

**INTEGRATED
ANNUAL REPORT
2011**

A large yellow mining truck is the central focus of the image, parked on a dirt road at a mining site. The truck is viewed from a low angle, emphasizing its massive size. It has a large, curved yellow dump body and several large, heavy-duty tires. The background shows a mining operation with a cloudy sky and a small white car in the distance for scale.

**BUILDING
THE FOUNDATIONS
FOR A FUTURE
THROUGH MINING**

PROCESS OPERATIONS

PROCESS OVERVIEW

The past four years have seen the implementation of our processing strategy, driven in part by our mining strategy. A major area of focus has been the achievement of operating excellence in treating UG2 and Platreef ores. Processing operations have thus concentrated on minimising the cost of processing and maximising the revenue generated per tonne of ore processed.

Maximising the revenue generated per tonne of ore processed

The recovery of PGMs

Maximising revenue has meant improving the recovery of platinum group metals (PGMs) and base metals through processing, in particular via our concentrators. Major success can be reported, since UG2 recoveries, which now top 87% at our mines in Rustenburg and Amandelbult, have gone up by six percentage points between 2008 and 2011. This step change has occurred on the back of advanced control technologies and the optimisation of the stirred milling projects on both mainstream and intermediate concentrate regrinding. This increase in recoveries – and its attendant reduction in chrome in concentrate – unlocks the opportunity to mine the cost-effective UG2 Reef in Rustenburg. In addition, the Mogalakwena North concentrator moved further up the optimisation curve by increasing recoveries by more than 10% in the second half of 2011.

Maximising the recovery of by-products, especially chrome concentrate

The chrome recovery plant in Rustenburg will begin commissioning in the first quarter of 2012.

Expansion of Rustenburg Base Metals Refinery

This innovative expansion project was successfully commissioned during 2011 and is scheduled to reach steady-state capacity in 2013.

Minimising the cost of processing per tonne of ore processed

Improved smelter reliability

During the past few years a major effort was made to improve smelter reliability in spite of the increasing volumes of UG2 concentrate to be smelted. Breakthrough technical enhancements (involving the design of long-lasting furnace walls) and advanced monitoring techniques have seen the Group furnaces go three years without an unplanned furnace stoppage. In addition, smelting operations have reported a reduction in real smelting costs.

Maximising capital efficiency

Amplats started introducing recycle feed into the process stream, treating some 25,000 platinum ounces in 2011. The improved management of working capital resulted in a pipeline reduction of 85,000 platinum ounces in 2011.

Our production profile indicates excess smelting and refining capacity in the short to medium term and provides an opportunity to improve capital efficiency. Following the successful introduction of some secondary material in 2011, we plan to secure additional secondary material to further increase capacity utilisation.

Reducing bottlenecks

An opportunity to reduce bottlenecks at the Mogalakwena North plant, by increasing its capacity from the current 600 ktpm to 750 ktpm to 800 ktpm at minimal incremental capital cost, is currently being evaluated. This should further improve processing costs and mine margins.

PROCESS OPERATIONS

CONCENTRATORS

Safety – Fatalities: 0 (0) LTIFR: 0.24 (0.33)

Tonnes milled: 37.8 Mt (managed)

Cash costs/tonne milled: R120



Richard Pilkington, general manager

Amplats operates 14 individual concentrators in nine geographical locations around the Bushveld Complex and in Zimbabwe. These units are managed by the general manager: concentrators, who is a member of the process operations committee chaired by the executive head: process.

Safety

Concentrator operations realised a 21% reduction in lost-time injuries in 2011. The continued focus on a 'zero harm' mindset and

culture across all operations, using simple non-negotiable safety standards and applying lessons learnt from previous safety incidents, remains central to achieving our safety goal. The following plants are commended for their safety achievements in 2011:

- All operations at the concentrators in the Rustenburg mining area were free of lost-time injuries in 2011. Added to this, the UG2 plant was entirely free of injuries during the year and also achieved a total of four years and four months without a lost-time injury (LTI).
- The Merensky plant at the concentrators in the Amandelbult area was totally free of injuries in 2011. Moreover, it achieved a total of one year and eight months without an LTI.
- The No 2 plant at Amandelbult had a total of one year and nine months without a LTI.

