

A worker in a white hard hat and safety gear is in the foreground, looking towards the background. The background shows a large industrial facility with a yellow overhead crane labeled "20 TON S.W.L.". The facility includes various pipes, valves, and structural steel. The sky is clear and blue.

# PLATINUM

Platinum owns the largest platinum reserves in the world and is the largest primary producer of platinum, accounting for some 40% of newly mined supply.

Platinum and other platinum group metals (PGMs) are primarily used in autocatalysts and jewellery. They are also employed in the chemical, electrical, electronic, glass and petroleum industries and in medical applications.

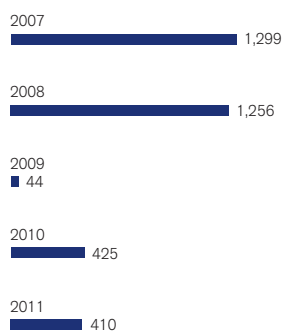
**Image**

Safety Representative Leon Terblanche with assistant fitter Abram Masebe at the cyclone section of the new milling area at Mogalakwena Platinum Mine.

# FINANCIAL HIGHLIGHTS

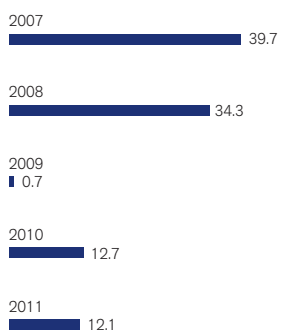
## 5 year underlying earnings

\$ m



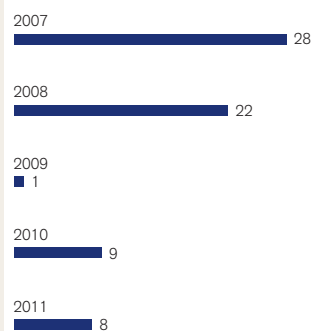
## Operating margin

%



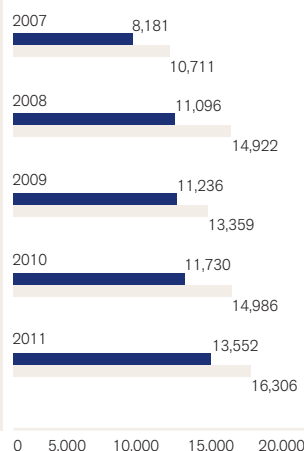
## Share of Group operating profit

%



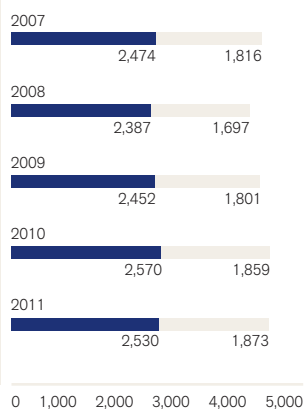
## Platinum operating costs

ZAR/ounce



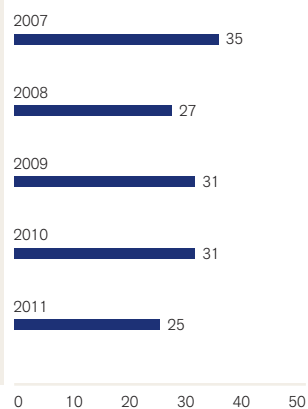
## Platinum production\*

Ounces (thousand)



## Share of Group net operating assets

%



■ Cash operating cost per equivalent refined Pt ounce\*  
■ Cost of sales per total Pt ounce sold†

\* Cash operating cost per equivalent refined Pt ounce excludes ounces from purchased concentrate and associated costs

† Total Pt ounces sold = refined Pt ounces sold plus Pt ounces sold in concentrate

■ Platinum  
■ Palladium, rhodium and gold  
\* Excludes share of Northern Platinum Limited  
Excludes production of nickel and copper

# FINANCIAL DATA

Total refined production	2011	2010	2009	2008	2007
Platinum (troy ounces)	2,530,100	2,569,900	2,451,600	2,386,600	2,474,000
Palladium (troy ounces)	1,430,700	1,448,500	1,360,500	1,318,800	1,389,700
Rhodium (troy ounces)	337,600	328,900	349,900	299,300	328,800
Nickel (tonnes)	20,300	18,500	19,500	15,500	19,200
Turnover (\$m)	2011	2010	2009	2008	2007
Subsidiaries and joint ventures	7,090	6,365	4,488	6,288	6,673
Associates	269	237	47	39	116
<b>Total turnover</b>	<b>7,359</b>	<b>6,602</b>	<b>4,535</b>	<b>6,327</b>	<b>6,789</b>
EBITDA	1,672	1,624	677	2,675	3,155
Depreciation and amortisation	782	787	645	506	458
<b>Operating profit before special items and remeasurements</b>	<b>890</b>	<b>837</b>	<b>32</b>	<b>2,169</b>	<b>2,697</b>
Operating special items and remeasurements	(6)	(72)	(104)	(19)	–
<b>Operating profit after special items and remeasurements</b>	<b>884</b>	<b>765</b>	<b>(72)</b>	<b>2,150</b>	<b>2,697</b>
Net interest, tax and non-controlling interests	(480)	(412)	12	(913)	(1,398)
<b>Total underlying earnings</b>	<b>410</b>	<b>425</b>	<b>44</b>	<b>1,256</b>	<b>1,299</b>
Net operating assets	11,191	13,478	12,141	9,045	9,234
Capital expenditure	970	1,011	1,150	1,563	1,479



01 (Left to right) At the Bathopele mine, miner Sydney Mabale explains the safety marking system to LHD operator Phillemon Molemi, sweeper Kenneth Xhantini, and LHD operators Petrick Semakhe and Annanias Makgala.



# BUSINESS OVERVIEW

## OPERATING PROFIT

(2010: \$837 m)

**\$890 m**

## SHARE OF GROUP OPERATING PROFIT

(2010: 9%)

**8%**

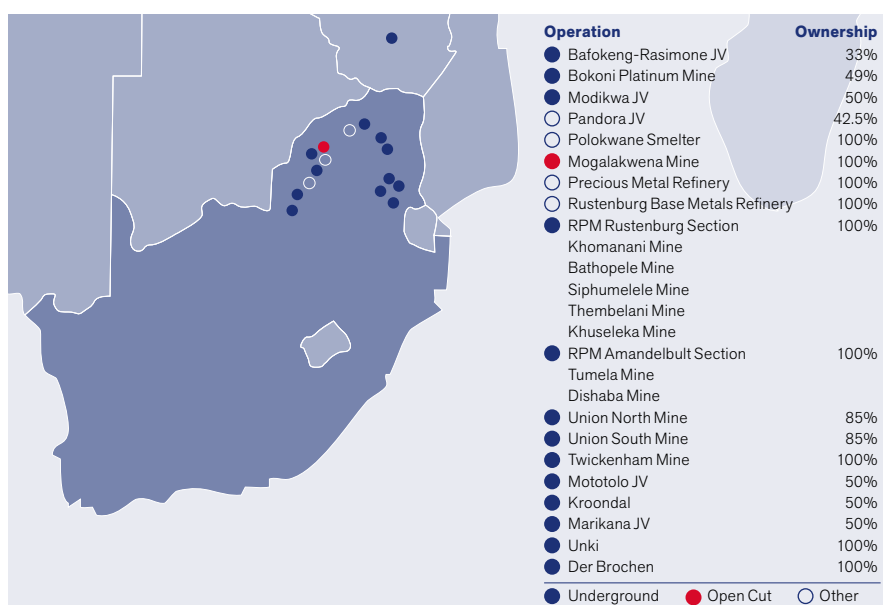
## EBITDA

(2010: \$1,624 m)

**\$1,672 m**

## Financial highlights

\$ million (unless otherwise stated)	2011	2010
Operating profit	<b>890</b>	837
EBITDA	<b>1,672</b>	1,624
Net operating assets	<b>11,191</b>	13,478
Capital expenditure	<b>970</b>	1,011
Share of Group operating profit	<b>8%</b>	9%
Share of Group net operating assets	<b>25%</b>	31%



