



PROFITABLE / SUSTAINABLE / STAKEHOLDERS / GROWTH

Group Mineral Resources and Mineral Reserves

supplement to the integrated annual report for the year ended 30 June 2020

Development into New Consort Mine's initial target block on 42L PC Shaft has been completed. The block has a Mineral Reserve of 5,000t at 25g/t with initial chip samples yielding grades in excess of 300g/t in certain areas.

HENDRIK PRETORIUS Group mineral resource management manager

AIM OF THIS REPORT

Pan African Resources' (Pan African) Mineral Resources and Mineral Reserves report 2020 conforms to the standards determined by the South African Code for Reporting of Mineral Resources and Mineral Reserves (SAMREC Code, 2016 edition) and reports the Group's position on Mineral Resources and Mineral Reserves at 30 June 2020.

This report accompanies Pan African's integrated annual report, including the annual financial statements for the year ended 30 June 2020 and should be read in conjunction with the entire reporting suite and documents. The entire suite of documents is available on our website at www.panafricanresources.com.

The Mineral Resources component is reported inclusive of Mineral Reserves, unless otherwise stated. Information in this report is presented by operation, mine or project on an attributable basis.

Rounding of numbers in this document may result in minor computational discrepancies.

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Group Mineral Resources and Mineral Reserves continued

HEADLINE NUMBERS – GROUP OVERVIEW

The Mineral Resources and Mineral Reserves for the Group are reported according to the guidelines of the SAMREC Code. Mineral Resources and Mineral Reserves exclude any exploration targets and represent the attributable constituent for Pan African. All Mineral Resources include that portion of the Mineral Resources that was converted to Mineral Reserves by applying modifying factors, a mine design and scheduling.

Pan African's attributable gold Mineral Resources and Mineral Reserves at 30 June 2020 are tabled below:

	Mineral Resources			Mineral Reserves	
	At 30 June 2020	At 30 June 2019	Category	At 30 June 2020	At 30 June 2019
Total Inferred	37.6Moz Au 13.5Moz Au	36.0Moz Au 12.3Moz Au	Total	10.9Moz Au	10.9Moz Au
Indicated	20.8Moz Au	20.5Moz Au	Probable	9.3Moz Au	9.5Moz Au
Measured	3.3Moz Au	3.1Moz Au	Proved	1.5Moz Au	1.4Moz Au

All Mineral Resources and Mineral Reserves reported are within the Group's existing mining rights and prospecting rights.







Pan African compared to peers*

Resolute Mining's Mineral Resources as declared in the Resolute 2019 annual report.

Shanta Gold's Mineral Resources as declared and calculated from the Shanta Gold corporate presentation dated 18 June 2020.

West Wits Mining Limited's Mineral Resources as declared in the West Wits Mining Limited investor presentation November 2018.

Further to the reported Mineral Resources and Mineral Reserves, Pan African has delineated a new exploration target at Evander Mines' 9 Shaft A-block. The project that is contained within the Kimberley Reef orebody and located at a shallow depth of some 300m below surface. This project is currently undergoing further technical investigation and analysis, including an exploration drilling programme. Refer to the Evander projects section (IIII) pages 54 to 63) in this document for further details. This exploration target is reported within an expected range in compliance with the relevant reporting standards. An exploration target cannot be included in the Mineral Resources and Mineral Reserves statement for the Group for the financial year ended 30 June 2020.

		Exploration target									
	At 30 June 2020				At 30 June 2019						
		Containe	ntained gold			Contained gold					
Category	Tonnes million	Grade g/t	Tonnes gold	Moz	Tonnes million	Grade g/t	Tonnes gold	Moz			
Minimum of expected range	0.7	8.0	5.6	0.18	_	_	_	-			
expected range	1.0	15.0	15.0	0.48	_	_	_	_			

Group Mineral Resources and Mineral Reserves continued

2020 IN REVIEW

The Group's achievements for the year ended 30 June 2020 are presented below:



Licence to operate

- Barberton Mines submitted its mining right renewal application to the Department of Mineral Resources and Energy (DMRE) on 24 August 2018 for a further period of 30 years. Processing of the application is in progress
- Evander mining right is valid until 28 April 2038

Pro

- Projects
- Deliver into Evander Mines' 8 Shaft pillar
- Enhance the output of Thomas section at Sheba Mine
- Equip the New Consort Prince Consort (PC) shaft pillar for extraction
- Completion of feasibility study at Evander Mines' Egoli project

00 ESG

- Impact of COVID-19
- Development of environmental, social and governance (ESG) framework for the Group
- Responsible production to achieve sustainable development goals as set out in the United Nations Sustainable Development Goals

Mineral Resources

- Substantial increase of 4.6% to the Group's Mineral Resources base
- Successful exploration drilling at New Consort and Fairview Mines generated additional Mineral Resources as reported in this document
- Fit for purpose mining method for Royal Sheba project decreased the reporting cut-off grade
- Identification of an organic growth project (Evander Mines' 9 Shaft A-block) that could significantly improve current annual production

Operational execution

- Met and exceeded revised production guidance of 175Koz for the year
- Barberton 337kt at 6.79g/t for 68Koz
- Barberton Tailings Retreatment plant (BTRP) 958kt at 1.76g/t for 20Koz
- Evander 67kt at 10.06g/t for 21Koz
- Elikhulu 13,094kt at 0.30g/t for 60Koz

Safety

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- Barberton Mines achieved 3 million fatality-free shifts in June 2020
- Fairview Mine achieved 2 million fatality-free shifts in April 2020
- Elikhulu had no lost-time injuries between July 2019 and June 2020

Financial metrics

- · Capital allocation aligned with the Group's strategy
- Achieved operational cash costs of US\$911/oz
- Managed Group net debt down to US\$76.4 million

A Mineral Reserves

- Advancement in reserve delineation drilling
- Optimisation of mining methods and modifying factors
- Additional platforms in the high-grade Main Reef Complex (MRC) orebody at Fairview Mine increases the mining flexibility and de-risks the production profile
- Optimisation of the BTRP scheduling
- Mineral Reserves decrease of only 0.5% post mining depletion of 0.18Moz



OPERATIONAL FOOTPRINT



The following key Mineral Resources and Mineral Reserves focus areas support the Group's strategic plan and are designed to boost growth in production, extend the operational life-of-mines and increase free cash flows, while also reducing operational costs.

- Extend reserve definition drilling programmes to other orebodies
- Identify additional exploration targets via modern geophysical techniques
- Increase Mineral Resources and Mineral Reserves base
- Deliver into the 2021 operational plan and budget
- Commence dewatering and re-equipping of the Evander Mines' 7 Shaft and 3 Decline system towards the Egoli project
- Advance the Royal Sheba project
- Increase the life-of-mine for all operations and re-equipping

- Sustain production from Evander Mines' 8 Shaft pillar
- Refine pseudo-pack underground pillar support system
- Conduct reserve definition drilling on the Leslie/Bracken tailings storage facility (TSF) to enhance planning at Elikhulu
- Advance the Egoli project
- Explore and evaluate shallow underground projects such as Evander Mines' 9 Shaft A-block and also Evander South

Group Mineral Resources and Mineral Reserves continued

CORPORATE GOVERNANCE Reporting code

The guiding principle in the Mineral Resources and Mineral Reserves report is to ensure integrity, transparency and materiality when informing all stakeholders on the status of the Group's mineral asset base.

Pan African uses the SAMREC Code, which sets out internationally recognised procedures and standards for the reporting of exploration results, Mineral Resources and Mineral Reserves.

The SAMREC Code was developed by the South African Institute of Mining and Metallurgy as the recommended guideline for companies listed on the Johannesburg Stock Exchange (JSE). Furthermore, the Group also complies with Section 12 of the JSE Listings Requirements and the Alternative Investment Market (AIM) Rules for Mining, Oil and Gas Companies of the London Stock Exchange (LSE) with regards to the reporting of Mineral Resources and Mineral Reserves. The relationship between Mineral Resources and Mineral Reserves, as defined by the SAMREC Code, is presented below.



COMPETENT PERSON

The competent person for Pan African, Hendrik Pretorius, the Group mineral resource management manager, signs off the Mineral Resources and Mineral Reserves report for the Group. Hendrik is a member of the South African Council for Natural Scientific Professions (SACNASP 400051/11 - Management Enterprise Building, Mark Shuttleworth Street, Innovation Hub, Pretoria, South Africa), as well as a member in good standing of the Geological Society of South Africa (GSSA 965978 - CSIR Mining Precinct, corner Rustenburg and Carlow Roads, Melville, South Africa). Hendrik has 17 years' experience in economic geology, mineral resource management and mining (surface mining and shallow to ultra-deep underground mining). He is based at The Firs Office Building, 2nd Floor, Office 204, corner Cradock and Biermann Avenues, Rosebank, Johannesburg,

South Africa. Hendrik holds a BSc (Hons) Degree in Geology from the University of Johannesburg as well as a Graduate Diploma in Mining Engineering from the University of the Witwatersrand. Hendrik has reviewed and approved the information contained in this document as it pertains to Mineral Resources and Mineral Reserves and has provided written confirmation to Pan African that the information is compliant with the SAMREC Code and, where applicable, the relevant requirements of Section 12 of the JSE Listing Requirements and Table 1 of the SAMREC Code, and may be published in the form and context in which it appears.

Hendrik is supported by key personnel and task experts for each discipline. Key personnel and their relevant experience are listed in the table below.

Name	Operation	Professional registration and qualification	Relevant experience
Bert van den Berg Group mining engineer	Group	Association of Mine Managers of South Africa (AMMSA) South African Institute of Mining and Metallurgy (SAIMM) BSc (Engineering) (Mining Engineering)	>17 years
Itumeleng Phoshoko Mining engineer projects	Group	Association of Mine Managers of South Africa (AMMSA) Witwatersrand University Mining Engineers Association BSc (Engineering) Mining Engineering GDE Mining Engineering Mine Managers' certificate of competency: Underground metalliferous mines Blasting certificate Advanced Diploma in Organisational Leadership Master of Business Administration	>16 years
Thomas Cronjé Technical services manager	Barberton Mines Proprietary Limited	GSSA No. 60262 SACNASP No. 400055/08 National Higher Diploma (Economic Geology) Graduate Diploma Engineering (Mining Engineering)	>30 years
Walter Seymore Ore reserve manager	Evander Gold Mining Proprietary Limited	National Diploma (Geotechnology)	>22 years

ASSESSMENT AND REPORTING IN COMPLIANCE WITH THE SAMREC CODE

In order to meet the requirements of the SAMREC Code, the material reported as Mineral Resources should have 'reasonable and realistic prospects for eventual economic extraction'.

Pan African has determined an appropriate cut-off grade, which has been applied to the quantified mineralised orebody. In determining the Mineral Resources and Mineral Reserves cut-off grade, Pan African uses the following metal price deck. Mineral Reserves represent the portion of the Measured and Indicated Mineral Resources above an economic cut-off grade within the life-of-mine plan. These Mineral Reserves have been estimated after considering all modifying factors affecting extraction. A range of disciplines is involved at each mine in the life-of-mine planning process, including geology, surveying, planning, mining design and engineering, rock engineering, metallurgy, financial management, human resources management and environmental management.

Criteria	Unit	2020	2019
Mineral Resources gold price	US\$/oz	1,414	1,534
	ZAR/kg	750,000	700,000
Mineral Reserves gold price	US\$/oz	1,225	1,315
	ZAR/kg	650,000	600,000
Exchange rate	US\$/ZAR	16.50	14.19



Group Mineral Resources and Mineral Reserves continued

ASSURANCE OF MINERAL RESOURCES AND MINERAL RESERVES

The Group follows a process of internal and external third-party reviews on task-specific practices to add expert assurance regarding the Mineral Resources and Mineral Reserves estimates and compliance to the appropriate reporting codes.

This declaration is centred on information deemed important for the reporting of the Mineral Resources and Mineral Reserves base for Pan African. It further reveals a level of transparency, materiality and completeness in the reporting of the mineral assets within the Group. Pan African's Mineral Resources and Mineral Reserves estimates are continuously reviewed by an internal competent person's team managed by the corporate technical services team, with recurring audits and reviews by external and independent subject experts.

Pan African's Mineral Resources and Mineral Reserves assurance policy stipulates that each material operation and process, with regards to Mineral Resources and Mineral Reserves declaration, be reviewed annually by the internal competent person's team and at least three times in a six-year cycle by independent experts.

The following internal reviews were conducted by the companies competent person's team during the current reporting period:

- · Monthly reconciliation and production reviews
- Quarterly sampling, logging and mapping observations
- Quarterly assay laboratory audits
- Annual geological modelling assessments
- Annual Mineral Resources estimation (MRE) technique evaluations and audits
- · Annual modifying factor review and sign-off
- · Annual mine design and scheduling analyses
- Annual Mineral Reserves calculation review.

The following independent external reviews were conducted during the current reporting period:

- DRA Global Feasibility Study report for Evander Mines' Egoli project
- The Mineral Corporation reviewed the Mineral Resources and Mineral Reserves of the Egoli project.





THE MINERAL RESOURCES MANAGEMENT CYCLE

Pan African subjects each mining site or project to the full mineral resource management value chain depicted below.



In order to obtain investment and/or funding approval and for subsequent project implementation, a project evolves from initial identification and sample testing to commissioning through a series of study stages, commencing with exploratory work and terminating with feasibility studies. If a project is evaluated as feasible and meets the Group's internal return requirements, it is executed (subject to funding availability and other considerations). Pan African distinguishes itself from its peers by having a clear focus on value-accretive growth and the mining of high-margin assets, in order to deliver long-term economic benefit for all stakeholders.

The guiding principles in driving the Mineral Resources and Mineral Reserves strategy are focused on sustaining and growing current production levels, decreasing operational costs, growing cash flows and profitability as well as a reasonable return on investment for shareholders.

THE MINE PLANNING CYCLE

Pan African applies a robust mineral resource management cycle to ensure strategically aligned operations and projects that are fit for purpose. The Group has an exceptional asset base and attractive growth opportunities, both in established operations and advanced brownfield resource definition prospects. The Group's strategy is based on global best practice in mineral resource management.

The mine planning cycle is arranged and fixed around a Group strategic plan. This plan is deliberated by the Group's executive committee and operational committee and is presented to the board of directors for approval.

The 2021 Group strategic plan is to:

- Prioritise safety above all else
- Produce at a low cost base (<US\$1,000/oz) with high margins
- Ensure growth in the Mineral Reserves base to sustain and grow profitable production
- Increase earnings in a sustainable manner
- Maximise the recovered grade
- Utilise available opportunities and plant capacities
- Apply the appropriate innovation and technology to improve operational efficiencies, reduce costs and realise overlooked potential
- Ensure a robust regulatory and social licence to operate within all regions where we are active
- Encourage an entrepreneurial culture that fosters consistent value creation for all stakeholders

Group Mineral Resources and Mineral Reserves continued

- The Group strategic plan leads to an ongoing evaluation of all the operations and projects within the Group's portfolio. During this phase, all orebodies are measured against the strategic plan and enhanced and optimised where possible and required, to deliver into the strategic plan.
- The optimisations applied enable the reporting of a SAMRECcompliant Mineral Resources base from which a life-of-mine design can be obtained.
- The life-of-mine identifies the manner in which the ore must be economically extracted to comply with the Group's strategic plan for the life of the operation or project.
- Business planning represents a rolling high-resolution threeyear plan for each operation to guide short-term planning for production, exploration and Mineral Reserves definition drilling.
- A 12-month operational plan, including a high-resolution financial model and cash flow forecast, is derived from the business plan and represents a realistic forecast of the next year's production output for each operation. The current production statistics illustrates the robustness of the Group's business plan.
- The combined operational, business and life-of-mine plan is based on the reported Mineral Reserves of each operation and project.



GROUP MINERAL RESOURCES TABULATION

The total Mineral Resources for the Group increased from 36.0Moz (335.8Mt at 3.13g/t) in June 2019 to 37.6Moz (332.3Mt at 3.52g/t) in June 2020 – a gross annual increase of 1.6Moz, or 4.6%.

	Mineral Resources									
		At 30 Jun	e 2020		At 30 June 2019					
	Contained gold				Containe	d gold				
Category	Tonnes million	Grade g/t	Tonnes gold	Moz	Tonnes million	Grade g/t	Tonnes gold	Moz		
Measured	43.3	2.38	103.0	3.31	53.1	1.84	97.5	3.14		
Indicated	216.6	2.99	647.4	20.81	218.1	2.93	639.2	20.54		
Inferred	72.3	5.80	419.4	13.48	64.7	5.90	381.8	12.29		
Total	332.3	3.52	1,169.8	37.61	335.8	3.33	1,118.5	35.97		

Mineral Resources increased mainly due to changes in the cut-off grade applied at Evander Mines' 8 Shaft, additional Mineral Resource blocks reported at Fairview Mine and the optimisation of the Royal Sheba mining method. Changes in the cut-off grade are as a result of the higher gold price used in the cut-off grade estimations relative to the previous declarations (June 2020: ZAR750,000/kg Au versus June 2019: ZAR700,000/kg Au).

