

AN OVERVIEW OF CURRENT PLATINUM GROUP METAL EXPLORATION PROJECTS AND NEW MINE DEVELOPMENTS IN SOUTH AFRICA

DIRECTORATE: MINERAL ECONOMICS



mineral resources

Department:
Mineral Resources
REPUBLIC OF SOUTH AFRICA

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Cover Picture: Wesizwe Platinum's Bakubung Platinum mine site. Sourced from www.wesizwe.co.za

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ABBREVIATIONS AND SYMBOLS

4E	platinum, palladium, rhodium, gold
6E	platinum, palladium, rhodium, ruthenium, iridium, gold
DMR	Department of Mineral Resources
FY	Financial year
g/t	grams per ton
Moz	million ounces
Mt	million tons
na	Information not available
PGMs	Platinum Group Metals
UG2	Upper group 2 chromitite layer in the Bushveld Complex

A. INTRODUCTION

Mine closures and project suspensions that characterized the PGMs sector in 2012 continued into 2013 as prices remained weak and costs reportedly escalated. Despite this, most companies are proceeding and well on track with projects, including exploration, expansions and new mine developments, under the consideration that today's prices are less relevant than expectations for the future.

South Africa's (SA) PGMs producers have traditionally exploited three separate, extensive layered reefs of the Bushveld Complex; the Merensky Reef, the Upper Group 2 (UG2) Chromitite Layer, and the Platreef, and indications are that current projects will perpetuate the trend. However, relatively shallow platinum deposits were recently found by a Canadian company in Waterberg, beyond the mapped northern limb of the Bushveld Complex. The orebody is at a relatively shallow 100 m and because of its unique nature, the mineralisation of this deposit is being referred to as having T-reef and F-reef. It is totally different to the Platreef in that it is 20 percent gold in its metal balance. Another discovery was made by yet another Canadian company on the Platreef itself; a flat-lying orebody which can be mined by room – and – pillar method. According to the company, it will be highly mechanized and the labour component per unit of platinum produced will be very low compared with traditional underground mining. Whether or not these discoveries indicate ample potential for the country's low cost platinum production remains to be seen, but they do encourage further prospecting in areas yet to be exhaustively explored.

This report consists of an alphabetical list of the companies operating/managing the 19 different projects covered, and provides details of the projects such as location, expected production and employment, as well as latest developments. Once complete, the projects covered combined are expected to produce more than 1 000 kilo-ounces (koz) of refined platinum and create more than 36 000 jobs. Such information was obtained from companies' annual reports and websites, as well as through direct communication. This is work in progress and is intended to provide a complete coverage of the platinum industry in South Africa. Current producers and prospectors are therefore encouraged to bring to attention information on all other developments that might have been erroneously omitted. It is hoped that this report will provide a useful reference for all industry participants and prospective investors.

B: PROJECTS BY COMPANY

Company	Project and Location	Ownership	Production and Employment	Capital and Duration	Latest Developments	Contact Details
African Rainbow Minerals (ARM)	The Modikwa Mine Lease Area. Mine expansion. Mpumalanga province.	A 50/50 Joint Venture (JV) between Rustenburg Platinum Mine (RPM) and ARM.	An additional 50 000 tons of ore per month. Expected to employ approximately 1 000 people.	Approximately R1.5 billion for North 1 and South 2 Phase 1. To be completed by June 2016.	The feasibility study for North shaft has been approved and the South 2 Phase 1 planned for approval by end of 2013.	Mkgosi Nkoana +2713 230 2044 Francois Uys +2783 455 0974
Anglo Platinum (Amplats)	Twickenham Platinum mine. New mine development. Mpumalanga province.	100% Amplats.	Steady-state production of 191 000 refined Pt oz per annum. Expected to employ approximately 6 400 people.	Approximately R14 billion. Steady-state production expected in 2019.	Twickenham will defer its current ramp up and enter into a period where it has to stay in business as an operating mine without the support of significant capital investment for the next 3 years.	Kgapu Mphahlele +2711 373 6239
	Thembelani 2 Shaft. Sinking of new replacement shaft. North West province.	100% Amplats.	Steady-state production of 170 000 refined Pt oz per annum. Expected to employ approximately 6 500 people.	Approximately R16.4 billion. Steady-state production expected in 2028.	Given the current global uncertainty the development of the shaft has been stopped at 33 level and the shaft has been put on care and maintenance.	
	Bathopele Phase 5. Ore replacement project. North West province.	100% Amplats.	Steady-state production of 136 000 refined Pt oz per annum. No additional jobs to be created.	Approximately R2.0 billion. Steady-state production expected in 2018.	The project was impacted by the industrial action in 2012, causing a decline in development rates.	

