28 October 2024

ASX:SPD, JSE:SDL

ACN: 646 399 891

Corporate Directory

Executive Chairman
Roger Baxter

Managing Director
Johan Odendaal

Non-Executive Directors
Mike Stirzaker
Rob Thomson
Daan van Heerden
Lindi Nkosi-Thomas

Company Secretary
Andrew Cooke

Top 5 Shareholders
Nicolas Daniel Resources Pty ltd
Nurinox Investments Pty Ltd
Robert Napier Keith
Legacy Platinum Corporation
HSBC Custody Nominees (Aus) Ltd

Company Overview

Dual-listed platinum group metal (PGM) company developing the advanced Bengwenyama PGM project, particularly rich in palladium/rhodium, located in South Africa's prolific Bushveld Complex.

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Prefeasibility Study Results: Project NPV_8 of USD1.059bn Maiden JORC Ore Reserve of 6.29 million oz @ 6.17g/t PGM (6E)

Key Study Parameters

- Prefeasibility Study (PFS) completed for the 70% owned Bengwenyama Platinum Group Metal (PGM) project indicates very attractive economics justifying development of the project.
- The life of mine (LoM) from the UG2 reef alone is estimated at 29 years with a total of approximately 45 million tonnes mined (~8.88 Moz 6E*) for an average annual steady state saleable product of 400Koz PGM (6E basis*) with cash costs firmly at the low end of the global cost curve a result of high delivered grade and shallow mining depths.
- Strategically situated amongst other Tier 1 operations on the Bushveld's Eastern Limb and owned by major mining companies. All necessary infrastructure (water, power, roads, services, and skilled labour force) already in place. Mining and processing are amenable to proven technology.

Financial Returns

- Post-tax ungeared NPV_8 (real) of USD1.059 billion based on conservative long term commodity price assumptions (Pt US$1200/oz, Pd US$1100/oz, Rh US$6,200/oz).
- Post-tax IRR of ~28%.
- Post-tax capital payback of ~3.5 years from first concentrate production.
- LoM EBITDA totalling ~USD5.6 billion.

Physical Parameters

- Development of a ~2.4 Mtpa UG2 reef two decline underground mining operation with mill feed head grade of 6.10g/t (6E) averaging over LoM
- Conventional flotation and spiral plant to deliver a marketable PGM concentrate (~85% recovery for PGM) and a 42% chrome concentrate for sale to export markets.
- Initial Capital of ~USD385 million (including a 15% contingency)
- Low LoM cash costs for operations of ~USD644/6E oz (~ZAR2,609/t)
- LoM AISC of ~USD800/6E oz
- High LoM EBITDA Margin of ~50%

Bengwenyama Project

Production Confidence Levels

- Percentage of JORC Measured and Indicated Resources used in the PFS LoM diluted mine plan is 87% (Inferred 13%) over the first five years, 94% (Inferred 6%) over the first 10 years and 74% (Inferred 26%) over the estimated 29-year mine life.
- Mine scheduling has targeted high grades initially from the shallow area of the UG2 reef with run of mine (RoM) at an average feed grade over the first 10 years of 6.3g/t (6E*).
- Average processing recovery of 85% over the life of mine from testwork demonstrates amenability to conventional processing technology adopted in the South African platinum industry.

***Note:**
7E or 6E+Au in this document refers to platinum, palladium, rhodium, ruthenium, iridium, osmium and gold.
6E or 5E+Au refers to platinum, palladium, rhodium, ruthenium, iridium and gold and;
4e or 3E+Au refers to platinum, palladium, rhodium and gold

Environmental Social Governance

- Widespread community and Traditional Council engagement has been established.
- Extensive environmental baseline studies have been completed across the Project Area.
- Heritage clearances have been completed over the Project development and operations area.
- Environmental Impact Assessment (EIA) was submitted on 11 July 2024, with the Department of Mineral Resources and Energy (DMRE) issuing an acknowledgment on 17 July 2024.
- Additional applications for a Waste Management License (WML) will be submitted to manage waste products and geochemical hazards.
- An Integrated Water and Waste Management Plan (IWWMP) has been initiated, as per GNR 267 of 2017, to regulate water use activities.
- Closure costs for the LoM are estimated at R90.921 million (USD4.65 million) as of April 2024, compiled by OMI Solutions (Pty) Ltd.
- Social and Labour Plan (SLP) has been developed in line with the Mining Charter and MPRDA requirements to support community development.
- On September 29, 2023, Southern Palladium officially submitted its application for a Mining Right (refer ASX Announcement 2 October 2023), a decision by the DMRE is anticipated Q2 2025.

Financial Investment Decision and Value Drivers

- Commencement of feasibility study work to commence in early 2025 in parallel with project construction funding discussions with financiers leading to the Financial Investment Decision (FID).
- Debt financing alternatives already progressed with the appointment of Blackbird Partners.
- Feasibility critical path study work includes metallurgical and geotechnical assessments. Drilling required for both assessments to commence as soon as practicable, subject to statutory approvals.
- FID discussions proposed in late 2025 subject to statutory approvals.
- Key value drivers during 2025 are the granting of the mining right, concentrate offtake outcomes and completion of a definitive feasibility study (DFS).

Value-Adding Opportunities Prior to Financial Investment Decision

- Value-adding opportunities to be carried out by Q1 2025 to be included as part of the FID. This work is expected to make project funding more attractive by either decreasing the ramp up period to full production or by decreasing the up-front capital requirement (or a combination of both).

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The assessments to be investigated include:-

- accessing the orebody with a single decline initially into the shallower sections of the orebody;
- increasing underground development for initial mine stopes by providing twin drives to enable greater ore and waste extraction until steady state mining is achieved;
- possible use of idle concentrate plant within trucking distance from the Project;
- increasing the rate of early development, including haulages and raises;
- adopting a mining contractor strategy for the underground development work;
- a two-stage processing plant construction with an initial 100,000 tpm plant, followed by second 100,000 tpm processing to match the production profile;
- adopting ore sorters to reduce the feed and increase the head grade thus requiring a smaller processing plant; and
- the utilisation of renewable energy sources.

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Key PFS Outcomes and Assumptions

The PFS confirms that the Bengwenyama Project is a globally significant Tier 1 PGM Project and presents a commercially viable development opportunity. A summary of the initial physical and financial evaluation of the Project at a 2.4 Mtpa throughput rate is indicated in Table 1 with additional details provided in the PFS Executive Summary. It is compared with the results delivered from the scoping study (SS) in February 2024. The peak funding requirement is USD452 million (inclusive of contingencies), with a pay-back period of 6.0 years from start of mining or 6.5 years from start of construction. Early revenue growth was supported by a combination of higher measured resource grades, an accelerated ramp-up that increased throughput (yielding more ounces), and a projected higher rhodium price. The UG2 basket price of USD 1,557 per 6E oz is a conservative estimate compared to the current spot price of USD 1,348 per 6E oz (As at 26 October 2024), especially considering that we are at the bottom of the cycle. More detailed information was gathered on the PFS labour costs. The accuracy of the labour cost estimate has been significantly enhanced by reviewing and refining labour requirements, adjusting salary rates based on benchmarks from existing operations, and aligning job gradings with industry standards.

Table 1: Key PFS Valuation Metrics

Production Metrics	**Unit**	**SS**	**PFS**
Life of Mine	Years	36	29
Life of Mine Ore Tonnes Mined	kt	51,896	45,262
Processing Rate	ktpa	2,040	2,400
Total 6E Oz in Mine Plan*	koz	10,740	8,876
6E Grade Delivered to Plant	g/t	6.42	6.10
6E Recovered grade	g/t	5.33	5.18
6E Recovery	%	81%	85%
Total 6E Oz Recovered	koz	8,897	7,545
PGM Concentrate	kt	1,326	1,987
Chromite Concentrate	kt	3,767	6,083
Financial Metrics			
Basket Price	USD/6E oz	1,529	1,557
Exchange Rate	ZAR/USD	18.87	19.57
All In Sustaining Costs ("AISC")	**USD/6E oz**	**836**	**800**
Average AISC First 5 Years	USD/6E oz	836	829
Average AISC First 10 Years	USD/6E oz	844	843
Net free cashflow (pre-tax)	USD million	4,295	4,660
Net free cashflow (post-tax)	USD million	3,132	3,403
EBITDA	USD million	5,213	5,607
Payback Period from Ground Break	Years	5.5	6.5
Payback Period from First Mining	Years	6.5	6.0
Payback Period from First Plant Production	Years	4.5	3.5
Peak Funding Requirement	**USD million**	**403**	**452**
NPV 8% (pre-tax)	USD million	1,043	1,562
NPV 8% (post-tax)	**USD million**	**698**	**1,059**
IRR (pre-tax)	%	24%	33%
IRR (post-tax)	**%**	**21%**	**28%**
Capital Cost Estimate			
Initial Mining Capital	USD million	126	96
Initial Plant	USD million	99	129
Initial TSF	USD million	23	42
Initial Shared Capital	USD million	98	63
Total Initial Capital Excluding Contingencies	**USD million**	**346**	**330**
Initial Capital Contingencies	USD million	62	55
Total Initial Capital	**USD million**	**409**	**385**
Key Environmental and Social Statistics			
Life of Mine State Royalties & Corporate Taxes	USD million	1,770	1,902
Life of Mine Expenditure	USD million	7,339	5,868
Life of Mine Total Economic Value Add	USD million	9,109	7,770

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Bengwenyama Maiden JORC Probable Reserve

The 6E Ore Reserves for the Project consist of Measured and Indicated Resources from the UG2 reef only. The Ore Reserve classification was conducted by converting Measured and Indicated Mineral Resources to Probable Ore Reserves. Table 2 provides a detailed summary of the tonnage, grades and content for Probable Ore Reserves within the Bengwenyama Project.

Table 2: Ore Reserve Estimation as at 23 October 2024 (UG2 reef)

Ore Reserve Category	Tonnes	Pt	Pd	Rh	Au	Ir	Os	Ru	4E	6E	Cu	Ni	Cr_2O_3	Moz(6E)
	Mt	(g/t)	(g/t)	(g/t)	(g/t)	(g/t)	(g/t)	(g/t)	(g/t)	(g/t)	(%)	(%)	(%)	
Probable	31.72	2.34	2.33	0.48	0.07	0.16	-	0.78	5.22	6.17	0.02	0.12	19.03	6.29
Total	**31.72**	**2.34**	**2.33**	**0.48**	**0.07**	**0.16**	**-**	**0.78**	**5.22**	**6.17**	**0.02**	**0.12**	**19.03**	**6.29**

Notes:

1. The Ore Reserve estimation included diluted Measured and Indicated Mineral Resources only.
2. No Inferred Mineral Resources have been included in the Ore Reserve.
3. The Ore Reserve estimation was completed using a 6E basket price (before payabilities) of USD1,557/oz over the LoM.

Southern Palladium (ASX: SPD; JSE: SDL, "Southern Palladium" or the "Company") is pleased to announce the outcome of its Pre-feasibility Study of its 70% owned Bengwenyama Project located on the Eastern Limb of the Bushveld Complex in South Africa which holds approximately 72% of the world's platinum group minerals ("PGM") resources.

The Managing Director, Johan Odendaal, said: "*Today, we are proud to announce the results of the Prefeasibility Study (PFS) for the Bengwenyama Project, which marks a significant step forward in advancing the project. Since the Scoping Study, we have identified several opportunities to enhance the physical and financial metrics, including:-*

- *completing the drilling program;*
- *increasing resource confidence;*
- *identifying footwall mineralization in the UG2 reef,*
- *optimising the initial secondary decline to reduce development time;*
- *accelerating the production build-up;*
- *increasing average annual production;*
- *completing chrome metallurgical tests to improve recovery understanding;*
- *changing the mining method;*
- *significantly increasing the detail and accuracy of the technical work.*

Over the first five years of the Project, 87% of ore production will come from JORC Measured and Indicated resource classifications, and 94% over the first 10 years. JORC Measured and Indicated resources account for 74% of the total planned ore production over the LoM. Additionally, we are excited to announce a maiden JORC Probable Reserve of 6.29Moz @ 6.17g/t PGE (6E) on the UG2 reef over a 1 m stoping width.

This maiden Reserve is underpinned by the substantial Mineral Resource update announced in October 2024, which saw the total resource increase to 40Moz, including 7.92Moz @ 9.653g/t PGE (6E) in the JORC Measured and Indicated categories. This represents a notable leap in resource confidence since our initial 18.8Moz Inferred Resource reported in July 2021. The successful conversion of Measured and Indicated Resources to Probable Reserves is a testament to our focused resource definition drilling program over the past two years.

Extensive metallurgical testing during the PFS phase has further de-risked the Project, demonstrating high and consistent recoveries for both PGMs and chrome. Notably, the Project's post-tax net present value ("NPV") has increased by 52% to USD1.059 billion, up from USD698 million in the Scoping Study. Capital costs for the plant and infrastructure have been refined, decreasing by 6% to USD385 million. This figure includes a 15% contingency.

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With an estimated all-in sustaining cost of USD800/oz (6E), the Bengwenyama Project will be positioned in the lowest quartile of the platinum industry cost curve, highlighting its competitive advantage.

The PFS results are compelling and firmly establish Bengwenyama as a Tier 1 PGM asset. The study confirms the commercial viability of the Project, and we are now preparing to progress to a definitive feasibility study ("DFS"), which is expected to be completed in 2025. Additionally, during the last quarter of 2024, we will explore further value-adding opportunities ahead of the financial investment decision. We have also made progress in advancing debt financing options with the appointment of Blackbird Partners.

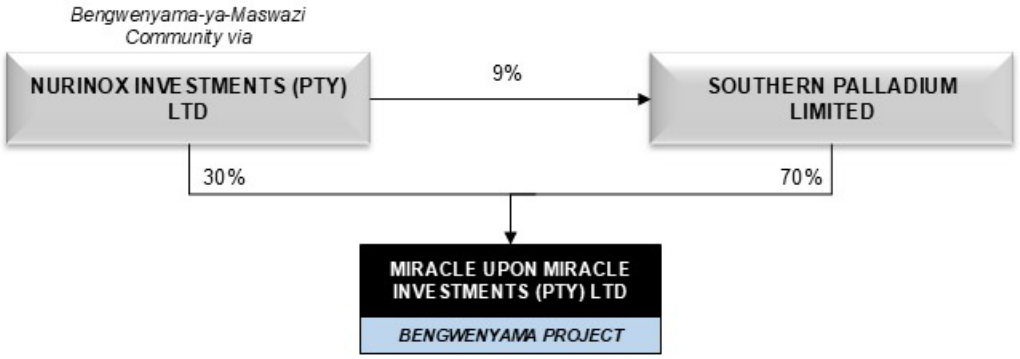
In the past two years, the Company has demonstrated rapid resource growth and exploration success, and we remain committed to maximising shareholder returns as we continue to unlock the full potential of this world-class asset."

Prefeasibility Study summary

INTRODUCTION

Today, Southern Palladium announced the results of the pre-feasibility study for its 70%-owned Bengwenyama Project, located on the Eastern Limb of the Bushveld Complex in South Africa, which contains approximately 72% of the world's platinum group metals ("PGM") resources. Figure 1 illustrates the Southern Palladium Interest in the Bengwenyama Project.

Figure 1: Southern PalladiumInterest in the Bengwenyama Project



The October 2024 pre-feasibility study (PFS) builds on the February 2024 updated scoping study, which provided an initial 36-year evaluation of the Bengwenyama Project based on the December 2023 mineral resource estimate of 26.22Moz. The UG2 Scoping Study outcomes included a total recovered production of 8.90Moz (6E) from the UG2 Reef, 54% of which was classified as JORC Indicated mineralisation, over the 36-year evaluation period.

Average annual PGM production was approximately 330,000 ozpa at an average AISC of USD836/ 6E ounce. The scoping study's post-tax financial metrics included an NPV_8 of US$700m, a post tax IRR of 21%, and a payback period of 6.5 years from the commencement of mining. Based on these results, the SPD board approved advancing the Project to a pre-feasibility study level.

Opportunities to improve upon the scoping study physical and financial metrics were identified at the time included:-

- completed the drilling programme increasing the confidence levels in the resource;
- identify footwall mineralisation in the UG2 reef;
- move the initial secondary decline to shorten the development time;
- steepen the production build-up;

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- increase the average annual production;
- complete chrome metallurgical tests to better understand recovery;
- change in mining method; and
- overall increase in detail and accuracy of technical work.

A number of specialists and consultants were involved in the completion of the PFS on the Project. These are listed in Table 3. Minxcon was the lead consultant and the Mineral Resource estimate, environmental social governance (ESG) aspects, mine design and scheduling, infrastructure and processing designs, operating and capital cost estimates and financial modelling, and PFS reviewed by SRK Consulting (South Africa) (Pty) Ltd.

Table 3: Consultants and Specialists Involved in PFS Study

Project Team	Company
Environmental Assessment Practitioner	OMI Solutions (Pty) Ltd
Air Quality Impact Assessment	Eco Elementum (Pty) Ltd
Noise Quality Impact Assessment	Eco Elementum (Pty) Ltd
Groundwater (Geohydrology) Impact Assessment	MVB Consulting (Pty) Ltd
Waste Assessment	Eco Elementum (Pty) Ltd
Surface Water (Hydrology) Impact Assessment and Stormwater Management Plan	Hydrospatial (Pty) Ltd
Water Resource and Hydropedology Impact Assessment	Land Matters Environmental Consulting (Pty) Ltd
Soil and Agricultural Ecosystem Impact Assessment	Land Matters Environmental Consulting (Pty) Ltd
Terrestrial Biodiversity Impact Assessment	Field and Form Landscape Science & Trogon Biodiversity
Aquatic Impact Assessment	Ecology International (Pty) Ltd
Visual Impact Assessment	Eco Elementum (Pty) Ltd
Socio-Economic Impact Assessment	Niara Environmental Consulting (Pty) Ltd
Phase 1 Heritage Impact Assessment	Land Matters Environmental Consulting (Pty) Ltd
Desktop Palaeontological Impact Assessment	Prof. Marion Bamford
Traffic Assessment	SA Traffic Surveys (Pty) Ltd
Blasting Assessment	Blast Management Consulting
Financial Provision	OMI Solutions (Pty) Ltd
Electrical, Control and Instrumentation Design	Paddy Keys & Associates
Tailings Storage Facility Design	Entail (Pty) Ltd
Surface Water Management and TSF Slurry and Return Water System Design	Eco-Elementum (Pty) Ltd
TSF Dewatering Plant	Tailex (Pty) Ltd
Surface Geotechnical Investigation	Bear-GeoConsult (Pty) Ltd
Geophysical Survey	New Resolution Geophysics
Diamond Core Drilling	Geomechanics
Drillhole Collar Survey	Aero Geomatics
Wireline Logging	Wireline Workshop
Assaying	ALS Minerals (part of ALS Limited)
Mineral Resource Estimate 3rd Party Review	ExplorMine Consultants
Geotechnical considerations and recommendations	Open House Management Services
Bond Ball Work Index testwork (comminution), initial rougher and cleaner kinetic testwork (floatation)	SGS South Africa
Milling curve testwork, rougher kinetic and locked cycle testwork (floatation) and mineralogical analysis	Suntech Geomet Laboratories
Mineral Resource estimate, ESG aspects, mine design and scheduling, infrastructure and processing designs, operating and capital cost estimates and financial modelling	Minxcon (Pty) Ltd

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In line with the opportunities identified, SPD announced significant progress at the Bengwenyama Project on 27 August 2024. The UG2 Reef, which is the main focus of the PFS, saw a 25% increase in the Measured and Indicated (M&I) Mineral Resource to 8.17 Moz (7E) at an impressive grade of 9.89 g/t over a reef width of 73 cm.

Notably, 28% of this UG2 M&I Mineral Resource is now classified as Measured, further boosting confidence in the Project's potential. The total UG2 Mineral Resource, including Measured, Indicated, and Inferred categories, stood at 24.81 Moz. When combined with the Merensky Reef Resource, the total Mineral Resource amounted to 35.32 Moz, reinforcing the robust nature of the Bengwenyama Project.

Additionally, all UG2 Exploration Targets, including those within Nooitverwacht, were successfully converted into Inferred Mineral Resources, representing an 81% increase in Inferred Resource. A subsequent announcement on 23 October 2024 focused primarily on the Merensky Reef, which brought the total combined UG2 and Merensky Reef Mineral Resource (Measured, Indicated, and Inferred) for the Bengwenyama Project to 40.25 Moz.

Importantly for this PFS, geologists identified consistent UG2 footwall mineralisation, which has now been estimated and included as a separate mining cut estimate. This includes 40 cm of mineralised UG2 footwall pyroxenite, increasing both the width of the mineralisation and the metal content of the UG2 mineable potential by approximately 700 Koz, in addition to the identified Mineral Resource estimate.

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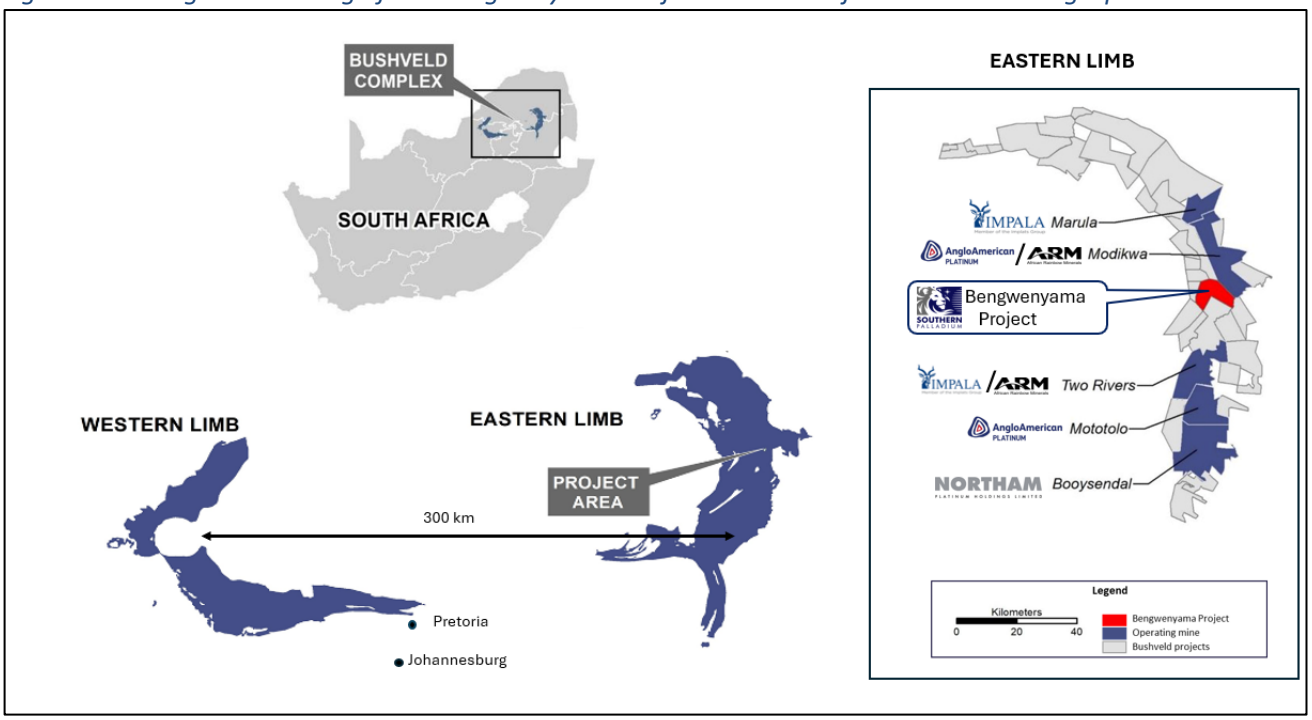
PROJECT LOCATION

The Project Area is located in the Greater Tubatse and Sekhukhune District Municipalities, in the Limpopo Province of South Africa, covering 5,280 hectares. Strategically positioned amidst major platinum mining operations on the farms Nooitverwacht 324 KT ('Nooitverwacht') and Eerstegeluk 327 KT ('Eerstegeluk), the Project has the potential to stimulate economic growth and development in rural areas with high unemployment rates by creating significant job opportunities. The strategic positioning of the Bengwenyama Project amidst major platinum mining operations is illustrated in Figure 2.

