



PURPOSE: RE-IMAGINING MINING TO IMPROVE PEOPLE'S LIVES

We are guided by our purpose to "re-imagine mining to improve people's lives". Our purpose is our reason for being, and why we exist. The Platinum Group Metals that we mine provide tremendous benefit to society, from auto catalyst that clean up vehicle emissions, to cancer drugs and other medical devices; electronic components that are safer and more durable. For Anglo American Platinum, by re-imagining mining we will unlock the potential of our precious metals and people, to create a positive impact on people's lives and the environment.

The next phase of our strategy has been formulated to maximise margins, returns and cash flows within a changing market and competitor landscape – focused on:

- Operational efficiency improvements achieving and beating world benchmarks and modernisation
- Break through opportunities step-change through new technology
- Investing in our operations East payback, high margin, value-enhancing and growth projects
- Market development drive demand for new applications for PGMs.
- Refers to other pages in this report.
- SUPPORTING DOCUMENTATION ON THE WEBSITE

Full annual financial statements (AFS)
Environmental, social and governance (ESG) report

www.angloamericanplatinum.com/investors/annual-reporting/2019

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OUR APPROACH TO REPORTING

Amplats is a member of the global Anglo American plc group, guided by the purpose and values of our parent while considering the complexities of the PGM industry in developing our strategic priorities. The synergies created by a common purpose, shared values and strategic focus underpin significant benefits for all stakeholders (page 15 of the integrated report).

This report sets out our approach to governance and key decisions in the review period, as well as progress against strategic goals, with additional information on our website. For completeness, we discuss risks, opportunities and trade-offs between our capitals under each strategic element, as well as the relationships between external and internal factors that enable Amplats to create value. We detail our outlook, again considering the risks, opportunities and trade-offs, to give stakeholders a balanced view of our group and its prospects.



INTEGRATED REPORT

Our annual integrated report provides a holistic assessment of the group's ability to create value.

It includes information from the annual financial statements and supplementary reports, particularly the environmental, social and governance (ESG) report which covers non-financial aspects that could have a material impact on our performance and our business if not managed effectively.

The report is developed for a range of stakeholders, including employees, local communities, non-governmental organisations (NGOs), customers, investors and government.



ESG REPORT

Provide a detailed account of performance covering key environmental, social and governance elements, in accordance with core requirements of the Global Reporting Initiative (GRI Standard).



ANNUAL FINANCIAL STATEMENTS

The audited annual financial statements present statutory and regulatory information required by the company's stock exchange listing.



ORE RESERVES AND MINERAL RESOURCES REPORT

In line with the JSE Listings
Requirements, Amplats prepared
Mineral Resource and Ore
Reserve statements for all its
assets as per the SAMREC Code
guidelines and definitions
(2016 edition). Competent
persons assume responsibility
for Mineral Resource and Ore
Reserve statements.

REPORTING FRAMEWORK

- International <IR> Framework of the International Integrated Reporting Council
- South African Companies Act 71 2008, as amended (Companies Act)
- JSE Listings Requirements
- King Report on Corporate Governance for South Africa 2016 (King IV)
- GRI Standards 2016 guidelines
- Anglo American plc group safety and sustainable development (S&SD) indicators, definitions and guidance notes for nonfinancial indicators. These are available on request.

ASSURANCE

Financial and several non-financial aspects of this report and of our 2019 suite of reports are independently assured. The report of the external auditor on our consolidated financial statements is on page 37 of the annual results booklet, while the external assurer's report on specific non-financial indicators is on page 144 of the ESG report.

REPORTING FRAMEWORK

- International Financial Reporting Standards (IFRS)
- ▼ Companies Act
- JSE Listings Requirements.

ASSURANCE

■ The report of the external auditor on our financial statements is on page 4 of the AFS.

REPORTING FRAMEWORK

- JSE Listings Requirements
- SAMREC Code (2016 edition).

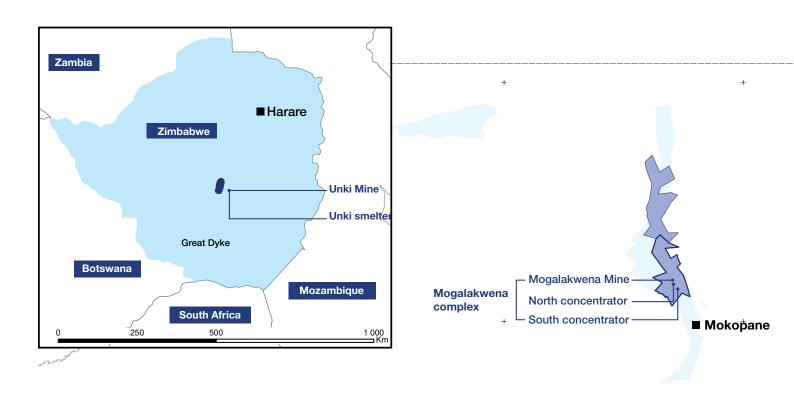
ASSURANCE

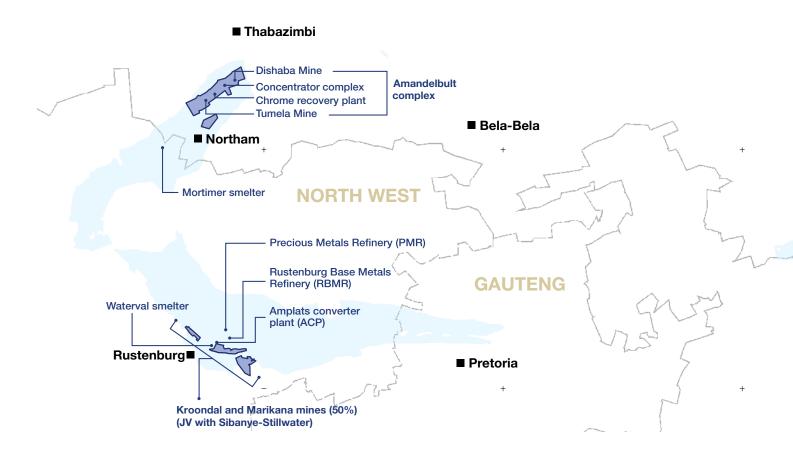
In compliance with the three-year external review and audit schedule, the following detailed audits of data gathering, data transformation and reporting of Mineral Resources and Ore Reserves were carried out in 2019:

- Mogalakwena Mine Optiro Consultants
- Mototolo Mine The Mineral Corporation
- Der Brochen Project The Mineral Corporation.

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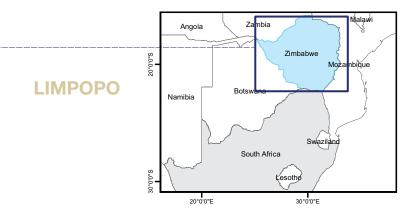
OPERATIONAL FOOTPRINT



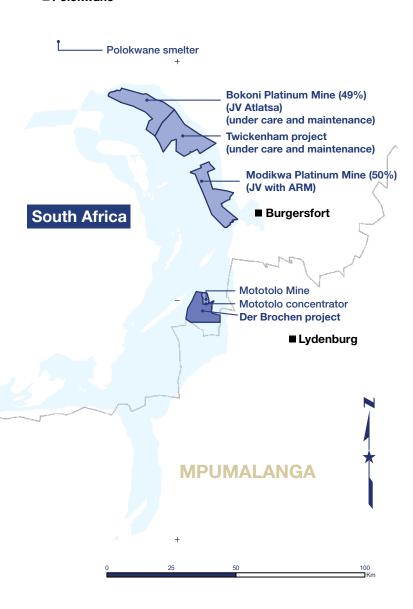


Amplats is listed on the JSE Limited and headquartered in Johannesburg, South Africa. Our majority shareholder is Anglo American plc (79.9%). We focus on extracting value from all the PGMs and base metals we mine – metals that make modern life possible in safe, smart and responsible ways.

We have a portfolio of low-capex, high-return and fast-payback investment opportunities that enhance value. Attractive growth options are available to expand margins, cash flows and returns.



■ Polokwane



We own and operate three mining complexes in South Africa's Bushveld Complex: Mogalakwena, Amandelbult and Mototolo. We also operate Unki Mine on the Great Dyke in Zimbabwe. We have interests in two joint ventures (JVs):

- Modikwa Platinum Mine (50%), with African Rainbow Minerals Mining Consortium Limited
- A pooling-and-sharing agreement with Sibanye-Stillwater, covering the shallow reserves of the Kroondal and Marikana mines (latter on care and maintenance).

Our smelting and refining operations treat concentrates from our owned operations, and from our JVs and third parties.

Recent corporate action: We acquired the Kwanda North and Central Block Prospecting Rights in the Northern Limb, which have been incorporated into the Mogalakwena Mining Right.

For more detail on our operations, Mineral Resources and Ore Reserves see from page 37 of this report and the operational overview section on pages 73 to 89 of the integrated report.

ORE RESERVES AND MINERAL RESOURCES

Gordon Smith

Executive head: technical, safety and sustainability



GENERAL STATEMENT

The Ore Reserves and Mineral Resources report is issued annually to inform stakeholders, shareholders and potential investors of the mineral assets held by Anglo American Platinum Limited (Amplats). The Amplats method of reporting Ore Reserves and Mineral Resources is in accordance to the South African Code for Reporting of Exploration Results, Mineral Resources and Mineral Reserves (the SAMREC Code, 2016). The reporting of Mineral Resources and Ore Reserves for 2019 is aligned to the SAMREC Code published in 2016. The estimates (tonnes and content) quoted in this report are on an attributable interest basis and the attributable interest is noted in the tabulations. Ore Reserve and Mineral Resource estimates are quoted as at 31 December 2019. The Anglo American plc Ore Reserves and Mineral Resources Report quotes the reported estimates on a 100% basis.

ORE RESERVES

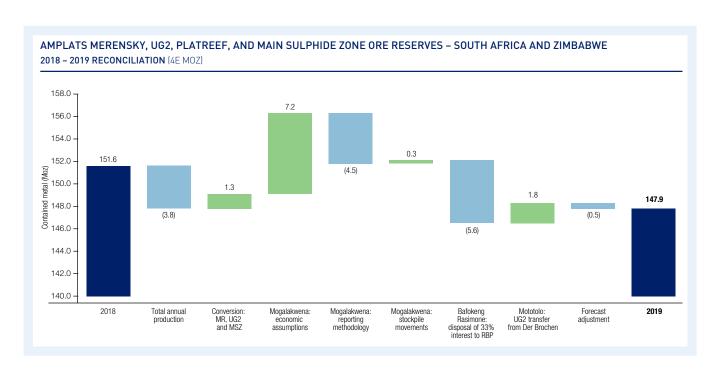
The combined South African and Zimbabwean Ore Reserves have decreased by 2.5% from 151.6 4E Moz to 147.9 4E Moz in the review period, primarily due to the disposal of the interest in the Bafokeng Rasimone Platinum Mine joint venture to Royal Bafokeng Platinum and annual production. The reduction of Ore Reserves has been partially offset by an increase in Ore Reserves at Mogalakwena and Dishaba mines due to conversion of Mineral Resources to Ore Reserves as well as the transfer and conversion of the Der Brochen Project Mineral Resources to Mototolo Mine.

At Mogalakwena Mine, pit-shell optimisation mainly related to improved economic assumptions, resulted in the conversion of additional Mineral Resources to Ore Reserves (+7.4 4E Moz). The extent of the increase was, however, offset by reallocation of some lower-grade material to Mineralisation as a result of the new Mineral Resources reporting methodology (–4.5 4E Moz), economic assumptions related to stockpiles in the latter years of the life-of-mine (–0.5 4E Moz), and production (–1.8 4E Moz). Overall, Mogalakwena Platreef Ore Reserves, including stockpiles, increased by 0.8 4E Moz to 118.8 4E Moz in 2019. The combination of basket metal prices and the exchange rate used to optimise the Mogalakwena pit is based on long-term forecasts in a balanced supply/demand scenario. Mining costs are escalated in real terms to account for anticipated mining inflation, increasing mining depth and haul distance.

At Mototolo Mine, the transfer and conversion of Mineral Resource to Ore Reserves from the Der Brochen Project resulted in an additional 1.8 4E Moz. As a result, Mototolo Mine UG2 Reef Ore Reserves increased by 87% to 3.0 4E Moz (2018: 1.6 4E Moz). This, together with the change from the previous Glencore Ore Reserves reporting policy has increased the mine Reserve life from 5 years to 16 years.

At Dishaba Mine, conversion of 0.8 4E Moz and a transfer of Ore Reserves from Tumela Mine of 0.2 4E Moz in the latter period of the life-of-mine contributed to a 10% increase of UG2 Reef Ore Reserves to 8.4 4E Moz in 2019 (7.6 4E Moz: 2018).

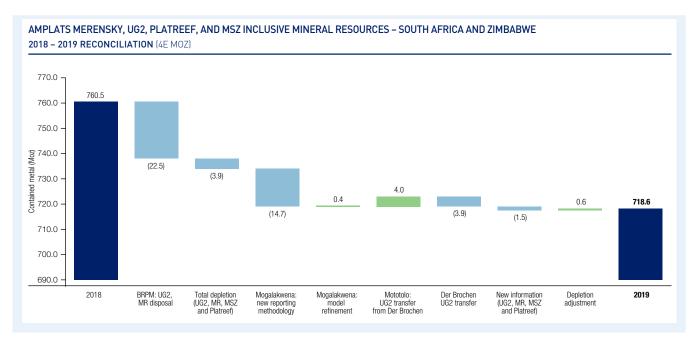
Ore Reserves at non-managed joint-venture operations decreased primarily due to production.



MINERAL RESOURCES

The combined South African and Zimbabwean Mineral Resources, inclusive of Ore Reserves, decreased by 5.5% from 760.5 4E Moz to 718.6 4E Moz in the review period. This was primarily due to disposing of the interest in Bafokeng Rasimone Platinum Mine joint venture to Royal Bafokeng Platinum

(–11.9 4E Moz of Merensky Reef and –10.7 4E Moz of UG2 Reef), reallocation of some lower-grade Platreef material to Mineralisation as a result of a change in Mineral Resources reporting methodology at Mogalakwena Mine (–14.7.0 4E Moz) and annual depletion (–3.9 4E Moz).



ORE RESERVES AND MINERAL RESOURCES CONTINUED

IMPACT OF PORTFOLIO-REPOSITIONING STRATEGY

Since 2013, Amplats has been executing a portfolio-repositioning strategy with three core elements: restructuring mineral assets into a value-optimised portfolio, deriving full value from operations, and enhancing cost and financial performance. The restructuring process is approaching the final stages, with the following achieved to date:

- Disposal of the Rustenburg mining and concentrating operations to Sibanye-Stillwater (2015)
- Twickenham Mine placed on care and maintenance (2016)
- Operations ceased at Bokoni Mine after Atlatsa Resources placed it under care and maintenance (2017)
- Interests in Pandora Mine sold to Lonmin plc and the sale of a portion of Tumela Mine to Northam Platinum (2017)
- Interests in Union Mine sold to Siyanda Resources (2018)
- Interests in Mototolo Mine acquired from Glencore plc and minority shareholders (2018)
- Ongoing engagements on interests in the Sibanye-Stillwater joint ventures.

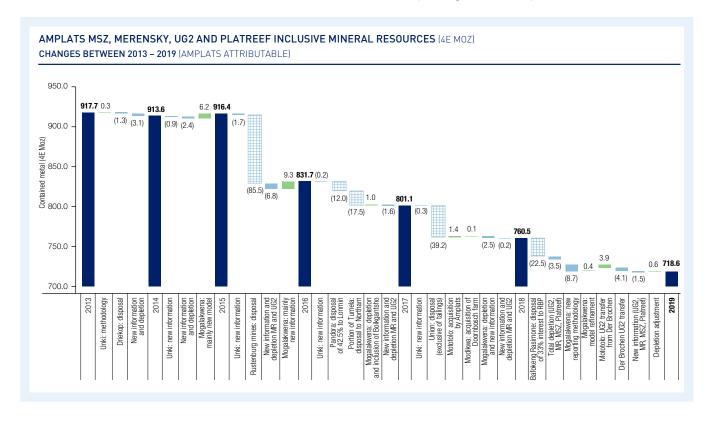
2019 progress

- The 33% stake held in Bafokeng Rasimone Platinum Mine joint venture sold to Royal Bafokeng Platinum
- Acquisition of the Kwanda North and Central Block Prospecting Rights, north of the current Mogalakwena Mining Right, from Atlatsa Resources
- Royalty agreement with Two Rivers Platinum Mine for Mototolo Mine to exploit UG2 Reef Ore Reserves across the Thorncliffe Farm boundary.

2020 outlook

- Consolidation of the Mototolo Mine and Der Brochen Project Mining Right
- Conclusion of the agreement of the sale of Unki Mines's KV and SR claims to Mimosa Platinum Mine.

To date, the net impact of this strategy is a reduction of Mineral Resource inclusive of Ore Reserves of 197.8 4E Moz, from 916.4 4E Moz in 2015 to 718.6 4E Moz in 2019. During this period, Amplats has maintained output of profitable metal to market and significantly improved its financial performance through improved productivity, managing operating costs and reducing overhead cost and net debt – all on the foundation of a value-optimising mineral asset portfolio.



DISPOSAL OF SHARES AT BAFOKENG RASIMONE MINE JOINT VENTURE – 2019

Mineral Resources inclusive of Ore Reserves

The sale of the 33% stake in Bafokeng Rasimone Platinum Mine joint venture to Royal Bafokeng Platinum has been concluded and decreased the combined South African and Zimbabwean Mineral Resource inclusive of Ore Reserves by 3.0% (–22.5 4E Moz) based on the 2019 declaration.

- -11.9 4E Moz Merensky Reef (33% attributable)
- -10.7 4E Moz UG2 Reef (33% attributable).

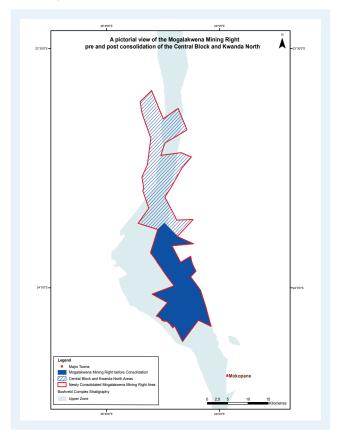
Ore Reserves

The conclusion of the disposal of Amplats' share of Ore Reserves at Bafokeng Rasimone Platinum Mine has decreased the combined South African and Zimbabwean Ore Reserves by 3.7% (–5.6 4E Moz) based on the 2019 declaration.

- -3.6 4E Moz Merensky Reef (33% attributable)
- ¬ -2.0 4E Moz UG2 Reef (33% attributable).

ACQUISITION OF THE KWANDA NORTH AND CENTRAL BLOCK PROSPECTING RIGHTS TO MOGALAKWENA MINE FROM ATLATSA – 2019

Amplats and Atlatsa Resources completed the acquisition and inclusion of the mineral endowment specified in the Central Block and Kwanda North Prospecting Rights into Mogalakwena Mining Right. The Prospecting Rights, which are contiguous to the existing Mogalakwena Mining Right, have not yet been classified as Mineral Resources. The Central Block and Kwanda North Prospecting Rights are, pending exploration and evaluation work, classified as Mineralisation and will not have any impact on the current reported Mineral Resource base.



MINING ROYALTY AGREEMENT BETWEEN TWO RIVERS PLATINUM MINE AND MOTOTOLO MINE TO EXPLOIT UG2 REEF ORE RESERVES – 2019

Amplats has reached an agreement with Two Rivers Platinum Mine to access mining areas adjacent to the current Thorncliffe Farm boundary from the Lebowa shaft of Mototolo Mine. This royalty agreement will provide mining flexibility to Lebowa shaft, which is approaching the current Mining Right boundary. The Mineral Resources and Ore Reserves involved are not reflected in this report as the SAMREC Code stipulates that only Mineral Resources and Ore Reserves that are fully permitted can be declared.

PLANNED CONSOLIDATION OF MOTOTOLO MINE AND DER BROCHEN PROJECT MINING RIGHT – 2020

Following the 100% acquisition of Mototolo Mine and subsequent transfer of Mining Rights to Amplats, a section 102 application has been submitted to the Department of Mineral Resources This application is intended to consolidate the Mototolo Mine area into the Der Brochen Mining Right. The effective date of transfer of the Mining Right is expected in 2020, with consolidation adjustments being reflected in the 2020 reporting period.

SALE OF UNKI MINES'S KV AND SR CLAIMS TO MIMOSA PLATINUM MINE – 2020

Mineral Resources inclusive of Ore Reserves

The KV and SR claims of Unki Mine are 65km south-southwest of Helvetia Farm, the southern-most part of the Unki Special Mining Lease area. The two properties are in the Wedza sub-chamber of the Great Dyke and adjacent to Mimosa Mine. The KV and SR claims cover areas of 6.1km² and 3.8km² respectively, half of which is underlain by the mineralised portion of the Main Sulphide Zone (MSZ) (see Zimbabwe overview map on page 15).

Due to the size of the claims and the distance between Unki Mine and the SR and KV claims, reasonable prospect of eventual economic extraction assessments have indicated that it is unlikely these properties can support the development of a standalone mine. Hence, the claims have been considered for disposal to Mimosa Platinum Mine. It is expected that the sale will be concluded in the first quarter of 2020. This disposal will result in a 5.0% 4E Moz contained metal reduction of the Unki Mine MSZ Mineral Resource inclusive of Ore Reserves based on the 2019 declaration.

■ -1.4 4E Moz MSZ (30.1 4E Moz to 28.6 4E Moz).

CHROMITE BY-PRODUCT FROM UG2 TAILINGS

Under current market conditions, the recovery of saleable chromite concentrate as a by-product from UG2 Reef processing is economically viable. Currently a chrome recovery plant, with a community partner, is operating at Amandelbult complex. The UG2 Reef at Tumela and Dishaba Mines (Amandelbult complex) has an average in situ Cr_2O_3 grade of some 32%.

Recovery from inter-stage or final UG2 flotation tail streams produces saleable chromite product. The amount of chromite concentrate produced is directly linked to UG2 Reef production and recovered as a by-product in processing. Chromite recoveries are between 14% and 18% from every tonne of

ORE RESERVES AND MINERAL RESOURCES CONTINUED

UG2 ore processed (overall yield factor) when the ${\rm Cr_2O_3}$ content in the UG2 ore is greater than 20%. The resultant chrome concentrate has an average ${\rm Cr_2O_3}$ grade of 40% to 46%. The contained monetary value of the chromite by-product is included when assessing UG2 reef Ore Reserves where the chromite recovery plant is in production.

INTERNAL CONTROLS

Well-established processes and protocols have ensured reliable Ore Reserves and Mineral Resources reporting.

In line with internal review and audit schedules as well as improvement initiatives, existing processes and reviews encompass:

Methodology

- ▼ Formal sign-off of the geological structure and geological discount factors; drill hole and sample databases; and the Mineral Resource classification
- A Mineral Resource classification scorecard for consistent resource-classification statements
- Various single and multiple disciplinary reviews in the framework of the business planning process
- Mine design and scheduling for consistent Ore Reserve reporting, which considers the company's business plan and economic tail management process
- ▼ Further refinement of the basic resource equation (BRE), an internal reconciliation of Mineral Resources segregated into the various business plans and investment centres
- The annual review and sign-off of Mineral Resources and Ore Reserves.

Information communicated

- Mineral Resource and Ore Reserve waterfall charts indicating year-on-year changes
- Prill and base-metal grade distribution of the Mineral Resources inclusive of Ore Reserves
- Spatial distribution of the Ore Reserve and Mineral Resource classifications of managed mines
- Reporting Mineral Resources, inclusive of Ore Reserves
- Statement of Mineralisation.

Mineral Resource and Ore Reserve management database

- Digital data capture of all relevant Mineral Resource and Ore Reserve information
- Integration with Anglo American plc's Group Mineral Resource and Ore Reserve reporting management systems
- ▼ Internal database audit and approval.

ASSURANCE/EXTERNAL REVIEWS

External independent audits are executed to ensure that the company's standards and procedures are aligned with world best practice and include both process and numerical estimates audits.

To comply with the Amplats three-year external review and audit schedule, the following detailed audits of data gathering, data transformation and reporting of Mineral Resources and Ore Reserves processes were carried out in 2019.

- Mogalakwena Mine Optiro Mining Consultants
- Mototolo Mine The Mineral Corporation
- Der Brochen project The Mineral Corporation

External audits summary

The Mogalakwena Mine audit by Optiro Consultants covered the 2019 Mineral Resource and Ore Reserve estimates, site inspection and checks on the source data and subsequent Mineral Resource and Ore Reserve estimation, including the Ore Reserve modifying factors. These checks and validation tests relate to the assumptions and parameters used for the estimation of the Mineral Resources and Ore Reserves and confirm the tonnages and grades reported by Amplats. Optiro state that it has found no material issues relating to the underlying Resource and Reserve assumptions and key parameters and confirm that these processes reflect good to best world's practice in Mineral Resource and Ore Reserve estimation.

The Mineral Corporation audits comprised site inspections and reviews of the Mototolo Mine and the Der Brochen Project estimation processes. No technical fatal flaws or material issues were identified in the detailed numbers audit of the Mineral Resource and Ore Reserve estimates. The Mineral Corporation state that the Mineral Resource estimates are supported by an extensive, validated geological database and satisfy the SAMREC Code requirements for reasonable prospects for eventual economic extraction; and the Ore Reserve estimates are based on a detailed Life of Mine Plan that has been tested for economic viability under a set of realistically assumed production levels, modifying factors and economic inputs

RISK

The geosciences and integrated planning departments follow risk management processes as outlined in the Anglo American risk matrix. This is done to systematically evaluate, mitigate and subsequently reduce risks relevant to the Mineral Resources and Ore Reserves estimation and reporting. Presently, no area of risk is considered significant using current controls.

It is generally recognised that Mineral Resource and Ore Reserve estimations are based on projections that may vary as new information becomes available, specifically if assumptions, modifying factors and market conditions change materially. Since the parameters associated with these considerations vary with time, the conversion of Mineral Resources to Ore Reserves may also change over time. For example, mining costs (capital and operating), exchange rates and metal prices may have significant impacts on the conversion of Mineral Resources to Ore Reserves and the reallocation of Ore Reserves to Mineral Resources in cases where there is a reversal in the economics of a project or area. The assumptions, modifying factors and market conditions therefore represent areas of potential risk. In addition, security of Mineral Right tenure or corporate activity could have a material impact on the future mineral asset inventory.

COMPETENCE AND RESPONSIBILITY

In accordance with the Listings Requirements of the JSE Limited, Amplats prepares its Mineral Resource and Ore Reserve statements for all its operations with reference to SAMREC Code guidelines and definitions (the SAMREC Code, 2016 edition). Competent Persons have been appointed to work on, and assume responsibility for, the Mineral Resource and Ore Reserve statements for all operations and projects, as required.

The Lead Competent Person with overall responsibility for compiling the 2019 Mineral Resources and Mineral Reserves Report is the executive head: technical, safety and sustainability, Dr Gordon Smith (PrEng). He confirms that the information on Mineral Resources and Ore Reserves in this report complies with the SAMREC Code and that it may be published in the form and context in which it was intended.

