

# ENVIRONMENTAL PERFORMANCE

Achievements	Challenges
<ul style="list-style-type: none"> <li>• Total electricity savings of 256 000MWh from all demand-side management electrical energy optimisation initiatives implemented. We are on the right trajectory to achieve our five year target</li> <li>• Harmony is the only gold mining company in the top 8 in the Carbon Disclosure Project Leadership Performance Index on the Johannesburg Stock Exchange and in the 'A' performance band on the Johannesburg Stock Exchange's 100 Climate Performance Leadership Index</li> <li>• Bioenergy project being commissioned with first gas production scheduled for February 2016</li> <li>• Memorandum of understanding signed with Department of Agriculture in the Free State province to develop a mushroom farm as a final land use</li> <li>• To advance the zero-discharge principle, Harmony is installing a water treatment plant at Doornkop and is finalising the tender for a similar solution at Kusasalethu</li> <li>• All actions related to the environment improvement plan for Hidden Valley completed except for the final site visit by the Conservation and Environment Protection Authority before signing off of the Environmental Implementation Plan submission</li> <li>• Exploration licence 2310 for Kili Teke in the Southern Highlands Province of Papua New Guinea was granted a Level 2A environment permit for exploration</li> </ul>	<ul style="list-style-type: none"> <li>• Two significant incidents in South Africa</li> <li>• Regulatory delays in the issuing of water use licences</li> <li>• Changing environmental legislative framework</li> <li>• In South Africa, potential implementation of carbon taxes coupled with increased cost of electricity will impact our operations' sustainability</li> </ul>

## WHY THE ENVIRONMENT IS MATERIAL TO HARMONY

We recognise that our business and business processes have, and can have, a negative effect on surrounding communities and the natural environment, and that it is our responsibility to avoid, mitigate, manage and limit these impacts. At the same time, what we do and how we do it can have a positive effect on our natural environment and communities; for example, by ensuring beneficial land use post-mining. We need to identify appropriate, sustainable opportunities for this to occur and ensure that we maximise these opportunities. In so doing, we will reduce our operating costs and exposure to risk while ensuring that we leave a lasting, positive legacy.

### Relevant material issues:

- Protecting our licence to operate
- Managing our impact
- Reducing our footprint
- Deliver lasting environmental benefits

## OUR APPROACH

Ultimate oversight for Harmony's environmental strategy and performance rests with the social and ethics committee of the board. In addition to an executive environmental manager, an environmental leadership committee drives environmental improvement strategically at group level, which cascades down to the various operations. At each operation, general managers are accountable for environmental management, and each operation develops annual environmental management plans to identify opportunities to

increase compliance and minimise pollution. To ensure legislative compliance, appropriate environmental management systems are being implemented at all operations to ensure a formal, systematic approach.

Our environmental strategy aims to optimise our environmental performance by managing our environmental impacts, focusing on effective risk controls, reducing environmental liabilities, ensuring responsible stewardship of our products within our scope of influence, complying with environmental legislation and regulations, and by creating a learning, sharing environmental culture that replicates experience from inside and outside the organisation and that shares knowledge and expertise within the group.

In South Africa, as required by the Mineral and Petroleum Resources Development Act, an environmental management programme has been drawn up for each operation, and submitted to and approved by the Department of Mineral Resources. These plans are amended when necessary and resubmitted for approval. Other key legislation includes compliance with the National Environmental Management Act, National Water Act and the National Nuclear Regulator Act.

In Papua New Guinea, we are subject to applicable environmental legislation including specific site conditions for water extraction and waste discharge attached to the mining tenements and issued by the Papua New Guinea Government Department of Environment and Conservation. In the fourth quarter of fiscal 2014, the Papua New Guinea Parliament approved the change of the Department of Environment and Conservation to the Conservation and Environment Protection Authority and this change is expected to be completed at the end of calendar year 2015. This transition period could cause potential approval delays in FY16.

The board-approved environmental policy – [www.harmony.co.za/sustainability/environment](http://www.harmony.co.za/sustainability/environment) – supports the strategy. Further, we have developed technical and performance standards and guidelines to ensure consistency at all our managed operations, and these are incorporated into operational environmental management systems and implemented in line with the principles of ISO 14001 standardisation process.

The environmental policy sets out our commitment to ensure that mine closure is undertaken to ensure long-term environmental stability and beneficial land use post-mining that promotes sustainable livelihoods in our communities. This policy underpins our understanding of the entire life cycle of our product.

## PERFORMANCE IN FY15

By year end, seven of our long-life mining operations (accounting for 64% of FY15 production) and five of our processing facilities had been ISO 14001-certified. Our focus in FY16 will be to achieve certification of the Bambanani and Joel mines in South Africa.

As required by law, all our South African operations have approved environmental management programmes that include broad outlines of closure plans. These environmental management programmes have been approved by the Department of Mineral Resources. An amendment to Kusasalethu's environmental management plan, relating to the inclusion of aggregate production from waste rock, was approved during the year. Amendments to the environmental management plans for Kalgold, Kusasalethu and two mining rights in the Free State have been submitted.



Hidden Valley ridge camp

## ENVIRONMENTAL PERFORMANCE CONTINUED

While closure principles are included in all environmental management programmes, detailed closure plans are being developed for Masimong and Unisel. Such plans are developed once operations are within five years of planned closure.

At Kalgold, our rehabilitation strategy focuses on returning the tailings to the D-zone pit, eliminating the need for adding to the surface footprint by way of a tailings dam. All tailings throughout the life of mine can be accommodated in the pit.

In line with revised legislative requirements, integrated water-use licence applications were submitted to the authorities for each operation in 2006. Our mines continue to operate under the old order water use licences or directives. Harmony is working closely with the officials of the Department of Water and Sanitation to expedite the issuing of the outstanding new order licences.

Implementation and execution of our environmental strategy is directed by an environmental leadership committee at each operation, supported by a group-level environmental manager. General managers retain legal responsibility for our operational environmental performance as well as for compliance with our environmental management plans.

The environmental management system forms the basis for the implementation of the environmental policy and monitoring compliance, while the environmental management programme report, developed in line with legislative requirements, contains specific as well as general principles governing environmental management during the life of a mine.

All certified operations maintained their certificates during FY15. Bambanani and Joel will be certified by the end of calendar 2015.

Group-level environmental audits as well as a number of annual compliance audits were undertaken during the year, most notably by the Department of Mineral Resources. Areas of non-compliance identified by the audits have been or are being addressed.

In Papua New Guinea, we seek to reduce our environmental footprint, largely through accelerated rehabilitation. Hidden Valley's environmental management plan is aligned with the ISO 14001 management standard. An important aspect of environmental management in Papua New Guinea is the environmental awareness training provided to all new employees during induction. This is reinforced through leadership training courses and the promotion of monthly environmental awareness initiatives aimed at the workforce as a whole.

An independent environmental audit of the Hidden Valley operation was undertaken by the joint venture partners and the following corrective actions were implemented during FY15:

- improved waste management, closure and decommissioning procedures for waste and fuel oil storage areas
- development of a sediment reduction plan that focuses on source control (for example, better drainage around waste dumps and the stabilisation of exposed slopes) rather than downstream sediment traps
- discussion with the Conservation and Environment Protection Authority on how alternative and more site-specific discharge criteria for cobalt and sediment can be developed
- training of sewage treatment plant operators to ensure that consistent treatment procedures are followed, and on proper sampling procedures

In FY10, the Papua New Guinea Conservation and Environment Protection Authority commissioned a third-party compliance audit of the Hidden Valley mine to address stakeholder concerns about the sedimentation impacts of mining on the Watut River. This compliance audit led to the development and implementation of a Conservation and Environment Protection Authority-approved environmental improvement plan and, in FY11, the appointment of an external stakeholder advisory panel. For additional information on this panel, please refer to the Sustainable Development Report 2012 which can be found at [www.financialresults.co.za/2012/harmony\\_ar2012/sustainability-report/op-environment.php](http://www.financialresults.co.za/2012/harmony_ar2012/sustainability-report/op-environment.php)

By the end of December 2014, all 40 actions identified in the environmental improvement plan had been addressed and application made to the Conservation and Environment Protection Authority for the environmental improvement plan to be formally closed out. Feedback is awaited from the Conservation and Environment Protection Authority.

In terms of compliance, the Conservation and Environment Protection Authority requested that Hidden Valley apply for an amendment to the current environmental permit regarding conditions relating to turbidity and cobalt levels. Hidden Valley is preparing to apply for an amendment to its environmental permit for cobalt and turbidity as requested. Discussions with Harmony representatives have been held to ensure that the proposed amendment will address additional concerns beside cobalt and turbidity.

## ENVIRONMENTAL INCIDENTS

### Relevant Global Reporting Initiative indicators: G4-EN24, G4-EN29, G4-EN34

Our environmental management plans provide for the monitoring, reporting and remediation of environmental incidents, including the direct or indirect discharge of water beyond our mining area.

Our environmental classification system categorises incidents on a scale of 1 to 5. A level 5 incident has mitigation costs in excess of R3 million and a very significant impact on highly valued species, habitat or eco-system, potentially resulting in international condemnation and possible director liability. A level 1 incident represents low-level non-conformance, with mitigation costs of less than R100 000 and where there is limited damage to a minimal area of low impact and where any complaints are localised.

During FY15, two significant environmental incidents were reported. A level 3 incident may result in either mitigation costs of between R250 000 and R500 000 or serious medium-term environmental effects, breaches in legislation and may result in serious adverse media attention. A level 4 incident has a mitigation cost in excess of R1 million, with the possibility of significant fines or prosecutions.

### Environmental incidents in FY15

#### Relevant Global Reporting Initiative indicators: G4-EN8, G4-S08

Date	Operation	Cause
31 October 2014	Kusasaletu (level 3)	A directive was issued to Kusasaletu to stop the discharge of water being pumped from underground mine workings. With the rains, storage capacity in the return water dam was depleted resulting in some water having to be discharged under controlled conditions. Kusasaletu developed a management plan to cease the discharge and submitted this to the Department of Water Affairs, which accepted it. Water sampling showed no impact on the receiving environment.
4 March 2015	Kalgold (level 4)	Kalgold operation received an administrative fine of R200 000 for the construction of a haul road without a record of decision issued by the provincial municipality. Harmony had been operating in line with an approved environmental plan. This fine was issued during the transitional period when the National Environmental Management Act and Department of Mineral Resources legislative processes were unclear. The mining industry has historically disputed the need to apply for authorisation in terms of the National Environmental Management Act for activities ancillary or incidental to mining operations undertaken in accordance with an environmental management plan approved in terms of the Mineral and Petroleum Resources Development Act 28 of 2002.

No fines or sanctions were received during FY15 for non-compliance with environmental laws and regulations in Papua New Guinea. Furthermore, mechanisms are in place to enable stakeholders to report any grievances they might have concerning environmental impacts caused by Harmony's operations in South Africa and Papua New Guinea.



Tailings storage facility and processing plant, Hidden Valley

# ENVIRONMENTAL PERFORMANCE CONTINUED

## LIMITING AND OPTIMISING THE RESOURCES WE USE

### Relevant Global Reporting Initiative indicators: G4-EN1

The primary materials used by Harmony are: the rock we mine, the ore we process and the liquefied petroleum gas, grease, cyanide, fuels and lubricating and hydraulic oils we use.

#### Materials used

	FY15	FY14	FY13 ****	FY12	FY11
Rock mined (ore and waste) (000t)	29 948*	39 133	38 668	34 868	30 250
Ore mined (000t)	13 041	14 798	13 312	14 010	12 063
Waste rock recycled (000t)	6 647	7 058	8 008	8 191	3 200
Slimes recycled (000t)	5 987	5 933	5 358	6 955	5 236
Liquefied petroleum gas (t)	1.14	1.21	1.08	0.55	0.62
Grease (t)	54	87	61	51	22
Cyanide (000t)	14.3	14.7	8.0	11.1	8.0
Petrol and diesel (000l)	24 464	27 148 **	61 354 ***	30 135	44 788
Lubricating and hydraulic oil (000l)	2 772	3 011	3 860	2 457	2 206

\* Reduction is – in the main – due to closure of Target 3 and restructuring of Kusasalethu's production profile

\*\* Reduction in petrol and diesel consumption is as a result of closing the Kimberley Reef area at Doornkop and the decline in the consumption at Hidden Valley with the increased use of hydropower

\*\*\* Increase was predominantly due to increased usage at Hidden Valley for the period during which the overland conveyor malfunctioned

\*\*\*\* 2013 excludes Evander. Previous years not restated

#### Cyanide

Harmony is a signatory to the International Cyanide Management Code for the manufacture, transport and use of cyanide in producing gold (the Cyanide Code). This voluntary industry code was developed by the United Nations Environment Programme and the International Council on Mining and Metals. All of our major gold mining operations and most of our metallurgical plants have been certified as compliant.

- Seven of our plants are certified in terms of the Cyanide Code – the Harmony One, Central, Target, Joel, Kusasalethu, Doornkop and Hidden Valley plants
- At Kalgold, a cyanide decontamination plant is being commissioned to optimise the consumption and disposal of cyanide. We continue to implement controls to move closer to compliance, which will be followed by a review of the plant's application for certification
- The Phoenix retreatment operation (Saaiplaas plant) was voluntarily deregistered following an external audit, which confirmed that there was a problem with weak acid dissociable cyanide concentrations in the tailings. External experts have been commissioned to investigate potential solutions
- The Hidden Valley plant received its Cyanide Code compliance certificate in FY14. Harmony and Newcrest are signatories to the Cyanide Code and, since commissioning of the process plant at Hidden Valley in FY10, monitoring has shown that cyanide concentrations at the Nauti Village compliance point (as stipulated in the permit) are in line with environmental permit limits

Harmony used 14.3 kilotonnes of cyanide during FY15 (FY14: 14.7 kilotonnes). The decrease in cyanide consumption was largely due to fewer tonnes of ore being treated in 2015 (18 063 kilotonnes) as compared to 2014 (18 784 kilotonnes)

## OPTIMISING OUR ENERGY USE, REDUCING CARBON EMISSIONS

### Relevant Global Reporting Initiative indicators: G4-EN3, G4-EN5 and G4-EN6

Reducing and managing the energy we consume are fundamental business considerations and environmentally imperative. Optimising our energy use will in turn optimise our carbon emissions.

Harmony's operations consume a significant amount of electricity in the production of gold. We account for our product to the point at which it is sent for refining (by Rand Refinery in South Africa and by Perth Refinery in Western Australia).



In South Africa, almost all of the energy we consume is indirect energy, in the form of electricity purchased from the national power utility, Eskom, which is largely derived from coal-fired power stations with very little scope for the large-scale purchase of energy from renewable sources.

In Papua New Guinea, we aim to maximise our use of alternative energy sources. In 2011, Hidden Valley was connected to a new hydropower transmission line, part of the Papua New Guinea electricity grid, and the operation is now predominantly driven by a hydro-powered electricity grid. In this reporting year 83% of Hidden Valley's power consumption was generated by hydropower, an increase on the previous year (70%).

Energy consumption is a significant portion of our operating costs in South Africa (16%) but less so in Papua New Guinea (8%).

Direct and indirect energy consumption (MWh)	FY15	% of total energy used	FY14	% of total energy used
<b>South Africa</b>				
Direct <sup>1</sup>	–	–	–	–
Indirect <sup>3</sup>	2 608 157	100	2 756 029	100
<b>Total</b>	<b>2 608 157</b>	<b>100</b>	<b>2 756 029</b>	<b>100</b>
<b>Papua New Guinea</b>				
Direct <sup>1</sup>	10 355	17	18 354	30
Indirect <sup>2</sup>	48 863	83	42 060	70
<b>Total</b>	<b>59 218</b>	<b>100</b>	<b>60 414</b>	<b>100</b>
<b>Harmony total</b>				
Direct	10 355	0.39	18 354	1
Indirect	2 657 020	99.61	2 798 089	99
<b>Total</b>	<b>2 667 375</b>	<b>100</b>	<b>2 816 443</b>	<b>100</b>

<sup>1</sup> Diesel

<sup>2</sup> Renewable energy – hydropower-generated electricity

<sup>3</sup> Non-renewable – coal-fired power stations (Eskom)

Energy consumption	FY15	FY14	FY13	FY12	FY11
Intensity consumption (MWh/tonne treated)	0.15	0.15	0.14	0.19	0.19
Absolute consumption (MWh)	2 667 375	2 816 443	2 704 220	3 058 219	3 534 000
<b>MWh</b>	<b>FY 15</b>	<b>FY14</b>	<b>FY13</b>	<b>FY12</b>	<b>FY11</b>
South Africa	2 608 157	2 756 029	2 664 111	3 013 150	3 429 000
Papua New Guinea	59 218	60 414	51 414	50 312	52 508
<b>Total</b>	<b>2 667 375</b>	<b>2 816 443</b>	<b>2 704 220</b>	<b>3 058 219</b>	<b>3 534 000</b>

## ENERGY MANAGEMENT

Harmony is developing a strategic advantage in the efficient use of energy, while managing rising energy costs and reducing its emission intensity. Harmony's revised energy efficiency and climate change policy and strategy articulate our commitment to improving energy efficiency.

Our primary focus has been on making mine cooling, compressed air, water management and ventilation more efficient. In addition, we have improved solar generation capacity within the group. Together, this contributed to a decrease in power consumption and an associated decrease in our energy-use intensity factors.

By the end of FY15, 12 projects had been implemented and 19 were on-going. Once completed, these will result in a total combined annual energy saving of 64 040MWh. The energy-efficient fans installed underground at Kusasalethu as well as Tshepong's optimisation of compressed air projects are exceeding expectations in terms of energy savings. Most of the other projects are on target or slightly below target.

# ENVIRONMENTAL PERFORMANCE CONTINUED

While we will continue to optimise efficiencies within the group, our strategy will progress to enhancing our energy mix with increased use of solar, hydropower and bio-energy in the short term.

In FY15, total energy use was 2 667 375MWh (FY14: 2 816 443MWh), down by 5% with corresponding energy intensity levels of 0.15MWh/tonne treated (FY14: 0.15MWh/tonne). In all, our energy consumption has declined by 24% in the past five years and our intensity usage by 21%.

Harmony South Africa's electricity consumption decreased by 149GWh and emissions by 153 000t CO<sub>2</sub>e (FY14: 92GWh and 96 879t CO<sub>2</sub>e respectively). The electricity generated from diesel at Papua New Guinea was 10 355MWh (FY14: 18 354MWh).

Harmony's environmental strategy has been influenced by the company's drive to reduce energy consumption and greenhouse gas emissions, as well as by the need to adapt to climate change and to diversify its energy mix. Our energy management strategy is thus aligned with that of our business strategy, particularly regarding effective carbon management. Our responsible stewardship of the environment encompasses:

- Promotion of energy efficiency at our deep-level operations in South Africa
- Design and development of renewable energy driven operations in Papua New Guinea
- Optimisation and rebalancing of our asset portfolio by decommissioning operations where the marginal returns of mining payable reserves are outweighed by the rising cost of the energy to mine those reserves
- Promotion of an alternative energy mix
- Alignment of our rehabilitation programme to support the green energy agenda

Harmony emits a certain quantity of carbon given the fossil fuel (petrol/diesel) consumed in transporting people and material in the course of our business. We have embarked on a drive to optimise our fleet that includes reducing the number of vehicles in the supply chain fleet as well as their average age. This has resulted in less fuel being used by transportation services to all operations, which has in turn led to lower carbon emissions. We monitor our fuel consumption monthly, as part of a standard set of key performance indicator measurements. Reducing the average fleet age also leads to reduced emissions as there is a direct correlation between the fleet age, kilometres travelled and oil consumption, not to mention the maintenance costs involved in running an ageing fleet. In addition to these efforts, as shown in the table above, our energy source in Papua New Guinea is now 83% from hydroelectricity and 17% from diesel to reduce greenhouse gas emissions.

## Addressing climate change by optimising our energy usage

### Relevant Global Reporting Initiative indicators: G4-EC2

The company is well-placed to capitalise on climate change opportunities that involve land rehabilitation, biodiversity, energy management, carbon sequestration and solar power.

Climate change risks have influenced the design of new assets and the operation of current assets (in terms of energy efficiency and alternative energy use). Opportunities presented by climate change have been included in mine closure plans regarding post-mining land use. The climate change risks and opportunities affecting Harmony's business strategy are monitored continuously at an asset level and are communicated to the board throughout the year. The overall strategy is reviewed annually.

Those climate change aspects that have had the greatest influence on Harmony's business strategy are:

**Regulatory risks:** The major regulatory risk facing Harmony's South African operations is the proposed carbon tax. While, in the past, we have adjusted our strategy to ensure that this tax forms part of our long-term planning and have aspired to take advantage of the tax relief associated with carbon tax offsets, Harmony remains seriously concerned about the implications of rising energy costs and carbon pricing impacts on the viability of its business. Harmony, through the Chamber of Mines, is collaborating with government on the threat that the carbon tax poses to our business in the current economic climate in which we are operating.

**Energy pricing:** Deep-level mining is inherently energy-intensive. Given the impact of climate change on energy pricing, Harmony's strategy is to rebalance its portfolio towards shallower/opencast/bulk/mechanised mining operations. Harmony's portfolio in Papua New Guinea includes Hidden Valley, an opencast mine, and the Golpu project, which will be a less emissions-intensive, underground block-cave operation.

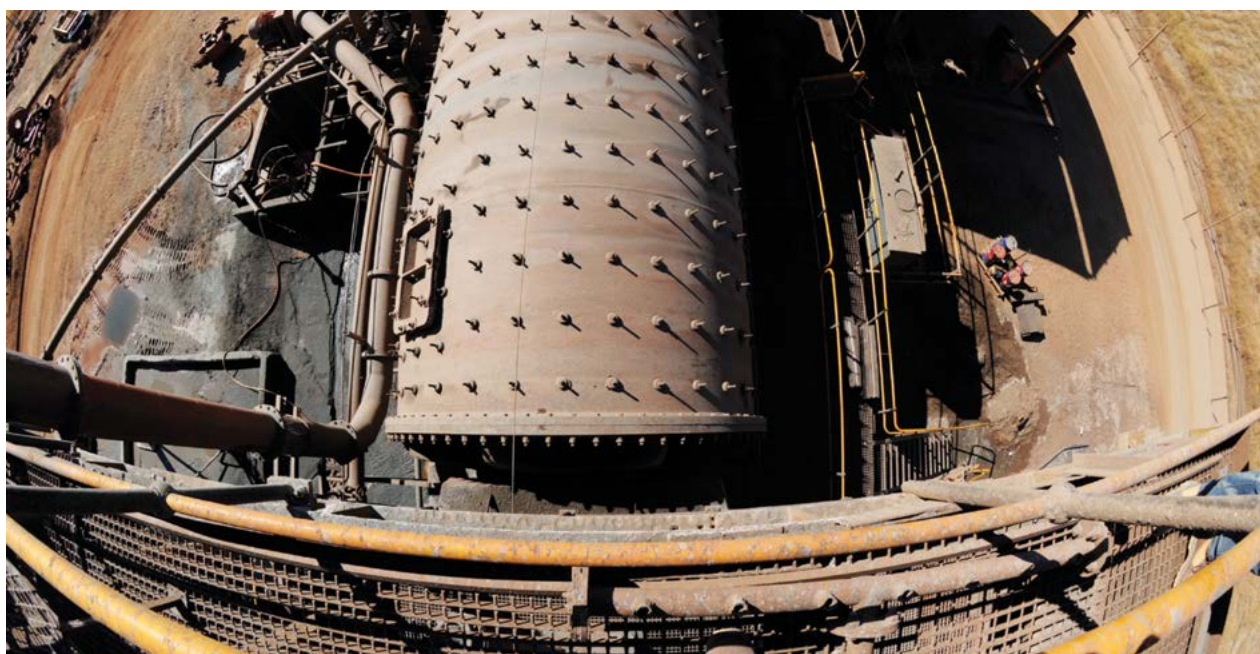
**Physical risks:** Significant climate-related physical risks facing Harmony include a change in rainfall patterns and the consequential risk of water supply. Intermittent water supply poses a threat to the operational continuity of Harmony's mines and thus has the highest impact on the profitability of the business. As such, Harmony's strategy is to ensure that no mine is affected by water constraints through the implementation of a holistic water management plan.

Harmony's short-term strategy for next five years is driven by adaptation, conservation and a move towards achieving an alternative energy mix to supply its operations. In terms of conservation, Harmony is reducing its grid-electricity consumption and greenhouse gas emissions through targeted year on year and multi-year reductions. The most recent reductions have been achieved by the implementation of a suite of energy efficiency initiatives and the closure of carbon-intensive shafts. Harmony is set to increase its use of green energy derived from hydropower, solar power and bio-mass.

Harmony's long-term strategy is based on two elements to mitigate the risk of climate change:

- **Rebalancing our asset portfolio:** In the rebalancing of our portfolio, energy-intensive operations – as one of the reasons to close a mined-out, unprofitable mine – are being closed and the focus in the long term will be on the development of lower-carbon intensity assets. This will minimise the impact of increased energy costs and our potential exposure to carbon taxes. In FY14, Steyn 2 shaft and the Doornkop Kimberley section were closed and, in FY15, Target 3 was placed on care and maintenance. Shafts decommissioned in recent years have been rehabilitated; their shaft cavities have been filled with inert material and capped to prevent, among other things, potential fugitive methane emissions. This process is now underway at Steyn 2. Our operation in Papua New Guinea has significantly lower emission intensities than its South African counterparts and has been designed for energy efficiency with a predominantly renewable energy base
- **Post-mining land use:** Several options are being considered for post-mine life land use, such as the creation of carbon sinks and the conversion of rehabilitated land to the cultivation of non-edible crops for renewable bio-energy production (the land is not suitable for food production). This will reduce the demand for coal-based electricity, thereby mitigating the effects of climate change. Non-edible crops will be planted on Harmony-owned land for the production of energy such as bio-gas and bio-char (charcoal made from the conversion of bio-mass, using heat by means of pyrolysis, into carbon in the form of a final product that is used in agriculture to improve land quality)

We have also begun engagements with our major suppliers to reduce climate change risks across the value chain. Group-level absolute and intensity-based greenhouse gas emission reduction targets have been set for the five years to FY18 (see Outlook on page 119).



Kalgold plant



# ENVIRONMENTAL PERFORMANCE CONTINUED

## NOTEWORTHY ACTION

### **SOUTH AFRICA: OPTIMISING ENERGY CONSUMPTION, REDUCING COSTS, SUPPORTING NATIONAL TARGETS**

We continue to support the South African government's energy-efficiency strategy, announced in 2005, which set a national improvement target of 12% by 2015. After the electricity crisis of 2008, when structural failures in the national grid led to a significant decrease in electricity capacity, Eskom imposed a 10% reduction in energy supply to the mining industry. We have worked closely with Eskom to manage electricity usage as part of our commitment to reduce energy consumption.

Electricity tariffs have risen steadily in South Africa since 2008 and, given electricity's relatively significant contribution to operating costs, tariff increases exceeding 8% will have an impact on the sustainability of several of our operations. Our work with Eskom to manage electricity usage includes the use of demand-side management strategies to reduce electricity consumption during peak periods. Demand-side management involves reduced energy use during periods of high demand by, for example, scheduled pumping, compressed air, cooling, hoisting and ventilation to coincide with cheaper off-peak periods, making more efficient use of Eskom tariffs that reward load shifting and load clipping, and improve the efficiency of our operations.

By the end of FY15, four demand-side management and eight Harmony-funded projects had been implemented and 17 additional initiatives were identified, and are in various stages of investigation or implementation. Together these projects, once completed, will result in a total annual energy saving of 64 040MWh. Initiatives undertaken by the operations, such as stopping compressors and main ventilation fans, are achieving the planned energy savings. Certain 'old' completed projects that were re-implemented as part of a maintenance programme have resulted in achieving the target set, others had limited success given operational challenges such as excessive water consumption. This will be rectified with the implementation of new projects to reduce water wastage and the use of compressed air in underground mines.

A further 17 energy efficiency projects are planned for FY16, some of which are Harmony initiatives while others await funding approval from Eskom. These 17 projects, if implemented, will contribute to annual savings of 82 301MWh and will be prioritised for completion in FY16.

The energy-saving initiatives planned for FY16 include:

- Bulk air cooler peak-load clipping to minimise power consumption during national peak hours at Kusaalethu
- Installation of energy-efficient ventilation fans in seven operating shafts registered as seven Demand Side Management projects
- Optimisation of ore transport from shafts to gold plants
- Load clipping project on fridge plants at Masimong
- Optimisation of compressed air use in mines using compressed air for cooling
- Optimisation of compressed air at Doornkop
- Optimisation of compressed air using stand-alone compressors at Phakisa
- Optimisation of compressed air and water use at Tshepong and Kusaalethu
- Implementation of ISO 50001
- Installation of energy-efficient motor drives

Harmony remains committed to the challenge of creating an enabling environment, and to the adequate allocation of resources to achieve our environmental goals and commitments. Dedicated staff are managing our energy-efficiency programme. The budgetary requirement for these 17 projects is R55 million and financial constraints may restrict the number of projects to be implemented during FY16.

Our aim is to maximise the use of alternative energy sources. While opportunities in South Africa are currently limited, government-led initiatives have increased the scope for alternative energy generation in the future, and Harmony wants to be at the forefront of this process (see discussion on 'South Africa: Committed to renewable energy' on page 109).

The situation in Papua New Guinea is a little different where a greenhouse gas management strategy has been developed for Harmony's joint venture Papua New Guinea operations. Here, greenhouse gas emissions are direct (Scope 1) emissions only since the main source of power is hydropower (Scope 2) which does not generate greenhouse gas emissions.

Our aim is to reduce our reliance on diesel-generated power at Hidden Valley and the amount of fuel that needs to be trucked to this remote site. Management has set a target that hydropower should make up 75% to 80% of energy used at Hidden Valley by FY16. The Hidden Valley plant, which accounts for the vast majority (about 85%) of the power consumed at this operation, is equipped with the latest technology to ensure optimal use of energy.

The Golpu project will be designed to meet environmental best practice. Environmental design criteria incorporate Papua New Guinean statutory requirements and, where applicable, Australian, World Health Organisation and International Finance Corporation (part of the World Bank Group) standards or guidelines. Prefeasibility infrastructure designs have been scoped with energy efficiency and water conservation in mind. The use of hydropower, natural gas or bio-mass for power generation is also being considered as part of the feasibility study, which is scheduled for completion by the end of the first half of FY16.

## NOTEWORTHY ACTION

### SOUTH AFRICA: COMMITTED TO RENEWABLE ENERGY

The National Energy Regulator of South Africa approved a renewable energy feed-in tariff guideline in 2009. This guideline has stimulated the development of renewable energy projects, which are becoming a more feasible investment option.

### ALTERNATIVE ENERGY SOURCES

Harmony is currently assessing various energy-generating initiatives for the land it owns in South Africa. Generation of additional power will help to alleviate current supply concerns and the cost of energy.

#### Bioenergy

Harmony is also implementing a bio-energy project involving the propagation of bio-crops on mine-impacted land in the Free State to generate natural gas as a substitute for fossil fuels in the company's Harmony One gold plant elution and carbon regeneration circuits. Phase 1 of the project aims to deliver 71 000GJ of energy with a view to producing first gas in February 2016 and aiming to ramp up to generate 187GJ within 24 months. This project aims to turn mine-impacted land to account by creating a value-adding use for it and, in so doing, promote skills development and job creation for communities and ensure a sustainable legacy in the Free State.

Following a feasibility study for the development of bio-mass capability in the Free State, implementation began in September 2014. The aim of the project is to use mine-impacted land as part of the provincial rehabilitation initiative to create economic opportunities for local communities. As part of this process, we will convert electrical and polyfuel heating of elution water at our gold plants to bio-gas heating.

Bioenergy will be produced in the Free State from Giant King Grass, sweet sorghum or sugar beet to supplement fossil energy.

#### Solar power

Harmony is building expertise in renewable energy and participating in a group that is developing a 5MW solar park at Kalgold in terms of the government's renewable energy power programme. The solar energy it generates will be fed into the Eskom electricity grid. The proposal for this project was submitted in the current round of public bidding.

Another two solar parks involving photovoltaic plants (two 10MW plants), planned for the Free State, are currently in environmental impact assessment stage. A third initiative, a 40MW plant at the African Rainbow Minerals Gold number 1 shaft, is also being investigated. All three projects will be implemented on Harmony-owned land.

#### Carbon sink

Harmony undertook a prefeasibility study to establish a bio-crop reforestation plantation on rehabilitated land in Virginia, Free State. The aim is to use the bio-crop to generate bio-char for community consumption, and to conduct trials to ascertain whether or not this crop could be planted and used on tailings dams for dust suppression and final rehabilitation as a carbon sink. With recent advances in the cultivation of Giant King Grass on affected land, and the ability of this grass to sequester carbon where it remains in the bio-mass of the grass, the project has developed into an opportunity for a carbon sink. Given the success of this project, it will be implemented as part of Harmony's rehabilitation strategy for its tailings dams. Planting is expected to begin in FY16.

#### Power-generating turbines

At Kusasalethu, three 3.1MW power-generating turbines were commissioned. These turbines are generating power from surface mine water transported underground. The targeted power generation capacity has been reduced as less water is now consumed by the mine. Commissioning of the fourth turbine has been postponed to FY16.

This energy will be fed directly into the mine grid and hence reduce Harmony's Eskom consumption. The annual cost saving is estimated at R6.1 million.

Collectively, these projects could reduce CO<sub>2</sub> emissions by 635 000t by FY16 but many of them require supplementary funding to be executed timeously. The purpose of carbon trading is to maximise financial gain from energy-saving initiatives while building our reputation as a responsible corporate citizen and environmental steward. Private-sector experts are working closely with National Treasury in South Africa to develop a carbon offsets/trading scheme. Harmony is monitoring the debate on the subject in order to identify opportunities for trading. No carbon projects have been registered yet.

# ENVIRONMENTAL PERFORMANCE CONTINUED

## Climate change and greenhouse gas emissions

Relevant Global Reporting Initiative indicators: G4-EC4, G4-EN15, G4-EN16, G4-EN17, G4-EN18 and G4-EN19

Harmony's Scope 1 and Scope 2 emissions in FY15 were 2 753 303t CO<sub>2</sub>e (FY14: 2 819 762t CO<sub>2</sub>e) with a corresponding intensity of 0.15 t CO<sub>2</sub>e/ton milled (FY14: 0.15t CO<sub>2</sub>e/ton milled). Indirect emissions, stemming largely from electricity purchased from Eskom, accounted for 98% of emissions. In FY15, in terms of Scope 1 and Scope 2, we decreased our carbon emissions by 2%, compared to an increase of 2.8% in FY14.

## GROUP CARBON EMISSIONS

Scope 1 emissions breakdown by source (CO <sub>2</sub> e tonnes)	FY15	FY14	FY13
Diesel	64 244	71 728	90 951
Explosives	1 748	2 079	2 026
Petrol	909	950	1 337
<b>Total scope 1</b>	<b>66 902</b>	<b>74 758</b>	<b>94 314</b>
Scope 1 emissions breakdown by source (%)			
Diesel	96	96	96
Explosives	3	3	3
Petrol	1	1	1
<b>Total scope 1</b>	<b>100</b>	<b>100</b>	<b>100</b>
Total scope 1, 2 and 3 emissions (CO <sub>2</sub> e tonnes)			
Scope 1	66 902	74 758	94 314
Scope 2	2 686 401	2 745 005	2 648 126
Scope 3	686 233	661 515	616 978
<b>Total</b>	<b>3 439 536</b>	<b>3 481 278</b>	<b>3 359 418</b>
Total scope 1, 2 and 3 emissions (%)			
Scope 1	2	2	3
Scope 2	78	80	79
Scope 3	20	18	18
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>

## CARBON EMISSIONS INTENSITY

Scope 1 emissions intensity by source (CO <sub>2</sub> e tonnes/tonne treated)	FY15	FY14	FY13
Diesel	0.0036	0.0038	0.0051
Explosives	0.0001	0.0001	0.0002
Petrol	0.0001	0.0001	0.0001
<b>Total scope 1, 2 and 3 emissions intensity (CO<sub>2</sub>e tonnes/tonne treated)</b>			
Scope 1	0.0040	0.0040	0.0051
Scope 2	0.1490	0.1458	0.1441
Scope 3	0.0380	0.0332	0.0336
<b>Total</b>	<b>0.1910</b>	<b>0.1830</b>	<b>0.1828</b>

In FY15, our total carbon emissions decreased by 1.2% with a corresponding increase in intensity which averaged 0.191t CO<sub>2</sub>e/tonne treated. This increase was a result of the decrease in tonnes treated during the year. While total carbon emissions increased by 2.8% in FY14, our emission intensity remains steady at 0.183t CO<sub>2</sub>e/tonne treated.

## Carbon-related legislation

Following the release for public comment of a policy paper on South Africa's proposed carbon tax in FY13, Harmony raised concerns about the potential impacts of this tax on the gold industry's competitiveness. Harmony's view was that the proposed method of taxation posed a significant risk to the business as the company would not benefit from any tax relief given to the largest contributor (Eskom) to our carbon footprint. Through Harmony's participation in the National Treasury's working group and Chamber of Mines' initiatives, we have proposed that companies should be eligible for tax relief for Scope 1 and Scope 2 emissions. We have submitted written commentary in this regard, recommending that the carbon tax should be a deductible cost for corporate income taxes and that levels of support for early mover status (incentives for compliance versus penalties) are raised in line with global practice.

The South African government's initial plan to implement a carbon tax from 2015 has been delayed to 2016. Following extensive public consultation on the proposed tax in 2013, several adjustments to the policy proposal are expected, including the use of part of the revenue generated by the carbon tax to fund energy-efficiency tax incentive schemes. With the current electricity cost increase of 12.65% and further increases planned in the future already threatening the financial viability of our operations, any additional cost burden by way of carbon tax would merely exacerbate the situation. Harmony is lobbying, through the Chamber of Mines, to implement a carbon tax that is reasonable, does not destroy international competitiveness and recognises 'early movers'. In this reporting year, the Chamber of Mines – in response to the proposed carbon tax – voiced its opposition to the tax, reiterating that the "mining industry is grappling with, in some instances, significantly reduced revenue outlook". Harmony is supportive of this position.

A Climate Change Office was established in Papua New Guinea in 2010, but it is a small and under-resourced government office. This office is still developing its greenhouse gas and other data collection methodologies. In FY13, the Papua New Guinea government called for comment on its proposed final draft climate change policy. This policy was approved in FY15.

## Carbon reporting

Just prior to year end, we submitted our ninth annual response to the Carbon Disclosure Project. Results from our previous submission – released in November 2014 – indicated that we had successively improved our reporting on and our performance regarding carbon emissions. Harmony attained a score of 100% for carbon disclosure and band "A" performance for leadership in respect of energy and climate change. The Carbon Disclosure Project assesses companies' responses against two parallel scoring schemes, namely performance and disclosure. The highest scoring companies for performance and/or disclosure are recorded in the Carbon Disclosure Project Climate Performance Leadership Index and/or the Climate Disclosure Leadership Index. Harmony is the only South African company to receive platinum awards, the highest award, in the disclosure and performance categories.



*Propagation of bio-crops on mine-impacted land to generate natural gas as an alternative to fossil fuels*

# ENVIRONMENTAL PERFORMANCE CONTINUED

## NOTEWORTHY ACTION

### Engagement with suppliers and their environmental impacts

**Relevant Global Reporting Initiative indicators: G4-12, G4-EN32, G4-EN33, G4-HR11**

We manage our supply chain risk by engaging continuously with our top 50 suppliers regarding their greenhouse gas emissions and climate change strategies. In FY14 specifically, for the first time, our timber supplier calculated its product carbon footprint and shared the findings with us.

While environmental management and compliance with various environmental legislation and regulations, among others, have been included in the general conditions of contract for our suppliers, screening of suppliers has not yet been conducted. Should any suppliers be found to have contravened the legal requirements specified or to be non-compliant, our contracts with them will be suspended. To date, there have not been any suspensions, and we have not received reports of grievances against suppliers regarding adverse impacts on the environment.

Engaging with our suppliers on greenhouse gas emissions is a key component of our overall sustainability goals. Although the company already has an environmental clause in its existing supplier contracts, we will include a more specific greenhouse gas-related clause in future supplier contracts. This clause will state that all suppliers must agree to introduce a greenhouse gas reporting system for the products we purchase and to send information of their carbon footprint to Harmony every year. Working with suppliers to improve their greenhouse gas performances will help reduce our Scope 3 emissions over time.

We are engaging with our top suppliers on greenhouse gas emissions to reduce climate change risks across the value chain. Supply chain has made great strides in managing its own footprint with initiatives that have reduced its footprint by reducing fuel consumption by approximately 29% in the past five years.

In addition, Harmony is investigating the potential to produce renewable energy in the form of bio-gas. The feedstock for this bio-gas will be energy crops (bio-crops) planted on Harmony-owned impacted land. These management methods and specific activities carried out in this reporting year positions Harmony to manage the risk presented by having only one supplier of polyfuel currently. The bio-gas project forms part of our risk management strategy to reduce our energy consumption and our dependency on energy generated by non-renewable sources.

## OPTIMISING WATER USE, LIMITING OUR IMPACTS

**Relevant Global Reporting Initiative indicators: G4-EN8, G4-EN9 and G4-EN10**

Significant amounts of water are used in the development and growth of our assets. Access to this resource is crucial, especially in South Africa where water is becoming a scarce resource. The risks associated with the limited availability of water in the country are high and intermittent water supplies pose a significant threat to the operational continuity of our mines and the profitability of our business. In FY13, a strategy to reduce dependency on existing groundwater infrastructure was implemented and a group-wide campaign to re-use processed water was initiated.

The holding capacities of the water dams at Kusasalethu have been upgraded. This involved desilting of these dams and enhanced pumping capabilities, on surface and underground, to enable them to cope with the greater volumes.

At Kalgold, a comprehensive geohydrological assessment informed a revision of the water balance. Technical changes were implemented at the plant and tailings storage facilities to maximise recovery of water for re-use. Similar work regarding capacity management as well as water efficiency has been completed at Doornkop.

Our South African operations do not draw water directly from surface sources, except for Kalgold which draws water from an aquifer. Our other operations source water from bulk water service providers and municipalities, surface water run-off, water that enters underground mining operations and is pumped to the surface, recycled water and boreholes.



Water use	Measured	FY15	FY14	FY13*	FY12	FY11
Water used for primary activities	000m <sup>3</sup>	<b>14 614</b>	16 495	18 556	38 011	36 671
Potable water from external sources	000m <sup>3</sup>	<b>11 993</b>	13 139	15 610	15 519	14 509
Non-potable water from external sources	000m <sup>3</sup>	<b>2 620</b>	3 355	2 946	22 492	22 163
Surface water used	000m <sup>3</sup>	<b>776</b>	1037	1 230	1 023	1 601
Groundwater used	000m <sup>3</sup>	<b>1 844</b>	1 550	1 716	21 469	22 096
Water recycled in process	000m <sup>3</sup>	<b>38 338</b>	24 531	27 593	38 337	8 266
Percentage of water recycled	%	<b>72</b>	61	60	50	18

\* FY13 excludes Evander and therefore some reductions occurred from the previous year

Water use for primary activities	Measured	FY15	FY14	FY13	FY12	FY11
Intensity consumption	000m <sup>3</sup> /tonne treated	<b>0.81</b>	0.88	1.01	2.09	1.99
Water used for primary activities	000m <sup>3</sup>	<b>14 614</b>	16 495	18 556	38 011	36 671

The total amount of water used for primary activities declined in FY15 to 14 613 602 m<sup>3</sup> with the intensity of 0.81 m<sup>3</sup>/tonne treated (2014: 16 495 284m<sup>3</sup>, and intensity of 0.88m<sup>3</sup>/tonne treated). Harmony has adopted a group-wide campaign to re-use process water in order to reduce our dependency on existing groundwater. In particular, our long-term targets are to reduce the amount of water used for primary activities by 4.5%, while increasing the amount of water recycled by 5% – thereby improving our water-use efficiency as measured by the volume of water used per tonne treated. These targets are set to be reached in FY18.