Attributable Mineral Resources 9.62 9.62 10 … 7.64 8 6.42 5.66 5.66 6 Ounces (Moz) 5.42 5.34 4 3.00 3.00 1.98 1.86 1.66 1.89 2 1.08 0.93 0.98 0.65 0.38 0.37 0.25 0.19 0 New Sheba Royal BTRP Fairview Elikhulu Egoli Evander Poplar Evander Rolspruit Consort Sheba South Mines' 8 Shaft 2020 2019

GROUP MINERAL RESERVES TABULATION

Pan African's Mineral Reserves remained consistent at 10.9Moz (208.2Mt at 1.62g/t) at 30 June 2020 relative to 10.9Moz (216.6Mt at 1.57g/t) at 30 June 2019 – a gross annual decrease of 0.05Moz (8.4Mt at 0.22g/t), or 0.5%.

		Mineral Reserves									
	At 30 June 2020				At 30 June 2019						
	Contained gold Co		Containe	ontained gold							
Category	Tonnes million	Grade g/t	Tonnes gold	Moz	Tonnes million	Grade g/t	Tonnes gold	Moz			
Proved	31.5	1.50	47.3	1.52	36.4	1.22	44.3	1.42			
Probable	176.7	1.65	290.6	9.34	180.2	1.64	295.5	9.50			
Total	208.2	1.62	338.0	10.87	216.6	1.57	339.8	10.92			

Mineral Reserves remained consistent year-on-year, with a minimal decrease of 0.5% post mining depletion of 0.17Moz, excluding 0.01Moz produced from third party material. Increases in the Mineral Reserves are reported for the New Consort, Royal Sheba and Evander Mines' 8 Shaft operations. Marginal decreases, mainly due to mining depletion, are evident at the BTRP, Sheba and Elikhulu operations. A change in the proposed mining method for the Egoli project resulted in a marginal decrease in reported Mineral Reserves for this project.



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Group Mineral Resources and Mineral Reserves continued

EXPLORATION AND RESERVE DELINEATION DRILLING

Pan African continuously defines and de-risks the Group's operational plan through ongoing reserve delineation diamond drilling and other exploration techniques. Exploration drilling de-risks Inferred Mineral Resources, delineates exploration targets and enhances the operations' geological modelling and mining layouts.

Operation	Total metres	Number of boreholes	Total expenditure ZAR million
Barberton Mines underground	8,710	124	9.5
Evander Mines	-	-	-

The reserve delineation drilling enables the technical service departments to model orebodies at a high resolution and to identify optimisation opportunities ahead of monthly planning sessions. All underground reserve delineation drill holes, along with stope and development chip sampling, are assayed for gold and utilised during the monthly estimation of the grade and metal content of a planned panel or stope. The business plan is also de-risked during this phase and any improvements to the operational plan are done consequently, to ensure compliance with the Group's strategic plan.

ORGANIC GROWTH

Pan African has an attractive pipeline of value-accretive growth opportunities, along with Mineral Reserves replacement targets.

The operations' robust life-of-mine plans support the Group's strategic plan. Current exploration drilling, as well as initiatives to access and develop orebodies, were aggressively pursued at the Barberton operations during the year. The strategy of converting Mineral Resources to Mineral Reserves was progressed by moving organic projects further up the mining value chain and closer towards the feasibility and production stages. These projects include Evander Mines' 8 Shaft pillar, New Consort's PC remnant blocks, Egoli and the Royal Sheba project. The schematic below illustrates the progress of near-mine growth projects that contributed ounces to the increased Mineral Resources for the year.



RISKS TO THE MINERAL RESOURCES AND MINERAL RESERVES

Mineral Resources and Mineral Reserves are estimates of the portion of the deposit owned by the Group that can be mined economically and safely.

There are inherent risks in the Mineral Resources and Mineral Reserves estimates. These estimates are functions of set criteria using geological, technical and economic parameters. Estimating the grade and/or quantity of the Mineral Resources is conducted by geologically analysing the volume, continuity and shape of the deposit. Data employed for these analyses includes geological mapping, core drilling, logging and sampling. Due to the nature of the deposits, complex geological judgements along with other additional variables and scientific calculations are applied to interpret the data and construct orebody models.

Economic and technical factors, such as inflationary cost increases and volatile global markets and commodity prices, impact the cut-off grade applied in estimating the economically extractable Mineral Resources and Mineral Reserves that are reported. In addition, newly available geological data from the operations can result in material changes to Mineral Resources and Mineral Reserves reported. The Group's financial position and results can be materially impacted by these changes to the Mineral Resources and Mineral Reserves.

		Low 🔴 Me	dium 🛑 High
Type of risk	Risk	Mitigation action	Level of risk
Financial	Volatile commodity price and foreign currency exchange rates	Rand gold price deemed conservative was used to calculate the modifying factors	
	Cost inflation	 Successfully concluded a three-year wage deal at Barberton Mines in 2018 Low-cost and low-risk tailings operations in the form of the Elikhulu and BTRP assist the Group in reducing the all-in sustaining cost per kilogramme Tailings retreatment accounted for 44% of the Group's gold production for the year ended June 2020 	•
Legal	Mining right legal tenure	 Barberton Mines lodged an application to renew its mining rights for a further period of 30 years on 24 August 2018. The DMRE advised Barberton Mines at the time that the renewal applications would not be processed as they were lodged prematurely. Barberton Mines was advised by its external legal advisors, Malan Scholes Attorneys, that the DMRE could not so refuse to process the renewal applications. On the advice of its Attorneys, Barberton Mines appealed this decision by the DMRE in accordance with the provisions of the Mineral and Petroleum Resources Development Act 28 of 2002 ("MPRDA") and the decision has furthermore been suspended as a consequence of the appeal process, meaning that the renewal applications, means that Barberton Mines' security of tenure with regard to its Mining Rights, is not negatively impacted. The DMRE has furthermore confirmed to Barberton Mines that it will continue to process the renewal applications to finalisation Evander Mines' mining right only expires on 28 April 2038 An application under Section 102 of the MPRDA was lodged by Evander Mines on 8 December 2017 to incorporate MP30/5/1/2/2/126 MR. This applications are being processed by the DMRE and all rights remain valid while the applications are being processed by the DMRE and all rights remain valid while the applications are being processed by the DMRE and all rights remain valid while the applications are being processed by the DMRE and all rights remain valid while the applications are being processed 	
Operational	Modifying factors	 Modifying factors, as defined in the Mineral Reserves conversion, are based on actual modifying factors achieved over the preceding three years The Group's mining operations have consistently exploited the same orebodies with the same infrastructure for many years 	•
	Limited mining flexibility	 At Barberton Mines: Development rates have increased by more than 40% in the MRC high-grade 11-block year-on-year A third high-grade panel (257) in the MRC 11-block was accessed in March 2020 Development at New Consort's PC Shaft remnant block and down-dip extension of the Main Muiden Reef (MMR) from 14 Level to 15 Level as well as 38 Level to 40 Level is underway 	•
	Nature reserve	 A recently proclaimed nature reserve overlaps portions of Barberton Mines' active mining rights. Ongoing discussions are held with all interested and affected parties to ensure alignment of all stakeholders Continuous communication and collaboration with governmental departments is undertaken to ensure sustainable mining operations over the Group's valid mining right 	•

There are currently no material legal proceedings or material conditions that will impact the Mineral Resources and Mineral Reserves reported for 2020 or Pan African's ability to continue mining activities as per life-of-mine plans as far as the Group is aware.

BARBERTON REGION

The mineralisation at Barberton Mines is classified as Achaean epigenetic hydrothermal lode gold deposits within a granite greenstone terrain. The distribution and localisation of these orebodies in the Barberton Greenstone Belt (BGB) can be largely attributed to the combined influence of thermal metamorphism and structural deformation. The BGB has produced approximately 11Moz of gold since gold was discovered in this goldfield in the early 1880s. Barberton Mines has produced more than 75% of the total production from the Barberton Greenstone Belt.

The Barberton goldfield is not comparable to the extent of the Witwatersrand goldfields, but it has been a consistent producer of gold. More than 250t of gold were produced from the Barberton goldfield between 1884 and 1984.

Barberton region

BACKGROUND

Gold was originally discovered in the Barberton area in 1886, where it is hosted within the sediments and metavolcanics of the BGB. The Fairview, New Consort and Sheba Mines that today make up Barberton Mines started operations more than 130 years ago. Originally, the New Consort area consisted of several small workings.

Over time, these were consolidated into what became known as New Consort Mine. In 1933, the company's name changed to Eastern Transvaal Consolidated Mines (ETC) and in 1948, ETC became a member of the Anglovaal Group. The Sheba Mine started life with the discovery of Bray's Golden Quarry, the first 13,000t of ore yielding 50,000oz of gold. Sheba Mine and its adjacent workings changed hands numerous times before being acquired by ETC in 1937. Mining at the Fairview Mine started in 1886 as a number of small operations from surface. These continued intermittently until 1955, when they were consolidated under Federale Mynbou. ETC acquired Fairview Mine in 1998. Barberton Mines has therefore been mined for over a century, with current production practices now embedded. The ETC operations, now comprising the Fairview, New Consort and Sheba operations, were sold to Metorex in June 2003. Pan African acquired the operations from Metorex in 2007.

Barberton Mines' mineral assets comprise Mineral Resources categories that range from early pre-feasibility study stage, at Royal Sheba, through to operating mines.

LOCATION

Barberton Mines is situated in the Mpumalanga province, South Africa, some 370km east of Johannesburg and 47km south-east of Mbombela. Barberton Mines comprises Fairview Mine, Sheba Mine, New Consort Mine and the BTRP.



Location of Barberton Mines.

Fairview Mine produces approximately 45% of Barberton Mines' underground gold production with New Consort Mine, Sheba Mine and BTRP producing 10%, 20% and 25% respectively. Operating three underground mines is advantageous in providing mining flexibility and versatility in terms of resource allocation.

The availability of high-grade orebodies and lower grade shallow resources from the mines provide options for planning in order to maintain the targeted grade/tonnage profile for annual gold production of approximately 100Koz. This also enables the optimal management of cash flows, operating costs and life of the operations at Barberton Mines from an early stage in the mine planning process. The operation has a proven track record of consistently delivering a solid performance, driven to a large extent by an embedded culture of safety and cost control.

The mining methods used at Barberton Mines' underground operations are semi-mechanised up-dip cut-and-fill and up-dip room and stick. An estimated 14% to 17% of gold is recovered by sweeping and vamping contractors focusing on worked-out areas and mining high-grade remnant ore pillars. Gold is extracted using the BIOX® gold extraction process, an environmentally friendly process which uses bacteria to release gold from the sulphide ore.

OPERATIONAL OVERVIEW

	Fairview Mine	New Consort Mine	Sheba Mine	BTRP
Mining method	 Underground Cut-and-fill, breast, up-dip 	 Underground Cut-and-fill, breast, up-dip 	 Underground Cut-and-fill, breast, up-dip and long hole open stoping 	Surface Hydraulic, load-and-haul
Infrastructure and mineral processing	An underground complex consisting of adits and sub-decline shaft systems. Gold rich orebodies are mined from near surface to approximately 1.7km below surface at the 11-block MRC orebody. Ore is transported through three decline shaft systems to 11 Level. From here, the ore is crushed and transported via an aerial bucket system to the Fairview metallurgical plant. The plant consists of a milling, gravity gold separation, flotation, BIOX® and carbon-in-pulp (CIP) circuit with a carbon regeneration section, elution (and electro-winning) circuit and smelt house. The Fairview plant capacity is 13.5ktpm	An underground complex consisting of adits and sub- vertical shaft systems. Ore is extracted mainly from the MMR, PC and 3 Shaft sections, located 200m to 1.5km below surface. The ore is transported through the shaft system to the New Consort metallurgical plant. Ore is crushed, milled, gravity gold concentrated and floated. The float concentrate is transported to the Fairview BIOX® section for further processing, while the tails are subjected to the New Consort carbon- in-leach (CIL) circuit. The loaded carbon from the CIL section is transported to Fairview for elution (and electro-winning). The total capacity of the New Consort metallurgical plant is 8ktpm	An underground complex consisting of adits and sub- vertical shaft systems. Ore is mined from near surface from the MRC, Sheba West and Thomas orebodies to approximately 1.2km below surface in the Zwartkoppie (Zk) orebody. The ore is transported through the shaft system to the Sheba metallurgical plant. Here the ore is crushed and milled, gravity separated and floated. The gravity concentrate is smelted in the Fairview smelt house. Flotation concentrate is transported to the Fairview BIOX [®] section for further processing. The Sheba plant has a capacity of 11ktpm	A surface re-mining site with road access from all surface material sources to the plant. Ore is either pumped (hydraulic re-mining and Fairview plant tailings) or trucked (load-and-haul) to the BTRP plant. The ore is milled in a regrind mill and processed through a CIL, a carbon regeneration and elution (and electro-winning) section. The BTRP also has its own smelt house. The BTRP has a capacity of approximately 100ktpm
TSF	Tailings from the Fairview metallurgical plant are pumped to the BTRP circuit for further processing prior to deposition (see BTRP)	Tailings from the New Consort CIL circuit are deposited onto the nearby Segalla TSF. The Segalla TSF has sufficient capacity to cater for the currently defined Mineral Reserves at New Consort Mine	Tailings from the Sheba flotation circuit are deposited onto the nearby Camelot TSF. The Camelot TSF has sufficient capacity to contain the tailings from the modelled Mineral Reserves of Sheba Mine and Royal Sheba	Tailings are deposited onto the current Bramber TSF. Future deposition will be conducted on the Bramber extension that will be constructed on the re-mined footprint of the historical Bramber TSF. The environmental impact assessment (EIA) scoping report was accepted by the DMRE on 5 March 2020. The designed capacity of the TSF extension will cater for deposition of the current modelled life of the operation

Barberton region continued

	Fairview Mine	New Consort Mine	Sheba Mine	BTRP				
Mineralisation style	Orogenic greenstone-hosted hy Mineralisation is typically contro shear zones. The zones are we	/drothermal-type deposits illed by regional geological structu Il defined within the globally recog	res such as main fault and nised BGB	Deposition material of historically treated metallurgical tailings from the Fairview, New Consort and Sheba Mines				
Mineralisation characteristics	Mineralisation is typically contin geological and grade continuity ore lode deposits or as free mill arsenopyrite	Intinuous in the short- to medium-range on strike with long-range nuity being experienced down-dip. Gold occurs in either vein-hosted milling gold associated with fine grade sulphides, mainly pyrite and approximately 1m beneath the historical footprint. The ore consists of oxidised tailings containing pyrite and arsenopyrite associated gold, which was not recovered in the initial tractment process						
Life-of-mine	20 years (2019: 20 years)	8 years (2019: 6 years)	9 years (2019: 9 years)	6 years* (excluding Royal Sheba) (2019: 9 years)				
Exploration	Ongoing exploration programm continuously upgrade Mineral F	es and reserve definition drilling an Resources to Mineral Reserves	e conducted to define the extent o	f the mineralisation and to				
Climate	The climate in the Barberton re- in summer months relative to w period. The driest month is Jun average rainfall of 141mm. The an average temperature of 15.2	gion is sub-tropical, implying warn inter months. The temperature av e, with only 11mm of rain on aver warmest month is January, with a °C	n and temperate conditions in gene erages 20°C and rainfall is approxir age. The highest precipitation mon n average temperature of 23.3°C.	aral. Rainfall is more frequent nately 860mm for a 12-month th is December, with an The coldest month, June, has				

* There has been a decline in the life-of-mine from 9 years to 6 years following mining depletion and upgrades to the floor contours of the remaining feed source dams.

REGIONAL GEOLOGICAL SETTING

The mineralisation at Barberton Mines is classified as Achaean epigenetic hydrothermal lode gold deposits within a granite greenstone terrain. The distribution and localisation of these orebodies in the BGB can be largely attributed to the combined influence of thermal metamorphism and structural deformation. The BGB has produced approximately 11Moz of gold since the first discovery in the early 1880s. Barberton Mines has produced more than 75% of the total production from the BGB.



Geological setting of Barberton Mines' operations (section lines are illustrated on the map along the operations and depicted as sectional views under each operation's detailed section in this report).

GENESIS OF THE ORE IN BARBERTON

Metamorphic devolatisation, possibly from the mafic and ultra-mafic Onverwacht lava at the transition from greenschist to amphibolite facies, triggers the process by which fluid is released. These low-salinity fluids, which transport gold as a reduced sulphur complex containing H_2O , CO_2 and H_2S , are released from the minerals' crystal structures and can transport gold in solution to favourable depositional sites. The stability fields of most of the common sulphides in Barberton Mines' ore (pyrite, arsenopyrite and pyrrhotite) indicate that the gold complex in the transport fluid is Au(HS)₂.

To facilitate metal deposition from the hydrothermal fluid, the pressure, temperature or chemical conditions need to change. Most greenstone gold deposits form as a result of the mineralised fluid coming into contact with an iron-bearing host rock. Converselv. Barberton Mines' host lithologies are not high in iron content. therefore, the ore deposition occurred due to a drop in fluid pressure. Pressure shadows, which form during dilating, faulting and folding, create low-pressure zones, effectively drawing the fluids into these cavities and result in releasing pressure. Pressure fluctuations can further be caused by seismic activity, particularly during transpressional and orogenic events. When pressure is released, H₂S (the ligand that makes gold soluble) is driven off, resulting in gold precipitation.

MAH Altigani, RKW Merkle and RD Dixon, in their article, *Geochemical identification of gold mineralisation in the Barberton Greenstone Belt, South Africa dated 2015*, concludes that the pervasive mineralising hydrothermal event post-dates the main tectonic metamorphic events. The hydrothermal fluids exploited weak zones in pre-existing faults and shear zones. The authors further conclude that the mineralising event occurred over an extended period of time and consisted of many individual pulses, at varying depths.

