Ore Reserves and Mineral Resources report 2021

AngloAmerican

PLATINUM

Our reporting suite

Integrated annual report

- Targets stakeholders assessing enterprise value (investors, lenders and creditors)
- Balanced view of our progress against strategic priorities and prospects, considering risks, opportunities and trade-offs, as well as ESG matters material to creating enterprise value
- Focused on material issues — those with the greatest real or potential impact (positive and negative, internal and external) on achieving our business objectives

Environmental, social and governance report

- Targets all stakeholders wanting to understand our sustainability impacts
- Disclosure on material sustainability topics reflecting our most significant impacts (positive or negative) on society, the environment and the economy (people, planet and prosperity)
- Covers all entities in our consolidated financial statements but excludes comprehensive non-financial data on our joint operations

Annual financial statements

- Targets primarily investors and capital markets
- Audited financial statements reflecting effects on enterprise value that have already taken place at the reporting date, or are included in future cash-flow projections

Ore Reserves and Mineral Resources report

- Updated estimates and reconciliation of Ore Reserve and Mineral Resource statements for all our assets
- As per SAMREC Code guidelines and definitions (2016)
- Complies with JSE Listings Requirements
- Signed off by Competent Persons

Contents

Front cover: Mogalakwena – core yard, logging core samples
L to R – Nelly Ntsoana (geologist) Mpho Modisane (geologist)

For more information, visit:
www.angloamericanplatinum.com/investors/annual-reporting/2021

Refers to other pages in this report

Supporting documentation on the website
Integrated annual report (IAR)
Full annual financial statements (AFS)
Environmental , social and governance (ESG) report

Our approach to reporting

Assurance

In compliance with the three-year external review and audit schedule, the following detailed audits of data gathering, data transformation and reporting of Ore Reserves and Mineral Resources were carried out in 2021:

– Mototolo complex – Snowden Optiro Mining Consultants
– Unki Mine – The MSA Group.

Reporting framework

- International <IR> Framework of the International Integrated Reporting Council
- South African Companies Act 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 non-financial indicators. These are available on request
- SAMREC Code 2016 edition
- Anglo American plc Group Ore Reserves and Mineral Resources reporting policy. This is available on request.

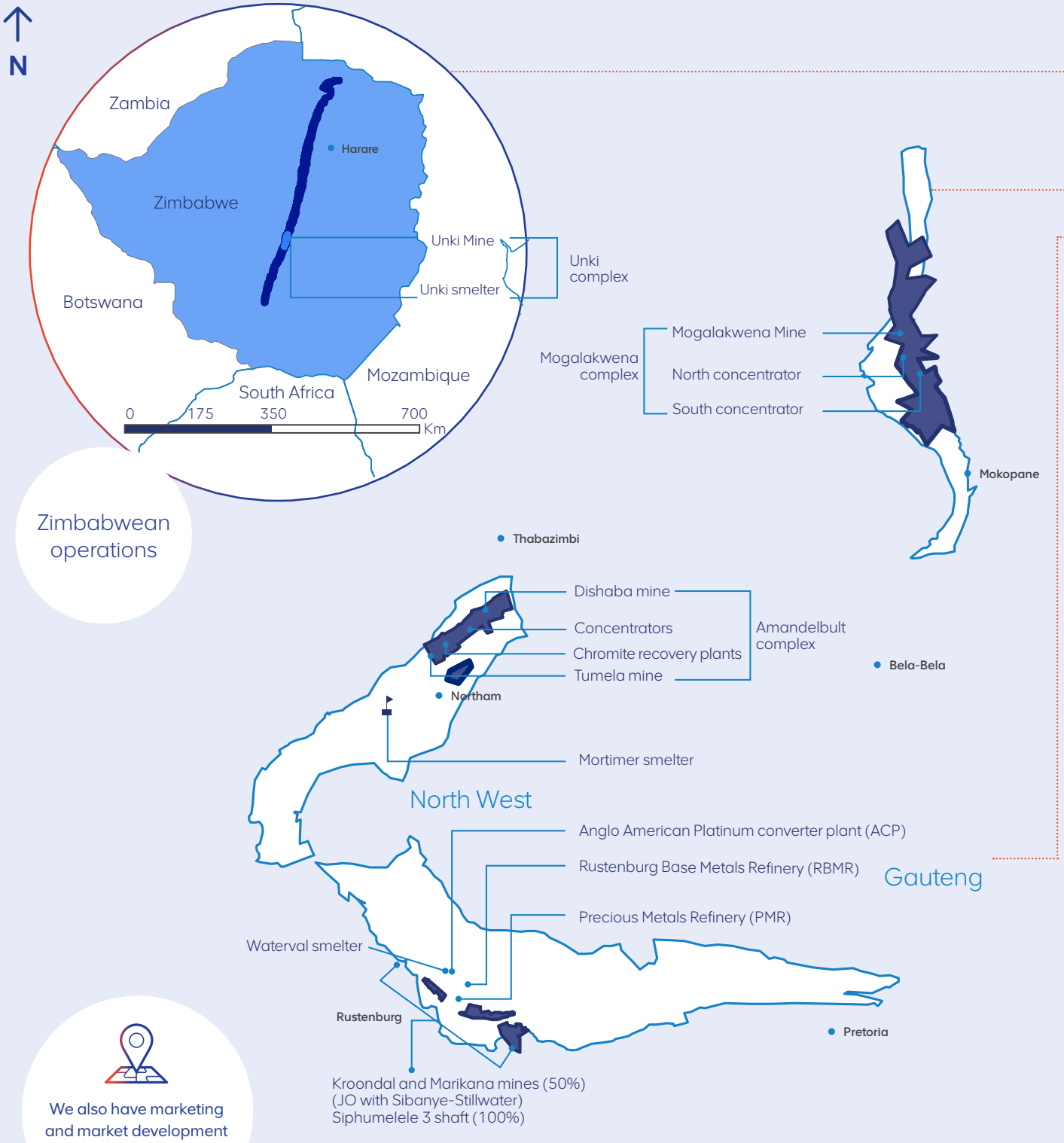
Forward-looking statements disclaimer

Certain elements in this report constitute forward-looking statements. These are typically identified by terminology such as 'believes', 'expects', 'may', 'will', 'could', 'should', 'intends', 'estimates', 'plans', 'assumes' and 'anticipates', or negative variations. Such forward-looking statements are subject to a number of risks and uncertainties, many beyond the company's control and all based on the company's current beliefs and expectations about future events.

Such statements could cause actual results and performance to differ materially from expected results or performance, expressed or implied. No assurance can be given that such future results will be achieved; actual events or results may differ materially as a result of risks and uncertainties facing the company and its subsidiaries.

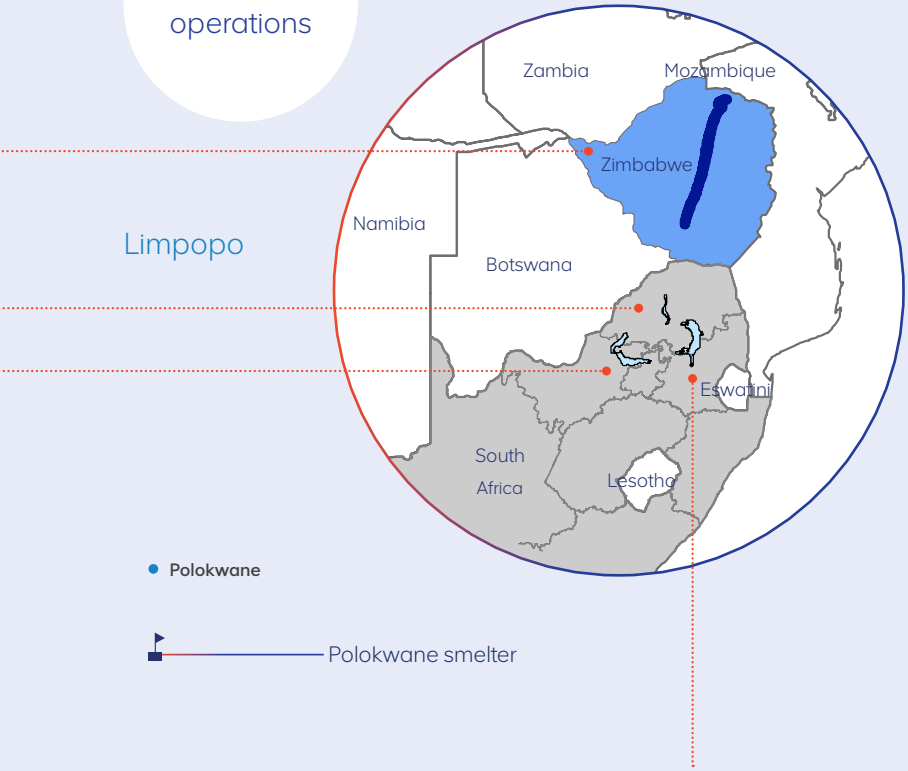
Where we operate

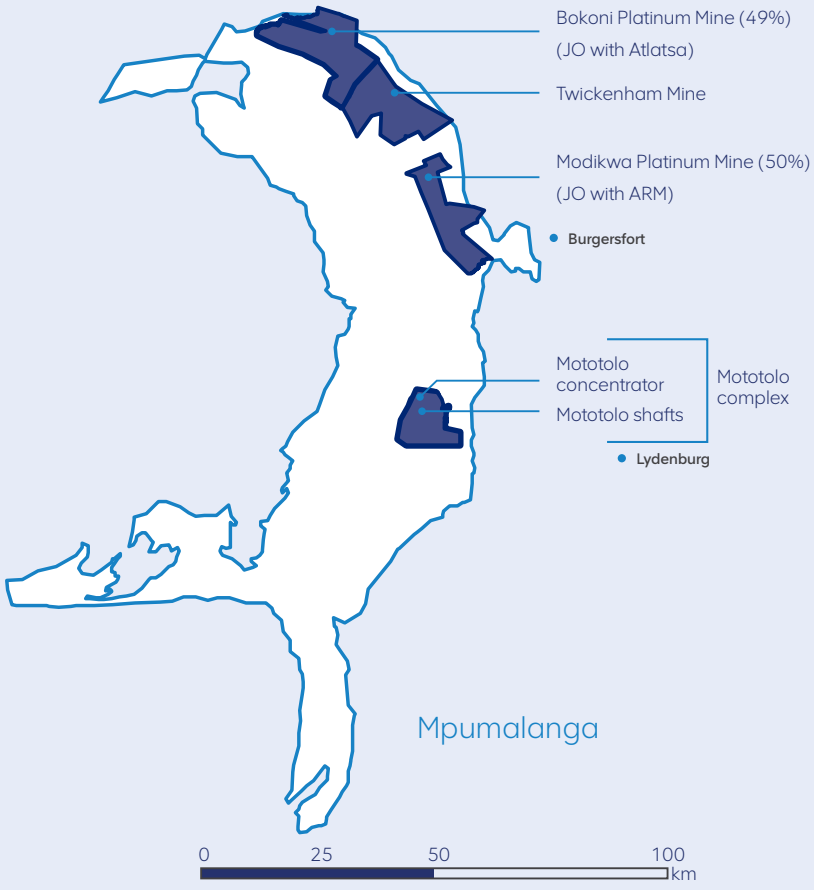
Our operations fall in the PGM-rich Bushveld Igneous Complex in South Africa and Great Dyke of Zimbabwe. We also have marketing and market development offices in London, Singapore and China. Our industry-leading asset portfolio exploits the largest Mineral Resource base of long-life, high-quality precious metals globally.



We also have marketing and market development offices in London, Singapore and China.

South African operations





Mogalakwena complex

Located 30km north-west of the town of Mokopane in Limpopo province, this mine is wholly owned and managed by Anglo American Platinum. It is at steady-state production and positioned for optimised organic growth and expansion to deliver maximum value. Mogalakwena is focused on exceeding industry benchmarks through technology and innovation.

The Amandelbult complex is

in Limpopo, between the towns of Northam and Thabazimbi, on the north-western limb of the Bushveld Complex. It is wholly owned and managed by Anglo American Platinum, with two mines: Tumela and Dishaba. The complex is at steady-state, with specific focus on further modernisation and mechanisation.

Mototolo complex (100%)

Located in Limpopo province, this complex is 30km west of the town of Burgersfort. Supported by the R3 billion expansion approved for Der Brochen, the complex is focused on performance improvement.

Unki Mine (100%)

Unki is located on the Great Dyke in Zimbabwe, 60km south-east of the town of Gweru. A mechanised underground mine with twin declines, ore is processed at the on-site concentrator.

Our approach to Ore Reserves and Mineral Resources reporting

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. An abridged version of this report is included in the Anglo American Platinum integrated annual report which together with this report, is published annually and available on the company website at www.angloamericanplatinum.com

Our method of reporting Ore Reserves and Mineral Resources is in accordance with the principles and guidelines for public reporting of the South African Code for Reporting of Exploration Results, Mineral Resources and Mineral Reserves (the SAMREC Code, 2016), the South African Code for Reporting of Mineral Asset Valuation (SAMVAL Code, 2016) and section 12.13 of the Listings Requirements of the Johannesburg Stock Exchange (JSE).

Ore Reserves and Mineral Resources terminology appearing in this report follows the definitions of the SAMREC Code. Ore Reserves in the context of this report has the same meaning as Mineral Reserves as defined by the Code. Estimates (tonnes and content) for individual operations and summaries quoted in this report are on a 100% basis and the attributable interest is referenced in tables and where relevant.

Ore Reserve and Mineral Resource estimates are quoted in this report as at 31 December 2021.

Key reporting principles

The following key reporting criteria apply:

General

- 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 tonnes
- 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
- The figures in the tables and charts have been rounded, and if used to derive totals and averages, minor differences may result
- The summary tabulations and reconciliations in this section of the report should be read in conjunction with the Ore Reserve and Mineral Resource statements in the subsequent sections
- Estimates of 0.0 represent numbers less than 0.05
- Definitions of reconciliation categories are on page 102 of this report
- The terms Ore Reserves and Mineral Reserves are used interchangeably
- Ore Reserves and Mineral Resources are reported on a 100% basis and the attributable interest is noted in the individual entity tables and where applicable
- There are no material legal proceedings or conditions that will impact the Ore Reserves and Mineral Resources reported for 2021, or Anglo American Platinum's ability to continue with mining activities as per life-of-mine plans
- Reporting is carried out by professionals with adequate experience in the estimation, evaluation and reporting of Ore Reserves and Mineral Resources relevant to the style of mineralisation
- Information for non-managed operations is provided by the joint-operation partners. For additional details, please refer to the applicable annual reports.

Mineral Resources

- Mineral Resources are quoted after the appropriate geological losses are applied.
- 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 Mineral Resource after continued exploration
- Only Mineral Resources that satisfy the reasonable prospects of eventual economic extraction requirements are reported. At Mogalakwena Mine, 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, a virgin rock temperature of 75°C is currently considered to be the limit to mining given current technology, metal prices and energy costs
- Underground Mineral Resources are estimated over a practical minimum width suitable for the Mineralisation known as the 'Resource cut'. The Resource cut width takes cognisance of the mining method, potential economic viability 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 additional geotechnical and mining considerations (SAMREC Code, clause 24)
- Merensky Reef is estimated over an optimised Resource cut width
- UG2 Reef is estimated over an optimised Resource cut width, which may include unavoidable 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 a multi-layered approach and reported at an optimal minimum Resource cut width
- Open pit Platreef estimates are confined to 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 Resources
- 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 Ore Reserves, ie one table reports on Resources that exclude those Resources converted to Reserves while the other includes these Resources
- The 4E prill split percentage (%) distribution (platinum, palladium, rhodium and gold), base metal grades (copper and nickel) and chromite grade are based on modelled and evaluated information, quoted over the Resource cut width and based on Mineral Resources inclusive of Ore Reserves
- Only Tumela, Dishaba, Mototolo and Twickenham and Sibanye-Stillwater joint operations have evaluated the chromite content in the UG2 Reef Resource cut.

Ore Reserves

- Anglo American Platinum uses value-based planning for the creation of the business plan. The resultant plan takes cognisance of cut-off grades which are variable over time (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 Mogalakwena 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
- Inferred Mineral Resources are considered in feasibility studies and life-of-mine plans but are excluded from Ore Reserves declaration in accordance with the SAMREC Code guidelines. Assessments have indicated that the exclusion of these Inferred Mineral Resources will have no impact on the Reserve life and life-of-mine
- 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 production/depletion figures for managed operations in this report represent actual measured production data typically up until 31 September 2021. Data for October to December are projections based on anticipated mining rates and these are aggregated with the actual production, to give the annualised production.

Economic assumptions

- The pay limits are directly linked to the 2022 business plan which takes into account platinum group metals, base metals, chromite 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 Ore Reserves are derived from value-based planning resulting in a range of variable pay limits across all Anglo American Platinum managed operations. 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 grades for the Anglo American Platinum managed mines ranges between 2.2 4E g/t and 3.9 4E g/t. The pay limit for MSZ is 2.6 4E g/t and the Platreef in situ pay limit is 1.0 4E g/t
- The macro-economic and planning parameters (global assumptions) applied to the valuation of Ore Reserves and Mineral Resources will impact decisions on overall viability and selection of the primary extraction horizon. Global assumptions are a set of economic and planning parameter forecasts 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 and corporate tax rates
- Metal prices: PGM (Pt, Pd, Rh, Ir, Ru), base metals (Ni, Cu, Co), gold and chromite concentrate.

The table below summarises the Anglo American Platinum group long-term basket price and exchange rates assumptions used for the December 2021 Ore Reserves and Mineral Resources estimation and reporting:

Basket price, real 2021	R/4E oz	**25,195**
Basket price, real 2021	US$/4E oz	**1,647**
Long-term exchange rate, real 2021	ZAR/US$	**15.30**

The basket price represents the revenue from all metals produced, expressed on a 4E ounce basis. Long-term basket metal price varies per operation, in accordance with individual operations metal ratios. Prices of individual metals represent reasonable forward-looking prices based on long-term forecasts in a balanced supply/demand scenario.

Mogalakwena North – Central pit.

Group highlights

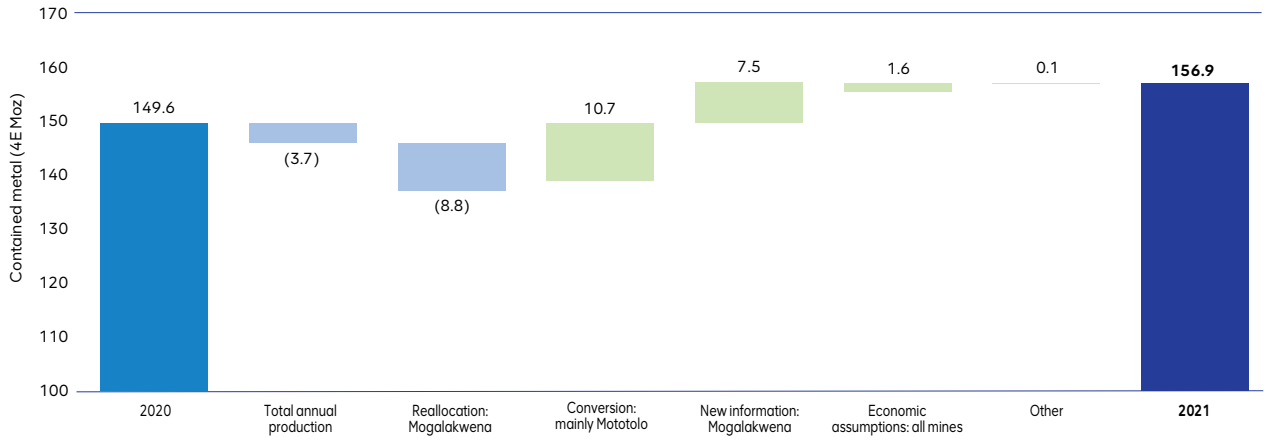
Ore Reserves

Salient features: year-on-year changes

The combined South African and Zimbabwean Ore Reserves increased by 4.9% from 149.6 4E Moz to 156.9 4E Moz in the review period. This was primarily due to the conversion of Mineral Resources to Ore Reserves in the Der Brochen south project at Mototolo complex and updated geological and Mineral Resource models as well as improved economic assumptions at Mogalakwena. The gains from the new information at Mogalakwena were partially offset by the reallocation of Ore Reserves to Mineral Resources due to a revised life-of-mine pit design.

Anglo American Platinum Merensky, UG2, Platreef and Main Sulphide Zone (MSZ) total Ore Reserves – South Africa and Zimbabwe

2020–2021 reconciliation (4E Moz)



Ore Reserves reflect the total Proved and Probable Ore Reserves.

Mototolo

At Mototolo complex, the conversion of UG2 Reef Mineral Resources to Ore Reserves in the Der Brochen south project area resulted in a substantial increase of the Ore Reserves footprint (+10.5 4E Moz) and the life-of-mine to beyond 30 years (16 years in 2020). Improved economic assumptions and reduced operational costs resulted in the conversion of the uneconomic tails from 2020 to Ore Reserves (+0.4 4E Moz) in 2021.

Mogalakwena

At Mogalakwena, the Platreef Ore Reserve 4E ounces decreased slightly (-0.3 4E Moz), because of a revised life-of-mine pit design (to improve accessibility to lower benches) (-8.8 4E Moz) and production (-1.6 4E Moz). The extent of the decrease was mostly offset by the inclusion of additional ore resulting from updated geological and Mineral Resource models within the life-of mine pit shell (+7.5 4E Moz) and improved economic assumptions (+2.1 4E Moz).

Amandelbult

At Amandelbult Dishaba and Tumela, mine-design changes, Modifying Factors changes and tail cuts resulted in the reallocation of UG2 Reef Ore Reserves to Mineral Resources, resulting in a combined 1.7 4E Moz decrease. At Dishaba in particular, Merensky Reef Ore Reserves decreased by 0.5 4E Moz due to further economic tail cuts at year 2049 of the life-of-mine.

Unki

There was a minor increase in Ore Reserves at Unki (+0.4 4E Moz) due to conversion of the upper and southern sections of the mine as well as the additional on-reef development in the life-of-mine footprint area.

Modikwa

The UG2 Reef Ore Reserve 4E ounces at Modikwa decreased (-0.5 4E Moz) due to geological model changes, economic tail-cuts and production.

Sibanye-Stillwater JOs

Ore Reserves at Kroondal and Siphumelele 3 joint operations decreased primarily due to annual production.

Recent developments

Mototolo complex: Der Brochen south feasibility study approval

As noted, the Mototolo complex Der Brochen south project feasibility study has been approved by the Anglo American Platinum board. The development of the project leverages the existing Mototolo infrastructure as well as establishment of new infrastructure, enabling mining to extend into the adjacent Der Brochen Mineral Resources. The project increases UG2 Reef Ore Reserves by 10.5 4E Moz (2.9 4E Moz: 2020 to 13.5 4E Moz: 2021) and extends life-of-mine beyond 30 years (from 16 years in 2020).

The mining of the UG2 Reef orebody will utilise the same bord-and-pillar extraction method as Mototolo Mine, and will be a fully mechanised operation, positioned in the bottom half of the primary PGM producer cost curve. The project includes development of a new shaft to replace the depleting Mototolo Ore Reserves (Lebowa and Borwa shafts), maintaining the 240,000 tonnes per month mining rate. With the completion of the concentrator debottlenecking project in Q3 2021, production from Mototolo complex is expected to be maintained at around 250,000 PGM ounces per year. The approval of the project supports the company's strategic priority of maximising value from its core portfolio of assets, investing capital into this life-extension project which is expected to generate value and strong returns. The execution of the project will begin in Q1 2022.

The royalty agreement that Anglo American Platinum has with Two Rivers Platinum Mine to access mining areas adjacent to the current Thorncliffe farm boundary from the Lebowa shaft is still in place. The royalty area ore and production are not reflected in this report as the SAMREC Code stipulates that only Ore Reserves and Mineral Resources which are fully permitted can be declared.

Mototolo Mine – Borwa shaft – general views.

Mineral Resources

Salient features: year-on-year changes

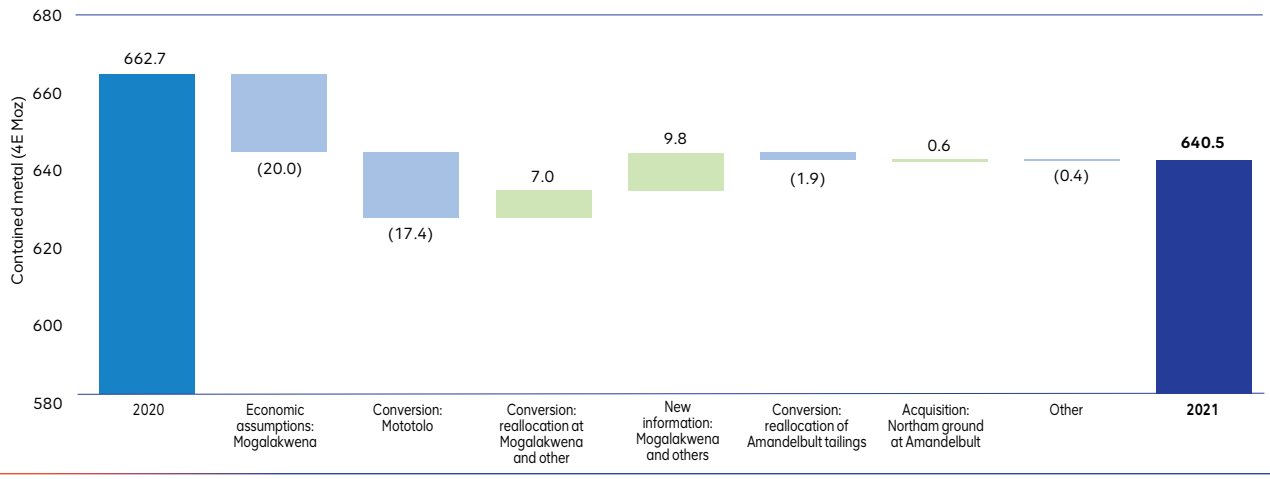
The combined South African and Zimbabwean Mineral Resources, exclusive of Ore Reserves, decreased by 3.4% from 662.7 4E Moz to 640.5 4E Moz in the review period.

This was primarily due to:
- The reallocation of Mineral Resources to Mineralisation at Mogalakwena following reasonable prospects of eventual economic extraction assessments (-20.0 4E Moz)
- Conversion of Mineral Resources to Ore Reserves in the Der Brochen south project area at Mototolo (-17.4 4E Moz)
- The reallocation of tailings Mineral Resources to Mineralisation after the reactivation of the storage facility for deposition at Amandelbult (-1.9 4E Moz).

The effects of the updated geological and Mineral Resources models at Mogalakwena (+10.2 4E Moz), reallocation of Ore Reserves and to Mineral Resources due to a revised life-of-mine pit design at Mogalakwena (+6.7 4E Moz), and acquisition of the block of ground from Northam Platinum at Amandelbult (+0.6 4E Moz) reduced the extent of the overall decrease in exclusive Mineral Resources.

Anglo American Platinum Merensky, UG2, Platreef, Main Sulphide Zone (MSZ) and tailings exclusive Mineral Resources reconciliation – South Africa and Zimbabwe

2020–2021 reconciliation (4E Moz)



Mineral Resources reflect the total Measured, Indicated and Inferred Mineral Resources.

Recent developments

Sale of Bokoni Mine

Anglo American Platinum and Atlatsa Resources Corporation have entered into a sale and purchase agreement (SPA) to dispose of Bokoni Mine to African Rainbow Minerals (ARM). Anglo American Platinum holds a 49% interest and Atlatsa holds a 51% interest of Bokoni Mine, which has been on care and maintenance since 2017. The transaction is expected to be concluded in 2022, subject to consent in terms of section 11 for the disposal of a controlling interest in Bokoni Mine to the new owners by the Department of Mineral Resources and Energy (DMRE); and approvals by the relevant competition authorities.

The sale is expected to decrease the total exclusive Mineral Resources by 23.9% from 640.5 4E Moz to 487.2 4E Moz (-153.3 4E Moz), based on the 2021 declaration:
- - 55.1 4E Moz Merensky Reef (100% basis)
- -98.2 4E Moz UG2 Reef (100% basis).

Conclusion of the acquisition of ground from Northam Platinum

To conclude the 2016 transaction, a section 102 application to amend the Amandelbult Mining Right by extending the current Mining Right area to include the block of ground from Northam Platinum has been approved by DMRE and notarially executed on 25 November 2021. Mineral Resources and boundary pillars are adjusted accordingly. The block has contributed the following Mineral Resources to the complex:
- +0.3 4E Moz Merensky Reef (100% basis)
- +0.3 4E Moz UG2 Reef (100% basis).

The status of the Sibanye-Stillwater joint operations

In January 2022, Anglo American Platinum entered into transaction agreements for the sale of its 50% interests in the Kroondal and Marikana pool-and-share agreements (the 'PSAs') to Sibanye-Stillwater. The transaction is subject to regulatory approvals, including section 11 consent for the transfer of the Mining Right and approvals by the competition authorities, as well as the delivery of 1.3 4E Moz of metal-in-concentrate by the Kroondal and Marikana PSA (100% basis).

Changes in Ore Reserves and Mineral Resources for 2021

Summary of Ore Reserve and Mineral Resource estimates

The summary estimates are reported on a 100% basis. Details of the individual operations' estimates that contributed to this summary as well as reconciliations are stated per reef and mine in the various sections throughout the report (on a 100% basis).

	2021			2020		
Classification	Tonnes Mt	Grade 4E Moz	Contained metal 4E Moz	Tonnes Mt	Grade 4E Moz	Contained metal 4E Moz
Ore Reserves[1] – South Africa	**1,505.8**	**3.13**	**151.3**	1,473.4	3.05	144.1
Ore Reserves[1] – Zimbabwe (Unki)	**53.1**	**3.30**	**5.6**	51.0	3.30	5.4
Ore Reserves[1] – South Africa and Zimbabwe	**1,559.0**	**3.13**	**156.9**	1,524.4	3.05	149.6
Mineral Resources exclusive of Ore Reserves[2,3] – South Africa	**4,895.2**	**3.94**	**619.5**	5,107.0	3.89	639.5
Mineral Resources exclusive of Ore Reserves[2,3] – Zimbabwe (Unki)	**152.8**	**4.26**	**20.9**	156.9	4.23	21.3
Mineral Resources exclusive of Ore Reserves[2,3] – South Africa and Zimbabwe	**5,048.0**	**3.95**	**640.5**	5,264.0	3.90	660.8
Mineral Resources inclusive of Ore Reserves[3,4] – South Africa	**6,445.1**	**3.83**	**792.2**	6,594.2	3.78	800.6
Mineral Resources inclusive of Ore Reserves[3,4] – Zimbabwe (Unki)	**209.6**	**4.15**	**27.9**	212.2	4.15	28.3
Mineral Resources inclusive of Ore Reserves[3,4] – South Africa and Zimbabwe	**6,654.8**	**3.84**	**820.1**	6,806.4	3.79	828.9
Mineral Resources exclusive of Ore Reserves[2,3] – South Africa tailings	—	—	—	72.3	0.80	1.9
Mineral Resources inclusive of Ore Reserves[2,3] – South Africa tailings	—	—	—	72.3	0.80	1.9

The combined Ore Reserves and Mineral Resources summaries represent Platreef, UG2, Merensky Reefs (South Africa) and Main Sulphide Zone – MSZ (Zimbabwe).

Tonnage is reported as dry metric tonnes, and Ore Reserves reported as run-of-mine (ROM) tonnes. Rounding of figures may result in computational discrepancies.

Mineral Resources are quoted after appropriate geological losses are applied.

'Mineral Resources exclusive of Ore Reserves' and 'scheduled Mineral Resources converted to Ore Reserves' are not additive because of Modifying Factors being applied in the conversion from Mineral Resources to Ore Reserves.

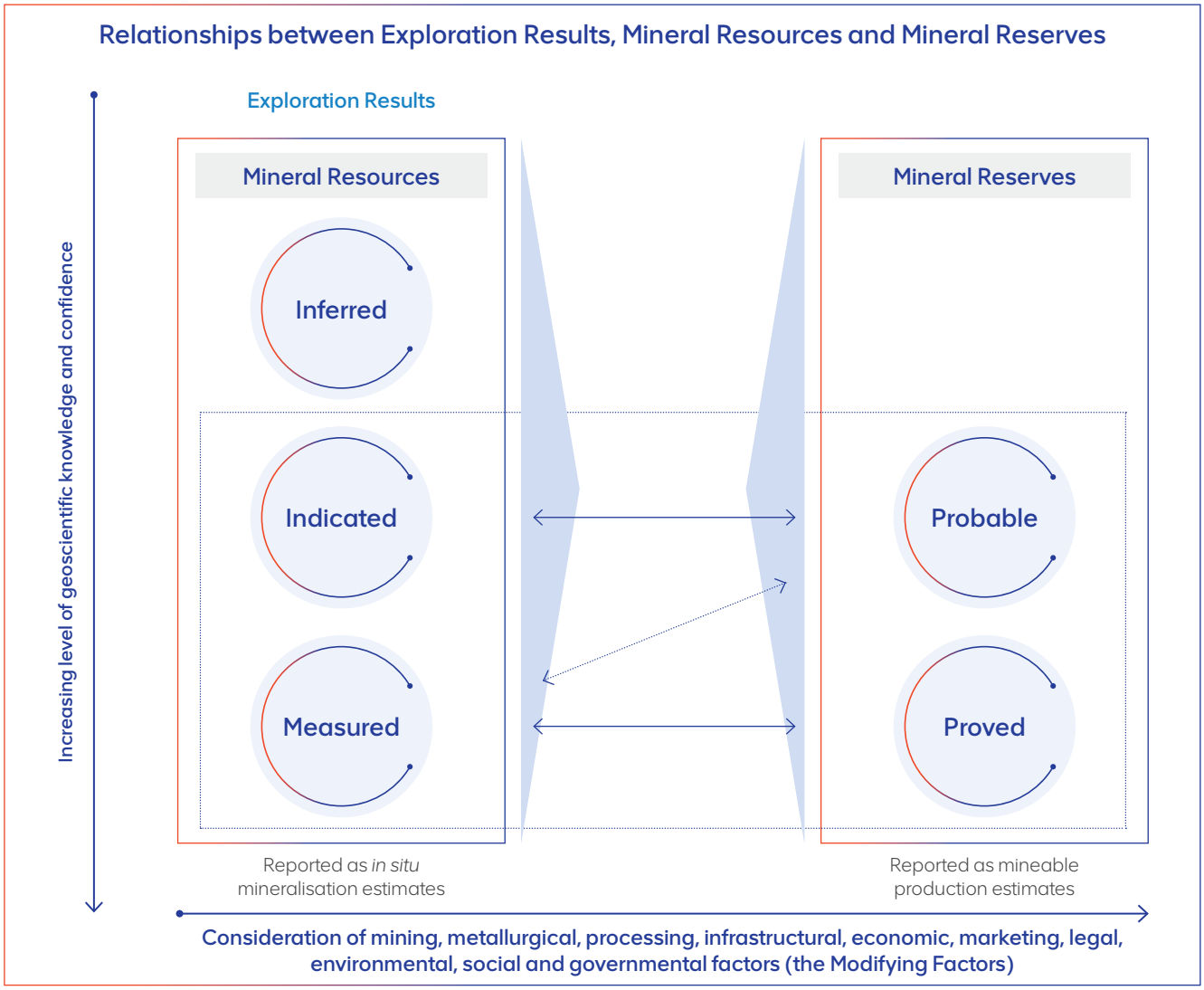
Due to the uncertainty that may be attached to some Inferred Mineral Resources, it cannot be assumed that all or part of an Inferred Mineral Resource will necessarily be upgraded to an Indicated or Measured Mineral Resource after continued exploration.

1 Ore Reserves reflect the total Proved and Probable Ore Reserves.
2 Mineral Resources reflect the total Measured, Indicated and Inferred Mineral Resources.
3 Exclusive Mineral Resources: Mineral Resources exclusive of the portion converted to Ore Reserves.
4 Inclusive Mineral Resources: Mineral Resources inclusive of the portion converted to Ore Reserves.

Corporate governance

Reporting code and controls

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), including table 1 and section 12.13 of the Listings Requirements of the JSE. The relationships between Ore Reserves and Mineral Resources are depicted in the SAMREC classification diagram below and the definitions are on page 101 of this report.



Competence and responsibility

In line with the SAMREC Code and the Listings Requirements of the JSE, Competent Persons have been appointed to work on, and assume responsibility for the Ore Reserve and Mineral Resource statements for all operations and projects. The lead Competent Persons with overall responsibility for the Anglo American Platinum 2021 Ore Reserves and Mineral Resource report are Kavita Mohanlal and Andrew Smith.

They have provided written confirmation that information disclosed in terms of this report is compliant with the SAMREC Code (2016) including table 1 and, where applicable, the relevant JSE section 12 Listings Requirements (section 12.13). They can confirm that the information may be published in the form and context in which it was intended. They are permanent employees of the technical and sustainability group function (T&S) within Anglo American plc.

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

	Competent Persons	Title	RPO	Membership number	Relevant experience
Mineral Resources	Kavita Mohanlal	Principal: Mineral Resource estimation	SACNASP, PrNatSci	400003/05	18 years
Ore Reserves	Andrew Smith	Lead: Ore Reserves	SAIMM member	702955	32 years

Kavita Mohanlal has BSc (hons) and MSc Mineral Resources management qualifications from the University of the Witwatersrand and has 18 years' relevant mineral industry experience across precious metals operations. In this period, she has held various technical positions within Anglo American Platinum and Anglo American plc. She is a professional natural scientist member of The South African Council of Natural Scientific Professions (SACNASP). SACNASP is based at The Innovation Hub, Enterprise Building Suite L4, 1 Mark Shuttleworth Street, Lynwood, Pretoria, 0087, Gauteng, South Africa.

Kavita Mohanlal
Principal: Mineral Resources estimation
SACNASP, PrNatSci: 400003/05

Anglo American plc
144 Oxford Road, Rosebank, Melrose
South Africa

17 February 2022

Andrew Smith has a BEng (mining engineering) qualification from the University of Nottingham (UK) and has 32 years' relevant mineral industry experience across precious metals operations. In this period, he has held technical, managerial, and executive positions at Anglo American Platinum and Anglo American plc. He is a fellow with the Southern Africa Institute of Mining and Metallurgy. SAIMM is based at The Mineral Council South Africa, 5 Hollard Street, Marshalltown, Johannesburg 2001, Gauteng, South Africa.

Andrew Smith
Lead: Ore Reserves
SAIMM, member: 702966, ECSA

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United Kingdom

17 February 2022

Internal controls

Well-established processes and protocols ensure reliable Ore Reserves and Mineral Resources reporting, as stipulated in the Anglo American plc group Ore Reserves and Mineral Resources reporting policy adopted by Anglo American Platinum. 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 classifications
- A Mineral Resource classification scorecard for consistent and robust 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 for the various business plans and investment centres
- The annual multi-stage internal and external reviews and sign-off of Ore Reserves and Mineral Resources statements
- Internal controls for financial reporting audits that review internal control measures in place for reporting Ore Reserves and Mineral Resources.

Information communicated

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

Ore Reserves and Mineral Resources management database

- Web-based data capture of all Ore Reserves and Mineral Resources estimates, reconciliations and other relevant information in the Anglo American Ore Reserves and Mineral Resources reporting system (ARR)
- Integration with Anglo American plc's group Mineral Resource and Ore Reserve reporting management systems
- Internal database audit, approvals and formal sign-off.

Assurance – external reviews

Anglo American Platinum operations are subject to a comprehensive three-year programme of external/third-party reviews aimed at providing assurance in respect of Ore Reserve and Mineral Resource estimates and reconciliations. The independent reviews are executed to ensure that our standards and procedures are aligned with world best practice and include both process and numerical estimate reviews. The reviews are conducted by suitably qualified Competent Persons and as suggested in the Anglo American reporting guidelines.

To comply with the Anglo American Platinum three-year external review and audit schedule, the following detailed audits of data gathering, data transformation and reporting of Ore Reserves and Mineral Resources processes were carried out in 2021:

- Mototolo complex – Snowden Optiro Mining Consultants
- Unki Mine – The MSA Group.

The scope of work for external reviews requires a site visit and as such, external reviewers at Mototolo conducted a site visit. The MSA external consultants were, however, unable to travel to Unki Mine in Zimbabwe due to regional/international Covid-19 travel restrictions. The review had to be conducted as desktop review, with online interaction between all the stakeholders involved in the audit.

External audits summary

It is both auditors' opinions that the Ore Reserves and Mineral Resources have been estimated using reasonable assumptions and techniques for the style of Mineralisation and mining methods at Unki and Mototolo mines. The Mineral Resources and Mineral Reserves have been prepared by suitably qualified and experienced Competent Persons who were assisted by various experts from the individual mines, Anglo American Platinum and Anglo American plc. The estimations and inputs are guided by comprehensive procedures and governed by standards that are assured by stringent internal audit and review processes. No significant or material items were identified during the audits and major risks that could impact on the reported Mineral Resources and Ore Reserves are well understood, with appropriate mitigation measures in place.

Continuous improvement of items identified and detailed in the full audit reports will be addressed in the following Ore Reserves and Mineral Resources estimation and reporting cycle(s). Assurance letters for the auditors' summary of findings are on pages 99 and 100 of this report.

Risk

Anglo American Platinum's integrated risk management framework ensures the effective governance of operational and strategic risks. The risk management process is aligned with ISO 31000 international risk management standards and King IV requirements. Risks are defined as situations or actions with the potential to threaten our ability to deliver on our strategic priorities and, ultimately, to create value. The approach to risk management is guided by risk appetite, enables the platinum management committee (PMC) and the board to establish a baseline level of risk the company is willing to accept and evaluates the likelihood and impact of certain threats. Risk appetite is assessed from the context of severity of consequences should the risk materialise, any relevant internal or external factors influencing the risk, and the status of management actions to mitigate the risk. Risk tolerance refers to the amount of risk Anglo American Platinum is able to withstand. We have also considered opportunities as part of our risk management process, aligned with King IV requirements. Anglo American Platinum's principal risks are outlined on pages 74–89 of the 2021 integrated annual report.

The relevant geosciences and mine planning departments follow risk management processes outlined in the Anglo American Platinum integrated risk management framework. This is done to systematically evaluate, mitigate and subsequently reduce risks relevant to the Ore Reserves and Mineral Resources estimation and reporting.

It is generally recognised that Ore Reserve and Mineral Resource estimations are based on projections that may vary as new information becomes available. In addition to geological uncertainty, such changes can be impacted 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 converting Mineral Resources to Ore Reserves and reallocating 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.

Covid-19 pandemic remained the most prevalent event in 2021 and was identified as the highest-ranking risk for Anglo American Platinum. The impact of Covid-19 cuts across different stages of the mining value chain and affects employees as well as mine communities. The pandemic has brought certain issues to the fore, with an increased focus on health and safety for employees and communities alike, a heightened concern on business continuity, realising the effects of supply-chain disruption across the mining value chain, and the accelerated shift to a digital, low-carbon economy.

However, Covid-19 has had no direct impact on the declaration of Ore Reserves and Mineral Resources except for its effect on the timelines/pace of extracting our mineral assets.

For more detail on our approach to risk and opportunity management and principal risks see the relevant sections in the integrated annual report

Environmental, social and governance (ESG)

Globally, organisations are moving towards greater disclosure on ESG information, due to increased stakeholder and shareholder interest in ESG-related criteria. ESG considerations are important inputs in determining reasonable prospects of eventual economic extraction (RPEEE) and Modifying Factors for estimating and reporting Ore Reserves and Mineral Resources. Items related to environmental, social and governance aspects outlined in table 1 of the SAMREC Code (2016) are incorporated into our Ore Reserves and Mineral Resources estimation processes, to ensure compliance, and inform all stakeholders and investors.

ESG strategic focus

Anglo American Platinum has integrated ESG into the company strategy. The company aims to become a leader in ESG by achieving our environment and social impact aspirations as the core of our strategy and way of working. We believe that ESG offers significant value, and we will invest meaningfully to achieve shared value for our stakeholders.

Sustainable mining plan

Our plan has three global sustainability pillars, with three stretch goals under each one

Environment	Social	Governance
Healthy environment	Thriving communities	Trusted corporate leader
Climate change Biodiversity Water usage	Education Health and wellbeing Livelihoods	Accountability Policy advocacy Ethical value chains

Collaborative regional development

Our innovative partnerships model to catalyse independent, scalable and sustainable economic development in regions around our operations – the objective being to improve lives by creating truly thriving communities that endure and prosper well beyond the life of the mine.

Our five-year local plans

We have tailored five-year local plans for each of our sites and group functions to address the unique changes across our operations. We have aligned each one of our global sustainability pillars and stretch goals.

Our critical foundations

The common requirements we have put in place to make sure we are operating all aspects of our business responsibly.

Leadership and culture | Zero harm | Human rights | Inclusion and diversity | Group standards and processes | Compliance with legal requirements

The focus on ESG is implemented through the Anglo American sustainable mining plan (SMP), which sets nine stretch goals across our three sustainability pillars (trusted corporate leader, healthy environment, and thriving communities), each containing milestones and targets are to be achieved by 2030. The SMP is underpinned by six critical foundations to ensure that we operate all aspects of our business responsibly. Collaborative regional development is central to our approach and aims to stimulate socio-economic development, both inside and outside the mining value chain.

Environmental management

Anglo American Platinum is committed to strong environmental stewardship, using innovation as a lever to improve performance. Our vision is to maintain a healthy environment, where not only do we minimise impact, but we deliver positive and lasting environmental outcomes in the areas in which we operate. We are innovating to transform the environmental footprint of our business as we work towards achieving the stretch environmental goals of our sustainable mining plan. We are transforming to make best use of data, through integrated digital tools for planning, simulation, execution and monitoring, from resource definition to the output of processing plants.

Environmental compliance permits, authorisations, penalties

The relevant authorities need to legally permit our operations to undertake various activities at every step of the mining process from exploration to closure. These permits incorporate binding commitments that require monitoring to ensure we are compliant. Anglo American Platinum has over 3,800 permits to which more than 25,000 conditions and commitments are linked. Compliance monitoring and verification on critical and high-risk permits is ongoing. In 2021, we completed the phased roll-out of the IsoMetrix environmental data and permitting management system across all Anglo American Platinum operations. All our operations' approaches to permits are reviewed against the minimum permitting requirement (MPR) programme annually.

No operation received a fine or legal non-compliance directive in 2021.

Water management

We are responsible water stewards, embracing technology to drive our water aspirations. We are working towards goals to reduce our freshwater, outlined in the SMP, by implementing site-specific water management action plans, supported by improved water accounting. Anglo American Platinum works in close collaboration with our stakeholders to manage our water resources responsibly. The water management strategy focuses on the strategic pillars of water stewardship, regional and operational water security and operational excellence. Site-specific water balances were established last year, with all sites generating a water reporting data set using international council on mining and metals (ICMM) metrics and water accounting framework (WAF). Most of our water withdrawal reduction is due to good on-site management of water, including increases in reuse and substituting freshwater with non-freshwater. Specific targets are set annually for each site. Our operations report on water withdrawal, consumption and discharge, tracking performance against targets monthly.

Biodiversity

Anglo American Platinum aims to understand our potential biodiversity impacts and to avoid, minimise and, where necessary, offset any material biodiversity impacts, aiming to achieve net positive impact (NPI) by 2030. Some of our operations are in areas of higher biodiversity value, increasing our responsibility to contribute to its conservation. Aligned with the ICMM's position statement on mining and protected areas, we uphold our 2003 commitment to neither explore nor develop new mines in world heritage sites. The Anglo American biodiversity technical standard and SMP seek to ensure that, by 2030, all our sites demonstrate that they are on track to deliver NPI at closure. Each operation has established a biodiversity management programme to ensure that there is a clear path and process to guide the operations on meeting their NPI requirements.

Climate change and energy management

We are committed to decarbonising our operations and playing a part in the transition to a low-carbon economy. Anglo American Platinum has committed to achieving carbon-neutrality (scope 1 and 2) across its operations by 2040, supported by clear intermediate targets. Our carbon-neutral model, which projects our energy intensity and carbon emissions over time, is based on reducing energy consumption through FutureSmart Mining™ methods and technology adoption, as well as transitioning to low-carbon energy sourcing, by increasing the proportion of renewables in our energy mix. We implement site-specific business improvement projects as part of ECO2MAN, our energy and carbon management programme. Our scope 3 emissions, based on 2020 data, were assessed and were relatively low compared to other business units.

Anglo American conducted a group-wide scenario analysis, incorporating a 1.5°C scenario, to assess the resilience of our portfolio to climate change. Our current focus is to fuel hydrogen-powered mine haul trucks, using green hydrogen to create an energy mix that moves us closer to carbon neutrality. The development of Mogalakwena's solar photovoltaic plant is progressing well and planned to become operational by 2023.

Social context and social performance

The social licence to operate is vital to ensuring the longevity of our operations. To build thriving communities, we are resetting our relationships with community stakeholders, collaborating on regional development, ensuring land access through resettlement, sharing the economic benefits of mining, building local capacity in health and education, and growing economic opportunity through inclusive procurement, and enterprise and supplier development. The targets outlined under the thriving communities pillar of the SMP guide our social aspirations. Social performance management is guided by the Anglo social way 3.0. Our community development programmes are implemented in partnership with NGOs, communities and government. The group-wide Covid-19 response programme, called WeCare, continued to assist to those in need in 2021.

Rehabilitation and closure (including funding)

The purpose of mine-closure planning in Anglo American is to deliver value through integrated, risk and opportunities-based closure planning and execution. This will establish safe, stable and non-polluting post-mining landscapes that leave a sustainable legacy for all stakeholders.

Our 'cradle-to-cradle' approach begins with closure planning in the exploration phase and continues until a sustainable post-mining legacy has been achieved. The mine-closure and rehabilitation at Anglo American Platinum is governed by key workstreams: the mine-closure toolbox (MCT) and mine-closure standard compliance (MCS), rehabilitation strategy, closure liabilities and closure execution. The rehabilitation programme is designed to be integrated into key business planning processes – resource development plans, life-of-asset planning and the sustainable mining plan to reduce our disturbance footprint and generate value both for us and our stakeholders. Five-year rehabilitation plans need to be developed and implemented for all open pit operations. All operations have stand-alone (outside the closure liability assessment reports) mine-closure plans. Detailed closure plans are developed within five to ten years of operational closure.