The following drought-risk mitigation initiatives continued in FY15:

- Deposition of tailings into the pit enhances recovery of water for re-use in the processing activities at Kalgold
- Commissioning of a water treatment plant at Doornkop and Kusasaletu to encourage recycling and reduce dependency on potable sources
- Implementation of process changes to improve water efficiency
- Optimisation of water separation and recycling systems
- Construction of larger return water dams and installation of large covered tanks to reduce evaporation

At Hidden Valley in Papua New Guinea, the topography together with the high levels of rainfall and low levels of evaporation pose significant water management challenges. Two main water management techniques in use are:

- controlled run-off of rainfall to prevent erosion and sediment entering the river system
- conservation of site-water used to limit the volumes of treated waste water discharged into the river system

Most of the raw water required for operations at Hidden Valley is drawn from the Pihema Creek and used for key processes in the processing plant and related ore-processing activities. Although process water recycling is prioritised, the high rainfall and low evaporation typical in this tropical environment creates a positive water balance. These conditions, together with the requirement to minimise water storage in the tailings storage facility, cause a high rate of water discharge to the environment. Minimising raw-water use is also essential to protect the mine during occasional droughts when the availability of river water can be greatly reduced.

The Hidden Valley operation treats all water to prescribed standards before it is discharged into the environment and the joint venture partners continuously monitor and manage the environmental impact of the mine on the Watut River system. River impact studies are integral to Hidden Valley's overall environmental monitoring programme. The environment and mine operational teams at Hidden Valley meet on a quarterly basis with representatives of Harmony and Newcrest Mining Limited, to review efforts to improve waste dump design, the compliance status of the tailings storage facility and water discharge results. Quality assurance/control programmes have been implemented to monitor construction of the waste dump and tailings storage facility. This programme included an assessment of the adequacy of sediment and run-off control measures. A significant improvement in waste dump design/build and tailings management is being achieved.

Furthermore, progress was made in reducing the discharge of mine-related sediment into the Watut River. There is scheduled monitoring of water quality, water extraction and discharges to ensure compliance with permit parameters. Lime dosing has continued

# ENVIRONMENTAL PERFORMANCE CONTINUED

at the Watut River to control acidity and dissolved metal levels. At the sewage treatment plant, new blowers and more frequent operator training have contributed to improved compliance with permitted discharge criteria. The outcomes and recommendations of the various monitoring reports have been used to inform management's environmental management plans.

## Acid mine drainage

Acid mine drainage is the occurrence of highly acidic water, usually containing high concentrations of metals, sulphides and salts as a consequence of mining activity. Major sources of acid mine drainage include drainage from underground mine shafts, run-off and discharge from open pits and mine waste dumps, tailings and ore stockpiles. Tailings and ore stockpiles make up nearly 88% of all waste produced in South Africa.

We manage fissure water at all of our operations. When there is a risk that rising water levels underground could either hinder access to our own ore reserves, those of other operations or harm the environment, water is pumped to surface. Our water management strategy includes intercepting this water before it is polluted underground. When brought to surface, it is consumed as plant intake. As the mines in the Witwatersrand Basin are interconnected, any tactical response to acid mine drainage on mine closure must be considered from a regional perspective. We continue to work closely with our regional partners to identify the long-term risks of acid mine drainage and to establish sustainable solutions.

In 2012 and 2013, geohydrological assessments were undertaken in the Free State region, Kalgoud and Doornkop. With regard to acid mine drainage, the studies confirmed that there was no risk of decant from the Free State operations or Kalgoud. From the perspective of surface water pollution, rehabilitation has been prioritised at the joint metallurgical scheme site and the acid plant site in the Free State, and at the decommissioned shafts and infrastructure in the Free State and at Kusasaletu.

Water is being discharged from our Doornkop operation under directive and is in the licensing process. Based on the draft licence received, Doornkop is able to comply with its licensing conditions. An intensive water-monitoring programme is in place and reporting to the regulator takes place routinely.

In Papua New Guinea, the issue is with acid rock drainage (which is the same as acid mine drainage) as a result of waste rock dumps. Environmental impacts are mitigated by the construction of engineered waste dumps and controlled placement of potentially acid-forming waste rock. When required, lime is added to the process-water discharge to maintain natural levels of alkalinity at the compliance point. Water sampling and studies continue to improve our understanding of acid rock drainage impacts, and enable us to formulate plans for longer-term reduction and mitigation.

## LAND MANAGEMENT AND ENVIRONMENTAL CONSERVATION

We recognise that we are custodians of the land we affect and manage. While some aspects of our operations – particularly open-pit mining, waste and tailings deposition and the construction of physical structures – entail altering the physical landscape permanently, we believe that, once mining has come to an end, it is important to rehabilitate the land to effective and appropriate post-mining land use. Rehabilitation and closure have, therefore, been incorporated into overall planning from concept stage for new operations and during the life of mine for existing operations. This includes ensuring that the necessary funding mechanisms are in place. Continuous efforts are made to identify land for rehabilitation and, where feasible, we refurbish infrastructure for use by local communities.

### Biodiversity, land management and conservation

**Relevant Global Reporting Initiative indicators: G4-EN12, G4-EN14, G4-EN31, MM1, MM2**

Harmony has strategies in place to manage the impacts of our operations on biodiversity. Environmental rehabilitation activities to restore the habitat for native species are on-going.

Biodiversity management plans are implemented at all sites, either through their respective mine closure plans, environmental management plans or specific biodiversity action plans – whichever is the most appropriate. Biodiversity action plans involve the protection and conservation of indigenous plants as well as the planned, progressive removal of alien and invasive plant species. In addition, in the Free State, a nursery has been established on rehabilitated ground to cultivate indigenous species to be used to repopulate affected or remediated land. Harmony has approximately 65 000ha of land under management in mining rights and disturbed areas that are under rehabilitation. None of our producing operations are in areas of high biodiversity value, inside or outside protected areas, and only one of our operational areas affects listed International Union for Conservation of Nature Red Data species (see page 115).

The following conservation projects are underway in the Free State:

- **Avianator programme:** This is a partnership with BirdLife South Africa. We provided the financial resources to design the curriculum and the funds for its implementation while BirdLife South Africa presented the course.

The course teaches young people about the value of birds and of their respective habitats. Additional curriculum resources are provided to the teachers together with training and monitoring modules to ensure success of the project. Since its inception in 2013, Harmony's donation enabled BirdLife South Africa to assist 10 underprivileged schools during FY15 to improve the teachers' skills in teaching the children about birds and their habitats. Through Harmony's support the programme has expanded to include an additional seven schools in Thabong, a township on the outskirts of Welkom.

- **Flamingo conservation project:** Harmony has entered into a memorandum of understanding with BirdLife South Africa to design conservation measures for the Lesser Flamingo in the Welkom district. Subsequently the partnership with BirdLife South Africa has grown, by undertaking a project to determine the suitability of the identified sites to build a breeding island for flamingos. Various community engagements will be undertaken to garner support for the project, which can not only benefit conservation of the flamingo, but can also promote tourism and possibly employment in the region identified.

Although Hidden Valley is not located in a biodiversity-protected area, five species on the International Union for Conservation of Nature Red Data List occur in the vicinity of the mine. There is no evidence that the mine has affected this critical habitat. These five species include the vulnerable tree kangaroo (*Dendrolagus dorianus*), an endangered species of tree kangaroo (*Dendrolagus goodfellowi*), the vulnerable nectar bat (*Syconycteris hobbit*), the vulnerable harpy eagle (*Harpyopsis novaeguineae*) and the critically endangered long-beaked echidna (*Zaglossus bruijnii*).

## NOTEWORTHY ACTION

### LAND MANAGEMENT AND RADIATION

Radiation has a health impact – a result of ingestion or prolonged exposure – and an environmental impact, given its extreme longevity and ability to sterilise affected areas. Licensing that demonstrates responsibility with regard to health, safety and environmental perspectives is required for each site from the National Nuclear Regulator. Site-specific gamma energy surveys are conducted at the decommissioned sites. Land clearance surveys are conducted on all land released into the public domain. Public safety assessments are being updated and will be submitted to the National Nuclear Regulator by March 2016. These assessments are based on specialist studies of human behaviour, as well as the quality of air and groundwater.

Although radiation presents a low-level risk at our mining operations, it is nevertheless effectively planned for and managed. Spills are reported to the regulators and cleaned up, and close-out reports are then submitted to the National Nuclear Regulator. Access control and signage is in place around process water dams and tailings dams to warn members of the public not to enter these areas.

In 2009, Harmony implemented a radiation quality management system, which complies fully with the requirements of the National Nuclear Regulator and, because it is ISO 9001-based, it requires continuous inspection. The quality systems audit conducted in 2015 confirmed that Harmony was 100% compliant regarding its management system for the third consecutive year.

Surface radiation is managed by reducing the extent of affected areas, especially at legacy sites, in line with legal compliance, and by reducing our environmental liabilities. Radiological clearance surveys are conducted at decommissioned sites. Radiological clearance reports are compiled and submitted to the National Nuclear Regulator to ensure the future declassification of these areas. A closure report for the area surrounding Eland shaft has been submitted to the National Nuclear Regulator.

Rehabilitation has been prioritised at the joint metallurgical services site in the Free State. Rehabilitation is also paramount at the decommissioned shafts in the Free State and at Kusasalethu's Deelkraal section.

Harmony's proposed rehabilitation methodology – which includes the use of phytoremediation – is supported by the Department of Mineral Resources and the National Nuclear Regulator. Phytoremediation involves the use of certain plants (these have been tested) to absorb radioactivity and our pollution sources from the ground into the plant structure. The harvested plants are disposed of at the tailings dam where the uranium and pollutants are consolidated. In this way, the pollution is removed without harm or wastage of the topsoil. Phytoremediation is more environment-friendly than traditional radiation rehabilitation methodologies, which require the removal of large volumes of topsoil and sub-soils, and create large cavities and further environmental deterioration. Phytoremediation has been used successfully in the Chernobyl area in the Ukraine.

# ENVIRONMENTAL PERFORMANCE CONTINUED

## Rehabilitation and closure

Land management (ha)	Mining right area	Land disturbed to date	Land rehabilitated in FY15
Kalgold	991	484	0
Kusasaletu and Deelkraal	5 605	302	5
Doornkop	905	296	0
African Rainbow Minerals Gold shafts (1, 2, 3, 4, 6 and 7)	5 980	351	4
Joel (1 and 2)	2 162	253	0
Target (1, 2 and 3)	4 327	257	0
President Steyn South (Steyn 1, 2 and plant)	1 847	57	5
President Steyn North (Steyn 7 and 9)	1 651	193	0
Virginia, Masimong, Saaiplaas, Unisel, Merriespruit, Harmony and Brand	22 583	3 349	1
Bambanani, Joint Metallurgical Services, Harmony One plant	2 356	1 346	66
Eland, Kudu, Sable, Nyala, Tshepong, Phakisa, Western Holdings 5	10 799	1 580	0
St. Helena 2, 4, and 8	4 912	446	0
St. Helena 10	944	8	0
Papua New Guinea	4 098	533	3
<b>Total</b>	<b>69 160</b>	<b>9454</b>	<b>83</b>

Only a small proportion of the land (15%) we manage has been disturbed by mining. Given that much of the affected land is in use, the opportunities for progressive and concurrent rehabilitation are limited. In FY15, the total rehabilitation liability for our South African operations was R2.21 billion (FY14: R2.2 billion). Harmony's rehabilitation liabilities are fully funded in advance by means of trust funds, insurance guarantees and bank guarantees.

Rehabilitation of our decommissioned operations in the Free State and at Kusasaletu's Deelkraal section in Gauteng province started in FY10 with the aim of reducing our environmental liabilities, eliminating potential safety and health exposures, and working with provincial authorities to meet socio-economic imperatives. Sites which have been demolished during the course of this year include African Rainbow Minerals Gold 4 shaft, Brand 3 shaft and Brand Main Office complex, Harmony 1 ventilation shaft, continued demolition of the decommissioned Steyn gold plant and finalisation of the Deelkraal shaft. In addition Harmony's bio-energy project in the Free State province has also assisted in reducing the environmental liability. Areas currently being demolished include Steyn gold plant, Saaiplaas 3 shaft, St Helena 4 hostel, St Helena 8 and 10 shafts and Brand 5 shaft.

The total number of shafts demolished to date is 32 (including ventilation shafts with many defunct workshops and hostels also having been demolished).

During the year, while rehabilitating the Brand 1A shaft near Welkom in the Free State province, an explosion took place which caused damaged to local houses and businesses. No one was seriously injured as a result of the accident. For more information, please refer to page 64 in the Safety and Health section of this report.

This rehabilitation programme reduced our closure liability by R21 million in FY15 and provided employment for at least 100 local residents in FY15.

In Papua New Guinea, land clearing for mining and processing operations is closely managed by permits issued by the environment and community affairs departments. The high altitude and extremely rugged terrain and heavy rainfall result in very high levels of surface water run-off, which makes it extremely challenging to rehabilitate cleared surfaces. In addition, Hidden Valley and Golpu are in a geologically active zone and experience frequent earthquakes and landslides. Steep surface rehabilitation is a dangerous and high-risk activity. Staff are specially trained and use special equipment to rehabilitate steep slopes.

The joint venture partners have compiled a template and guide for the preparation of a closure plan and the associated costs, which was completed in the fourth quarter of FY15. Site personnel will prepare a revised closure cost, using this guide, and submit the closure plan and costs to the owners and a third-party auditor for review and agreement. Operational staff will play a greater role in the preparation of the revised closure plan and associated cost estimate.

## MANAGING OUR EFFLUENTS AND WASTE

### Relevant Global Reporting Initiative indicators: G4-EN22, G4-EN23, G4-EN24 and MM3

Harmony's mining and processing operations generate mineral and non-mineral waste. The effective management of waste is a priority as this can reduce our environmental impacts and mitigate our environmental liabilities. We understand the actual cost of waste management, and this assists us in planning for new projects and mine closure. As part of this process, we maximise recycling and waste reduction during the life of a mine and design for waste minimisation and mineral waste reclamation (such as waste rock from dumps as aggregate) so as to minimise our total mining environmental footprint.

Internally developed mineral, non-mineral and hazardous waste materials guidelines are included in the environmental management systems which are implemented at all of Harmony's operations. At Harmony, we understand that waste management begins with waste's initial generation and encompasses its handling, storage and transport as well as its recycling, treatment and/or disposal.

Our primary sources of mineral and non-mineral waste are:

- The tailings accumulated in tailings storage facilities, which may be active or dormant. These facilities are large areas usually located in a natural hollow, valley or an embankment used to provide safe, permanent storage of tailings material. In the tailings storage facilities, the finely ground rock and water that together make up tailings will separate. About 35% of tailings are solids that will settle. The balance is water that accumulates on the surface to form a tailings pond. Tailings ponds provide an important water source for mine operations. Tailings water is usually pumped back to the mill to be re-used in the milling process. Tailings consist of overburden rock which is made up of soil, gravel and other loose materials that cover the surface of a mine site, ore which is rock that contains high concentrations of minerals such as gold, molybdenum and silver and mine rock which is solid material removed from an open pit. The design and management of tailings storage facilities are subject to rigorous regulation and are factored into our environmental management plans. A large number of our dormant tailings storage facilities were acquired as part of various transactions by Harmony over many years, and were not necessarily established by Harmony
- Material accumulated in waste rock dumps. Overburden or waste rocks are both a product of drilling and blasting, and are transported to these dumps. The waste rock dumps are man-made surface dumps located near a mine, where development rock which does not contain valuable minerals and which had to be removed from the mine has been deposited. Waste rock dumps may be re-used as construction material, subject to the approval of the National Nuclear Regulator – this approval is necessary specifically for road construction
- Scrap steel – this steel has been reclaimed in the rehabilitation exercise being undertaken at the shafts which have been decommissioned in the Free State and at Deelkraal. Decontaminated steel is sold for recycling to scrap dealers authorised by the National Nuclear Regulator and in accordance with its procedures regarding decontamination, the monitoring of radioactivity and the final release of the material
- Scrap timber – this originates from timber that has been in use as support in the underground stopes. All timber supplied to Harmony is certified by the Forest Stewardship Council which assures forest rotation in South Africa. As part of our bio-energy programme, we will be looking into introducing the timber and wood chips into our bio-energy plant

(000t)	FY15	FY14	FY13	FY12	FY11 <sup>1</sup>
Accumulated tailings in tailings storage facilities (active and dormant)	1 400 273	1 382 178	1 359 770	1 433 760	6 039
Accumulated waste rock dumps	196 692	190 128	169 115	165 085 <sup>2</sup>	82 751
Scrap steel	4.996	4.919	5.583	10.355 <sup>2</sup>	8.973

<sup>1</sup> Data for FY11 for Papua New Guinea only

<sup>2</sup> New reporting indicator for South Africa from FY12, FY13 onwards with consolidated group data being reported

### Mineral waste

Tailings are made up of crushed rock and process water emitted from the gold elution process in the form of a slurry once the gold has been extracted. The composition, size and consistency of tailings vary by operation, with the opencast operations producing greater volumes of tailings in general than the underground operations. Tailings and waste rock are usually inert, but rock close to the ore body may be associated with radiation or salts if these are characteristic of the ore body.

Since tailings do contain impurities or pollutants, in terms of our water management programme, they are placed on an engineered tailings dam to contain the slime. The fines are also collected and deposited on the tailings. Water is collected from the toe drains and penstocks and is channelled to the return water dam where it is available to be re-used by the plant.



# ENVIRONMENTAL PERFORMANCE CONTINUED

In the process, the cyanide present is destroyed – it self-destructs on the tailings when exposed to light – but salts and heavy metals can enter into ground water and create a pollution plume. We monitor our groundwater to ensure that such pollution plumes are contained. The public safety assessments have illustrated that such plumes (radionuclide contaminant plumes) will in all likelihood be contained in the tailings storage or water management facilities for hundreds to thousands of years and that the potential polluted plumes originating from the tailings storage facilities will only travel between 10m and 100m from these facilities in a 10 000-year period.

Effective mineral waste management not only reduces the aesthetic and land use challenges of mining, particularly during closure, but also reduces the potential for water and air pollution as well as maximising the recovery of ore, minerals and metals. Improved mineral waste management can result in significant savings and a reduction in energy consumption. Residual economic value can be generated from projects such as our Phoenix reclamation initiative.

Mineral waste has a significant impact on land. At Harmony, all chemically reactive or radioactive waste is appropriately handled so as to protect employees, communities and the environment.

Harmony manages the environmental impacts of mineral waste by:

- Minimising the quantity of material stored so as to limit the extent of the footprint of land disturbed
- Ensuring storage sites are physically and chemically safe, and well-engineered
- Undertaking progressive rehabilitation – returning affected land to productive use after mining

In Papua New Guinea a waste rock management plan, including acid rock drainage management strategies, was submitted to the Conservation and Environment Protection Authority for review and approval.

Hidden Valley's advanced waste management systems have generated positive feedback from stakeholders particularly the tailings storage facility which is the first large tailings storage facility to be operated successfully in Papua New Guinea. The review of the laws relating to management and disposal of tailings is now on an indefinite hold and the regulatory focus of the Mining Policy and Geohazard Department is on completing the revised Mining Policy, Act and related new regulations approved in 2015.

In FY15, 24.7Mt of mineral waste were generated from gold production (FY14: 33.5Mt), comprising 6.6Mt of waste rock and 18.1Mt of tailings (FY14: 12.8Mt waste; 20.7Mt tailings).

## Non-mineral waste

Non-mineral waste – such as plastics, steel, paper and timber – is generated by processing operations and is produced in smaller volumes than mineral waste. This waste is managed by recycling, off-site treatments, disposal or on-site landfills. The impacts of non-mineral waste can be reduced by recycling and re-using where possible. Harmony ensures the responsible storage, treatment and disposal of non-mineral waste.

Group environmental standards for non-mineral waste management have been rolled out throughout the group and are currently being integrated into existing ISO 14001 systems.

In FY15, 9 059 tonnes of waste (plastic, steel, wood and paper) were recycled (FY14: 7 892 tonnes), generating R5.2 million (FY14: R8.3 million).

## ENVIRONMENTAL PROTECTION EXPENDITURE AND INVESTMENT

### Relevant Global Reporting Initiative indicators: G4-EN22

Total expenditure by Harmony on its environmental portfolio in FY15 was R64 million, of which R34 million was spent in South Africa and R30 million in Papua New Guinea (FY14: R68 million, R34 million in South Africa and R34 million in Papua New Guinea). The total FY16 operational budget for the environment in Hidden Valley is R30 million (US\$2.6million) (PNGK6 981 048). In addition, R30 million (US\$2.6million) has been committed to the implementation of the bio-energy initiative over the next two years.

## OUTLOOK

We continue to pursue our five-year environmental objectives:

Group aggregate targets FY14 – FY18	Baseline	Performance	
Baseline FY13		FY15	FY14
• Reduce amount of water used for primary activities (intensity and absolute) by 4.5%	Absolute: 18 556ML Intensity: 1.01m <sup>3</sup> /t	Absolute: 14 614ML Intensity: 0.81m <sup>3</sup> /t	Absolute: 16 495ML Intensity: 0.88m <sup>3</sup> /t
• Total environmental legal compliance	0 fines	1 fine	0 fines
• Improve on percentage of water recycled (intensity and absolute) by 5%	60%	72%	60%
• Implementation of 80% of biodiversity action plans	All operations have biodiversity action plans	All operations have biodiversity action plans	All operations have biodiversity action plans
• Reduce land available for rehabilitation by 2%	9 948ha	9 454ha	9 416ha

Baseline FY08			
• Reduce absolute electricity consumption by 3%	4 422 000MWh	2 667 375MWh	2 816 443MWh
• Reduce intensity of electricity consumption (MWh/t treated) by 2%	0.35MWh/t	0.15MWh/t	0.15MWh/t
• Reduce total carbon emissions by 3%	5 343 000t CO <sub>2</sub> e	3 439 536t CO <sub>2</sub> e	3 481 278t CO <sub>2</sub> e
• Reduce carbon emission intensity (CO <sub>2</sub> /t treated) by 2%	0.3t CO <sub>2</sub> e/t	0.19t CO <sub>2</sub> e/t	0.18t CO <sub>2</sub> e/t



Solar geysers in Slovoville near Doornkop

# OPERATIONAL PERFORMANCE

Achievements	Challenges
<ul style="list-style-type: none"> <li>Measured in terms of fatalities, best safety performance recorded in 14 years</li> <li>Bambanani currently the lowest cost underground mine with an all-in sustaining cost of less than US\$800/oz for FY15, with the highest underground recovered grade in South Africa of 12.70g/t</li> <li>Kusasaletu successfully restructured to ensure its return to profitability</li> <li>Productivity for our South African operations improved by 8% for in-service employees and contractors to 43.6 tonnes per individual in FY15 (FY14: 40.3)</li> <li>Underground grade stable at 4.75g/t for the year</li> </ul>	<ul style="list-style-type: none"> <li>To increase margins in lower gold price environment through on-going operational restructuring</li> <li>Balancing union wage demands with a call to preserve jobs and ensuring the sustainability of our business</li> <li>Improving mining discipline</li> <li>Improving delivery in line with operational targets</li> <li>To further improve productivity</li> <li>Keeping pace with an inflationary environment</li> <li>Improving Hidden Valley's performance to increase profitability and extend the mine's life</li> </ul>

## WHY OUR OPERATIONAL PERFORMANCE IS MATERIAL

Gold mining and gold production are central to Harmony's existence. Maintaining and growing our margins as efficiently as we can is essential to sustaining our business and meeting our strategic objectives. This includes delivering safely on our operational plans, reducing costs, improving productivity and maximising revenue.

Our approach takes into consideration the long-term sustainability of the company as a whole. In the current environment of high-cost inflation and lower gold prices, we aim to mine those areas which will return cash flow sooner and to delay major capital expenditure (although not at the expense of safety or future viability).

By sustaining the company as a whole, we are able to pay salaries and wages to the people we employ, taxes to the national fiscus and dividends to our shareholders, to continue to be an effective and responsible custodian of the environment and to give back to the communities in which we operate.

The revenue we generate and ultimately the profit we make are determined by the price received for the gold we sell, and this is determined principally by the prevailing gold price measured in US dollars on world markets. Furthermore, the prices received in our operational and functional currencies – the South Africa rand and the Papua New Guinea kina which affect 91% and 9% of our production respectively – are governed by the prevailing exchange rates in terms of the US dollar. The kina is our functional currency in Papua New Guinea and these values are in turn converted into rands, Harmony's presentation currency.

We are price takers and have no influence on the gold price or exchange rates. However, in most cases the effect of a lower US dollar gold price is mitigated by a decline in the exchange rate of the rand and/or kina versus the US dollar, which increases the rand price and/or kina price received per ounce of gold. The contra-cyclical behaviour of the US dollar price of gold and the rand-US dollar and kina-US dollar exchange rate often work to our advantage.

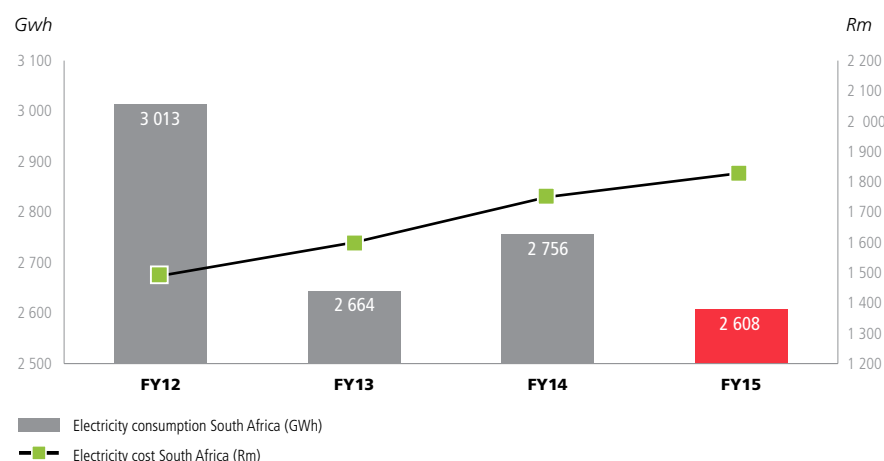
In line with our strategy to increase our margins, Target 3 was closed in October 2014 and Kusasaletu, Doornkop, Masimong and Hidden Valley were all restructured to return these mines to profitability.

Gold production was 8% lower year on year at 1.08Moz, due largely to the closure of the unprofitable Target 3 operation and a significant reduction in gold production at Kusasaletu and Hidden Valley during the year.

Inflationary pressures continue to weigh heavily on our margins and during the year we persisted with efforts to reduce costs and restructure our operations for profitability. Despite increases, especially in power and labour costs, cash operating costs in rand terms increased by just 3% year on year (7% decrease in US dollars). Owing to the reduction in gold production, however, cash operating costs increased by 12% in terms of rands per kilogram and by 1.5% in terms of US dollars per ounce.

The graph below illustrates our success to date with regard to fighting inflationary electricity price increases. Although Eskom has imposed an 81% cumulative price increase since FY12, we have saved 13% on power usage in the past four years, which, combined with improved scheduling of consumption, has limited the increase in Harmony's electricity costs to 23%.

### Electricity consumption vs cost



Our people are our biggest asset and maintaining good employee relations is essential to the sustainability of our company. Our focus is on creating an environment in which our employees can strive, be efficient and productive. Various wellness and communication initiatives are embedded in our culture. For more detailed information on engagement with our employees and their performance, please refer to the Employees and Communities section in this report on page 78, as well as the Health and Safety section on page 65.

## FINANCIAL PERFORMANCE

Our focus is on producing profitable ounces, safely. Although some operations managed to achieve their plans, under-performance at some of our biggest mines – such as Kusasalethu, Doornkop and Hidden Valley – resulted in our overall production results for the year being very disappointing.

The average US dollar gold price received in FY15 was US\$1 222/oz compared with US\$1 299/oz in FY14, a decline of 6%. During FY15 the rand weakened 11% against the US dollar, from R10.35 in FY14 to R11.45, resulting in a 4% increase in the rand gold price received from R432 165/kg to R449 570/kg.

At year-end, our all-in sustaining cost was R458 626/kg, compared with R413 433/kg in FY14, while the all-in sustaining cost in US dollar terms remained stable at US\$1 246/oz year on year.

Our translated costs in US dollars are very sensitive to the exchange rate of the rand and other currencies in terms of the US dollar. The primary reason for the cost remaining stable in US dollar terms is the weakening of the rand against the US dollar in FY15. Amounts are translated from rands to US dollars at an average of R11.45 for FY15 (FY14: R10.35 and FY13: R8.82).

## MAJOR CHALLENGES

The major challenges faced during the year and their respective mitigation plans were:

- Safety:** Safety is Harmony's key priority. Our various safety initiatives – see page 61 – assisted in reducing the number of accidents at all of our mines. Regrettably, we did have nine fatalities (FY14: 22 fatalities) at our operations during FY15. The fatalities, together with the Section 54/55 notices issued by the Department of Mineral Resources to stop operations until they were declared safe, resulted in an estimated production loss of 588kg (18 905oz). We had seven underground fires during the year (four fires at Kusasalethu, two at Masimong and one at Doornkop), with no loss of life or serious reportable incident – proof that our employees are more safety conscious. We lost about 200kg (6 430oz) in total during the year due to stoppages as a result of fires. For more detailed information on our safety performance, please refer to the section on Health and Safety (page 58) in this report.
- Infrastructure and equipment failure:** Infrastructure and equipment maintenance remains a daily focus at all our mines. The majority of the infrastructure problems experienced at Kusasalethu in FY14 were resolved during FY15. At the South African mines the senior engineering capacity, safety management and operational risk management were enhanced.



## OPERATIONAL PERFORMANCE CONTINUED

- **Managing operational risks:** While the management of operational risks is integral to the management of our business, we need to improve our execution. Gold mining is a value chain that can only be optimised if a risk management plan is in place and all supporting systems are functioning efficiently. Managing risks effectively while working safely and being pro-active are core to our success. Safety hazards and operational business risks are identified and dealt with continuously at each of our operations.
- **Achieving our operational plans:** Bambanani achieved its FY15 plan while Tshepong, Target 1, Joel, Phakisa, Unisel, Phoenix, Kalgold and surface sources came closer to achieving their plans for FY15. In preparing our plans for FY16, our emphasis was on matching the capital and human resources required with the production profile and profitability. We also plan for year on year improvements by removing bottlenecks, optimising development and being profitable.
- **Increasing recovered grades** remains a key objective. The closure of loss-making mining sections at Kusasalethu will have a positive effect on the overall grade in FY16. The average underground grade recovered for the year remained stable at 4.75g/t compared to 4.77g/t in FY14.
- **Productivity:** Enhancing productivity of our workforce has involved its restructuring and streamlining. A more pro-active approach to healthcare has assisted in reducing the high levels of absenteeism and sick leave taken from 8.90% to 8.05%. Healthcare is decentralised and therefore employees have access to primary healthcare services on site (health hubs). As high blood pressure is one of our most serious healthcare concerns, the localised health hubs enable us to better monitor employee health and treatment programmes. This too has contributed to improved health levels and less absenteeism. For more information, please refer to the section on Safety and Health on page 65.

The benefits of a healthier workforce are reflected in improved productivity rates at year-end, with overall productivity per in-service employee including contractors of 43.6 tonnes per individual (FY14: 40.3). Harmony's underground productivity figures regressed slightly, from 91.49g/total employee per month costed in FY14 to 89.1g/total employee per month costed for FY15. Productivity at Hidden Valley in Papua New Guinea was reported at 228g/total employee costed (FY14: 277g/total employee costed).

Employees qualify for various bonuses based mainly on safety performance, and tonnes and grades mined – all in an effort to increase productivity.



Bambanani underground



## OUTLOOK FOR FY16

Relevant Global Reporting Initiative indicators: G4-EC7 and G4-EC8

### Our approach towards our FY16 operational planning:

Harmony's management is devoted to improving the company's operational performance. Our values are entrenched in everything we do – safety, accountability, achievement, being connected and honest – and they inform our decisions and our actions. Realistic planning supports our strategy to optimise assets – our ore bodies, our infrastructure and our people. This will ensure safer, more profitable production.

### Highlights of what we expect for FY16:

- All operations to be profitable by the end of the financial year
- An increase in both total production and underground recovered grade
- Bambanani to remain the most profitable operation in the group and in South Africa as a whole
- Kusasalethu to return to profitability by focusing on high grade areas, reducing its electricity usage and splitting reef and waste tonnes going forward
- Phakisa to be profitable by the end of FY16 and will build up production by increasing volumes while grades will remain stable
- Joel to be marginally cash flow positive, given capital required to develop decline shaft
- Tshepong's production to improve due to higher volumes and a higher recovered grade
- Masimong to be profitable with a shorter life of mine, following restructuring
- Doornkop to generate profits later in FY16 post its restructuring
- Hidden Valley's restructuring should yield a profitable outcome in FY16

Our guidance per operation for FY16 is provided in the tables below:

Operation	FY16 production (oz)	FY16 Cost and capital R/kg	FY16 Cost and capital US\$/oz	Life of mine (years)
Kusasalethu	170 000 – 190 000	410 000 – 440 000		25
Phakisa	90 000 – 110 000	450 000 – 490 000		11
Tshepong	120 000 – 140 000	425 000 – 450 000		20
Target 1	110 000 – 130 000	410 000 – 440 000		10
Bambanani	80 000 – 100 000	260 000 – 300 000		6
Doornkop	70 000 – 90 000	440 000 – 460 000		15
Masimong	65 000 – 80 000	420 000 – 455 000		3
Unisel	45 000 – 55 000	430 000 – 465 000		5
Joel	60 000 – 75 000	410 000 – 440 000		11
<b>Underground operations</b>	810 000 – 970 000	425 000 – 450 000		
Hidden Valley	80 000 – 95 000	395 000 – 425 000		3 – 6
Various surface	50 000 – 55 000	410 000 – 445 000		15+
Kalgold	30 000 – 40 000	420 000 – 450 000		14
<b>Total</b>	<b>~ 1.1Moz</b>	<b>~ R435 000/kg</b>	<b>~ US\$1 080/oz*</b>	

\* An exchange rate of R12.50/US\$ was used

Our FY16 annual production guidance is aimed at increasing margins. Harmony's strategic plans are based on a gold price of R450 000/kg (or US\$1 230/oz) and an exchange rate of R11.38/US\$).

Our target is to produce 1.1Moz at a total cost, including capital, of R435 000/kg (US\$1 080/oz\*).

# OPERATIONAL PERFORMANCE CONTINUED

Our planned capital expenditure will be spent in line with our strategy. The breakdown of the capital expenditure per operation is outlined below:

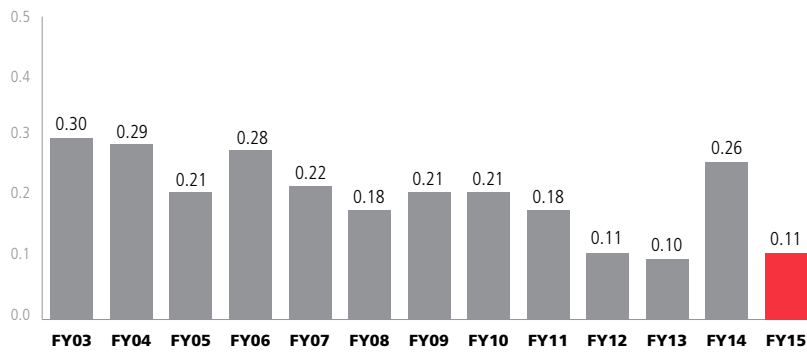
## Capital expenditure

Operation	FY15 (R million)				FY16 – forecast (R million)			
	On-going capital development	Maintenance capital	Growth capital	Total	On-going capital development	Maintenance capital	Growth capital	Total
Kusasaletu	320	143	0	463	283	158	0	441
Phakisa	309	39	56	404	280	26	0	306
Tshepong	231	65	17	313	239	30	25	294
Target 1	216	76	4	296	220	81	13	314
Bambanani	27	35	48	110	27	39	34	100
Doornkop	154	61	30	245	137	13	18	168
Masimong	135	31	0	166	70	15	0	85
Unisel	56	43	0	99	44	17	0	61
Joel	63	38	81	182	68	22	95	185
Target 3	11	9	0	20	0	0	0	0
<b>Underground operations</b>	<b>1 522</b>	<b>540</b>	<b>236</b>	<b>2 298</b>	<b>1 368</b>	<b>401</b>	<b>185</b>	<b>1 954</b>
Hidden Valley	75	46	0	121	71	64	0	135
Various surface	0	10	0	10	0	11	0	11
Kalgold	0	41	0	41	0	39	0	39
<b>Total R million</b>	<b>1 597</b>	<b>637</b>	<b>236</b>	<b>2 470</b>	<b>1 439</b>	<b>515</b>	<b>185</b>	<b>2 139</b>
Exchange rate (R/US\$)	<b>11.45</b>	<b>11.45</b>	<b>11.45</b>	<b>11.45</b>	<b>12.50</b>	<b>12.50</b>	<b>12.50</b>	<b>12.50</b>
<b>Total US\$ million</b>	<b>140</b>	<b>56</b>	<b>21</b>	<b>216</b>	<b>115</b>	<b>41</b>	<b>15</b>	<b>171</b>

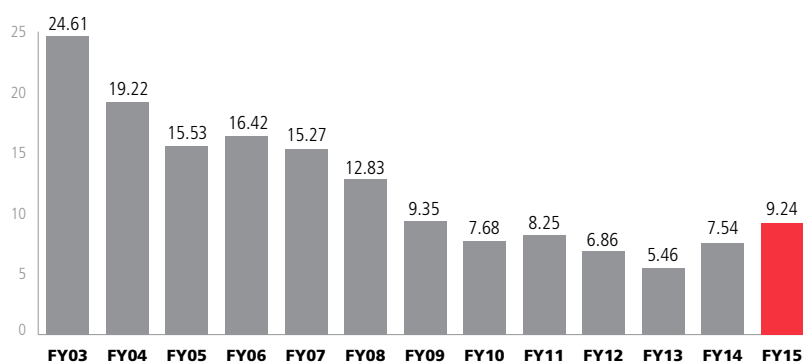
We continue to mine in line with our reserve grades – except at Phakisa, which is still in build-up phase, and at Kusasaletu, which should be mined more in line with its reserve grade following the mine's restructuring.

Operation	Reserve grade (g/t)	Adjusted reserve grade (-5%)	Actual grade (g/t) achieved in FY15	% of reserve grade achieved in FY15	Rating	FY16 grade guidance (g/t)
Kusasaletu	6.18	5.87	4.35	74%	✗	6.5
Phakisa	6.83	6.49	5.10	79%	✗	5.1
Tshepong	5.42	5.15	4.31	84%	✓	4.4
Target 1	5.29	5.03	5.11	102%	✓	4.6
Bambanani	11.33	10.76	12.7	118%	✓	11.5
Doornkop	5.16	4.90	4.42	90%	✓	4.4
Masimong	3.85	3.66	3.68	101%	✓	3.6
Unisel	4.48	4.26	4.06	95%	✓	3.9
Joel	5.24	4.98	4.10	82%	✓	4.2
<b>Underground operations</b>	<b>5.82</b>	<b>5.53</b>	<b>4.75</b>	<b>86%</b>	<b>✓</b>	<b>~5.0</b>

✗	Not yet achieved (below 80%)
✓	Close to target grade (80 to 90%)
✓	Achieved target grade (90% plus)

**Fatality injury frequency rate***Harmony total***FY15 Contribution to production by operation (%)**

Tshepong	13
Kusasaletu	12
Target 1	11
Hidden Valley	9
Phakisa	9
Bambanani	9
Doornkop	8
Masimong	7
Joel	7
Unisel	5
Kalgold	4
Phoenix	3
Dumps	2
Target 3	1

**Lost-time injury frequency rate***Harmony total**Tshepong headgear*

# OPERATIONAL PERFORMANCE CONTINUED

## SOUTH AFRICA – DEEP-LEVEL MINING

### Bambanani

		FY15	FY14	FY13
<b>Number of employees</b>				
– Permanent		1 517	1 584	1 190
– Contractors		330	444	452
Total		1 847	2 028	1 642
<b>Operational</b>				
Volumes milled	(000t) (metric)	229	206	164
	(000t) (imperial)	253	227	180
Gold produced	(kg)	2 908	2 576	1 606
	(oz)	93 495	82 821	51 635
Gold sold	(kg)	2 947	2 567	1 591
	(oz)	94 748	82 530	51 152
Grade	(g/t)	12.70	12.50	9.79
	(oz/t)	0.370	0.365	0.287
<b>Development results</b>				
Total metres		1 150.3	1 092	734
Reef metres		14.7	0	0
Capital metres		0	0	21
Productivity	(g/TEC)	153.08	157.73	113.80
<b>Financial</b>				
Revenue	(Rm)	1 330	1 111	717
	(US\$m)	116	107	81
Average gold price received	(R/kg)	451 200	432 706	450 933
	(US\$/oz)	1 226	1 300	1 590
Cash operating cost	(Rm)	697	574	469
	(US\$m)	61	55	53
Production profit/(loss)	(Rm)	625	537	262
	(US\$m)	55	52	30
Capital expenditure	(Rm)	110	125	115
	(US\$m)	10	12	13
Cash operating cost	(R/kg)	239 552	222 764	292 136
	(US\$/oz)	651	669	1 030
All-in sustaining cost	(R/kg)	276 855	263 867	325 497
	(US\$/oz)	752	793	1 148
<b>Safety</b>				
Number of fatalities		1	1	0
Lost-time injury frequency rate per million hours worked		4.63	7.46	6.56
<b>Environment</b>				
Electricity consumption	(GWh)	133	143	143
Water consumption – primary activities	(ML)	1 731	1 665	1 431
Greenhouse gas emissions	(000t CO <sub>2</sub> e)	137	142	142
Intensity data per tonne treated				
– energy		0.59	0.69	0.87
– water		7.57	8.08	8.72
– greenhouse gas emissions		0.61	0.69	0.87
Number of reportable environmental incidents		0	0	0
<b>Community</b>				
Local economic development	(Rm)	3	3	6
Training and development*	(Rm)	17	13	13

\* Expenditure on training and development at Bambanani includes that at Steyn 2 for FY14 and FY13

**Bambanani** *continued***Other salient features**

Status of operation	Mature operation with focus on mining of the shaft pillar for the next few years after which it will reach the end of its operating life
Life of mine	6 years
Hoisting capacity (per month)	32 256 tonnes (35 556 tons)
Compliance and certification	New order mining right – December 2007 ISO 14001 ISO 9001 OHSAS 18001

**Mineral reserves as at 30 June 2015**

Reserves (metric)	Proved reserves			Probable reserves			Total mineral reserves		
	Tonnes (Mt)	Grade (g/t)	Gold (000kg)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)
	1.6	11.33	18	–	–	–	1.6	11.33	18
Reserves (imperial)	Tons (Mt)	Grade (oz/t)	Gold (000oz)	Tons (Mt)	Grade (oz/t)	Gold (000oz)	Tons (Mt)	Grade (oz/t)	Gold (000oz)
	1.7	0.331	565	–	–	–	1.7	0.331	565

Bambanani, near Welkom and about 262 kilometres from Johannesburg, has two surface shafts (the East and West shafts). Mining is conducted at a depth of 2 365 metres. Activities at the mine focus on the Basal Reef and are limited to shaft pillar extraction. The ore mined is sent to Harmony One Plant for processing. Given the high risk of seismicity at Bambanani, efforts are focused on managing support systems and the rehabilitation of areas with challenging ground conditions.

Bambanani's all-in sustaining costs are less than US\$800/oz, and it is currently our most profitable mine. It is also the lowest cost underground gold mine with the highest recovered grade in South Africa.

Commissioning of the decline shaft and the provision of associated services are planned to be completed by November 2015, after which ore from the Bambanani shaft pillar extraction, currently being hoisted at East Shaft, will be hoisted via West Shaft.

Bambanani's success in achieving its strategic plan for FY15 can be attributed to its continued mining flexibility and management of ground and seismic risks. Management of these risks included additional pumping to prevent rising water in the sub-shaft, monitoring of seismicity of the shaft pillar and identifying any potential deformation of the vertical shaft before the commissioning of the decline shaft.

Gold production increased by 13% to 2 908kg (93 495oz) in FY15. This was primarily due to the achievement of square metres and grades. Recovered gold grades increased by 2% to 12.70g/t (0.370oz/t) while tonnes milled increased by 11% to 229 000t. The increases in gold production and the average gold price received contributed to a 20% increase in revenue to R1 330 million (8% increase to US\$116 million).