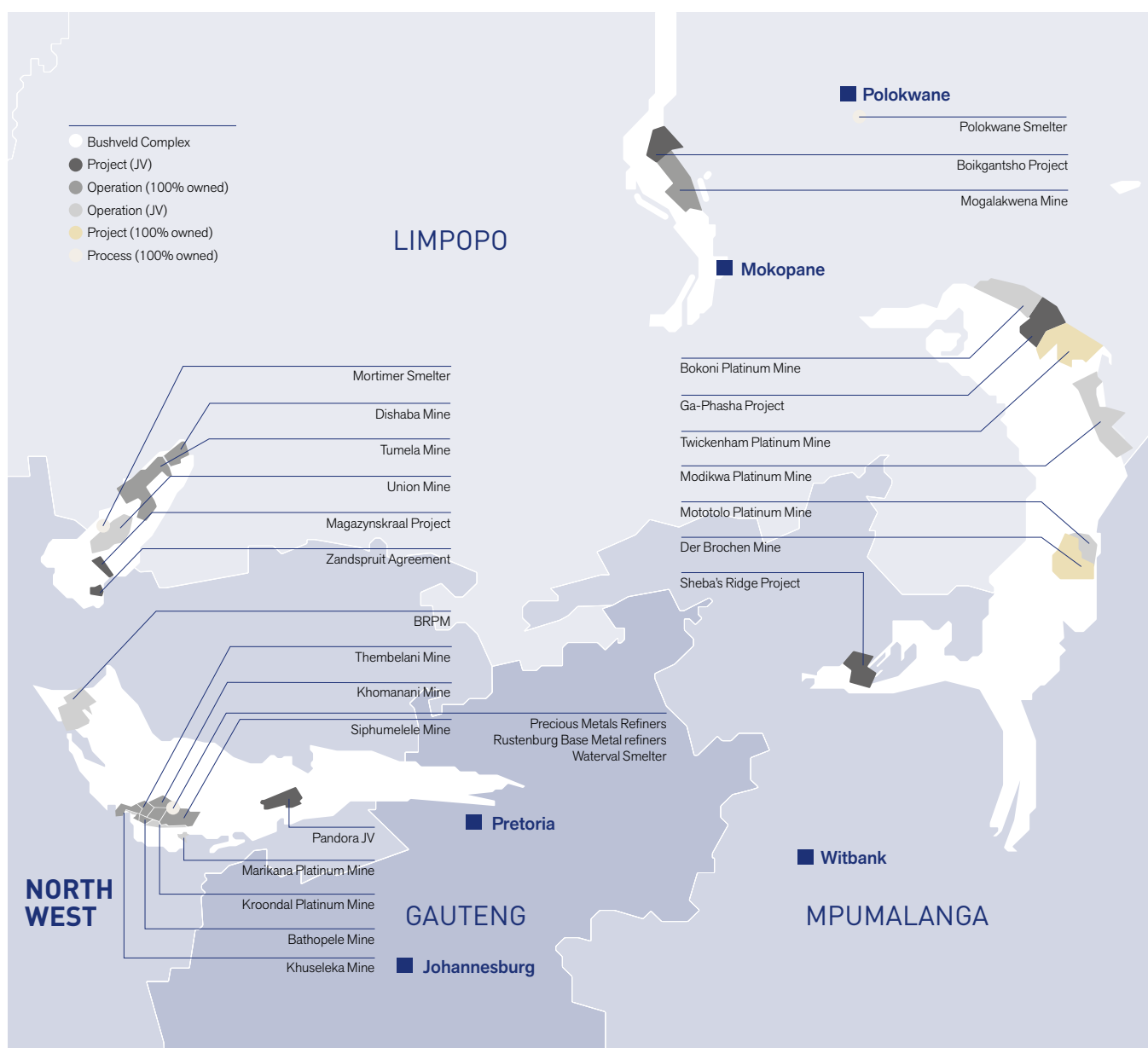
## BUSINESS OVERVIEW

Our Platinum business, based in South Africa, is the world's leading primary producer of platinum, accounting for around 40% of global output. Platinum mines, processes and refines the entire range of platinum group metals (PGMs): platinum, palladium, rhodium, ruthenium, iridium and osmium. Base metals such as nickel, copper and cobalt sulphate are important secondary products and are significant contributors to earnings.

Platinum's operations exploit the world's richest reserve of PGMs, known as the Bushveld Complex, which contains PGM-bearing Merensky, UG2 and Platreef ores. The company's access to an excellent portfolio of Ore Reserves ensures it is well placed to be the world's major platinum producer for many years to come.

Platinum wholly owns 10 mining operations currently in production, a tailings re-treatment facility, three smelters, a base metals refinery and a precious metals refinery. Each mine operates its own concentrator facilities, with smelting and refining of the output being undertaken at Rustenburg Platinum Mines' (RPM) metallurgical facilities.

Platinum's 100% owned mining operations now consist of the five mines at Rustenburg Section – Khomanani, Bathopele, Siphumelele, Thembelani and Khuseleka; Amandelbult Section's two mines, Tumela and Dishaba, as well as Mogalakwena and Twickenham mines and the new Unki mine in Zimbabwe. Union Mine is 85% held, with a black economic empowerment (BEE) partner, the Bakgatla-Ba-Kgafela traditional community, holding the remainder.



Platinum also has 50:50 joint ventures with a BEE consortium, led by African Rainbow Minerals, at Modikwa platinum mine; and with XK Platinum Partnership in respect of the Mototolo mine. In addition, Platinum has 50:50 pooling and sharing agreements with Aquarius Platinum covering the shallow reserves of the Kroondal and Marikana mines and portions of the reserves at Thembelani and Khuseleka. Platinum is in partnership with Royal Bafokeng Resources, and has a 33% shareholding in the combined Bafokeng-Rasimone platinum mine (BRPM) and Styltdrift properties.

During 2010, the listing of Royal Bafokeng Platinum (RB Plat) was completed successfully. Platinum, through RPM, holds 12.6% of RB Plats' issued share capital. The listing was a landmark transaction marking the fulfilment of Platinum's commitment towards facilitating the creation of an independently controlled and managed, black-empowered PGM producer.

# INDUSTRY OVERVIEW

## INDUSTRY OVERVIEW

PGMs have a wide range of industrial and high technology applications. Demand for platinum is driven primarily by its use in autocatalysts to control emissions from both gasoline and diesel engine vehicles, and in jewellery. These uses are responsible for 70% of total net platinum consumption. PGMs, however, have a wide range of other applications, predominantly in the chemical, electronic, medical, glass and petroleum industries.

The platinum jewellery market requires constant promotion and development. Our Platinum business is the major funder and supporter of the Platinum Guild International (PGI), which plays a key role in encouraging demand for platinum and in establishing new platinum jewellery markets. Since 2000, China has been the leading platinum jewellery market, followed by Europe, Japan and North America.

Industrial applications for platinum are driven by technology and, especially in the case of autocatalysts, by legislation. With the rapid spread of exhaust emissions legislation, more than 94% of new vehicles now have autocatalysts fitted. The intensifying stringency of emissions legislation will drive growth in PGM demand.

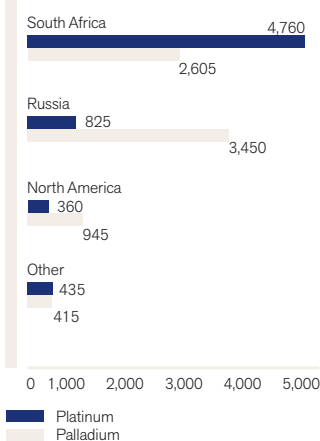
Palladium's principal application, accounting for about 45% of demand, is in autocatalysts. The metal is also used in electronic components, dental alloys and, more recently, has become an emerging jewellery metal in markets such as China. Palladium demand is expected to continue to increase in 2012, particularly given the volume of gasoline vehicles being produced by emerging market countries such as China, India and Brazil.

Rhodium is an important metal in autocatalytic activity, which accounts for nearly 80% of net demand. Increased stocks of rhodium in the autocatalyst sector, coupled with increased supplies from South Africa, are likely to keep the market in surplus in the short to medium term.

# MARKET INFORMATION

## Geographical PGM supply

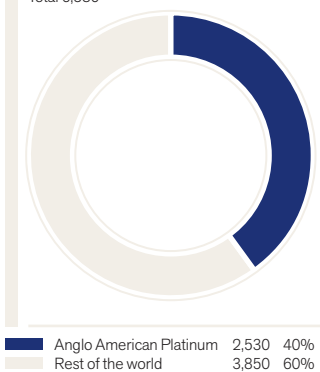
Ounces (thousand)



Source: Anglo American Platinum

## 2011 Share of world platinum production

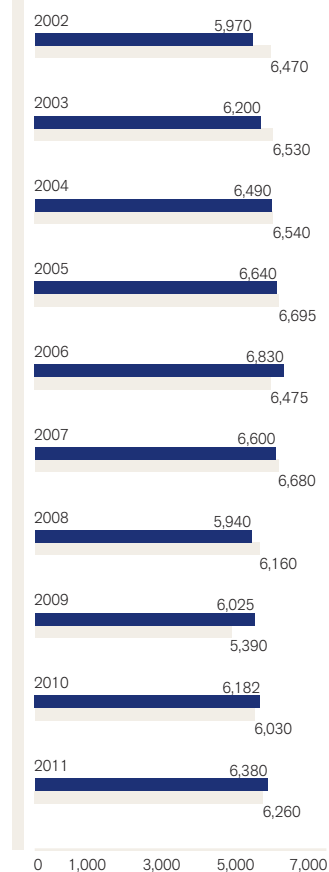
Ounces (thousand)  
Total 6,380



Source: Anglo American Platinum

## Platinum supply and demand

Ounces (thousand)



■ Total platinum supply  
■ Total platinum net demand

Source: Johnson Matthey and Anglo American Platinum

### 2011 Platinum end use

(Gross demand)