Figure 2: Strategic Positioning of the Bengwenyama Project Amidst Major Platinum Mining Operations



It is located less than 10 km from the regional town of Steelpoort and benefits from excellent infrastructure, including grid power, sealed roads, and water supply, all within a few kilometres from the Project site. Additionally, a skilled workforce is available locally.

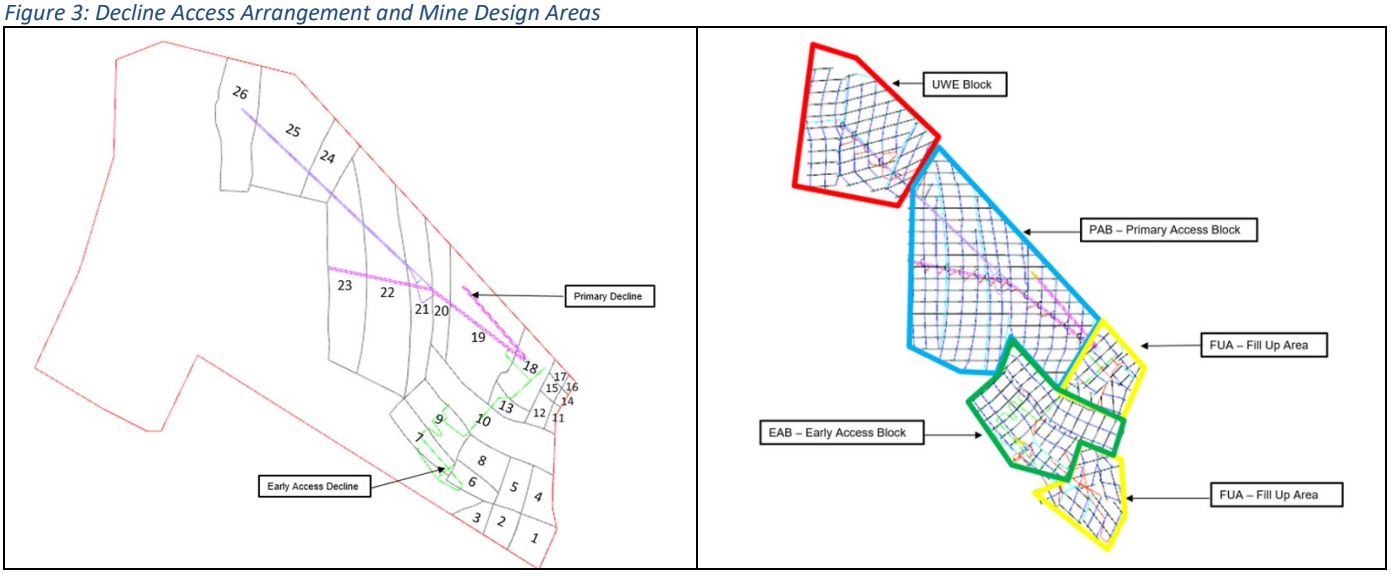
PROJECT FEATURES

Mining Access and Schedule

For the PFS, production from the Bengwenyama Project is sourced only from the UG2 reef, and mainly on the shallower farm, Eerstegeluk. The production profile of the Project demonstrates an annual production range of 2.4 mtpa from conventional underground stoping with a 1.0 m stoping width accessed through two decline access points, the early access development and the primary access development. First reef will be accessed at a vertical depth of just 50 m.

The early access development will consist of a two-barrel, early access decline with a 5 m x 4 m decline and a return airway with dimension of 4 m x 4 m, sunk at an angle of 5.7°, providing access to the UG2 reef. This will allow for optimal manoeuvrability of trackless equipment and extended tyre life. The primary access development will also consist of a two-barrel decline with two 6 m x 4 m end sizes, sunk at 9°, designated for transport of men and material and a conveyor belt for the transport of ore and waste.

Figure 3: Decline Access Arrangement and Mine Design Areas



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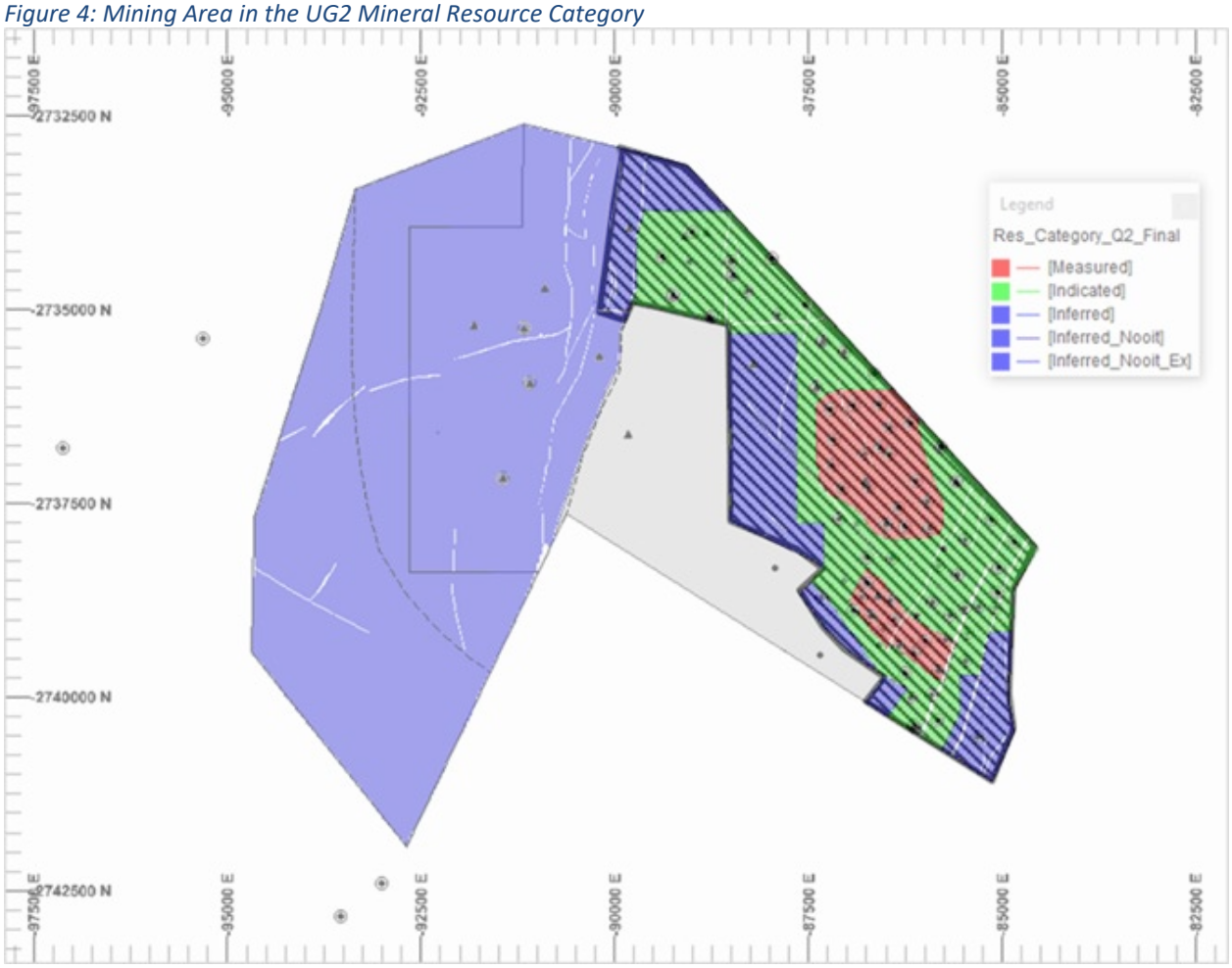
The selected mining method for the underground operations for the Bengwenyama Project is a hybrid approach optimised for narrow reef orebodies, combining mechanised development with conventional stoping, typically utilised by neighbouring mines Modikwa and Marula. This method enhances ore extraction while minimising dilution, supporting the safety and efficiency of mining operations.

The mining area in the UG2 Mineral Resource category is illustrated in Figure 4.

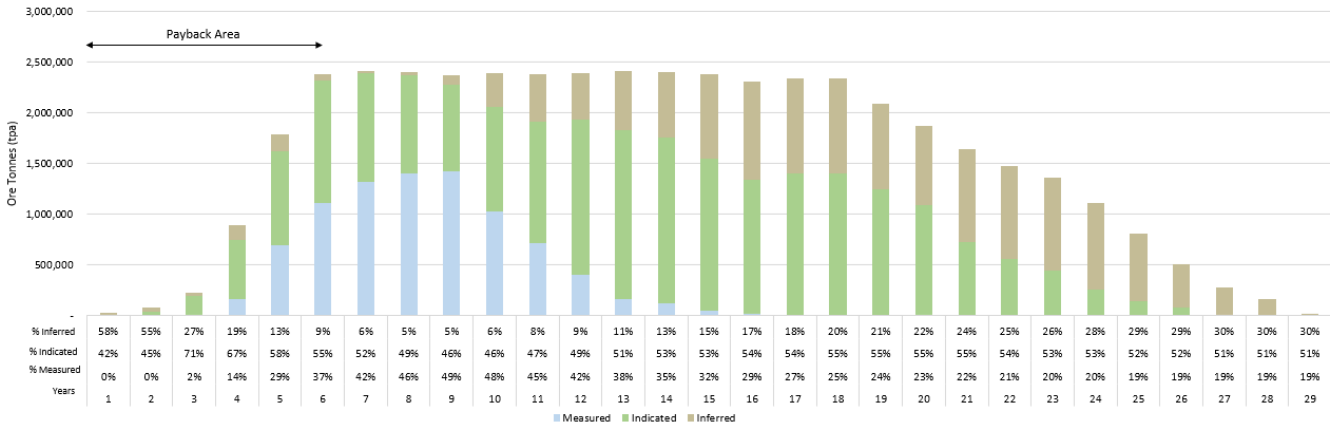
Figure 4: Mining Area in the UG2 Mineral Resource Category



Ore production tonnes over the first five years is achieved with 87% coming from JORC Measured and Indicated resource classifications and over the first 10 years coming from 94% JORC Measured and Indicated resource classifications. JORC Measured and Indicated resources comprise 74% of the overall LoM ore production.

Downdip extensions to existing resources and mining of the Merensky Reef have the potential to keep PGM production at steady state beyond year 19. The Mineral Resource category diluted LoM plan and cumulative contribution by category is illustrated in Figure 5.

Figure 5: Mineral Resource Category Diluted Life of Mine Plan and Cumulative Contribution by Category.



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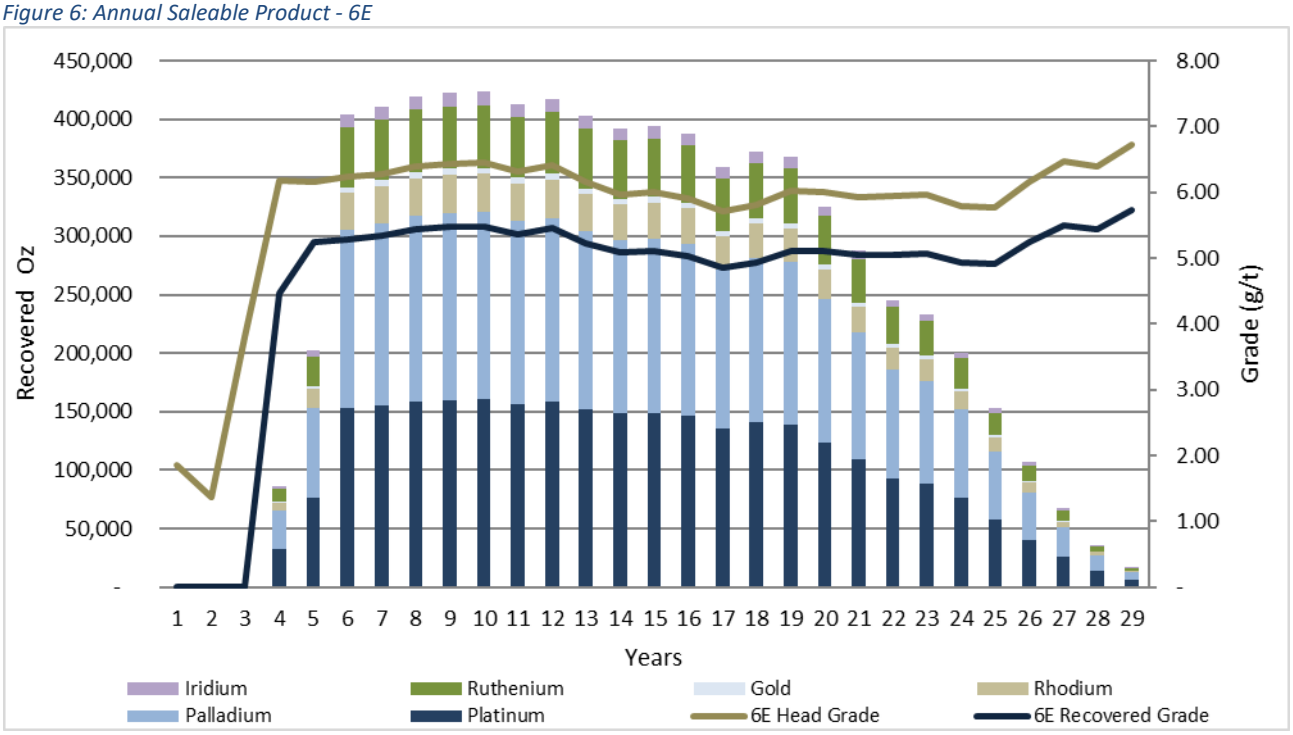
Processing

The Bengwenyama Project is located close to other, similar PGM operations. The Bushveld Complex has been mined extensively for multiple decades for the extraction of PGM minerals from the UG2 reef. Standard technology has been established and has been optimised with current state-of-the-art technology involving MF2 (2x Mill and Float process) processing infrastructure with an average recovery rate of 85%. Steady state saleable product is estimated at just above 400,000 ozpa as illustrated in Figure 6. Chrome is a byproduct from the UG2 Chromitite seam and will add significantly to PGM revenue streams.

Figure 6: Annual Saleable Product - 6E



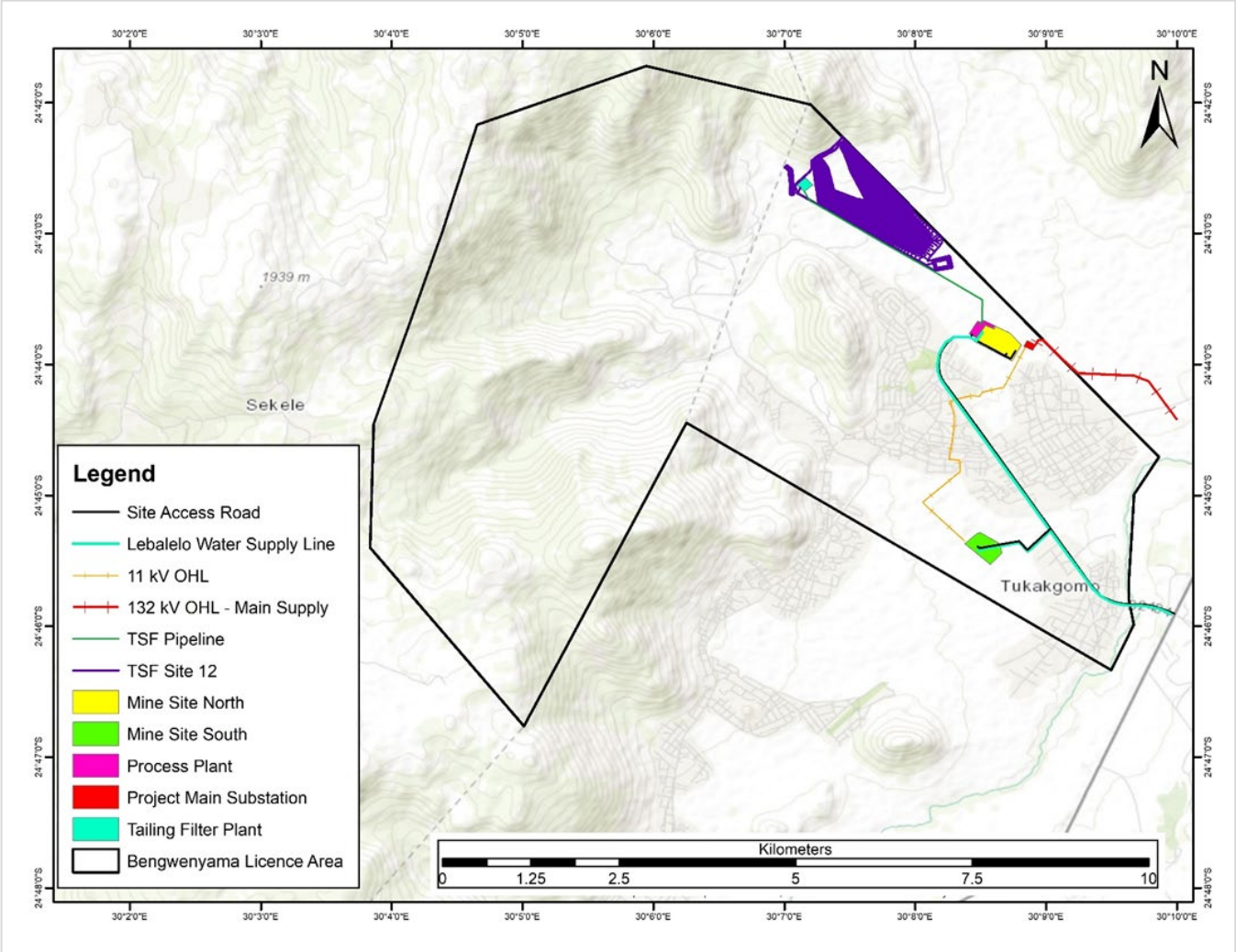
Source: Minxcon Scoping Study Update, February 2024

The tailings storage facility (TSF) is expected to have at least 45 Mt of storage capacity and a maximum height of 82 m, with the potential of expandability. The preliminary outcome from the tailings storage study favoured dry stacking. Despite the expectedly higher cost of implementing dry-stacking technology, the site is expected to provide storage for the current LoM without having to expand outside of the mine lease boundary.

Mine Infrastructure and Services

The Project is accessed through a regional road (R555) and forms part of the established paved road network. The R555 is the main route to the Project Area, which heads 27 km northeast from the town of Middelburg, before reaching the town of Burgersfort, a paved district road leads towards the Eerstegeluk farm, the location of the Bengwenyama Project.

Figure 7: Project Infrastructure Layout



Power will be supplied to the Project through a 132 kV overhead lines connected to the national grid. A transmission line running in close proximity to the Project (+- 3.5 km) is fed by the Merensky and Mampuru transmission and distribution substations. Synchronised back-up generators will feed into the Bengwenyama distribution substations. A full load list has been drafted and early indications for the total installed power is estimated at 64.6 MW with a power draw of 43.4 MW. An application has been submitted to Eskom (local power utility) on the 29th of August 2024, for the supply of power as well as obtaining the required cost estimate letter ("CEL") from the utility to determine the detailed requirements to establish the access to the grid.

A study has been completed to assess potential carbon emission reduction strategies as well as alternative energy solutions for the project. This included an energy needs assessment, resource and technology assessment, energy modelling, local grid assessment and concept solar PV design. This will be further optimised and assessed during the following study phase.

Process water will be sourced from the Lebalelo Water User Association, a local water supply authority supplying water to local communities, neighbouring mining operations, and agricultural activities in the area. A Lebalelo pipeline is located in close proximity (roughly 3.5 km from main points of consumption) to the Project. Early indications are that the peak total water requirement for the Project will be approximately 294,711 m^3/month. Potable water will be sourced directly form the water supply scheme.

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ENVIRONMENTAL AND MINING APPROVALS

The Environmental Impact Assessment ("EIA") phase was completed on 11 July 2004 and the DMRE acknowledgement letter was issued on 17 July 2024. Additional permit applications are in progress and will be completed at a later stage and include a Waste Management Licence ("WML") in terms of the National Environmental Management: Waste Act, 2008 and a Water Use Licence ("WUL") in terms of section 21 of the National Water Act, 1998.

An integrated Water and Waste Management Plan ("IWWMP") as per the requirements of GNR 267 of 2017 has been initiated as part of the process to authorise all planned water use activities.

A Waste Management License application will be lodged with the competent authority to manage waste products and geochemical hazards.

SOCIAL RESPONSIBILITY AND SUSTAINABILITY

A social and labour plan ("SLP") has been developed for the Project in compliance with the requirements of the MPRDA. Southern Palladium's management recognises the importance of close collaboration with the single community involved with the Project. The essence of the Community is deeply embedded in the development of the Project. SPD's focus is to deliver a sustainable operation and provide economic benefits to the region.

CAPITAL COST ESTIMATE

The capital cost estimate ("CCE") was principally compiled for the two declines, processing plant, process plant infrastructure and other related infrastructure and covers all the costs associated with the construction and associated expenditure required for an underground mining operation with a production capacity of 2.4Mtpa.

The estimate includes all costs associated with access; bulk services (power and water); surface and underground mining infrastructure and facilities; process plant and supporting infrastructure, TSF, general supporting infrastructure, and engineering procurement, construction management ("EPCM").

The capital expenditure for the Project over the LoM is sub-divided into mining, plant and shared infrastructure capital, as indicated in Table 1.

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Table 4: Project Capital Expenditure

Capital Expenditure	ZARm	USDm
Initial Capital		
Direct Mining Capital	1,429	73
Capitalised Development	449	23
Plant Capital	2,519	129
TSF Capital	820	42
Shared Infrastructure Capital	1,240	63
Contingency	1,079	55
Total Initial Capital	**7,536**	**385**
Ongoing Capital		
Direct Mining Capital	693	35
Capitalised Development	463	24
Plant Capital	-	-
TSF Capital	388	20
Ongoing Shared Capital	42	2
Contingency	251	13
Total Ongoing Capital	**1,837**	**94**
Stay-in-Business Capital		
Total Stay-in-Business Capital	**9,171**	**469**

The study capital costs estimates are assessed to have an accuracy of ±15 - 25%. The total initial capital for the Project, calculated as direct capital in years one to four (year first metal is produced), is estimated at ZAR6,456 million or USD330 million excluding contingencies and ZAR7,736 million or USD385 million including contingencies.

Ongoing capital is defined as direct Project capital after year four. Stay in business capital or sustaining capital consists of renewals and replacement costs over the LoM. A 20% contingency has been applied on all mining and shared infrastructure capital (initial and ongoing) and 15% on plant and TSF capital.

OPERATIONAL COST ESTIMATE

The Minxcon first-principles activity-based cost model was utilised to calculate operating costs for the underground and the processing operations. The cost model utilises the mine and engineering design criteria and production schedule inputs to derive cost rates for the mining, engineering and processing activities.

The costs for labour, equipment, consumables, services and utilities have been sourced from quotations, actual industry stores costs, industry rates and utility rates. Where costs could not be obtained from these sources, benchmarking with similar-sized projects and operations was conducted. The study operating costs estimates are assessed to have an accuracy of ±15% - 25%. The operating cost summary is detailed in Table 4 inclusive of contingencies.