The closure liabilities of all Anglo American Platinum operations are assessed annually through a rigorous process. Financial provisions are made annually, reviewed and audited in line with internal and external requirements. Anglo American Platinum has approximately R4.2 billion in financial guarantees and rehabilitation trust funds with the DMRE to cover the premature closure liability of all its South African mining operations.

Closure liability estimates, closure and rehabilitation risks and rehabilitation performance can be found on pages 190 and 191 of the 2021 ESG report.

For more detail see the full ESG report

Unki – Laser device being used underground for precision markup of centre lines and panel marking. Foreground is Prosper Ngwerume (section surveyor) and marking up in background is Kassiot Sibanda (miner).

The geological setting and exploration

The geological setting

Anglo American Platinum's Mineral Resources of platinum group metals occur exclusively in southern Africa and are hosted by two layered intrusions: the Bushveld Complex in South Africa and the Great Dyke in Zimbabwe.

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

The Bushveld Complex

Formed over two billion years ago as a result of 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 1.2 billion 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.

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 PGMs 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 occurs between 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 PGM-bearing ore processed in South Africa.

The Merensky Reef is extensively developed in both the eastern (EL) and western limbs (WL) of the Bushveld Complex. The reef typically consists of a pegmatoidal feldspathic pyroxenite layer, bounded on the top and bottom by thin chromitite layers (stringers) that range from 5mm to 20mm in thickness. Mineralisation of the reef generally occurs within the pegmatoidal feldspathic pyroxenite and, to a limited extent, in the hanging wall and footwall, with the highest PGM concentration peaking at the chromitite stringers.

The UG2 Reef

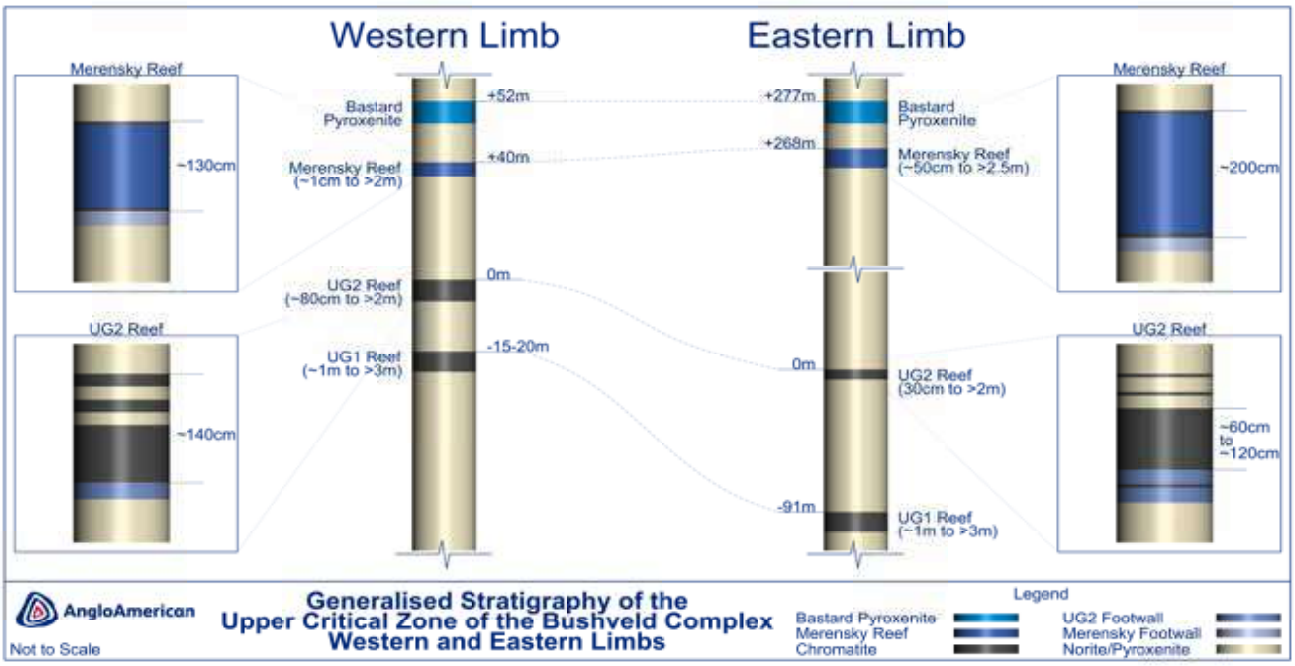
The UG2 Reef, which is consistently developed throughout the EL and WL, is rich in chromitite, but with lower gold and base metal grades compared to the Merensky Reef.

The UG2 Reef occurs vertically below the Merensky Reef and the separation distance varies between 12m to 150m in the WL and averages at 350m to 400m in the EL. The UG2 Reef normally comprises a 0.6m to 1.0m main chromitite layer overlain by three to five chromitite layers (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 layers and the UG2 main layer has important implications for geotechnical considerations for mining across the Bushveld Complex.

The structural setting

The structural setting is characterised by dykes, faults and fractures. Most dykes are dolerites of Karoo and post-Karoo age and can be correlated to the Karoo tectonic extension period. They are generally vertical or steeply dipping and the widths range from several centimetres to more than 30m. The Merensky Reef and UG2 Reef horizons are affected by these structural and other geological features, but also potholes and often iron-rich replacement pegmatites, which all result in geological losses and have an impact on Mineral Resource estimations and mine planning.

The Merensky Reef and UG2 Reef generalised stratigraphy in the eastern and the western limbs



The Platreef

The Platreef is developed in the northern limb of the Bushveld Complex and, for most of the current mining area, comprises a thick heterogenous unit of mafic rock, dominated by pyroxenite and norite. It averages 150m in thickness, with a prominently top-loaded grade profile. The highest-grade mineralisation is typically located in the upper 30m to 40m of the package which strikes approximately 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.

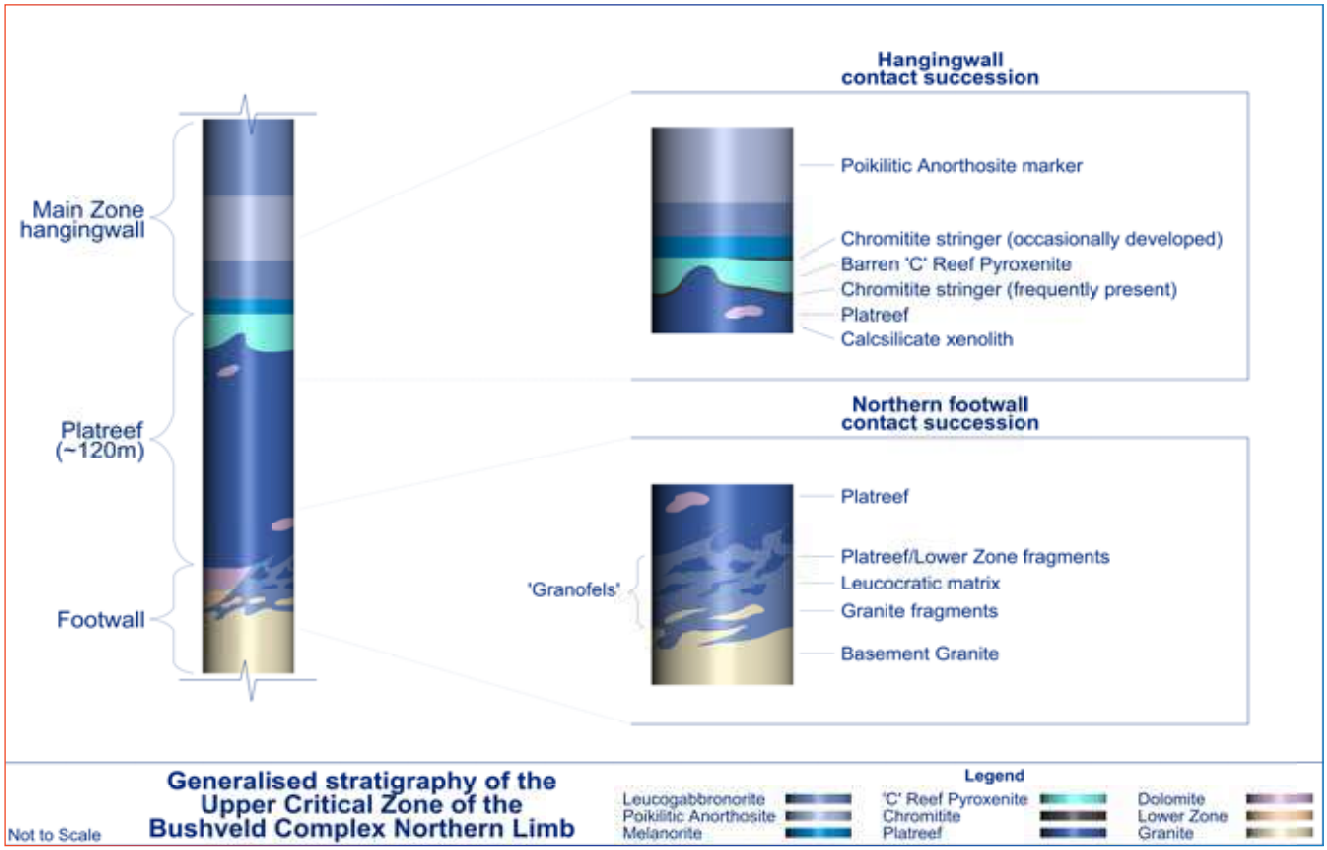
Carbonate floor rocks incorporated into the basal Platreef have been altered to mineralised parapyroxenites and calc-silicates formed during extensive syn-magmatic interaction with high-magnesium silicate melts. Towards the north, where the Platreef footwall rock is Archaean basement granite, partial melting of this protolith has resulted in the formation of a metamorphic rock referred to as 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, the Platreef is structurally affected by dolerite dykes and several lateral fault systems orientated in a north-east/south-west direction. Zones adjacent to major fault systems 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.

Base metal mineralisation in the Bushveld Complex

The Merensky Reef and Platreef in particular yield meaningful quantities of nickel, copper and cobalt as by-products. 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 Platreef generalised stratigraphy in Mogalakwena Mine complex area (northern limb)



The Great Dyke

The Great Dyke in Zimbabwe occurs as a 2.5 billion-year-old mafic to predominantly ultramafic layered intrusion, is about 550km long and between 3km and 11km wide. The Great Dyke is trending in a north north-easterly direction cutting across the Archaean rocks of the Zimbabwe Craton, which are largely granite and greenstone belt rocks. Unki Mine is located in the Selukwe subchamber of the Great Dyke. The subchamber is 90km long, and up to about 7km wide. The shape of the Selukwe subchamber has to some extent been controlled by the proximity of the Selukwe greenstone belt, in that it has been deflected and constricted in places.

The Great Dyke has been preserved within a narrow graben structure and is synclinal in shape, with essentially the same mafic and ultramafic lithological successions being exposed on both sides of the longitudinal axis. The dyke comprises an upper mafic unit of alternating sequences of pyroxenite and dunite-harzburgites and a lower ultramafic zone of dunite. The layers are dipping and flattening towards the axis of the intrusion and the dip decreases from outcrops to the central near-axis area varying from 14° to 0°. The PGMs and associated base metal mineralisation are developed within the uppermost pyroxenite horizon, the Main Sulphide Zone (MSZ).

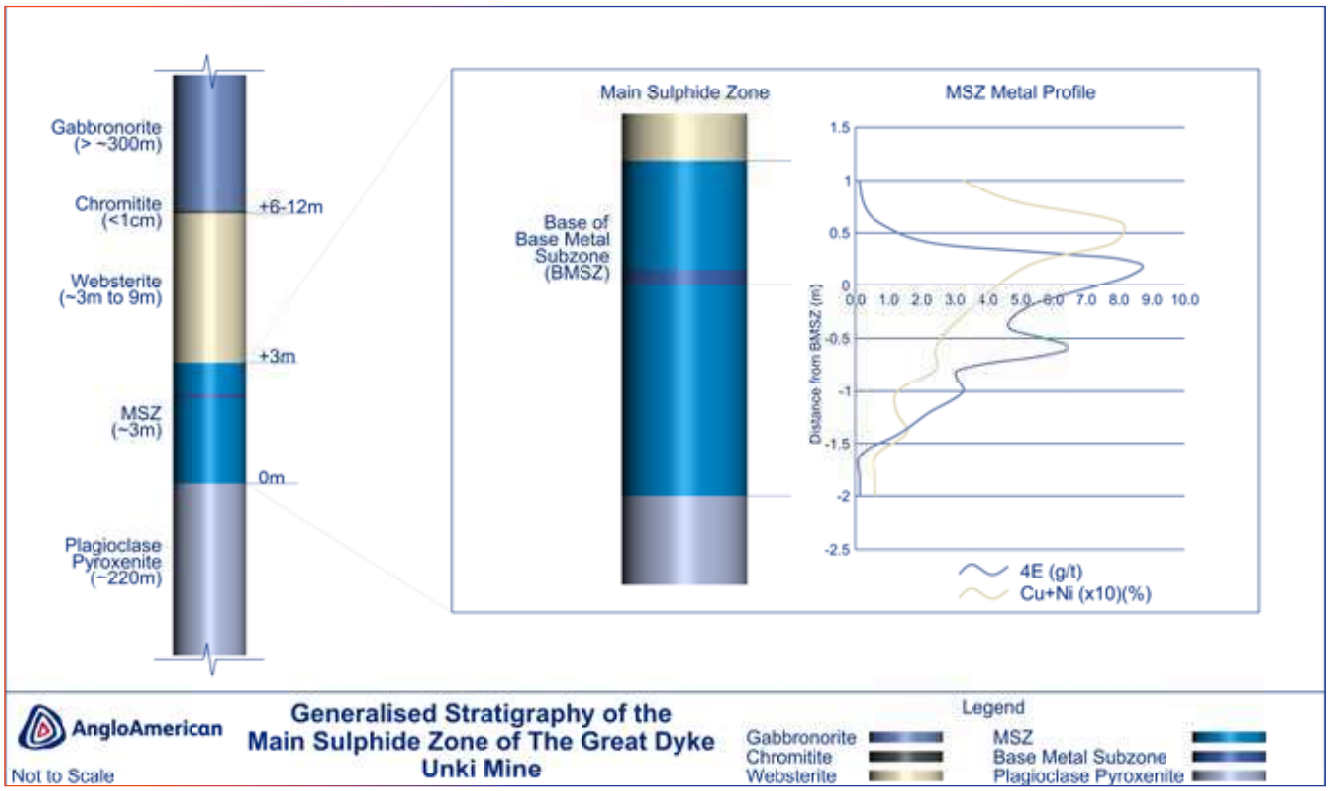
The Main Sulphide Zone (MSZ)

The mineralisation occurs at the same stratigraphic horizon throughout the Great Dyke within the uppermost pyroxenite layer, P1 unit, and follows the igneous layering. The MSZ occurs some 10m below the mafic-ultramafic contact and is hosted in the P1 unit 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 subzones – the base metal subzone, which is dominated by nickel and copper, as well as the PGM subzone. 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, 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 fault is localised over a small section of the eastern section of the mine.

The Main Sulphide Zone generalised stratigraphy in the Unki Mine area (Selukwe subchamber)



Exploration and feasibility studies – managed operations

Exploration activities progressed on all Anglo American Platinum-owned and managed operations, with continued focus on brownfields and on-mine exploration. Exploration activities are aimed at supplying a wide variety of metal content, geological, geotechnical, geometallurgical and geophysical information. This, together with associated value-driven initiatives and technology projects aligned with the company's FutureSmart Mining™ concept and underpinned by the company's vision, assists in mitigating risk and supports business plans, sustainability goals 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 and Mineral Resources conversion programmes.

Mogalakwena complex

Most of the exploration budget for 2021 was spent on the Mogalakwena complex. This included activities near current mining operations within the Mogalakwena Mining Right. Mineral Resource conversion activities for on-mine orebody replacement or extensions, open pit and potential underground, will continue, aligned with the company's Mineral Resources development plans and northern limb extraction strategies. All associated drilling results to date are in alignment with expected grades, tonnes and ounces. Geometallurgical data acquisition and modelling has gained momentum in 2021 and will continue to be a key focus area for all projects and programmes. Major Mineral Resources conversion and exploration programmes are planned for 2022, with expected costs of R488 million.

In line with the future-of-Mogalakwena work on Mineral Resource development planning, a prefeasibility study is being carried out for determination of potential underground Mineral Resources, down dip of the current Sandsloot pit in particular. The development plan is supported by an adequate drilling programme, which has thus far confirmed the expected mineralisation styles and concentrations. Potential underground Mineral Resources will be considered for public reporting as and when the project has advanced to a satisfactory level of confidence and reasonable prospects of eventual economic extraction are confirmed.

Amandelbult complex

Various projects ranging from conceptual to prefeasibility stages, underpinned by adequately sized diamond drilling programmes, are in progress at the Amandelbult complex within the Mineral Rights boundaries, targeting mainly UG2 Reef with Merensky Reef as secondary horizon as and where appropriate.

Two major projects are Tumela 1 subshaft and Middellaagte Graben projects. This, in conjunction with modernisation strategy, will minimise risks through Mineral Resource conversion drilling combined with the resolution of structural complexities.

Mototolo complex

The Der Brochen feasibility study was concluded in 2021, with the conversion of the Der Brochen south area to Ore Reserves reported for the Mototolo complex. Additional exploration drilling for the Mototolo complex focused on de-risking business plans and structural complexities. Further work will accelerate into 2022 with focus on value-driven optimisation of extraction strategies and further Mineral Resource to Ore Reserve conversion.

Details on the Der Brochen south feasibility study approvals are discussed on page 8 of this report

Unki complex

Exploration continues at the Great Dyke in Zimbabwe to obtain more information in support of the mine extraction strategy for the Unki Mine Special Mining Lease (SML). This includes diamond drilling for Mineral Resource conversion and development as well as geotechnical components focused on major infrastructure placement and associated risk management.

There are currently no feasibility studies underway at Unki complex.

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 and Energy. A further reduction of the remaining Prospecting Right holdings is envisaged, in alignment with Anglo American Platinum's portfolio focus on long-term, high-quality assets.

Total exploration expenditure for 2021 was R308 million. The projected exploration expenditure for 2022 is expected to increase significantly to R701 million.

Excluding the non-managed joint operations, 236 surface diamond cored drill-holes were drilled in 2021, totalling 117,676 metres and 41,565 assay samples. In addition, 181 underground exploration diamond cored drill-holes totalling 12,034 metres, associated with 5,751 assay samples, were completed. A total of 99,090 metres of reverse circulation (RC) drilling equating to 6,606 in-pit RC drill-holes were completed at the Mogalakwena operation for value-based ore control. On average, a fleet of 23 drill rigs for surface and 18 drill rigs for underground exploration were employed, while two RC rigs were operational for in-pit drilling at Mogalakwena.

Exploration expenditure

	Mineral Resource conversion and near-mine			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	69	40,121	96.22	6,606	99,090	89.08
Northern limb exploration and near mine	72	49,482	150.8	—	—	—
Dishaba	4	4,078	16.03	92	5740	9.70
Tumela	68	19,038	45.03	48	2632	5.61
Mototolo	9	1,733	3.70	28	2,456	1.80
Unki	14	3,184	4.02	13	1,205	1.34
Prospecting Right	—	—	—	—	—	—
Total 2021 exploration expenditure	236	117,636	315.79	6,787	111,124	107.64
Total 2022 exploration budget			701.0			

Mogalakwena – core yard, cutting core samples. L to R – Anna Manganye, Piet Matsimbi.

Mineral Resources process summary

Managed operations

as at 31 December 2021

Mineral Resource estimation

Geological modelling

A standardised Anglo American Platinum approach is used to create geological structural models for the determination of geological losses for reporting of Mineral Resources at the 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 domain 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 incremental 1 4E g/t cut-off grade. The Mineral Resource grades are all above marginal grade cut-off and therefore not applicable to Merensky, UG2 reefs and the MSZ Mineral Resources reporting.

The tabular PGM orebodies lend themselves to a three-component subdivision, comprising the mineralised envelope, hanging wall and footwall intervals. 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 (ie Platreef), by a combination of geological features and grade cut-offs (ie Merensky Reef and MSZ) or by geology (ie UG2 Reef). The hanging wall and footwall components, which are lower grade relative to the mineralised interval, contribute to the total mining width 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 operations, created within applicable modelling software. Ordinary kriging is the estimation method applied, together with semi-variogram analysis, to quantify the spatial continuity and data variance. 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 mainly in the kriging efficiency and kriging variance parameters.

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 sizes are supported by 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 25 samples were used for estimation as determined from the KNA study. Multiple nested search passes were used to estimate blocks not populated by the first search pass. The minimum and maximum number of samples used remained constant for the second pass, but are increased for the third pass to between 20 and 40, depending on data density.

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 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

Anglo American Platinum 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 prospects for eventual economic extraction (RPEEE) criteria specified in the SAMREC Code as well as Anglo American Platinum's RPEEE criteria for Mineral Resources guidelines document. These include, but are not limited to, mining method, geological complexity, considering constraints from environmental, social and governance, legal, process ability and economic factors relevant to Anglo American Platinum. 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 and Twickenham mines, as well as the Bokoni Mine. Anglo American Platinum will continue to review deposits down-dip of this limit based on changing geological information, mining technology and metal prices.

Endowment

Further understanding and quantification of the company's full mineral endowment potential on and around our current holdings is under-way, following the acquisition and inclusion of the endowment specified in the Central Block and Kwanda North into the greater Mogalakwena Mining Right.

Summary exclusive Mineral Resource estimates

The estimates below are reported on a 100% basis. Estimates of 0.0 represent numbers less than 0.05.

		Mineral Resources Million tonnes (Mt)		Grade 4E g/t		Contained metal 4E tonnes		Contained metal 4E Moz	
Mine	**Classification**	**2021**	2020	**2021**	2020	**2021**	2020	**2021**	2020
Tumela (100%)	Measured	**23.4**	23.0	**6.68**	6.74	**156**	155	**5.0**	5.0
Merensky Reef	Indicated	**46.7**	46.2	**7.05**	7.04	**329**	325	**10.6**	10.5
	Measured and Indicated	**70.1**	69.2	**6.93**	6.94	**485**	480	**15.6**	15.4
	Inferred	**44.9**	44.6	**7.01**	7.04	**315**	314	**10.1**	10.1
	Total	**115.0**	113.7	**6.96**	6.98	**800**	794	**25.7**	25.5
UG2 Reef	Measured	**78.3**	102.4	**5.35**	5.40	**419**	553	**13.5**	17.8
	Indicated	**70.2**	44.1	**5.51**	5.52	**387**	243	**12.4**	7.8
	Measured and Indicated	**148.5**	146.5	**5.43**	5.44	**806**	796	**25.9**	25.6
	Inferred	**47.4**	47.4	**5.76**	5.77	**273**	273	**8.8**	8.8
	Total	**195.9**	193.8	**5.51**	5.52	**1,079**	1,069	**34.7**	34.4
Dishaba (100%)	Measured	**9.4**	8.0	**7.00**	7.11	**66**	57	**2.1**	1.8
Merensky Reef	Indicated	**11.6**	10.6	**6.64**	6.92	**77**	73	**2.5**	2.4
	Measured and Indicated	**21.0**	18.5	**6.80**	7.00	**143**	130	**4.6**	4.2
	Inferred	**12.6**	12.6	**6.03**	6.28	**76**	79	**2.4**	2.6
	Total	**33.6**	31.2	**6.51**	6.71	**219**	209	**7.0**	6.7
UG2 Reef	Measured	**21.2**	19.2	**5.25**	5.25	**111**	101	**3.6**	3.2
	Indicated	**25.5**	22.8	**5.72**	5.78	**146**	132	**4.7**	4.2
	Measured and Indicated	**46.7**	42.0	**5.51**	5.54	**257**	233	**8.3**	7.5
	Inferred	**9.2**	8.9	**5.50**	5.54	**50**	49	**1.6**	1.6
	Total	**55.9**	50.9	**5.51**	5.54	**307**	282	**9.9**	9.1
Tailings	Measured	**—**	63.0	**—**	0.79	**—**	50	**—**	1.6
	Indicated	**—**	8.1	**—**	0.82	**—**	7	**—**	0.2
	Measured and Indicated	**—**	71.1	**—**	0.79	**—**	57	**—**	1.8
	Inferred	**—**	1.2	**—**	0.91	**—**	1	**—**	0.0
	Total	**—**	72.3	**—**	0.80	**—**	58	**—**	1.9
Total Amandelbult complex	Measured	**132.3**	215.5	**5.69**	4.24	**752**	916	**24.2**	29.4
	Indicated	**154.1**	131.7	**6.10**	5.92	**939**	780	**30.2**	25.1
	Measured and Indicated	**286.4**	347.3	**5.91**	4.88	**1,691**	1,696	**54.4**	54.5
	Inferred	**114.0**	114.7	**6.26**	6.25	**714**	716	**23.0**	23.1
	Total	**400.4**	462.0	**6.01**	5.22	**2,405**	2,412	**77.3**	77.6
Mogalakwena (100%)	Measured	**207.8**	246.4	**2.19**	2.17	**455**	535	**14.6**	17.2
Platreef	Indicated	**1,517.4**	1,389.7	**2.29**	2.30	**3,475**	3,196	**111.7**	102.8
	Measured and Indicated	**1,725.3**	1,636.0	**2.28**	2.28	**3,930**	3,731	**126.4**	119.9
	Inferred	**425.3**	595.7	**1.75**	1.76	**745**	1,048	**23.9**	33.7
	Total	**2,150.6**	2,231.7	**2.18**	2.14	**4,675**	4,779	**150.3**	153.7
Platreef stockpile	Measured	**2.8**	3.9	**3.96**	3.22	**11**	12	**0.4**	0.4
	Indicated	**—**	—	**—**	—	**—**	—	**—**	—
	Measured and Indicated	**2.8**	3.9	**3.96**	3.22	**11**	12	**0.4**	0.4
	Inferred	**—**	—	**—**	—	**—**	—	**—**	—
	Total	**2.8**	3.9	**3.96**	3.22	**11**	12	**0.4**	0.4

Summary exclusive Mineral Resource estimates continued

		Mineral Resources Million tonnes (Mt)		Grade 4E g/t		Contained metal 4E tonnes		Contained metal 4E Moz	
Mine	**Classification**	**2021**	2020	**2021**	2020	**2021**	2020	**2021**	2020
Mototolo complex (100%)	Measured	**41.3**	40.9	**4.75**	4.75	**196**	194	**6.3**	6.3
Merensky Reef	Indicated	**57.4**	58.2	**4.55**	4.54	**261**	264	**8.4**	8.5
	Measured and Indicated	**98.7**	99.1	**4.63**	4.63	**457**	458	**14.7**	14.7
	Inferred	**73.7**	73.7	**4.51**	4.52	**332**	333	**10.7**	10.7
	Total	**172.4**	172.9	**4.58**	4.58	**789**	791	**25.4**	25.5
UG2 Reef	Measured	**40.8**	108.0	**3.85**	3.99	**157**	431	**5.1**	13.9
	Indicated	**68.3**	136.8	**3.97**	3.95	**271**	540	**8.7**	17.4
	Measured and Indicated	**109.1**	244.8	**3.92**	3.97	**428**	971	**13.8**	31.2
	Inferred	**124.0**	124.4	**4.02**	4.02	**499**	500	**16.0**	16.1
	Total	**233.1**	369.3	**3.98**	3.99	**927**	1,471	**29.8**	47.3
Unki (100%)	Measured	**6.7**	7.5	**4.11**	4.09	**27**	31	**0.9**	1.0
MSZ	Indicated	**114.5**	110.8	**4.33**	4.29	**496**	475	**15.9**	15.3
	Measured and Indicated	**121.2**	118.4	**4.32**	4.28	**523**	506	**16.8**	16.3
	Inferred	**31.7**	38.6	**4.04**	4.07	**128**	157	**4.1**	5.0
	Total	**152.8**	156.9	**4.26**	4.23	**651**	663	**20.9**	21.3
Twickenham (100%)	Measured	**48.4**	48.4	**4.75**	4.75	**230**	230	**7.4**	7.4
Merensky Reef	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
Siphumelele 3 (100%)	Measured	**5.0**	4.7	**3.18**	3.16	**16**	15	**0.5**	0.5
UG2 Reef	Indicated	**–**	–	**–**	–	**–**	–	**–**	–
	Measured and Indicated	**5.0**	4.7	**3.18**	3.16	**16**	15	**0.5**	0.5
	Inferred	**–**	–	**–**	–	**–**	–	**–**	–
	Total	**5.0**	4.7	**3.18**	3.16	**16**	15	**0.5**	0.5

Summary exclusive Mineral Resource estimates continued

Mine/project	Classification	Mineral Resources Million tonnes (Mt) 2021	2020	Grade 4E g/t 2021	2020	Contained metal 4E tonnes 2021	2020	Contained metal 4E Moz 2021	2020
Modikwa (50%)	Measured	**20.7**	20.7	**3.16**	3.15	**65**	65	**2.1**	2.1
Merensky Reef	Indicated	**53.8**	53.9	**2.90**	2.90	**156**	156	**5.0**	5.0
	Measured and Indicated	**74.6**	74.6	**2.97**	2.97	**221**	221	**7.1**	7.1
	Inferred	**139.3**	139.3	**2.84**	2.84	**396**	396	**12.7**	12.7
	Total	**213.9**	213.9	**2.89**	2.89	**617**	617	**19.8**	19.8
UG2 Reef	Measured	**47.0**	48.2	**5.88**	5.91	**276**	285	**8.9**	9.2
	Indicated	**89.5**	90.3	**5.90**	5.90	**528**	533	**17.0**	17.1
	Measured and Indicated	**136.6**	138.5	**5.89**	5.9	**804**	818	**25.9**	26.3
	Inferred	**78.1**	77.5	**6.21**	6.22	**485**	482	**15.6**	15.5
	Total	**214.6**	216.0	**6.01**	6.01	**1,289**	1,300	**41.5**	41.8
Bokoni (49%)	Measured	**92.8**	92.8	**4.82**	4.82	**447**	447	**14.4**	14.4
Merensky Reef	Indicated	**47.8**	47.8	**4.85**	4.85	**232**	232	**7.5**	7.5
	Measured and Indicated	**140.6**	140.6	**4.83**	4.83	**679**	679	**21.8**	21.8
	Inferred	**205.8**	205.8	**5.02**	5.02	**1,033**	1,033	**33.2**	33.2
	Total	**346.4**	346.4	**4.94**	4.94	**1,712**	1,712	**55.1**	55.1
UG2 Reef	Measured	**198.6**	198.6	**6.43**	6.43	**1,277**	1,277	**41.1**	41.1
	Indicated	**92.3**	92.3	**6.57**	6.57	**606**	606	**19.5**	19.5
	Measured and Indicated	**290.9**	290.9	**6.47**	6.47	**1,883**	1,883	**60.6**	60.6
	Inferred	**174.6**	174.6	**6.71**	6.71	**1,172**	1,172	**37.7**	37.7
	Total	**465.5**	465.5	**6.56**	6.56	**3,055**	3,055	**98.2**	98.2
Kroondal (50%)	Measured	**1.1**	1.5	**3.01**	3.22	**3**	5	**0.1**	0.2
UG2 Reef	Indicated	**—**	0.3	**—**	3.58	**—**	1	**—**	0.0
	Measured and Indicated	**1.1**	1.8	**3.01**	3.28	**3**	6	**0.1**	0.2
	Inferred	**—**	—	**—**	—	**—**	—	**—**	—
	Total	**1.1**	1.8	**3.01**	3.28	**3**	6	**0.1**	0.2
Marikana (50%)	Measured	**25.4**	27.3	**3.44**	3.48	**87**	95	**2.8**	3.1
UG2 Reef	Indicated	**9.5**	9.5	**3.84**	3.83	**36**	36	**1.2**	1.2
	Measured and Indicated	**34.8**	36.8	**3.55**	3.57	**123**	131	**4.0**	4.2
	Inferred	**4.9**	4.9	**2.95**	2.95	**15**	15	**0.5**	0.5
	Total	**39.8**	41.7	**3.48**	3.50	**138**	146	**4.4**	4.7
South Africa									
Merensky Reef	Measured	**235.9**	233.7	**4.92**	4.91	**1,160**	1,148	**37.3**	36.9
	Indicated	**304.7**	304.0	**4.89**	4.88	**1,489**	1,484	**47.9**	47.7
	Measured and Indicated	**540.6**	537.7	**4.90**	4.90	**2,649**	2,632	**85.2**	84.6
	Inferred in LOMP*	**—**	1.1	**—**	6.33	**—**	7	**—**	0.2
	Inferred ex LOMP*	**642.0**	640.7	**4.71**	4.71	**3,024**	3,020	**97.2**	97.1
	Inferred	**642.0**	641.8	**4.71**	4.72	**3,024**	3,027	**97.2**	97.3
	Total	**1,182.6**	1,179.5	**4.80**	4.80	**5,673**	5,659	**182.4**	182.0
UG2 Reef	Measured	**472.1**	564.6	**5.70**	5.50	**2,690**	3,106	**86.5**	99.8
	Indicated	**500.7**	541.4	**5.70**	5.49	**2,853**	2,970	**91.8**	95.5
	Measured and Indicated	**972.8**	1,106.0	**5.70**	5.49	**5,543**	6,076	**178.3**	195.4
	Inferred in LOMP*	**0.9**	0.0	**4.05**	5.71	**4**	0	**0.1**	0.0
	Inferred ex LOMP*	**585.4**	585.9	**5.74**	5.74	**3,361**	3,362	**108.1**	108.1
	Inferred	**586.4**	585.9	**5.74**	5.74	**3,365**	3,362	**108.2**	108.1
	Total	**1,559.2**	1,691.9	**5.72**	5.58	**8,908**	9,438	**286.5**	303.5

Summary exclusive Mineral Resource estimates continued

Mine/project	Classification	Mineral Resources Million tonnes (Mt) 2021	2020	Grade 4E g/t 2021	2020	Contained metal 4E tonnes 2021	2020	Contained metal 4E Moz 2021	2020
Platreef**	Measured	**207.8**	246.4	**2.19**	2.17	**455**	535	**14.6**	17.2
	Measured stockpiles	**2.8**	3.9	**3.96**	3.22	**11**	12	**0.4**	0.4
	Indicate	**1,517.4**	1,389.7	**2.29**	2.30	**3,475**	3,196	**111.7**	102.8
	Measured and Indicated	**1,728.0**	1,639.9	**2.28**	2.28	**3,941**	3,743	**126.7**	120.3
	Inferred in LOMP*	**0.3**	—	**2.59**	—	**1**	—	**0.0**	—
	Inferred ex LOMP*	**425.1**	595.7	**1.75**	1.76	**744**	1,048	**23.9**	33.7
	Inferred	**425.3**	595.7	**1.75**	1.76	**745**	1,048	**23.9**	33.7
	Total	**2,153.4**	2,235.5	**2.18**	2.14	**4,686**	4,791	**150.6**	154.1
South Africa									
All reefs	Measured	**918.6**	1,048.6	**4.70**	4.58	**4,316**	4,801	**138.8**	154.3
	Indicate	**2,322.8**	2,235.0	**3.37**	3.42	**7,817**	7,650	**251.4**	246.0
	Measured and Indicated	**3,241.5**	3,283.6	**3.75**	3.79	**12,133**	12,451	**390.2**	400.4
	Inferred in LOMP*	**1.1**	1.1	**3.72**	6.32	**5**	7	**0.1**	0.2
	Inferred ex LOMP*	**1,652.6**	1,822.3	**4.31**	4.08	**7,129**	7,430	**229.2**	238.9
	Inferred	**1,653.8**	1,823.4	**4.31**	4.08	**7,134**	7,437	**229.3**	239.1
	Total	**4,895.2**	5,107.0	**3.94**	3.89	**19,267**	19,888	**619.5**	639.5
Zimbabwe									
Main Sulphide Zone (MSZ)	Measured	**6.7**	7.5	**4.11**	4.09	**27**	31	**0.9**	1.0
	Indicated	**114.5**	110.8	**4.33**	4.29	**496**	475	**15.9**	15.3
	Measured and Indicated	**121.2**	118.4	**4.32**	4.28	**523**	506	**16.8**	16.3
	Inferred in LOMP*	**1.0**	0.0	**3.24**	3.41	**3**	0	**0.1**	0.0
	Inferred ex LOMP*	**30.7**	38.5	**4.07**	4.07	**125**	157	**4.0**	5.0
	Inferred	**31.7**	38.6	**4.04**	4.07	**128**	157	**4.1**	5.0
	Total	**152.8**	156.9	**4.26**	4.23	**651**	663	**20.9**	21.3
South Africa and Zimbabwe									
All reefs: Merensky, UG2, tailings Platreef, MSZ	Measured	**925.3**	1,119.2	**4.70**	4.36	**4,343**	4,882	**139.7**	156.9
	Indicated	**2,437.3**	2,353.9	**3.41**	3.46	**8,313**	8,132	**267.3**	261.5
	Measured and Indicated	**3,362.6**	3,473.1	**3.77**	3.75	**12,656**	13,014	**407.0**	418.5
	Inferred in LOMP*	**2.1**	1.1	**3.50**	6.24	**8**	7	**0.2**	0.2
	Inferred ex LOMP*	**1,683.3**	1,862.1	**4.31**	4.08	**7,254**	7,588	**233.2**	244.0
	Inferred	**1,685.4**	1,863.2	**4.31**	4.08	**7,262**	7,595	**233.4**	244.2
	Total	**5,048.0**	5,336.3	**3.95**	3.86	**19,918**	20,609	**640.5**	662.7

* 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 Mineral Resources with reasonable prospects for eventual economic extraction not considered in the LOMP are reported as 'Inferred ex LOMP'.

** 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.

Inferred Mineral Resources are generally excluded from feasibility studies and life-of-mine plans, except at Dishaba, Modikwa and Unki, where insignificant amounts are included. Assessments have indicated that the exclusion of the Inferred Resources in LOMP will have no impact on the life-of-mine plans.

Ore Reserves process summary

Managed operations

as at 31 December 2021

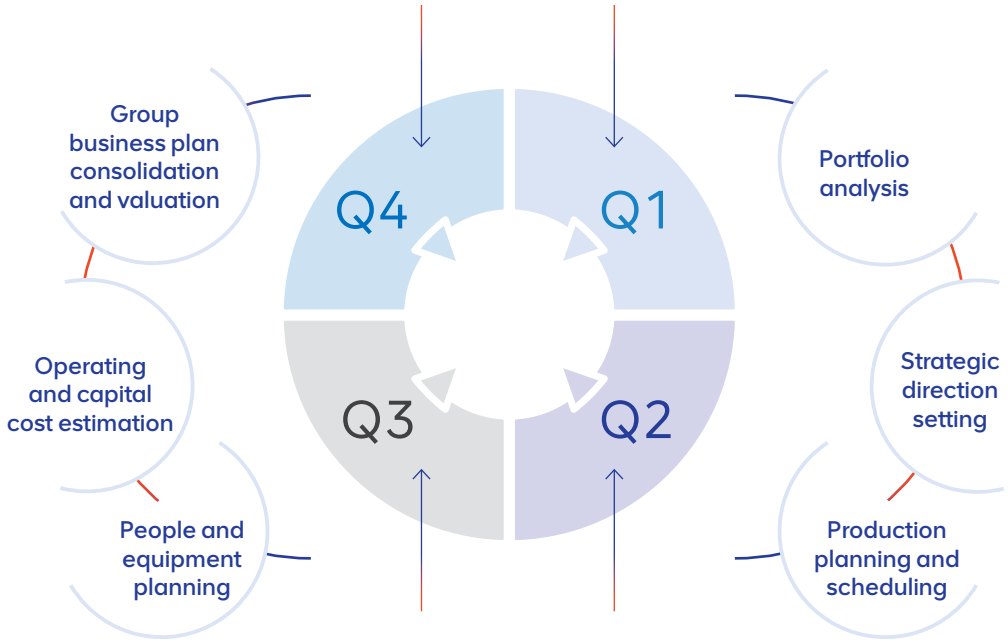
Business planning process

The process of defining Ore Reserves from Mineral Resources has not changed materially for the 2021 reporting cycle. The process of defining Ore Reserves is supported by an integrated planning process, an approved Anglo American Platinum and Anglo American group policy. The process outlines the methodology used when Mineral Resources are converted to Ore Reserves based on current economic considerations and other Modifying Factors. The main activities of the process are: plan alignment and development, life-of-mine planning and scheduling, budgeting and costing, business plan and Ore Reserve reporting. They are supported by six essential processes as outlined in the planning cycle.

Planning cycle

- Each mine's business plan and a group consolidated business-plan view are compiled, forming the basis of the Ore Reserves published for that planning cycle. The annual business planning process is thus a continuous one, with a degree of iteration where the outputs of a business plan serve as indirect inputs into a successive business plan and Ore Reserve reporting

- This is the foundation phase of the business-planning process, with the focus being on portfolio analysis and alignment to group strategy
- This is an opportunity to test the group's potential production against forecast global market demand as well as project capital affordability



- Detailed operating and capital cost estimates and the required stay-in-business capital estimates to sustain the business are prepared for the first three years to form a three-year budget. LOM planning runs concurrently with budget preparation in the third quarter

- Feedback received from strategy sessions provides guidance for setting organisational top-down goals for individual operations. In the second quarter, the focus is on producing a business plan

Q1 = Strategy and plan alignment and plan development
Q2 = Life-of-mine planning and scheduling
Q3 = Budgeting and costing
Q4 = Business plan and Ore Reserves and Mineral Resources reporting

Business planning process: Modifying Factors

The business-planning process starts by defining the terms of reference and collating the input parameters used to determine the portion of Mineral Resources that is to be converted to Ore Reserves. The Modifying Factors that impact conversion of Mineral Resources to Ore Reserves include mining, geotechnical, processing and recovery, financial, legal; environmental, market, infrastructure and social and governmental.

Underground operations: Merensky, UG2 and MSZ

For underground operations, application of Modifying Factors is implemented in three distinct phases:

1 **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 Mineral 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 Mineral Resource. The factors considered include: throughput capacity, recoveries, mass pull, recovery potential and blending of ore from different sources. The result is a mineable Ore 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 Mineral Resource not being converted into Ore Reserve. This portion, known as the uneconomic tail, reverts to Mineral Resources to be considered in subsequent planning processes. The exclusion results in a scheduled Ore Reserve that is equivalent to the operation's published Ore Reserve estimates.
4 Other factors such as marketing, environmental, social governmental and infrastructure are also adequately assessed in various levels of technical studies within the mine plan.

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 also starts by defining the terms of reference and collating the input parameters used to determine the portion of Mineral Resources that is to be converted to Ore Reserves. 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 optimisation studies are undertaken to define the economically exploitable pit shell, excluding benefits derived from Inferred Mineral 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, safety berms, step-outs, bench stacking, etc. Material contained in the final pit design will include Measured, Indicated and Inferred Mineral Resources. In other words, despite having allocated a zero value for revenue to Inferred Mineral Resources during the pit optimisation, in the final pit design and production schedule it is necessary to recognise this material.
4 **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 Ore Reserve.
5 **Economics**. The subsequent application of Modifying Factors that influence the economic aspects of the mining operation results in a portion of the scheduled Mineral Resource not being converted into Ore Reserve. This portion, known as the uneconomic tail, reverts to Mineral Resources to be considered in subsequent planning processes. The exclusion results in a scheduled Ore Reserve that is equivalent to the operation's published Ore Reserve estimates.
6 Other factors such as marketing, environmental, social, governmental and infrastructure are also adequately assessed in various levels of technical studies within the mine plan.

Ore Reserves process summary continued

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

Ore Reserves classification

On completion of an economically viable mine plan, having applied the Modifying Factors and economics as mentioned above, the conversion and classification of Ore Reserves is guided by:

- Measured Mineral Resources contained in the economically viable plan are converted to Proved or Probable Ore Reserves while Indicated Mineral Resources are converted to Probable Ore Reserves
- Inferred Mineral Resources are not converted to Ore Reserves
- Inferred Mineral Resources should not represent more than 10% of the material considered in the first 15 years of the life-of-mine period
- For a capital project to be included in the Ore Reserves, the project must have passed a prefeasibility level of study, meet the economic criteria as set by the company, have board approval and funding to proceed to a feasibility study
- Projects approved for implementation are included into the Ore Reserves provided they meet the above criteria
- The scheduled Ore Reserves are peer reviewed and signed off by the Competent Person(s) team.

The Ore Reserves declared reflect the anticipated tonnage and grades delivered to the concentrator.

Reconciliation

Anglo American Platinum 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 Mineral Resource model which is updated annually incorporating new drilling and sampling data. The final stage defines changes in the Modifying Factors being applied to mine design to produce the production profile.

Mogalakwena central pit – general view.

Summary Ore Reserve estimates

The estimates below are reported on a 100% basis. Estimates of 0.0 represent numbers less than 0.05.

		Ore Reserves (ROM Mt)		Grade 4E g/t		Contained metal 4E tonnes		Contained metal 4E Moz	
Mine	**Classification**	**2021**	2020	**2021**	2020	**2021**	2020	**2021**	2020
Tumela (100%)	Proved	**0.1**	0.1	**5.74**	5.51	**0**	0	**0.0**	0.0
Merensky Reef	Probable	**0.2**	0.4	**3.33**	3.90	**1**	2	**0.0**	0.1
	Total	**0.3**	0.5	**3.95**	4.12	**1**	2	**0.0**	0.1
UG2 Reef	Proved	**32.1**	36.7	**4.62**	4.62	**148**	169	**4.8**	5.4
	Probable	**0.3**	0.3	**3.39**	3.92	**1**	1	**0.0**	0.0
	Total	**32.3**	37.0	**4.61**	4.62	**149**	170	**4.8**	5.5
Dishaba (100%)	Proved	**2.0**	5.3	**4.23**	5.18	**9**	27	**0.3**	0.9
Merensky Reef	Probable	**4.1**	5.0	**5.83**	4.93	**24**	25	**0.8**	0.8
	Total	**6.2**	10.3	**5.30**	5.06	**33**	52	**1.1**	1.7
UG2 Reef	Proved	**49.7**	54.7	**4.37**	4.33	**217**	237	**7.0**	7.6
	Probable	**5.4**	8.3	**4.51**	4.35	**25**	36	**0.8**	1.2
	Total	**55.1**	63.0	**4.38**	4.33	**242**	273	**7.8**	8.8
Total Amandelbult complex	Proved	**83.9**	96.7	**4.46**	4.49	**374**	433	**12.0**	14.0
	Probable	**10.0**	14.1	**5.00**	4.53	**51**	64	**1.6**	2.0
	Total	**93.9**	110.8	**4.52**	4.49	**425**	497	**13.6**	16.0
Mogalakwena (100%	Proved	**833.2**	763.4	**2.90**	2.90	**2,416**	2,214	**77.8**	71.2
Platreef	Probable	**334.8**	444.3	**3.34**	3.00	**1,118**	1,333	**35.9**	42.8
	Total	**1,168.0**	1,207.8	**3.03**	2.94	**3,534**	3,547	**113.7**	114.1
Platreef primary stockpile	Proved	**19.5**	19.3	**1.70**	1.96	**33**	38	**1.1**	1.2
	Probable	**40.9**	40.9	**1.47**	1.47	**60**	60	**1.9**	1.9
	Total	**60.3**	60.2	**1.54**	1.63	**93**	98	**3.0**	3.1
Mototolo complex (100%)	Proved	**68.6**	18.2	**3.56**	3.46	**244**	63	**7.9**	2.0
UG2 Reef	Probable	**53.1**	7.5	**3.32**	3.50	**176**	26	**5.7**	0.8
	Total	**121.7**	25.7	**3.45**	3.47	**420**	89	**13.5**	2.9
Unki (100%)	Proved	**30.3**	24.3	**3.27**	3.33	**99**	81	**3.2**	2.6
MSZ	Probable	**22.8**	26.7	**3.33**	3.28	**76**	87	**2.4**	2.8
	Total	**53.1**	51.0	**3.29**	3.30	**175**	168	**5.6**	5.4
Siphumelele 3 (100%)	Proved	**12.1**	14.7	**2.60**	2.62	**32**	38	**1.0**	1.2
UG2 Reef	Probable	**—**	—	**—**	—	**—**	—	**—**	—
	Total	**12.1**	14.7	**2.60**	2.62	**32**	38	**1.0**	1.2
Modikwa (50%)	Proved	**11.3**	15.9	**4.48**	4.33	**51**	69	**1.6**	2.2
UG2 Reef	Probable	**29.9**	29.2	**4.16**	4.14	**124**	121	**4.0**	3.9
	Total	**41.1**	45.1	**4.25**	4.21	**175**	190	**5.6**	6.1
Kroondal (50%)	Proved	**8.7**	9.3	**2.60**	2.50	**23**	23	**0.7**	0.7
UG2 Reef	Probable	**—**	—	**—**	—	**—**	—	**—**	—
	Total	**8.7**	9.3	**2.60**	2.50	**23**	23	**0.7**	0.7

Summary Ore Reserve estimates continued

		Ore Reserves (ROM Mt)		Grade 4E g/t		Contained metal 4E tonnes		Contained metal 4E Moz	
Reef	**Classification**	**2021**	2020	**2021**	2020	**2021**	2020	**2021**	2020
South Africa									
Merensky Reef	Proved	**2.1**	5.3	**4.29**	5.19	**9**	27	**0.3**	0.9
	Probable	**4.3**	5.4	**5.70**	4.85	**25**	27	**0.8**	0.8
	Total	**6.4**	10.8	**5.24**	5.01	**34**	54	**1.1**	1.7
UG2 Reef	Proved	**182.5**	149.4	**3.91**	4.01	**715**	599	**23.0**	19.3
	Probable	**88.6**	45.3	**3.68**	4.07	**326**	184	**10.5**	5.9
	Total	**271.1**	194.7	**3.84**	4.03	**1,041**	783	**33.4**	25.2
Platreef	Proved	**833.2**	763.4	**2.90**	2.90	**2,416**	2,214	**77.8**	71.2
	Proved primary stockpile	**19.5**	19.3	**1.70**	1.96	**33**	38	**1.1**	1.2
	Total proved	**852.7**	782.7	**2.87**	2.88	**2,449**	2,252	**78.9**	72.5
	Probable	**334.8**	444.3	**3.34**	3.00	**1,118**	1,333	**35.9**	42.8
	Probable primary stockpile	**40.9**	40.9	**1.47**	1.47	**60**	60	**1.9**	1.9
	Total probable	**375.6**	485.2	**3.14**	2.87	**1,178**	1,393	**37.9**	44.7
	Total	**1,228.3**	1,267.9	**2.96**	2.88	**3,627**	3,645	**116.7**	117.2
South Africa									
Merensky, UG2, Platreef	Proved	**1,037.2**	937.4	**3.06**	3.07	**3,173**	2,878	**102.1**	92.6
	Probable	**468.6**	535.9	**3.26**	2.99	**1,529**	1,604	**49.2**	51.5
	Total	**1,505.8**	1,473.4	**3.13**	3.05	**4,702**	4,482	**151.3**	144.1
Zimbabwe									
Main Sulphide Zone	Proved	**30.3**	24.3	**3.27**	3.33	**99**	81	**3.2**	2.6
	Probable	**22.8**	26.7	**3.33**	3.28	**76**	87	**2.4**	2.8
	Total	**53.1**	51.0	**3.30**	3.30	**175**	168	**5.6**	5.4
South Africa and Zimbabwe									
All reefs: Merensky, UG2, Platreef, MSZ	Proved	**1,067.5**	961.8	**3.06**	3.08	**3,272**	2,959	**105.3**	95.2
	Probable	**491.5**	562.6	**3.27**	3.01	**1,605**	1,691	**51.6**	54.3
	Total	**1,559.0**	1,524.4	**3.13**	3.05	**4,877**	4,650	**156.9**	149.6

Estimates and reconciliation – managed and joint operations

Ore Reserves and Mineral Resources are reported on a 100% basis and the attributable interest is noted in the individual entity tables and where applicable.