%



Autocatalyst 39.1%  
Jewellery 30.5%  
Investment 6.1%  
Industrial 24.3%

Source: Johnson Matthey 2011 Interim Review

### Platinum price

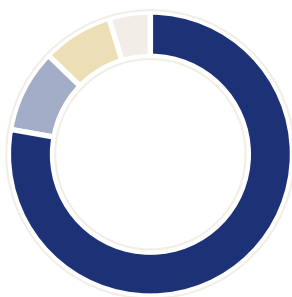


Source: Anglo American Commodity Research

### 2011 Rhodium end use

(Gross demand)

%



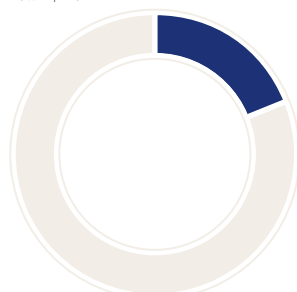
Autocatalyst 77.9%  
Glass 9.4%  
Chemical 8.0%  
Other 4.7%

Source: Johnson Matthey 2011 Interim Review

### 2011 Share of world palladium production

Ounces (thousand)

Total 7,415



Source: Anglo American Platinum

### 2011 Palladium end use

(Gross demand)

%



Autocatalyst 66.5%  
Jewellery 6.1%  
Investment (2.4%)  
Industrial 29.8%

Source: Johnson Matthey 2011 Interim Review

# STRATEGY AND GROWTH

## STRATEGY AND GROWTH

Our objective is to maintain Platinum's position as the leading primary producer of platinum. We are doing so in two principal ways: first, through managing costs as a priority, by improving productivity, increasing efficiency and through the effective management of supply chain and procurement costs; secondly, through continuing to develop the market for PGMs and to expand production into that growth opportunity.

During 2011, unit cost management proved to be challenging, though costs were contained at R13,552 per equivalent refined platinum ounce. Unit costs are expected to increase with inflation in 2012. Productivity is expected to increase from 2011 levels of 6.32m<sup>2</sup> to an average of 6.8m<sup>2</sup>.

Platinum's strategic plan, based on our current view that the market will be adequately supplied, should improve the company's cost position, taking it from the upper half to the lower half of the cost curve. Platinum is steadily improving the reliability

of its production capability and continues to entrench cost management throughout the business as a long term and sustainable culture. This will help ensure that Platinum is well positioned to extract optimal value from its assets as the market recovery continues. At the same time, there will continue to be an unrelenting focus on safety as Platinum pursues its zero harm objective.

Project capital spend is now directly related to long term ounce requirements. This has led to a reduction in the rate of spend, and all previously deferred projects have been reviewed and are now incorporated into the business's growth for value strategy. Platinum aims to spend R8.8 billion (\$1.1 billion) of capital in 2012, excluding capitalised interest.

Platinum is involved in developing mining activity for PGMs on the Great Dyke of Zimbabwe, the second largest repository of platinum after the Bushveld Complex. We are focusing exploration work in Zimbabwe on new projects in the Great Dyke, as well as establishing extensions to the Unki resource base for potential future projects.



01 A Komatsu Haul truck, Mogalakwena Platinum Mine, South Africa.



# PROJECT PIPELINE – KEY PROJECTS

## Khuseleka ore replacement

Overall capex: \$187m

### Country

South Africa

### Ownership

100% Anglo American Platinum

### Replacement production

94,000 Pt. oz per annum

### Full project capex

\$187m

### Full production

Merensky in Q1 2015, UG2 in 2022

The Khuseleka ore replacement project aims to replenish diminishing Merensky Reef output and to supplement existing UG2 Reef output at that shaft by extending the existing decline shaft. The associated project infrastructure includes three ventilation shafts, which were completed in 2010. Merensky Reef development is 99% complete. However, the UG2 Reef development is only 67% complete, against a planned rate of 73% owing to worse than anticipated geological conditions and the doubling of development to allow for ventilation requirements.



## Thembelani

Overall capex: \$342m

### Country

South Africa

### Ownership

100% Anglo American Platinum

### Replacement production

115,000 Pt. oz per annum

### Full project capex

\$342m

### Full production

Project suspended pending studies for optimal way forward

The Thembelani No 2 shaft project is designed to replace Merensky Reef output at Thembelani, in line with the overall strategy for the Rustenburg mining right area to maximise Merensky production where possible. The Thembelani Merensky replacement project consists of the No 2 main shaft for miners and materials, a ventilation shaft and a series of declines from 28 level to 38 level, including the infrastructure needed to access the Merensky Reef only. Production from the early levels (27/29) started in 2008, and about 47,000 ounces have been produced. The capital development and equipping of 29 level is almost complete. The ventilation shaft has been sunk to its bottom 31 station and is complete. Initial Ore Reserve development from the ventilation shaft commenced in 2011 for early access to the 30 and 31 levels. This was enabled by the commissioning of temporary hoisting facilities in the ventilation shaft. Bulk infrastructure – such as the refrigeration plant, consumer substation, 1-kV substation and 3-kV yard – was also commissioned in 2011. The main shaft is now sunk to 33 level (1,117 m below surface) and station cutting is under way, with 28 and 32 levels having been completed. The project has been suspended (except for shaft sinking to 34L) while studies are underway to improve economic viability above the group hurdle rate.



## Dishaba East Upper UG2

Overall capex: \$219m

### Country

South Africa

### Ownership

100% Anglo American Platinum

### Incremental production

100,000 Pt. oz per annum

### Full project capex

\$219m

### Full production

Q4 2013

The East Upper UG2 project utilises existing Merensky reef infrastructure at Dishaba No 2 shaft to access the UG2 Reef horizon. The project started in 2007 and was completed in 2011. The backfill project which began in 2004, but was deferred in 2008, recommenced in 2011. Poor ground conditions at 18 level and lower, require backfilling before mining can be executed safely.



## PROJECT PIPELINE – KEY PROJECTS continued

### Mogalakwena North

Overall capex: \$829m

**Country**

South Africa

**Ownership**

100% Anglo American Platinum

**Incremental and replacement production**

350–400,000 Pt. oz per annum

**Full project capex**

\$829m

**Full production**

2010

The Mogalakwena North project, aimed at increasing milling capacity at the mine, was approved in 2006. Concentrator optimisation was largely completed during 2011, including the development and optimisation of the tailings storage facilities. This project involved the relocation of a number of villages and the resettlement of 957 families. While most people agreed to relocate in 2008, some villagers resisted the move. Assisted by an independent facilitator, in 2010 the company engaged with the community and its legal adviser in order to find an amicable solution to the issue. A final position by the resisting community is imminent.



### Twickenham

Overall capex: \$1,232m

**Country**

South Africa

**Ownership**

100% Anglo American Platinum

**Replacement production**

191, 500 Pt. oz per annum

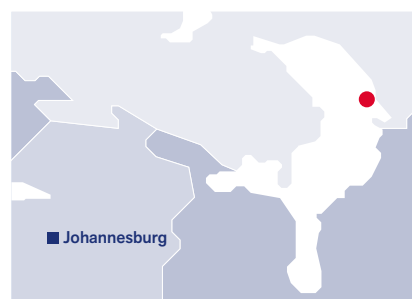
**Full project capex**

\$1,232m

**Full production**

2019

The Twickenham project is central to unlocking value for Anglo American Platinum in the Eastern Limb. Major construction work in 2011 included the installation of underground conveyors, chairlifts, surface workshops, and water clarifiers. Rock removal infrastructure has been constructed on level 1. The horizontal development utilising hydro-power equipment will start in the second quarter of 2012. A new, revised investment proposal for mining and infrastructure has been approved after the three year deferral that accompanied recent unfavourable global economic conditions. The complete Twickenham project investment approval is anticipated for the fourth quarter of 2012, and will include a concentrator that is currently at feasibility stage. Development ore is being stockpiled and the concentrator is planned for commissioning in 2016, in line with the project's production plan. The Twickenham project is planned to reach mining steady state of 3 million tonnes of ore mined per annum in 2019.



### Base Metals Refinery (BMR)

Overall capex: \$360m

**Country**

South Africa

**Ownership**

100% Anglo American Platinum

**Incremental production**

11,000 tonnes per annum of nickel

**Full project capex**

\$360m

**Full production**

Q3 2012

The objective of the BMR expansion project is to expand the refinery's nickel production capacity from 21.5 to 33 ktpa nickel (Ni) cathode. The project makes allowances for the corresponding increase in copper cathode production as well as the concomitant increase in the production of cobalt sulphate and sodium sulphate. The expansion will be achieved through changes to the process technology as well as capacity expansion through the installation of new equipment. A critical project objective includes maximising re-use of existing assets and minimising process interruption during execution. The BMR expansion project which commenced in the second half of 2007, was restarted in January 2010, following a deferment period. The first Ni cathode from the new automated nickel tank house was produced in March 2011, while chemical changeover completion was achieved during the fourth quarter of 2011. Operational optimisation is under way.