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Table 5: Operating Cost Summary

Description	Total LoM	Per Milled t	6E Oz Recovered	% of AISC
Unit	**ZAR Million**	**ZAR/t**	**ZAR/6E oz**	**%**
Mining	52,007	1,149	6,893	44.0%
Processing	18,537	410	2,457	15.7%
Central & Technical Services	24,521	542	3,250	20.8%
Cash Operating Costs	**95,065**	**2,100**	**12,600**	**80.5%**
Royalties	12,630	279	1,674	10.7%
Off-Mine Operating Costs	1,154	26	153	1.0%
Sustaining Capital	9,171	203	1,215	7.8%
Rehabilitation	80	2	11	0.1%
AISC	**118,099**	**2,609**	**15,653**	**100.0%**
Unit	**USD Million**	**USD/t**	**USD/6E oz**	**%**
Mining	2,657	58.7	352	44.0%
Processing	947	20.9	126	15.7%
Central & Technical Services	1,253	27.7	166	20.8%
Cash Operating Costs	**4,857**	**107.3**	**644**	**80.5%**
Royalties	645	14.3	86	10.7%
Off-Mine Operating Costs	59	1.3	8	1.0%
Sustaining Capital	469	10.4	62	7.8%
Rehabilitation	4	0.1	1	0.1%
AISC	**6,034**	**133.3**	**800**	**100.0%**

FINANCIAL COST INDICATORS

Costs reported for the Project are displayed per milled tonne and per recovered 6E ounce in Table 5. It should be noted that costs are inclusive of contingencies.

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Table 6: Project Cost Indicators (Weighted Average over Life of Mine)

Description	Unit	Value
Average Basket Price	USD/6E oz	1,557
Average Exchange Rate	ZAR/USD	19.57
Revenue	**ZAR/Milled tonne**	**4,831**
Mine Cost	ZAR/Milled tonne	1,149
Plant Costs	ZAR/Milled tonne	410
Other Costs	ZAR/Milled tonne	542
Royalties	ZAR/Milled tonne	279
Adjusted Operating Cost	**ZAR/Milled tonne**	**2,379**
Sustaining Capex	ZAR/Milled tonne	203
Rehabilitation	ZAR/Milled tonne	2
Off-Mine Overheads	ZAR/Milled tonne	26
All-in Sustaining Cost (AISC)	**ZAR/Milled tonne**	**2,609**
Non-Sustaining Capex	ZAR/Milled tonne	207
Non-Current Costs	ZAR/Milled tonne	-
All-in Cost (AIC)	**ZAR/Milled tonne**	**2,816**
EBITDA*	ZAR/Milled tonne	2,425
EBITDA Margin	%	50%
4E oz Recovered	oz	6,387,863
Revenue	**USD/4E oz**	**1,749**
Mine Cost	USD/4E oz	416
Plant Costs	USD/4E oz	148
Other Costs	USD/4E oz	196
Royalties	USD/4E oz	101
Adjusted Operating Cost	**USD/4E oz**	**861**
Sustaining Capex	USD/4E oz	73
Reclamation	USD/4E oz	1
Off-Mine Overheads	USD/4E oz	9
All-in Sustaining Cost (AISC)	**USD/4E oz**	**945**
Non-Sustaining Capex	USD/4E oz	75
Non-Current Costs	USD/4E oz	-
All-in Cost (AIC)	**USD/4E oz**	**1,020**
EBITDA	USD/4E oz	878
6E oz Recovered	oz	7,544,915
Revenue	**USD/6E oz**	**1,481**
Mine Cost	USD/6E oz	352
Plant Costs	USD/6E oz	126
Other Costs	USD/6E oz	166
Royalties	USD/6E oz	86
Adjusted Operating Cost	**USD/6E oz**	**729**
Sustaining Capex	USD/6E oz	62
Reclamation	USD/6E oz	1
Off-Mine Overheads	USD/6E oz	8
All-in Sustaining Cost (AISC)	**USD/6E oz**	**800**
Non-Sustaining Capex	USD/6E oz	63
Non-Current Costs	USD/6E oz	-
All-in Cost (AIC)	**USD/6E oz**	**863**
EBITDA	USD/6E oz	743

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PROJECT POSITIONING

The Bengwenyama Project is estimated to be positioned in the lowest quartile of the PGM cost curve (R. Hochreiter, 2024) as illustrated in Figure 8. The 6E All-In Sustaining Costs ("AISC") of the Project is estimated to approximate those of Northam's Booysendal operation.

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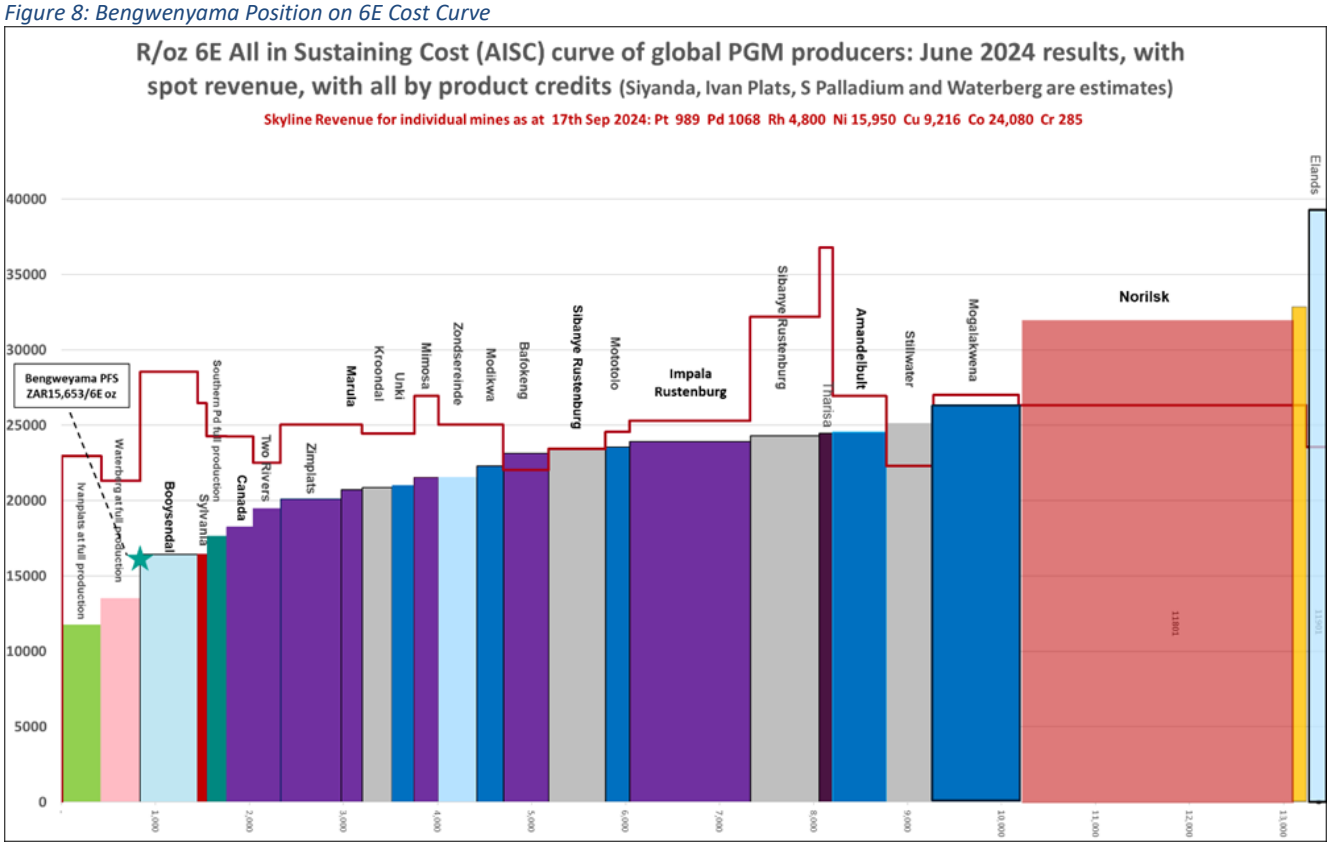
Figure 8: Bengwenyama Position on 6E Cost Curve

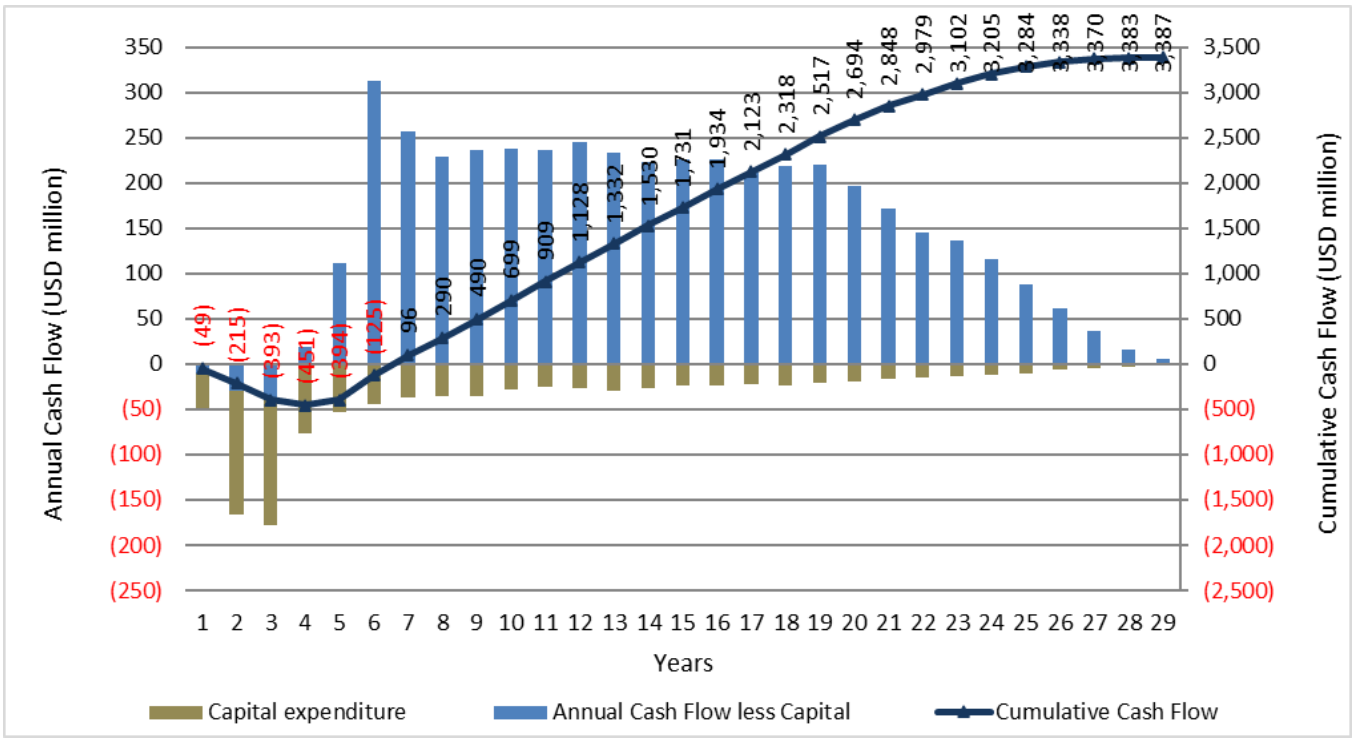


Source: Adapted from Rene Hochreiter (NOAH Capital Markets & Sieberana Research, 2024)

CASHFLOW

The Project capital expenditure, cash flow, and cumulative cash flow over the LoM are displayed in Figure 9, on an annual basis in USD terms, respectively. The peak funding requirement is USD452 million (inclusive of contingencies), with a pay-back period of 6.0 years from start of mining or 6.5 years from start of construction.

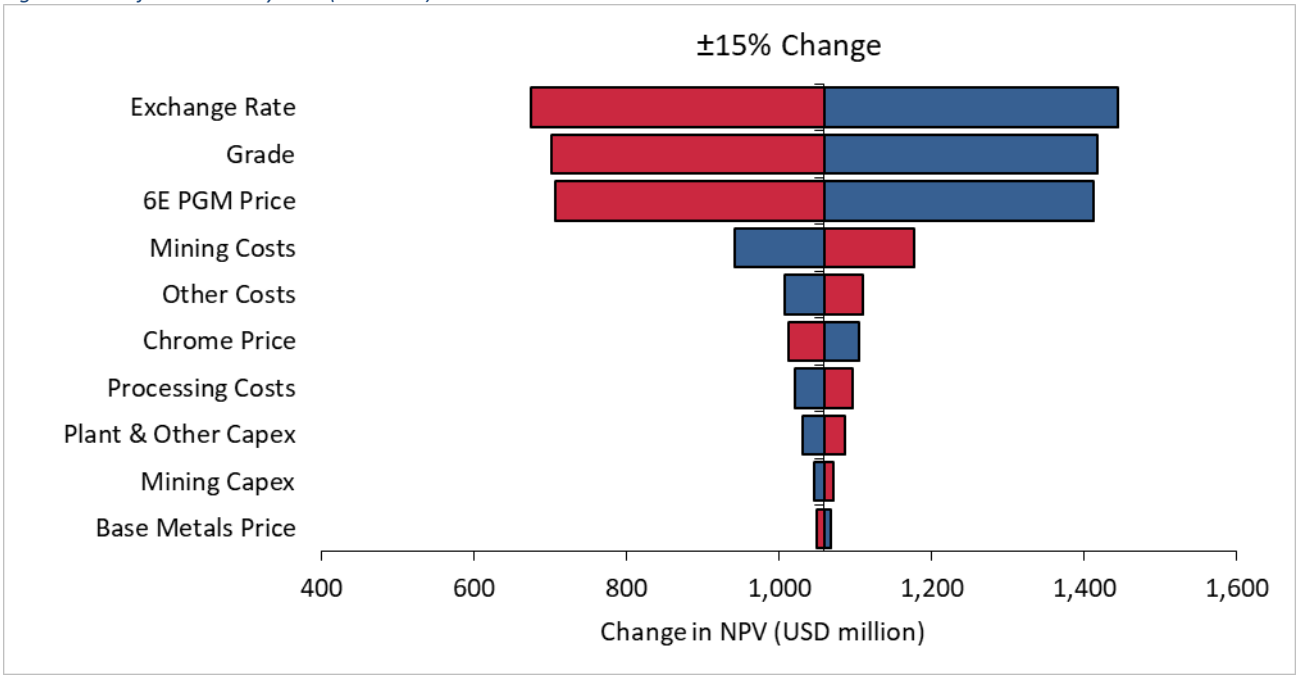
Figure 9: Annual and Cumulative Cash Flow - USD (Real Terms)



SENSITIVITY ANALYSIS

Based on the real cash flow calculated in the financial model, consultants and Minxcon performed single-parameter sensitivity analyses to ascertain the impact on the NPV. The bars represent various inputs into the model; each being increased or decreased by 15%. The left-hand side of the graph indicates a negative 15% change in the input while the right-hand side of the graph indicating a positive 15% change in the input. A negative effect to the NPVs represented by red bars and a positive effect represented by blue bars. Exchange rate, grade and PGM prices have the largest impact on the Project's NPV, followed by the mining operating costs. The Project is least sensitive to the base metal prices, capital and processing operating costs.

Figure 10: Project Sensitivity USD (NPV8.0%)



FINANCIAL INVESTMENT DECISION AND VALUE DRIVERS

- commencement of feasibility study work in early 2025 in parallel with project construction funding discussions with financiers leading to the Financial Investment Decision ("FID").
- debt financing alternatives already progressed with the appointment of Blackbird Partners.
- feasibility critical path study work includes metallurgical and geotechnical assessments. Drilling required for both assessments to start as soon as practicable subject to statutory approvals.
- FID proposed in late 2025 subject to statutory approvals.
- key value drivers during 2025 are the granting of the mining right and concentrate offtake arrangement.

VALUE ADDING OPPORTUNITIES PRIOR TO FINANCIAL INVESTMENT DECISION

Minxcon was mandated to investigate value adding opportunities by Q1 2025 to be included in the DFS. This work is expected to make project funding more attractive by either decreasing the ramp up period to full production or by decreasing the up-front capital requirement (or a combination of both).

Aspects to be investigated to decrease the period to full production include:-

- accessing the orebody with a single decline initially into the shallow part of the orebody;
- increasing underground development for initial mine stopes by providing twin drives to enable greater ore and waste extraction until steady state mining is achieved; and
- increasing the rate of developing raises for ventilation

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Aspects to be investigated to decrease upfront capital include:-

- adopting a mining contractor for the underground development work;
- a two-stage processing plant construction by an initial 100,000 tpm plant, followed by second 100,000 tpm processing to match the production profile;
- adopting ore sorters to reduce the feed to be processed in the plant thus requiring a smaller processing plant, this would also reduce the amount of waste for tailings disposal; and
- possible utilisation of idle concentrate plants within trucking distance.

REASONABLE BASIS TO ACHIEVE DEVELOPMENT FUNDING

The Bengwenyama PGM Project's technical and economic fundamentals underpin various funding alternatives which are being investigated by the Company to the benefit of shareholders. Some of these alternatives will be determined once the value adding opportunities noted above have been assessed.

Whilst no formal funding discussions have commenced, the Company is engaging financial advisers to assist in assessing the various funding alternatives which include equity, debt, strategic partnership, off take arrangement and metal streaming.

The Company has formed the view that there is a reasonable basis to believe that future funding for development of the Project will be available when necessary due to the Project's world class scale, location amongst other Tier 1 producers, shallow depth and position as a low-cost producer due to the high PGM grade.

NEXT STEPS

A preliminary development schedule has been compiled for the Project. The main activities forming part of the schedule includes:-

- issuing of Environmental Authorisation;
- issue of Mining Right;
- completion of required drilling (resource infill, metallurgical testwork, geotechnical and hydrogeological);
- definitive feasibility study
- final investment decision;
- mine development;
- construction; and
- commissioning and ramp-up

CONCLUSIONS AND RECOMMENDATIONS

The PFS demonstrates that the Project is commercially viable and provides justification for the Project to progress to a DFS. A schedule and budget for the completion of a DFS for the Bengwenyama Project is being completed and will be reviewed for approval by SPD's Board.

JORC Competent Persons Statement

Uwe Engelmann
The information in this report that relates to Exploration Targets, Exploration Results, Mineral Resources or Ore Reserves is based on information compiled by Mr Uwe Engelmann (BSc (Zoo. & Bot.), BSc Hons (Geol.), Pr.Sci.Nat. No. 400058/08, FGSSA). Mr. Engelmann is a director of Minxcon (Pty) Ltd and a member of the South African Council for Natural Scientific Professions. Minxcon provides geological consulting services to Southern Palladium Limited. Mr. Engelmann has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr. Engelmann consents to the inclusion in the report of the matters based on his

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information in the form and context in which it appears. Mr Engelmann has a beneficial interest in Southern Palladium through a shareholding in Nicolas Daniel Resources Proprietary Limited.

Daan van Heerden

The scientific and technical information contained in this announcement has been reviewed, prepared, and approved by Mr Daan van Heerden (B Eng (Min.), MCom (Bus.Admin.), MMC, Pr.Eng. No. 20050318, AMMSA, FSAIMM). Mr van Heerden is a director of Minxcon (Pty) Ltd and a Registered Professional Engineer with the Engineering Council of South Africa, a Member of the Association of Mine Managers South African Council, as well as a Fellow Member of the South African Institute of Mining and Metallurgy. Minxcon provides geological consulting services to Southern Palladium Limited. Mr van Heerden has sufficient experience that is relevant to the styles of mineralisation and activities being undertaken to qualify as a Competent Person, as such term is defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr. van Heerden consents to the inclusion in the report of the matters based on his information in the form and context in which it appears. Mr. van Heerden has a beneficial interest in Southern Palladium through a shareholding in Nicolas Daniel Resources Proprietary Limited.

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Forward Looking Information and Cautionary Statements

This prefeasibility study contains "forward-looking information" and "forward-looking statements" (collectively, "forward-looking information") within the meaning of applicable securities laws. This forward-looking information includes, but is not limited to, statements concerning the expected future performance of the Bengwenyama Project, anticipated production rates, resource estimates, mine life, financial projections, capital and operating costs, timelines, economic viability, and other similar statements.

Forward-looking information is based on various assumptions, estimates, and expectations of future performance, which are inherently subject to significant uncertainties and risks, including but not limited to those associated with the mining industry. These include:-

- variability in mineral resource estimates;
- the timing and successful completion of development and construction activities;
- risks related to fluctuations in commodity prices;
- political and regulatory changes in the jurisdictions where we operate;
- potential operational difficulties, including environmental and safety risks; and
- availability of financing and unforeseen financial requirements.

Although the company believes that the forward-looking information in this report is reasonable based on information currently available, actual results may differ materially from those anticipated in the statements. Readers are cautioned not to place undue reliance on forward-looking information, as it is not a guarantee of future performance.

The company disclaims any intention or obligation to update or revise forward-looking statements, whether as a result of new information, future events, or otherwise, except as required by applicable law.

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SOUTHERN PALLADIUM

Southern Palladium Limited

Pre-Feasibility Study

Summary Report

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This Report titled "Pre-Feasibility Study - Summary Report" prepared for Southern Palladium Limited has an effective date of 23 October 2024.

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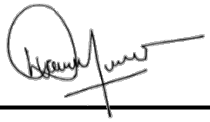

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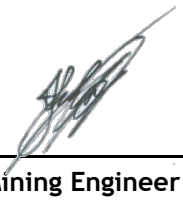

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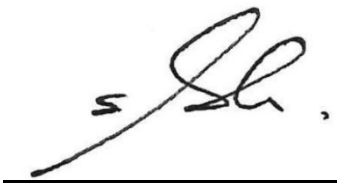

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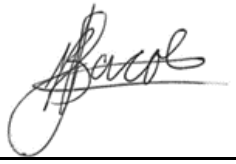

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This Report was prepared by Minxcon (Pty) Ltd ("Minxcon"). In the preparation of the Report, Minxcon utilised information relating to operational methods and expectations provided to them by various sources. Where possible, Minxcon has verified this information from independent sources after making due enquiry of all material issues. Minxcon and its directors accept no liability for any losses arising from reliance upon the information presented in this Report. The authors of this report are not qualified to provide extensive commentary on legal issues associated with rights to the mineral properties and relied on the information provided to them by the issuer. No warranty or guarantee, be it express or implied, is made by the authors with respect to the completeness or accuracy of the legal aspects of this document.

OPERATIONAL RISKS

The business of mining and mineral exploration, development and production by their nature contain significant operational risks. The business depends upon, amongst other things, successful prospecting programmes and competent management. Profitability and asset values can be affected by unforeseen changes in operating circumstances and technical issues.

POLITICAL AND ECONOMIC RISK

Factors such as political and industrial disruption, currency fluctuation and interest rates could have an impact on future operations, and potential revenue streams can also be affected by these factors. The majority of these factors are, and will be, beyond the control of any operating entity.

FORWARD LOOKING STATEMENT

Certain statements contained in this document other than statements of historical fact, contain forward-looking statements regarding the operations, economic performance or financial condition, including, without limitation, those concerning the economic outlook for the mining industry, expectations regarding commodity prices, exchange rates, production, cash costs and other operating results, growth prospects and the outlook of operations, including the completion and commencement of commercial operations of specific production projects, its liquidity and capital resources and expenditure, and the outcome and consequences of any pending litigation or enforcement proceedings.

Although Minxcon believes that the expectations reflected in such forward-looking statements are reasonable, no assurance can be given that such expectations will prove to be correct. Accordingly, results may differ materially from those set out in the forward-looking statements as a result of, among other factors, changes in economic and market conditions, changes in the regulatory environment and other State actions, success of business and operating initiatives, fluctuations in commodity prices and exchange rates, and business and potential risk management.

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UNITS OF MEASUREMENT AND ABBREVIATIONS

UNITS OF MEASUREMENT: The following units of measurement are used in this Report, and are in metric terms:-

Unit	Definition
%	Per cent
/	Per, Or
± or ~	Approximately
°	Degrees
cm	Centimetre
g/t	Grammes per tonne
ha	Hectares
km	Kilometre (1,000 m)
koz	Kilo ounces (1,000 oz)
kt	Kilotonnes (1,000 t)
ktpm	Kilotonnes per month
kV	Kilovolt (1,000 volts)
kWh	Kilowatt hour
m	Metre
mm	Millimetre
Moz	Million ounces (1,000,000 oz)
Mt	Million tonnes (1,000,000 t)
Mtpa	Million tonnes per annum
MVA	Megavolt ampere
oz	Troy Ounces
t	Tonne

ROUNDING: It is noted that throughout the Report, tables may not compute due to rounding.