Cash operating costs increased by 21% to R697 million (or 11% to US\$61 million), mainly due to the increase in volumes mined and processed which resulted in higher electricity and labour costs.

Capital expenditure decreased by 12% to R110 million (a decrease of 21% to US\$10 million) primarily due to a R34 million (US\$4 million) reduction in expenditure relating to the shaft pillar extraction project. Most of this was spent on the decline shaft.



# OPERATIONAL PERFORMANCE CONTINUED

## Doornkop

		FY15	FY14	FY13
<b>Number of employees</b>				
– Permanent		2 977	2 836	3 238
– Contractors		493	736	842
Total		3 470	3 572	4 080
<b>Operational</b>				
Volumes milled	(000t) (metric)	603	737	1 008
	(000t) (imperial)	665	812	1 112
Gold produced	(kg)	2 663	2 603	3 631
	(oz)	85 618	83 687	116 738
Gold sold	(kg)	2 711	2 633	3 550
	(oz)	87 160	84 653	114 135
Grade	(g/t)	4.42	3.53	3.60
	(oz/t)	0.129	0.103	0.105
Productivity	(g/TEC)	68.47	63.57	87.71
<b>Development results</b>				
Total metres (excl. capital metres)		8 919	8 322	12 501
Reef metres		1 701	1 475	1 625
Capital metres		0	0	0
<b>Financial</b>				
Revenue	(Rm)	1 220	1 126	1 615
	(US\$m)	107	109	183
Average gold price received	(R/kg)	449 857	427 728	454 937
	(US\$/oz)	1 222	1 285	1 604
Cash operating cost	(Rm)	1 071	1 095	1 077
	(US\$m)	94	106	122
Production profit/(loss)	(Rm)	128	28	573
	(US\$m)	12	3	65
Capital expenditure	(Rm)	245	238	285
	(US\$m)	21	23	32
Cash operating cost	(R/kg)	402 065	420 617	296 714
	(US\$/oz)	1 092	1 264	1 046
All-in sustaining cost	(R/kg)	508 743	523 839	380 935
	(US\$/oz)	1 382	1 574	1 343
<b>Safety</b>				
Number of fatalities		1	11	0
Lost-time injury frequency rate per million hours worked		7.14	9.06	5.30
<b>Environment</b>				
Electricity consumption	(GWh)	205	187	216
Water consumption – primary activities	(ML)	733	1 010	760
Greenhouse gas emissions	(000t CO <sub>2</sub> e)	211	186	214
Intensity data per tonne treated				
– energy		0.34	0.25	0.21
– water		1.26	1.37	0.75
– greenhouse gas emissions		0.35	0.25	0.21
Number of reportable environmental incidents		0	0	0
<b>Community</b>				
Local economic development*	(Rm)	37	25	7
Training and development	(Rm)	35	23	17

\* Included in the total for FY15 is an amount of R28 million that was capitalised as part of the hostel upgrades (FY14: R10 million)

**Doornkop** *continued***Other salient features**

Status of operation	Recently completed its restructuring process. Mining takes place on the South Reef at this single-shaft operation.
Life of mine	15 years
Hoisting capacity (per month)	91 480 tonnes ( 100 839 tons)
Compliance and certification	New order mining right – October 2008 ISO 14001 ISO 9001 OHSAS 18001

**Mineral reserves as at 30 June 2015**

	Proved reserves			Probable reserves			Total mineral reserves		
Reserves (metric)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)
	1.3	5.00	7	3.8	5.22	20	5.1	5.16	26
Reserves (imperial)	Tons (Mt)	Grade (oz/t)	Gold (000oz)	Tons (Mt)	Grade (oz/t)	Gold (000oz)	Tons (Mt)	Grade (oz/t)	Gold (000oz)
	1.4	0.146	211	4.2	0.152	636	5.6	0.151	847

Doornkop, a single-shaft operation, is located in the province of Gauteng of South Africa, approximately 30 kilometres west of Johannesburg, on the northern rim of the Witwatersrand Basin. Mining is conducted at a depth of 1 978 metres. The operation focuses on narrow-reef conventional mining of the South Reef. The ore from the operation is processed at the Doornkop plant.

Doornkop's performance was influenced by ever increasing operational costs, unplanned events (the fire and fatal accidents) and low productivity levels. Key challenges, which are receiving management's attention, include the complex geology which necessitates frequent changes to mine layouts, logistical bottlenecks in the horizontal tramming section and the need to reduce costs significantly to improve profit margins.

As Doornkop continued to incur losses, restructuring at the mine became essential given the current gold price environment and the significant capital investment required to sustain operations at this shaft. Consequently, in line with the Labour Relations Act, 66 of 1995, a Section 189A was issued at Doornkop in May 2015. Post year-end, the Section 189A process was concluded on 31 July 2015 with only 528 employees including contractors being affected, most of whom were transferred to vacant positions at other operations. The remaining 186 people chose to be re-skilled for redeployment into alternative positions within the company or accepted the voluntary severance packages offered to Doornkop employees.

Doornkop's life of mine has been shortened to 15 years and emphasis has been placed on creating mining flexibility, achieving stoping targets, reclaiming material from older areas to reduce the cost of consumables and using exploration drilling to improve the geological information available on and confidence levels in the ore body. The new mining plan for Doornkop will focus on mining the higher-grade areas of the South Reef ore body on 192 and 197 levels.

Gold production increased by 2% to 2 663kg (85 618oz) in FY15. Recovered gold grades improved by 25% to 4.42g/t (0.129oz/t) while tonnes milled fell by 18% to 603 000t. The decrease in tonnes milled was due to closure of the low-grade Kimberley Reef section during FY14. The increase in gold production, combined with the increase in the average rand gold price received, resulted in an 8% increase in revenue to R1 220 million (2% decrease to US\$107 million).

Cash operating costs decreased by 2% to R1 071 million (decreased by 11% to US\$94 million).

Capital expenditure increased by 3% to R245 million (decreased by 9% to US\$21 million) and was spent mainly on on-going development.

# OPERATIONAL PERFORMANCE CONTINUED

## Joel

		FY15	FY14	FY13
<b>Number of employees</b>				
– Permanent		1 818	1 594	1 570
– Contractors		81	189	182
Total		1 899	1 783	1 752
<b>Operational</b>				
Volumes milled	(000t) (metric)	551	548	611
	(000t) (imperial)	607	604	674
Gold produced	(kg)	2 258	2 335	3 228
	(oz)	72 596	75 072	103 782
Gold sold	(kg)	2 330	2 308	3 192
	(oz)	74 911	74 204	102 625
Grade	(g/t)	4.10	4.26	5.28
	(oz/t)	0.119	0.124	0.154
Productivity	(g/TEC)	115.65	125.78	173.77
<b>Development results</b>				
Total metres		3 200	2 881	3 303
Reef metres		1 037	1 079	947
Capital metres		338	993	1 271
<b>Financial</b>				
Revenue	(Rm)	1 046	995	1 452
	(US\$m)	91	96	165
Average gold price received	(R/kg)	449 026	430 929	454 880
	(US\$/oz)	1 220	1 295	1 604
Cash operating cost	(Rm)	755	688	667
	(US\$m)	66	66	76
Production profit/(loss)	(Rm)	276	327	798
	(US\$m)	24	32	90
Capital expenditure	(Rm)	182	145	160
	(US\$m)	16	14	18
Cash operating cost	(R/kg)	334 168	294 493	206 737
	(US\$/oz)	908	885	729
All-in sustaining cost	(R/kg)	390 417	338 957	252 342
	(US\$/oz)	1 061	1 019	890
<b>Safety</b>				
Number of fatalities		0	2	2
Lost-time injury frequency rate per million hours worked		3.72	3.25	2.42
<b>Environment</b>				
Electricity consumption	(GWh)	101	103	105
Water consumption – primary activities	(ML)	671	498	654
Greenhouse gas emissions	(000t CO <sub>2</sub> e)	104	102	104
Intensity data per tonne treated				
– energy		0.18	0.19	0.17
– water		1.22	0.91	1.07
– greenhouse gas emissions		0.19	0.19	0.17
Number of reportable environmental incidents		0	0	0
<b>Community</b>				
Local economic development	(Rm)	3	3	7
Training and development	(Rm)	15	11	8

**Joel** *continued*

Other salient features	
Status of operation	Twin-shaft operation – technically challenging
Life of mine	11 years
Hoisting capacity (per month)	47 174 tonnes (52 000 tons)
Compliance and certification	New order mining right – December 2007 ISO 14001 ISO 9001 OHSAS 18001

**Mineral reserves as at 30 June 2015**

	Proved reserves			Probable reserves			Total mineral reserves		
Reserves (metric)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)
	2.0	5.32	11	3.7	5.20	19	5.7	5.24	30
Reserves (imperial)	Tons (Mt)	Grade (oz/t)	Gold (000oz)	Tons (Mt)	Grade (oz/t)	Gold (000oz)	Tons (Mt)	Grade (oz/t)	Gold (000oz)
	2.2	0.155	347	4.1	0.152	621	6.3	0.153	968

Joel is located in the Free State Province and about 292 kilometres from Johannesburg, on the southern edge of the Witwatersrand Basin. The mine comprises two shafts, the North and South shafts. The primary economical reef horizon at Joel is a narrow tabular Beatrix Reef deposit which is accessed via conventional grid development. Mining is conducted at a depth of 1 452 metres. The ore is processed at the Joel plant.

Joel's focus is on maintaining mining grades.

Managing the shaft and project schedules is critical for Joel, given its limited shaft flexibility. The 137 decline project began in October 2014 and the focus currently is to finalise the project in the next two years. First production from this area is expected in July 2017. Joel's future operating life depends on successful completion of the decline shaft system.

High levels of capital expenditure on the decline shaft project will result in low profit margins over the next two years.

Management is addressing potential risks to achieving the production plan, such as expected grade variations, water and gas intersections in the decline shaft barrels and managing the limited hoisting capacity of the North shaft.

Gold production decreased by 3% to 2 258kg (72 596oz) in FY15. Recovered gold grades declined by 4% to 4.10g/t (0.119oz/t) while tonnes milled increased by 1% to 551 000t. The decrease in gold production, offset by the increase in the average rand gold price received, resulted in a 5% increase in revenue to R1 046 million (5% decrease to US\$91 million).

Cash operating costs increased by 10% to R755 million (unchanged at US\$66 million) due to a 9% increase in volumes mined and higher electricity and labour costs.

Capital expenditure increased by 26% to R182 million (increased 14% to US\$16 million) primarily due to 137 decline and on-going development.

# OPERATIONAL PERFORMANCE CONTINUED

## Kusasaletu

		FY15	FY14	FY13
<b>Number of employees</b>				
– Permanent		3 898	5 139	5 023
– Contractors		1 020	1 302	909
Total		4 918	6 441	5 932
<b>Operational</b>				
Volumes milled	(000t) (metric)	908	1 143	711
	(000t) (imperial)	1 001	1 260	784
Gold produced	(kg)	3 953	4 694	2 740
	(oz)	127 092	150 916	88 093
Gold sold	(kg)	4 297	4 531	2 698
	(oz)	138 151	145 673	86 742
Grade	(g/t)	4.35	4.11	3.85
	(oz/t)	0.127	0.120	0.112
Productivity	(g/TEC)	65.59	73.60	42.86
<b>Development results</b>				
Total metres		13 777	15 077	9 361
Reef metres		2436	3 107	1 487
Capital metres		59	–	–
<b>Financial</b>				
Revenue	(Rm)	1 939	1 959	1 213
	(US\$m)	169	189	137
Average gold price received	(R/kg)	451 211	432 358	449 531
	(US\$/oz)	1 226	1 299	1 585
Cash operating cost	(Rm)	1 866	1 830	1 516
	(US\$m)	163	177	172
Production profit/(loss)	(Rm)	(57)	206	(271)
	(US\$m)	(5)	20	(31)
Capital expenditure	(Rm)	463	509	420
	(US\$m)	40	49	48
Cash operating cost	(R/kg)	472 112	389 762	553 358
	(US\$/oz)	1 283	1 171	1 951
All-in sustaining cost	(R/kg)	594 399	522 347	742 033
	(US\$/oz)	1 615	1 570	2 616
<b>Safety</b>				
Number of fatalities		1	3	2
Lost-time injury frequency rate per million hours worked		25.80	9.56	4.25
<b>Environment</b>				
Electricity consumption	(GWh)	682	664	580
Water consumption – primary activities	(ML)	1 342	1 418	2 591
Greenhouse gas emissions	(000t CO <sub>2</sub> e)	702	660	574
Intensity data per tonne treated				
– energy		0.75	0.58	0.82
– water		1.48	1.23	3.64
– greenhouse gas emissions		0.77	0.58	0.81
Number of reportable environmental incidents		1	2	2
<b>Community</b>				
Local economic development*	(Rm)	30	65	21
Training and development	(Rm)	50	37	35

\* Included in the total for FY15 is an amount of R18 million that was capitalised as part of the hostel upgrades (FY14: R52 million)



**Kusasaletu** *continued*

Other salient features	
Status of operation	Minimising costs and increasing volumes are a priority
Life of mine	25 years
Hoisting capacity (per month)	200 000 tonnes (220 460 tons)
Compliance and certification	New order mining right – December 2007
	ISO 14001
	ISO 9001
	Cyanide Code

**Mineral reserves as at 30 June 2015**

	Proved reserves			Probable reserves			Total mineral reserves		
Reserves (metric)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)
	6.5	6.83	44	20.1	5.97	120	26.6	6.18	164
Reserves (imperial)	Tons (Mt)	Grade (oz/t)	Gold (000oz)	Tons (Mt)	Grade (oz/t)	Gold (000oz)	Tons (Mt)	Grade (oz/t)	Gold (000oz)
	7.1	0.199	1 419	22.2	0.174	3 856	29.3	0.180	5 274

Kusasaletu is located about 90 kilometres from Johannesburg, near the provincial border of Gauteng and North West Province. Kusasaletu is situated in the West Witwatersrand Basin and mines the Ventersdorp Contact Reef as its main ore body. The mine comprises twin vertical and twin sub-vertical shaft systems and uses conventional mining methods in a sequential grid layout. Mining is conducted at a depth of 3 388 metres, making it Harmony's deepest mine. Ore mined is treated at the Kusasaletu plant.

Kusasaletu operations were hampered by safety stoppages, underground fires and illegal mining activities during FY15. In November 2014, Kusasaletu was closed for a two-week period during which time we removed all illegal miners and enhanced all our security and access control measures at the mine.

Despite our best efforts – which included establishing a new management team and involving external advisors – the mine has been making losses since December 2012. To restore Kusasaletu to profitability, restructuring of the mine began in December 2014 with the issuing of a section 189A notice in terms of the Labour Relations Act, 66 of 1995. This process, which was concluded in February 2015, impacted 1 271 employees. Kusasaletu's new mine plan is based on the mining of lower volumes at higher grades at a reduced cost. As a result, the old mining areas on levels 78 to 95 have been abandoned.

Investments to improve the plant have been made and include enhanced measures to prevent gold theft. Most of the infrastructure issues experienced in FY14 have been resolved. The mine's ageing infrastructure will continue to require attention and further investment is required to ensure that we meet our production target for FY16. Availability and flexibility of mining panels will be vital to the success of this mine.

A profitable turnaround at Kusasaletu is expected in FY16. Plans to achieve the turnaround include achieving the planned production by increasing the grades we mine from 1 270 cm grams/tonne in FY15 to a targeted 1 450 cm grams/tonne in FY16, splitting reef and waste tonnes, and completing the ventilation and cooling improvement project.

Challenges include maintaining efficiencies at the metallurgical plant, eliminating illegal mining and gold theft, and producing sufficient backfill at the plant for operational support.

Gold production decreased by 16% to 3 953kg (127 092oz) in FY15. This was primarily due to the reduction in tonnes milled. Recovered gold grades increased by 6% to 4.35g/t (0.127oz/t) while tonnes milled fell by 21% to 908 000t. The decrease in gold production, partially offset by the increase in the average rand gold price received, resulted in 1% decrease in revenue to R1 939 million (11% decrease to US\$169 million).

Cash operating costs increased by 2% to R1 866 million (8% decrease to US\$163 million).

Capital expenditure decreased by 9% to R463 million (18% decrease to US\$40 million), mainly due to reduced shaft capital expenditure. Capital was spent mainly on on-going development.

# OPERATIONAL PERFORMANCE CONTINUED

## Masimong

		FY15	FY14	FY13
<b>Number of employees</b>				
– Permanent		2 470	2 868	3 098
– Contractors		99	118	233
Total		2 569	2 986	3 331
<b>Operational</b>				
Volumes milled	(000t) (metric)	670	670	868
	(000t) (imperial)	739	739	958
Gold produced	(kg)	2 463	2 718	3 616
	(oz)	79 187	87 385	116 256
Gold sold	(kg)	2 491	2 708	3 598
	(oz)	80 087	87 064	115 679
Grade	(g/t)	3.68	4.06	4.17
	(oz/t)	0.107	0.118	0.121
Productivity	(g/TEC)	75.27	78.00	99.88
<b>Development results</b>				
Total metres		9 855	10 079	10 600
Reef metres		2 376	1 547	1 574
<b>Financial</b>				
Revenue	(Rm)	1 118	1 171	1 640
	(US\$m)	98	113	186
Average gold price received	(R/kg)	448 867	432 416	455 782
	(US\$/oz)	1 220	1 299	1 607
Cash operating cost	(Rm)	979	978	985
	(US\$m)	86	95	112
Production profit/(loss)	(Rm)	126	188	665
	(US\$m)	11	18	76
Capital expenditure	(Rm)	166	168	171
	(US\$m)	15	16	19
Cash operating cost	(R/kg)	397 380	360 006	272 403
	(US\$/oz)	1 080	1 082	960
All-in sustaining cost	(R/kg)	486 861	450 210	346 557
	(US\$/oz)	1 323	1 353	1 222
<b>Safety</b>				
Number of fatalities		1	2	1
Lost-time injury frequency rate per million hours worked		12.09	15.80	7.31
<b>Environment</b>				
Electricity consumption	(GWh)	184	196	208
Water consumption – primary activities	(ML)	859	874	891
Greenhouse gas emissions	(000t CO <sub>2</sub> e)	190	195	206
Intensity data per tonne treated				
– energy		0.28	0.29	0.24
– water		1.28	1.30	1.03
– greenhouse gas emissions		0.29	0.29	0.23
Number of reportable environmental incidents		0	0	0
<b>Community</b>				
Local economic development*	(Rm)	6	17	15
Training and development	(Rm)	25	20	13

\* Included in the total for FY15 is an amount of R0 million that was capitalised as part of the hostel upgrades (FY14: R11 million)

**Masimong** *continued***Other salient features**

Status of operation	Mature, single shaft operation nearing the end of its life of mine.
Life of mine	3 years
Hoisting capacity (per month)	108 863 tonnes (120 000 tons)
Compliance and certification	New order mining right – December 2007 ISO 14001 ISO 9001 OHSAS 18001

**Mineral reserves as at 30 June 2015**

	Proved reserves			Probable reserves			Total mineral reserves		
Reserves (metric)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)
	1.7	3.87	7	0.2	3.66	1	1.9	3.85	7
Reserves (imperial)	Tons (Mt)	Grade (oz/t)	Gold (000oz)	Tons (Mt)	Grade (oz/t)	Gold (000oz)	Tons (Mt)	Grade (oz/t)	Gold (000oz)
	1.9	0.113	212	0.2	0.107	23	2.1	0.112	235

Masimong is located in the Free State Province, near the city of Welkom and about 260 kilometres from Johannesburg. The Masimong complex comprises an operating shaft (5 shaft), and a second shaft (4 shaft), which, although closed for mining, is used for ventilation, pumping and as a second outlet. Masimong exploits the Basal Reef and the B Reef. Mining is conducted at a depth of 2 050 metres. Ore mined is processed at the Harmony One plant.

In line with our strategy, we restructured Masimong to improve its profitability during FY15 by scaling down ore body development in an effort to reduce costs and increase margins. The restructuring process was completed in June 2015 and the expected life of mine has been shortened to three years.

Factors which will contribute to Masimong's success include quality mining practices and achieving targeted volumes, improved safety performance leading to fewer stoppages, preventing access by illegal miners and being cost efficient.

Essential to the success of this restructuring will be to secure the workforce's commitment towards the end of the life of the mine, while operating the mine at a low profit margin.

Gold production decreased by 9% to 2 463kg (79 187oz) in FY15, mainly due to the lower grades mined, a result of the lower grade yielded by the B Reef than in previous years. A fatality in January 2015 and two underground fires also affected production. Recovered gold grades decreased by 9% to 3.68g/t (0.107oz/t) while tonnes milled remained unchanged at 670 000t. The decrease in gold production and increase in average gold price received resulted in a 5% decrease in revenue to R1 118 million (13% decrease to US\$98 million).

Cash operating costs remained almost unchanged at R979 million (9% decrease to US\$86 million).

Capital expenditure decreased by 1% to R166 million (decreased by 6% to US\$15 million). Capital was spent mainly on on-going development.

# OPERATIONAL PERFORMANCE CONTINUED

## Phakisa

		FY15	FY14	FY13
<b>Number of employees</b>				
– Permanent		3 344	3 460	3 708
– Contractors		392	325	332
Total		3 736	3 785	4 040
<b>Operational</b>				
Volumes milled	(000t) (metric)	611	577	512
	(000t) (imperial)	674	636	565
Gold produced	(kg)	3 118	2 976	2 434
	(oz)	100 246	95 680	78 255
Gold sold	(kg)	3 156	2 963	2 423
	(oz)	101 468	95 263	77 902
Grade	(g/t)	5.10	5.16	4.75
	(oz/t)	0.149	0.150	0.139
Productivity	(g/TEC)	76.99	70.72	53.87
<b>Development results</b>				
Total metres		12 138	11 298	10 684
Reef metres		1 749	1 364	1 191
Capital metres		162	101	184
<b>Financial</b>				
Revenue	(Rm)	1 420	1 284	1 103
	(US\$m)	124	124	125
Average gold price received	(R/kg)	449 969	433 199	455 063
	(US\$/oz)	1 223	1 302	1 604
Cash operating cost	(Rm)	1 166	1 068	986
	(US\$m)	102	103	112
Production profit/(loss)	(Rm)	239	223	121
	(US\$m)	21	21	14
Capital expenditure	(Rm)	403	360	337
	(US\$m)	35	35	38
Cash operating cost	(R/kg)	373 876	358 995	405 077
	(US\$/oz)	1 016	1 079	1 428
All-in sustaining cost	(R/kg)	501 996	486 710	549 340
	(US\$/oz)	1 364	1 463	1 937
<b>Safety</b>				
Number of fatalities		0	1	1
Lost-time injury frequency rate per million hours worked		8.76	7.73	8.80
<b>Environment</b>				
Electricity consumption	(GWh)	143	126	113
Water consumption – primary activities	(ML)	1 155	1 090	880
Greenhouse gas emissions	(000t CO <sub>2</sub> e)	147	125	112
Intensity data per tonne treated				
– energy		0.23	0.22	0.22
– water		1.89	1.89	1.72
– greenhouse gas emissions		0.24	0.22	0.22
Number of reportable environmental incidents		0	0	0
<b>Community</b>				
Local economic development*	(Rm)	12	11	8
Training and development	(Rm)	32	30	26

\* Included in the total for FY15 is an amount of R3 million that was capitalised as part of the hostel upgrades (FY14: R4 million)

**Phakisa** *continued***Other salient features**

Status of operation	Production ramp up continues
Life of mine	11 years
Hoisting capacity (per month)	103 000 tonnes (113 537 imperial tons)
Compliance and certification	New order mining right – December 2007 ISO 14001 ISO 9001 OHSAS 18001

**Mineral reserves as at 30 June 2015**

	Proved reserves			Probable reserves			Total mineral reserves		
Reserves (metric)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)
	6.1	6.61	40	2.1	7.49	16	8.2	6.83	56
Reserves (imperial)	Tons (Mt)	Grade (oz/t)	Gold (000oz)	Tons (Mt)	Grade (oz/t)	Gold (000oz)	Tons (Mt)	Grade (oz/t)	Gold (000oz)
	6.7	0.193	1 294	2.3	0.218	499	9.0	0.199	1 792

Phakisa is located in the Free State Province, some 252 kilometres from Johannesburg. The mine has two shafts, the main Phakisa shaft and the Nyala shaft. The latter is used to hoist rock and serves as a second escape route. Phakisa exploits the Basal Reef. Mining is conducted at a depth of 2 426 metres. Ore mined is processed at the Harmony One plant.

Phakisa achieved planned development metres during FY15, which will ensure future mining flexibility. Build-up of production will continue and the focus will be on achieving planned mine call factor and stoping width targets.

Risks receiving management's focus include the sourcing and training of additional labour in time for the production build up, managing logistical challenges including the single-man winder arrangement, the Koepe rock winder and the rail-veyor™ ore-handling system.

Gold production increased by 5% to 3 118kg (100 246oz) in FY15. This was primarily due to an increase in volumes mined, in line with the planned build-up. Recovered gold grades decreased by 1% to 5.10g/t (0.149oz/t) while tonnes milled increased by 6% to 611 000t. The increases in gold production and the average gold price received resulted in an 11% increase in revenue to R1 420 million (unchanged at US\$124 million).

Cash operating costs increased by 9% to R1 166 million (decrease by 1% to US\$102 million).

Capital expenditure increased by 12% to R403 million (unchanged at US\$35 million), primarily due to the higher rate of on-going development during the year.



# OPERATIONAL PERFORMANCE CONTINUED

## Target 1

		FY15	FY14	FY13
<b>Number of employees</b>				
– Permanent		1 683	1 624	1 629
– Contractors		266	270	250
Total		1 949	1 894	1 879
<b>Operational</b>				
Volumes milled	(000t) (metric)	749	771	717
	(000t) (imperial)	826	851	790
Gold produced	(kg)	3 824	4 493	3 967
	(oz)	122 944	144 453	127 542
Gold sold	(kg)	3 868	4 508	3 925
	(oz)	124 358	144 936	126 191
Grade	(g/t)	5.11	5.83	5.53
	(oz/t)	0.149	0.170	0.161
Productivity	(g/TEC)	172.25	206.06	184.79
<b>Development results</b>				
Total metres		4 174	4 292	3 732
Reef metres		290	436	691
Capital metres		0	0	490
<b>Financial</b>				
Revenue	(Rm)	1 738	1 948	1 794
	(US\$m)	152	188	203
Average gold price received	(R/kg)	449 319	432 031	457 149
	(US\$/oz)	1 221	1 298	1 612
Cash operating cost	(Rm)	1 178	1 049	947
	(US\$m)	103	101	107
Production profit/(loss)	(Rm)	547	897	857
	(US\$m)	48	87	97
Capital expenditure	(Rm)	296	289	331
	(US\$m)	26	28	38
Cash operating cost	(R/kg)	308 156	233 487	238 840
	(US\$/oz)	837	702	842
All-in sustaining cost	(R/kg)	399 642	312 436	338 405
	(US\$/oz)	1 086	939	1 193
<b>Safety</b>				
Number of fatalities		0	0	0
Lost-time injury frequency rate per million hours worked		4.51	1.30	3.66
<b>Environment</b>				
Electricity consumption	(GWh)	242	242	243
Water consumption – primary activities	(ML)	808	790	759
Greenhouse gas emissions	(000t CO <sub>2</sub> e)	249	251	240
Intensity data per tonne treated				
– energy		0.32	0.31	0.33
– water		1.22	1.02	1.06
– greenhouse gas emissions		0.33	0.31	0.33
Number of reportable environmental incidents		0	0	0
<b>Community</b>				
Local economic development	(Rm)	4	4	6
Training and development	(Rm)	30	20	19

**Target 1** *continued*

Other salient features	
Status of operation	Single, cost efficient shaft operation.
Life of mine	10 years
Hoisting capacity (per month)	89 994 tonnes (99 200 tons)
Compliance and certification	New order mining right – December 2007 ISO 14001 ISO 9001 OHSAS 18001

**Mineral reserves as at 30 June 2015**

Reserves (metric)	Proved reserves			Probable reserves			Total mineral reserves		
	Tonnes (Mt)	Grade (g/t)	Gold (000kg)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)
	3.2	5.45	17	3.8	5.16	19	7.0	5.29	37
Reserves (imperial)	Tons (Mt)	Grade (oz/t)	Gold (000oz)	Tons (Mt)	Grade (oz/t)	Gold (000oz)	Tons (Mt)	Grade (oz/t)	Gold (000oz)
	3.5	0.159	562	4.2	0.150	625	7.7	0.154	1 187

Target 1 is located in the Free State Province, some 270 kilometres southwest of Johannesburg. Mining operations at Target 1 comprise one primary underground mine, with a depth of approximately 2 945 metres. While most of the ore extracted comes from mechanised mining (massive mining techniques), conventional stoping is still employed primarily to de-stress areas ahead of mechanised mining. Ore mined is processed at the Target plant.

The gold mineralisation currently exploited at Target 1 is contained within a succession of Elsburg and Dreyerskuil quartz pebble conglomerate reefs.

Target 1 manages its risks by focusing on trackless development to ensure the timeous availability of massive stopes and to prevent excessive dilution from waste and backfill in the pillar areas which could impact negatively on the delivered grade. Future success will depend on the availability of trackless mining equipment and performance regarding volumes and grade from the deeper Block 3 extension of the mine.

Gold production decreased by 15% to 3 824kg (122 944oz) in FY15, due primarily to the normalisation of the excessively high grades mined from both the massives (pillars) and from the high-grade narrow reef intersections mined during FY14. As a result, the recovered gold grade declined by 12% to 5.11g/t (0.149oz/t) and tonnes milled by 3% to 749 000t. The decrease in gold production was offset by an increase in the average gold price received, resulting in an 11% decrease in revenue to R1 738 million (19% decrease to US\$152 million).

Cash operating costs rose by 12% to R1 178 million (2% increase to US\$103 million) owing to a 21% increase in the cost of consumables.

Capital expenditure, which increased by 2% to R296 million (decrease of 7% to US\$26 million), was spent mainly on on-going development.

# OPERATIONAL PERFORMANCE CONTINUED

## Tshepong

		FY15	FY14	FY13
<b>Number of employees</b>				
– Permanent		4 218	4 132	4 758
– Contractors		210	216	258
Total		4 428	4 348	5 016
<b>Operational</b>				
Volumes milled	(000t) (metric)	992	947	1 040
	(000t) (imperial)	1 095	1 044	1 147
Gold produced	(kg)	4 278	4 223	4 154
	(oz)	137 540	135 772	133 554
Gold sold	(kg)	4 337	4 204	4 135
	(oz)	139 437	135 161	132 944
Grade	(g/t)	4.31	4.46	3.99
	(oz/t)	0.126	0.130	0.116
Productivity	(g/TEC)	86.05	84.33	72.80
<b>Development results</b>				
Total metres		13 053	12 762	13 125
Reef metres		1 822	2 209	2 541
Capital metres		0	79	352
<b>Financial</b>				
Revenue	(Rm)	1 948	1 822	1 887
	(US\$m)	170	176	214
Average gold price received	(R/kg)	449 211	433 425	456 294
	(US\$/oz)	1 221	1 302	1 609
Cash operating cost	(Rm)	1 588	1 379	1 429
	(US\$m)	139	133	162
Production profit/(loss)	(Rm)	337	457	460
	(US\$m)	29	44	52
Capital expenditure	(Rm)	313	301	310
	(US\$m)	27	29	35
Cash operating cost	(R/kg)	371 149	326 498	343 895
	(US\$/oz)	1 008	981	1 212
All-in sustaining cost	(R/kg)	460 844	415 061	441 108
	(US\$/oz)	1 252	1 247	1 555
<b>Safety</b>				
Number of fatalities		1	2	1
Lost-time injury frequency rate per million hours worked		5.72	8.33	8.67
<b>Environment</b>				
Electricity consumption	(GWh)	307	301	310
Water consumption – primary activities	(ML)	1 110	1 090	1 088
Greenhouse gas emissions	(000t CO <sub>2</sub> e)	316	299	307
Intensity data per tonne treated				
– energy		0.31	0.32	0.30
– water		1.12	1.15	1.05
– greenhouse gas emissions		0.32	0.32	0.30
Number of reportable environmental incidents		0	1	1
<b>Community</b>				
Local economic development*	(Rm)	33	30	9
Training and development	(Rm)	33	24	23

\* Included in the total for FY15 is an amount of R24 million that was capitalised as part of the hostel upgrades (FY14: R22 million)

**Tshepong** *continued***Other salient features**

Status of operation	Steady state operation: development continues
Life of mine	20 years
Hoisting capacity (per month)	214 000 tonnes (235 892 tons)
Compliance and certification	New order mining right – December 2007 ISO 14001 ISO 9001

**Mineral reserves as at 30 June 2015**

	Proved reserves			Probable reserves			Total mineral reserves		
Reserves (metric)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)
	18.4	5.58	102	3.3	4.50	15	21.6	5.42	117
Reserves (imperial)	Tons (Mt)	Grade (oz/t)	Gold (000oz)	Tons (Mt)	Grade (oz/t)	Gold (000oz)	Tons (Mt)	Grade (oz/t)	Gold (000oz)
	20.2	0.163	3 294	3.6	0.131	474	23.8	0.158	3 768

Tshepong is located in the Free State Province, near Welkom, about 248 kilometres from Johannesburg. Mining is conducted at a depth of 2 349 metres. The mine uses conventional undercut mining in the Basal Reef while the B Reef is exploited as a high grade secondary reef. Ore mined is processed at the Harmony One plant.

Success at Tshepong will be ensured by the continued improvement in safety performance, the timely equipping of panels to maintain mining flexibility and the build-up in production from the sub-66 decline which is driving the improvement in grade.

Challenges receiving management's attention are: to consistently achieve the increased square metre profile and to manage the geologically complex (excessive fault and dyke intrusions) decline area.

Gold production increased by 1% to 4 278kg (137 540oz) in FY15, due primarily to an increase in volumes extracted. Recovered gold grade decreased by 3% to 4.31g/t (0.126 oz/t) while tonnes milled rose by 5% to 992 000t. The increase in gold production and the average gold price received, in rand terms, resulted in 7% increase in revenue to R1 948 million (3% decrease to US\$170 million).

Cash operating costs increased by 15% to R1 588 million (increased 5% to US\$139 million).

Capital expenditure increased by 4% to R313 million (decreased 7% to US\$27 million). Capital was mainly spent on on-going development.



Briefing at Tshepong underground

# OPERATIONAL PERFORMANCE CONTINUED

## Unisel

		FY15	FY14	FY13
<b>Number of employees</b>				
– Permanent		1 809	1 809	1 845
– Contractors		114	148	143
Total		1 923	1 957	1 988
<b>Operational</b>				
Volumes milled	(000t) (metric)	417	408	446
	(000t) (imperial)	460	450	492
Gold produced	(kg)	1 695	1 838	1 813
	(oz)	54 495	59 093	58 289
Gold sold	(kg)	1 715	1 834	1 804
	(oz)	55 138	58 964	58 000
Grade	(g/t)	4.06	4.50	4.07
	(oz/t)	0.118	0.131	0.118
Productivity	(g/TEC)	77.82	85.33	82.24
<b>Development results</b>				
Total metres		5 177	5 641	6 380
Reef metres		2 816	3 462	3 514
<b>Financial</b>				
Revenue	(Rm)	770	792	825
	(US\$m)	67	77	93
Average gold price received	(R/kg)	449 082	432 072	457 160
	(US\$/oz)	1 220	1 298	1 612
Cash operating cost	(Rm)	674	600	571
	(US\$m)	59	58	65
Production profit/(loss)	(Rm)	88	192	258
	(US\$m)	7	19	29
Capital expenditure	(Rm)	99	85	78
	(US\$m)	9	8	9
Cash operating cost	(R/kg)	397 615	326 466	315 136
	(US\$/oz)	1 080	981	1 111
All-in sustaining cost	(R/kg)	477 013	397 993	388 617
	(US\$/oz)	1 296	1 196	1 370
<b>Safety</b>				
Number of fatalities		1	0	1
Lost-time injury frequency rate per million hours worked		8.74	11.66	12.27
<b>Environment</b>				
Electricity consumption	(GWh)	109	110	111
Water consumption – primary activities	(ML)	519	711	1 431
Greenhouse gas emissions	(000t CO <sub>2</sub> e)	112	109	110
Intensity data per tonne treated				
– energy		0.26	0.27	0.25
– water		1.25	1.74	3.21
– greenhouse gas emissions		0.27	0.27	0.25
Number of reportable environmental incidents		0	0	0
<b>Community</b>				
Local economic development*	(Rm)	19	12	16
Training and development	(Rm)	21	15	13

\* Included in the total for FY15 is an amount of R15 million that was capitalised as part of the hostel upgrades (FY14: R8 million)



**Unisel** *continued***Other salient features**

Status of operation	Approaching end of life of mine.
Life of mine	5 years
Hoisting capacity (per month)	60 000 tonnes (66 138 tons)
Compliance and certification	New order mining right – December 2007 ISO 9001

**Mineral reserves as at 30 June 2015**

	Proved reserves			Probable reserves			Total mineral reserves		
Reserves (metric)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)
	1.8	4.55	8	0.8	4.33	3	2.6	4.48	12
Reserves (imperial)	Tons (Mt)	Grade (oz/t)	Gold (000oz)	Tons (Mt)	Grade (oz/t)	Gold (000oz)	Tons (Mt)	Grade (oz/t)	Gold (000oz)
	2.0	0.133	268	0.9	0.126	111	2.9	0.131	380

Unisel is located in the Free State Province, near Virginia and about 271 kilometres from Johannesburg. Mining is conducted at a depth of 2 153 metres below surface. Conventional scattered mining and pillar reclamation takes place to access the Basal, Leader and, to a lesser extent, the Middle reefs. Ore mined is processed at Harmony One plant.

Unisel is nearing the end of its operating life, but has been a good performer despite being Harmony's oldest operating mine. An emphasis on clean mining practices and the mining of high-grade panels contributed to improved grade recoveries and an increase in production year on year.

Successes are attributable to the improved safety performance with fewer stoppages and the achievement of planned volumes mined, especially in the high-grade areas.

Risks receiving management attention include the ageing shaft infrastructure and equipment and maintenance of a small profit margin.

Gold production decreased by 8% to 1 695kg (54 495oz) in FY15, due primarily to the late start-up after the December 2014 break and the halt to production following a fatality in April 2015. The recovered gold grade declined by 10% to 4.06g/t (0.118oz/t) while tonnes milled increased by 2% to 417 000t. The decrease in gold production was partially offset by an increase in the average rand gold price received, which resulted in a 3% decrease in revenue to R770 million (13% decrease to US\$67 million).

Cash operating costs increased by 12% to R674 million (increased by 2% to US\$59 million).

Capital expenditure increased by 16% to R99 million (increased by 13% to US\$9 million), due primarily to greater expenditure on maintenance and hostel upgrades. Capital was mainly spent on on-going development.

# OPERATIONAL PERFORMANCE CONTINUED

## SOUTH AFRICA – SURFACE OPERATIONS

### Surface dumps

		FY15	FY14	FY13
<b>Number of employees</b>				
– Permanent		10	13	39
– Contractors		174	129	240
Total		184	142	279
<b>Operational</b>				
Volumes milled	(000t) (metric)	2 701	2 897	3 326
	(000t) (imperial)	2 978	3 196	3 668
Gold produced	(kg)	862	903	1 279
	(oz)	27 713	29 032	41 121
Grade	(g/t)	0.32	0.31	0.38
	(oz/t)	0.009	0.009	0.011
<b>Financial</b>				
Revenue	(Rm)	389	386	579
	(US\$m)	34	37	66
Average gold price received	(R/kg)	450 420	431 172	452 899
	(US\$/oz)	1 224	1 296	1 597
Cash operating cost	(Rm)	330	328	432
	(US\$m)	29	32	49
Production profit/(loss)	(Rm)	58	62	152
	(US\$m)	5	6	17
Capital expenditure	(Rm)	6	9	15
	(US\$m)	1	1	2
Cash operating cost	(R/kg)	382 959	363 568	337 428
	(US\$/oz)	1 041	1 092	1 190
All-in sustaining cost	(R/kg)	403 906	383 701	365 401
	(US\$/oz)	1 097	1 153	1 288
<b>Safety</b>				
Number of fatalities		0	0	0
Lost-time injury frequency rate per million hours worked		2.48	0.83	0.71
<b>Environment</b>				
Electricity consumption	(GWh)	64	68	68
Water consumption – primary activities	(ML)	480	816	763
Greenhouse gas emissions	(000t CO <sub>2</sub> e)	66	67	67
Intensity data per tonne treated				
– energy		0.02	0.23	0.20
– water		0.18	0.28	0.23
– greenhouse gas emissions		0.02	0.23	0.23
Number of reportable environmental incidents		0	0	0
<b>Community</b>				
Local economic development	(Rm)	0	0	1

**Surface dumps** *continued***Other salient features**

Status of operation	The operational plans are for a profitable FY16
Life of mine	1 year
Compliance and certification	Certification depends on future of these operations ISO 9001

**Mineral reserves as at 30 June 2015**

	Proved reserves			Probable reserves			Total mineral reserves		
Reserves (metric)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)
	–	–	–	3.9	0.51	2	3.9	0.51	2
Reserves (imperial)	Tons (Mt)	Grade (oz/t)	Gold (000oz)	Tons (Mt)	Grade (oz/t)	Gold (000oz)	Tons (Mt)	Grade (oz/t)	Gold (000oz)
	–	–	–	4.3	0.015	65	4.3	0.015	65

Production from the processing of surface rock dumps situated in the Free State province in South Africa depends entirely on the availability of spare mill capacity at the Harmony One and Target plants, which in turn depends on the availability of underground ore delivered for milling. Central Plant treats only re-mined, redundant plant clean-up and rock dumps. Improved mine ore feeds throughout the year resulted in steadily lower gold production from the generally lower-grade dump material, and the surface operations remained profitable.



*Kalgold surface mining*

# OPERATIONAL PERFORMANCE CONTINUED

## Phoenix (Tailings retreatment)

		FY15	FY14	FY13
<b>Number of employees</b>				
– Permanent		83	83	87
– Contractors		312	293	286
Total		395	376	373
<b>Operational</b>				
Volumes milled	(000t) (metric)	6 245	6 073	5 358
	(000t) (imperial)	6 887	6 697	5 908
Gold produced	(kg)	867	835	827
	(oz)	27 875	26 846	26 588
Gold sold	(kg)	881	825	805
	(oz)	28 324	26 524	25 882
Grade	(g/t)	0.14	0.14	0.15
	(oz/t)	0.004	0.004	0.005
Productivity	(g/TEC)	185.73	201.11	220.89
<b>Financial</b>				
Revenue	(Rm)	396	357	365
	(US\$m)	35	35	41
Average gold price received	(R/kg)	449 941	433 293	453 680
	(US\$/oz)	1 223	1 302	1 599
Cash operating cost	(Rm)	295	246	231
	(US\$m)	26	24	26
Production profit/(loss)	(Rm)	97	117	140
	(US\$m)	8	11	16
Capital expenditure	(Rm)	4	2	156
	(US\$m)	–	–	18
Cash operating cost	(R/kg)	339 896	294 408	279 615
	(US\$/oz)	924	885	986
All-in sustaining cost	(R/kg)	344 319	294 615	284 911
	(US\$/oz)	936	885	1 005
<b>Safety</b>				
Number of fatalities		0	0	0
Lost-time injury frequency rate per million hours worked		0.00	0.00	0.00
<b>Environment</b>				
Electricity consumption	(GWh)	41	67.5	71
Water consumption – primary activities	(ML)	277	228	271
Greenhouse gas emissions	(000t CO <sub>2</sub> e)	42	67.1	70
Intensity data per tonne treated				
– energy		0.007	0.011	0.013
– water		0.04	0.04	0.051
– greenhouse gas emissions		0.007	0.011	0.013
Number of reportable environmental incidents		0	0	0

**Phoenix (Tailings retreatment)** *continued*

Other salient features	
Status of operation	Retreatment of tailings using spare processing capacity
Life of mine	15 years
Compliance and certification	New order mining right – December 2007
	ISO 14001 certification is under consideration – interim focus is on compliance
	ISO 9001

**Mineral reserves as at 30 June 2015**

	Proved reserves			Probable reserves			Total mineral reserves		
Reserves (metric)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)
	86.6	0.28	25	–	–	–	86.6	0.28	25
Reserves (imperial)	Tons (Mt)	Grade (oz/t)	Gold (000oz)	Tons (Mt)	Grade (oz/t)	Gold (000oz)	Tons (Mt)	Grade (oz/t)	Gold (000oz)
	95.4	0.008	792	–	–	–	95.4	0.008	792

Phoenix is a tailings retreatment operation, situated in Virginia in the Free State Province that makes use of the Saaiplaas plant. During FY13, Harmony finalised an empowerment agreement and transferred 30% of its shareholding in the Phoenix operations to black economic empowerment owners.