The Barberton ores are thus mineralised shears with gold occluded in sulphide minerals. The sulphides often occur as massive assemblages in the shear structure. Lower grade ore, in the wall rock, form as a result of the alteration process during fluid flow and is associated with disseminated sulphide minerals. A late stage of gold mineralisation occurred in Metamorphic devolatisation, possibly from the mafic and ultramafic Onverwacht lava at the transition from greenschist to amphibolite facies, triggers the process by which fluid is released. brittle fractures with the formation of quartz veins. These quartz veins often contain free gold in visible clusters.

GEOLOGICAL/RESOURCE ESTIMATION METHODOLOGY

The Mineral Resources are reported according to guidelines compliant with the SAMREC Code.

Geological modelling

The grade and the structure in the BGB ore shoots are highly erratic in nature, and most of the data for evaluating resource blocks is derived from development adjacent to the mining blocks and from the position of the present mining areas along with diamond drill hole information. The continuity of grade values within the ore shoots is derived primarily from short-range statistical projections, based on historical mining measurements of the orebody, the study of its tectonic structure and continuity modelling such as variography and trend analyses.

The tectonic structure and orebody geometry have been modelled using the Lynx orebody modelling system (StopeCAD) and Datamine Studio RM[®]. These systems allow for the threedimensional (3D) structure of the mineralised volume to be constructed, modified and viewed graphically. Additionally, these 3D models can be adjusted as new data becomes available. Furthermore, these systems are employed as a tool for visualising grade continuity and are an aid for mine planning.

Resource estimation

During grade control, both diamond-core drill holes and underground channel/ chip sampling is utilised. A minimum sampling width of 230cm is used in the case of mechanical mining and 100cm for conventional scraper-type stoping. Where the reef width is narrower, hanging wall and footwall samples are included. Exploration diamond drill holes and sampling are conducted over a sample width of 50cm within the mineralised or lithological contacts. Drilling is also conducted on the tailings material that is retreated at the BTRP. In this case, the samples from either auger drilling, dual drilling or sonic drilling are sampled at 150cm intervals.

All samples are transported from site to the nearby SGS Barberton assay laboratory (SGS Barberton). SGS Barberton is an

Barberton region continued

independent South African National Accreditation System (SANAS)-accredited assay laboratory (T0565) and is certified to conduct the relevant gold analyses. The samples are accompanied by a representative from Barberton Mines (either a geologist or sampler) and a sample dispatch note. Sample preparation and assaying is conducted by SGS Barberton. Preparation of the samples includes the drying of the sample at 110°C, followed by crushing to 85% passing 2.36mm. Between 0.5kg and 0.75kg of crushed material is sub-sampled and pulverised using Rocklabs LM2 and RM2000 pulverisers to 85% passing 75µm. A 25g (grade control) or 50g (exploration) aliquot is mixed with a pre-mix flux for fire assay purposes. Lowgrade orebodies are analysed using atomic absorption while high-grade orebodies employ a parted gravimetric finish.

An in-house quality assurance and quality control (QA/QC) system is implemented at Barberton Mines, where each sample for grade control purposes is assayed in duplicate to ensure repeatability. Also, certified reference material is employed to indicate the accuracy of the assaying procedure. For exploration, up to 10% of the samples are re-assayed for precision tests and are accompanied by certified reference material at a 10% frequency. A two-times standard deviation is employed as a failing criteria in the QA/QC system and triggers a re-assaying procedure. All exploration samples retrieving grades in excess of 10g/t are immediately re-assayed to validate the grades.

Mineral resources estimation at Fairview, Sheba and New Consort Mines uses an inverse distance weighted grade and orebody width estimate within a limited search ellipse defined for each orebody specifically. At Royal Sheba (located within the Sheba mining right), ordinary kriging MRE is conducted for the various resource classification criteria. The search ellipse employed during the kriging process is in line with the orebody dimension and modelled variogram ranges. In all cases, historical data is employed during the MRE due to the rich history of mining and exploration in the area.

Extreme high-grade samples are evaluated per orebody and capped to an acceptable maximum grade for each orebody and operation specifically. These high grades are identified by sample statistics, histograms and capping curves. The capped high-grade samples are employed for the MRE of each orebody.

Mineral Resources classification

Blocks of Measured Resources are generally 20m on strike and 10m in the dip direction of actual mining. Where blocks are defined adjacent to a development end

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only, the grade and true width of the reef in the block is estimated by calculating the arithmetic mean or 'stretch average' of the samples along the development end. If the sample spacing is at the standard stope sampling grid of 3m, the block value is derived by calculating the inverse weighted estimated value of all available samples. During ordinary kriging MRE, a Measured Resource block is defined as a block estimated within the modelled variogram range with a slope of regression not less than 70%. This effectively reports a Measured Resource within 50m of sufficient representative sampling.

Blocks of Indicated Resources are defined where only diamond drill hole samples and information are available. Both the grades and orebody widths are either estimated by means of an inverse weighted estimate or ordinary kriging. The Indicated Resource extends up to the modelled variogram ranges of a sufficiently sampled area with a slope of regression not less than 50%. Grades and widths are mostly interpolated into the Indicated Resource blocks.

The Inferred Resource blocks are characterised by a regional grade and width obtained from arithmetic means, Sichel's-t estimates and ordinary kriging. Inferred Resource blocks are extrapolated to double the modelled variogram range or grade continuity for each orebody.

Mineral Reserves conversion

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Mineral inv	entory of Barberton Mines at 30 June 2	020	
	Mineral Resources 45.4Mt @ 3.16g/t for 4.61Moz		Mineral Reserves 24.6Mt @ 2.73g/t for 2.16Moz
	Inferred 18.3Mt @ 3.20g/t for 1.88Moz		
	Indicated 12.2Mt @ 3.02g/t for 1.18Moz		 Probable 9.8Mt @ 3.11g/t for 0.98Moz
	Measured 15.0Mt @ 3.22g/t for 1.55Moz		 Proved 14.7Mt @ 2.48g/t for 1.17Moz

Indicated Mineral Resources are converted to Probable Mineral Reserves due to the lower confidence mainly in grade continuity relative to that of Measured Mineral Resources. In most instances, Measured Mineral Resources are converted to Proved Mineral Reserves. Certain Measured Mineral Resources are not immediately accessible for mining and require development or equipping. Under these circumstances, Measured Mineral Resources have been converted to Probable Mineral Reserves.

MINING RIGHTS

Barberton Mines is the holder of mining rights for gold for each of the three respective mining operations. The mining areas are situated in the Barberton region, located in the City of Mbombela Local Municipality, Mpumalanga province. On 28 April 2011, the DMRE converted the old order mining rights held by Barberton Mines for a period of 10 years in terms of Item 7 of Schedule II of the MPRDA.

As the current term of the mining rights expires on 27 April 2021, Barberton Mines timeously submitted applications for the renewal of these mining rights, together with the relevant supporting documents to the DMRE on 24 August 2018 to extend the operations' mining rights by a further 30 years, up to August 2048. Approval from the DMRE is still pending. The DMRE responded to these applications for renewal by stating that they were lodged too early. The Company has obtained legal advice to the effect that the DMRE is obliged to process the renewal applications in accordance with the MPRDA. Consequently, the Company lodged an appeal against the decision by the DMRE to delay the processing of the renewal applications. This internal administrative process is not expected to impact on the Company's security of tenure with regard to its mining rights. The MPRDA makes provisions for mining rights to remain in full force and effect while applications for renewal are being processed.

No impediments are foreseen that could prevent the renewal of the mining rights. All Mineral Resources and Mineral Reserves reported on in this document are located within the existing mining rights of Barberton Mines.

Licence name	Project	Type of licence	Licence number	Area	Licence holder	Expiry date	Status
Barberton Mines Proprietary Limited	Sheba Mine (including Royal Sheba)	Mining	MP30/5/1/2/2/189 MR	1,705.0645ha	Barberton Mines Proprietary Limited	27 April 2021	Effective Mining right renewal application in process by the DMRE
Barberton Mines Proprietary Limited	New Consort Mine	Mining	MP30/5/1/2/2/190 MR	2,520.8191ha	Barberton Mines Proprietary Limited	27 April 2021	Effective Mining right renewal application in process by the DMRE
Barberton Mines Proprietary Limited	Fairview Mine	Mining	MP30/5/1/2/2/191 MR	3,033.8643ha	Barberton Mines Proprietary Limited	27 April 2021	Effective Mining right renewal application in process by the DMRE

Barberton Mines has an established environmental management programme (EMPr). Each operation has an approved EIA, EMPr and water-use licence (WUL). Barberton Mines' undiscounted rehabilitation provision of US\$4.2 million is funded by means of a Cenviro insurance investment product underwritten by Centriq Insurance Company Limited, with a current value of US\$3.4 million. These funds are invested in a portfolio comprising a combination of money market, capital market and equity instruments. The aim is to provide the Group with the necessary liquidity for rehabilitation activities and to preserve the value of the rehabilitation capital. The audit and risk committee and board reviews the performance of this portfolio on a regular basis.



Barberton region continued

Fairview Mine

During the reporting period, Fairview Mine continued its focus on optimising the extraction and flexibility within the MRC and Rossiter Reefs.

This was achieved by increasing development rates towards downdip extensions of the orebodies and by increasing the reserve definition rate. Broader scale exploration drilling is focused on the Hope Reef with desktop studies being conducted on various known but unmined lower grade blocks in all orebodies.

SURFACE RIGHTS

The majority of the surface rights that form part of the Fairview mining area are owned by local government (the Department of Public Works) and are under the management of the Mpumalanga Tourism and Parks Agency (MTPA). Fairview Mine has had an active lease agreement with the Department of Public Works since 2012. The agreement continues on a month-to-month basis and is revised in 12-monthly intervals. This lease agreement enables Fairview Mines to continue using the surface areas for its approved mine works programme.

The Fairview Mine also owns surface rights on the farms Fairview 542JU and Portion 1 Bramber South 348JU, which adjoin the Fairview mining right area. Certain mine infrastructure, offices and the operational Fairview tailings dam are located on this



property. The Fairview Mine properties extend over a surface area of 3,034ha, of which approximately 4% is currently disturbed by mining and mining-related activities.

GEOLOGY

The Fairview Mine area straddles the contact between the arenites of the Moodies Group to the north (Eureka Syncline) and the Fig Tree Group's greywacke and shale to the south (Ulundi Syncline). The contact is marked by the presence of the regionally identifiable Sheba Fault. The two synclines are re-folded due to the immense force present during deformation, resulting in back-to-back isoclines that dip steeply to the south. Tight isoclinal, thrust fault-related anticlines of Onverwacht Group schist (Zwartkoppie Formation) occur within the greywacke of the Fig Tree Group.

The Fairview Mine orebody is an epigenetic hydrothermal lode gold deposit. Three distinct types of mineralisation occur at the mine:

- Refractory sulphidic ore, which constitutes the bulk of the mined ore, is hosted in the greywacke and shale sequence of the Fig Tree Group. The mineralisation is found in close association with an anastomosing shear system that often parallels the stratigraphy and lithological contacts. Auriferous pyrite and arsenopyrite mineralisation are confined to ribbon-like shoots within the shear system and as disseminations in the wall rock. The shears are often defined by quartz-carbonate veining and the host rock can be sericitised and carbonatised on either side of the shear.
- A coarse clastic unit of the Fig Tree Group hosts a series of hanging wall bodies. This coarse clastic unit consists of thick-bedded to massive greywacke, grading into arenite with interbedded granule stone layers. Two quartz-porphyry dykes and two dolerite dykes intrude the host rock sediments. Although the mineralised fractures persist for up to 500m, payable gold values are confined to several discrete ribbon-like payshoots. Blue-black quartz veins, quartz-carbonate veins and stockworks are recognised in the hanging wall area. The contacts and texture of the veins suggest a dilation fracture fill origin, rather than replacement origin. Refractory gold-quartz-carbonatesulphide ore occurs as disseminated to massive pyrite and arsenopyrite mineralisation. The age relationship between the gold mineralisation and the quartz-porphyry dykes suggests that the Hope Reef is marginally older and the Le Roux Reef is marginally younger than the quartz-porphyry dykes. The quartzporphyry dyke that intrudes into the Hope Reef mineralisation has been dated at 3,050 million years.
- Quartz veins, containing free milling gold, occur in the Moodies Group in the footwall of the Sheba Fault. The blue-grey quartz veins fill near-vertical cross-cutting fractures in the siliceous, brittle quartzite units. Gold mineralisation generally occurs within the vein, but may penetrate the adjacent host rock. Only minor pyrite and arsenopyrite are associated with this ore type.

The deepest intersection on a Fairview orebody is at a depth of 1,660m below the adit elevation, approximately 200m below the current mining platforms. The orebody is open at depth.

OPERATIONAL PERFORMANCE

	Unit	30 June 2020	30 June 2019
Mining			
Total mined	t	108,044	112,742
Au mined grade	g/t	11.8	11.9
Processing			
Tonnes treated	t	108,045	112,742
Au head grade	g/t	11.8	11.9
Au sold	OZ	38,546	42,027
Plant recovery factor	%	94.30	94.75
Financials			
Average Au price received	ZAR/kg	797,947	577,902
	US\$/oz	1,584	1,267
Capital expenditure	ZAR (million)	126.8	101.7
All-in costs	US\$/oz	1,136	1,091

MINERAL RESOURCES

				Mineral R	esources			
		At 30 Jun	e 2020			At 30 Jun	e 2019	
		Containe	d gold			Containe	d gold	
Category	Tonnes million	Grade g/t	Tonnes gold	Moz	Tonnes million	Grade g/t	Tonnes gold	Moz
Measured	1.64	9.63	15.81	0.51	1.62	10.04	16.22	0.52
Indicated	1.06	11.59	12.30	0.40	1.02	13.05	13.36	0.43
Measured and								
Indicated	2.70	10.40	28.11	0.90	2.64	11.20	29.58	0.95
Inferred	1.89	17.63	33.37	1.07	1.75	16.12	28.22	0.91
Total	4.60	13.38	61.45	1.98	4.39	13.16	57.80	1.86

Notes:

Mineral Resources are reported in accordance with the SAMREC Code. Mineral Resources would be the same if reported according to the guidelines of the CIM's National Instrument 43-101. Cut-off values are calculated at 2.16g/t for Fairview Mine and 1.95g/t for 11 Level, applying a gold price of ZAR750,000/kg (US\$1,414/oz and US\$/ZAR:16.50). Mineral Resources are reported inclusive of Mineral Reserves. All Mineral Resources reported exclude geological structures. Mineral Resources are reported as in-situ tonnes (2.73t/m³). Any discrepancies in totals are due to rounding. Effects of mining and recovery losses have been considered in the cut-off grade calculations.

MODIFYING FACTORS

At 30 June 2020	Gold price ZAR/kg	Cut-off value g/t Au	Cut-off value cmg/t	Stoping width cm	Dilution %	MCF %	PRF %
Fairview Mine	650,000	6.64	664	100	5	100	92.49

Barberton region continued

MINERAL RESERVES

				Mineral F	leserves				
		At 30 Jun	e 2020		At 30 June 2019				
			d gold			Containe	d gold		
Category	Tonnes million	Grade g/t	Tonnes gold	Moz	Tonnes million	Grade g/t	Tonnes gold	Moz	
Proved	1.37	7.50	10.31	0.33	0.74	8.83	6.57	0.21	
Probable	1.32	9.96	13.13	0.42	1.20	13.95	16.79	0.54	
Total	2.69	8.71	23.44	0.75	1.95	11.99	23.36	0.75	

Notes:

Mineral Reserves are reported in accordance with the SAMREC Code. Mineral Reserves would be the same if reported according to the guidelines of the CIM's National Instrument 43-101. Cut-off values are calculated at 8.47g/t for Fairview Mine and 6.64g/t for 11 Level, applying a gold price of ZAR650,000/kg (US\$1,225/oz and US\$/ZAR:16.50). All Mineral Reserves reported exclude geological structures. Mineral Reserves are reported as in-situ tonnes (2.73t/m³). Any discrepancies in totals are due to rounding. Effects of mining and recovery losses have been considered in the cut-off grade calculations. The mineral tenure for Fairview Mine is up to 27 April 2021. On 24 August 2018, Barberton Mines submitted an application to the DMRE to extend the Fairview mining right by a further 30 years, to August 2048. The approval is pending and no impediments are foreseen that could prevent the renewal of the mining right.

MINERAL RESOURCES AND MINERAL RESERVES RECONCILIATION

Factors that affected the Mineral Resources reconciliation	Factors that affected the Mineral Reserves reconciliation
Depletion through mining activities	Depletion through mining activities
Geological boundary and structural updates	Impact of updated geological structures and boundaries
Mineral Resource block updates (tonnes and grade)	Update of grades in Mineral Resource blocks
Cut-off grade increased from 2.08g/t in the 2019 reporting period to 2.16g/t in the 2020 reporting period	Mine call factor remained constant at approximately 100% as well as the plant recovery factor of 92.49%

Fairview Mine













Barberton region continued

Sheba Mine

Sheba Mine continued to focus on extraction of the MRC and ZK orebodies during the year. Specific attention was given to the reserve definition drilling of the ZK orebodies' down-dip extension towards the Fairview Mine. During January 2020, further development was conducted on the free milling Thomas orebody, which was brought into production through long hole open stopping, a first at Barberton Mines. Studies on Project Dibanisa, combining the Fairview and Sheba Mines infrastructure to optimise costs and efficiency, have progressed well (refer to the Barberton projects section in this report).