Dr Smith holds the following qualifications from the University of the Witwatersrand: BSc (mining engineering), MSc in engineering, MBA and PhD. He has 41 years' mineral industry experience across precious, base and ferrous metals, chrome, diamonds, semi-precious stone and coal operations. In this period, he has held a range of technical, managerial and executive positions at Rio Tinto (Zimbabwe), Falcon Mines plc, the Chamber of Mines - research organisation, CSIR - mining technology, Snowden Mining Industry Consultants and Metora Mineral Resources prior to joining Amplats in 2003.

He is registered with the Engineering Council of South Africa (ECSA) as a professional mining engineer, registration number 930124. ECSA is based on the 1st floor, Waterview Corner Building, 2 Ernest Oppenheimer Avenue, Bruma Lake Office Park, Bruma, Johannesburg, 2198, South Africa.

The Lead Competent Person has appointed the following Competent Persons, who are responsible for reviewing Mineral Resources and Ore Reserves estimates and the associated year-on-year reconciliations as well as approvals for the publication in this report.

Field	Competent Person	Title	RPO	Membership number	Relevant experience
Mineral Resources	lain Colquhoun	Principal resource estimation platinum	SACNASP, PrSciNat	400097/00	22 years
Ore Reserves	Nicholaas J Nel	Principal mine planner	SAIMM member	706878	20 years

All Competent Persons have sufficient relevant experience in the type of deposit and activity for which they have taken responsibility. Details of Amplats' Competent Persons are published in the relevant operations' sections of this report and available on written request from the company secretary.



Gordon Smith PrEng, PhD, MBA, MSc (engineering), BSc (mining engineering)

Engineering Council of South Africa (930124) Executive head: technical, safety and sustainability

Anglo American Platinum 55 Marshall Street, Johannesburg, South Africa 13 February 2020

CHANGES IN ORE RESERVES AND MINERAL RESOURCES FOR 2019

Summary of Ore Reserve and Mineral Resource estimates

The estimates represent Amplats' attributable interests

	20	19	20 ⁻	18
Classification	Million	Contained	Million	Contained
	tonnes	metal	tonnes	metal
	(Mt)	4E Moz	(Mt)	4E Moz
Ore Reserves ¹ – South Africa	1,439.2	142.3	1,409.7	146.1
Ore Reserves ¹ – Zimbabwe (Unki)	53.3	5.6	52.5	5.6
Ore Reserves ¹ – South Africa and Zimbabwe	1,492.5	147.9	1,462.2	151.6
Mineral Resources exclusive of Ore Reserves ^{2,3} – South Africa	4,431.5	528.2	4,784.2	564.7
Mineral Resources exclusive of Ore Reserves ^{2,3} – Zimbabwe (Unki)	168.0	23.0	169.7	23.2
Mineral Resources exclusive of Ore Reserves ² – South Africa and Zimbabwe	4,599.5	551.2	4,953.9	587.9
Mineral Resources inclusive of Ore Reserves ^{2,4} – South Africa	5951.2	688.6	6,275.8	730.3
Mineral Resources inclusive of Ore Reserves ^{2,4} – Zimbabwe (Unki)	223.9	30.1	224.9	30.2
Mineral Resources inclusive of Ore Reserves ² – South Africa and Zimbabwe	6,175.1	718.6	6,500.7	760.5
Mineral Resources exclusive of Ore Reserves ^{2,3} – South Africa tailings	72.3	1.9	72.3	1.9
Mineral Resources inclusive of Ore Reserves ^{2,4} – South Africa tailings	72.3	1.9	72.3	1.9

Note: 'Mineral Resources exclusive of Ore Reserves' and 'Scheduled Resources converted to Ore Reserves' are not additive because of modifying factors being applied in the conversion from Mineral Resources to Ore Reserves.

Details of individual operations that contributed to the summary of Ore Reserve and Mineral Resource estimates stated per reef appear later in this report. Ore Reserves reflect the total of Proved and Probable Ore Reserves.

Mineral Resources reflect the total of Measured, Indicated and Inferred Mineral Resources. Mineral Resources are quoted after geological losses.

Exclusive Resources: Mineral Resources exclusive of the portion converted to Ore Reserves. Inclusive Resources: Mineral Resources inclusive of the portion converted to Ore Reserves.



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28 January 2020

Dr Gordon Smith Executive Head: Technical, Safety and Sustainability Anglo American Platinum Limited 55 Marshall St, JOHANNESBURG, South Africa

Dear Sir

2019 ANGLO AMERICAN PLATINUM MINERAL RESOURCE AND MINERAL RESERVE ESTIMATES AUDIT – MOGALAKWENA COMPLEX

Optiro Pty Ltd (Optiro), at the request of Anglo American Platinum (AAP), carried out an audit at AAP's Mogalakwena Complex, located in Limpopo Province, South Africa. The audit covered the 2019 Mineral Resource and Mineral Reserve estimates and featured a site inspection followed by a range of follow-up checks on both the source resource data and the subsequent estimates, including the Mineral Reserve modifying factors. These checks and validation tests relate to the assumptions and parameters used for the estimation of the resources and reserves and confirm the tonnages and grades reported by AAP. Optiro has found no material issues relating to the underlying resource and reserve assumptions and key parameters.

In addition to the checks Optiro has reviewed the processes underlying the resource and reserve estimation and declaration for the Mogalakwena Complex for 2019 and can confirm that these processes reflect good to best world's practice in resource and reserve estimation. Optiro has provided to AAP some comments and recommendations to both enhance the current process and to assist in AAP's quest for ongoing continuous improvement.

The review was carried out by Mr Ian Glacken and Mr Andrew Grubb, both Directors of Optiro. Both Mr Glacken and Mr Grubb have the relevant qualifications and experience to be considered as Competent Persons according to the definitions of the SAMREC Code (2016). Mr Glacken, a Geologist, has over 35 years' post graduate mining industry experience and is a Fellow of the Australasian Institute of Mining and Metallurgy (and a Chartered Professional of that organisation), A Fellow of the Australian Institute of Geoscientists and a member of the Institution of Mining, Metallurgy and Materials of the United Kingdom (and a Chartered Engineer under the European rules). Mr Grubb, a Mining Engineer, has over 40 years' experience in the mining industry worldwide and is a Fellow of the Australasian Institute of Mining and Metallurgy. Neither Optiro nor the authors of the report has any beneficial interest in AAP. Optiro has been remunerated according to a specified schedule of rates, and Optiro's fee for this work is not related to the outcomes of the report.

Yours sincerely

OPTIRO

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Andrew Grubb

Director - Mining agrubb@optiro.com



Dr Gordon Smith 30 January 2020

Executive Head: Technical, Safety and Sustainability Anglo American Platinum Limited 55 Marshall Street Johannesburg 2000

Dear Sir

THE 2019 MINERAL RESOURCE AND MINERAL RESERVE AUDIT - MOTOTOLO MINE AND THE DER BROCHEN PROJECT

Background

Mineral Corporation Consultancy (Pty) Limited (The Mineral Corporation or TMC) has completed an independent audit (the Audit) of the UG2 Reef and Merensky Reef Mineral Resource and Mineral Reserve estimates for Mototolo Mine and the Der Brochen Project as at 31 December 2019. The Audit was commissioned by Anglo American Platinum Limited (AAPL) in fulfilment of the corporate governance standard of subjecting platinum group metal (PGM) mineral assets under its management to periodic audits by external parties. Mototolo Mine and the Der Brochen Project are contiguous AAPL mineral assets located on the Eastern Limb of the Bushveld Complex. The 2019 Mineral Resource and Mineral Reserve estimates were prepared and signed-off by Competent Persons from Mototolo Mine and AAPL. The Audit was completed by Mineral Resource and Mineral Reserve Competent Persons from TMC following guidelines of the 2016 Edition of the South African Code for the Reporting of Exploration Results, Mineral Resources and Mineral Reserves (the SAMREC Code).

The Der Brochen Project is an advanced exploration project. However, Mototolo Mine is an established mine exploiting the UG2 Reef from the Lebowa and Borwa underground shafts, with Run of Mine ore processed at the onsite concentrator plant. The mine was historically operated as a joint venture between AAPL and Glencore South Africa (Pty) Ltd (Glencore) under Glencore management. Since 1 November 2018, the operational management of the mine transferred to AAPL following the acquisition of Glencore's stake in the joint venture. These ownership changes paved the way for AAPL to integrate Mototolo Mine and the Der Brochen Project for synergy. Mototolo Mine has migrated to the AAPL governance framework for the preparation and reporting of Mineral Resources and Mineral Reserves. The 2019 Mineral Reserves for Mototolo Mine are based on approved UG2 Reef Life of Mine (LoM) plans for Lebowa and Borwa Shafts. Furthermore, the UG2 Reef Mineral Resources within the Mototolo Mine footprint are assigned to the mine. However, the UG2 Reef Mineral Resources outside the Mototolo Mine footprint and all the Merensky Reef Mineral Resources are assigned to the Der Brochen Project.

Audit Methodology

The Audit was accomplished through a combination of desktop reviews of relevant Mineral Resource and Mineral Reserve information provided by AAPL and a confirmatory site visit by TMC's Competent Persons during the period 3 to 6 December 2019. The desktop reviews entailed a Process Audit and Detailed Numbers Audit of the Mineral Resources and Mineral Reserves. In both cases, the desktop reviews were directed at identifying any fatal flaws and material errors and/or omissions for remediation by AAPL. TMC did not perform an independent estimation of the Mineral Resources and Mineral Reserves for Mototolo Mine and the Der Brochen Project.

The Process Audit involved systematic and detailed reviews of the key elements of the Mineral Resource and Mineral Reserve estimation processes undertaken in order to validate adherence to internal standards and the SAMREC Code, and to identify material errors and omissions or areas of improvement. TMC assessed compliance to the SAMREC Code with respect to the estimation, classification, reporting and sign-off of Mineral Resource and Mineral Reserve estimates by the Competent Persons. TMC also assessed the extent to which Mototolo Mine has transitioned to the AAPL governance system and any additional resources required to ensure compliance with the system.

The Detailed Numbers Audit included a detailed review of the evaluation data, geological and structural models and Mineral Resource estimation, classification and reporting. TMC also undertook a detailed review of the Modifying Factors employed for the conversion of UG2 Mineral Resources to Mineral Reserves as well as the technical and economic inputs that were utilised for the development of the LoM plans for Lebowa and Borwa Shafts. In conclusion, TMC reviewed the LoM plans and cash flow models employed for the economic viability testing of the LoM plans as well as the final aggregation and classification of Mineral Reserves for Mototolo Mine.

Audit Findings and Conclusions

From the Process Audit and Detailed Numbers Audit, TMC could not identify any fatal flaws or material issues in the UG2 Reef and Merensky Reef Mineral Resources for Mototolo Mine and the Der Brochen Project. TMC confirmed that Mototolo Mine has fully transitioned to the AAPL Mineral Resource and Mineral Reserve governance framework, which provides for a comprehensive, overarching management system for the estimation, management and reporting of Mineral Resources and Mineral Reserves. The consistent and rigorous application of internal standards at both Mototolo Mine and the Der Brochen Project led to the compilation of Mineral Resource and Mineral Reserve estimates according to the guidelines of the SAMREC Code. TMC has provided AAPL with recommendations for continuous improvement where relevant. In particular, additional internal resources may be required to strengthen the survey and mine planning functions at Mototolo Mine.

The 2019 UG2 Reef and Merensky Reef Mineral Resource estimates are based on a validated geological database, technically sound geological and structural models and have been assessed for reasonable prospects for eventual economic extraction as required by the SAMREC Code. Similarly, the 2019 Mineral Reserve estimates for Mototolo Mine are derived from detailed LoM plans, which were tested for economic viability under a set of realistically assumed production levels, Modifying Factors and economic inputs.

These opinions do not imply that TMC has accepted the role of Competent Person for the purpose of reporting the 31 December 2019 Mineral Resource and Mineral Reserve estimates for Mototolo Mine and Der Brochen Project.

Yours sincerely

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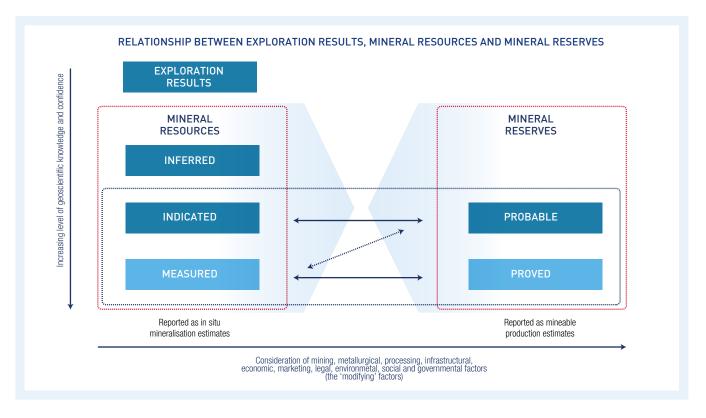
KEY REPORTING CRITERIA

OUR APPROACH TO ORE RESERVES AND MINERAL RESOURCES REPORTING

Ore Reserves and Mineral Resources are reported in accordance with guidelines and principles of the South African Code for the Reporting of Exploration Results, Mineral Resources and Mineral Reserves (SAMREC Code, 2016), the South African Code for reporting mineral asset valuation (SAMVAL Code, 2016), and section 12.13 of the Listings Requirements of the JSE Limited

(JSE). This report is issued annually to inform stakeholders, shareholders and potential investors of the mineral assets held by Anglo American Platinum Limited (Amplats). An abridged version is included in the Amplats Integrated Report for 2019, which is published annually and available at

www.angloamericanplatinum.com



The following key reporting criteria apply:

- 4E grade is the sum of Platinum, Palladium, Rhodium and Gold grades in grams per tonne (g/t)
- ▼ PGM: Platinum Group Metals
- Mt: million dry metric tonnes
- Moz: 4E million troy ounces with a 31.10348 gram per ounce factor applied. Contained metal is also reported in metric toppos
- ROM: Ore Reserves are reported as run-of-mine (ROM) ore after all modifying factors have been applied. The reported Ore Reserves grades are as delivered to the concentrator for processing
- Rounding of figures may result in computational discrepancies.
- Estimates of 0.0 represent numbers less than 0.05
- Definitions of reconciliation categories are on page 84 of this report
- The terms Ore Reserves and Mineral Reserves are used interchangeably
- Mineral Resources and Ore Reserves are reported on an attributable basis and the attributable interest is noted in the individual entity tabulations
- Mineral Resources are quoted exclusive of appropriate known and unknown geological losses
- Due to the uncertainty that may be attached to some Inferred Mineral Resources, it cannot be assumed that all or part of an Inferred Mineral Resource will necessarily be upgraded to an Indicated or Measured Resource after continued exploration

- Mineral Resources are quoted over the entire Mining Right, except for Mogalakwena Mine, where the Platreef Mineral Resources are only quoted down to potential future surface mining depth, and for Merensky and UG2 reefs at Tumela, Twickenham and Bokoni mines, where a virgin rock temperature of 75°C is currently considered to be the limit to mining given anticipated technology, metal prices and energy costs
- Underground Mineral Resources are estimated over a practical minimum mining width suitable for the Mineralisation known as the "Resource cut". The Resource cut width considers the mining method and geotechnical aspects in the hanging wall or footwall of the reef. The conversion of the Resource cut to an appropriate Reserve width would include additional dilution incurred as the result of appropriate geotechnical and mining considerations (SAMREC Code, clause 24)
 - Merensky Reef is estimated over a minimum mining width
 - UG2 Reef is estimated over a practical minimum mining width, which may include dilution. The UG2 Reef, particularly in the Eastern Limb, may contain lenses of internal waste that are included as dilution when estimating Mineral Resources
 - The Main Sulphide Zone (MSZ) estimation is based on optimal minimum mining width

- Open-pit Mineral Resource reporting methodology is aligned to the Anglo American policy. Mineral Resource estimates reporting is confined within a factored revenue pit shell, which is based on stable, long-term economic parameter assumptions, metal prices and exchange rates. Only the Platreef Mineralisation that is within this factored shell is deemed to fulfil 'reasonable prospects of eventual economic extraction' requirements to be reported as Mineral Resource estimates
- Where Ore Reserves and Mineral Resources have been quoted for the same property, Mineral Resources are reported both inclusive and exclusive of the material converted to Reserves, ie one table reports on Resources that exclude those Resources converted to Reserves while the other includes these Resources
- Amplats takes cognisance of cut-off grades (derived from information on pay limits in the mining operations) and of 'reasonable prospects for eventual economic extraction' over a period of 30 to 50 years
- Stockpile is mined ore stored on surface for future treatment. It is reported separately as Proved and Probable Ore Reserves but included in the total Platreef Ore Reserves. Run-of-mine (ROM) stockpiles are reported as Proved and long-term stockpiles as Probable Ore Reserves
- The published Ore Reserve stockpile does not include oxidised and calc-silicate material; this material is, however, included in the Mineral Resource statement
- Reserve life is the scheduled extraction period in years for the total Ore Reserves in the approved life-of-mine plan, considering the combined reefs' production (as applicable) in the current Mining Right. Where applicable, an application to extend the Mining Right will be submitted at the appropriate time and there is reasonable expectation that such an extension will not be withheld
- The pay limits are directly linked to the 2019 Business Plan which takes into account Platinum Group Metals, Base Metals and other credits. The pay limit is based on 'Cost 4' which consists of 'Direct Cash Cost' (on and off-mine), 'Other Indirect Costs' and 'Stay-in-Business Capital' (on and off-mine). The range is a function of various factors including depth of the orebody, geological complexity, mining method, infrastructure and economic parameters. The *in-situ* Merensky and UG2 reefs Ore Reserve pay limit for the Amplats managed mines ranges between 3.8 g/t (4E) and 3.1 g/t (4E). The pay limit for MSZ is 2.7 g/t (4E) and the Platreef *in-situ* pay limit is 2.3 g/t (4E)
- The macro-economic and planning parameters (global assumptions) applied to the valuation of Mineral Resources and Ore Reserves will impact decisions on overall viability and selection of the primary extraction horizon. Global assumptions are a set of economic and planning parameters forecast into the future, which are applied in economic assessments, valuation of projects, investment decisions, strategic planning and business planning. The global assumptions applied have been smoothed and stabilised to avoid overly pessimistic or optimistic long-term views. This approach should ensure that valid long-term investment decisions are not delayed or curtailed because of short-term market aberrations.

- These parameters comprise:
 - Economic parameters, ie ZAR/US\$ exchange rates; inflation rates (USA and SA); cost escalation rates; corporate tax rate and dividend withholding tax for companies
 - Metal prices: core PGM (Pt, Pd, Rh), secondary PGM (Ir, Ru, Os), gold and base metals (Au, Ni, Cu, Co)
 - Downstream process: smelting and refining efficiencies, metal pipeline and operating costs
- Working capital movement factors as detailed in the 2019 Amplats Integrated Report
- The table below summarises long term metal prices and exchange rates assumptions approved by Amplats for the December 2019 Ore Reserves and Mineral Resources estimation and reporting:

Platinum	US\$/oz	1,270
Palladium	US\$/oz	950
Rhodium	US\$/oz	1,960
Gold	US\$/oz	1,250
Nickel	US\$/lb	7.80
Copper	US\$/lb	3.15
Exchange rate	ZAR/US\$	13.24

- Long-term basket price forecasts based on these assumptions vary per operation, in accordance with individual operations' PGM ratios
- There are no material legal proceedings or conditions that will impact the Ore Reserves and Mineral Resources reported for 2019, or Amplats' ability to continue with mining activities as per life-of-mine plans
- Reporting is by professionals with adequate experience in the estimation, evaluation and reporting of Ore Reserves and Mineral Resources relevant to this style of Mineralisation
- Information for non-managed operations is provided by the joint-venture partners. For additional details, please refer to the applicable annual reports.

KEY REPORTING CRITERIA CONTINUED

MINERAL RESOURCES AND ORE RESERVES: DEFINITION

Definition: Mineralisation

Mineralisation is a concentration or occurrence of material of possible economic interest, in or on the earth's crust, for which quantity and quality cannot be estimated with sufficient confidence to be defined as a Mineral Resource. Mineralisation is not classified as a Mineral Resource or Mineral Reserves and can only be reported under Exploration Results. The data and information relating to it must be sufficient to allow a considered and balanced judgement of its significance.

Definition: Mineral Resources

A **Mineral Resource** is a concentration or occurrence of solid material of economic interest in or on the earth's crust in such form, grade or quality and quantity that there are reasonable prospects for eventual economic extraction. The location, quantity, grade, continuity and other geological characteristics of a Mineral Resource are known, estimated or interpreted from specific geological evidence and knowledge, including sampling. Mineral Resources are subdivided, and must be so reported, in order of increasing confidence in respect of geoscientific evidence, into Inferred, Indicated or Measured categories. (SAMREC Code, clause 24)

Measured Mineral Resources	That part of a Mineral Resource for which quantity, grade or quality, densities, shape and physical characteristics are estimated with confidence sufficient to allow the application of modifying factors to support detailed mine planning and final evaluation of the economic viability of the deposit. Geological evidence is derived from detailed and reliable exploration, sampling and testing and is sufficient to confirm geological and grade or quality continuity between points of observation. A Measured Mineral Resource has a higher level of confidence than that applying to either an Indicated Mineral Resource or an Inferred Mineral Resource. It may be converted to a Proved Mineral Reserve or to a Probable Mineral Reserve.	(SAMREC Code, clause 28)
Indicated Mineral Resources	That part of a Mineral Resource for which quantity, grade or quality, densities, shape and physical characteristics are estimated with sufficient confidence to allow the application of modifying factors in sufficient detail to support mine planning and evaluation of the economic viability of the deposit. Geological evidence is derived from adequately detailed and reliable exploration, sampling and testing and is sufficient to assume geological and grade or quality continuity between points of observation.	(SAMREC Code, clause 27)
Inferred Mineral Resources	That part of a Mineral Resource for which quantity and grade or quality are estimated on the basis of limited geological evidence and sampling. Geological evidence is sufficient to imply but not verify geological and grade or quality continuity. An Inferred Resource has a lower level of confidence than that applying to an Indicated Mineral Resource and must not be converted to a Mineral Reserve. It is reasonably expected that the majority of Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration.	(SAMREC Code, clause 25)

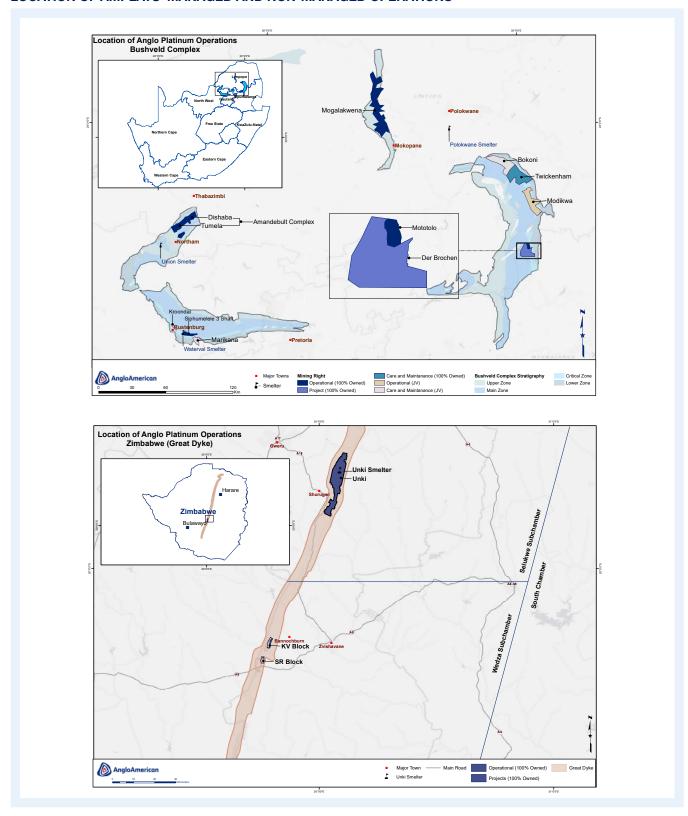
Definitions: Ore Reserves

A **Mineral Reserve** is the economically mineable part of a Measured and/or Indicated Mineral Resource. It includes diluting materials and allowances for losses, which may occur when the material is mined or extracted and is defined by studies at pre-feasibility level as appropriate that include application of modifying factors. Such studies demonstrate that, at the time of reporting, extraction could reasonably be justified. The reference point at which Mineral Reserves are defined, usually the point where the ore is delivered to the processing plant, must be stated. It is important that, in all situations where the reference point is different, such as for a saleable product, a clarifying statement is included to ensure that the reader is fully informed as to what is being reported. (SAMREC Code, clause 35). Ore Reserves are subdivided, in order of increasing confidence, into Probable Ore Reserves and Proved Ore Reserves.

Probable Mineral Reserves	The economically mineable part of an Indicated, and in some circumstances, a Measured Mineral Resource. The confidence in the modifying factors applying to a Probable Mineral Reserve is lower than that applying to a Proved Mineral Reserve.	(SAMREC Code, clause 36)
Proved Mineral Reserves	The economically mineable part of a Measured Mineral Resource. A Proved Mineral Reserve implies a high degree of confidence in the modifying factors.	(SAMREC Code, clause 37)

LOCATION OF AMPLATS OPERATIONS

LOCATION OF AMPLATS' MANAGED AND NON-MANAGED OPERATIONS



KEY REPORTING CRITERIA CONTINUED

GEOLOGICAL SETTING

Amplats' Mineral Resources of Platinum Group Metals (PGM) occur exclusively within southern Africa and are hosted by two distinct layered intrusions: the Bushveld Complex in South Africa and the Great Dyke in Zimbabwe.

PGM Resources present in these two geological entities account for approximately 85% of the world's known platinum and 55% of the world's known palladium.

THE BUSHVELD COMPLEX

Formed over 2 billion years ago from multiple injections of magma into the earth's crust many kilometres below the surface, the Bushveld Complex is geologically unique due to its size, uniformity of its layering and extent of known mineral content. This saucer-shaped intrusion is over 350km wide, 250km long and up to 12km thick. Over time, the rim of the intrusion has been exposed by erosion, revealing three separate main segments known as the Western, Eastern and Northern Limbs. The Western Limb is split into two lobes (north-western and south-western) by the Pilanesberg complex, a remnant of an alkaline volcanic plug intruded into the Bushveld Complex about 1,250 million years ago. The Eastern Limb is split into two lobes (north-eastern and south-eastern) by the north-east trending Steelpoort fault. The exposed segments exhibit layering of pyroxenites, norites, gabbros, anorthosites and chromitites and this layering occurs across the entire extent of the complex. Within the layers, mineralisation is found in specific horizons containing chromium, iron, titanium, vanadium, nickel, copper and PGM.