Operational success will be secured by maintaining plant efficiency and by reducing pump and pipe failures.

Grade variability and the theft of pipelines and electrical cable are the main risks being managed at Phoenix.

Gold production increased by 4% to 867kg (27 875oz) in FY15. This was due, firstly, to the additional tonnage processed with the toll treatment of material from the surface source clean-up at Central gold plant in the first half of the financial year and, secondly, due to the improvements in recovery from 42.1% to 45.6% of this material, as a result of additional grinding at Central gold plant. Recovered gold grades remained unchanged at 0.14g/t (0.004oz/t). Tonnes milled increased by 3% to 6 245 000t. The increase in gold production and average rand gold price received resulted in an 11% increase in revenue to R396 million (unchanged at US\$35 million).

Year on year cash operating costs increased by 20% to R295 million (increased by 8% to US\$26 million) due to the higher volumes of tonnes processed, the high rate of attrition on pumping equipment experienced at the re-mining pump stations, the surface source clean-up and toll treatment at Central plant.



Phoenix tailings retreatment plant

# OPERATIONAL PERFORMANCE CONTINUED

## Kalgold

		FY15	FY14	FY13
<b>Number of employees</b>				
– Permanent		240	230	246
– Contractors		465	471	390
Total		705	701	636
<b>Operational</b>				
Volumes milled	(000t) (metric)	1 472	1 472	1 398
	(000t) (imperial)	1 623	1 623	1 542
Gold produced	(kg)	1 198	1 162	1 332
	(oz)	38 517	37 358	42 825
Gold sold	(kg)	1 230	1 203	1 263
	(oz)	39 545	38 677	40 607
Grade	(g/t)	0.81	0.79	0.95
	(oz/t)	0.024	0.023	0.028
Productivity	(g/TEC)	183.86	185.15	202.19
<b>Financial</b>				
Revenue	(Rm)	551	522	571
	(US\$m)	48	50	65
Average gold price received	(R/kg)	448 230	433 759	451 856
	(US\$/oz)	1 218	1 303	1 593
Cash operating cost	(Rm)	452	409	384
	(US\$m)	40	39	44
Production profit/(loss)	(Rm)	88	103	215
	(US\$m)	8	10	24
Capital expenditure	(Rm)	41	33	52
	(US\$m)	4	3	6
Cash operating cost	(R/kg)	377 547	351 670	288 147
	(US\$/oz)	1 026	1 057	1 016
All-in sustaining cost	(R/kg)	427 005	397 889	329 652
	(US\$/oz)	1 160	1 196	1 162
<b>Safety</b>				
Number of fatalities		0	0	0
Lost-time injury frequency rate per million hours worked		2.25	0.90	3.87
<b>Environment</b>				
Electricity consumption	(GWh)	40	41	46
Water consumption – primary activities	(ML)	1 795	1 707	1 571
Greenhouse gas emissions	(000t CO <sub>2</sub> e)	41	41	46
Intensity data per tonne treated				
– energy		0.03	0.03	0.033
– water		1.22	1.16	1.12
– greenhouse gas emissions		0.03	0.03	0.033
Number of reportable environmental incidents		1	0	0
<b>Community</b>				
Local economic development	(Rm)	2	7	5
Training and development	(Rm)	4	4	3



**Kalgold** *continued***Other salient features**

Status of operation	Open-pit mining operation
Life of mine	14 years
Compliance and certification	New order mining right – August 2008 ISO 14001 ISO 9001

**Mineral reserves as at 30 June 2015**

	Proved reserves			Probable reserves			Total mineral reserves		
Reserves (metric)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)
	5.8	0.97	6	10.6	1.15	12	16.5	1.08	18
Reserves (imperial)	Tons (Mt)	Grade (oz/t)	Gold (000oz)	Tons (Mt)	Grade (oz/t)	Gold (000oz)	Tons (Mt)	Grade (oz/t)	Gold (000oz)
	6.4	0.028	182	11.7	0.033	393	18.2	0.032	574

Kalgold is an open-pit mine situated 55 kilometres southwest of Mahikeng in North West Province and located within the Kraaipan Greenstone Belt. Mining takes place from the A Zone pit. Ore mined from the pit is processed at a carbon-in-leach plant located at Kalgold.

Success at Kalgold will be ensured by increased tonnes milled, based on the use of additional mobile crushing units to substitute low availability of the plant crusher section. The upgrade of the elution circuit and the replacement of the existing A and B mills, as well as improved safety, will ensure Kalgold's profitability. We will remain focused on managing the mining contract and its sub-contractors, and on commissioning of the in-pit tailings deposition project.

Risks managed at Kalgold include the prevention of plant intrusions and gold theft and the performance of blasting and hauling operations in the pit.

Gold production increased by 3% to 1 198kg (38 517oz) in FY15. This was due primarily to the improvement of 3% in the gold grade recovered to 0.81g/t (3% to 0.024oz/t). Tonnes milled remained unchanged at 1 472 000t. The higher gold production and average rand gold price received resulted in a 6% increase in revenue to R551 million (a 4% increase to US\$48 million).

Cash operating costs rose by 11% to R452 million due to a 51% increase in consumable costs (3% increase to US\$40 million).

Capital expenditure increased by 24% to R41 million (increased by 33% to US\$4 million), due primarily to the replacement of the A and B mills, the establishment of a storm water diversion trench, installation of infrastructure to enable the in-pit deposition of tailings and the elution plant upgrade project.

# OPERATIONAL PERFORMANCE CONTINUED

## PAPUA NEW GUINEA

### Hidden Valley (50%)

		FY15	FY14	FY13
<b>Number of employees</b>				
– Permanent		1 289	1 213	1 107
– Contractors		868	767	996
Total		2 157	1 980	2 013
<b>Operational</b>				
Volumes milled	(000t) (metric)	1 825	2 001	1 844
	(000t) (imperial)	2 012	2 207	2 033
Gold produced	(kg)	2 943	3 292	2 644
	(oz)	94 619	105 840	85 007
Gold sold	(kg)	3 003	3 307	2 622
	(oz)	96 548	106 322	84 299
Grade	(g/t)	1.61	1.65	1.43
	(oz/t)	0.047	0.048	0.042
Productivity	(g/TEC)	228	277	219
<b>Financial</b>				
Revenue	(Rm)	1 346	1 434	1 189
	(US\$m)	118	138	135
Average gold price received	(R/kg)	448 322	433 488	453 482
	(US\$/oz)	1 218	1 303	1 599
Cash operating cost	(Rm)	1 153	1 086	1 150
	(US\$m)	101	105	130
Production profit/(loss)	(Rm)	203	344	44
	(US\$m)	18	33	5
Capital expenditure	(Rm)	121	122	506
	(US\$m)	11	12	57
Cash operating cost	(R/kg)	391 774	329 943	434 796
	(US\$/oz)	1 065	991	1 533
All-in sustaining cost	(R/kg)	514 690	415 068	775 866
	(US\$/oz)	1 395	1 244	2 711
<b>Safety</b>				
Number of fatalities		1	0	0
Lost-time injury frequency rate per million hours worked		4.20	0.00	0.19
<b>Environment</b>				
Electricity consumption	(GWh)	48	42	40
Water consumption – primary activities	(ML)	722	768	699
Greenhouse gas emissions	(000t CO <sub>2</sub> e)	0	0	0
Intensity data per tonne treated				
– energy		0.03	0.02	0.02
– water		0.39	0.38	0.38
– greenhouse gas emissions		0	0	0
Number of reportable environmental incidents		0	1	0
<b>Community</b>				
Local economic development	(Rm)	0	5	14
Training and development	(Rm)	0	19	11

**Hidden Valley (50%)** *continued***Other salient features**

Status of operation	Open-pit mining operation producing gold and silver. A joint venture with Newcrest Mining Limited
Life of mine	3 – 6 years dependent on FY16 performance
Compliance and certification	Mining lease approved by Papua New Guinea authorities; Cyanide Code

**Mineral reserves as at 30 June 2015**

	Proved reserves			Probable reserves			Total mineral reserves		
Reserves (metric)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)
	1.4	1.11	2	12.0	1.79	22	13.4	1.72	23
Reserves (imperial)	Tons (Mt)	Grade (oz/t)	Gold (000oz)	Tons (Mt)	Grade (oz/t)	Gold (000oz)	Tons (Mt)	Grade (oz/t)	Gold (000oz)
	1.5	0.032	50	13.3	0.052	693	14.8	0.050	743

The Hidden Valley mine is an open pit gold and silver mine, jointly owned and managed as part of the joint venture between Harmony and Newcrest Mining Limited (50:50). The mine is situated in the highly prospective area of the Morobe Province in Papua New Guinea, some 210 kilometres northwest of Port Moresby. The major gold and silver deposits of the Morobe goldfield and Hidden Valley are hosted in the Wau Graben. The Hidden Valley-Kaverio and Hamata pits, located approximately 6 kilometres apart, are in operation. Ore mined is treated at the Hidden Valley processing plant.

Hidden Valley's operational performance in FY15 was impacted by the failure of the overland conveyer and a safety stoppage as a result of a fatality at the mine.

Restructuring to improve performance is underway. The life of mine has been shortened to three to six years and will be assessed in an on-going manner.

Gold production declined by 11% to 2 943kg (94 619oz) in FY15. This was due primarily to safety stoppages following the fatality in December 2014, replacement of the semi-autogenous grinding mill liners in April 2015 and breakdowns in the overland conveyor. Recovered gold grades decreased by 2% to 1.61g/t (2% to 0.047oz/t) while tonnes milled declined by 9% to 1 825 000t. The decrease in gold production was partially offset by an increase in the average rand gold price received, resulting in a 6% decrease in revenue to R1 346 million (14% to US\$118 million).

Cash operating costs increased by 6% to R1 153 million (decreased by 4% to US\$101 million). Cost reduction initiatives being pursued at the mine include revising the organisational structure. An operational improvement programme has also been launched, with a specific focus on mining and maintenance discipline.

Capital expenditure marginally decreased by 1% to R121 million (decreased by 8% to US\$11 million).

# OPERATIONAL PERFORMANCE CONTINUED

## Metallurgical plants

Harmony has eight metallurgical plants in South Africa and one metallurgical plant in Papua New Guinea. Ore extracted at our mines is crushed and milled and mostly treated by extracting the gold through a carbon-in-leach or carbon-in-pulp circuit process. The gold attached to the carbon is extracted into a solution using an elution process. This gold solution is then treated further to produce rough gold bars (doré) or cathode sludge.

Plant	Type of plant	Processing capacity (tonnes/month) Metric	Average milled for FY15 (tonnes/month) Metric	Processing capacity (tons/month) Imperial	Average milled for FY15 (tons/month) Imperial	Plant recoveries in FY15 (%)
<b>South Africa</b>						
Doornkop plant	Conventional plant <sup>1</sup> , commissioned in 1985	225 000	<b>102 062</b>	248 018	<b>112 503</b>	<b>96.33</b>
Harmony One plant	Conventional plant <sup>1</sup> , commissioned in 1986. Zinc precipitation and smelting to produce doré.	390 000	<b>320 978</b>	429 901	<b>353 818</b>	<b>96.01</b>
Joel plant	Conventional plant <sup>1</sup> , re-commissioned in 2009	80 000	<b>45 912</b>	88 160	<b>50 595</b>	<b>95.33</b>
Kalgold plant	Plant <sup>2</sup>	145 000	<b>122 660</b>	159 834	<b>135 208</b>	<b>82</b>
Kusasaletu plant	Plant <sup>1</sup> , commissioned in 1978, elution plant commissioned in 2013	147 168	<b>75 650</b>	147 168	<b>75650</b>	<b>93.3</b>
Target plant	Plant <sup>1</sup> commissioned in 2002	95 254	<b>82 056</b>	115 742	<b>99 706</b>	<b>95.97</b>
Saaiplaas plant	Commissioned in the late 1950s, since converted to plant <sup>2</sup>	500 000	<b>483 917</b>	551 000	<b>533 276</b>	<b>44.6</b>
Harmony Central plant	Hybrid technology <sup>1,2</sup> commissioned in 1986	150 000	<b>165 919</b>	165 300	<b>182 843</b>	<b>78.11</b>
<b>Papua New Guinea</b>						
Hidden Valley plant	Gold <sup>1</sup> and Merrill Crowe (silver) circuit plant, commissioned in 2009	366 557	<b>303 933</b>	404 060	<b>335 029</b>	<b>Au=87 Ag=71</b>

<sup>1</sup> Carbon-in-pulp

<sup>2</sup> Carbon-in-leach

All the gold production at our South African operations is sent for refining to Rand Refinery, which is owned by a consortium of the major gold producers in South Africa. Harmony holds a 10.38% stake in Rand Refinery. Gold production from our Hidden Valley mine in Papua New Guinea is refined in Australia at an independent refiner, The Perth Mint Australia.

# PROJECTS AND EXPLORATION

## WHY THIS IS MATERIAL TO HARMONY

Sustaining and growing production is key to our long-term strategy. Our current resources are finite and it is essential to have a project pipeline that balances early-stage and more immediate prospects so as to meet our future targets. In addition to production we need to diversify our resource base in order to mitigate our exposure to the counter-cyclical nature of the gold industry.

## OUR APPROACH

Our exploration programme, like our operations, is focused in South Africa and Papua New Guinea. As we already have knowledge of the local geology, government, infrastructure and regulations of these countries, it makes sense to take advantage of this as we expand our project pipeline.

Our exploration strategy targets significant prospective geological regions in these countries to discover large long-life gold and copper-gold ore bodies that will allow us to create value for years to come. An aim of this strategy is to create a balanced exploration portfolio that includes both brownfields and greenfields exploration. Brownfields exploration allows us to maximise value from existing infrastructure by developing mineral resources that sustain our operations. Greenfields exploration, on the other hand, allows us to create new opportunities in highly prospective under-explored mineral provinces and emerging gold districts.

We take a flexible approach to potential exploration projects that include looking at joint ventures, acquisitions and other arrangements. However, all projects undergo a robust assessment to determine whether they meet our exploration standards. The criteria include project- and country-related risk profiles, and minimum requirements on the potential size, production profile and investment targets. In addition, we seek out exploration projects that align with our operational imperatives of prioritising safety, maximising in-ground expenditure and drill testing high-priority targets. In this way we can ensure that future projects, once operational, will enable us to meet our long-term strategic objectives.

## KEY GEOLOGICAL FEATURES OF EXPLORATION AREAS

**Papua New Guinea:** The central belt of rocks that makes up the highland spine of Papua New Guinea formed as a result of subduction related interaction between the Pacific plate (in the north), converging with the Australian plate (in the south). Deposits typical of subduction-related arc settings include:

- Epithermal gold deposits which form at shallow depths, relatively close to the earth's surface, examples of which include Hidden Valley, Hamata, Kerimenge, Wau and Wafi
- Porphyry copper-gold systems which form at deeper levels in the crust associated with the emplacement of intrusive stocks and dykes. Porphyry systems are one of the largest sources of copper ore in the world, and can also contain significant amounts of gold, molybdenum and silver as by-products. Golpu is a high grade porphyry copper-gold system

Harmony have advanced a number of gold and copper-gold prospects and are at various stages of exploration and evaluation across Harmony's lease areas in Papua New Guinea. These include the Kili Teke prospect.

**South Africa:** All of our underground mines are in the Witwatersrand Supergroup. Most of these can be found in the south-western corner of the Witwatersrand Basin or Free State goldfields, which comprise sedimentary rocks that are deep and extend for hundreds of kilometres into the West Rand goldfields and West Wits Basin. The Kraaipan Greenstone Belt can be found further north-west where we have an open pit operation.

## ACTIONS IN 2015

In FY15, we spent R385million (US\$34 million) (FY14: R460 million, US\$45 million) in total on brownfields and greenfields exploration including amounts capitalised. Of this, 98% was spent in Papua New Guinea. The Harmony board approved the updated Golpu prefeasibility study in December 2014 and as a result started capitalising project and evaluation expenditure for the Golpu project (R119 million (US\$10 million) was capitalised in FY15). There was an overall net reduction in total exploration expenditure year on year, largely driven by the decline in the dollar gold price. The major portion of exploration spend in Papua New Guinea was directed at advancing the feasibility studies to turn the world-class Golpu copper-gold deposit to account. R86 million (US\$7.5 million) or 24% of the Papua New Guinea exploration programme was directed to greenfields exploration which produced some highly significant porphyry copper-gold intercepts at the Kili Teke prospect.

# PROJECTS AND **EXPLORATION** CONTINUED

In the continued low gold price environment, coupled with increasing cost pressures, the key challenge remains to develop high margin reserve ounces to replace depletion. On this basis the key principles underpinning the FY15 exploration programme remained:

- Reduced overall exploration spend
- Advance the high-grade Golpu porphyry copper-gold deposit to feasibility study phase and underground access (advanced exploration activity)
- Turnover and rationalisation of the tenement package to keep focus on the most prospective targets

In line with our core operating capability in the region, Harmony closely monitors the environment for new opportunities that would enhance the project portfolio. With the sustained low commodity prices, tenure over highly prospective target areas in Papua New Guinea is becoming available.

## **NOTEWORTHY ACTIONS**

FY15 highlights and milestones achieved as a result of the exploration expenditure and work programme in Papua New Guinea include:

- Completion of the optimised prefeasibility study for the Golpu project
- Discovery of highly significant copper-gold mineralisation at the Kili Teke prospect in the Hela province in Papua New Guinea
- Further rationalisation of the greenfield tenement package

### **Advancement of the Golpu project:**

- Completed a revised prefeasibility study for a stage 1 development targeting the upper higher value portion of the ore body. Refer [www.harmony.co.za](http://www.harmony.co.za):
  - “Harmony’s Golpu project to proceed to feasibility” – announced on 15 December 2014
- Completed concept study for second stage mine development (stage 2) to develop the resource further
- Commenced feasibility studies for the stage 1 mine development as well as engineering and environmental studies to permit early commencement of underground access to the ore body
  - Stage 2B environmental permitting for advanced exploration access was obtained

### **Project turnover and development:**

- Drilling at the Kili Teke prospect in the Hela Province on tenement EL2310, has delivered some highly significant intersections of copper and gold mineralisation.
- The project continues to shape up as a significant new copper-gold discovery. Refer [www.harmony.co.za](http://www.harmony.co.za):
  - “Harmony intersects highly significant copper-gold mineralisation in Papua New Guinea exploration programme” – announced on 11 March 2015
  - “Superb exploration results from Harmony’s Kili Teke prospect” – announced post year-end on 30 July 2015
- Milne Bay Province tenement EL2316 prospectivity downgraded and surrendered.
- Application EL2386 in the Lalabu-Pangia district of the Southern Highlands lodged to secure priority to tenure to the historic Poru prospect
- A major prospectivity review of the Morobe joint venture tenure commenced with relinquishment of a number of peripheral target areas including EL1985, EL1629, and EL1193
- Morobe exploration activities were restructured and Harmony, through its 100%-owned subsidiary, Harmony Gold Exploration (PNG) Limited, was appointed to manage the exploration programme on behalf of the joint venture

### **Greenfield tenement rationalisation:**

- Harmony (100%) tenement holding reduced 9% to 1 023km<sup>2</sup> (FY14: 1 125.5km<sup>2</sup>)
- Joint venture (Harmony 50%) tenement holding reduced 39% to 1 245km<sup>2</sup> (FY14: 2 057km<sup>2</sup>)
  - Harmony now undertakes exploration on behalf of the joint venture owners (Newcrest 50%; Harmony 50%) which has simplified the joint venture’s organisational structure and achieved further cost reductions



## PAPUA NEW GUINEA EXPLORATION PROJECTS

Papua New Guinea is one of the world's most prospective yet underexplored terrains for porphyry copper-gold and epithermal gold mineralisation. The New Guinea mobile belt which spans the core of the Irian Jaya – Papua New Guinea mainland, is host to a number of world class porphyry copper-gold and gold deposits including Golpu (Cu-Au), Ok Tedi (Cu-Au), Grasberg (Cu-Au), and Porgera (Au).

Harmony began actively exploring in Papua New Guinea in 2003. We have developed a small but high quality project portfolio, in both established mineral provinces and emerging gold and copper districts:

### Morobe Exploration Joint Venture (50%)

The Morobe Exploration Joint Venture refers to a key strategic tenement holding in the Morobe Province that encompasses the Hidden Valley operation and Golpu project. The tenement package is held jointly (50:50) between Harmony and Newcrest Mining Limited.

The Morobe exploration strategy is to manage a portfolio pipeline of projects to develop bulk tonnage (~1 Moz) or high margin gold or copper-gold targets that provide new stand-alone opportunities or resource options to compliment the operations at Hidden Valley, or at the Golpu project. However, the on-going programme was curtailed during the year in favor of a major prospectivity review to ensure that reduced expenditure levels required by the Morobe joint venture partners are directed appropriately at the most prospective targets.

During FY15, we spent R12.2 million (US\$1.1 million) (FY14: R42 million (US\$4 million)) on exploration in the area. This represents Harmony's share which is 50% of the total work programme expenditure.

A reduced budget of R7.6 million (US\$0.7 million) (50% to Harmony) has been allocated for FY16. The budget allows the Morobe joint venture titles to be maintained in good standing in conjunction with field work to generate drill targets on the highest priority targets.

### Harmony Gold Exploration (Papua New Guinea) Limited (100%)

Harmony holds a 100% interest in 1 023km<sup>2</sup> (FY14: 1 125.5km<sup>2</sup>) of exploration tenure in the Highlands region of Papua New Guinea. The tenement package comprises two titles, one active exploration license (EL2310) and one exploration license application (EL2386). R87 million (US\$7.5 million) was spent in FY15 (FY14: R63 million (US\$6 million)) which was focused almost entirely on developing and drill testing the Kili Teke Project on EL2310.

The drilling has been highly successful with a number of significant copper-gold intercepts obtained (outlined in more detail below). Based on these drill results, an FY16 budget of R86 million has been earmarked for infill and extension drilling to progress the Kili Teke mineralisation to an inferred resource. The Kili Teke prospect has the potential to develop into a major new copper-gold discovery which further highlights the prospectivity of this world-class mineral province.

The case for exploration investment in Papua New Guinea is strong. The country is hugely prospective, under-explored, and has a stable and transparent regulatory environment that promotes and supports mining investment. In addition, Harmony has an established track record of discovery and adding value through cost effective exploration:

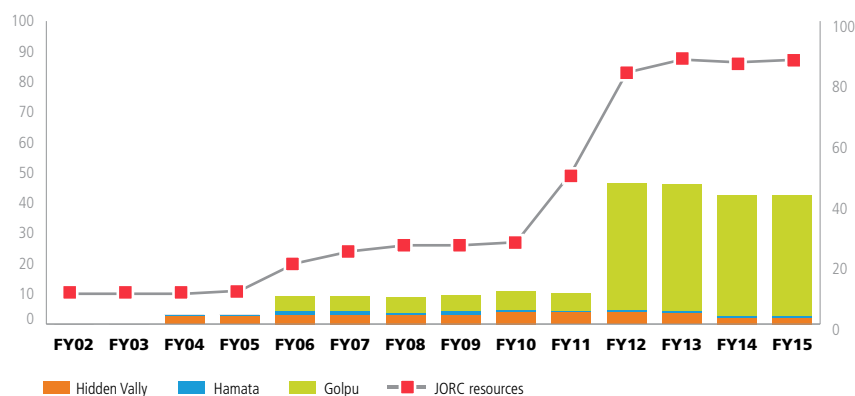
- Since 2003, resource growth attributed from the Morobe joint venture comprises 12.5Moz of gold and 4.7 million tonnes of copper (38.5Moz gold equivalent)
- Discovery cost on a per ounce equivalent basis is less than US\$10, among the best in the world

This growth, in both gold and copper resources, appears set to continue on a 100% basis, as the Kili Teke prospect advances from first pass exploration drilling into resource definition.

# PROJECTS AND EXPLORATION CONTINUED

## Resource gold equivalent<sup>1,2</sup>

Million ounces



<sup>1</sup> Resource gold equivalent totals based on US\$1 430/oz Au, US\$3.50/lb Cu, US\$30/oz Ag with 100% recovery assumed for all metals, reserve gold equivalent totals based on US\$1 230/oz Au, US\$3.10/lb Cu, US\$18/oz Ag, recoveries are based on recovery curve information built into the profit algorithms used to generate the reserve figures.

<sup>2</sup> Morobe Mining Joint Ventures resources and reserves – expressed as 100%

The underlying strategy of the Papua New Guinea exploration and mine development programme and progress during the year are summarised below:

### Morobe Mining Joint Ventures tenements (50%)

Project description	Target	Progress in FY15	Targets/plans for FY16
<b>Golpu</b>	Development of the Golpu deposit, a world-class copper-gold porphyry resource, into a mine with more than 25 years of low-cost copper and gold production.	<p>Completed an updated prefeasibility study (refer to <a href="https://www.harmony.co.za/our-business/exploration/golpu-updated-prefeasibility-results">https://www.harmony.co.za/our-business/exploration/golpu-updated-prefeasibility-results</a>) for a Golpu Stage 1 development targeting the higher value portion of the ore body.</p> <p>Completed a concept study for a second stage mine development (Stage 2).</p> <p>Commenced feasibility studies for the Stage 1 mine development as well as engineering and environmental studies to permit early commencement of underground access to the ore body.</p>	<ul style="list-style-type: none"> <li>Complete feasibility study for the stage 1 mine development and a prefeasibility study for stage 2</li> <li>Commence advanced exploration activity including underground access to the Golpu ore body</li> <li>Continue engineering and environmental studies to enable permitting of project construction</li> </ul>
	Wafi transfer zone – greenfields exploration targeting discovery of additional resources to expand Golpu into a mineral district	<p>Validation mapping and revised detail geological compilation completed for the Wafi Transfer and integration with geophysical, geochemical datasets to prioritise targets.</p> <p>A number of tenements surrendered including EL1985 and EL1629.</p>	<ul style="list-style-type: none"> <li>Nambonga North, together with a number of geophysical targets highlighted for field work to develop to drill testing</li> </ul>

**Morobe Mining Joint Ventures tenements (50%)** *continued*

Project description	Target	Progress in FY15	Targets/plans for FY16
<b>Hidden Valley district</b>	Brownfields exploration in a 10km radius of the Hidden Valley plant to develop replacement resources and support expansion.	<p>A seamless regional geology interpretation completed and integrated with all available geochemical and geophysical data. The compilation provides the framework for ranking targets.</p> <p>EL1193 was surrendered after prospectivity was downgraded.</p> <p>Three holes (288 metres) completed at 11 Peg Prospect which returned sporadic anomalous gold results.</p>	<ul style="list-style-type: none"> <li>Field reconnaissance and prospect development work on high priority targets in the Historic Wau mining district</li> <li>Follow up on radiometric targets identified north and west of Hamata Pit</li> <li>Prospect development work at Target 3 approximately 5km southwest of Wau</li> <li>Compilation of results in context with regional datasets. No further work planned at this stage</li> </ul>

**Harmony Papua New Guinea tenements (100%)**

Project description	Target	Progress in FY15	Targets/plans for FY16
<b>Kili Teke prospect</b>	Targeting copper-gold porphyry.	<p>A rigorous field programme of detailed mapping and sampling was undertaken during the year, in order to advance Kili Teke to drill testing phase. Preliminary social mapping, together with baseline monitoring of water quality of the local streams, was also established in the early stages of the field programme.</p> <p>By November 2014, results had outlined four potential high-grade drill targets to be tested.</p> <p>Subsequent drill testing comprised 10 holes for 5 169m. All but one hole were drilled at the Central Mineralised Porphyry zone. Results included several highly significant intercepts:</p> <ul style="list-style-type: none"> <li>KTDD007: 422m @ 0.55% Cu, 0.43g/t Au, from 131m</li> <li>Including 202m @ 0.74% Cu, 0.57g/t Au, from 137m</li> <li>KTDD013: 480m @ 0.63% Cu, 0.44g/t Au from 90m (partial result)</li> <li>Including: 186m @ 1.02% Cu, 0.72g/t Au from 252m</li> </ul> <p>By July 2015, results had outlined a mineralised footprint, (defined by the 0.2% copper envelope) in excess of 600m long, 200m wide and extending at depth in excess of 700m. The mineralised zone remains open ended along strike, and at depth.</p>	<ul style="list-style-type: none"> <li>Infill and extension drilling at the Central Mineralised porphyry target to define resources</li> <li>Complete first pass drill testing of remaining targets including Ieru porphyry, transfer zone porphyry, and Gold Ridge anomaly</li> </ul>

# PROJECTS AND EXPLORATION CONTINUED

## Harmony Papua New Guinea tenements (100%)

Project description	Target	Progress in FY15	Targets/plans for FY16
<b>Project generation</b>	Develop a project pipeline capable of delivering additional quality resources to sustain growth and regional operations.	Monitoring tenements with ELA2836 pegged to secure priority to the Poru prospect area.  Magavara EL2316 surrendered after detailed historic data review.	<ul style="list-style-type: none"> <li>Progress EL2386 Poru project</li> </ul>

## South Africa

Project description	Target	Progress in FY15	Targets/plans for FY16
<b>Joel North</b>	Mining down to 137 level.	Infrastructural development on 129 level was completed and the declines have continued to 137 level. Equipping of the conveyor decline has begun.	<ul style="list-style-type: none"> <li>Start of lateral development on 137 level and completion of the equipping of the conveyor decline</li> </ul>
<b>Central plant tailings reclamation</b>	Reclaim material from FSS5 tailings facility and process it in central plant (to be converted for tailings re-treatment) at 300 000 tonnes per annum. Central plant operation will be similar to the highly profitable Phoenix operation, which has been in operation since 2007.	The feasibility study was completed as planned and the project obtained technical approval. Funding options are being investigated.	<ul style="list-style-type: none"> <li>Implementation of the project as soon as funding has been allocated</li> </ul>
<b>White Rivers Exploration – Beisa Project Joint Venture</b>	The main objective of this exploration joint venture is to explore and develop potential gold resources at White Rivers Exploration (Pty) Limited's Beisa Project and abutting exploration areas within Harmony's adjacent Target Complex	<p>Under the terms of the Agreement, White Rivers and Harmony (through Loraine Gold Mines Limited and Avgold Limited) will have an initial and fixed 65% and 35% interest respectively in the exploration joint venture, with White Rivers funding and managing exploration activities to prefeasibility study level.</p> <p>The initial exploration activities, which comprise of collation of historical data, interpretation and verification of data, and geological modelling are in progress.</p>	<ul style="list-style-type: none"> <li>Good progress is being made and an initial resource is expected to be declared during FY16</li> <li>Scoping and prefeasibility study to commence</li> </ul>



# RESOURCES AND RESERVES

## MINERAL RESOURCES AND RESERVES – A SUMMARY

Harmony's statement of mineral resources and mineral reserves as at 30 June 2015 is produced in accordance with the South African Code for the Reporting of Mineral Resources and Mineral Reserves and the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. It should be noted that the mineral resources are reported inclusive of the mineral reserves. The detailed mineral resources and reserves statement is available on our company website, [www.harmony.co.za](http://www.harmony.co.za).

Harmony uses certain terms in the summary such as 'measured', 'indicated' and 'inferred' resources, which the United States' Securities and Exchange Commission guidelines strictly prohibit companies registered in the United States from including in their filings with the commission. United States investors are urged to consider the disclosure in this regard in our Form 20-F which is available on our website at [www.harmony.co.za/investors/reporting/20f](http://www.harmony.co.za/investors/reporting/20f).

## HARMONY – TOTAL

The company's attributable gold equivalent mineral resources were declared as 110.3Moz as at 30 June 2015, an 18% decrease year on year from the 133.8Moz declared at 30 June 2014. The total gold contained in mineral resources at the South African operations represented 63.5% of the company's total mineral resource, with the Papua New Guinea operations representing 36.5% of Harmony's total gold and gold equivalent mineral resources as at 30 June 2015.

As at 30 June 2015, Harmony's attributable gold and gold equivalent mineral reserves amounted to 42.6Moz of gold, a 14% decrease from the 49.5Moz declared at 30 June 2014. The gold reserve ounces in South Africa represent 51.9% while the Papua New Guinea gold and gold equivalent ounces represent 48.1% of Harmony's total mineral reserves as at 30 June 2015.

## SOUTH AFRICA

### South African underground operations

The company's mineral resources at the South African underground operations as at 30 June 2015 totalled 60.6Moz (217.2Mt at 8.68g/t), a decrease of 27% year on year from the 83.3Moz declared as at 30 June 2014. This decrease is due to depletion by mining during the year, the exclusion of Freddie's 9 shaft and downscaling at Masimong.

The company's mineral reserves at the South African underground operations as at 30 June 2015 totalled 15.0Moz (80.3Mt at 5.82g/t), a decrease of 25% year on year from the 19.9Moz declared as at 30 June 2014. The decrease is due to depletion by mining during the year, the placing of Target 3 on care and maintenance and changes to the life-of-mine profile at various operations.

### South African surface operations, including Kalgold

The company's mineral resources at its South African surface operations as at 30 June 2015 totalled 9.5Moz (1 082.3Mt at 0.27g/t), a decrease of 1% year on year from the 9.6Moz declared as at 30 June 2014. This decrease is due to depletion by mining and the exclusion of surface sources at Joel.

The company's mineral reserves at its South African surface operations as at 30 June 2015 totalled 7.1Moz (835.9Mt at 0.26g/t), a decrease of 12% year on year from the 8.0Moz declared at 30 June 2014. The decrease is due to depletion by mining and the exclusion of surface sources at Joel.

# RESOURCES AND RESERVES CONTINUED

## PAPUA NEW GUINEA

### Papua New Guinea operations

The company's attributable mineral resources (including gold and gold equivalents) at its Papua New Guinea operations as at 30 June 2015 totalled 40.2Moz, a decrease of 2% year on year from the 40.9Moz declared as at 30 June 2014. This decrease is due to depletion by mining during the year and to changes to the open-pit spatial constraint at Hidden Valley.

The company's mineral reserves at its Papua New Guinea operations as at 30 June 2015 totalled 20.5Moz, a decrease of 5% year on year from the 21.5Moz declared as at 30 June 2014. The decrease is due to depletion by mining during the year and changes to the life-of-mine profile at Hidden Valley. The reserves that we declared for Golpu are based on the prefeasibility study completed in 2012. During December 2014, Harmony released the results of an updated prefeasibility study with respect to the Golpu project. Please refer to our website ([www.harmony.co.za/our-business/exploration/golpuupdated-prefeasibility-results](http://www.harmony.co.za/our-business/exploration/golpuupdated-prefeasibility-results)) for details. The Golpu project's reserves will be updated again once the feasibility study for stage 1 and the prefeasibility study for stage 2 have been completed. These studies are expected to be completed by the end of December 2015.

### ASSUMPTIONS

In converting mineral resources to mineral reserves, the following commodity prices and exchange rates were applied:

- A gold price of US\$1 230/oz
- An exchange rate of US\$/ZAR11.38
- The above parameters resulted in a rand gold price of R450 000/kg for the South African assets
- The Hidden Valley mine and Golpu project in the Morobe Mining Joint Ventures used commodity prices of US\$1 250/oz Au, US\$20/oz Ag, US\$10/lb Mo and US\$3.10/lb Cu at an exchange rate of US\$0.85 per A\$
- Gold equivalent ounces are calculated assuming US\$1 400/oz Au, US\$3.10/lb Cu and US\$23.00/oz Ag, and assuming 100% recovery for all metals. These are the same assumptions as those used in the 2012 prefeasibility study for the calculation of gold equivalent ounces.

### AUDITING

Harmony's South African mineral resources and mineral reserves have been 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 code of resource blocking, valuation, resource classification, cut-off calculations, development of life-of-mine plans and the compliance of statements with the South African Code for the Reporting of Mineral Resources and Mineral Reserves (SAMREC) from each operation and project that support Harmony's annual mineral resources and mineral reserves declaration. This audit process is specifically designed to comply with the requirements of internationally recognised procedures and standards such as:

- The South African Code for Reporting Mineral Resources and Mineral Reserves
- Industry Guide 7 of the United States Securities and Exchange Commission
- Sarbanes-Oxley requirements in the United States
- The Australian Code for Reporting of Exploration Results, Mineral Resources and Mineral Reserves (JORC) which complies with South African Code for the Reporting of Mineral Resources and Mineral Reserves

Harmony's South African mineral resources and reserves were reviewed by SRK Consulting Engineers and Scientists for compliance with the South African Code for the Reporting of Mineral Resources and Mineral Reserves. The mineral resources and reserves of the Papua New Guinea assets were reviewed by AMC Consultants Pty Ltd for compliance with the standards set out in the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves.

### COMPETENT PERSON'S DECLARATION

In South Africa, Harmony employs an ore reserve manager at each of its operations who takes responsibility for the compilation and reporting of mineral resources and mineral reserves at their operations. In Papua New Guinea, competent persons are appointed for the mineral resources and mineral reserves for specific projects and operations.

These competent persons, who are full-time employees of Harmony, consent to the inclusion in the report of the matters based on the information in the form and context in which it appears.



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

- **Resources and reserves of South Africa:**

Jaco Boshoff, BSc (Hons), MSc, MBA, Pr. Sci. Nat, MSAIMM, MGSSA, who has 20 years' relevant experience, is registered with the South African Council for Natural Scientific Professions (SACNASP) and is a member of the South African Institute of Mining and Metallurgy (SAIMM).

Mr Boshoff is Harmony's Lead Competent Person.

**Jaco Boshoff**

23 October 2015

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- **Resources and reserves of Papua New Guinea:**

Gregory Job, BSc, MSc, who has 27 years' relevant experience and is a member of the Australian Institute of Mining and Metallurgy (AusIMM).

**Greg Job**

23 October 2015

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## ADMINISTRATIVE INFORMATION FOR PROFESSIONAL ORGANISATIONS

### The Australasian Institute of Mining and Metallurgy (AusIMM)

PO Box 660, Carlton South, Vic 3053, Australia

Telephone: +61 3 9658 6100; Facsimile: +61 3 9662 3662

[www.ausimm.com.au](http://www.ausimm.com.au)

### South African Council for Natural Scientific Professions (SACNASP) – The legislated regulatory body for natural science practitioners in South Africa

Private Bag X540, SILVERTON, 0127, Gauteng Province, South Africa

Telephone: +27 (12) 841-1075; Facsimile: +27 (086) 206-0427

[www.sacnasp.org.za](http://www.sacnasp.org.za)

### The Southern African Institute of Mining and Metallurgy (SAIMM)

P.O. Box 61127, Marshalltown, 2107, Gauteng Province, South Africa

Telephone: +27 (011) 834-1273 / 7, Facsimile: +27 (086) 206-0427

[www.saimm.co.za](http://www.saimm.co.za)

## ENVIRONMENTAL MANAGEMENT AND FUNDING

Harmony's environmental strategy aims to optimise our environmental performance by managing our environmental impacts, focusing on effective risk controls, reducing environmental liabilities, ensuring responsible stewardship of our products within our scope of influence, complying with environmental legislation and regulations. For further information regarding Harmony's approach to Environmental Performance refer to page 100.

# RESOURCES AND RESERVES CONTINUED

Details relating to the provision for environmental rehabilitation and funding can be found in note 24 in Harmony's audited annual financial statements which are available in a separate report, the Financial Report 2015, which is also available online at [www.har.co.za/14/HAR-FR15.pdf](http://www.har.co.za/14/HAR-FR15.pdf).

## LEGAL ENTITLEMENT TO MINERALS REPORTED

Harmony's South Africa operations operate under new order mining rights in terms of the Minerals and Petroleum Resources Development of Act of 2002 (Act No. 28, of 2002) (MPRDA). In Papua New Guinea, Harmony operates under the Independent State of Papua New Guinea Mining Act 1992. All required operating permits have been obtained, and are in good standing. The legal tenure of each operation and project has been verified to the satisfaction of the accountable Competent Person.

## RECONCILIATION

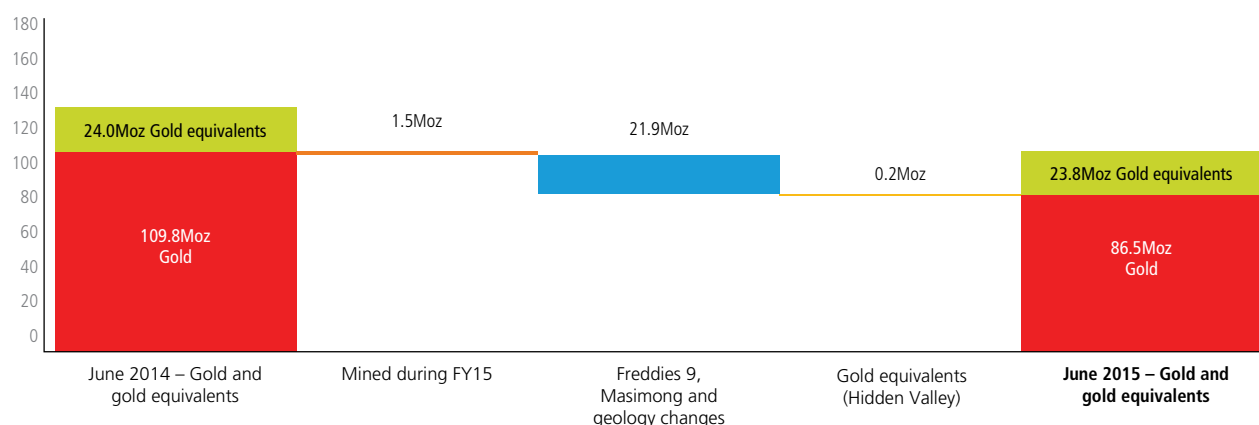
### Mineral resources

As at 30 June 2015, attributable gold equivalent mineral resources were 110.3Moz, down from 133.8Moz in June 2014. The following table and graph show the year on year reconciliation of the mineral resources.

Gold and gold equivalent mineral resources reconciliation	Tonnes	Moz
June 2014 – gold and gold equivalents	4 160	133.8
<b>Reductions</b>		
Mined during FY15	(45)	(1.5)
Freddies 9, Masimong and geology changes	(680)	(21.9)
Gold equivalents	(5)	(0.2)
<b>June 2015 – gold and gold equivalents</b>	<b>3 430</b>	<b>110.3</b>

### Mineral resources reconciliation (Moz)

FY14 vs FY15



Kalgold pit mining

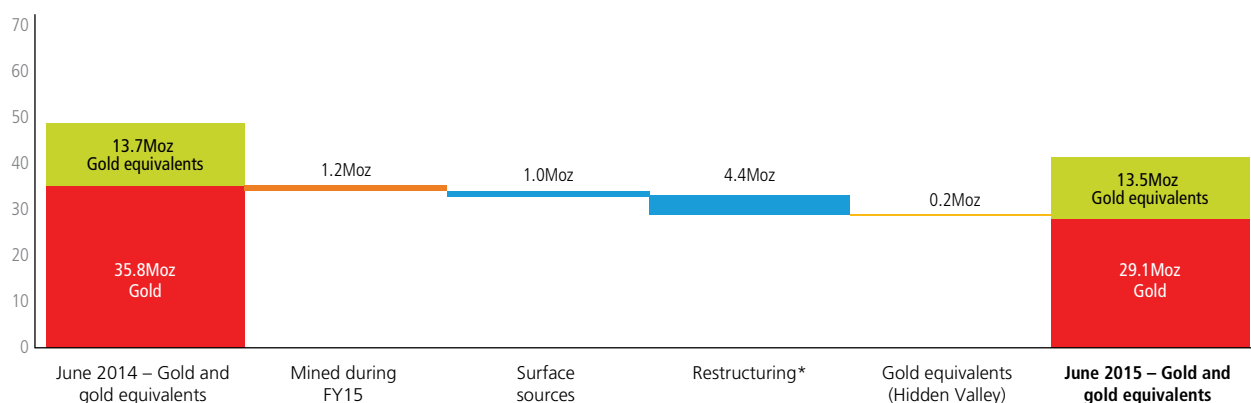
## Mineral reserves

As at 30 June 2015, Harmony's attributable gold equivalent mineral reserves were 42.6Moz, down from 49.5Moz. The year on year mineral reserves reconciliation is shown below.