SURFACE RIGHTS

The majority of the area used for the development of Sheba Mine's surface infrastructure is located on state-owned land under the control of the Department of Public Works and is under the management of the MTPA. The adjacent land comprises primarily wilderness and grazing areas.

Sheba Mine properties cover a surface area of some 1,705ha, of which approximately 14% is currently disturbed by mining and mining-related activities. Sheba Mine has had an active lease agreement with the Department of Public Works since 2012, which

enables the operation to continue using the surface areas for its approved mine works programme. The agreement continues on a month-to-month basis and is revised at 12-monthly intervals.

GEOLOGY

The Sheba section straddles the contact between the arenites of the Moodies Group to the north (Eureka Syncline) and the Fig Tree Group's greywacke and shale to the south (Ulundi Syncline) similar to the stratigraphic occurrence of the Fairview Mine. The contact is marked by the presence of the regionally identifiable Sheba Fault. The two synclines are re-folded due to the immense force present during deformation, resulting in back-to-back isoclines that dip steeply to the south. Tight isoclinal, thrust fault-related anticlines of Onverwacht Group schist (Zwartkoppie Formation) occur within the Fig Tree Group's greywacke.

The Sheba orebody is an epigenetic hydrothermal lode gold deposit. Three distinct types of mineralisation occur at the mine:

 Refractory sulphidic ore (MRC section), which constitutes the bulk of the mined ore, is hosted in the greywacke and shale sequence of the Fig Tree Group. The mineralisation is found in close association with a shear system in the immediate hanging



Simplified geological section of Sheba Mine.

wall of greenschist anticlines of the Zwartkoppie Formation. Auriferous pyrite and arsenopyrite mineralisation occurs as massive replacement veins within the shear system and as disseminations in the wall rock.

 The Zwartkoppie section is characterised by the occurrence of visible gold and disseminated pyrite in the greenschist as the prominent mineralisation, in association with shear and fracturehosted smoky and white quartz veins.

OPERATIONAL PERFORMANCE

• The mineralisation of the Royal Sheba orebody is encapsulated in a shear envelope of the Sheba Fault, ranging in width from 5m to 25m. The gold mineralisation occurs predominantly in sulphide minerals and native gold.

The deepest orebody intersection on Sheba is 1,200m below shaft collar elevation. The orebody is open at depth.

	Unit	30 June 2020	30 June 2019
Mining			
Total mined	t	130,944	108,732
Au mined grade	g/t	5.5	7.2
Processing			
Tonnes treated	t	130,944	108,732
Au head grade	g/t	5.5	7.2
Au sold	OZ	20,994	23,899
Plant recovery factor	%	91.09	95.04
Financials			
Average Au price received	ZAR/kg	797,947	577,902
	US\$/oz	1,584	1,267
Capital expenditure	ZAR (million)	142.4	98.7
All-in costs	US\$/oz	1,693	1,461

MINERAL RESOURCES

The Mineral Resources reported exclude those of the Royal Sheba deposit.

				Mineral R	esources			
		At 30 Jun	e 2020			At 30 Jun	e 2019	
		Containe	d gold			Containe	d gold	
Category	Tonnes million	Grade g/t	Tonnes gold	Moz	Tonnes million	Grade g/t	Tonnes gold	Moz
Measured	0.64	9.05	5.81	0.19	0.62	8.96	5.60	0.18
Indicated	0.30	6.47	1.92	0.06	0.29	6.39	1.86	0.06
Measured and								
Indicated	0.94	8.24	7.72	0.25	0.92	8.14	7.46	0.24
Inferred	0.53	7.86	4.16	0.13	0.52	7.78	4.07	0.13
Total	1.47	8.10	11.88	0.38	1.44	8.01	11.53	0.37

Notes:

Mineral Resources are reported in accordance with the SAMREC Code. Mineral Resources would be the same if reported according to the guidelines of the CIM's National Instrument 43-101. Cut-off values are calculated at 2.56g/t for Sheba Mine and 2.70g/t for the MRC and ZK sections, applying a gold price of ZAR750,000/kg (US\$1,414/oz and US\$/ZAR:16.50). Mineral Resources are reported inclusive of Mineral Reserves. All Mineral Resources reported exclude geological structures. Mineral Resources are reported as in-situ tonnes (2.73t/m³). Any discrepancies in totals are due to rounding. Effects of mining and recovery losses have been considered in the cut-off grade calculations.

Barberton region continued

MODIFYING FACTORS

At 30 June 2020	Gold price ZAR/kg	Cut-off value g/t Au	Cut-off value cmg/t	Stoping width cm	Dilution %	MCF %	PRF %
Sheba Mine	650,000	6.28	628	100	5	97.62	94.10

MINERAL RESERVES

The Mineral Reserves reported exclude those of the Royal Sheba deposit.

				Mineral F	leserves			
		At 30 Jun	e 2020			At 30 Jun	e 2019	
		Containe	d gold			Containe	d gold	
Category	Tonnes million	Grade g/t	Tonnes gold	Moz	Tonnes million	Grade g/t	Tonnes gold	Moz
Proved	0.65	6.01	3.92	0.13	0.63	5.71	3.60	0.12
Probable	0.32	5.55	1.77	0.06	0.15	10.59	1.61	0.05
Total	0.97	5.86	5.69	0.18	0.78	6.66	5.21	0.17

Notes:

Mineral Reserves are reported in accordance with the SAMREC Code. Mineral Reserves would be the same if reported according to the guidelines of the CIM's National Instrument 43-101. Cut-off values are calculated at 6.28g/t for Sheba Mine and 6.86g/t for the MRC and ZK sections, applying a gold price of ZAR650,000/kg (US\$1,225/oz and US\$/ZAR:16.50). All Mineral Reserves reported exclude geological structures. Mineral Reserves are reported as in-situ tonnes (2.73t/m³). Any discrepancies in totals are due to rounding. Effects of mining and recovery losses have been considered in the cut-off grade calculations. The mineral tenure for Sheba Mine is up to 27 April 2021. On 24 August 2018, Barberton Mines submitted an application to the DMRE to extend the Sheba mining right by a further 30 years, to August 2048. The approval is pending and no impediments are foreseen that could prevent the renewal of the mining right.

MINERAL RESOURCES AND MINERAL RESERVES RECONCILIATION

Factors that affected the Mineral Resources reconciliation	Factors that affected the Mineral Reserves reconciliation
Depletion through mining activities	Depletion through mining activities
Geological boundary and structural updates	Impact of updated geological structures and boundaries
Mineral Resource block updates (tonnes and grade)	Update of grades in Mineral Resource blocks
Cut-off grade increased from 1.94g/t in the 2019 reporting period to 2.56g/t in the 2020 reporting period	The mine call factor decreased from 100% in the previous reporting period to 97.62% in the current period







LIFE-OF-MINE PLANNING

Currently, studies are being conducted to evaluate the possibility of feeding Royal Sheba ore into the Sheba plant from year 10 onwards.





New Consort Mine

During the year, New Consort Mine developed towards the Consort Bar and MMR orebodies at 38 and 15 Levels, respectively. Specific focus and studies were centred on the PC Shaft remnant blocks' equipping between 42 and 44 Levels. Additionally, exploration drilling during the year focused on an orebody approximately 80m in the footwall of the MMR horison. This orebody was first intersected during the 2019 surface drilling campaign at New Consort. High-resolution reserve definition drilling focused on the 15 Level MMR and deeper Consort Bar orebodies.

SURFACE RIGHTS

Most of the area employed for the development of the New Consort Mine surface infrastructure is state-owned land under the control of the Department of Public Works and under the management of the MTPA. The surrounding land comprises primarily wilderness and grazing areas. A private nature reserve is located to the west of the mining right area.

Barberton Mines owns Portion 1 of the farm Segalla 306 JU on which the Segalla Tailings Facility is located. A substantial part of the facility, however, falls outside Portion 1 on state land, which is declared a conservation area and is controlled by the MTPA. The New Consort Mine properties cover a surface area of some 2,521ha, of which approximately 14% is currently disturbed by mining and miningrelated activities. New Consort Mine has had an active lease agreement with the Department of Public Works since 2012 for the land on which the surface infrastructure and the Segalla Tailings Facility are located. This lease agreement enables New Consort Mine to continue using the surface areas for its approved mine works programme.

GEOLOGY

The New Consort area can be divided into two distinctive synclinal structures, termed the Three Shaft Syncline and the Top Section Syncline. The Shires structure, which is a prominent north-south striking shear zone separating these two synclines, is intruded by a pegmatite.

The New Consort orebody is an epigenetic hydrothermal lode gold deposit. Gold mineralisation at the New Consort section is associated with the contact between the underlying schist of the Onverwacht Group and the overlying metapelite of the Fig Tree Group. This contact is marked by the presence of the Consort 'bar', a highly siliceous banded chert. The Consort Bar is thought to be a silicified mylonite occupying the contact. A series of northdipping tabular pegmatites, termed the Muiden Reef (MR) pegmatites, displace the south-dipping Consort contact and



Simplified geological section of New Consort Mine.

the mineralised shoots. Some scheelite mineralisation has been recorded, associated with the pegmatites.

A lenticular body of fine-grained siliceous amphibolite, termed the 'footwall lens', occurs on the northern limb of the Top Section Syncline and is host to the mineralisation in the PC and MMR

shoots. Mineralisation consists of arsenopyrite and visible gold associated with fractures in the footwall lens. The Consort Bar is host to mineralisation in the 7 Shaft, 3 Shaft and Ivaura areas.

The deepest intersection of the New Consort orebody is 1,450m below adit elevation. The orebody is open at depth.

	Unit	30 June 2020	30 June 2019
Mining			
Total mined	t	98,415	71,790
Au mined grade	g/t	3.1	4.4
Processing			
Tonnes treated	t	98,415	71,790
Au head grade	g/t	3.1	4.4
Au sold	OZ	8,617	9,429
Plant recovery factor	%	88.90	93.63
Financials			
Average Au price received	ZAR/kg	797,947	577,902
	US\$/oz	1,584	1,267
Capital expenditure	ZAR (million)	22.1	20.8
All-in costs	US\$/oz	1,986	1,957

MINERAL RESOURCES

		Mineral Resources							
		At 30 Jun	e 2020			At 30 Jun	e 2019	,	
		Containe	d gold			Containe	d gold		
Category	Tonnes million	Grade g/t	Tonnes gold	Moz	Tonnes million	Grade g/t	Tonnes gold	Moz	
Measured	0.32	9.00	2.90	0.09	0.34	9.05	3.07	0.10	
Indicated	0.19	7.85	1.46	0.05	0.18	8.06	1.48	0.05	
Measured and									
Indicated	0.51	8.58	4.36	0.14	0.52	8.71	4.55	0.15	
Inferred	0.30	11.06	3.36	0.11	0.23	6.60	1.51	0.05	
Total	0.81	9.51	7.72	0.25	0.75	8.06	6.06	0.20	

Notes:

Mineral Resources are reported in accordance with the SAMREC Code. Mineral Resources would be the same if reported according to the guidelines of the CIM's National Instrument 43-101. Cut-off values are calculated at 3.28g/t for New Consort Mine, 3.07g/t for 3 Shaft, 3.54g/t for PC Shaft and 2.92g/t for MMR, applying a gold price of ZAR750,000/kg (US\$1,414/oz and US\$/ZAR:16.50). Mineral Resources are reported inclusive of Mineral Reserves. All Mineral Resources reported exclude geological structures. Mineral Resources are reported as in-situ tonnes (2.73t/m³). Any discrepancies in totals are due to rounding. Effects of mining and recovery losses have been considered in the cut-off grade calculations.

MODIFYING FACTORS

At 30 June 2020	Gold price ZAR/kg	Cut-off value g/t Au	Cut-off value cmg/t	Stoping width cm	Dilution %	MCF %	PRF %
Sheba Mine	650,000	7.75	775	100	5	91.30	91.40

Barberton region continued

MINERAL RESERVES

		Mineral Reserves							
	At 30 June 2020				At 30 June 2019				
		Containe	d gold			Containe	d gold		
Category	Tonnes million	Grade g/t	Tonnes gold	Moz	Tonnes million	Grade g/t	Tonnes gold	Moz	
Proved	0.18	6.70	1.23	0.04	0.20	5.12	1.01	0.03	
Probable	0.17	5.27	0.88	0.03	0.11	5.14	0.58	0.02	
Total	0.35	6.02	2.12	0.07	0.31	5.13	1.59	0.05	

Notes:

Mineral Reserves are reported in accordance with the SAMREC Code. Mineral Reserves would be the same if reported according to the guidelines of the CIM's National Instrument 43-101. Cut-off values are calculated at 7.75g/t for New Consort Mine, 7.16g/t for 3 Shaft, 8.56g/t for PC Shaft and 6.64g/t for MMR, applying a gold price of ZAR650,000/kg (US\$1,225/oz and US\$/ZAR:16.50). All Mineral Reserves reported exclude geological structures. Mineral Reserves are reported as in-situ tonnes (2.73t/m³). Any discrepancies in totals are due to rounding. Effects of mining and recovery losses have been considered in the cut-off grade calculations. The mineral tenure for New Consort Mine is up to 27 April 2021. On 24 August 2018, Barberton Mines submitted an application to the DMRE to extend the Consort mining right by a further 30 years, to August 2048. Approval from the DMRE is still pending and no impediments are foreseen that could prevent the renewal of the mining right.

MINERAL RESOURCES AND MINERAL RESERVES RECONCILIATION

Factors that affected the Mineral Resources reconciliation	Factors that affected the Mineral Reserves reconciliation
Depletion through mining activities	Depletion through mining activities
Geological boundary and structural updates	Impact of updated geological structures and boundaries
Mineral Resource block updates (tonnes and grade)	Update of grades in Mineral Resource blocks
Cut-off grade increased from 2.63g/t in the previous reporting period to 3.28g/t in the current period	The mine call factor decreased year-on-year from 92.2% to 91.3% while the plant recovery factor decreased from 92.2% to 91.4% in the current reporting period

New Consort Mine





LIFE-OF-MINE PLANNING

Currently, studies are being conducted to evaluate the possibility of feeding Royal Sheba ore into the Sheba plant from year eight onwards.



Barberton Tailings Retreatment Plant

BTRP commissioned the re-mining of the Harper North dam during December 2019. Mining of the Bramber footprint, Harper South and Vantage dams are progressing as per the plan. Recently, a bulk sample of the calcine material on the Segalla dam at New Consort was treated at the BTRP with success. The feed of BTRP will therefore. in future, be supplemented with the highgrade calcine material. It is envisaged that the Royal Sheba project will form part of the BTRP feed sources when the project is commissioned. By constructing a runof-mine (RoM) crusher circuit, the BTRP plant will be able to treat circa 30,000tpm of RoM material, thereby extending the life of the operation and ensuring its sustained output in future.

Surface rights

The BTRP is located within the mining right of Fairview Mine. Fairview Mine owns surface rights on farms Fairview 542JU and portion 1 Bramber South 348JU. Certain mine infrastructure, offices and the operational tailings dam are located on this property.

Geology

The BTRP section re-treats previously processed gold ore in the form of slime material. The slimes emanate from historical mining activities on the same orebodies that are currently being mined underground from the existing Barberton Mines operations. The feed sources to the BTRP include the Bramber dam, currently contributing up to 10,000tpm of the BTRP's 100,000t capacity. A further 70,000t per month is sourced from the nearby Harper South and Harper North tailings dams that can supply the BTRP with feed material at the current rate for the next three years. The total life of the BTRP is modelled at nine years. The additional life is obtained by the re-mining of the Segalla dam located at New Consort Mine. The remainder of the capacity is filled with residue material from the BIOX® plant at Fairview at a rate of 13,000tpm and the Vantage dam at 7,000tpm.



Barberton region continued

OPERATIONAL PERFORMANCE

	Unit	30 June 2020	30 June 2019
Mining			
Total mined	t	958,106	1,114,923
Au mined grade	g/t	1.76	1.5
Processing			
Tonnes treated	t	958,106	1,114,923
Au head grade	g/t	1.76	1.5
Au sold	OZ	20,137	24,007
Plant recovery factor	%	37	45
Financials			
Average Au price received	ZAR/kg	787,128	578,146
	US\$/oz	1,562	1,267
Capital expenditure	ZAR (million)	5.6	8.1
All-in costs	US\$/oz	807	576

MINERAL RESOURCES

		Mineral Resources								
		At 30 Jun	e 2020		At 30 June 2019					
		Containe	d gold			Containe	d gold			
Category	Tonnes million	Grade g/t	Tonnes gold	Moz	Tonnes million	Grade g/t	Tonnes gold	Moz		
Measured	7.31	1.65	12.06	0.39	7.77	1.65	12.86	0.41		
Indicated	4.36	1.42	6.20	0.20	4.75	1.45	6.91	0.22		
Measured and										
Indicated	11.67	1.56	18.26	0.59	12.52	1.58	19.77	0.64		
Inferred	9.29	0.89	8.23	0.26	9.32	0.89	8.26	0.27		
Total	20.96	1.26	26.49	0.85	21.84	1.28	28.03	0.90		

Notes:

Mineral Resources are reported in accordance with the SAMREC Code. Mineral Resources would be the same if reported according to the guidelines of the CIM's National Instrument 43-101. Cut-off values are calculated at 0.2g/t for the BTRP, applying a gold price of ZAR750,000/kg (US\$1,414/oz and US\$/ZAR:16.50). Mineral Resources are reported inclusive of Mineral Reserves. All Mineral Resources reported exclude geological structures. Mineral Resources are reported as in-situ tonnes (1.4t/m³). Any discrepancies in totals are due to rounding. Effects of mining and recovery losses have been considered in the cut-off grade calculations.