### Unki Platinum Mine

Overall capex: \$459m

**Country**

South Africa

**Ownership**

100% Anglo American Platinum

**Incremental production**

70 000 Pt. oz per annum refined platinum

**Full project capex**

\$459m

**Full production**

Q4 2013

Unki is situated near Gweru, on Zimbabwe's Great Dyke and is a 120,000 tonne per month operation. The mine was developed as a mechanised, trackless bord-and-pillar mine. Underground access is obtained through a twin decline shaft system, one being utilised for the transport of personnel and material, and the other for ore conveyance. Both decline shafts are now on reef, with strike belts from eight mining sections transferring ore directly onto the main decline shaft conveyor. Run-of-mine ore is being treated at the newly established 120,000 tonne per month concentrator plant, which reached steady state operation ahead of plan in the third quarter of 2011. It exceeded its planned ramp up profile, producing 51,600 equivalent refined platinum ounces in 2011.



**Bathopele Platinum Mine phase 4****Overall capex: \$76m****Country**

South Africa

**Ownership**

100% Anglo American Platinum

**Incremental production**108 000 Pt. oz per annum  
refined platinum**Full project capex**

\$76m

**Full production**

Q3 2012

Bathopele Mine is situated in the North West province of South Africa, near the town of Rustenburg and within the Western Limb of the Bushveld Igneous Complex. The mine operates under a mining right covering a total area of 17 square kilometres. Bathopele currently consists of 2 declines namely East and Central which have been established to exploit the UG2 reserves at 280 000 tons per month. Phase 4 is an ore replacement project and a natural progression of the previous phases (1 to 3) and employs a proven mine method. It is a fully mechanised operation that mines the UG2 horizon exclusively. Two types of mechanised equipment are utilised namely Low Profile (LP) and Extra Low Profile (XLP) equipment. The mining layout applied in the LP section is Bord and Pillar and in the XLP section, breast mining layout is applied. The project commenced in 2008 and plans to reach steady state in 2012.

**Bathopele Platinum Mine phase 5****Overall capex: \$1,232m****Country**

South Africa

**Ownership**

100% Anglo American Platinum

**Replacement production**136 000 Pt. oz per annum  
refined platinum**Full project capex**

\$236m

**Full production**

Q2 2018

Bathopele Mine is situated in the North West province of South Africa, near the town of Rustenburg and within the Western Limb of the Bushveld Igneous Complex. The mine operates under a mining right covering a total area of 17 square kilometres. Bathopele currently consists of 2 declines namely East and Central which have been established to exploit the UG2 reserves at 280 000 tons per month. Phase 5 is an ore replacement project and a natural progression of the previous phases (1 to 4) and employs a proven mine method. It is a fully mechanised operation that mines the UG2 horizon exclusively. Two types of mechanised equipment are utilised namely Low Profile (LP) and Extra Low Profile (XLP) equipment. The mining layout applied in the LP section is Bord and Pillar and in the XLP section, breast mining layout is applied. The project was approved for implementation in December 2011 and plans to reach steady state in 2018. The scope of the project includes exploitation of UG2 to Bathopele Mine's boundaries by way of extension to the existing Central and East Shafts and makes provision for a new sub-outcrop decline (West Shaft) which is configured per existing declines and connected to Central Shaft by way of an upgraded roadway (3 West Roadway).





01 Construction of the new Rustenburg Base Metals Refiners tankhouse.

01

# PRODUCTION DATA

## Total Refined Production

Refined production	unit	2011	2010	2009	2008	2007
Platinum	000 oz	<b>2,530.1</b>	2,569.9	2,451.6	2,386.6	2,474.0
Palladium	000 oz	<b>1,430.7</b>	1,448.5	1,360.5	1,318.8	1,389.7
Rhodium	000 oz	<b>337.6</b>	328.9	349.9	299.3	328.8
Gold	000 oz	<b>105.1</b>	81.3	90.9	78.5	97.9
PGMs	000 oz	<b>4,887.4</b>	4,936.9	4,751.2	4,530.8	4,787.1
Nickel	000 tonnes	<b>20.3</b>	18.5	19.5	15.5	19.2
Copper	000 tonnes	<b>12.8</b>	10.9	11.2	8.8	11.0

## Bathopele mine

100% owned

Refined production	unit	2011	2010	2009	2008	2007
Platinum	000 oz	<b>118.3</b>	141.6	133.6	112.6	116.3
Palladium	000 oz	<b>65.8</b>	81.8	73.9	62.7	66.9
Rhodium	000 oz	<b>20.9</b>	24.7	25.9	19.6	22.0
Gold	000 oz	<b>1.3</b>	1.4	1.5	1.2	1.6
PGMs	000 oz	<b>243.2</b>	292.8	278.0	228.9	240.1
Nickel	000 tonnes	<b>0.3</b>	0.3	0.3	0.2	0.2
Copper	000 tonnes	<b>0.1</b>	0.1	0.1	0.1	0.2
Cash operating costs	R/oz equivalent refined Pt	<b>13,168</b>	10,748	10,647	10,386	7,735

## Khomanani mine

100% owned

Refined production	unit	2011	2010	2009	2008	2007
Platinum	000 oz	<b>102.2</b>	101.1	105.5	91.3	101.1
Palladium	000 oz	<b>47.9</b>	47.2	47.4	39.5	46.5
Rhodium	000 oz	<b>10.8</b>	9.7	11.1	7.8	9.2
Gold	000 oz	<b>4.4</b>	4.0	4.6	3.8	5.8
PGMs	000 oz	<b>179.7</b>	174.6	183.1	152.0	170.2
Nickel	000 tonnes	<b>0.7</b>	0.7	0.7	0.5	1.1
Copper	000 tonnes	<b>0.4</b>	0.4	0.5	0.4	0.6
Cash operating costs	R/oz equivalent refined Pt	<b>15,698</b>	13,911	12,659	11,622	9,600

## Thembelani mine

100% owned

Refined production	unit	2011	2010	2009	2008	2007
Platinum	000 oz	<b>106.4</b>	97.6	79.3	71.1	85.3
Palladium	000 oz	<b>55.3</b>	52.1	40.6	36.9	46.5
Rhodium	000 oz	<b>15.5</b>	14.1	13.0	11.1	14.0
Gold	000 oz	<b>2.7</b>	2.0	2.1	1.4	2.3
PGMs	000 oz	<b>205.9</b>	190.1	155.6	140.1	165.9
Nickel	000 tonnes	<b>0.6</b>	0.5	0.5	0.3	0.5
Copper	000 tonnes	<b>0.3</b>	0.2	0.2	0.1	0.4
Cash operating costs	R/oz equivalent refined Pt	<b>14,776</b>	13,126	13,972	13,839	10,839

## Khuseleka mine

100% owned

Refined production	unit	2011	2010	2009	2008	2007
Platinum	000 oz	<b>133.0</b>	131.7	157.0	172.8	225.8
Palladium	000 oz	<b>65.6</b>	65.0	76.0	82.7	114.9
Rhodium	000 oz	<b>16.6</b>	15.2	22.0	21.4	29.8
Gold	000 oz	<b>4.6</b>	4.2	5.2	5.1	9.1
PGMs	000 oz	<b>245.5</b>	239.1	293.0	315.6	412.2
Nickel	000 tonnes	<b>0.8</b>	0.9	1.0	1.1	1.8
Copper	000 tonnes	<b>0.5</b>	0.5	0.5	0.6	1.0
Cash operating costs	R/oz equivalent refined Pt	<b>15,958</b>	13,477	13,118	11,806	8,619



## PRODUCTION DATA continued

### Siphumelele mine

100% owned

Refined production	unit	2011	2010	2009	2008	2007
Platinum	000 oz	100.9	96.2	110.6	119.8	167.9
Palladium	000 oz	43.3	42.0	51.2	57.9	81.9
Rhodium	000 oz	7.5	7.2	13.1	14.9	19.9
Gold	000 oz	5.8	4.6	4.3	3.4	7.6
PGMs	000 oz	163.9	156.8	197.2	219.6	295.5
Nickel	000 tonnes	0.8	0.7	0.7	0.6	1.4
Copper	000 tonnes	0.6	0.5	0.4	0.3	0.7
Cash operating costs	R/oz equivalent refined Pt	13,492	12,663	13,297	14,901	10,681

### Tumela mine

100% owned

Refined production	unit	2011	2010	2009	2008	2007
Platinum	000 oz	284.4	303.0	293.8	314.5	408.5
Palladium	000 oz	129.7	140.8	133.6	149.2	201.4
Rhodium	000 oz	46.5	45.9	46.9	43.2	58.8
Gold	000 oz	4.4	4.5	5.9	6.3	11.1
PGMs	000 oz	543.0	566.0	549.7	585.2	781.7
Nickel	000 tonnes	0.8	1.0	1.1	1.2	2.3
Copper	000 tonnes	0.4	0.5	0.5	0.6	1.2
Cash operating costs	R/oz equivalent refined Pt	12,308	9,870	9,245	8,743	5,973