Gold and gold equivalent mineral resources reconciliation	Tonnes	Moz
June 2014 – gold and gold equivalents	1 538	49.5
<b>Reductions</b>		
Mined during FY15	(38)	(1.2)
Surface sources	(31)	(1.0)
Restructuring (Hidden Valley, Kusasaletu, Doornkop, Masimong and closure of Target 3)	(137)	(4.4)
Gold equivalents	(7)	(0.2)
<b>June 2015 – gold and gold equivalents</b>	<b>1 325</b>	<b>42.6</b>

### Mineral reserves reconciliation (Moz)

FY14 vs FY15



\* Restructuring of Hidden Valley, Kusasaletu, Masimong, Doornkop and the closure of Target 3



Rock samples from Bambanani

# RESOURCES AND RESERVES CONTINUED

## MINERAL RESOURCES STATEMENT (METRIC)

Gold	Measured resources			Indicated resources			Inferred resources			Total mineral resources		
	Tonnes (Mt)	Grade (g/t)	Gold (000oz)	Tonnes (Mt)	Grade (g/t)	Gold (000oz)	Tonnes (Mt)	Grade (g/t)	Gold (000oz)	Tonnes (Mt)	Grade (g/t)	Gold (000oz)
<b>South Africa underground</b>												
<b>Free State</b>												
Bambanani	1.3	15.50	632	–	–	–	–	–	–	1.3	15.50	632
Joel	4.4	8.12	1 157	7.0	7.59	1 706	1.1	7.03	242	12.5	7.73	3 105
Masimong	5.8	8.46	1 579	2.7	7.63	668	5.2	8.96	1480	13.7	8.48	3 727
Phakisa	8.4	10.30	2 786	11.6	11.60	4 337	24.1	9.21	7143	44.2	10.05	14 267
Target 1	9.0	7.42	2 158	11.1	7.54	2 700	4.2	5.55	742	24.3	7.16	5 599
Target 2												
Target 3	7.0	9.10	2 057	4.7	7.10	1 063	–	–	–	11.7	8.31	3 119
Freddies 9												
Tshepong	17.9	11.53	6 623	4.5	9.28	1 331	6.2	8.60	1712	28.5	10.54	9 666
Unisel	7.4	6.87	1637	6.3	6.95	1 400	4.1	8.59	1135	17.8	7.29	4171
<b>Total Free State underground</b>	<b>61.3</b>	<b>9.46</b>	<b>18 629</b>	<b>47.9</b>	<b>8.58</b>	<b>13 204</b>	<b>44.8</b>	<b>8.65</b>	<b>12 453</b>	<b>153.9</b>	<b>8.95</b>	<b>44 286</b>
<b>West Rand</b>												
Doornkop South Reef	3.0	7.28	705	7.1	7.56	1 736	22.6	6.82	4 966	32.8	7.03	7 407
Doornkop Main Reef	0.08	5.38	14	0.04	5.51	8	0.02	5.32	3	0.1	5.41	25
<b>Total</b>	<b>3.1</b>	<b>7.23</b>	<b>719</b>	<b>7.2</b>	<b>7.55</b>	<b>1 745</b>	<b>22.7</b>	<b>6.82</b>	<b>4 969</b>	<b>32.9</b>	<b>7.02</b>	<b>7 432</b>
Kusasaletu	7.2	11.04	2 563	21.4	8.47	5 843	1.7	9.05	483	30.3	9.12	8 890
<b>Total West Rand</b>	<b>10.3</b>	<b>9.90</b>	<b>3 282</b>	<b>28.6</b>	<b>8.24</b>	<b>7 588</b>	<b>24.3</b>	<b>6.97</b>	<b>5 452</b>	<b>63.3</b>	<b>8.02</b>	<b>16 322</b>
<b>Total South Africa underground</b>	<b>71.6</b>	<b>9.52</b>	<b>21 911</b>	<b>76.5</b>	<b>8.45</b>	<b>20 792</b>	<b>69.1</b>	<b>8.06</b>	<b>17 905</b>	<b>217.2</b>	<b>8.68</b>	<b>60 608</b>
<b>South Africa surface</b>												
<b>Kraaipan Greenstone Belt</b>												
Kalgold	12.8	0.80	328	15.5	0.98	486	9.2	1.18	351	37.5	0.97	1164
<b>Total Kalgold tailings dam</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>23.6</b>	<b>0.26</b>	<b>200</b>	<b>23.6</b>	<b>0.26</b>	<b>200</b>
<b>Free State Region – surface</b>												
Free State (Phoenix)	86.6	0.28	792	–	–	–	–	–	–	86.6	0.28	792
Free State (St Helena)	258.7	0.27	2230	–	–	–	–	–	–	258.7	0.27	2 230
Free State (other):												
– Waste rock dumps	–	–	–	3.9	0.51	65	23.8	0.42	323	27.7	0.43	387
– Slimes dams	–	–	–	632.8	0.23	4585	15.5	0.19	94	648.2	0.22	4 680
– Subtotal	–	–	–	636.7	0.23	4650	39.2	0.33	417	675.9	0.23	5 067
<b>Total Free State</b>	<b>345.2</b>	<b>0.27</b>	<b>3 023</b>	<b>636.7</b>	<b>0.23</b>	<b>4 650</b>	<b>39.2</b>	<b>0.33</b>	<b>417</b>	<b>1 021.2</b>	<b>0.25</b>	<b>8 090</b>
<b>Total South Africa surface</b>												
<b>(including Kalgold)</b>	<b>358.0</b>	<b>0.29</b>	<b>3 350</b>	<b>652.2</b>	<b>0.24</b>	<b>5 136</b>	<b>72.0</b>	<b>0.42</b>	<b>968</b>	<b>1 082.3</b>	<b>0.27</b>	<b>9 454</b>
<b>Total South Africa</b>	<b>429.6</b>		<b>25 261</b>	<b>728.7</b>		<b>25 928</b>	<b>141.1</b>		<b>18 873</b>	<b>1 299.5</b>		<b>70 062</b>
<b>Papua New Guinea <sup>1</sup></b>												
Hidden Valley	1.4	1.11	50	38.5	1.57	1 948	1.1	1.33	46	41.0	1.55	2 044
Hamata	0.2	1.09	6	1.6	2.16	111	0.09	1.82	5	1.8	2.05	122
Wafi	–	–	–	56.7	1.72	3 146	11.3	1.30	475	68.1	1.65	3 621
Golpu	–	–	–	428.2	0.61	8 434	108.7	0.48	1 669	536.9	0.59	10 103
Nambonga	–	–	–	–	–	–	19.9	0.79	505	19.9	0.79	505
<b>Total Papua New Guinea</b>	<b>1.6</b>	<b>1.11</b>	<b>56</b>	<b>525.0</b>	<b>0.81</b>	<b>13 639</b>	<b>141.1</b>	<b>0.60</b>	<b>2 701</b>	<b>667.7</b>	<b>0.76</b>	<b>16 396</b>
<b>Grand total</b>	<b>431.2</b>		<b>25 316</b>	<b>1 253.7</b>		<b>39 567</b>	<b>282.3</b>		<b>21 574</b>	<b>1 967.2</b>		<b>86 458</b>

<b>Gold equivalents<sup>1</sup></b>	<b>Measured resources</b>		<b>Indicated resources</b>		<b>Inferred resources</b>		<b>Total mineral resources</b>	
	Tonnes (Mt)	Au eq (000oz)	Tonnes (Mt)	Au eq (000oz)	Tonnes (Mt)	Au eq (000oz)	Tonnes (Mt)	Au eq (000oz)
<b>Silver</b>								
Hidden Valley	1.4	16	38.5	659	1.1	21	41.0	696
<b>Total</b>	<b>1.4</b>	<b>16</b>	<b>38.5</b>	<b>696</b>	<b>1.1</b>	<b>21</b>	<b>41.0</b>	<b>696</b>
<b>Copper</b>								
Golpu	–	–	428.2	19 521	108.7	3 416	536.9	22 937
Nambonga	–	–	–	–	19.9	204	19.9	204
<b>Total</b>	<b>–</b>	<b>–</b>	<b>428.2</b>	<b>19 521</b>	<b>128.6</b>	<b>3 620</b>	<b>556.8</b>	<b>23 141</b>
<b>Total silver and copper as gold equivalents</b>	<b>1.4</b>	<b>16</b>	<b>466.7</b>	<b>20 180</b>	<b>129.7</b>	<b>3 641</b>	<b>597.8</b>	<b>23 837</b>
<b>Total Papua New Guinea including gold equivalents</b>	<b>1.6</b>	<b>72</b>	<b>525.0</b>	<b>33 819</b>	<b>141.1</b>	<b>6 342</b>	<b>667.7</b>	<b>40 232</b>
<b>Total Harmony including gold equivalents</b>	<b>431.2</b>	<b>25 332</b>	<b>1 253.7</b>	<b>59 747</b>	<b>282.3</b>	<b>25 215</b>	<b>1 967.2</b>	<b>110 294</b>

## Other metals

	Tonnes (Mt)	Grade (g/t)	Ag (000oz)	Tonnes (Mt)	Grade (g/t)	Ag (000oz)	Tonnes (Mt)	Grade (g/t)	Ag (000oz)	Tonnes (Mt)	Grade (g/t)	Ag (000oz)
<b>Papua New Guinea<sup>1</sup></b>												
<b>Silver</b>												
Hidden Valley	1.4	20.40	917	38.5	29.80	36 880	1.1	33.34	1162	41.0	29.57	38 959
Golpu	–	–	–	428.2	1.14	15 664	108.7	0.88	3 090	536.9	1.09	18 754
Nambonga	–	–	–	–	–	–	19.9	2.87	1 836	19.9	2.87	1 836
<b>Total</b>	<b>1.4</b>	<b>20.40</b>	<b>917</b>	<b>466.7</b>	<b>3.50</b>	<b>52 544</b>	<b>129.7</b>	<b>1.46</b>	<b>6 088</b>	<b>597.8</b>	<b>3.10</b>	<b>59 549</b>

	Tonnes (Mt)	Grade (%)	Cu (Mlb)	Tonnes (Mt)	Grade (%)	Cu (Mlb)	Tonnes (Mt)	Grade (%)	Cu (Mlb)	Tonnes (Mt)	Grade (%)	Cu (Mlb)
<b>Copper</b>												
Golpu	–	–	–	428.2	0.93	8 809	108.7	0.64	1 544	536.9	0.87	10 353
Nambonga	–	–	–	–	–	–	19.9	0.21	92	19.9	0.21	92
<b>Total</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>428.2</b>	<b>0.93</b>	<b>8 809</b>	<b>128.6</b>	<b>0.58</b>	<b>1 636</b>	<b>556.8</b>	<b>0.85</b>	<b>10 445</b>

	Tonnes (Mt)	Grade (ppm)	Mo (000t)	Tonnes (Mt)	Grade (ppm)	Mo (000t)	Tonnes (Mt)	Grade (ppm)	Mo (000t)	Tonnes (Mt)	Grade (ppm)	Mo (000t)
<b>Molybdenum</b>												
Golpu	–	–	–	428.2	98	93	108.7	76	18	536.9	94	111

	Tonnes (Mt)	Grade (kg/t)	U <sub>3</sub> O <sub>8</sub> (Mlb)	Tonnes (Mt)	Grade (kg/t)	U <sub>3</sub> O <sub>8</sub> (Mlb)	Tonnes (Mt)	Grade (kg/t)	U <sub>3</sub> O <sub>8</sub> (Mlb)	Tonnes (Mt)	Grade (kg/t)	U <sub>3</sub> O <sub>8</sub> (Mlb)
<b>South Africa</b>												
<b>Uranium</b>												
<b>Free State underground</b>												
Masimong	–	–	–	6.0	0.28	4	9.1	0.23	5	15.1	0.25	8
Tshepong	6.1	0.20	3	12.8	0.23	6	10.4	0.12	3	29.3	0.18	12
Phakisa	8.4	0.18	3	11.6	0.18	5	24.1	0.08	4	44.2	0.13	12
<b>Total</b>	<b>14.5</b>	<b>0.19</b>	<b>6</b>	<b>30.4</b>	<b>0.22</b>	<b>15</b>	<b>43.6</b>	<b>0.12</b>	<b>12</b>	<b>88.6</b>	<b>0.17</b>	<b>33</b>
<b>Total South Africa underground</b>	<b>14.5</b>	<b>0.19</b>	<b>6</b>	<b>30.4</b>	<b>0.22</b>	<b>15</b>	<b>43.6</b>	<b>0.12</b>	<b>12</b>	<b>88.6</b>	<b>0.17</b>	<b>33</b>
<b>Free State surface</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>174.1</b>	<b>0.10</b>	<b>38</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>174.1</b>	<b>0.10</b>	<b>38</b>
<b>Grand total</b>	<b>14.5</b>	<b>0.19</b>	<b>6</b>	<b>204.6</b>	<b>0.12</b>	<b>53</b>	<b>43.6</b>	<b>0.12</b>	<b>12</b>	<b>262.7</b>	<b>0.12</b>	<b>71</b>

<sup>1</sup> Total attributable gold equivalent ounces are calculated assuming a US\$1 400/oz Au, US\$3.50/lb Cu and US\$25.00/oz Ag with 100% recovery for all metals

NB: Rounding of numbers may result in slight computational discrepancies

Note: 1 tonne = 1 000 kg = 2 204 lbs

1 troy ounce = 31.10348 grams

Au = gold Ag = silver Cu = copper U<sub>3</sub>O<sub>8</sub> = uranium Mo = molybdenum  
Moz = million ounces

# RESOURCES AND RESERVES CONTINUED

## MINERAL RESERVES STATEMENT (METRIC)

Gold	Proved reserves			Probable reserves			Total mineral reserves		
	Tonnes (Mt)	Grade (g/t)	Gold <sup>2</sup> (000oz)	Tonnes (Mt)	Grade (g/t)	Gold <sup>2</sup> (000oz)	Tonnes (Mt)	Grade (g/t)	Gold <sup>2</sup> (000oz)
<b>South Africa underground</b>									
<b>Free State</b>									
Bambanani	1.6	11.33	565	—	—	—	1.6	11.33	565
Joel	2.0	5.32	347	3.7	5.20	621	5.7	5.24	968
Masimong	1.7	3.87	212	0.2	3.66	23	1.9	3.85	235
Phakisa	6.1	6.61	1 294	2.1	7.49	499	8.2	6.83	1 792
Target 1	3.2	5.45	562	3.8	5.16	625	7.0	5.29	1 187
Target 3									
Tshepong	18.4	5.58	3 294	3.3	4.50	474	21.6	5.42	3 768
Unisel	1.8	4.55	268	0.8	4.33	111	2.6	4.48	380
<b>Total Free State underground</b>	<b>34.8</b>	<b>5.85</b>	<b>6 542</b>	<b>13.8</b>	<b>5.29</b>	<b>2 352</b>	<b>48.6</b>	<b>5.69</b>	<b>8 895</b>
<b>West Rand</b>									
<b>Doornkop</b>									
Doornkop South Reef	1.3	5.00	211	3.8	5.22	636	5.1	5.16	847
Kusasaletu	6.5	6.83	1 419	20.1	5.97	3 856	26.6	6.18	5 274
<b>Total West Rand</b>	<b>7.8</b>	<b>6.52</b>	<b>1 629</b>	<b>23.9</b>	<b>5.85</b>	<b>4 492</b>	<b>31.7</b>	<b>6.01</b>	<b>6 121</b>
<b>Total South Africa underground</b>	<b>42.5</b>	<b>5.97</b>	<b>8 171</b>	<b>37.7</b>	<b>5.65</b>	<b>6 845</b>	<b>80.3</b>	<b>5.82</b>	<b>15 016</b>
<b>South Africa surface</b>									
<b>Kraaipan Greenstone Belt</b>									
Kalgold	5.8	0.97	182	10.6	1.15	393	16.5	1.08	574
<b>Free State – surface</b>									
Free State (Phoenix)	86.6	0.28	792	—	—	—	86.6	0.28	792
Free State (St Helena)	175.9	0.27	1507	—	—	—	175.9	0.27	1507
Free State (Other):									
– Waste rock dumps	—	—	—	3.9	0.51	65	3.9	0.51	65
– Slimes dams	—	—	—	553.1	0.23	4123	553.1	0.23	4123
– Subtotal	—	—	—	557.0	0.23	4188	557.0	0.23	4188
<b>Total Free State</b>	<b>262.5</b>	<b>0.27</b>	<b>2 300</b>	<b>557.0</b>	<b>0.23</b>	<b>4 188</b>	<b>819.4</b>	<b>0.25</b>	<b>6 488</b>
<b>Total South Africa surface (including Kalgold)</b>	<b>268.3</b>	<b>0.29</b>	<b>2 481</b>	<b>567.6</b>	<b>0.25</b>	<b>4 581</b>	<b>835.9</b>	<b>0.26</b>	<b>7 062</b>
<b>Total South Africa</b>	<b>310.8</b>		<b>10 652</b>	<b>605.4</b>		<b>11 425</b>	<b>916.2</b>		<b>22 078</b>
<b>Papua New Guinea<sup>1</sup></b>									
Hidden Valley	1.4	1.11	50	12.0	1.79	693	13.4	1.72	743
Hamata	0.2	1.09	6	1.0	2.36	80	1.2	2.19	85
Golpu	—	—	—	225.0	0.86	6 194	225.0	0.86	6 194
<b>Total Papua New Guinea</b>	<b>1.6</b>	<b>1.11</b>	<b>56</b>	<b>238.1</b>	<b>0.91</b>	<b>6 967</b>	<b>239.6</b>	<b>0.91</b>	<b>7 022</b>
<b>Grand total</b>	<b>312.4</b>		<b>10 708</b>	<b>843.4</b>		<b>18 392</b>	<b>1 155.8</b>		<b>29 100</b>

<sup>1</sup> Total attributable gold equivalent ounces are calculated assuming a US\$1 400/oz Au, US\$3.10/lb Cu and US\$23.00/oz Ag with 100% recovery for all metals

<sup>2</sup> 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

NB: Rounding of numbers may result in slight computational discrepancies

Note: 1 tonne = 1 000 kg = 2 204 lbs

1 troy ounce = 31.10348 grams



**Gold equivalents<sup>1</sup>**

	Proved reserves		Probable reserves		Total mineral reserves	
	Tonnes (Mt)	Au eq <sup>2</sup> (000oz)	Tonnes (Mt)	Au eq <sup>2</sup> (000oz)	Tonnes (Mt)	Au eq <sup>2</sup> (000oz)
<b>Silver</b>						
Hidden Valley	1.4	15	12.0	218	13.4	232
<b>Total</b>	<b>1.4</b>	<b>15</b>	<b>12.0</b>	<b>218</b>	<b>13.4</b>	<b>232</b>
<b>Copper</b>						
Golpu	–	–	225.0	13 265	225.0	13 265
<b>Total</b>	<b>–</b>	<b>–</b>	<b>225.0</b>	<b>13 265</b>	<b>225.0</b>	<b>13 265</b>
<b>Total silver and copper as gold equivalents</b>	<b>1.4</b>	<b>15</b>	<b>237.0</b>	<b>13 482</b>	<b>238.4</b>	<b>13 497</b>
<b>Total Papua New Guinea including gold equivalents</b>	<b>1.6</b>	<b>70</b>	<b>238.1</b>	<b>20 449</b>	<b>239.6</b>	<b>20 519</b>
<b>Total Harmony including equivalents</b>	<b>312.4</b>	<b>10 722</b>	<b>843.4</b>	<b>31 874</b>	<b>1 155.8</b>	<b>42 597</b>

**Other metals**

	Tonnes (Mt)	Grade (g/t)	Ag <sup>2</sup> (000oz)	Tonnes (Mt)	Grade (g/t)	Ag <sup>2</sup> (000oz)	Tonnes (Mt)	Grade (g/t)	Ag <sup>2</sup> (000oz)
<b>Papua New Guinea<sup>1</sup></b>									
<b>Silver</b>									
Hidden Valley	1.4	20.40	917	12.0	35.12	13 582	13.4	33.59	14 499
Golpu	–	–	–	225.0	1.36	9 864	225.0	1.36	9 864
<b>Total</b>	<b>1.4</b>	<b>20.40</b>	<b>917</b>	<b>237.0</b>	<b>3.08</b>	<b>23 446</b>	<b>238.4</b>	<b>3.18</b>	<b>24 363</b>

	Tonnes (Mt)	Grade (%)	Cu <sup>2</sup> (Mlb)	Tonnes (Mt)	Grade (%)	Cu <sup>2</sup> (Mlb)	Tonnes (Mt)	Grade (%)	Cu <sup>2</sup> (Mlb)
<b>Copper</b>									
Golpu	–	–	–	225.0	1.21	5 992	225.0	1.21	5 992

	Tonnes (Mt)	Grade ppm	Mo <sup>2</sup> (Mlb)	Tonnes (Mt)	Grade ppm	Mo <sup>2</sup> (Mlb)	Tonnes (Mt)	Grade ppm	Mo <sup>2</sup> (Mlb)
<b>Molybdenum</b>									
Golpu	–	–	–	225.0	81	40	225.0	81	40

<sup>1</sup> Total attributable gold equivalent ounces are calculated assuming a US\$1400/oz Au, US\$3.50/lb Cu and US\$25.00/oz Ag with 100% recovery for all metals

<sup>2</sup> 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

NB: Rounding of numbers may result in slight computational discrepancies

Note: 1 tonne = 1 000 kg = 2 204 lbs

1 troy ounce = 31.10348 grams

Au = gold Ag = silver Cu = copper Mo = molybdenum

# MINING CHARTER COMPLIANCE

Harmony is a truly empowered company. We report on our performance in relation to the Mining Charter throughout this integrated report. The table below sets out the specific requirements of the Mining Charter and our progress in terms of these requirements. Further information on what we have achieved in relation to the Mining Charter can be found in the Social and ethics committee chairman's report on pages 22 to 24.

## PROGRESS AGAINST MINING CHARTER TARGETS

December 2014 marked the end of the five-year period set for implementation of and compliance with the Mining Charter. The Mining Charter has served as a guide to the industry, focusing the transformation journey on nine key elements. In FY15, a template was designed by the Department of Mineral Resources which allowed mining companies to provide the information necessary to assess their success in achieving key Mining Charter targets. The following table provides a synopsis of our performance against the targets for each of the Mining Charter's nine pillars for the calendar year ended 31 December 2014.

Pillar	Target	Compliance as at 31 December 2014
<b>Reporting</b>		
We are required to report the level of compliance with the Mining Charter by calendar year.	Annually	✓
<b>Ownership</b>		
We are required to transfer 26% of Harmony's equity to historically disadvantaged South African entities. Beneficiaries could include entrepreneurs, employees and community trusts.	26%	✓
<b>Housing and living conditions</b>		
Mining companies housing employees in hostels are required to provide single-person rooms, as well as family units.	Occupancy rate of one room per person Family units established	97.78% Hostels have been upgraded to allow for one person per room, converting some hostels into family units and establishing home ownership programmes which include the construction of houses. Harmony is working in partnership with the Department of Human Settlements to convert old hostels into family units. Masimong has been completed while Merriespruit is in progress. A key challenge was to comply fully regarding the Doornkop mining licence. For more information please refer to the Employees and Community section on page 76
<b>Procurement and enterprise development</b>		
We are required to achieve a certain level of procurement spending with black-owned entities in order to encourage the economic empowerment and development of such suppliers.	Capital goods: 40% Services: 70% Consumer goods: 50% Annual contribution by multinational suppliers to socio-economic development: 0.5% of the value of any supply contract	Capital goods: 82.56% Services: 73.89% Consumer goods: 67.56% Harmony engaged all its multinational suppliers urging them to contribute to socio-economic development, as prescribed by the Mining Charter. Harmony is also exploring the potential of a Harmony-supported fund for this very same purpose, which will allow for proper monitoring of contributions made by our suppliers. Harmony has done a great deal to empower and develop black-owned suppliers and/or to encourage ownership transformation of supplier companies. See page 98 for more details.

Pillar	Target	Compliance as at 31 December 2014
<b>Employment equity</b>		
Workplace diversity and equitable representation by historically disadvantaged South Africans at all levels are seen as catalysts for social cohesion, transformation and competitiveness.	<b>Top management</b> Board: 40% <b>Senior management</b> (executive committee): 40% <b>Middle management:</b> 40% <b>Junior management:</b> 40% <b>Core skills:</b> 40%	<b>Top management</b> Board: 60% <b>Senior management</b> (executive committee): 46.49% <b>Middle management:</b> 38.58% <b>Junior management:</b> 56% <b>Core skills:</b> 62.57% Specific emphasis has been placed on demographic representation particularly insofar as women are concerned. Although all group-wide employment equity targets have been met, further efforts are currently underway to ensure we are fully transformed at an operational level as well.
<b>Human resource development</b>		
The development of employee skills is integral to social transformation in the workplace and to sustainable growth. We are required to contribute to the development of the requisite skills, including the support of South African-based research and development initiatives intended to develop solutions to exploration, mining, processing, technology efficiency, beneficiation and environmental conservation challenges.	Percentage of total payroll to be invested: 5%	Percentage of payroll invested: 5.95%
<b>Mine community development</b>		
To achieve our social licence to operate, we need to make meaningful contributions towards community development, particularly in communities close to the mines and in labour-sending areas. Development programmes must be based on a clear assessment of development needs, in line with local Integrated Development Plans.	Project implementation as at 30 June 2015	86.44%



Simulated training at Target 1

# MINING CHARTER COMPLIANCE CONTINUED

Pillar	Target	Compliance as at 31 December 2014
<b>Sustainable development and growth</b>		
<p>Given that mineral resources are non-renewable, it is important to balance the economic benefits of mining with the social and environmental needs of our communities and thus we are required to meet specific obligations in respect of health, safety and environmental management.</p> <p>As one of the most-regulated industries in South Africa, the mining industry has highly developed health, safety and environmental strategies in place to improve the industry's management and performance in this regard.</p>	<p>Implementation of approved Environmental Management Programmes: 100%</p> <p>Implementation of the tripartite action plan on health and safety: 100%</p> <p>Percentage of samples in South African facilities: 100%</p>	<p>Implementation of approved Environmental Management Programmes: 87.50%</p> <p>At the time of finalisation of the Mining Charter, Harmony still needed to conduct concurrent rehabilitation at certain of its sites, hence the shortfall. Please refer to the Environmental Performance section on page 100 for more details.</p> <p>Implementation of the tripartite action plan on health and safety: 100%</p> <p>Percentage of samples in South African facilities: 100%</p>
<b>Beneficiation</b>		
<p>The Mining Charter encourages companies to beneficiate the minerals they mine. The incentive is that beneficiation advances may be used to offset black economic empowerment requirements. We benefit from our shareholding in Rand Refinery (Pty) Limited. All our gold is fully refined and beneficiated to final product within South Africa for sale to customers.</p> <p>In addition, Harmony beneficiates at its jewellery school in Welkom. The first commercial outlets supplied by the school were opened in April 2015.</p>		
<b>Total score:</b>		<b>91.03%*</b>

\* According to the Mining Charter, an overall score of 91.03% represents an "Excellent performance rating"



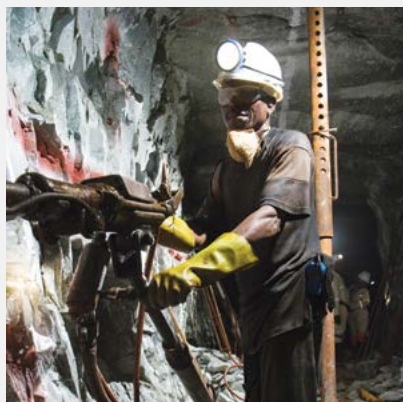
Masimong housing project



# GOVERNING HARMONY

## GOVERNING HARMONY

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# CORPORATE GOVERNANCE

## THE VALUE OF GOOD CORPORATE GOVERNANCE

Harmony's corporate governance framework and processes are aimed at fulfilling the company's obligations to all stakeholders. These obligations are the foundation both of our strategy and of our values, and are inseparable from our practice of corporate governance.

Harmony's board is tasked with making the decisions necessary to shape the strategy and to guide the company in attaining its strategic goals. We thus seek particular skills in our board members to enable them to contribute meaningfully to the company. These skills include knowledge of the South African gold mining industry as well as the local and international economy, financial and/or mining expertise, an understanding of socio-economic expectations and knowledge of the legislation and regulations in the jurisdictions in which we operate.

Harmony's values are entrenched in our code of ethics and underpin not only our approach to corporate governance but everything we do, and every decision that we make. Moreover, our board members live our values and lead by example by making decisions that are in line with our values. Leadership, strategy and our values are interdependent and our approach to corporate governance seeks to ensure this.

Each quarter, the board, through the audit and risk committee, reviews the company's risks and operational, financial and sustainability performances, and relates these back to strategy at the annual strategy session.

## OUR APPROACH TO CORPORATE GOVERNANCE

### Governance practices and reporting

The foundation of our corporate governance is compliance with the Companies Act, the requirements of the JSE Limited, where we have our primary listing, and the New York Stock Exchange as well as the King Report on Governance for South Africa and the King Code of Governance Principles (King III) and related principles of good corporate governance. Harmony also complies voluntarily with the principles of the United Nations Global Compact, International Council on Mining and Metals, the Global Reporting Initiative and the Cyanide Code.

In line with the JSE Listings Requirements, we apply all 75 principles of King III. Any deviations from the recommendations of King III are specifically mentioned in this report. A detailed King III compliance register can be found on page 182.

New York Stock Exchange foreign private issuers, such as Harmony, must briefly highlight any significant ways in which their corporate governance practices differ from those followed by United States domestic companies subject to the listing standards of the New York Stock Exchange. A brief summary of the significant differences can be found in our 2015 Form 20-F filed with the United States Securities and Exchange Commission on our website at [www.harmony.co.za/investors/reporting/20f](http://www.harmony.co.za/investors/reporting/20f).

Our governance structures and processes are reviewed regularly and adapted when necessary to reflect what is happening internally in Harmony, as well as to keep up with national and international best practice.

### Board leadership

We have paid specific attention to the composition of our board to ensure a balance of power. Harmony has a unitary board comprising executive and non-executive directors with a majority of independent non-executive directors.

On the recommendation of the nomination committee and in terms of the King III requirement, the board was evaluated and the classification confirmed of all independent non-executive directors. This includes directors serving on the board for longer than nine years.

The roles of the chairman and chief executive officer are distinct and separate, as governed by the board's terms of reference and the delegation of authority framework.

Our chairman, Patrice Motsepe, was appointed based on the value he adds to Harmony in this role, given the vital skills he has. Patrice has served on our board since 2003 and was most recently re-elected as chairman in August 2015. In terms of our succession plan, the

chairman is currently supported by a deputy chairman, Modise Motloba, who has held this position since August 2012. As determined in accordance with King III, Patrice is not considered to be independent.

As a result, Fikile De Buck was re-appointed by the board as our lead independent non-executive director in August 2015. Her role is in line with the recommendations of King III and she assists the board in managing any actual or perceived conflicts of interests that may arise from the non-independence of the chairman. Mavuso Msimang was appointed deputy lead independent non-executive director on 5 May 2014.

For more on the members of our board see page 28.

### Appointment of directors

The responsibility for board appointments lies with the nomination committee, which recommends all new board appointments and reviews succession plans for directors and management. In line with King III, the board chairman is a member of this committee. The procedures governing appointments are formal and transparent. While the nomination committee recommends individuals as members of the board, the appointment of board members is considered by the board as a whole, in accordance with its terms of reference. These appointments are, in turn, approved by shareholders.

When making new appointments to the board, Harmony considers the following factors: skills; experience, gender and demographics. We are satisfied that we currently have an acceptable balance of members and that our non-executive and independent directors have sufficient experience and knowledge among them to carry significant weight in the board's decision-making process.

### Board induction and training

Once appointed, directors undergo the company's board induction programme. Managed by the company secretary, this programme provides new board members with comprehensive company information and governance packs. It also offers directors the opportunity to meet with various management teams and to tour the business. No new directors were appointed during the year.

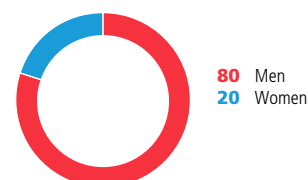
A formal training-needs analysis is conducted annually to ensure board members are appropriately trained, with ad hoc training opportunities identified during the year. Formal training on relevant topics is given at each board meeting, while the company secretary provides board members with regular updates on regulatory and industry developments. Our board also took time to visit our operations and community projects during the year.

### Board responsibilities

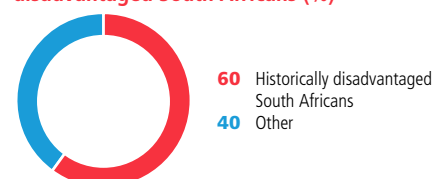
The board responsibilities are carried out with the company's best interests in mind. Our board receives sufficient information to ensure objective decision-making, and is expected to act rationally at all times. Our code of ethics enshrines behaviour that puts the best interests of Harmony ahead of those of individuals. The code of ethics is available at [www.harmony.co.za/sustainability/governance#policies](http://www.harmony.co.za/sustainability/governance#policies).

One of the board's primary functions is to establish management structures and processes that assist in maintaining the sustainability of our business in terms of our financial, social and environmental performance. The board and its committees have work plans in place that allow them to address their responsibilities adequately throughout the year. These work plans are reviewed and confirmed quarterly.

Composition of the board – by gender (%)



Composition of the board – by historically disadvantaged South Africans (%)



Composition of the board – by director (%)





# CORPORATE GOVERNANCE CONTINUED

Responsible citizenship is core to the company and, through the social and ethics committee, the board ensures we remain a committed, socially responsible corporate citizen. One of the ways in which the board ensures Harmony is a good corporate citizen is by considering and responding to the legitimate expectations of stakeholders. This requires a careful balance between promoting our business interests and protecting our stakeholder relations – it is essential that Harmony remains profitable in order to be able to share these profits with stakeholders. The social and ethics committee receives quarterly reports on stakeholder engagement, which it uses to monitor progress and provide feedback to the board. In addition, the board is kept informed of shareholder perceptions after roadshows and other shareholder engagements (refer to the Stakeholder Engagement section on page 52).

## NOTEWORTHY ACTION

### Building relationships with stakeholders

The board interacts with many of our key stakeholders during the course of the year. This, we believe, is important – our relationships are central to our business and our strategy. Insight into these relationships improve board members' ability to fulfil their roles appropriately.

During the year under review the board spent time with our employees during site visits to the operations, the company's bio-energy project in the Free State and the Masimong Health Hub. Board members also had an opportunity to dine with our employees at the Masimong hostel.

In addition, the chief executive officer and financial director had direct contact with investors through road shows, while the whole board interacted with shareholders at the annual general meeting. The chief executive officer engages with the greater industry through the Chamber of Mines.

To sustain our business, we need to ensure our balance sheet remains strong and flexible. The board undertakes quarterly reviews of our financial performance, while the executive management team reviews our operational results on a weekly basis. If the company were found to be in financial distress, the board would consider what mechanisms would be appropriate to address this. Ordinarily, the board uses these quarterly reviews to perform solvency and liquidity tests to support the going concern statement, in line with the provisions of the Companies Act.

In line with the International Integrated Reporting Council guidelines, the board reviews and approves this integrated report as part of its annual duties. The audit and risk committee makes a final recommendation to the board for consideration.

The board monitors the performance of the chief executive officer. The board also evaluates succession plans for the chief executive officer and executive management annually to ensure a continuation of skills and expertise for the future.

## BOARD COMMITTEES

In order to focus on our priorities, particular responsibilities have been delegated to board committees in terms of the board delegation of authority and the committees' terms of reference. The board does not abdicate its overall responsibility but rather the work done by these committees serves to support the board in executing its responsibility. At each board meeting, the committee chairmen report on the activities of their respective committees and make recommendations on key decisions. Some duties are further delegated to the chief executive officer and financial director who, in turn, delegate some of these responsibilities to the executive committee and management, who are closer to the operations. A clear line of communication is in place to ensure these responsibilities are well managed, underpinning our value of accountability.

Each board committee comprises board members with the skills and expertise that suit its portfolio, allowing committee members to apply their minds and make well-considered recommendations to the board. Minutes of each committee meeting are included in the board packs distributed prior to board meetings to provide context to deliberations at committee meetings. To ensure board members are able to fully consider what they need to within these committees, and on the board, each director has unrestricted access to the advice and services of senior management, allowing them insight into the business, as well as full access to company and subsidiary information, records, documents and property. Our non-executive directors are encouraged to visit our operations and attend management meetings to get a sense of how they are run. However, they remain independent, allowing management to fulfil their duties fully. If they feel it is necessary, our board members can request independent, professional advice at the company's expense.

## Audit and risk committee

### Members

- John Wetton\* (chairman)
- Fikile De Buck\*
- Modise Motloba\*
- Simo Lushaba\*
- Karabo Nondumo\*

\* Independent non-executive

### Description of expertise and experience

- Accounting experience, experience in investment banking, treasury services and fund management
- Roles on various other boards, as well as industry bodies
- Governance experience
- Knowledge of business development in and around Africa
- Previous roles as chief financial officers, business managers and an external auditor. Therefore a good understanding of company finances, risk, processes and controls

### Primary functions

- Monitors the operation of an adequate system of internal control and control processes
- Monitors the preparation of accurate financial reporting and statements in compliance with all applicable legal and corporate governance requirements and accounting standards
- Monitors risk management, ensures that significant risks identified are appropriately addressed and supports the board in the overall governance of risk

### Key activities and actions in FY15

For the actions of the audit and risk committee in FY15 refer to the committee's report on page 202.

## Investment committee

### Members

- Simo Lushaba\* (chairman)
- Ken Dicks\*
- Cathie Markus\*
- Vishnu Pillay\*
- John Wetton\*
- André Wilkens

\* Independent non-executive

### Description of expertise and experience

- Occupy various roles on other boards
- Experience in entrepreneurship and business development
- Extensive knowledge of the mining, legal and financial industries
- This combination of skills equips the investment committee with knowledge of what reasonable returns on investments are and a thorough understanding of the investment process, as well as insight into what investors want

### Primary functions

- Considers projects, acquisitions and disposals in line with Harmony's strategy and ensures that due diligence procedures are followed
- Conducts other investment-related functions designated by the board

### Key activities and actions in FY15

- Reviewed and recommended the budget and business plans for FY16
- Considered whether the company could afford a proposed dividend distribution, taking into account the company's cash flow, current and future projects
- Considered investments, proposals, projects and proposed acquisitions in line with the board's approved delegation of authority and the committee's terms of reference

# CORPORATE GOVERNANCE CONTINUED

## Nomination committee

### Members

- Fikile De Buck\* (chairman)
- Joaquim Chissano\*
- Patrice Motsepe
- Modise Motloba\*
- Mavuso Msimang\*

*\* Independent non-executive*

### Description of expertise and experience

- Experience in the mining, financial, accounting and legal sectors
- Extensive experience in management and leadership roles
- Understanding of Harmony, and its needs, as well as of the requirements of being on a board. These insights allows the committee to find and nominate individuals who will add value to our Harmony board in the areas that we require

### Primary functions

- Ensures that procedures governing board appointments are formal and transparent
- Makes recommendations to the board on all new board appointments
- Reviews succession planning for directors and other members of the executive team and oversees the board's self-assessment process

### Key activities and actions in FY15

- Reviewed succession planning for directors and other members of the executive team and oversaw the board's self-assessment process
- Reviewed and recommended directors for re-election who retired by rotation in terms of the company's memorandum of incorporation
- Reviewed and recommended the composition, structure and size of the board and board committees
- Considered the positions of the chairman of the board, the deputy chairman of the board, the lead independent director and the deputy lead independent director and made recommendations to the board
- Reviewed and recommended the independence of non-executive directors (especially independent non-executives serving on the board for longer than nine years)
- Reviewed and recommended succession plans for the board, the chairman of the board, the chief executive officer, executive management, the company secretary and the head of internal audit
- Followed a transparent and formal process in recommending a suitable candidate for the board's consideration and appointment to replace Graham Briggs as chief executive officer following his retirement

## Remuneration committee

### Members

- Cathie Markus\* (chairman)
- Fikile De Buck\*
- Simo Lushaba\*
- Karabo Nondumo\*^
- Vishnu Pillay\*#
- John Wetton\*
- André Wilkens

*\* Independent non-executive*

*^ Resigned from the committee on 7 May 2015*

*# Appointed to the committee on 7 May 2015*

### Description of expertise and experience

- Experience in accounting, remuneration and financial management roles, as well as legal and mining experience, allowing members to ensure our remuneration is aligned with industry standards, best practice and legislation
- Knowledge of the duties and responsibilities of board and executive positions, allowing realistic key performance indicators to be related to remuneration

**Remuneration committee** *continued***Primary functions**

- Ensures directors and executive managers are fairly rewarded for their contribution to Harmony's performance
- Assists the board in monitoring, reviewing and approving Harmony's compensation policies and practices, and in administering its share incentive schemes
- Operates as an independent overseer of the group remuneration policy and makes recommendations to the board for final approval

**Key activities and actions in FY15**

- Reviewed and recommended the remuneration policy to the board for inclusion in the notice to the annual general meeting for consideration by the shareholders as a non-binding advisory resolution ([www.har.co.za/15/download/HAR-RS.pdf](http://www.har.co.za/15/download/HAR-RS.pdf))
- Reviewed and recommended the remuneration report to be included in the integrated annual report (page 190)
- Reviewed and recommended the non-executive directors' fees to the board for consideration and approval by shareholders. For more information, refer to the Report to Shareholders 2015, which is available at [www.har.co.za/15/download/HAR-RS15.pdf](http://www.har.co.za/15/download/HAR-RS15.pdf)
- Reviewed and recommended executive directors' and executive management's annual salary increases (page 190). No increases were awarded to any of the non-executive directors, executive directors or executive management in FY15.
- Reviewed the annual salary increases of the company secretary and the head of internal audit. No management salary increases were awarded in FY15.
- Reviewed a comprehensive benchmark on incentive schemes in the industry and made the necessary recommendations to the board. Please refer to the remuneration report for more information (page 190).

The details of these activities are contained in this committee's report, which can be found on page 190.

**Social and ethics committee****Members**

- Modise Motloba\* (chairman)
- Joaquim Chissano\*
- Fikile De Buck\*
- Cathie Markus\*
- Mavuso Msimang\*
- John Wetton\*

\* Independent non-executive

**Description of expertise and experience**

- Proven experience in the fields of sustainable and business development in Africa, community affairs, government relations, the drafting and implementing of charters, international relations and global leadership
- This collected experience of committee members brings with it the skills and relationships necessary to ensure Harmony can contribute to meaningful change through its social development and transformation work. In addition, this experience adds weight to the committee's ability to enforce the code of ethics within Harmony

**Primary functions**

- Oversees policy and strategies pertaining to occupational health and employee well-being, environmental management, corporate social responsibility, human resources and ethics management
- Monitors implementation of policies and strategies by executives and their management teams for each discipline referred to above
- Assesses compliance of the company against relevant regulations
- Reviews material issues in each of the above disciplines to evaluate their relevance in the reporting period, and to identify additional material issues that warrant reporting, including sustainability related key performance indicators and levels of assurance

**Key activities and actions in FY15**

- Reviewed and recommended the social and ethics committee report to be included in the integrated annual report
- Reviewed and considered the social, economic and environmental issues affecting the company's business
- Reviewed and considered the effect that the company's operations had on the economic, social and environmental well-being of communities, as well as significant risks within the ambit of the committee's responsibilities
- Approved material elements of sustainability reporting and the key performance indicators which were externally assured
- Considered and monitored the company's employment relationships
- Attended a site visit to the company's bio-energy project in the Free State, had lunch at the Masimong 5 hostel and visited the Masimong health hub

This committee's report can be found on page 22.