MODIFYING FACTORS

At 30 June 2020	Gold price ZAR/kg	Cut-off value g/t Au	Cut-off value cmg/t	MFC %	Dilution %	PRF %
BTRP	650,000	0.3	-	100	0	26.9

MINERAL RESERVES

				Mineral I	Reserves			
	At 30 June 2020				At 30 June 2019			
		Containe	d gold			Containe	d gold	
Category	Tonnes million	Grade g/t	Tonnes gold	Moz	Tonnes million	Grade g/t	Tonnes gold	Moz
Proved	7.31	1.65	12.06	0.39	7.77	1.65	12.86	0.41
Probable	1.73	1.93	3.33	0.11	2.36	1.67	3.94	0.13
Total	9.04	1.70	15.39	0.49	10.13	1.66	16.80	0.54

Notes:

Mineral Reserves are reported in accordance with the SAMREC Code. Mineral Reserves would be the same if reported according to the guidelines of the CIM's National Instrument 43-101. Cut-off values are calculated at 0.3g/t for the BTRP, applying a gold price of ZAR650,000/kg (US\$1,225/oz and US\$/ZAR:16.50). All Mineral Reserves reported exclude geological structures. Mineral Reserves are reported as in-situ tonnes (1.4t/m³). Any discrepancies in totals are due to rounding. Effects of mining and recovery losses have been considered in the cut-off grade calculations.

MINERAL RESOURCES AND MINERAL RESERVES RECONCILIATION

Factors that affected the Mineral Resources reconciliation	Factors that affected the Mineral Reserves reconciliation
Depletion through mining activities (recovered and unrecoverable)	Depletion through mining activities (recovered and unrecoverable)
The cut-off grade remained constant year-on-year	The plant recovery factor remained constant from the previous reporting period
Update to floor contours of re-mining source dams	Update to floor contours of re-mining source dams



Barberton region continued





LIFE-OF-MINE PLANNING

BTRP currently has a modelled remaining life of six years with a deminishing ounce profile due to marginal head grades and lower recovery source material to be processed. Projects and exploration initiatives such as the Royal Sheba project and identification and evaluation of suitable third party material or other available sources aims to extend the life of the operation and derisk the remaining ounce profile.

Marginal head grade and recovery feed sources for BTRP are being off-set and supplemented by RoM material from the Royal Sheba project to ensure a sustainable long life of the BTRP operation according to a concept level study. The RoM circuit will enable the BTRP plant to treat up to 30ktpm of RoM material. Current indications are that RoM material can be fed into the plant from year three in the LoM scheduling, thereby off-setting some tailings feed sources at that point.





Barberton projects

Barberton Mines' assets also include projects that are at varying stages of exploration and development. The individual projects and level of study are summarised and illustrated in the figure alongside.

Royal Sheba project

Geology

The Royal Sheba project straddles the contact between the arenites of the Moodies Group to the north (Eureka Syncline) and the Fig Tree Group's greywacke and shale to the south (Ulundi Syncline), similar to the stratigraphic occurrence of the Sheba Mine. The contact is marked by the presence of the regionally identifiable Sheba Fault. The two synclines are re-folded due to the immense force present during deformation, resulting in back-to-back isoclines that dip steeply to the south.

The mineralisation of the Royal Sheba orebody is encapsulated in a shear envelope of the Sheba Fault, ranging in width from 5m to 25m. The gold mineralisation occurs predominantly in finely disseminated sulphide minerals (mainly pyrite) and native gold.



MINERAL RESOURCES

	Mineral Resources								
		At 30 Jun	e 2020			At 30 June 2019			
		Containe	d gold			Containe	d gold		
Category	Tonnes million	Grade g/t	Tonnes gold	Moz	Tonnes million	Grade g/t	Tonnes gold	Moz	
Measured	5.04	2.30	11.57	0.37	2.40	3.46	8.31	0.27	
Indicated	6.07	2.25	13.64	0.44	2.33	3.93	9.14	0.29	
Measured and									
Indicated	11.11	2.27	25.21	0.81	4.73	3.69	17.45	0.56	
Inferred	6.06	1.37	8.31	0.27	0.85	3.19	2.73	0.09	
Total	17.17	1.95	33.52	1.08	5.58	3.61	20.17	0.65	

Notes:

Mineral Resources are reported in accordance with the SAMREC Code. Mineral Resources would be the same if reported according to the guidelines of the CIM's National Instrument 43-101. Cut-off values are calculated at 0.8g/t for Royal Sheba applying a gold price of ZAR750,000/kg (US\$1,414/oz and US\$/ZAR:16.50). Mineral Resources are reported inclusive of Mineral Reserves. All Mineral Resources reported exclude geological structures. Mineral Resources are reported as in-situ tonnes (2.73t/m³). Any discrepancies in totals are due to rounding. Effects of mining and recovery losses have been considered in the cut-off grade calculations.

Barberton region continued

MODIFYING FACTORS

At 30 June 2020	Gold price ZAR/kg	Cut-off value g/t Au	Cut-off value cmg/t	Stoping width cm	Dilution %	MCF %	PRF %
Royal Sheba project	650,000	0.8	560	700	5	95	85

MINERAL RESERVES

		Mineral Reserves									
		At 30 Jun	e 2020		At 30 June 2019						
		Containe	d gold			Containe	d gold				
Category	Tonnes million	Grade g/t	Tonnes gold	Moz	Tonnes million	Grade g/t	Tonnes gold	Moz			
Proved	5.23	1.72	8.98	0.29	2.45	2.87	7.03	0.23			
Probable	6.30	1.82	11.48	0.37	2.49	3.18	7.90	0.25			
Total	11.52	1.77	20.45	0.66	4.94	3.02	14.93	0.48			

Notes:

Mineral Reserves are reported in accordance with the SAMREC Code. Mineral Reserves would be the same if reported according to the guidelines of the CIM's National Instrument 43-101. Cut-off values are calculated at 0.8g/t for Royal Sheba applying a gold price of ZAR650,000/kg (US\$1,225/oz and US\$/ZAR:16.50). All Mineral Reserves reported exclude geological structures. Mineral Reserves are reported as in-situ tonnes (2.73t/m³). Any discrepancies in totals are due to rounding. Effects of mining and recovery losses have been considered in the cut-off grade calculations. The mineral tenure for Sheba Mine is up to 27 April 2021. On 24 August 2018, Barberton Mines submitted an application to the DMRE to extend the Sheba mining right by a further 30 years, to August 2048. The approval from the DMRE is still pending and no impediments are foreseen that could prevent the renewal of the mining right.

MINERAL RESOURCES AND MINERAL RESERVES RECONCILIATION

Factors that affected the Mineral Resources reconciliation	Factors that affected the Mineral Reserves reconciliation
Geological boundary and structural updates	Impact of updated geological structures and boundaries
Mineral Resource block updates	Update of grades in Mineral Resource blocks
Proposed mining method optimisation	Long hole open stoping mining method adopted
Cut-off grade decreased from 1.7g/t to 0.8g/t due to a change in mining method to bulk long hole open stoping	Modifying factors remained constant year-on-year







Project Dibanisa

Project Dibanisa aims to use the current Sheba Mine infrastructure, both on surface and underground, to effectively extract the Royal Sheba orebody from 23 Level (Sheba Mine ZK Shaft). This enables the concurrent mining of the Royal Sheba orebody from near surface workings as well as some 600m beneath surface, targeting the Measured and Indicated Mineral Resources.

The project involves connecting the Sheba and Fairview workings on 23 Level by establishing a series of ore passes from the Sheba Mine to the Fairview Mine. The combined production of Fairview and Sheba will be hoisted from the Fairview infrastructure (mainly 2 Decline and 1 Decline). The ore will then be processed at the Fairview plant where a gravity circuit (Knelson Concentrator) was installed during the reporting period. This enables the Fairview plant to effectively process the free gold reefs of Sheba Mine and decrease the overall cost by reducing the transportation of concentrate from the Sheba plant to the Fairview BIOX® plant.

Following these modifications and enhancements to the underground and surface infrastructure, underground ore from Royal Sheba (23 Level Sheba Mine ZK Shaft) will be extracted through the Sheba Mine ZK Shaft and processed at the Sheba plant at a throughput of approximately 12,000t per month.

Near surface workings at Royal Sheba will be used to fill the plant capacity at New Consort. The total project is estimated to be completed by June 2022. Additional processing capacity could be utilised if the Segalla slime processing at the BTRP plant is either supplemented or replaced by the higher grade and higher recovery material from Royal Sheba.

Project Dibanisa mitigates the need for the high capital requirements of commissioning a new plant and related infrastructure for the Royal Sheba deposit. Furthermore, this initiative reduces overall overhead costs for the operations by consolidating infrastructure.



Simplified geological section of Fairview Mine and Sheba Mine illustrating the ore flow optimisations and redundancies that will be achieved with Project Dibanisa.

Barberton region continued

Barberton Mines' Mineral Resources and Mineral Reserves reconciliation

At 30 June 2020, Barberton Mines reported Mineral Reserves of 2,144,395oz (24Mt at 2.79g/t) and Mineral Resources of 4,598,829oz (45Mt at 3.15g/t) contained gold. The Measured and Indicated Mineral Resources are inclusive of those Mineral Resources modified to produce the Mineral Reserves. Mineral Reserves are reported as mill-delivered tonnes at the contained grade, having duly considered all modifying factors. Mineral Resources and Mineral Reserves reported are contained within the mining right boundaries of Barberton Mines. All mined-out areas have been depleted from the reported Mineral Resources and Mineral Reserves.

Mineral Resources At 30 June 2020 At 30 June 2019 **Contained gold** Contained gold Tonnes Grade Tonnes Grade Tonnes Tonnes million million Category g/t gold Moz g/t gold Moz 3.22 48.15 1.55 3.61 1.48 Measured 14.95 12.75 46.06 Indicated 12.19 3.02 36.84 1.18 8.79 3.88 34.07 1.10 Measured and 27.14 3.13 2.73 Indicated 85.00 21.55 3.72 80.13 2.58 Inferred 18.26 3.20 58.47 1.88 12.86 3.56 45.83 1.47 143.46 3.66 Total 45.40 3.16 4.61 34.40 125.95 4.05

MINERAL RESOURCES COMPARISON

RECONCILIATION OF MINERAL RESOURCES

Barberton Mines' Mineral Resources posted a significant increase for the 2020 reporting period of 563Koz (or 14%, 11.0Mt at 1.59g/t) post mining depletion. The underground portion of the Mineral Resources for the Barberton region increased by 613Koz (19.9%, 11.9Mt at 1.60g/t) post mining for the reporting period, indicating the achievements made through exploration and reserve delineation drilling based on the enhanced geological and exploration modelling.



This increase can be ascribed to the following factors:

- Substantial decrease in the Royal Sheba cut-off grade due to optimisation in the conceptual mining method being less selective and relying on bulk production
- Re-evaluating Fairview Mine's remnant areas and the high-grade 11-block MRC platforms
- Remnant areas at New Consort Mine and the PC Shaft remnant blocks adding additional flexibility at the operation
- · Additional Mineral Resource blocks defined through geological modelling processes at all the underground operations
- Changes in cut-off grades.

MINERAL RESERVES COMPARISON

		Mineral Reserves								
		At 30 Jun	ie 2020		At 30 June 2019					
		Containe	d gold			Containe	d gold			
Category	Tonnes million	Grade g/t	Tonnes gold	Moz	Tonnes million	Grade g/t	Tonnes gold	Moz		
Proved	14.75	2.48	36.50	1.17	11.80	2.63	31.08	1.00		
Probable	9.83	3.11	30.60	0.98	6.32	4.88	30.83	1.00		
Total	24.57	2.73	67.10	2.16	18.11	3.42	61.90	2.00		

RECONCILIATION OF MINERAL RESERVES

Barberton Mines' Mineral Reserves increased by 6.5Mt at 0.80g/t for 167Koz contained gold.

The increase, post depletion, can be attributed to the conversion of the Royal Sheba and New Consort Mineral Resources to Mineral Reserves. Decreasing sections in the Mineral Reserves are mainly attributable to cut-off grade changes at the Fairview operation. The BTRP Mineral Reserves decreased by 1.1Mt at 1.30g/t (46Koz) mainly due to mining depletions.



EVANDER REGION

Exploration in the area started in 1903 with the advent of diamond drilling and progressed intermittently through various major exploration phases up to the incorporation of the first mine (Winkelhaak Mine) in 1955 within the Evander basin region of the world-renowned Witwatersrand Supergroup. Since then, three other mines were brought into production, namely Leslie Mine, Bracken Mine and Kinross Mine.

Gold has been mined in South Africa for many decades, More than 98% of the mined gold was extracted from the Witwatersrand goldfields. Evander gold mines, part of the Witwatersrand goldfields, ha<mark>s</mark> produced gold uninterruped since 1958.

Evander region

BACKGROUND

Exploration in the Evander region commenced in 1903 with the advent of diamond drilling and progressed, intermittently, through various major exploration phases that included extensive geophysical surveys and drilling that realised the economic potential of the Kimberley Reef on the southern edge of the main Witwatersrand basin.

The goldfield is centred around Evander, a town founded in 1955 to serve the burgeoning mining community. The first gold to be produced came from Winkelhaak Mine in December 1958 and, over the next nine years, three other mines were brought into production, namely Leslie Mine, Bracken Mine and Kinross Mine. Evander Mines (Leslie, Bracken and Kinross Mines) exploits the Kimberley Reef, where mining methods employed include underground conventional breast-type scraper mining and railbound equipment with some trackless mechanised development. More recently, the Elikhulu surface tailings retreatment operation was commissioned by the Group in August 2018.

Hydraulic mining of the Kinross tailings dam is utilised to pump material at a rate of 1.2Mt per month to the Elikhulu Tailings Retreatment Plant (Elikhulu) operation. Elikhulu achieved its inaugural gold pour on 16 August 2018, within budget and ahead of schedule. Fed by the historical Kinross, Leslie/Bracken and Winkelhaak TSFs, the modern retreatment plant at Elikhulu can produce up to 65,000oz of gold per year, with an expected remaining life-of-mine of 12 years. The gold is then extracted in a CIL hybrid plant.

Evander Mines' mineral assets comprise advanced projects containing compliant Mineral Resources that range from early pre-feasibility study stage (Poplar, Evander South and Rolspruit projects) to a bankable feasibility study at the Egoli project in addition to the abovementioned mining operations, including Elikhulu. The current revenue streams for Evander Mines are primarily generated from Evander Mines' 8 Shaft (8 Shaft) pillar mining and Elikhulu.

LOCATION

Evander Mines is situated in Mpumalanga, approximately 120km east-south-east from Johannesburg near the town of Secunda.



OPERATIONAL OVERVIEW

	8 Shaft	Elikhulu
Mining method	Underground Conventional breast, scraper mining	Surface Hydraulic mining
Infrastructure and mineral processing	An underground complex consisting of vertical and decline shaft systems. Gold-bearing reef is mined from 8 Shaft pillar, approximately 1.6km below surface and from 24 Level, some 2.4km below surface. Ore is transported through the decline shaft systems to 15 Level. From there, the ore is transported across to Evander Mines' 7 Shaft (7 Shaft), where it is hoisted and conveyed to the Kinross metallurgical plant. The plant consists of a milling, gravity gold separation and CIP circuit with a carbon regeneration section, elution (and electro-winning) circuit and smelt house. The Kinross plant capacity is currently 55ktpm, but can be upgraded to the original design capacity of 240ktpm with the refurbishment of defunct mills	A surface re-mining site with road access from all surface material sources to the plant. Ore is pumped (hydraulic re-mining) to the Elikhulu plant in slurry form. The ore is subjected to pre-oxidation to enhance the metallurgical recovery, from where it is processed through a CIL circuit, with a carbon regeneration and elution (and electro- winning) section. Elikhulu has its own smelt house. The design processing capacity at Elikhulu is approximately 1,200ktpm
TSF	Tailings from the Kinross metallurgical plant are pumped to the Elikhulu residue tank	Tailings from the Elikhulu residue tank are deposited onto the new regional Kinross extension TSF and the Winkelhaak TSF at a ratio of 1,000ktpm and 200ktpm, respectively. The designed capacity of the Kinross TSF extension will cater for deposition of the current modelled life of the operation
Mineralisation style	Palaeo-placer and braided stream-type sedimentary deposit scavenged gold from the hinterland and underlying deposits. Mineralisation is concentrated in robust conglomeratic and carbonaceous units	Deposition material of historically treated metallurgical tailings from the Winkelhaak, Leslie, Bracken and Kinross Mines
Mineralisation characteristics	Gold is associated with disseminated sulphides in the form of pyrite. High grades occur where the reef is characterised by carbon specs or bands	The material is confined to the deposition site of historical tailings and approximately 1m beneath the historical footprint. The ore consists of oxidised tailings containing pyrite associated gold which was not recovered in the initial treatment process
Life-of-mine	3 years (2019: 3 years)	12 years (2019: 13 years)
Exploration	Ongoing sampling programmes and reserve delineation drilli to continuously upgrade Mineral Resources to Mineral Reser (9 Shaft A-block) project commenced during July 2020	ng is conducted to define the mineralisation continuity and ves. Exploration drilling for Evander Mines' 9 Shaft A-block
Climate	The Evander region is located in the Highveld climatic region winters. Rain falls mostly as showers and thunderstorms, ma approximately 560mm. The most rainfall is experienced in Ja months are June and July with no rainfall expected on avera 16.5°C in June to 25.7°C in January. The region is the colde on an average night	of South Africa with warm and wet summers and cool dry ainly between October and March. Average annual rainfall is anuary, which receives on average 110mm of rain. The driest ge. The average monthly midday temperatures range from st during June when evening temperatures drop to 0.1°C

Evander region continued

REGIONAL GEOLOGICAL SETTING

Evander Mines exploits the Kimberley Reef in the Evander basin, the eastern-most extremity of the Witwatersrand Supergroup. The Kimberley Reef is mined throughout the major gold mining districts within the Witwatersrand Supergroup, including the East Rand, Central Rand, West Rand, Far West Rand and Free State goldfields. Deposition models for gold within the conglomeratic horizons follows a palaeo-placer-type sedimentological deposition along with winnowing, erosion and concentration of gold-bearing footwall lithologies. Various studies have highlighted the importance of hydrothermal activity for deposition, remobilisation and enrichment within certain packages of the Witwatersrand Supergroup.