### Dishaba mine

100% owned

Refined production	unit	2011	2010	2009	2008	2007
Platinum	000 oz	161.9	156.4	150.1	146.7	165.4
Palladium	000 oz	72.6	71.8	67.3	68.1	78.1
Rhodium	000 oz	20.8	19.3	19.1	13.9	15.7
Gold	000 oz	4.8	3.7	4.9	5.3	7.5
PGMs	000 oz	291.1	278.0	267.3	252.9	290.3
Nickel	000 tonnes	0.8	0.8	0.9	1.0	1.5
Copper	000 tonnes	0.4	0.4	0.5	0.5	0.8
Cash operating costs	R/oz equivalent refined Pt	13,125	11,717	10,291	9,644	6,921

### Union mine

85% owned from 1 December 2006 (100% statistics shown)

Refined production	unit	2011	2010	2009	2008	2007
Platinum	000 oz	273.1	304.0	291.9	309.0	309.6
Palladium	000 oz	116.7	134.5	127.3	139.7	145.1
Rhodium	000 oz	47.2	46.6	49.4	47.1	51.3
Gold	000 oz	3.4	3.5	4.5	4.6	5.3
PGMs	000 oz	515.4	566.0	550.7	576.3	608.6
Nickel	000 tonnes	0.6	0.8	0.9	1.0	1.3
Copper	000 tonnes	0.3	0.3	0.4	0.4	0.6
Cash operating costs	R/oz equivalent refined Pt	13,263	11,179	10,268	9,379	8,187

### Union North mine

85% owned (100% statistics shown)

Refined production	unit	2011
Platinum	000 oz	98.3
Palladium	000 oz	42.0
Rhodium	000 oz	16.6
Gold	000 oz	1.3
PGMs	000 oz	184.8
Nickel	000 tonnes	0.2
Copper	000 tonnes	0.1
Cash operating costs	R/oz equivalent refined Pt	13,795

### Union South mine

85% owned (100% statistics shown)

Refined production	unit	2011
Platinum	000 oz	174.8
Palladium	000 oz	74.7
Rhodium	000 oz	30.5
Gold	000 oz	2.1
PGMs	000 oz	330.7
Nickel	000 tonnes	0.4
Copper	000 tonnes	0.2
Cash operating costs	R/oz equivalent refined Pt	12,963

**Mogalakwena mine**

100% owned

Refined production	unit	2011	2010	2009	2008	2007
Platinum	000 oz	312.8	272.3	233.3	177.4	162.5
Palladium	000 oz	320.6	283.2	249.9	184.5	167.4
Rhodium	000 oz	20.7	16.5	17.4	11.2	11.5
Gold	000 oz	41.4	29.0	31.0	21.0	17.4
PGMs	000 oz	676.4	589.1	520.2	384.5	354.2
Nickel	000 tonnes	10.1	8.5	9.1	5.6	3.9
Copper	000 tonnes	6.6	5.6	5.8	3.5	2.4
Cash operating costs	R/oz equivalent refined Pt	12,662	12,426	11,710	14,234	9,341

**Unki Mine (Zimbabwe)**

100% owned

Refined production	unit	2011	2010	2009	2008	2007
Platinum	000 oz	50.8	–	–	–	–
Palladium	000 oz	33.9	–	–	–	–
Rhodium	000 oz	2.9	–	–	–	–
Gold	000 oz	4.9	–	–	–	–
PGMs	000 oz	90.1	–	–	–	–
Nickel	000 tonnes	0.8	–	–	–	–
Copper	000 tonnes	0.9	–	–	–	–
Cash operating costs	R/oz equivalent refined Pt	15,087	–	–	–	–

**Twickenham platinum mine project**

100% owned

Refined production	unit	2011	2010	2009	2008	2007
Platinum	000 oz	0.9	3.6	7.5	9.9	8.8
Palladium	000 oz	0.7	3.2	7.2	10.1	8.8
Rhodium	000 oz	0.3	0.6	1.6	1.7	1.3
Gold	000 oz	–	0.1	0.2	0.3	0.3
PGMs	000 oz	2.6	8.5	19.0	24.1	20.2
Nickel	000 tonnes	–	–	–	–	–
Copper	000 tonnes	–	–	–	–	–
Cash operating costs	R/oz equivalent refined Pt	4,506	60,773	21,662	21,724	14,670

**Modikwa platinum mine**

50:50 JV with Aquarius Platinum (South Africa)

Refined production	unit	2011	2010	2009	2008	2007
Platinum	000 oz	129.8	134.9	135.3	131.2	114.6
Palladium	000 oz	117.5	127.1	128.0	124.9	114.0
Rhodium	000 oz	25.0	24.1	27.2	24.0	23.1
Gold	000 oz	3.5	2.9	3.7	3.7	3.7
PGMs	000 oz	311.8	328.0	331.8	320.5	297.0
Nickel	000 tonnes	0.5	0.5	0.6	0.6	0.6
Copper	000 tonnes	0.4	0.3	0.3	0.4	0.4
Cash operating costs	R/oz equivalent refined Pt	14,881	13,569	13,740	13,859	11,782

**Kroondal platinum mine pooling-and-sharing agreement**

50:50 JV with Aquarius Platinum (South Africa)

Refined production (mined and purchased)	unit	2011	2010	2009	2008	2007
Platinum	000 oz	217.6	266.7	230.7	196.3	128.8
Palladium	000 oz	106.4	132.4	110.8	94.0	63.5
Rhodium	000 oz	41.2	43.1	40.5	30.4	22.6
Gold	000 oz	1.7	1.9	2.0	1.3	1.2
PGMs	000 oz	445.9	522.7	458.7	371.8	267.0
Nickel	000 tonnes	0.3	0.4	0.4	0.3	0.2
Copper	000 tonnes	0.1	0.1	0.1	0.1	0.1
Cash operating costs	R/oz equivalent refined Pt	14,093	11,031	10,437	9,441	6,524

**Marikana platinum mine pooling-and-sharing agreement**

50:50 JV with Aquarius Platinum (South Africa)

Refined production (mined and purchased)	unit	2011	2010	2009	2008	2007
Platinum	000 oz	48.7	53.3	38.2	32.8	22.4
Palladium	000 oz	22.8	25.1	16.7	14.2	9.6
Rhodium	000 oz	8.1	7.7	6.6	4.6	3.0
Gold	000 oz	0.5	0.4	0.4	0.3	0.3
PGMs	000 oz	92.1	104.9	71.3	60.1	41.8
Nickel	000 tonnes	0.1	0.1	0.1	0.1	–
Copper	000 tonnes	–	0.1	–	–	–
Cash operating costs	R/oz equivalent refined Pt	16,384	13,633	11,037	13,405	10,306

## PRODUCTION DATA continued

### Mototolo platinum mine

50:50 JV with XK Platinum Partnership

Refined production (mined and purchased)	unit	2011	2010	2009	2008	2007
Platinum	000 oz	115.1	110.5	106.3	83.9	92.6
Palladium	000 oz	66.8	65.0	61.5	48.9	55.3
Rhodium	000 oz	17.8	18.7	17.2	13.5	13.8
Gold	000 oz	1.8	1.5	1.6	1.1	1.4
PGMs	000 oz	234.9	231.9	214.9	175.3	182.4
Nickel	000 tonnes	0.3	0.3	0.3	0.2	0.3
Copper	000 tonnes	0.1	0.1	0.1	0.1	0.1
Cash operating costs	R/oz equivalent refined Pt	11,800	10,392	9,132	8,648	6,076

### Western limb tailings retreatment

100% owned

Refined production	unit	2011	2010	2009	2008	2007
Platinum	000 oz	43.0	43.3	32.4	41.8	44.1
Palladium	000 oz	13.2	13.9	10.4	13.6	16.9
Rhodium	000 oz	2.1	1.9	1.8	2.2	3.6
Gold	000 oz	4.3	3.6	3.8	4.4	4.6
PGMs	000 oz	65.5	65.3	50.9	66.0	77.3
Nickel	000 tonnes	0.2	0.3	0.2	0.2	0.3
Copper	000 tonnes	0.2	0.2	0.2	0.2	0.2
Cash operating costs	R/oz equivalent refined Pt	10,251	9,110	9,621	8,331	6,805

# PLATINUM GROUP METALS

## Ore Reserve and Mineral Resource estimates as at 31 December 2011

### PLATINUM

The Ore Reserve and Mineral Resource estimates were compiled in compliance with The South African Code for the Reporting of Exploration Results, Mineral Resources and Mineral Reserves, (The SAMREC Code, 2007). Operations and Projects outside South Africa were compiled in accordance with the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (The JORC Code, 2004) as a minimum standard. Details of the individual operations appear in Anglo American Platinum's Annual Report. Merensky Reef and UG2 Reef Mineral Resources are reported over an economic and mineable cut appropriate to the specific reef. The figures reported represent 100% of the Mineral Resources and Ore Reserves attributable to Anglo American Platinum Limited unless otherwise noted. Rounding of figures may cause computational discrepancies.