ACRONYMS AND ABBREVIATIONS: The following acronyms and abbreviations are used in this Report:-

Item	Description
002PPR	LP30/5/1/1/3/2/1/002PPR
3E	Platinum, palladium and rhodium
4E	Platinum, palladium, rhodium and gold
6E	Platinum, palladium, rhodium, ruthenium, iridium and gold
7E	Platinum, palladium, rhodium, ruthenium, iridium, osmium and gold
ASG	Articulated Strike Gulleys
BC	Bushveld Complex
Bengwenyama or Project	Bengwenyama Project
CZ	Critical Zone
DCF	Discounted Cash Flow
DMRE	Department of Mineral Resources and Energy
DWS	Department of Water and Sanitation
EA	Environmental Authorisation
Eerstegeluk	Farm Eerstegeluk 327 KT
EIA	Environmental Impact Assessment
EPCM	Engineering, Procurement and Construction Management
FCFE	Cash Flow to Equity
FCFF	Free Cash Flow to the Firm
FEED	Front-end Engineering Design
FID	Final Investment Decision
FS	Feasibility Study
GISTM	Global Industry Standards on Tailings Management
IMF	International Monetary Fund
LHD	Load and Haul Dumpers

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Item	Description
LZ	Lower Zone
Minxcon	Minxcon (Pty) Ltd
MF2	2 x Mill Float
MUM	Miracle Upon Miracle Investments (Pty) Ltd
MZ	Main Zone
NEMA	National Environmental Management Act, No. 107 of 1998
Nooitverwacht	Farm Nooitverwacht 324 KT
PFS	Pre-Feasibility Study
PGE	Platinum Group Element
PGM	Platinum Group Metal
PPP	Public Participation Process
RLS	Rustenburg Layered Suite
RoM	Run of Mine
RPEEE	Reasonable Prospects for Eventual Economic Extraction
SBM	Selective Blast Mining
SLP	Social and Labour Plan
SPD	Southern Palladium Limited
SUDP	Social Upliftment and Development Plan
Tailex	Tailex Management Services (Pty) Ltd
TSF	Tailings Storage Facility
UCZ	Upper Critical Zones
USD	United States Dollar
ZAR	South African Rand

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1 INTRODUCTION

Minxcon (Pty) Ltd ("Minxcon") was mandated by Southern Palladium Limited ("SPD") to complete a Pre-Feasibility Study ("PFS") Summary Report on the Bengwenyama Project ("Bengwenyama" or "Project"). The Project is an exploration property situated in the Limpopo Province, South Africa and targets platinum group metals ("PGM") from the UG2 and Merensky Reefs of the Bushveld Complex.

Minxcon previously completed a scoping study update on the Project with an effective date of 1 January 2024. This PFS incorporates changes to the following key items:-

- updated Mineral Resources;
- surface geotechnical study completed;
- chrome metallurgical tests received;
- updated locations;
- updated second access point to the orebody; and
- change in mining method;
- increased mining rate; and
- overall increase in detail and accuracy of technical work.

A number of specialist and consultants were involved in the completion of the PFS on the Project. These are listed in Table 1.

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Table 1: Consultants and Specialists Involved in PFS Study

Project Team	Company
Environmental Assessment Practitioner	OMI Solutions (Pty) Ltd
Air Quality Impact Assessment	Eco Elementum (Pty) Ltd
Noise Quality Impact Assessment	Eco Elementum (Pty) Ltd
Groundwater (Geohydrology) Impact Assessment	MVB Consulting (Pty) Ltd
Waste Assessment	Eco Elementum (Pty) Ltd
Surface Water (Hydrology) Impact Assessment and Stormwater Management Plan	Hydrospatial (Pty) Ltd
Water Resource and Hydropedology Impact Assessment	Land Matters Environmental Consulting (Pty) Ltd
Soil and Agricultural Ecosystem Impact Assessment	Land Matters Environmental Consulting (Pty) Ltd
Terrestrial Biodiversity Impact Assessment	Field and Form Landscape Science & Trogon Biodiversity
Aquatic Impact Assessment	Ecology International (Pty) Ltd
Visual Impact Assessment	Eco Elementum (Pty) Ltd
Socio-Economic Impact Assessment	Niara Environmental Consulting (Pty) Ltd
Phase 1 Heritage Impact Assessment	Land Matters Environmental Consulting (Pty) Ltd
Desktop Palaeontological Impact Assessment	Prof. Marion Bamford
Traffic Assessment	SA Traffic Surveys (Pty) Ltd
Blasting Assessment	Blast Management Consulting
Financial Provision	OMI Solutions (Pty) Ltd
Electrical, Control and Instrumentation Design	Paddy Keys & Associates
Tailings Storage Facility Design	Entail (Pty) Ltd
Surface Water Management and TSF Slurry and Return Water System Design	Eco-Elementum (Pty) Ltd
TSF Dewatering Plant	Tailex (Pty) Ltd
Surface Geotechnical Investigation	Bear-GeoConsult (Pty) Ltd
Geophysical Survey	New Resolution Geophysics
Diamond Core Drilling	Geomechanics
Drillhole Collar Survey	Aero Geomatics
Wireline Logging	Wireline Workshop
Assaying	ALS Minerals (part of ALS Limited)
Mineral Resource Estimate 3rd Party Review	ExplorMine Consultants
Geotechnical considerations and recommendations	Open House Management Services
Bond Ball Work Index testwork (comminution), initial rougher and cleaner kinetic testwork (floatation)	SGS South Africa
Milling curve testwork, rougher kinetic and locked cycle testwork (floatation) and mineralogical analysis	Suntech Geomet Laboratories
Mineral Resource estimate, ESG aspects, mine design and scheduling, infrastructure and processing designs, operating and capital cost estimates and financial modelling	Minxcon (Pty) Ltd

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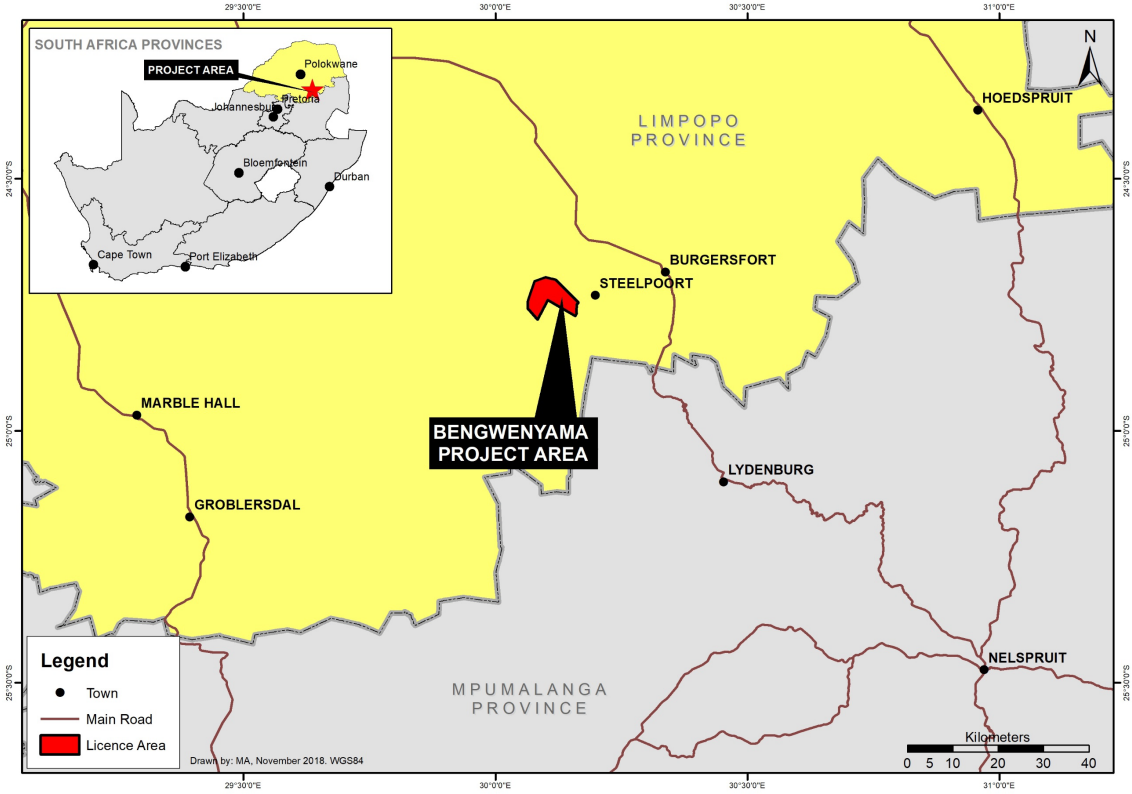
The term PGM as utilised in this Report is considered as recovered metal. The term platinum group elements ("PGE") is utilised for *in situ* element occurrences. The term "7E" refers to the grouping of platinum, palladium, rhodium, ruthenium, iridium, osmium and gold, while "6E" refers to platinum, palladium, rhodium, ruthenium, iridium and gold. The term "4E" refers to the grouping of platinum, palladium, rhodium and gold, while "3E" refers to platinum, palladium and rhodium.

The Project Area is located in the Greater Tubatse Municipality, Sekhukhune District Municipality, Limpopo Province of South Africa and covers an area of 5,280.8938 ha (as per surveyor information). The Project is located approximately 9 km west of the town of Steelpoort and 20 km southwest of Burgersfort as illustrated in Figure 1 on the farms Nooitverwacht 324 KT ("Nooitverwacht") and Eerstegeluk 327 KT ("Eerstegeluk"; *Figure* 2).

The Project is centred on the following coordinates:-

- Latitude: 30°6'30" E; and
- Longitude: 24°44'0" S

Figure 1: General Location of the Project Area



Minxcon Consulting	**General Location of the Project Area**	**October 2024**

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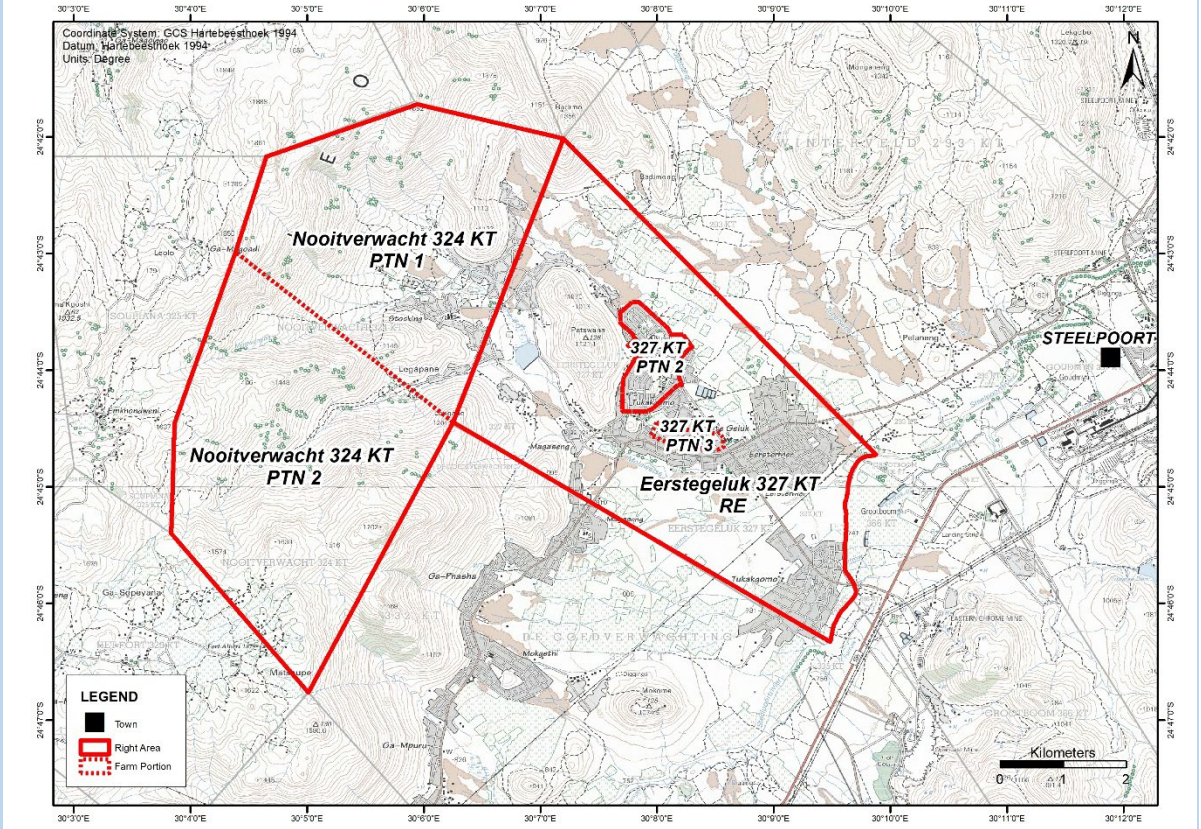
Figure 2: Project Farms



Mining, agriculture, and tourism are major economic drivers within the Limpopo Province. With regards to mining, the mineral resources abundant within the province include platinum, chrome, coal, diamonds, and copper. The Project Area is situated on the Eastern Limb of the Bushveld Complex in South Africa which holds approximately 72% of the world's platinum group minerals ("PGM") resources and could stimulate economic growth and development by creating job opportunities in rural areas with high unemployment rates. The extraction and processing of minerals from the Project could boost the province's gross domestic product ("GDP") and global competitiveness. The revenue generated could be reinvested in infrastructure development, education, healthcare, and other essential services, fostering long-term socio-economic advancement within the Sekhukhune District Municipality. The Project could also have positive social implications for local communities, providing opportunities for skills development, training, and capacity building. However, the Project must adhere to environmental legislation, minimise ecological impacts, and implement sustainable practices to protect the region's natural resources. Prioritising environmental stewardship ensures the benefits of mining are balanced with the need to protect the environment for future generations.

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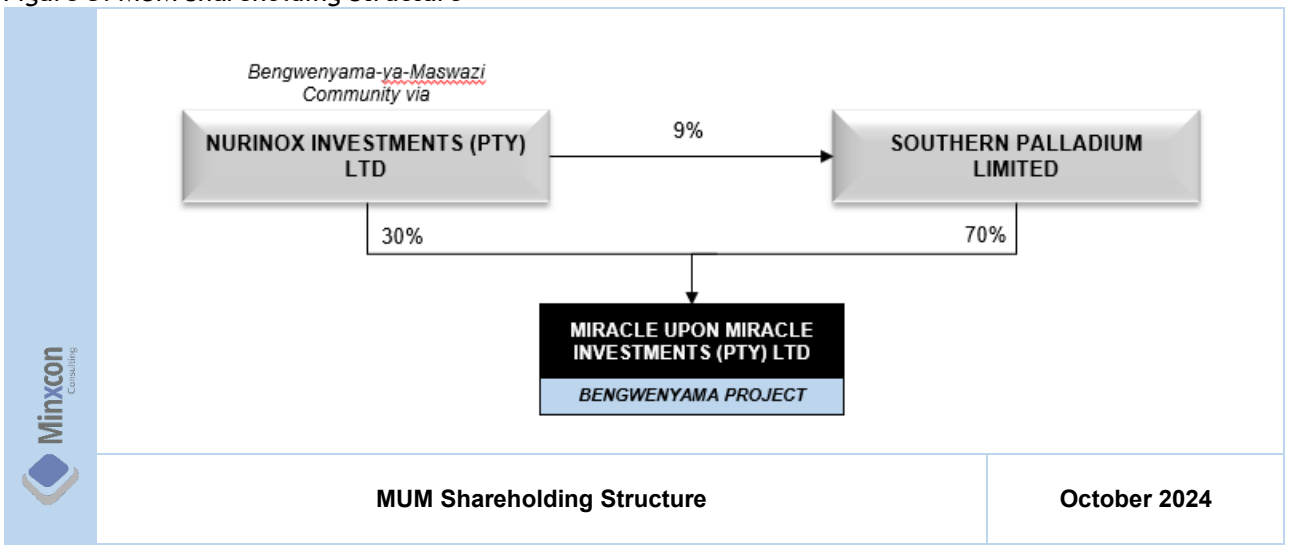
The mineral right to the properties is held in the name of Miracle Upon Miracle Investments (Pty) Ltd ("MUM") which is held 70% in the name of Southern Palladium Limited ("SPD"), and 30% by Nurinox Investments (Pty) Ltd ("Nurinox"). Nurinox is fully represented by the Community.

The shareholding structure as it relates to the Project is illustrated in Figure 3.

Figure 3: MUM Shareholding Structure



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2 GEOLOGY AND MINERAL RESOURCES

2.1 Regional, Local and Property Geology

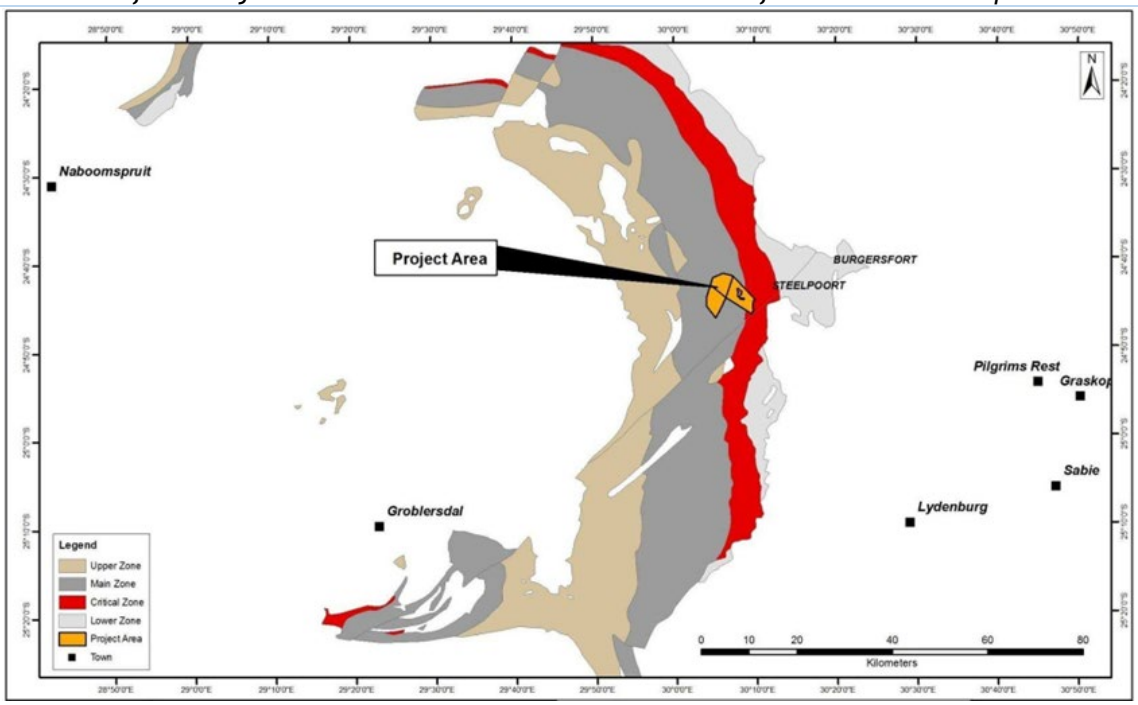
2.1.1 Regional Geology

The Project Area is located in the Bushveld Complex ("BC"), the largest layered igneous complex in the world, dated between 2.06 billion years and 2.058 billion years. Located in the north-central Kaapvaal Craton, the BC comprises a mafic-ultramafic succession of layered and massive rocks known as the Rustenburg Layered Suite ("RLS"), granitic rocks called the Lebowa Granite Suite, and felsic extrusive rocks of the Rooiberg Group. The BC was intrusively emplaced within and exhibits a transgressive relationship to the Transvaal Supergroup sequence. It outcrops in three main arcuate complexes, or limbs namely, Western, Eastern, and Northern Limbs. The magmatic layering of the ultramafic-mafic rocks is consistent and can be traced over hundreds of kilometres of strike.

The BC likely formed through multiple overlapping lopolith-shaped intrusions. The similarity of geology across large areas within each limb suggests simultaneous differentiation and replenishment of basaltic magma under identical conditions. This is particularly evident in the sequence of igneous layering, which includes both the Merensky Reef and the UG2 Reef. The Eastern and Western Limbs of the BC form a broad ellipse, with granites and felsic volcanics occupying the central area. Post BC sedimentary successions of the Waterberg Group and Karoo Supergroup and Holocene-age alluvial deposits, cover large parts of the BC.

The location of the Bengwenyama Project in relation to the extent and regional geology of the Eastern Limb of the BC is illustrated graphically in Figure 5.

Figure 4: Location of the Project Area in Relation to the Eastern Limb of the Bushveld Complex



Location of the Project Area in Relation to the Eastern Limb of the Bushveld Complex | **October 2024**

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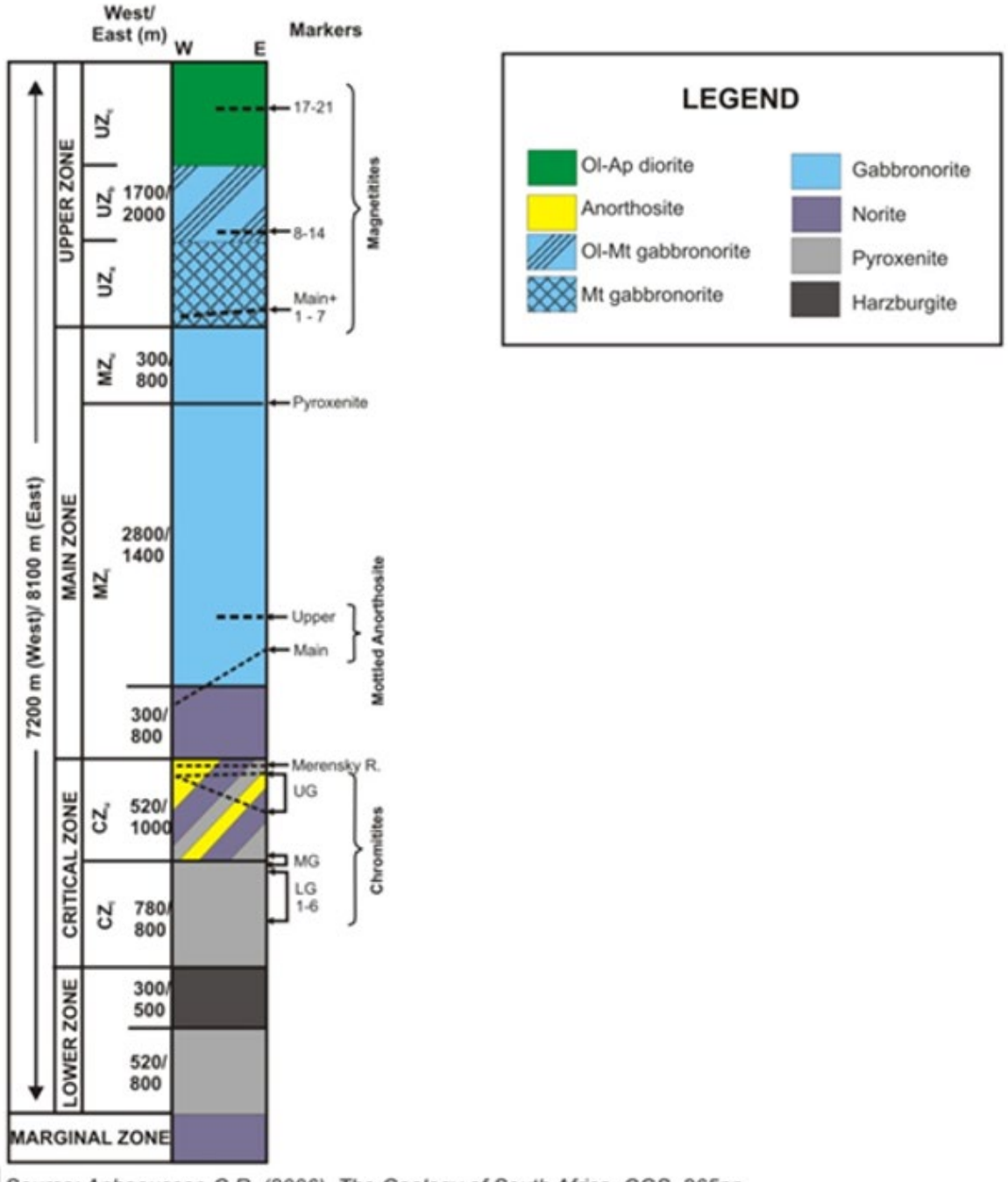
The Marginal Zone, Lower Zone ("LZ"), Critical Zone ("CZ"), Main Zone ("MZ"), and Upper Zone are the five main units that make up the RLS stratigraphy as illustrated in Figure 5, and host the mineralised reefs. The Lower and Upper Critical Zones ("UCZ") make up the Critical Zone, which hosts the Merensky and the UG2 Reefs and is home to the world's greatest concentrations of PGEs and chromium.

