

### Mineral Resource and Mineral Reserve Statement 2008



# Report profile

This report presents the mineral resources and reserves of Impala Platinum Holdings Limited (Implats) for the financial year ended on 30 June 2008. This is the first such separate document produced by the Implats group.

Reporting of Implats' Mineral Resource and Mineral Reserve estimates as presented in this document is done in accordance with the South African Code for Reporting of Mineral Resources and Mineral Reserves (SAMREC) and the Australian Code for Reporting on Mineral Resources and Mineral Reserves (JORC). These estimates have been signed off by the relevant Competent Persons, as defined by these codes.

An abbreviated extract of this report is contained in the Implats Annual Report 2008. In addition, this information is available electronically on Implats' corporate website, www.implats.co.za.



# Corporate profile

Impala Platinum Holdings Limited (Implats), a leading global producer of platinum, produced 1.9Moz of platinum (approximately 25% of global supply) and 3.6Moz of platinum group metals (PGMs) for the financial year 2008.

Implats' mining interests are found on the two most significant known PGM-bearing orebodies in the world: the Bushveld Complex in South Africa and the Great Dyke in Zimbabwe:

- In South Africa, these are located on the western limb of the Bushveld Complex – Impala Platinum (Impala) and Afplats' Leeuwkop project – and on eastern limb – Marula Platinum (Marula) and Two Rivers Platinum (Two Rivers).
- In Zimbabwe, Implats operates Zimplats Holdings (Zimplats), which is listed on the Australian Securities Exchange (ASX), and has a 50% interest in Mimosa Investments Limited (Mimosa), a joint venture with Aquarius Platinum Limited (Aquarius).

Impala Refining Services (IRS) uses Impala's excess smelting and refining capacity to process the concentrate and matte produced by the various mine-to-market group operations as well as material purchased from other companies. Toll-refining is also undertaken on behalf of other companies. Implats is one of the largest autocatalyst recyclers in the world.

The company's exploration efforts are focused on a number of projects in Botswana, Canada, Greenland, Madagascar, Mozambique and South Africa. Some of these are in joint ventures and alliances with other companies.

Implats has a primary listing on the JSE Limited (JSE) – IMP – and a secondary listing on the London Stock Exchange (LSE) – IPLA. The company may also be traded via a sponsored level 1 ADR program (IMPUY) on the New York Stock Exchange (NYSE).

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# Introduction

Implats' Mineral Resources and Mineral Reserves reflect and support the group's growth opportunities. The group accordingly remains committed to the following:

- Growth of the Mineral Resource base by leveraging and optimising current assets, exploration and acquisitions, including alliances and equity interests with third parties
- Continuously improving the management of Mineral Resources and related processes and systems
- Addressing skills development and retention
- The legislative regime that governs mineral rights ownership
- The transparent disclosure of Mineral Resources and Mineral Reserves in line with the prescribed codes, SAMREC and JORC

# Salient highlights - 2008

Highlights relating to Implats' Mineral Resources and Mineral Reserves as at 30 June 2008 relative to 30 June 2007:

- Estimated total attributable Mineral Resources increased to 237 million platinum ounces from 187 million platinum ounces.
- Total attributable group Mineral Reserves increased to 42 million platinum ounces from 40 million platinum ounces.
- Conversion of the old order mining right at Marula in January 2008.
- Granting of the mining right for Afplats' Leeuwkop project in April 2008.
- Conversion of Impala's old order mining rights post year-end.
- Exploration activities following the recently acquired prospecting rights by Afplats over the farms Kareepoort and Wolwekraal culminated in an increase in the Inferred Mineral Resource estimate, as did the progression of the Tamboti exploration project to Inferred Mineral Resource status.
- Board approval of the 17 Shaft project at Impala Platinum and the commensurate increase in Mineral Reserves.

## Geological settings

The mining operations of Implats and its associated companies exploit platiniferous horizons within the two largest known deposits of platinum group minerals in the world, namely the Bushveld Complex in South Africa and the Great Dyke in Zimbabwe. Mining mostly takes place as underground operations focusing on relatively narrow mineralised horizons with the specific mining methods adapted to suit the local geology and morphology of the mineralised horizon.

### The Bushveld Complex

The Bushveld Complex is an extremely large, 2-billion-year-old saucer-shaped layered igneous intrusion occurring in the northern part of the country within the boundaries of South Africa. The complex comprises an array of diverse igneous rocks ranging in composition from ultramafic to felsic. It is generally understood that the Bushveld Complex was formed by the repeated injection of magma into an enormous chamber. Due to the huge volumes of magma involved, cooling and subsequent mineral crystallisation out of the magma was a slow process. Different minerals were formed as the magma cooled. These minerals accumulated into sub-horizontal layers, building from the base of the chamber. These processes were repeated by the intermittent replenishment and addition of existing and new magma as the case may be, thus producing a repetition of the mineral layering.

Some individual layers or groups of layers can be traced for hundreds of kilometres. This layered sequence, the Rustenburg Layered Suite, comprises five principal zones, the Marginal, Lower, Critical, Main and Upper Zones. The Bushveld Complex, dipping in general to the centre of the complex, is roughly clover-leaf shaped, consisting of four compartments or limbs, the western, eastern, northern and southern limbs, in order of economic importance.

The Bushveld Complex is unique both in its size, covering an areal extent of some 66,000km<sup>2</sup> and in the economic importance of its minerals. Contained within the well layered ultramafic to mafic succession are two horizons in the Critical Zone which host economically exploitable quantities of PGMs, namely the Merensky Reef and the underlying UG2 Reef. These two economic horizons can be traced for hundreds of kilometres around the complex and are the focus of Implats' operations from which the PGMs – platinum, palladium, rhodium, ruthenium and iridium – are recovered, together with quantities of gold, nickel, copper and other metals and compounds.

The Merensky Reef is generally composed of an upper feldspathic pyroxenite, overlying a thin basal chromitite stringer, followed by an anorthosite to norite footwall and with mineralisation decreasing from the basal chromitite stringer into the hanging wall and footwall. The UG2 Reef is defined as a main chromitite layer, with most of the mineralisation contained within this unit, followed by a poorly mineralised pegmatoidal pyroxenite footwall. Below the UG2 Reef are numerous other chromitite layers that are mined by various other companies for chromium, as their PGM content is too low.

Implats' operations on the Bushveld Complex comprise Impala Rustenburg, located north of Rustenburg in North West Province,



and Marula, situated north-west of Burgersfort in the province of Limpopo. The Two Rivers mine, a joint venture between Implats and African Rainbow Minerals Limited (ARM), is located south-west of Burgersfort in the province of Mpumalanga. The Leeuwkop project and contiguous prospecting areas of Afplats are situated west of Pretoria, in North West Province.

### The Great Dyke

The Great Dyke is a 2.5-billion-year-old highly elongated layered igneous intrusion occurring geographically in the centre of Zimbabwe. It bisects the country in a north-north-east trending direction and comprises an array of igneous rocks ranging in composition from ultramafic to mafic. The Dyke is a layered complex similar to that of the Bushveld Complex. The Dyke is divided vertically into three major successions, a lower mafic sequence consisting mainly of steeply-dipping, fine-grained rocks of variable composition, including pyroxenites and norites,

### Geological settings (continued)

an overlying ultramafic sequence, dominated from the base upwards by cyclic repetitions of dunite, harzburgite and bronzitite, and an upper mafic sequence consisting mainly of gabbro and gabbro-norite. It is V- to Y-shaped in section, with the layering dipping from the sides of the Dyke towards the axis of the intrusion near the margins and flattening out near the centre to form a flat-lying floor. Much of the mafic sequence has been removed by erosion. Contained within the ultramafic sequence is the P1 pyroxenite, directly below the maficultramafic contact, which in turn hosts economically exploitable quantities of PGMs in the Main Sulphide Zone (MSZ), which is generally 10 – 50m from the top of the ultramafic sequence.

Disseminated sulphides with anomalous base metals, but a low PGM content are also present locally at the mafic-ultramafic contact. The Dyke developed as a series of initially discrete magma chambers or compartments, which joined up as the chambers filled. The chambers coalesced below the MSZ and before erosion, the MSZ would have been continuous along the length of the Dyke. In its present plane of erosion, the Great Dyke is longitudinally subdivided into a series of narrow

contiguous layered complexes or chambers, namely a northern chamber consisting of the Musengezi, Darwendale and Sebakwe sub-chambers; and a southern chamber consisting of the Selukwe and Wedza sub-chambers. The Darwendale and Sebakwe sub-chambers are known as the Hartley Complex. The Dyke is highly elongated, slightly sinuous, 550km long, with a maximum width of 11km.

The MSZ is a lithologically continuous layer that is typically 2 – 3m thick and forms an elongated basin. It generally contains iron-nickel-copper sulphides, while elevated PGM concentrations occur towards its base. Peak values for the PGMs and base metals are commonly offset, while the ratio between platinum and palladium also varies vertically. In contrast to the Bushveld Complex, it is often difficult to identify mineralisation visually. Below the MSZ are several chromitite layers that are mined by various other companies for chromium, as their PGM content is too low.

Implats' operations on the Great Dyke comprise Zimplats' Ngezi Platinum Mine, located south-west of Harare, and the Mimosa mine, which is situated east of Bulawayo.



An airborne electromagnetic survey under way at the Segwagwa project, Bostwana

# Regulatory compliance

The reporting of Mineral Resources and Mineral Reserves for Implats' South African operations is done in accordance with the principles and guidelines of the SAMREC code. SAMREC was established in 1998 and modelled its code on JORC. The first version of the SAMREC code was issued in March 2000 and adopted by the then Johannesburg Stock Exchange (JSE) – now the JSE Limited – in its Listings Requirements later in the same year; this was similarly the basis for the JSE's Ongoing Reporting Requirements which were promulgated in 2005. Since 2004, the SAMREC code has been under review and an updated SAMREC 2007 was promulgated by the Southern African Institute of Mining and Metallurgy (SAIMM) and the Geological Society of South Africa (GSSA) during June 2007. The JSE is expected to incorporate the new version in due course.

Zimplats, as an ASX-listed company, reports its Mineral Resources and Ore Reserves in accordance with the JORC code. Mimosa, a Mauritius-based company, does not fall under any regulatory reporting code but has adopted the JORC code for its reporting.

The definitions contained in the SAMREC code are either identical to, or not materially different from, international definitions. The international definitions for the Mineral Resource and sub-categories for Indicated and Measured Mineral Resources, and the definitions for Mineral Reserve and sub-categories for Probable and Proved Mineral Reserves, are the same as those found in the SAMREC Code. These definitions can be found in the glossary on page 37 of this report.