Stratigraphic column for the Witwatersrand Supergroup after: The Archaean Geology of the Kaapvaal Craton, Southern Africa pp 255-275 (HE Frimmel, 2019).

MINING RIGHTS

Evander Mines was the holder of an old order mining right for gold and associated minerals which was converted by the DMRE in terms of Item 7 of Schedule II of the MPRDA to a new order mining right (MP30/5/1/1/2/126 MR) on 29 April 2008 and valid until 28 April 2038. Evander Mines also holds the Evander West and Evander South prospecting rights. All Mineral Resources and Mineral Reserves reported in this document are located within the existing mining right and prospecting rights of Evander Mines. The Evander South prospecting right (MP30/5/1/2/248 PR) contains Mineral Resources of 22.3Mt at 7.54g/t for 5.4Moz (11.7Mt at 8.83g/t for 3.3Moz are Indicated Mineral Resources and 10.6Mt at 6.12g/t for 2.1Moz are in the Inferred Mineral Resources category). This prospecting right is being consolidated into Evander Mines' mining right in terms of a Section 102 application that was lodged at the DMRE in December 2017, which application is being processed.

Mining licence	Type of licence	Licence number	Area (ha)	Expiry date	Status
Evander South	Prospecting	MP30/5/1/2/2/248 PR	2,551	29 June 2019	Section 102 application to include prospecting right into Evander Mines' mining right is pending (lodged 8 December 2017)
Evander West	Prospecting	MP30/5/1/2/2/4272 PR	11,189	19 October 2016	Renewal application lodged (October 2016). Section 102 application to include prospecting right into Evander Mines' mining right is pending (lodged 8 December 2017)
Evander Gold Mining	Mining	MP30/5/1/2/2/126 MR	31,783	28 April 2038	Effective

Evander Mines has an established and approved EIA, EMPr and WUL, which incorporates the Elikhulu operations.

Evander Mines has lodged an undiscounted rehabilitation provision of US\$12.9 million, that is fully funded by means of a Cenviro insurance investment product underwritten by Centriq Insurance Company Limited with a current value of US\$16.6 million. These funds are invested in a portfolio comprising a combination of money market, capital market and equity instruments. The aim is to provide the Group with the necessary liquidity for the rehabilitation activities and to preserve the value of the rehabilitation capital. A rehabilitation strategy and implementation plan was compiled and updated in 2017 to rehabilitate dormant and non-productive areas in terms of the Group's ESG focus and concurrent rehabilitation strategy. The audit and risk committee reviews the performance of this portfolio on a regular basis.

SURFACE RIGHTS

Evander Mines' mining right extends over 31,783ha. Evander Mines also owns a surface area of 6,676ha, of which 2,230ha are disturbed by mining and miningrelated activities. The surface activities are limited to the three main shaft complexes: Kinross, Winkelhaak and Leslie/Bracken. There is also one TSF associated with each of the three complexes. No surface exploration activities were undertaken on the prospecting right areas during the period under review.

Historically, mining at Evander Mines involved underground operations from nine shafts at the Kinross, Winkelhaak and the Bracken/Leslie sections. Water abstraction is via both 7 and 8 Shafts in the Kinross section. Evander Mines currently mines the 8 Shaft pillar and re-processes surface tailings facilities via Elikhulu.

GEOLOGICAL/RESOURCE ESTIMATION METHODOLOGY

The Mineral Resources are reported according to guidelines compliant with the SAMREC Code.

Geological modelling

The grade and the structure of the Kimberley Reef is highly erratic in nature, and most of the data for evaluating the resource blocks is derived from underground development adjacent to the mining blocks and from the position The aim is to provide the Group with the necessary liquidity for the rehabilitation activities and to preserve the value of the rehabilitation capital. of the present mining areas along with diamond drill hole information. The continuity of grade values within the ore shoots is derived primarily from short-range statistical projections, based on historical mining, actual measurements of the orebody and continuity modelling such as variography and trend analyses.

The tectonic structure and orebody geometry has been modelled using Datamine Studio RM[®]. This system allows for the 3D structure of the mineralised volume to be constructed, modified and viewed graphically. Additionally, the 3D models can be updated as new data becomes available. Importantly, this system is also utilised as a tool for visualising grade continuity and is a valuable aid for mine planning.

Drone surveys are conducted on a monthly basis over the tailings dams being re-mined, forming the basis of the geological and resource models for the Elikhulu operation.

Resource estimation

For grade control, diamond-cored drill hole sampling, and underground stope and development sampling, a minimum sampling width of 20cm is adhered to. Exploration diamond drill hole sampling is conducted over a sample width of 50cm within the mineralised zone or lithological contacts. Auger drilling, dual drilling or sonic drilling is also conducted on the tailings material that is retreated at the Elikhulu operation. These are sampled at 150cm intervals.

All samples are transported from site to SGS Barberton. SGS Barberton is a SANAS-accredited assay laboratory (T0565) and is certified to conduct the relevant gold analyses. The samples are collected by SGS Barberton at Evander Mines in the presence of a mine representative (sampler) and are accompanied by a sample dispatch note. Transportation of the samples is done in sealed containers by SGS Barberton employees to the assay laboratory. Sample preparation and assaying is conducted by SGS Barberton. Preparation of the samples includes the drying of the sample at 110°C, followed by crushing to 85% passing 2.36mm. Between 0.5kg and 0.75kg of crushed material is sub-sampled and pulverised using a Rocklabs LM2 or RM2000 pulveriser to 85% passing 75µm. A 25g (grade control) or 50g (exploration) aliquot is mixed with a pre-mix flux for fire

Evander region continued

assay purposes. Low-grade orebodies are analysed using atomic absorption while high-grade orebodies employ a parted gravimetric finish.

An in-house QA/QC system is implemented at Evander Mines, where each sample for grade control purposes is assayed in duplicate to ensure repeatability. In addition, the use of certified reference material is employed to monitor the accuracy of the assaying procedure. For exploration, up to 10% of the samples are re-assayed for precision tests and are accompanied by certified reference material at a 10% frequency. A two-times standard deviation is employed as a failing criteria in the QA/ QC system and triggers a re-assaying procedure. All exploration samples retrieving grades in excess of 10g/t are immediately re-assayed to validate the grades.

Extreme high-grade samples are evaluated per geozone and capped to an acceptable maximum grade. These high grades are identified by sample statistics, histograms and capping curves. The capped highgrade samples are employed for the MRE of each geozone. The MRE method employed for generating local grade estimates at Evander Mines is ordinary kriging. The orientations and ranges of each geozone's semi-variogram are used to determine the kriging search parameters, and the estimation parameters are optimised for each search and each geozone.

Mineral Resources classification

Hard rock Kimberley Reef estimates are kriged into 30m by 30m blocks for the Measured Resources from point data within the modelled variogram ranges. Indicated Mineral Resources are macrokriged into 60m by 60m parent cells, employing a regularised declustered grid of samples on the same basis. Estimation is conducted within the modelled variogram ranges per geozone. Inferred Mineral Resources are macro-kriged into a 120m by 120m parent cell within the identified geozones, based on the modelled variogram range from a regularised and declustered data set on the same grid size. The Measured and Indicated Resource models are then tested on gold content measured and centimetre grams per

tonne (cmg/t) kriging efficiency and slope of regression and merged together with the Inferred Mineral Resources model to produce a combined kriged block model.

The Mineral Resources for the tailings are estimated by a capped 3m composited drill hole data set. The MRE is conducted through ordinary kriging, employing anisotropic variography into a parent cell of 50m by 50m by 3m (X, Y, Z) dimensions. The MRE parameters such as the minimum and maximum number of samples, maximum samples per drill hole and scaling factors are assessed through a quantitative kriging neighbourhood analysis. Measured Mineral Resources for the tailings are classified if a block is estimated within the variogram range with a slope of regression of 80% or more. Indicated Mineral Resources for the tailings extend up to double the variogram range due to the nature of the deposit. All other estimates for the tailings are classified as Inferred Mineral Resources.

Mineral Reserves conversion

Mineral inv	entory of Evander Mines at 30 June 202	20		
	Mineral Resources 286.9Mt @ 3.58g/t for 33.0Moz			Mineral Reserves 183.7Mt @ 1.47g/t for 8.7Moz
	Inferred 54.1Mt @ 6.68g/t for 11.6Moz			
	Indicated 204.5Mt @ 2.99g/t for 19.6Moz			Probable • 166.8Mt @ 1.56g/t for 8.4Moz
	Measured 28.4Mt @ 1.93g/t for 1.8Moz		-	Proved ► 16.8Mt @ 0.64g/t for 0.3Moz

Indicated Mineral Resources are converted to Probable Mineral Reserves due to the lower confidence mainly in grade continuity relative to that of Measured Mineral Resources. In most instances, Measured Mineral Resources are converted to Proved Mineral Reserves. Certain Measured Mineral Resources are not immediately accessible for mining and require development or equipping. In these situations, Measured Mineral Resources have been converted to Probable Mineral Reserves.

Evander Mines' 8 Shaft

GEOLOGY

The Kimberley Reef is an oligomictic, pebbly conglomerate and comprises a composite sequence of channel sediments that define longitudinal gravel bars and sand bars with pebbly veneers. The reef in the area strikes in an east-west direction and dips to the north at about 10 degrees. The area is also divided by two major normal faults, striking in an east-north-east to west-south-west direction. The reef thickness varies from a waste on contact up to a 50cm well-developed oligomictic conglomerate. Average reef thickness is 35cm within the 8 Shaft vicinity. High gold values in the Kimberley Reef are mostly located at the base of the unit and are associated with the presence of carbon and some visible gold on the footwall contact.

LOCATION

8 Shaft is situated about 5km north-west of the town of Evander. It covers an area of 44km² and is located between the Rolspruit project to the north-west and 7 Shaft to the south-east. During the reporting period, mining occurred in the 2 Decline area on the western side, at a depth of 2,300m to 2,500m below surface as well as at the 8 Shaft pillar at a depth of 1,600m below surface.

OPERATIONAL PERFORMANCE

	Unit	30 June 2020	30 June 2019
Mining			
Total mined	t	67,257	63,971
Au mined grade	g/t	10.1	8.7
Processing			
Tonnes treated	t	67,257	63,971
Au head grade	g/t	10.1	8.7
Au produced	OZ	20,670	16,876
Au sold	OZ	15,077	16,876
Plant recovery factor	%	95	94
Financials			
Average Au price received	ZAR/kg	776,637	573,722
	US\$/oz	1,542	1,258
Capital expenditure	ZAR (million)	297.5	38.1
All-in costs	US\$/oz	3,642*	1,927

Excluding tell treatment.

* Production cost capitalised until middle May 2020.

MINERAL RESOURCES

		Mineral Resources								
		At 30 Jun	e 2020			At 30 Jun	e 2019			
		Containe	d gold			Containe	d gold			
Category	Tonnes million	Grade g/t	Tonnes gold	Moz	Tonnes million	Grade g/t	Tonnes gold	Moz		
Measured	3.48	12.54	43.67	1.40	2.32	15.49	35.92	1.16		
Indicated	2.99	11.99	35.83	1.15	2.10	14.12	29.59	0.95		
Measured and										
Indicated	6.47	12.29	79.50	2.56	4.42	14.84	65.52	2.11		
Inferred	16.13	9.80	158.08	5.08	12.88	10.40	134.04	4.31		
Total	22.60	10.51	237.58	7.64	17.30	11.53	199.56	6.42		

Notes:

Mineral Resources are reported in accordance with the SAMREC Code. Mineral Resources would be the same if reported according to the guidelines of the CIM's National Instrument 43-101. Cut-off values are calculated at 664cmg/t, applying a gold price of ZAR750,000/kg (US\$1,414/oz and US\$/ZAR:16.50). Mineral Resources are reported inclusive of Mineral Reserves. All Mineral Resources reported exclude geological structures. Mineral Resources are reported as in-situ tonnes (2.71t/m³). Any discrepancies in totals are due to rounding. Effects of mining and recovery losses have been considered in the cut-off grade calculations.

Evander region continued

MODIFYING FACTORS

At 30 June 2020	Gold price ZAR/kg	Cut-off value g/t Au	Cut-off value cmg/t	Stoping width cm	Dilution %	MCF %	PRF %
8 Shaft	650,000	7.15	859	120	14.6	85	95.3

MINERAL RESERVES

		Mineral Reserves								
		At 30 Jun	e 2020		At 30 June 2019					
		Containe	d gold			Containe	d gold			
Category	Tonnes million	Grade g/t	Tonnes gold	Moz	Tonnes million	Grade g/t	Tonnes gold	Moz		
Proved	0.34	9.83	3.36	0.11	0.38	8.54	3.23	0.10		
Probable	-	-	-	-	_	_	_	-		
Total	0.34	9.83	3.36	0.11	0.38	8.54	3.23	0.10		

Notes:

Mineral Reserves are reported in accordance with the SAMREC Code. Mineral Reserves would be the same if reported according to the guidelines of the CIM's National Instrument 43-101. Cut-off values are calculated at 859cmg/t, applying a gold price of ZAR650,000/kg (US\$1,225/oz and US\$/ZAR:16.50). All Mineral Reserves reported exclude geological structures. Mineral Reserves are reported as in-situ tonnes (2.71t/m³). Any discrepancies in totals are due to rounding. Effects of mining and recovery losses have been considered in the cut-off grade calculations. The Mineral Reserves are only reported within the 8 Shaft pillar area.

MINERAL RESOURCES AND MINERAL RESERVES RECONCILIATION

Factors that affected the Mineral Resources reconciliation	Factors that affected the Mineral Reserves reconciliation
Depletion through mining activities	Depletion through mining activities
Geological boundary and structural updates	Impact of updated geological structures and boundaries
Mineral Resource block updates	Update of grades in Mineral Resource blocks
Contractor mining model, utilising less infrastructure	Contractor mining model, utilising less infrastructure
Cut-off grade decreased due to lower mining cost and higher gold price	Modifying factors affected positively due to pillar mining and higher gold price







LIFE-OF-MINE PLANNING

Evander Mines' current 8 Shaft pillar mining is planned to be depleted post year three of production. This schedule fits well with the feasibility study for the Egoli project, where RoM material from Egoli will be filling the Kinross plant's RoM circuit capacity once the pillar is depleted.



Elikhulu

The Elikhulu Tailings Retreatment Plant and related infrastructure at Evander Mines, owned and operated by Pan African, re-treats historical gold plant tailings at a rate of 1.2Mt per month.

Elikhulu is expected to yield approximately 60Koz of gold per annum for the initial six years of production (while treating the Kinross and Leslie/Bracken TSFs). Thereafter, while processing the Winkelhaak TSF, production is expected to be approximately 45Koz per annum for the plant's remaining six years. These production estimates exclude an Inferred Resource of 102Koz of gold delineated in the soil material beneath the existing tailings dumps.

GEOLOGY

The ore being treated at Elikhulu originated from previously mined and metallurgically treated Kimberley Reef from the Winkelhaak, Leslie/Bracken and Kinross Mines as part of Evander Mines' operations. The tailings of the treated material were historically deposited onto three TSF's that will be reclaimed in the following order: Kinross, Leslie/Bracken and Winkelhaak. Post their processing, these TSFs will be consolidated into a modern, single enlarged regional Kinross tailings extension facility, thus reducing Evander Mines' environmental footprint and associated environmental impact.

OPERATIONAL PERFORMANCE

	Unit	30 June 2020	30 June 2019
Mining			
Total mined	t	13,093,574	11,767,018
Au mined grade	g/t	0.3	0.3
Processing			
Tonnes treated	t	13,093,574	11,767,018
Au head grade	g/t	0.3	0.3
Au sold	OZ	59,616	55,464
Plant recovery factor	%	47	49
Financials			
Average Au price received	ZAR/kg	788,510	560,446
	US\$/oz	1,565	1,228
Capital expenditure	ZAR (million)	8.6	534.6
All-in costs	US\$/oz	614	1,410

* Elikhulu commissioned in August 2018.