Figure 5: Generalised Stratigraphy of the Bushveld Complex



Source: Anhaeusser, C.R. (2006). The Geology of South Africa, CGS, 265pp

Generalised Stratigraphy of the Bushveld Complex	October 2024

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2.1.2 Local and Project Geology

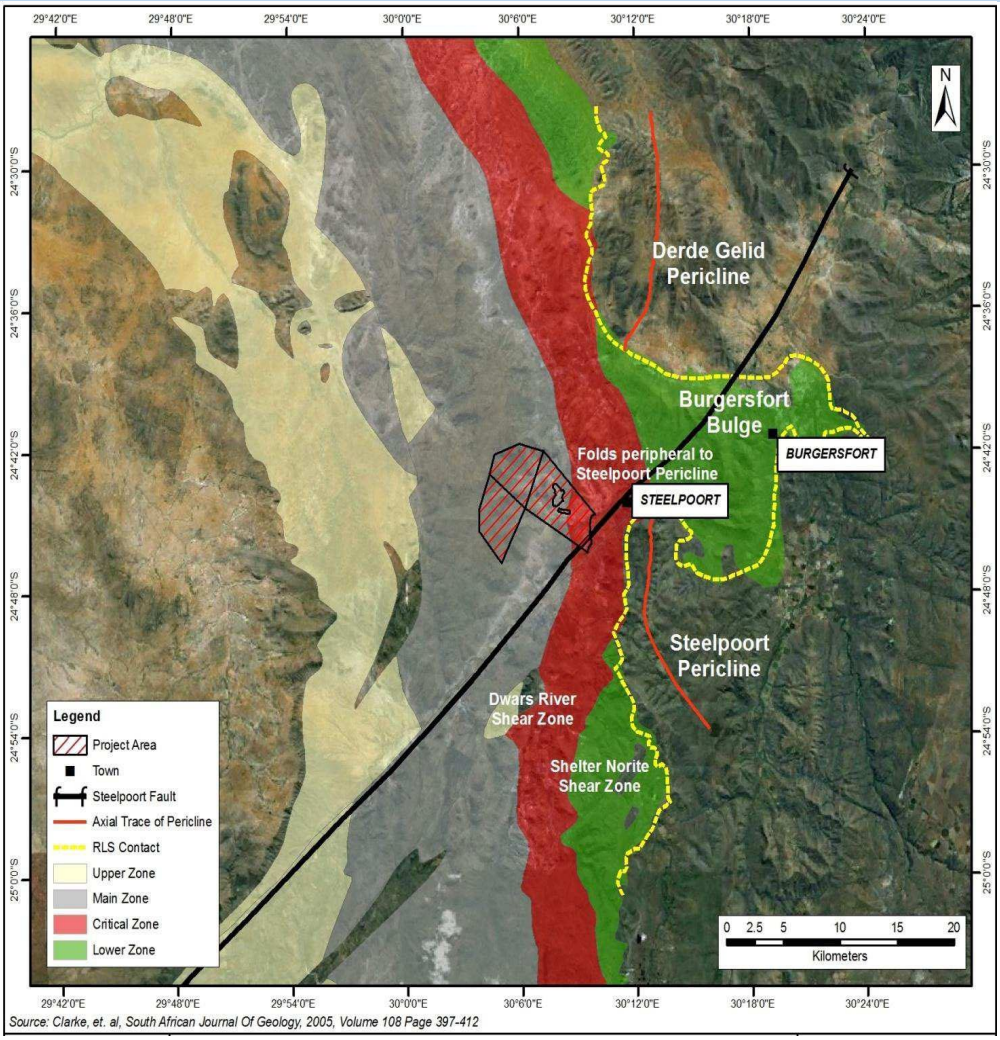
2.1.2.1 Local Geology

The towns of Zebedelia in the north and Bethal in the south define the Eastern Limb of the BC, which is further subdivided into the Western, Central, and Southern geographical sectors from north to south.

The Central and Southern Sectors are demarcated by the Steelpoort Fault Zone, a prominent linear feature. North of the town of Steelpoort, the RLS intruded sub-concordantly into the Pretoria Group, which lies directly above the Magaliesberg Formation; both units belong to the Transvaal Supergroup. In contrast to the strata north of Steelpoort, the rocks south of Steelpoort are in contact with increasingly younger Transvaal Supergroup formations.

The Project Area is situated on the Central Sector side of the border separating the two sectors, as illustrated in Figure 6. The Project Area is in the Central Sector/Southern Sector of the Eastern Limb of the BC which is more geologically and structurally complex compared to the Western Limb. The Project Area is underlain by MZ lithologies. The CZ and LZ outcrop east of the Project Area.

Figure 6: Local Geology and Structure Plan



Local Geology and Structure Plan	October 2024

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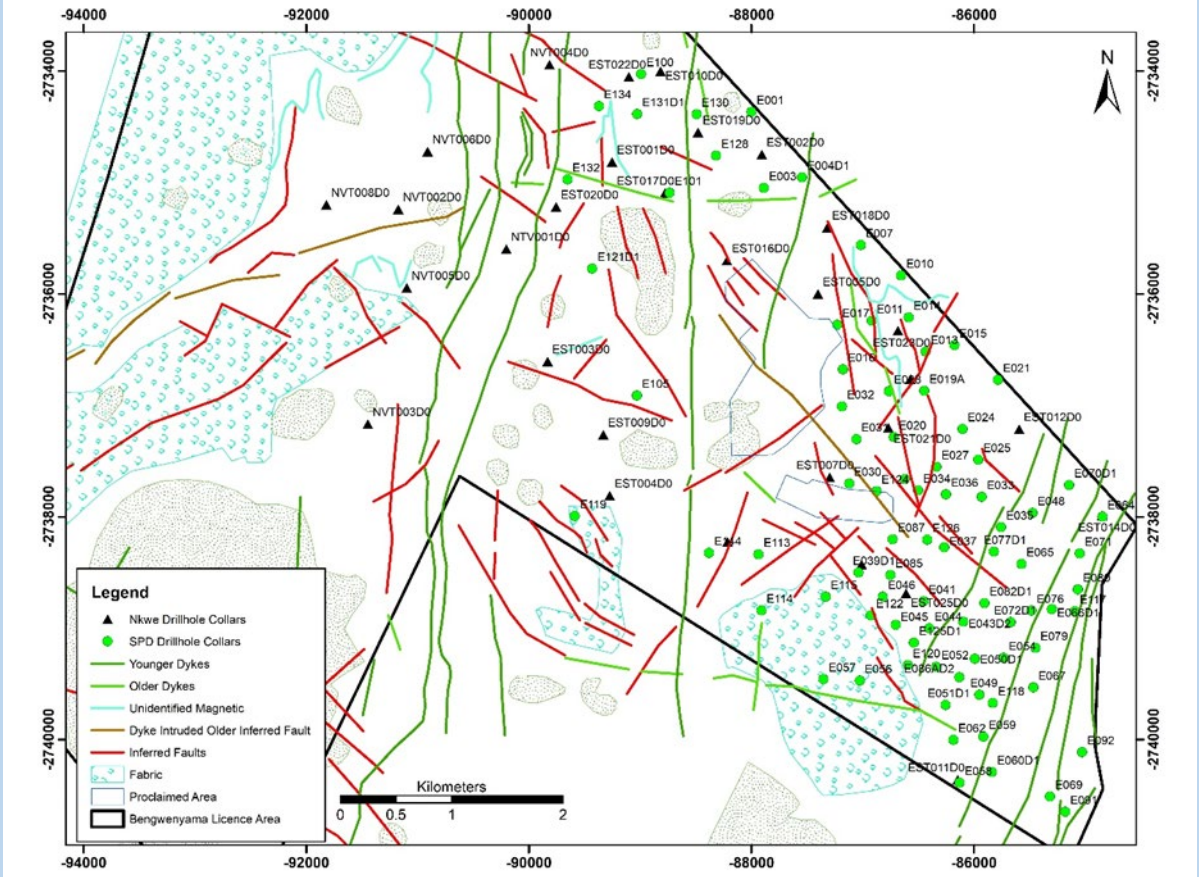
2.1.2.2 Project Geology

The Bengwenyama Project Mineral Resource consists of the Merensky and UG2 Reefs. Recent completed drilling intersected both reefs which are separated by a 260m middling of norite and pyroxenite units as shown in Figure 8, the stratigraphic column of the Project Area. Although both reefs are of economic importance in the region with the Merensky Reef located at shallow depth, sub-cropping in parts, previous studies have indicated that the UG2 is economically the more economic target. Accordingly, the UG2 Reef is the focus of the PFS. Subsequently, although mention is made of the Merensky Reef, the bulk of all reference in the geology and Mineral Resources section in this report has been centred around the UG2 reef.

2.1.2.2.1 Stratigraphy and UG2 Facies

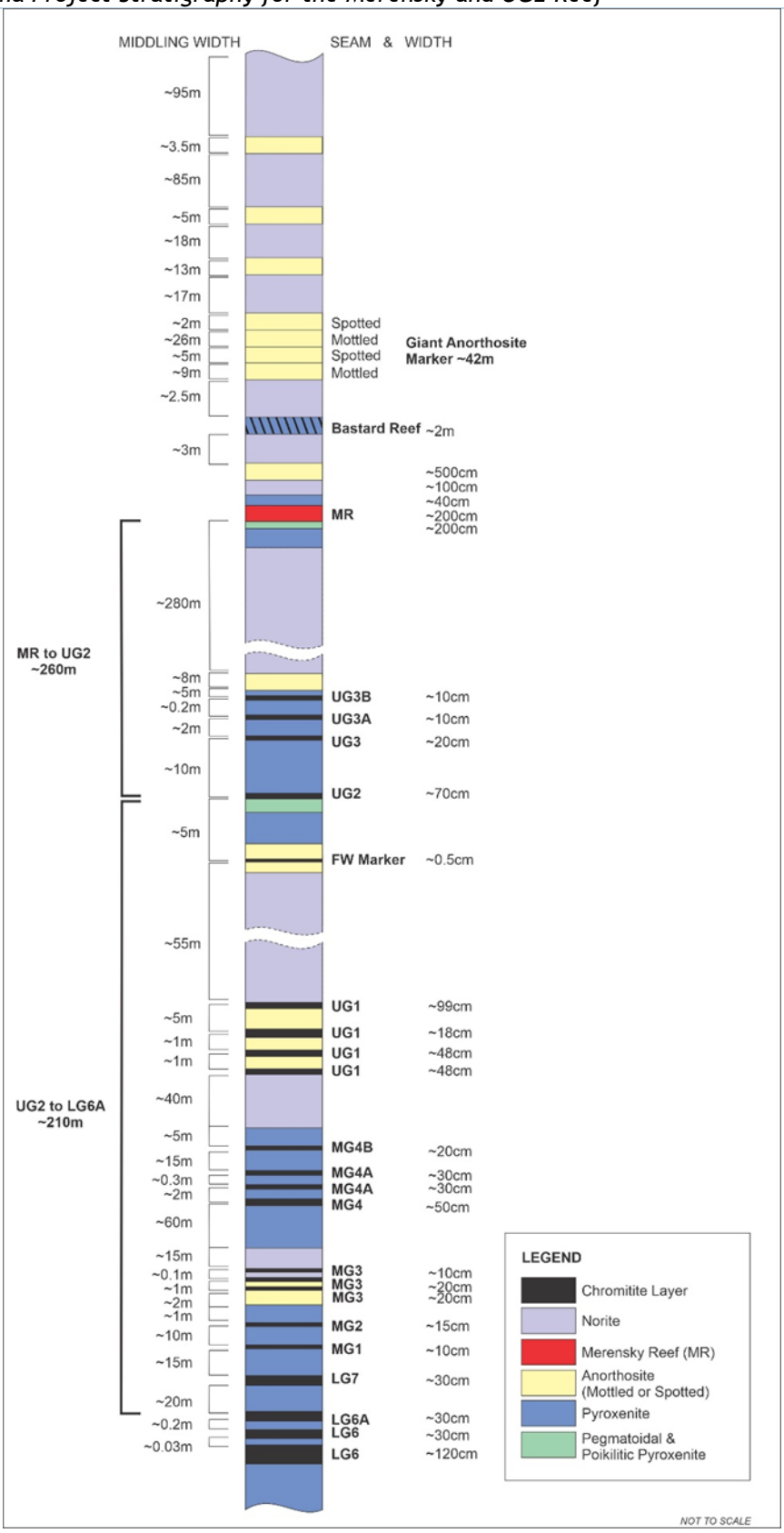
The focus of the recent complete drilling with Figure 7 illustrating the drillholes completed as at the end of April 2024, has been in the eastern portion of farm Eerstegeluk where the UG2 reef is the shallowest and dips in a westerly direction at about 6°. The later drilling was targeting the northern horst block and the dome structure to better understand the geology in this area. Figure 8 illustrates the Bengwenyama Project stratigraphy from the Giant Anorthosite Marker ("GAM") in the Merensky Hanging wall through to the Merensky Reef and the UG2 Reef down to the LG6 Chromitite Seams.

Figure 7: Southern Palladium Drilling Campaign Status as at April 2024



Southern Palladium Drilling Campaign Status as at April 2024	October 2024

Figure 8: Bengwenyama Project Stratigraphy for the Merensky and UG2 Reef



Bengwenyama Project Stratigraphy for the Merensky and UG2 Reef	October 2024

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The UG2 stringers that often appear regionally in the hanging wall of the UG2 are not present in the Project Area. Occurrence of the stringers within the Project Area is localised to a small area in the northeastern corner on Eerstegeluk. The hanging wall contact is an approximately 3 cm thick Leuconorite Parting Plane ("LPP") overlain by a feldspathic pyroxenite unit. The LPP is not always present resulting in a sharp contact between feldspathic pyroxenite and Chromitite seam. The footwall contact is either a sharp contact or gradational disseminated chromite contact. The footwall of the UG2 is a pegmatoidal or poikilitic feldspathic pyroxenite, with low and variable PGE grades, grading into a medium grained massive feldspathic pyroxenite.

The focus of the PFS is the UG2 Reef which is a chromitite seam of the upper group within the critical zone running at an average reef width of approximately 73 cm as illustrated in Figure 9.

Figure 9: UG2 Intersection (yellow box) in Drillhole E062

Minxcon Consulting	**UG2 Intersection (yellow box) in Drillhole E062**	**October 2024**

The nature and appearance of the UG2 reef intersections has led to the identification and classification of the facies associated with each drilled hole. A total of nine UG2 reef facies have been identified on the Project Area namely, massive UG2 facies, massive UG2 with gradational bottom contact facies, split massive UG2 facies, split massive UG2 gradational bottom contact facies, mixed massive UG2 facies, stringer UG2 facies, split reef type 1 facies, split reef type 2 facies and pothole facies. The split reef and mixed facies have been combined as a mixed massive facies to simplify the facies plan. The distribution of UG2 facies identified over the Project Area is illustrated in Figure 10.

The split reef type 1 and type 2 facies are associated with the Anglovaal drillholes which inform the Nooitverwacht extension only.

The UG2 is very uniform within the project area with the majority of the UG2 Reef (77%) being classified as either the massive UG2 facies or the massive UG2 with gradational bottom contact facies. The mixed massive facies and stringer facies only contribute 3% each with the potholed UG2 (pothole facies) contributing 17%. The pothole facies are considered in the geological losses applied to the Mineral Resource. The consistent occurrence of the massive UG2 facies is a contributing factor to the homogeneity and consistency of the UG2 Reef and a contributing factor to the resource classification as measured for a portion of the Mineral Resource. The two dominant UG2 facies are described below.

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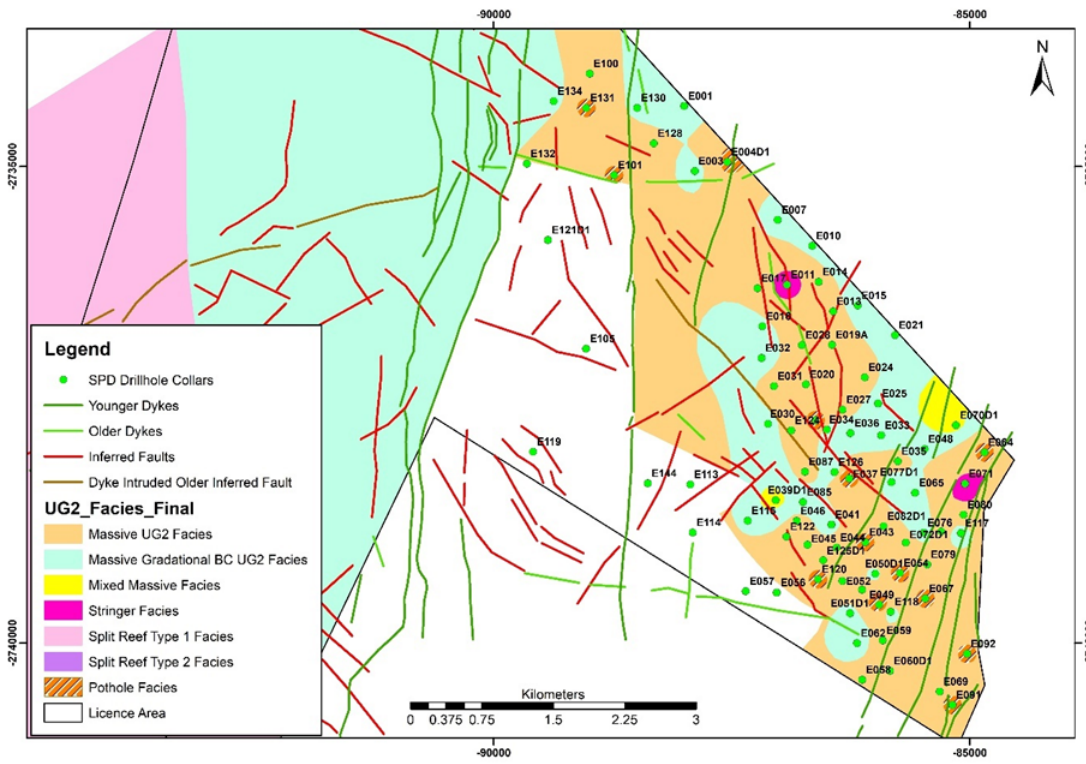
Figure 10: UG2 Reef Facies Plan



UG2 Reef Facies Plan	**October 2024**

Massive UG2 Facies – Massive chromitite reef with orthopyroxenite oikocrysts defined by sharp or irregular basal contact with the underlying pyroxenite or pegmatoidal pyroxenite. Massive UG2 reef facies on drillhole E010D1 is presented in Figure 11.

Figure 11: Massive UG2 Reef Facies on Drillhole E010D1

Massive UG2 Reef Facies on Drillhole E010D1	**October 2024**

Massive UG2 with Gradational Bottom Contact Facies - Massive chromitite reef with orthopyroxenite oikocrysts with either a gradational basal contact or a dissemination of chromitite in the underlying pyroxenite or pegmatoidal pyroxenite. Figure 12 illustrates massive UG2 reef with gradational footwall contact facies.

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Figure 12: Massive UG2 with Gradational Bottom Contact Facies

Minxcon Consulting	**Massive UG2 with Gradational Bottom Contact Facies**	**October 2024**

2.1.2.2.2 Structures

A high-definition helicopter borne Total Magnetic Field ("TMF") gradient and gamma-ray spectrometry survey was completed in January of 2022 and highlighted major structural features that could be expected.

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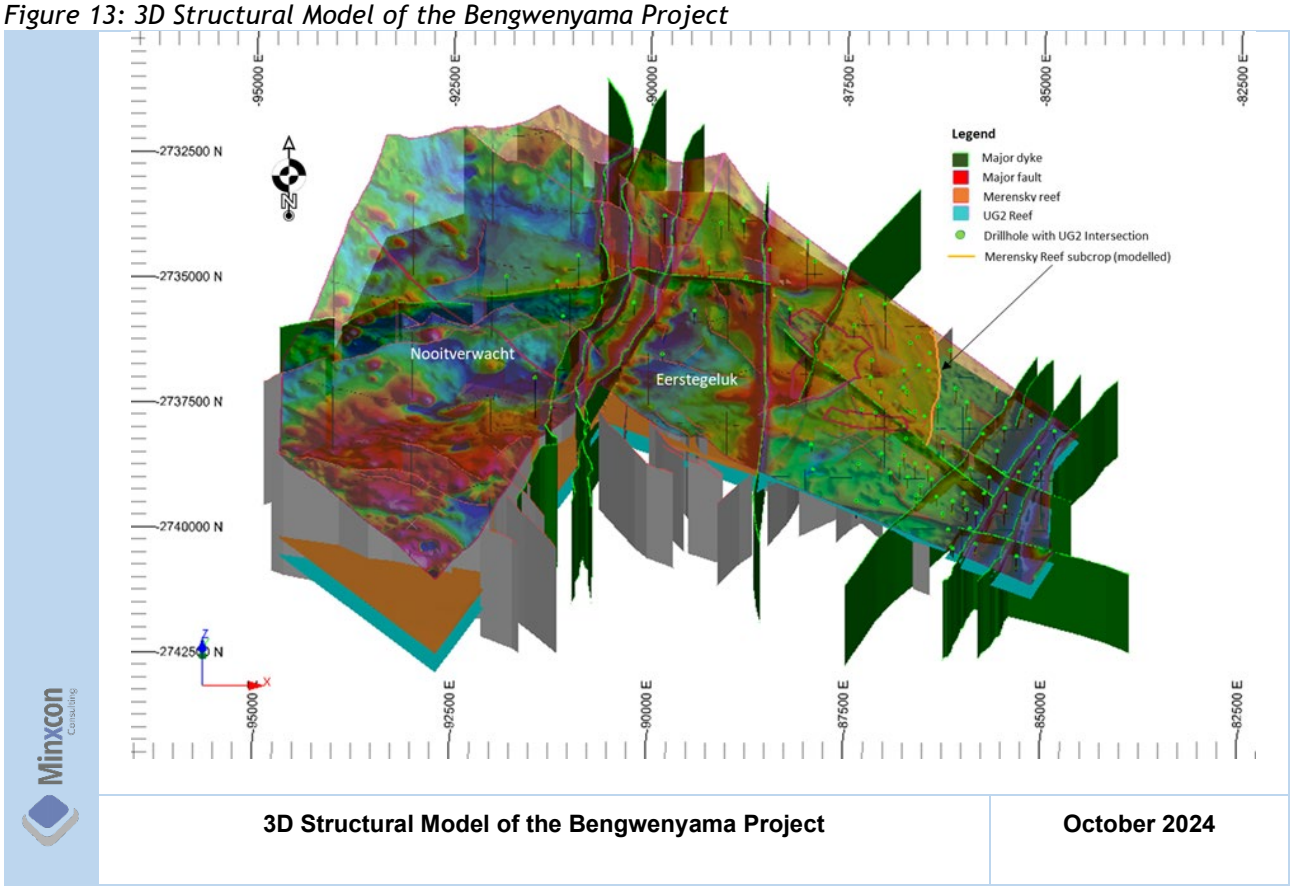
These structures were utilised in development of the 3D structural model in conjunction with the MR and UG2 Reef intersections.

Figure 13 illustrates the 3D structural model with geophysics draped over the DTM.