Various Competent Persons, as defined by the SAMREC and JORC codes, have contributed to the summary Mineral Resource and Mineral Reserve figures quoted in this report. These statements thus reflect the estimates as compiled by teams of professional practitioners from the various operations, shafts and projects.

These were reviewed and signed off by the Implats' signatory below:

#### JJ Vermaak

Pr.Sci.Nat. Registration No. 400015/88

(Consulting Geologist, Implats, the Competent Person has 22 years' experience in the evaluation and exploitation of PGM-bearing deposits.)

- The Competent Person for the Two Rivers' Mineral Resources and Reserves is Mr. PJ van der Merwe, a full-time employee of ARM.
- The Competent Persons for Zimplats are Messrs. A du Toit and S Simango, full-time employees of Zimplats.
- Implats and Aquarius have jointly signed off the Mimosa estimates; the competent person from Aquarius in this regard is Mrs FH Cilliers.
- Implats has obtained written consent from ARM Platinum that the information disclosed pertaining to its Mineral Resources and Mineral Reserves is compliant with the SAMREC Code and can be published in this form.
- Implats has legal entitlement to the mining of minerals being reported upon without any known impediments.
- Reporting of Mineral Resources is quoted inclusive of Mineral Reserves. A tabulation is also provided to illustrate the proportion of Mineral Resources that has not been converted to Mineral Reserves. For clarity, note that inclusive reporting implies that Mineral Reserves are included in Mineral Resources, whereas exclusive reporting means that Mineral Reserves are not included in Mineral Resources.



# Mineral rights status

The Mineral and Petroleum Resources Development Act No 28 of 2002 (MPRDA), came into effect on 1 May 2004 in South Africa. The MPRDA, its associated Broad-Based Socio-Economic Empowerment Charter for the Mining Industry and its attendant Scorecard have played a significant role in the transformation of the South African mining industry. The act effectively transferred ownership of privately held mineral rights to the state to enable any third party to apply to the Department of Minerals and Energy (DME) for new order prospecting rights or mining rights over these previously privately held minerals.

In order to promote security of tenure and to secure existing prospecting and mining rights, affected entities were given five years to submit applications for the conversion of old order mining rights (by 30 April 2009). Up to two years were granted for the conversion of old order prospecting rights (by 30 April 2006). Furthermore, in respect of unused old order rights, the MPRDA granted to the holder of such a right a one-year exclusive right to apply for the conversion of these rights.

Implats has embraced the principles of transformation as a strategic imperative to reinforce its position as a leading southern African company, making the best possible use of available Mineral Resources. To this effect, applications have been lodged with the DME for the conversion of all old order mining rights and old order prospecting rights, as well as for the granting of new prospecting rights in respect of unused old order rights at Implats' South African operations. Prospecting right applications have also been lodged in respect of previously privately held minerals.

Significant progress was made during the past year in obtaining conversion approval and mining rights. At Marula, the two old order mining licences were converted in January 2008. The mining right at the Leeuwkop Project was granted in April 2008. Approval for the conversion of the existing four old order mining rights at Impala was granted post year-end. The conversion of the Two Rivers' old order mining rights is awaited following the submission of that application in July 2007.



Drilling at Impala



River at Highbank Lake project, Canada.

As reported last year, very good progress was made regarding the conversion of old order prospecting rights and applications for prospecting rights conversions. All old order prospecting rights had been converted by 30 June 2008. One new prospecting right application was outstanding at year-end and one prospecting right held previously by Implats had not been resolved with the DME.

Fully permitted mining tenements are not specified by SAMREC as a prerequisite for converting Mineral Resources to Mineral Reserves, however, Implats is cognisant that a reasonable expectation must exist that such mining rights will be obtained. Implats remains committed to South African legislative requirements to convert present old order mining rights; such commitments are demonstrated in the Implats Annual Report 2008.

In Zimbabwe, the long-awaited revision to the Mines and Minerals Amendment Bill of 2007, which was tabled before parliament, was not passed prior to the dissolution of Parliament in preparation for the March 2008 elections. It has been overtaken by the Indigenisation and Economic Empowerment Bill of 2007, which was signed into law and the date of commencement was 17 April 2008. No regulations have been gazetted and it is unclear exactly how it will be applied. Zimplats has been assured that an agreement signed with the Zimbabwean government by Zimplats towards the end of FY2006 will be honoured. In terms of this agreement, a portion of land was released to the Zimbabwean government in exchange for a combination of cash and empowerment credits and a guarantee that all remaining land claims retained for long-term expansion be incorporated into the special mining leases that apply to Zimplats' current operations; the extension of special mining lease 1 and mining lease 27 were duly executed. This gave Zimplats the confidence to proceed with its expansion. The final empowerment shareholdings in Zimplats in terms of this agreement are still to be determined and several options are being considered.

# Implats - an overview

While platinum was first discovered in South Africa in 1924 by Dr. Hans Merensky, Implats only started production in the late 1960s. Following a successful drilling and exploration programme, a mine with an initial annual capacity of 100 000 ounces of platinum was established north of Rustenburg. The first blast was on 3 June 1967 and, in November 1968, a lease covering some 10 900 hectares (predominantly owned by the Bafokeng Tribe – now the Royal Bafokeng Nation) was granted. Production began, ahead of schedule, in July 1969.

Key corporate activities that have significantly influenced Implats' overall Mineral Resource and Mineral Reserve inventory are summarised in the table below which gives an overview of the Mineral Resource history of Implats over the past 40 years.

These acquisitions and disposals have culminated in the current Implats structure as depicted below. The equity ownership depicted here represents the basis of Implats' attributable Mineral Resources and Mineral Reserves as presented on page 33.



Shaft construction at Impala

1965	1969	1980	1989	1990	1990	1991	1991	1992	1996	1998	1998	1999	1999	2000	2000	2000	
Exploration begins at Rustenburg	First mining, initial output of 100 000ozs of platinum	Increased production to 300 000ozs platinum	54% controlling interest in Messina Platinum acquired	Karee Mine sold for 27% interest in Lonplats	Rights acquired to the so-called "Deeps" at Impala; also known as the 3rd Bafokeng Area	1661 Implats obtained 37% controlling interest in Barplats	1661 Acquired mineral rights for so-called 4th and 5th Bafokeng areas from Keeley	Given overriding economic constraints, mining operations at Crocodile River Mine mothballed	Mining operations at Messina Platinum mothballed due to prevailing economic outlook	Unbundling of Gencor, Implats acquired some mineral rights including Everest South	Implats increased interest in Barplats to 83%	Established Impala Refining Services (IRS); essentially to optimise spare processing capacity	Interest in Messina Platinum sold to Southern Era	Settlement with the Royal Bafokeng Nation regarding royalties and mineral right ownership	Additional rights acquired at Impala Rustenburg; part of exchange agreement with Anglo Platinum	Winnaarshoek acquired from Platexco and amalgamated with other rights into Marula Platinum	

Implats' current corporate structure, together with the respective percentage equity stakes and corresponding platinum production in FY2008, is shown below:



2000	2001	2001	2001	2002	2002	2003	2004	2004	2004	2006	2006	2006	2007	2008	2008	2008
Rights in Everest South and North sold; interest acquired in Aquarius	37% interest in Mimosa Platinum Mine acquired from ZCE Platinum	Acquired 45% interest in Two Rivers Mine (55% owned by ARM)	35% interest in Zimplats purchased from Delta Gold	Interest in Mimosa Platinum Mine increased to 50%	Interest in Zimplats enlarged by 21% in transaction with Aurion Gold	Absa's 15% interest in Zimplats purchased	Interest in Barplats sold to the Salene Consortium	27% interest in Lonplats sold to Incwala Resources as part of an empowerment transaction	Share holding in Zimplats increased to 86.9%	Employee Share Ownership Programme (ESOP), concluded. Effective interest in Implats of 2.6%	Some 36% of the Zimplats Mineral Resources released as part of an empowerment credit transaction	Major BEE transaction concluded with the Royal Bafokeng Nation, which has an effective interest of 13.4% in Implats	74% interest acquired in Afplats' Leeuwkop project	BEE transaction concluded at Marula, current BEE ownership is 27%	20% holding in AQPSA and 8.4% in Aquarius disposed	Mining right granted at Leeuwkop project; old order mining rights converted at Impala and Marula

# Exploration review

Implats' exploration strategy remains two-pronged: the primary focus being the brownfields exploration and advancing mineral resources at current operations and assets, and the second being greenfields exploration in a continued attempt to locate new orebodies. Implats recognises that there is a cost benefit in participating in projects at an early stage, as the more advanced junior projects that are available for acquisition attract significant premiums. Implats therefore continues its offshore greenfields exploration in conjunction with other parties.

While the group's exploration focus has continued to be on primary platinum group mineral targets, attention is also being given to potential nickel targets in southern Africa, given the company's competitive position in the area of nickel refining.

#### Bushveld Complex in South Africa

Exploration around current mining operations at Impala and Marula continued in support of life-of-mine operations. At Marula the proposed Merensky Reef feasibility study area was the primary target while at Impala the main focus was on the proposed 18 shaft block. Exploration continued at the prospecting right areas on portions of the farms Elandsheuvel, Reinkoyalskraal, Doornspruit and Roodekraalspruit, and the farms Diepkuil and Klipgatkop that are situated down-dip of the present Impala mining lease boundary. A large 3-D seismic survey at the deeper portion of the mining right and prospecting right areas will commence early in FY2009.

At Afplats exploration commenced at the prospecting right areas on the farms Wolwekraal and Kareepoort, and continued at portions of the farm Hartebeestpoort. Infill drilling at the Leeuwkop project of Afplats is also being done.

Surface drilling continued at the Tamboti project on portions of the farms Tweefontein and Kalkfontein, and the farm Buffelshoek adjacent to the Two Rivers mine. Exploration also continued at the Paradys project. This grassroots project, which is a joint venture with Endulwini Resources, targets the Paradys diapiric antiform structure with a potential attenuated Critical Zone succession and is located in the eastern Bushveld.

A new prospecting right for the Springbok Project, situated south of Bela-Bela, was awarded recently to Implats. Exploration at this project will begin early in FY2009.

Exploration activities will be continued at an increased level on the Bushveld Complex given the need for 3-D seismic surveys and surface drilling at both Impala and Afplats.

### Great Dyke in Zimbabwe

At Zimplats, work in FY2008 focussed mainly on Portal 6 and the drilling of three deeper lines. Detailed geotechnical and establishment drilling was completed at Portal 3. The objectives for FY2009 are to complete the drilling of the northern half of Portal 10 to upgrade this area to an Indicated Mineral Resource. Three infill lines of holes in the northern (deep drilling) areas will be drilled.