The Bushveld Complex comprises three main suites, namely the Rooiberg Group, Lebowa Granite Suite and Rustenburg Layered Suite. The Rustenburg Layered Suite comprises four major subdivisions: the Upper Zone, Main Zone, Critical Zone and Lower Zone. Economic concentrations of PGMs occur mainly in three distinct units within the Critical Zone: Merensky Reef; Upper Group 2 (UG2) chromitite; and Platreef. The Merensky Reef and UG2 Reef occur around the Eastern and Western Limbs of the complex, while the Platreef is found only along the eastern edge of the Northern Limb.

The Merensky and UG2 reefs are narrow tabular orebodies that extend laterally over hundreds of square kilometres, resulting in extensive Mineral Resources. Their continuity, established over decades of exploration and mining, allows for the long-range extrapolation of data.

The Merensky Reef

The Merensky Reef has been the principal source of PGM since it was first mined in 1925. The reef contains economically important PGM and base metal sulphide Mineralisation. However, with the depletion of shallow Merensky Resources, the UG2 Reef, which is found at a minimum vertical distance of 12m to 400m below the Merensky Reef, depending on location, has grown steadily in importance to the point where it now accounts for most of the platinum-bearing ore processed in South Africa.

The Merensky Reef is extensively well developed in both the Eastern (EL) and Western Limbs (WL) of the Bushveld Complex. The reef is well defined and typically consists of a pegmatoidal feldspathic pyroxenite layer, bounded on the top and bottom by thin chromitite layers (stringers) that have thicknesses ranging

from 5mm to 20mm. Mineralisation of the reef generally occurs in the pegmatoidal feldspathic pyroxenite and, to a limited extent, in the hanging wall and footwall, with highest PGM concentration peaking at the chromitite stringers.

In the WL, the Merensky Reef dips in an arc ranging from 18° to 27° south-easterly direction in the Amandelbult area and at 9° to 12° northerly direction in the Rustenburg area. It has a variable reef thickness ranging from 1cm (Contact Reef facies) to >2m, over large areas. At Amandelbult complex in particular, the reef comprises up to five different facies. Each facies type exhibits unique geomorphological, geochemical and mineralisation characteristics and plays a fundamental role in geozone delineations and Resource and Reserves widths. In the EL, the Merensky Reef is slightly thicker and dips at 8° to 18° in a south-westerly direction.

The UG2 Reef

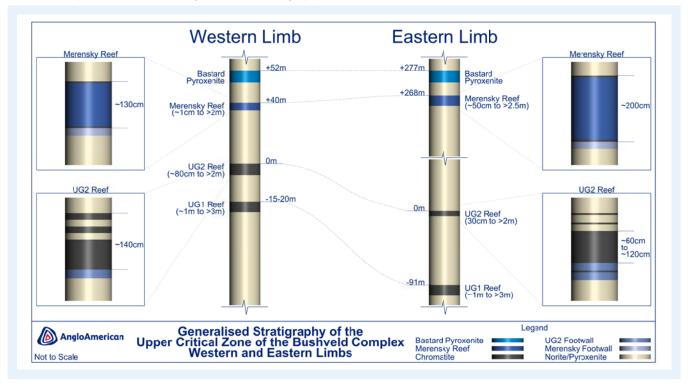
The UG2 Reef, which is consistently developed throughout the EL and WL, is rich in chromitite, but with lower gold and base metal content compared to Merensky Reef. In the WL, the UG2 Reef occurs between 12m and 150m vertically below the Merensky Reef and dips at 18° to 27° in a south-easterly direction (Amandelbult area). In the EL, the reef occurs between 120m and 400m vertically below the Merensky Reef and dips at 8° to 18° in a south-westerly direction.

In the WL, the UG2 normally comprises a 0.6m to 1.0m main chromitite band overlain by three chromitite bands (UG2 leaders) varying in thickness from 5cm to 30cm, separated by feldspathic pyroxenite. The immediate footwall of the UG2 is usually a pegmatoidal feldspathic pyroxenite, which varies in thickness from a few centimetres to over 1m. The separation distances between these UG2 leader chromitite bands and the UG2 main band has important implications for geotechnical considerations for mining.

In the EL, the UG2 normally comprises a main chromitite band varying in thickness from 0.3m to 1.0m, overlain by three or up to four chromitite stringers varying in thickness from 2mm to 1cm. The immediate footwall of the UG2 is usually a pegmatoidal feldspathic pyroxenite, which varies in thickness from a few centimetres to over 1m. The separation distances between these UG2 hanging wall stringers has important implications for geotechnical considerations for mining.

In the EL south of the Steelpoort fault, UG2 chromitite is an amalgamation of UG2 main chromitite with the leader chromitite unit, the two usually indistinguishable but may be separated based on their Pt/Pd ratios varying in thickness from 0.60m to 2.25m (averaging 1.20m). This is overlain by a poikilitic feldspathic pyroxenite parting varying in thickness from millimetres to 15m and averaging 1m. This parting is overlain by three chromitite bands (up to 20cm), separated by poikilitic feldspathic pyroxenite and pegmatoidal pyroxenites commonly referred to as the 'triplets' with an average thickness of 80cm.

The Merensky Reef and UG2 Reef horizons are affected by structural and other geological features, including potholes, faults and replacement pegmatites, which result in geological losses and have an impact on Mineral Resource estimations and mine planning.



The Merensky Reef and UG2 Reef generalised stratigraphy

The Platreef

The Platreef is developed in the Northern Limb of the Bushveld Complex and can be described as a multiple-pulse mafic magmatic horizon, dominantly pyroxenitic in composition. It averages 150m in thickness, with a prominently top-loaded grade profile, where the optimal Mineralisation is located in the upper 30m to 40m of the package and strikes ~north-south, dipping at an average of 40° to 50° to the west.

In comparison to the Merensky and UG2 reefs, the Platreef is a far thicker and more variable orebody, typified by extensive contact with metasedimentary and granitic floor rocks and assimilation of footwall fragments. The variability of lithology and thickness along strike is attributed to underlying structures and assimilation of local country rocks. This assimilation ranges from shales and banded ironstones in the south, through to dolomites in the centre of the mining area, to granites in the northern portion of the property.

Carbonate floor rocks incorporated into the basal Platreef have been altered to mineralised parapyroxenites and calc-silicates formed during extensive syn-magmatic interaction with high-Mg silicate melts. Towards the north, where the Platreef country rock

is Archaean basement granite, partial melting of this protolith has resulted in the formation of a metamorphic rock referred to as a Granofels. The Granofels is present in a prominent interaction zone developed between the base of the Platreef and the underlying basement granite. As a result, the Mineralised horizon defined for the Platreef orebody often incorporates significant portions of the immediate footwall.

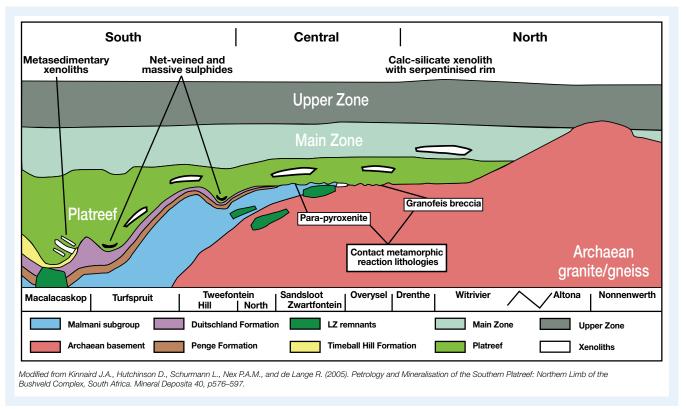
At Mogalakwena Mine, the Platreef is structurally affected by dolerite dykes and several predominantly lateral fault systems orientated in a north-east/south-west direction. Zones adjacent to major fault systems constitute areas of no Mineralisation and are discounted as geological losses. The fault systems display normal to reverse fault displacements ranging between 50m and 600m, with up-thrown blocks proving favourable to mine design. The Platreef hosts significant dolomite inclusions in the southern region of the mining area and these also constitute geological loss zones.

In general, the economic thickness of the Platreef supports open-pit mining operations to depths exceeding 400m below the surface at current prices and mining costs.

KEY REPORTING CRITERIA CONTINUED

GEOLOGICAL SETTING CONTINUED

A schematic illustration of the Platreef Mineralisation model



Base metal Mineralisation in the Bushveld Complex

The Merensky Reef, and Platreef in particular, yields meaningful quantities of nickel, copper and cobalt as by-products of PGM. While the UG2 Reef has relatively low concentrations of these metals, beneficiation for the by-product chromium contributed considerable economic value more recently. Copper, nickel, cobalt and chromium are accounted for in the relevant economic evaluations.

THE GREAT DYKE

The Great Dyke in Zimbabwe occurs as a 2.5 billion-year-old mafic to predominantly ultramafic layered intrusion, over 500km long, trending in a north/north-easterly direction. Unki Mine is located in the Selukwe sub-chamber while the KV and SR claims are in the Wedza sub-chamber of the Great Dyke. The dyke comprises an upper mafic unit of alternating sequences of pyroxenite and dunite-harzburgites and a lower ultramafic dunites, that cut across the dominantly Archaean granite and greenstone belts of the Zimbabwe Craton.

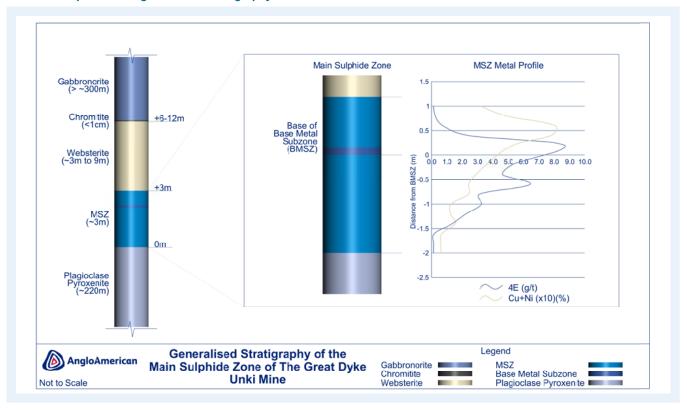
It is synclinal in section with layers dipping and flattening towards the axis of the intrusion, with essentially the same lithological succession being exposed on both sides of the longitudinal axis. The general dip decreases from outcrops to the central area varying from 14° to 0°. The PGM and associated base metal Mineralisation are developed within the uppermost pyroxenite horizon, the Main Sulphide Zone (MSZ).

The Main Sulphide Zone (MSZ)

The MSZ occurs some 10m below the mafic-ultramafic contact and is hosted in the uppermost pyroxenite layer (P1) of the ultramafic sequence. The P1 unit consists of a thin upper unit of websterite and a lower thick unit of plagioclase pyroxenite where the MSZ occurs near the base of the websterite unit. Based on geochemistry, the MSZ has two distinguishable sub-zones – the base metal sub-zone which is dominated by nickel and copper, as well as the PGM sub-zone. The transition from the upper zone to lower zone is marked by a reduction in iron-nickel-copper sulphides disseminated in the pyroxenite.

The base of the upper zone is an important stratigraphic horizon, referred to as the base of the Base Metals Subzone (BMSZ). The base metals occur as disseminated inter-cumulus Fe-Ni-Cu sulphides. Although the mineralised zone is characterised by the absence of identifiable markers, this risk has been successfully negated by using handheld X-ray fluorescence (XRF) technology, as well as regular underground sampling of the mineralised horizon, enabling optimal extraction.

The MSZ is structurally affected by faults, dykes, xenoliths and replacement pegmatites. The most prominent is the footwall fault, which occurs at an average stratigraphic distance of 1.6m below the BMSZ, with this distance ranging from ~1m to 2.5m. This footwall fault is localised over a small section of the Unki East Mine.



The Main Sulphide Zone generalised stratigraphy

EXPLORATION ACTIVITIES - MANAGED OPERATIONS

Exploration activities progressed on all owned and Amplats managed operations, with continued focus on brownfields and on-mine exploration. Exploration activities are aimed at supplying a wide variety of grade, geological, geotechnical and geophysical information. This, together with associated value-driven processes, assists in mitigating risk and supports the company's business plans and prospecting works programme compliance. Well defined systems of quality assurance and quality control processes and protocols are in place to validate sampling and analytical data generated from the various exploration programs.

Most of the exploration budget for 2019 was spent on the Mogalakwena complex. This included activities near current mining operations, Tweefontein, Sandsloot and Boikgantsho within the Mineral Rights boundaries as well as the recently incorporated Central Block and Kwanda North endowment areas. The acquisition of these Rights was concluded in August 2019 and incorporated into the Mogalakwena Mining Right. Exploration activities over these endowments will continue, aligned with the Northern Limb strategy.

Exploration continues at the Great Dyke in Zimbabwe to obtain more information specifically in support of the mine extraction strategy for the Unki Platinum Mine Special Mining Lease (SML). No active exploration was undertaken on the KV or SR Claims which are part of Unki SML. The KV and SR Claims have been considered for sale to Mimosa Platinum Mine which is expected to be finalised in the first quarter of 2020.

Other expenditure occurred at Der Brochen project and Mototolo Mine. These assets, in the context of the 2018 acquisition, required additional work on the mine's business plan delivery

and the project's feasibility phase. This includes drilling on Two Rivers Platinum Mine property to the immediate north of Mototolo's Lebowa shaft providing confidence for planned for extraction through a royalty arrangement with the mine. At Dishaba and Tumela mines, activities were focused on current and future projects supporting the mine's life extension as well as minimising the risk to the business plan.

Exploration on Prospecting Right areas are in line with the work programme schedules and the environmental management programmes submitted to the government's Department of Mineral Resources. A reduction of Prospecting Right holdings is envisaged, in alignment with Amplats' portfolio focus on long-term, high-quality assets.

Excluding the non-managed joint ventures, 168 surface diamond cored drill holes were drilled in 2019, totalling 53,440 metres and 27,765 assay samples. In addition, 262 underground exploration diamond cored drill holes totalling 18,256 metres and 10,344 assay samples were completed. A total of 114,278 metres of reverse circulation (RC) drilling equating to 7,887 in-pit RC drill holes were completed at the Mogalakwena operation for value-based ore control.

Total exploration expenditure for 2019 was R281 million. The projected exploration expenditure for 2020 is also expected to be above R200 million.

KEY REPORTING CRITERIA CONTINUED

EXPLORATION ACTIVITIES - MANAGED OPERATIONS CONTINUED

Exploration expenditure

		onversion and scovery drilling		Underground exploration and in-pit ore control drilling			
Mine/project	Number of drill holes	Length (m)	Expenditure (Rm)	Number of drill holes	Length (m)	Expenditure (Rm)	
Mogalakwena Mine	53	15,189	41.21	7,887	118,298	80.91	
Northern Limb and Near Mine	11	4,133	68.38				
Dishaba Mine	31	8,694	17.31	126	6,366	9.73	
Tumela Mine	15	11,087	21.73	79	5,096	8.31	
Mototolo Mine	21	4,747	12.35	0	0	0.00	
Der Brochen Project	0	0	0.22				
Unki Mine	37	9,590	14.56	57	6,794	6.67	
Prospecting Rights	0	0	0.00				
Total 2019 Exploration expenditure	168	53,440	175.76	8,149	136,554	105.62	

MINERAL RESOURCE ESTIMATION: MANAGED OPERATIONS

GEOLOGICAL MODELLING

A standardised Amplats approach is used to create geological structure models and determine geological losses for Mineral Resources at individual underground and open-pit operations. This involves identifying and quantifying geological losses from all possible sources, historical mining, surface exposure and any geophysical and geological exploration data. The total known and unknown geological losses are reported per structural domains as defined by similar geological attributes regarding structural characteristics, complexity, geological loss feature frequency, size or distribution. The final structural models and geological loss estimates are signed off by a Competent Persons team, to ensure the best possible input into Mineral Resource models and business mine-planning processes.

MINERALISATION

The Mineralisation envelope is based on data generated from all possible sources, including surface and underground diamond drilling, open-pit RC drilling, underground reef sampling and geological mapping. The mineralised envelope for the Platreef is delineated on an increment 1g/t 4E cut-off grade. The remaining orebodies do not apply a grade cut-off.

The tabular PGM orebodies lend themselves to a three-component subdivision, comprising the mineralised interval, hanging wall interval and footwall interval. Separate estimation models are prepared for each of these components. The mineralised interval represents the most consistently mineralised unit and dominates the defined Mineral Resource. The margins of the mineralised interval may be defined exclusively by grade cut-offs (eg Platreef), by a combination of geological features and grade cut-offs (eg Merensky Reef) or by geology (eg UG2 Reef). The hanging wall and footwall components, which are lower-grade relative to the mineralised interval, do contribute to the total mining cut that may be planned to extract the

mineralised interval. When these marginal units are prepared as 'layered estimation models', different extraction plans may be applied, and the appropriate marginal dilution aggregated.

GRADE ESTIMATION

The Mineral Resource models are prepared as 2D block models for underground operations and 3D block models for the open pit, created with Datamine software. Ordinary kriging is the estimation method applied, together with semi-variogram analysis, to quantify the spatial continuity and variance of the data. The estimation parameters were defined using a kriging neighbourhood analysis (KNA) and the variogram models defined by the Merensky, UG2, MSZ and Platreef geozones respectively. KNA tests the impact of different parameters on the estimate by interpreting changes in the kriging efficiency and kriging variance.

Within sparse to moderately informed areas of the Merensky, UG2 and MSZ, the kriging efficiency and kriging variance reaches stability at block sizes between 300m and 500m. In well-informed areas (underground sample sections and drill holes) of the similar orebodies, the kriging efficiency and kriging variance reach stability at block sizes between 50m to 250m. For the Platreef, however, block sizes range from 50m x 50m x 5m to 20m x 20m x 5m. The smaller block size is due to the closely spaced data density from exploration drilling and in-pit RC drilling data.

Search distances for grade and width estimation were based on variogram ranges for each variable. A minimum of five to seven and a maximum of 20 samples were used for estimation as determined from the KNA study. Multiple search passes were used to estimate blocks not populated by the first search pass. The minimum and maximum number of samples used remained constant, except in the third pass where they increased to 20 and 40 respectively.

MINERAL RESOURCE CLASSIFICATION

The Mineral Resource classification is reviewed and signed off by a team of Competent Persons. The classification process is driven by a weighted scorecard approach evaluating both geological (non-statistical) and geostatistical criteria. This allows assessment of data quality; orebody knowledge; Mineralisation geometry and continuity as well as statistical outputs. The geostatistical and geological (non-statistical) considerations for the classification procedure are shown below:

Non-statistical parameters	Statistical parameters
Aeromagnetic survey	Search volume
Seismic survey (where applicable)	Number of samples
Structural model	Kriging efficiency
Facies interpretation	Kriging variance
Historical data/mining history	Slope of regression
Geological loss	
Quality assurance and quality control	

REASONABLE PROSPECTS OF EVENTUAL ECONOMIC EXTRACTION

Amplats has maintained the basic resource equation (BRE) to establish a consistent and auditable process for tracking and reconciling movements in Mineral Resources and Mineralisation. This is underpinned by the reasonable prospect for eventual economic extraction (RPEEE) criteria specified in the SAMREC Code as well as Amplats' determination of reasonable prospect of eventual economic extraction of Mineral Resources guidelines document. The BRE encompasses processes from all technical disciplines to ensure that the publication of Mineral Resource data is aligned with the company's business plan and with technical and economic considerations.

A virgin rock temperature of 75°C is still considered to be the practical limit to mining (given current technology constraints, metal prices and energy costs), and continues to form the perimeter of declared Inferred Mineral Resources within the Mining Rights of Tumela Mine and Twickenham Mine, as well as the Bokoni JV. Amplats will continue to review deposits down-dip of this limit based on changing geological information, mining technology and metal prices.

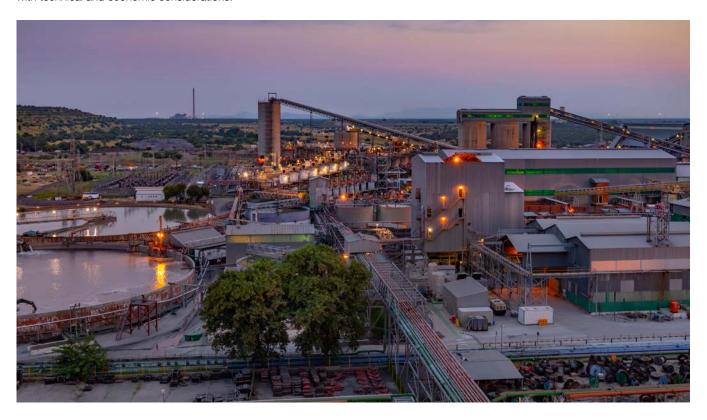
Further understanding and quantification of the company's full endowment potential on and around its current holdings progressed well in 2019, with the acquisition and inclusion of the endowment specified in the Central Block and Kwanda North Prospecting Rights into the greater Mogalakwena Mining Right concluded.

lain Colquhoun (Geology hons) *PrSciNat* (400097/00)

Principal mineral resources

Anglo American group discovery and geosciences

Johannesburg 13 February 2020



MINERAL RESOURCE ESTIMATES SUMMARY

as at 31 December 2019

MINERAL RESOURCES SUMMARY

By reef exclusive of Ore Reserves (4E)

The estimates below represent Amplats' attributable interests:

	Classification	Mineral Resources Million tonnes (Mt)		Grade 4E g/t		Contained metal 4E tonnes		Contained metal 4E Moz	
Reef		2019	2018	2019	2018	2019	2018	2019	2018
South Africa									
Merensky Reef	Measured	179.8	188.1	5.08	5.23	914	983	29.4	31.6
	Indicated	253.7	266.2	5.09	5.15	1,291	1,372	41.5	44.1
	Measured and Indicated	433.5	454.3	5.09	5.18	2,205	2,355	70.9	75.7
	Inferred in LOMP*	1.0	2.6	6.62	7.80	7	21	0.2	0.7
	Inferred ex LOMP*	468.4	474.5	4.93	4.94	2,309	2,344	74.2	75.4
	Inferred	469.4	477.1	4.93	4.95	2,316	2,365	74.5	76.0
	Total	902.9	931.5	5.01	5.07	4,521	4,720	145.3	151.7
UG2 Reef	Measured	426.4	461.0	5.33	5.27	2,272	2,431	73.0	78.1
	Indicated	449.4	486.3	5.34	5.28	2,397	2,569	77.1	82.6
	Measured and Indicated	875.8	947.3	5.33	5.28	4,669	5,000	150.1	160.7
	Inferred in LOMP* Inferred ex LOMP*	0.0 455.5	0.1 466.5	5.70 5.52	5.16 5.53	0 2,515	1 2,578	0.0 80.9	0.0 82.9
	Inferred	455.5	466.7	5.52	5.53	2,515	2,579	80.9	83.0
	Total	1,331.3	1,414.0	5.40	5.36	7,184	7,579	231.0	243.6
Platreef**	Measured	221.1	236.6	2.18	1.99	482	471	15.5	15.1
rialieei	Measured stockpiles	4.4	4.4	3.20	3.20	14	14	0.4	0.4
	Indicated	1,375.7	1,371.1	2.31	2.17	3,178	2,975	102.2	95.7
	Measured and Indicated	1,601.2	1,612.1	2.29	2.15	3,674	3,460	118.1	111.2
	Inferred in LOMP*	0.6	2.5	3.76	4.77	2	12	0.1	0.4
	Inferred ex LOMP*	595.4	824.2	1.76	2.18	1,048	1,797	33.7	57.8
	Inferred	596.0	826.6	1.76	2.19	1,050	1,809	33.8	58.1
	Total	2,197.2	2,438.7	2.15	2.16	4,724	5,269	151.9	169.4
South Africa reefs	Measured	831.6	890.1	4.42	4.38	3,682	3,899	118.3	125.3
	Indicated	2,078.9	2,123.7	3.30	3.26	6,866	6,916	220.8	222.3
	Measured and Indicated	2,910.5	3,013.8	3.62	3.59	10,548	10,815	339.1	347.6
	Inferred in LOMP*	1.6	5.2	5.56	6.30	9	34	0.3	1.1
	Inferred ex LOMP*	1,519.3	1,765.2	3.87	3.81	5,872	6,719	188.8	216.0
	Inferred	1,520.9	1,770.4	3.87	3.81	5,881	6,753	189.1	217.1
	Total	4,431.5	4,784.2	3.71	3.67	16,429	17,568	528.2	564.7
Zimbabwe									
Main Sulphide Zone	Measured	7.9	11.1	4.12	3.96	33	44	1.1	1.4
(MSZ)	Indicated	112.3	111.3	4.29	4.29	482	477	15.5	15.3
	Measured and Indicated	120.2	122.4	4.28	4.26	515	521	16.5	16.8
	Inferred in LOMP*	0.03	0.0	3.41	3.37	0	0	0.0	0.0
	Inferred ex LOMP*	47.7	47.4	4.22	4.23	201	200	6.5	6.4
	Inferred	47.8	47.4	4.22	4.23	201	200	6.5	6.4
	Total	168.0	169.7	4.26	4.25	716	721	23.0	23.2

By reef exclusive of Ore Reserves (4E)

The estimates below represent Amplats' attributable interests:

			Mineral Resources Million tonnes (Mt)		Grade 4E g/t		Contained metal 4E tonnes		Contained metal 4E Moz	
Reef	Classification	2019	2018	2019	2018	2019	2018	2019	2018	
South Africa and 2	Zimbabwe									
All reefs (Merensky, UG2,	Measured Indicated	839.6 2,191.2	901.2 2,234.9	4.42 3.35	4.37 3.31	3,715 7,348	3,943 7,393	119.4 236.3	126.7 237.7	
Platreef, MSZ)	Measured and Indicated	3,030.8	3,136.1	3.65	3.61	11,063	11,336	355.7	364.4	
	Inferred in LOMP* Inferred ex LOMP*	1.7 1,567.0	5.2 1,812.6	5.52 3.88	6.29 3.82	9 6,073	34 6,919	0.3 195.3	1.1 222.5	
	Inferred	1,568.7	1,817.8	3.88	3.82	6,082	6,953	195.6	223.5	
	Total	4,599.5	4,953.9	3.73	3.69	17,145	18,289	551.2	587.9	
South Africa - Tail	ings									
	Measured Indicated	63.0 8.1	63.0 8.1	0.79 0.82	0.79 0.82	50 7	50 7	1.6 0.2	1.6 0.2	
	Measured and Indicated	71.1	71.1	0.79	0.79	57	57	1.8	1.8	
	Inferred in LOMP* Inferred ex LOMP*	1.2	1.2	0.91	0.91	1	1	0.04	0.0	
	Inferred	1.2	1.2	0.91	0.91	1	1	0.0	0.0	
	Total	72.3	72.3	0.80	0.80	58	58	1.9	1.9	

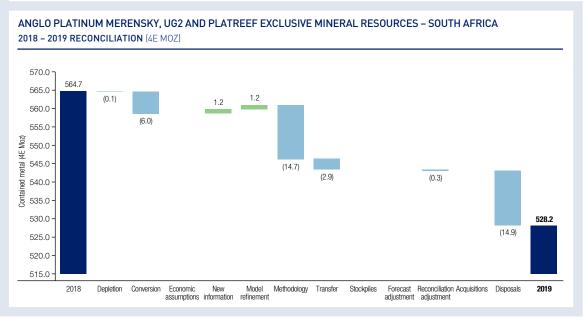
^{*} Inferred in LOMP and Inferred ex LOMP:

Inferred Mineral Resources in the life-of-mine plan (LOMP) are described as 'Inferred (in LOMP)'. The portion of Inferred Resources with reasonable prospects for eventual economic extraction not considered in the LOMP are reported as 'Inferred (ex LOMP)'

EXCLUSIVE MINERAL RESOURCES SUMMARY FOOTNOTES

The reconciliation waterfall charts are based on the total of Measured, Indicated and Inferred Mineral Resources exclusive of Ore Reserves attributable to Amplats. Definitions of reconciliation categories are on page 84.