Figure 13: 3D Structural Model of the Bengwenyama Project



The Project Area is bisected (close to Nooitverwacht and Eerstegeluk Farm boundaries) by a series of parallel north-northeast to south-southwest faults and dykes, which downthrow the Merensky and UG2 reef on the west. The presence of sub-parallel west-northwest to east-southeast faults and dykes has also been interpreted. The Merensky Reef and UG2 outcrop north of Nooitverwacht farm on the Modikwa mining lease. The Merensky Reef outcrops and subcrops on Eerstegeluk. The UG2 is interpreted to have limited exposure.

Although both UG2 and Merensky Reefs are of economic importance in the UCZ, the UG2 is the target orebody. They sub-crop and dip gently west at between 6° and 12°, with local dips exceeding this into the high 20's with stratigraphic separation between the UG2 and Merensky Reefs ranging from 213 m to 315 m.

The strike of the RLS is typically NNW-SSE with a general westerly dip of between 6º and 12º. The dip has been disrupted by the dome structure into several fault blocks with variations in the dip and strike as illustrated in Figure 14.

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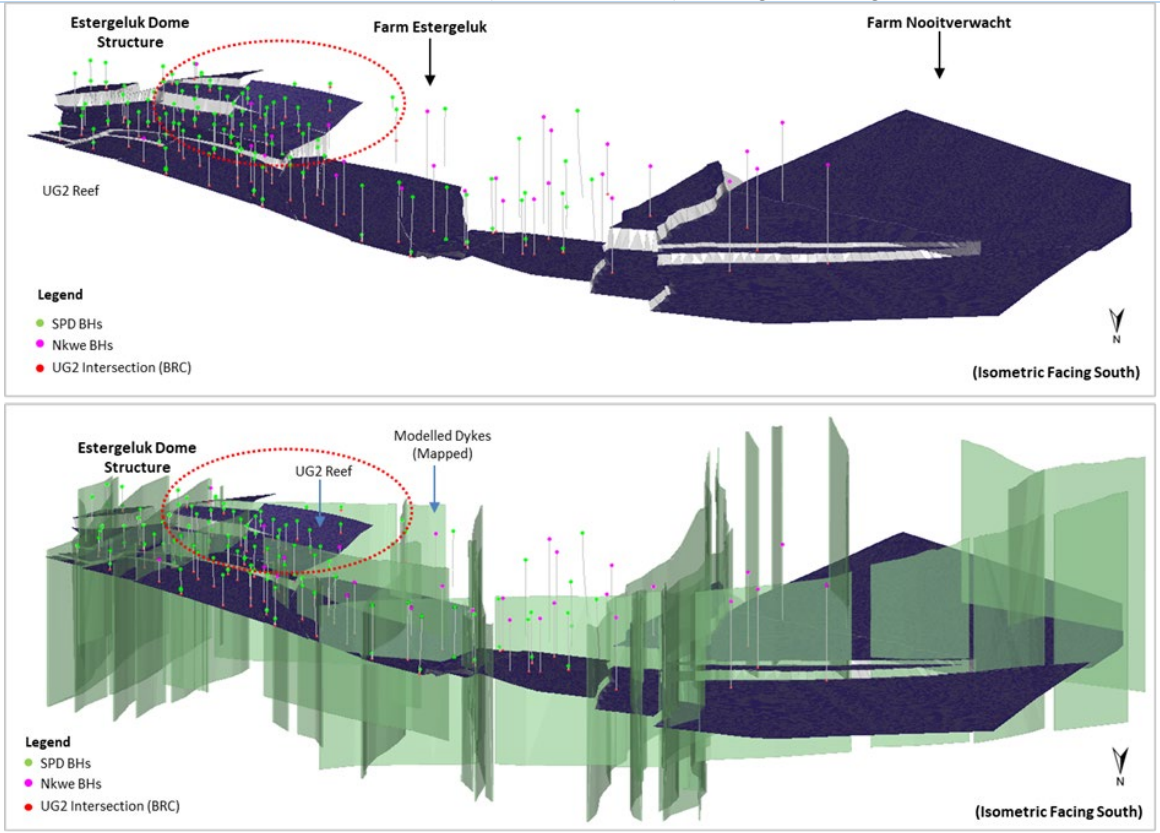
Figure 14: Generalised East / West Cross Section (Isometric View) through Eerstegeluk



Generalised East / West Cross Section (Isometric View) through Eerstegeluk	October 2024

The contact aureole of the Eastern Limb of the BC is characterised by strongly deformed domal structures that penetrate upwards into the RLS, significantly impacting the development of the Late Cretaceous Zone ("LZ") and Central Zone ("CZ"). The Burgersfort "bulge" east of the Project Area is a trough-like body bordered by the Derde Gelid Pericline and the Steelpoort Pericline. Both periclines represent updomed Transvaal Supergroup floor units (Clarke, B.M., et al, 2005).

The formation of domal structures has been attributed to diapirism, a process involving the heating of floor rocks due to the intrusion of the RLS. This heating resulted in the formation of topographic floor highs, which facilitated the upward movement of plasticised and partially molten floor rocks into the crystallizing RLS magma. The economic significance of these domal or upwarped floor rocks lies in their ability to attenuate the LZ and CZ above the floor domes, potentially disrupting the continuity of laterally continuous economic horizons (Clarke, B.M., et al, 2005).

This updoming is present within the Bengwenyama Project Area on the southern border of the farm Eerstegeluk as illustrated in Figure 15 and Figure 16, respectively.

Drilling has delineated an area of updoming that has affected the UG2 reef which has been removed from the Mineral Resource as illustrated in Figure 15. This doming resulted in loss of UG2 reef and where still preserved, pushing up of the UG2 reef, closer to surface which should then enable easier access to mining.

Iron-rich ultramafic pegmatites ("IRUPS") have been identified in the Modikwa, Spitskop, and Kennedy's Vale areas. These replacement bodies either completely replaced or highly disrupted the economic layers of either the UG2 or the Merensky Reef. To date limited IRUPs were intersected within the MR or UG2 Reef horizons but have been intersected in the Main Zone in the drillholes completed within the dome structure.

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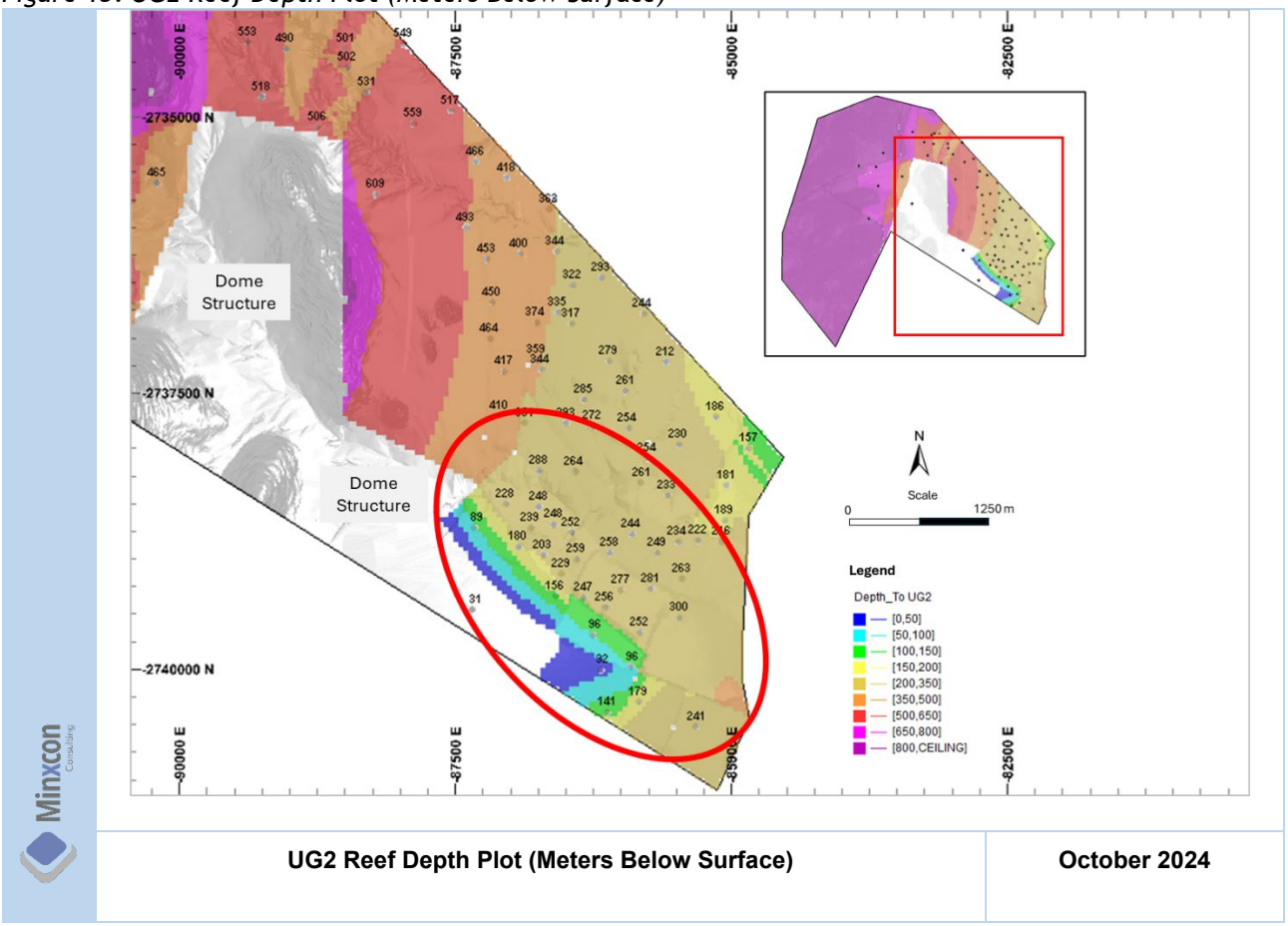
Both reefs are oxidised at surface and have persistent down-dip economic horizons. Historical drillholes on Nooitverwacht have indicated depths of approximately 700 m below surface for the Merensky Reef and the equivalent 1,100 m below surface for the UG2. Figure 15 illustrates the UG2 Reef depth below surface with the dome structure area removed where no UG2 is present. The red ellipsoid indicates location where initial mining is planned. The area is characterised by shallow depth to UG2 reef extending from surface to 250 m.

Figure 15: UG2 Reef Depth Plot (Meters Below Surface)



Potholes in the area represent local changes in the strike and dip of the economic units, forming depressions into the footwall stratigraphy. The depth-to-width ratio of potholes in this region of the Central Sector is 1:2. Potholes were intersected and logged in the drilling completed to date and contribute ~three quarters of the 24% geological losses. Figure 16 illustrates a northwest to southeast section through the dome structure and illustrates the uplift of the basement which removed approximately 600 m of bushveld stratigraphy between the two dykes. There is a zone of mixing of the bushveld lithologies and the basement lithologies which is made up of shales and quartzites from the Transvaal Supergroup. This zone is constraint by the set of north - south parallel dykes running through Eerstegeluk and into Modikwa and in the north by the east - west running dyke. This has been confirmed by the drilling on either side of the structure.

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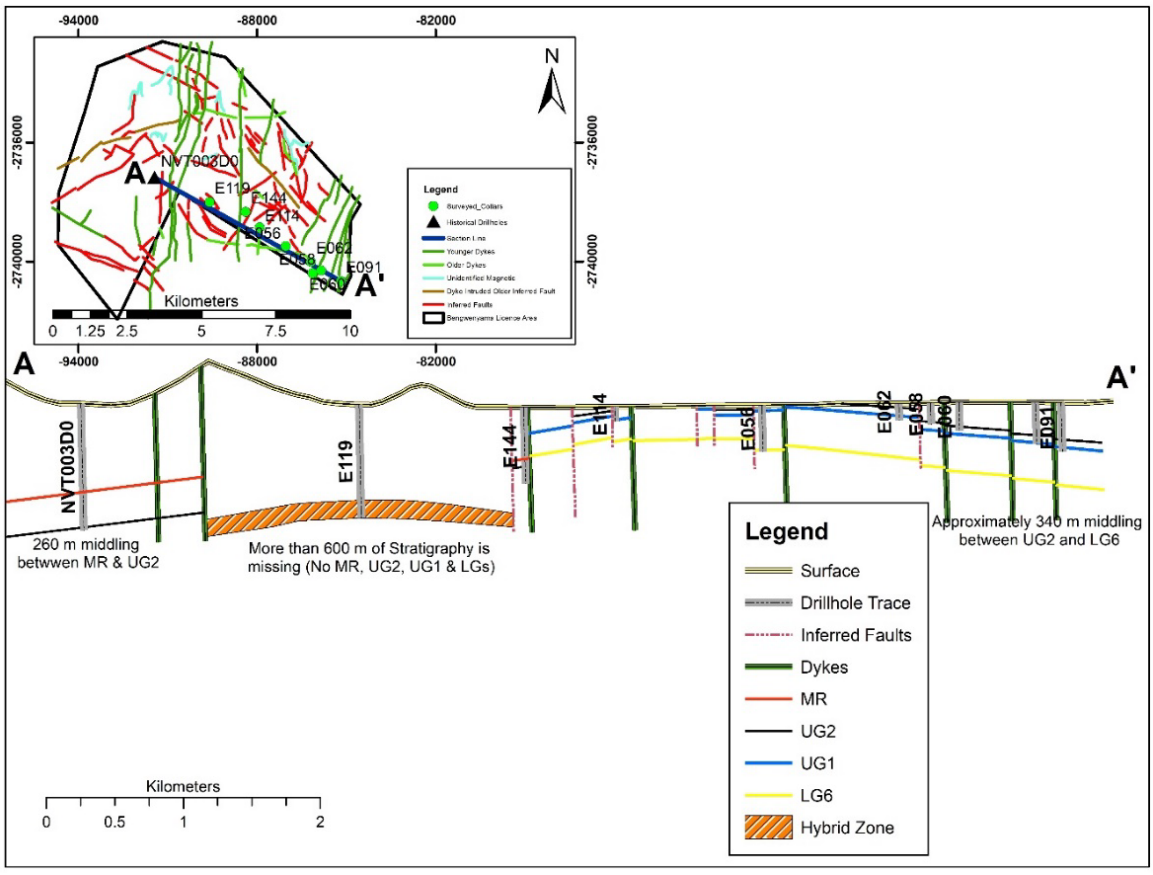
Figure 16: Northwest – Southeast Cross Section Across the Dome Area



Northwest – Southeast Cross Section Across the Dome Area	October 2024

2.1.3 Mineralisation

The UG2 occurs as either a pure chromite or a cumulate framework of chromite with interstitial plagioclase and/or orthopyroxene. The bulk of the PGE mineralisation associated with the UG2 is hosted within the main chromitite layer as disseminated sulphides attached to the chromite grains. Typically, the sulphides form embayments in the chromite grains or at triple junctions. Less commonly, the sulphides may be occluded within the chromite grains. The typical sulphides which host the PGE are pyrrhotite, pentlandite and chalcopyrite. The UG2 in this area of the BC is characterised by a Pt and Pd telluride assemblage and Pt-Rh-Co-Cu sulphide assemblage. The PGE grades are typically elevated at the top and basal contacts of the chromitite seam. The disseminated mineralisation may extend into the footwall units and is typically related to disseminated chromite and chromitite stringers.

Suntech Geomet Laboratories completed a comprehensive mineralogical characterisation on UG2 chromitite reef samples from drillhole E035 and E077 to characterise PGM minerals utilising geochemical and mineralogical analyses, such as X-ray diffraction analysis and automated scanning electron microscopy mineral liberation analysis.

UG2 reef on drillhole E077 assayed 5.91 g/t 6E, a Pt/Pd ration of 0.57 and Ru index of 16.6% and was dominated by oxides, primarily presented by chromite (~75.2% mass), silicates (~24% mass) comprising plagioclase, orthopyroxene, chlorite, amphibole, talc and mica while the sulphides are only 0.18% mass and other trace minerals. The bulk of the PGMs contained in the sample are PGE-sulphides (~59.3%), while the remainder encompasses PGM Laurite (~16.8%), PGM Bismuth Tellurides (~12.8%), PGMs sulphur-arsenides

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(~9.3%), and PGM arsenides (~1.9%). PGMs particle grains are 79%- 6.0µm, with the coarsest grain sized at 18µm.

The sample's base metal sulphide concentration was significantly low (0.18% total sulphides). The sulphides are hosted by pentlandite (~55.53%), chalcopyrite (~37.37%), other sulphides and pyrite (~7.10%).

UG2 reef on drillhole E035 assayed 8.05 g/t 6E, a Pt/Pd ration of 0.98 and Ru index of ~13%, was dominated by oxides, primarily represented by chromite (~89 mass%) and silicates (~11 mass%). The bulk of the PGMs contained in the sample are PGE-sulphides (~84%), while the remainder encompasses PGM Alloys (~6%), Laurite (~6%), PGM Bismuth Tellurides (~2%), and PGM Antimonides (~1%). PGMs particle grains are 50%- 6.8µm, with the coarsest and smallest grains sized at 32µm and 0.52µm respectively.

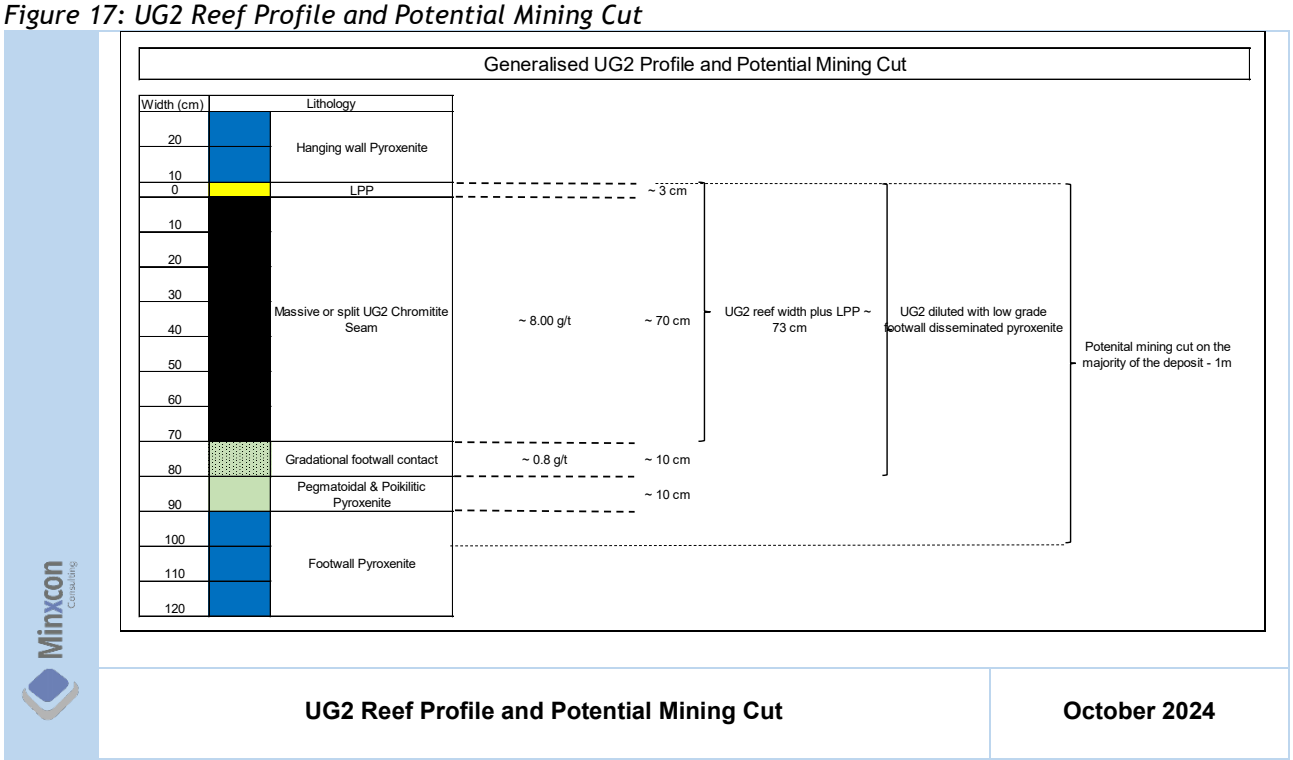
The sample's sulphide concentration was significantly low (0.08% total sulphides), with Total S value for the sample of 0.03 wt.%. The sulphides are hosted by pentlandite (~61%), chalcopyrite (~22%), other sulphides and pyrite (~9%). The total sulphides present in the sample are pointedly fine-grained with a D50 of ~13.5µm, 89% of which are liberated while 4% are middlings and the balance locked.

The Merensky Reef is a pyroxenitic unit characterised by enclosing chromitite stingers. The economic portion of the Merensky Reef is typically demarcated by the chromitite stringers. The PGE mineralisation of the Merensky Reef is typically associated with base metal sulphides and silicates. The base metal sulphides are interstitial together with plagioclase feldspar within cumulate orthopyroxene. The PGE mineralisation typically occurs in combination with sulphides, sulpharsenides, arsenides, tellurides and alloys.

2.2 Resource Mining Profile - Geotechnical

Exploration drilling and core analysis was done to determine the location of reef parallel structures in the hanging wall in relation to the top of the UG2 reef contact. The data indicates that there are no reef parallel structures present within 6 m of the top of reef contact and a beam thickness of 6 m was considered. There is however, a small area in the NE corner of Eerstegeluk which has stringers in the hanging wall of the UG2. Figure 17 shows the UG2 reef profile as well as the potential mining cut.

Figure 17: UG2 Reef Profile and Potential Mining Cut



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2.3 Mineral Resources

2.3.1 Structural Model

The structural model utilises data from 30,746 m of drilling through 82 drillholes. In addition to the current geological database, Minxcon sourced and has been authorised to utilise historic Anglovaal data. Exploratory data analysis (EDA) of this data suggests compatibility of use to inform both structural and grade estimation. Although this data does not fall within confines of the project licence limit, its consideration is crucial in elevating geological confidence within undrilled western sections of the Project.

The significant increase in size of the dataset informing the current structural interpretation in comparison to data informing historic models aids further understanding of structurally complex southern sections of the orebody in the vicinity of the Eerstegeluk Dome.

A complex fault and dyke system traverses both the Merensky and UG2 reefs dividing the deposit into 20 fault blocks through the Merensky Reef and a total of 26 fault blocks through the UG2 reef as illustrated in Figure 18 creating conspicuous horst and graben structures through both reefs in the northern sections of the deposit.