Estimates of 0.0 represent numbers less than 0.05.

Figures in the tables and charts have been rounded and if used to derive totals and averages, minor discrepancies may result.

Definitions of reconciliation categories are on page 102 of this report.

Estimates and reconciliation – managed operations

as at 31 December 2021

Mogalakwena Mine

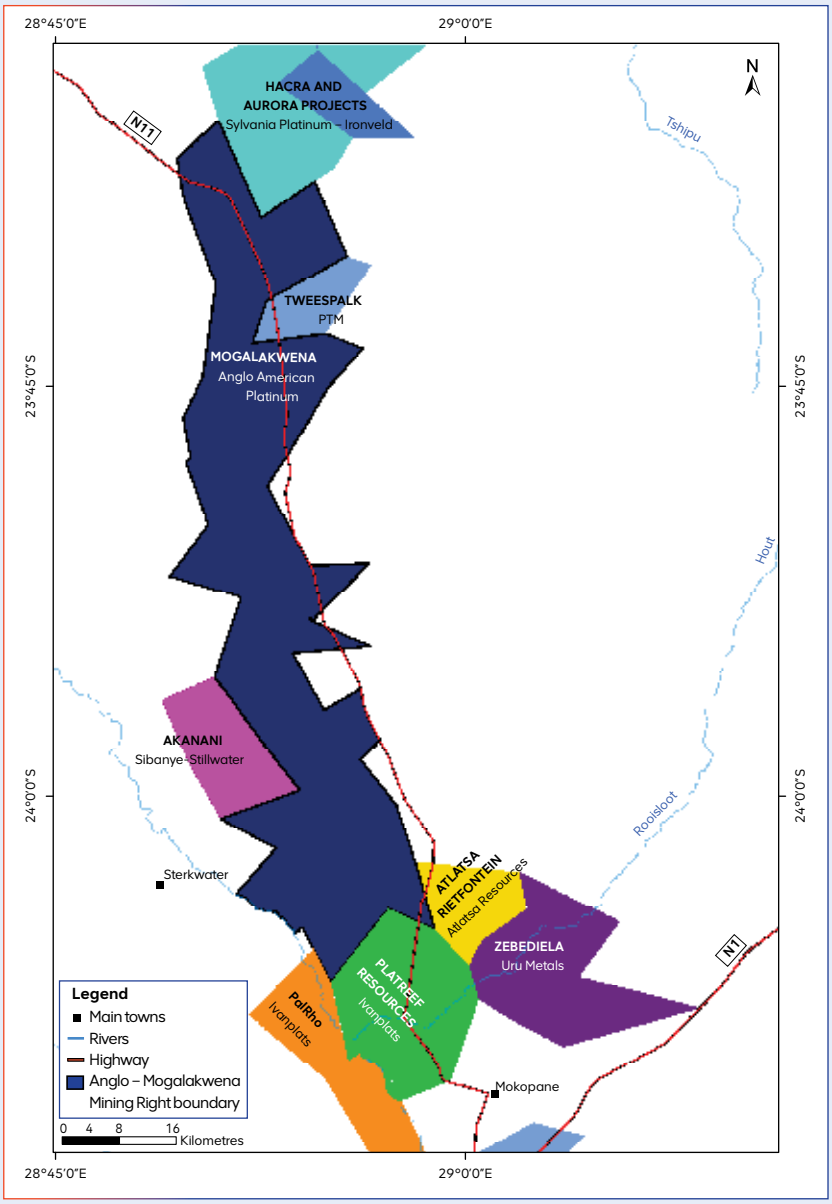
Anglo American Platinum Limited interest: 100%
Management structure: managed

Location

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 Anglo American Platinum, with a consolidated Mining Right that stretches along multiple farms extending over 50 kilometres.

Property description

The mine is at steady-state production, and is positioned for optimised organic growth and to deliver maximum value. The mine is also focusing on exceeding industry benchmarks through technology and innovation. Mogalakwena Mine exploits the Platreef, the primary PGM-bearing horizon developed in the northern limb of the Bushveld Complex.



Competence

Phuthela Myeni
Competent Person:
Mineral Resources
Role:
Resource geologist
Relevant qualifications:
BSc hons (geology)
Professional organisation:
SACNASP, PrSciNat (400012/15)
Relevant experience:
13 years

Marlon van Heerden
Competent Person:
Ore Reserves
Role:
Principal LOM planning
Relevant qualifications:
BTech (mining engineering)
Professional organisation:
SAIMM, member (704211)
Relevant experience:
14 years

Brief history

The earliest recorded prospecting activity commenced on the farms Tweefontein and Sandsloot in 1926. Trenching, drilling and bulk sampling preceded the start of mining activities on the Zwartfontein, Sandsloot and Vaalkop farms. This was accompanied by construction and commissioning of 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 field mapping and sampling programme, significant volumes of exploration drilling 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 1980s and early 1990s, evaluation activities which included bulk sampling and underground trial mining were undertaken. 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 1992. This was followed by extensive exploration programmes and development of the Zwartfontein pit in the early 2000s. This expansion continued with exploitation of Central and North pits in 2006 and 2008 respectively, now the primary mining areas of Mogalakwena in 2021.

Anglo American Platinum 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 areas have not been classified as Mineral Resources while further exploration and evaluation work is underway and therefore will not have an impact on the 2021 Mogalakwena reported Mineral Resource base.

Mineral Rights

The Mogalakwena Mining Right covers an area of 37,211ha. This includes the Central Block and Kwanda North Mineral Rights that are incorporated into the Mogalakwena Mining Right. Anglo American Platinum holds a converted Mining Right under the Department of Mineral Resources and Energy (DMRE) reference LP 50 MR, valid from July 2010 to July 2040.

There are no known impediments to the Mining Right.

Brief geological description

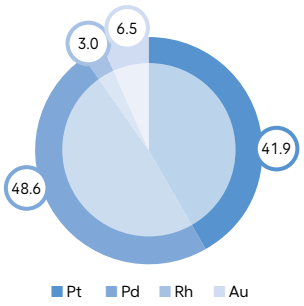
The Platreef deposit occurs in the northern limb of the Bushveld Complex. In broad terms, the orebody can be described as a multiple-pulse mafic magmatic horizon, dominated by pyroxene-rich rock type, overlain by Main Zone gabbronorites. It is underlain by a succession of sedimentary units of the Transvaal Supergroup ranging from shales and banded ironstones in the south to, dolomites in the centre onlapping onto Archaean basement granites and gneisses in the northern parts. The interaction between the Platreef and the footwall lithologies has resulted in an array of hybrid lithologies observed throughout the northern limb and is locally typified by extensive assimilation of Transvaal Supergroup sedimentary footwall fragments, known as xenoliths and the generation of the granofelsic interaction horizon along the bottom contact in the north.

The Platreef strikes north north-west/south south-east across the length of the Mogalakwena Mineral Right area, dipping at an average angle of 40° to 50° to the west with local flattening occurring. Within the mining complex, the Platreef is structurally affected by dolerite dykes ranging between 5m and 40m in width and several predominantly lateral fault systems such as the Drenthe, Mohlosane, NM and Pit fault systems, orientated in a north-east/south-west direction, dipping between 60° and 85° towards the south-east.

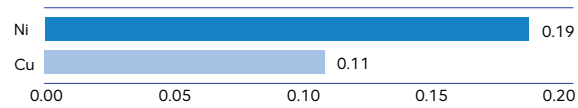
The fault systems display normal to reverse fault displacements ranging between 50m and 600m, with the up-thrown blocks proving favourable to mine design. The dykes and Platreef adjacent to major fault systems constitute areas of no mineralisation and are discounted as geological loss zones. The Platreef hosts significant dolomite inclusions in the southern region of the mining area and these also constitute geological loss zones.

For a description of the Mineral Resources estimation and classification process see page 23 of this report

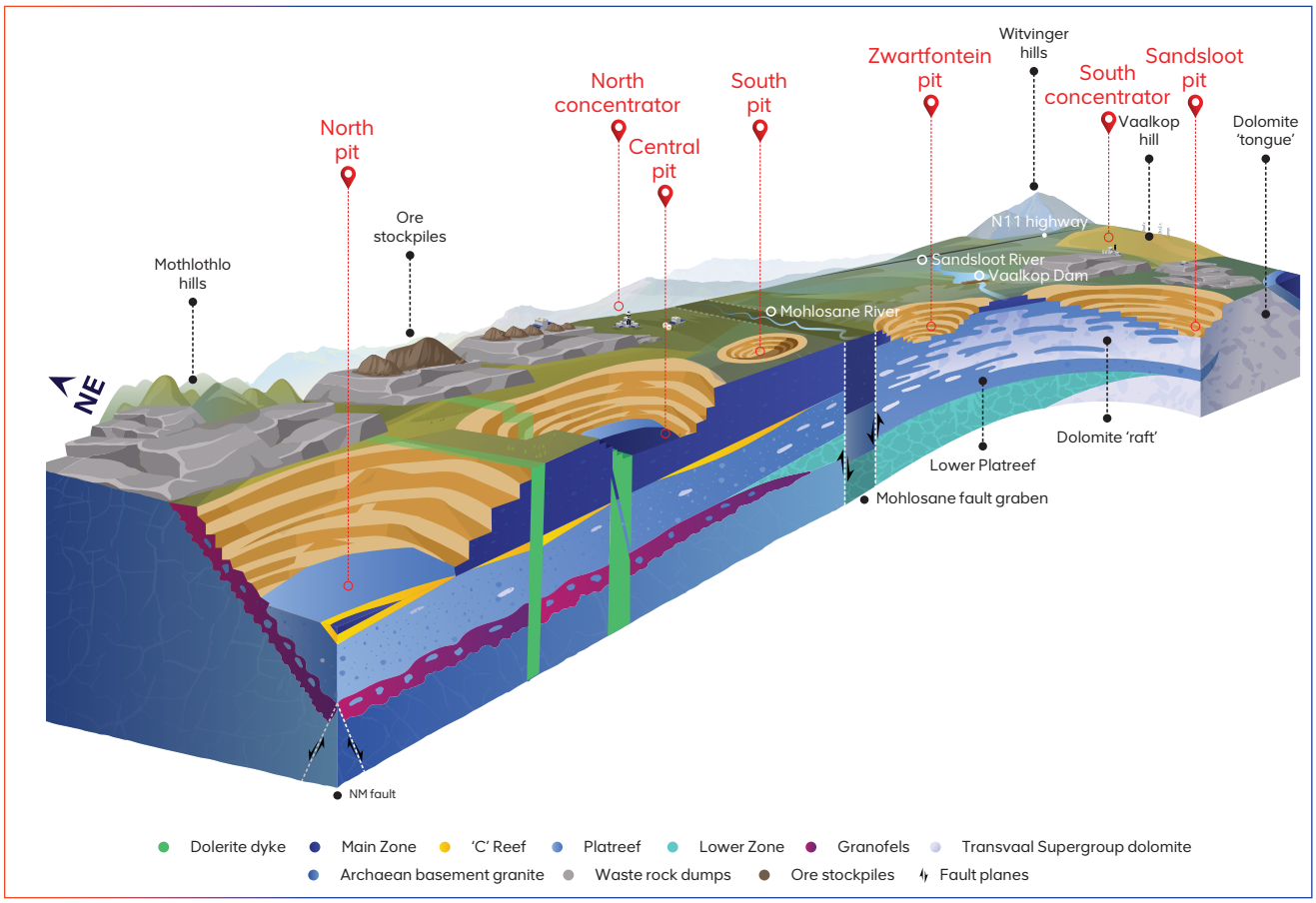
Mogalakwena Platreef 4E prill split
(%)



Mogalakwena Platreef base metal grades
(%)



Schematic diagram of the Bushveld Complex in Mogalakwena Mine complex area (northern limb)



Schematic drawing compiled by James Winch (Mogalakwena geology team), not to scale

Reasonable prospects of eventual economic extraction

The following factors are considered when determining reasonable prospects of eventual economic extraction of the declared Mineral Resources:

- Legal: Mogalakwena Mine adheres to regulatory requirements and has requisite permits and licences to mine.
- Geology: The latest updated geological and Mineral Resource models underpin the RPEEE considerations applied in the context of Mineral Resources declaration.
- Mining method: The RPEEE considerations are based on the current open pit mining method at Mogalakwena which has been used for an extended period to economically exploit the orebody.
- Economics: Mineral Resources reporting is confined within a factored revenue pit-shell, using the latest pit optimisation revenue factor shells based on the calculated corresponding 1.5 revenue factor basket metal prices. The parameter inputs are based on stable, long-term economic assumptions, metal prices and exchange rates catering for historical, actual and forecast metal prices, as well as current future forecast metal prices. The parameter inputs for the creation of the factored revenue shell are typically assessed once every three years and only Platreef Mineralisation within this factored shell is deemed to fulfil reasonable prospects of eventual economic extraction requirements to be reported as Mineral Resource estimates. Platreef Mineral Resources are currently reported at a 1 4E g/t PGM grade cut-off.
- Metallurgical: Sufficient geo-metallurgical and mineralogical test work has been carried out for the Platreef and recovery potentials considered. The mine has sufficient metallurgical data to predict recovery potential. Material is currently processed on- and off-mine.
- Other factors such as marketing, environmental, social and infrastructure are adequately assessed in various levels of technical studies within the mine plan.

	Units	Platreef
Mineral Resource assumptions		
Grade cut-off 4E	4E g/t	1.0
Average density	g/cm^3	3.1
Ore Reserve Modifying Factors		
Mining dilution	%	6.2
Stripping ratio (waste:ore)		6.6
4E concentrator recoveries	%	77 – 82
Mine call factor	%	100

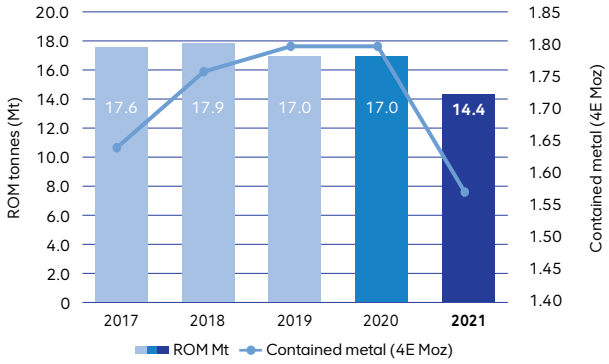
Mining method and operational infrastructure

Mining of the orebody is by open pit methods whereby material is extracted in vertical benches to create a large open excavation. Benches are mined from top to bottom and are accessed by means of haul roads in the hanging and footwall to connect multiple benches to surface entry and exit points. Open pit mining is the most widely used surface mining method used to extract minerals relatively close to surface by means drilling, blasting, loading-and-hauling. Material is moved by means of truck and shovel to the processing plants, stockpiles, and waste rock dumps along a network of constructed surface road-ways. The walls of an open pit excavation are mined at the maximum allowable slope angle achievable within the specified geotechnical constraints, and berm-offsets are created between benches to reduce the potential risk of rock falls along the overall slope. The final shape of the excavation is determined by the overall economics of the exploitation process and is generally subdivided into three-dimensional phases expanding the open pit to maximise the potential net present value of the mine within specified constraints.

Current mining areas comprise five open pits: Sandsloot, Zwartfontein, Mogalakwena South, North and Central. Pit depths vary from 30m to 260m. Ore is milled on-mine at the North and South concentrators as well as at Baobab concentrator which is located approximately 90km offsite.

For a description of the Ore Reserves estimation and classification process see pages 28–30 of this report

Mogalakwena Platreef production history (ROM)



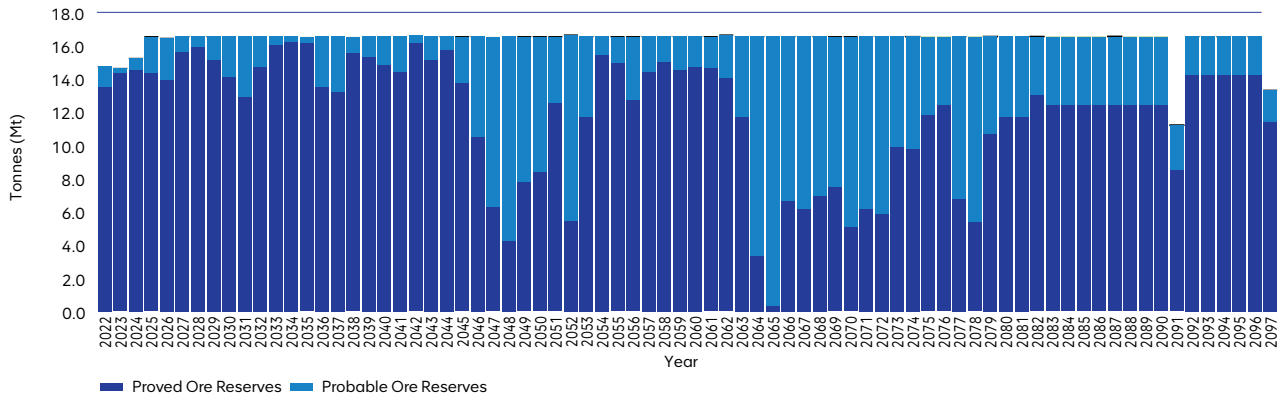
For additional details on the 2021 production information see the mining and concentrating operations review section, pages 104–107 of integrated annual report

Mogalakwena life-of-mine schedule

The life-of-mine schedule for Mogalakwena indicates the current Platreef production planned in the approved life-of-mine plan and includes the projects that have passed the necessary approvals that underpin the Ore Reserve declaration. The anticipated mining is for 76 years and exceeds the current Mining Right expiry date of 2040 (Reserve life of 19 years). 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.

Mogalakwena total ROM tonnes in LOM plan

Tonnes (Mt)



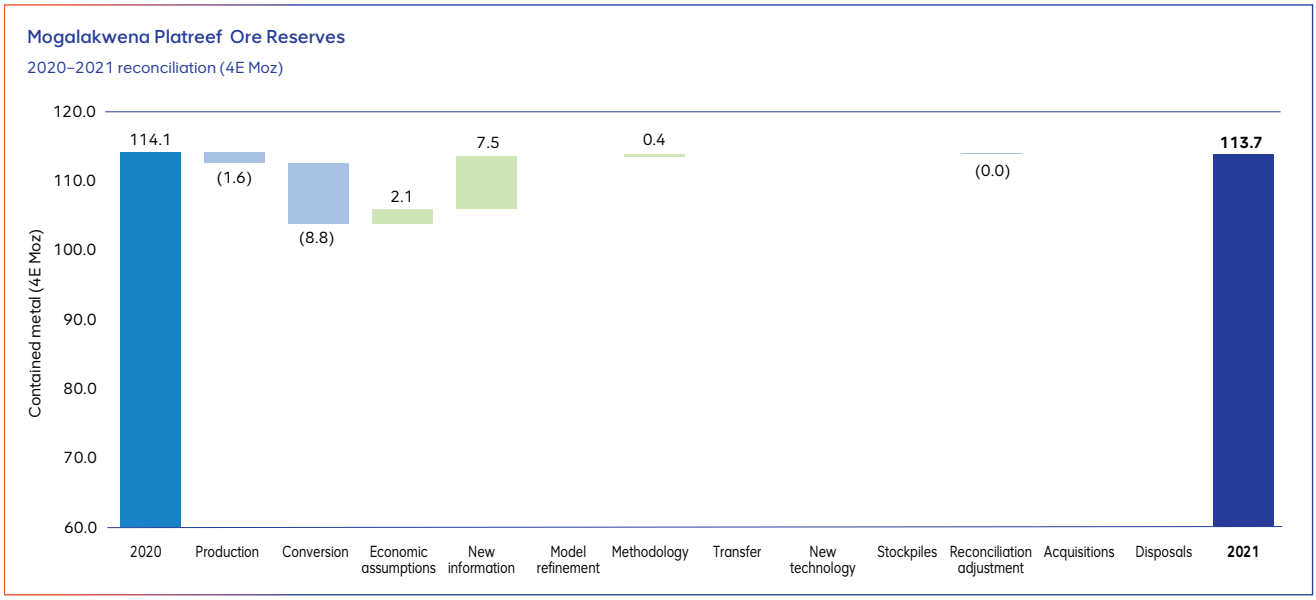
Ore Reserve estimates

Mogalakwena (100%)	Reserve life	Classification	Ore Reserves (ROM) Million tonnes (Mt) 2021	2020	Grade 4E g/t 2021	2020	Contained metal 4E tonnes 2021	2020	Contained metal 4E Moz 2021	2020
Platreef	>19	Proved	**833.2**	763.4	**2.90**	2.90	**2,416**	2,214	**77.8**	71.2
		Probable	**334.8**	444.3	**3.34**	3.00	**1,118**	1,333	**35.9**	42.8
		Total	**1,168**	1,207.8	**3.03**	2.94	**3,534**	3,547	**113.7**	114.1
Platreef primary stockpile*		Proved	**19.5**	19.3	**1.70**	1.96	**33**	38	**1.1**	1.2
		Probable	**40.9**	40.9	**1.47**	1.47	**60**	60	**1.9**	1.9
		Total	**60.3**	60.2	**1.54**	1.63	**93**	98	**3.0**	3.1

* These stockpiles are scheduled for future treatment. ROM stockpiles are reported as Proved and longer-term stockpiles as Probable Ore Reserves.

Platreef Ore Reserve reconciliation

The Platreef Ore Reserve 4E ounces decreased slightly due to a revised life-of-mine pit design (to improve accessibility to lower benches) and production. The extent of the decrease was mostly offset by the inclusion of additional ore resulting from updated geological and Mineral Resources models within the life-of mine pit shell (new information) and improved economic assumptions.



Platreef primary stockpile Ore Reserve reconciliation

The Platreef primary stockpile Ore Reserve 4E ounces decreased slightly due to the adjustment of forecast production in 2020 and stockpile movement.

Exclusive Mineral Resource estimates

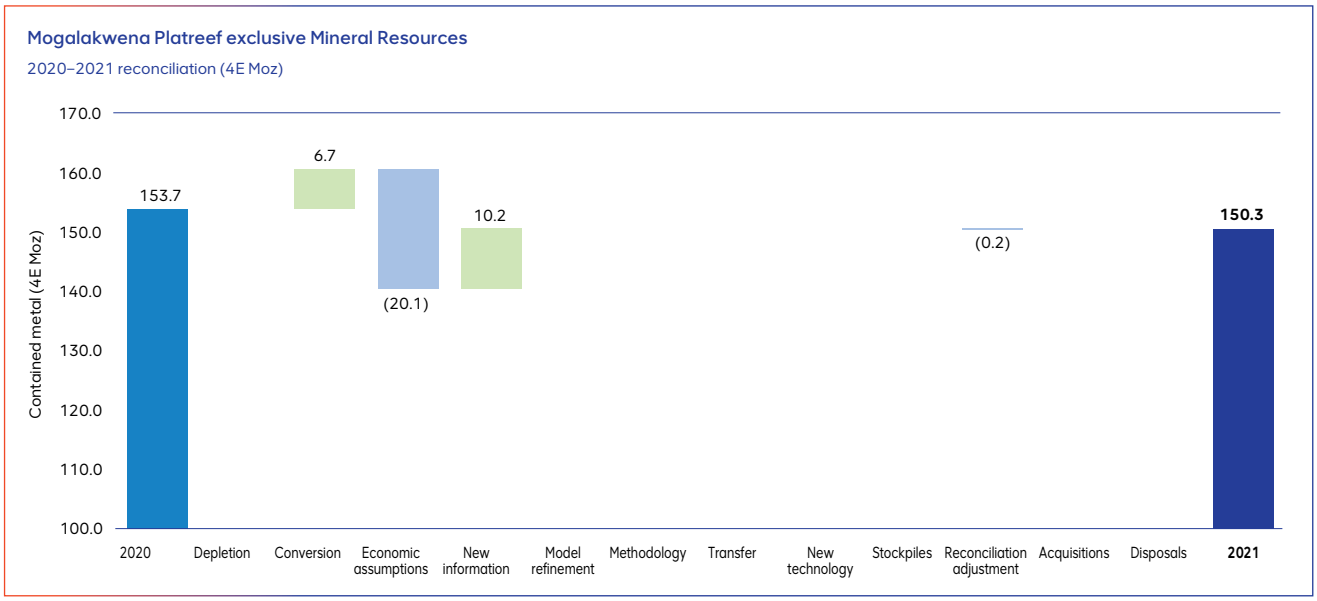
Mogalakwena* (100%)	Classification	Mineral Resources Million tonnes (Mt) 2021	2020	Grade 4E g/t 2021	2020	Contained metal 4E tonnes 2021	2020	Contained metal 4E Moz 2021	2020
Platreef	Measured	**207.8**	246.4	**2.19**	2.17	**455**	535	**14.6**	17.2
	Indicated	**1,517.4**	1,389.7	**2.29**	2.3	**3,475**	3,196	**111.7**	102.8
	Measured and Indicated	**1,725.3**	1,636.0	**2.28**	2.28	**3,930**	3,731	**126.4**	119.9
	Inferred	**425.3**	595.7	**1.75**	1.76	**745**	1,048	**23.9**	33.7
	Total	**2,150.6**	2,231.7	**2.18**	2.14	**4,675**	4,779	**150.3**	153.7
Platreef stockpile	Measured	**2.8**	3.9	**3.96**	3.22	**11**	12	**0.4**	0.4
	Indicated	**—**	—	**—**	—	**—**	—	**—**	—
	Measured and Indicated	**2.8**	3.9	**3.96**	3.22	**11**	12	**0.4**	0.4
	Inferred	**—**	—	**—**	—	**—**	—	**—**	—
	Total	**2.8**	3.9	**3.96**	3.22	**11**	12	**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).

Mogalakwena Mine (100%) continued

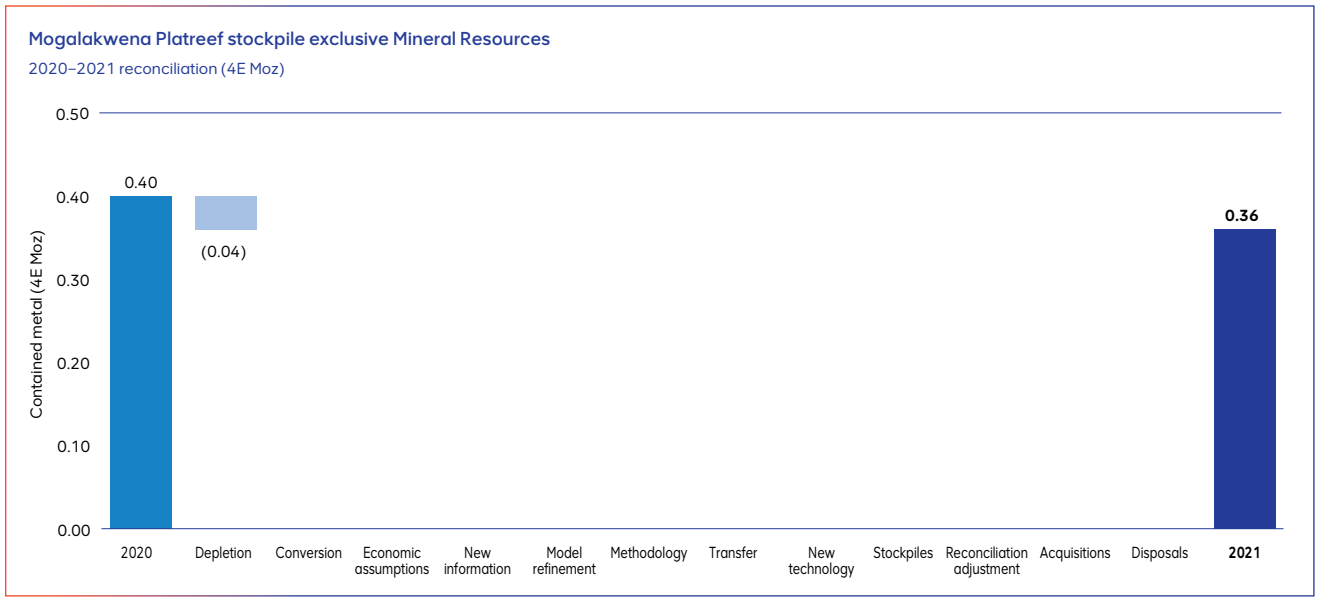
Platreef exclusive Mineral Resource reconciliation

The Platreef exclusive Mineral Resources 4E ounces decreased slightly primarily due to revised economic assumptions. The extent of the decrease was partially offset by increases from updated geological and Mineral Resources models (new information) as well as reallocation of Ore Reserves to Mineral Resources resulting from revised pit design (conversion).



Platreef stockpile exclusive Mineral Resource reconciliation

The Platreef stockpile exclusive Mineral Resources 4E ounces decreased slightly due to depletion.

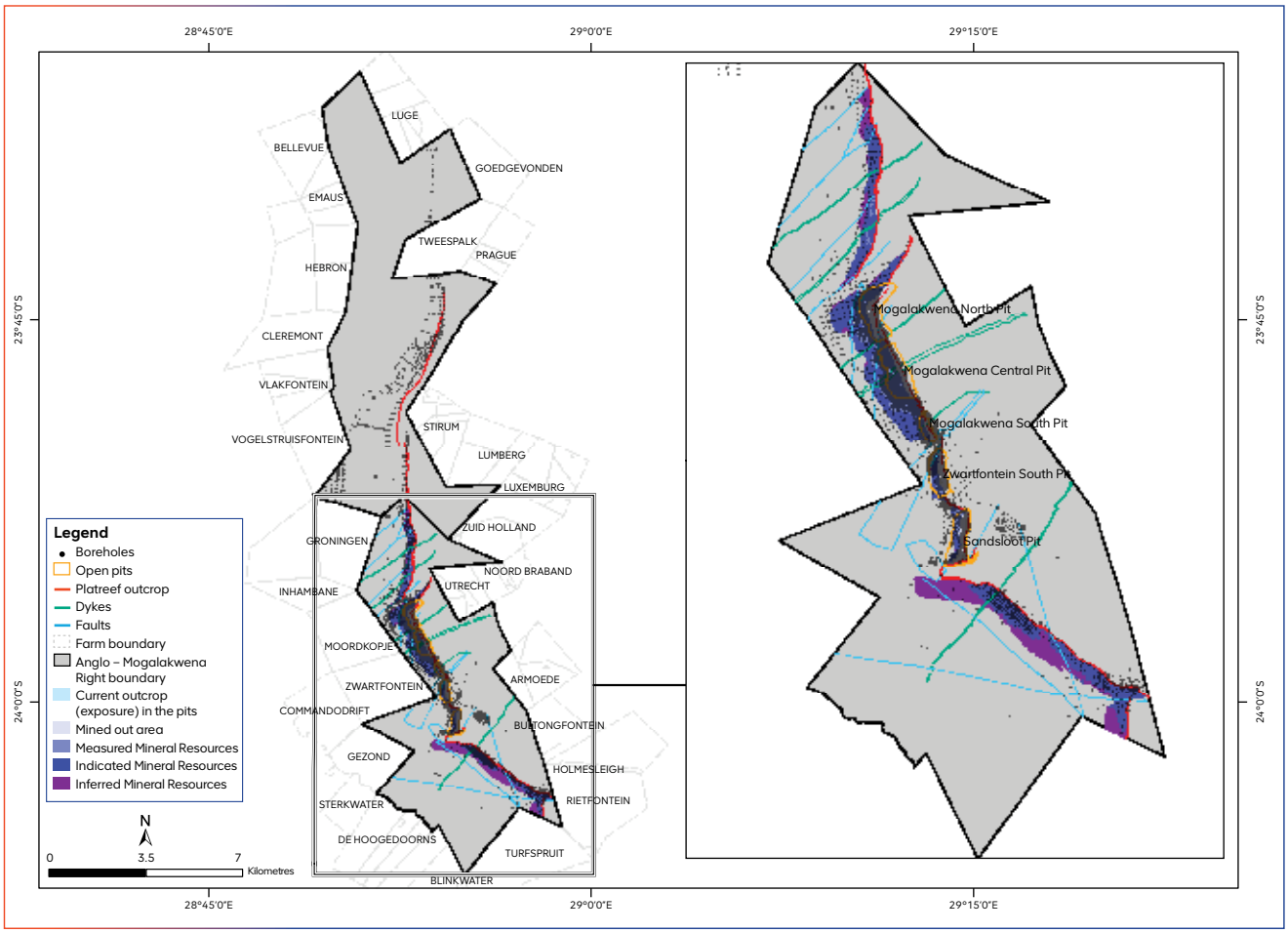


Inclusive Mineral Resource estimates

Mogalakwena* (100%)	Classification	Mineral Resources Million tonnes (Mt) 2021	2020	Grade 4E g/t 2021	2020	Contained metal 4E tonnes 2021	2020	Contained metal 4E Moz 2021	2020
Platreef	Measured	1,007.9	980.9	2.86	2.82	2,887	2,768	92.8	89.0
	Indicated	1,842.1	1,835.4	2.50	2.52	4,602	4,614	147.9	148.3
	Measured and Indicated	2,850.0	2,816.3	2.63	2.62	7,489	7,382	240.8	237.3
	Inferred	425.3	5,95.7	1.75	1.76	745	1,048	23.9	33.7
	Total	3,275.3	3,412.0	2.52	2.47	8,234	8,430	264.7	271.0
Platreef stockpile	Measured	63.1	64.0	1.65	1.73	104	110	3.3	3.6
	Indicated	—	—	—	—	—	—	—	—
	Measured and Indicated	63.1	64.0	1.65	1.73	104	110	3.3	3.6
	Inferred	—	—	—	—	—	—	—	—
	Total	63.1	64.0	1.65	1.73	104	110	3.3	3.6

* 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



Estimates and reconciliation – managed operations

as at 31 December 2021

Amandelbult complex

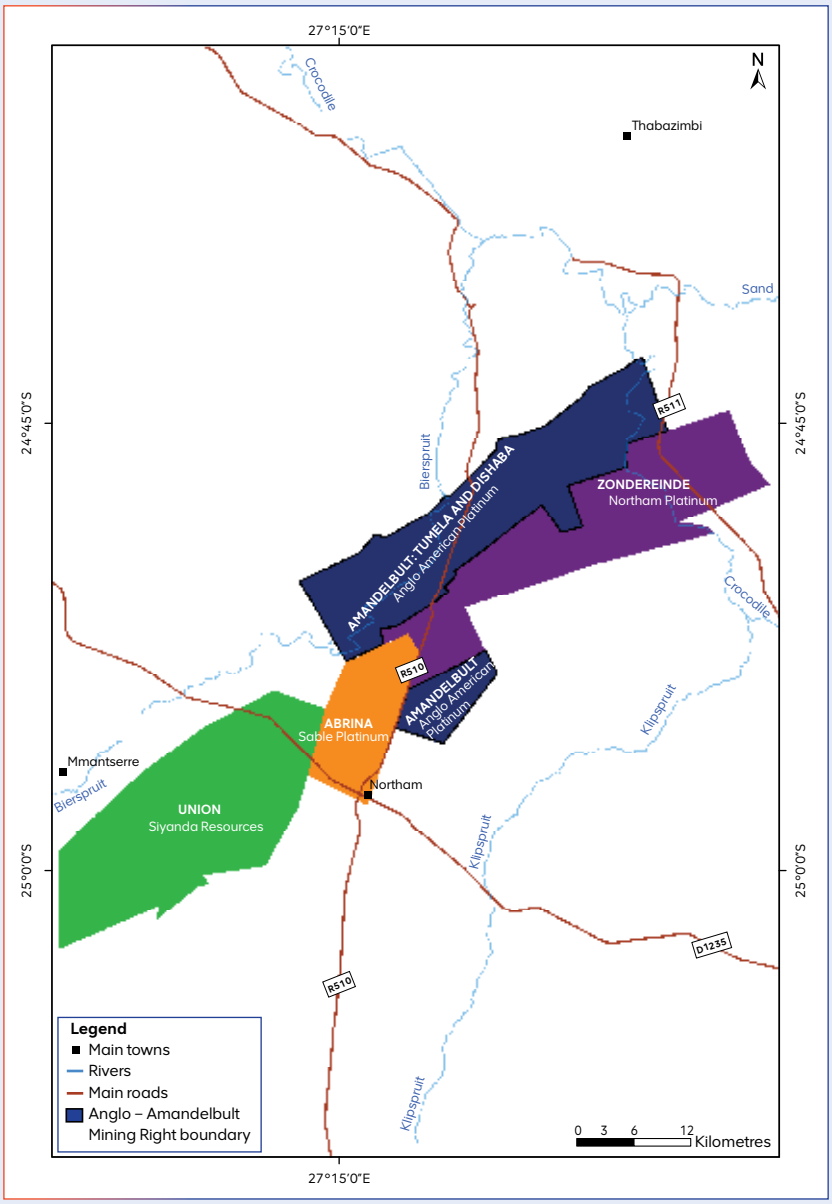
Anglo American Platinum Limited interest: 100%
Management structure: managed

Location

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.

Property description

The Amandelbult complex is wholly owned and managed by Anglo American Platinum, with two mines: Tumela and Dishaba. The complex is at a steady-state phase, with specific focus on modernisation and mechanisation. The primary reef mined is UG2 Reef, with limited mining of Merensky Reef.



Competence

Annamart Jarman
Competent Person:
Mineral Resources
Role:
Resource geologist
Relevant qualifications:
BSc (hons) (geology), MSc (mineral economics)
Professional organisation:
SACNASP, PrSciNat (400026/10)
Relevant experience:
11 years

Johan Laubscher
Competent Person:
Ore Reserves
Role:
Chief surveyor
Relevant qualification:
ND (survey)
Professional organisation:
SAIMM, member (710163)
Relevant experience:
9 years

Brief history

Soon after the discovery of platinum in the eastern Bushveld Complex in the 1920s, attention focused on the geologically similar, but further exposed, western Bushveld Complex. The discovery of the Merensky Reef near Rustenburg in 1925 prompted exploration in other parts of the western Bushveld Complex, including the Amandelbult area. The Steelpoort Platinum Syndicate first prospected the Amandelbult section in 1926. The syndicate was acquired by Potgietersrus 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 (Anglo American Platinum) 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. Ore Reserves and Mineral Resources are reported separately. The feasibility study for a chromite recovery plant was completed in 2013 and project execution approved in 2014. Construction and commissioning were completed in 2016. In 2016, Mineral Resources in the south-western portion of Tumela were sold to Northam Platinum. To conclude the 2016 transaction, Anglo American Platinum most recently acquired the block of ground from Northam Platinum Limited through a section 102 transfer.

Mineral Rights

The Mining Right covers an area of 12,504ha. Anglo American Platinum holds a converted Mining Right under the DMRE reference LP 48 MR, valid from July 2010 to July 2040. A section 102 application to amend the Amandelbult Mining Right by extending the current Mining Right area to include the Northam block has been approved by the DMRE and notarially executed on 25 November 2021. The reg 29(a) NEMA (National Environment Management Act 1998) application and environmental authorisation has been approved as well.

There are no known impediments to the Mining Right.

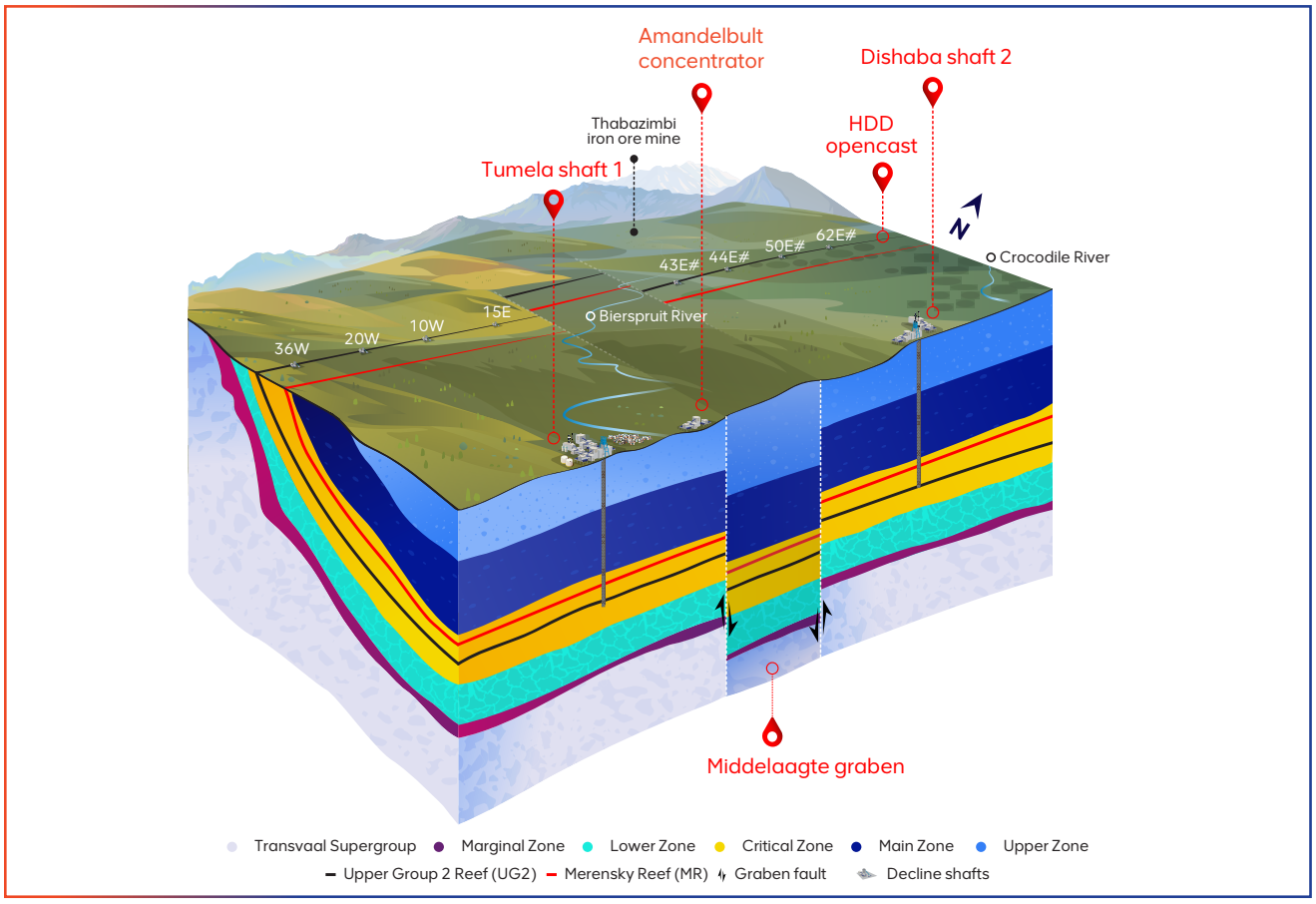
Brief geological description

Amandelbult complex is in the western limb of the Bushveld Complex. In this area, the Merensky and UG2 reefs, strike north-east/south-west over approximately 22km, and dips at 16° to 30° in a south-easterly direction. The Merensky Reef has a variable thickness ranging from 1cm (contact reef facies) to greater than 1.4m, over large areas. The reef comprises up to five different facies. Each facies type exhibits unique geological, geochemical and mineralisation characteristics and plays a fundamental role in geozone delineations and Mineral Resource width estimation.

The UG2 Reef occurs between 15m and 60m vertically below the Merensky Reef and dips at 18° to 27° in a south-easterly direction. The UG2 normally comprises a 0.6m to 1.0m main chromitite layer overlain by up to three chromitite layers (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 up to 1m.

The Upper Zone transgression to the west of the Amandelbult complex (known as the northern "gap") onto Main Zone, Critical Zone and Transvaal Supergroup floor, effects a rapid steepening of the dip toward the extreme north-eastern portion of the mining area as well as an abrupt change in the strike of the reefs in the south-western portion of the mining area. Dolerite dykes and sills of Pilanesberg and Karoo age and lamprophyre dykes occur. These trend typically north-west/south-east and their thickness varies from centimetres up to approximately 50m. Potholes of variable sizes and a range of often iron-rich, generally pegmatoidal pyroxene rich (locally termed IRUPs) occur as well. Faults of various sizes occur throughout the lease area. The largest faults occur in the Middellaagte area, trending north-west/south-east with associated throws of up to 500m confining a 2.5km wide graben.

For a description of the Mineral Resources estimation and classification process see page 23 of this report



Schematic drawing compiled by Ruddy Maakamedi (Amandelbult geology team), not to scale

Reasonable prospects of eventual economic extraction

The following factors were considered when determining reasonable prospects of eventual economic extraction of the declared Mineral Resources:

- Legal: The complex adheres to all regulatory requirements and has requisite permits and licences to mine.
- Geology: The latest updated geological and Mineral Resource models underpin the RPEEE considerations applied in the context of Mineral Resources declaration.
- Mining method: The RPEEE considerations are based on the current mining methods of underground conventional (scattered breast mining) and extra-low profile (XLP) mechanisation.
- Economics: Using the current global assumptions (prices and costs), the current mining methods are known to be viable at depth as currently applied and when considering adjacent mining operations.
- Technology: Current technology is deemed to be inadequate for mining any material below the 75° isotherm line, and therefore has been excluded from the Mineral Resources declaration.
- Metallurgical: Sufficient geo-metallurgical and mineralogical test work has been carried out for reefs declared and recovery potentials considered. The complex has sufficient plant data to predict recovery potential.
- Other factors such as marketing, environmental, social, governance, and infrastructure are adequately assessed in various studies within the mine plan.

Mining method and operational infrastructure

The primary mining method used at Amandelbult complex is scattered breast mining for both Dishaba and Tumela mines and has been in practice since the start of the mining in 1973.

Conventional scattered breast mining is preceded by haulage development below reef, parallel to strike. Access to the reef horizon is developed by means of south or north crosscuts. On-reef true dip raises or winzes connect to cross-cuts on different levels by means of step overs and travelling ways. The ore passes are generally done by inverse drilling (from the reef horizon down to the crosscut). Modernised equipment is being rolled out on the stoping horizon to address safety and efficiency concerns, including the introduction of cycle mining, split panels utilising throw blasting and water-jet cleaning to eliminate the use of scraper winches.

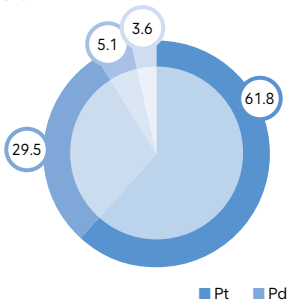
Extra-low profile (XLP) mechanised mining method is being implemented at the 15E dropdown project area since inception in 2019. The XLP mechanised mining is an underground mining method designed to exploit narrow reef orebodies (1.2m to 1.7m width) with a dip less than 22°. It maximises reef extraction by placing the primary development (main infrastructure) on reef. A constant production is achieved by coordinating XLP and low profile (LP) equipment to continuously feed the conveyor belt system.

The complex has two vertical shafts at Tumela and Dishaba, three concentrators and two chromite plants. Current working infrastructure has five vertical and seven decline shaft systems to transport rock, employees and material, with mining on the Merensky and UG2 reefs horizons. The operating depth for current workings extends from surface to 1.3km below surface. At Dishaba mine, short-life, low-tonnage outcrop strip-mining supplements underground production.