Company	Project and Location	Ownership	Production and Employment	Capital and Duration	Latest Developments	Contact Details
Atlatsa Resources	Bokoni and Ga-Phasha. Mine expansion. Limpopo Province.	51% Atlatsa Resources 49% Amplats.	Up to 160 kt of ore per month in the next 3 years. Expected to employ approximately 5 500 people.	In excess of R 1 billion over the next 5 years. Steady-state production by 2016.	Continuing with ramp up of Brakfontein Shaft	Bava Reddy +2711 779 6800
	Boikgantsho. New mine development. Limpopo province.	51% Atlatsa Resources 49% Amplats.	Expected production not stated. Expected to employ approximately 500-700 people.	In excess of R 10 million over the next 3 years. Feasibility studies to be completed by end-2013.	Pre-feasibility studies continue.	
Impala Platinum	No. 16, 17 and 20 shafts. Ore replacement projects. North West province.	100% Implats.	Steady state production estimated at 365 koz Pt and 143 ktpm Merensky Reef (no. 20). No additional jobs to be created.	Approximately R25.5 billion. To be completed by May 2015.	The shafts have been commissioned and production ramp up has commenced.	Gerhard Potgieter +2711 731 9135
	Leeuwkop exploration project. North West province.	Owned by Afplats (Pty) Ltd, in which Implats has a 74% interest.	Production and employment not stated.	Production to commence in 2020 the earliest.	Early sinking of the main shaft has commenced and has progressed to a depth of 600 m.	
Ivanhoe Mines	Platreef exploration project. Limpopo province.	90% Ivanhoe Mines 10% Japanese consortium. The BBBEE partner will acquire a 26% interest in the project.	Expected production and employment not yet available.	Up to 12 Mt of ore per year. Scoping study to be completed late in 2013 or early 2014.	Sinking of an exploration shaft is being planned to provide underground access to the Flatreef deposit to obtain a bulk sample.	Jeremy Michaels +2711 088 4348

Company	Project and Location	Ownership	Production and Employment	Capital and Duration	Latest Developments	Contact Details
Northam Platinum	Zondereinde mine expansion. Limpopo province.	100% Northam.	No increased production the life of mine extends to 2028. No additional jobs will be created.	Approximately R975 million. Due for completion during the year ending 30 June 2018.	Sinking of the decline continues.	DJ Gonzalez +2714 784 3000
Platinum Australia	Kalahari Platinum. New mine development. North West province.	10% Anglo American 9% Platinum Australia 81% ARM.	Steady state production at 100 koz of PGMs per annum. Expected to employ approximately 500 people.	Production to commence in 2015.	Definitive feasibility study complete but project delayed by power supply disruptions and infrastructural challenges.	Gavin Ferguson +2711 706 5333
	Rooderand mine development. North West province.	90% ATLA Mining 10% Platinum Australia.	Steady state production at 85 koz of PGMs per annum. Expected to employ approximately 500 people.	Production to commence in 2015.	Definitive feasibility study complete and project is on time and within budget.	
Platinum Group Metals (PTM)	Western Bushveld JV. New mine development. North West province.	74% PTM 26% BEE	Steady state production expected at 275 000 4E oz per year over a 20 year mine life. Employment not available.	Approximately R5 billion. Production expected to commence in mid-2015.	The project has advanced to construction.	Kris Begic 604-899-5450
	Waterberg exploration project. Limpopo province.	49.97% PTM 26% Mnombo Wethu Consultants CC JOGMEC may earn up to a 37% interest in the project.	Expected production and employment not available.	Exploration is in relatively early stages.	A preliminary economic assessment is under way and due for completion towards the end of 2013.	

Company	Project and Location	Ownership	Production and Employment	Capital and Duration	Latest Developments	Contact Details
Platmin	Mphahlele Project. New mine development. Limpopo province.	54% owned by Platmin. Other stakeholders are the Limpopo Province Development Corporation as well as the Mphahlele community.	Production expected at 250 4E koz per annum. Expected to employ approximately 2 750 people.	Production to commence in 2015	The projects will be further advanced into detailed design and implementation stages pending the successful acquisition of the surface rights and the execution of the mining right that has already been granted by the DMR.	D Riley +2712 661 4280
	Grootboom Project. New mine development. Mpumalanga province.	72.39% Platmin, 27.61% BEE-owned.	Production expected at 75 ktpm of UG2 ore. Expected to employ approximately 1 100 people.	Production to commence in 2015		
Royal Bafokeng Platinum	Styldrift Merensky Phase 1 Project. Expansion of existing operations. North West province.	JV between RBPlat and RPM.	Steady-state production of up to 220 000 Pt oz in concentrate per annum. Expected to employ approximately 3 500 people.	Approximately R11.8 billion. Production ramp up planned for July 2015.	Sinking, station lateral development and shaft equipping will continue until mid- 2015 when production ramp up will commence.	Lindiwe Montshiwagae +2710 590 4517
Village Main Reef	Lesego Platinum. New mine development. Limpopo province.	78% Village Main Reef 22% IDC.	Approximately 300 kt of ore over 67 years. Expected to employ approximately 5 000 people.	Approximately R1.2 billion.	Definitive Feasibility Studies completed. High grade Merensky Reef and UG2 discovered at a depth of 350 m.	Cheryl Walton CWalton@villagemainreef.co.za
Wesizwe Platinum	Bakubung Platinum mine. New mine development. North West province.	100% Wesizwe Platinum.	Approximately 350 koz of PGMs per annum. Expected to employ 3 200 people.	Approximately R1.4 billion committed by last financial year. First production by 2018.	The main shaft has entered the slow-sink phase.	Jacob Mothomogolo +2711 994 4600