# CORPORATE GOVERNANCE CONTINUED

## Technical committee

### Members

- André Wilkens (chairman)
- Ken Dicks\*
- Cathie Markus\*^

- Vishnu Pillay\*
- Karabo Nondumo\*

\* independent non-executive

^ resigned from the committee on 7 May 2015

### Description of expertise and experience

- Decades of experience in the mining industry, particularly in gold, mining technology and mining engineering
- Strong research skills
- This experience allows members to grasp fully the technical and operational challenges facing Harmony and lend their knowledge to the tasks required of them

### Primary functions

- Provides a platform to discuss strategy, performance against targets, operational results, projects and safety
- Informs the board of key developments, progress against objectives and the challenges facing operations
- Reviews strategic plans before recommending such to the board for approval
- Provides technical guidance and support to management

### Key activities and actions in FY15

- Monitored exploration in South Africa and Papua New Guinea
- Monitored all South African and Papua New Guinean operations
- Reviewed and recommended to the board the annual budget and business plans of the company
- Monitored safety across all operations
- Attended an underground site visit to Phakisa. Also visited the Phakisa health hub and ice plants.

During the review period, the majority of members of all board committees were independent non-executive directors. All board committees were chaired by an independent non-executive director, except for the technical committee chaired by André Wilkens (a non-independent, non-executive director). The board is confident that André's leadership as chairman of the technical committee is in the best interest of the company, based on his extensive knowledge of the specific areas of responsibilities of that committee.

## BOARD AND BOARD COMMITTEE MEETING ATTENDANCE

	Board	Audit and risk	Nomination	Remuneration	Technical	Investment	Social and ethics
<b>Number of meetings</b>	5	5	3	5	8	4	5
Patrice Motsepe (chairman)	5	–	3	–	–	–	–
Modise Motloba (deputy chairman)	5	3	2	–	–	–	5
Joaquim Chissano	4	–	2	–	–	–	2
Fikile De Buck	4	3	3	4	–	–	4
Ken Dicks	5	–	–	–	8	4	–
Simo Lushaba	4	4	–	4	–	4	–
Cathie Markus	5	–	–	5	4***	4	4
Mavuso Msimang	4	–	3	–	–	–	2
Karabo Nondumo	5	4	–	4*	8	–	–
Vishnu Pillay	5	–	–	0**	8	4	–
John Wetton	5	5	–	5	–	4	5
André Wilkens	5	–	–	5	8	4	–
Graham Briggs	5	–	–	–	–	–	–
Frank Abbott	4	–	–	–	–	–	–
Mashego Mashego	4	–	–	–	–	–	–

– Not applicable

\* Resigned from the committee on 7 May 2015

\*\* Appointed to the committee on 7 May 2015

\*\*\* Resigned from the committee on 7 May 2015

## COMPANY SECRETARY

In terms of section 3.84(i) and (j) of the JSE Listings Requirements, the board has, on the recommendation of the nomination committee, considered the performance, qualifications, level of experience and competence of the company secretary. The board is satisfied that Riana Bisschoff is sufficiently competent, qualified and experienced to act as Harmony's company secretary. The board is further satisfied that Riana is not a director of the board or any of the company's subsidiaries and that she maintained an arm's-length relationship with the board during FY15.

The following information was taken into consideration during the review:

Riana Bisschoff (LLB, LLM) is a qualified attorney, conveyancer and notary. She has been a company secretary for the past 11 years (eight years in a listed environment). Riana was appointed group company secretary in March 2012, and is fully supported by the board and management. She plays an active role in achieving good corporate governance, supporting the chairman and the board in:

- Ensuring the effective functioning of the board
- Providing guidance to the chairman, board and directors of Harmony's subsidiaries on their responsibilities and duties in the prevailing regulatory and statutory environment
- Raising matters that may warrant the attention of the board

The company secretary assists in ensuring that the board's decisions and instructions are clearly communicated and is available as a central source of guidance and advice in Harmony on matters of ethics.

## BOARD EVALUATION

The board conducts annual self-assessments of its own performance, as well as the performances of its board committees, individual directors and the chairman. The audit firm, KPMG, assists with this, adding independence to the process. From this process, a full report on the findings and recommendations is drawn up, and the board implements any changes necessary during the following financial year. The administrative recommendations made during the FY15 assessment process will be addressed during FY16.

## LEGISLATIVE COMPLIANCE

### Relevant Global Reporting Initiative indicators: G4-S07, G4-S08

One of the duties of the board is to ensure that Harmony complies with all applicable laws, in both South Africa and Papua New Guinea, and that it adheres to non-binding rules, codes and standards.

We are in the process of finalising a revised compliance strategy which will serve as a framework for an overriding, renewed monitoring system.

Harmony paid no significant fines in any of its areas of operation and had no actions brought against it for anti-competitive behaviour, or for anti-trust or monopoly practices during FY15. See page 22 for the social and ethics committee report and page 202 for the audit and risk committee report.

Given the importance of public policy and our strategic objective of maintaining our licence to operate, we have increased our engagement in recent years with the South African government on policy, often through the Chamber of Mines. One such example is the engagement we had, through the Chamber of Mines, on carbon taxes and the Mining Charter, especially as it relates to ownership and section 54 applications in the mine health and safety arena.

We have also engaged with Eskom and the energy regulator on issues that could have an impact on our operations, such as security of the power supply, the cost of electricity and potential carbon taxes.

# CORPORATE GOVERNANCE CONTINUED

## ROTATION OF DIRECTORS

Aligning with King III and with Harmony's memorandum of incorporation, one-third of the board's non-executive directors must retire from office at each annual general meeting. These will be the non-executive directors who have been in office the longest since their last election. In addition, those directors appointed following the last annual general meeting held are also expected to stand down for election by shareholders following their respective appointments.

In line with this, the directors who will retire at this year's annual general meeting are:

- Fikile De Buck
- Joaquim Chissano
- Modise Motloba
- Patrice Motsepe

Their curricula vitae are available on pages 28 to 32.

## CODE OF ETHICS

### Relevant Global Reporting Initiative indicators: G4-S05

Developed to respond to the challenge of ethical conduct in the business environment, our code of ethics commit Harmony, our employees and our contractors to the highest moral standards, free from conflicts of interest. Over the past few years we have done extensive work in enshrining our five values – safety, accountability, achievement, connectedness and honesty – into everyday behaviour at Harmony, through constructive employee engagement. These values underpin our code of ethics and align it with our strategy.

Every second year the board reviews the code of ethics, while its application within Harmony is continually monitored by management. Our ethics programme is also subject to independent assurance as part of the internal audit coverage plan.

Our management ethics committee monitors our ethical culture and integrity. It also assesses declarations of interest in terms of the code of conduct and provides feedback to the executive committee, which then reports to the board's social and ethics committee. As a result, ethics are discussed and examined at every level of management within the company.

The social and ethics committee of the board is in the process of reviewing a draft code of conduct which will replace our current code of ethics. We continue to improve our efforts to adhere to good corporate governance and ethical standards. Making our codes easier to read and understand is part of this process.

The code of ethics encourages employees and other stakeholders to report any suspected irregularities. This can be done anonymously through a 24-hour crime line (which is managed by external auditing specialists), as well as other channels. All incidents reported are investigated and monitored by the white-collar crime committee, which comprises managers representing various disciplines in the company and reports to the management ethics committee.

The identity of any employee or stakeholder who reports non-compliance with the code of ethics is protected. Our anonymous ethics hotline number is +27 (0) 800 21 23 39 and is widely advertised throughout the organisation.

## RESTRICTIONS ON SHARE DEALINGS

During price-sensitive periods, our employees and directors are prohibited from dealing in Harmony shares. Written notice of these restricted periods is communicated to employees and directors by the company secretary. In terms of regulatory and governance standards, directors and employees are required to disclose any dealings in Harmony shares in accordance with the JSE Listings Requirements. The clearance procedure for directors and executive management to deal in Harmony shares is regulated by the company's policy on trading in shares and insider trading.



## INFORMATION TECHNOLOGY GOVERNANCE

The board recognises that information technology is integral to doing business today, and fundamental in supporting the sustainability and growth of our company. Accordingly, the focus of our information technology division is to ensure accurate, reliable and timely information that supports effective reporting and appropriate management of our business to enable Harmony to achieve its sustainability objectives.

The audit and risk committee monitors the return on investment from significant information technology projects. Information technology management ensures that the key elements of appropriate project management principles are applied to all information technology projects. A management information technology steering committee has oversight of various information technology aspects, including governance, compliance and business continuity.

Formal processes are in place to protect and manage information, including sensitive information processed by the company.

## POLITICAL DONATIONS

### Relevant Global Reporting Initiative indicators: G4-S06

Harmony has a political donations policy. We made no political donations for the year under review.

## SARBANES-OXLEY

In line with New York Stock Exchange listing requirements, we comply with the Sarbanes-Oxley Act. Details of this compliance and relevant processes can be found in our Form 20-F for FY15, which is available at [www.harmony.co.za/investors/reporting/20f](http://www.harmony.co.za/investors/reporting/20f) from 23 October 2015.

## ACCESS TO INFORMATION

Harmony complies with the Promotion of Access to Information Act 2000, which protects the constitutional right to information that is required to exercise or protect a right. The purpose of this legislation is to foster a culture of transparency and accountability in both public and private bodies, and to promote a society in which all South Africans are enabled to enjoy their rights. For more on this see our website: [www.harmony.co.za/sustainability/governance#policies](http://www.harmony.co.za/sustainability/governance#policies). The company received no requests for access to information during FY15.

## HUMAN RIGHTS

### Relevant Global Reporting Initiative indicators: G4-HR1, G4-LA14, G4-HR3, G4-HR9, G4-HR10, G4-HR12, G4-S03, G4-S03

Harmony recognises that human rights should be integrated into all that we do and, through the entrenchment of our values, we endeavour to do this every day.

In line with the Companies Act, the social and ethics committee's responsibilities include monitoring of the company's standing in terms of the goals and purposes of the ten principles set out in the United Nations Global Compact. The United Nations Global Compact asks companies to embrace, support and enact, within their sphere of influence, a set of core principles in the areas of human rights, labour standards, the environment and anti-corruption. The social and ethics committee monitors our performance regarding these principles, based on the various reports submitted to them in terms of the committee's annual work plan.

We acknowledge that human rights cannot be limited to how we conduct our business, but must also be considered when we consider our business partnerships with other companies involved in our supply chain. We screen prospective suppliers on their level of legal compliance and compare their business practices with those prescribed in our code of ethics. This ensures that they behave in a way that Harmony believes is appropriate and that is aligned with our values.

During the year under review, we did not identify any human rights infringements on the part of companies involved in our supply chain, nor did we terminate any relationships on this basis. Furthermore, no human rights grievances were recorded against Harmony.

# KING III COMPLIANCE SCORECARD

## KING III COMPLIANCE REPORT: FY15

In South Africa, in terms of the JSE Limited Listings Requirements as well as the King Report on Governance for South Africa and the King Code of Governance Principles (King III), companies are required to disclose compliance with the latter in the current reporting year. The table below details Harmony's compliance status as at 23 October 2015. We provide supplementary information in support of the application of each of these governance standards within our company.

Principle	Applied	Explanation/comment
<b>Principle 1.1</b>		
The board should provide effective leadership based on an ethical foundation.	✓	The board of directors has established management structures and processes based on ethical values and good corporate governance principles, ensuring Harmony's business is sustainable in terms of our financial, social and environmental performance.  The board is governed by its terms of reference available at <a href="http://www.harmony.co.za/sustainability/governance">www.harmony.co.za/sustainability/governance</a> .
<b>Principle 1.2</b>		
The board should ensure the company is and is seen to be a responsible corporate citizen.	✓	Responsible citizenship is a core principle underpinning Harmony's values and a key component of the board's terms of reference. Through its social and ethics committee, the board ensures the company remains a committed, socially responsible corporate citizen. For more information refer to the social and ethics committee report on page 22 of the Integrated Annual Report 2015 and for the social and ethics committee terms of reference please refer to <a href="https://www.harmony.co.za/sustainability/governance#policies">https://www.harmony.co.za/sustainability/governance#policies</a> on our website.
<b>Principle 1.3</b>		
The board should ensure the company's ethics are managed effectively.	✓	Harmony's code of ethics (the code) ( <a href="http://www.harmony.co.za/sustainability/governance">http://www.harmony.co.za/sustainability/governance</a> ) were adopted and updated to respond to the challenge of ethical conduct in the business environment. For more information on the code of ethics, refer to page 180 of the Integrated Annual Report 2015.
<b>Principle 2.1</b>		
The board should act as the focal point for and custodian of corporate governance.	✓	The board advocates effective, responsible leadership and aims to lead by example. Governance structures and processes are regularly reviewed and adapted to accommodate internal developments and reflect national and international best practice while considering the best interests of the company.
<b>Principle 2.2</b>		
The board should appreciate that strategy, risk, performance and sustainability are inseparable.	✓	As reflected in its terms of reference, and as is evident from the content of the integrated annual report, the board appreciates that strategy, risk, performance and sustainability are inseparable. The board annually considers and reviews the company's strategy relative to its risks, performance and sustainability at a strategy session arranged specifically for this purpose.
<b>Principle 2.3</b>		
The board should provide effective leadership based on an ethical foundation.	✓	Refer to principle 1.1.
<b>Principle 2.4</b>		
The board should ensure the company is and is seen to be a responsible corporate citizen.	✓	Refer to principle 1.2.

Principle	Applied	Explanation/comment
<b>Principle 2.5</b>		
The board should ensure the company's ethics are managed effectively.	✓	Refer to principle 1.3.
<b>Principle 2.6</b>		
The board should ensure the company has an effective and independent audit committee.	✓	The board has approved the mandate for the audit committee, which includes monitoring risk management. At Harmony, the committee is, therefore, known as the audit and risk committee. In FY15, the committee again complied with the legal, regulatory and other responsibilities assigned to it by the board in terms of its terms of reference. These are detailed in this committee's report – on page 202 of the Integrated Annual Report 2015 – which confirms the audit and risk committee's effectiveness and independence.
<b>Principle 2.7</b>		
The board should be responsible for the governance of risk.	✓	Refer to principle 2.6. The board is assisted in this by the audit and risk committee, ensuring that any significant risks facing Harmony are adequately addressed. For more information, refer to the risk management report on page 202 of Integrated Annual Report 2015.
<b>Principle 2.8</b>		
The board should be responsible for information technology governance.	✓	The audit and risk committee oversees and monitors information technology governance on behalf of the board, and views this as an important aspect of risk management. Refer to the audit and risk committee report on page 202 of Integrated Annual Report 2015.
<b>Principle 2.9</b>		
The board should ensure the company complies with applicable laws and considers adherence to non-binding rules, codes and standards.	✓	Refer to a discussion of our legislative compliance on page 179 of the Integrated Annual Report 2015.
<b>Principle 2.10</b>		
The board should ensure there is an effective risk-based internal audit.	✓	<p>The internal audit function assists the board and management by independently reviewing the adequacy and effectiveness of Harmony's systems of internal control. Significant findings are reported to the audit and risk committee and follow-up audits are conducted in areas where significant internal control weaknesses are found. Harmony has an in-house internal audit function and co-sourced arrangements with audit firms to provide assurance on the effectiveness of governance, risk management and the internal control environment.</p> <p>The purpose, authority and responsibility of the internal audit function are formally documented in the internal audit charter as approved by the audit and risk committee.</p>
<b>Principle 2.11</b>		
The board should appreciate that stakeholders' perceptions affect the company's reputation.	✓	The board considers and responds to the legitimate interests and expectations of Harmony's stakeholders. The social and ethics committee receives quarterly reports on stakeholder engagement, and reports thereon at board meetings. Board members are also regularly apprised of stakeholder perceptions after management road shows and other shareholder engagements. For more information on the company's stakeholder engagements, refer to page 52 of the Integrated Annual Report 2015.
<b>Principle 2.12</b>		
The board should ensure the integrity of the company's integrated report.	✓	The integrated report is reviewed by the audit and risk committee with the assistance of the social and ethics committee (on sustainability matters). The report is recommended to the board for approval.

# KING III COMPLIANCE SCORECARD CONTINUED

Principle	Applied	Explanation/comment
<b>Principle 2.13</b>		
The board should report on the effectiveness of the company's system of internal controls.	✓	Refer to principle 2.10.
<b>Principle 2.14</b>		
The board and its directors should act in the best interests of the company.	✓	The board debates issues rationally and with sufficient information from management to reach an objective assessment. All directors are mindful of their duty to act in the best interests of the company. The board has approved a policy for dealing in Harmony shares which applies to directors, prescribed officers and selected employees.
<b>Principle 2.15</b>		
The board should consider business-rescue proceedings or other turnaround mechanisms as soon as the company is financially distressed as defined in the Companies Act.	✓	Twice a year, the board assesses Harmony's ability to continue as a going concern and monitors its financial performance quarterly to assess whether the company is financially distressed for the purposes of considering business-rescue proceedings and to ensure sound financial management. In addition, the board receives a quarterly update on the operations and the financial position of the company through the technical, investment and audit and risk committees as well as at the board meeting.
<b>Principle 2.16</b>		
The board should elect a chairman who is an independent non-executive director. The chief executive officer of the company should not also fulfil the role of chairman of the board.	✓	For a discussion of our board leadership, refer to page 172 of the Integrated Annual Report 2015. Our chairman is not considered to be independent and therefore, we appointed a Lead Independent Director.  The chief executive officer of the company is not the chairman of the board.
<i>Johannesburg Stock Exchange Listings Requirement, section 3.84(c).</i>		
<b>Principle 2.17</b>		
The board should appoint the chief executive officer and establish a framework for the delegation of authority.	✓	The board appointed Graham Briggs as the company's chief executive officer with effect from 1 January 2008. During 2012, his term of employment as chief executive officer was extended to 31 October 2016. Graham however decided to retire earlier and will remain the company's chief executive officer until a new chief executive officer is appointed. The existing delegation of authority is revised and refreshed when necessary and at least every second year to keep it updated with any changes that may affect the authority framework.
<b>Principle 2.18</b>		
The board should comprise a balance of power, with a majority of non-executive directors. The majority of non-executive directors should be independent.	✓	For a discussion of our board leadership, refer to page 172 of the Integrated Annual Report 2015.
<i>Johannesburg Stock Exchange Listings Requirement, section 3.84(b).</i>		
<b>Principle 2.19</b>		
Directors should be appointed through a formal process.	✓	For a discussion on the appointment of directors, refer to page 173 of the Integrated Annual Report 2015.
<i>Johannesburg Stock Exchange Listings Requirement, section 3.84(a).</i>		

Principle	Applied	Explanation/comment
<b>Principle 2.20</b>		
The induction and on-going training and development of directors should be conducted through formal processes.	✓	For a discussion on board induction and training, refer to page 173 of the Integrated Annual Report 2015.
<b>Principle 2.21</b>		
The board should be assisted by a competent, suitably qualified and experienced company secretary	✓	For a discussion on the company secretary, refer to page 179 of the Integrated Annual Report 2015.
<i>Johannesburg Stock Exchange Listings Requirement, section 3.84(i)&amp;(j).</i>		
<b>Principle 2.22</b>		
The evaluation of the board, its committees and individual directors should be performed every year.	✓	For a discussion on the evaluation of the board, refer to page 179 of the Integrated Annual Report 2015.
<b>Principle 2.23</b>		
The board should delegate certain functions to well-structured committees without abdicating its own responsibilities.	✓	For a discussion of the board committees, refer to page 174 of the Integrated Annual Report 2015.
<i>Johannesburg Stock Exchange Listings Requirement, section 3.84(d).</i>		
<b>Principle 2.24</b>		
A governance framework should be agreed between the group and its subsidiary boards.	✓	The board reviewed its delegation of authority and approved a revised delegation of authority framework on 25 August 2014.
<b>Principle 2.25</b>		
Companies should remunerate their directors and executives fairly and responsibly.	✓	For more information on Harmony's remuneration policy, refer to the remuneration report on page 190 of the Integrated Annual Report 2015.
<b>Principle 2.26</b>		
Companies should disclose the remuneration of each director and certain senior executives.	✓	Refer to the remuneration report on page 190 of the Integrated Annual Report 2015.
<b>Principle 2.27</b>		
Shareholders should approve the company's remuneration policy.	✓	The company's remuneration policy is presented to shareholders for a non-binding advisory vote at each annual general meeting. Refer to the FY15 notice of the annual general meeting contained in the Report to Shareholders 2015 ( <a href="http://www.har.co.za/15/download/HAR-RS15.pdf">www.har.co.za/15/download/HAR-RS15.pdf</a> ).
<b>Principle 3.1</b>		
The board should ensure the company has an effective and independent audit committee.	✓	Refer to principle 2.6.
<b>Principle 3.2</b>		
Audit committee members should be suitably skilled and experienced independent non-executive directors.	✓	All five members of the audit and risk committee are independent non-executive directors. The board is satisfied that members of this committee collectively have the appropriate knowledge and experience to fulfil their mandate. For more information on the audit and risk committee, refer to page 202 of the Integrated Annual Report 2015.

# KING III COMPLIANCE SCORECARD CONTINUED

Principle	Applied	Explanation/comment
<b>Principle 3.3</b>		
The audit committee should be chaired by an independent non-executive director.	✓	The chairman of this committee is an independent non-executive director.
<b>Principle 3.4</b>		
The audit committee should oversee integrated reporting.	✓	Refer to the audit and risk committee report on page 202 of the Integrated Annual Report 2015. Also refer to principle 2.12 and principle 9.2.
<b>Principle 3.5</b>		
The audit committee should ensure that a combined assurance model is applied to provide a coordinated approach to all assurance activities.	✓	Refer to the audit and risk committee report on page 202 of the Integrated Annual Report 2015.
<b>Principle 3.6</b>		
The audit committee should satisfy itself of the expertise, resources and experience of the company's finance function.	✓	Refer to the audit and risk committee report on page 202 of the Integrated Annual Report 2015.
<i>Johannesburg Stock Exchange Listings Requirement, section 3.84(g)&amp;(h).</i>		
<b>Principle 3.7</b>		
The audit committee should be responsible for overseeing the internal audit function.	✓	Refer to principle 2.10.
<b>Principle 3.8</b>		
The audit committee should be an integral component of the risk management process.	✓	Management is responsible for implementing effective risk management processes. This is overseen by the audit and risk committee on behalf of the board. A comprehensive report on risk management appears on page 41 of the Integrated Annual Report 2015.
<b>Principle 3.9</b>		
The audit committee is responsible for recommending the appointment of the external auditor and overseeing the external audit process.	✓	Refer to the audit and risk committee report on page 202 of the Integrated Annual Report 2015.
<b>Principle 3.10</b>		
The audit committee should report to the board and shareholders on how it has discharged its duties.	✓	The audit and risk committee reports to the board each quarter on how it has discharged its statutory duties, as well as those assigned to it by the board. This information is also disclosed for the period under review in the Integrated Annual Report 2015 (page 202).
<b>Principle 4.1</b>		
The board should be responsible for the governance of risk.	✓	Refer to principle 2.7.
<b>Principle 4.2</b>		
The board should determine the levels of risk tolerance.	✓	Refer to the audit and risk committee report on page 202 of the Integrated Annual Report 2015.
<b>Principle 4.3</b>		
The risk committee or audit committee should assist the board in carrying out its risk responsibilities.	✓	Refer to principle 2.7.

Principle	Applied	Explanation/comment
<b>Principle 4.4</b>		
The board should delegate to management the responsibility to design, implement and monitor the risk management plan.	✓	The risk management policy and plan is implemented by management through coordinated risk management processes. Oversight of these processes lies with the audit and risk committee.
<b>Principle 4.5</b>		
The board should ensure risk assessments are performed on a continual basis.	✓	Risk identification, assessment, response and monitoring are performed on a weekly basis at operational level while the executive committee reviews the corporate/strategic risk profile each quarter. Management provides formal quarterly risk reports to the audit and risk committee.
<b>Principle 4.6</b>		
The board should ensure frameworks and methodologies are implemented to increase the probability of anticipating unpredictable risks.	✓	Refer to principle 4.5.
<b>Principle 4.7</b>		
The board should ensure that management considers and implements appropriate risk responses.	✓	Refer to principle 4.5.
<b>Principle 4.8</b>		
The board should ensure continual risk monitoring by management.	✓	Refer to principle 4.5.
<b>Principle 4.9</b>		
The board should receive assurance regarding the effectiveness of the risk management process.	✓	Management provides formal risk reports to the audit and risk committee each quarter. In addition, evaluation of the risk management process forms part of the internal audit coverage plan.
<b>Principle 5.1</b>		
The board should be responsible for information technology (IT) governance.	✓	Refer to principle 2.8.
<b>Principle 5.2</b>		
Information technology should be aligned with the performance and sustainability objectives of the company.	✓	The board recognises that information technology is integral to doing business today, and fundamental in supporting the sustainability and growth of our company. Accordingly, the focus of our information technology division is ensuring accurate, reliable and timely information that supports effective reporting and appropriate management of our business to enable Harmony to achieve its sustainability objectives.
<b>Principle 5.3</b>		
The board should delegate to management the responsibility for implementation of an information technology governance framework.	✓	Management is responsible for implementing the information technology governance framework.
<b>Principle 5.4</b>		
The board should monitor and evaluate significant information technology investments and expenditure.	✓	The audit and risk committee monitors the return on investment from significant information technology projects. Information technology management ensures that key elements of appropriate project management principles are applied to all information technology projects.
<b>Principle 5.5</b>		
Information technology should form an integral part of the company's risk management.	✓	A management information technology steering committee has oversight of various aspects of information technology, including governance, compliance and business continuity.



# KING III COMPLIANCE SCORECARD CONTINUED

Principle	Applied	Explanation/comment
<b>Principle 5.6</b>		
The board should ensure information assets are managed effectively.	✓	Formal processes are in place to protect and manage information, including sensitive information processed by the company.
<b>Principle 5.7</b>		
A risk committee and audit committee should assist the board in carrying out its information technology responsibilities.	✓	Refer to principle 2.8.
<b>Principle 6.1</b>		
The board should ensure the company complies with applicable laws and considers adherence to non-binding rules, codes and standards.	✓	Refer to principle 2.9.
<b>Principle 6.2</b>		
The board and each director should have a working understanding of the effect of applicable laws, rules, codes and standards on the company and its business.	✓	Refer to principle 2.20.
<b>Principle 6.3</b>		
Compliance risk should form an integral part of the company's risk management process.	✓	Refer to principle 2.7.
<b>Principle 6.4</b>		
The board should delegate to management the implementation of an effective compliance framework and processes.	✓	Refer to principle 2.9.
<b>Principle 7.1</b>		
The board should ensure there is an effective risk-based internal audit.	✓	Refer to principle 2.10.
<b>Principle 7.2</b>		
Internal audit should have a risk-based approach to its plan.	✓	A fully risk-based audit coverage plan has been developed and approved by the audit and risk committee. This is in line with activities surrounding the roll out of the enterprise risk management strategy, coupled with the combined assurance strategy.
<b>Principle 7.3</b>		
Internal audit should provide a written assessment of the effectiveness of the company's system of internal control and risk management.	✓	Internal audit provides an annual written assessment to the audit and risk committee. This assessment is in accordance with the annual coverage plan.
<b>Principle 7.4</b>		
The audit committee should be responsible for overseeing internal audit.	✓	Refer to principle 2.10.
<b>Principle 7.5</b>		
Internal audit should be strategically positioned to achieve its objectives.	✓	Refer to principle 2.10.

Principle	Applied	Explanation/comment
<b>Principle 8.1</b>		
The board should appreciate that stakeholders' perceptions affect a company's reputation.	✓	Refer to principle 2.11.
<b>Principle 8.2</b>		
The board should delegate to management to proactively deal with stakeholder relationships.	✓	For an overview of our stakeholder engagement, refer to page 52 of the Integrated Annual Report 2015.
<b>Principle 8.3</b>		
The board should strive to achieve the appropriate balance between its various stakeholder groupings, in the best interests of the company.	✓	A formal stakeholder engagement policy was approved by the social and ethics committee on behalf of the board in August 2013 and is reviewed every second year. For an overview of our stakeholder engagement, refer to page 52 of the Integrated Annual Report 2015.
<b>Principle 8.4</b>		
Companies should ensure the equitable treatment of shareholders.	✓	All shareholders, including minority shareholders, are treated equally. The company abides by the requirements of the JSE Limited and New York Stock Exchange, ensuring that full, equal and timeous public disclosure is made to all shareholders and the general public on any price-sensitive activities on the part of Harmony.
<b>Principle 8.5</b>		
Transparent and effective communication with stakeholders is essential for building and maintaining their trust and confidence.	✓	In terms of our stakeholder engagement policy and in line with our corporate values of honesty and connectedness, the board provides information to stakeholders that are complete, timely, relevant, accurate and easily accessible.
<b>Principle 8.6</b>		
The board should ensure disputes are resolved as efficiently and expeditiously as possible.	✓	The audit and risk committee monitors all material legal disputes and reports to the board quarterly. Proper dispute resolution practices are in place.
<b>Principle 9.1</b>		
The board should ensure the integrity of the company's integrated report.	✓	Refer to principle 2.12.
<b>Principle 9.2</b>		
Sustainability reporting and disclosure should be integrated with the company's financial reporting.	✓	Refer to principle 2.12 and principle 3.4.
<b>Principle 9.3</b>		
Sustainability reporting and disclosure should be independently assured.	✓	Each year, selected key performance indicators – those most material to stakeholders' understanding of our performance – are independently assured. In recent years, we have steadily aimed at increasing the number of indicators assured, as well as the depth of this assurance. The social and ethics committee, under its terms of reference, approves the material elements of sustainability reporting over which the external assurance provider should provide assurance and ensures that a formal process of assurance on sustainability reporting is established through the audit and risk committee.

# REMUNERATION REPORT



**Cathie Markus**  
Chairman, remuneration committee

## REMUNERATION COMMITTEE

### CHAIRMAN'S LETTER

I have pleasure in submitting the annual remuneration report for FY15 on behalf of the remuneration committee and the board.

During the year we engaged with many of our shareholders who had given feedback regarding our reporting process on remuneration or aspects of our remuneration policies and procedures. We have reviewed and enhanced our remuneration reporting using the valuable inputs contained in those comments and in line with best practice, with the aim of improving our communication. Our focus has been on actions taken during the year to incorporate shareholder feedback and to provide a clear illustration of how our remuneration policies and practices are closely tied to our company strategy – ultimately reinforcing our belief in 'pay for performance'.

During the year we also undertook an extensive review of our short- and long-term incentive schemes. Again, the comments and concerns raised by shareholders have been taken into consideration as part of this review process, and the review has resulted in us making some changes to our long-term incentive schemes. These changes are highlighted throughout the relevant sections in the report. They include the removal of gold production as a performance measure for the long-term incentives, and a change to the way we test performance measures for performance shares. Additional changes requiring shareholder approval are discussed below and are also included in the notice of our annual general meeting for our shareholders' consideration.

This year, in line with leading international best practice and with best practice in South Africa, we have split the report into two sections:

- **Part one:** remuneration, governance and policy
- **Part two:** remuneration outcomes during the year under review.

As before, this remuneration report continues to focus on the remuneration of executive directors and prescribed officers as well as on the fees paid to non-executive directors. We rely on carefully designed variable pay structures which require certain levels of performance against activities that are of primary importance to the sustainability and success of our business. We continually reassess these measures to ensure that they are aligned with our group strategy. We also give an overview of our employee share-option scheme, the Tlhakanelo Employee Share Trust, which aims to give our non-managerial employees an opportunity to benefit as Harmony shareholders.

For more on the committee and its activities during the year under review see the governance report on page 176 of the Integrated Annual Report 2015.

**Cathie Markus**  
Chairman, remuneration committee  
23 October 2015

**"WE RELY ON CAREFULLY  
DESIGNED VARIABLE  
PAY STRUCTURES  
WHICH REQUIRE  
CERTAIN LEVELS  
OF PERFORMANCE  
AGAINST ACTIVITIES  
THAT ARE OF PRIMARY  
IMPORTANCE TO THE  
SUSTAINABILITY AND  
SUCCESS OF OUR  
BUSINESS"**

## PART ONE: REMUNERATION, GOVERNANCE AND POLICY

### REMUNERATION COMMITTEE

The remuneration committee is the custodian of Harmony's remuneration policy and its implementation.

No member of the committee has a personal interest in the outcome of decisions made, and five of its six members are independent non-executive directors.

For more information on the composition, primary functions, activities and actions of this committee, refer to the Corporate Governance section on page 172. The terms of reference of this committee are available at [www.harmony.co.za/sustainability/governance#policies](http://www.harmony.co.za/sustainability/governance#policies).

**The main focus areas for the remuneration committee during the year were as follows:**

- Review the short-term incentive scheme and the applicable performance measures
- Review the long-term incentive scheme, including the use of share appreciation rights, and the performance measures applied to performance shares
- Executive and non-executive remuneration benchmarking
- Review of and engagement on shareholder concerns
- Approval and recommendation of the remuneration report

### HARMONY'S REMUNERATION POLICY – ALIGNED WITH STRATEGY

Harmony's reward strategy underpins our business strategy of producing profitable ounces, safely. In order to achieve this, we rely on experienced, skilled teams who live our values and play their role in maintaining stakeholder relationships, in growing profits, and in maintaining a sustainable company.

Our remuneration policy has been designed with this strategy in mind – to attract and retain these experienced, skilled teams, and to motivate them to deliver superior performance and achieve our key business goals. To ensure that this happens, we need to be certain that all elements of our remuneration and wider reward offerings are market competitive and properly calibrated.

In determining remuneration, the remuneration committee takes into account shareholders' interests and the financial health of the company.

### BOARD REMUNERATION (NON-EXECUTIVE DIRECTORS)

Harmony's philosophy regarding the remuneration of non-executive directors is to ensure that they are fairly rewarded for their contributions to the company's overall performance.

Non-executive directors' fees are reviewed annually to ensure that they remain competitive. In line with the recommendations of King III, our non-executive directors are paid a retainer for board meetings and an attendance fee for every board meeting attended. Non-executive directors also receive a retainer for serving on a committee. In addition, an ad hoc fee is paid for special meetings or attendance to company business, per day.

Non-executive directors, including the chairman, do not receive share options or other incentive awards correlated with the share price or group performance as these may impair their ability to provide impartial oversight and advice.

The proposed fees for FY16 are set out in the notice of annual general meeting on page 30 in the Report to Shareholders 2015.

# REMUNERATION REPORT CONTINUED

## REMUNERATION MIX AT HARMONY

Harmony chooses to adopt an integrated approach to rewarding its employees.

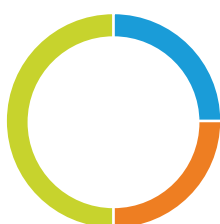
The graphs below illustrate the designed outcome of the total remuneration package for the chief executive officer, financial director, executive director and prescribed officers, based on achieving targeted performance. The guaranteed pay, short-term incentives and long-term incentives are expressed as a percentage of total remuneration.

**On target pay mix – chief executive (%)**



Long-term incentives **32**  
Short-term incentives **23**  
Guaranteed pay **45**

**On target pay mix – financial director, executive director, prescribed officers (%)**



Long-term incentives **25**  
Short-term incentives **25**  
Guaranteed pay **50**

The graphs depicting actual payment can be found in Part Two, on page 196 of this Remuneration Report.

These elements of the remuneration package are discussed in more detail below:

## KEY ELEMENTS OF HARMONY'S REMUNERATION STRUCTURE

Reward elements	Remuneration strategy
<b>Guaranteed pay</b>	<p>In reviewing and approving levels of guaranteed pay, the committee ensures that the guaranteed pay portion of remuneration is aligned with similar roles in the market sector in which we operate and the contribution made by employees.</p> <p>To compete effectively for skills in a challenging employment market, we identify the target market against which to benchmark guaranteed pay. This target market includes those organisations or companies that employ similar skills sets to those which we require. Comparisons are made predominantly with the mining and resources sectors to ensure that Harmony is competitive.</p> <p>Harmony aims for guaranteed pay levels relative to the median of the target market.</p> <p>Guaranteed pay is inclusive of contributions by the company to a retirement fund and a medical aid scheme.</p>

Reward elements	Remuneration strategy
<b>Short-term incentive</b>	<p>The short-term incentive scheme provides for bonus payments. Bonus payments are:</p> <ul style="list-style-type: none"> <li>• based on team performance against annual targets that are reviewed annually</li> <li>• paid twice a year for all management employees in corporate, central services, medical services and central operations (including executive directors and prescribed officers)</li> <li>• paid quarterly for designated shaft management team members and regional operations management teams</li> </ul>

The targets on which bonus payments are based are derived from the company's business plan which is developed in terms of the company's strategic objectives for the year. For executive management, the measures and weightings are as follows:

Performance drivers	Weighting
Gold produced	40%
Total cost R/kg	30%
Underground grade	30%

*Payment parameters:*

To achieve a minimum qualification for a bonus, Harmony must achieve at least 90% of that business plan target for a performance driver. On-target performance can result in a total bonus of 50% of guaranteed pay.

Above-target performance is capped at 100% of guaranteed pay as illustrated below:

% of business plan achieved	% of 6-month guaranteed pay	Parameter
<90	0	
90	30	Threshold
100	50	Target
110	100	Maximum
>110	100	

Previously, safety improvement was measured against the fatal injury frequency rate. We have re-evaluated this measure and consider the lost-time injury frequency rate to be a more comprehensive measure of safety and have, accordingly, incorporated a measure based on improvement of the lost-time injury frequency rate.

Safety performance is applied as an adjustment in the calculation of our short-term incentive bonuses. The company's lost-time injury frequency rate for the total South African business plan is used to measure Harmony's safety performance.

If the planned safety target is achieved, 10% will be added to the overall percentage bonus paid. If the company does not achieve its safety target, up to 10% will be deducted from the overall percentage bonus paid as per the gradation scale illustrated below:

Achievement against business plan	% added or deducted from overall bonus percentage *
100	10%
95	5%
90	0%
85	-5%
80	-10%

*\*Linear interpolation between these points*

# REMUNERATION REPORT CONTINUED

Reward elements	Remuneration strategy
<b>Long-term (share-based) incentive</b>	The Harmony 2006 share plan (the plan) consists of share appreciation rights (SARs), performance shares and restricted shares.

Employees eligible for participation in the plan include executive directors, executive management and management. Non-executive directors may not participate in the plan.

The expected value of the total share reward as a percentage of guaranteed pay is:

- 70% for the chief executive officer
- 50% for the executives and prescribed officers

There is no repricing or surrender or re-grant of any offers. Share awards are not granted in a closed period and no backdating of awards is allowed. Rewards are settled in shares, although participants may receive, via our share scheme administrators, cash from the sale of these shares, less tax payable.

The main elements of the share plan and performance conditions are summarised below.

## Share appreciation rights

Eligible employees receive annual allocations, which vest in equal thirds on the third, fourth and fifth anniversaries of such allocations and lapse in the sixth year as illustrated below. The value or reward that accrues is based on the positive appreciation of the share price over time (compared to the issue price) and continued employment. If this criteria is met, the shares become exercisable.

Grant Date	1st Anniversary	2nd Anniversary	3rd Anniversary	4th Anniversary	5th Anniversary	6th Anniversary
–	–	–	1/3 exercisable	1/3 exercisable	1/3 exercisable	All unexercised SARs lapse

The company acknowledges shareholders' sentiment with regard to the issuing of share appreciation rights. Such views will be considered should the company issue new share appreciation rights to executive management going forward.

## Performance shares

Eligible employees receive annual conditional awards of a maximum number of performance shares. The conditional award vests after three years, if and to the extent that performance conditions have been satisfied. The conditional awards that do not vest at the end of the three year period will be forfeited.

Awards made since November 2014 will be tested over the full three-year performance period and will be measured on the total shareholder return of the company compared to that of the gold index as follows:

Performance	Achievement	Vesting
Full (stretch)	Outperform gold index by 20%	100%
Target	Match gold index	75%
Threshold	Underperform gold index by 20%	0%

Linear interpolation will apply between levels.

Performance measures, for awards made prior to November 2014, were based on the company's gold production and relative share price performance against certain South African gold mining companies. The awards were assessed and calculated annually, and accumulated over the three-year period.

Details of the awards made during FY15 can be found in Part Two of this Remuneration Report, on page 196.



Reward elements	Remuneration strategy
<b>Long-term (share-based) incentive</b> <i>continued</i>	<p><b>Restricted shares</b></p> <p>The share plan allows for restricted shares and matching performance shares to be granted to eligible employees at the discretion of the board. The board determines the quantum and balance between restricted shares and matching performance shares.</p> <p>Restricted shares vest three years from the grant date. If the grant is not exercised, partially or fully at the time, these shares remain restricted for a further three years and are supplemented by a matching grant of restricted shares. All restricted shares are then only settled after the end of a further three-year period.</p> <p>The last award of new restricted shares was made in 2012.</p> <p>The company acknowledges shareholders' sentiment with regard to the issuing of restricted shares. Such views will be considered should the company issue new restricted shares going forward.</p> <p><b>Plan limit</b></p> <p>The approved aggregate number of shares that may be acquired by participants in the long-term incentive plan, together with any other share plan or scheme are 60 011 669 shares as approved by the members of the company at an annual general meeting held on 1 December 2010. To date, Harmony has used 6 680 515 of these approved shares.</p> <p>The aggregate number of shares that may be acquired by any one participant in terms of the long-term incentive plan together with any other share plan or scheme approved by the members shall not exceed 2 100 000 shares. To date, none of the participants has acquired an aggregate of more than 2 100 000 shares.</p> <p><b>Proposed changes to the share plan</b></p> <p>A proposal will be made at the forthcoming annual general meeting to amend the share plan in relation to the treatment of retiring executive management participants in respect of all future grants. It is proposed that, on retirement, the vesting of allocated shares will not be accelerated. This will ensure that participants approaching retirement remain motivated to perform according to the performance conditions, and put in place succession planning and ensure sustainability, so that shareholder value continues to be maintained and created after they retire.</p> <p>For more information refer to the notice of the annual general meeting in the Report to Shareholders 2015 <a href="http://www.har.co.za/15/download/HAR-RS15.pdf">www.har.co.za/15/download/HAR-RS15.pdf</a>.</p>
<b>Tlhakanelo Employee Share Trust</b>	<p>Administered in terms of the Tlhakanelo trust, this share-based incentive scheme ensures that current and future qualifying employees participate in Harmony's growth. Qualifying employees are those who are permanently employed by the company and who do not participate in any of the company's other share incentive schemes.</p> <p>Under the Tlhakanelo employee share scheme, each award is split into the ratio of two share appreciation rights for each ordinary share and these vest annually in equal tranches on each anniversary of the allocation date. As per the provisions of the trust deed, the last tranche of shares allocated in terms of the scheme will vest during March 2017.</p> <p>Share appreciation rights are subject to a guaranteed minimum payout of R18 per share appreciation right and a maximum payout of R32 per share appreciation right on each vesting date (over the five-year period).</p> <p>Prior to vesting, participants may elect to receive their shares or have these sold on their behalf.</p> <p>Details of the awards made during FY15 can be found in Part Two of this Remuneration Report, on page 196.</p>

# REMUNERATION REPORT CONTINUED

## CONTRACTS, SEVERANCE AND TERMINATION

Executive directors and executive managers have employment contracts with Harmony which include notice periods of up to 180 days. There are no balloon payments on termination, automatic entitlement to bonuses or automatic entitlement to share-based payments other than in terms of the company's approved share incentive plans.

## NON-BINDING ADVISORY VOTE

Shareholders are requested to cast a non-binding advisory vote required by King III on Part One of this remuneration report as it appears above. For more information refer to the notice of the annual general meeting in the Report to Shareholders 2015 [www.har.co.za/15/download/HAR-RS15.pdf](http://www.har.co.za/15/download/HAR-RS15.pdf).

## STAKEHOLDER FEEDBACK

We maintain open communication channels with our stakeholders, listen to feedback and take action where this is deemed to be in the best interests of the company. Based on comments received from shareholders following our FY14 remuneration report, we have enhanced our reporting and changed the parameters of our short-term and long-term incentive schemes.