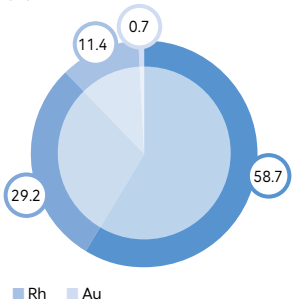
For a description of the Ore Reserves estimation and classification processes see pages 28–30 of this report

Tumela mine

Tumela Merensky Reef 4E prill split (%)



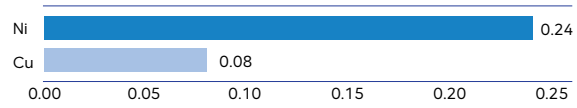
Tumela UG2 Reef 4E prill split (%)



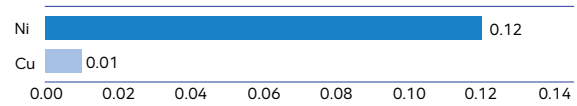
Pt Pd Rh Au

UG2 Reef chromite grade : **31.9%**

Tumela Merensky Reef base metal grades (%)



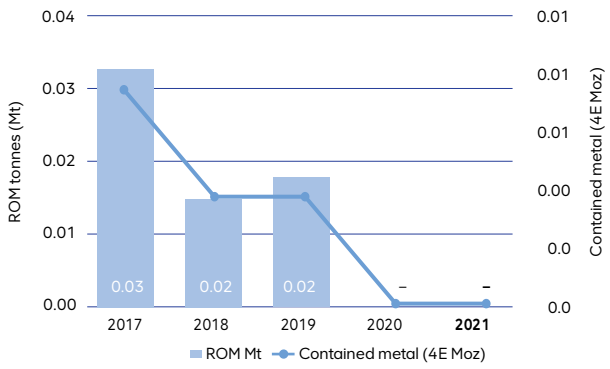
Tumela UG2 Reef base metal grades (%)



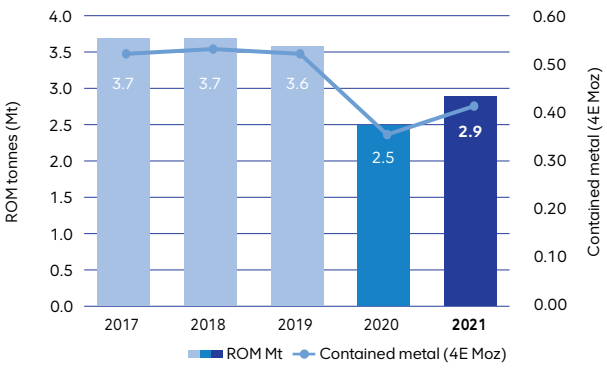
	Units	Merensky	UG2
Mineral Resource assumptions			
Average geological loss	%	35	24
Minimum Resource cut width	cm	120	120
Average density	g/cm³	3.3	4.1
Ore Reserve Modifying Factors			
Mining loss factor	%	5*	35
Mining dilution	%	15*	25
Planned stoping width	cm	153*	150
4E concentrator recoveries	%	84	85
Mine call factor	%	100	100

* Conventional mining methods only.

Tumela Merensky Reef production history (ROM)



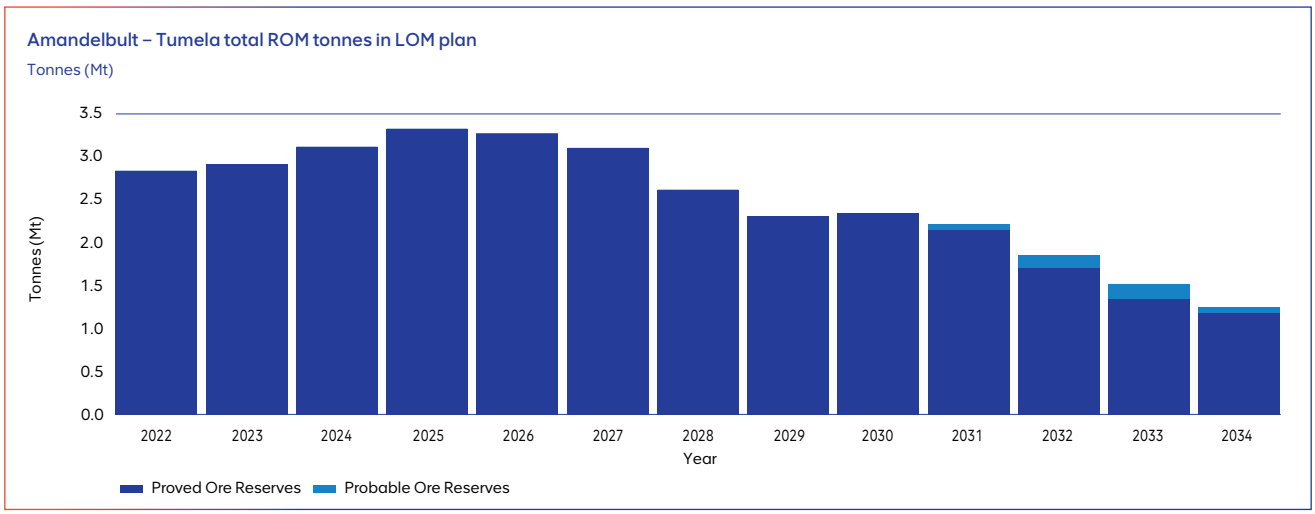
Tumela UG2 Reef production history (ROM)



For additional details on the 2021 production information see the mining and concentrating operations review section, pages 108–111 of integrated annual report

Tumela life-of-mine schedule

The life-of-mine schedule for Tumela indicates the current combined reefs' production planned in the approved life-of-mine plan and includes projects that have passed the necessary approvals that underpin the Ore Reserve declaration. The anticipated life-of-mine is for 13 years and is within the current Mining Right expiry date of 2040.

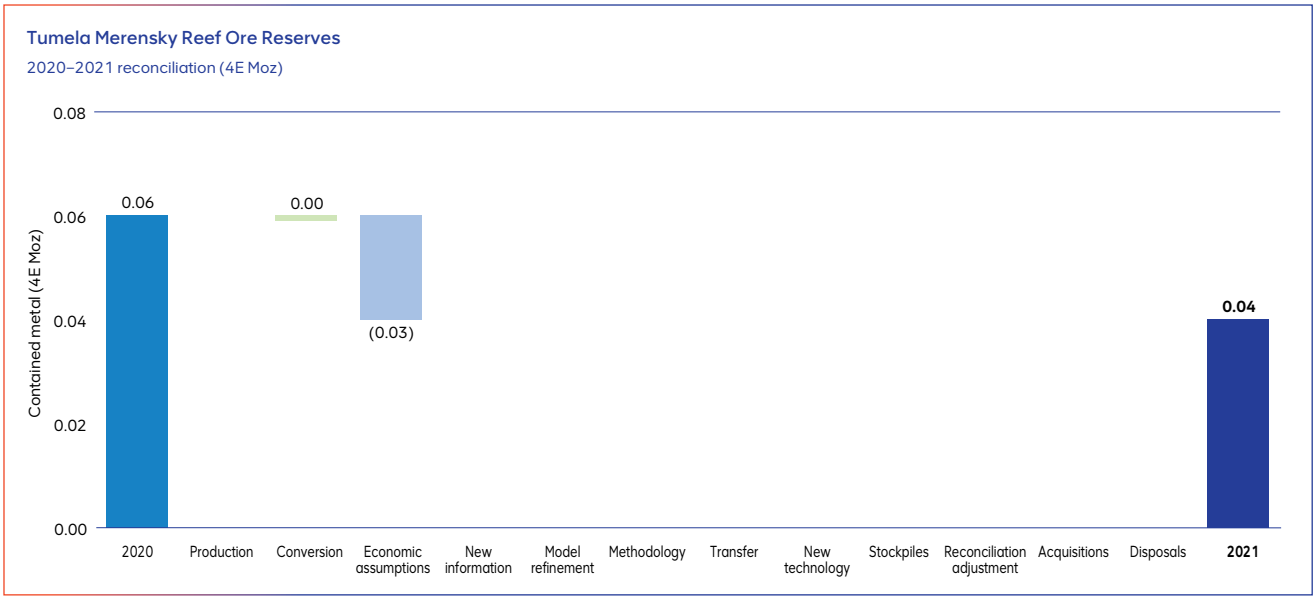


Ore Reserve estimates

Amandelbult complex – Tumela mine (100%)	Reserve life	Classification	Mineral Resources Million tonnes (Mt) 2021	2020	Grade 4E g/t 2021	2020	Contained metal 4E tonnes 2021	2020	Contained metal 4E Moz 2021	2020
Merensky Reef	13	Proved	**0.1**	0.1	**5.74**	5.51	**0**	0	**0.0**	0.0
		Probable	**0.2**	0.4	**3.33**	3.90	**1**	2	**0.0**	0.1
		Total	**0.3**	0.5	**3.95**	4.12	**1**	2	**0.0**	0.1
UG2 Reef		Proved	**32.1**	36.7	**4.62**	4.62	**148**	169	**4.8**	5.4
		Probable	**0.3**	0.3	**3.39**	3.92	**1**	1	**0.0**	0.0
		Total	**32.3**	37	**4.61**	4.62	**149**	170	**4.8**	5.5

Merensky Reef Ore Reserves reconciliation

The 0.03 4E Moz content decrease in Merensky Reef Ore Reserves is due to uneconomic tails of an area that were subsequently transferred to Dishaba Ore Reserves.



UG2 Reef Ore Reserves reconciliation

The UG2 Reef Ore Reserve 4E content decreased as a result of production and the reallocation of Ore Reserves to Mineral Resources due to updated Modifying Factors (conversion).

Exclusive Mineral Resource estimates

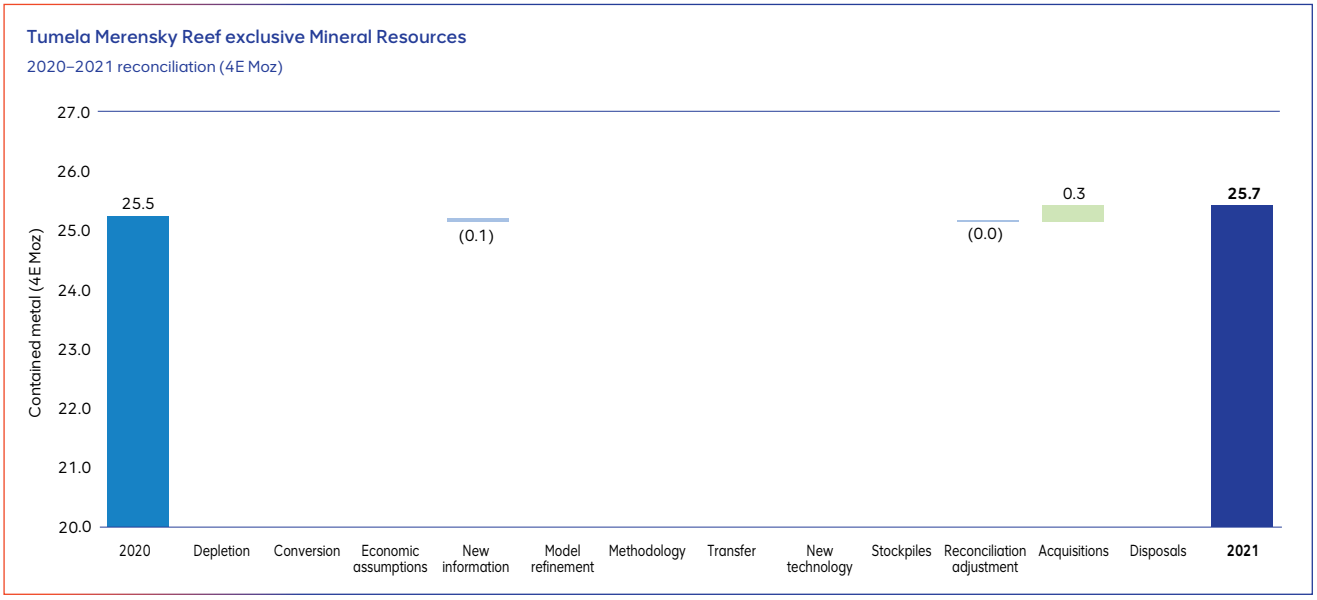
Amandelbult complex – Tumela mine (100%)*	Classification	Mineral Resources Million tonnes (Mt) 2021	2020	Grade 4E g/t 2021	2020	Contained metal 4E tonnes 2021	2020	Contained metal 4E Moz 2021	2020
Merensky Reef	Measured	**23.4**	23.0	**6.68**	6.74	**156**	155	**5.0**	5.0
	Indicated	**46.7**	46.2	**7.05**	7.04	**329**	325	**10.6**	10.5
	Measured and Indicated	**70.1**	69.2	**6.93**	6.94	**485**	480	**15.6**	15.4
	Inferred	**44.9**	44.6	**7.01**	7.04	**315**	314	**10.1**	10.1
	Total	**115.0**	113.7	**6.96**	6.98	**800**	794	**25.7**	25.5
UG2 Reef	Measured	**78.3**	102.4	**5.35**	5.40	**419**	553	**13.5**	17.8
	Indicated	**70.2**	44.1	**5.51**	5.52	**387**	243	**12.4**	7.8
	Measured and Indicated	**148.5**	146.5	**5.43**	5.44	**806**	796	**25.9**	25.6
	Inferred	**47.4**	47.4	**5.76**	5.77	**273**	273	**8.8**	8.8
	Total	**195.9**	193.8	**5.51**	5.52	**1,079**	1,069	**34.7**	34.4
Tailings	Measured	**–**	63.0	**–**	0.79	**–**	50	**–**	1.6
	Indicated	**–**	8.1	**–**	0.82	**–**	7	**–**	0.2
	Measured and Indicated	**–**	71.1	**–**	0.79	**–**	57	**–**	1.8
	Inferred	**–**	1.2	**–**	0.91	**–**	1	**–**	0.0
	Total	**–**	72.3	**–**	0.80	**–**	58	**–**	1.9

* The exclusive Measured Mineral Resources include low-tonnage opencast Merensky Reef Mineral Resources of 0.1 4E Moz (0.3Mt at 8.11 4E g/t) and UG2 Reef Mineral Resources of 0.2 4E Moz (0.9 Mt at 5.49 4E g/t).

Amandelbult complex (100%) continued

Merensky Reef exclusive Mineral Resources reconciliation

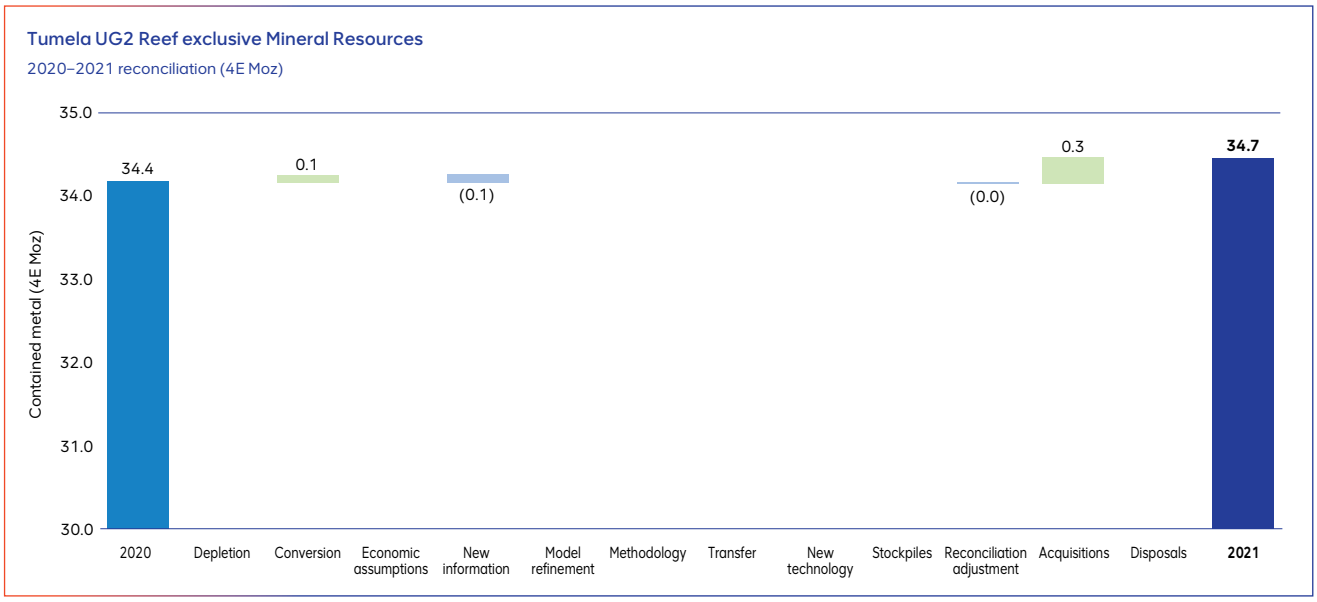
The Merensky Reef Mineral Resource 4E content marginally increased due to the acquisition of ground from Northam Platinum.



For the details of the acquisition, see page 9 of this report.

UG2 Reef exclusive Mineral Resources reconciliation

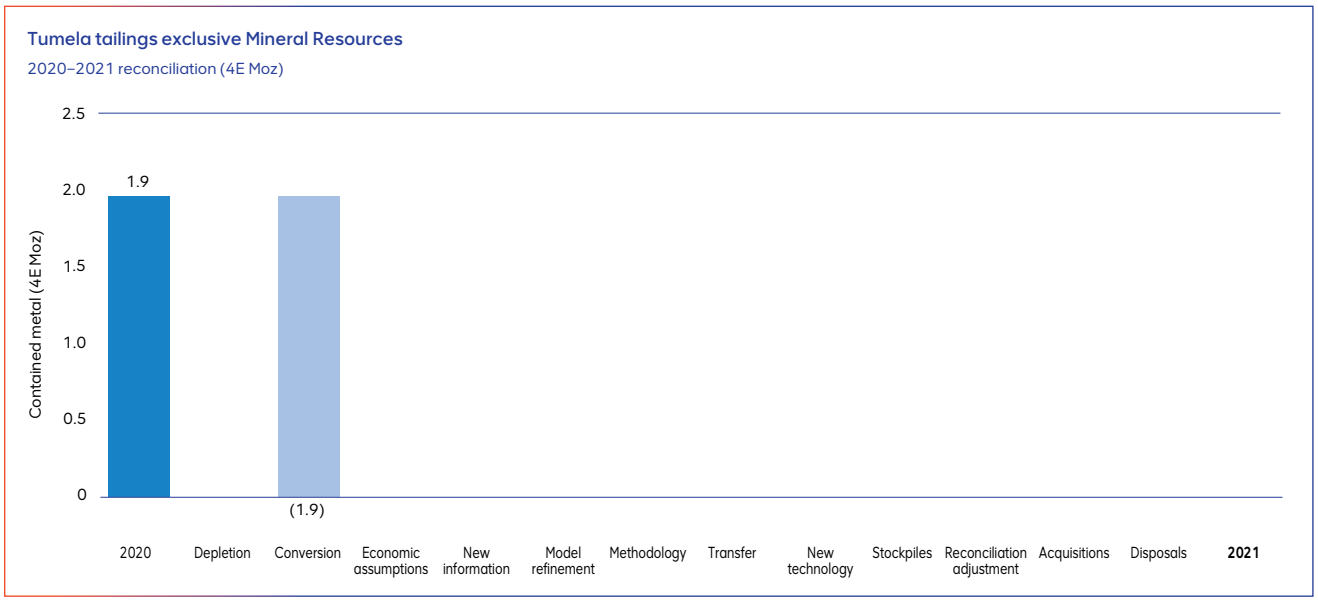
The UG2 Reef Mineral Resource 4E content marginally increased due to the acquisition of ground from Northam Platinum.



For the details of the acquisition, see page 9 of this report.

Tailings exclusive Mineral Resources reconciliation

The Amandelbult tailings Mineral Resources were reallocated to Mineralisation after the storage facility was reactivated for deposition.



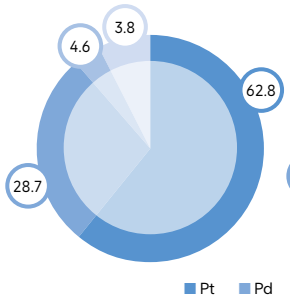
Inclusive Mineral Resource estimates

Amandelbult complex – Tumela mine (100)*	Classification	Mineral Resources Million tonnes (Mt) 2021	2020	Grade 4E g/t 2021	2020	Contained metal 4E tonnes 2021	2020	Contained metal 4E Moz 2021	2020
Merensky Reef	Measured	**24.4**	24.0	**6.72**	6.78	**164**	163	**5.3**	5.2
	Indicated	**46.7**	46.2	**7.05**	7.04	**329**	325	**10.6**	10.5
	Measured and Indicated	**71.1**	70.2	**6.94**	6.95	**493**	488	**15.9**	15.7
	Inferred	**44.9**	44.6	**7.01**	7.04	**315**	314	**10.1**	10.1
	Total	**116.0**	114.8	**6.97**	6.99	**808**	802	**26.0**	25.8
UG2 Reef	Measured	**117.6**	144.9	**5.38**	5.41	**633**	783	**20.4**	25.2
	Indicated	**70.9**	44.6	**5.51**	5.52	**391**	246	**12.6**	7.9
	Measured and Indicated	**188.5**	189.4	**5.43**	5.44	**1,024**	1,029	**32.9**	33.1
	Inferred	**47.4**	47.4	**5.76**	5.77	**273**	273	**8.8**	8.8
	Total	**235.9**	236.8	**5.50**	5.50	**1,297**	1,302	**41.7**	41.9
Tailings	Measured	**–**	63.0	**–**	0.79	**–**	50	**–**	1.6
	Indicated	**–**	8.1	**–**	0.82	**–**	7	**–**	0.2
	Measured and Indicated	**–**	71.1	**–**	0.79	**–**	57	**–**	1.8
	Inferred	**–**	1.2	**–**	0.91	**–**	1	**–**	0.0
	Total	**–**	72.3	**–**	0.80	**–**	58	**–**	1.9

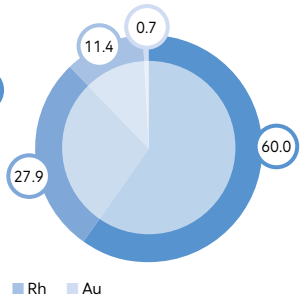
* The inclusive Measured Mineral Resources include low-tonnage opencast Merensky Reef Mineral Resources of 0.1 4E Moz (0.3Mt at 8.11 4E g/t) and UG2 Reef Mineral Resources of 0.2 4E Moz (0.9Mt at 5.95 4E g/t).

Dishaba mine (100%)

Dishaba Merensky Reef 4E prill split
(%)

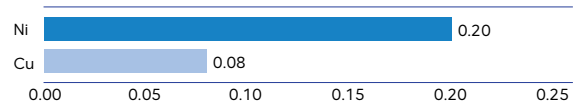


Dishaba UG2 Reef 4E prill split
(%)

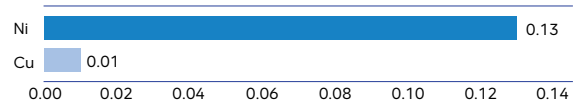


UG2 Reef Chromite grade : **31.6%**

Dishaba Merensky Reef base metal grades
(%)

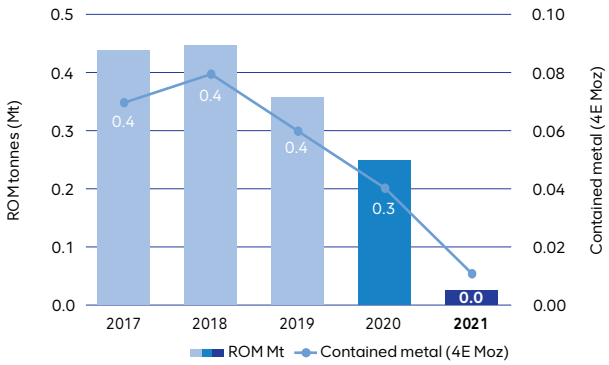


Dishaba UG2 Reef base metal grades
(%)

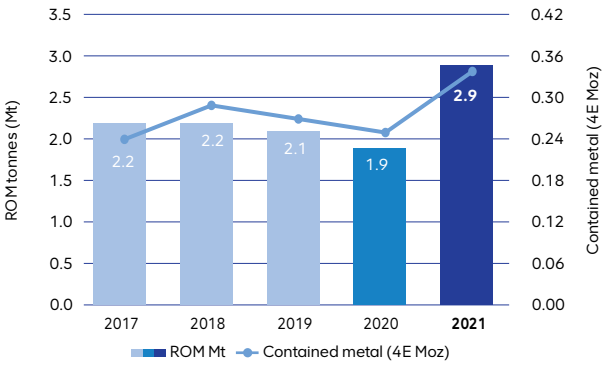


	Units	Merensky	UG2
Mineral Resource assumptions			
Average geological loss	%	23	18
Minimum Resource cut width	cm	120	120
Average density	g/cm³	3.1	4.0
Ore Reserve Modifying Factors			
Mining loss factor	%	48	37
Mining dilution	%	37	19
Planned stoping width	cm	152	158
4E concentrator recoveries	%	83	85
Mine call factor	%	100	100

Dishaba Merensky Reef production history (ROM)



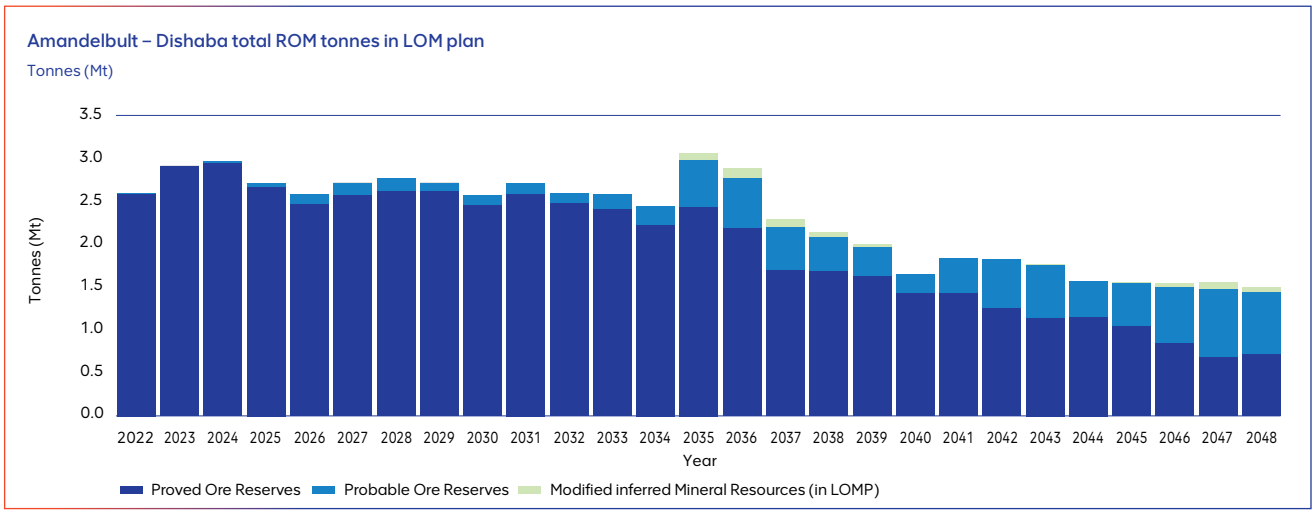
Dishaba UG2 Reef production history (ROM)



For additional details on the 2021 production information see the mining and concentrating operations review section, pages 108–111 of integrated annual report

Dishaba life-of-mine schedule

The life-of-mine schedule for Dishaba indicates the current combined reefs' production planned in the approved life-of-mine plan and includes projects that have passed the necessary approvals that underpin the Ore Reserve declaration. The anticipated life-of-mine is for 27 years and exceeds the current Mining Right expiry date of 2040 (Reserve life of 19 years). 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 modified Inferred Mineral Resources in life-of-mine plan are excluded from Ore Reserves declaration and assessments have indicated that the exclusion of these Inferred Mineral Resources will have no impact on the current life-of-mine.



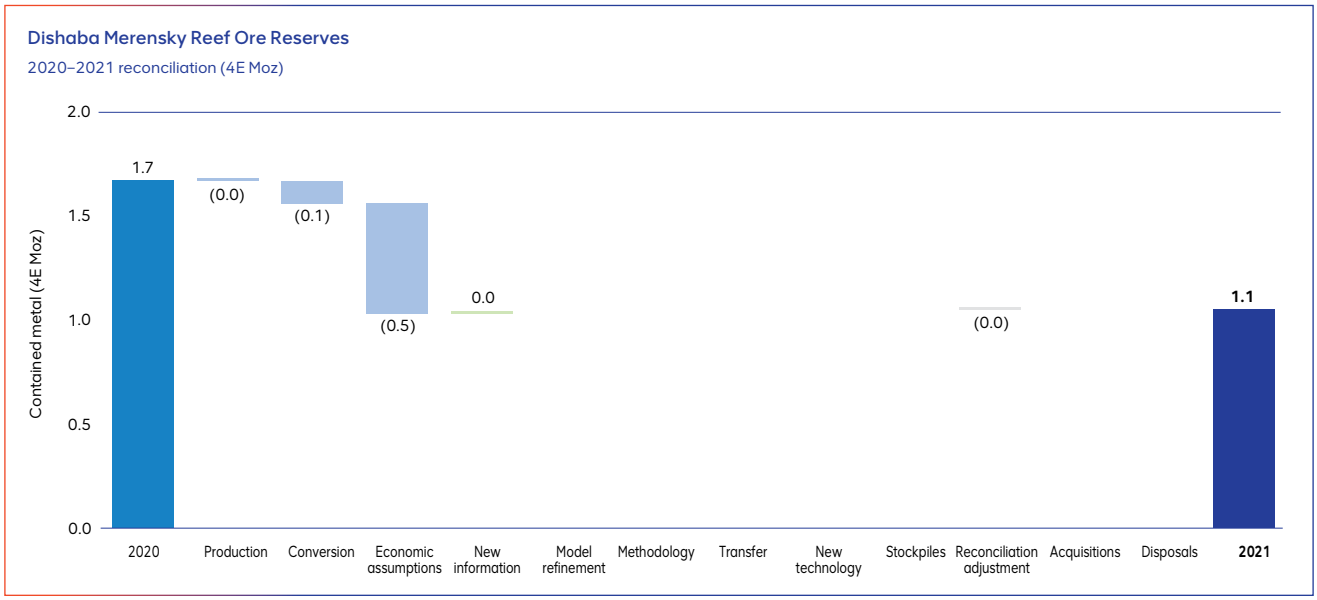
Ore Reserve estimates

Amandelbult complex – Dishaba mine (100)*	Reserve life	Classification	Mineral Reserves Million tonnes (Mt) 2021	2020	Grade 4E g/t 2021	2020	Contained metal 4E tonnes 2021	2020	Contained metal 4E Moz 2021	2020
Merensky Reef	>19	Proved	**2.0**	5.3	**4.23**	5.18	**9**	27	**0.3**	0.9
		Probable	**4.1**	5.0	**5.83**	4.93	**24**	25	**0.8**	0.8
		Total	**6.2**	10.3	**5.30**	5.05	**33**	52	**1.1**	1.7
UG2 Reef		Proved	**49.7**	54.7	**4.37**	4.33	**217**	237	**7.0**	7.6
		Probable	**5.4**	8.3	**4.51**	4.35	**25**	36	**0.8**	1.2
		Total	**55.1**	63.0	**4.38**	4.33	**242**	273	**7.8**	8.8

* The Proved Ore Reserves include short-life, low-tonnage, open-cast Merensky Reef Ore Reserves of 0.01 4E Moz (0.1Mt at 4.30 4E g/t) and UG2 Reef Ore Reserves of 0.1 4E Moz (0.7Mt at 4.50 4E g/t).

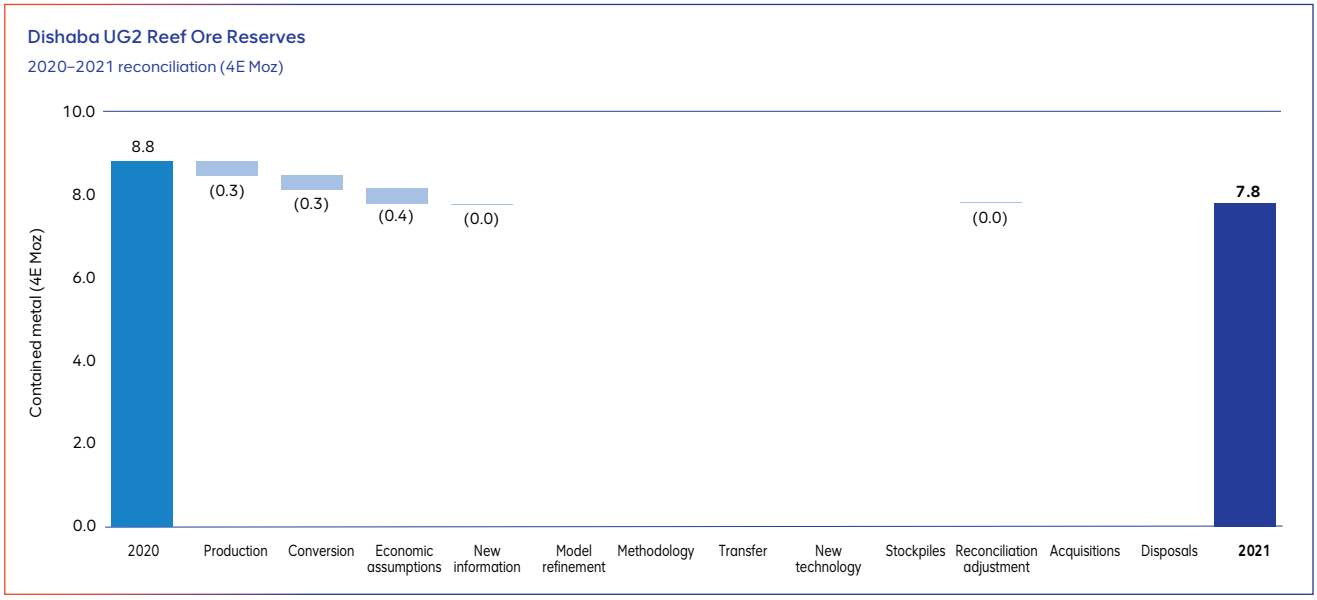
Merensky Reef Ore Reserves reconciliation

The Merensky Reef Ore Reserve 4E ounces decreased due to the reallocation of Ore Reserves to Mineral Resources following mine design optimisation and economic tail cuts at year 2049 of the updated life-of-mine plan.



UG2 Reef Ore Reserves reconciliation

The UG2 Reef Ore Reserve 4E ounces decreased due to the reallocation of Ore Reserves to Mineral Resources following mine design optimisation, economic tail cuts at year 2049 of the updated life-of-mine plan and annual production.



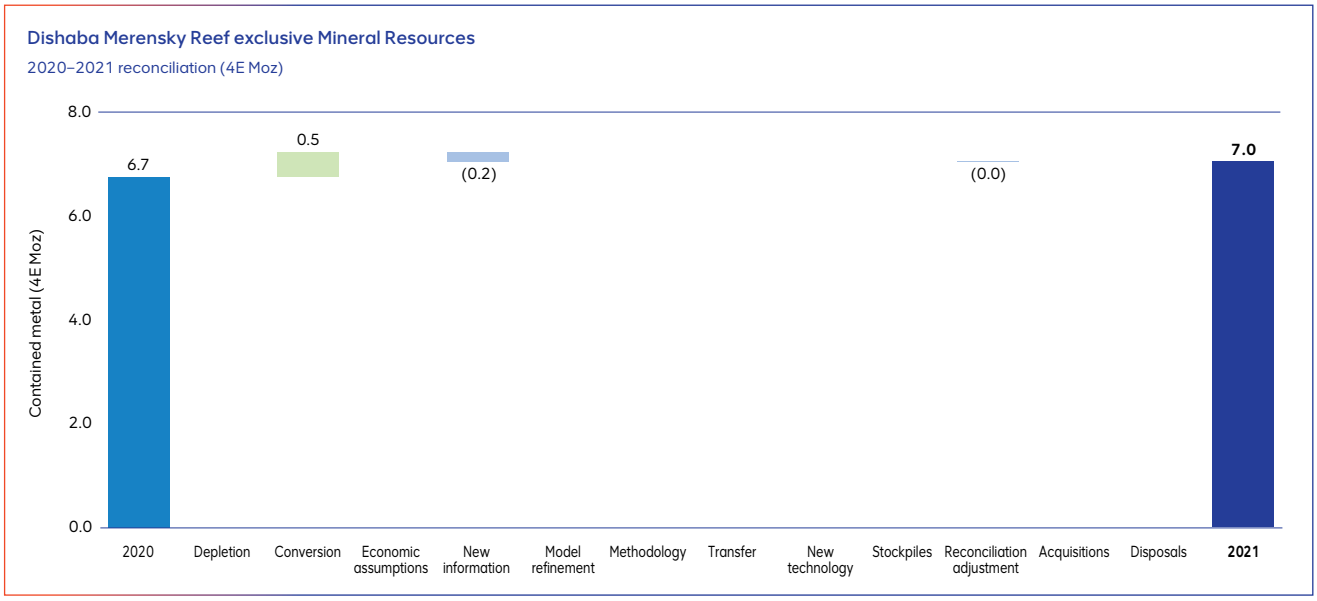
Exclusive Mineral Resource estimates

Amandelbult complex – Dishaba (100%)*	Classification	Mineral Resources Million tonnes (Mt) 2021	2020	Grade 4E g/t 2021	2020	Contained metal 4E tonnes 2021	2020	Contained metal 4E Moz 2021	2020
Merensky Reef	Measured	**9.4**	8.0	**7.00**	7.11	**66**	57	**2.1**	1.8
	Indicated	**11.6**	10.6	**6.64**	6.92	**77**	73	**2.5**	2.4
	Measured and Indicated	**21.0**	18.5	**6.80**	7.00	**143**	130	**4.6**	4.2
	Inferred	**12.6**	12.6	**6.03**	6.28	**76**	79	**2.4**	2.6
	Total	**33.6**	31.2	**6.51**	6.71	**219**	209	**7.0**	6.7
UG2 Reef	Measured	**21.2**	19.2	**5.25**	5.25	**111**	101	**3.6**	3.2
	Indicated	**25.5**	22.8	**5.72**	5.78	**146**	132	**4.7**	4.2
	Measured and Indicated	**46.7**	42.0	**5.51**	5.54	**257**	233	**8.3**	7.5
	Inferred	**9.2**	8.9	**5.50**	5.54	**50**	49	**1.6**	1.6
	Total	**55.9**	50.9	**5.51**	5.54	**307**	282	**9.9**	9.1

* The exclusive Measured Mineral Resources include low-tonnage open-cast Merensky Reef Mineral Resources of 0.1 4E Moz (0.5Mt at 6.42 4E g/t) and UG2 Reef Mineral Resources of 0.2 4E Moz (1.0 Mt at 5.24 4E g/t).

Merensky Reef exclusive Mineral Resources reconciliation

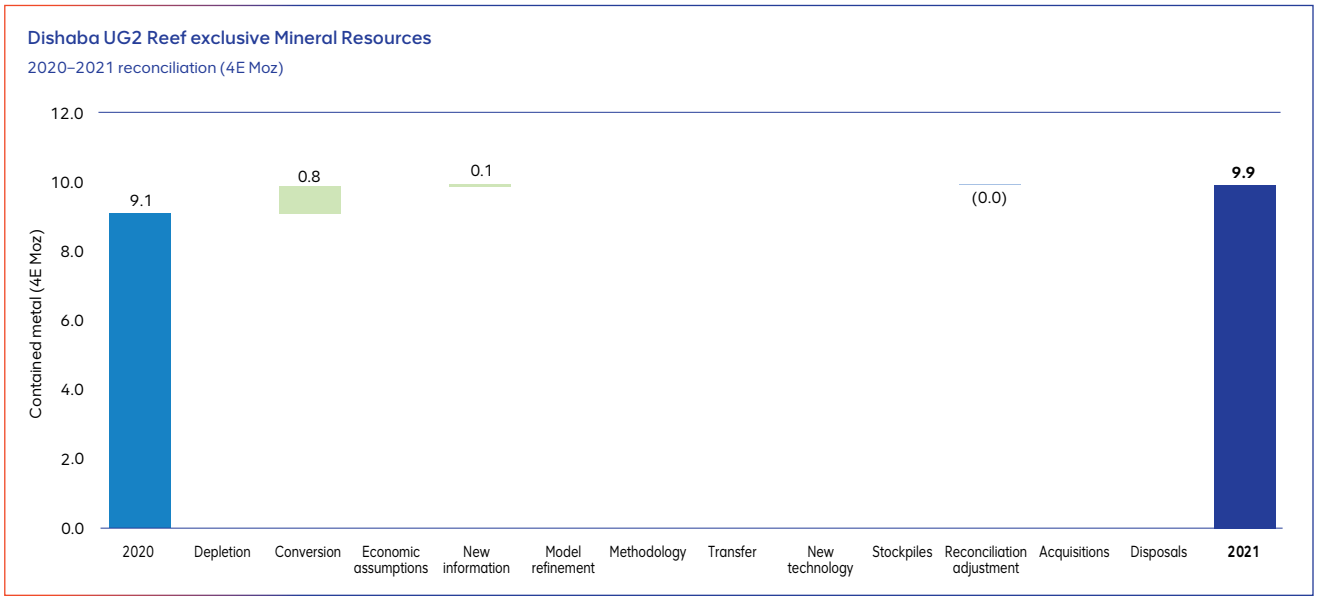
The Merensky Reef Mineral Resources 4E ounces increased due to reallocation of Ore Reserves to Mineral Resources following mine design optimisation and tail management (conversion). The increase was partially offset by a reduction due to updated geological and Mineral Resources models (new information).



Amandelbult complex (100%) continued

UG2 Reef exclusive Mineral Resources reconciliation

The UG2 Reef Mineral Resources 4E ounces increased due to the reallocation of Ore Reserves to Mineral Resources following mine design optimisation and tail management.

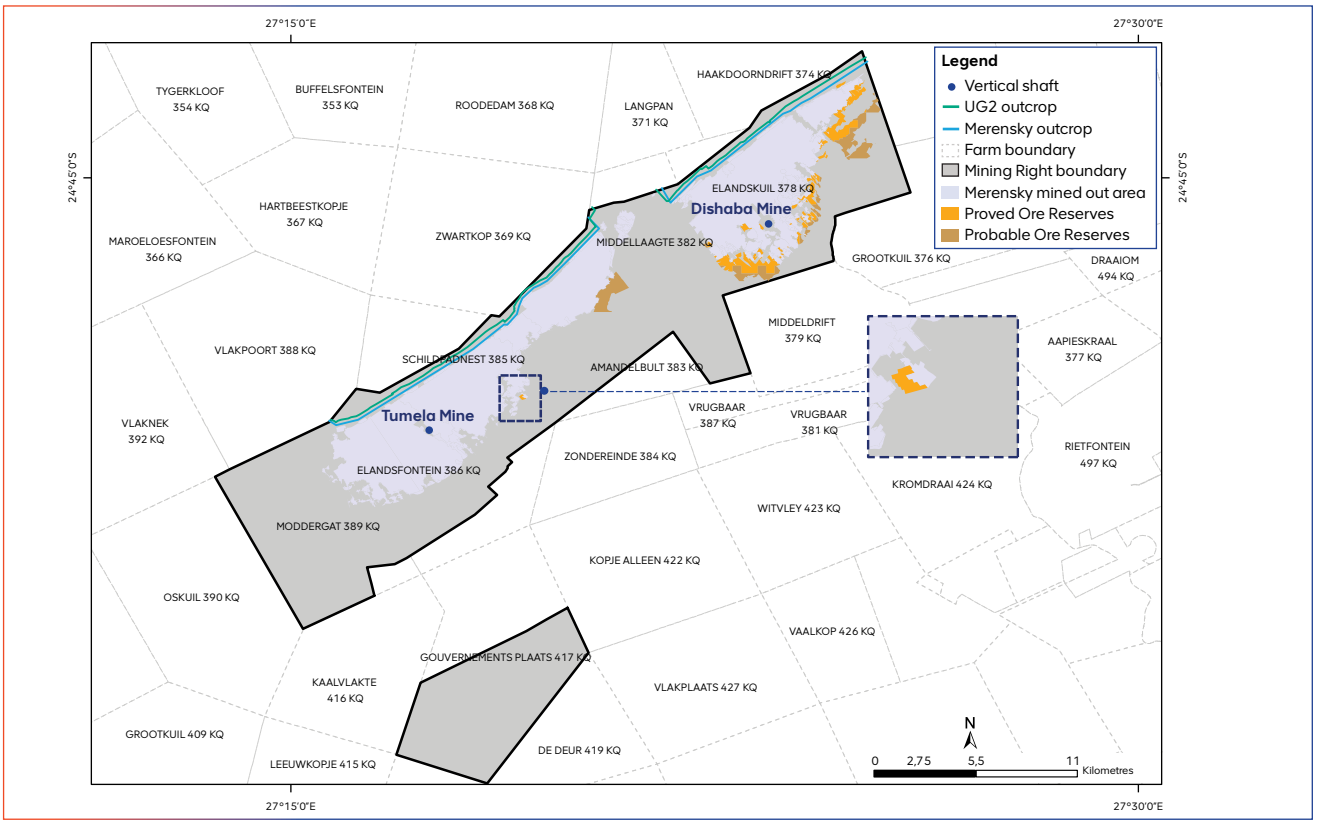


Inclusive Mineral Resource estimates

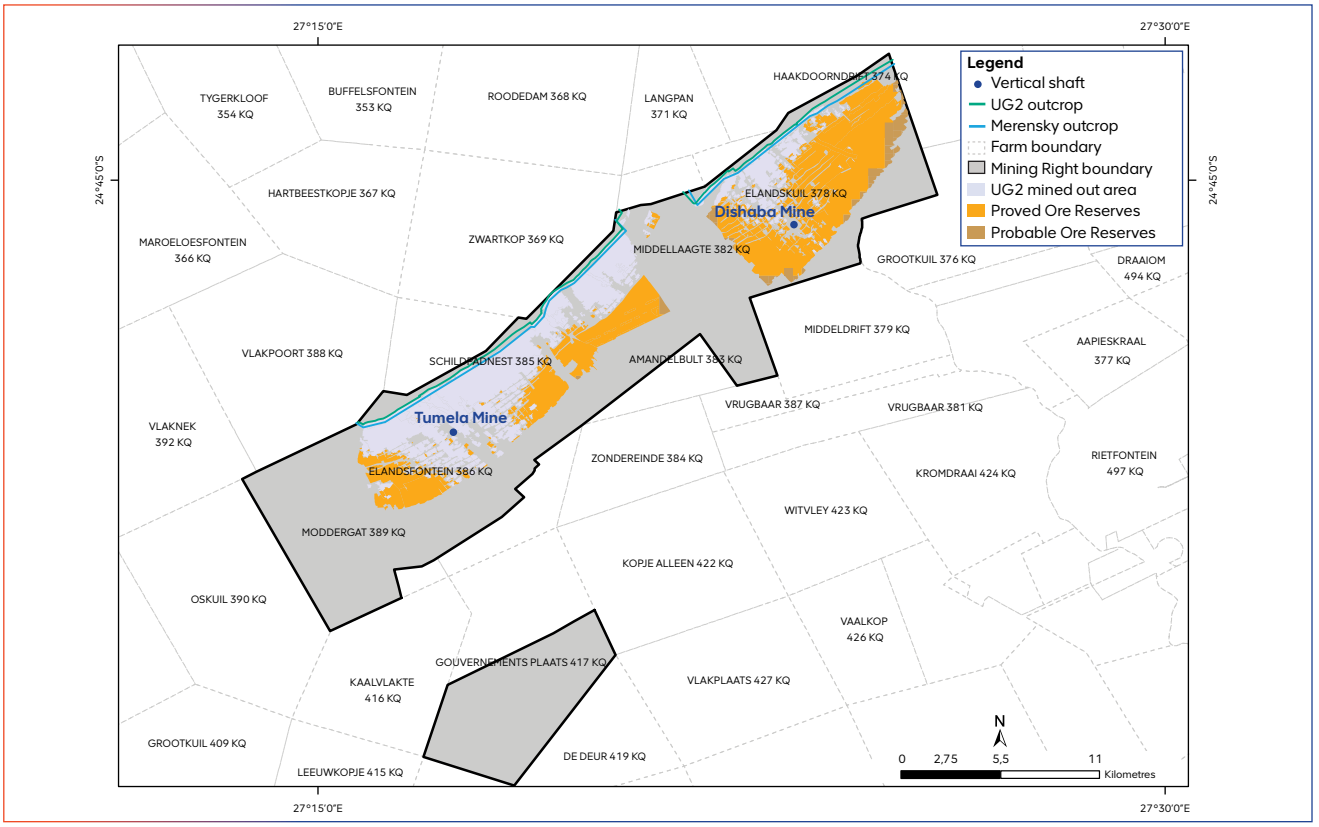
Amandelbult complex – Dishaba (100%)*	Classification	Mineral Resources Million tonnes (Mt) 2021	2020	Grade 4E g/t 2021	2020	Contained metal 4E tonnes 2021	2020	Contained metal 4E Moz 2021	2020
Merensky Reef	Measured	**15.0**	15.0	**6.97**	6.95	**105**	105	**3.4**	3.4
	Indicated	**14.7**	15.2	**6.56**	6.61	**96**	100	**3.1**	3.2
	Measured and Indicated	**29.7**	30.2	**6.76**	6.78	**201**	205	**6.5**	6.6
	Inferred	**12.6**	12.6	**6.03**	6.28	**76**	79	**2.4**	2.6
	Total	**42.3**	42.8	**6.54**	6.63	**277**	284	**8.9**	9.1
UG2 Reef	Measured	**88.3**	91.1	**5.32**	5.33	**469**	486	**15.1**	15.6
	Indicated	**31.8**	32.6	**5.67**	5.68	**180**	185	**5.8**	6.0
	Measured and Indicated	**120.1**	123.7	**5.41**	5.42	**649**	671	**20.9**	21.6
	Inferred	**9.2**	8.9	**5.50**	5.54	**50**	49	**1.6**	1.6
	Total	**129.2**	132.7	**5.42**	5.43	**699**	720	**22.5**	23.2

* The inclusive Measured Mineral Resources include low-tonnage open-cast Merensky Reef Mineral Resources of 0.1 4E Moz (0.6Mt at 6.36 4E g/t) and UG2 Reef Mineral Resources of 0.2 4E Moz (1.3Mt at 5.26 4E g/t).