#### Other Southern African exploration

Segwagwa project, Botswana: Implats continues to fufill the terms of the agreement with Health Hive (Pty) Ltd, with respect to the Masoke and Segwagwa intrusions in south-eastern Botswana. Favourable geophysical anomalies were soil sampled and drill tested. Sample results are awaited.

Tete project, Mozambique: The licences around the Tsangano intrusion in the Tete Province were stream and soil sampled. Follow-up work is in progress.

**Other:** Implats recently concluded a strategic exploration alliance with Australian junior Impact Minerals.

#### Offshore projects

Highbank Lake project, Canada: Limited drilling undertaken during the year to test areas with favourable potential for the development of PGE mineralisation failed to yield significant results. Geological interpretation is ongoing.

Amikoq project, Greenland: During the year Implats entered into an option and joint venture agreement with Nuna Minerals with respect to the Amikoq intrusion in south-western Greenland. Exploration activities began recently.

Ambodilafa, Madagascar: Implats continued to participate with Jubilee Platinum over the Ambodilafa intrusion. Drilling and down-hole geophysics continued during the year. PGE mineralisation, grading 3.99g/t (3PGE+Au) over 0.89m was intersected in one borehole.

Other: Post year-end, Implats concluded joint venture agreements with Xstrata and Wallbridge on two projects in the Sudbury Basin, Canada.

# Auditing in 2008

Two independent audits were conducted during the past year in line with Implats' practice of conducting external reviews of its Mineral Resources and Mineral Reserves on a three-year cycle.

SRK Consulting completed an independent audit of the Merensky Reef Mineral Resource and Mineral Reserve evaluation and estimation at Marula. This audit, together with internal work undertaken, resulted in a complete revision of the estimate and the classification thereof. The details are presented below in the Marula section.

SRK also completed a feasibility study on Portal 3 at Zimplats. Recent drilling information was incorporated in this estimates and allowed a significant increase in the measured and proven resource categories for this portal. Modifying factors applied in the study were based on the re-evaluation of the performance at Portal 2 and these factors were applied to arrive at all the underground Ore Reserve estimates as reflected in this report

# Pertinent assessment and reporting criteria

The following key assumptions and parameters, unless otherwise stated, were used in the compilation of the estimates in this declaration:

- Mineral Resource tonnage and grades are estimated *in situ*. The Mineral Resources for the Merensky Reef are estimated at a minimum mining width, and may include mineralisation below the selected cut-off grade.
- Mineral Resource estimates for the UG2 Reef reflect the channel widths only and do not include any dilution; the estimates only reflect the main UG2 Chromitite Layer. Note that the channel widths in the case of Impala and Marula are narrower than a practical minimum mining width.
- The Mineral Resource estimates for the Main Sulphide Zone are based on optimal mining widths.
- Mineral Resources are reported inclusive of Mineral Reserves, unless otherwise stated.
- Mineral Resources are stated exclusive of estimated geological losses.
- As noted in previous reports, the Mineral Resource estimates at Impala and Zimplats were reported exclusive of estimated support and stability pillars, owing to the intricate relationship with geological losses. This practice has been reviewed in light of inconsistency with the reporting of other Implats operations as well as that of other companies. Consequently, the Impala and Zimplats Mineral Resource estimates as presented in this report do not cater for estimated support and stability pillars; resulting in an apparent increase in the Mineral Resource estimates for these two operations.

- Mineral Reserve estimates include allowances for mining dilution and are reported as tonnage and grade delivered to the mill.
- Rounding-off of figures in the accompanying summary estimates may result in minor computational discrepancies; where this occurs it is not deemed significant.
- All references to tonnage are to the metric unit (tonne).
- All references to ounces (oz) are troy with the factor used being 31.10348 metric grams per ounce.
- The Mineral Resources and Mineral Reserves reported for individual operations and projects are reflected as the total estimate. The corresponding estimates relating to attributable Mineral Resources and Mineral Reserves are only given as a combined summary tabulation where specifically stated as such.
- Mineral Reserves are that portion of the Mineral Resource which technical and economic studies have demonstrated can justify extraction at the time of disclosure. Historically, Implats has only converted Mineral Resources to Mineral Reserves on completion of a full feasibility study. The exception to this has been at Zimplats, where the basis of a pre-feasibility study was applied, as permitted by the JORC Code. Implats will review this practice in line with the SAMREC 2007 clarification that only a pre-feasibility study is required for such conversions. The current ratio of Mineral Resources to Mineral Reserves is 25%. Approximately 53% of the total Mineral Resource is contained in the Inferred Mineral Resource category. Given Implats' growth strategy, the objective remains to improve this ratio in forthcoming years.
- The term Ore Reserve is the same as that applied for Mineral Reserve.
- Implats uses a discounted cash flow model that embodies economic, financial and production statistics in the valuation of mineral assets. Key inputs include:
  - relative rates of inflation in South Africa and the United States
  - rand/US dollar exchange rate
  - capital expenditure
  - operating expenditure
  - production profile
  - metal recoveries and prices

The outputs are net present value, internal rate of return, annual free cash flow, project payback period and funding requirements. Metal price and exchange rate forecasts are updated regularly by Implats' marketing department. As at 30 June 2008, a real long-term forecast for revenue per platinum ounce sold of R24 083 was used.

### Key year-on-year changes In Mineral Resource and Mineral Reserve estimates and reporting

Material and significant issues affecting the Mineral Resource and Mineral Reserve estimates and reporting as at 30 June 2008, relative to the previous reporting period, include the following:

- The sale of the equity interest in Aquarius during FY2008 means that such Mineral Resource and Mineral Reserve estimates are no longer reflected as part of the Implats inventory. This reduced the total attributable Mineral Resource by 1.6 million ounces of platinum and the attributable Mineral Reserve by 0.9 million ounces of platinum.
- The consistent manner in which pillars are dealt with in the Mineral Resource estimates (see earlier reference) resulted in an apparent increase in the Impala and Zimplats Mineral Resource estimates.
- Exploration activities at the Tamboti project and the recently acquired prospecting rights over the Afplats farms,

Kareepoort and Wolwekraal, culminated in an increase in the Inferred Mineral Resource estimate.

- Board approval of the 17 Shaft project at Impala Platinum and the commensurate increase in Mineral Reserves converted from the Mineral Resource category.
- Standardisation of reporting of metal content in terms of 5PGE+Au (g/t). (The 3PGE+Au format is shown for comparative purposes.)
- A revision and update of the Mineral Resource and Mineral Reserve categories in selected areas, in line with third party recommendations, specifically at Marula.
- Specific changes relating to estimates are clarified per operation.

# Reconciliation

A high-level reconciliation of total Mineral Resources and Mineral Reserves for the Implats group of companies is shown below. Details of the variances in addition to depletions are explained in the sub-sections per operation. Rounding-off of numbers may result in computational discrepancies, especially in these high level comparisons.

### Total Mineral Resources tonnage (million) inclusive of Mineral Reserves

	2007	2008	Variance
Impala	532	595	63
Marula	104	103	(1)
Afplats	351	394	43
Two Rivers	89	87	(1)
Tamboti	0	279	279
Zimplats	1 563	1 883	320
Mimosa	137	140	4
Totals	2 775	3 482	707

Notes: No calculation for attributable Mineral Resources included.

The main factors affecting on the variances, other than depletions, are:

- The change in the way in which pillars were dealt with resulted in increases at Impala and Zimplats. Previous reports reflect allowances for support and stability pillars at these areas.
- The negative tonnage variance at Marula can mostly be attributed to the revised Merensky Reef estimate, which is

essentially over a narrower width in comparison with previous statements.

- The inclusion of the Tamboti, Kareepoort and Wolwekraal prospecting right areas resulted in a positive variance.
- The positive variance at Mimosa is an outcome of an increased mining width.

Total Mineral	Resources Pt	ounces	(million)	_	inclusive	∩f	Mineral	Reserves
	NESOUICES I I	OULICES		_	IIICIUSIVE	UI	IVIIIICIAI	IVE2ELVE2

	2007	Depletion/mined	Growth and changes	2008
Impala	71.4	1.5	9.2	79.0
Marula	11.6	0.1	0.0	11.5
Afplats	32.5	0.0	4.0	36.5
Two Rivers	6.1	0.1	0.0	6.0
Tamboti	0.0	0.0	24.2	24.2
Zimplats	88.7	0.1	18.4	107.0
Mimosa	8.2	0.1	0.2	8.3
Totals	218.6	1.9	55.9	272.5

Notes: No calculation for attributable Mineral Resources included.

Depletion ounces were adjusted by global concentrator and mine call factors.

Potential impact of pillar losses was taken into account.

The year-on-year comparison of Mineral Reserve estimates is summarised below in terms of both tonnage and platinum ounce.

### Total Mineral Reserves tonnage (million)

	2007	Depletion/mined	Growth and changes	2008
Impala	256	16.1	67.2	308
Marula	40	1.5	0.0	38
Afplats	49	0.0	0.0	49
Two Rivers	41	2.3	1.2	40
Zimplats	242	2.6	(10.5)	228
Mimosa	36	1.7	1.1	35
Totals	663	24.1	58.9	698

Notes: No calculation for attributable Mineral Reserves included.

The main considerations affecting the year-on-year comparisons other than depletions include:

- The approval of the 17 Shaft project at Impala and the resultant increase in Mineral Reserves.
- The reason other than depletion for the negative variance at Zimplats can largely be attributed to re-estimation. This is mostly at portals 5, 6 and 7.

### Total Mineral Reserves Pt ounces (million)

	2007	Depletion/mined	Growth and changes	2008
Impala	20.8	1.3	5.0	24.5
Marula	2.5	O.1	0.0	2.4
Afplats	3.6	0.0	0.0	3.6
Two Rivers	2.5	O.1	0.0	2.4
Zimplats	12.9	0.1	(O.3)	12.5
Mimosa	2.0	0.1	0.0	1.9
Totals	44.3	1.7	4.7	47.3

Notes: No calculation for attributable Mineral Reserves included.

Depletion ounces were adjusted by global concentrator factors.

The above high-level reconciliations reflect both stability and growth opportunities for Implats and its subsidiaries.

# Mineral Resources and Mineral Reserves

### Impala

The Impala mining operation is located just to the north of Rustenburg on the western limb of the Bushveld Complex. The complex comprises an array of diverse igneous rocks, ranging in composition from ultramafic to felsic. Contained within this welllayered ultramafic to mafic succession are two horizons in the Critical Zone which host economically exploitable quantities of PGMs, namely the Merensky Reef and the underlying UG2 Reef. Both reefs sub-outcrop in the lease area and dip generally in a north-east direction at about 10°. The vertical separation between the Merensky and UG2 Reefs varies from about 125m in the south to some 45m in the north.