South Africa



^{**} For Platreef a cut-off grade of 1.0 4E g/t is used except for calc-silicate and oxidised material where a cut-off grade of 3.0 4E g/t is applied.

142.0

140.0

MINERAL RESOURCE ESTIMATES SUMMARY CONTINUED

as at 31 December 2019

EXCLUSIVE MINERAL RESOURCES SUMMARY FOOTNOTES continued

South Africa continued

The South African Mineral Resources exclusive of Ore Reserves 4E content decreased by 6.5% to 528.2 4E Moz and the tonnage decreased by 7.4% to 4,431.5Mt (2018: 4,784.2Mt) after disposing of the interest in Bafokeng Rasimone Platinum Mine joint venture to Royal Bafokeng Platinum, reallocating some lower-grade Platreef material to Mineralisation after a change in Mineral Resources reporting methodology at Mogalakwena Mine and other factors:

- Mogalakwena Mine conversion of Mineral Resources to Ore Reserves and new Mineral Resource reporting methodology (reallocation):
- -20.0 4E Moz ⇒ -260.2Mt -14.9 4E Moz ⇒ -78.1Mt

■ BRPM – Merensky and UG2 reefs disposal:

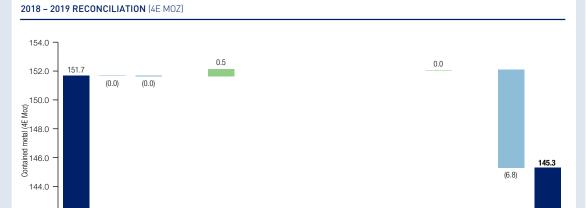
- Der Brochen Project and Mototolo Mine net transfer of UG2 Mineral Resources from Der Brochen to Mototolo:

ANGLO PLATINUM MERENSKY REEF EXCLUSIVE MINERAL RESOURCES - SOUTH AFRICA

- -2.9 4E Moz ⇒ -22.1Mt
- Dishaba, Tumela, and Modikwa mines conversion of UG2 Reef Mineral Resources to Ore Reserves:
- -0.7 4E Moz ⇒ -4.1Mt

Stockpiles Reconciliation Acquisitions Disposals

By reef **Merensky Reef**



The Merensky Mineral Resource 4E ounce content decreased by 4.2% to 145.3 4E Moz and the tonnage decreased by 3.1% to 902.9Mt (2018: 931.5Mt) primarily after the disposal of the interest in BRPM to Royal Bafokeng Platinum:

Methodology

New technology

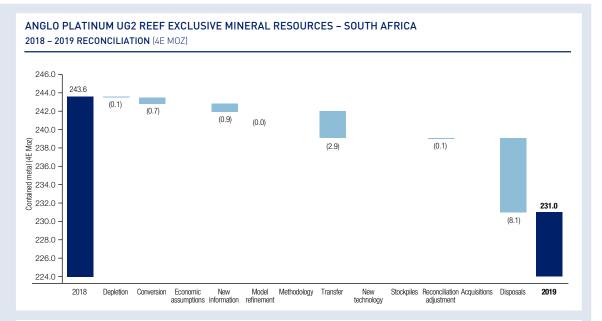
■ BRPM – disposal: -6.8 4E Moz ⇒ -28.0Mt

The decrease is slightly offset by the increase in exclusive Mineral Resources at:

Conversion Economic New Model assumptions information refinement

■ Modikwa Mine – new information (lower geological losses, higher grade): +0.6 4E Moz ⇒ +0.5Mt





The UG2 exclusive Mineral Resource 4E ounce content decreased by 5.2% to 231.0 4E Moz and the tonnage decreased by 5.8% to 1,331.3Mt (2018: 1,414.0Mt) primarily due to the disposal of the interest in BRPM to Royal Bafokeng Platinum and other factors:

■ BRPM – disposal:

-8.1 4E Moz ⇒ -50.1Mt

■ Der Brochen project – transfer of Mineral Resources to Mototolo Mine and new information:

-4.6 4E Moz ⇒ -33.9Mt

■ Dishaba Mine – conversion of Mineral Resources to Ore Reserves:
 ■ All mines – total new information

-1.5 4E Moz ⇒ -9.2Mt -0.2 4E Moz ⇒ -1.1Mt

The decrease is marginally offset by the increase in exclusive Mineral Resources at:

Mototolo Mine – post conversion of transferred of Mineral Resources from Der Brochen: +1.0 4E Moz ⇒ +7.5Mt

■ Tumela Mine – reallocation of Ore Reserves to Mineral Resources:

+0.4E Moz ⇒ +2.5Mt

■ Modikwa Mine – reallocation (change in mine design) of Ore Reserves to Mineral Resources:

+0.4E Moz ⇒ +2.1Mt

Platreef

ANGLO PLATINUM PLATREEF EXCLUSIVE MINERAL RESOURCES - SOUTH AFRICA **2018 - 2019 RECONCILIATION** [4E MOZ] 175.0 169.4 170.0 1.5 165.0 Sontained metal (4E Moz) 160.0 155.0 151.9 (14.7)(0.2)150.0 145.0 140.0 Forecast Reconciliation Acquisitions Disposals adjustment adjustment Model 2019 Depletion Conversion Economic Methodology Transfer Stockpiles assumptions information refinement

MINERAL RESOURCE ESTIMATES SUMMARY CONTINUED

as at 31 December 2019

EXCLUSIVE MINERAL RESOURCES SUMMARY FOOTNOTES continued

Platreef continued

The Mogalakwena Platreef exclusive Mineral Resource 4E ounce content decreased by 17.5 4E Moz (10.3%) and the tonnage decreased from 2,438.7Mt to 2,197.2Mt (9.9%) mainly due to:

Conversion of Mineral Resources to Ore Reserves:

-5.3 4E Moz ⇒ -105.5Mt

■ Change in Mineral Resource reporting methodology (reallocating lower-grade Platreef material to Mineralisation):

-14.7 4E Moz ⇒ -154.7Mt

The decrease is slightly offset by the increase in exclusive Mineral Resources due to:

■ New information at Mogalakwena Super pit:

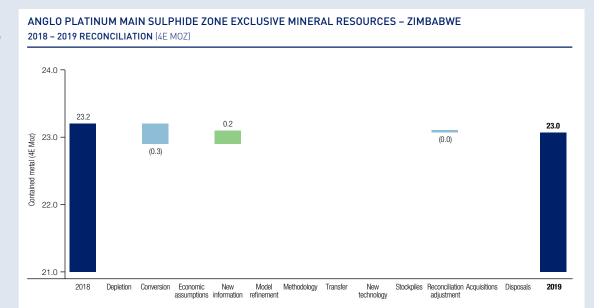
+1.5 4E Moz ⇒ +2.7Mt

■ Model refinement at Sandsloot and Zwartfontein South pits:

+1.2 4E Moz ⇒ +15.9Mt

The resource statement includes stockpiled material from the open-pit operation that consists of calc-silicate and oxidised material with a cut-off grade of greater than 3.0 4E g/t. This Measured Mineral Resource is included in the Resource statement (0.4 4E Moz \Rightarrow 4.4Mt).

Zimbabwe Main Sulphide Zone (MSZ)



The Mineral Resource 4E ounce content and tonnage decreased slightly to 23.0 4E Moz and 168.0Mt (2019: 169.7Mt) due to

Converting Mineral Resources to Ore Reserves:

-0.3 4E Moz ⇒ -2.7Mt

New information due to decrease in geological loss:

+0.2 4E Moz ⇒ +0.5Mt

The current mining areas at Unki East and West are evaluated on a 180cm resource cut width and the remaining area evaluated on a 120cm resource cut width.

Tailings

Operating tailings storage facilities are not reported as part of the Mineral Resources. At Amandelbult Complex, a dormant tailings storage facility has been evaluated and is separately reported as tailings Mineral Resources.

No Ore Reserves are declared for this storage facility.

ORE RESERVE ESTIMATES SUMMARY

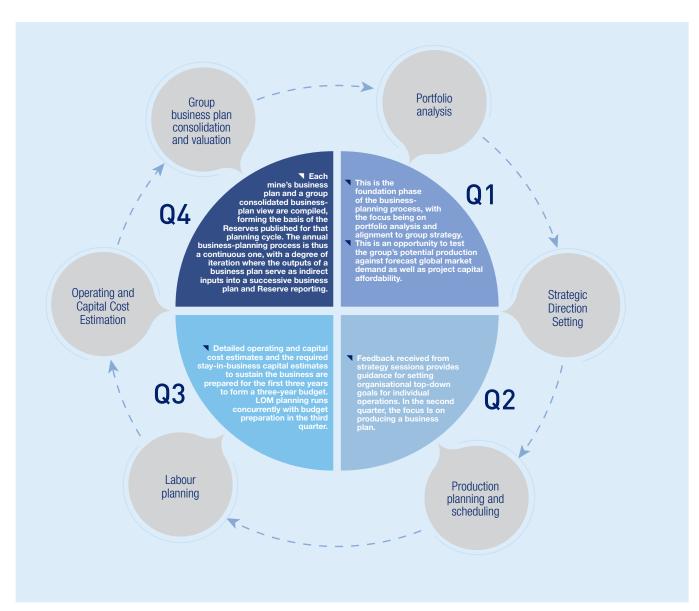
as at 31 December 2019

ORE RESERVES: MANAGED OPERATIONS

Business planning process

The process of defining Ore Reserves from Mineral Resources has not changed materially for the 2019 reporting cycle. The process of defining Ore Reserves is supported by an integrated planning process, an approved Amplats and Anglo American Group policy. The process outlines the methodology used when

Mineral Resources are converted to Ore Reserves based on current economic considerations. The main activities of the process are: plan alignment and development, LOM planning and scheduling, budgeting and LOM costing, business plan and Ore Reserve reporting. They are supported by six essential processes as outlined in the planning cycle.



PLANNING CYCLE

Q1 = Plan alignment and development

Q2 = LOM planning and scheduling

Q3 = Budgeting and costing

Q4 = Business plan and R&R

ORE RESERVE ESTIMATES SUMMARY CONTINUED

as at 31 December 2019

Modifying factors

The business-planning process starts by defining the terms of reference and collating the input parameters used to determine the economically viable portion of the defined Mineral Resources. The modifying factors that impact conversion of Mineral Resources to Ore Reserves are technical; mining; geotechnical; processing and recovery; financial; legal; market; infrastructure; and social/governmental. Modifying factors for each operation are tabled in the individual operational sections of this report.

Underground operations: Merensky, UG2 and MSZ

For underground operations, application of modifying factors is implemented in three distinct phases:

- Mine design and scheduling. The modifying factors for mine-design criteria as applicable to different reefs and mining methods are benchmarked and signed off in the first quarter of the year. Geotechnical and ventilation considerations as well as factors that impact on dilution of the Resource (ie stope width versus Resource width, tertiary development and other mining done on the reef horizon) are applied. Discounting factors include unknown geological losses, dimensions and position of in-stope pillars, boundary pillar, barrier pillars and regional pillars where required. Modifying factors that define mining losses (reef in hanging/reef in foot and mining inefficiencies) are also applied to specific mine-design criteria.
- 2 Processing. Those modifying factors that influence the efficiency of processing and recovery are applied to the scheduled resource. The factors considered include: throughput capacity, recoveries, mass pull, recovery potential and blending of ore from different sources. The result is a Mineable Reserve.
- 3 **Economics.** The subsequent application of modifying factors that influence the economic aspects of the mining operation results in a portion of the scheduled Resource not being converted into Reserve. This portion, known as the uneconomic tail, reverts to Mineral Resources to be considered in subsequent planning processes. Its exclusion results in a scheduled Reserve that is equivalent to the operation's published Ore Reserve estimates.

For the purposes of Ore Reserve conversion, only the Measured and Indicated Mineral Resource categories are converted. Only those current operations and approved projects in execution, featured in the business plan, are included as Ore Reserves.

The scheduled Ore Reserves are peer reviewed and signed off by the Competent Person(s).

Platreef open-pit operations:

1 Pit design. The open-pit planning process starts by defining the terms of reference and collating the input parameters used to determine the economically viable portion of defined Resources. With this information, the 3D Mineral Resource model can be improved to incorporate new economic fields and the profit (revenue-cost) for each block can be calculated. The *in situ* Mineral Resource model is then regularised to the smallest mining unit size that corresponds to the mining parameters for a specific mining area, considering the overall mining recovery (loss and dilution) as estimated from operational reconciliation resource model to metal reporting to the processing facilities. This output, the so-called economic model, is used as input for optimising pit designs.

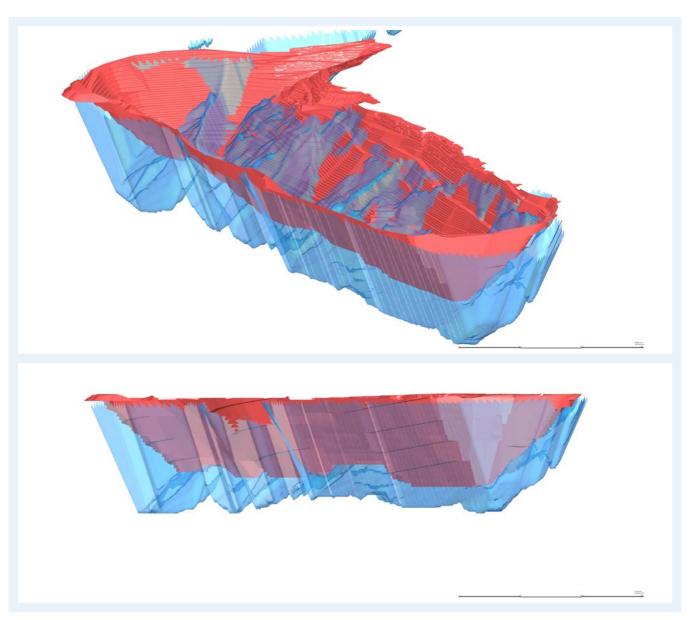
- 2 Pit optimisation. Based on inputs collected, mine optimisations studies are undertaken to define the economically exploitable pit shell, excluding benefits derived from Inferred Resources. The Lerchs-Grossman algorithm or floating cone methodology seeks to maximise net present value (NPV), but does not account for risk. The envelope that defines the theoretical pit for maximum NPV is seldom the envelope selected by the planning engineer as the final pit envelope. The latter is usually contained within the former and is often decided according to diminishing return, geometric (eg constrained by existing infrastructure) and/or geotechnical constraint.
- 3 Mine design and scheduling. After selecting the optimal pit shell, detailed mine design and production scheduling follows. The detailed pit design and production schedule will include cutback sequence, ramps, inter-ramp slope angles, safety berms, step-outs, bench stacking, etc. Material contained in the final pit design will include Measured, Indicated and Inferred Resources. In other words, despite having allocated a zero value for revenue to Inferred Resources during the pit optimisation, in the final pit design and production schedule it is necessary to recognise this material.

Material in the mine plan defined as Ore Reserves is material above the economic cut-off grade, depending on technical and financial considerations, and includes in-pit and stockpiled material. Material that falls below the cut-off grade for all primary and secondary process methods is deemed to be waste.

The next step is to determine logical mining phases and complete detailed mine designs. Operational constraints are applied to these designs which, after operational mining and processing schedules are developed, optimise the defined exploitation sequence and meet the business strategy.

All material included in the life-of-asset production schedule (ie ore treated) and categorised Measured or Indicated Resource is converted to Ore Reserves. Inferred Resource in the LOM production schedule (ie ore treated) is classified as Scheduled Mineral Resources.

The scheduled Ore Reserves are peer reviewed and signed off by the Competent Person(s).



Mogalakwena Mine: Pit design shell (red) versus Optimised pit shell (blue)

Reconciliation

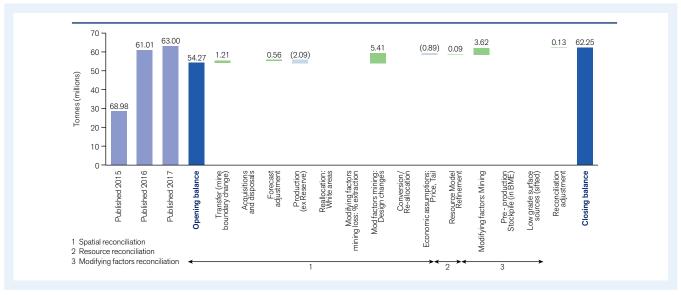
In the process of continuous improvement, Amplats continues to use a three-stage reconciliation of year-on-year changes as well as a consistent and auditable process for tracking and reconciling year-on-year movements in Ore Reserves using the basic resource to reserve reports.

The first stage is a spatial reconciliation that defines the impact of boundary changes, face-position adjustments, mine-design changes, as well as areas that are no longer economically viable for current price forecasts. The second stage of the reconciliation defines changes in the Resource model which is updated yearly with new drilling and sampling data. The final stage defines changes in the modifying factors being applied to mine design to produce the production profile.

ORE RESERVE ESTIMATES SUMMARY CONTINUED

as at 31 December 2019

Example: Waterfall chart of year-on-year changes created from the reconciliation methodology (Dishaba Mine)



Low grade surface storage facilities (surface sources)

Bulk samples taken on historical surface storage facilities have demonstrated the intermittent presence of low-grade reef material. This stems from historical haulage development on PGM-bearing horizons such as the Pseudo 1 horizon at Amandelbult Complex, and from historical sub-optimal orehandling processes.

Owing to the difficulty of effectively evaluating these large-scale facilities, they are, across operations are not reported under the Ore Reserve and Mineral Resource estimates but categorised as Mineralisation.

Where concentrator capacity is available, low grade material that has indicated potential is further sampled and evaluated on a localised basis for processing as part of surface-sources material.

Tailings storage facilities (surface sources)

Operational tailings dams are not fully evaluated and therefore not reported as part of published Ore Reserves. Dormant or non-operational dams at the Amandelbult complex have been evaluated and reported as Mineral Resources, but no Ore Reserves have been declared yet.

Nico Nel HND, MRM SAIMM (706878)

Principal mine planner Anglo American Platinum

Johannesburg 13 February 2020

ORE RESERVES SUMMARY

By reef (4E)

The estimates below represent Amplats' attributable interests:

		Ore re (ROM	serves // Mt)	Gra 4E	ade g/t	Containe 4E to		Containe 4E M	
Reef	Classification	2019	2018	2019	2018	2019	2018	2019	2018
South Africa									
Merensky Reef	Proved	4.4	21.6	5.28	4.75	23	103	8.0	3.3
	Probable	4.4	12.1	4.76	4.47	21	54	0.7	1.7
	Total	8.8	33.7	5.02	4.65	44	157	1.4	5.0
UG2 Reef	Proved	142.9	137.0	3.92	4.05	561	556	18.0	17.9
	Probable	31.4	38.7	3.98	4.14	125	160	4.0	5.2
	Total	174.3	175.7	3.93	4.07	686	716	22.0	23.0
Platreef	Proved	767.3	727.8	2.96	3.06	2,271	2,227	73.0	71.6
	Proved primary ore stockpiles	20.0	23.1	2.54	2.42	51	56	1.6	1.8
	Total proved	787.3	750.9	2.95	3.04	2,322	2,283	74.7	73.4
	Probable	428.0	408.5	3.07	3.25	1,314	1,328	42.2	42.7
	Probable primary ore stockpiles	40.9	40.9	1.47	1.47	60	60	1.9	1.9
	Total probable	468.9	449.4	2.93	3.09	1,374	1,388	44.2	44.6
	Total	1,256.2	1,200.3	2.94	3.06	3,696	3,671	118.8	118.0
South Africa reefs	Proved	934.8	909.5	3.11	3.23	2,907	2,942	93.4	94.5
	Probable	504.6	500.2	3.01	3.20	1,520	1,602	48.9	51.5
	Total	1,439.2	1,409.7	3.08	3.22	4,426	4,544	142.3	146.1
Zimbabwe									
Main Sulphide Zone	Proved	27.2	25.4	3.29	3.35	89	85	2.9	2.7
(MSZ)	Probable	26.1	27.0	3.24	3.26	85	88	2.7	2.8
	Total	53.3	52.5	3.27	3.30	174	173	5.6	5.6
South Africa and Z	imbabwe								
All reefs	Proved	962.0	934.9	3.11	3.24	2,996	3,027	96.3	97.3
(Merensky, UG2,	Probable	530.7	527.3	3.02	3.21	1,605	1,690	51.6	54.3
Platreef, MSZ)	Total	1,492.5	1,462.2	3.08	3.23	4,600	4,717	147.9	151.6

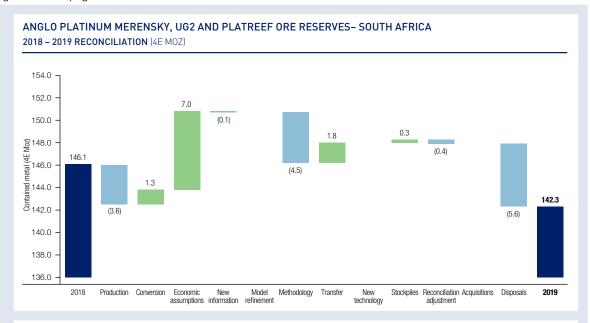
ORE RESERVE ESTIMATES SUMMARY CONTINUED

as at 31 December 2019

ORE RESERVE SUMMARY FOOTNOTES

The reconciliation waterfall charts are based on the total of Proved and Probable Ore Reserves attributable to Amplats. Definitions of reconciliation categories are on page 84.

South Africa



The Ore Reserve 4E content decreased by 2.6% to 142.3 4E Moz and the tonnage increased by 2.1% to 1,439.2Mt (2018:1,409.7Mt). This was primarily due to disposing of the interest in BRPM joint venture to Royal Bafokeng Platinum, a new Mineral Resource reporting methodology at Mogalakwena Mine which resulted in reallocating marginal material, and production.

■ BRPM – disposal: –5.6 4E Moz 🗢 –41.3Mt

■ Mogalakwena – change in Mineral Resource reporting methodology: -4.5 4E Moz => -27.4Mt

▼ Production – Merensky Reef, UG2 Reef and Platreef:
-3.6 4E Moz ⇒ -32.8Mt

■ Dishaba and Tumela mines- economic assumptions (tail management): -0.4 4E Moz => -2.6Mt

The decrease in the Ore Reserves 4E content is partially offset by the increase in Platreef at Mogalakwena Mine due to economic assumptions, Merensky and UG2 at Dishaba and Tumela mines due to converting Mineral Resources to Ore Reserves as well as UG2 Reef at Mototolo Mine due to converting transferred Mineral Resources to Ore Reserves.

■ Mogalakwena Mine:

■ Dishaba Mine:

▼ Tumela Mine:

■ Mototolo Mine:

+7.4 4E Moz ⇒ +105.9Mt

+1.1 4E Moz ⇒ +11.6Mt

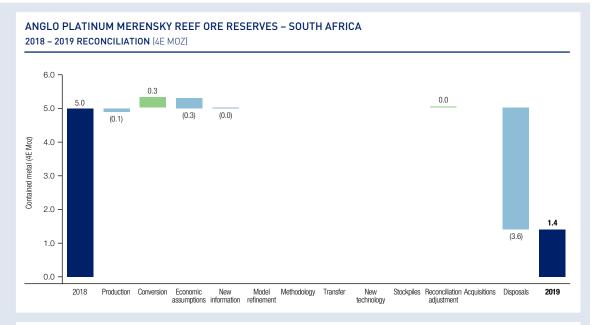
+0.3 4E Moz ⇒ +2.6Mt

+1.8 4E Moz ⇒ +17.5Mt

ORE RESERVE FOOTNOTES continued

By reef

Merensky Reef



The Ore Reserve 4E ounce content decreased by 71.8% to 1.4 4E Moz and the tonnage decreased by 74.0% to 8.8Mt (2018: 33.7Mt), primarily due to the sale of the interest in the BRPM joint venture to Royal Bafokeng Platinum and other minor factors.

■ BRPM – disposal: –3.6 4E Moz 🗢 –24.9Mt

■ Dishaba Mine – economic assumptions (tail management): -0.3 4E Moz \(\Dip -1.9Mt \)

Annual Production:
 -0.1 4E Moz ⇒ -0.4Mt

■ Dishaba Mine – conversion of Mineral Resources to Ore Reserves: +0.3 4E Moz \Rightarrow +1.9Mt

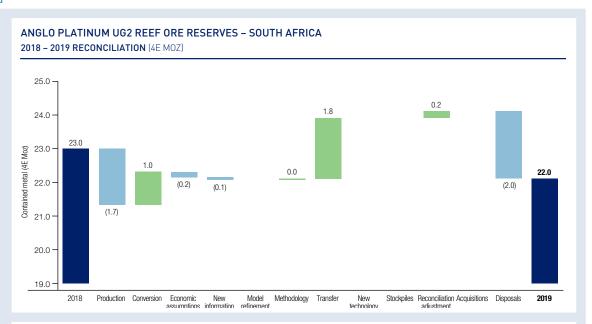
ORE RESERVE ESTIMATES SUMMARY CONTINUED

as at 31 December 2019

ORE RESERVE FOOTNOTES continued

By reef continued

UG2 Reef



The Ore Reserve 4E ounce content decreased by 1.0 4E Moz to 22.0 4E Moz and the tonnage decreased by 1.4Mt to 174.3Mt mainly due to the sale of the interest in the BRPM joint venture to Royal Bafokeng Platinum and other factors.

 ■ BRPM – disposal:
 -2.0 4E Moz ⇒ 16.5Mt

 ■ Production:
 -1.7 4E Moz ⇒ -15.1Mt

■ Dishaba, Tumela and Modikwa mines – economic assumptions (tail management): –0.2 4E Moz ⇒ -1.0Mt

Mototolo and Modikwa mines – reallocating Ore Reserves to Mineral Resources:
 -0.2 4E Moz ⇒ -1.0Mt

The decrease in Ore Reserves is partially offset by the by the following factors.