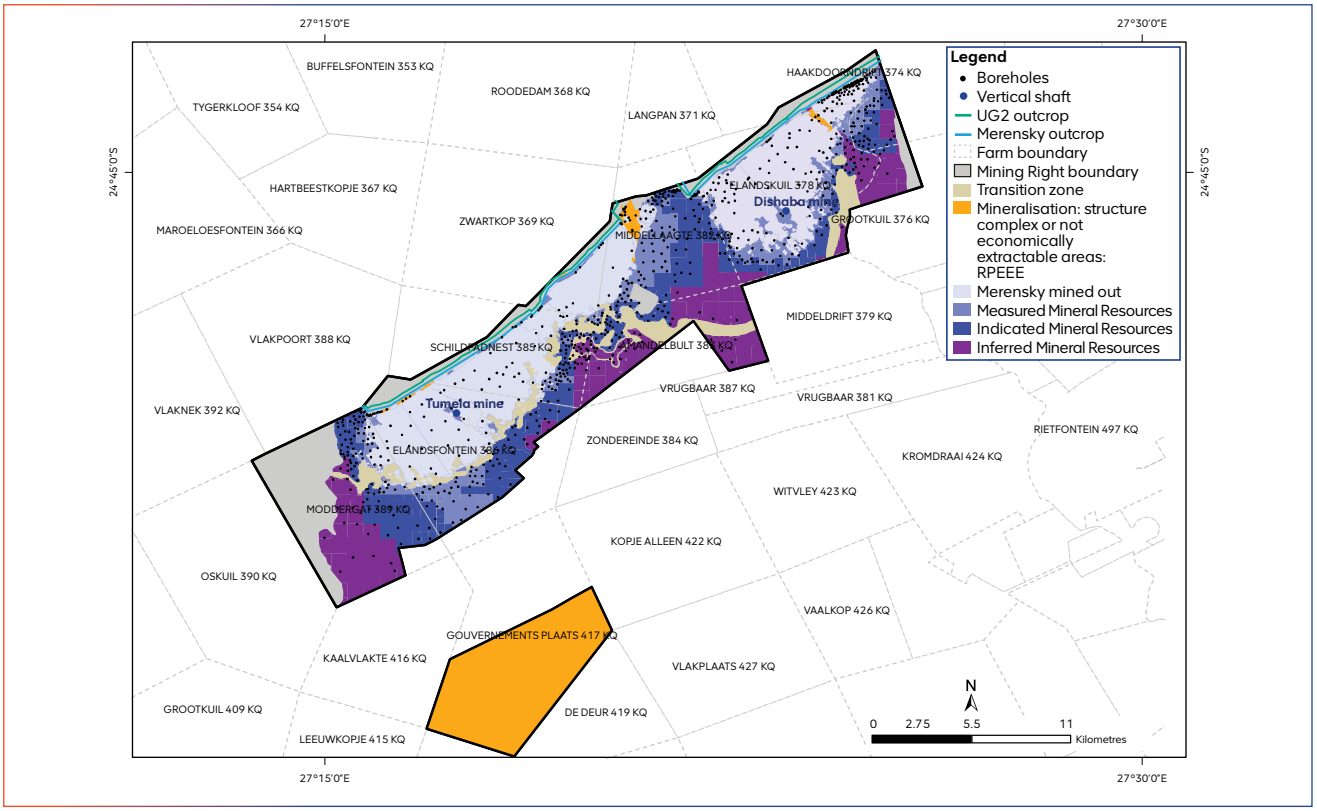
Amandelbult complex Merensky Reef Ore Reserves classification map



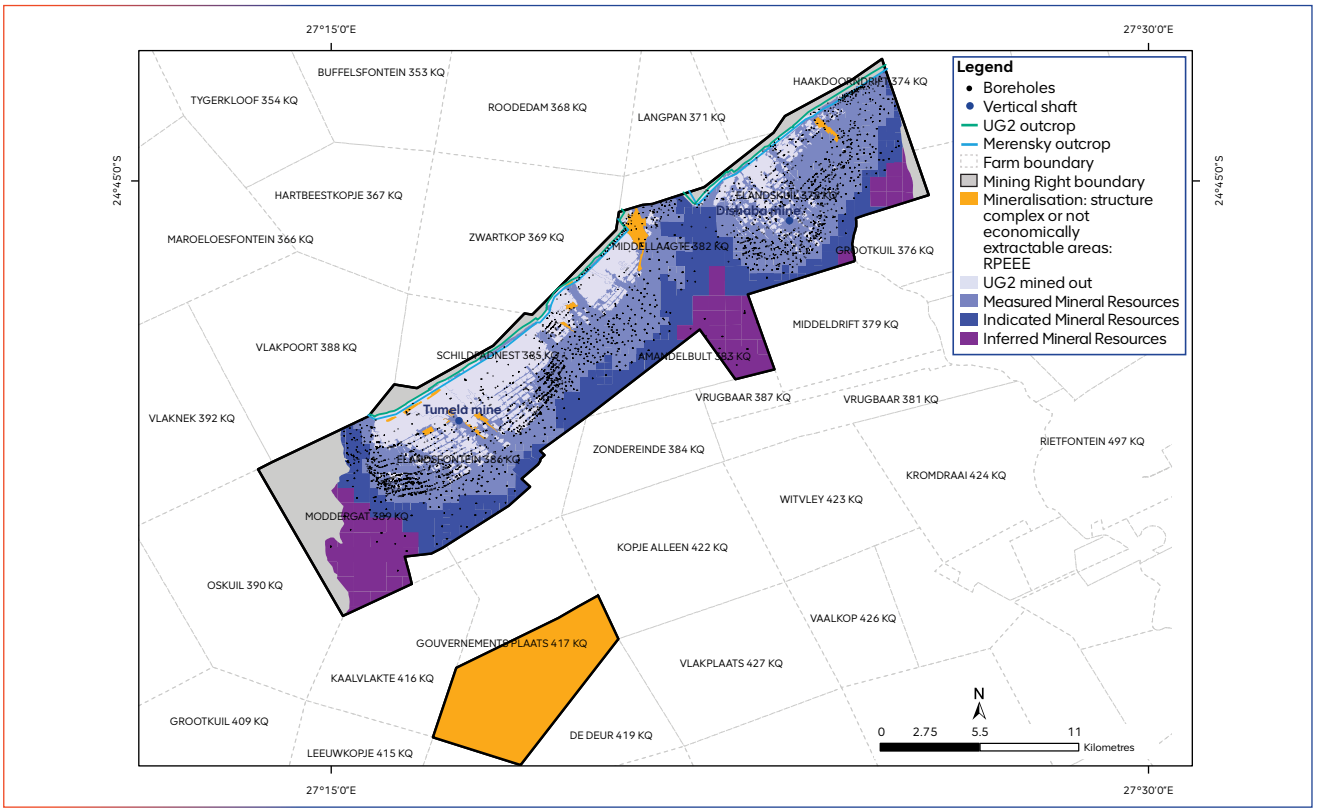
Amandelbult complex UG2 Reef Ore Reserves classification map



Amandelbult complex Merensky Reef Mineral Resources classification map



Amandelbult complex UG2 Reef Mineral Resources classification map



Amandelbult – Tumela exploration drilling.

Estimates and reconciliation – managed operations

as at 31 December 2021

Mototolo complex

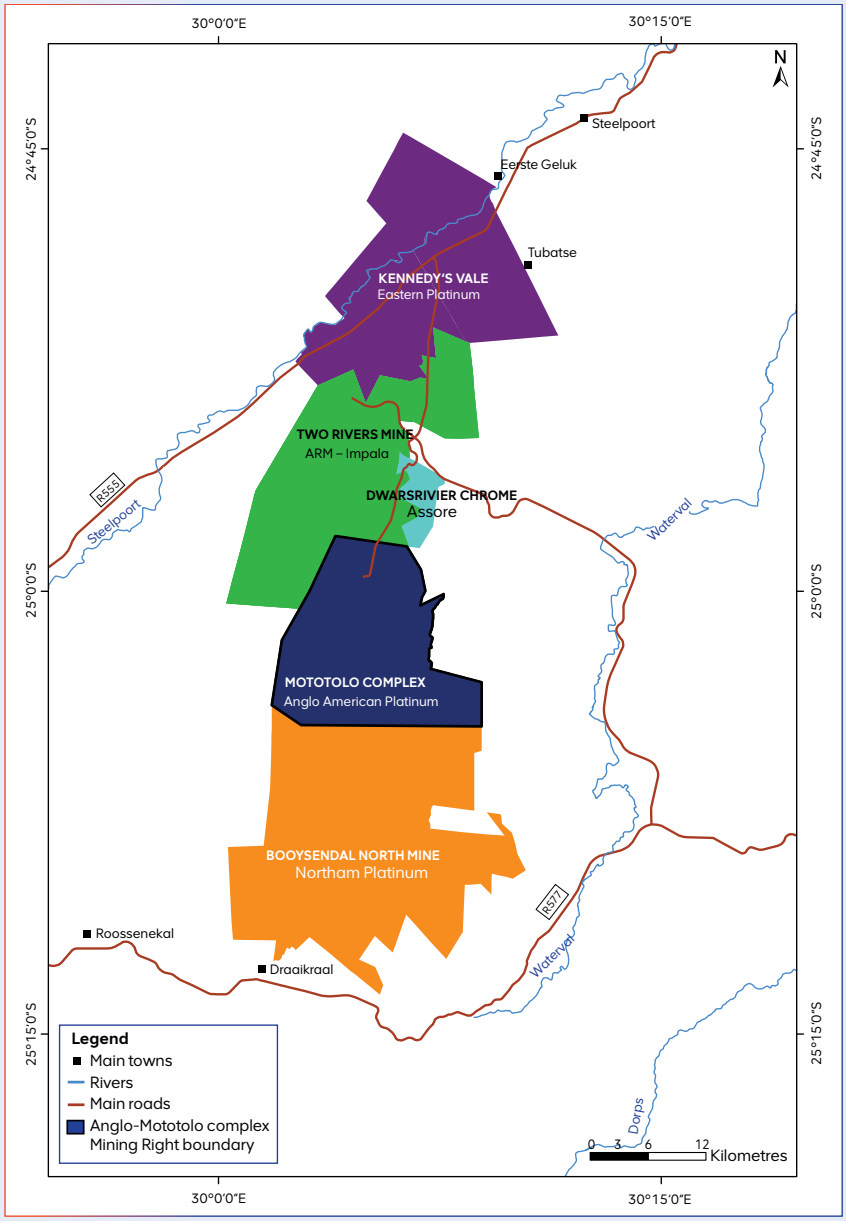
Anglo American Platinum Limited interest: 100%
Management structure: managed

Location

Located in Limpopo province, Mototolo complex is 30km west of the town of Burgersfort. Mototolo Mine and Der Brochen project have merged and now report as a consolidated operation/complex.

Property description

The consolidated operation has transformed into a new PGM complex following the approval for development of the Der Brochen south project and extension of the life-of-mine. The complex is focused on overall integration and performance improvement. The UG2 Reef is the primary reef being mined.



Competence

Kavita Mohanlal
Competent Person:
Mineral Resources
Role:
Principal resource estimation
Relevant qualifications:
BSc (hons) (geology), MSc (Mineral Resources management)
Professional organisation:
SACNASP, PrSciNat (400003/05)
Relevant experience:
18 years

Andrew Cloete
Competent Person:
Ore Reserves
Role:
Chief mine planner
Relevant qualifications:
Advanced mine survey and evaluation
Professional organisation:
IMSSA (2286/2021)
Relevant experience:
24 years

Brief history

The eastern limb of the Bushveld Complex has since the 1920s, 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. At the same time, 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 chromite and PGM on the Thorncliffe farm. At that time, Thorncliffe was viewed as a chromite mine and the PGM potential was disregarded. In 2002, drilling targeting the Merensky and UG2 reefs allowed for the preferential selection targets for these reefs to be determined.

In 2005, Anglo American Platinum and Xstrata (later acquired by Glencore), formed a 50:50 joint partnership, the Mototolo joint operation, and contributed individual portions of Mining Rights. Anglo American Platinum contributed Mining 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 production in June 2009.

In 2018, Anglo American Platinum acquired the 50% stake in Mototolo Mine from Glencore and minority shareholders. Following the 100% acquisition of Mototolo Mine and the subsequent transfer of Mining Rights to Anglo American Platinum, a section 102 application has been submitted to the Department of Mineral Resources and Energy to consolidate the Rights.

In 2020, Anglo American Platinum entered into a royalty mining agreement with Two Rivers Platinum Mine to access UG2 mining areas from the Mototolo complex Lebowa shaft to the north, adjacent to the Thorncliffe farm boundary.

Mineral Rights

The Der Brochen Mining Right covers an area of 9,628ha. Anglo American Platinum holds a converted Mining Right under DMRE reference LP 182 MR, valid from July 2010 to July 2040. A section 102 application submitted to the DMRE to consolidate the Mototolo and Der Brochen areas Mineral Rights, is expected to be concluded by the end of Q2 2022.

There are no known impediments to the current Rights.

Brief geological description

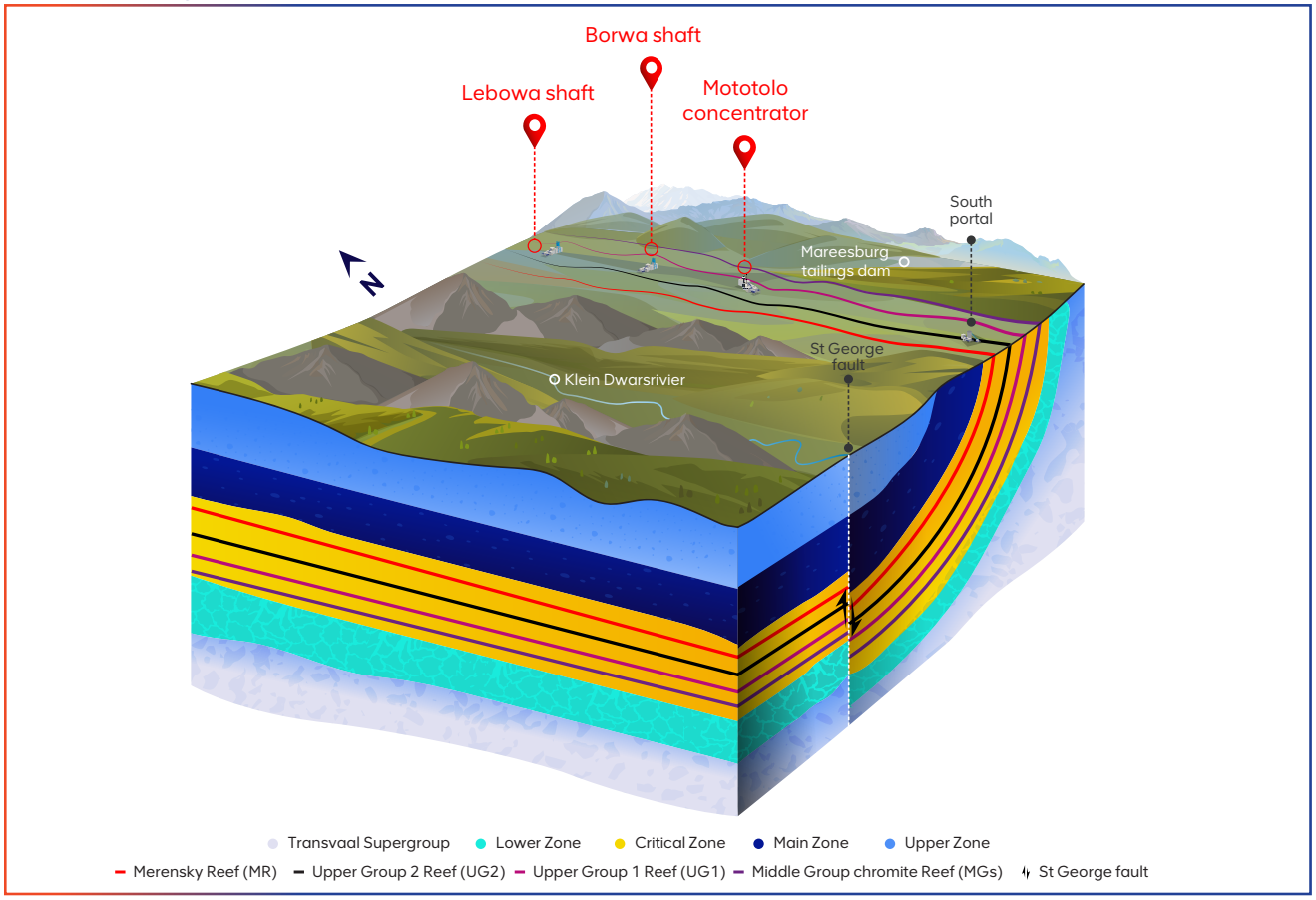
Mototolo Mine is in the eastern limb of the Bushveld Complex. In this area, the Merensky and UG2 reefs outcrops strike north to south over approximately 13km, dipping at an average 10° to the west. The UG2 normally comprises a main chromitite band with an average thickness 1.1m, overlain by three chromitite 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. Localised internal pyroxenite or anorthosite-rich layers can occur within the UG2 main chromitite band, creating areas of 'split-reef' facies. The vertical separation between the Merensky Reef and UG2 Reef horizons is approximately 170m.

The north/south trending St George fault traverses through the complex and represents a natural boundary that divides the complex into a 'shallow' eastern, and an upthrown 'deep' (offset of 30-60m from north to south) western portion. On average, a 80-300m wide corridor in the proximity of the fault including a highly fractured damage zone (interpreted from 3D seismic surveys), has been assigned a 100% geological loss.

The Helena pothole is located immediately south of Borwa shaft and represents an area of severe slumping and destructive potholing. Dykes are predominantly dolerite/diabase in composition and of Karoo age with little variation in strike directions and steep dips, with the Caracle dyke swarm traversing the Der Brochen south area. Whilst the main structural trend is north north-east/south south-west, most small-scale faulting in the mining operations is trending north-west/south-east. A regional depression is currently interpreted west of the St George fault on Richmond farm.

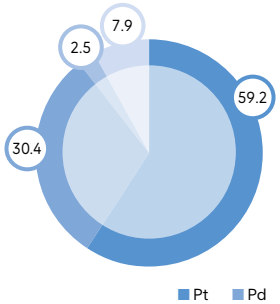
For a description of the Mineral Resource estimation and classification processes see page 23 of this report

Schematic diagram of the Bushveld Complex in Mototolo complex area (eastern limb)

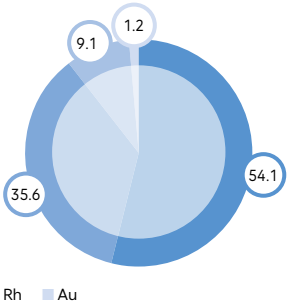


Schematic drawing compiled by Stephan van As (Mototolo geology team), not to scale

Mototolo complex
Merensky Reef 4E prill split
(%)

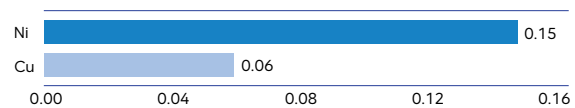


Mototolo complex
UG2 Reef 4E prill split
(%)

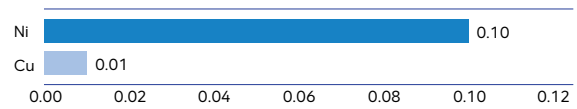


UG2 Reef Chromite grade : **19.9%**

Mototolo complex Merensky Reef base metal grades
(%)



Mototolo complex UG2 Reef base metal grades
(%)



Reasonable prospects of eventual economic extraction

The following factors were considered when determining reasonable prospects of eventual economic extraction of the declared Mineral Resources:

- Legal: Mototolo Mine adheres to all regulatory requirements and has requisite permits and licences to mine.
- Geology: The latest updated geological and Mineral Resource models underpin the RPEEE considerations applied in the context of Mineral Resources declaration.
- Mining method: The RPEEE considerations are based on the current mining methods of underground mechanised bord-and-pillar.
- Economics: Using current global assumptions (prices and costs), current mining methods are known to be viable at depth when considering the current operation and adjacent mining operations.
- Metallurgical: Sufficient geo-metallurgical and mineralogical test work has been carried out for reefs declared and recovery potentials considered. The mine has sufficient plant data to predict recovery potential.
- Other factors such as marketing, environmental, social and infrastructure are adequately assessed in the various studies within the mine plan.

Mining method

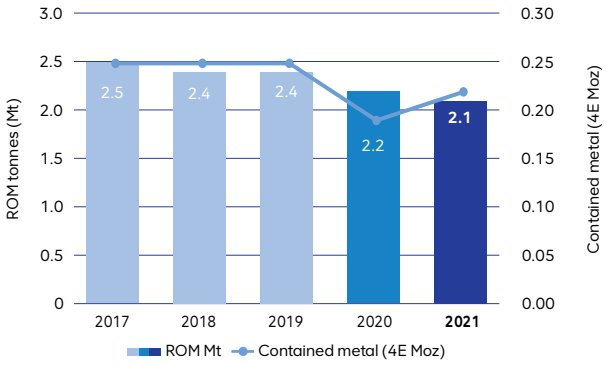
Mototolo complex is a mechanised, trackless, bord-and-pillar underground operation which extracts the UG2 Reef from near outcrop, extending to over 450m below surface. The low profile (LP) underground mining equipment utilised is designed to exploit narrow reef orebodies (>1.8m width) with dip less than 22°. It maximises reef extraction by placing the primary development (main infrastructure) on reef. Access to the orebody is by means of a three-barrel decline system. All the development is done on-reef at an apparent angle of 9°. Strike development provides machine access, rock handling, as well as all the necessary services and infrastructure to the panels. The strike development incorporates one transport drive and one belt drive connected by laterals every 75m. The ledging starts off with developing the panels on strike from the decline cluster, with the ledging layout consisting of 16 panels on the western and eastern sides respectively.

Current mine infrastructure consists of two decline shafts, Lebowa and Borwa, a concentrator and a chromite processing plant The ore is extracted from the two shafts and transported by overland conveyor to the concentrator.

For a description of the Ore Reserve estimation and classification processes see pages 28–30 of this report

	Units	Merensky	UG2
Mineral Resource assumptions			
Average geological loss	%	22	18
Minimum Resource cut width	cm	90	180
Average density	g/cm^3	3.3	3.8
Ore Reserve Modifying Factors			
Mining loss factor	%		0.45
Mining dilution	%		10.8
Mine extraction factor	%		58 – 85
Planned stoping width	cm		201
4E concentrator recoveries	%		84
Mine call factor	%		96

Mototolo UG2 Reef production history (ROM)*



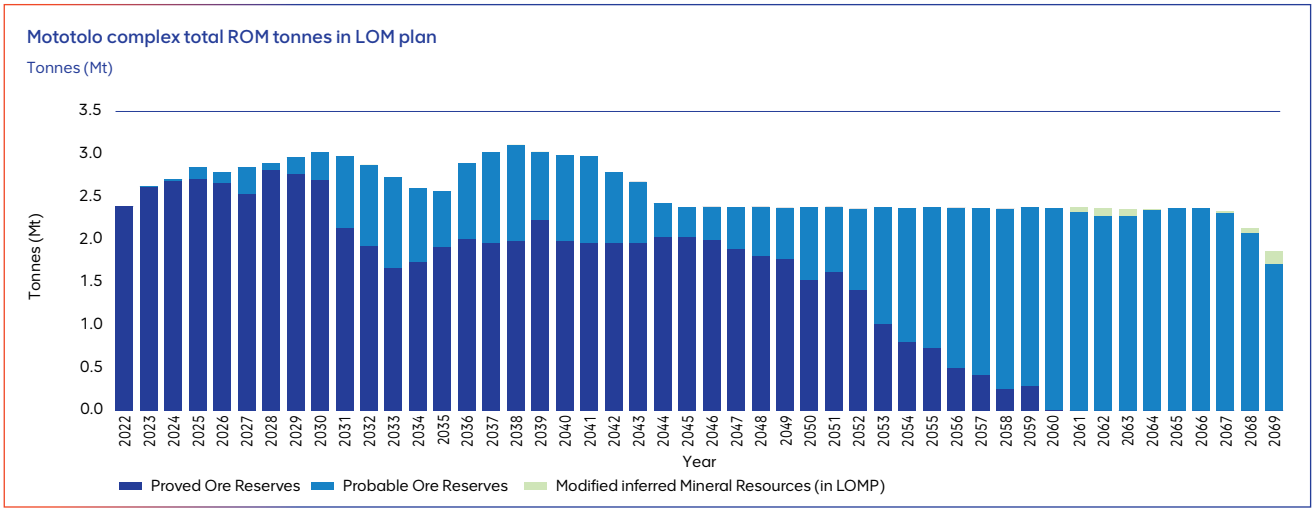
* 2021 production figures exclude production from the Two Rivers Mine royalty mining area.

For additional details on the 2021 production information see the mining and concentrating operations review section, pages 112–114 of integrated annual report

Mototolo complex life-of-mine schedule

The life-of-mine schedule for Mototolo indicates the current UG2 Reef production planned in the approved life-of-mine plan and includes the projects that have passed the necessary approvals that underpin the Ore Reserve declaration. The currently anticipated mining is for 48 years and exceeds the current Mining Right expiry date of 2040 (Reserve life of 19 years). 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 modified Inferred Mineral Resources in life-of-mine plan are excluded from Ore Reserves declaration and assessments have indicated that the exclusion of these Inferred Mineral Resources will have no impact on the current life-of-mine.

Mototolo complex (100%) continued

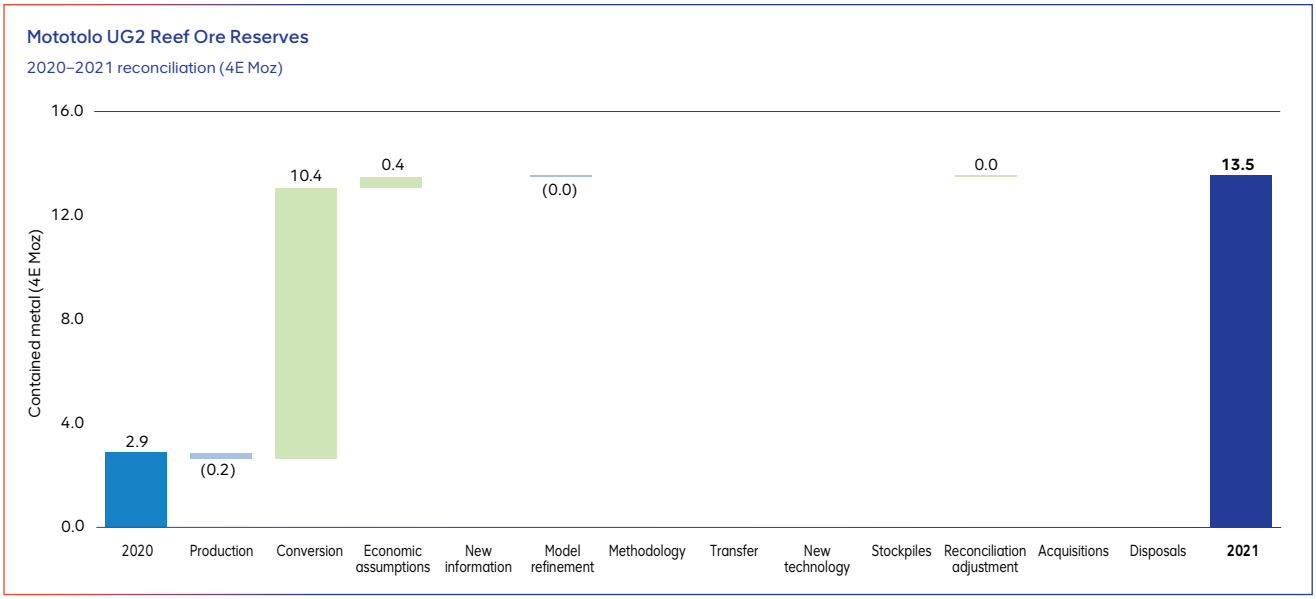


Ore Reserve estimates

Mototolo complex – (100%)	Reserve life	Classification	Ore Reserves (ROM) Million tonnes (Mt) 2021	2020	Grade 4E g/t 2021	2020	Contained metal 4E tonnes 2021	2020	Contained metal 4E Moz 2021	2020
UG2 Reef	>19	Proved	**68.6**	18.2	**3.56**	3.46	**244**	63	**7.9**	2.0
		Probable	**53.1**	7.5	**3.32**	3.50	**176**	26	**5.7**	0.8
		Total	**121.7**	25.7	**3.45**	3.47	**420**	89	**13.5**	2.9

UG2 Reef Ore Reserves reconciliation

The UG2 Ore Reserves 4E content increased substantially following the conversion of Mineral Resources to Ore Reserves in the Der Brochen south project area after the approval of the feasibility study.



* Production figures exclude production from the Two Rivers Mine royalty mining area.

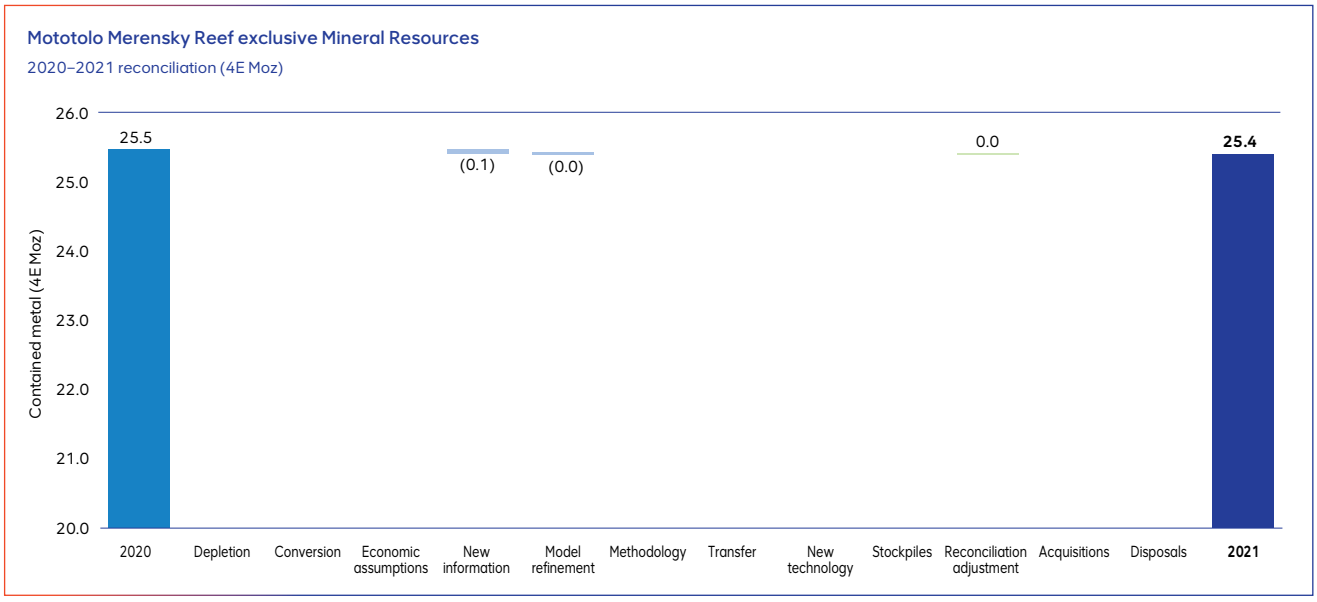
For the details of the approval of the Der Brochen south project, see page 8 of this report.

Exclusive Mineral Resource estimates

Mototolo complex – (100%)	Classification	Mineral Resources Million tonnes (Mt) 2021	2020	Grade 4E g/t 2021	2020	Contained metal 4E tonnes 2021	2020	Contained metal 4E Moz 2021	2020
Merensky Reef	Measured	**41.3**	40.9	**4.75**	4.75	**196**	194	**6.3**	6.3
	Indicated	**57.4**	58.2	**4.55**	4.54	**261**	264	**8.4**	8.5
	Measured and Indicated	**98.7**	99.1	**4.63**	4.63	**457**	458	**14.7**	14.7
	Inferred	**73.7**	73.7	**4.51**	4.52	**332**	333	**10.7**	10.7
	Total	**172.4**	172.9	**4.58**	4.58	**789**	791	**25.4**	25.5
UG2 Reef	Measured	**40.8**	108.0	**3.85**	3.99	**157**	431	**5.1**	13.9
	Indicated	**68.3**	136.8	**3.97**	3.95	**271**	540	**8.7**	17.4
	Measured and Indicated	**109.1**	244.8	**3.93**	3.97	**428**	971	**13.8**	31.2
	Inferred	**124.0**	124.4	**4.02**	4.02	**499**	500	**16.0**	16.1
	Total	**233.1**	369.3	**3.98**	3.99	**927**	1,471	**29.8**	47.3

Merensky Reef exclusive Mineral Resources reconciliation

The Merensky Reef Mineral Resource 4E content marginally decreased resulting from an update to the geological losses being applied (new information).



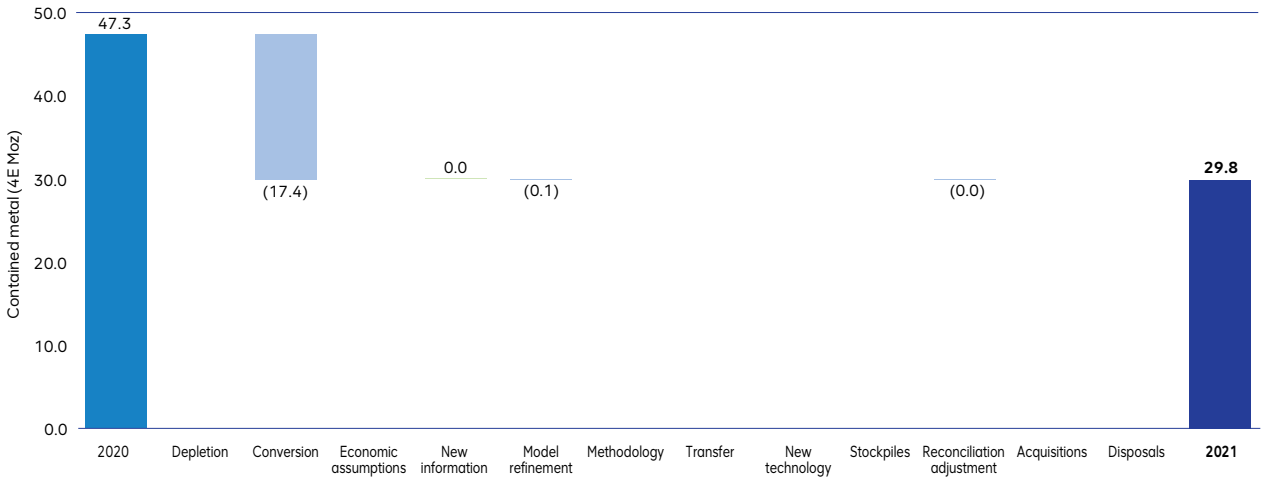
Mototolo complex (100%) continued

UG2 Reef exclusive Mineral Resources reconciliation

The UG2 Mineral Resources 4E content decreased substantially following the conversion of Mineral Resources to Ore Reserves in the Der Brochen south project area following the approval of the feasibility study.

Mototolo UG2 Reef exclusive Mineral Resources

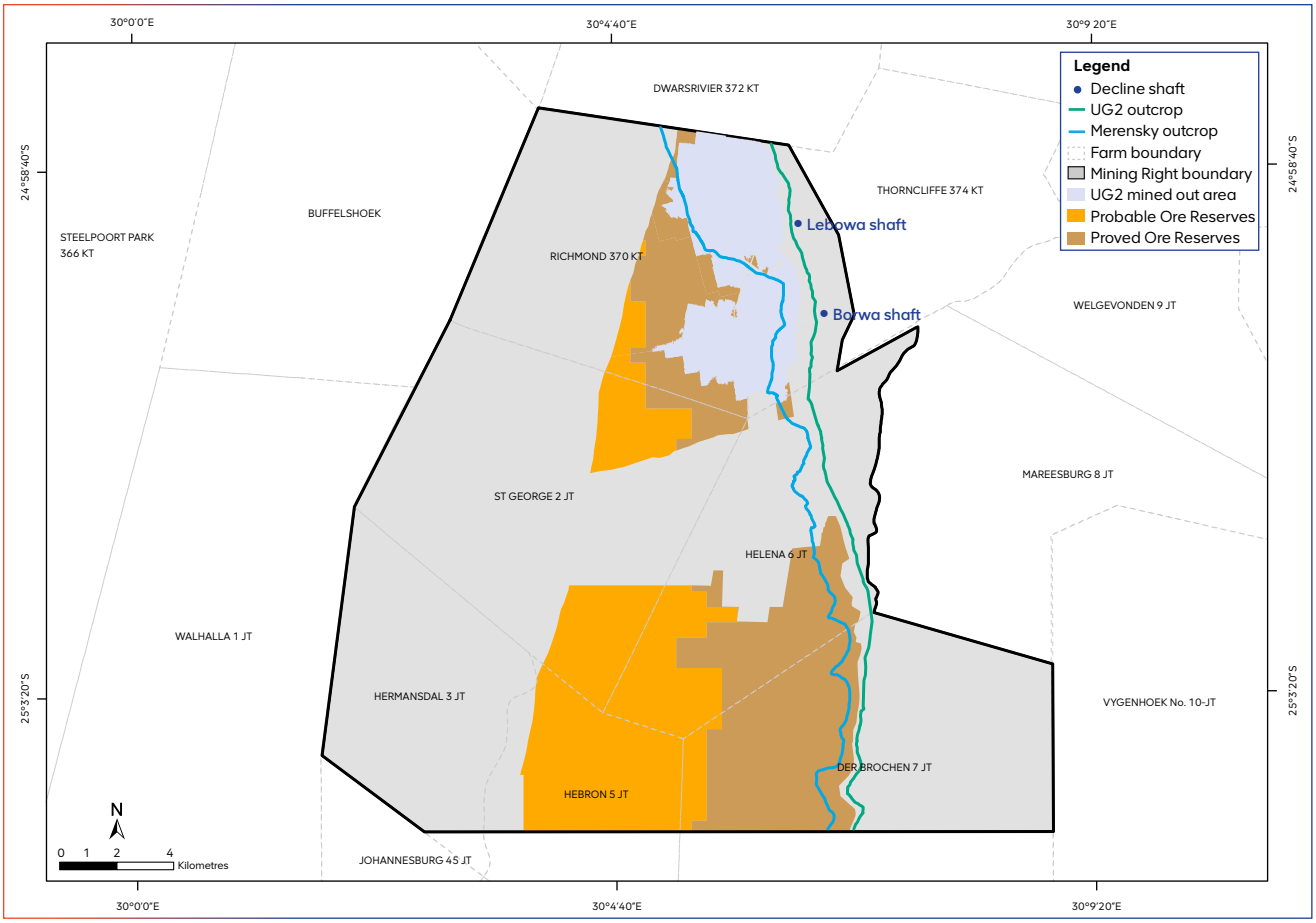
2020–2021 reconciliation (4E Moz)



Inclusive Mineral Resource estimates

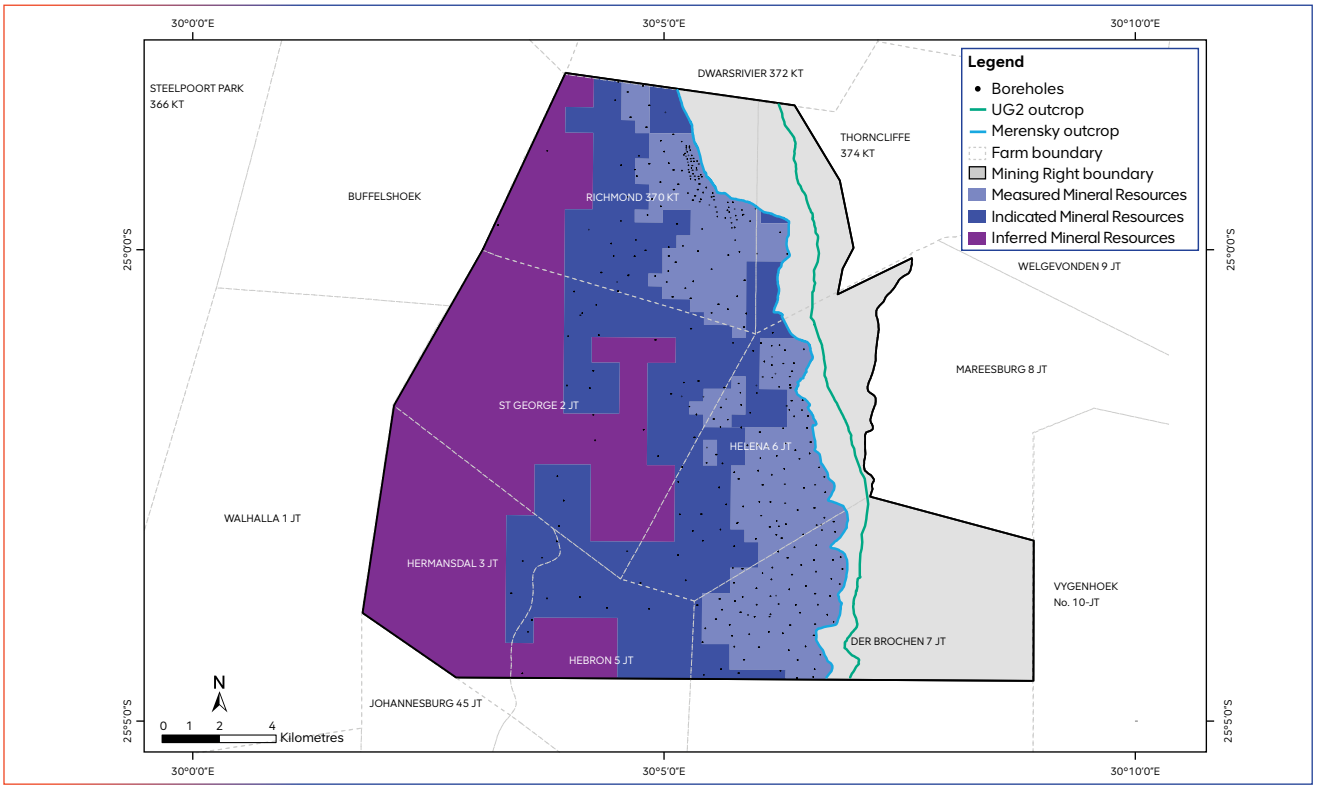
Mototolo complex – (100%)	Classification	Mineral Resources Million tonnes (Mt) 2021	2020	Grade 4E g/t 2021	2020	Contained metal 4E tonnes 2021	2020	Contained metal 4E Moz 2021	2020
Merensky Reef	Measured	**41.3**	40.9	**4.75**	4.75	**196**	194	**6.3**	6.3
	Indicated	**57.4**	58.2	**4.55**	4.54	**261**	264	**8.4**	8.5
	Measured and Indicated	**98.7**	99.1	**4.63**	4.63	**457**	458	**14.7**	14.7
	Inferred	**73.7**	73.7	**4.51**	4.52	**332**	333	**10.7**	10.7
	Total	**172.4**	172.9	**4.58**	4.58	**789**	791	**25.4**	25.5
UG2 Reef	Measured	**131.2**	130.5	**3.95**	3.99	**518**	521	**16.7**	16.8
	Indicated	**146.3**	147.6	**3.96**	3.96	**580**	585	**18.7**	18.8
	Measured and Indicated	**277.5**	278.2	**3.96**	3.97	**1,098**	1,106	**35.3**	35.6
	Inferred	**124.0**	124.4	**4.02**	4.02	**499**	500	**16.0**	16.1
	Total	**401.5**	402.6	**3.98**	3.99	**1,597**	1,606	**51.3**	51.7

Mototolo complex UG2 Reef Ore Reserves classification map

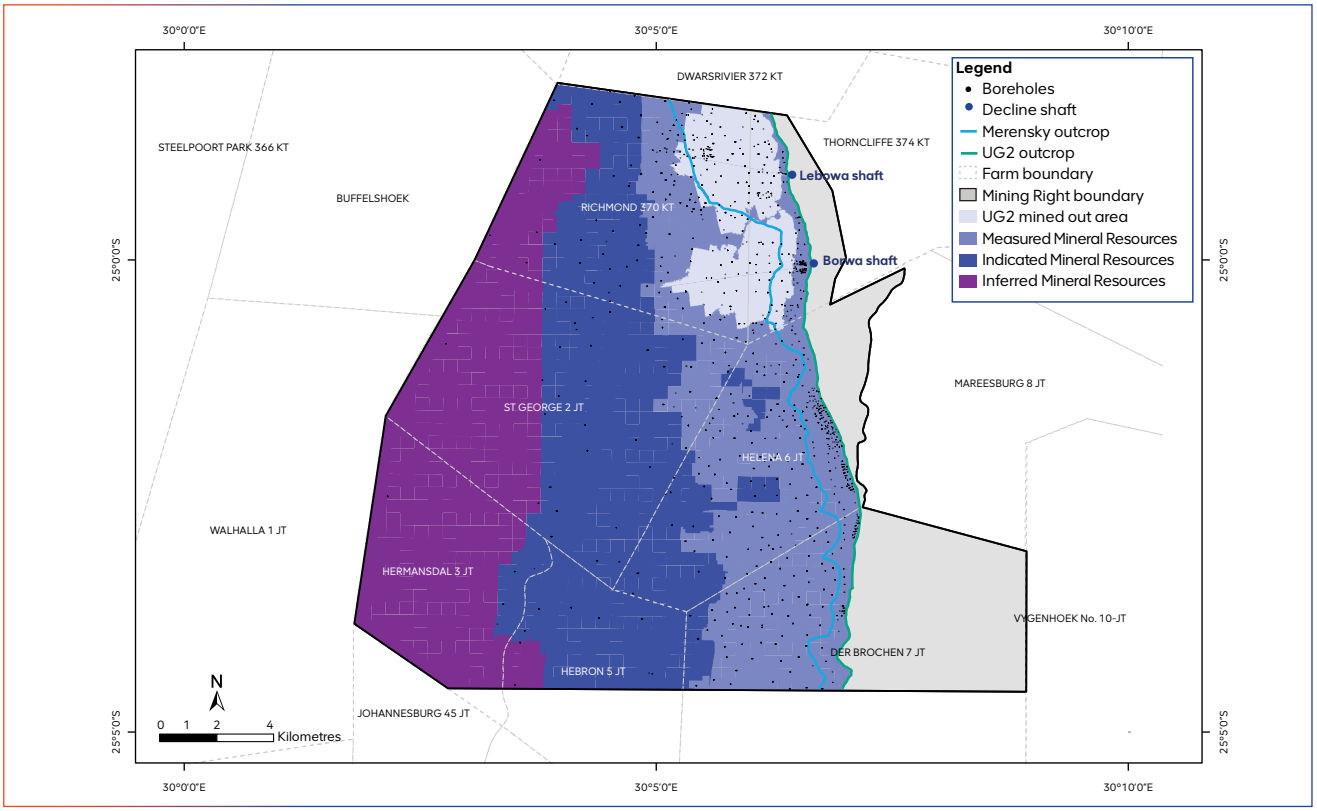


Mototolo Borwa shaft – Boom drill in operation.

Mototolo complex Merensky Reef Mineral Resources classification map



Mototolo complex UG2 Reef Mineral Resources classification map



Estimates and reconciliation – managed operations

as at 31 December 2021

Unki Mine

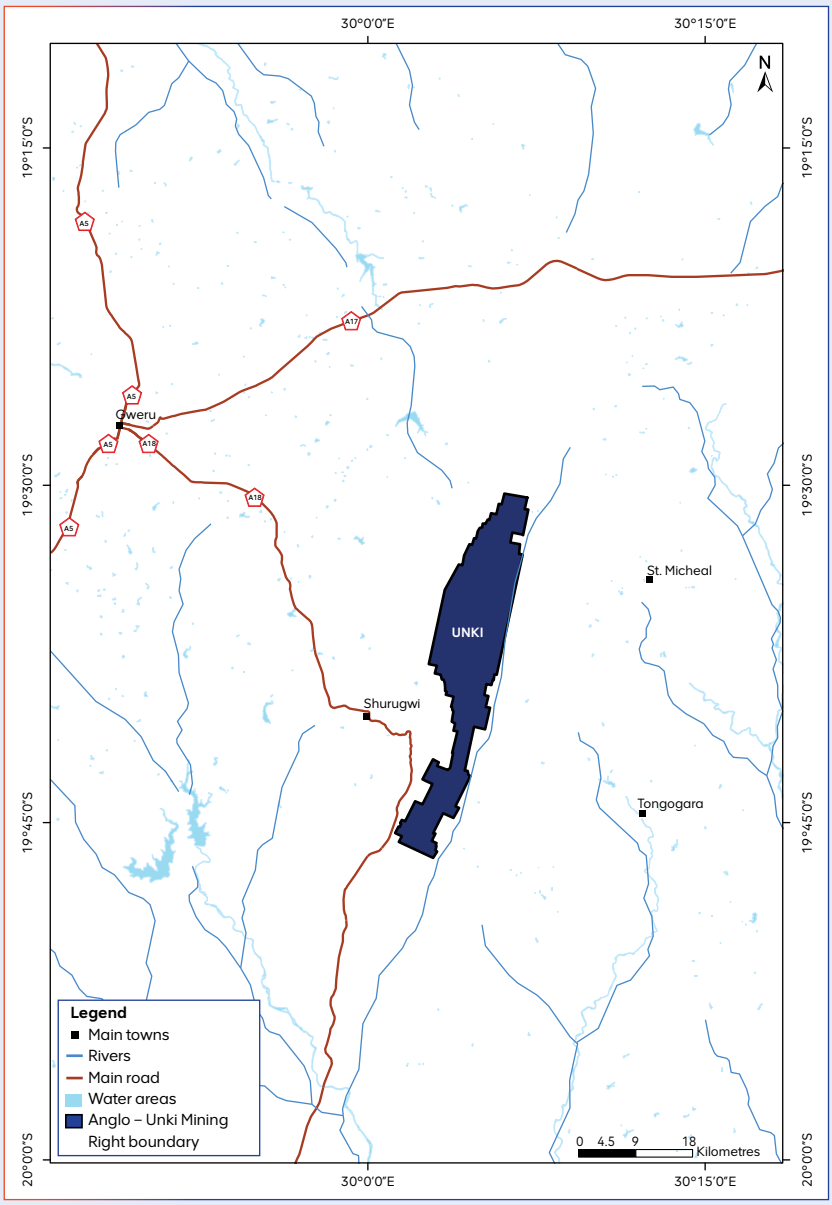
Anglo American Platinum Limited interest: 100%
Management structure: managed

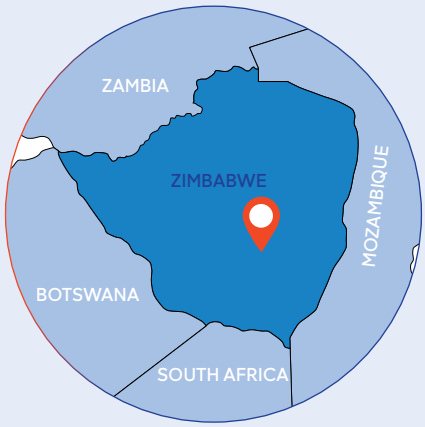
Location

Unki Mine is located on the Great Dyke in Zimbabwe, 60km south-east of the town of Gweru and 15km north-east of Shurugwi.