The Merensky Reef is generally composed of an upper feldspathic pyroxenite, overlying a thin basal chromitite stringer, followed by an



anorthosite to norite footwall and with the mineralisation decreasing from the basal chromitite stringer into the hanging wall and footwall. The UG2 Reef is defined as a main chromitite layer, with most of the mineralisation contained within this unit, followed by a poorly mineralised pegmatoidal pyroxenite footwall.

Impala holds contiguous mining rights and prospecting rights for a total area of 33 203ha across 20 farms or portions thereof. The prospecting area involving the joint venture with Royal Bafokeng Holdings (Pty) Limited (Royal Bafokeng Resources Platinum (Pty) Ltd) has not been factored into the Mineral Resource estimate; this will be facilitated once sufficient studies have been completed. Both the Merensky and UG2 Reefs are being exploited; the bulk of the mining at Impala Platinum is conventional breast mining. Mechanised bord and pillar mining takes place in selected areas only, while limited opencast mining takes place at the outcrop position.



Impala Merensky metal ratios

(%) 5 PGM + Au

### Mineral Resources (inclusive reporting)

			As at 30	June 2008			As at 30	June 2007	
		Channel tonnes	Grade (g/t) 3PGE	Grade (g/t) 5PGE	Pt oz	Channel tonnes	Grade (g/t) 3PGE	Grade (g/t) 5PGE	Pt oz
Orebody	Category	millions	+Au	+Au	millions	millions	+Au	+Au	millions
Merensky	Measured	134.6	5.92	6.78	16.7	121.3	6.06	6.94	15.4
	Indicated	98.0	6.12	7.01	12.6	89.3	6.13	7.02	11.5
	Inferred	90.6	6.70	7.68	12.7	71.2	6.83	7.83	10.2
UG2	Measured	122.2	6.81	8.87	16.6	117.8	6.93	9.03	16.3
	Indicated	81.7	6.77	8.82	11.0	73.8	6.75	8.79	9.9
	Inferred	68.0	6.95	9.06	9.4	58.5	6.96	9.06	8.1
Total		595.1	6.49	7.93	79.1	531.9	6.56	8.03	71.4

### Mineral Reserves

				June 2008				June 2007	
		Mill	Grade (g/t)	Grade (g/t)		Mill	Grade (g/t)	Grade (g/t)	
		tonnes	3PGE	5PGE	Pt oz	tonnes	3PGE	5PGE	Pt oz
Orebody	Category	millions	+Au	+Au	millions	millions	+Au	+Au	millions
Merensky	Proved	21.1	3.97	4.55	1.8	23.0	4.07	4.66	2.0
	Probable	134.4	4.00	4.58	11.3	104.7	4.04	4.63	8.9
UG2	Proved	22.1	3.85	5.02	1.7	23.2	3.89	5.06	1.8
	Probable	129.9	3.78	4.93	9.8	105.6	3.88	5.06	8.2
Total		307.5	3.89	4.76	24.5	256.4	3.96	4.85	20.8

### Mineral Resources

		As	at 30 June Pt	2008	As	at 30 June : Pt	2007
Orebody	Category	Tonnes millions	grade (g/t)	Pt oz millions	Tonnes millions	grade (g/t)	Pt oz millions
1 & 2							
Tailings							
Complex	Indicated	48.1	0.42	0.6	48.1	0.42	0.6

### Notes:

- Mineral Resources are quoted inclusive of Mineral Reserves.
- Mineral Resource estimates allow for estimated geological losses but not for anticipated pillar losses during eventual mining. In previous years allowances were indeed made for such foreseen pillar losses; the standardisation resulted in the overall increase in Mineral Resources.
- The modifying factors used to convert a Mineral Resource to a Mineral Reserve are derived from historical figures using an inhouse ore accounting system. This system is able to provide dilution factors that are applied to the *in situ* estimates to project the final product delivered to the mill.
- The Mineral Reserves quoted reflect the grade delivered to the mill rather than an *in situ* channel grade quoted in respect of Mineral Resources.
- Board approval of 17 Shaft resulted in these Mineral Resources being converted to the Mineral Reserve category.
- Mineral Resource and Mineral Reserve grades are shown as both 5PGE+Au and 3PGE+Au.
- Rounding-off of numbers may result in minor computational discrepancies.

### Mineral Resources and Mineral Reserves (continued)





UG1 Chromitite Layer at 11 Shaft, Impala

### Marula

Marula's mining operation is located on the eastern limb of the Bushveld Complex, some 35km to the north-west of Burgersfort. The geological succession is broadly similar to that of the western limb with the same two horizons occurring in the Critical Zone and which host economically exploitable quantities of PGMs, namely the Merensky Reef and the underlying UG2 Reef. Both reefs suboutcrop in the lease area and dip generally in a west-south-west direction at about 13°. The vertical separation between the Merensky and UG2 Reefs is around 400m.

The UG2 Reef is defined as a main chromitite layer, with most of the mineralisation contained within this unit, followed by a poorly mineralised pegmatoidal pyroxenite footwall. The mineable Merensky Reef is the upper portion of a pyroxenite layer, with a chromitite stringer close to the contact with the hanging wall and with the mineralisation decreasing from this upper chromitite stringer into the hanging wall and footwall.

Marula holds two contiguous mining and prospecting rights for a total area of 5 720ha across the farms Clapham and Winnaarshoek, and portions of the farms Driekop, Forest Hill and Hackney. At present Implats has an effective 73% interest in Marula following the increase in empowerment participation during the past year. The three partners now each hold a 9% interest in Marula. The conversions of the two old order mining rights at Marula were executed in January 2008.

Current mining activities target the UG2 Reef only. A conventional breast mining method would exploit the bulk of the UG2 Mineral Reserve; hybrid mining is being undertaken until the conventional operation is fully established. Potential future mining of the Merensky Reef is pending the conclusion of the present feasibility study and commensurate project approval.







Marula, on the eastern limb of the Bushveld Complex

### Mineral Resources and Mineral Reserves (continued)

#### As at 30 June 2008 As at 30 June 2007 Grade Grade Grade Grade Channel Channel (g/t) (g/t) (g/t) (g/t) tonnes **3PGE** 5PGE Pt oz tonnes 3PGE 5PGE Pt oz Orebody Category millions +Au +Au millions millions +Au +Au millions Measured 18.2 5.44 5.80 Merensky 1.8 Indicated 5.57 5.94 50.2 5.12 5.47 4.7 13.7 1.4 5.89 6.28 1.9 5.2 5.37 5.73 0.5 Inferred 17.2 UG2 8.54 9.94 8.39 9.94 Measured 28.2 3.3 28.6 3.4 Indicated 22.0 8.48 9.87 2.6 22.0 8.28 9.80 2.6 3.5 Inferred 3.5 7.50 8.88 0.4 7.50 8.88 0.4 Total 102.9 7.10 8.01 11.4 109.5 6.70 7.63 11.6

### Mineral Resources (inclusive reporting)

### **Mineral Reserves**

			As at 30	) June 2008					
			Grade	Grade			Grade	Grade	
		Mill	(g/t)	(g∕t)		Mill	(g/t)	(g/t)	
		tonnes	3PGE	5PGE	Pt oz	tonnes	3PGE	5PGE	Pt oz
Orebody	Category	millions	+Au	+Au	millions	millions	+Au	+Au	millions
UG2	Probable	38.0	4.45	5.28	2.4	39.5	4.42	5.24	2.5

### Notes:

- The figures in the above statement reflect the total estimates for Marula Platinum as at June 2008, corresponding estimated attributable Mineral Resources and Reserves are summarized elsewhere in the report.
- Mineral Resources are quoted inclusive of Mineral Reserves.
- Mineral Reserves quoted reflect the grade delivered to the mill rather than an *in situ* channel grade quoted in respect of the Mineral Resources.
- The modifying factors used in the UG2 Mineral Reserve calculation are based on the mine plan which envisages hybrid and conventional breast mining operations.
- Estimated geological losses have been accounted for in the Mineral Resource calculations, estimated pillar losses have not been accounted for in the Mineral Resource calculations.
- The UG2 Mineral Resources accounts for the main chromitite layer width only, without consideration of dilution, whilst the Merensky Reef Mineral Resources are based on a minimum width of 80cm.

- Grade estimates were obtained by means of co-kriging of UG2 and ordinary kriging of Merensky Reef borehole intersections.
- The Merensky Reef Mineral Resource estimate has been adapted significantly following the external review by SRK. The channel width selection has been adapted and is now based on a cut-off grade of 1.5g/t. This resulted in a higher average grade but narrower width for the orebody. In addition the classification has been significantly adjusted with some of the previous Indicated Mineral Resource having now progressed to the Measured category, and some reverting back to the Inferred category, based on the revised confidence levels of the estimates.
- Changes in the UG2 Mineral Resource and Mineral Reserve estimates since last year essentially reflect depletions.
- Mineral Resource and Mineral Reserve grades are now reflected as both 3PGE+Au and 5PGE+Au.
- Rounding-off of numbers may result in minor computational discrepancies.





Drilling in progress on Tamboti project

### Mineral Resources and Mineral Reserves (continued)

### Afplats

Afplats' Leeuwkop project and adjacent prospecting right areas are situated about 10km west of Brits on the western limb of the Bushveld Complex. An extensive exploration programme conducted by Afplats intersected both the Merensky and UG2 Reefs. The Merensky Reef occurs about 850m below surface at the southern boundary of Leeuwkop, with the vertical separation between the Merensky and UG2 Reefs averaging 200m. Both reefs dip generally to the north at roughly 9°.

The UG2 Reef comprises a package that is made up of two chromitite layers. The upper chromitite layer is separated from the main chromitite layer by a thin pyroxenite parting. It will be mined as a single package. The Merensky Reef, which is not considered to be economically viable at present, is the upper portion of a pyroxenite layer, with a chromitite stringer close to the contact with the hangingwall and with the mineralisation decreasing from the chromitite stringer into the hangingwall and footwall.

Afplats holds a contiguous mining and prospecting rights (some of the latter are still old order rights) for a total area of some 10 568ha

across the farms Leeuwkop, Kareepoort and Wolwekraal and portions of the farm Hartebeestpoort B, west of Brits. The acquisition of Afplats by Implats was announced in February 2007, in terms of which Implats would acquire 100% of Afplats and, by implication, an effective 74% stake in the Leeuwkop project and varying proportions in the associated subsidiaries. The mining right for the Leeuwkop area was awarded in April 2008. The final structure for the Imbasa and Inkosi areas, which comprise several portions of the farm Hartebeestpoort B, had not been finalised at year-end.