Anglo American plc's interest in Anglo American Platinum Limited is 79.8%.

#### Platinum – South Africa Operations

Platinum – South Africa Operations		Tonnes <sup>(1)</sup>		Grade <sup>(2)</sup>		Contained metal <sup>(3)</sup>		Contained metal <sup>(3)</sup>	
ORE RESERVES	Classification	2011	2010	2011	2010	2011	2010	2011	2010
Merensky Reef <sup>(4)(5)</sup>		Mt	Mt	4E PGE	4E PGE	4E tonnes	4E tonnes	4E Moz	4E Moz
	Proved	63.9	89.2	5.05	4.97	322.7	443.5	10.4	14.3
	Probable	49.1	51.0	5.16	5.05	253.4	257.7	8.1	8.3
	Total	113.0	140.2	5.10	5.00	576.2	701.3	18.5	22.5
UG2 Reef <sup>(4)(6)</sup>	Proved	390.7	425.9	4.10	4.14	1,600.7	1,762.2	51.5	56.7
	Probable	250.0	204.2	4.78	4.72	1,194.1	963.3	38.4	31.0
	Total	640.7	630.2	4.36	4.33	2,794.8	2,725.4	89.9	87.6
	Platreef <sup>(7)</sup>	Proved	538.8	381.3	2.84	2.93	1,532.3	1,118.5	49.3
Proved primary ore stockpile <sup>(8)</sup>		20.0	11.7	1.71	1.96	34.3	23.0	1.1	0.7
Probable		166.5	216.3	3.24	2.68	539.9	579.4	17.4	18.6
Total		725.4	609.3	2.90	2.82	2,106.6	1,720.9	67.7	55.3
All Reefs	Proved	1,013.4	908.1	3.44	3.69	3,490.1	3,347.2	112.2	107.6
	Probable	465.7	471.5	4.27	3.82	1,987.4	1,800.4	63.9	57.9
	Total <sup>(9)</sup>	1,479.1	1,379.7	3.70	3.73	5,477.5	5,147.6	176.1	165.5
	Tailings <sup>(10)</sup>	Proved	–	–	–	–	–	–	–
Probable		18.9	21.8	0.86	1.13	16.2	24.6	0.5	0.8
Total		18.9	21.8	0.86	1.13	16.2	24.6	0.5	0.8

#### Platinum – Zimbabwe Operations

Platinum – Zimbabwe Operations		Tonnes <sup>(1)</sup>		Grade <sup>(2)</sup>		Contained metal <sup>(3)</sup>		Contained metal <sup>(3)</sup>	
ORE RESERVES	Classification	2011	2010	2011	2010	2011	2010	2011	2010
Main Sulphide Zone <sup>(11)</sup>		Mt	Mt	4E PGE	4E PGE	4E tonnes	4E tonnes	4E Moz	4E Moz
	Proved	15.0	14.3	3.68	3.69	55.2	52.9	1.8	1.7
	Probable	23.7	27.3	3.85	3.82	91.2	104.4	2.9	3.4
	Total	38.7	41.7	3.79	3.78	146.5	157.3	4.7	5.1

<sup>(1)</sup> **Tonnage:** Quoted as dry metric tonnes.

<sup>(2)</sup> **Grade:** 4E PGE is the sum of Platinum, Palladium, Rhodium and Gold grades in grammes per tonne (g/t). The reported grades are as delivered for treatment.

<sup>(3)</sup> **Contained Metal:** Contained Metal is presented in metric tonnes and million troy ounces (Moz).

<sup>(4)</sup> **Merensky Reef and UG2 Reef:** The pay limits built into the basic mining equation are directly linked to the 2012 Business plan. The pay limit is based on Cost 4 which consists of 'Direct Cash Cost' (on and off mine), 'Other Indirect Costs' and 'Stay in Business Capital' (on and off mine). The reserve pay-limit varies across all operations between 1.8g/t and 3.7g/t (4E PGE). The range is a function of various factors including depth of the ore body, geological complexity, infrastructure and economic parameters.

<sup>(5)</sup> **Merensky Reef:** The global Ore Reserve 4E ounce content decreased primarily due to re-allocation of previously reported Ore Reserves back to Mineral Resources as a result of changes in economic assumptions and extraction strategy at Thembelani Mine (-17.7 Mt / -2.9 Moz) and portions of the 4-shaft area at Tumela Mine (-3.2 Mt / -0.6 Moz). In addition, changes in reserve classification for portions of Tumela's 4-shaft area contribute to the Proved Ore Reserve tonnage decrease as Proved Ore Reserves have been re-classified as Probable Ore Reserves.

<sup>(6)</sup> **UG2 Reef:** The global Ore Reserve 4E ounce content increased primarily due to conversion of Mineral Resources to Ore Reserves at Thembelani Mine (+26.0 Mt / +3.5 Moz) and Siphumelele Mine (+9.2 Mt / +0.9 Moz) with additional contributions from Union, Twickenham and Khomanani Mines. However, the UG2 Ore Reserves were negatively influenced due to changes in extraction strategy for portions of Tumela's 4-shaft area which resulted in the re-allocation of previously reported Ore Reserves back to Mineral Resources (-19.6 Mt / -2.8 Moz).

<sup>(7)</sup> **Platreef:** The Ore Reserves 4E ounce content (inclusive of Proved primary ore stockpiles) increased due to additional drilling and re-evaluation at Mogalakwena South (+118.6 Mt / +13.0 Moz), previously this area was not considered for conversion to Ore Reserves. The Mine Life has been extended significantly as a result. For Mogalakwena North, Central and South (previously known as Zwartfontein North) the 4E pay limit is 1.0 g/t. For Sandsloot and Zwartfontein South the pay limit is unchanged at 1.7 g/t.

<sup>(8)</sup> **Platreef stockpiles:** Mined ore being held for long-term future treatment. These are reported separately as Proved Ore Reserves and aggregated into the summation tabulations.

<sup>(9)</sup> **Alternative units – All Reefs Total:** Tonnage in million short tons (Mton) and associated grade in troy ounces per short ton (oz/ton) for 2011 is:

Total – 1,630.4 Mton (2010: 1,520.8 Mton)

Total – 0.108 oz/ton (2010: 0.109 oz/ton)

<sup>(10)</sup> **Tailings:** Operating tailings dams cannot be geologically assessed and therefore are not reported as part of the Ore Reserves. At Rustenburg mines a dormant dam has been evaluated and the tailings form part of the Ore Reserves statement. Tailings dam Ore Reserves are reported separately as Ore Reserves and are not aggregated to the global Ore Reserve summation.

<sup>(11)</sup> **Main Sulphide Zone:** The Main Sulphide Zone within the Great Dyke of Zimbabwe is the orebody mined at Unki Mine. The Ore Reserves for the Main Sulphide Zone relate to the Unki East mine only. Anglo American Platinum owns an effective 100% interest in Southridge Limited.