Property description

The Unki Special Mining Lease (SML) lies in the Selukwe subchamber of the Great Dyke. The mine exploits the Main Sulphide Zone (MSZ). The mine is at steady-state production, with long-dated strategic growth potential.





Competence

Kavita Mohanlal
Competent Person:
Mineral Resources
Role:
Principal resource estimation
Relevant qualifications:
BSc (hons) (geology), MSc (Mineral Resources management)
Professional organisation:
SACNASP, PrSciNat (400003/05)
Relevant experience:
18 years

Clever Dick
Competent Person:
Ore Reserves
Role:
Chief surveyor
Relevant qualification:
Mine surveyors certificate of competency (no 159)
Professional organisation:
SAIMM, member (705453)
Relevant experience:
18 years

Brief history

Exploration for PGM 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 Unki Mine began in 2006 after the 2005 feasibility study. Unki Mine ramped production to planned output of 120,000 tonnes per month in late 2011 and is investigating opportunities to increase production twofold by 2026.

More recently, the KV-SR Claims, which were previously reported at Unki Mine have been sold to Mimosa Platinum Mine.

Mineral Rights

The current Mining Lease 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 Mining Lease.

Brief geological description

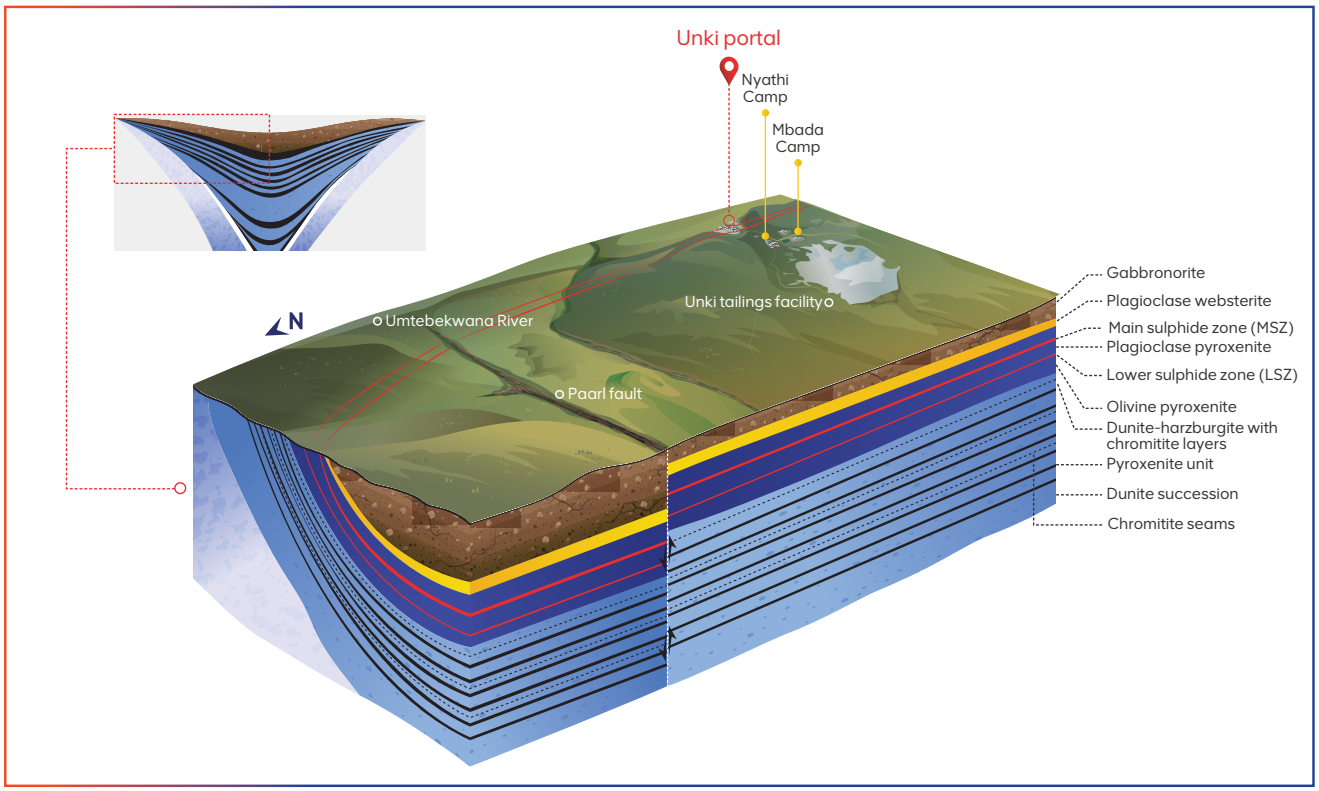
Unki Mine is located in the Selukwe subchamber of the Great Dyke in Zimbabwe. In transverse section, the subchamber is synclinal in shape, with essentially the same lithological succession being exposed on both sides of the longitudinal axis. The general dip decreases from outcrops to the central area varying from 14˚ to 0˚. Within the Special Mining Lease, the intrusion strikes north north-east/south south-west and extends about 26km.

The PGM and associated base metal mineralisation are developed within the uppermost pyroxenite horizon, the Main Sulphide Zone (MSZ). The main rock types are gabbronorites, websterites and pyroxenites of the mafic and ultramafic succession. Based on geochemistry, the MSZ has two distinguishable subzones – the base metal subzone, which is dominated by nickel and copper, as well as the PGM subzone. The transition from the upper zone to lower zone is marked by a reduction in iron-nickel-copper sulphides disseminated in the pyroxenite.

The MSZ is affected by structural disturbances such as faults, xenoliths and replacement pegmatites. The two most prominent faults are the Paarl and Footwall faults. Paarl fault is a transverse, steeply dipping fault in the north of the mine. The magnitude of its displacement is just over 100m. The Footwall fault occurs over a localised area in the eastern section of the mine at an average stratigraphic distance of 1.6m below the base of the MSZ.

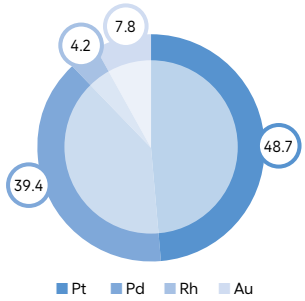
For a description of the Mineral Resource estimation and classification processes see page 23 of this report

Schematic diagram of the Great Dyke in the Unki Mine area

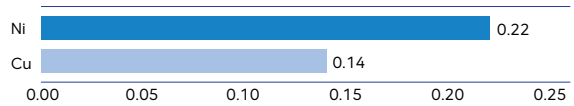


Schematic drawing compiled by Melusi Hlambelo (Unki geology team), not to scale

Unki MSZ 4E prill split
(%)



Unki MSZ base metal grades
(%)



Reasonable prospects of eventual economic extraction

The following factors were considered when determining reasonable prospects of eventual economic extraction of the declared Mineral Resources:

- Legal: Unki Mine adheres to all regulatory requirements and has requisite permits and licences to mine
- Geology: The latest updated geological and Mineral Resource models underpin the RPEEE considerations applied in the context of Mineral Resources declaration
- Mining method: The RPEEE considerations are based on the current mining methods of underground mechanised bord-and-pillar
- Economics: Using the current global assumptions (prices and costs), the current mining method is known to be viable at the deepest point of the orebody
- Metallurgical: Sufficient geo-metallurgical and mineralogical test work has been carried out for the reef declared and recovery potentials considered. The mine has sufficient plant data to predict recovery potential
- Other factors such as marketing, environmental, social and infrastructure are adequately assessed in the various studies within the mine plan.

	Units	MSZ
Mineral Resource assumptions		
Average geological loss	%	7
Minimum Resource cut width	cm	180/120*
Average density	g/cm^3	3.2
Ore Reserve Modifying Factors		
Mining loss factor	%	3
Mining dilution	%	12
Mine extraction factor	%	80 – 83
Planned stoping width	cm	200
4E concentrator recoveries	%	82
Mine call factor	%	95

* 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.

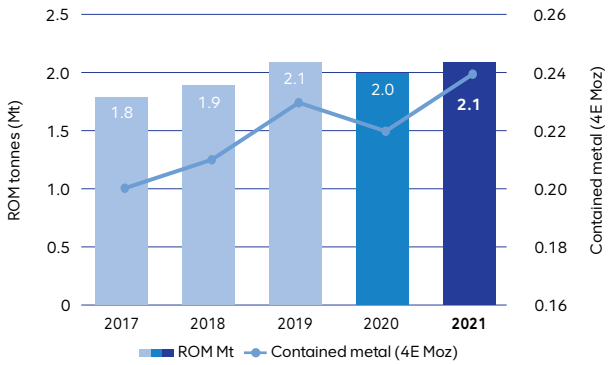
Mining method and operational infrastructure

Unki Mine is a mechanised, trackless, bord-and-pillar underground operation. Minimal development is required to prepare for mining. Development is often on-reef and comprises roadways for ore transport and travelling ways for mine personnel. Excavation of roadways is combined with ore production. Mined-out stopes serve as transport routes. Mobile mechanised mining equipment is used at Unki Mine. A twin-decline shaft system provides access to underground workings for employees and material, as well as ore conveyance. Both shafts are now 2,822m from the portal on surface. Currently there are 16 established mining sections with two additional sections planned for 2022. The equipped sections 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.

For a description of the Ore Reserves estimation and classification processes see pages 28–30 of this report

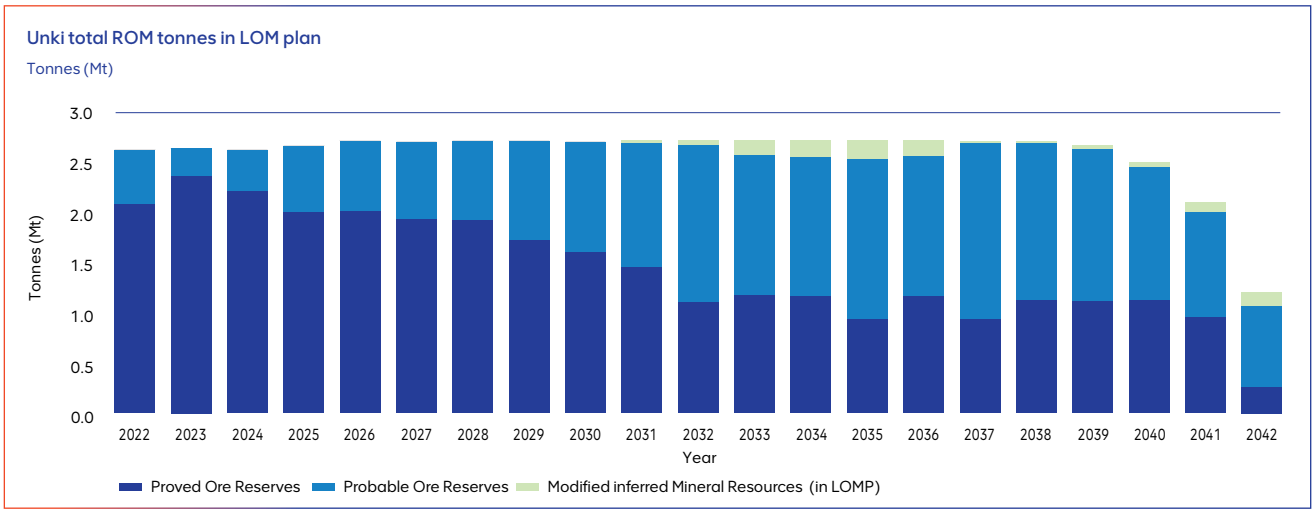
Unki MSZ Reef production history (ROM)



For additional details on the 2021 production information see the mining and concentrating operations review section, pages 115–117 of integrated annual report

Unki life-of-mine schedule

The life-of-mine schedule for Unki indicates the current MSZ production planned in the approved life-of-mine plan and includes projects that have passed the necessary approvals that underpin the Ore Reserve declaration. The currently anticipated mining is for 21 years and is within the Special Mining Lease conditions. The modified Inferred Mineral Resources in life-of-mine plan are excluded from Ore Reserves declaration and assessments have indicated that the exclusion of these Inferred Mineral Resources will have no impact on the current life-of-mine.

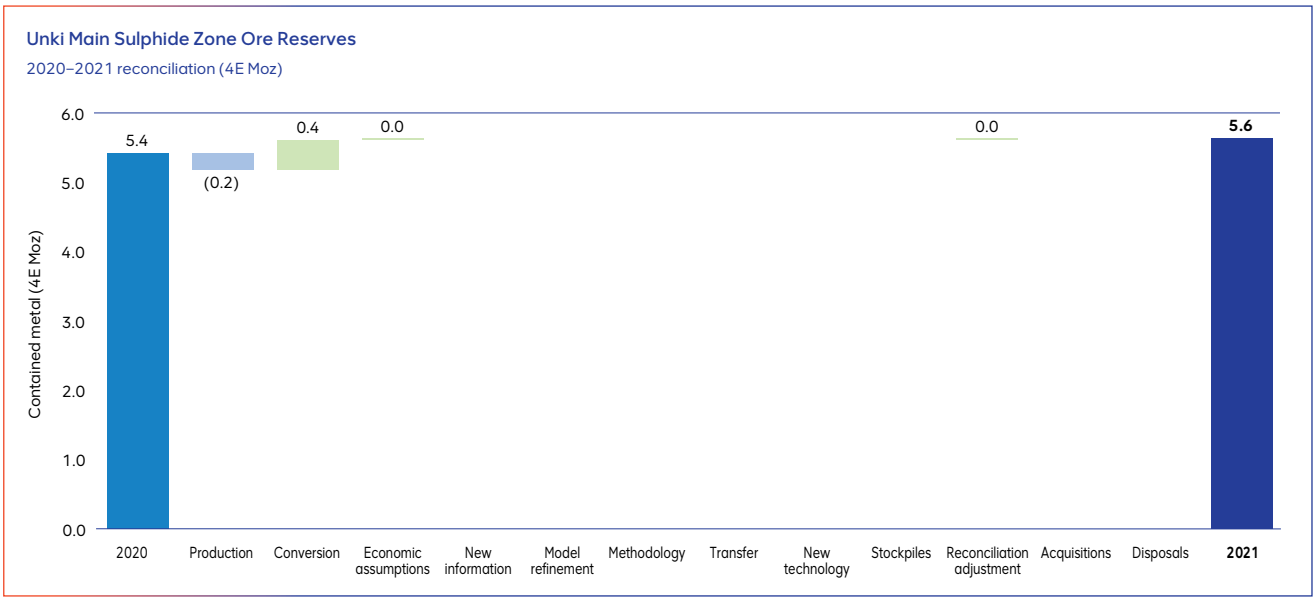


Ore Reserves estimates

			Mineral Resources Million tonnes (Mt)		Grade 4E g/t		Contained metal 4E tonnes		Contained metal 4E Moz	
Unki Mine (100%)	**Reserve life**	**Classification**	**2021**	2020	**2021**	2020	**2021**	2020	**2021**	2020
MSZ	21	Proved	**30.3**	24.3	**3.27**	3.33	**99**	81	**3.2**	2.6
		Probable	**22.8**	26.7	**3.33**	3.28	**76**	87	**2.4**	2.8
		Total	**53.1**	51.0	**3.30**	3.30	**175**	168	**5.6**	5.4

MSZ Ore Reserves reconciliation

The MSZ Ore Reserves 4E ounces increased due to conversion of the upper and southern sections of the mine from Mineral Resources to Ore Reserves as well as additional on-reef development in the life-of-mine footprint area.

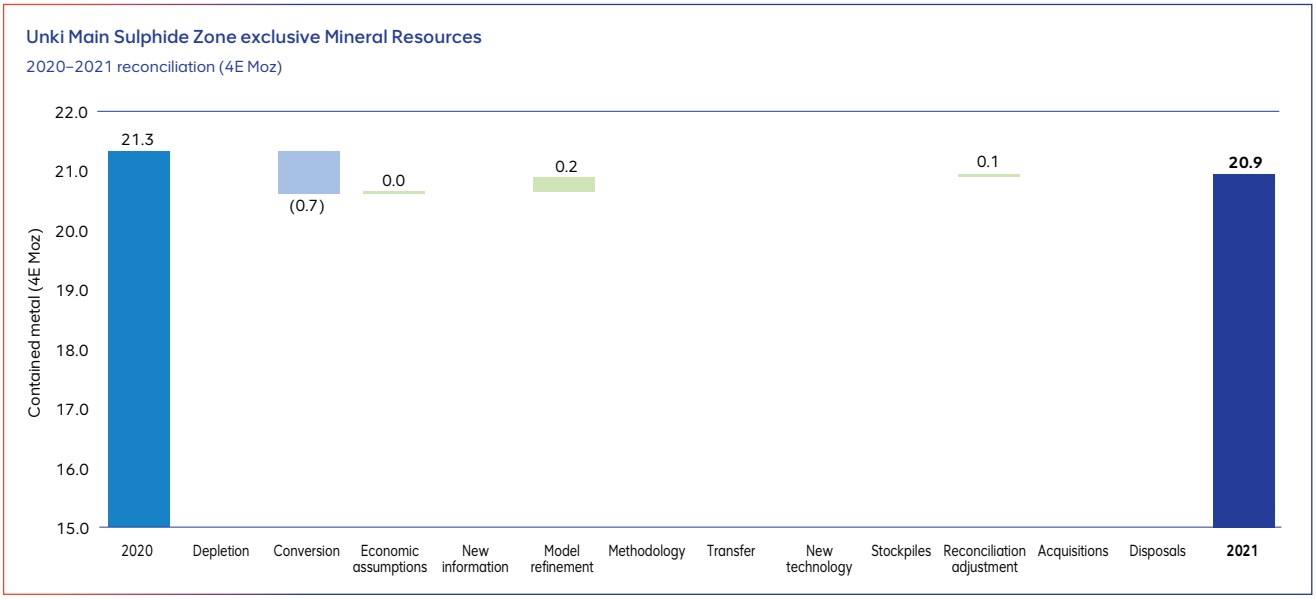


Exclusive Mineral Resources estimates

		Mineral Resources Million tonnes (Mt)		Grade 4E g/t		Contained metal 4E tonnes		Contained metal 4E Moz	
Unki Mine (100%)	**Classification**	**2021**	2020	**2021**	2020	**2021**	2020	**2021**	2020
MSZ	Measured	**6.7**	7.5	**4.11**	4.09	**27**	31	**0.9**	1.0
	Indicated	**114.5**	110.8	**4.33**	4.29	**496**	475	**15.9**	15.3
	Measured and Indicated	**121.2**	118.4	**4.32**	4.28	**523**	506	**16.8**	16.3
	Inferred	**31.7**	38.6	**4.04**	4.07	**128**	157	**4.1**	5.0
	Total	**152.8**	156.9	**4.26**	4.23	**651**	663	**20.9**	21.3

MSZ exclusive Mineral Resources reconciliation

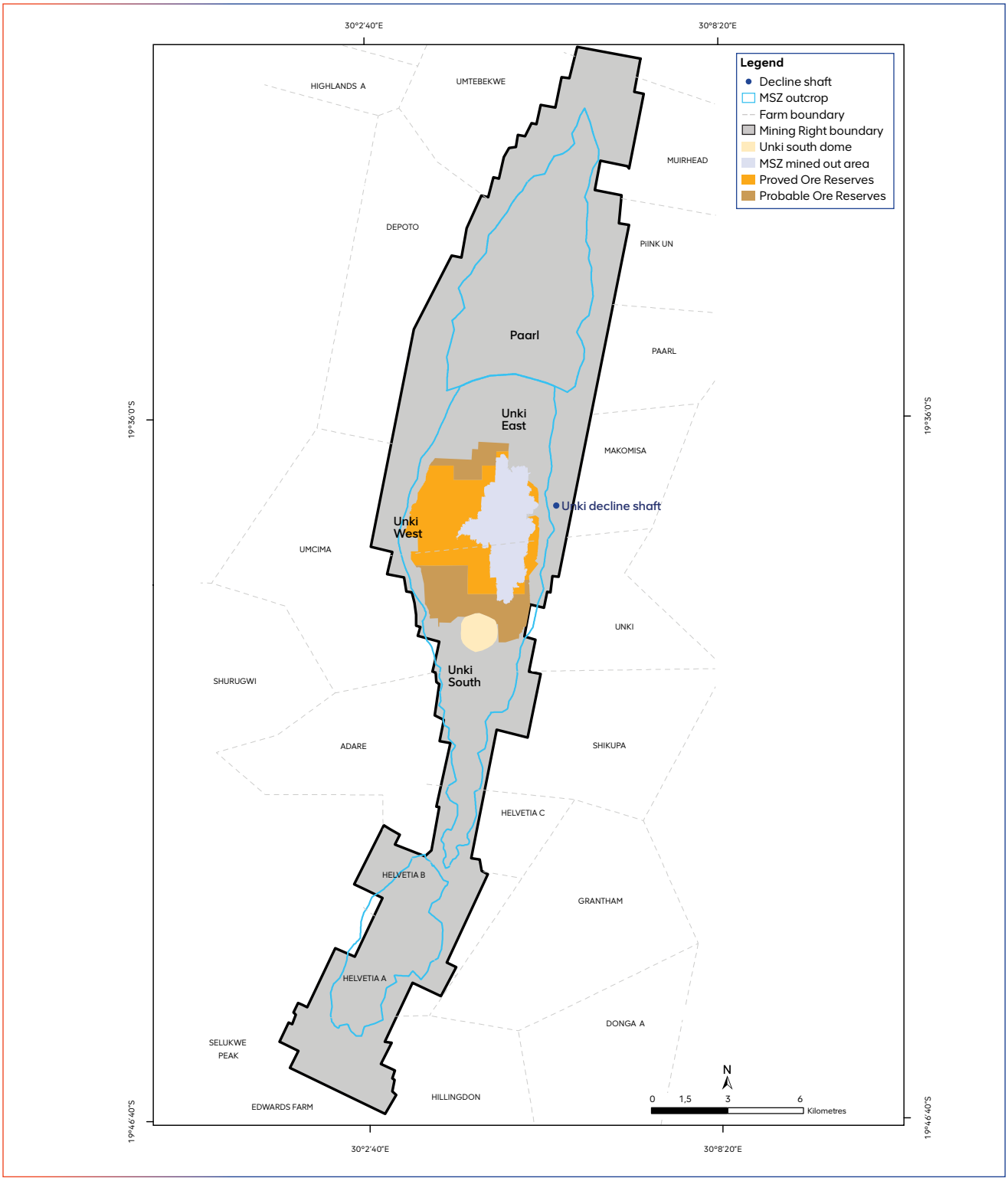
Mineral Resources at Unki decreased primarily due to conversion of the upper and southern sections of the mine to Ore Reserves. The extent of the decrease was partially offset by increases from updated geological and Mineral Resources models.



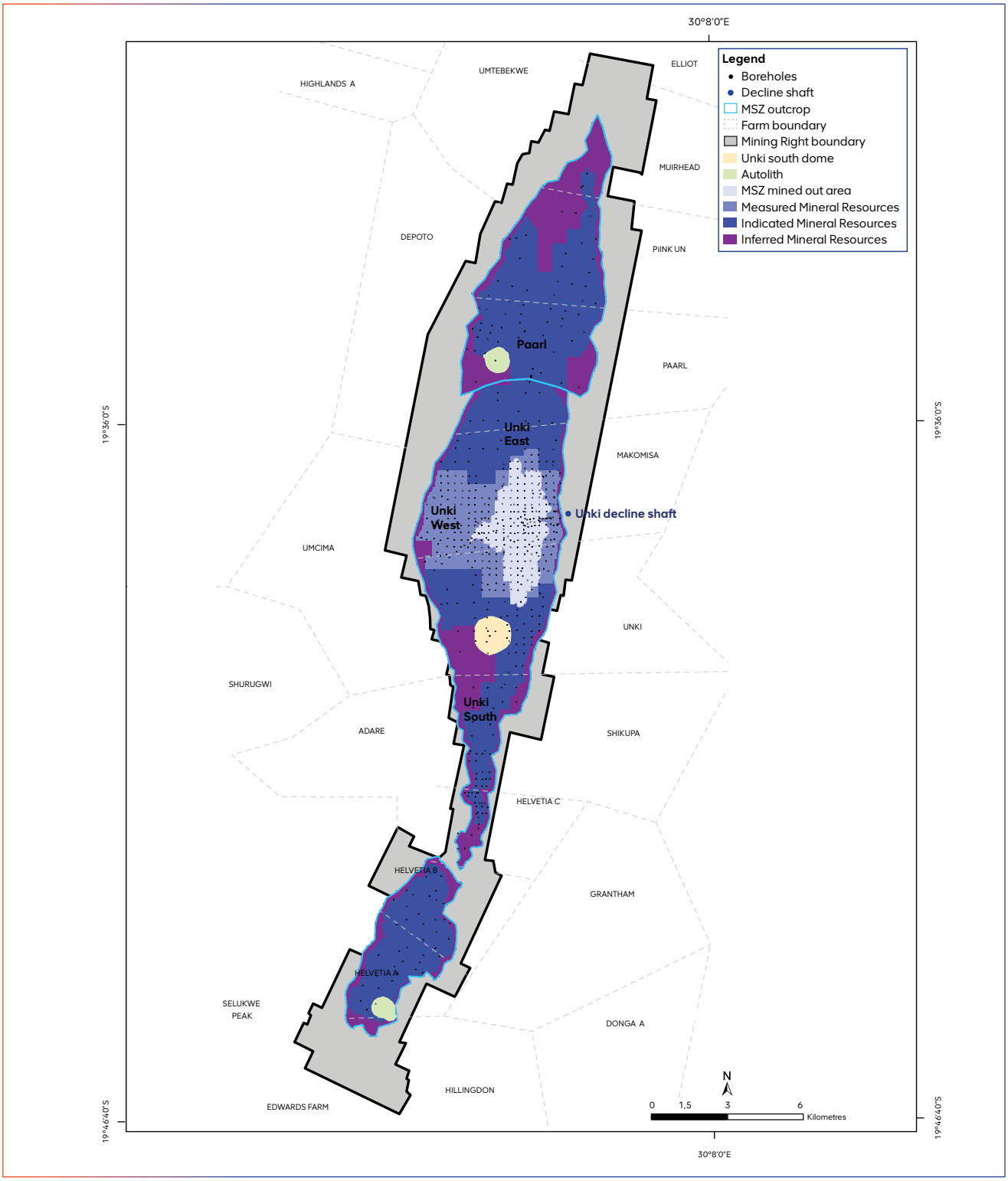
Inclusive Mineral Resource estimates

		Mineral Resources Million tonnes (Mt)		Grade 4E g/t		Contained metal 4E tonnes		Contained metal 4E Moz	
Unki Mine (100%)	**Classification**	**2021**	2020	**2021**	2020	**2021**	2020	**2021**	2020
MSZ	Measured	**39.7**	34.5	**3.86**	3.97	**153**	137	**4.9**	4.4
	Indicated	**138.2**	139.1	**4.25**	4.21	**588**	585	**18.9**	18.8
	Measured and Indicated	**178.0**	173.6	**4.17**	4.16	**741**	722	**23.8**	23.2
	Inferred	**31.7**	38.6	**4.04**	4.07	**128**	157	**4.1**	5.0
	Total	**209.6**	212.2	**4.15**	4.15	**869**	879	**27.9**	28.3

Unki Mine MSZ Ore Reserves classification map



Unki Mine MSZ Mineral Resources classification map



Estimates and reconciliation – managed operations

as at 31 December 2021

Twickenham Mine

Anglo American Platinum Limited interest: 100%
Management structure: managed

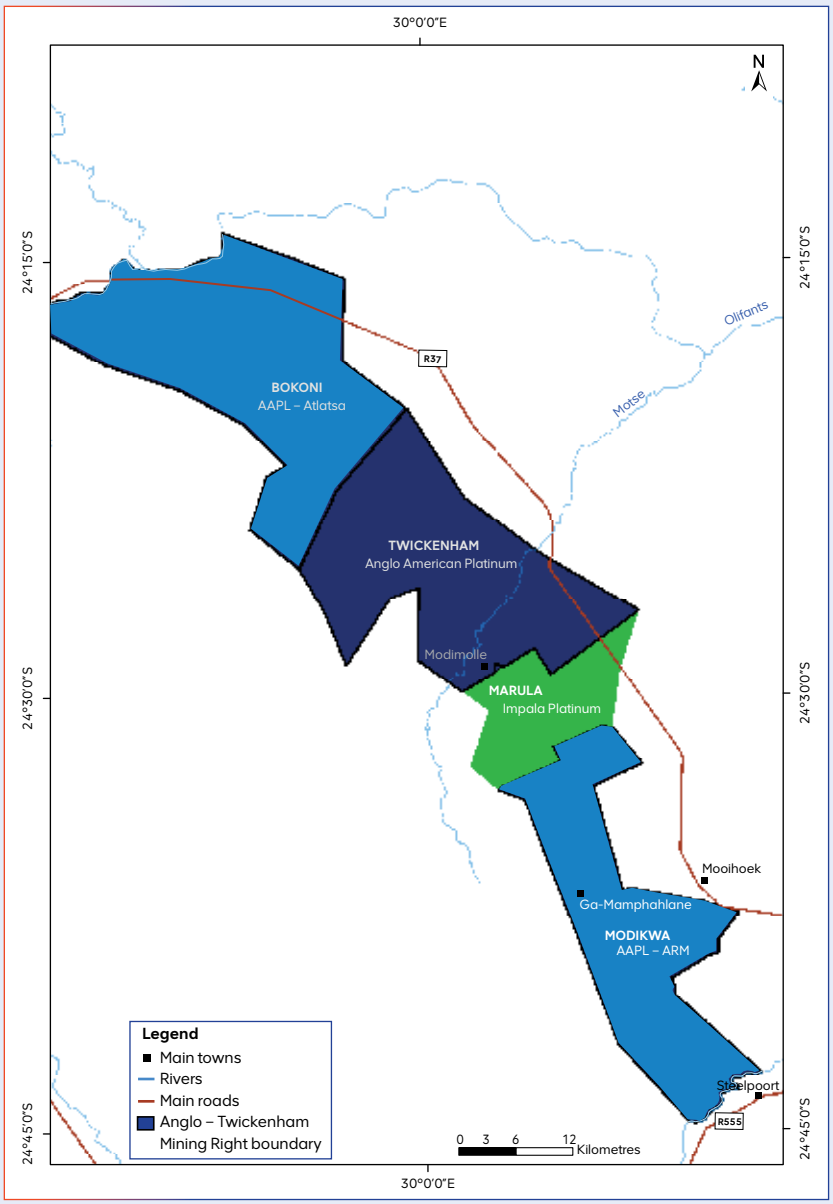
Location

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 Mine was placed on care and maintenance in 2016.

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



Competence

Iain Colquhoun*
Competent Person:
Mineral Resources
Role:
External consultant
Relevant qualifications:
BSc (hons) (mineral economics)
Professional organisation:
SACNASP, PrSciNat (400097/00)
Relevant experience:
24 years

* Employed by Lofty Mining Consultants.

Brief history

After the Merensky Reef was discovered in the mid-1920s on Maandagshoek farm, in the eastern limb of the Bushveld Complex, the Twickenham area has 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.

The Hackney area was the focus of extensive exploration since 1966 to 1982. Trial mining of the UG2 Reef at Hackney was conducted between 1977 and 1979. During 1988 to 1989 further diamond drilling commenced. Renewed interest sparked further drilling during the period between 1996 and 1997. At the same time detailed mineralogical and metallurgical studies of the UG2 and Merensky reefs were conducted to better predict the treatment characteristics of the orebody.

Since 2001, Anglo American Platinum 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 tonnes per month by 2008.

However, due to economic conditions prevailing at the time, Twickenham has been placed on care and maintenance since 2016.

Mineral Rights

The current Mining Right covers an area of 17,747ha. Anglo American Platinum holds a converted Mining Right under DMRE reference LP 89 MR, valid from March 2011 to March 2041.

There are no known impediments to the Mining Right.

Brief geological description

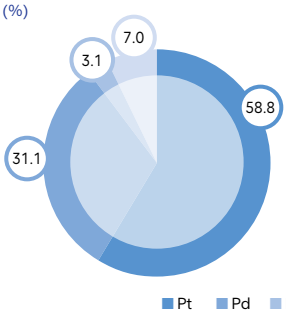
Twickenham Mine is located in the eastern limb of the Bushveld Complex, north of the Steelpoort fault. The main economic horizons and PGM mineralisation are the UG2 and the Merensky reefs. Both reefs subcrop on the property, striking roughly north north-west/south south-east at an average dip of 15° to the south-west over a strike length of 16km. The UG2 and Merensky reefs are separated by approximately 400m of mafic cumulate rocks.

Merensky Reef has an average thickness of 140cm and the mineralisation occurs mainly in a poikilitic plagioclase pyroxenite bound by thin chromitite stringers and associated pegmatoidal textures, which contain the highest PGM grades. The UG2 Reef chromitite layer varies in thickness from 30cm to 110cm (average of 62cm), overlain by up to five chromitite stringers varying in thickness from 2mm to 1cm. The immediate footwall of the UG2 Reef is usually a pegmatoidal feldspathic pyroxenite, which varies in thickness from a few centimetres to 2m, with an average of 60cm.

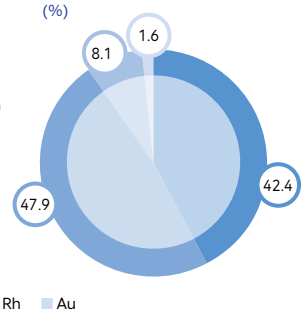
The topography consists of a long valley between the fairly rugged Leolo mountain range, comprising Main Zone gabbro and gabbro-norites. The tectonic setting is characterised by north north-east/south south-west striking dolerite dykes of post-Karoo age and faults. A fairly prominent dyke swarm exists on Paschaskraal farm with individual dyke widths reaching 30m to 40m. Other geological discontinuities are potholes and replacement pegmatites of various compositions (sometimes iron rich) are rare, but do occur.

For a description of the Mineral Resources estimation and classification processes see page 23 of this report

Twickenham Merensky Reef 4E prill split
(%)



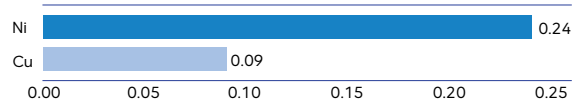
Twickenham UG2 Reef 4E prill split
(%)



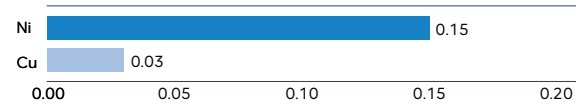
Pt Pd Rh Au

UG2 Reef Chromite grade : **24.6%**

Twickenham Merensky Reef base metal grades
(%)



Twickenham UG2 Reef base metal grades
(%)



Reasonable prospects of eventual economic extraction

The following factors were considered when determining reasonable prospects of eventual economic extraction of the declared Mineral Resources:

- Legal: Twickenham Mine adheres to all regulatory requirements and has requisite permits and licences to mine.
- Geology: The latest geological and Mineral Resource models underpin the RPEEE considerations applied in the context of Mineral Resources declaration.
- Mining method: The RPEEE consideration is based on the current mining methods as utilised on adjacent mines.
- Economics: Using current global assumptions (prices and costs), current mining methods are known to be viable when considering adjacent mining operations.
- Technology: Current technology is deemed to be inadequate for mining any material below the 75° isotherm line, and therefore has been excluded from the Mineral Resources declaration.
- Metallurgical: Sufficient geo-metallurgical and mineralogical test work has been carried out for reefs declared and recovery potentials considered. The mine has sufficient plant data to predict recovery potential.
- Other factors such as marketing, environmental, social and infrastructure are adequately assessed in the various technical reviews.

	Units	Merensky	UG2
Mineral Resource assumptions			
Average geological loss	%	22	21
Minimum Resource cut width	cm	105	95
Average density	g/cm^3	3.4	4.0

Twickenham Mine (100%) continued

Exclusive Mineral Resource estimates

Twickenham (100%)	Classification	Mineral Resources Million tonnes (Mt) 2021	2020	Grade 4E g/t 2021	2020	Contained metal 4E tonnes 2021	2020	Contained metal 4E Moz 2021	2020
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

Merensky Reef exclusive Mineral Resources reconciliation

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

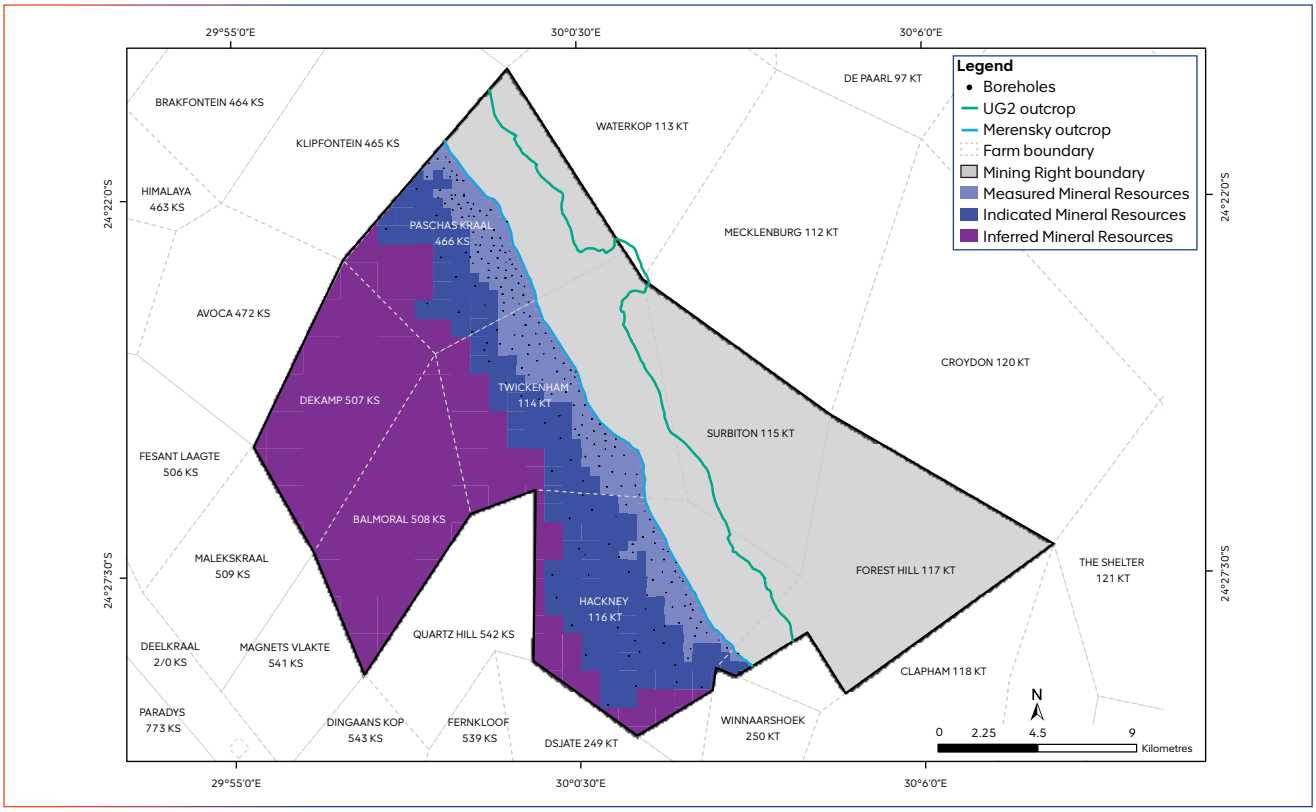
UG2 Reef exclusive Mineral Resources reconciliation

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

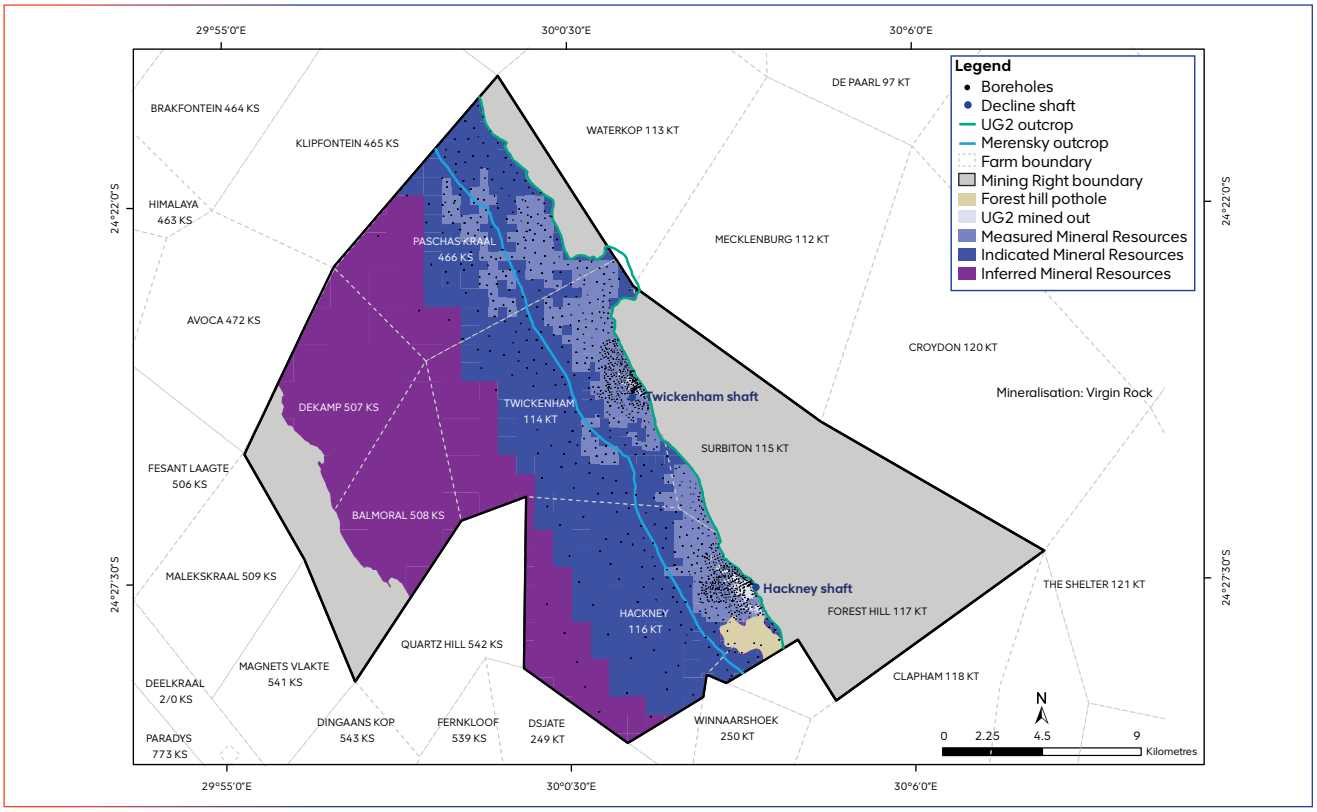
Inclusive Mineral Resource estimates

Twickenham (100%)	Classification	Mineral Resources Million tonnes (Mt) 2021	2020	Grade 4E g/t 2021	2020	Contained metal 4E tonnes 2021	2020	Contained metal 4E Moz 2021	2020
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

Twickenham Merensky Reef Mineral Resources classification map



Twickenham UG2 Reef Mineral Resources classification map



Estimates and reconciliation – joint operations

as at 31 December 2021

Modikwa Mine

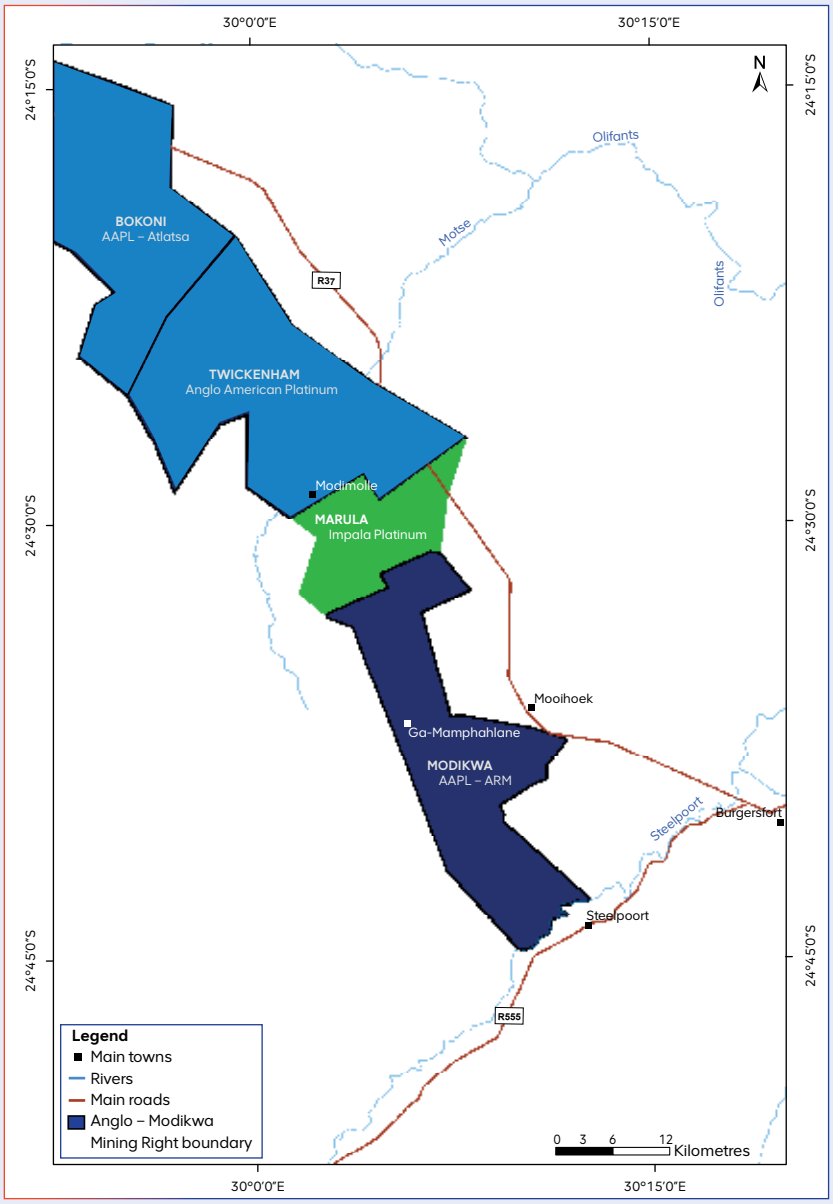
Anglo American Platinum Limited interest: 50%
Management structure: non-managed

Location

Modikwa Platinum Mine is located 25km north-west of the town of Burgersfort and 15km north of Steelpoort, along the border of Mpumalanga and Limpopo provinces in South Africa. It is an independently managed joint-operation partnership between Anglo American Platinum (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 in excess of 450m below surface.



Competence

Martha Setuke
Competent Person:
Mineral Resources
Role:
Resources and Reserves reporting specialist
Relevant qualifications:
BSc (hons) (geology), GDE (mining)
Professional organisation:
SACNASP, PrSciNat (400300/12)
Relevant experience:
16 years

Alpheus Lesufi*
Competent Person:
Ore Reserves
Role:
Resource leader: survey
Relevant qualification:
BTech (survey)
Professional organisation:
SAIMM, member (706902)
Relevant experience:
9 years

* Employed by Modikwa Mine.

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

Brief history

The discovery of the Merensky Reef on the eastern limb of the Bushveld Complex occurred in the mid 1920s on Maandagshoek farm. 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 the UG2 Reef horizons, notably where these occurred in the hills on the eastern side of the area. This was followed in the 1960s by a sequence of diamond drilling programmes undertaken throughout the area to determine the basic characteristics of the orebody.

In the late 1970s to early 1980s, several limited underground operations were established, which included the development of a vertical shaft at the Driekop pipe, and a number of inclined winzes on the Maandagshoek farm. 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 Anglo American Platinum and African Rainbow Minerals 50:50 joint partnership culminated in the inception of the mine in the early 2000s. Mining operations started as a project in 2001, reaching mining status in 2003. Both the N1 and S1 shafts started simultaneously in 2001 and the S2 shaft was established in 2013.

Mineral Rights

The Mining Right covers an area of 14,136ha and is held in equal shares by Anglo American Platinum and African Rainbow Minerals. The converted Mining Right held under DMRE reference LP129 MR and is valid from November 2013 to November 2043.

There are no known impediments to the Mining Right.

Brief geological description

Modikwa Mine is located in the eastern limb of the Bushveld Complex, north of the Steelpoort fault. The main economic horizons and PGM mineralisation are the UG2 and the Merensky reefs. Both reefs subcrop on the property, striking roughly north north-west/south south-east at dips ranging from 10° to 12° to the south-west over a strike length of 25km. The UG2 and Merensky reefs are separated by approximately 245m to 360m of mafic cumulate rocks.

Merensky Reef thickness is approximately 2.5m and mineralisation occurs mainly in a poikilitic plagioclase pyroxenite bound by thin chromitite stringers and associated pegmatoidal textures, which contain the highest PGM grades. The UG2 chromitite layer is varying in thickness from 55cm to 65cm, overlain by three chromitite stringers varies 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 20cm. Gentle undulations of the UG2 Reef with amplitudes of less than 2m are developed across the mine area.

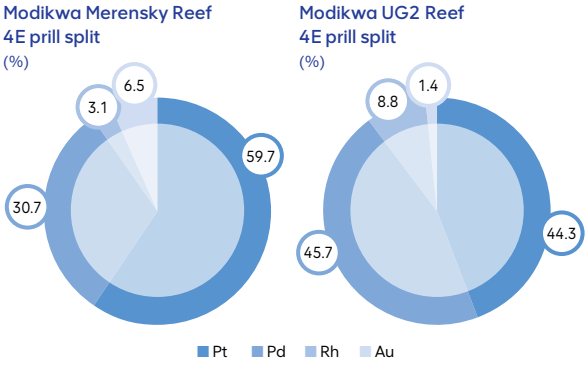
Potholes are randomly distributed within the North shaft area but are less abundant in the South shaft area. The dolerite dykes are generally vertical or steep dipping, varying between 70° and 90° and the thickness from several centimetres to approximately 30m, including four north/south trending dyke swarms, one of which cuts across the South shaft area. The Onverwacht Hill and Driekop areas in the southern portion of the mine are characterised by the presence of several large ultramafic pegmatoid intrusions that disrupt, and locally replace the UG2 Reef.