Figure 18: Structural domains based on structural interpretation - UG2 Reef

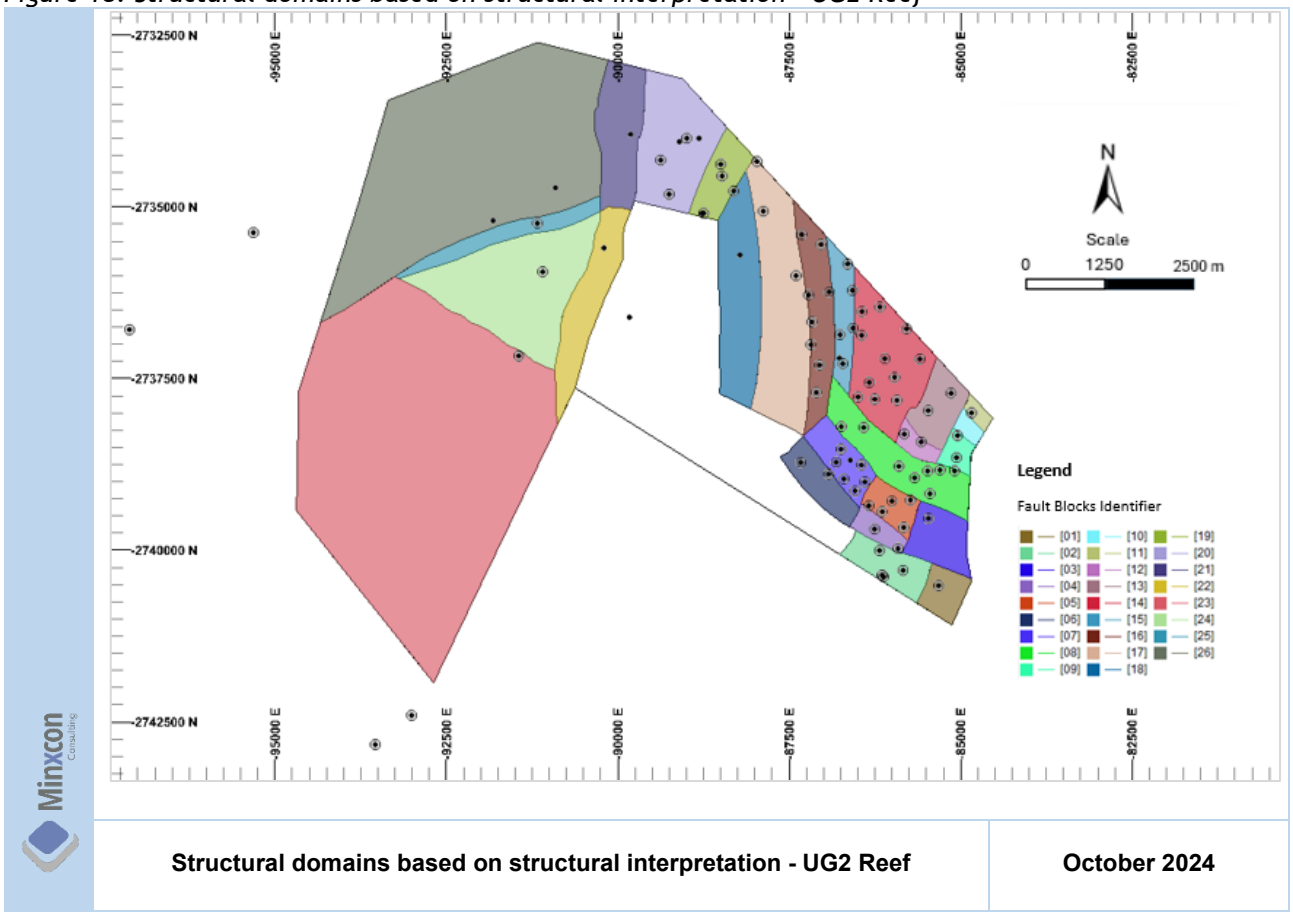

Figure 19 shows the updated 3D geological model for the project including the Nooitverwacht extension and neighbouring property based on recent SPD drilling campaign, the historical Anglovaal data and additional drilling data sourced from the public domain. The consolidated dataset illustrates continuity and robust nature of the UG2 Reef horizon through area. The updated 3D structural model provides better understanding of the UG2 structures, and this updated 3D model underpins assumptions utilised for the PFS.

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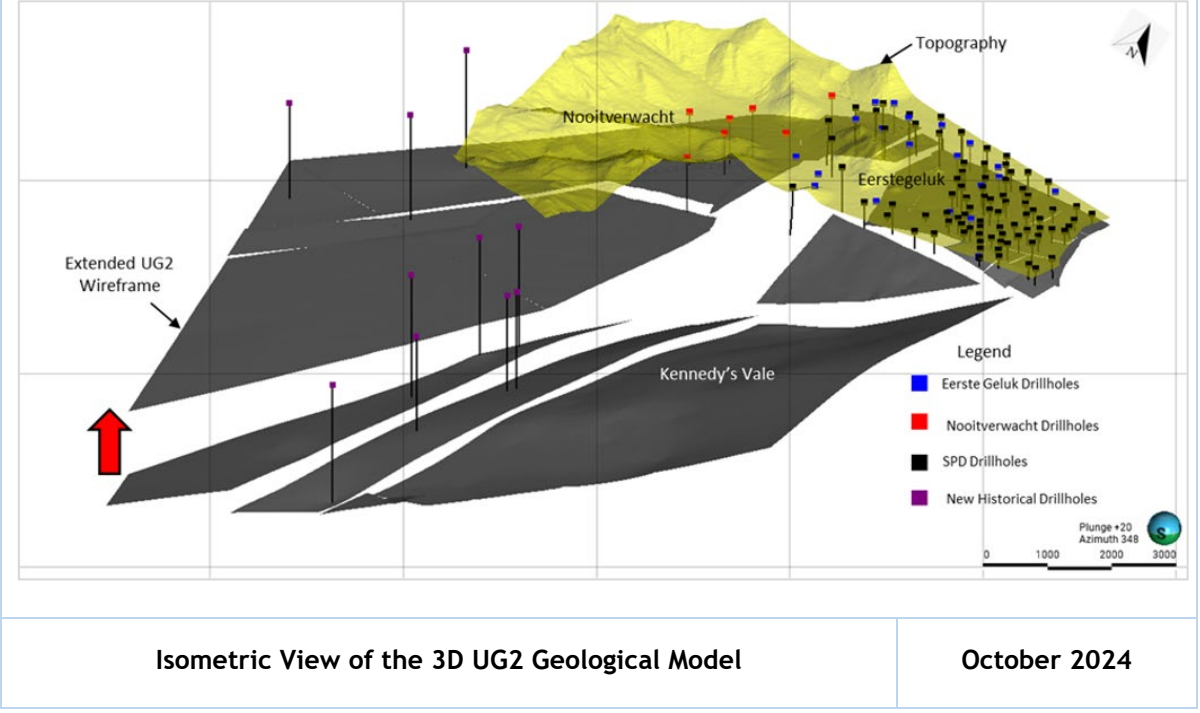
Figure 19: Isometric View of the UG2 Reef Model



Isometric View of the 3D UG2 Geological Model	**October 2024**

2.3.2 Geological Losses

The complexity of the fault and dyke systems and the presence of potholes forms the basis and justification for geological losses ascribed during reporting of Mineral Resources. The geological losses have been domained according to structure and the density of disturbances observed in the drill reef intersections. The geological losses consist of faults and potholes only, as no IRUPs have been intersected in any of the UG2 drilling, besides in the dome structure which have been removed from the model and resource entirely.

The Measured Resource portion that falls within the 15% and 27% loss domains have an additional derisking factor applied to them. This has been applied to the percentage losses allocated to potholes only, by applying a factor of 1.5 to the pothole losses. Therefore, the geological losses for the Measured Resource is 19% and 37%. This was applied for any additional potholes that might not be intersected in the drilling that could affect the mining in the measured portion of the Mineral Resource. This factor will be reviewed with further drilling data that will be collected for the Feasibility Study.

The extrapolated inferred of the Nooitverwacht extension has a geological loss of 50% applied to it to accommodate any potential dome structures in the extension. This is based on the 34% loss due to the dome structures in Eerstegeluk plus 16% for additional faults and potholes. The recent drilling confirmed that the dome structure is larger than expected and extends into what was previously referred to as the Southern Horst Block. The exploration target in this area has now been removed and a 100% loss has been applied to this area.

The overall geological losses applied to the Measured and Indicated (M&I) and Inferred Mineral Resources for the UG2 are 21% and 26% respectively (excluding the Nooitverwacht extension). In addition to the geological losses applied, the surface mapping that was completed over the project area was used to quantify the dykes, which ranged in thickness from 12m to 60m, and their area has been removed from the models. The mapped dykes have been removed from the estimation models and hence do not form part of the geological losses applied. The combined dyke losses total 2% which are removed from the models. The final geological loss domains are shown in Figure 20.

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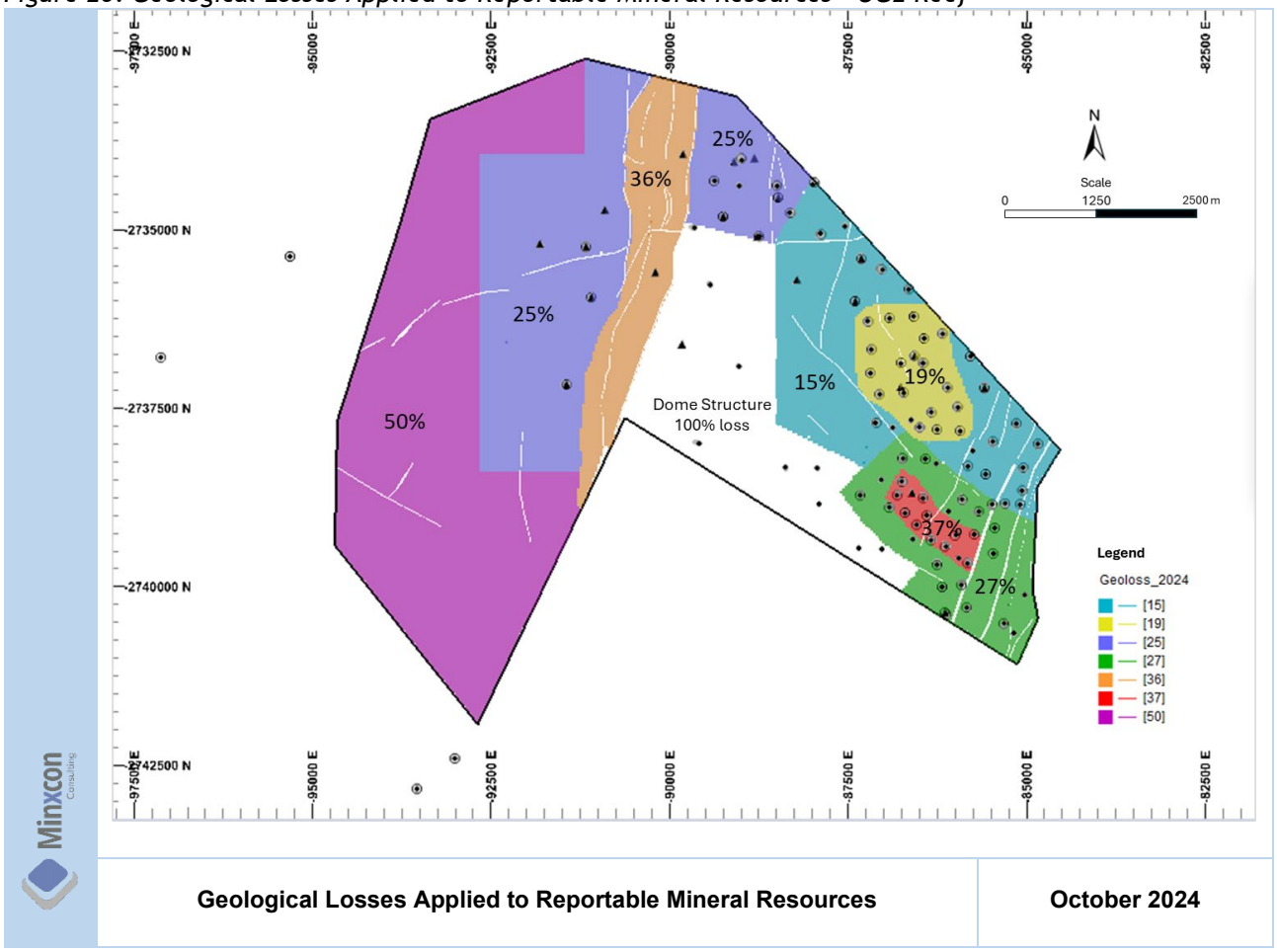
Figure 20: Geological Losses Applied to Reportable Mineral Resources – UG2 Reef



2.3.3 Grade Estimation

The UG2 PGE grade estimates are informed by data from 81 drillholes, comprising 73 drillholes from SPD campaign and 8 from the Anglovaal data, with base metal grades data available for 63 drillholes only from the SPD campaign. EDA indicates a transition in geological facies towards the west the Project Area. As such, both the Merensky and UG2 models have been domained into 2 sections, a domain informed by a consolidated database comprising recent SPD and Nkwe data and a domain informed by inference from the Anglovaal data which lies outside the project limits. Consequently, in order to reflect the level of confidence in the datasets informing subsequent grade estimates within the two domains of both models, different grade interpolation techniques have been applied to each domain.

Both the Merensky and UG2 datasets were examined for outliers which could impact subsequent grade estimation processes. The deposit exhibits low PGE grade variability within both reefs, supported by coefficients of variation of 4E grade of 0.49 and 0.22 for the Merensky and UG2 reefs respectively. However, a localised instance of elevated PGE grade within the Merensky reef was noted and warranted capping of anomalous samples from drillhole E121D1. No capping was applied to the UG2 reef sample population.

Due to the low density of 4E data, the Simple Kriging ("SK") technique was applied to the western section (Nooitverwacht Extension) of the models informed by the Anglovaal data. The Ordinary Kriging (OK) technique was applied to the domains informed by the consolidated SPD & Nkwe dataset (7E). The variography study results summarised in Table 2 for specifically the UG2 reef indicate ranges of 750 to 2,500 m. Ranges for Merensky Reef are 700 to 2,300 m.

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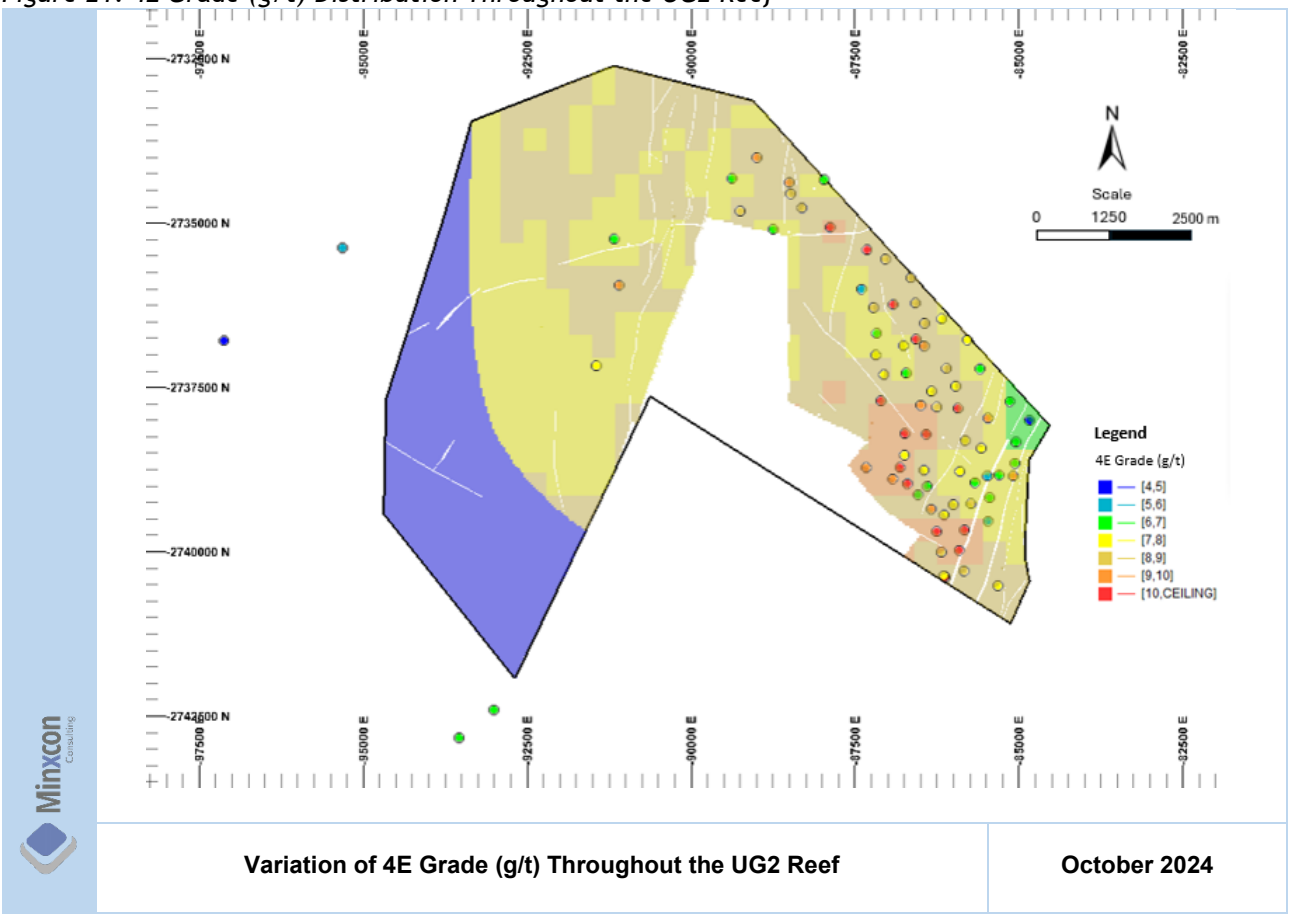
Table 2: Final Modelled Variogram Parameters for the Various Elements -UG2 Reef

Reef	Grade	Nugget	1st Structure Range			2nd Structure Range			SILL
			X (m)	Y (m)	SVAR	X (m)	Y (m)	SVAR	
UG2	Pt (g/t)	0.092	550	550	0.627	1,350	1,350	0.280	1
	Pd (g/t)	0.100	400	400	0.725	1,200	1,200	0.175	1
	Rh (g/t)	0.167	300	300	0.389	900	900	0.444	1
	Au (g/t)	0.441	600	600	0.278	1,250	1,250	0.281	1
	4E (g/t)	0.100	400	400	0.450	900	900	0.450	1
	Ir (g/t)	0.158	400	400	0.158	900	900	0.684	1
	Os (g/t)	0.714	750	750	0.179	1,450	1,450	0.107	1
	Ru (g/t)	0.105	400	400	0.316	1,400	1,400	0.579	1
	7E (g/t)	0.100	400	400	0.429	900	900	0.471	1
	SG (t/m^3)	0.102	630	630	-	1,250	1,250	0.898	1
	Thickness (m)	0.271	280	280	0.417	1,050	1,050	0.313	1

Quantitative Kriging Neighbourhood analysis ("QKNA") determined the optimal estimation at a block size of 350 m x 350 m, with a minimum and maximum number of samples of 5 and 15 respectively through a 3-pass search for the domain of the model informed via the Ordinary Kriging ("OK") grade interpolation technique. Figure 21 shows the resultant grade estimation results showing low variation of 4E grade for the UG2 reef.

Figure 21: 4E Grade (g/t) Distribution Throughout the UG2 Reef



2.3.4 Reasonable Prospects for Eventual Economic Extraction

Consideration of Reasonable Prospects for Eventual Economic Extraction ("RPEEE") was undertaken using a financial assessment which considers extraction through underground mining methods driven by the mining assumptions provided in Table 3.

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Table 3: Economic Constraints Applied during the RPEEE Test

Parameter	Unit	UG2	MR	Comment
Metal basket price	USD/oz	2,691	1,969	Based on the 90th percentile of the real term individual metal price since 1980 & prill splits
Mining Cost	R/t	1,585	767	* MR is mechanised mining (concept study) and UG2 conventional mining (PFS)
Other Costs	R/t	413	153	
Treatment cost	R/t	320	219	No smelter and refinery costs
Mine call factor	%	95%	95%	
Payability	%	86%	86%	Discount for the concentrate
Recovery	%	85%	85%	On-site plant recovery

Note: Operating cost based on original scoping study which considered conventional mining.

The RPEEE assessment established a 4E grade cut-off of 1.6 g/t and 2.2 g/t for the Merensky and UG2 reefs respectively. As the Bengwenyama drill data indicates minimum grades of 1.57 g/t and 4.40 g/t for the Merensky and UG2 reefs respectively, there is prospect for economic extraction of all mineralised material under current economic conditions.

2.3.5 Mineral Resource Classification

The Mineral Resource classification criteria utilises qualitative and quantitative criteria incorporating:-

- Drillhole spacing and geological confidence in structural interpretation;
- Confidence in the location and impact of known major structures;
- The potential impact from unknown geological structures;
- Confidence in understanding of the nature of the thickness and grade continuity;
- A reflection of quality of analytical data informing grade estimates (availability and quality of QAQC); and
- The quality of estimation parameters in particular:-
    - 4E grade variogram range limits
    - The number of samples informing a grade estimate
    - The search volume employed to interpolate a grade estimate
    - Kriging Efficiency as per kriging efficiency thresholds (Mwasinga, 2001)
    - Slope of Regression

Preliminary results are moderated through an override by the CP to present practicality of mining while retaining accuracy of lateral and down-dip geological confidence. The final result for the UG2 reef as illustrated in Figure 22 is coded into the Bengwenyama block model for utilisation in subsequent mine planning tasks.

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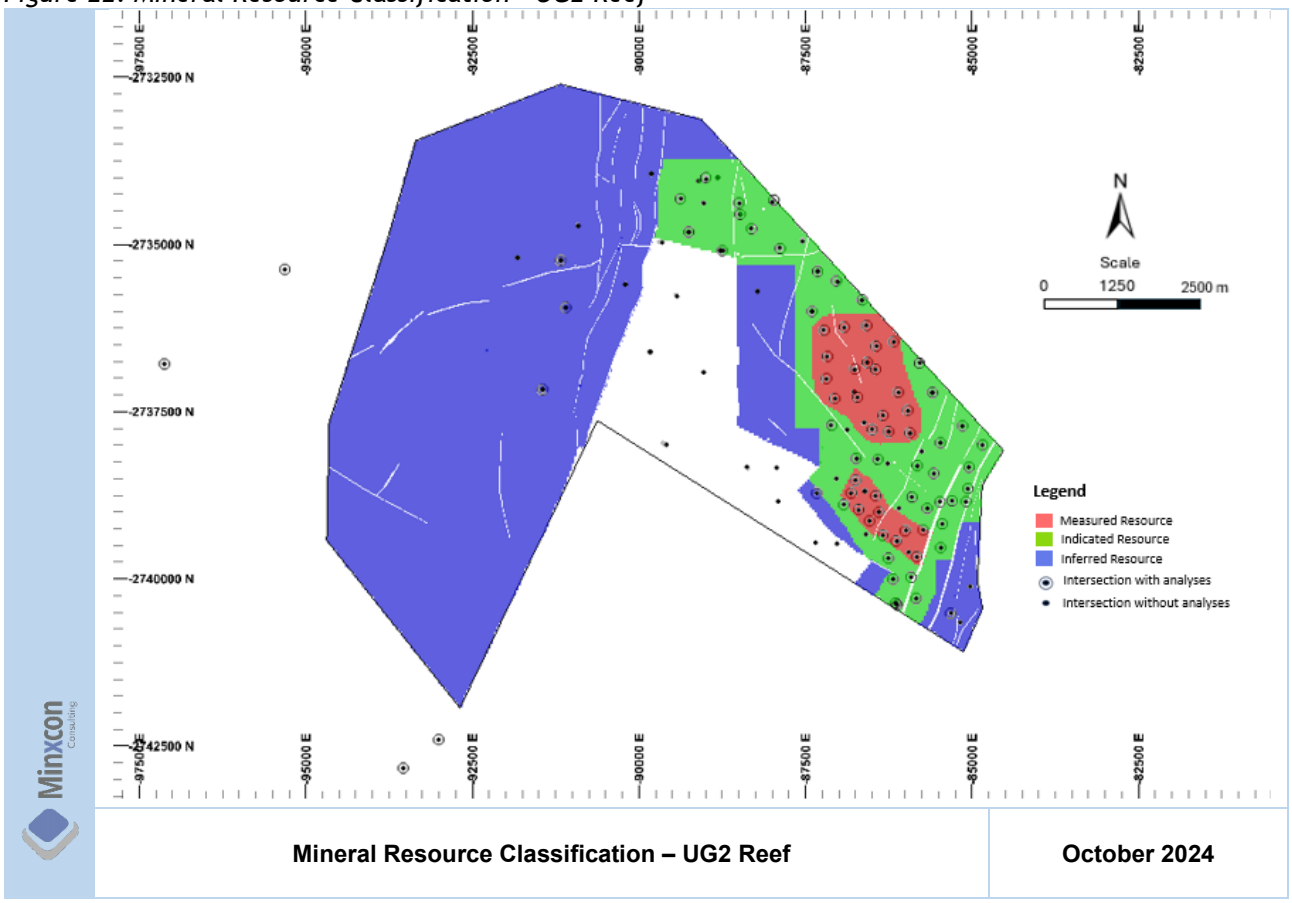
Figure 22: Mineral Resource Classification – UG2 Reef



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2.3.6 Mineral Resource Estimate

The resultant Mineral Resource estimate as at 23 October 2024 is provided in Table 4.