# PLATINUM GROUP METALS

Ore Reserve and Mineral Resource estimates as at 31 December 2011

Platinum – South Africa Operations		Tonnes <sup>(1)</sup>		Grade <sup>(2)</sup>		Contained metal <sup>(3)</sup>		Contained metal <sup>(3)</sup>	
MINERAL RESOURCES	Classification	2011	2010	2011	2010	2011	2010	2011	2010
<b>Merensky Reef<sup>(4)(5)</sup></b>		Mt	Mt	4E PGE	4E PGE	4E tonnes	4E tonnes	4E Moz	4E Moz
	Measured	162.1	152.5	5.57	5.53	903.7	843.1	29.1	27.1
	Indicated	273.5	254.2	5.54	5.54	1,515.4	1,408.8	48.7	45.3
	<b>Measured and Indicated</b>	<b>435.6</b>	<b>406.7</b>	<b>5.55</b>	<b>5.54</b>	<b>2,419.1</b>	<b>2,251.9</b>	<b>77.8</b>	<b>72.4</b>
	Inferred (in LOMP)	22.7	30.6	8.05	8.22	182.7	251.3	5.9	8.1
	Inferred (ex. LOMP)	547.1	584.9	5.08	5.28	2,778.8	3,089.0	89.3	99.3
	<b>Total Inferred</b>	<b>569.8</b>	<b>615.5</b>	<b>5.20</b>	<b>5.43</b>	<b>2,961.5</b>	<b>3,340.3</b>	<b>95.2</b>	<b>107.4</b>
<b>UG2 Reef<sup>(4)(6)</sup></b>		Mt	Mt	4E PGE	4E PGE	4E tonnes	4E tonnes	4E Moz	4E Moz
	Measured	391.9	408.4	5.33	5.42	2,090.5	2,213.6	67.2	71.2
	Indicated	547.2	521.0	5.21	5.48	2,849.6	2,853.1	91.6	91.7
	<b>Measured and Indicated</b>	<b>939.1</b>	<b>929.4</b>	<b>5.26</b>	<b>5.45</b>	<b>4,940.1</b>	<b>5,066.7</b>	<b>158.8</b>	<b>162.9</b>
	Inferred (in LOMP)	9.0	25.1	4.97	4.95	44.9	124.0	1.4	4.0
	Inferred (ex. LOMP)	660.1	735.4	5.23	5.55	3,449.4	4,080.0	110.9	131.2
	<b>Total Inferred</b>	<b>669.1</b>	<b>760.5</b>	<b>5.22</b>	<b>5.53</b>	<b>3,494.3</b>	<b>4,204.0</b>	<b>112.3</b>	<b>135.2</b>
<b>Platreef<sup>(7)</sup></b>		Mt	Mt	4E PGE	4E PGE	4E tonnes	4E tonnes	4E Moz	4E Moz
	Measured	219.1	110.3	2.38	2.38	522.0	262.3	16.8	8.4
	Indicated	980.9	860.1	2.20	2.19	2,158.3	1,883.2	69.4	60.5
	<b>Measured and Indicated</b>	<b>1,199.9</b>	<b>970.3</b>	<b>2.23</b>	<b>2.21</b>	<b>2,680.3</b>	<b>2,145.5</b>	<b>86.2</b>	<b>69.0</b>
	Inferred (in LOMP)	10.0	90.0	4.15	2.96	41.3	266.6	1.3	8.6
	Inferred (ex. LOMP)	1,575.5	1,110.1	2.12	1.80	3,344.8	1,993.6	107.5	64.1
	<b>Total Inferred</b>	<b>1,585.5</b>	<b>1,200.1</b>	<b>2.14</b>	<b>1.88</b>	<b>3,386.0</b>	<b>2,260.2</b>	<b>108.9</b>	<b>72.7</b>
<b>All Reefs</b>		Mt	Mt	4E PGE	4E PGE	4E tonnes	4E tonnes	4E Moz	4E Moz
	Measured	773.1	671.2	4.55	4.95	3,516.2	3,319.0	113.0	106.7
	Indicated	1,801.5	1,635.3	3.62	3.76	6,523.3	6,145.1	209.7	197.6
	<b>Measured and Indicated<sup>(8)</sup></b>	<b>2,574.7</b>	<b>2,306.4</b>	<b>3.90</b>	<b>4.10</b>	<b>10,039.5</b>	<b>9,464.1</b>	<b>322.8</b>	<b>304.3</b>
	Inferred (in LOMP)	41.7	145.7	6.45	4.41	268.9	642.0	8.6	20.6
	Inferred (ex. LOMP)	2,782.7	2,430.5	3.44	3.77	9,572.9	9,162.5	307.8	294.6
	<b>Total Inferred</b>	<b>2,824.4</b>	<b>2,576.1</b>	<b>3.48</b>	<b>3.81</b>	<b>9,841.8</b>	<b>9,804.5</b>	<b>316.4</b>	<b>315.2</b>
<b>Tailings<sup>(9)</sup></b>		Mt	Mt	4E PGE	4E PGE	4E tonnes	4E tonnes	4E Moz	4E Moz
	Measured	87.6	87.6	1.08	1.08	94.3	94.3	3.0	3.0
	Indicated	17.9	0.4	1.13	0.89	20.2	0.4	0.6	0.0
	<b>Measured and Indicated</b>	<b>105.5</b>	<b>88.1</b>	<b>1.09</b>	<b>1.08</b>	<b>114.5</b>	<b>94.7</b>	<b>3.7</b>	<b>3.0</b>
	Inferred (in LOMP)	–	–	–	–	–	–	–	–
	Inferred (ex. LOMP)	–	–	–	–	–	–	–	–
	<b>Total Inferred</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>

THE MINERAL RESOURCES ARE REPORTED AS ADDITIONAL TO ORE RESERVES.

Platinum – Zimbabwe Operations		Tonnes <sup>(1)</sup>		Grade <sup>(2)</sup>		Contained metal <sup>(3)</sup>		Contained metal <sup>(3)</sup>	
MINERAL RESOURCES	Classification	2011	2010	2011	2010	2011	2010	2011	2010
<b>Main Sulphide Zone<sup>(10)</sup></b>		Mt	Mt	4E PGE	4E PGE	4E tonnes	4E tonnes	4E Moz	4E Moz
	Measured	8.7	8.7	4.15	4.12	36.0	35.7	1.2	1.1
	Indicated	21.2	19.2	4.13	4.17	87.5	80.2	2.8	2.6
	<b>Measured and Indicated</b>	<b>29.8</b>	<b>27.9</b>	<b>4.14</b>	<b>4.16</b>	<b>123.5</b>	<b>116.0</b>	<b>4.0</b>	<b>3.7</b>
	Inferred (in LOMP)	14.2	14.2	4.19	4.19	59.5	59.6	1.9	1.9
	Inferred (ex. LOMP)	35.5	35.5	4.09	4.09	144.9	144.8	4.7	4.7
	<b>Total Inferred</b>	<b>49.6</b>	<b>49.7</b>	<b>4.12</b>	<b>4.12</b>	<b>204.4</b>	<b>204.5</b>	<b>6.6</b>	<b>6.6</b>

THE MINERAL RESOURCES ARE REPORTED AS ADDITIONAL TO ORE RESERVES.

Due to the uncertainty that may be attached to some Inferred Mineral Resources, it cannot be assumed that all or part of an Inferred Mineral Resource will necessarily be upgraded to an Indicated or Measured Resource after continued exploration.

<sup>(1)</sup> **Tonnage:** Quoted as dry metric tonnes.

<sup>(2)</sup> **Grade:** 4E PGE is the sum of Platinum, Palladium, Rhodium and Gold grades in grammes per tonne (g/t).

3E PGE is the sum of Platinum, Palladium and Gold grades in grammes per tonne (g/t).

<sup>(3)</sup> **Contained Metal:** Contained Metal is presented in metric tonnes and million troy ounces (Moz).

<sup>(4)</sup> **Merensky Reef and UG2 Reef:** The Mineral Resources are estimated over a practical minimum mining width suitable for the deposit known as the 'Resource Cut'. The minimum mining width over which Mineral Resources are declared is 90cm. The 'Resource Cut' width takes cognisance of the mining method and geotechnical aspects in the hanging wall or footwall of the reef. The delineation of the Resources that meet the requirements of reasonable expectation of eventual economic extraction has been defined using the modifying factors as defined in the SAMREC code. These include but are not limited to mineability, geological complexity, processability and economic factors relevant to Anglo American Platinum. The minimum resource grades per reef and per operation are in all instances greater than the Cost 4 pay limit. Investigations conducted in 2011 to determine maximum mining depths related to virgin rock temperatures have been concluded. A virgin rock temperature of 75° Celsius is currently considered to be the limit to mining given anticipated technology, metal prices and energy costs. The affected portions of the Inferred Mineral Resources within the Mining Rights of Tumela Mine, Twickenham Mine and Ga-Phasha PGM Project are therefore re-classified as Deposit within the Anglo American Platinum's portfolio (-128.7 Mt / -26.1 Moz). During 2011 Wesizwe Platinum issued additional shares which diluted Anglo American Platinum's attributable share in Wesizwe Platinum to 13% (from the previous 26.6%). As a result Anglo American Platinum can no longer apply equity accounting but has to reflect the investment as an asset held for sale valued at market value (-27.0 Mt / -4.6 Moz).

<sup>(5)</sup> **Merensky Reef:** The decrease in Mineral Resources is primarily due to previously reported Mineral Resources being re-classified as Deposit in areas where the virgin rock temperature is expected to be above 75° Celsius. This applies mainly to Tumela Mine (-26.6 Mt / -6.7 Moz). Disposal of Wesizwe's Mineral Resources (-12.0 Mt / -2.4 Moz) also contributes to the decrease. However the Merensky Reef Mineral Resources were positively influenced due to re-allocation of previously reported Ore Reserves back to Mineral Resources as a result of changes in economic assumptions at Thembelani Mine (+13.8 Mt / + 3.1 Moz).

<sup>(6)</sup> **UG2 Reef:** The decrease in Mineral Resources is primarily due to previously reported Mineral Resources being re-classified as Deposit in areas where the virgin rock temperature is expected to be above 75° Celsius. This applies to Tumela Mine, Twickenham Mine and Ga-Phasha PGM Project (-101.9 Mt / -19.4 Moz). The exclusion of Wesizwe's Mineral Resources (-15.0 Mt / -2.2 Moz) and conversion of Mineral Resources to Ore Reserves at Thembelani and Siphumelele (-27.1 Mt / -4.5 Moz) also contributes to the decrease. The decrease is offset by an increase of Mineral Resources at the Der Brochen Project due to a change in the mining method (from ultra-low profile to low-profile mechanised board and pillar mining) which increases the resource cut (+81.0 Mt / +2.8 Moz).