PRODUCTION

Tonnes milled by own operations in 2011 increased by 1% year-on-year to 38.9 million tonnes, largely as a result of the successful commissioning and start-up of Unki Platinum Mine's concentrator at the beginning of the year and an increase in tonnes milled from the concentrators at Mogalakwena Mine. The listing of Royal Bafokeng Platinum (RBPlats) resulted in the Group losing joint control of direct interest in the Bafokeng-Rasimone Platinum Mine (BRPM), even though significant influence over operations was retained. As a result the 33% shareholding in BRPM is being equity accounted, contributing significantly to the year-on-year decrease in tonnes treated by non-managed operations and resulting in a decrease in tonnes treated by total operations of 1% year-on-year, to 48.5 million tonnes.



Concentrators operated efficiently to match ore production from the mines, and ore stocks ahead of concentrators were well managed.

The 12% year-on-year increase in the grade of Platreef ore treated at Mogalakwena Mine's concentrators, together with the 2% increase in built-up head grade of UG2 ore treated, contributed to an increase in overall built-up head grade of 1%, to 3.2 g/t 4E. The addition of Zimbabwean ore and the percentage increase of Platreef ore treated contributed to the 1% year-on-year reduction in recovery performance since these ore types have lower recovery potential than does Merensky Reef ore. The continued operation and optimisation of IsaMill™ stirred milling technology, together with various asset-optimisation projects targeted at recovery improvements, played key roles in mitigating the reduction in recovery that would normally be associated with an increase in treatment of materials with lower recovery potential.

Attributable platinum contained in concentrate produced for the year totalled 1.9 million ounces.

Costs

Cash operating costs were 15% higher than in the previous year, largely as a result of a 32% increase in utility costs and the start-up of Unki Platinum Mine's concentrator at the beginning of the year. Asset-optimisation initiatives targeting key commodities continued at all concentrator operations, playing an essential role in maintaining operational cost efficiencies and cost containment.

These initiatives resulted in the continued reduction in and optimisation of the consumption of grinding media, reagents and utilities, making valuable contributions to cost-containment efforts. The full impact of cost increases, in conjunction with the year-on-year decrease in tonnes milled, resulted in a cost increase of 17% per tonne milled.

Capital expenditure

Capital expenditure increased by 65% to R792 million, with R388 million spent on stay-in-business capital expenditure and the balance of R404 million spent on expansion projects. Expansion capital was spent on the completion of the concentrator at Unki Platinum Mine (R90 million); the construction of the chrome plant at the Waterval concentrator complex (R110 million); the construction of concentrators at Twickenham Platinum Mine (R16 million); the construction work done on the de-bottlenecking project at Mogalakwena Mine (R16 million); upfront payments for the proposed IsaMill™ installation of concentrators at Union Mine and the Mototolo Joint Venture (R75 million); and final payments on the completion of the Amandelbult Merensky and Mogalakwena North concentrator plant IsaMill™ installations (R43 million).

Projects

Chrome recovery plant (CRP)

Commissioning of the chrome plant at Waterval concentrator complex in the Rustenburg mining area is set to begin during the early part of 2012.

Outlook

Union Mine's Ivan concentrator will start treating tailings ore during April 2012 owing to the depletion of waste rock. The retrofitting of the Merensky plant at the concentrators in the Amandelbult mining area will commence during the first quarter of 2012, thereby increasing the available capacity to treat UG2 ore while optimising recovery performance. Concentrator operations will continue to focus on operational excellence through the deployment of advanced control strategies and asset-optimisation projects. These are essential to mitigating the effects of above-inflation increases expected on the key input commodities of grinding media, chemicals and power. Optimisation of the IsaMill™ technology should further improve recovery performance.