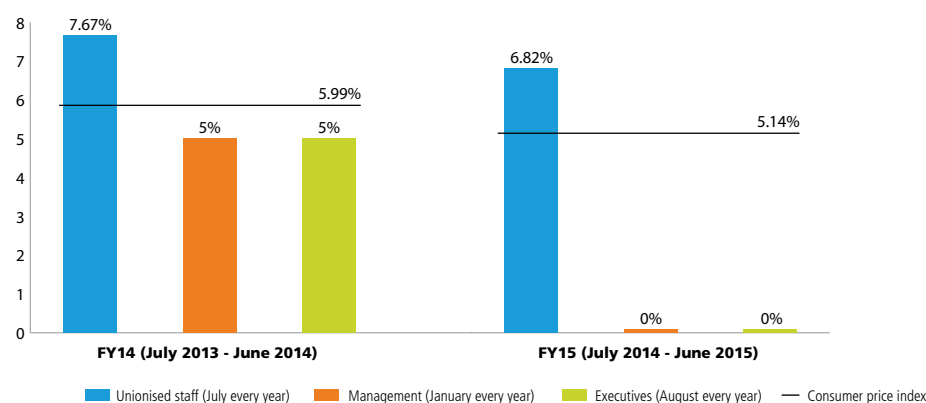
## PART TWO: REMUNERATION PAID DURING THE YEAR BASED ON THE POLICY APPLICABLE AND APPROVED BY SHAREHOLDERS IN 2014

### INCREASES TO GUARANTEED PACKAGE DURING THE YEAR UNDER REVIEW

An assessment of executive remuneration, and short- and long-term incentives was undertaken during FY15. This assessment was used to benchmark remuneration at Harmony and align it with prevailing market conditions and shareholders' expectations. The survey was conducted by an independent external service provider.

Taking into consideration the prevailing market conditions, affordability and shareholders' expectations, no increases were made to the guaranteed remuneration packages of executives and management during FY15. Illustrated below are the average percentage increases awarded during FY14 and FY15 to executives, management and unionised staff:

Unionised staff, management and executive – average salary increase FY14 to FY15 (%)



## SHORT-TERM INCENTIVE PAYMENTS DURING THE YEAR UNDER REVIEW

During the year under review, achievement levels against the targets for the executive short-term incentive scheme were as follows:

### First period FY15 (July to December 2014)

Company performance measures	Weighting	% of plan achieved	Weighted %
Total kilograms	40	92	13.60
Total cost (R/kg)	30	93	10.80
Grade	30	102	18.00
Weighted average	–	–	42.4
Lost-time injury frequency rate adjustment			-10
Percentage of six-months' guaranteed pay			<b>32.4</b>

### Second period FY15 (January to June 2015)

Company performance measures	Weighting	% of plan achieved	Weighted %
Total kilograms	40	83	0
Total cost (R/kg)	30	74	0
Grade	30	96	12.60
Weighted average	–	–	12.60
Lost-time injury frequency rate adjustment			-10
Percentage of six-months' guaranteed pay			<b>2.6</b>

## LONG-TERM INCENTIVES AWARDED DURING THE YEAR UNDER REVIEW

During FY15, share appreciation rights, performance shares and matching restricted shares were granted in November 2014.

**Share appreciation rights:** The value or reward that accrues on share appreciation rights is based on the positive appreciation of the share price over time compared to the issue price.

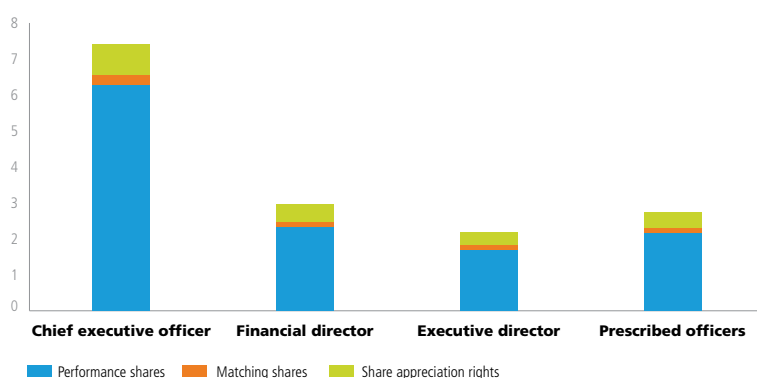
**Performance shares:** The performance measure applicable to performance awards is based on Harmony's total shareholder return compared to that of the gold index over the three-year period.

**Matching shares:** Although no further grants of restricted shares have been made since 2012, restricted shares not exercised were supplemented with matching shares.

The number of grants awarded for each executive director, prescribed officer and executive management is as set out in the table on page 200 of this report.

The fair values at date of grant for awards made during FY15 are illustrated below:

### Fair value of grant awarded November 2014\* (Rm)



\*Fair value has been determined per the requirement of the International Financial Reporting Standards

# REMUNERATION REPORT CONTINUED

## VESTING OF LONG-TERM INCENTIVES DURING THE YEAR UNDER REVIEW

During the year, the following awards in terms of the long-term incentive plan vested in November 2014:

- **Share appreciation rights allocated in November 2011**

The performance condition determined that the headline earnings per share growth from the allocation date should exceed the consumer price index. Headline earnings over the duration of the 2011 share appreciation right period, being the three years ending June 2014, exceeded headline earnings in the comparative three-year period by more than the consumer price index. The performance condition was therefore met and vesting occurred on the third anniversary.

- **Performance shares awarded in November 2011**

The vesting percentage of performance shares was based on the achievement of two conditions, namely gold production against plan and relative share price performance against South African gold mining companies.

This resulted in a total vesting of 27.5% of performance shares granted in November 2011 calculated as follows:

- Gold production has a maximum vesting of 50% and a minimum vesting of 0%. The company achieved 82%, 92% and 87% of plan over the three consecutive years which resulted in an average vesting of 15%.
- The company underperformed against its peers on the basis of its relative share price performance which resulted in vesting of 12.5%.

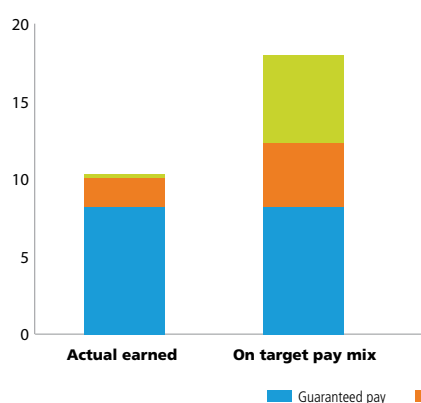
- **Restricted shares granted in November 2011**

Grants were not exercised and remained restricted for a further three years.

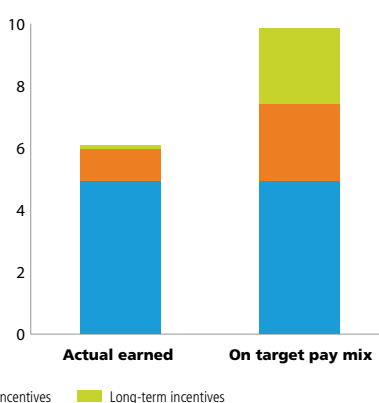
## TOTAL REMUNERATION OUTCOMES

The compositions of total remuneration outcomes for FY15 for the chief executive officer and financial director are illustrated below:

**Total remuneration – chief executive officer (Rm)**



**Total remuneration – financial director (Rm)**



## PAYMENTS MADE THROUGH THE TLHAKANELO EMPLOYEE SHARE TRUST

Incentives	As at 30 June 2015:	Total since incorporation of the trust:
Value of ordinary shares sold and proceeds paid to participants (before tax)	R17 million	R101 million
Value of bonus payments paid to participants by Harmony based on R18 per share appreciation right (before tax). No sale of shares – shares were underwater	R27 million	R88 million
Total payments received by participants (value of share plus share appreciation rights bonus) (before tax)	R44 million	R189 million

## NON-EXECUTIVE DIRECTORS' FEES

During August 2015, the remuneration committee considered an industry benchmark on non-executive directors' fees. On the recommendation of the remuneration committee, the board proposed that an increase of 5% in the fees for all non-executive directors, and no increase for the chairman of the board, be considered for approval by the shareholders at the forthcoming annual general meeting. For more information on the notice of the annual general meeting refer to the Report to Shareholders 2015 [www.har.co.za/15/download/HAR-RS15.pdf](http://www.har.co.za/15/download/HAR-RS15.pdf).

## DIRECTORS' EMOLUMENTS

### Directors' remuneration

	Directors' fees (R000)	Salaries and benefits (R000)	Retirement contributions during the year (R000)	'Bonuses paid (R000)	Total (R000)	Total (R000)
Name	FY15	FY15	FY15	FY15	FY15	FY14
<b>Non-executive</b>						
Patrice Motsepe	1 077	—	—	—	1 077	998
Joaquim Chissano	415	—	—	—	415	369
Fikile De Buck	836	—	—	—	836	773
Ken Dicks	482	—	—	—	482	396
Dr Simo Lushaba	615	—	—	—	615	573
Cathie Markus	705	—	—	—	705	627
Modise Motloba	841	—	—	—	841	763
Mavuso Msimang	443	—	—	—	443	397
Karabo Nondumo	561	—	—	—	561	422
Vishnu Pillay	472	—	—	—	472	378
John Wetton	789	—	—	—	789	712
Andre Wilkens	637	—	—	—	637	550
<b>Executive</b>						
Frank Abbott	—	4 925	—	1 039	5 964	6 346
Graham Briggs	—	8 187	—	1 825	10 012	10 141
Mashego Mashego	—	3 650	368	779	4 797	4 824
<b>Prescribed officers</b>						
Alwyn Pretorius <sup>2</sup>	—	4 333	513	977	5 823	1 569
Tom Smith <sup>3</sup>	—	—	—	—	—	4 808
Johannes van Heerden <sup>4</sup>	—	5 136	172	811	6 119	6 326
<b>Executive management</b>	—	16 540	1 255	3 148	20 943	24 715
<b>Total</b>	<b>7 873</b>	<b>42 771</b>	<b>2 308</b>	<b>8 579</b>	<b>61 531</b>	<b>65 687</b>

<sup>1</sup> Reflects amounts paid during the year

<sup>2</sup> Amount in FY14 represents remuneration since appointment as a prescribed officer in March 2014. Remuneration prior to appointment included in Executive management

<sup>3</sup> Prescribed officer until March 2014

<sup>4</sup> Salary is paid in Australian dollars and is influenced by the movement in the exchange rate

# REMUNERATION REPORT CONTINUED

## EXECUTIVE DIRECTORS AND MANAGEMENT SHARE INCENTIVES As at 30 June 2015

	Executive directors				Prescribed officers				Other			
	Graham Briggs		Frank Abbott		Mashego Mashego		Alwyn Pretorius		Johannes van Heerden		Executive management	
	Number of shares	Average price (Rands)	Number of shares	Average price (Rands)	Number of shares	Average price (Rands)	Number of shares	Average price (Rands)	Number of shares	Average price (Rands)	Number of shares	Average price (Rands)
<b>Movements on share incentives</b>												
<b>Share options</b>												
Opening balance at 1 July 2014	91 938	48.55	–	–	–	–	–	–	34 325	44.69	–	–
Options exercised	–	n/a	–	n/a	–	n/a	–	n/a	–	n/a	–	n/a
– Average sales price	–	n/a	–	n/a	–	n/a	–	n/a	–	n/a	–	n/a
Options forfeited and lapsed	91 938	48.55	–	–	–	–	–	–	34 325	44.69	–	–
<b>Closing balance at 30 June 2015</b>	–	–	–	–	–	–	–	–	–	–	–	–
<b>Performance shares</b>												
Opening balance at 1 July 2014	690 308	n/a	252 805	n/a	184 157	n/a	184 157	n/a	184 157	n/a	838 892	n/a
Awards granted	561 217	n/a	207 462	n/a	149 715	n/a	191 472	n/a	149 715	n/a	590 304	n/a
Awards exercised	17 578	n/a	6 344	n/a	5 247	n/a	5 247	n/a	5 247	n/a	35 940	n/a
– Average sales price	–	17.11	–	17.11	–	17.11	–	17.11	–	17.11	–	17.48
– Gain realised on awards exercised (Rand)	300 760		108 546		89 776		89 776		89 776		628 231	
Awards forfeited and lapsed	46 343	n/a	16 728	n/a	13 835	n/a	13 835	n/a	13 835	n/a	152 082	n/a
<b>Closing balance at 30 June 2015</b>	<b>1 187 604</b>	<b>n/a</b>	<b>437 195</b>	<b>n/a</b>	<b>314 790</b>	<b>n/a</b>	<b>356 547</b>	<b>n/a</b>	<b>314 790</b>	<b>n/a</b>	<b>1 241 174</b>	<b>n/a</b>
<b>Restricted shares</b>												
Opening balance at 1 July 2014	175 456	n/a	29 136	n/a	19 694	n/a	19 694	n/a	64 218	n/a	136 282	n/a
Matching shares granted	15 000	n/a	8 000	n/a	8 000	n/a	8 000	n/a	8 000	n/a	20 000	n/a
Awards exercised	–	n/a	–	n/a	–	n/a	–	n/a	–	n/a	17 350	n/a
– Average sales price	–	n/a	–	n/a	–	n/a	–	n/a	–	n/a	–	17.11
– Gain realised on awards exercised (Rand)	–	–	–	–	–	–	–	–	–	–	304 493	509 813
Awards forfeited and lapsed	–	n/a	–	n/a	–	n/a	–	n/a	–	n/a	–	n/a
<b>Closing balance at 30 June 2015</b>	<b>190 456</b>	<b>n/a</b>	<b>37 136</b>	<b>n/a</b>	<b>27 694</b>	<b>n/a</b>	<b>27 694</b>	<b>n/a</b>	<b>72 218</b>	<b>n/a</b>	<b>138 932</b>	<b>n/a</b>
<b>Share appreciation rights</b>												
Opening balance at 1 July 2014	185 200	56.65	75 740	47.04	74 049	55.88	81 221	57.81	81 221	57.81	345 676	54.78
Rights granted	107 567	18.41	63 622	18.41	45 913	18.41	58 718	18.41	45 913	18.41	181 027	18.46
Rights exercised	–	n/a	–	n/a	–	n/a	–	n/a	–	n/a	–	n/a
– Average sales price	–	n/a	–	n/a	–	n/a	–	n/a	–	n/a	–	20.41
– Gain realised on awards exercised (Rand)	–	–	–	–	–	–	–	–	–	–	–	274 552
Rights forfeited and lapsed	28 377	77.81	–	n/a	7 055	77.81	13 006	77.81	13 006	77.81	82 236	58.91
<b>Closing balance at 30 June 2015</b>	<b>264 390</b>	<b>38.82</b>	<b>139 362</b>	<b>33.97</b>	<b>112 907</b>	<b>39.27</b>	<b>126 933</b>	<b>37.54</b>	<b>114 128</b>	<b>39.68</b>	<b>444 467</b>	<b>38.90</b>
Gain realised on awards exercised (Rand)	300 760		108 546		89 776		89 776		89 776		932 724	5 588 834
												7 200 192

# **EXECUTIVE DIRECTORS AND MANAGEMENT SHARE INCENTIVES** *continued* **As at 30 June 2015**

	Executive directors						Prescribed officers						Other			
	Graham Briggs		Frank Abbott		Mashego Mashego		Alwyn Pretorius		Johannes van Heerden		Executive management		Other management		Total	
	Number of shares	Average price (Rands)	Number of shares	Average price (Rands)	Number of shares	Average price (Rands)	Number of shares	Average price (Rands)	Number of shares	Average price (Rands)	Number of shares	Average price (Rands)	Number of shares	Average price (Rands)	Number of shares	Average price (Rands)
Outstanding awards (listed by grant date)	1 187 604		437 195		314 790		356 547		314 790		1 241 174		10 470 408		14 322 508	
	6 160	n/a	–	n/a	–	n/a	–	n/a	–	n/a	–	n/a	–	n/a	6 160	n/a
	137 275	n/a	57 067	n/a	40 471	n/a	40 471	n/a	40 471	n/a	159 571	n/a	1 196 802	n/a	1 672 128	n/a
	482 952	n/a	172 666	n/a	124 604	n/a	124 604	n/a	124 604	n/a	491 299	n/a	4 041 830	n/a	5 562 559	n/a
	561 217	n/a	207 462	n/a	149 715	n/a	191 472	n/a	149 715	n/a	590 304	n/a	5 231 776	n/a	7 081 661	n/a
Restricted shares	190 456		37 136		27 694		27 694		72 218		138 932		178 972		673 102	
	48 485	n/a	–	n/a	–	n/a	–	n/a	22 262	n/a	26 413	n/a	30 606	n/a	127 766	n/a
	15 000	n/a	8 000	n/a	8 000	n/a	8 000	n/a	8 000	n/a	20 000	n/a	20 000	n/a	87 000	n/a
	30 802	n/a	–	n/a	–	n/a	–	n/a	–	n/a	–	n/a	–	n/a	30 802	n/a
	32 684	n/a	21 136	n/a	11 694	n/a	11 694	n/a	11 694	n/a	46 106	n/a	81 760	n/a	216 768	n/a
	48 485	n/a	–	n/a	–	n/a	–	n/a	22 262	n/a	26 413	n/a	30 606	n/a	127 766	n/a
	15 000	n/a	8 000	n/a	8 000	n/a	8 000	n/a	8 000	n/a	20 000	n/a	16 000	n/a	83 000	n/a
	264 390		139 362		112 907		126 933		114 128		444 467		15 217 780		16 419 967	
	14 286	77.28	–	77.28	5 327	77.28	6 548	77.28	6 548	77.28	23 989	77.28	1 166 903	77.28	1 223 601	77.28
	13 939	84.81	–	84.81	6 400	84.81	6 400	84.81	6 400	84.81	22 405	84.81	600 202	84.81	655 746	84.81
15 November 2009																
15 November 2010																
15 November 2011																
16 November 2012																
15 November 2013																
17 November 2014																
Closing balance as at 30 June 2015	1 642 450		613 693		455 391		511 174		501 136		1 824 573		25 867 160		31 415 577	



# AUDIT AND RISK COMMITTEE CHAIRMAN'S REPORT



**John Wetton**  
Chairman, audit and risk committee

I have pleasure in submitting this report for the financial year ended 30 June 2015, in accordance with the Companies Act 71 of 2008 (the Act). This committee complies with the requirements of the Act pertaining to the composition and functions of an audit committee. In addition, as explained in the committee's terms of reference, Harmony's audit committee is also tasked with overseeing risk management in the company and is therefore known as the audit and risk committee.

## COMPOSITION OF THE COMMITTEE

In terms of the Act, the following members, who were serving on the committee as at 30 June 2015, will be recommended for re-appointment as audit and risk committee members for FY16 to shareholders at the company's annual general meeting:

Name	Status	Date appointed
John Wetton (chairman)	Independent non-executive director	1 July 2011, appointed chairman 30 November 2011
Fikile De Buck	Lead independent non-executive director	30 March 2006
Dr Simo Lushaba	Independent non-executive director	24 January 2003
Modise Motloba	Independent non-executive director	30 July 2004
Karabo Nondumo	Independent non-executive director	3 May 2013

The individuals proposed satisfy the requirements set out in section 94 of the Act for members of an audit committee, and their appointment will ensure that the committee continues to have adequate and relevant knowledge as well as the experience required for the committee to perform its functions proficiently. For details of the qualifications, expertise and experience of the members of the audit and risk committee refer to their curricula vitae in the Board and Management section on page 28 of the Integrated Annual Report 2015.

## PURPOSE, ROLE AND ACTIVITIES

The purpose and role of the audit and risk committee are in accordance with the requirements of the Act, the JSE Listings Requirements, King III and additional requirements imposed on the committee by the board. Further details can be found in the committee's terms of reference available on Harmony's website at [www.harmony.co.za/sustainability/governance#policies](http://www.harmony.co.za/sustainability/governance#policies).

The committee undertakes its duties with accountability to both the board and the company's stakeholders. The committee met five times during the past financial year, during which and in accordance with its terms of reference and work plan, the committee:

- Reviewed the company's quarterly and annual financial results
- Evaluated and considered Harmony's risks, as well as measures taken to mitigate those risks. In addition, the committee also considered and refined the company's risk appetite and tolerance levels
- Monitored the internal control environment in Harmony and found it to be effective
- Discussed the appropriateness of accounting principles, critical accounting policies, management judgements, estimates and impairments, all of which were found to

be appropriate

- Considered the appointment of the external auditor, PricewaterhouseCoopers Inc, as the registered independent auditor for the ensuing year. A new PwC audit partner would be appointed from FY16 as a result of the compulsory rotation of Faan Lombard, who had served as Harmony's audit partner for the past five years. The committee thanks Faan for his service during this period
- Satisfied itself, and confirmed through enquiry, that the external audit firm, PricewaterhouseCoopers Inc, was independent from the company
- Evaluated the independence and effectiveness of the internal audit function
- Evaluated and coordinated the internal audit, external audit and sustainability assurance processes
- Received and considered reports from the external and internal auditors
- Reviewed and approved internal and external audit plans, terms of engagement and fees, as well as the nature and extent of non-audit services rendered by the external auditors
- Considered the appropriateness and expertise of the financial director, Frank Abbott, as well as that of the finance function – both were found to be adequate and appropriate
- Considered whether information technology risks are adequately addressed and whether appropriate controls are in place to address these risks. The committee oversees and monitors the governance of information technology on behalf of the board, a task it views as a critical aspect of risk management
- Considered and confirmed the company as a going concern
- Oversaw the process of assurance of the integrated report

The audit and risk committee is confident that it complied with the legal, regulatory and other responsibilities assigned to it by the board, under its terms of reference in accordance with the Act, the JSE Listings Requirements and King III.

The internal audit function reports directly to the audit and risk committee, except on administrative matters about which it reports to the executive: risk management and services improvement. The internal and external auditors attend the committee's quarterly meetings and have unrestricted access to the chairman of the committee. The audit and risk committee met privately with the internal and external auditors during FY15.

Post year-end, on recommendation from the audit and risk committee, the board approved:

- The Annual Financial Statements and Summarised Consolidated Financial Statements for the year ended 30 June 2015. The audit and risk committee reviewed these statements to ensure they presented a true, balanced and plausible assessment of the financial position and performance of Harmony
- The Integrated Annual Report for the year ended 30 June 2015, in accordance with King III and the JSE Listings Requirements
- The annual report filed on Form 20-F for the year ended 30 June 2015 for subsequent submission to the United States Securities and Exchange Commission
- The notice of the annual general meeting to be held on 20 November 2015

For more on the committee and its activities during the year under review see page 175 of the Integrated Annual Report 2015.

### **John Wetton**

**Audit and risk committee chairman**

23 October 2015



# ASSURANCE REPORT

## INDEPENDENT ASSURANCE REPORT TO THE DIRECTORS OF HARMONY GOLD MINING COMPANY LIMITED

We have been engaged by the directors of Harmony Gold Mining Company Limited ("Harmony" and/or the "Company") to perform an independent assurance engagement in respect of Selected Sustainability Information reported in the Company's Integrated Annual Report for the year ending 30 June 2015 (the "Report"). This report is produced in accordance with the terms of our contract with the Company dated 25 February 2015.

### INDEPENDENCE AND EXPERTISE

We have complied with the International Federation of Accountants' (IFAC) Code of Ethics for Professional Accountants, which includes comprehensive independence and other requirements founded on fundamental principles of integrity, objectivity, and professional competence and due care, confidentiality and professional behaviour. Our engagement was conducted by a multi-disciplinary team of health, safety, environmental and assurance specialists with extensive experience in sustainability reporting.

### SCOPE AND SUBJECT MATTER

The subject matter of our engagement and the related levels of assurance that we are required to provide are as follows:

#### Reasonable assurance

The following Selected Sustainability Information in the Report was selected for an expression of reasonable assurance:

- Electricity purchased (kWh)
- Total Scope 2 carbon emissions (tCO<sub>2</sub>e)
- Preferential procurement – black economic empowerment total spend (South African rands)
- Local economic development spend (South African rands)
- Employment equity in management in South Africa (%)

Refer to "How we performed" on page 8 for all of these indicators.

#### Limited assurance

The following Selected Sustainability Information in the Report was selected for an expression of limited assurance:

- Housing and living conditions in South Africa – % conversion
- Water used for primary activities (kilolitres)
- Volume of mineral waste disposed (tonnes)
- Lost-time injury frequency rate
- Total injuries and accidents – number of injury cases in the 2015 reporting period
- Silicosis – number of cases confirmed in the 2015 reporting period
- Critical skills training – number of people trained in the 2015 reporting period
- Total Scope 1 carbon emissions (tCO<sub>2</sub>e)
- Total Scope 3 carbon emissions (tCO<sub>2</sub>e)

Refer to "How we performed" on page 8 for all of these indicators.

We refer to this information as the "Selected Sustainability Information for Reasonable Assurance" and the "Selected Sustainability Information for Limited Assurance", respectively, and collectively as the "Selected Sustainability Information".

We have carried out work on the data reported for 30 June 2015 only and have not performed any procedures with respect to earlier periods, except where specifically indicated, or any other elements included in the Integrated Annual Report 2015 and, therefore, do not express any conclusion thereon. We have not performed work in respect of future projections and targets.

#### **RESPECTIVE RESPONSIBILITIES OF THE DIRECTORS AND PRICEWATERHOUSECOOPERS INC.**

The directors are responsible for selection, preparation and presentation of the Selected Sustainability Information in accordance with the criteria set out in the company's internally defined procedures and captured in the Glossary of Terms on page 222, (referred to as the "Reporting Criteria"), and for the development of the Reporting Criteria. The directors are also responsible for designing, implementing and maintaining of internal controls as the directors determine is necessary to enable the preparation of the Selected Sustainability Information that are free from material misstatements, whether due to fraud or error.

Our responsibility is to form an independent conclusion, based on our reasonable assurance procedures, on whether the Selected Sustainability Information for Reasonable Assurance has been prepared, in all material respects, in accordance with the Reporting Criteria.

We further have a responsibility to form an independent conclusion, based on our limited assurance procedures, on whether anything has come to our attention to indicate that the Selected Sustainability Information for Limited Assurance has not been prepared, in all material respects, in accordance with the Reporting Criteria.

This report, including the conclusions, has been prepared solely for the directors of the Company as a body, to assist the directors in reporting on the Company's sustainable development performance and activities. We permit the disclosure of this report within the Report for the year ended 30 June 2015, to enable the directors to demonstrate they have discharged their governance responsibilities by commissioning an independent assurance report in connection with the Report. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the directors as a body and the company for our work or this report save where terms are expressly agreed and with our prior consent in writing.

#### **ASSURANCE WORK PERFORMED**

We conducted our assurance engagement in accordance with International Standard on Assurance Engagements 3000: Assurance Engagements other than Audits and Reviews of Historical Financial Information (ISAE 3000), and, in respect of greenhouse gas emissions, International Standard on Assurance Engagements 3410: Assurance Engagements on Greenhouse Gas Statements (ISAE 3410), issued by the International Auditing and Assurance Standards Board. These standards require that we comply with ethical requirements and that we plan and perform the assurance engagement to obtain either reasonable or limited assurance on the Selected Sustainability Information as per the terms of our engagement.

Our work included examination, on a test basis, of evidence relevant to the Selected Sustainability Information. It also included an assessment of the significant estimates and judgements made by the directors in the preparation of the Selected Sustainability Information. We planned and performed our work so as to obtain all the information and explanations that we considered necessary in order to provide us with sufficient evidence on which to base our conclusion in respect of the Selected Sustainability Information.

# ASSURANCE REPORT CONTINUED

Our work in respect of the Selected Sustainability Information for Reasonable Assurance included the following procedures:

- reviewing the processes that Harmony have in place for determining the Selected Sustainability Information included in the Report;
- obtaining an understanding of the systems used to generate, aggregate and report the Selected Sustainability Information;
- conducting interviews with management 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 Selected Sustainability Information and related statements in Harmony's Report

Our procedures relating to the Selected Sustainability Information for Limited Assurance primarily comprised:

- reviewing the processes that Harmony have in place for determining the Selected Sustainability Information included in the Report;
- obtaining an understanding of the systems used to generate, aggregate and report the Selected Sustainability Information;
- conducting interviews with management 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 Selected Sustainability Information and related statements in Harmony's Report

A limited assurance engagement is substantially less in scope than a reasonable assurance engagement under ISAE 3000. Consequently, the nature, timing and extent of procedures for gathering sufficient appropriate evidence are deliberately limited relative to a reasonable assurance engagement, and therefore less assurance is obtained with a limited assurance engagement than for a reasonable assurance engagement.

The procedures selected depend on our judgement, including the assessment of the risk of material misstatement of the Selected Sustainability Information, whether due to fraud or error. In making those risk assessments, we consider internal control relevant to the Company's preparation of the Selected Sustainability Information in order to design procedures that are appropriate in the circumstances.

We believe that the evidence we have obtained is sufficient and appropriate to provide a basis for our conclusions.

## **INHERENT LIMITATIONS**

Non-financial performance information is subject to more inherent limitations than financial information, given the characteristics of the subject matter and the methods used for determining, calculating, sampling and estimating such information. The absence of a significant body of established practice on which to draw allows for the selection of different but acceptable measurement techniques which can result in materially different measurements and can impact comparability. Qualitative interpretations of relevance, materiality and the accuracy of data are subject to individual assumptions and judgements. The precision of different measurement techniques may also vary. Furthermore, the nature and methods used to determine such information, as well as the measurement criteria and the precision thereof, may change over time. It is important to read the Report in the context of the Reporting Criteria.

In particular, where the information relies on factors derived by independent third parties, our assurance work has not included examination of the derivation of those factors and other third party information.

## CONCLUSIONS

### Reasonable assurance

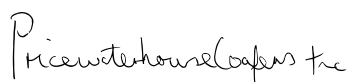
Based on the results of our reasonable assurance procedures, in our opinion, the Selected Sustainability Information for the year ended 30 June 2015, has been prepared, in all material respects, in accordance with the Reporting Criteria.

### Limited assurance

Based on the results of our limited assurance procedures nothing has come to our attention that causes us to believe that the Selected Sustainability Information for the year ended 30 June 2015, has not been prepared, in all material respects, in accordance with the Reporting Criteria.

### Other matters

The maintenance and integrity of Harmony's website is the responsibility of Harmony's directors. Our procedures did not involve consideration of these matters and, accordingly we accept no responsibility for any changes to either the information in the Report or our independent assurance report that may have occurred since the initial date of presentation on the Harmony website.



**PricewaterhouseCoopers Inc.**

**Registered Auditor**

Director: Jayne Mammatt

Johannesburg

23 October 2015



# DIRECTORS' REPORT

## OUR BUSINESS

The Harmony group of companies has underground and surface operations and conducts gold mining and exploration in South Africa and Papua New Guinea. A general review of the group's business and operations is provided on page 120 of the Integrated Annual Report 2015 (the report).

The company does not have a controlling shareholder and is managed by its directors on behalf of all of its shareholders. The company's primary listing is in South Africa on the securities exchange operated by the JSE Limited. Harmony's ordinary shares are also listed in the form of American Depositary Receipts on the New York Stock Exchange and as International Depositary Receipts on the Berlin exchange.

## ANNUAL INTEGRATED REPORT 2015

As required by the King Report on Governance for South Africa and the King Code of Governance Principles (King III) and the JSE Listings Requirements, the board has reviewed and approved the Integrated Annual Report 2015 on the recommendation of the audit and risk committee.

## STATEMENT BY THE BOARD

The board of directors is of the opinion that the Integrated Annual Report 2015 and the accompanying consolidated financial statements fairly reflect the true financial position of the group at 30 June 2015 and its performance for the year.

## COMPANY SECRETARY

The company secretary is Riana Bisschoff. Her business and postal addresses appear on the inside back cover of this report. The company secretary's certificate is found on page 209 of the report.

## BOARD OF DIRECTORS

There were no changes to the board during FY15.

## DIRECTORS' SHAREHOLDINGS

At 30 June 2015, the chief executive officer, Graham Briggs held 24 718 shares, the financial director, Frank Abbott held 203 243 shares and executive director, Mashego Mashego, held 3 096 shares in Harmony while non-executive directors André Wilkens and Ken Dicks, held 101 303 and 20 000 shares in Harmony respectively. None of the directors' immediate families and associates held any direct shareholding in the company's issued share capital. No other director held or acquired any shares in the company, other than through share incentive schemes (executive directors only), during FY15.

## GOING CONCERN

In accordance with the solvency and liquidity test in terms of section 4 of the Companies Act, the board is of the opinion that the company has adequate resources and that:

- the company's assets, fairly valued, exceed the fair value of its liabilities
- the company will be able to pay its debts as they become due in the ordinary course of business for the 12 months following 30 June 2015

## FINANCIAL RESULTS

Details of the group's financial performance are discussed in the financial director's review, on page 18 of this report.

## SHARE CAPITAL

Full details of the authorised, issued and unissued share capital of the company as at 30 June 2015 are set out in the consolidated statements of changes in shareholders' equity in the Financial Report 2015 ([www.har.co.za/15/download/HAR-FR15.pdf](http://www.har.co.za/15/download/HAR-FR15.pdf)).

## SHAREHOLDERS

Information on shareholder spread, the range of shareholdings and public shareholders, as well as major shareholders, is presented in the shareholders' information section on page 220 of the Integrated Annual Report 2015.



## INVESTMENTS

A schedule of investments in subsidiaries, associates and joint arrangements appears in the Financial Report 2015 which is available online at [www.har.co.za/15/download/HAR-FR15.pdf](http://www.har.co.za/15/download/HAR-FR15.pdf)

## CONTINGENCIES

None of Harmony's properties is the subject of pending material legal proceedings. We are involved in legal and arbitration proceedings that are incidental to the normal conduct of our business. Refer to note 33 of the consolidated financial statements for further discussion.

## BORROWINGS

- (i) Movement in borrowings: see note 27 to the consolidated financial statements
- (ii) Borrowing powers are detailed in the company's memorandum of incorporation

## DISPOSALS

There were no material disposals during FY15.

## RELATED PARTY TRANSACTIONS

None of the directors or major shareholders of Harmony or, to Harmony's knowledge, their families, had an interest, directly or indirectly, in any transaction during the period under review or in any proposed transaction that has affected or will materially affect Harmony or its subsidiaries, other than as stated below.

African Rainbow Minerals Limited currently holds 14.59% of Harmony's shares. The following directors of Harmony are directors of African Rainbow Minerals Limited as well: Patrice Motsepe, André Wilkens, Frank Abbott and Joaquim Chissano.

## MATERIAL TRANSACTIONS WITH ASSOCIATES, JOINT ARRANGEMENTS AND STRUCTURED ENTITIES

All transactions with related parties are conducted at arm's length. Refer to note 32 of the consolidated financial statements for details on transactions conducted during the period under review.

## RECENT DEVELOPMENTS

Subsequent to year end, Harmony provided guarantees to the value of R150 million in favour of Nedbank Limited on behalf of the ARM Broad-Based Economic Empowerment Trust (ARM BBEE Trust). The guarantees are in support of the financial covenants of the ARM BBEE Trust's bank loan. Harmony's support of the ARM BBEE Trust is as a result of its continued commitment to broad-based ownership, an imperative driven strongly by the regulator.

# COMPANY SECRETARY'S CERTIFICATE

In accordance with the Companies Act No 71 of 2008 (the Act) I certify that for the year ended 30 June 2015 Harmony Gold Mining Company Limited, to the best of my knowledge and belief, has lodged with the Companies and Intellectual Property Commission all such returns and notices as are required of a public company in terms of the Act, and that all such returns and notices appear to be true, correct and up to date.

## R BISSCHOFF

Company secretary

23 October 2015

# GLOBAL REPORTING INITIATIVE

## INDEX

GENERAL STANDARD DISCLOSURES			
General Standard Disclosures		Section reference	External assurance
<b>STRATEGY AND ANALYSIS</b>			
<b>G4-1</b>	Provide a statement from the most senior decision-maker of the organisation (such as chief executive officer, chair, or equivalent senior position) about the relevance of sustainability to the organisation and the organisation's strategy for addressing sustainability	Chairman's letter (p10) Chief executive officer's review (p14) Social and ethics committee chairman's report (p14)	
<b>ORGANISATIONAL PROFILE</b>			
<b>G4-3</b>	Report the name of the organisation	Front cover, About this report (p2)	
<b>G4-4</b>	Report the primary brands, products, and services	Who Harmony is (p4)	
<b>G4-5</b>	Report the location of the organisation's headquarters	Who Harmony is (p4)	
<b>G4-6</b>	Report the number of countries where the organisation operates, and names of countries where either the organisation has significant operations or that are specifically relevant to the sustainability topics covered in the report	Who Harmony is (p4)	
<b>G4-7</b>	Report the nature of ownership and legal form	Shareholder information (p220)	
<b>G4-8</b>	Report the markets served (including geographic breakdown, sectors served, and types of customers and beneficiaries)	Who Harmony is (p4)	
<b>G4-9</b>	Report the scale of the organisation, including: a. Total number of employees b. Total number of operations c. Net sales (for private sector organisations) or net revenues (for public sector organisations) d. Total capitalisation broken down in terms of debt and equity (for private sector organisations) e. Quantity of products or services provided	Who Harmony is (p4)	
<b>G4-10</b>	Report the composition of the workforce, including: a. Report the total number of employees by employment contract and gender b. Report the total number of permanent employees by employment type and gender c. Report the total workforce by employees and supervised workers and by gender d. Report the total workforce by region and gender e. Report whether a substantial portion of the organisation's work is performed by workers who are legally recognized as self-employed, or by individuals other than employees or supervised workers, including employees and supervised employees of contractors f. Report any significant variations in employment numbers (such as seasonal variations in employment in the tourism or agricultural industries)	Employees and communities (p76)	
<b>G4-11</b>	Report the percentage of total employees covered by collective bargaining agreements	Employees and communities – Freedom of association (p80)	
<b>G4-12</b>	Describe the organisation's supply chain.	Environmental performance – Engagement with suppliers and their environmental impacts (p112) Our business context (p38) Stakeholder engagement: Suppliers of goods and services (p55)	

**GENERAL STANDARD DISCLOSURES** *continued*

<b>General Standard Disclosures</b>		<b>Section reference</b>	<b>External assurance</b>
<b>G4-13</b>	Report any significant changes during the reporting period regarding the organisation's size, structure, ownership, or its supply chain, including: <ul style="list-style-type: none"> <li>a. Changes in the location of, or changes in, operations, including facility openings, closings, and expansions</li> <li>b. Changes in the share capital structure and other capital formation, maintenance, and alteration operations (for private sector organisations)</li> <li>c. Changes in the location of suppliers, the structure of the supply chain, or in relationships with suppliers, including selection and termination</li> </ul>	About this report (p2)	
<b>G4-14</b>	Report whether and how the precautionary approach or principle is addressed by the organisation	Managing our risks and opportunities (p41) Environmental performance (p100)	
<b>G4-16</b>	List memberships of associations (such as industry associations) and national or international advocacy organisations in which the organisation: <ul style="list-style-type: none"> <li>• Holds a position on the governance body</li> <li>• Participates in projects or committees</li> <li>• Provides substantive funding beyond routine membership dues</li> <li>• Views membership as strategic</li> </ul>	Our business context (p38) Corporate governance (p172) Employees and communities (p76) Environmental performance (p100) Operational performance (p120)	
<b>IDENTIFIED MATERIAL ASPECTS AND BOUNDARIES</b>			
<b>G4-17</b>	a. List all entities included in the organisation's consolidated financial statements or equivalent documents. b. Report whether any entity included in the organisation's consolidated financial statements or equivalent documents is not covered by the report	About this report (p2) Who Harmony is (p4)	
<b>G4-18</b>	a. Explain the process for defining the report content and the aspect boundaries. b. Explain how the organisation has implemented the reporting principles for defining report content	About this report (p2)	
<b>G4-19</b>	List all the material aspects identified in the process for defining report content	Managing our risks and opportunities: Material issues (p50) Social and ethics committee chairman's report (p22)	
<b>G4-20</b>	For each material aspect, report the aspect boundary within the organisation, as follows: <ul style="list-style-type: none"> <li>• Report whether the aspect is material within the organisation</li> <li>• If the aspect is not material for all entities within the organisation (as described in G4-17), select one of the following two approaches and report either: <ul style="list-style-type: none"> <li>• The list of entities or groups of entities included in G4-17 for which the aspect is not material or</li> <li>• The list of entities or groups of entities included in G4-17 for which the aspects is material</li> </ul> </li> </ul> Report any specific limitation regarding the aspect boundary within the organisation	Managing our risks and opportunities: Material issues (p50)	
<b>G4-21</b>	For each material aspect, report the aspect boundary outside the organisation, as follows: <ul style="list-style-type: none"> <li>• Report whether the aspect is material outside of the organisation</li> <li>• If the aspect is material outside of the organisation, identify the entities, groups of entities or elements for which the aspect is material. In addition, describe the geographical location where the aspect is material for the entities identified</li> <li>• Report any specific limitation regarding the aspect boundary outside the organisation</li> </ul>	Managing our risks and opportunities: Material issues (p50)	

# GLOBAL REPORTING INITIATIVE INDEX CONTINUED

GENERAL STANDARD DISCLOSURES <small>continued</small>			
General Standard Disclosures		Section reference	External assurance
<b>G4-22</b>	Report the effect of any restatements of information provided in previous reports, and the reasons for such restatements	About this report (p2)	
<b>G4-23</b>	Report significant changes from previous reporting periods in the scope and aspect boundaries	About this report (p2)	
<b>STAKEHOLDER ENGAGEMENT</b>			
<b>G4-24</b>	Provide a list of stakeholder groups engaged by the organisation	Stakeholder engagement (p52)	
<b>G4-25</b>	Report the basis for identification and selection of stakeholders with whom to engage	Stakeholder engagement (p52)	
<b>G4-26</b>	Report the organisation's approach to stakeholder engagement, including frequency of engagement by type and by stakeholder group, and an indication of whether any of the engagement was undertaken specifically as part of the report preparation process	Stakeholder engagement (p52)	
<b>G4-27</b>	Report key topics and concerns that have been raised through stakeholder engagement, and how the organisation has responded to those key topics and concerns, including through its reporting. Report the stakeholder groups that raised each of the key topics and concerns	Stakeholder engagement (p52)	
<b>REPORT PROFILE</b>			
<b>G4-28</b>	Reporting period (such as fiscal or calendar year) for information provided	About this report (p2)	
<b>G4-29</b>	Date of most recent previous report (if any)	About this report (p2)	
<b>G4-30</b>	Reporting cycle (such as annual, biennial)	About this report (p2)	
<b>G4-31</b>	Provide the contact point for questions regarding the report or its contents	Directorate and administration (Inside back cover)	
<b>G4-32</b>	"In accordance" option: a. Report the 'in accordance' option the organisation has chosen. b. Report the GRI Content Index for the chosen option. c. Report the reference to the External Assurance Report, if the report has been externally assured. GRI recommends the use of external assurance but it is not a requirement to be 'in accordance' with the Guidelines	Assurance report (p204) Global Reporting Initiative Index (p210)	
<b>G4-33</b>	a. Report the organisation's policy and current practice with regard to seeking external assurance for the report. b. If not included in the assurance report accompanying the sustainability report, report the scope and basis of any external assurance provided. c. Report the relationship between the organisation and the assurance providers. d. Report whether the highest governance body or senior executives are involved in seeking assurance for the organisation's sustainability report	Social and ethics committee chairman's report (p22) Assurance report (p204)	
<b>GOVERNANCE</b>			
<b>G4-34</b>	Report the governance structure of the organisation, including committees of the highest governance body. Identify any committees responsible for decision-making on economic, environmental and social impacts	Board and management (p28)	
<b>ETHICS AND INTEGRITY</b>			
<b>G4-56</b>	Describe the organisation's values, principles, standards and norms of behaviour such as codes of conduct and codes of ethics	Our values (inside front cover), Who Harmony is (p4) Our strategy and investment case (p25) Corporate governance (p172)	