Evander region continued

MINERAL RESOURCES

		Mineral Resources									
		At 30 Jun	e 2020			At 30 Jun	e 2019	,			
		Containe	d gold			Containe	d gold				
Category	Tonnes million	Grade g/t	Tonnes gold	Moz	Tonnes million	Grade g/t	Tonnes gold	Moz			
Measured Indicated	24.4 147.6	0.30 0.28	7.3 41.3	0.23 1.33	37.58 153.41	0.31 0.28	11.7 42.5	0.38 1.36			
Measured and Indicated	172.0	0.28	48.5	1.56	190.99	0.28	54.22	1.74			
Inferred Total	11.0 183.1	0.29	3.2 51.7	0.10	12.57 203.56	0.34	4.2	0.15			

Notes:

Mineral Resources are reported in accordance with the SAMREC Code. Mineral Resources would be the same if reported according to the guidelines of the CIM's National Instrument 43-101. Paylimit values are calculated at 0.1g/t, applying a gold price of ZAR750,000/kg (US\$1,414/oz and US\$/ZAR:16.50). The paylimit criteria is applied to the global grade of the whole TSF to be re-mined due to the low selectivity of the mining method. Mineral Resources are reported inclusive of Mineral Reserves. Mineral Resources are reported as in-situ tonnes (1.35t/m³). Any discrepancies in totals are due to rounding. Effects of mining and recovery losses have been considered in the cut-off grade calculations.

MODIFYING FACTORS

			Mining			
	Gold price	value	loss	Dilution	PRF	
At 30 June 2020	ZAR/kg	g/t Au	%	%	%	
Elikhulu	650,000	0.2	-6	0	47.74	

MINERAL RESERVES

	Mineral Reserves									
		At 30 Jun	e 2020		At 30 June 2019					
	Contained gold					Contained gold				
Category	Tonnes million	Grade g/t	Tonnes gold	Moz	Tonnes million	Grade g/t	Tonnes gold	Moz		
Proved	16.0	0.30	4.8	0.16	23.62	0.31	7.4	0.23		
Probable	140.5	0.28	39.0	1.25	146.99	0.26	38.8	1.25		
Total	156.5	0.28	43.8	1.41	170.61	0.27	46.2	1.48		

Notes:

Mineral Reserves are reported in accordance with the SAMREC Code. Mineral Reserves would be the same if reported according to the guidelines of the CIM's National Instrument 43-101. Paylimit values are calculated at 0.2g/t, applying a gold price of ZAR650,000/kg (US\$1,225/oz and US\$/ZAR:16.50). The paylimit criteria is applied to the global grade of the whole TSF to be re-mined due to the low selectivity of the mining method. All Mineral Reserves reported exclude geological structures. Mineral Reserves are reported as in-situ tonnes (1.35t/m³). Any discrepancies in totals are due to rounding. Effects of mining and recovery losses have been considered in the cut-off grade calculations.

MINERAL RESOURCES AND MINERAL RESERVES RECONCILIATION

Factors that affected the Mineral Resources reconciliation	Factors that affected the Mineral Reserves reconciliation
Depletion through mining activities (recovered and unrecoverable)	Depletion through mining activities (recovered and unrecoverable)
TSF boundary updates for Leslie/Bracken and Winkelhaak	Impact of updated TSF limits for Leslie/Bracken and Winkelhaak
Mineral Resource block updates on the Kinross dam	Update of grades in Mineral Resource blocks
Cut-off grade impacted due to higher gold price	Modifying factors employed as it has been experienced since the commissioning of Elikhulu



Mineral Reserves sensitivity





LIFE-OF-MINE PLANNING

Current schedules indicate a 12-year life of the Elikhulu operation at current throughput.



Evander region continued

Evander projects

Evander Mines' assets also include projects that are at varying stages of exploration and development. The individual projects and level of study are summarised and illustrated in the map below.

The Group remains focused on creating shareholder value through unlocking the potential of its organic growth and brownfield exploration projects.



Evander Mines' 7 Shaft – Egoli project

7 Shaft is located approximately 3km south-east of 8 Shaft. The Egoli project orebody is approximately 2.5km in underground tramming distance from 7 Shaft. 7 Shaft is currently operational and is utilised by Evander Mines for hoisting RoM material from the 8 Shaft pillar to the Kinross metallurgical plant. The Egoli project infrastructure is much less onerous when compared with the 8 Shaft remnant workings, which are approximately 13km in tramming distance from 7 Shaft, and result in significant mining losses in addition to time consuming logistical processes.

During the year, the Egoli project was subject to rigorous internal and independent review and represents a viable organic growth project at 3 Decline within the 7 Shaft area. A final feasibility study was completed by DRA Global, followed by a further third-party review by The Mineral Corporation. This feasibility study focuses on the Egoli project as a standalone operation using existing infrastructure with on-reef development utilising a hybrid mining method, where stoping will be conducted on a conventional basis with hand-held equipment and development by trackless machinery.

The Egoli project will be accessed directly from 7 Shaft (twin shaft system) with one decline (3 Decline). Blasted ore generated in the stopes will be cleaned into the advance strike gullies by means of a scraper and winch combination. The strike gully winches will scrape ore into the centre gully from where it will again be scraped down-dip into the receiving bay. A belt loading winch will then scrape the ore onto static grizzlies constructed over strike conveyors, which in turn will transport the broken rock to dip conveyors located in the decline cluster. The 3 Decline conveyor system will tip broken rock into the main decline ore passes located between 14 and 15 Levels. The broken rock will be drawn on 15 Level and trammed by rail to the 7 Shaft complex for hoisting to surface and processing at the Kinross metallurgical plant.

The Egoli orebody is a defined high-grade fluvial channel (payshoot), and is a large orebody of world-class proportions. This payshoot represents a divergent fluvial channel which forms part of the basin-wide



Kimberley Reef deposition system. The Kimberley Reef has been mined from the Evander goldfield in the east as well as at operations in the Welkom goldfield in the west (an extent of over 400km). Locally, the Egoli project payshoot is comparable to the currently mined Kinross payshoot (at 8 Shaft) in geology, mineralisation as well as time and style of deposition. The successfully mined Kinross payshoot is therefore analogous to the Egoli project payshoot and has been deposited by the same fluvial system with the same source areas of sediment.

Being a brownfield project with limited development risk, the feasibility study anticipate that approximately 560m of underground development will be required from the breakaway position of the current 3 Decline to intersect the Egoli orebody. The Egoli project has all the required permitting in place through Evander Mines' mining right that is valid until 2038, as well as the applicable wateruse licence and approved environmental management plans. The substantial existing infrastructure which is currently operational comprises a vertical shaft system (7 Shaft) to a depth of 1,960m, hoisting infrastructure and processing facilities at the Kinross metallurgical plant. In addition, the necessary surface and engineering infrastructure such as offices, change house, lamp room, workshop, electricity supply, metallurgical plant and tailings storage facilities are already in place and only require refurbishment and upgrading where applicable.

The feasibility study concluded that the Egoli project is a highly attractive project with excellent returns in the current economic environment with possible upside to the LoM and annual gold production for the Group following the successful conversion of Inferred Mineral Resources to Indicated Mineral Resources. and subsequently to Mineral Reserves as the development progresses. The initial LoM is planned for nine years with average recoverable gold production of approximately 72,000oz per annum at an average head grade of 6,61g/t, based on current Indicated and Measured Resources only. The mine design and schedule is planned to produce 45,000t per month of RoM to the Kinross metallurgical plant.

The Egoli project can increase Evander Mines' underground gold production profile materially at a relatively low capital cost and significant cost and time savings, using the existing shaft and metallurgical facilities.

GEOLOGY

The Kimberley Reef is an oligomictic, pebbly conglomerate and comprises a composite sequence of channel sediments that define longitudinal gravel bars and sand bars with pebbly veneers. The reef in the area strikes in an east-west direction and dips to the north at about 10 degrees. The reef thickness varies from a waste on contact up to a 50cm well-developed oligomictic conglomerate. Average reef thickness is 30cm within the 7 Shaft vicinity. High gold values in the Kimberley Reef are mostly located at the base of the unit and are associated with the presence of carbon and some visible gold on the footwall contact.

Evander region continued

MINERAL RESOURCES

Category		Mineral Resources									
		At 30 Jun	e 2020	At 30 June 2019							
		Containe	d gold			Contained gold					
	Tonnes million	Grade g/t	Tonnes gold	Moz	Tonnes million	Grade g/t	Tonnes gold	Moz			
Measured	0.46	8.51	3.90	0.13	0.44	8.60	3.80	0.12			
Indicated	2.94	9.85	28.93	0.93	2.94	9.85	28.93	0.93			
Measured and											
Indicated	3.39	9.67	32.83	1.06	3.38	9.69	32.75	1.05			
Inferred	6.26	9.68	60.58	1.95	6.26	9.68	60.58	1.95			
Total	9.65	9.68	93.41	3.00	9.64	9.69	93.33	3.00			

Notes:

Mineral Resources are reported in accordance with the SAMREC Code. Mineral Resources would be the same if reported according to the guidelines of the CIM's National Instrument 43-101. Cut-off values are calculated at 327cmg/t, applying a gold price of ZAR750,000/kg (US\$1,414/oz and US\$/ZAR:16.50). Mineral Resources are reported inclusive of Mineral Reserves. All Mineral Resources reported exclude geological structures. Mineral Resources are reported as in-situ tonnes (2.71t/m³). Any discrepancies in totals are due to rounding. Effects of mining and recovery losses have been considered in the cut-off grade calculations.

MODIFYING FACTORS

At 30 June 2020	Gold price ZAR/kg	Cut-off value g/t Au	Cut-off value cmg/t	Stoping width cm	Dilution %	MCF %	PRF %
7 Shaft	650,000	3.30	397	120	11	90	95

MINERAL RESERVES

Category		Mineral Reserves									
		At 30 Jun	ie 2020		At 30 June 2019						
		Containe	d gold		Contained gold						
	Tonnes million	Grade g/t	Tonnes gold	Moz	Tonnes million	Grade g/t	Tonnes gold	Moz			
Proved	0.45	5.90	2.64	0.08	0.62	4.21	2.61	0.08			
Probable	2.99	6.72	20.08	0.65	3.51	7.06	24.82	0.80			
Total	3.44	6.61	22.72	0.73	4.13	6.64	27.43	0.88			

Notes:

Mineral Reserves are reported in accordance with the SAMREC Code. Mineral Reserves would be the same if reported according to the guidelines of the CIM's National Instrument 43-101. Cut-off values are calculated at 397cmg/t, applying a gold price of ZAR650,000/kg (US\$1,225/oz and USS/ZAR:16.50). All Mineral Reserves reported exclude geological structures. Mineral Reserves are reported as in-situ tonnes (2.71t/m³). Any discrepancies in totals are due to rounding. Effects of mining and recovery losses have been considered in the cut-off grade calculations.

MINERAL RESOURCES AND MINERAL RESERVES RECONCILIATION

Factors that affected the Mineral Resources reconciliation	Factors that affected the Mineral Reserves reconciliation
Revised mining method with on-reef development adopted	Revised mining method with on-reef development adopted with additional pillars required
Cut-off grade decreased due to lower cost mining method and increased gold price	Modifying factors impacted positively due to lower mining costs, higher gold price and proximity of mining activities to infrastructure



Mineral Reserves sensitivity





LIFE-OF-MINE PLANNING

The feasibility study conducted by DRA Global, scheduling only the Measured and Indicated Mineral Resources, specifies a nine-year life-of-mine for the Egoli project. This nine-year life will start when dewatering of the 3 Decline at the 7 Shaft system commences. Further upside exists at the Egoli project when a portion of the reported Inferred Mineral Resources is allowed to be converted to Indicated and Measured Mineral Resources in future as more data becomes available through the mining activity. These newly converted Mineral Resources could then be modelled into the mine reserves, further increasing the current life of the project.

The Egoli payshoot extends past the current 8 Shaft infrastructure, towards the Rolspruit project and, through the current geological models' extrapolation, terminates at the Poplar project. This represents a total project target trend extending in excess of 15km that are all contained within the existing Evander Mines mineral rights.



Rolspruit project

BACKGROUND

The Rolspruit project is an exploration project where the orebody is a down-dip extension of the Kinross payshoot currently being exploited at 8 Shaft. The project is located immediately west-northwest of 8 Shaft. Exploration on the Rolspruit project commenced in 1955, and by 1988, a total of 53 boreholes with accompanying reef deflections had been completed by various companies. The Group regularly reviews its portfolio of exploration projects and applies the latest available economic data to assess their feasibility.

GEOLOGY

The Kimberley Reef strikes in an east-west direction and dips at 28 degrees to the north, and has been intersected at an average depth of 2,300m below surface. The Foot Wall Sill Break is an intrusive sill that is associated with a reverse fault, which resulted in a 90m displacement of the reef horizon. The Kimberley Reef at Rolspruit is a well-developed oligomictic conglomerate up to 1m thick, averaging about 40cm. In this area, the Kimberley Reef is very similar to that of 8 Shaft with high gold grade values mostly

located at the base of the unit, and associated with the presence of carbon and some visible gold on the footwall contact.

MINERAL RESOURCES

The Mineral Resources estimation was performed by ExplorMine Consultants Proprietary Limited in April 2011, with no recent updates as no new information on the project is available. A review of the resulting pre-feasibility study was conducted in 2012 and reviewed by SRK Consulting (South Africa) in 2017, with all operational and capital expenditure being escalated. An extensive channel sampling database for the adjoining 8 Shaft area and the surface drilling data for Rolspruit formed the dataset for the reviewed resource estimation.

Macro-ordinary kriging was applied to Indicated Resources while a Sichel's-t estimation technique was used to estimate the Inferred Mineral Resources. The Indicated Mineral Resource estimation was defined on the 8 Shaft channel sampling dataset and subsequent geozones. The block size employed during this estimation was 60m by 60m.

MINERAL RESOURCES

	Mineral Resources									
		At 30 Jun	ie 2020			At 30 June 2019				
		Containe	d gold			Containe	Contained gold			
Category	Tonnes million	Grade g/t	Tonnes gold	Moz	Tonnes million	Grade g/t	Tonnes gold	Moz		
Measured	-	_	_	-	_	_	_	_		
Indicated	23.73	11.80	279.91	9.00	23.74	11.79	279.90	9.00		
Measured and										
Indicated	23.73	11.80	279.91	9.00	23.74	11.79	279.90	9.00		
Inferred	2.09	9.25	19.36	0.62	2.09	9.25	19.36	0.62		
Total	25.82	11.59	299.27	9.62	25.83	11.58	299.26	9.62		

Notes:

Mineral Resources are reported in accordance with the SAMREC Code. Mineral Resources would be the same if reported according to the guidelines of the CIM's National Instrument 43-101. Cut-off values are calculated at 461cmg/t, applying a gold price of ZAR750,000/kg (US\$1,414/oz and US\$/ZAR:16.50). Mineral Resources are reported inclusive of Mineral Reserves. All Mineral Resources reported exclude geological structures. Mineral Resources are reported as in-situ tonnes (2.71t/m³). Any discrepancies in totals are due to rounding. Effects of mining and recovery losses have been considered in the cut-off grade calculations.

MODIFYING FACTORS

At 30 June 2020	Gold price ZAR/kg	Cut-off value g/t Au	Cut-off value cmg/t	Stoping width cm	Dilution %	MCF %	PRF %
Rolspruit	650,000	4.77	525	110	16.5	85	96.4

MINERAL RESERVES

		Mineral Reserves								
		At 30 June 2020				At 30 June 2019				
	Contained gold				Contained gold					
Category	Tonnes million	Grade g/t	Tonnes gold	Moz	Tonnes million	Grade g/t	Tonnes gold	Moz		
Proved	-	_	_	-	_	_	_	_		
Probable	23.36	8.60	201.01	6.46	23.36	8.60	201.01	6.46		
Total	23.36	8.60	201.01	6.46	23.36	8.60	201.01	6.46		

Notes:

Mineral Reserves are reported in accordance with the SAMREC Code. Mineral Reserves would be the same if reported according to the guidelines of the CIM's National Instrument 43-101. Cut-off values are calculated at 525cmg/t, applying a gold price of ZAR650,000/kg (US\$1,225/oz and US\$/ZAR:16.50). All Mineral Reserves reported exclude geological structures. Mineral Reserves are reported as in-situ tonnes (2.71t/m³). Any discrepancies in totals are due to rounding. Effects of mining and recovery losses have been considered in the cut-off grade calculations.

MINERAL RESOURCES AND MINERAL RESERVES RECONCILIATION

Factor affecting the Mineral Resources reconciliation	Factor affecting the Mineral Reserves reconciliation
Cut-off grade increased slightly due to inflationary increase in mining costs assumed	Cut-off grade increased slightly due to inflationary increase in mining costs assumed through conventional narrow tabular breast mining at a depth of more than 2,500m





Evander region continued





LIFE-OF-MINE PLANNING

Turgis Consulting conducted a pre-feasibility study on the Rolspruit project in 2012. This study concluded a potential 29-year life-of-mine for the Rolspruit project with peak production of circa 450Koz per annum. The project will, however, require new twin shaft infrastructure to a depth of 2,371m for the main shaft and 2,261m for the ventilation shaft as well as underground development to enable the cost-effective extraction of ore from the Rolspruit project. The life of the project is dependent on when the construction of the required shaft infrastructure commences.