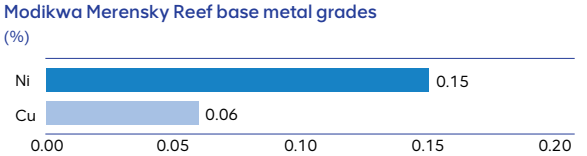
For a description of the Mineral Resources estimation and classification processes see page 23 of this report

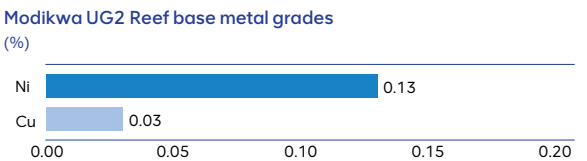
Reasonable prospects of eventual economic extraction

The following factors were considered to when determining reasonable prospects of eventual economic extraction of the declared Mineral Resources:

- Legal: Modikwa Mine adheres to all regulatory requirements and has requisite permits and licences to mine
- Geology: The latest updated geological and Mineral Resource models underpin the RPEEE considerations applied in the context of Mineral Resources declaration
- Mining method: The RPEEE considerations are based on the current mining methods as utilised currently on the operation and adjacent mines.
- Economics: Using current global assumptions (prices and costs), applicable mining methods are known to be viable as utilised on the current mining footprint.
- Metallurgical: Sufficient geo-metallurgical and mineralogical test work has been carried out for reefs declared and recovery potentials considered. The mine has sufficient plant data to predict recovery potential.
- Other factors such as marketing, environmental, social and infrastructure are adequately assessed in the various studies within the mine plan.







Modikwa Mine (50%) continued

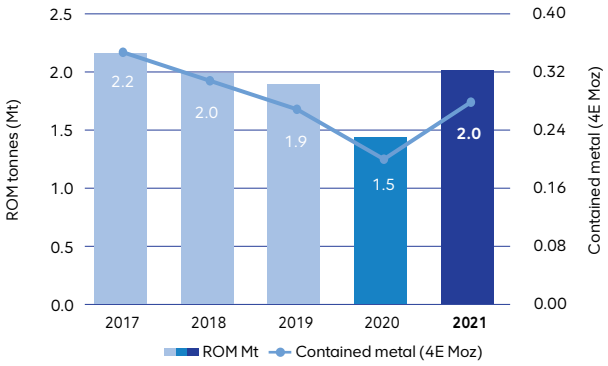
	Units	Merensky	UG2
Mineral Resource assumptions			
Average geological loss	%	21	17
Minimum Resource cut width	cm	180	103
Average density	g/cm^3	3.4	3.9
Ore Reserve Modifying Factors			
Mining loss factor	%		1.2
Mining dilution	%		33
Planned stoping width	cm		119
4E concentrator recoveries	%		87
Mine call factor	%		95

Mining methods and operational infrastructure

The mine is a hybrid operation using conventional breast stoping with strike pillars, supported by trackless development and ore clearance. On-reef mining/stoping is supported by on-reef infrastructure which will be developed ahead of on-reef operations and will be conducted by means of trackless mechanised mining equipment. 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.

For a description of the Ore Reserves estimation and classification processes see pages 28–30 of this report

Modikwa UG2 Reef production history (ROM)



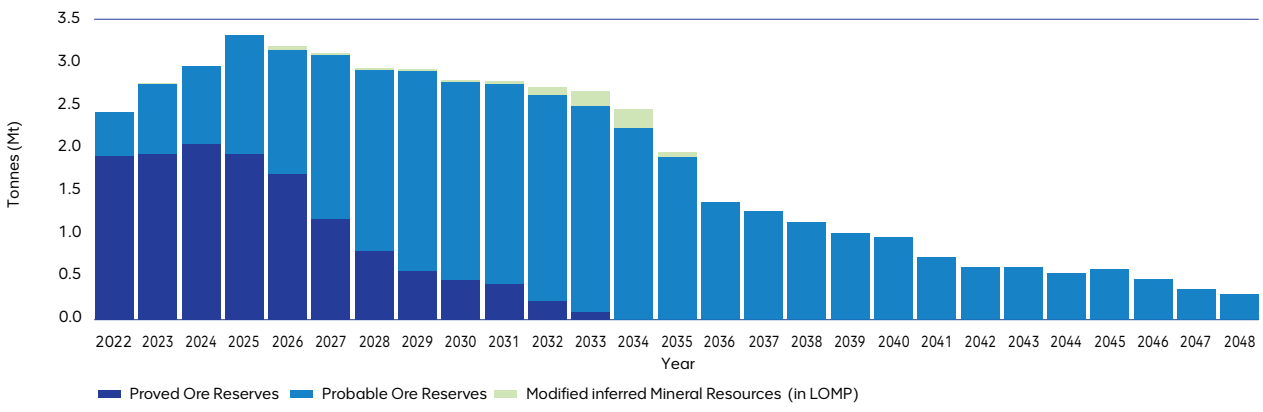
For additional details on the 2021 production information see the mining and concentrating operations review section, pages 118–120 of integrated annual report

Modikwa life-of-mine schedule

The life-of-mine schedule for Modikwa indicates the current UG2 Reef production planned in the approved life-of-mine plan and includes projects that have passed the necessary approvals that underpin the Ore Reserve declaration. The anticipated life-of-mine is for 27 years and exceeds the current Mining Right expiry date of 2043 (Reserve life of 22 years). 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 modified Inferred Mineral Resources in life-of-mine plan are excluded from Ore Reserves declaration and assessments have indicated that the exclusion of these Inferred Mineral Resources will have no impact on the current life-of-mine.

Modikwa total ROM tonnes in LOM plan

Tonnes (Mt)

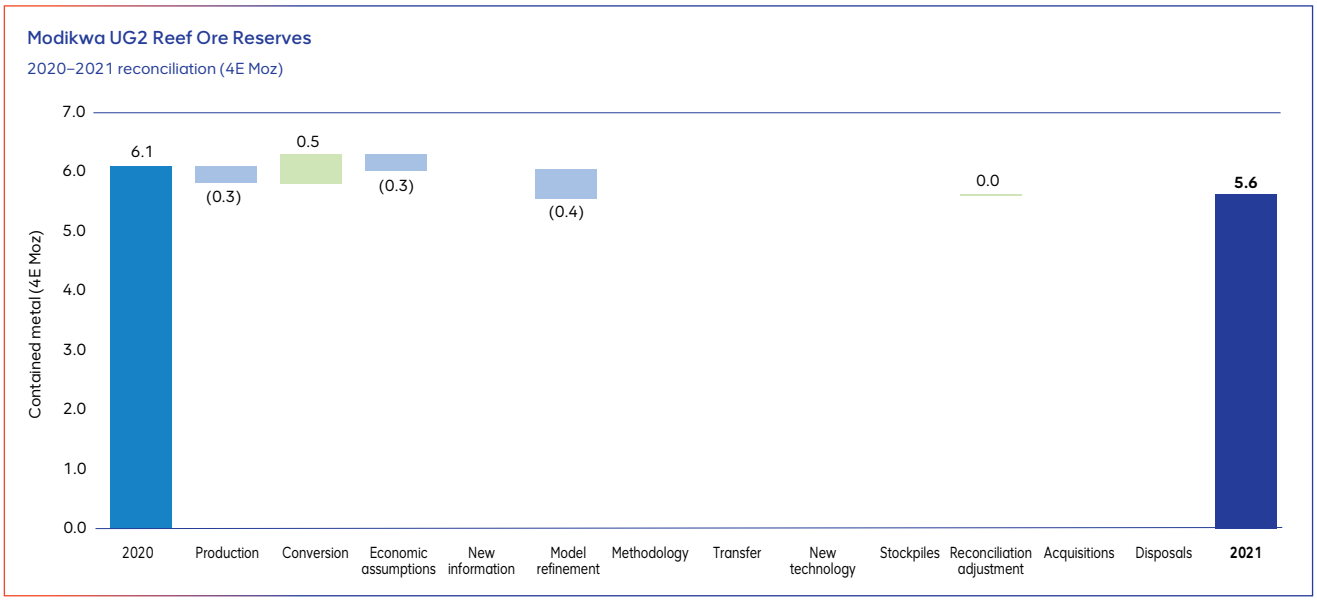


Ore Reserve estimates

Modikwa Mine (50%)	Reserve life	Classification	Ore Reserves (ROM) Million tonnes (Mt) 2021	2020	Grade 4E g/t 2021	2020	Contained metal 4E tonnes 2021	2020	Contained metal 4E Moz 2021	2020
UG2 Reef	>22	Proved	**11.3**	15.9	**4.48**	4.33	**51**	69	**1.6**	2.2
		Probable	**29.9**	29.2	**4.16**	4.14	**124**	121	**4.0**	3.9
		Total	**41.1**	45.1	**4.25**	4.21	**175**	190	**5.6**	6.1

UG2 Reef Ore Reserves reconciliation

The UG2 Reef Ore Reserve 4E ounces decreased due to geological model changes, economic tail-cuts and production. The extent of the decrease was reduced by the conversion of Mineral Resources to Ore Reserves following revised mine design changes.



Exclusive Mineral Resource estimates

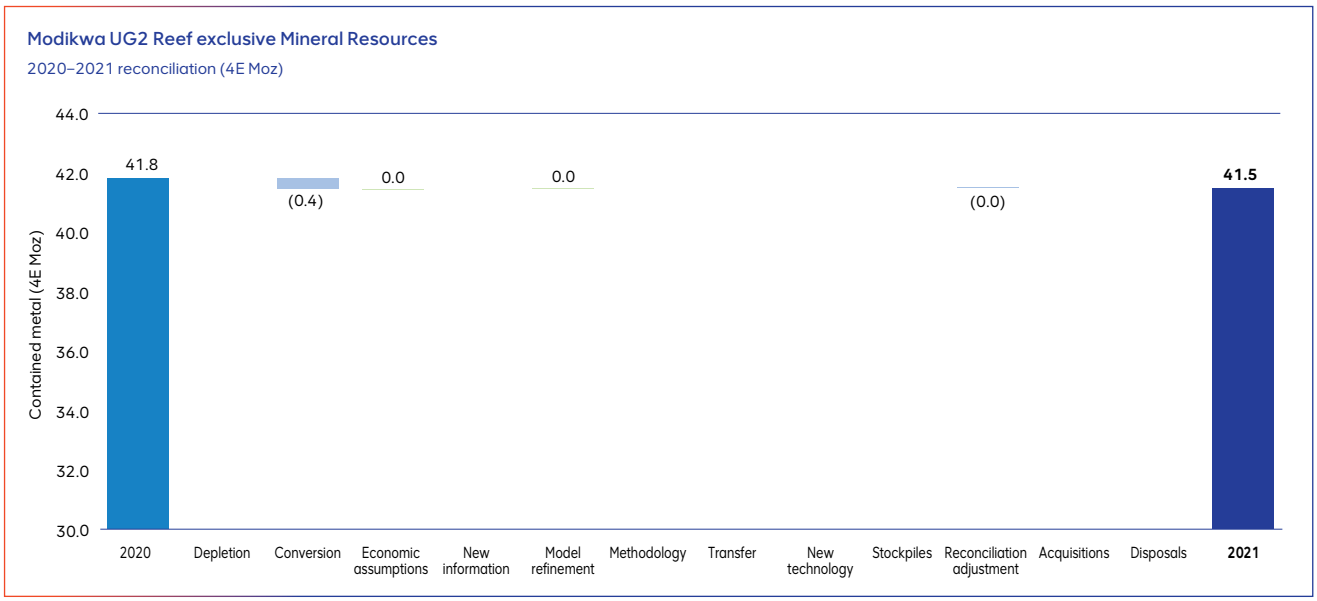
Modikwa Mine (50%)	Classification	Ore Reserves (ROM) Million tonnes (Mt) 2021	2020	Grade 4E g/t 2021	2020	Contained metal 4E tonnes 2021	2020	Contained metal 4E Moz 2021	2020
Merensky Reef	Measured	**20.7**	20.7	**3.16**	3.15	**65**	65	**2.1**	2.1
	Indicated	**53.8**	53.9	**2.90**	2.90	**156**	156	**5.0**	5.0
	Measured and Indicated	**74.6**	74.6	**2.97**	2.97	**221**	221	**7.1**	7.1
	Inferred	**139.3**	139.3	**2.84**	2.84	**396**	396	**12.7**	12.7
	Total	**213.9**	213.9	**2.89**	2.89	**617**	617	**19.8**	19.8
UG2 Reef	Measured	**47.0**	48.2	**5.88**	5.91	**276**	285	**8.9**	9.2
	Indicated	**89.5**	90.3	**5.90**	5.90	**528**	533	**17.0**	17.1
	Measured and Indicated	**136.6**	138.5	**5.89**	5.90	**804**	818	**25.9**	26.3
	Inferred	**78.1**	77.5	**6.21**	6.22	**485**	482	**15.6**	15.5
	Total	**214.6**	216.0	**6.01**	6.01	**1,289**	1,300	**41.5**	41.8

Merensky Reef exclusive Mineral Resources reconciliation

Estimates are unchanged from previous reporting.

UG2 Reef exclusive Mineral Resources reconciliation

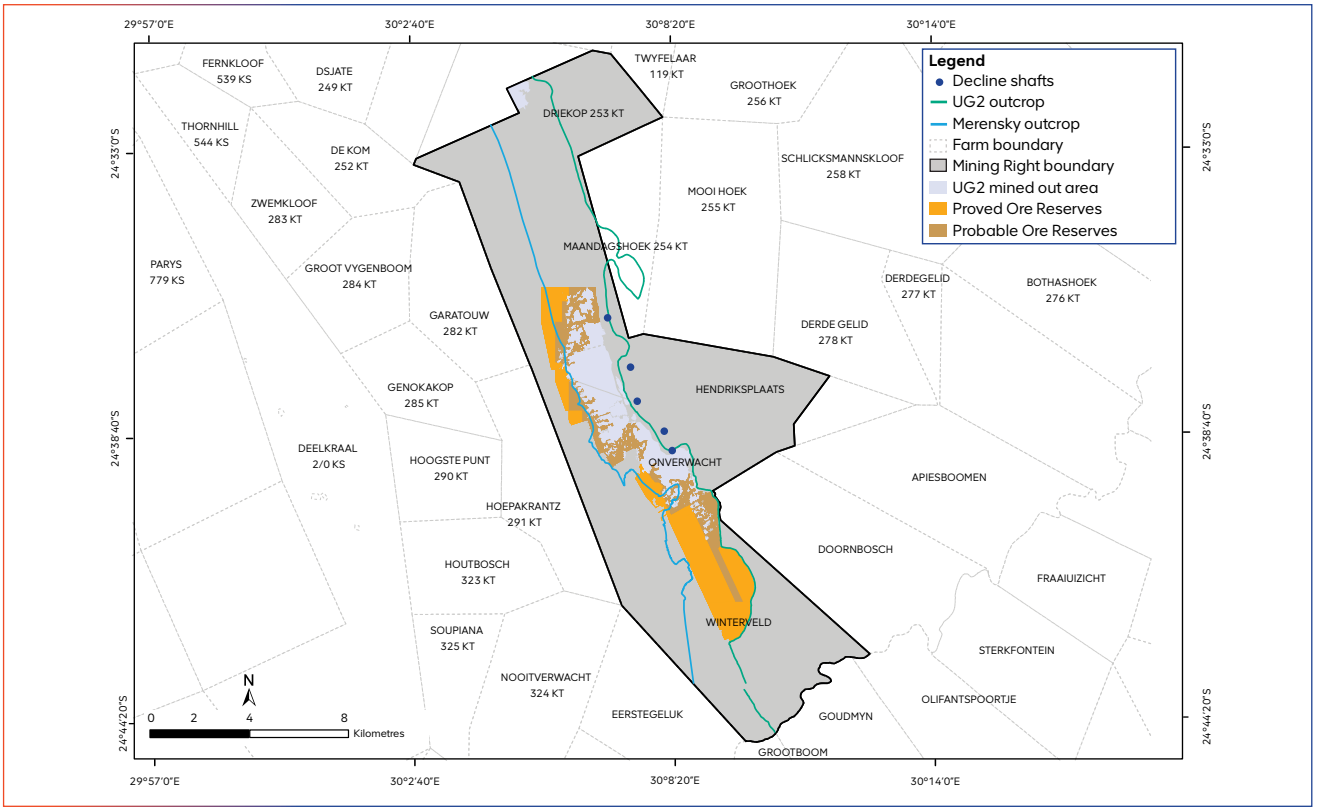
The UG2 Reef exclusive Mineral Resources 4E ounces decreased slightly due to conversion of most of the 2020 economic tail to Ore Reserves following revised economic assumptions.



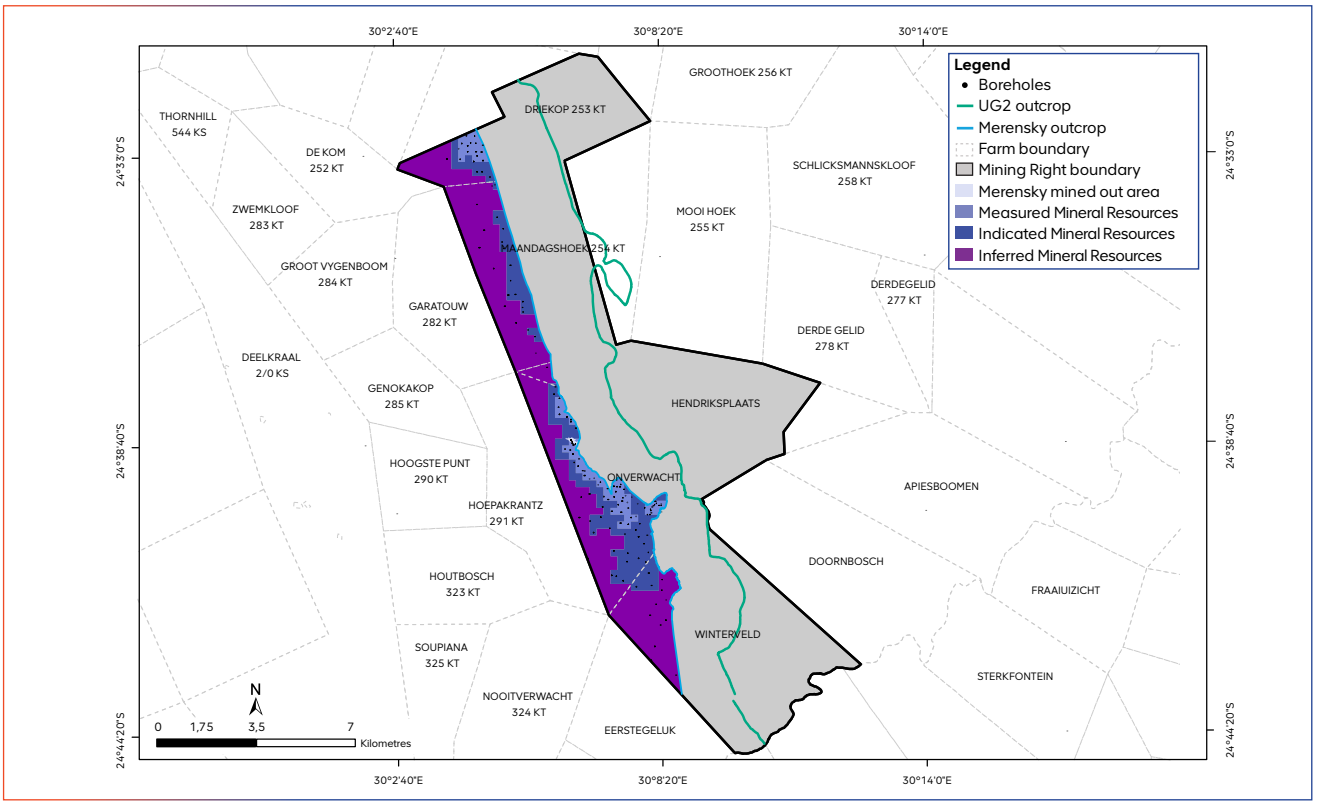
Inclusive Mineral Resource estimates

		Mineral Resources Million tonnes (Mt)		Grade 4E g/t		Contained metal 4E tonnes		Contained metal 4E Moz	
Modikwa Mine (50%)	**Classification**	**2021**	2020	**2021**	2020	**2021**	2020	**2021**	2020
Merensky Reef	Measured	**20.7**	20.7	**3.16**	3.15	**65**	65	**2.1**	2.1
	Indicated	**53.8**	53.9	**2.90**	2.90	**156**	156	**5.0**	5.0
	Measured and Indicated	**74.6**	74.6	**2.97**	2.97	**221**	221	**7.1**	7.1
	Inferred	**139.3**	139.3	**2.84**	2.84	**396**	396	**12.7**	12.7
	Total	**213.9**	213.9	**2.89**	2.89	**617**	617	**19.8**	19.8
UG2 Reef	Measured	**83.8**	84.3	**5.90**	5.93	**494**	500	**15.9**	16.1
	Indicated	**102.2**	102.1	**5.91**	5.91	**604**	603	**19.4**	19.4
	Measured and Indicated	**186.0**	186.4	**5.90**	5.92	**1,098**	1,103	**35.3**	35.5
	Inferred	**78.1**	77.5	**6.21**	6.22	**485**	482	**15.6**	15.5
	Total	**264.1**	263.9	**6.00**	6.00	**1,583**	1,585	**50.9**	51.0

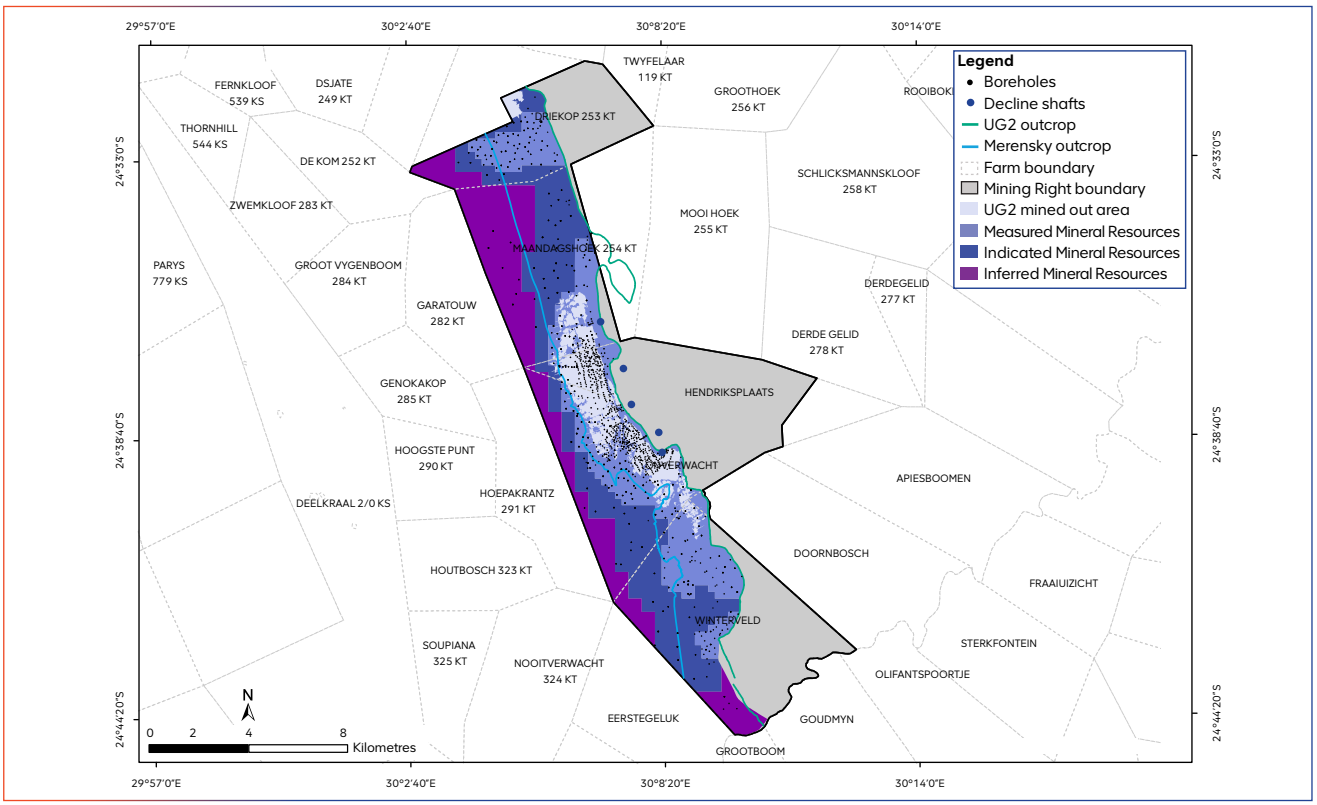
Modikwa UG2 Reef Ore Reserves classification map

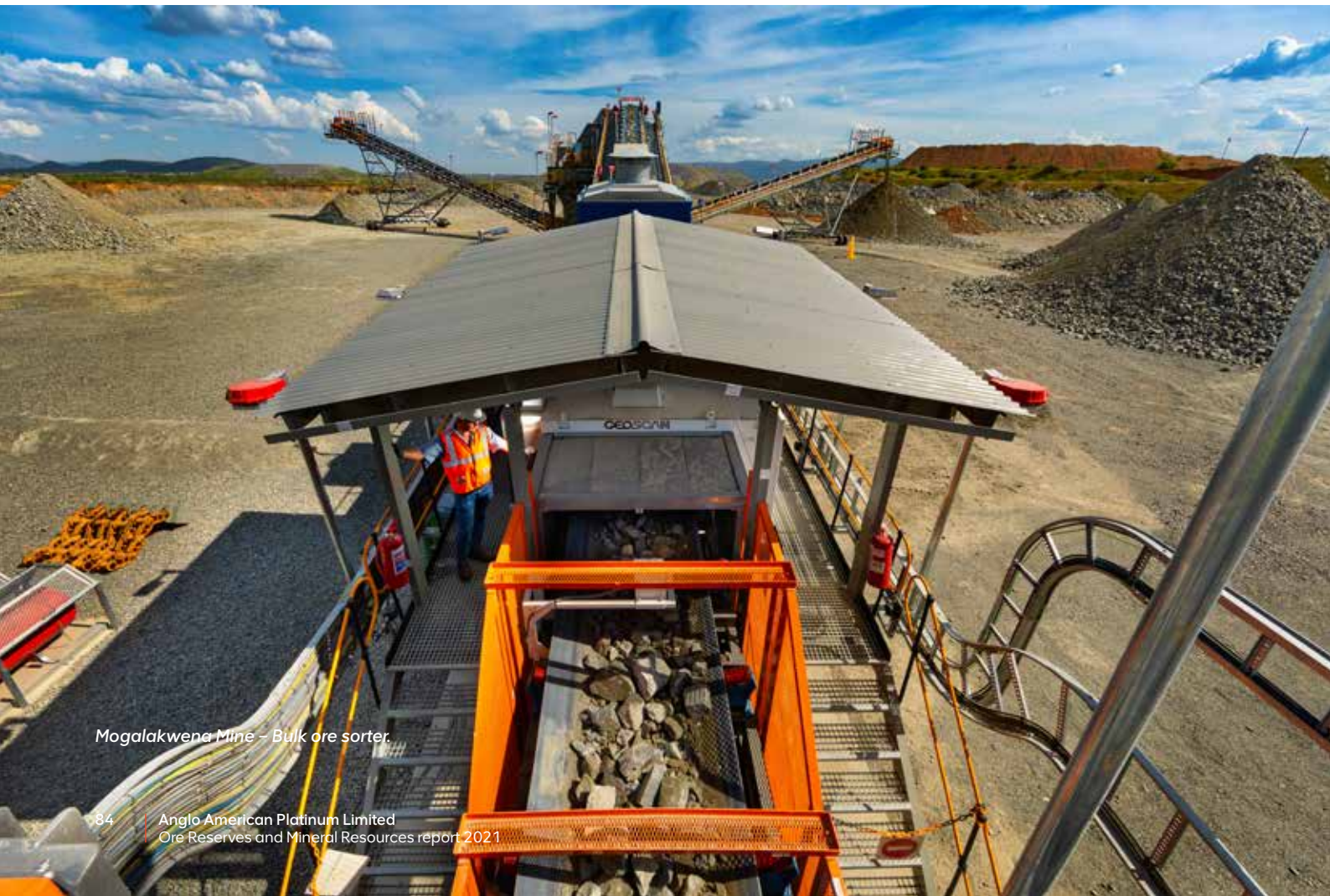


Modikwa Merensky Reef Mineral Resources classification map



Modikwa UG2 Reef Mineral Resources classification map





Mogalakwena Mine – Bulk ore sorter.

Estimates and reconciliation – joint operations

as at 31 December 2021

Sibanye-Stillwater joint operations

Anglo American Platinum Limited interest: 50% (Kroondal-Marikana) and 100% (Siphumelele 3)
Management structure: non-managed

Location

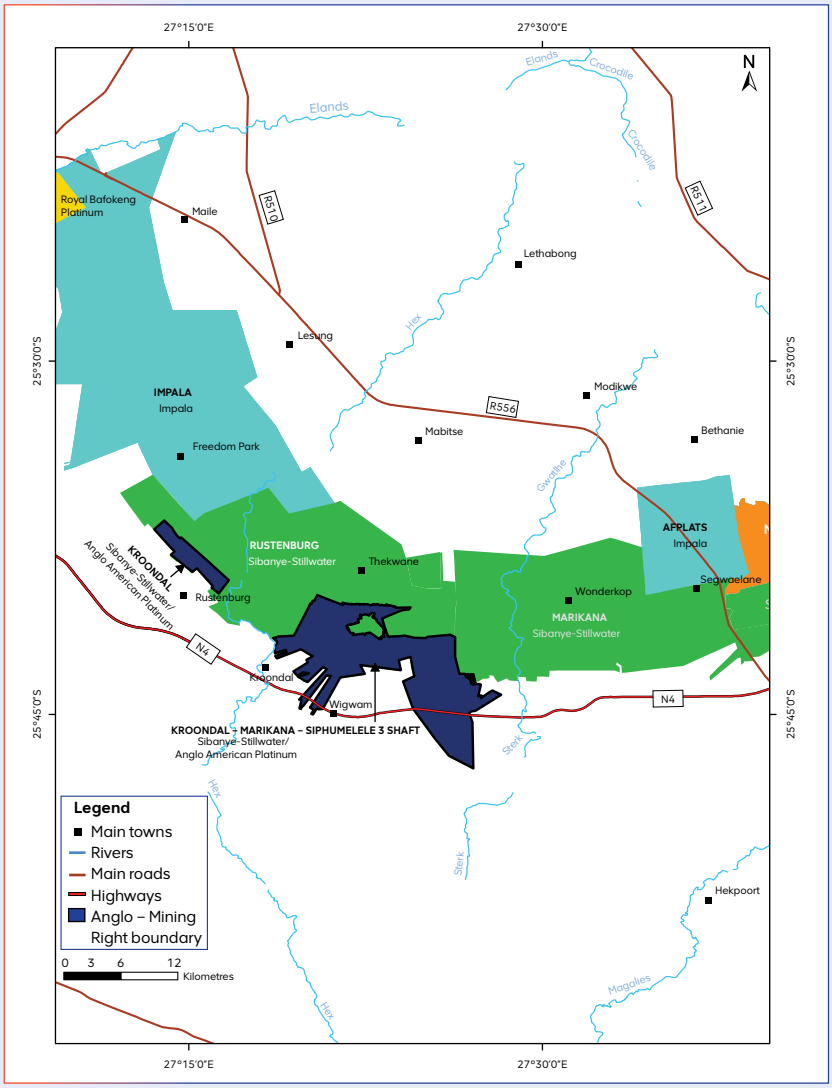
The Siphumelele 3 shaft, Kroondal and Marikana mines are located in the North West province, 12km outside the town of Rustenburg and some 120km north-west of Johannesburg.

Property description

Kroondal and Marikana mines are a 50/50 joint operation with Sibanye-Stillwater. The joint-operation agreement is a pooling-and-sharing agreement (PSA), where the Sibanye-Stillwater infrastructure is used to access Ore Reserves and Mineral Resources on the Anglo American Platinum-held Mining Right. The joint operations are 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. Anglo American Platinum has 100% ownership of the operation but, it is mined on a royalty basis by Sibanye-Stillwater. Siphumelele, Kroondal and Marikana mines form part of the western limb of the Bushveld Complex and extract UG2 Reef.

Marikana Mine, with infrastructure comprising four decline shafts and a concentrator, was placed on care and maintenance in 2012.



Competence

Nicole Wansbury*
Competent Person:
Mineral Resources
Role:
Unit manager geology
Relevant qualifications:
MSc (geology)
Professional organisation:
SACNASP, PrSciNat (400060/11)
Relevant experience:
16 years

Brian Smith*
Competent Person:
Ore Reserves
Role:
Unit manager survey
Relevant qualifications:
MEng (Mineral Resource management)
Professional organisation:
SAGC, professional mine surveyor (GPr MS 0218)
Relevant experience:
35 years

* Employed by Sibanye-Stillwater.

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

Brief history

A prefeasibility study of the Kroondal platinum project, in which Aquarius had a 45% stake, was completed in 1996, followed by a 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-operation agreement with Anglo American Platinum the next year. The agreement included an offtake agreement with Anglo American Platinum 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 Anglo American Platinum's joint-operations partner and manages the operations.

On 31 January 2022, Anglo American Platinum announced its intent to dispose of the interest in the Kroondal and Marikana joint operations to Sibanye-Stillwater, conditional on a number of contractual and regulatory approvals.

Mineral Right

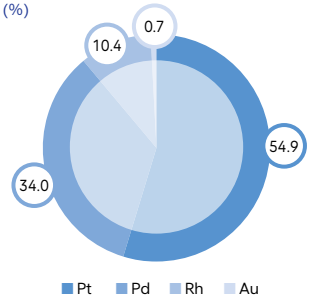
The current Mining Right covers an area of 3,212ha. Anglo American Platinum holds a converted Mining Right under DMRE reference NW 80 MR, valid from July 2010 to July 2040. The Mining Right is under the PSA agreements and covers Siphumelele 3 shaft, Kroondal and Marikana mines.

The are no known impediments to the Mining Right.

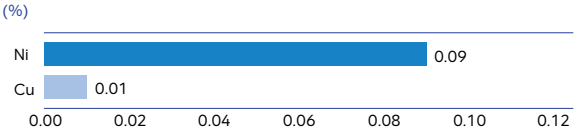
Brief geological description

The mines are located in the western limb of the Bushveld Complex. The economic horizon being exploited is the UG2 Reef which consists of two chromitite-rich horizons hosting PGM minerals, separated by a pyroxenite parting forming the mineable horizon. The reef dips at 9° to 10° towards the north-east. The two chromitite horizons, termed the UG2 leader seam and UG2 main seam, are about 20cm and 70cm thick respectively, and the pyroxenite parting has a variable thickness of up to 4m, but is typically less than 1.5m. The mining cut typically includes both the seams and the internal pyroxenite. The orebody is tabular, laterally continuous with relatively long-range grade consistency and predictability. Reef disruptions in the form of potholes, faults, IRUPs and dykes occur throughout the orebody.

Sibanye-Stillwater joint operation UG2 Reef 4E prill split



Sibanye-Stillwater joint operation UG2 Reef base metal grades



Mineral Resources estimation and classification summary

The Mineral Resource estimates are based on data generated from underground and surface diamond drilling, underground channel sampling, geological mapping, 3D surface seismic surveys and aerial magnetic surveys. The UG2 Reef is subdivided into a number of geozones, which relate primarily to reef width, differences in reef elevation within the stratigraphic succession and mineralisation alignment. These are used as separate geostatistical domains for estimation. Detailed exploratory data analysis, including sample verification, histogram and cumulative frequency plots for distributional analysis, additive constant estimates, outlier checks, trend analysis and declustering are carried out on individual domains. The optimum estimation parameters are determined using a kriging neighbourhood analysis in combination with the variogram models defined for the UG2 domains. Variography studies are carried out on different domains, with traditional variograms used for kriging purposes.

Mineral Resources estimation for platinum, palladium, rhodium, gold, ruthenium, iridium, density and true width using ordinary kriging; and inverse distance for copper, nickel and chromite. Modelling is completed using 2D block models, except for a small open-cast section where a 3D block model was created. The Resource widths are compiled over a minimum practical mining cut. It includes additional varying thickness over break material to a minimum mining width. The minimum mining widths are determined by a number of parameters, namely: reef width, mineralisation of the hanging wall and footwall, mining method, rock quality, location of weak parting planes, support systems and associated equipment required for support installation. At the Kroondal operation, a minimum 200cm mining width was modelled for all areas where a high-profile trackless mining method is applied.

Geological losses are split into known and unknown (anticipated) losses and determined for each structural domain and per shaft. All Mineral Resources reported are exclusive of geological losses. The final Mineral Resource quantities are determined by projecting the 2D estimated parameters onto the 3D structural polygons, exclusive of the geological losses, and reporting them on a 4E composite grade basis. Mineral Resource classifications are based on the scoring and rating of five statistical parameters (kriging variance,

kriging efficiency, slopes of regression, search volume and number of samples) and seven non-statistical parameters (aeromagnetic survey, seismic interpretation, structural model, facies interpretation, geological loss estimates, historical data (mining history) and quality assurance/quality control (QA/QC) reports.

Reasonable prospects of eventual economic extraction

The following factors were considered to determine reasonable prospects of eventual economic extraction of the declared Mineral Resources:

- Legal: Kroondal, Marikana and Siphumelele 3 adhere to all regulatory requirements and have requisite permits and licences to mine.
- Geology: The latest updated geological and Mineral Resource models underpin the RPEEE considerations applied in the context of Mineral Resources declaration.
- Mining method: The RPEEE considerations are based on the current mining method as utilised currently on the operation and adjacent mines.
- Economics: Using current global assumptions (prices and costs), applicable mining methods are known to be viable as utilised on the current mining footprint.
- Metallurgical: Sufficient geo-metallurgical and mineralogical test work has been carried out for the reef declared and recovery potentials considered. The mine has sufficient plant data to predict recovery potential.
- Other factors such as marketing, environmental, social and infrastructure are adequately assessed in the various studies within the mine plan.

	Units	UG2
Mineral Resource assumptions		
Average geological loss	%	20 – 29
Minimum Resource cut width	cm	202
Average density	g/cm^3	3.5
Ore Reserve Modifying Factors		
Mining loss factor	%	0.0 – 0.13
Mining dilution	%	7
Pillar extraction factor	%	75 – 81
Planned stoping width	cm	218 – 227
4E concentrator recoveries	%	83
Mine call factor	%	95

Ore Reserves estimation and classification summary

Ore Reserves are estimated following the generation of a life-of-mine plan by incorporating Modifying Factors into the Mineral Resource model. All design and scheduling work is undertaken within Cadsmine, a mine planning and scheduling programme. The planning process incorporates appropriate Modifying Factors based on the reconciliation exercises and technical economic investigations. The mill tonnes are quoted as the expected mill delivered run-of-mine metric tonnes and 4E PGM grades, inclusive of all mining dilutions and losses except mill recovery.

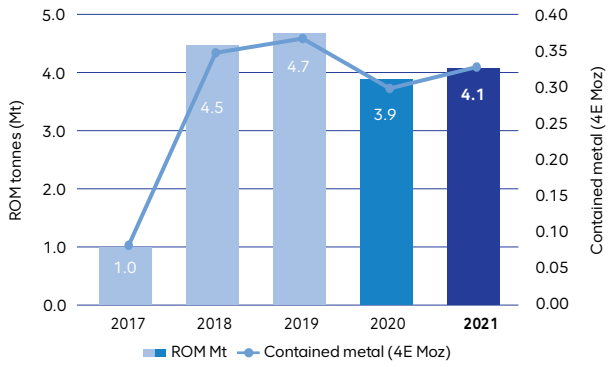
The tonnage and grades scheduled in Measured Mineral Resources are classified as Proved Ore Reserves and those in the Indicated Mineral Resources are classified as Probable Ore Reserves. No Measured Mineral Resources were converted to Probable Ore Reserves. The Ore Reserve estimation process is based on the development of an appropriately detailed and engineered life-of-mine plan, which accounts for all necessary access development and stope designs. All Ore Reserves are quoted in terms of the expected run-of-mine tonnages and grades delivered to the metallurgical processing facilities, and therefore the quantities reported account for dilution. Mine dilution includes other material, which is waste that is broken on the mining horizon, other than on the stope face, inclusive of unknown geological losses.

Mining method and operational Infrastructure

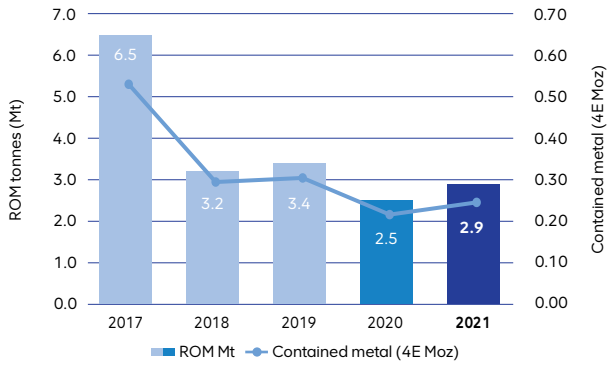
The UG2 Reef ore is mined through the mechanised bord-and-pillar mining as well as opencast methods. Ore Reserves at Siphumelele 3 shaft are mined, hoisted and processed using the Kroondal Mine infrastructure. The UG2 Reef is accessed from surface using five decline systems. Mining takes place at depths between 250m and 550m below surface. Run-of-mine ore is processed 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 Anglo American Platinum, under an offtake agreement.

Siphumelele 3 UG2 Reef production history (ROM)



Kroondal UG2 Reef production history (ROM)



For additional details on the 2021 production information see the mining and concentrating operations review section, pages 121–123 of integrated annual report

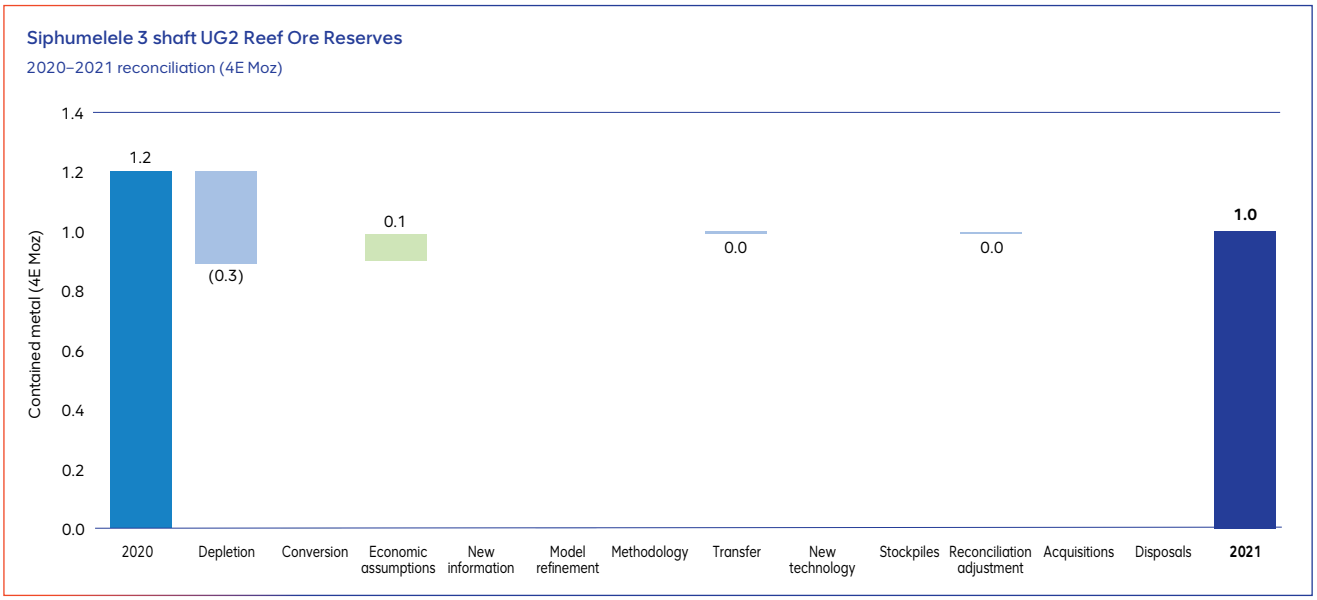
Siphumelele 3 shaft

Ore Reserve estimates

Siphumelele 3 shaft (100%)	Reserve life	Classification	Ore Reserves (ROM) Million tonnes (Mt) 2021	2020	Grade 4E g/t 2021	2020	Contained metal 4E tonnes 2021	2020	Contained metal 4E Moz 2021	2020
UG2 Reef	16	Proved	12.1	14.7	2.60	2.62	32	38	1.0	1.2
		Probable	—	—	—	—	—	—	—	—
		Total	12.1	14.7	2.60	2.62	32	38	1.0	1.2

UG2 Reef Ore Reserves reconciliation

The UG2 Reef Ore Reserve 4E ounces decreased due to production which was partially offset by revised economic assumptions.

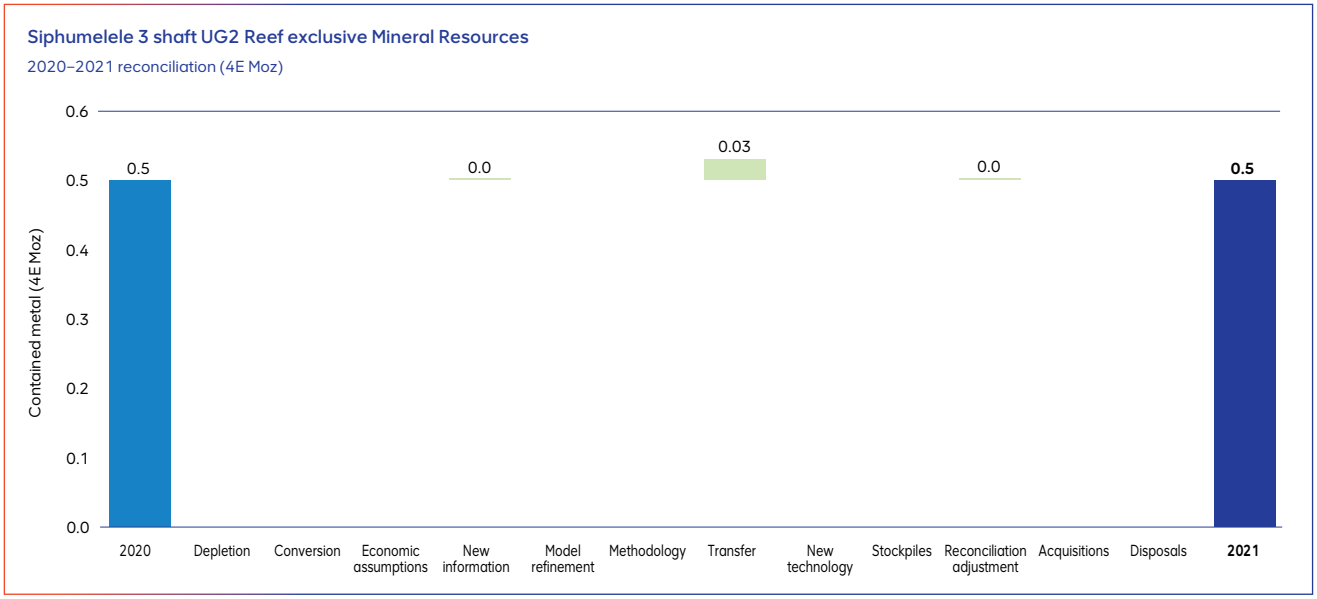


Exclusive Mineral Resource estimates

Siphumelele 3 shaft (100%)	Classification	Mineral Resources Million tonnes (Mt) 2021	2020	Grade 4E g/t 2021	2020	Contained metal 4E tonnes 2021	2020	Contained metal 4E Moz 2021	2020
UG2 Reef	Measured	5.0	4.7	3.18	3.16	16	15	0.5	0.5
	Indicated	—	—	—	—	—	—	—	—
	Measured and Indicated	5.0	4.7	3.18	3.16	16	15	0.5	0.5
	Inferred	—	—	—	—	—	—	—	—
	Total	5.0	4.7	3.18	3.16	16	15	0.5	0.5

UG2 Reef exclusive Mineral Resources reconciliation

The UG2 Reef Mineral Resources 4E ounces marginally increased due to revised reporting boundaries.