■ Mototolo Mine – conversion of transferred Mineral Resources from Der Brochen project to Ore Reserves:

+1.8 4E Moz ⇒ +17.5Mt

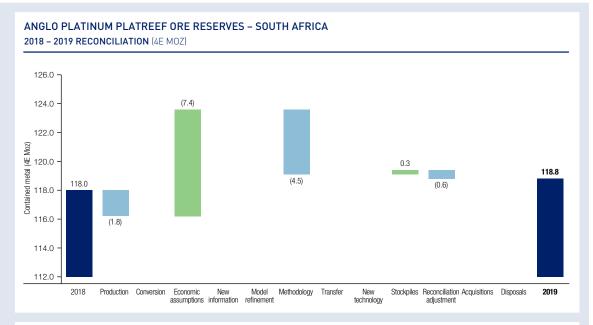
■ Dishaba Mine – conversion of Mineral Resources to Ore Reserves (new mine design): +0.8 4E Moz ⇒ +9.0Mt

■ Tumela Mine – conversion of Mineral Resources to Ore Reserves (new mine design): +0.3 4E Moz 🗢 +2.6Mt

ORE RESERVE SUMMARY FOOTNOTES continued

By reef continued

Platreef



The Ore Reserves 4E ounce content (including primary ore stockpiles) increased by 0.7% to 118.8 4E Moz and the tonnage decreased by 4.7% to 1,256.2Mt (2018: 1,200.3Mt) mainly due to:

■ Economic assumptions – improved economics resulted in the conversion of additional Mineral Resources to Ore Reserves:
 +7.9 4E Moz ⇒ +116.5Mt

Stockpile movements account for:
+0.8 4E Moz

+10.0Mt

The extent of the increase was, however, offset by reallocation of some lower-grade material to Mineralisation due to a change in Mineral Resources reporting methodology, economic assumptions, and production.

■ Reallocating some lower-grade material to Mineralisation:
-4.5 4E Moz ⇒ -29.1Mt

▼ Ex-pit production:-1.8 4E Moz ⇒ -17.0Mt

▼ Economic assumptions – stockpiled material remaining after life-of-mine

due to unfavourable economics:

-0.5 4E Moz ⇒ -10.6Mt

■ Reconciliation adjustment of 2018 production forecast:
-0.5 4E Moz ⇒ -4.0Mt

The published Ore Reserve stockpile does not include oxidised and calc-silicate material; this material is included in the Mineral Resource statement.

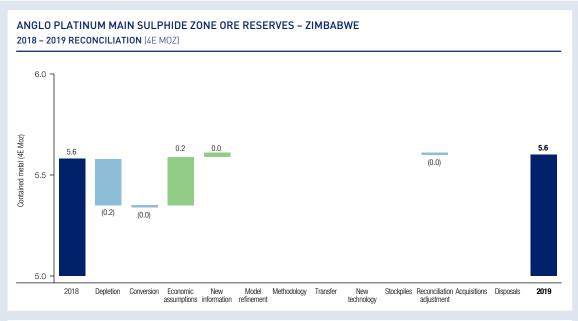
ORE RESERVE ESTIMATES SUMMARY CONTINUED

as at 31 December 2019

ORE RESERVE SUMMARY FOOTNOTES continued

Zimbabwe

Main Sulphide Zone (MSZ)



The Ore Reserve 4E ounce content remained at 5.6 4E Moz and the tonnage increased slightly by 0.8% to 53.3Mt mainly due to additional Mineral Resources converted to Ore Reserves after a revised mine design. Production: -0.2 4E Moz $\Rightarrow -1.9$ Mt

Economic assumptions – tail management +0.2 4E Moz ⇒ +2.2Mt



as at 31 December 2019

Kavita Mohanlal

Mineral Resources
Principal resource estimation platinum
SACNASP, PrSciNat
16 years

Marlon van Heerden Ore Reserves Principal LOM planning SAIMM, member 12 years



KEY FEATURES

The Mogalakwena Mining Right area

37 211ha including CB and KN

Mining Methods

Open pit (truck and shovel)

Reserve Life

> 21 years, with LOM exceeding 30 years

MOGALAKWENA MINE (100%)

Mogalakwena Mine complex is located 30km north-west of the town of Mokopane in Limpopo province, South Africa. It is wholly owned and managed by Amplats. The mine is at steady-state production, and focused on optimised organic growth through incorporation of adjacent properties north of the former Mining Right boundary.

PROPERTY DESCRIPTION

The mine exploits the Platreef, the primary PGM-bearing horizon developed in the Northern Limb of the Bushveld Complex. The reef averages 150m in thickness, with a prominently top-loaded grade profile, hosting optimal Mineralisation in the upper 30m to 40m of the reef package.

BRIEF HISTORY

The earliest recorded prospecting activity commenced on the farms Tweefontein and Sandsloot in 1925. Trenching, drilling and bulk sampling preceded the start of mining activities for the farms Zwartfontein, Sandsloot and Vaalkop. This was accompanied by construction and commissioning the beneficiation plant.

Mining and production halted following the Great Depression of 1929, with activity on the tenement only resuming in 1968, by Johannesburg Consolidated Investments (JCI), the predecessor entity of Anglo American Platinum. Between 1968 and 1989, building on a comprehensive framework and sampling program, significant exploration involving field mapping, drilling and geophysics, was completed along the strike extent on the Northern Limb. The results of this exploration allowed for effective target assessment, and vectored focus on the originally identified properties of Sandsloot, Tweefontein, Vaalkop, along with Overysel immediately to the north.

In the late 1980's and early 1990's, evaluation activities which included bulk sampling and underground trial mining were undertaken, with the latter focused on the Overysel portion of the property. The outcome of these activities became key drivers in adopting a high-tonnage, low-grade extractive method of the extraordinarily thick and variable Platreef orebody. Bulk open pit was selected as the preferred mining method, with primary production beginning at Sandsloot in 1993. This was followed by extensive exploration programmes and development of the Zwartfontein pit in the early 2000s. The exploitation of Central and North pits followed in 2006 and 2008 respectively, now the primary mining areas of Mogalakwena Mine.

In 2019, Amplats and Atlatsa Resources completed the acquisition and inclusion of the mineral endowment specified in the Central Block and Kwanda North Prospecting Rights into Mogalakwena Mining Right. The Central Block and Kwanda North Prospecting Rights are, pending exploration and evaluation work, classified as Mineralisation and will not have any impact on the current reported Mineral Resource base.

as at 31 December 2019

MOGALAKWENA MINE (100%)

continued

MINERAL RIGHTS

The Mogalakwena Mining Right covers an area of 37 211ha. This includes the Central Block and Kwanda North Mineral Rights that are now incorporated into the Mogalakwena Mining Rights. Amplats holds a converted Mining Right under the Department of Mineral Resources (DMR) ref LP 50 MR, valid from 23 July 2010 to 22 July 2040. The anticipated life-of-mine plan (LOMP) exceeds the current Mining Right expiry date (2040). An application to extend the Mining Right will be submitted at the appropriate time. There is reasonable expectation that this extension will not be withheld.

There are no known impediments to the Right.

MINING METHOD

Mining of the orebody is by open pit methods (truck-and-shovel).

OPERATIONAL INFRASTRUCTURE

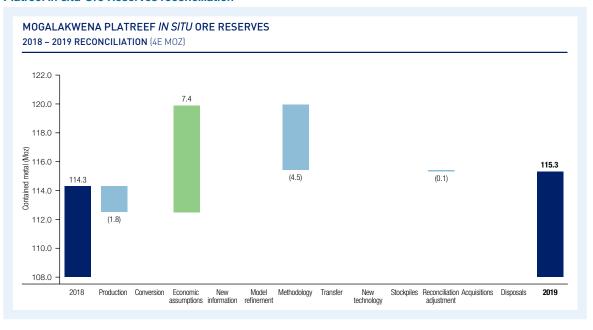
Current mining areas comprises five open pits: Sandsloot, Zwartfontein, Mogalakwena South, North and Central. Pit depths vary from 45m to 245m. Ore is milled on-mine at the North and South concentrators as well as at the Baobab concentrator.

	Units	Platreef
Mineral Resource assumptions		
Grade cut-off	4E g/t	1.0
Average density	g/cm³	3.1
Ore Reserves modifying factors		
Mining dilution	%	2
Stripping ratio (waste:ore)		7.6
Concentrator recoveries	%	74 – 82
Mine call factor	%	100
Paylimit grade (in situ)	4E g/t	2.3
Paylimit grade (stockpiles)	4E g/t	1.0 – 1.7

ORE RESERVES

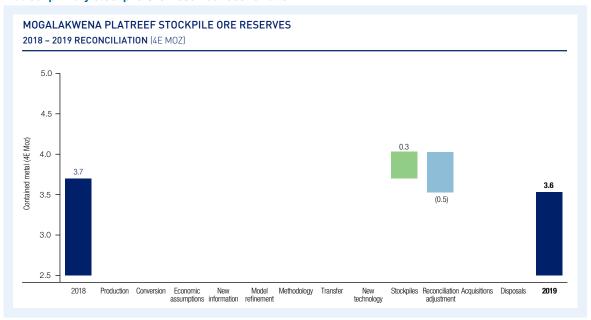
Mogalakwena	Reserve	Ore Reserves (ROM) Million tonnes (Mt)		Grade 4E g/t		Contained metal 4E tonnes		Contained metal 4E Moz		
(100%)	life	Classification	2019	2018	2019	2018	2019	2018	2019	2018
Platreef (in situ)	>21	Proved	767.3	727.8	2.96	3.06	2,271	2,227	73.0	71.6
		Probable	428.0	408.5	3.07	3.25	1,314	1,328	42.2	42.7
		Total	1,195.3	1,136.4	3.00	3.13	3,585	3,555	115.3	114.3
Platreef primary ore		Proved	20.0	23.1	2.54	2.42	51	56	1.6	1.8
stockpiles		Probable	40.9	40.9	1.47	1.47	60	60	1.9	1.9
		Total	60.8	63.9	1.82	1.81	111	116	3.6	3.7

Platreef in situ Ore Reserves reconciliation



ORE RESERVES continued

Platreef primary stockpile Ore Reserves reconciliation



EXCLUSIVE MINERAL RESOURCES

Mogalakwena*			Mineral Resources Million tonnes (Mt)		Grade 4E g/t		Contained metal 4E tonnes		Contained metal 4E Moz	
(100%)	Classification	2019	2018	2019	2018	2019	2018	2019	2018	
Platreef (in situ)	Measured Indicated	221.1 1,375.7	236.6 1,371.1	2.18 2.31	1.99 2.17	482 3,178	471 2,975	15.5 102.2	15.1 95.7	
	Measured and Indicated	1,596.8	1,607.8	2.29	2.14	3,660	3,446	117.7	110.8	
	Inferred	596.0	826.6	1.76	2.19	1,050	1,809	33.8	58.1	
	Total	2,192.8	2,434.4	2.15	2.16	4,710	5,255	151.4	168.9	
Platreef primary ore stockpiles	Measured Indicated	4.4	4.4	3.20	3.20	14	14	0.4	0.4	
	Measured and Indicated	4.4	4.4	3.20	3.20	14	14	0.4	0.4	
	Inferred									
	Total	4.4	4.4	3.20	3.20	14	14	0.4	0.4	

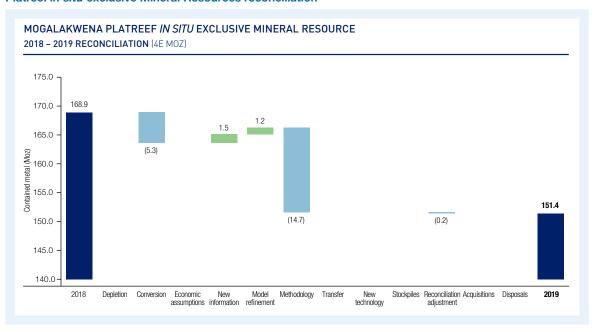
^{*} A 1.0 4E g/t cut-off grade is used to define Platreef Mineral Resources (excluding oxidised and calc-silicate stockpile material for which a 3.0 4E g/t cut-off grade is applied).

as at 31 December 2019

MOGALAKWENA MINE (100%) continued

EXCLUSIVE MINERAL RESOURCES continued

Platreef in situ exclusive Mineral Resources reconciliation



Platreef primary stockpile exclusive Mineral Resources reconciliation

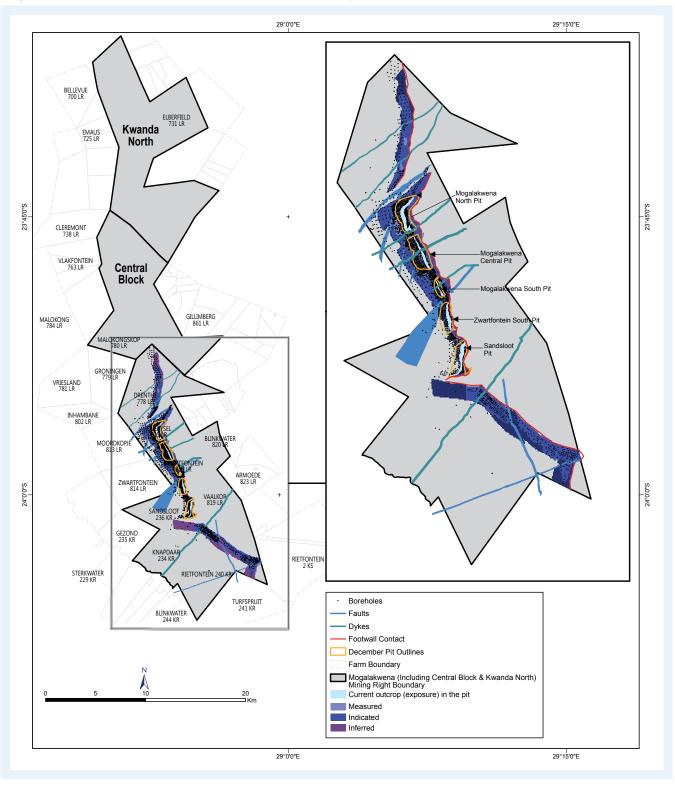
No changes to estimates from last reporting.

INCLUSIVE MINERAL RESOURCES

Manalalananatt		Mineral Resources Million tonnes (Mt)		Grade 4E g/t		Contained metal 4E tonnes		Contained metal 4E Moz	
Mogalakwena** (100%)	Classification	2019	2018	2019	2018	2019	2018	2019	2018
Platreef (in situ)	Measured Indicated	997.6 1,832.8	999.4 1,789.2	2.83 2.51	2.82 2.44	2,819 4,604	2,820 4,363	90.6 148.0	90.7 140.3
	Measured and Indicated	2,830.4	2,788.6	2.62	2.58	7,423	7,183	238.7	231.0
	Inferred	596.0	826.6	1.76	2.19	1,050	1,808	33.8	58.1
	Total	3,426.4	3,615.2	2.47	2.49	8,473	8,991	272.4	289.1
Platreef primary ore stockpiles	Measured Indicated	67.5	68.3	1.83	1.90	124	130	4.0	4.2
·	Measured and Indicated	67.5	68.3	1.83	1.90	124	130	4.0	4.2
	Inferred								
	Total	67.5	68.3	1.83	1.90	124	130	4.0	4.2

^{*} A 1.0 4E g/t cut-off grade is used to define Platreef Mineral Resources (excluding oxidised and calc-silicate material for which a 3.0 4E g/t cut-off grade is applied).

Mogalakwena Mine Platreef Mineral Resources classification map



as at 31 December 2019

Kavita Mohanlal

Mineral Resources Principal resource estimation platinum SACNASP, PrSciNat 16 years

Vinodh Sewpersad

Ore Reserves
Mineral resource manager
SACNASP, PrSciNat
28 years



KEY FEATURES

Complex Mining Right area

12 504ha

Mining methods

primarily conventional underground

Reserve Life

Dishaba Mine: >21 years

Tumela Mine: 14 years

Complex has a Chromite concentrate recovery plant that yields recoveries

between 14% and 18% per tonne of UG2 Ore processed

AMANDELBULT COMPLEX (100%)

The Amandelbult Complex is in Limpopo, between the towns of Northam and Thabazimbi, on the North-western Limb of the Bushveld Complex in South Africa. The complex is wholly owned and managed by Amplats, with two mines: Tumela and Dishaba.

PROPERTY DESCRIPTION

Dishaba and Tumela mines are at steady-state production, and focused on organic growth and value extraction through mechanisation and modernisation.

The primary reef mined is UG2 Reef, with limited mining of Merensky Reef.

BRIEF HISTORY

Soon after the discovery of platinum in the eastern Bushveld Complex in the 1920's, attention focused on the geologically similar, but further exposed, western Bushveld. The discovery of the Merensky Reef near Rustenburg in 1925, prompted exploration in other parts of the western Bushveld, including the Amandelbult area. The Steelpoort Platinum Syndicate first prospected the Amandelbult section in 1926. The syndicate was acquired by Potgietersrust Platinum Limited, but the Great Depression of 1929 halted most mining operations in the Bushveld Complex and interest in the Amandelbult area waned.

Later, Rustenburg Platinum Mines (Amplats) acquired the Mineral Rights in the area, starting in 1964 with the farm Amandelbult and in 1974 with the acquisition of the Mineral Rights of the farm Elandskuil from Amcor. A mining lease was applied for in 1974.

Mining operations at Amandelbult started on the farm Schilpadsnest but, due to lack of demand for platinum, operations were curtailed in January 1975, and only essential maintenance work was performed. With an improvement in the market, production resumed on a small scale in March 1976, building up to current production. In 2009, Amandelbult Complex was split into two mines, Dishaba and Tumela. Mineral Resources and Ore Reserves are reported separately. The feasibility study for a chrome recovery plant was completed in 2013 and project execution approved in 2014. Construction and commissioning were completed in 2016.

MINERAL RIGHTS

The Mining Right covers an area of 12 504ha. Amplats holds a converted Mining Right under the DMR ref LP 48 MR, valid from 23 July 2010 to 22 July 2040.

There are no known impediments to the Right.

MINING METHOD

Primarily, conventional scattered breast with strike pillars mining method, transitioning into mechanised trackless mining in certain sections. At Dishaba Mine, short-life, low tonnage outcrop strip mining supplements underground production.

OPERATIONAL INFRASTRUCTURE

The complex has two mines (Tumela and Dishaba) and three concentrators with a chrome plant. Current working infrastructure has five vertical and seven decline shaft systems to transport rock, employees and material, with mining on the Merensky and UG2 reef horizons. The operating depth for current workings runs from surface to 1.3km below surface.

Tumela Mine (100%)

	Units	MR	UG2
Mineral Resource			
assumptions			
Average geological loss	%	35	23
Minimum Resource cut width	cm	120	120
Average density		3.2	4.1
Ore Reserves modifying			
factors			
Mining loss factor	%	5	26
Mining dilution	%	15	18
Planned stoping width	cm	156	153
4E concentrator recoveries	%	83	85
Mine call factor	%	100	100
Paylimit grade	4E g/t	3.8	3.8

ORE RESERVES

Amandelbult Complex – Tumela			Ore Reserves (ROM) Million tonnes (Mt)		Grade 4E g/t		Containe 4E to	ed metal nnes	Contained metal 4E Moz	
Mine (100%)	life	Classification	2019	2018	2019	2018	2019	2018	2019	2018
Merensky Reef	14	Proved Probable	0.1	0.1	5.74	5.72	0	1	0.0	0.0
		Total	0.1	0.1	5.74	5.72	0	1	0.0	0.0
UG2 Reef		Proved Probable	37.8 0.3	40.3 0.1	4.62 4.10	4.65 4.46	175 1	188 0	5.6 0.0	6.0 0.0
		Total	38.1	40.4	4.61	4.65	176	188	5.6	6.0

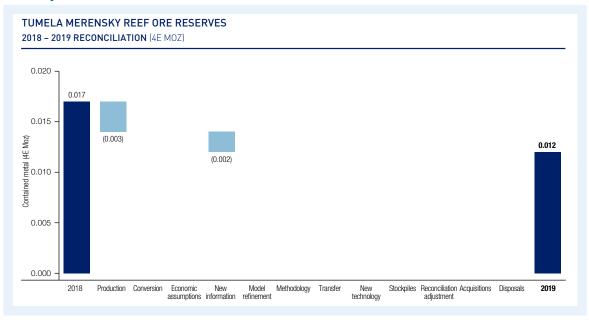


as at 31 December 2019

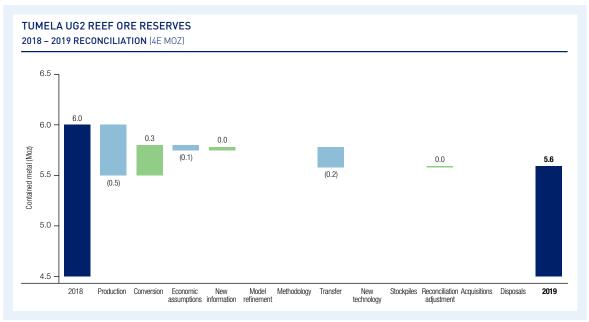
AMANDELBULT COMPLEX continued

Tumela Mine (100%) continued

Merensky Reef Ore Reserves reconciliation



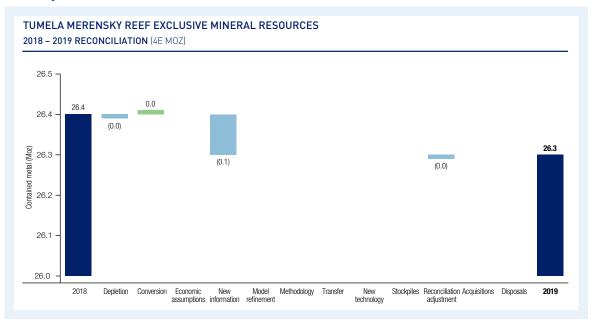
UG2 Reef Ore Reserves reconciliation



EXCLUSIVE MINERAL RESOURCES

Amandelbult Complex – Tumela		Mineral R Million to		Grade 4E g/t		Contained metal 4E tonnes		Contained metal 4E Moz	
Mine (100%)	Classification	2019	2018	2019	2018	2019	2018	2019	2018
Merensky Reef	Measured	24.8	25.3	6.82	6.85	169	173	5.4	5.6
	Indicated	46.5	46.9	7.04	7.05	327	331	10.5	10.6
	Measured and Indicated	71.3	72.2	6.96	6.98	496	504	16.0	16.2
	Inferred	45.8	45.3	7.02	7.00	321	317	10.3	10.2
	Total	117.1	117.5	6.99	6.99	817	821	26.3	26.4
UG2 Reef	Measured	105.6	103.5	5.40	5.41	571	560	18.3	18.0
	Indicated	44.3	45.0	5.52	5.52	244	249	7.9	8.0
	Measured and Indicated	149.9	148.5	5.44	5.44	815	809	26.2	26.0
	Inferred	47.0	47.1	5.77	5.76	271	271	8.7	8.7
	Total	196.9	195.6	5.52	5.52	1,086	1,080	34.9	34.7

Merensky Reef exclusive Mineral Resources reconciliation

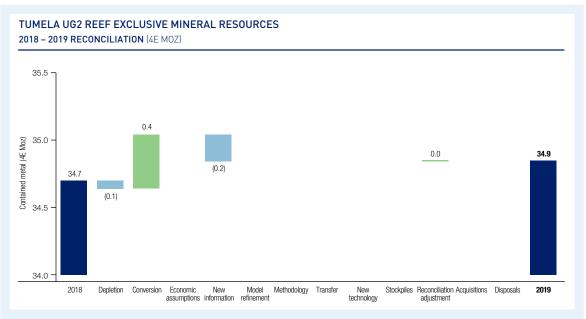


as at 31 December 2019

AMANDELBULT COMPLEX continued

Tumela Mine (100%) continued EXCLUSIVE MINERAL RESOURCES continued

UG2 Reef exclusive Mineral Resources reconciliation



INCLUSIVE MINERAL RESOURCES

Amandelbult Complex – Tumela		Mineral R Million to			ade g/t	Contained metal 4E tonnes		Contained metal 4E Moz	
Mine (100%)*	Classification	2019	2018	2019	2018	2019	2018	2019	2018
Merensky Reef	Measured Indicated	24.9 46.5	25.4 46.9	6.81 7.04	6.85 7.05	169 327	174 331	5.4 10.5	5.6 10.6
	Measured and Indicated	71.4	72.3	6.96	6.98	496	505	16.0	16.2
	Inferred	45.8	45.3	7.02	7.00	321	317	10.3	10.2
	Total	117.1	117.6	6.98	6.99	817	822	26.3	26.4
UG2 Reef	Measured	149.1	154.5	5.40	5.39	805	833	25.9	26.8
	Indicated	44.7	45.2	5.52	5.52	246	250	7.9	8.0
	Measured and Indicated	193.8	199.7	5.43	5.42	1,051	1,083	33.8	34.8
	Inferred	47.0	47.1	5.77	5.76	271	271	8.7	8.7
	Total	240.7	246.8	5.49	5.49	1,322	1,354	42.5	43.5
Tailings	Measured	63.0	63.0	0.79	0.79	50	50	1.6	1.6
	Indicated	8.1	8.1	0.82	0.82	7	7	0.2	0.2
	Measured and Indicated	71.1	71.1	0.79	0.79	57	57	1.8	1.8
	Inferred	1.2	1.2	0.91	0.91	1	1	0.0	0.0
	Total	72.3	72.3	0.80	0.80	58	58	1.9	1.9

^{*}The inclusive Measured Resources include low tonnage open cast Merensky Reef Resources of 0.1 4E Moz (0.3Mt at 7.91 (4E) g/t) and UG2 Reef Resources of 0.2 4E Moz (1.3Mt at 5.45 (4E) g/t).

Dishaba Mine (100%)

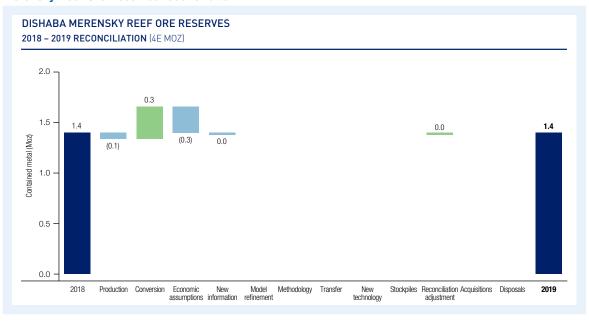
	Units	MR	UG2
Mineral Resource assumptions			
Average geological loss	%	22	18
Minimum Resource cut width	cm	120	120
Average density	g/cm3	3.1	4.0
Ore Reserves modifying factors			
Mining loss factor	%	37	41
Mining dilution	%	38	28
Planned stoping width	%	139	167
4E concentrator recoveries	%	83	86
Mine call factor	%	100	100
Paylimit grade	4E g/t	3.6	3.6

ORE RESERVES

Amandelbult Complex – Dishaba Mine	Reserve		Ore Reserves (ROM) Million tonnes (Mt)		Grade 4E g/t		Contained metal 4E tonnes		Contained metal 4E Moz	
(100%)*	life	Classification	2019	2018	2019	2018	2019	2018	2019	2018
Merensky Reef	>21	Proved Probable	4.4 4.4	4.0 4.8	5.27 4.76	5.10 4.89	23 21	20 23	0.7 0.7	0.6 0.8
		Total	8.7	8.8	5.02	4.98	44	43	1.4	1.4
UG2 Reef		Proved Probable	53.4 8.9	45.5 8.8	4.19 4.22	4.37 4.43	224 37	199 39	7.2 1.2	6.4 1.3
		Total	62.3	54.3	4.20	4.38	261	238	8.4	7.6

^{*} The Proved Ore Reserves includes short life, low tonnage, open cast Merensky Reef Ore Reserves of 0.03 4E Moz (0.2Mt at 4.76 (4E) g/t) and UG2 Reef Ore Reserves of 0.1 4E Moz (0.9Mt at 4.54 (4E) g/t).