The mining layout for the Leeuwkop project, as completed in the feasibility study previously conducted by Afplats, is under review for refinement prior to project approval by the Implats board. The Mineral Reserve estimates below reflect the on-reef mechanised bord and pillar mining method as envisaged in the original feasibility study. These estimates had been modified by Implats during the previous reporting period. The likely mining method envisaged in the current feasibility study is a conventional layout, however the corresponding Mineral Reserve estimate has not been finalised and the estimate reported last year has not been updated.



### Mineral Resources (inclusive reporting)

			As at 30	June 2008		As a	t 30 June 2	007
			Grade	Grade			Grade	
		Channel	(g/t)	(g/t)		Channel	(g/t)	
		tonnes	3PGE	5PGE	Pt oz	tonnes	3PGE	Pt oz
Orebody	Category	millions	+Au	+Au	millions	millions	+Au	millions
Afplats Leeuwkop								
UG2	Indicated	54.8	5.10	6.35	5.4	54.8	5.10	5.4
	Inferred	128.9	4.70	5.89	11.9	128.9	4.70	11.9
Imbasa – Inkosi								
UG2	Inferred	167.3	4.62	5.79	15.2	167.3	4.62	15.2
Kareepoort - Wolwekraa	l							
UG2	Inferred	43.4	4.81	6.00	4.1	-	-	_
Total		394.4	4.73	5.92	36.5	351.0	4.72	32.5

### Mineral Reserves

			As at 30	June 2008		As at 30 June 2007				
			Grade	Grade			Grade			
		Mill	(g∕t)	(g/t)		Mill	(g/t)			
		tonnes	3PGE	5PGE	Pt oz	tonnes	3PGE	Pt oz		
Orebody	Category	millions	+Au	+Au	millions	millions	+Au	millions		
Afplats Leeuwkop										
UG2	Probable	49.3	3.75	4.67	3.6	49.3	3.75	3.6		

### Notes:

- The figures in the above statement reflect the total Mineral Resource and Mineral Reserve estimates for Afplats and related subsidiaries as at June 2008, corresponding estimated attributable Mineral Resources and Mineral Reserves to Implats are summarized elsewhere in the report.
- Mineral Resources are quoted inclusive of Mineral Reserves.
- Mineral Reserves quoted reflect the grade delivered to the mill rather than an *in situ* channel grade quoted in respect of the Mineral Resources. As indicated above these are unchanged from the estimates reported last year, however it is envisaged that it will in future reflect a conventional mining layout.
- The UG2 grade estimates are based on borehole assay data. These are still based on the estimates compiled by Snowden;

with the Leeuwkop estimates having been audited by SRK in the competent persons report.

- Implats still chooses not to publish Merensky Reef Mineral Resource estimates as the rationale of eventual economic extraction is at present doubtful.
- Mineral Resource estimate is now included for the newly awarded Kareepoort and Wolwekraal areas; this resulted in an increase of the total Mineral Resource estimate.
- Mineral Resource and Mineral Reserve grades are now reflected as both 3PGE+Au and 5PGE+Au.
- Rounding-off of numbers may result in minor computational discrepancies.



### Mineral Resources and Mineral Reserves (continued)

### Two Rivers

Two Rivers is located approximately 35km to the south-west of Burgersfort on the eastern limb of the Bushveld Complex. In broad terms, the geological succession is similar to that of other areas of the eastern limb; both the Merensky Reef and underlying UG2 Reef occur at Two Rivers. Both reefs sub-outcrop in the lease area and dip generally to the west at about 10°. The vertical separation between the Merensky and UG2 Reefs is around 140m.

Three distinct reef facies (reef types) have been defined for the UG2 Reef at Two Rivers, namely the 'normal facies' with a thick main chromitite layer; a 'split reef' in the southern and west-central parts, characterised by an internal pyroxenite/norite lens up to 6m thick and situated approximately two-thirds of the chromitite thickness

upwards from the base; and a 'southern facies' comprising a second pyroxenite/norite lens situated approximately one-third of the chromitite thickness from the base. The Merensky Reef is the upper portion of a pyroxenite layer, with a chromitite stringer close to the contact with the hanging wall and with the mineralisation decreasing from the chromitite stringer into the hanging wall and footwall. Only the UG2 Reef is currently being mined.

Two Rivers holds a contiguous old order mining right over a total of 1 879ha on a portion of the farm Dwarsrivier. Mine development targeting the UG2 Reef began in 2005 and the mining layout is based on a mechanised bord and pillar design. The operation is managed by ARM and Implats has a 45% interest in the joint venture.



 Two Rivers UG2 metal ratios

 (%) 5 PGM + Au

 50

 40

 30

 20

 10

 PI 46.0 Pd 27.8 Rh 8.6 Ru 13.3 Ir 3.4 Au 0.8



Two Rivers on the eastern limb of the Bushveld Complex

### Mineral Resources (inclusive reporting)

			As at 30	June 2008		As at 30 June 2007			
			Grade	Grade			Grade		
		Channel	(g∕t)	(g/t)		Channel	(g∕t)		
		tonnes	3PGE	5PGE	Pt oz	tonnes	3PGE	Pt oz	
Orebody	Category	millions	+Au	+Au	millions	millions	+Au	millions	
Merensky	Indicated	18.7	3.34	3.55	1.2	18.7	3.34	1.2	
	Inferred	3.9	3.16	3.36	0.2	3.9	3.16	0.2	
UG2	Measured	14.8	4.62	5.52	1.2	13.7	4.55	1.1	
	Indicated	41.7	3.70	4.46	2.8	44.1	3.82	3.0	
	Inferred	8.1	3.90	4.68	0.6	8.1	3.90	0.6	
Total		87.2	3.77	4.42	6.0	88.5	3.81	6.1	

### Mineral Reserves

			As at 30.	June 2008		As a	t 30 June 2	007
			Grade	Grade			Grade	
		Mill	(g∕t)	(g∕t)		Mill	(g∕t)	
		tonnes	3PGE	5PGE	Pt oz	tonnes	3PGE	Pt oz
Orebody	Category	millions	+Au	+Au	millions	millions	+Au	millions
UG2	Proved	10.6	3.68	4.46	0.7	10.2	3.74	0.7
	Proved (Stockpile)	0.1	3.55	4.10	0.01	0.2	3.71	0.06
	Probable	28.9	3.20	3.86	1.7	30.2	3.34	1.8
Total		39.5	3.33	4.02	2.4	40.6	3.44	2.5

### Notes:

- The figures in the above statement reflect the total estimates for Two Rivers, as at 30 June 2008. The corresponding estimated Mineral Resources and Reserves attributable to Implats are summarised elsewhere in the report.
- Mineral Resources are quoted inclusive of Mineral Reserves
- Grade estimates were obtained by means of ordinary kriging of UG2 and Merensky Reef borehole intersections.
- The modifying factors used in the UG2 Mineral Reserve calculations are based on mechanised room and pillar mining operations.
- The Merensky Reef estimates are unchanged from the previous statements. The Measured UG2 Mineral Resource estimate has increased as a larger proportion of the Indicated estimate is now progressed to this category. The overall Mineral Resource estimate is effectively unchanged if depletion is taken into account.

- The outline of the Mineral Reserve classified as Proved Mineral Reserve has been adapted. The mining schedule has been reviewed and the Mineral Reserve estimate was updated, resulting in a slight decrease in estimated head grade but virtually no impact on the overall estimate once depletion is accounted for.
- The individual metal proportions for the Merensky Reef were derived by Implats.
- Mineral Resource and Mineral Reserve grades are reflected as both 3PGE+Au and 5PGE+Au.
- Rounding-off of numbers may result in minor computational discrepancies.
- More details regarding the Mineral Resources and Mineral Reserves can be obtained in the 2008 ARM Annual Report.

### Mineral Resources and Mineral Reserves (continued)





Two Rivers on the eastern limb of the Bushveld Complex

### Tamboti

The Tamboti project is located down-dip of the Two Rivers mine and approximately 45km to the south-west of Burgersfort on the eastern limb of the Bushveld Complex. In broad terms, the geological succession is similar to that of other areas of the eastern limb and Two Rivers in particular.

Both the Merensky Reef and underlying UG2 Reef are present and affected by numerous faults. The vertical separation between the Merensky and UG2 Reefs is around 160m. The Steelpoortpark granite occurs in the south-western part of the area. Two distinct reef facies (reef types) have been defined for the UG2 Reef, namely the

'normal facies' with a thick main chromitite layer and a 'split reef', characterised by an internal pyroxenite/norite lens. The Merensky Reef is the upper portion of a pyroxenite layer, with a chromitite stringer close to the contact with the hangingwall and with the mineralisation decreasing from the chromitite stringer into the hanging wall and footwall.

Impala holds a prospecting right over a total of 8 254ha on a large portion of the farms Tweefontein and Kalkfontein, as well as the farm Buffelshoek; this constitutes the Tamboti project. No Merensky Reef is present at Tweefontein and the UG2 Reef occurs only on a small portion of this farm. The total mineral rights holding at Kalkfontein is some 60%.

### Mineral Resources

			As at 30	June 2008	
		Channel tonnes	Grade (g/t)	Grade (g/t)	Pt oz
Orebody	Category	millions	3PGE+Au	5PGE+Au	millions
Kalkfontein					
Merensky	Inferred	55.1	3.34	3.64	3.5
UG2	Inferred	68.9	5.65	6.92	6.8
Buffelshoek					
Merensky	Inferred	64.1	4.06	4.40	5.0
UG2	Inferred	91.2	5.92	7.08	8.9
Total		279.4	4.92	5.75	24.2

#### Notes:

- The figures in the above statement reflect the total estimates for the Tamboti Project as at 30 June 2008, and are included in the total attributable to Implats. The small area of UG2 Reef that occurs at Tweefontein was excluded as it is structurally complex.
- Only Mineral Resources are quoted, as Mineral Reserves cannot be calculated at this stage.
- Mineral Resource estimates allow for estimated geological losses but not for anticipated pillar losses during eventual mining.
- Grade estimates were obtained as an arithmetic average, as the use of other geostatistical methods is currently not meaningful.

- The Merensky Reef represents the mineralised portion of the upper portion of the pyroxenite layer, extended in some cases to a minimum mining width of 100cm.
- The UG2 Reef includes the main and leader chromitite layers, as due to their close proximity it will not be possible to separate these during mining.
- Mineral Resource grades are reflected as both 3PGE+Au and 5PGE+Au.
- Rounding-off of numbers may result in minor computational discrepancies.





### Mineral Resources and Mineral Reserves (continued)





Exposure in open cast excavation at Impala.

### Zimplats

Zimplats' Ngezi mine is located south-west of Harare in the Sebakwe sub-chamber of the Hartley Complex in the Great Dyke in Zimbabwe. Also in the Hartley Complex is the Hartley Mine, but in the Darwendale sub-chamber, 77km to the north. The Hartley Complex is about 100km long and contains approximately 80% of Zimbabwe's PGM Mineral Resources. The north-north-east-trending layered igneous rocks within the basin dip at between 5° and 20° near the margins and flatten out near the centre.