Inclusive Mineral Resource estimates

Siphumelele 3 shaft (100%)	Classification	Mineral Resources Million tonnes (Mt) 2021	2020	Grade 4E g/t 2021	2020	Contained metal 4E tonnes 2021	2020	Contained metal 4E Moz 2021	2020
UG2 Reef	Measured	**18.9**	22.1	**3.15**	3.16	**59**	70	**1.9**	2.2
	Indicated	**–**	–	**–**	–	**–**	–	**–**	–
	Measured and Indicated	**18.9**	22.1	**3.15**	3.16	**59**	70	**1.9**	2.2
	Inferred	**–**	–	**–**	–	**–**	–	**–**	–
	Total	**18.9**	22.1	**3.15**	3.16	**59**	70	**1.9**	2.2

Kroondal Mine

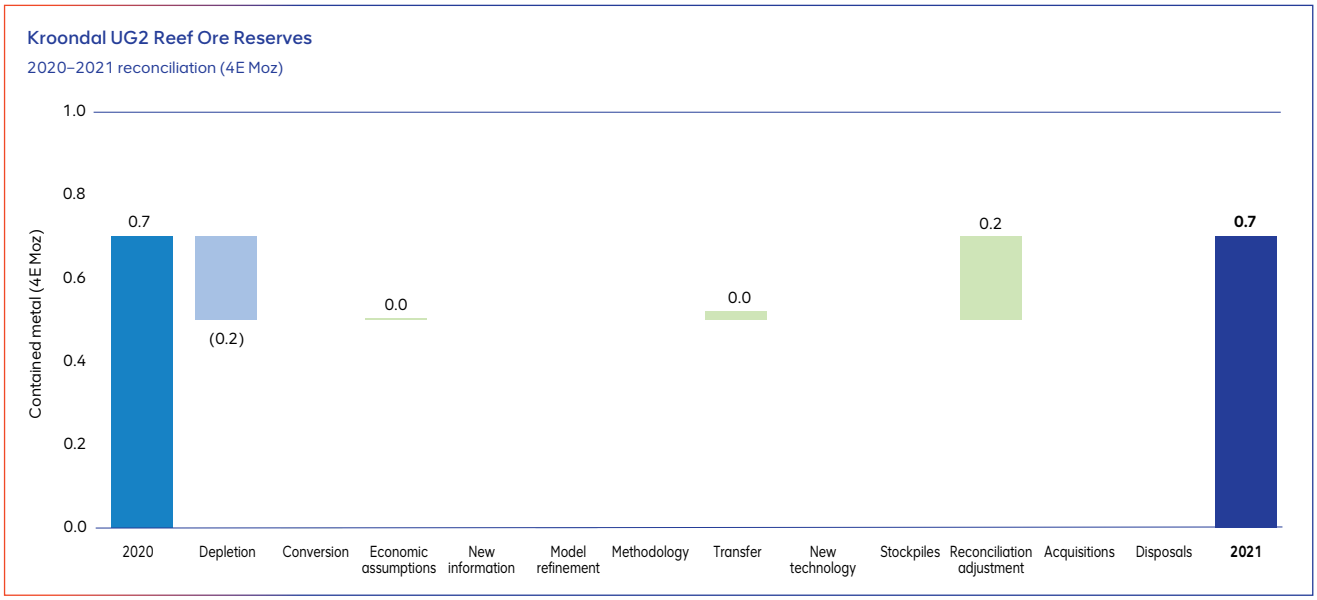
Ore Reserve estimates

Kroondal Mine (50%)*	Reserve life	Classification	Mineral Resources Million tonnes (Mt) 2021	2020	Grade 4E g/t 2021	2020	Contained metal 4E tonnes 2021	2020	Contained metal 4E Moz 2021	2020
UG2 Reef	5	Proved	8.7	9.3	2.6	2.5	23	23	0.7	0.7
		Probable	—	—	—	—	—	—	—	—
		Total	8.7	9.3	2.6	2.5	23	23	0.7	0.7

* The Proved Ore Reserves include opencast UG2 Reef Ore Reserves of 0.2 4E Moz (1.7 Mt and 3.27 4E g/t).

UG2 Reef Ore Reserves reconciliation*

The UG2 Reef Ore Reserve 4E ounces decreased primarily due to production.



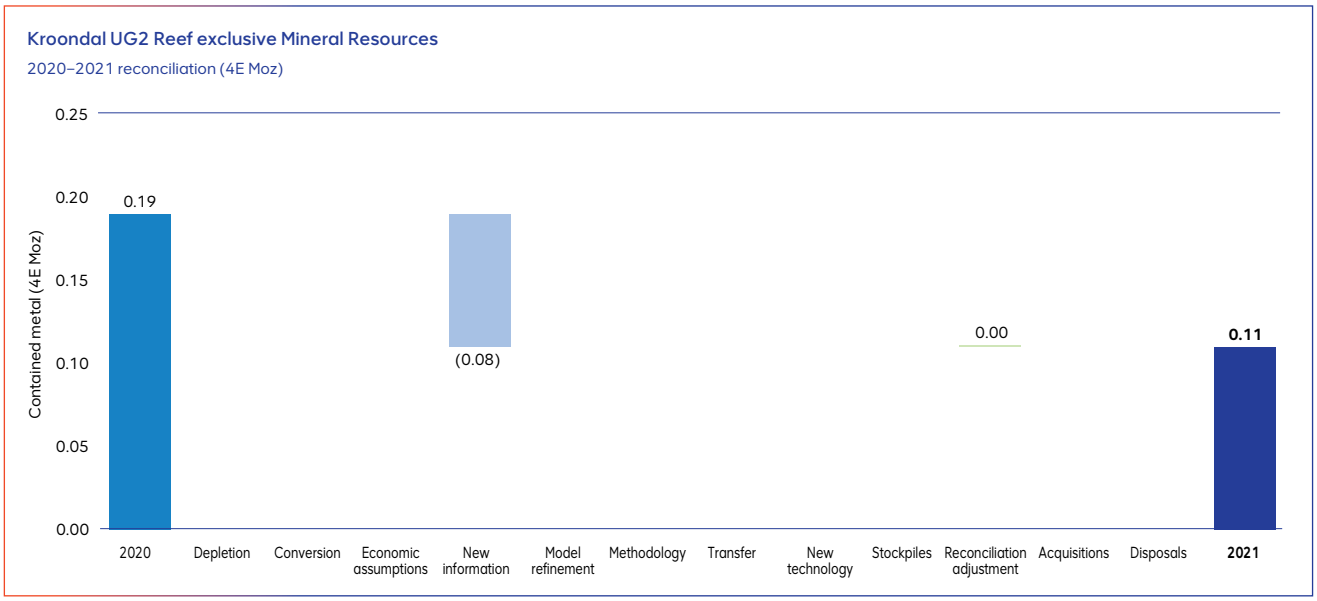
* Reconciliation adjustment: the reported 2020 estimates excluded opencast UG2 Reef Reserves of 0.2 4E Moz which are now adjusted for.

Exclusive Mineral Resource estimates

Kroondal Mine (50%)	Classification	Mineral Resources Million tonnes (Mt) 2021	2020	Grade 4E g/t 2021	2020	Contained metal 4E tonnes 2021	2020	Contained metal 4E Moz 2021	2020
UG2 Reef	Measured	1.1	1.5	3.01	3.22	3	5	0.1	0.2
	Indicated	—	0.3	—	3.58	—	1	—	0.0
	Measured and Indicated	1.1	1.8	3.01	3.28	3	6	0.1	0.2
	Inferred	—	—	—	—	—	—	—	—
	Total	1.1	1.8	3.01	3.28	3	6	0.1	0.2

UG2 Reef exclusive Mineral Resources reconciliation

The UG2 Reef Mineral Resources 4E ounces marginally decreased resulting from updated geological losses applied.



Inclusive Mineral Resource estimates

		Mineral Resources Million tonnes (Mt)		Grade 4E g/t		Contained metal 4E tonnes		Contained metal 4E Moz	
Kroondal Mine (50%)	**Classification**	**2021**	2020	**2021**	2020	**2021**	2020	**2021**	2020
UG2 Reef	Measured	**11.3**	12.1	**3.36**	3.19	**38**	39	**1.2**	1.2
	Indicated	**—**	0.6	**—**	3.58	**—**	2	**—**	0.1
	Measured and Indicated	**11.3**	12.6	**3.36**	3.20	**38**	41	**1.2**	1.3
	Inferred	**—**	—	**—**	—	**—**	—	**—**	—
	Total	**11.3**	12.6	**3.36**	3.20	**38**	41	**1.2**	1.3

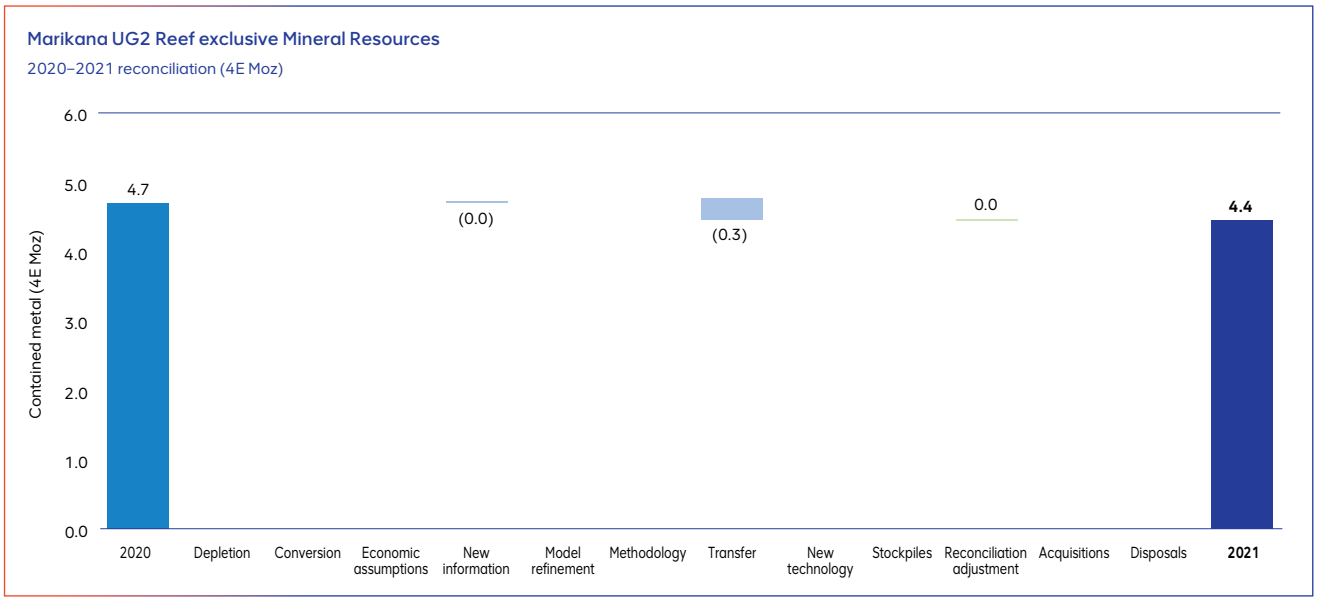
Marikana Mine continued

Exclusive Mineral Resource estimates

Marikana Mine (50%)	Classification	Mineral Resources Million tonnes (Mt) 2021	2020	Grade 4E g/t 2021	2020	Contained metal 4E tonnes 2021	2020	Contained metal 4E Moz 2021	2020
UG2 Reef	Measured	**25.4**	27.3	**3.44**	3.48	**87**	95	**2.8**	3.1
	Indicated	**9.5**	9.5	**3.84**	3.83	**36**	36	**1.2**	1.2
	Measured and Indicated	**34.8**	36.8	**3.55**	3.57	**123**	131	**4.0**	4.2
	Inferred	**4.9**	4.9	**2.95**	2.95	**15**	15	**0.5**	0.5
	Total	**39.8**	41.7	**3.48**	3.50	**138**	146	**4.4**	4.7

UG2 Reef exclusive Mineral Resources reconciliation

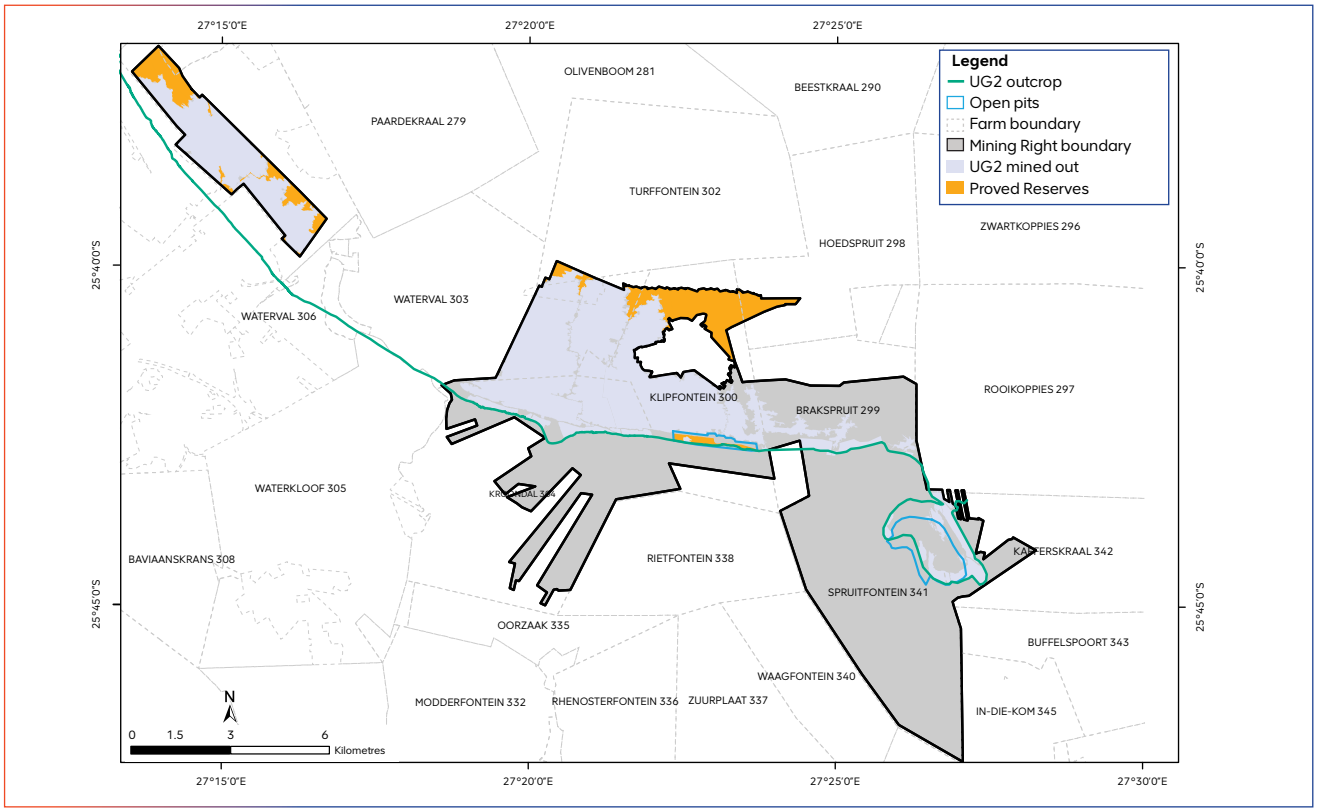
The UG2 Reef Mineral Resources 4E ounces decreased due to transfer of open-cast Mineral Resources to Kroondal resulting from revised reporting boundaries.



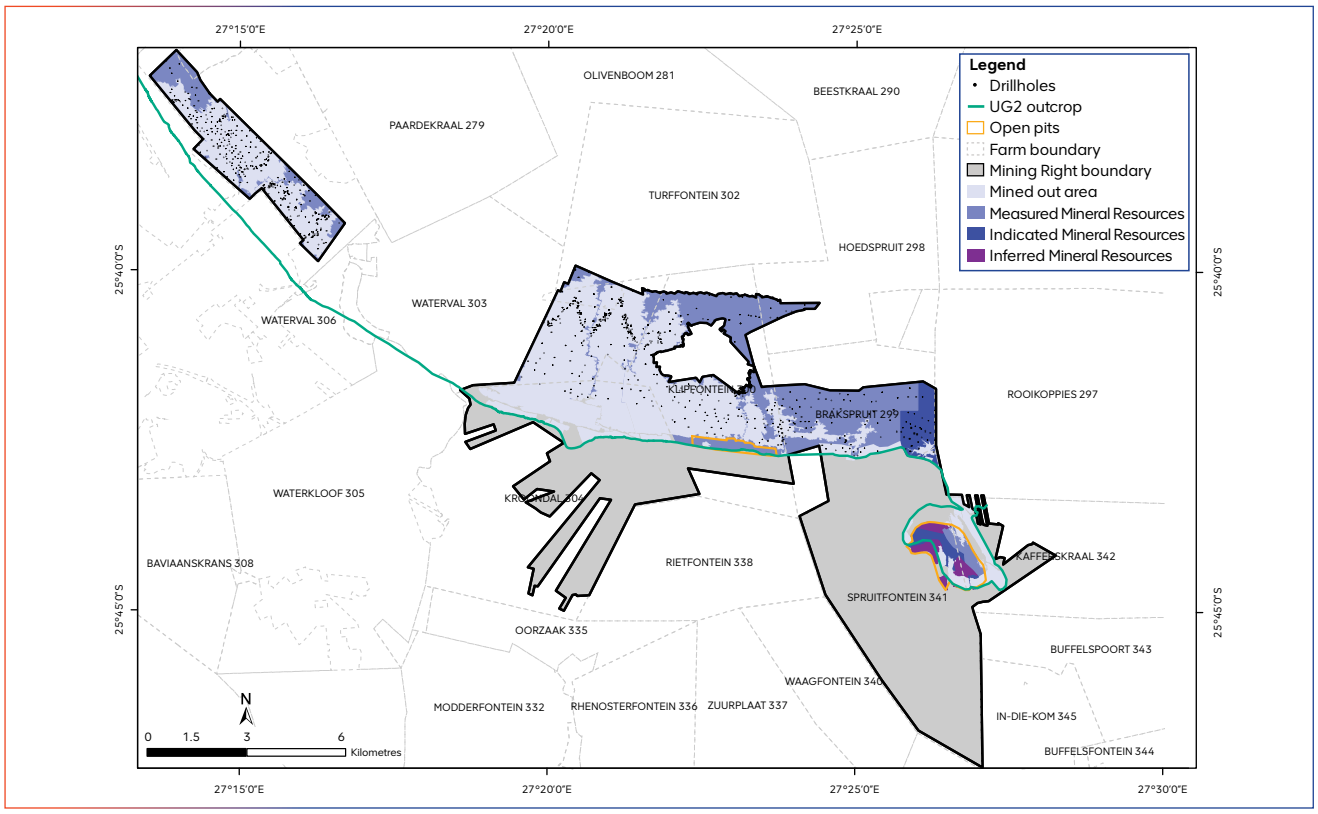
Inclusive Mineral Resource estimates

Marikana Mine (50%)	Classification	Mineral Resources Million tonnes (Mt) 2021	2020	Grade 4E g/t 2021	2020	Contained metal 4E tonnes 2021	2020	Contained metal 4E Moz 2021	2020
UG2 Reef	Measured	**25.4**	27.3	**3.44**	3.48	**87**	95	**2.8**	3.1
	Indicated	**9.5**	9.5	**3.84**	3.83	**36**	36	**1.2**	1.2
	Measured and Indicated	**34.8**	36.8	**3.55**	3.57	**123**	131	**4.0**	4.2
	Inferred	**4.9**	4.9	**2.95**	2.95	**15**	15	**0.5**	0.5
	Total	**39.8**	41.7	**3.48**	3.50	**138**	146	**4.4**	4.7

Sibanye-Stillwater joint operations UG2 Reef Ore Reserves classification map



Sibanye-Stillwater joint operations UG2 Reef Mineral Resources classification map



Estimates and reconciliation – joint operations

as at 31 December 2021

Bokoni Mine

Anglo American Platinum Limited interest: 49%
Management structure: non-managed

Location

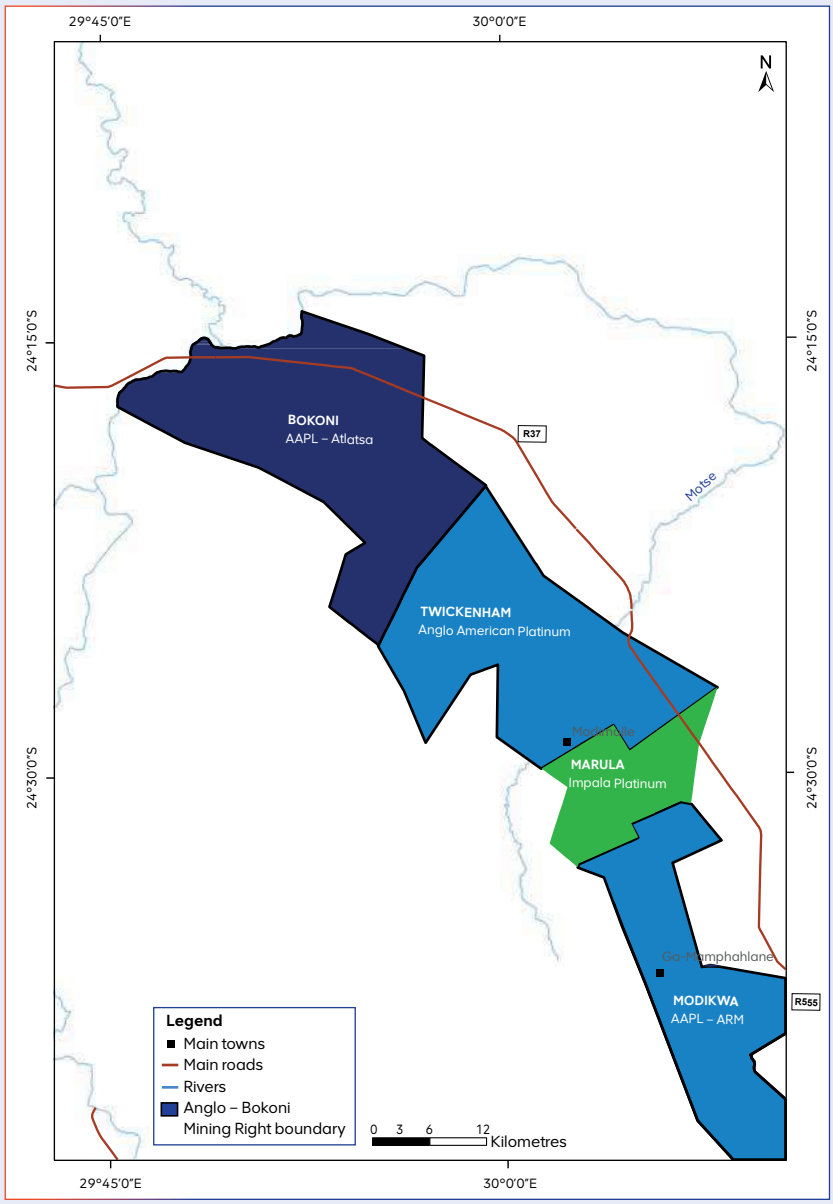
Bokoni is a 51:49 joint-operation partnership between Atlatsa Resources and Anglo American Platinum in Limpopo, 80km south-east of the town of Polokwane.

Property description

It forms part of the north-eastern limb of the Bushveld Complex, with both Merensky and UG2 reefs Mineral Resources.

The mining infrastructure of Middelpunt and Brakfontein decline shafts and two concentrators was placed on care and maintenance in October 2017, following the closure of the older Vertical and UM2 shafts in 2015. The opencast operation was terminated in December 2016 and the rehabilitation completed in January 2018.

Anglo American Platinum and Atlatsa Resources Corporation have entered into a sales and purchase agreement (SPA) to dispose of Bokoni Mine to African Rainbow Minerals (ARM).



Competence

Raymond Makgato*
Competent Person:
Mineral Resources
Role:
Technical assistant: strategy and business development
Relevant qualifications:
BSc (hons) (geology), GDE (mining)
Professional organisation:
SACNASP, PrSciNat (400100/10)
Relevant experience:
14 years

* Employed by Anglo American Platinum.

Brief history

Bokoni Mine has undergone several ownership and name changes since 1969 when it was known as Atok Platinum Mine (Pty) Limited and subsequently acquired by Anglo American Platinum in the mid 1990s. Anooraq Resources (renamed Atlatsa Resources) and Anglo American Platinum entered into an empowerment transaction agreement in 2008, whereby Anglo American Platinum sold to Atlatsa an effective 50% of Bokoni Mine and an additional 1% interest in each of the other joint projects (including Ga-Phasha). As a result, Atlatsa Resources had a controlling interest in the mine.

In July 2017, Atlatsa entered into an agreement with Anglo American Platinum, whereby Atlatsa implemented a full care and maintenance strategy for Bokoni Mine. In December 2021, Anglo American announced the sale of its stake in Bokoni Mine to ARM. The transaction is expected to be concluded in 2022.

Mineral Rights

Bokoni Mine has two Mining Rights. The first covers an area of 15,139ha, having a converted Mining Right under DMRE reference LP 59 MR, valid from June 2009 to June 2039. The second covers an area of 4,549ha, having a converted Mining Right under the DMRE reference LP 65 MR, valid from June 2009 to June 2039.

There are no known impediments to the Mining Rights.

Brief geological description

Bokoni Mine is located in the eastern limb of the Bushveld Complex, north of the Steelpoort fault. The main economic horizons and PGM mineralisation are the UG2 and Merensky reefs. Both reefs subcrop on the property, striking roughly north-west/south-east at dips ranging between 16° to 18° to the south-west over a strike length of 22km. The vertical separation between the two reefs is approximately 400m.

The Merensky Reef comprises of poikilitic pyroxenite bound by chromitite stringers with thickness ranging between 50cm to 100cm. The UG2 chromitite layer varies in thickness from 50cm to 70cm, overlain by three, sometimes up to five, chromitite stringers varying in thickness from 1mm to 10mm. The immediate footwall of the UG2 Reef is usually a pegmatoidal feldspathic pyroxenite, which varies in thickness from a few centimetres to over 1m. Split reef conditions exist on UG2 Reef to the south-east of the Middelpunt Hill area.

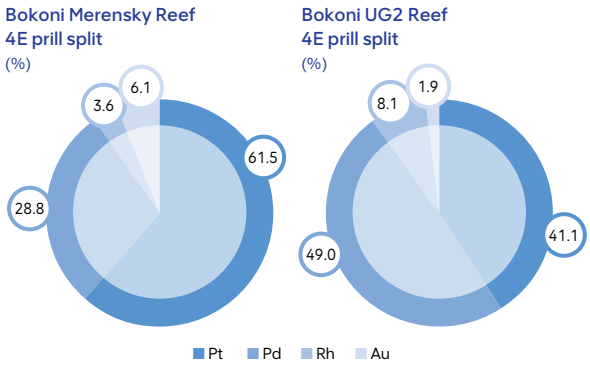
Structurally, the mine is affected by north-east/south-west striking dolerite dykes of post-Karoo age and faults. Other geological discontinuities such as potholes and replacement pegmatites of various compositions (sometimes iron-rich) do occur. Replacement pegmatite induced mega-slumps occur on Brakfontein farm and more notably Klipfontein farm affecting both economic horizons. They are adequately discounted in the reported Mineral Resources.

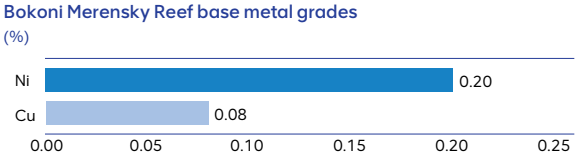
Mineral Resources estimation and classification

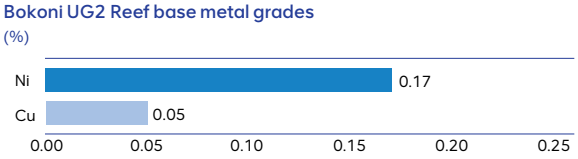
A Mineral Resources modelling process is undertaken to allow estimation of the Merensky and UG2 reefs in Datamine. Estimation block sizes vary from 25m x 25x10m to 800m x 800m, depending the density of the data and proximity to mined areas. Two types of block models were constructed to allow estimation. The first and main Mineral Resource model type facilitated estimation of the main mineralised 'interval' for both the Merensky and UG2 Reefs. The secondary type of model facilitated the estimation of multiple 10cm reef hangingwall and footwall layers. The top reef contact was used as a datum for the various block models. The densities for each reef unit were estimated into the primary block models using the variography and values from the surface drilling sampling data.

Mineral Resources estimation for platinum, palladium, rhodium, gold, ruthenium, iridium, density and true width using ordinary kriging; and inverse distance for copper and nickel. The Resource cut widths are compiled over a minimum practical mining cut which includes additional varying thickness of over-break material. The minimum mining widths are determined by a number of parameters, namely: reef width, mineralisation of the hanging wall and footwall, mining method, rock quality, location of weak parting planes, support systems and associated equipment required for support installation.

The Mineral Resource 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. Minimum number of samples, search volume and slope of regression are geostatistical considerations for the classification process.







Reasonable prospects of eventual economic extraction

The following factors were considered when determining reasonable prospects of eventual economic extraction of the declared Mineral Resources:

- Legal: Bokoni Mine adheres to all regulatory requirements and has requisite permits and licences to mine
- Geology: The latest geological and Mineral Resource models underpin the RPEEE considerations applied in the context of Mineral Resources declaration
- Mining method: The RPEEE considerations are based on the mining methods as utilised on adjacent mines
- Economics: Historical mining at Bokoni has proved that mining can be economically viable
- Technology: Current technology is deemed to be inadequate for mining any material below the 75° isotherm line, and therefore has been excluded from the Mineral Resources declaration
- Metallurgical: Sufficient geo-metallurgical and mineralogical test work has been carried out for reefs declared and recovery potentials considered. The mine has sufficient plant data to predict recovery potential
- Other factors such as marketing, environmental, social and infrastructure are adequately assessed during various technical reviews.

	Units	Merensky	UG2
Mineral Resource assumptions			
Average geological loss	%	**14**	**14**
Minimum Resource cut width	cm	**90**	**90**
Average density	g/cm^3	**3.4**	**3.9**

Exclusive Mineral Resource estimates

		Mineral Resources Million tonnes (Mt)		Grade 4E g/t		Contained metal 4E tonnes		Contained metal 4E Moz	
Bokoni Mine (49%)	**Classification**	**2021**	2020	**2021**	2020	**2021**	2020	**2021**	2020
Merensky Reef	Measured	**92.8**	92.8	**4.82**	4.82	**447**	447	**14.4**	14.4
	Indicated	**47.8**	47.8	**4.85**	4.85	**232**	232	**7.5**	7.5
	Measured and Indicated	**140.6**	140.6	**4.83**	4.83	**679**	679	**21.8**	21.8
	Inferred	**205.8**	205.8	**5.02**	5.02	**1,033**	1,033	**33.2**	33.2
	Total	**346.4**	346.4	**4.94**	4.94	**1,712**	1,712	**55.1**	55.1
UG2 Reef	Measured	**198.6**	198.6	**6.43**	6.43	**1,277**	1,277	**41.1**	41.1
	Indicated	**92.3**	92.3	**6.57**	6.57	**606**	606	**19.5**	19.5
	Measured and Indicated	**290.9**	290.9	**6.47**	6.47	**1,883**	1,883	**60.6**	60.6
	Inferred	**174.6**	174.6	**6.71**	6.71	**1,172**	1,172	**37.7**	37.7
	Total	**465.5**	465.5	**6.56**	6.56	**3,055**	3,055	**98.2**	98.2

Merensky Reef exclusive Mineral Resources reconciliation

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

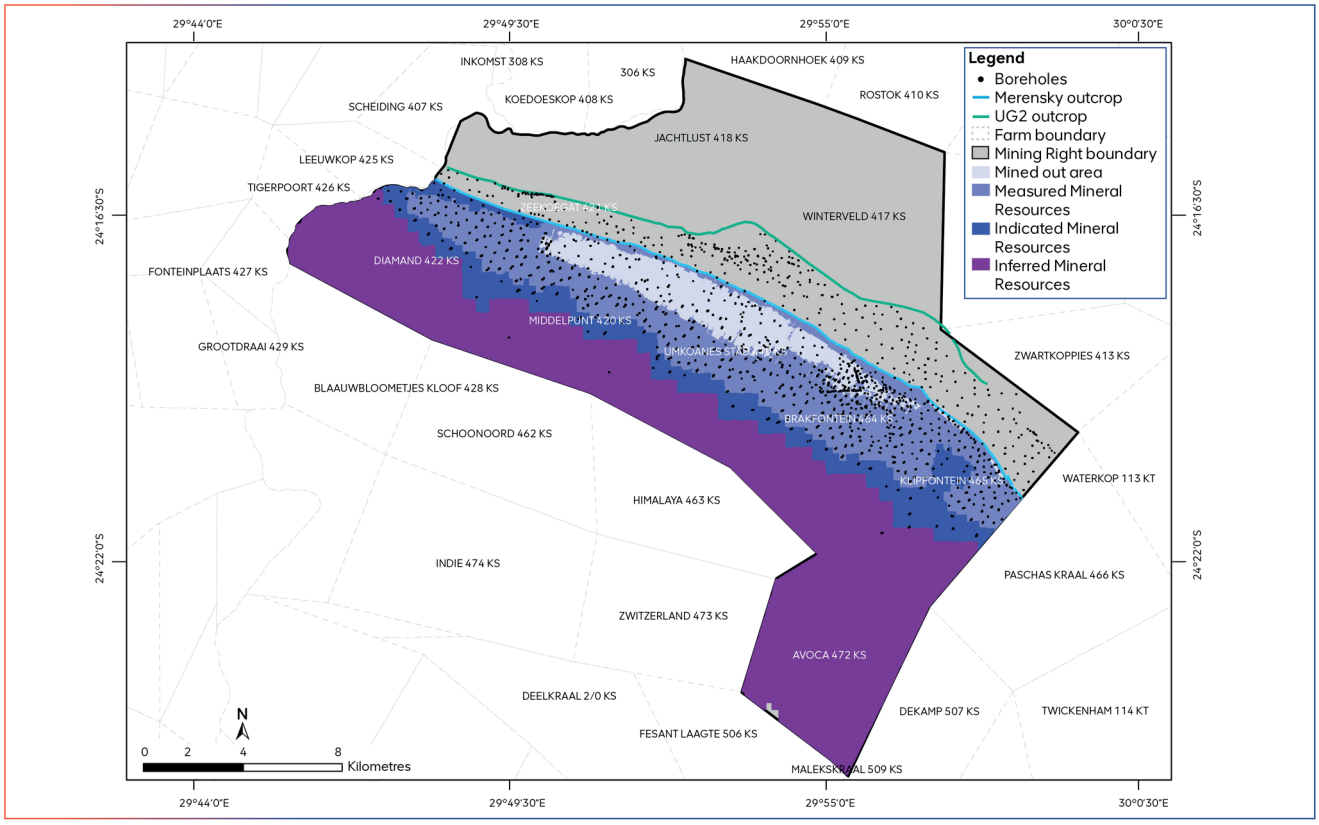
UG2 Reef exclusive Mineral Resources reconciliation

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

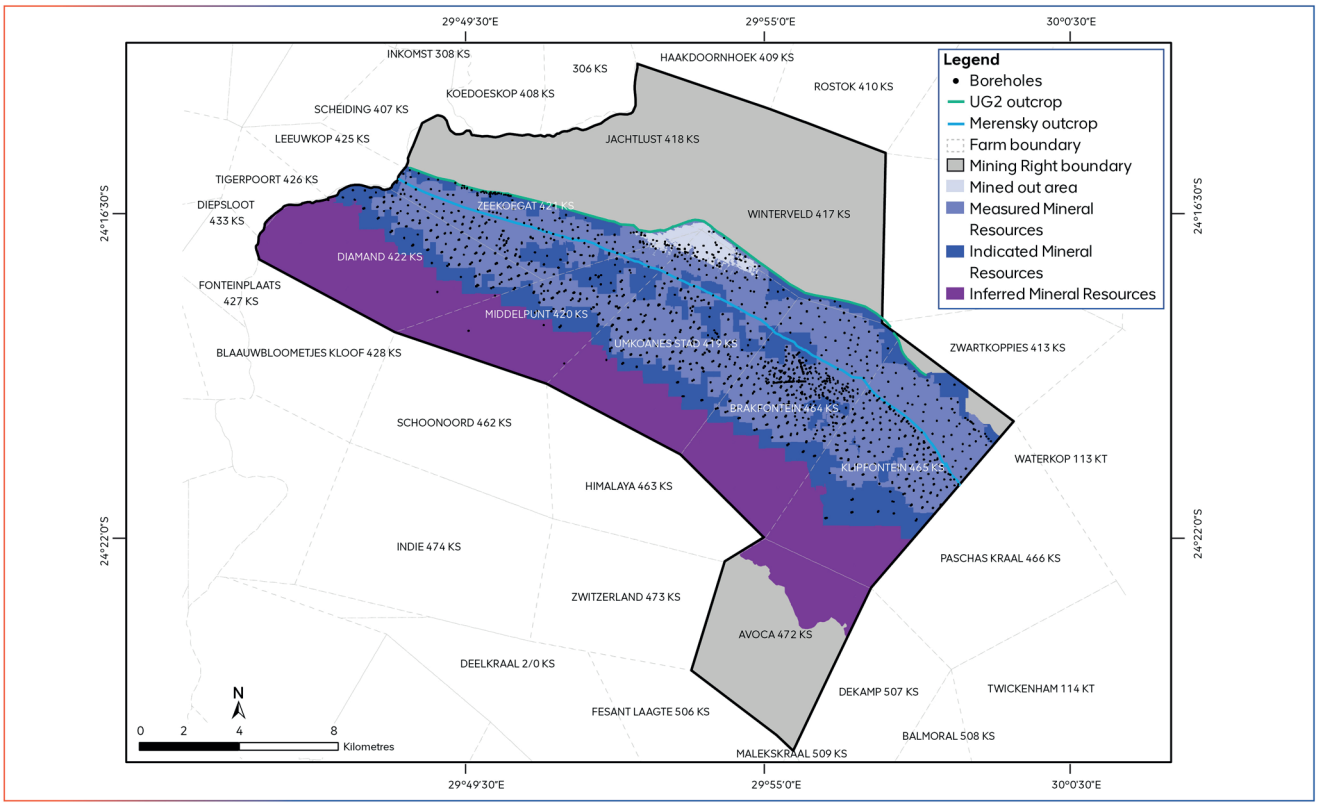
Inclusive Mineral Resource estimates

		Mineral Resources Million tonnes (Mt)		Grade 4E g/t		Contained metal 4E tonnes		Contained metal 4E Moz	
Bokoni Mine (49%)	**Classification**	**2021**	2020	**2021**	2020	**2021**	2020	**2021**	2020
Merensky Reef	Measured	**92.8**	92.8	**4.82**	4.82	**447**	447	**14.4**	14.4
	Indicated	**47.8**	47.8	**4.85**	4.85	**232**	232	**7.5**	7.5
	Measured and Indicated	**140.6**	140.6	**4.83**	4.83	**679**	679	**21.8**	21.8
	Inferred	**205.8**	205.8	**5.02**	5.02	**1,033**	1,033	**33.2**	33.2
	Total	**346.4**	346.4	**4.94**	4.94	**1,712**	1,712	**55.1**	55.1
UG2 Reef	Measured	**198.6**	198.6	**6.43**	6.43	**1,277**	1,277	**41.1**	41.1
	Indicated	**92.3**	92.3	**6.57**	6.57	**606**	606	**19.5**	19.5
	Measured and Indicated	**290.9**	290.9	**6.47**	6.47	**1,883**	1,883	**60.6**	60.6
	Inferred	**174.6**	174.6	**6.71**	6.71	**1,172**	1,172	**37.7**	37.7
	Total	**465.5**	465.5	**6.56**	6.56	**3,055**	3,055	**98.2**	98.2

Bokoni Merensky Reef Mineral Resources classification map



Bokoni UG2 Reef Mineral Resources classification map



Endowment

as at 31 December 2021

Endowment

General	In addition to evaluated and reported Ore Reserves and Mineral Resources, Anglo American Platinum 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	**Tailings storage facilities** 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, base metals, chromite and are registered internally in Anglo American Platinum's 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).
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 chromite recovery plants, with a community partner, are operating at Amandelbult complex. The Amandelbult complex UG2 Reef at Tumela and Dishaba mines has an average *in situ* Cr_2O_3 grade of approximately 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 11% and 21% from every tonne of UG2 ore processed (overall yield factor) when the Cr_2O_3 content in the UG2 ore is greater than 20%. The resultant chromite concentrate has an average Cr_2O_3 grade of between 41% and 44%. The contained monetary value of the chromite by-product is included when assessing UG2 Reef Ore Reserves where the chromite recovery plants are in production.

Amandelbult – The chromite plants at Amandelbult concentrator.

External audits assurance letters

Mototolo complex external audit assurance letter

Scott Jackson
Anglo American Platinum Limited
Head of Mineral Resources and Ore Reserves
Anglo American Technical and Sustainability
144 Oxford Road
Rosebank, Melrose
South Africa

18 February 2022

Dear Sir

Mototolo Complex 2021 Mineral Resource and Mineral Reserve Audit

In November 2021 Snowden Optiro (Snowden) were requested to audit Anglo American Platinum Limited's (AAPL) 2021 Mineral Resources and Mineral Reserves for the Mototolo Der Brochen Complex.

The audit was carried out by Mr Matt Mullins, Executive Consultant for Snowden and a Fellow of the Australasian Institute of Mining and Metallurgy, and by Dr Steven Rupprecht, Associate Executive Consultant for Snowden and an Honorary Fellow of the Southern African Institute of Mining and Metallurgy. They are both Competent Persons as defined in the SAMREC (2016) Code.

Snowden is satisfied that the Mineral Resources and Mineral Reserves being reported are compliant with internal procedures, with the SAMREC Code, and with Section 12 of the JSE Listings Rules.

Several critical action items were identified during the audit, mainly concerning documentation associated with the Public Report. These were satisfactorily addressed prior to the date of this letter. Additional improvement opportunities have been identified in the Snowden report and should be addressed during the next reporting cycle.

Your Sincerely,

Matt Mullins, Executive Consultant

Snowden Mining Industry Consultants Pty Ltd
No. 34 Fricker Road Illovo Boulevard, Illovo
2196, SOUTH AFRICA
Reg No. 1998/023556/07

snowdenoptiro.com

Unki Mine external audit assurance letter

THE MSA GROUP

Specialist Consultants to the Mining Industry

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PO Box 81356, Parkhurst, 2120, South Africa
Directors: KD Scott, NNP Makhoba, JG Haddon

25 January 2022

Mr. Scott Jackson,
Head of Mineral Resources and Ore Reserves,
Anglo American: Technical and Sustainability,
144 Oxford Road,
Rosebank,
South Africa.

Dear Sir

Unki Platinum Mine Mineral Resource and Mineral Reserve Audit 2021

At the request of Anglo Platinum Limited ("AAPL"), The MSA Group (Pty) Ltd ("MSA") completed an Independent Audit of the 31 December 2021 Mineral Resources and Mineral Reserves for Unki Platinum Mine ("Unki"). Unki comprises an underground mechanised bord and pillar mine, a concentrator and a smelter that extract Platinum Group Metals ("PGMs"), nickel and copper from the Main Sulphide Zone of the Great Dyke of Zimbabwe.

The audit covered Mineral Resource and Mineral Reserve estimation, classification and reporting. The audit process included discussions with the persons responsible for the estimates, review of the data collection processes, analysis of the input data, detailed review of the underlying assumptions and estimation methodology, and checks on the resulting estimates. The audit was carried out remotely due to COVID-19 pandemic restrictions.

It is MSA's opinion that the Mineral Resources and Mineral Reserves have been estimated using reasonable assumptions and techniques for the style of mineralisation and mining methods at Unki. The Mineral Resources and Mineral Reserves have been prepared by suitably qualified and experienced Competent Persons who were assisted by various experts from Unki and AAPL. The estimations and inputs are guided by comprehensive procedures and governed by standards that are assured by stringent internal audit and review processes.

No significant or material items were identified during the course of the audit. Major risks that could impact on the reported Mineral Resources and Reserves are well understood with appropriate mitigation measures in place. MSA has verified the quantum of Mineral Resource and Mineral Reserves reported for Unki and considers that the Mineral Resources and Mineral Reserves have been prepared in accordance with the guidelines of the 2016 Edition of the South African Code for the Reporting of Exploration Results, Mineral Resources and Mineral Reserves (The SAMREC Code, 2016) and are suitable for public disclosure in Anglo American Platinum Limited's Annual Report.

The Mineral Resource audit was completed by Mr. Jeremy Witley (Pri. Sci. Nat.) and the Mineral Reserve audit was completed by Mr. Jonathan Hudson (Pr. Eng.), who are appropriately qualified and experienced in narrow tabular PGE deposits to carry out the audit. Neither MSA, Mr. Witley nor Mr. Hudson have any material interest in the assets concerned, and MSA is remunerated based on fees that are not contingent on the outcome of this independent external audit.

On behalf of The MSA Group (Pty) Ltd.

Jeremy Witley
Head of Mineral Resources
Pri. Sci. Nat., FGSSA, BSc (Hons), MSc (Eng.)

Jonathan Hudson
Associate Principal Mining Engineer
Pr. Eng., FSAIMM, BSC (Eng.), MBA

Definitions for SAMREC Code terminology

Ore Reserves and Mineral Resources 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 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)
Inferred 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 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 prefeasibility or 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. Code considers the term Ore Reserves synonymous with Mineral Reserves.

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)
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)

Definitions for reconciliation categories

Opening balance	As at 31 December 2020.
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.
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 eg changes in pit slope angles or mineable cut due to geotechnical reasons. The change can be positive or negative year-on-year. Subcategories: – 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 orebodies (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.
Acquisition	Additional Ore Reserves and Mineral Resources due to acquisitions of assets or increased direct ownership in joint operations agreements/associate companies.
Disposal	Reduction in Ore Reserves and Mineral Resources due to disposals of assets or reduced direct ownership in joint operations agreements/associate companies, refusal/withdrawal/relinquishment of Mining/Prospecting Rights or related permits eg due to environmental issues, changes in policy.
Closing balance	As at 31 December 2021.

Glossary of terms

Anorthosite	Igneous rock composed almost entirely of plagioclase feldspar
Chromitite	An igneous cumulate rock composed mostly of the mineral chromite
Competent Person	A person who is registered with SACNASP, ECSA or SAGC, or is a member or Fellow of the SAIMM, the GSSA, IMSSA or a Recognised Professional Organisation (RPO). A Competent Person must have a minimum of five years relevant experience in the style of mineralisation or type of deposit under consideration and in the activity which that person is undertaking
DMRE	Department of Mineral Resources and Energy
Dolerite	A dark, crystalline, igneous rock consisting predominantly of pyroxene with labradorite often emplaced in dykes
Dunite	Igneous rock consisting predominately of olivine
Dyke	Bodies of magma that cut through and across the layering of adjacent rocks. They form when magma rises into an existing fracture or creates a new fracture forcing its way through existing rock, and then solidifies. Karoo-age dykes are estimated to have been emplaced ca 180 million years ago
Feasibility study	A comprehensive design and costing study of a project. Appropriate assessments have been made of realistically assumed geological, mining, metallurgical, economic, marketing, legal, environmental, social, governmental, engineering, operational and all other modifying factors, which are considered in sufficient detail to demonstrate at the time of reporting that extraction is reasonably justified (economically mineable) and the factors reasonably serve as the basis for a final decision by a proponent or financial institution to proceed with, or finance, the development of the project. The overall confidence of the study should be stated
Gabbro	Igneous rock composed predominately of plagioclase feldspar and clinopyroxene occurring in approximately equal proportions
Gabbronorites	Igneous rock composed predominately of a higher proportion of plagioclase feldspar and clinopyroxene
Harzburgite	Igneous rock composed mainly of olivine and pyroxene
In situ	In its natural position or place
IRUP	Iron-rich ultramafic pegmatite
ISO 31000	International Organization for Standardization sets the international standards for risk management
IsoMetrix	Social and environmental data management system
Isotherm	A line connecting points of equal temperature, in the context of this report, 75˚C
LOMP	Life-of-mine plan. A design and financial/economic study of an existing operation in which appropriate assessments have been made of existing geological, mining, metallurgical, economic, marketing, legal, environmental, social, governmental, engineering, operational and all other modifying factors, which are considered in sufficient detail to demonstrate that continued extraction is reasonably justified
Mafic	Igneous rock composed mainly of dark ferromagnesium minerals which are less than 90% by volume
Mine call factor	The ratio, expressed as a percentage, of the metals produced in recovery plus residue to the corresponding product "called for" by the mine's measuring and evaluation methods
Norite	Igneous rock composed mainly of plagioclase feldspar and orthopyroxenes in approximately equal proportions
Pay limit grade	The average grade at which it is estimated that ore can be mined at break-even over the life-of-mine
Pegmatoid	Igneous rock that has the coarse crystalline texture of a pegmatite (large interlocking crystals) but lacks the graphic appearance
Prill split	A prill split in the context of PGM mining indicates the relative proportions of the various PGMs contained in a tonne of ore. The prill split is classified as a 4E prill split when it reports on the elements: platinum, palladium, rhodium, and gold
Pyroxenite	Igneous rock composed predominately of pyroxene and minor feldspar
RC	Reverse circulation drilling method
Reef	A geological or stratigraphic horizon that may contain economic levels of mineralisation
RPEEE	Reasonable prospects of eventual economic extraction
RPO	A Recognised Professional Organisation as per the SAMREC Code definitions
SAMREC Code	South African Code for the Reporting of Exploration Results, Mineral Resources and Mineral Reserves 2016 Edition
SAMVAL Code	South African Code for the Reporting of Mineral Asset Valuation 2016 Edition
Stripping ratio	An open pit mining process measurement that represents the amount of waste material, also known as overburden, that must be moved in order to extract a given amount of ore
Tailings	Material resulting from processing operations
Ultramafic	Igneous rock composed mainly of dark ferromagnesium minerals which constitute more than 90% by volume
Websterite	Igneous rock composed of equal proportions of orthopyroxene and clinopyroxene

Recognised professional organisations

Organisations	Addresses and contact details
ECSA	Engineering Council of South Africa Lake Office Park, Waterview Corner Building 1st floor, 2 Ernest Oppenheimer Ave, Bruma, Johannesburg, 2198, Gauteng, South Africa **Website:** www.ecsa.co.za
IMMSA	The Institute for Mine Surveyors of Southern Africa The Mineral Council South Africa, Room 509, 5th Floor, 5 Hollard Street, Marshalltown, Johannesburg, Gauteng, South Africa **Website:** www.ims.org.za
SACNASP	South African Council for Natural Scientific Professions The Innovation Hub, Enterprise Building Suite L4, 1 Mark Shuttleworth Street, Lynwood, Pretoria, 0087, Gauteng, South Africa **Website:** www.sacnasp.org.za
SAGC	South African Geomatics Council Unit 3, Building 2, Bruma Boulevard Office Park, 20 Zulberg Close, Bruma, Johannesburg, 2026, Gauteng, South Africa **Website:** www.sagc.org.za
SAIMM	The Southern African Institute of Mining and Metallurgy The Mineral Council South Africa, 5th Floor, 5 Hollard Street, Marshalltown, Johannesburg, Gauteng, South Africa **Website:** www.saimm.co.za

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N Viljoen (chief executive officer)
CW Miller (finance director)

Independent non-executive directors

RJ Dixon
T Leoka
NP Mageza
NT Moholi
D Naidoo
JM Vice

Non-executive directors

M Cutifani (Australian)
NB Mbazima (Zambian)
N Fakude
A Michaud-Ahmed (British)

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Fraud line – yourvoice

Anonymous whistleblower facility 087 232 5426 (South Africa)
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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www.angloamerican.com

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