<sup>(7)</sup> **Platreef:** A 1.0g/t (4E PGE) cut-off has been used to define Mineral Resources. The Mineral Resource 4E ounce content increased primarily due to additional borehole information which has confirmed the presence of the Platreef at higher elevation in localised areas to the west and below the original pit shell. Until a better understanding of this structure has been determined, a low classification confidence and a 100m swathe of geological loss have been applied to these elevated resources. Conceptual pit shell evaluations have indicated that the pit could extend to the west and deeper to exploit these resources. Consequently, the Mineral Resource reporting depth has increased by approximately 200m to 650m below surface elevation (equivalent to 400m a.m.s.l.). Due to this increase in reporting depth the Mineral Resources increase substantially. Pit design test work has confirmed that these resources are potentially open pit. The increase in tonnage is offset by the decrease of Mineral Resources due to additional conversion of Mineral Resources to Ore Reserves at Mogalakwena South (-123.6 Mt / -13.9 Moz) and at Sandsloot, where previously reported Mineral Resources are excluded as the limit of surface mining has been reached (-34.6 Mt / -3.2 Moz). No Mineral Resources applicable to underground mining have been included. However, stockpile material is included which comprises calc-silicate and oxidised material with a cut-off grade of greater than 3g/t (5.2 Mt / 0.6 Moz).

<sup>(8)</sup> **Alternative units – All Reefs Measured and Indicated:** Tonnage in million short tons (Mton) and associated grade in troy ounces per short ton (oz/ton) for 2011 is:

Measured and Indicated – 2,838.1 Mton (2010: 2,542.4 Mton)

Measured and Indicated – 0.114 oz/ton (2010: 0.120 oz/ton)

<sup>(9)</sup> **Tailings:** Operating tailings dams cannot be geologically assessed and therefore are not reported as part of the Mineral Resources. At Rustenburg mines a dormant dam has been evaluated and the tailing forms part of the Mineral Resource statement. During 2010 the tailings dams at Union Mine were reactivated and their resources were removed from the Mineral Resource statement. However, for 2011, some of the Union tailings were de-activated and as consequence now form part of the Mineral Resource statement. A dormant tailings dam at Amandelbult is currently being drilled and its resources will be evaluated in 2012.

<sup>(10)</sup> **Main Sulphide Zone:** The Main Sulphide Zone is the orebody mined at Unki Mine. The Mineral Resources for the Main Sulphide Zone relate to the Unki East and West mines only. Anglo American Platinum owns an effective 100% interest in Southridge Limited. During 2011 a new resource evaluation was completed covering Unki South, Helvetia and Paarl projects (contained within the special mining lease held by Southridge Limited). However, an independent external review of these Mineral Resource is outstanding and will only be completed during the first quarter of 2012 and therefore the Mineral Resources reported re-state the Unki East and West mines resources.



# PLATINUM GROUP METALS

Ore Reserve and Mineral Resource estimates as at 31 December 2011

Platinum – Other Projects		Tonnes <sup>(1)</sup>		Grade <sup>(2)</sup>		Contained metal <sup>(3)</sup>		Contained metal <sup>(3)</sup>	
MINERAL RESOURCES		2011	2010	2011	2010	2011	2010	2011	2010
	Classification								
<b>South Africa</b>									
Boikgantsho <sup>(4)</sup>	Measured	–	–	3E PGE	3E PGE	3E tonnes	3E tonnes	3E Moz	3E Moz
	Indicated	37.0	86.6	1.30	1.35	47.9	116.9	1.5	3.8
<b>Measured and Indicated</b>		<b>37.0</b>	<b>86.6</b>	<b>1.30</b>	<b>1.35</b>	<b>47.9</b>	<b>116.9</b>	<b>1.5</b>	<b>3.8</b>
Platreef	Inferred	1.8	51.0	1.14	1.23	2.1	62.7	0.1	2.0
<b>Sheba's Ridge<sup>(5)</sup></b>									
	Measured	28.0	111.8	0.88	0.85	24.6	95.1	0.8	3.1
	Indicated	34.0	128.4	0.85	0.95	29.1	122.1	0.9	3.9
<b>Measured and Indicated</b>		<b>62.0</b>	<b>240.1</b>	<b>0.87</b>	<b>0.90</b>	<b>53.6</b>	<b>217.2</b>	<b>1.7</b>	<b>7.0</b>
	Inferred	149.9	0.9	0.96	0.85	144.5	0.8	4.6	0.0
<b>Brazil</b>									
Pedra Branca <sup>(6)</sup>	Inferred	6.6	6.6	2.27	2.27	15.0	15.0	0.5	0.5

Due to the uncertainty that may be attached to some Inferred Mineral Resources, it cannot be assumed that all or part of an Inferred Mineral Resource will necessarily be upgraded to an Indicated or Measured Resource after continued exploration.

<sup>(1)</sup> **Tonnage:** Quoted as dry metric tonnes.

<sup>(2)</sup> **Grade:** 4E PGE is the sum of platinum, palladium, rhodium and gold grades in grammes per tonne (g/t).

3E PGE is the sum of platinum, palladium and gold grades in grammes per tonne (g/t).

<sup>(3)</sup> **Contained Metal:** Contained Metal is presented in metric tonnes and million troy ounces (Moz).

<sup>(4)</sup> **Boikgantsho:** Anglo American Platinum holds an attributable interest of 49% of the Joint Venture between Anglo American Platinum and Anooraq Resources. During 2011 a new resource evaluation was completed resulting in a significant change to the previous reporting which was unchanged since 2004. A cut-off grade of 1g/t (3E) was applied, the same as for Mogalakwena Platreef (1g/t 4E). The new evaluation excludes oxidised material up to a depth of 40m. The resources are reported only to a depth of 300m below surface and excludes losses due to the major dykes and a swathe of 200m either side of the major Drenthe fault, which has a displacement of approximately 2.2km.

<sup>(5)</sup> **Sheba's Ridge:** Anglo American Platinum holds an attributable interest of 35% of the Joint Venture between Anglo American Platinum, Aquarius Platinum and the South African Industrial Development Corporation (IDC). Re-interpretation of the geology together with structural complexity resulted in a revised model with a significant decrease of the resource classification confidence. Additionally, the reporting depth below surface has been reduced. Note that since 2011 the joint venture area encompasses all Prospects Rights of the Sheba's Ridge project. The geological loss increased from a previously used 0.5% to 5% within the Measured category and to 10% within the Indicated and Inferred categories. Previously the cutoff grade used was \$10.5/t recoverable value, a figure supplied by Ridge Mining using metal price projections and metallurgical recoveries. This was changed to 0.5g/t (3E) in the current model.

<sup>(6)</sup> **Pedra Branca:** Anglo American Platinum holds an attributable interest of 51% of the Joint Venture between Anglo American Platinum and Solitario Resources & Royalty. A cut-off of 0.7g/t (3E PGE) was applied for resource definition.

The following Operations and Projects contributed to the combined 2011 Ore Reserve and Mineral Resource estimates stated per reef (excluding Other Projects):

Operations:	%	Mine Life
Bafokeng Rasimone Platinum Mine (BRPM) – MR/UG2	33%	30+
Bathopele Mine – UG2	100%	15
Bokoni Platinum Mine – MR/UG2	49%	30+
Dishaba Mine – MR/UG2	100%	30+
Khomanani Mine – MR/UG2	100%	17
Khuseleka Mine – MR/UG2	100%	27
Kroondal Platinum Mine – UG2	50%	7
Marikana Platinum Mine – UG2	50%	7
Modikwa Platinum Mine – MR/UG2	50%	19
Mogalakwena Mine – PR	100%	30+
Mototolo Platinum Mine – UG2	50%	5*
Pandora – UG2	42.5%	23
Siphumelele Mine – MR/UG2	100%	30+
Thembelani Mine – MR/UG2	100%	27
Tumela Mine – MR/UG2	100%	30+
Twickenham Platinum Mine – MR/UG2	100%	30+
Union Mine – MR/UG2	85%	26
Unki Mine – MSZ	100%	27
<b>Projects:</b>		
Der Brochen Project – MR/UG2	100%	
Ga-Phasha PGM Project – MR/UG2	49%	
Magazynskraal Project – MR/UG2	20%	
Other Exploration Projects (portions of Driekop/Rustenburg) – MR/UG2	37.5% to 100%	
Rustenburg – Non Mine Projects – MR/UG2	100%	

MR = Merensky Reef, UG2 = UG2 Reef, PR = Platreef, MSZ = Main Sulphide Zone;

% = Anglo American Platinum Limited attributable interest;

Mine Life = The extraction period in years for scheduled Ore Reserves comprising Proved and Probable Reserves only considering the combined MR and UG2 production where applicable;

\* Only 5 years of Ore Reserves are declared as per Xstrata policy.

Information was provided by the Joint Venture partners for the following operations and projects:

Operations – BRPM, Bokoni, Kroondal, Marikana, Modikwa, Mototolo, Pandora, (only Ore Reserve information for BRPM and Modikwa)

Projects – Pedra Branca, Sheba's Ridge, Ga-Phasha, Magazynskraal

Audits related to the generation of the Ore Reserve and Mineral Resource statements were carried out by independent consultants during 2011 at the following operations:

Bathopele, Dishaba, Khomanani, Mogalakwena, Siphumelele, Thembelani, Tumela, Union.