The platinum-bearing Main Sulphide Zone (MSZ) lies between 5m and 50m below the base of the mafic sequence. The MSZ is a continuous layer between 2m and 10m thick that forms an elongated basin. Peak values for the base metals and various PGMs are offset vertically with palladium at the base, platinum in the centre and nickel above. It is difficult to visually identify the MSZ.

Zimplats holds mining rights over two areas comprising a total of 48,500ha across the Hartley Complex in the Great Dyke. Underground stoping at Zimplats currently consists of mechanised bord and pillar layouts. Underground production is in the build-up phase particularly at Portal 1 and 4; the production at Portal 2 has reached steady state.





### Mineral Resources and Mineral Reserves (continued)

#### As at 30 June 2008 As at 30 June 2007 Grade Grade Grade (g/t) (g/t) (g/t) **3PGE** 3PGE **5PGE** Ni Cu Pt oz Tonnes Ni Cu Pt oz Tonnes Orebody Category millions +Au +Au % % millions millions +Au % % millions Ngezi Portals - Advanced to Reserve 3.48 3.68 0.10 0.07 4.5 69.1 3.47 0.09 0.09 3.8 MSZ Measured 80.6 0.08 3.54 Indicated 233.9 3.53 3.73 0.11 13.3 205.6 0.11 0.09 11.7 Total 315 3.52 3.72 0.11 0.08 17.8 275 3.52 0.10 0.09 15.6 Ngezi Portals - Not Advanced to Reserve MSZ Measured 29.1 3.39 3.59 0.10 0.09 1.5 21.7 3.43 0.11 0.12 1.1 Indicated 226.4 3.51 3.70 0.12 0.09 12.5 188.2 3.51 0.12 0.10 10.4 Inferred 134 3.44 3.63 0.13 0.09 7.7 112 3.44 0.13 0.09 6.4 390 21.7 Total 3.48 3.67 0.12 0.09 322 3.48 0.12 0.10 17.9 Mining Lease Extensions north of Portal 10 4.56 0.18 44.6 4.56 0.22 0.18 3.0 MSZ Indicated 53.8 4.80 0.22 3.6 3.59 3.59 Inferred 829 3.79 0.15 0.13 45.1 673 0.15 0.13 36.6 3.65 3.85 0.13 718 0.15 0.13 39.7 Total 883 0.15 48.8 3.65 Hartley 2.0 1.7 MSZ Measured 28.3 4.53 4.78 0.14 0.12 24.1 4.53 0.14 0.12 3.97 9.3 Indicated 143.1 4.19 0.13 0.11 117.1 3.98 0.13 0.11 7.6 3.89 3.0 Inferred 46 4.10 0.13 0.10 28 3.87 0.13 0.10 1.8 Total 218 4.03 4.25 0.13 0.11 14.2 169 4.04 0.13 0.11 11.1 Oxides - all areas MSZ Indicated 16.8 3.46 3.66 0.10 0.07 0.9 17.0 3.47 0.10 0.07 1.0 3.85 3.5 Inferred 61 3.65 0.12 0.10 3.5 61 3.67 0.12 0.10 Total 78 3.61 3.81 0.09 4.4 78 3.62 0.12 0.09 4.5 0.12 Overall Total 1 883 3.64 3.84 0.13 0.11 107.0 1 563 3.63 0.13 0.11 88.7

### Mineral Resources (inclusive reporting)

### Ore Reserves

				As at 30 June 2008				As at 30 June 2007				
			Grade	Grade					Grade			
			(g∕t)	(g∕t)					(g∕t)			
		Tonnes	3PGE	5PGE	Ni	Cu	Pt oz	Tonnes	3PGE	Ni	Cu	Pt oz
Orebody	Category	millions	+Au	+Au	%	%	millions	millions	+Au	%	%	millions
MSZ	Proved	65.7	3.37	3.56	0.10	0.07	3.5	57.0	3.34	0.10	0.07	3.0
	Probable	162.6	3.43	3.63	0.11	0.08	9.0	184.3	3.37	0.11	0.08	9.9
	Total	228.4	3.41	3.61	0.10	0.07	12.5	241.5	3.36	0.11	0.08	12.9

### Notes:

- The figures in the above statement reflect the total Mineral Resource and Ore Reserve estimate for Zimplats as at 30 June 2008, corresponding estimated Mineral Resources and Ore Reserves attributable to Implats are summarised elsewhere in the report.
- Mineral Resources are quoted inclusive of Ore Reserves.
- Mineral Resource estimates allow for estimated geological losses, however no allowance is made for anticipated pillar losses during eventual mining. This is a significant change in comparison with

the previous statements and has resulted in an apparent increase of some 20% in the overall Mineral Resource estimate.

- The Ore Reserves quoted reflect anticipated grades delivered to mill.
- Mineral Resources have been estimated using floating average and kriging techniques on data derived from surface boreholes.
   Estimates are based on composite widths that vary depending on cut-off grades, which are based on appropriate economic conditions.

- SRK completed a feasibility study on Portal 3. Recent resource drilling was incorporated in this estimate and allowed a significant increase in the Measured and Proven category for this portal. Modifying factors applied in this study were based on a re-evaluation of the performance at Portal 2 and these factors have been applied at all the underground Ore Reserve estimates presented in this statement.
- The overall Ore Reserve tonnage decreased by 5% due to depletion and re-estimation. Proven Ore Reserves increased by

15% after depletion due mainly to an increase in this category at Portal 3. Re-estimation mostly affected Ore Reserves estimates for Portals 5, 6 and 7.

- Rounding-off of numbers may result in minor computational discrepancies.
- More details regarding the Mineral Resources and Mineral Reserves can be obtained in the 2008 Zimplats Annual Report.



Drilling at Zimplats

### Mineral Resources and Mineral Reserves (continued)

### Mimosa

Mimosa is also located in Zimbabwe, east of Bulawayo in the Wedza Complex of the Great Dyke. PGM Mineral Resources at Mimosa are located in four erosionally isolated and fault-bounded blocks, consisting from north to south of: the North Hill, South Hill, the Mtshingwe and Far South Hill areas. The Mimosa mine is located in the eastern part of the South Hill block. The north-north-east trending layered igneous rocks within the layering dip from the sides towards the axis of the intrusion and flatten out near the centre.

The platinum-bearing Main Sulphide Zone (MSZ) lies about 10m below the base of the mafic sequence. The MSZ is a continuous layer of 2 – 3m thick that forms an elongated basin. The MSZ at Mimosa has a well-defined grade profile with an identifiable reef horizon marker facilitating grade control.

Mimosa holds contiguous mining rights for a total area of 6 590ha across the Wedza Complex in the Great Dyke. As at

30 June 2008, Implats owned a 50% shareholding in Mimosa Investments Limited (with Aquarius Platinum Limited owning the remaining 50%).

Underground stoping operations at Mimosa are being conducted by means of mechanised bord and pillar methods. The mining method was changed from a combination of semi-mechanised and mechanised sections to a fully mechanised operation.





### Mineral Resources (inclusive reporting)

				As at 30	June 20	08*			As at 3	30 June 2	007**	
			Grade	Grade					Grade			
			(g/t)	(g/t)					(g/t)			
		Tonnes	3PGE	5PGE	Ni	Cu	Pt oz	Tonnes	3PGE	Ni	Cu	Pt oz
Orebody	Category	millions	+Au	+Au	%	%	millions	millions	+Au	%	%	millions
South Hill	Measured	43.1	4.01	4.27	0.14	0.11	2.7	41.9	4.06	0.14	0.12	2.7
	Indicated	26.9	3.54	3.78	0.14	0.12	1.5	26.2	3.58	0.15	0.12	1.5
	Inferred	15.0	3.85	4.09	0.13	0.12	0.9	14.7	3.89	0.14	0.12	0.9
	Inferred											
	(Oxides)	6.6	3.70	3.95	0.13	0.12	0.4	6.5	3.74	0.14	0.12	0.4
Total		91.6	3.82	4.07	0.14	0.12	5.5	89.3	3.87	0.14	0.12	5.5

### Ore Reserves

				As at 30	June 20	08*		As at 30 June 2007**				
			Grade	Grade					Grade			
		Mill	(g∕t)	(g∕t)				Mill	(g/t)			
		tonnes	3PGE	5PGE	Ni	Cu	Pt oz	tonnes	3PGE	Ni	Cu	Pt oz
Orebody	Category	millions	+Au	+Au	%	%	millions	millions	+Au	%	%	millions
South Hill												
	Proved	18.4	3.61	3.86	0.14	0.12	1.1	19.5	3.64	0.14	0.12	1.1
	Probable	16.9	3.33	3.55	0.15	0.12	0.9	16.5	3.38	0.15	0.12	0.9
Total		35.4	3.48	3.71	0.15	0.12	1.9	36.0	3.52	0.15	0.12	2.0

### Mineral Resources

				As at 30	June 20	08*		As at 30 June 2007**				
			Grade	Grade					Grade			
			(g∕t)	(g∕t)					(g/t)			
		Tonnes	3PGE	5PGE	Ni	Cu	Pt oz	Tonnes	3PGE	Ni	Cu	Pt oz
Orebody	Category	millions	+Au	+Au	%	%	millions	millions	+Au	%	%	millions
North Hill												
	Inferred	48.7	3.64	3.90	0.14	0.11	2.8	47.4	3.70	0.14	0.11	2.8
* 2008 data	at 2.0m cut							** 2007	data at	1.95m ci	ut	

#### Notes:

- The figures in the statement above reflect the total Mineral Resource and Ore Reserve estimates for Mimosa as at 30 June 2008, corresponding estimated Mineral Resources and Reserves attributable to Implats are summarised elsewhere in the report.
- Mineral Resources are quoted inclusive of Ore Reserves.
- Mineral Resources are quoted before accounting for anticipated pillar losses. Predicted geological losses have been subtracted from the Mineral Resource estimates.
- Compared to previous published figures the material differences are:

- Mineral Resources estimates are now quoted at a 2.0m width aligned with the overall conversion of the mining activities from a combination of semi-mechanised and mechanised section to a fully mechanised operation.
- The resultant revised widths impacted on both the tonnage and grade estimated.
- No additional surface drilling has been conducted and the outline of the different Mineral Resource and Mineral Reserve categories remain unchanged from last year.
- Additional changes are attributed to depletion.
- Rounding-off of numbers may result in minor computational discrepancies.