Merensky Reef Ore Reserves reconciliation



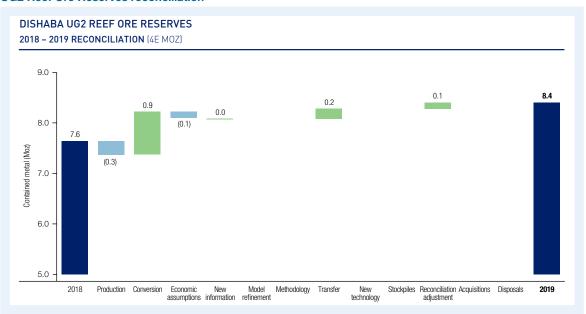
as at 31 December 2019

AMANDELBULT COMPLEX continued

Dishaba Mine (100%) continued

ORE RESERVES continued

UG2 Reef Ore Reserves reconciliation



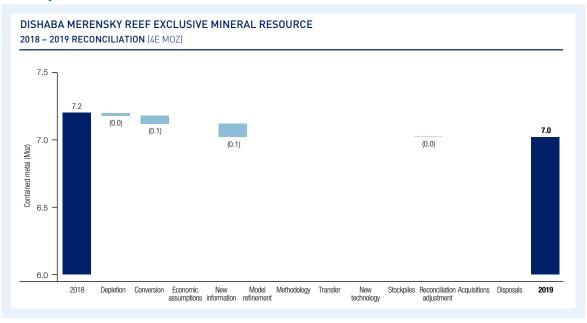
EXCLUSIVE MINERAL RESOURCES

Amandelbult Complex –		Mineral Resources Million tonnes (Mt)				Contained metal 4E tonnes		Contained metal 4E Moz	
Dishaba Mine (100%)*	Classification	2019	2018	2019	2018	2019	2018	2019	2018
-	Measured Indicated	9.4 10.4	9.3 11.0	7.01 6.88	7.11 6.90	66 71	66 76	2.1 2.3	2.1 2.4
	Measured and Indicated	19.8	20.3	6.94	7.00	137	142	4.4	4.6
	Inferred	13.0	13.0	6.29	6.30	82	83	2.6	2.6
	Total	32.8	33.3	6.68	6.72	219	225	7.0	7.2
UG2 Reef	Measured Indicated	19.5 22.7	26.6 24.6	5.27 5.79	5.25 5.74	103 131	140 141	3.3 4.2	4.5 4.5
	Measured and Indicated	42.1	51.3	5.55	5.49	234	281	7.5	9.0
	Inferred	9.0	8.8	5.55	5.54	50	49	1.6	1.6
	Total	51.1	60.1	5.55	5.49	284	330	9.1	10.6

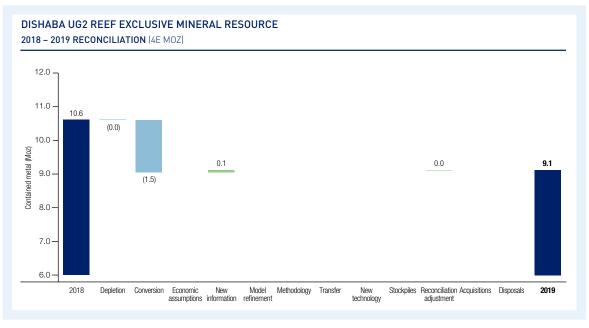
^{*} The exclusive Measured Resources include low tonnage open cast Merensky Reef Resources of 0.1 4E Moz (0.3Mt at 6.13 (4E) g/t) and UG2 Reef Resources of 0.1 4E Moz (0.5Mt at 5.07 (4E) g/t).

EXCLUSIVE MINERAL RESOURCES continued

Merensky Reef exclusive Mineral Resources reconciliation



UG2 Reef exclusive Mineral Resources reconciliation



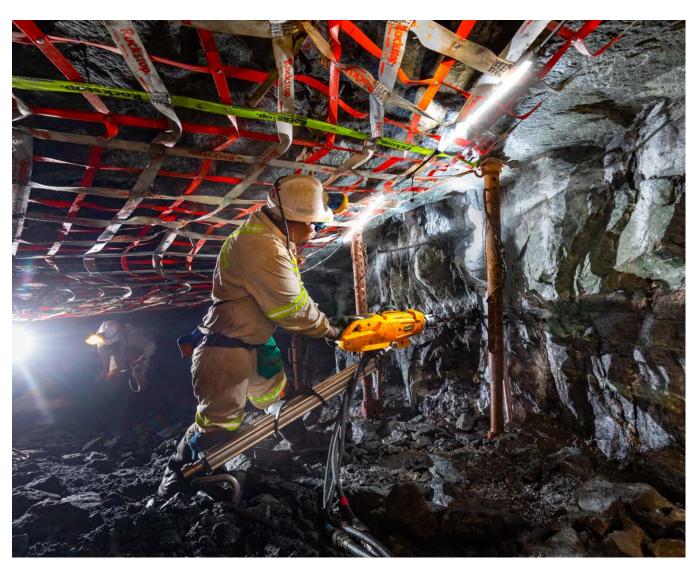
as at 31 December 2019

AMANDELBULT COMPLEX continued

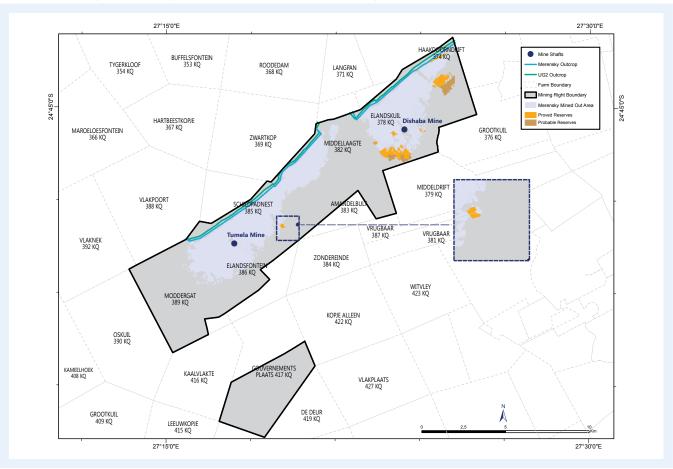
Dishaba Mine (100%) continued INCLUSIVE MINERAL RESOURCES

Amandelbult Complex – Dishaba		Mineral Resources Million tonnes (Mt)		Grade 4E g/t		Contained metal 4E tonnes		Contained metal 4E Moz	
Mine (100%)*	Classification	2019	2018	2019	2018	2019	2018	2019	2018
Merensky Reef	Measured Indicated	14.4 15.3	14.1 16.4	6.90 6.61	6.91 6.67	99 101	97 109	3.2 3.3	3.1 3.5
	Measured and Indicated	29.7	30.5	6.75	6.78	200	206	6.5	6.6
	Inferred	13.0	13.0	6.29	6.30	82	82	2.6	2.6
	Total	42.7	43.5	6.61	6.64	282	288	9.1	9.3
UG2 Reef	Measured Indicated	91.9 32.5	88.7 34.8	5.34 5.69	5.32 5.65	491 185	472 197	15.8 5.9	15.2 6.3
_	Measured and Indicated	124.4	123.5	5.43	5.41	676	669	21.7	21.5
	Inferred	9.0	8.8	5.55	5.54	50	49	1.6	1.6
	Total	133.4	132.3	5.44	5.42	726	718	23.3	23.1

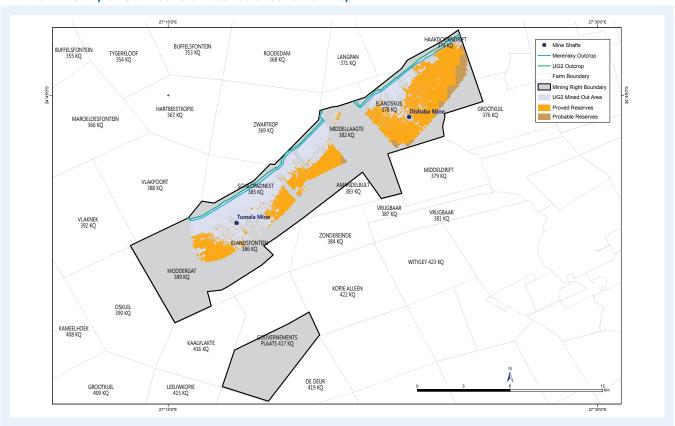
^{*} The inclusive Measured Resources include low tonnage open cast Merensky Reef Resources of 0.1 4E Moz (0.5Mt at 6.12 (4E) g/t) and UG2 Reef Resources of 0.2 4E Moz (1.2Mt at 5.18 (4E) g/t).



Amandelbult Complex Merensky Reef Ore Reserves classification map



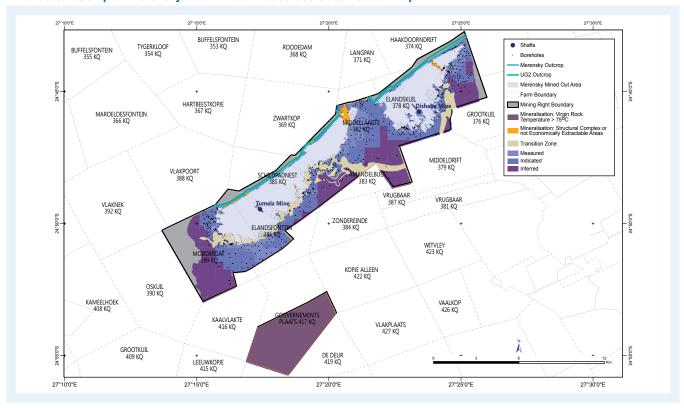
Amandelbult Complex UG2 Reef Ore Reserves classification map



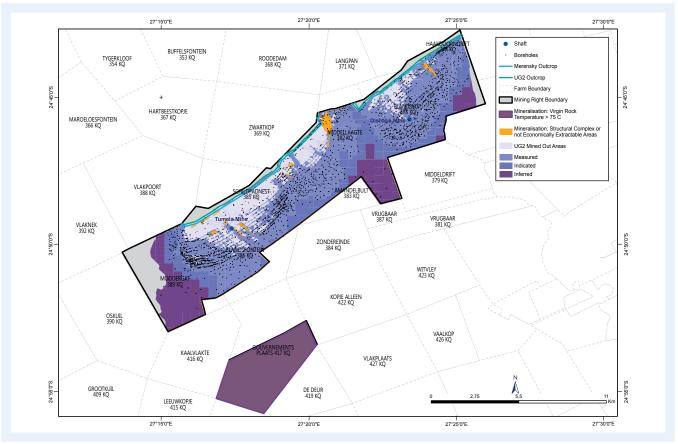
as at 31 December 2019

AMANDELBULT COMPLEX continued

Amandelbult Complex Merensky Reef Mineral Resources classification map



Amandelbult Complex UG2 Reef Mineral Resources classification map



Kavita Mohanlal Mineral Resources Principal resource estimation platinum SACNASP, PrSciNat 16 years

Clever Dick Ore Reserves Chief surveyor SAIMM, Member 16 years



UNKI MINE (100%)

Unki Mine operations are on the Great Dyke in Zimbabwe, 60km south-east of the town of Gweru. The mine is at steady-state production and wholly owned and managed by Amplats.

PROPERTY DESCRIPTION

The Unki Special Mining Lease (SML) lies in the Selukwe sub-chamber, while the KV-SR claims are in the Wedza sub-chamber of the Great Dyke. The mine exploits the Main Sulphide Zone (MSZ).

BRIEF HISTORY

Exploration for PGMs and associated base metals in the Great Dyke dates back over 50 years, when PGM and base metal zones were delineated from soil geochemical surveys. The first phase of drilling began in 1967 near the Paarl area and expanded to cover the rest of the Middleridge claims. In 1969, trial mining started at Paarl where a winze was developed on-reef and two mining levels established.

In 1972, focus shifted to the Unki area – regarded as having better PGM grades than Paarl. A vertical prospect shaft which was used for various trial mining initiatives was sunk in 1974 in the Unki area. This was followed by intermittent exploration and feasibility studies on the Unki project. The project failed to take off due to several challenges, primarily the price of the metals and difficulties of MSZ identification. However, understanding of the MSZ has improved over the years and it is generally successfully mined on the Great Dyke.

The development of the Unki East mine began in 2006 after the 2005 feasibility study. Unki East mine ramped production to planned output of 120,000t/m in late 2011 and is investigating opportunities to expand operations in Zimbabwe to increase production two-fold by 2026.

More recently, the KV-SR claims, which are part of the Unki Special Mining Lease, have been considered for disposal to Mimosa Platinum Mine. It is expected that the sale will be concluded in the first quarter of 2020.

KEY FEATURES

The Unki Special Mining Lease area

10,386ha

Mechanised, trackless, bord-and-pillar

underground operation

Reserve life

22 years

as at 31 December 2019

UNKI MINE (100%) continued

MINERAL RIGHTS

The current Mining Right covers an area of 10,386ha. On 5 October 2009, Unki Mines and Southridge Limited were granted a Special Mining Lease, valid until October 2034.

There are no known impediments to the Right.

MINING METHOD

Unki Mine is a mechanised, trackless, bord-and-pillar underground operation.

OPERATIONAL INFRASTRUCTURE

A twin-decline shaft system provides access to underground workings for employees and material, as well as ore conveyance. Both shafts are now 2,267m from the portal on surface. Twenty-one mining sections have been established so far, 16 of which are fully equipped and have strikes belts for transferring ore directly to the main incline shaft conveyor. Run-of-mine ore is processed at the concentrator plant on site, which was commissioned in 2011. The Unki smelter was completed and commissioned in 2018.

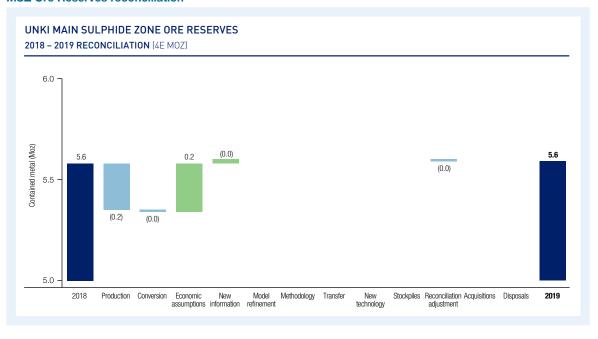
	Units	MSZ
Mineral Resource assumptions		
Average geological loss	%	7
Minimum Resource cut width	cm	180/120*
Average density	g/cm³	3.2
Ore Reserves modifying factors		
Mining loss factor	%	3
Mining dilution	%	18
Mine extraction factor	%	80 – 83
Planned stoping width	cm	204
4E concentrator recoveries	%	80
Mine call factor	%	95
Paylimit grade	4E g/t	2.7

^{*} The current mining areas at Unki East and West are estimated over a Resource cut of 180cm. The remaining area is estimated over a Resource cut of 120cm.

ORE RESERVES

			Ore Reserves (ROM) Million tonnes (Mt)		Grade 4E g/t		Contained metal 4E tonnes		Contained metal 4E Moz	
Unki Mine (100%)	Reserve life	Classification	2019	2018	2019	2018	2019	2018	2019	2018
MSZ	22	Proved	27.2	25.4	3.29	3.35	89	85	2.9	2.7
		Probable	26.1	27.0	3.24	3.26	85	88	2.7	2.8
		Total	53.3	52.5	3.27	3.30	174	173	5.6	5.6

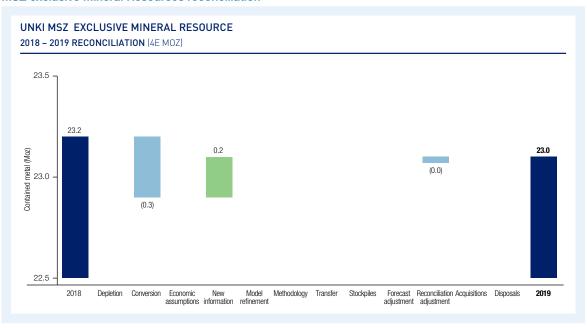
MSZ Ore Reserves reconciliation



EXCLUSIVE MINERAL RESOURCES

		Mineral Resources Million tonnes (Mt)		Grade 4E g/t		Contained metal 4E tonnes		Contained metal 4E Moz	
Unki Mine (100%)	Classification	2019	2018	2019	2018	2019	2018	2019	2018
MSZ	Measured	7.9	11.1	4.12	3.96	33	44	1.1	1.4
	Indicated	112.3	111.3	4.29	4.29	482	477	15.5	15.3
	Measured and Indicated	120.2	122.4	4.28	4.26	515	521	16.5	16.8
	Inferred	47.8	47.4	4.22	4.23	201	200	6.5	6.4
	Total	168.0	169.7	4.26	4.25	716	721	23.0	23.2

MSZ exclusive Mineral Resources reconciliation



INCLUSIVE MINERAL RESOURCES

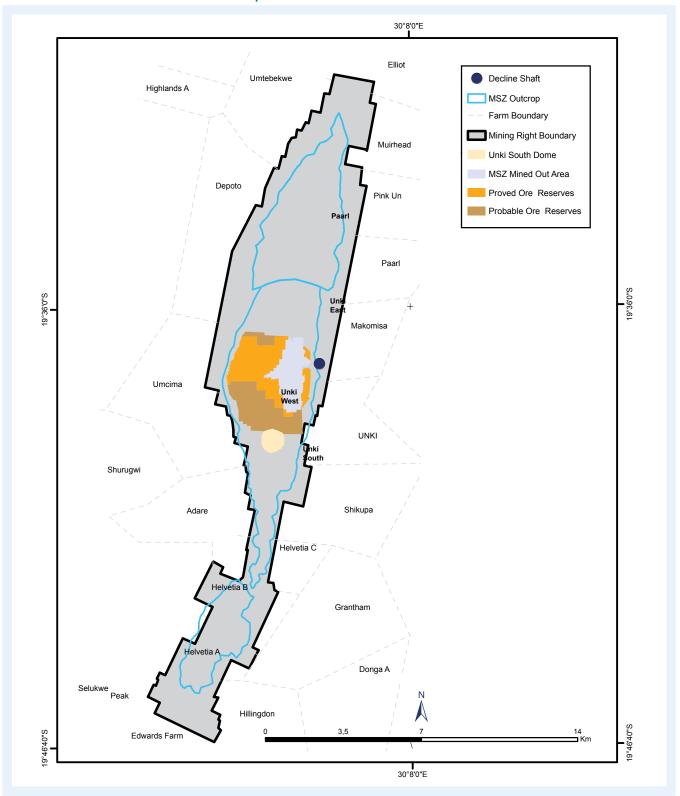
		Mineral Resources Million tonnes (Mt)		Grade 4E g/t		Contained metal 4E tonnes		Contained metal 4E Moz	
Unki Mine (100%)	Classification	2019	2018	2019	2018	2019	2018	2019	2018
MSZ	Measured Indicated	36.8 139.3	38.7 138.9	3.99 4.21	3.99 4.21	147 586	154 585	4.7 18.9	5.0 18.8
	Measured and Indicated	176.1	177.6	4.16	4.16	733	739	23.6	23.8
	Inferred	47.8	47.4	4.22	4.23	202	200	6.5	6.4
	Total	223.9	224.9	4.18	4.18	935	939	30.1	30.2

as at 31 December 2019

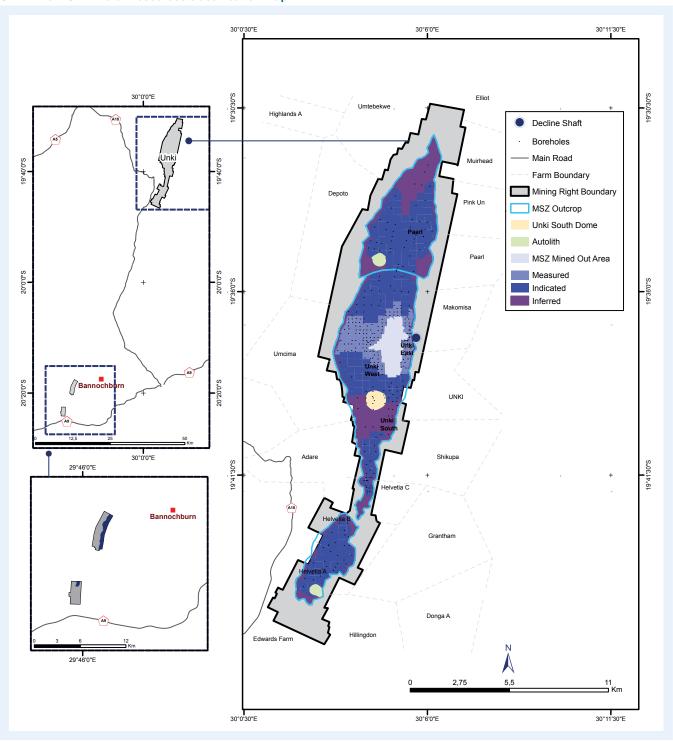
UNKI MINE (100%) continued

INCLUSIVE MINERAL RESOURCES continued

Unki Mine MSZ Ore Reserves classification map



Unki Mine MSZ Mineral Resources classification map



as at 31 December 2019

Iain Colguhoun

Mineral Resources Principal resource estimation platinum SACNASP, PrSciNat 22 years

Frederik C Fensham

Ore Reserves Mineral resource manager SACNASP, PrSciNat 26 years



MOTOTOLO MINE (100%)

Situated in the Limpopo province, Mototolo Mine is 30km west of the town of Burgersfort. The 100% ownership acquisition of Mototolo Mine and subsequent expression of interest in consolidation of Mining Rights by Amplats was concluded in 2018.

PROPERTY DESCRIPTION

It forms part of the Eastern Limb of the Bushveld Complex and the primary reef mined is the UG2 Reef.

BRIEF HISTORY

The Eastern Limb of the Bushveld Complex has, since the 1920's, been the subject of numerous exploration programmes. Exploration in the Groot and Klein Dwarsrivier Valleys also dates to 1924, with Platinum Proprietary exploring Richmond and Helena between 1924 and 1930. In the same period, Transvaal Consolidated Land and Exploration Company explored the Der Brochen farm, opening up adits and winzes on the Merensky Reef.

In 1999, Xstrata South Africa purchased Consolidated Metallurgical Industries (CMI) and acquired rights for chromitite and platinum on the Thorncliffe Farm. At that time, Thorncliffe was viewed as a chromitite resource and the platinum potential was disregarded. In 2002, drilling targeted the UG2 and Merensky reefs, and preliminary targets for these reefs were determined.

In 2005, Amplats and Xstrata (later acquired by Glencore), formed a 50:50 joint-venture partnership, Mototolo JV, and contributed individual portions of Mining Rights. Amplats contributed rights over Richmond farm and Glencore contributed rights over Thorncliffe farm. The first blast in November 2005 marked the start of 2 x 4 barrel, on-reef shaft clusters that eventually reached steady-state. Steady-state production in June 2009.

In 2018 Amplats acquired the 50% stake in Mototolo Mine from Glencore and minority shareholders. The mine is now wholly owned and managed by Amplats.

KEY FEATURES

Reserve life increased from

5 to 16 years

Mechanised, trackless, bord-and-pillar

underground operation

Ore Reserves increased by

15.4 Mt and 1.4 (4E)Moz

MINERAL RIGHTS

Prior to the acquisition, the mine operated individual Mining Rights from both JV partners. However, a section 102 application has been submitted to DMR to consolidate the Mototolo Mine area into the Der Brochen Mining Rights area. The effective date is expected in 2020.

There are no known impediments to the current Rights.

MINING METHOD

Mototolo is fully mechanised and extracts the UG2 Reef some 450m below surface using bord-and-pillar mining methods.

OPERATIONAL INFRASTRUCTURE

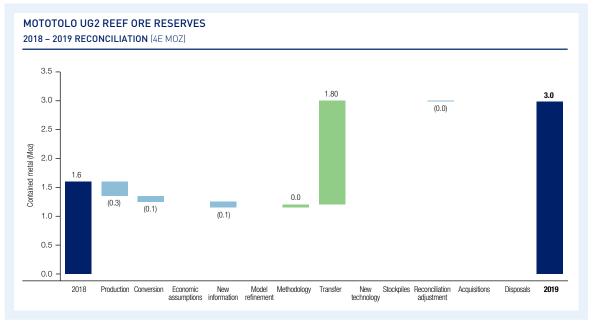
Current mine infrastructure consists of two decline shafts, Lebowa and Borwa, and a concentrator.