SPECIFIC STANDARD DISCLOSURES				
Disclosures on Management Approach and Indicators		Section reference	Identified omissions and reasons	External assurance
<b>CATEGORY: ECONOMIC</b>				
<b>MATERIAL ASPECT: ECONOMIC PERFORMANCE</b>				
<b>G4-EC1</b>	Economic value generated and distributed	How we performed (p8) How we create value (p26) Financial director's review (p18)	No omissions	
<b>G4-EC2</b>	Financial implications and other risks and opportunities for the organisation's activities due to climate change	Environmental performance: Addressing climate change by optimising our energy usage (p106)	No omissions	
<b>G4-EC4</b>	Financial assistance received from government	How we create value (p26) Financial director's review (p18)	Not applicable Do not receive assistance from government	
<b>MATERIAL ASPECT: MARKET PRESENCE</b>				
<b>G4-EC5</b>	Ratios of standard entry level wage by gender compared to local minimum wage at significant locations of operation	Our business context (p38)	Not applicable	
<b>G4-EC6</b>	Proportion of senior management hired from the local community at significant locations of operation	Employees and communities: Employment equity (p85)	Not applicable	
<b>MATERIAL ASPECT: INDIRECT ECONOMIC IMPACTS</b>				
<b>G4-EC7</b>	Development and impact of infrastructure investments and services supported	Operational performance: Outlook for FY16 (p123)	Not applicable	
<b>G4-EC8</b>	Significant indirect economic impacts, including the extent of impacts	Operational performance: Outlook for FY16 (p123)	Not applicable	
<b>MATERIAL ASPECT: PROCUREMENT PRACTICES</b>				
<b>G4-EC9</b>	Proportion of spending on local suppliers at significant locations of operation	Employees and communities: Procurement (p98)	Not applicable	Assurance on preferential procurement – BEE total spend (ZAR) Assurance report
<b>CATEGORY: ENVIRONMENTAL</b>				
<b>MATERIAL ASPECT: MATERIALS</b>				
<b>G4-EN1</b>	Materials used by weight or volume	Environmental performance: Limiting and optimising the resources we use (p104)	No omissions	
<b>MATERIAL ASPECT: ENERGY</b>				
<b>G4-EN3</b>	Energy consumption within the organisation	Environmental performance: Optimising our energy usage, reducing carbon emissions (p104)	No omissions	Assurance on electricity purchased (kWh) Assurance report
<b>G4-EN5</b>	Energy intensity	Environmental performance: Optimising our energy usage, reducing carbon emissions (p104)	No omissions	
<b>G4-EN6</b>	Reduction of energy consumption	Environmental performance: Optimising our energy usage, reducing carbon emissions (p104)	No omissions	
<b>MATERIAL ASPECT: WATER</b>				
<b>G4-EN8</b>	Total water withdrawal by source	Environmental performance: Optimising water usage, limiting our impacts (p112) Environmental incidents in FY15 (p103)		Assurance on water used for primary activities (kilolitres) Assurance report
<b>G4-EN9</b>	Water sources significantly affected by withdrawal of water	Environmental performance: Optimising water usage, limiting our impacts (p112)		

# GLOBAL REPORTING INITIATIVE INDEX CONTINUED

SPECIFIC STANDARD DISCLOSURES <small>continued</small>				
Disclosures on Management Approach and Indicators		Section reference	Identified omissions and reasons	External assurance
<b>G4-EN10</b>	Percent and total volume of water recycled and reused	Environmental performance: Optimising water usage, limiting our impacts (p112)		
<b>MATERIAL ASPECT: BIODIVERSITY</b>				
<b>G4-EN12</b>	Description of significant impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas	Environmental performance: Biodiversity, land management and conservation (p114)		
<b>G4-EN14</b>	International Union of Conservation of Nature (IUCN) red listed with habitats affected by operations	Environmental performance: Biodiversity, land management and conservation (p114)		
<b>MM2</b>	The number and percentage of total sites identified as requiring biodiversity management plans according to stated criteria, and the number (percentage) of those sites with plans in place	Environmental performance: Biodiversity, land management and conservation (p114)		
<b>MATERIAL ASPECT: EMISSIONS</b>				
<b>G4-EN15</b>	Direct greenhouse gas (GHG) emissions (scope 1)	Environmental performance: Climate change and greenhouse gas (GHG) emissions (p110)		Assurance on total scope 1 carbon emissions (tCO <sub>2</sub> e) Assurance report
<b>G4-EN16</b>	Energy indirect greenhouse gas (GHG) emissions (scope 2)	Environmental performance: Climate change and greenhouse gas (GHG) emissions (p110)		Assurance on total scope 2 carbon emissions (tCO <sub>2</sub> e) Assurance report
<b>G4-EN17</b>	Other indirect greenhouse gas (GHG) emissions (scope 3)	Environmental performance: Climate change and greenhouse gas (GHG) emissions (p110)		Assurance on total scope 3 carbon emissions (tCO <sub>2</sub> e) Assurance report
<b>G4-EN18</b>	Greenhouse gas (GHG) emissions intensity	Environmental performance: Climate change and greenhouse gas (GHG) emissions (p110)		
<b>G4-EN19</b>	Reduction of greenhouse gas (GHG) emissions	Environmental performance: Climate change and greenhouse gas (GHG) emissions (p110)		
<b>MM1</b>	Amount of land (owned or leased, and managed for production activities or extractive use) disturbed or rehabilitated	Environmental performance: Biodiversity, land management and conservation (p114)		
<b>MATERIAL ASPECT: EFFLUENTS AND WASTE</b>				
<b>G4-EN22</b>	Total water discharge by quality and destination	Environmental performance: Managing our effluents and waste (p117)		
<b>G4-EN23</b>	Total weight of waste by type and disposal method	Environmental performance: Managing our effluents and waste (p117)		Assurance on volume of mineral waste disposed (tonnes) Assurance report
<b>G4-EN24</b>	Total number and volume of significant spills	Environmental performance: Managing our effluents and waste, environmental incidents (p117)		

SPECIFIC STANDARD DISCLOSURES <i>continued</i>				
Disclosures on Management Approach and Indicators		Section reference	Identified omissions and reasons	External assurance
<b>MM3</b>	Total amounts of overburden, rock, tailings, and sludges and their associated risks	Environmental performance: Managing our effluents and waste (p117)		
<b>MATERIAL ASPECT: COMPLIANCE</b>				
<b>G4-EN29</b>	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations	Environmental performance: Environmental incidents (p103)		
<b>MATERIAL ASPECT: SUPPLIER ENVIRONMENTAL ASSESSMENT</b>				
<b>G4-EN32</b>	Percentage of new suppliers that were screened using environmental criteria	Environmental performance: Engagement with suppliers and their environmental impacts (p112)		
<b>G4-EN33</b>	Significant actual and potential negative environmental impacts in the supply chain and actions taken	Environmental performance: Engagement with suppliers and their environmental impacts (p112)		
<b>MATERIAL ASPECT: ENVIRONMENTAL GRIEVANCE MECHANISMS</b>				
<b>G4-EN34</b>	Number of grievances about environmental impacts filed, addressed, and resolved through formal grievance mechanisms	Stakeholder engagement: Host communities, labour sending areas and neighbours (p55)  Environmental performance: Environmental incidents (p103)		
<b>CATEGORY: SOCIAL</b>				
<b>LABOR PRACTICES AND DECENT WORK</b>				
<b>MATERIAL ASPECT: EMPLOYMENT</b>				
<b>G4-LA1</b>	Total number and rates of new employee hires and employee turnover by age group, gender and region	Employees and communities, Human rights (p86)  Corporate Governance: Human rights (p181)	Harmony distinguishes between permanent employees and contractors, by operation	
<b>G4-LA2</b>	Benefits provided to full-time employees that are not provided to temporary or part-time employees, by significant locations of operation	Safety and Health: Health (p65)  Employees and communities: Employment standards (p78)	Not applicable	
<b>MATERIAL ASPECT: OCCUPATIONAL HEALTH AND SAFETY</b>				
<b>G4-LA5</b>	Percentage of total workforce represented in formal joint management-worker health and safety committees that help monitor and advise on occupational health and safety programs	Safety and health: Safety performance (p60)	Not applicable	
<b>G4-LA6</b>	Type of injury and rate of injury, occupational disease, lost days, and absenteeism, and total number of work-related fatalities, by region and by gender	Safety and health (p58)  Operational performance (p120)		Assurance on lost time injury frequency rate (LTIFR), total injuries and accidents (TIA) and silicosis – number of cases confirmed Assurance report
<b>G4-LA7</b>	Workers with incidence or risk of disease related to their occupation	Safety and health (p58)	Not applicable	
<b>G4-LA8</b>	Health and safety topics covered in formal agreements with trade unions	Safety and health (p58)	Not applicable	



# GLOBAL REPORTING INITIATIVE INDEX CONTINUED

SPECIFIC STANDARD DISCLOSURES <i>continued</i>				
Disclosures on Management Approach and Indicators		Section reference	Identified omissions and reasons	External assurance
MATERIAL ASPECT: TRAINING AND EDUCATION				
G4-LA9	Average hours of training per year per employee by gender, and by employee category	Employees and communities (p76)	Harmony can now breakdown training hours	Assurance on critical skills training – number of people trained Assurance report
G4-LA10	Programs for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings	Employees and communities: Adult education and training (p81)	Transition assistance programmes implemented and assistance provided to facilitate continued employability and management of career endings	
G4-LA11	Percentage of employees receiving regular performance and career development reviews, by gender and by employee category	Employees and communities (p76)	Not applicable	
MATERIAL ASPECT: DIVERSITY AND EQUAL OPPORTUNITY				
G4-LA12	Composition of governance bodies and breakdown of employees per employee category according to gender, age group, minority group membership, and other indicators of diversity	Employees and communities (p76)	Harmony only quantifies the split between own employees and contractors in compliance with the Employment Equity Act and Mining Charter targets. However, diversity indicators are closely monitored against targets by the social and ethics committee of the board.	Assurance on employment equity in management in South Africa see Assurance report
MATERIAL ASPECT: SUPPLIER ASSESSMENT FOR LABOR PRACTICES				
G4-LA14	Percentage of new suppliers that were screened using labour practices criteria	Employees and communities: Human rights (p86)  Corporate governance: Human rights (p181)	Not applicable	
G4-LA15	Significant actual and potential negative impacts for labour practices in the supply chain and actions taken	Employees and communities: Procurement (p98)	Not applicable	
MATERIAL ASPECT: LABOR PRACTICES GRIEVANCE MECHANISMS				
G4-LA16	Number of grievances about labour practices filed, addressed, and resolved through formal grievance mechanisms	Employees and communities: Labour disputes and strikes (p79)		
MM4	Number of strikes and lock-outs exceeding one week’s duration, by country	Employees and communities: Labour disputes and strikes (p78)		

SPECIFIC STANDARD DISCLOSURES <i>continued</i>				
Disclosures on Management Approach and Indicators		Section reference	Identified omissions and reasons	External assurance
<b>HUMAN RIGHTS</b>				
<b>MATERIAL ASPECT: INVESTMENT</b>				
<b>G4-HR1</b>	Total number and percentage of significant investment agreements and contracts that include human rights clauses or that underwent human rights screening	Employees and communities: Human rights (p86)  Corporate governance: Human rights (p181)	Not applicable	
<b>MATERIAL ASPECT: NON-DISCRIMINATION</b>				
<b>G4-HR3</b>	Total number of incidents of discrimination and corrective actions taken	Employees and communities: Employment equity (p85)  Corporate governance: Human rights (p181)	Not applicable	
<b>MATERIAL ASPECT: FREEDOM OF ASSOCIATION AND COLLECTIVE BARGAINING</b>				
<b>G4-HR4</b>	Operations and suppliers identified in which the right to exercise freedom of association and collective bargaining may be violated or at significant risk, and measures taken to support these rights	Employees and communities: Freedom of association (p80)	Not applicable	
<b>MATERIAL ASPECT: INDIGENOUS RIGHTS</b>				
<b>MM5</b>	Total number of operations taking place in or adjacent to Indigenous Peoples' territories, and number and percentage of operations or sites where there are formal agreements with Indigenous Peoples' communities	Employees and communities: Human rights (p86)  This only applies to our Papua New Guinea operations at present, where we comply with local legislation, licence conditions and agreements with associated communities and landowners	Not applicable	
<b>MATERIAL ASPECT: ASSESSMENT</b>				
<b>G4-HR9</b>	Total number and percentage of operations that have been subject to human rights reviews or impact assessments	Corporate governance: Human rights (p181)	Not applicable	
<b>MATERIAL ASPECT: SUPPLIER HUMAN RIGHTS ASSESSMENT</b>				
<b>G4-HR10</b>	Percentage of new suppliers that were screened using human rights criteria	Corporate governance: Human rights (p181)	Not applicable	
<b>G4-HR11</b>	Significant actual and potential negative human rights impacts in the supply chain and actions taken	Employees and communities: Labour disputes and strikes (p79) Human rights (p86)  Environmental performance: Engagement with suppliers and their environmental impacts (p112)	Not applicable	

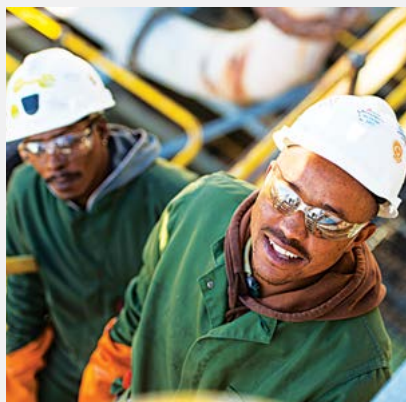
# GLOBAL REPORTING INITIATIVE INDEX CONTINUED

SPECIFIC STANDARD DISCLOSURES <small>continued</small>				
Disclosures on Management Approach and Indicators		Section reference	Identified omissions and reasons	External assurance
<b>MATERIAL ASPECT: HUMAN RIGHTS GRIEVANCE MECHANISMS</b>				
<b>G4-HR12</b>	Number of grievances about human rights impacts filed, addressed, and resolved through formal grievance mechanisms	Corporate governance: Human rights (p181)	Not applicable	
<b>SOCIETY</b>				
<b>MATERIAL ASPECT: LOCAL COMMUNITIES</b>				
<b>G4-SO1</b>	Percentage of operations with implemented local community engagement, impact assessments, and development programmes	Employees and communities (p76)	Not applicable	
<b>G4-SO2</b>	Operations with significant actual or potential negative impacts on local communities	Operational performance: Socio-economic investment (p94)	Not applicable	
<b>MM6</b>	Number and description of significant disputes relating to land use, customary rights of local communities and Indigenous Peoples	There were no disputes during the year under review.		
<b>MATERIAL ASPECT: ANTI-CORRUPTION</b>				
<b>G4-SO3</b>	Total number and percentage of operations assessed for risks related to corruption and the significant risks identified	Corporate governance: Human rights (p181)	Not applicable	
<b>G4-SO4</b>	Communication and training on anti-corruption policies and procedures	Corporate governance: Human rights (p181)	Not applicable	
<b>G4-SO5</b>	Confirmed incidents of corruption and actions taken	Corporate governance: Code of ethics (p180)	Not applicable	
<b>MATERIAL ASPECT: PUBLIC POLICY</b>				
<b>G4-SO6</b>	Total value of political contributions by country and recipient/beneficiary	Corporate governance: Political donations (p181)	Not applicable	
<b>MATERIAL ASPECT: ANTI-COMPETITIVE BEHAVIOR</b>				
<b>G4-SO7</b>	Total number of legal actions for anti-competitive behaviour, anti-trust, and monopoly practices and their outcomes	Corporate governance: Legislative compliance (p179)	Not applicable	
<b>MATERIAL ASPECT: COMPLIANCE</b>				
<b>G4-SO8</b>	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws and regulations	Environmental performance: Environmental incidents in FY15 (p112)  Corporate governance: Legislative compliance (p179)	Not applicable	
<b>MATERIAL ASPECT: SUPPLIER ASSESSMENT FOR IMPACTS ON SOCIETY</b>				
<b>G4-SO10</b>	Significant actual and potential negative impacts on society in the supply chain and actions taken	Employees and communities: Procurement (p98)	Not applicable	

# ADDITIONAL INFORMATION

## ADDITIONAL INFORMATION

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Directorate and administration	IBC*
<i>*inside back cover</i>	



# SHAREHOLDER INFORMATION

## CONTACTS

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## STOCK EXCHANGE LISTINGS AND TICKER CODES

Harmony's primary listing is on the JSE Limited. It is also quoted in the form of American depositary receipts on the New York Stock Exchange and as international depositary receipts on the Berlin exchange.

### Harmony's ticker codes on these exchanges are as follows:

JSE Limited	HAR
New York Stock Exchange Euronext	HMY
Berlin Stock Exchange	HAM1

## SHARE INFORMATION

Sector	Resources
Sub-sector	Gold
Nature of business	Harmony Gold Mining Company Limited and its subsidiaries are engaged in underground and open-pit gold mining, exploration and related activities in South Africa and Papua New Guinea.
Issued share capital as at 30 June 2015	436 187 133 shares in issue
Market capitalisation	
at 30 June 2015	R6.8 billion or US\$560 million
at 30 June 2014	R13.58 billion or US\$1.28 billion
Share price statistics – FY15	
Johannesburg Stock Exchange: 12 month high	R35.50
12 month low	R15.59
Closing price as at 30 June 2015	R15.59
New York Stock Exchange: 12 month high	US\$3.29
12 month low	US\$1.31
Closing price as at 30 June 2015	US\$1.34
Free float	100%
ADR ratio	1:1

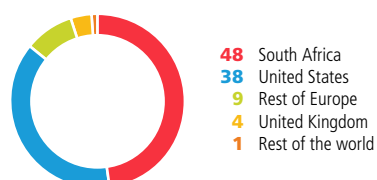
## SHAREHOLDER SPREAD AS AT 30 JUNE 2015

Shareholder spread	Number of shareholders	% of shareholders	Number of shares	% of issued share capital
Public	8 693	99.89	251 177 613	57.59
Non-public	10	0.11	185 009 520	42.41
Share option scheme	3	0.03	1 087 401	0.25
Holding 10% +	3	0.03	183 569 759	42.09
Directors*	5	0.05	352 360	0.08
<b>Totals</b>	<b>8 703</b>	<b>100.00</b>	<b>436 187 133</b>	<b>100.00</b>

\* Held by Frank Abbott, Graham Briggs, Ken Dicks, Mashego Mashego and André Wilkens

## GEOGRAPHIC DISTRIBUTION OF SHAREHOLDERS AS AT 30 JUNE 2015

Geographic distribution of shareholders (%)  
as at 30 June 2015



## Ownership summary as at 30 June 2015

Rank	Investor	Current combined position	% shares in issue
1	Allan Gray Unit Trust Management Ltd.	64 690 738	14.83
2	African Rainbow Minerals Ltd	63 632 922	14.59
3	Van Eck Global	55 246 099	12.67
4	Public Investment Corp. of South Africa	31 174 528	7.15
5	Retail Brokers (ADR)	22 121 076	5.07
6	Dimensional Fund Advisors, Inc.	13 487 290	3.09
7	Domestic Broker Dealers	11 786 747	2.70
8	The Vanguard Group, Inc.	10 850 897	2.49
9	Universal-Investment GmbH	9 668 294	2.22
10	Renaissance Technologies LLC	6 068 100	1.39

## DIVIDEND POLICY

In considering the payment of dividends, the board will, with the assistance of the audit and risk and investment committees, take into account the following:

- The current financial status of the company and the payment of a proposed dividend subject to the successful application of the solvency and liquidity test as set out in section 4 of the Companies Act of 2008
- The future funding and capital requirements of the company
- The intention to pay a dividend

## DIVIDEND PAID DURING FY15

No dividends were declared during FY15. Harmony's stated policy is to only pay dividends from profits and not from debt.

## SHAREHOLDERS' DIARY

Financial year-end	30 June
Annual financial statements issued	23 October 2015
Form 20-F issued	23 October 2015
Annual general meeting	23 November 2015
<b>Quarterly results presentations FY16:</b>	
Quarter 1	5 November 2015
Quarter 2	4 February 2016
Quarter 3	9 May 2016
Quarter 4	17 August 2016

# GLOSSARY OF TERMS

Term	Definition
AET	Adult education and training
ADR	American depositary receipts
Ag	Silver
AMCU	Association of Mineworkers and Construction Union
AMD	Acid mine drainage – outflow of acidic water formed by mining activity and egress of water following contact with certain types of ore bodies and host rock. Also known as acid rock drainage
ART	Antiretroviral therapy
Au	Gold
BEE	Black economic empowerment
BBBEE	Broad-based black economic empowerment
By-products	Any products emanating from the core process of producing gold, including silver and uranium in South Africa and copper, silver and molybdenum in Papua New Guinea
Capital expenditure (capex)	Expenditure on tangible assets – includes on-going and project capital. In particular, capex includes spending on on-going development, abnormal expenditure, shaft projects and major projects, and covers both sustaining and growing operations
Carbon-in-leach (CIL)	Gold is leached from a slurry of gold ore with cyanide in agitated tanks and adsorbed on to carbon granules in the same circuit. Granules are separated from the slurry and treated to remove gold
Carbon-in-pulp (CIP)	Gold is leached conventionally from a slurry of gold ore with cyanide in agitated tanks. The leached slurry passes into the CIP circuit where carbon granules are mixed with the slurry and gold is adsorbed onto the carbon. Granules are separated from the slurry and treated to remove gold
Cash costs	Total cash costs include site costs for all mining, processing and administration, reduced by contributions from by-products and include royalties and production taxes. Depreciation, rehabilitation, corporate administration, retrenchment, capital and exploration costs are excluded. Total cash costs per ounce are attributable total cash costs divided by attributable ounces of gold produced
CDP	Carbon Disclosure Project – an independent not-for-profit organisation that acts as an intermediary between shareholders and corporations on all climate change-related issues, providing primary climate change data from the world's largest corporations to the global marketplace
CEO	Chief executive officer
CO <sub>2</sub> emissions	Total CO <sub>2</sub> emissions calculated from direct emissions generated from petrol and diesel consumption and indirect emissions generated from electricity consumption (expressed in tonnes)
<sup>1</sup> Critical skills training – number of people trained in FY15	<p>The following disciplines are defined as core skills:</p> <ul style="list-style-type: none"> <li>• Mining</li> <li>• Engineering</li> <li>• Ore reserves</li> <li>• Metallurgy</li> </ul> <p>The critical skills within these disciplines are:</p> <ul style="list-style-type: none"> <li>• Mining – general manager; mine manager; mining manager</li> <li>• Engineering – engineers; junior engineers</li> <li>• Ore reserves – ore reserve management; HOD – geology, survey and planning; section geologist/senior geologist; section surveyor/mine surveyor/senior shaft surveyor; section geostatistician/senior geostatistician (geological technician); section planner/senior planner; surveyors/geotechs</li> <li>• Metallurgy – plant manager; senior metallurgist</li> </ul>
CSI/R	Corporate social investment/responsibility

<sup>1</sup> Definitions applied to the Selected Sustainability Indicators assured by the independent auditors



Term	Definition
Cu	Copper
Cut-off grade	Minimum grade at which a unit of ore will be mined to achieve the desired economic outcome
Cyanide Code	International management code for manufacture, transport and use of cyanide in producing gold. The aim is to promote responsible management of cyanide used in gold mining; to protect human health and reduce potential for environmental impacts
Depletion	Decrease in quantity of ore in a deposit or property due to extraction or production
Development	Process of accessing an ore body through shafts or tunnelling in underground mining
Discontinued operation	A component of an entity that has been disposed of or abandoned or classified as held for sale until conditions precedent to the sale have been fulfilled
DMR	Department of Mineral Resources, South Africa
DOTS	Directly observed therapy short-course
DSM	Demand-side management
DTI	Department of Trade and Industry
EBIT	Earnings before interest and tax
<sup>1</sup> Electricity purchased (kWh)	Electricity purchased from the supplier during the reporting period. This includes all electricity purchased by source (fossil fuel, nuclear, hydroelectric, wind, solar, etc). It excludes electricity generated by the operation itself and electricity supplied to third parties such as mine hostels/accommodation where cost is recovered from employees, communities and businesses
EMP/S	Environmental management programme/system
EMPR	Environmental management programme report
Employment equity in management in South Africa (%)	<p>Employment equity is reported as a number and percentage of the total number of historically disadvantaged South Africans employed per band.</p> <p>For historically disadvantaged South Africans we refer to: black people (African, coloured and Indian males and females) and white women. White males and foreigners (including those naturalised after the DTI code date on March 1994) are excluded</p> <p>Employment equity is measured in the bands C, D, E and F, where:</p> <ul style="list-style-type: none"> <li>• Top management (F band)</li> <li>• Senior management (E band)</li> <li>• Professionally qualified and experienced specialists/middle management (D band)</li> <li>• Skilled technical and academic qualified/junior management/supervisors/foremen/superintendents (C band)</li> <li>• Core and critical (C-E management levels in core disciplines)</li> </ul>
Energy consumption	Energy use calculated from electricity purchased and diesel and petrol consumed during the reporting period
ERP	Enterprise resource planning
ESOP	Employee share ownership scheme
ETFs	Exchange traded funds
Exco	Executive committee

<sup>1</sup> Definitions applied to the Selected Sustainability Indicators assured by the independent auditors

# GLOSSARY OF TERMS CONTINUED

Term	Definition
FIFR	<p>Fatal injury frequency rate</p> <p>A work-related injury which results in loss of life</p> <p>The calculation for the fatality injury frequency rate (FIFR): Actual fatal injuries x 1 000 000/hours worked</p> <p>The calculation for hours: Actual shifts worked x 9 (this is throughout Harmony for consistency to assume every person works nine hours per shift)</p>
FOG	Fall of ground
FOGIFR	<p>Fall-of-ground injury frequency rate</p> <p>Any work-related fall-of-ground injury that calls for medication, treatment, medical checks and reviews, irrespective of time lost or not</p> <p>The calculation for FOGIFR: Actual fall of ground injuries x 1 000 000/hours worked</p> <p>The calculation for hours: Actual shifts worked x 9 (this is throughout Harmony for consistency to assume every person works nine hours)</p>
FSC	Forest Stewardship Council
g/TEC	Grams per total employee costed
GHG	Greenhouse gas – a gas that contributes to the greenhouse effect by absorbing infrared radiation, such as carbon dioxide and chlorofluorocarbons (CFCs)
Gold produced	Refined gold derived from the mining process, measured in ounces or kilograms in saleable form
Grade	Quantity of gold contained in a unit weight of gold-bearing material, generally expressed in ounces per short ton of ore (oz/t), or grams per metric tonne (g/t)
GRI	Global Reporting Initiative
GWh	Gigawatt hours
HDSAs	Historically disadvantaged South Africans – all people and groups discriminated against on the basis of race, gender and disability as per the Mineral and Petroleum Resources Development Act (No 28 of 2002) and the Mining Charter definitions
HIV	Human immunodeficiency virus
HIV/Aids	Human immunodeficiency virus or acquired immunodeficiency syndrome
Housing and living conditions:	
<sup>1</sup> a) conversion of operational hostels from sharing to single occupancy rooms	The number of employees who share a room in Harmony's company accommodation at active mining operations, and the number of employees who have single rooms in Harmony's company accommodation at active mining operations. This is calculated by comparing the total physical hostel design capacity (room numbers) versus the total number of hostel occupants. This gives the total average occupancy rate per hostel. An average of greater than one person for an active mining operation confirms that the occupant is sharing accommodation
b) Conversion of non-operational hostels from single-sex units to family units known as community rental units (CRU)	The number of family units is determined by the architectural design of the new structure, designed to create community rental units for both Harmony employees and members of the public
c) Promoting home ownership	Company houses sold to individual employees at special prices and other housing development initiatives being promoted or facilitated by Harmony

<sup>1</sup> Definitions applied to the Selected Sustainability Indicators assured by the independent auditors

Term	Definition
HR	Human resources
ICMM	International Council on Mining and Metals
ICT/IT	Information and communication technology/information technology
IFRS	International Financial Reporting Standards
IIRC	International Integrated Reporting Council
Indicated mineral resource	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 testing information using appropriate techniques from outcrops, trenches, pits, workings and drill holes. The locations are too widely or inappropriately spaced to confirm geological and/or grade continuity but close enough for continuity to be assumed
Inferred mineral resource	Part of a mineral resource for which tonnage, grade resource and mineral content can be estimated with a low level of confidence. It is inferred from geological evidence and assumed but not verified geological and/or grade continuity. It is based on information gathered through appropriate techniques from outcrops, trenches, pits, workings and drill holes that may be limited or of uncertain quality and reliability
Interest cover	Earnings before interest and tax divided by finance costs and unwinding of obligations
IRCA	International Register of Certificated Auditors
ISO	International Organisation for Standardization
ISO 9000	International Standards Organization's family of standards for quality management systems
ISO 9001	The only standard within the ISO 9000 family against which a company can be certified against. It is the standard that defines the requirements of having a Quality Management System
ISO 14001	Published in 1996 by the International Organisation for Environmental Standardisation, it specifies actual requirements for an environmental management system
ISO 50001	This standard specifies the requirements for establishing, implementing, maintaining and improving an energy management system so as to achieve continually improving energy performance, including energy efficiency, energy use and consumption
IUCN	International Union for Conservation of Nature and Natural Resources
JMS	Joint Metallurgical Services
JORC	Australian Code for Reporting Exploration Results, Mineral Resources and Mineral Reserves
JSE	JSE Limited (Johannesburg Stock Exchange)
Kina	Papua New Guinea currency
King III	King Report on Governance for South Africa, published in 2009
kg	Kilograms
KPIs	Key performance indicators
Land disturbed and land available for rehabilitation (ha)	Total land footprint disturbed less the land footprint used for on-going or future mining activities, where the footprint of disturbed area includes all buildings, roads and mining area that needs to be rehabilitated according to the Environmental Management Programme Report (EMPR); the area rehabilitated meets the required standard of the EMPR, final land use plans and only maintenance and monitoring is needed; and the land available for rehabilitation is the area used for on-going or future mining activities
LED	Local economic development

<sup>1</sup> Definitions applied to the Selected Sustainability Indicators assured by the independent auditors

# GLOSSARY OF TERMS CONTINUED

Term	Definition
<sup>1</sup> Local economic development (LED) spend/ community spend (South African rands)	<p>Local economic development project spend linked to the licence of each mine.</p> <p>The following categories qualify as LED spend:</p> <ul style="list-style-type: none"> <li>• bursary students</li> <li>• bursary graduates</li> <li>• training bridging school</li> <li>• training mining</li> <li>• training engineering</li> <li>• costs related to: <ul style="list-style-type: none"> <li>• mine community projects</li> <li>• labour-sending area; projects in community that is not for mine employees; and</li> <li>• conversion of hostel into family units</li> </ul> </li> <li>• Procurement spend related to: <ul style="list-style-type: none"> <li>• contractor compliance; and</li> <li>• BEE procurement</li> </ul> </li> <li>• corporate social responsibility</li> </ul>
LOM	Life of mine: the number of years an operation is scheduled to mine and treat ore, based on the current mine plan
LPG	Liquefied petroleum gas
<sup>1</sup> LTIFR	<p>Lost-time injury frequency rate: a lost-time injury is a work-related injury that calls for medication, treatment, medical checks, reviews and subsequent days off work. This injury or illness incapacitates injured employees from performing their normal occupation on the next scheduled work day or shift.</p> <p>The calculation for the lost-time injury frequency rate (LTIFR): Actual lost-time injuries x 1 000 000/hours worked</p> <p>The calculation for hours: Actual shifts worked x 9 (this is throughout Harmony for consistency to assume every person works nine hours)</p>
m <sup>2</sup> /TEC	Square metres per total employee costed
MBoD	Medical Bureau of Occupational Diseases
MDR TB	Multidrug-resistant tuberculosis
Measured mineral resource	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 outcrops, trenches, pits, workings and drill holes. Locations are spaced closely enough to confirm geological and grade continuity
MHSC	Mine Health and Safety Council
MHSA	Mine Health and Safety Act (No 29 of 1996)
Mine call factor	The ratio, expressed as a percentage, of the total quantity of recovered and unrecovered mineral product after processing with the amount estimated in the ore based on sampling
Mineral resource	A concentration or occurrence of material of intrinsic economic interest in/on the earth's crust in such form, quality and quantity that there are reasonable prospects for eventual economic extraction. The location, quantity, grade, geological characteristics and continuity of a mineral resource are known, estimated or interpreted from specific geological evidence and knowledge. Mineral resources are subdivided, in order of increasing geological confidence, into inferred, indicated and measured categories

<sup>1</sup> Definitions applied to the Selected Sustainability Indicators assured by the independent auditors

Term	Definition
Mining Charter	Broad-based social-economic empowerment charter for the South African mining industry. The goal is to create an industry that reflects the promise of a non-racial South Africa
MMJV	Morobe Mining Joint Ventures
Mo	Molybdenum
MOSH	Mining Industry Occupational Safety and Health
Moz	Million ounces
MPRDA	Mineral and Petroleum Resources Development Act (No 28 of 2002)
MQA	Mining Qualifications Authority, a sector education training authority for the mining and minerals sector facilitating human resources development
MW	Megawatt
MWh	Megawatt hour
NEMA	National Environmental Management Act
NERSA	National Energy Regulator of South Africa
NGO	Non-governmental organisation
NIHL	Noise-induced hearing loss reported as the number of new cases identified and submitted for compensation during the reporting period
NNR	National Nuclear Regulator
NQF	National Qualifications Framework
NUM	National Union of Mineworkers
NWA	National Water Act
NYSE	New York Stock Exchange
OHSAS 18001	Occupational health and safety assessment specification
On-going capital	Capital expenditure to maintain existing production assets. This includes replacement of vehicles, plant and machinery, ore reserve development and capital expenditure related to safety, health and the environment
Operating margin	Revenue less production costs expressed as a percentage of revenue
Pay limit	The grade of a unit of ore at which revenue from the recovered mineral content of the ore is equal to the total cash cost, including ore reserve development and stay-in-business capital. This grade is expressed as an in-situ value in grams per tonne or ounces per short ton (before dilution and mineral losses)
PNG	Papua New Guinea
<sup>1</sup> Preferential procurement – BEE total spend (ZAR)	Procurement spend collected from the Harmony enterprise resource planning system's payment register, which is only the discretionary spend value spent with suppliers that hold a valid black economic empowerment certificate, and comply with the minimum historically disadvantaged South Africans ownership of 25%, or more. The reporting period for this key performance indicator is 26 June 2014 to 25 June 2015, and reports the spend throughout the reporting period regardless of invoice date. Reporting is aligned with the requirement of the revised Mining Charter of September 2010

<sup>1</sup> Definitions applied to the Selected Sustainability Indicators assured by the independent auditors

## GLOSSARY OF TERMS CONTINUED

Term	Definition
Probable mineral reserve	Economically mineable part of an indicated, and in some cases, a measured mineral resource. It includes diluting materials and allowances for losses that may occur when the material is mined. Appropriate assessments and studies have been carried out, and include consideration of and modification by realistically assumed mining, metallurgical, economic, marketing, legal, environmental, social and governmental factors. These assessments demonstrate at the time of reporting that extraction could reasonably be justified
Productivity	An expression of labour productivity based on the ratio of grams of gold produced per month to the total number of employees in underground mining operations
Project capital	Capital expenditure to either bring a new operation into production; to materially increase production capacity; or to materially extend the productive life of an asset
Proved reserve	Economically mineable part of a measured mineral resource. It includes diluting materials and allowances for losses that may occur when the material is mined. Appropriate assessments and studies have been carried out, and include consideration of and modification by realistically assumed mining, metallurgical, economic, marketing, legal, environmental, social and governmental factors. These assessments demonstrate at the time of reporting that extraction could reasonably be justified
Reclamation	In South Africa, reclamation describes the process of reclaiming slimes (tailings) dumps using high-pressure water cannons to form a slurry that is pumped back to metallurgical plants for processing
Reef	A gold-bearing sedimentary horizon, normally a conglomerate band that may contain economic levels of gold
REFIT	Renewable energy feed-in tariff
SAMREC	South African Code for Reporting Exploration Results, Mineral Resources and Mineral Reserves
SANS	South African national standard
<sup>1</sup> Scope 1 carbon emissions (tCO <sub>2</sub> e)	Direct combustion of fuel by the Harmony Group (explosives, diesel and petrol)
<sup>1</sup> Scope 2 carbon emissions (tCO <sub>2</sub> e)	Scope 2 emissions calculated from electricity purchased (from the power utility excluding use by third parties) multiplied by the appropriate factor as indicated by the electricity supplier
<sup>1</sup> Scope 3 carbon emissions (tCO <sub>2</sub> e)	<p>Indirect combustion by the Harmony group in line with Scope 3 emissions in the following categories, as indicated by the greenhouse gas Protocol:</p> <ul style="list-style-type: none"> <li>• Purchased goods and services</li> <li>• Capital goods</li> <li>• Fuel and Energy related emissions not included in Scopes 1 and 2</li> <li>• Upstream transportation and distribution</li> <li>• Waste generated in operations</li> <li>• Business travel</li> <li>• Employee commuting</li> <li>• Upstream leased assets</li> <li>• Downstream transportation and distribution</li> <li>• Processing of sold products</li> <li>• Use of sold products</li> <li>• Downstream leased assets</li> <li>• Franchises</li> <li>• End of life treatment and</li> <li>• Investments</li> </ul>

<sup>1</sup> Definitions applied to the Selected Sustainability Indicators assured by the independent auditors

Term	Definition
<sup>1</sup> Silicosis – number of new cases certified in FY15	The number of cases of pure silicosis confirmed by the Medical Bureau of Occupational Diseases in FY15, which includes all cases that have been received by Harmony as confirmed during FY15, regardless of the date of the Medical Bureau of Occupational Diseases letter. Cases where other conditions are present, specifically tuberculosis, are not included in this number
SLPs	Social and labour plans aimed at promoting employment and advancing the social and economic welfare of all South Africans while ensuring economic growth and socio-economic development as stipulated in the MPRDA
SMMEs	Small, medium and micro enterprises
SOX	Sarbanes-Oxley
Tailings	Finely ground rock of low residual value from which valuable minerals have been extracted. Discarded tailings stored in dam facilities
<sup>1</sup> Total injuries and accidents (TIA)	All work-related injuries. This category is the sum of all dressing cases and lost-time injuries.  Dressing cases: a work-related injury that calls for medication, treatment or medical check that is normally administered by a healthcare professional. A dressing case does not result in lost-time from work beyond the date of injury
Tuberculosis – number of cases confirmed in FY15	Tuberculosis (TB). The number of cases of pure tuberculosis confirmed by the Medical Bureau of Occupational Diseases in FY15, which includes all cases that have been received by Harmony as confirmed during FY13, regardless of the date of the Medical Bureau of Occupational Diseases letter. Cases where other conditions are present, specifically silicosis, are not included in this number
Tonne/ton (t)	Metric = 1 000 kilograms / Imperial = 2 000 pounds (1 016 kilograms)
TSF	Tailings storage facility
UASA	United Association of South Africa
US	United States
U <sub>3</sub> O <sub>8</sub>	Uranium oxide
US\$	United States dollar
<sup>1</sup> Volumes of mineral waste disposed (tonnes)	Mineral waste consists of waste rock and slimes/tailings. Waste rock refers to the amount of waste rock produced and/or hoisted to surface, and placed on a waste rock disposal site during the reporting month. Slimes/tailings refers to the total amount of slimes/tailings produced by the processing plant during the reporting month
Waste	Material with insufficient mineralisation for future treatment and discarded
<sup>1</sup> Water used for primary activity (kilolitres)	The total make-up or new water drawn into the boundaries of the operation from all sources (including surface water, groundwater and municipal water supply or water utilities) for use for mining and processing-related activities including use by contractors. This definition excludes: internally recycled water, affected fissure water, water discharged to receiving environment and supply to third parties such as communities and businesses
Weighted average number of ordinary shares	Number of ordinary shares in issue at the beginning of the year, increased by shares issued during the year, weighted on a time basis for the period in which they have participated in the income of the company, and increased by share options that are virtually certain to be exercised
WHO	World Health Organization
Yield	Amount of valuable mineral or metal recovered from each unit mass of ore expressed as ounces per short ton or grams per metric tonne

<sup>1</sup> Definitions applied to the Selected Sustainability Indicators assured by the independent auditors





# FORWARD-LOOKING STATEMENTS

## PRIVATE SECURITIES LITIGATION REFORM ACT

### Safe Harbour Statement

This report contains forward-looking statements within the meaning of the safe harbour provided by Section 21E of the Securities Exchange Act of 1934, as amended, and Section 27A of the Securities Act of 1933, as amended, with respect to our financial condition, results of operations, business strategies, operating efficiencies, competitive positions, growth opportunities for existing services, plans and objectives of management, markets for stock and other matters. These include all statements other than statements of historical fact, including, without limitation, any statements preceded by, followed by, or that include the words “targets”, “believes”, “expects”, “aims” “intends” “will”, “may”, “anticipates”, “would”, “should”, “could”, “estimates”, “forecast”, “predict”, “continue” or similar expressions or the negative thereof.

These forward-looking statements, including, among others, those relating to our future business prospects, revenues and income, wherever they may occur in this report and the exhibits to this report, are essentially estimates reflecting the best judgment of our senior management and involve a number of risks and uncertainties that could cause actual results to differ materially from those suggested by the forward-looking statements. As a consequence, these forward-looking statements should be considered in light of various important factors, including those set forth in this report. Important factors that could cause actual results to differ materially from estimates or projections contained in the forward-looking statements include, without limitation: overall economic and business conditions in South Africa, Papua New Guinea, Australia and elsewhere, estimates of future earnings, and the sensitivity of earnings to the gold and other metals prices, estimates of future gold and other metals production and sales, estimates of future cash costs, estimates of future cash flows, and the sensitivity of cash flows to the gold and other metals prices, statements regarding future debt repayments, estimates of future capital expenditures, the success of our business strategy, development activities and other initiatives, estimates of reserves statements regarding future exploration results and the replacement of reserves, the ability to achieve anticipated efficiencies and other cost savings in connection with past and future acquisitions, fluctuations in the market price of gold, the occurrence of hazards associated with underground and surface gold mining, the occurrence of labour disruptions, power cost increases as well as power stoppages, fluctuations and usage constraints, supply chain shortages and increases in the prices of production imports, availability, terms and deployment of capital, changes in government regulation, particularly mining rights and environmental regulation, fluctuations in exchange rates, the adequacy of the Group’s insurance coverage and socio-economic or political instability in South Africa, Papua New Guinea and other countries in which we operate.

For a more detailed discussion of such risks and other factors (such as availability of credit or other sources of financing), see the Company’s latest Annual Report on Form 20-F which is on file with the Securities and Exchange Commission, as well as the Company’s other Securities and Exchange Commission filings. The Company undertakes no obligation to update publicly or release any revisions to these forward-looking statements to reflect events or circumstances after the date of this report or to reflect the occurrence of unanticipated events, except as required by law.

# DIRECTORATE AND ADMINISTRATION

## HARMONY GOLD MINING COMPANY LIMITED

Harmony Gold Mining Company Limited was incorporated and registered as a public company in South Africa on 25 August 1950

Registration number: 1950/038232/06

### Corporate office

Randfontein Office Park  
PO Box 2, Randfontein, 1760  
South Africa  
Corner Main Reef Road and Ward Avenue  
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South Africa

Telephone: +27 11 411 2000  
Website: [www.harmony.co.za](http://www.harmony.co.za)

### DIRECTORS

PT Motsepe\* (chairman)  
FFT De Buck\*^ (lead independent director)  
M Motloba\*^ (deputy chairman)  
GP Briggs (chief executive officer)  
F Abbott (financial director)  
JA Chissano\*<sup>1</sup>^  
KV Dicks\*^  
Dr DSS Lushaba\*^  
C Markus\*^  
HE Mashego\*\*  
M Msimang\*^  
KT Nondumo\*^  
VP Pillay\*^  
JL Wetton\*^  
AJ Wilkens\*

\* Non-executive

\*\* Executive

^ Independent

<sup>1</sup> Mozambican

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## TRANSFER SECRETARIES

### Link Market Services South Africa (Proprietary) Limited

(Registration number 2000/007239/07)  
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Telephone: +27 86 154 6572  
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## ADR\* DEPOSITARY

### Deutsche Bank Trust Company Americas c/o American Stock Transfer and Trust Company

Peck Slip Station  
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New York, NY 10272-2050  
E-mail queries: [db@amstock.com](mailto:db@amstock.com)  
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\*ADR: American Depositary Receipts

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Illovo, Johannesburg, 2196  
Private Bag X9936, Sandton, 2146

Telephone: +27 11 507 0300  
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JSE Limited: HAR  
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Berlin Stock Exchange: HAM1  
ISIN: ZAE 000015228