# Mineral Resource Summary – exclusive of Mineral Reserves

Both inclusive and exclusive styles of reporting Mineral Resources are permitted by the governing codes. Implats has adopted the inclusive style of reporting for consistency purposes and to be aligned with its strategic partners. A collation of the Mineral Resource estimates exclusive of Mineral Reserves is presented below as it allows for additional transparency. Note that this format is not adhered to by strategic partners and the corresponding estimates have been derived from details provided to Implats. The tabulation below should be read in conjunction with the Mineral Reserve statements in the preceding sections. A direct comparison of tonnes and grade is not possible between the inclusive and exclusive styles of reporting forms owing to the mixing of channel and mill figures.

### Summary Mineral Resource estimate, exclusive of Mineral Reserves, as at 30 June 2008:

	Mi	neral Resources Exclusive of Miner	ral Reserves		2008	
				Tonnage	Grade (g/t)	Pt Oz
	Orebody	Remarks	Category	(millions)	5PGE+Au	(millions
Impala	Merensky		Measured	10.0	6.19	1.1
			Indicated	91.2	6.92	11.6
			Inferred	91.9	7.68	12.9
	UG2		Measured	20.3	8.76	2.7
			Indicated	81.7	8.82	11.0
			Inferred	69.1	9.07	9.6
		Total Impala		364	8.03	48.9
Marula	Merensky		Measured	18.2	5.80	1.8
			Indicated	13.7	5.94	1.4
			Inferred	17.2	6.28	1.9
	UG2		Indicated	22.0	9.87	2.6
			Inferred	3.5	8.88	0.4
		Total Marula		75	7.28	8.0
Afplats	UG2	Leeuwkop	Inferred	128.9	5.89	11.9
		Imbasa & Inkosi	Inferred	167.3	5.79	15.2
		Kareepoort & Wolwekraal	Inferred	43.4	6.00	4.1
		Total Afplats		340	5.86	31.2
wo Rivers Me	Merensky		Indicated	18.7	3.55	1.2
			Inferred	3.9	3.36	0.2
	UG2		Inferred	8.1	4.68	0.6
		Total Two Rivers		31	3.82	2.0
Tamboti	Merensky		Inferred	119	4.05	8.5
	UG2		Inferred	160	7.01	15.7
		Total Tamboti		279	5.75	24.2
Zimplats	MSZ		Measured	57.4	4.18	3.6
			Indicated	440.1	3.99	26.4
			Inferred	1 070.7	3.79	59.2
		Total Zimplats		1 568	3.86	89.2
Mimosa	MSZ	South Hill	Measured	19.4	4.27	1.2
			Indicated	4.6	3.78	0.3
			Inferred	15.0	4.09	0.9
			Inferred (Oxides)	6.6	3.95	0.4
		North Hill	Inferred	48.7	3.90	2.8
		Total Mimosa		94	4.00	5.6
			Measured	125	5.33	10
			Indicated	672	5.20	54
All Minera	I Resources exclus	ive of Mineral Reserves	Inferred	1 674	4.84	144
Implats		Total		2 751	4.95	209

Note that the tabulation above does not reflect attributable Mineral Resources but rather total Mineral Resources exclusive of Mineral Reserves.

# Individual platinum group metal proportions

The platinum-bearing deposits typically host six of the platinum group metals which are nearly always found in association with each other. These metals are platinum, palladium, rhodium, ruthenium, iridium and osmium. The southern African deposits are typically dominated by platinum; however, significant value can be derived from the other metals, depending on prevailing market conditions. The proportion of osmium is not routinely measured due to its inhibiting chemical properties and extremely low concentration levels. In addition, gold is found in association with these metals. The table below gives an estimate of the relative proportion of these metals as found in the Implats deposits. Note that rounding-off of numbers affects the accuracy of the proportions reported.

### Proportions of platinum group metals expressed as a percentage relative to the total:

					5PGM+Au P	roportions (%)		
			Pt	Pd	Rh	Ru	lr	Au
Impala	Merensky UG2	b b	56.9 47.6	24.9 25.8	4.4 8.9	8.3 13.5	1.8 3.5	3.6 0.7
Marula	Merensky UG2	a b	53.4 37.1	31.0 38.0	2.6 8.3	5.2 12.1	1.0 3.4	6.8 1.0
Afplats	UG2	а	47.5	23.0	9.2	15.8	4.0	0.5
Two Rivers	Merensky UG2	C a	56.6 46.0	27.4 27.8	2.7 8.6	5.9 13.3	1.0 3.4	6.4 0.8
Tamboti	Merensky UG2	a a	55.5 44.2	28.1 30.7	2.9 8.5	6.0 12.7	1.1 3.1	6.4 0.9
Zimplats	MSZ	а	47.2	36.5	4.0	3.6	1.7	7.0
Mimosa	MSZ	b	45.7	36.3	4.1	4.0	2.5	7.4

a estimate derived from borehole sampling estimates/resource model.

b estimate derived from historic mill feed composite control sampling.

c Implats estimates, derived from borehole sampling not published by ARM.

# Implats' attributable Mineral Resources and Reserves

Since FY2007, Implats has reported a summary of total attributable platinum ounces, sourced from all categories of Mineral Resources of the Implats' group of companies and its other strategic interests based on the percentage equity interest held. The following tables reflect estimates for platinum, palladium and rhodium, based on the percentage equity interest held by Implats. The BEE transaction with the Royal Bafokeng Holdings (Pty) Limited (RBH) was executed at

an Implats level and such ownership is not reflected here at an operational level. No future potential additional BEE participation is accounted for. For clarity, both attributable Mineral Resources, inclusive of Mineral Reserves, and attributable Mineral Reserves are shown in separate tables. Note that these are not in addition to each other. These are summary estimates and inaccuracy is derived from the rounding-off of numbers.



A 99.99% pure platinum bar

### Implats' attributable Mineral Resources and Reserves (continued)

### Attributable Mineral Resources inclusive of Mineral Reserves as at 30 June 2008 Based on Implats' equity interest

			2008	(	Ounces at		Implats	Attr	ibutable	
					millio	าร	%		millions	
			Tonnage				owner-			
	Orebody	Category	millions	Pt	Pd	Rh	ship	Pt	Pd	Rh
Impala	Merensky	Measured	134.6	16.7	7.3	1.30	100	16.7	7.3	1.30
		Indicated	98.0	12.6	5.5	0.98	100	12.6	5.5	0.98
		Inferred	90.6	12.7	5.6	0.99	100	12.7	5.6	0.99
	UG2	Measured Indicated	122.2 81.7	16.6 11.0	9.0 6.0	3.09 2.05	100 100	16.6 11.0	9.0 6.0	3.09 2.05
		Inferred	68.0	9.4	5.1	1.75	100	9.4	5.1	2.05
	Total	Interred	595	79.1	38.5	10.16	100	79.1	38.5	10.6
Marula	Merensky	Measured	18.2	1.8	1.0	0.09	73.0	1.3	0.8	0.06
IVIAIUIA	IVIELEIISKY	Indicated	13.7	1.0	0.8	0.09	73.0	1.0	0.6	0.08
		Inferred	17.2	1.9	1.1	0.09	73.0	1.4	0.8	0.07
	UG2	Measured	28.2	3.3	3.4	0.75	73.0	2.4	2.5	0.55
		Indicated	22.0	2.6	2.7	0.58	73.0	1.9	1.9	0.42
		Inferred	3.5	0.4	0.4	0.08	73.0	0.3	0.3	0.06
	Total		103	11.4	9.4	1.66		8.3	6.9	1.21
Afplats										
Leeuwkop	UG2	Indicated	54.8	5.3	2.6	1.03	74	3.9	1.9	0.76
		Inferred	128.9	11.6	5.6	2.24	74	8.6	4.2	1.66
Imbasa		Inferred	70.0	6.0	2.9	1.17	60	3.6	1.8	0.70
Inkosi		Inferred	97.3	8.7	4.2	1.69	49	4.3	2.1	0.83
Kareepoort/ Wolwekraal		Inferred	43.4	4.0	1.9	0.77	74	2.9	1.4	0.57
		Interieu					74			
Afplats	Total		394	35.7	17.3	6.90		23.4	11.3	4.52
Two Rivers	Merensky	Indicated	18.7	1.2	0.6	0.06	45	0.5	0.3	0.03
		Inferred	3.9	0.2	0.1	0.01	45	0.1	0.1	0.01
	UG2	Measured Indicated	14.8 41.7	1.2 2.8	0.7 1.7	0.23 0.51	45 45	0.5 1.2	0.3 0.7	0.10 0.23
		Inferred	8.1	0.6	0.3	0.10	45	0.3	0.2	0.25
	Total	inioriod	87	6.0	3.4	0.91	10	2.7	1.5	0.41
Tamboti	Merensky	Inferred	119.2	8.6	4.4	0.45	100	8.6	4.4	0.45
lambou	UG2	Inferred	160.2	16.0	11.1	3.05	100	16.0	11.1	3.05
	Total		279	24.6	15.4	3.50		24.6	15.4	3.50
Zimplats	MSZ	Measured	137.9	8.1	6.3	0.68	86.9	7.1	5.5	0.59
Zimpiais	IVIJZ	Indicated	674.0	39.9	30.9	3.35	86.9	34.7	26.8	2.91
		Inferred	1 071	61.5	47.6	5.18	86.9	53.5	41.4	4.49
	Total		1 883	109.6	84.8	9.20		95.2	73.7	7.99
Mimosa	MSZ	Measured	43.1	2.7	2.1	0.24	50	1.4	1.1	0.12
wiiiii03a	IVIJL	Indicated	26.9	1.5	1.2	0.24	50	0.7	0.6	0.12
		Inferred	15.0	0.9	0.7	0.08	50	0.5	0.4	0.04
		Inferred (Oxides)	6.6	0.4	0.3	0.03	50	0.2	0.2	0.02
		Inferred N Hill	48.7	2.8	2.2	0.25	50	1.4	1.1	0.13
	Total		140	8.3	6.6	0.74		4.1	3.3	0.37
Implats	Total		3 482	275	175	33		237	151	28
			0 102	2,5	.,,,			_0,		20

For comparative purposes note that Implats reported some 187 million attributable platinum ounces at 30 June 2007 from the summation of all Mineral Resources







The details provided above regarding the individual operations and projects reflect both stability and growth opportunities for Implats.

The group remains committed to an integrated mineral resource management process and various initiatives are driven to continuously improve mineral resource management protocols, processes, systems and skills. The development, attraction and retention of skills remains the highest risk item relating to continuous improvement in mineral resource management and the reporting of Mineral Resources and Mineral Reserves.

The expectation is that the overall Mineral Resource base will continue to grow in the next few years, especially once sufficient work has been completed on the RBH/Implats joint venture at Rustenburg. Progress is also being made with other prospecting projects that should be reflected in future statements.