	Units	UG2
Mineral Resource assumptions		
Average geological loss	%	14
Minimum Resource cut width	cm	180
Average density	g/cm³	3.7
Ore Reserves modifying factors		
Mining loss factor	%	0.45
Mining dilution	%	22
Mine extraction factor	%	58 – 85
Planned stoping width	cm	206
4E Concentrator recoveries	%	84
Mine call factor	%	95
Paylimit grade	4E g/t	3.1

ORE RESERVES

Mototolo Mine	Reserve		Ore Re (ROM) tonne	Million	Gra 4E	ade g/t	Containe 4E to		Containe 4E N	
(100%)	life	Classification	2019	2018	2019	2018	2019	2018	2019	2018
UG2 Reef	16	Proved Probable	21.8 6.0	11.9	3.36 3.26	4.16	73 20	50	2.4 0.6	1.6
		Total	27.8	11.9	3.34	4.16	93	50	3.0	1.6

UG2 Reef Ore Reserves reconciliation



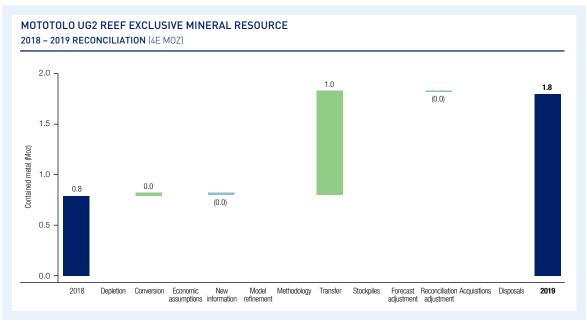
as at 31 December 2019

MOTOTOLO MINE (100%) continued

EXCLUSIVE MINERAL RESOURCES

Mototolo Mine			Mineral Resources Million tonnes (Mt)		Grade 4E g/t		Contained metal 4E tonnes		ed metal Moz
(100%)	Classification	2019	2018	2019	2018	2019	2018	2019	2018
UG2 Reef	Measured Indicated	7.5 6.5	6.3	3.81 4.29	3.91	29 28	25	0.9 0.9	0.8
	Measured and Indicated	14.0	6.3	4.03	3.91	57	25	1.8	0.8
	Inferred								
	Total	14.0	6.3	4.03	3.91	57	25	1.8	0.8

UG2 Reef exclusive Mineral Resources reconciliation

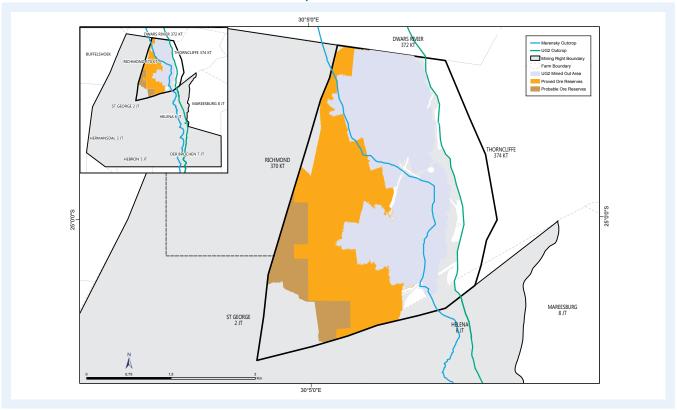


INCLUSIVE MINERAL RESOURCES

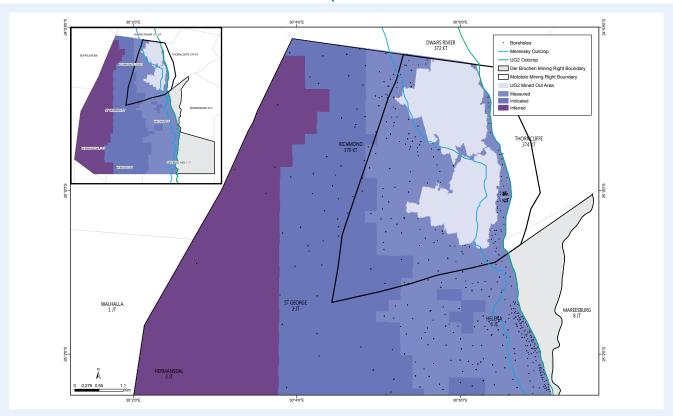
Mototolo Mine		Mineral Resources Million tonnes (Mt)		Grade 4E g/t		Contained metal 4E tonnes		Contained metal 4E Moz	
(100%)	Classification	2019	2018	2019	2018	2019	2018	2019	2018
UG2 Reef	Measured Indicated	34.0 13.8	21.2	4.02 4.15	4.19	137 57	89	4.4 1.8	2.9
	Measured and Indicated	47.8	21.2	4.06	4.19	194	89	6.2	2.9
	Inferred								
	Total	47.8	21.2	4.06	4.19	194	89	6.2	2.9

INCLUSIVE MINERAL RESOURCES continued

Mototolo Mine UG2 Reef Ore Reserves classification map



Mototolo Mine UG2 Reef Mineral Resources classification map



as at 31 December 2019





DER BROCHEN PROJECT (100%)

The Der Brochen Project is in the southern portion of the Eastern Limb of the Bushveld Complex, some 40km south of the town of Steelpoort and west of Lydenburg.

PROPERTY DESCRIPTION

It has been the focus of a number of exploration programmes targeting the Merensky and UG2 Reef horizons since the early 2000s.

The recent acquisition of the remaining interest in Mototolo Mine and resulting synergies will enable Amplats to build a new PGM complex on the Eastern Limb for future replacement and growth optionality. Feasibility studies for the Mototolo/ Der Brochen Complex are under way.

BRIEF HISTORY

The Eastern Limb of the Bushveld Complex has, since the 1920's, been the subject of numerous exploration programmes. These included trenching and small adits, and winzes that were excavated on both the Merensky and UG2 Reef horizons, notably where these occurred in the hills on the eastern side of the area. In the 1960s, a sequence of diamond drilling was undertaken throughout the area to determine the basic characteristics of the ores. Comparisons with the western Bushveld PGM deposits were unfavourable and this, as well as market factors, reduced the level of input.

In 2001, Amplats began several exploration drilling programmes to evaluate and quantify Merensky and UG2 resources on the Der Brochen Project farms. To date, over 1,850 exploration drill holes have been drilled in and around the project area and adjacent properties to the north-east and south.

Additional exploration activities since 2001 include trenching, trench sampling, 2D/3D seismic mapping, wireline logging, drill hole radar, geometallurgical characterisation (mineralogy and metallurgy), bulk sampling, aeromagnetic surveys, Landsat images, drill hole radar, and other tools to improve interpretation and understanding of the geology.

KEY FEATURES

The current Der Brochen Mining Right area

9,063ha

Feasibility studies for the

Mototolo/ Der Brochen Complex are under way

MINERAL RIGHTS

The current Mining Right covers an area of 9,063ha. Amplats holds a converted Mining Right under DMR ref LP 182 MR, valid from 23 July 2010 to 22 July 2040. A section 102 application has been submitted to DMR to merge the Mototolo Mine areas and Der Brochen Mining Rights. The effective date of transfer of the Mining Right is expected in 2020.

There are no known impediments to the Right.

	Units	MR	UG2
Mineral Resource assumptions			
Average geological loss	%	21	18
Minimum resource cut width	cm	90	180
Average density	g/cm³	3.3	3.7

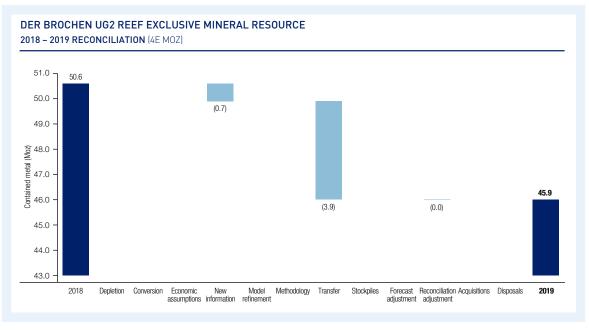
EXCLUSIVE MINERAL RESOURCES

Der Brochen			Mineral Resources Million tonnes (Mt)		Grade 4E g/t		ed metal nnes	Contained metal 4E Moz	
project (100%)	Classification	2019	2018	2019	2018	2019	2018	2019	2018
Merensky Reef	Measured	41.4	41.4	4.75	4.75	197	197	6.3	6.3
	Indicated	59.2	59.2	4.51	4.51	267	267	8.6	8.6
	Measured and Indicated	100.6	100.6	4.61	4.61	464	464	14.9	14.9
	Inferred	74.4	74.4	4.53	4.53	337	337	10.8	10.8
	Total	175.0	175.0	4.58	4.58	801	801	25.7	25.7
UG2 Reef	Measured	98.8	111.3	4.00	3.96	395	441	12.7	14.2
	Indicated	135.1	155.1	3.94	3.96	532	614	17.1	19.8
	Measured and Indicated	233.9	266.5	3.97	3.96	927	1,055	29.8	33.9
	Inferred	124.5	126.1	4.02	4.10	501	517	16.1	16.6
	Total	358.5	392.6	3.98	4.00	1,428	1,572	45.9	50.6

Merensky Reef exclusive Mineral Resources reconciliation

Estimates remain unchanged from previous reporting.

UG2 Reef exclusive Mineral Resources reconciliation



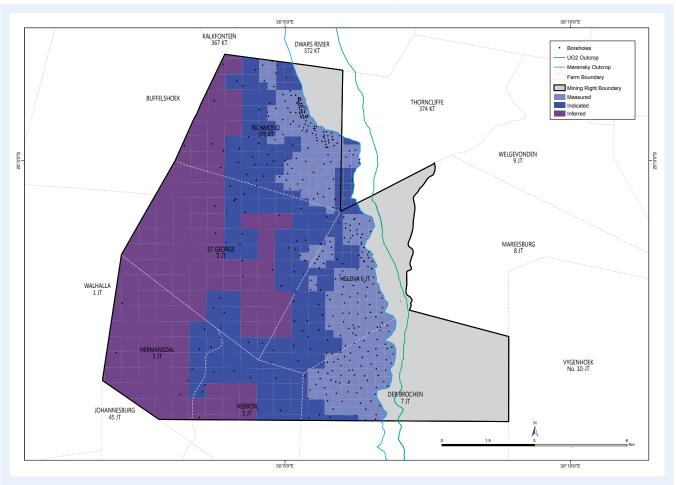
as at 31 December 2019

DER BROCHEN PROJECT (100%) continued

INCLUSIVE MINERAL RESOURCES

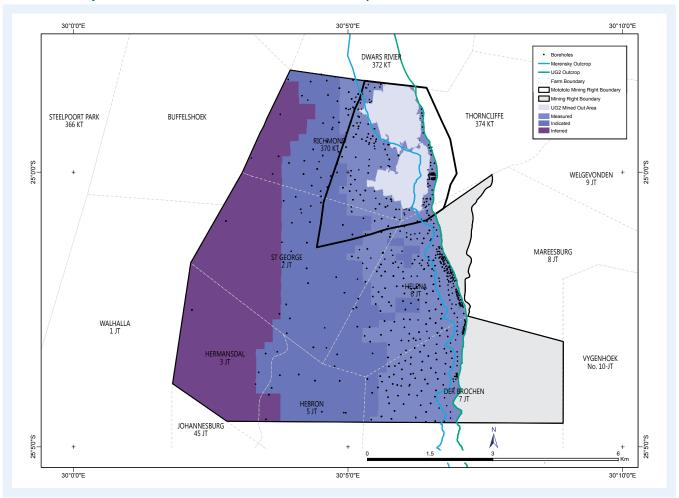
Der Brochen		Mineral Resources Million tonnes (Mt)		Grade 4E g/t		Contained metal 4E tonnes		Contained metal 4E Moz	
project (100%)	Classification	2019	2018	2019	2018	2019	2018	2019	2018
Merensky Reef	Measured Indicated	41.4 59.2	41.4 59.2	4.75 4.51	4.75 4.51	197 267	197 267	6.3 8.6	6.3 8.6
	Measured and Indicated	100.6	100.6	4.61	4.61	464	464	14.9	14.9
	Inferred	74.4	74.4	4.53	4.53	337	337	10.8	10.8
	Total	175.0	175.0	4.58	4.58	801	801	25.7	25.7
UG2 Reef	Measured	98.8	111.3	4.00	3.96	395	441	12.7	14.2
	Indicated	135.1	155.1	3.94	3.96	532	614	17.1	19.8
	Measured and Indicated	233.9	266.5	3.97	3.96	927	1,055	29.8	33.9
	Inferred	124.5	126.1	4.02	4.10	501	517	16.1	16.6
	Total	358.5	392.6	3.98	4.00	1,428	1,572	45.9	50.6

Der Brochen Project Merensky Reef Mineral Resources classification map



INCLUSIVE MINERAL RESOURCES continued

Der Brochen Project UG2 Reef Mineral Resources classification map





as at 31 December 2019



Iain Colquhoun Mineral Resources Principal resource estimation platinum SACNASP, PrSciNat 22 years



TWICKENHAM MINE (100%)

Twickenham Mine is in the Eastern Limb of the Bushveld Complex, immediately south-east of Bokoni Mine and some 35km north-west of the town of Burgersfort.

PROPERTY DESCRIPTION

Twickenham was placed on care and maintenance in 2016, and some of the mining footprint used to research new mining technology.

The mine offers long-term prospects for shallow mechanised mining on both the UG2 and Merensky Reef horizons. In the current commodity price environment, all expansionary project decisions have been delayed.

BRIEF HISTORY

The Merensky Reef was discovered in the mid-1920s on Maandagshoek Farm, and the area has since then been the subject of different exploration programmes. A phase of trenching and numerous small adits were excavated on both the Merensky and UG2 Reef horizons, notably where these occurred in the hills on the eastern side of the area. In the 1960s, diamond-drilling programmes were undertaken throughout the area to determine the basic characteristics of the orebody. Comparisons with the western Bushveld Complex PGM orebodies were unfavourable for the east Bushveld and this, as well as market factors, reduced the level of exploration and development.

Hackney area was the focus of extensive exploration from 1966 to the late-1990s, with trial mining of UG2 between 1977 and 1979. Since 2001, Amplats exploration activities have included several major exploration drilling programmes and related activities. The UG2 was identified as the primary target at the mine, based on geological continuity, grade consistency and precious metal values. The development of the mine started in 2001 and was planned to peak at 250,000 t/m by 2008. However, due to economic reasons, Twickenham was placed on care and maintenance in 2016, and some of the mining footprint was used to research new mining technology.

KEY FEATURES

Mining Right area

17,747ha

Placed on

care and maintenance in 2016

MINERAL RIGHTS

The current Mining Right covers an area of 17,747ha. Amplats holds a converted Mining Right under DMR ref LP 89 MR, valid from 8 March 2011 to 7 March 2041.

There are no known impediments to the Right.

	Units	MR	UG2
Mineral Resource assumptions			
Average geological loss	%	22	21
Minimum Resource cut width	cm	105	95
Average Density	g/cm³	3.4	4.0

EXCLUSIVE MINERAL RESOURCES

Twickenham		Mineral Resources Million tonnes (Mt)		Grade 4E g/t		Contained metal 4E tonnes		Contained metal 4E Moz	
(100%)	Classification	2019	2018	2019	2018	2019	2018	2019	2018
Merensky Reef	Measured Indicated	48.4 87.3	48.4 87.3	4.75 4.97	4.75 4.97	230 434	230 434	7.4 14.0	7.4 14.0
	Measured and Indicated	135.7	135.7	4.89	4.89	664	664	21.3	21.3
	Inferred	165.7	165.7	5.26	5.26	872	872	28.0	28.0
	Total	301.4	301.4	5.09	5.09	1,536	1,536	49.4	49.4
UG2 Reef	Measured Indicated	54.6 145.4	54.6 145.4	6.29 6.05	6.29 6.05	344 879	344 879	11.1 28.3	11.1 28.3
	Measured and Indicated	200.0	200.0	6.12	6.12	1,223	1,223	39.3	39.3
	Inferred	148.2	148.2	5.88	5.88	871	871	28.0	28.0
	Total	348.2	348.2	6.02	6.02	2,094	2,094	67.3	67.3

Merensky Reef exclusive Mineral Resources reconciliation

Twickenham Mine is on care and maintenance. Estimates are unchanged from previous reporting.

UG2 Reef exclusive Mineral Resources reconciliation

Twickenham Mine is on care and maintenance. Estimates are unchanged from previous reporting.

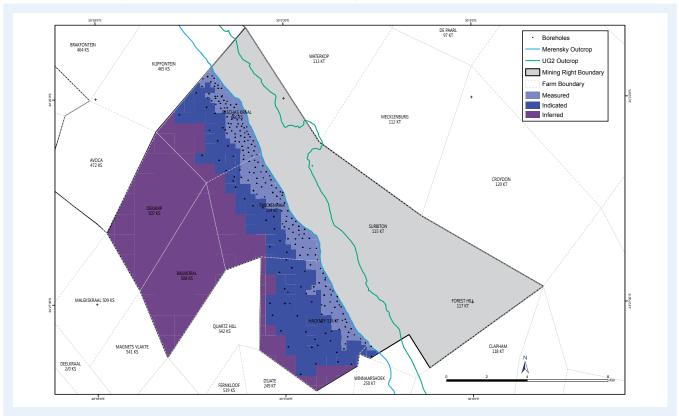
INCLUSIVE MINERAL RESOURCES

Twickenham		Mineral Resources Million tonnes (Mt)		Grade 4E g/t		Contained metal 4E tonnes		Contained metal 4E Moz	
(100%)	Classification	2019	2018	2019	2018	2019	2018	2019	2018
Merensky Reef	Measured	48.4	48.4	4.75	4.75	230	230	7.4	7.4
	Indicated	87.3	87.3	4.97	4.97	434	434	14.0	14.0
	Measured and Indicated	135.7	135.7	4.89	4.89	664	664	21.3	21.3
	Inferred	165.7	165.7	5.26	5.26	872	872	28.0	28.0
	Total	301.4	301.4	5.09	5.09	1,536	1,536	49.4	49.4
UG2 Reef	Measured	54.6	54.6	6.29	6.29	344	344	11.1	11.1
	Indicated	145.4	145.4	6.05	6.05	879	879	28.3	28.3
	Measured and Indicated	200.0	200.0	6.12	6.12	1,223	1,223	39.3	39.3
	Inferred	148.2	148.2	5.88	5.88	871	871	28.0	28.0
	Total	348.2	348.2	6.02	6.02	2,094	2,094	67.3	67.3

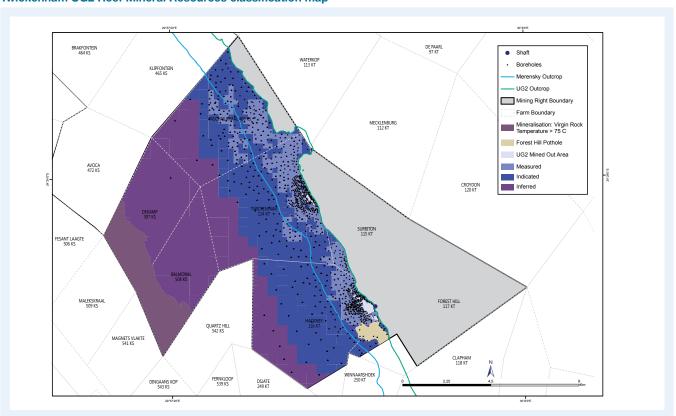
as at 31 December 2019

TWICKENHAM MINE (100%) continued INCLUSIVE MINERAL RESOURCES continued

Twickenham Merensky Reef Mineral Resources classification map



Twickenham UG2 Reef Mineral Resources classification map



ESTIMATES AND RECONCILIATION – NON-MANAGED OPERATIONS

as at 31 December 2019

Information for non-managed operations is provided by joint venture partners. For additional details please refer to the applicable annual reports.

Martha Hlangwane

Mineral Resources Resources and reserves reporting: platinum SACNASP, PrSciNat 14 years

Jurie de Kock

Ore Reserves Chief surveyor SAIMM, member 38 years



MODIKWA MINE (50%)

Modikwa Platinum Mine is some 15km north of Burgersfort and 15km north-west of Steelpoort, along the border of Mpumalanga and Limpopo provinces in South Africa. It is an independently managed joint-venture partnership between Amplats (50%), African Rainbow Minerals (41.5%) and Modikwa Communities (8.5%).

PROPERTY DESCRIPTION

It forms part of the Eastern Limb of the Bushveld Complex, with UG2 and Merensky reefs present. The mine extracts UG2 Reef from surface to 450m below surface.

BRIEF HISTORY

The discovery of the Merensky Reef occurred in the mid 1920's on Maandagshoek Farm, and the area has at various periods since then been the subject of different exploration programmes. A phase of trenching and numerous small adits were excavated on both the Merensky and the UG2 Reef horizons, notably where these occurred in the hills on the eastern side of the area. This was followed in the 1960's by a sequence of diamond drilling was undertaken throughout the whole area to determine the basic characteristics of the ores.

In the late 1970's to early 1980's, several limited underground operations were established, including development of the old Driekop pipe, a vertical shaft and the inclined winzes on Maandagshoek. The UG2 was identified as the primary target in the vicinity of the Modikwa Mine lease based on geological continuity, grade consistency and precious metal values.

The joint venture partnership with African Rainbow Mineral culminated the inception of the mine. Mining operations started as a project in 2001, reached mining status in 2003. Both N1 and S1 shafts started simultaneously in 2001. S2 shaft was established in 2013.

KEY FEATURES

The Modikwa Mining Right area

14,092ha

Reserve Life

>22 years

Mining Method

hybrid underground operation

as at 31 December 2019

MODIKWA MINE (50%) continued

MINERAL RIGHTS

The mine operates under a Mining Right covering 14,092ha. The Right is held by Amplats and ARM in equal shares. The converted Mining Right is held under DMR ref LP129 MR is valid from 13 November 2013 to 12 November 2043.

There are no known impediments to the Right.

MINING METHOD

The mine is a hybrid operation using conventional breast stoping with strike pillars, supported by trackless development and ore clearance.

OPERATIONAL INFRASTRUCTURE

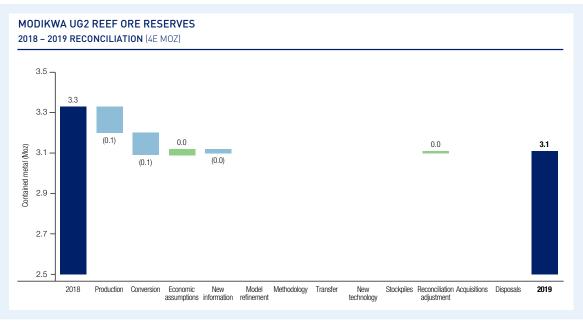
The current infrastructure comprises three primary decline shafts (North 1, South 1 and South 2), three adits on Onverwacht Hill and a concentrator with mainstream inert grinding (MIG) plant.

	Units	MR	UG2
Mineral Resource			
assumptions			
Average geological loss	%	21	21
Minimum Resource cut width	cm	180	102
Average Density	g/cm³	3.4	3.9
Ore Reserves modifying			
factors			
Mining loss factor	%		1.2
Mining dilution	%		36
Planned Stoping width	cm		120
4E concentrator recoveries	%		87.9
Mine call factor	%		95
Paylimit grade	g/t		3.7

ORE RESERVES

Modikwa Mine	Reserve life	Classification	Ore Reserves (ROM) Million tonnes (Mt)		Grade 4E g/t		Contained metal 4E tonnes		Contained metal 4E Moz	
(50%)			2019	2018	2019	2018	2019	2018	2019	2018
UG2 Reef	>22	Proved	6.8	7.9	4.45	4.49	30	36	1.0	1.1
		Probable	16.3	15.9	4.12	4.27	67	68	2.2	2.2
		Total	23.0	23.9	4.22	4.34	97	104	3.1	3.3

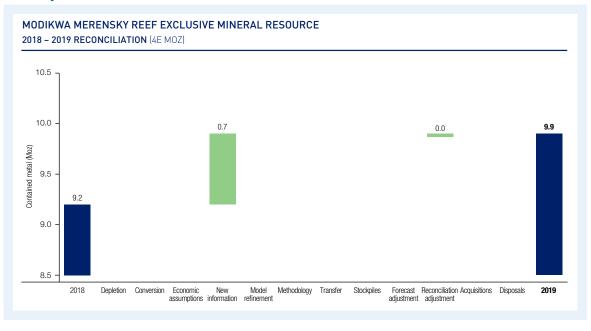
UG2 Reef Ore Reserves reconciliation



EXCLUSIVE MINERAL RESOURCES

Modikwa Mine		Mineral Resources Million tonnes (Mt)		Grade 4E g/t		Contained metal 4E tonnes		Contained metal 4E Moz	
(50%)	Classification	2019	2018	2019	2018	2019	2018	2019	2018
Merensky Reef	Measured	10.4	9.3	3.15	2.93	33	27	1.0	0.9
	Indicated	26.9	27.9	2.90	2.72	78	76	2.5	2.4
	Measured and Indicated	37.3	37.1	2.97	2.77	111	103	3.6	3.3
	Inferred	69.7	69.3	2.84	2.65	198	184	6.4	5.9
	Total	107.0	106.4	2.89	2.69	309	287	9.9	9.2
UG2 Reef	Measured	24.1	23.3	5.91	5.90	142	138	4.6	4.4
	Indicated	45.3	44.6	5.90	5.90	267	263	8.6	8.5
	Measured and Indicated	69.4	67.9	5.90	5.90	409	401	13.2	12.9
	Inferred	38.7	38.6	6.22	6.24	241	241	7.7	7.8
	Total	108.1	106.5	6.02	6.02	650	642	20.9	20.6

Merensky Reef exclusive Mineral Resources reconciliation

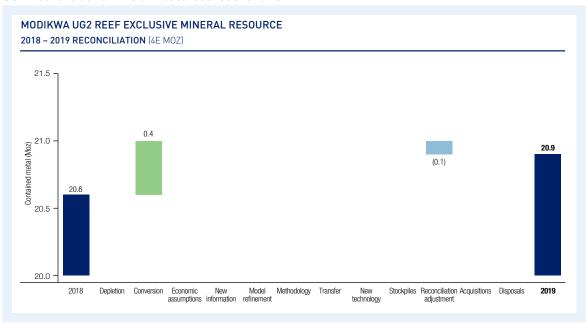


as at 31 December 2019

MODIKWA MINE (50%) continued

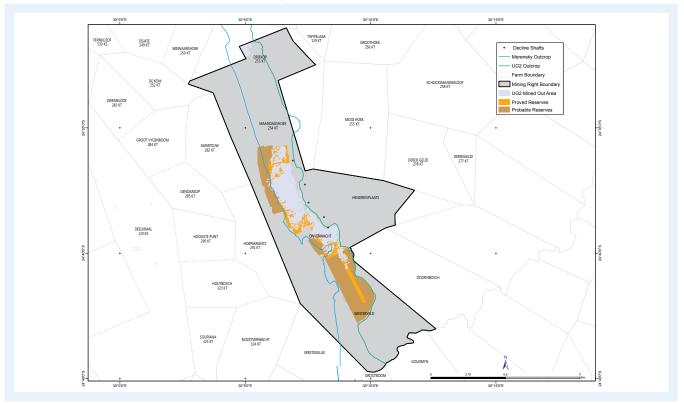
EXCLUSIVE MINERAL RESOURCES continued

UG2 Reef exclusive Mineral Resources reconciliation

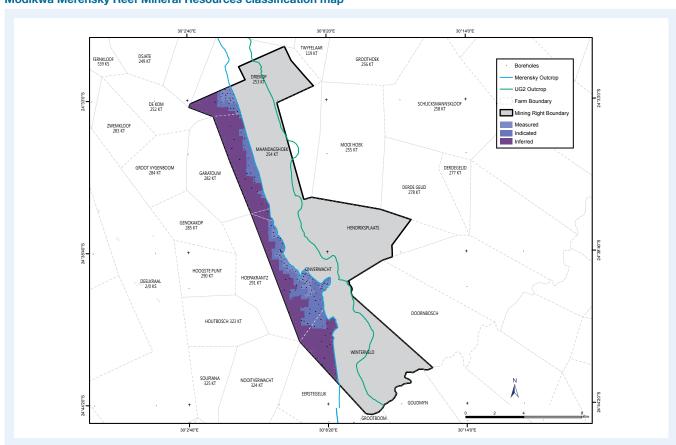


Modikwa Mine		Mineral Resources Million tonnes (Mt)		Grade 4E g/t		Contained metal 4E tonnes		Contained metal 4E Moz	
(50%)	Classification	2019	2018	2019	2018	2019	2018	2019	2018
Merensky Reef	Measured Indicated	10.4 26.9	9.3 27.9	3.15 2.90	2.93 2.72	33 78	27 76	1.0 2.5	0.9 2.4
	Measured and Indicated	37.3	37.1	2.97	2.77	111	103	3.6	3.3
	Inferred	69.7	69.3	2.84	2.65	198	184	6.4	5.9
	Total	107.0	106.4	2.89	2.69	309	287	9.9	9.2
UG2 Reef	Measured Indicated	43.1 51.1	43.4 51.2	5.94 5.91	5.94 5.92	256 302	258 303	8.2 9.7	8.3 9.8
	Measured and Indicated	94.2	94.7	5.92	5.93	558	561	17.9	18.1
	Inferred	38.7	38.6	6.22	6.24	241	241	7.7	7.8
	Total	132.9	133.3	6.01	6.02	799	802	25.7	25.8

Modikwa UG2 Reef Ore Reserves classification map

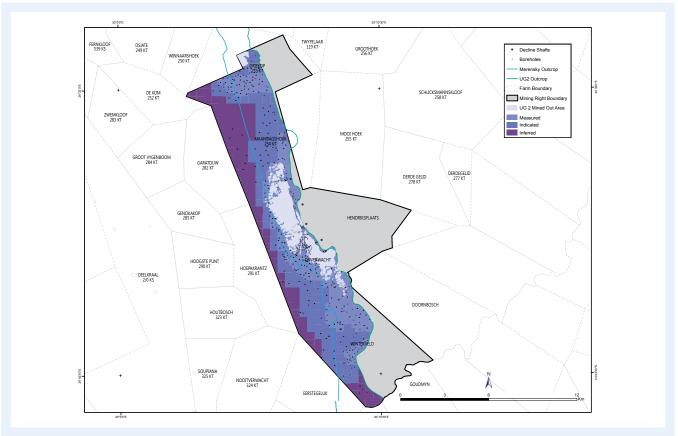


Modikwa Merensky Reef Mineral Resources classification map



as at 31 December 2019

Modikwa UG2 Reef Mineral Resources classification map

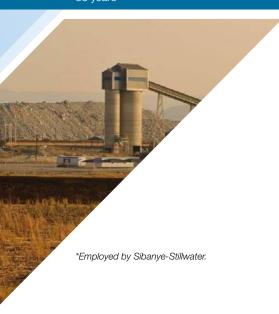




Information for non-managed operations is provided by joint venture partners. For additional details please refer to the applicable annual reports.