Poplar project

BACKGROUND

The Poplar project is situated in the north-western limb of the Evander Basin, west of the town of Leandra. Exploration on the Poplar project commenced in the mid-1950s and has been the subject of several studies. A total of 104 mother holes were drilled in the project area, with an additional 146 intersections obtained through deflection drill holes. No additional information has been obtained during the period under review. The Group regularly reviews its portfolio of exploration projects and applies the latest available economic data to assess their feasibility.

GEOLOGY

The Kimberley Reef occurs at a depth below surface of between 500m in the west and 1,200m in the east. The reef strikes northsouth and dips nine to 24 degrees to the east. The Kimberley Reef comprises a sequence of fluvial, channel sediments that were deposited in a braided stream environment. Deposition of the reef was influenced by the footwall lithologies. The Kimberley Reef horizon has a channel width of approximately 30cm, generally a thin reef hosting high gold grades. The reef has north-east to south-west trending channels or payshoots, which are evident in other parts of the Evander Basin. A series of seven major, sub-parallel and fairly evenly spaced faults traverse the property. These are all orientated in a roughly north-north-east to south-south-west direction. Throws on these faults vary between 50m and 400m.

MINERAL RESOURCES

Category		Mineral Resources									
		At 30 Jun	ne 2020			At 30 Jun	e 2019				
		Containe	d gold	d gold		Contained gold					
	Tonnes million	Grade g/t	Tonnes gold	Moz	Moz Tonnes	Grade g/t	Tonnes gold	Moz			
Measured	-	-	-	-	-	-	-	-			
Indicated	15.50	7.82	121.22	3.90	15.50	7.82	121.22	3.90			
Measured and											
Indicated	15.50	7.82	121.22	3.90	15.50	7.82	121.22	3.90			
Inferred	7.91	6.91	54.70	1.76	7.91	6.91	54.70	1.76			
Total	23.41	7.51	175.92	5.66	23.41	7.51	175.92	5.66			

Notes:

Mineral Resources are reported in accordance with the SAMREC Code. Mineral Resources would be the same if reported according to the guidelines of the CIM's National Instrument 43-101. Cut-off values are calculated at 554cmg/t, applying a gold price of ZAR750,000/kg (US\$1,414/oz and US\$/ZAR:16.50). All Mineral Resources reported exclude geological structures. Mineral Resources are reported as in-situ tonnes (2.71t/m³). Any discrepancies in totals are due to rounding. Effects of mining and recovery losses have been considered in the cut-off grade calculations.

MINERAL RESOURCES RECONCILIATION

Factor affecting the Mineral Resources reconciliation

Cut-off grade remained stable due to inflationary increase in mining costs assumed and higher gold price

Poplar project

Grade/tonnage curve



Evander South project

BACKGROUND

The Evander South project is in the south-western limb of the Evander Basin. It is located directly west of Evander Mines' 9 Shaft (9 Shaft) and is south of the Poplar project. A total of 116 mother holes were drilled in the project area, with 475 deflections. No additional information has been obtained during the period under review.

GEOLOGY

The Kimberley Reef at Evander South occurs at a depth of between 300m in the west and 1,200m in the east below surface with a north-south strike and dips between six and 19 degrees. It comprises a sequence of fluvial channel sediments that were deposited in a braided stream environment with final deposition influenced by the footwall lithologies. The high-grade Kimberley Reef is associated with carbon and is a narrow, small pebble, clast-supported and well-packed oligomictic conglomerate. Carbon was observed in several of the borehole intercepts drilled at the Evander South project.

MINERAL RESOURCES

	Mineral Resources									
		At 30 Jun	e 2020		At 30 June 2019					
	Contained gold					Contained gold				
Category	Tonnes million	Grade g/t	Tonnes gold	Moz	Tonnes million	Grade g/t	Tonnes gold	Moz		
Measured	-	-	_	-	_	_	_	_		
Indicated	11.71	8.83	103.41	3.33	11.59	8.88	102.98	3.31		
Measured and										
Indicated	11.71	8.83	103.41	3.33	11.59	8.88	102.98	3.31		
Inferred	10.63	6.12	65.07	2.09	10.10	6.25	63.09	2.03		
Total	22.34	7.54	168.48	5.42	21.69	7.66	166.07	5.34		

Notes:

Mineral Resources are reported in accordance with the SAMREC Code. Mineral Resources would be the same if reported according to the guidelines of the CIM's National Instrument 43-101. Cut-off values are calculated at 371cmg/t, applying a gold price of ZAR750,000/kg (US\$1,414/oz and US\$/ZAR:16.50). All Mineral Resources reported exclude geological structures. Mineral Resources are reported as in-situ tonnes (2.71t/m³). Any discrepancies in totals are due to rounding. Effects of mining and recovery losses have been considered in the cut-off grade calculations.

MINERAL RESOURCES RECONCILIATION

Factor affecting the Mineral Resources reconciliation

Cut-off grade decreased slightly due to inflationary increase in mining costs assumed and higher gold price



Evander Mines' 9 Shaft A-block project

BACKGROUND

The 9 Shaft A-block project is situated in the south-western limb of the Evander Basin. It is located directly west of 9 Shaft and is approximately 9km west-south-west of 7 Shaft. 9 Shaft was operational between 1962 and 2009, mining the Kimberley Reef in the Evander goldfield as part of the Leslie Gold Mine. The A-block area on 1 Level was known as the final production section for the shaft. Production at that time was at a small scale (up to 5,000t per month from two to three panels), but with very high grades (1,000cmg/t up to 1,500cmg/t with boreholes showing up to 4,000cmg/t) and at shallow depths of around 300m below surface. Due to low volumes and a comparatively low gold price (ZAR230,000 to ZAR310,000/kg of gold, https://goldprice.org/) at the time, operations at 9 Shaft were discontinued.

In 2009, Mineral Resources of circa 0.8Mt at an in-situ gold grade averaging 12g/t over a 1m stoping width (~0,32Moz) was reported for the A-block area. The majority of these were in the Inferred Resource category. Due to the depressed gold price and the resultant demolition of the 9 Shaft head gear, the previously reported Mineral Resources have been downgraded to an exploration target. The drilling programme planned by the Group at A-block aims to improve the Mineral Resources category with a potential conversion to Mineral Reserves. Exploration of the area further to the west of the A-block towards Evander South will also be conducted during this programme.

GEOLOGY

The Kimberley Reef occurs at a relatively shallow depth of between 200m in the south-west and 500m in the north-east. The reef strikes north-west-south-east and dips between six and 19 degrees, and occurs as stacked half-grabens that could be accessed by a single production level. The Kimberley Reef comprises a sequence of fluvial channel sediments that were deposited in a braided stream environment. Deposition of the reef was influenced by the footwall lithologies, which, in this project, comprise the Kimberley shales. The high-grade Kimberley Reef in this area is associated with carbon and is a narrow, small pebble, clast-supported and well-packed oligomictic conglomerate. Small-scale mining occurred in close proximity to this project area prior to the discontinuation of 9 Shaft operations. All of the available historical data has been considered in the modelling of the project area's exploration target.



EXPLORATION TARGET

	Exploration target								
	At 30 June 2020				At 30 June 2019				
		Containe	d gold			Containe	d gold		
Category	Tonnes million	Grade g/t	Tonnes gold	Moz	Tonnes million	Grade g/t	Tonnes gold	Moz	
Minimum of expected range	0.7	8.0	5.6	0.18	_	_	_	_	
Maximum of expected range	1.0	15.0	15.0	0.48	_	_	_	_	

Evander Mines' Mineral Resources and Mineral Reserves reconciliation

BACKGROUND

At 30 June 2020, Evander Mines reported Mineral Reserves of 8.7Moz (183.63Mt at 1.47g/t) and Mineral Resources of 33.0Moz (286.9Mt at 3.58g/t) contained gold. The Measured and Indicated Mineral Resources are inclusive of those Mineral Resources modified to produce the Mineral Reserves. Mineral Reserves are reported as mill-delivered tonnes at the head grade, having duly considered all modifying factors. Mineral Resources and Mineral Reserves reported are contained within the mining right and prospecting right boundaries of Evander Mines. The Evander South Mineral Resources of 22.34Mt at 7.54g/t for 5.4Moz (11.7Mt at 8.83g/t for 3.3Moz are Indicated Mineral Resources and 10.6Mt at 6.12g/t for 2.1Moz are Inferred Mineral Resources) occur on the Evander South prospecting right MP30/5/1/2/2/248 PR. This prospecting right is being consolidated into the Evander Mines mining right MP30/5/1/2/2/126 MR through a Section 102 application that was lodged at the DMRE on 8 December 2017. All mined-out areas have been depleted from the reported Mineral Resources and Mineral Resources.

MINERAL RESOURCES COMPARISON

	Mineral Resources								
	At 30 June 2020				At 30 June 2019				
	Contained gold				d gold				
Category	Tonnes million	Grade g/t	Tonnes gold	Moz	Tonnes million	Grade g/t	Tonnes gold	Moz	
Measured	28.37	1.93	54.85	1.76	40.34	1.28	51.48	1.66	
Indicated	204.45	2.99	610.56	19.63	209.28	2.89	605.11	19.45	
Measured and									
Indicated	232.82	2.86	665.41	21.39	249.62	2.63	656.59	21.10	
Inferred	54.07	6.68	360.95	11.61	51.82	6.48	335.98	10.82	
Total	286.89	3.58	1,026.36	33.00	301.44	3.29	992.57	31.92	



RECONCILIATION OF MINERAL RESOURCES

Evander Mines' Mineral Resources posted the following changes for 2020.

Total Mineral Resources increased by 1.08Moz contained gold from 31.92Moz (301.44Mt at 3.29g/t) at 30 June 2019 to 33.00Moz (286.89Mt at 3.58g/t) post total mining depletion.

The increase can mainly be attributed to the escalation in the gold price (in rand terms) from ZAR700,000/kg of gold in 2019 to ZAR750,000/kg of gold in 2020, and the consequent decrease of cut-off grades. The other factor that led to a decrease in the cut-off grades, specifically for 8 Shaft and the Egoli project, is an optimisation in the mining model. At 8 Shaft, a contractor mining model was adopted and mining occurs closer to the shaft infrastructure. At Egoli, the traditional off-reef development model is substituted for a lower cost on-reef development mining method which also decreases the lead time to first gold production. This had a marked change in the Mineral Resources statement for 8 Shaft, Evander South and the Egoli project.

		Mineral Reserves								
	At 30 June 2020			At 30 June 2019						
		Contained gold				Contained gold				
Category	Tonnes million	Grade g/t	Tonnes gold	Moz	Tonnes million	Grade g/t	Tonnes gold	Moz		
Proved	16.83	0.64	10.84	0.35	24.62	0.54	13.21	0.43		
Probable	166.83	1.56	260.04	8.36	173.86	1.52	264.68	8.51		
Total	183.66	1.47	270.88	8.71	198.48	1.40	277.89	8.93		

MINERAL RESERVES COMPARISON

RECONCILIATION OF MINERAL RESERVES

Evander Mines' total Mineral Reserves decreased by 217,067oz (14.82Mt at 0.47g/t) contained gold.

This decrease is attributable to:

- The depletion of 80Koz of gold recovered through both the underground and tailings operations
- The depletion of mining activity on the Kinross dam (unrecovered gold) through the Elikhulu operation
- The optimisation of the mining method employed in the Mineral Reserving of the Egoli project.



Mineral Reserves reconciliation

Glossary

AIM	Alternative Investment Market, the London Stock	Mineral Reserves	A Mineral Reserve is the economically mineable			
	erowing companies		part of a Measured and/or Indicated Mineral Besource. It includes diluting materials and			
Διι	Gold		allowances for losses, which may occur when			
Barberton Mines	Barberton Mines Proprietany Limited		the material is mined or extracted and is defined			
BGB	Barberton Greenstone Belt		by studies at pre-feasibility or feasibility level as			
	Biological Ovidation (BIOX®) cold extraction		appropriate that include application of modifying			
DIONG	process developed at Barberton Mines. It is an		factors. Such studies demonstrate that, at the			
	environmentally friendly process of releasing		be justified			
	gold from the sulphide that surrounds it by using					
	bacteria		The reference point at which Mineral Reserves			
Bramber tailings	TSF located at Fairview, which the BTRP treated historically		delivered to the processing plant, must be stated.			
Brownfield project	Project based on prior work or rebuilt from a		reference point is different, such as for a saleable			
	previous one		product, a clarifying statement is included to			
BTRP	Barberton Tailings Retreatment Plant, a gold		ensure that the reader is fully informed as to what			
	which commenced production in EY2014		is being reported.			
CIL	Carbon-in-leach		Mineral Reserves are reported as inclusive of			
CIM	Canadian Institute of Mining		diluting and contaminating material delivered for			
CIP	Carbon-in-pulp		treatment or dispatched from the mine without			
cm	Centimetre		treatment. To avoid confusion in reporting Mineral Reserves, the definition of treatment is taken to include any beneficiation of the raw			
cmg/t	Centimetre grams/tonne					
CO ₂	Carbon dioxide		product that might take place before or during			
DMRE	Department of Mineral Resources and Energy		the metallurgical process. For clarity, tonnages			
EIA	Environmental impact assessment		and grades of saleable product may be reported			
Elikhulu	Elikhulu Tailings Retreatment Plant project in		indicating such.			
	Mpumalanga province	Mineral Resources	A Mineral Resource is a concentration or			
EMPr	Environmental management programme		occurrence of solid material of economic interest			
Evander Mines	Evander Gold Mines Limited and Evander Gold		in or on the earth's crust in such form, grade or			
ESC			quality and quantity that there are reasonable			
EGG	Environmental, social and governance		location, quantity, grade, continuity and other			
	Grams/tonne		geological characteristics of a Mineral Resource			
GSSA	Geological Society of South Africa		are known, estimated or interpreted from specific			
HO	Water		geological evidence and knowledge, including			
HS	Hydrogen sulfide		sampling.			
ha	Hectares		Mineral Resources are subdivided, and must be			
Harmony	Harmony Gold Mining Company Limited		so reported, in order of increasing confidence in			
JSE	JSE Limited incorporating the Johannesburg		Indicated or Measured categories			
	Securities Exchange, the largest stock exchange	Mining Charter	Charter to facilitate the sustainable transformation			
	in Africa	Winning Onlanton	and development of the South African mining			
km	Kilometre		industry			
Koz	Thousand ounces	MMR	Main Muiden Reef			
kt	Thousand tonnes	Moz	Million ounces			
ktpm	Thousand tonnes per month	MPRDA	Mineral and Petroleum Resources Development			
LSE	London Stock Exchange		Act			
LoM	Life-of-mine	MR	Muiden Reef			
MCF	Mine call factor	MRC	Main Reef Complex			
Metorex	Metorex Limited	MRE	Mineral Resources estimation			
		MRM	Mineral Resource management			

Mt	Million tonnes
MTPA	Mnumalanga Tourism and Parks Agency
07	
Pan African	Holding company – Pan African
Resources PLC	
PAR Gold Proprietary	Pan African's black empowerment partner, which
Limited	has a 19.53% stake in the Group
PC	Prince Consort
PRF	Plant Recovery Factor
QA/QC	Quality assurance and quality control
RoM	Run-of-mine
SA	South Africa
SACNASP	South African Council for Natural Scientific
	Professionals
SAMREC	South African Code for Reporting of Mineral
	Resources and Mineral Reserves (2016 edition)
SANAS	South African National Accreditation System
SHEQC	Safety, health, environment, quality and community
t	Tonnes
tpm	Tonnes per month
TSF	Tailings storage facility
the current financial	The year ended 30 June 2020
year or the period/	
year under review	
the Group or the	Pan African Resources PLC, listed on the LSE's
African	Aim and on the JSE in the Gold Mining Sector
the previous financial	The year ended 30 June 2019
vear	
US\$	United States dollar
WUL	Water-use licence
ZAR	South African rand
ZK	Zwartkoppie
%	Parts per hundred/ percentage

Corporate information

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COMPETENT PERSON

The competent person for Barberton Mines and Evander Mines, Hendrik Pretorius, the Group mineral resource management manager, signs off the Mineral Resources report for the Group. He is a member of the South African Council for Natural Scientific Professions (SACNASP 400051/11 – Management Enterprise Building, Mark Shuttleworth Street, Innovation Hub, Pretoria, South Africa), as well as a member in good standing of the Geological Society of South Africa (GSSA 965978 – CSIR Mining Precinct, corner Rustenburg and Carlow Roads, Melville, South Africa). Hendrik has 17 years' experience in economic geology and mineral resource management.

Hendrik holds a BSc (Hons) Degree in Geology from the University of Johannesburg as well as a Graduate Diploma in Mining Engineering (GDE) from the University of the Witwatersrand. He is based at The Firs Office Building, 2nd Floor, Office 204, corner Cradock and Biermann Avenues, Rosebank, Johannesburg, South Africa. Hendrik has confirmed in writing to Pan African that the information disclosed is compliant with the relevant requirements of Section 12 of the JSE Listings Requirements and the Table 1 requirements of the SAMREC Code and that it may be published in the form and context in which it is intended.



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