### Attributable Mineral Reserves as at 30 June 2008

			2008	Ounces at 100% millions				Attributable ounces		
			Tonnage	Pt	Pd	ls Rh	% owner-	Pt	millions Pd	s Rh
	Orebody	Category	millions	<u> </u>	ru		ship	FL	ru	
Impala	Merensky	Proved	21.1	1.8	0.8	0.14	100%	1.8	0.8	0.14
	5	Probable	134.4	11.3	4.9	0.88	100%	11.3	4.9	0.87
	UG2	Proved	22.1	1.7	0.9	0.32	100%	1.7	0.9	0.32
		Probable	129.9	9.8	5.3	1.82	100%	9.8	5.3	1.83
	Total		307.5	24.5	11.9	3.15	100%	24.5	11.9	3.15
Marula	UG2	Probable	38.0	2.4	2.5	0.54	73.0%	1.7	1.8	0.39
Afplats	UG2	Probable	49.3	3.5	1.7	0.68	74%	2.6	1.3	0.50
Two Rivers	UG2	Proved	10.7	0.7	0.4	0.13	45%	0.3	0.2	0.06
		Probable	28.9	1.6	1.0	0.31	45%	0.7	0.4	0.14
	Total		39.5	2.4	1.4	0.44	45%	1.1	0.6	0.20
Zimplats	MSZ	Proved	65.7	3.6	2.7	0.30	86.9%	3.1	2.4	0.26
		Probable	162.6	8.9	6.9	0.75	86.9%	7.8	6.0	0.65
	Total		228.4	12.5	9.7	1.05	86.9%	10.9	8.4	0.91
Mimosa	MSZ	Proved	18.4	1.1	0.8	0.09	50%	0.5	0.4	0.05
		Probable	16.9	0.9	0.7	0.08	50%	0.4	0.3	0.04
	Total		35.4	2.0	1.5	0.17	50%	1.0	0.8	0.09
Implats	Total		698	47	29	6		42	25	5

For comparative purposes note that Implats reported some 40 million attributable platinum ounces in FY2007 from the summation of all Mineral Reserves.



Implats attributable Mineral Reserves based on equity interest (Moz) by source



# Glossary of terms

Afplats: African Platinum Limited

Aquarius: Aquarius Platinum Limited

Anorthosite: Plutonic rock composed almost entirely of plagioclase feldspar.

**ARM**: African Rainbow Minerals Limited of which ARM Platinum is a subsidiary

ASX: Australian Securities Exchange

BEE: Black economic empowerment

Bord and pillar: Underground mining method where ore is extracted from rectangular shaped rooms, leaving parts of the ore as pillars to support the roof. Pillars are usually rectangular and arranged in a regular pattern.

**Concentrating:** A process of splitting the milled ore in two fractions, one containing the valuable minerals, the other waste.

Decline: A shallow dipping mining excavation used to access the orebody.

**Development:** Underground excavation for the purpose of accessing Mineral Reserves.

DME: Department of Minerals and Energy

Dunite: Coarse-grained, igneous rock consisting mainly of olivine.

**Dyke:** A wall-like body of igneous rock that is intruded (usually vertically) into the surrounding rock in such a way that it cuts across the stratification (layering) of this rock.

FACF: Fire assay conversion factor is merely the ratio of (5PGE+Au):(3PGE+Au). Note that this does not merely reflect the impact of ruthenium and iridium.

Facies: A rock unit defined by its composition, its shape and internal geometry. Generally, a sub-unit of a more extensive rock unit with defining compositional, textural and other characteristics.

g/t: grammes per tonne. The unit of measurement of grade, equivalent to parts per million.

GSSA: Geological Society of South Africa

HDSA: Historically disadvantaged South Africans, being South African nationals who were, prior to 1994, disadvantaged whether by legislation or convention.

Head grade: The value, usually expressed in parts per million or gram per tonne, of the contained mineralisation of economic interest in material delivered to the mill.

JORC: The Australasian Code for Reporting of Mineral Resources and Ore Reserves

JSE: The JSE Limited, the South African securities exchange based in Johannesburg. Formerly, the JSE Securities Exchange and prior to that the Johannesburg Stock Exchange

LSE: London Stock Exchange

In situ: In its natural position or place.

IRS: Impala Refining Services Limited

Kriging: A geostatistical estimation method that gives the best-unbiased linear estimates of point values or of block averages.

Mafic: An igneous rock composed chiefly of dark ferromagnesium minerals.

Merensky Reef: A horizon in the Critical Zone of the Bushveld Complex often containing economic grades of PGM. The term "Merensky Reef" as it is generally used refers to that part of the Merensky unit that is economically exploitable, regardless of the rock type.

MPRDA: Minerals and Petroleum Resources Development Act

NYSE: New York Stock Exchange

**Pegmatoid:** An igneous rock that has the course-grained texture of a pegmatite but lacks graphic intergrowths.

**PGE:** Platinum group elements comprising six elemental metals of the platinum group. The metals are platinum, palladium, rhodium, ruthenium, iridium and osmium.

**3PGE+Au:** Refers to the sum of platinum, palladium, rhodium and gold as determined by a fire assay method (typically by a lead collection procedure); notably there are various methods in operation at different laboratories and companies; these are not directly comparable. These fire assay methods typically undermeasure the actual total platinum, palladium, rhodium and gold content.

**5PGE+Au:** Refers to the sum of platinum, palladium, rhodium, ruthenium, iridium and gold as determined by a NiS fire assay procedure; this is the most accurate assay procedure, and results can be compared between laboratories but is time consuming and expensive.

PGM: Platinum group metals being the metals derived from PGE.

**Pyroxenite:** An ultra-basic igneous rock consisting of ferromagnesian minerals which are usually less than 40% by volume.

Reef: A local term for a metalliferous mineral deposit.

SAIMM: South African Institute of Mining and Metallurgy

SAMREC: The South African Mineral Resource Committee

SAMREC code: The South African code for the reporting of exploration results, Mineral Resources and Mineral Reserves

SAMVAL: The South African Mineral Asset Valuation Committee

SSC Committee: SAMREC/SAMVAL Committee

**Seismic surveys:** A geophysical exploration method whereby rock layers can be mapped based on the time taken for energy reflected from these layers to return to surface.

**Smelting:** A smelting process to upgrade further the fraction containing the valuable minerals.

Stoping: Underground excavations to effect the removal of ore.

**UG2 Reef:** A distinct chromitite horizon in the Critical Zone of the Bushveld Complex often containing economic grades of PGM.

### Resource and Reserve definitions

SAMREC Code – The South African Code for Reporting of Mineral Resources and Mineral Reserves sets out minimum standards, recommendations and guidelines for Public Reporting of Exploration Results, Mineral Resources and Mineral Reserves in South Africa. SAMREC was established in 1998 and is modelled on the Australasian Code for Reporting of Mineral Resources and Ore Reserves (JORC Code). An updated version of SAMREC was published in 2007.

In terms of SAMREC, a Competent Person is one who is registered with the South African Council for National Scientific Professions (SACNASP), the Engineering Council of South Africa (ECSA) or the South African Council for Professional Land Surveyors and Technical Surveyors (PLATO), or is a member of or Fellow of the SAIMM, the GSSA or a recognised overseas professional organisation (ROPO). A complete list of such recognized organisations is promulgated by the SSC from time to time. The Competent Person must comply with the provisions of the relevant promulgated Acts. A Competent Person must have a minimum of five years' experience relevant to the style of mineralization and type of deposit or class of deposit under consideration and to the activity they undertake. If the competent person is estimating or supervising the estimation of Mineral Resources, the relevant experience must be in the estimation, assessment and evaluation of Mineral Resources. If the competent person is estimating or supervising the estimation of Mineral Reserves, the relevant experience must be in the estimation, assessment and evaluation of Mineral Reserves. Persons called upon to sign as a Competent Person must be clearly satisfied in their own minds that they are able to face their peers and demonstrate competence in the commodity, type of deposit and situation under consideration.

A Mineral Resource is a concentration (or occurrence) of material of economic interest in or on the Earth's crust in such form, quality and quantity that there are reasonable and realistic prospects for eventual economic extraction. The location, quantity, grade, continuity and other geological characteristics of a Mineral Resource are known, estimated from specific geological evidence and knowledge, or interpreted from a well constrained and portrayed geological model. Mineral Resources are subdivided, in order of increasing confidence in respect of geoscientific evidence, into Inferred, Indicated and Measured categories.

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

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

A Mineral Reserve is the economically mineable material derived from a Measured and/or Indicated Mineral Resource. It is inclusive of diluting materials and allows for losses that may occur when the material is mined. Appropriate assessments, which may include feasibility studies, have been carried out, including consideration of, and modification by, realistically assumed mining, metallurgical, economic, marketing, legal, environmental, social and government factors. These assessments demonstrate at the time of reporting that extraction is reasonably justified. Mineral Reserves are sub-divided in order of increasing confidence into Probable Mineral Reserves and Proved Mineral Reserves.

A **Probable Mineral Reserve** is the economically mineable material derived from a Measured and/or Indicated Mineral Resource. It is estimated with a lower level of confidence than a Proved Mineral Reserve. It is inclusive of diluting materials and allows for losses that may occur when the material is mined. Appropriate assessments, which may include feasibility studies, have been carried out, including 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 is reasonably justified.

A **Proved Mineral Reserve** is the economically mineable material derived from a Measured Mineral Resource. It is estimated with a high level of confidence. It is inclusive of diluting materials and allows for losses that may occur when the material is mined. Appropriate assessments, which may include feasibility studies, have been carried out, including 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 is reasonably justified.

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# Forward-looking statements

Certain statements contained in this document other than statements of historical fact contain forward-looking statements regarding Implats' operations, economic performance or financial condition, including, without limitation, those concerning the economic outlook for the platinum industry, expectations regarding metal prices, production, cash costs and other operating results, growth prospects and the outlook of Implats' operations, including the completion and commencement of commercial operations of certain of Implats' exploration and production projects, its liquidity and capital resources and expenditure, and the outcome and consequences of any pending litigation or enforcement proceedings. Although Implats believes that the expectations reflected in such forward-looking statements are reasonable, no assurance can be given that such expectations will prove to be correct. Accordingly, results may differ materially from those set out in the forward-looking statements as a result of, among other factors, changes in economic and market conditions, success of business and operating initiatives, changes in the regulatory environment and other government actions, fluctuations in metal prices and exchange rates, and business and operational risk management. For a discussion on such factors, refer to the Risk Management section in the main Implats or circumstances after the dates of the Annual Financial Statements or to reflect the occurrence of unanticipated events. All subsequent written or oral forward-looking statements attributable to Implats or any person acting on its behalf are qualified by the cautionary statements herein.



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