Leonard Changara* Mineral Resources Unit manager geology SACNASP, PrSciNat 21 years

Brian Smith* Ore Reserves Unit manager survey SAGC, Professional Mine Surveyor 33 years



KEY FEATURES

The Mining Right area

3,212 ha

Mining method

Mechanised bord and pillar underground operation

Reserve Life

Siphumelele 3 Shaft: 11 years

Kroondal Mine: 5 years

Marikana Mine on

care and maintenance

SIBANYE-STILLWATER JV

The Siphumelele 3 shaft, Kroondal and Marikana mines are in the North West province, 12km outside the town of Rustenburg and some 120km north-west of Johannesburg.

Kroondal and Marikana mines are a 50/50 joint venture with Sibanye-Stillwater. The joint venture is a pooling-and-sharing agreement (PSA), where the Sibanye-Stillwater infrastructure is used to access Mineral Resources and Ore Reserves on the Amplats held Mining Right. The joint venture is managed by Sibanye-Stillwater.

The Siphumelele 3 shaft is part of the Kroondal Extension area, an area situated down-dip of the original PSA agreement area. Amplats has 100% ownership of the operation but, it is mined on a royalty basis by Sibanye-Stillwater.

PROPERTY DESCRIPTION

Siphumelele, Kroondal and Marikana Mines form part of the Western Limb of the Bushveld Complex and extracts UG2 Reef.

Marikana Mine, with infrastructure comprising four decline shafts and a concentrator, was placed on care and maintenance.

BRIEF HISTORY

A pre-feasibility study of the Kroondal Platinum Project, in which Aquarius had a 45% stake, was completed in 1996, followed by a bankable feasibility study the next year. Mine developments started in 1998, with development and completion of two decline shafts . In 2000, Aquarius increased its stake to 100%, but entered into a 50/50 joint venture agreement with Amplats the next year. The joint venture included an off-take agreement with Amplats for the Ore Reserves covered by the agreement and plans to build a concentrator. In 2012, Marikana Mine, was placed on care and maintenance.

In 2013, the extent of the Mineral Resource included in the PSA agreement was extended by including Siphumelele 3 shaft (Kroondal extension area), extending the life of mine. In April 2016, following the acquisition in full of Aquarius, Sibanye-Stillwater acquired a 50% stake in Kroondal Mine. Sibanye-Stillwater is now Amplats joint venture partner and manages the operations.

as at 31 December 2019

SIBANYE-STILLWATER JV continued MINERAL RIGHT

The current Mining Right covers an area of 3,212ha. Amplats holds a converted Mining Right under DMR ref NW 80 MR, valid from 29 July 2010 to 28 July 2040. The Mining Right is under the PSA agreements and covers Siphumelele 3#, Kroondal and Marikana mines.

The are no known impediments to the Right.

MINING METHOD

Mechanised bord-and-pillar mining method.

OPERATIONAL INFRASTRUCTURE

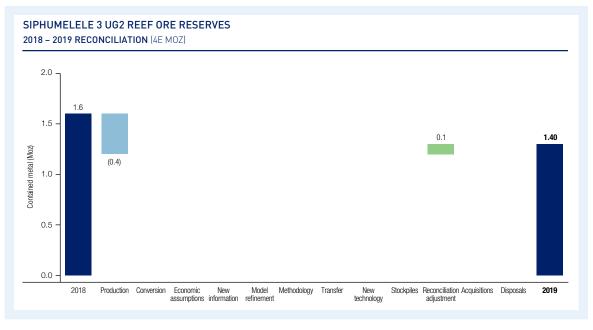
Ore Reserves at Siphumelele 3 Shaft are mined, hoisted and processed using the Kroondal Mine infrastructure. The UG2 Reef is accessed from surface using five decline systems. Mining takes place at depths between 250m and 550m below surface. ROM ore is treated via two concentrator processing plants (K1 and K2) and there is spare processing capacity at a third concentrator plant, which is currently under care and maintenance (Marikana plant). The concentrate is sold to Amplats, under an off-take agreement.

	Units	UG2
Mineral Resource assumptions		
Geological loss	%	15 – 32
Minimum Resource cut width	cm	200
Average Density		3.5
Ore Reserves modifying factors		
Mining loss factor	%	0.0 – 0.13
Mining dilution	%	6 – 11
Pillar extraction factor	%	75 – 81
Average planned stoping width	cm	230
4E concentrator recoveries	%	81
Mine call factor	%	94

Siphumelele 3 Shaft (100%) ORE RESERVES

Siphumelele 3	Reserve		Ore Reserves (ROM) Million tonnes (Mt)		Grade 4E g/t		Contained metal 4E tonnes		Contained metal 4E Moz	
Shaft (100%)		Classification	2019	2018	2019	2018	2019	2018	2019	2018
UG2 Reef	11	Proved Probable	17.1	20.7	2.52	2.46	43	51	1.4	1.6
		Total	17.1	20.7	2.52	2.46	43	51	1.4	1.6

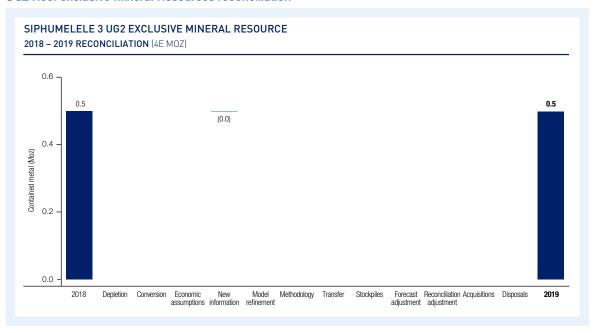
UG2 Ore Reserves reconciliation



Siphumelele 3 Shaft (100%) continued EXCLUSIVE MINERAL RESOURCES

Siphumelele 3		Mineral Resources Million tonnes (Mt)				Contained metal 4E tonnes		Contained metal 4E Moz	
Shaft (100%)	Classification	2019	2018	2019	2018	2019	2018	2019	2018
UG2 Reef	Measured Indicated	4.8	4.9	3.09	3.04	15	15	0.5	0.5
	Measured and Indicated	4.8	4.9	3.09	3.04	15	15	0.5	0.5
	Inferred								
	Total	4.8	4.9	3.09	3.04	15	15	0.5	0.5

UG2 Reef exclusive Mineral Resources reconciliation



Siphumelele 3			esources nnes (Mt)	Grade 4E g/t		Contained metal 4E tonnes		Contained metal 4E Moz	
Shaft (100%)	Classification	2019	2018	2019	2018	2019	2018	2019	2018
UG2 Reef	Measured	26.2	30.2	3.07	3.02	81	91	2.6	2.9
	Indicated	0.0	0.0	0.00	0.00	0	0	0.0	0.0
	Measured and Indicated	26.2	30.2	3.07	3.02	81	91	2.6	2.9
	Inferred	0.0	0.0	0.00	0.00	0	0	0.0	0.0
	Total	26.2	30.2	3.07	3.02	81	91	2.6	2.9

as at 31 December 2019

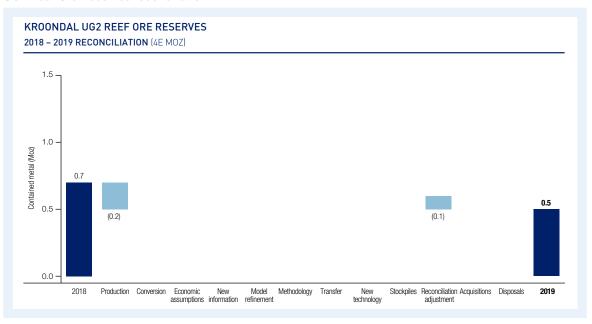
SIBANYE-STILLWATER JV continued

Kroondal Mine (50%)

ORE RESERVES

Kroondal Mine	Reserve		Ore Reserves (ROM) Million tonnes (Mt)		Grade 4E g/t		Contained metal 4E tonnes		Contained metal 4E Moz	
(50%)	life	Classification	2019	2018	2019	2018	2019	2018	2019	2018
UG2 Reef	5	Proved Probable	6.1	8.0	2.62	2.78	16	22	0.5	0.7
		Total	6.1	8.0	2.62	2.78	16	22	0.5	0.7

UG2 Reef Ore Reserves reconciliation

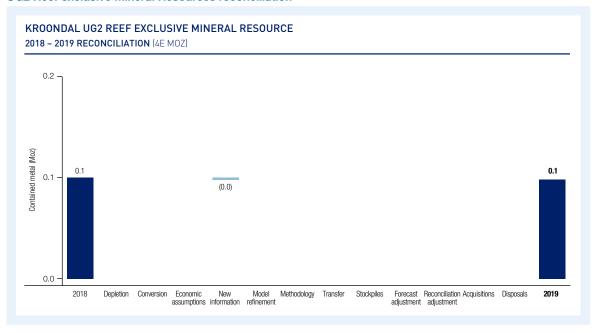


EXCLUSIVE MINERAL RESOURCES

Kroondal Mine		Mineral Resources Million tonnes (Mt)		Grade 4E g/t		Contained metal 4E tonnes		Contained metal 4E Moz	
(50%)*	Classification	2019	2018	2019	2018	2019	2018	2019	2018
UG2 Reef	Measured Indicated	0.5 0.3	0.6 0.3	3.08 3.58	3.05 3.40	1 1	2 1	0.0 0.0	0.1 0.0
	Measured and Indicated	0.8	0.8	3.26	3.16	2	3	0.1	0.1
	Inferred								
	Total	0.8	0.8	3.26	3.16	2	3	0.1	0.1

^{*} Post the finalisation of the Amplats R&R Report, Sibanye-Stillwater have restated the Measured Mineral Resource estimates. This is not a material change and restated estimates can be found in the Sibanye-Stillwater Annual Report.

UG2 Reef exclusive Mineral Resources reconciliation



Kroondal Mine		Mineral Resources Million tonnes (Mt)		Grade 4E g/t		Contained metal 4E tonnes		Contained metal 4E Moz	
(50%)	Classification	2019	2018	2019	2018	2019	2018	2019	2018
UG2 Reef	Measured Indicated	7.4 0.3	10.0 0.3	3.14 3.58	3.09 3.40	23 1	31 1	0.7 0.0	1.0 0.0
	Measured and Indicated	7.7	10.3	3.16	3.10	24	32	0.8	1.0
	Inferred								
	Total	7.7	10.3	3.16	3.10	24	32	0.8	1.0

as at 31 December 2019

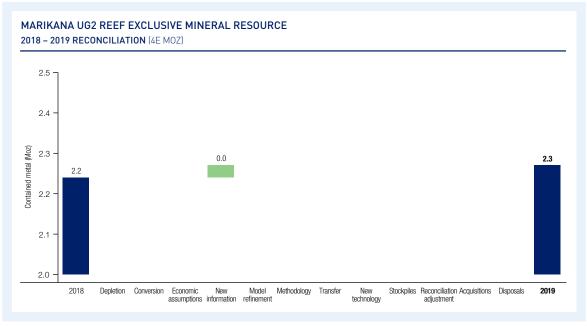
SIBANYE-STILLWATER JV continued

Marikana Mine (50%)

EXCLUSIVE MINERAL RESOURCES

Marikana Mine		Mineral Resources Million tonnes (Mt)		Grade 4E g/t		Contained metal 4E tonnes		Contained metal 4E Moz	
(50%)	Classification	2019	2018	2019	2018	2019	2018	2019	2018
UG2 Reef	Measured	13.7	13.6	3.35	3.29	46	45	1.5	1.4
	Indicated	4.7	4.7	3.76	3.75	18	18	0.6	0.6
	Measured and Indicated	18.4	18.3	3.46	3.41	64	63	2.0	2.0
	Inferred	2.5	2.5	2.95	2.95	7	7	0.2	0.2
	Total	20.9	20.8	3.40	3.35	71	70	2.3	2.2

UG2 Reef exclusive Mineral Resources reconciliation



Marikana Mine		Mineral Resources Million tonnes (Mt)		Grade 4E g/t		Contained metal 4E tonnes		Contained metal 4E Moz	
(50%)	Classification	2019	2018	2019	2018	2019	2018	2019	2018
UG2 Reef	Measured Indicated	13.7 4.7	13.6 4.7	3.35 3.76	3.29 3.75	46 18	45 18	1.5 0.6	1.4 0.6
	Measured and Indicated	18.4	18.3	3.46	3.41	64	63	2.0	2.0
	Inferred	2.5	2.5	2.95	2.95	7	7	0.2	0.2
	Total	20.9	20.8	3.40	3.35	71	70	2.3	2.2

Information for non-managed operations is provided by joint venture partners. For additional details please refer to the applicable annual reports.

Vinodh Sewpersad Mineral Resources Mineral Resource manager SACNASP, PrSciNat 28 years



BOKONI MINE (49%)

Bokoni is a 51:49 joint venture between Atlatsa Resources and Amplats. It is in Limpopo, 80km south-east of the town of Polokwane.

PROPERTY DESCRIPTION

It forms part of the North-eastern Limb of the Bushveld Complex, with both Merensky and UG2 Mineral Resources.

Current mining infrastructure, comprising two decline shafts and two concentrators, was placed on care and maintenance in October 2017. The older Vertical and UM2 shafts were closed in 2015. The open-cast operation was terminated in December 2016 and rehabilitation of the opencast was completed in January 2018.

BRIEF HISTORY

Bokoni Mine has undergone several ownership and name changes since commissioning. The present day Bokoni Mine was commissioned as Atok Platinum Mine (Pty) Limited in 1969 and was subsequently acquired by Amplats in the mid 1990's.

In 2008, Anooraq Resources (later renamed Atlatsa Resources) entered into an empowerment transaction agreement with Amplats, whereby Amplats sold to Atlatsa an effective 51% of Bokoni Mine and an additional 1% interest in each of the other joint venture projects (including Ga Phasha). As a result, Atlatsa had controlling interest in the mine.

In July 2017 Atlatsa entered into an agreement with Amplats, whereby Atlatsa will implement a full care and maintenance strategy for Bokoni Mine.

KEY FEATURES

Two Mining Rights

15,139ha 4,549ha

Mine on

care and maintenance

as at 31 December 2019

BOKONI MINE (49%) continued MINERAL RIGHTS

Bokoni Mine has two Mining Rights. The first covers an area of 15,139ha. Bokoni Mine joint venture holds a converted Mining Right under DMR ref LP 59 MR, valid from 29 June 2009 to 28 June 2039.

The second Mining Right covers an area of 4,549ha. Bokoni Mine joint venture holds a converted Mining Right under the DMR Ref LP 65 MR, valid from 29 June 2009 to 28 June 2039.

There are no known impediments to the Rights.

	Units	MR	UG2
Mineral Resource assumptions			
Average geological loss	%	14	14
Minimum Resource cut width	cm	90	90
Average density	g/cm³	3.4	3.9

EXCLUSIVE MINERAL RESOURCES

		Mineral Resources Million tonnes (Mt)		Grade 4E g/t		Contained metal 4E tonnes		Contained metal 4E Moz	
Bokoni (49%)	Classification	2019	2018	2019	2018	2019	2018	2019	2018
Merensky Reef	Measured Indicated	45.5 23.4	45.5 23.4	4.82 4.85	4.82 4.85	219 114	219 114	7.0 3.7	7.0 3.7
	Measured and Indicated	68.9	68.9	4.83	4.83	333	333	10.7	10.7
	Inferred	100.8	100.8	5.02	5.02	506	506	16.3	16.3
	Total	169.7	169.7	4.94	4.94	839	839	27.0	27.0
UG2 Reef	Measured Indicated	97.3 45.2	97.3 45.2	6.43 6.57	6.43 6.57	626 297	626 297	20.1 9.6	20.1 9.6
	Measured and Indicated	142.5	142.5	6.47	6.47	923	923	29.7	29.7
	Inferred	85.6	85.6	6.71	6.71	574	574	18.5	18.5
	Total	228.1	228.1	6.56	6.56	1,497	1,497	48.1	48.1

Merensky Reef exclusive Mineral Resources reconciliation

Bokoni Mine is on care and maintenance. Estimates are unchanged from previous reporting.

UG2 Reef exclusive Mineral Resources reconciliation

Bokoni Mine is on care and maintenance. Estimates are unchanged from previous reporting.

		Mineral Resources Million tonnes (Mt)		Grade 4E g/t		Contained metal 4E tonnes		Contained metal 4E Moz	
Bokoni (49%)	Classification	2019	2018	2019	2018	2019	2018	2019	2018
Merensky Reef	Measured Indicated	45.5 23.4	45.5 23.4	4.82 4.85	4.82 4.85	219 114	219 114	7.0 3.7	7.0 3.7
	Measured and Indicated	68.9	68.9	4.83	4.83	333	333	10.7	10.7
	Inferred	100.8	100.8	5.02	5.02	506	506	16.3	16.3
	Total	169.7	169.7	4.94	4.94	839	839	27.0	27.0
UG2 Reef	Measured Indicated	97.3 45.2	97.3 45.2	6.43 6.57	6.43 6.57	626 297	626 297	20.1 9.6	20.1 9.6
	Measured and Indicated	142.5	142.5	6.47	6.47	923	923	29.7	29.7
	Inferred	85.6	85.6	6.71	6.71	574	574	18.5	18.5
	Total	228.1	228.1	6.56	6.56	1,497	1,497	48.1	48.1

ENDOWMENT – MINERALISATION

as at 31 December 2019

PRILL AND BASE METAL ESTIMATES

The prill percentage (%) distribution (Platinum, Palladium, Rhodium and Gold), base metal grades (Copper and Nickel) and Chrome are based on modelled and evaluated information, quoted over the 'Resource cut' and based on Mineral Resources inclusive of Ore Reserves.

		Prill % dis	stribution	Base met	Chrome grades*		
	Pt%	Pd%	Rh%	Au%	Cu%	Ni%	Cr ₂ O ₃ %
Merensky Reef - West Bushveld							
Tumela Mine	61.8	29.5	5.1	3.6	0.08	0.24	
Dishaba Mine	62.7	28.9	4.6	3.9	0.08	0.21	
Merensky Reef – East Bushveld							
Twickenham Platinum Mine	58.8	31.1	3.1	7.0	0.09	0.24	
Modikwa Platinum Mine	59.7	30.7	3.1	6.5	0.06	0.15	
Bokoni Platinum Mine	61.5	28.8	3.6	6.1	0.08	0.20	
Der Brochen Project	59.1	30.4	2.6	7.9	0.12	0.26	
UG2 Reef - West Bushveld							
Tumela Mine	58.7	29.2	11.4	0.7	0.01	0.12	32.2
Dishaba Mine	60.2	27.7	11.4	0.7	0.01	0.13	32.0
UG2 Reef - East Bushveld							
Twickenham Platinum Mine	42.4	47.9	8.1	1.6	0.03	0.15	24.6
Modikwa Platinum Mine	44.2	45.6	8.8	1.4	0.03	0.13	
Bokoni Platinum Mine	41.1	49.0	8.1	1.9	0.05	0.17	
Der Brochen Project	54.1	35.6	9.0	1.2	0.01	0.10	17.9
Mototolo Mine	53.9	35.7	9.3	1.2	0.01	0.10	19.9
Platreef							
Mogalakwena Mine	42.0	48.5	3.1	6.5	0.11	0.19	
MSZ – Zimbabwe							
Unki Platinum Mine	48.5	39.8	4.1	7.5	0.14	0.22	

^{*} Only Tumela, Dishaba, Mototolo, Twickenham mines and Der Brochen Project have evaluated the chromite content in the UG2 Reef.

ENDOWMENT - MINERALISATION

General

In addition to evaluated and reported Ore Reserves and Mineral Resources, Amplats holds various Mineralisations that are not publicly reported.

Different types of Mineralisation exist, either stockpiled material on surface or still in situ underground. This material requires studies to determine the potential economic value (reasonable prospects for eventual economic extraction).

Surface material

Surface material is divided into tailings storage facilities, stockpiles and low grade material storage facilities.

Tailings storage facilities

Tailings Mineral Resources, where evaluated, are already reported in the relevant Mineral Resource statement.

Tailings Mineralisation: operating (active) tailings facilities for current mining operations are not evaluated and therefore not reported as part of Mineral Resources. They contain residual amounts of PGM and base metals and are registered internally in Amplats' asset books. Currently, significant Mineralisation is available at the following operations:

- Amandelbult Complex Western Limb
- Modikwa, Mototolo and Bokoni mines Eastern Limb
- Mogalakwena Mine Northern Limb
- Unki Mine Great Dyke (Zimbabwe).

Stockpiles

Stockpiles are mined ore held for future treatment. Currently, only Mogalakwena reports Ore Reserve and Mineral Resource stockpiles, included in the relevant Ore Reserve and Mineral Resource statement.

Low grade material storage facilities

Low grade storage facilities are not evaluated and currently not reported under the Ore Reserve and Mineral Resource statement.

Evaluation of low-grade surface storage facilities not contracted to external companies is ongoing. They contain various amounts of PGM and base metals and are recorded internally. Currently, Mineralisation has been identified at Amandelbult Complex. However, minor low grade surface material also exist on other operations.

Underground in situ material

Note that Mineral Resources are quoted over the entire Mining Right and Prospecting Right areas except for:

- Mogalakwena Mine, where Mineral Resources are only guoted down to potential future surface mining depths
- Twickenham, Tumela and Bokoni mines, where a virgin rock temperature of 75°C is currently considered the limit to mining given present technology, metal prices and energy costs. Areas higher than 75°C are currently classified as Mineralisation.

DEFINITIONS FOR RECONCILIATION CATEGORIES

as at 31 December 2019

Opening balance

As at 31 December 2018.

Production

The amount of material (expressed in terms of tonnage and content as applicable) removed by mining from the scheduled Ore Reserves, ie areas actually mined in the reporting period which are removed from reserve model(s).

Depletion

Mineral Resources: the amount of material (expressed in terms of tonnage and content as applicable) removed by mining from Mineral Resources, ie areas actually mined in the reporting period which are removed from resource model(s).

Conversion

The effect of applying updated 'Modifying Factors' to Ore Reserves and Mineral Resources which include geotechnical, mining, metallurgical, marketing, legal, environmental, social and governmental considerations including infrastructure. Includes changes to the mining method, mine plan and/or layout changes e.g. changes in pit slope angles or mineable cut due to geotechnical reasons. The change can be positive or negative year-on-year.

■ Sub-Categories:

- Conversion is the process of up-grading Mineral Resources to Ore Reserves based on a change in confidence levels and/or Modifying Factors.
- Re-allocation is the process of down-grading of Ore Reserves to Mineral Resources or Mineral Resources to Mineralised Inventory based on a change in confidence levels and/or modifying factors.
- Sterilisation is the process of removing material from Ore Reserves and/or Mineral Resources that no longer has reasonable prospects for eventual economic extraction (RPEEE).

Economic assumptions

The effect of economic assumptions based on the current or future price of a commodity and associated exchange rate estimates as determined by the corporate centre (Global Assumptions) which has a direct impact on the Mineral Resources or Ore Reserves particularly the cut-off grade (which can be affected by changes in costs).

New information

The effect of additional resource definition information (with QA/QC information) which initiates an update to the geological models (facies, structural, grade, geotechnical) and results in an updated (re-classified) resource model and subsequent determination of new Ore Reserve estimates. Includes ore bodies (or portions of current orebodies) within the same project/operation not previously reported.

Model refinement

No additional resource definition drilling has been undertaken but the interpretation (geometry/ore-waste contacts) of the orebody has been refined or internal mine/lease boundaries changed, eg based on mapping information obtained during mining or a different structural model being applied. Changes to in situ tonnages as a result of new geological losses being applied or a change to the definition of the boundary of the Mineral Resources due to an updated 'economically mineable cut' being applied.

Methodology

Changes to Mineral Resources or Ore Reserves in response to the application of new or improved mining and/or processing methods.

Transfer

Movement of Mineral Resources and/or Ore Reserves from one type of product/ore type facies to another due to internal contact changes/updates or from one mining/project area to another or re-location of in-situ material to stockpiles.

New technology

Changes to Mineral Resources or Ore Reserves in response to the application of new or improved mining and/or processing methods.

Stockpiles

Only used the first time a stockpile is declared ('opening balance' of stockpile, thereafter a separate reconciliation for stockpiles is required).

Reconciliation adjustment

Changes which cannot be allocated to a defined category or an adjustment necessary to mitigate inaccurate production/depletion estimates of the previous year*. This should be limited to a maximum of 5% of the overall changes. A description of these changes must be supplied.

Acquisition

Additional Mineral Resources and Ore Reserves due to acquisitions of assets or increased direct ownership in JV agreements/associate companies.

Disposal

Reduction in Mineral Resources and Ore Reserves due to disposals of assets or reduced direct ownership in JV agreements/associate companies, refusal/withdrawal/relinquishment of Mining/Prospecting Rights or related permits e.g. due to environmental issues, changes in policy.

Closing balance

As at 31 December 2019.

ADMINISTRATION

DIRECTORS

Executive directors

C Griffith (chief executive officer)

C Miller (finance director)

Independent non-executive directors

RMW Dunne (British)

NP Mageza

NT Moholi

D Naidoo

JM Vice

Non-executive directors

M Cutifani (Australian)

S Pearce (Australian)

AM O'Neill (British)

N Mbazima

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Anonymous whistleblower facility

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www.yourvoice.angloamerican.com

HUMAN RESOURCES-RELATED QUERIES

Job opportunities: www.angloamericanplatinum.com/ careers/job-opportunities

Bursaries, email: bursaries@angloplat.com

Career information: www.angloamericanplatinum.com/ careers





Anglo American Platinum Limited

Incorporated in the Republic of South Africa Date of incorporation: 13 July 1946 Registration number: 1946/022452/06 JSE code: AMS – ISIN: ZAE000013181

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