Table 4: Combined UG2 and MR Mineral Resource as at 23 October 2024

Reef	Resource Category	Tonnes	Thickness	Pt	Pd	Rh	Au	Ir	Os	Ru	4E	7E	Cu	Ni	Moz (4E)	Moz (7E)
		Mt	(m)	(g/t)									(%)			
Merensky	Indicated	25.11	2.02	1.62	0.64	0.1	0.12	0.03	0.03	0.21	2.49	2.76	0.04	0.12	2.01	2.23
Merensky	Inferred (7E)	62.54	1.81	2.09	0.86	0.14	0.18	0.04	0.04	0.26	3.22	3.55	0.05	0.14	6.47	7.13
Merensky	**Total (7E)**	**87.66**	**1.87**	**1.96**	**0.8**	**0.13**	**0.16**	**0.04**	**0.04**	**0.24**	**3.01**	**3.32**	**0.04**	**0.13**	**8.48**	**9.36**
Merensky	Inferred (4E)	59.44	1.96	2.01	0.93	0.1	0.17				3.18				6.08	
Merensky	**Total (4E)**	**147.1**	**1.90**	**1.98**	**0.85**	**0.11**	**0.17**				**3.08**				**14.56**	
UG2	Measured	7.17	0.77	3.69	3.75	0.76	0.12	0.25	0.17	1.24	8.34	10.00	0.03	0.16	1.92	2.30
UG2	Indicated	18.52	0.72	3.68	3.63	0.76	0.11	0.26	0.17	1.23	8.19	9.85	0.04	0.16	4.88	5.86
UG2	Inferred (7E)	33.01	0.69	3.67	3.50	0.76	0.11	0.26	0.17	1.23	8.04	9.70	0.04	0.17	8.54	10.3
UG2	**Total (7E)**	**58.70**	**0.71**	**3.67**	**3.57**	**0.76**	**0.11**	**0.26**	**0.17**	**1.23**	**8.12**	**9.78**	**0.04**	**0.17**	**15.33**	**18.46**
UG2	Inferred (4E)	36.12	1.30	3.00	2.01	0.44	0.07				5.47				6.35	
UG2	**Total (4E)**	**94.82**	**0.93**	**3.42**	**2.98**	**0.64**	**0.10**				**7.11**				**21.68**	
Combined Total (7E)		**146.35**	**1.40**	**2.64**	**1.91**	**0.38**	**0.14**	**0.13**	**0.09**	**0.64**	**5.06**	**5.91**	**0.04**	**0.14**	**23.81**	**27.82**
Combined Total (4E)		**241.92**	**1.52**	**2.54**	**1.68**	**0.32**	**0.14**				**4.66**				**36.24**	

Notes:

1. All elements have been estimated individually and their combined grade will vary slightly from the estimated composite 4E and 7E modelled grades.
2. Geological losses have been applied.
3. Basket priced used for the pay limit is 2,691 USD/oz and 1,969 USD/oz for UG2 and MR respectively
4. A pay limit of 2.2 g/t for the UG2 and 1.6 g/t for the MR have been applied, albeit the entire Mineral Resource falls above the pay limit.
5. The Mineral Resource is inclusive of the Mineral Reserve.
6. The Mineral Resource is 100% attributable.

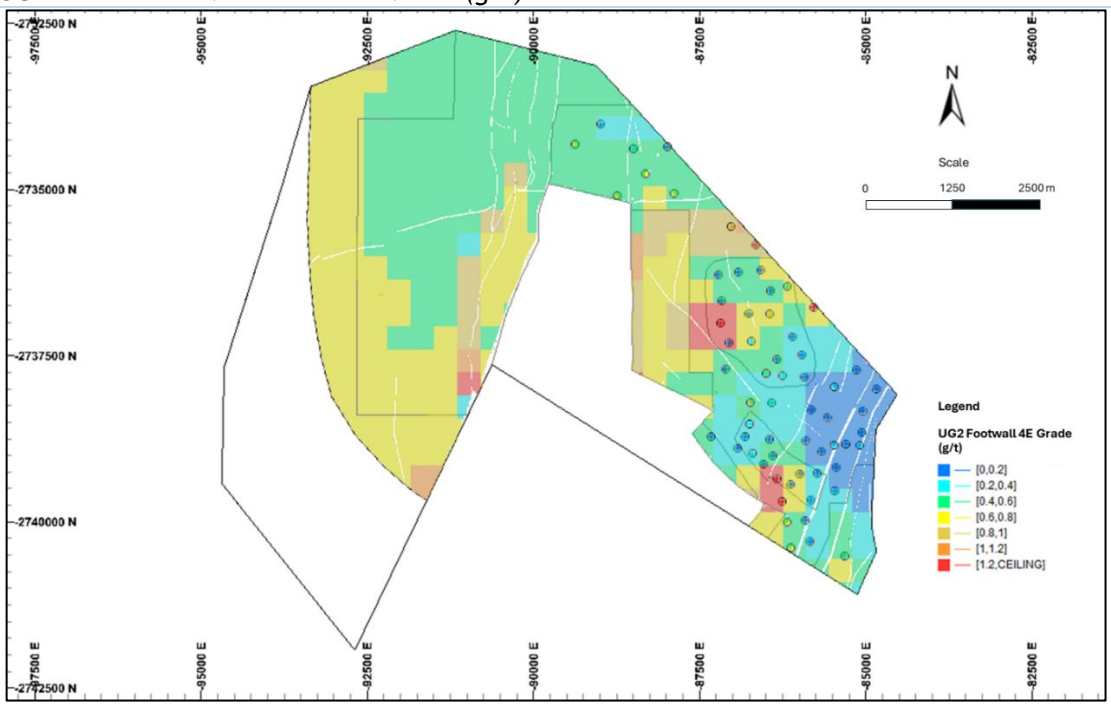
The UG2 Mineral Resource has also been stated as a mining cut UG2 Mineral Resource (Table 5). This Mineral Resource, which the Mineral Reserves are based on, takes into consideration the modelled UG2 footwall mineralisation that will be mined during the mining operations. This mining dilution will therefore carry mineralisation albeit at a low grade with an average of ~ 0.58 g/t (4E). Including the 40cm mineralised footwall dilution results in a potential extraction cut of approximately 1.1 m at lower grade, of 5.74 g/t (4E).

Table 5: UG2 Resource Mining Cut Mineral Resource as at 23 October 2024

Resource Classification	Tonnes	Reef Width	Pt	Pd	Rh	Au	Ir	Os	Ru	4E	7E	Cu	Ni	Cr_2O_3	(4E)	(7E)
	(Mt)	(m)	(g/t)									(%)			Moz	
Measured	10.24	1.16	2.64	2.73	0.55	0.09	0.18	0.12	0.89	**6.01**	**7.20**	0.03	0.14	21.52	**1.98**	**2.37**
Indicated	26.93	1.11	2.60	2.56	0.54	0.08	0.18	0.12	0.87	**5.78**	**6.96**	0.03	0.14	21.19	**5.00**	**6.02**
Measured & Indicated	**37.17**	**1.12**	**2.61**	**2.60**	**0.55**	**0.08**	**0.18**	**0.12**	**0.88**	**5.84**	**7.03**	**0.03**	**0.14**	**21.28**	**6.98**	**8.40**
Inferred Eerste. & Nooit, Nth (7E)	48.63	1.08	2.58	2.46	0.54	0.07	0.18	0.12	0.87	**5.66**	**6.83**	0.03	0.14	20.69	**8.84**	**10.67**
Inferred Nooitverwacht Ext. (4E)	39.97	1.36	2.74	1.84	0.40	0.07				**5.01**					**6.43**	
Inferred Combined (4E)	**88.60**	**1.21**	**2.65**	**2.18**	**0.48**	**0.07**				**5.36**					**15.28**	

The footwall mineralisation model, which is modelled at 40 cm, is shown in Figure 23, with grades ranging from 0.09 g/t to 1.76 g/t (4E) with the grade increasing to the west.

Figure 23: UG2 Footwall 4E Mineralisation Model (g/t)



2.3.7 Upside Potential

With the latest drilling campaign and with the additional historical Anglovaal drilling data the entire project area has now been converted into a Mineral Resource for both the UG2 Reef and the Merensky Reef. The upside potential in terms of Mineral Resources would be to convert the Inferred Mineral Resource to Indicated and the Indicated Mineral Resource to Measured and in reducing the geological loss factor that has been applied to some areas as the confidence in the area improves. In addition to this, the mineralisation in the Merensky Reef footwall has not been included in the Mineral Resource as yet due to limited data and this could potentially be upside for the Merensky Reef Mineral Resource.

Other chromitite seams such as the LG6 have also not been drilled as yet and could be upside for the Project for an additional chromite source.

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3 PRODUCTION TARGETS AND MINE

3.1 Mining Strategy

The mining strategy for the UG2 reef involves utilising underground mining techniques to efficiently exploit the orebody. This approach emphasises the rapid initiation of production at full capacity. Initial development activities will commence at the start of the Project to establish essential access to the ore resource. The Primary Decline ("PD") placement has been carefully planned to divide the mining area into two sections, facilitating balanced production rates. Each mining level is further subdivided into two half-levels by the decline, designated as north and south. The secondary decline, referred to as the Early Access Decline ("EAD"), provides expedited access to the orebody, accelerating the Project timeline by allowing earlier commencement of extraction. This early access optimises the overall development schedule, ensuring faster achievement of production goals while enabling more efficient utilisation of resources and infrastructure.

The selected underground mining method depends on various factors, including orebody width, fault blocks, operating costs, and Net Present Value ("NPV"). Minxcon has identified the key limiting or governing factors that define the extent of the underground operations. These factors are:-
200 ktpm ore; and
conventional stoping with a 1.0 m stoping width.

3.2 Access Strategy

There will be two decline access areas, namely, the early access area and the primary access area. The early access area will consist of a two-barrel decline, an early access decline with dimensions of 5 m x 4 m and a return airway with dimensions of 4 m x 4 m, sunk at an angle of 5.7°. This will allow for optimal manoeuvrability of the trackless equipment.

The primary access area will also consist of a two-barrel decline with two 6 m x 4 m end sizes, sunk at 9°, designated for transport of men and material and a conveyor belt for the transport of ore and waste.

Early access will be provided to block 1 to 10 by developing breakaways from the early access decline situated in the footwall of the orebody as illustrated in Figure 24. Once the decline intersects the reef, the decline will be maintained in the footwall to a depth of 50 m below the reef to provide sufficient space for level tipping arrangements. The declines will provide access to the UG2 reef through conventional level developments with intermittent breakaway access points along the declines, also illustrated in Figure 24.

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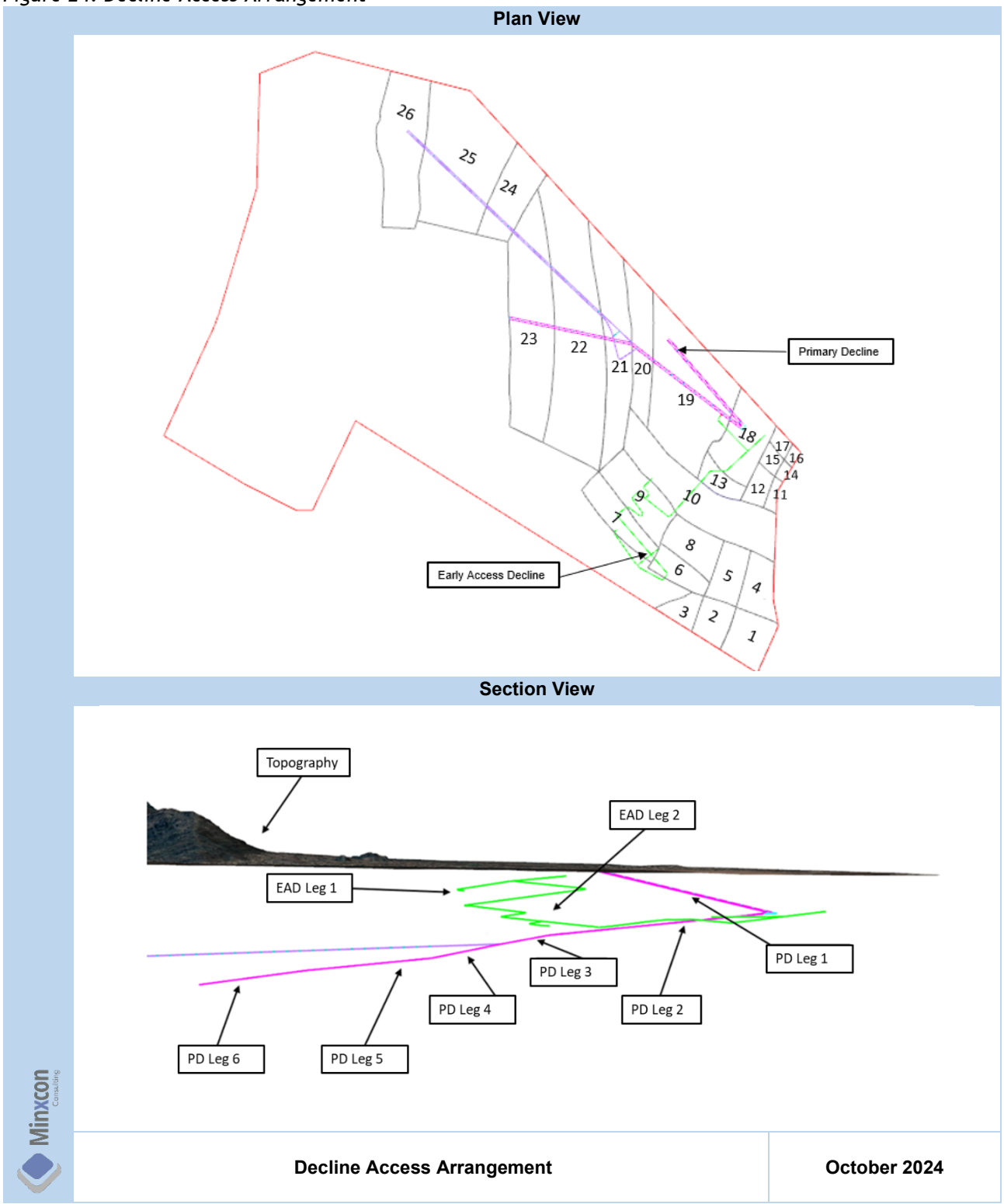
Figure 24: Decline Access Arrangement



Due to the characteristics of the deposit, variations in dip inclination are observed throughout the orebody. Consequently, the decline is divided into distinct sections to accommodate these different dip angles. To ensure comprehensive access to the entire orebody, two independent declines, the PD and the EAD are required. These separate declines are interconnected at block 19, facilitating efficient movement between them and enhancing overall operational flexibility.

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Table 6: Primary and Early Access Decline Sectional Dimensions

Decline Sections	Length	Dip
	m	Degrees
Primary Decline		
PD Leg 1	1,735	- 9.0
PD Leg 2	1,522	- 4.5
PD Leg 3	360	- 8.4
PD Leg 4	386	- 11.2
PD Leg 5	724	- 8.5
PD Leg 6	609	- 7.5
Early Access Decline		
EAD Leg 1	580	~ - 4.1
EAD Leg 2	4,745	~ - 5.0

3.3 Mining Parameters

3.3.1 Mining Method

The selected mining method for the underground operations for the Bengwenyama Project is a hybrid approach optimised for narrow reef orebodies, combining mechanised development with conventional stoping. This method enhances ore extraction while minimising dilution, supporting the safety and efficiency of mining operations. The process begins with the pre-development of mining blocks, involving off-reef haulage drives and centre gulleys (raises), which allow for the advancement of mining infrastructure. Hydro-powered handheld drills are employed for production drilling in the stopes, where the face advance is constrained by the length of the drill rods.

The orebody's strike determines the mining advance direction, with stoping carried out in a double-sided or breast mining layout. This configuration was selected to maximise available working faces, enhancing productivity. Access to the panels for both personnel and materials is provided through the raises, which are connected to subsequent levels to facilitate through ventilation.

Following blasting, the broken ore is scraped from the face along strike gullies utilising a scraper winch, depositing the material into loading bays at the bottom of the centre gully. Load haul dump ("LHD") vehicles then load the material in the muckbay and transport the ore to dump trucks stationed in the haulage drives. This integrated system ensures the efficient removal of material and maximises face availability, thus enhancing overall ore extraction and operational throughput. The hybrid approach strikes a balance between mechanised efficiencies and the adaptability of conventional stoping methods, contributing to safer and more effective mining.

3.3.2 Access Development

The mining operation will utilise a twin-decline system from surface to access the UG2 reef horizon. This system consists of two parallel declines, namely: a material decline and a conveyor belt decline. The material decline will facilitate the movement of personnel, equipment, and materials, while the conveyor belt decline will allow continuous ore transport utilising a conveyor system. The declines are designed for maximum efficiency, as illustrated in Figure 25, and are interconnected through haulages and crosscuts, which provide access to the orebody at different levels, enabling effective ore extraction and material flow.

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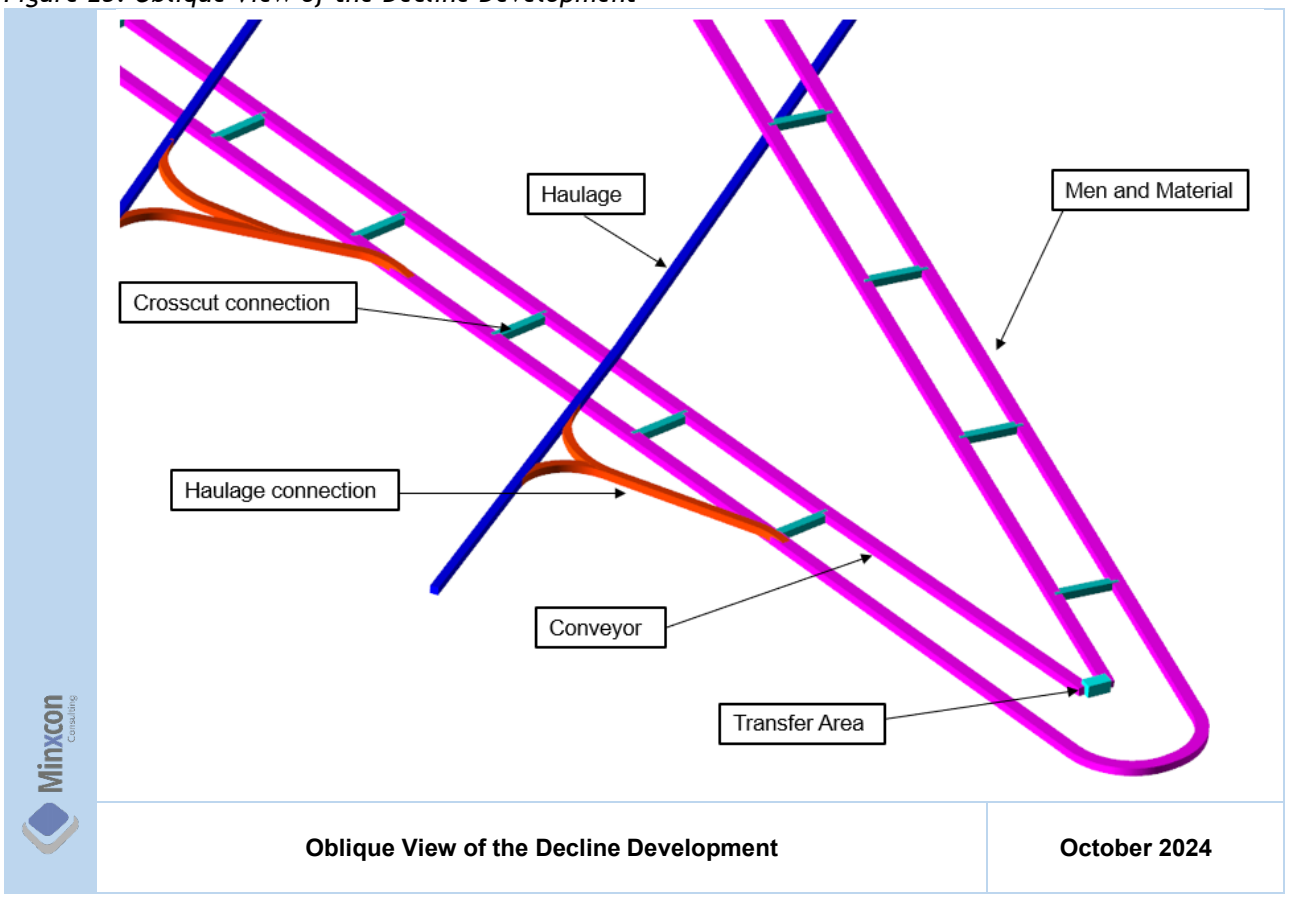
Figure 25: Oblique View of the Decline Development



3.3.2.1 Development Method

The development plan for the Bengwenyama Project will be conducted utilising mechanised drill rigs, targeting ore extraction close to the footwall while incorporating controlled portions of waste above and below the orebody to maintain the minimum stoping width of 100 cm. On-reef development includes the establishment of two access drives from the EAD to the first reef block and further extension towards adjacent reef blocks. The shortest possible off-reef drives will connect these reef blocks to maintain operational efficiency. The specific breakdown of these developments is detailed in Table 7, which outlines the on-reef and off-reef development ends required to achieve optimal access and infrastructure support for the mining operation.

The on-reef development ensures direct access to ore zones, enabling consistent extraction and ore recovery. Development extends along strike, progressing systematically toward adjacent reef blocks, diverging as necessary to optimise extraction.

The off-reef development includes minimal but strategically placed drives to connect reef blocks, ensuring essential infrastructure such as ventilation and transport systems are operational, thus supporting overall mining efficiency. The layout presented in Table 7 provides a clear delineation between on-reef and off-reef activities, ensuring effective coordination of development work.

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Table 7: On and Off-Reef Development

Off-Reef	Width	Height
	m	m
Declines		
Conveyor Belt (PD)	6.0	4.0
Men and Material (PD)	6.0	4.0
Early Access (EAD)	5.0	4.0
Return Airway (EAD)	4.0	4.0
Other		
Connecting Crosscuts	4.0	4.0
Haulage Connections	4.0	4.0
Crosscuts	4.0	4.0
Haulages	4.0	4.0
Transfer Area	6.0	6.0
Travelling way	1.5	1.8
Ventilation Connections	1.8	2.1
On-Reef	**Width**	**Height**
	m	m
Advance Strike Gulleys	1.5	1.8
Reef raises	1.8	2.1
Diagonal raises	1.8	2.1
Panel	23.5	1.0
Ledging	23.5	1.0

3.3.3 Stoping

Conventional breast stoping methods will facilitate mining from centrally located raises, allowing for simultaneous advancement in both directions. Stope panels will be drilled with handheld rock drills, ensuring precision in excavation. The blasting process will utilise emulsion explosives combined with a shock tube initiation system, promoting controlled and effective rock fragmentation. This method enhances operational efficiency while maintaining safety and structural integrity within the stope, in line with best mining practices. The conventional stoping panel layout utilised for design purposes is depicted in Figure 26, highlighting the systematic approach to ore extraction.

The UG2 reef is accessed through raises from off-reef haulage drives developed along the strike of the orebody. These panels are serviced by raises developed on the dip of the UG2 reef, with spacing set at 200 m centre to centre.

To facilitate efficient water drainage from the panel face, advance strike gulleys (“ASG”) are constructed at a 5° angle above the strike on either side of the raise. Strike cleaning operations will utilise scraper winches to transport material from the face along the ASG into the raise, where it will then be scraped down into a loading bay located at the base of the raise.

The design incorporates an average back length of 250 m, accommodating 10 panels, each measuring 25 m. Each panel features a face width of 23.5 m and is supported by in-stope pillars situated on the up-dip side. These pillars, measuring 4 m wide and 6 m in length and spaced 5 m apart, provide essential structural support. The level spacing between haulages is adjusted according to the reef dip, ensuring the design objective of 10 panels per raise line is consistently achieved.

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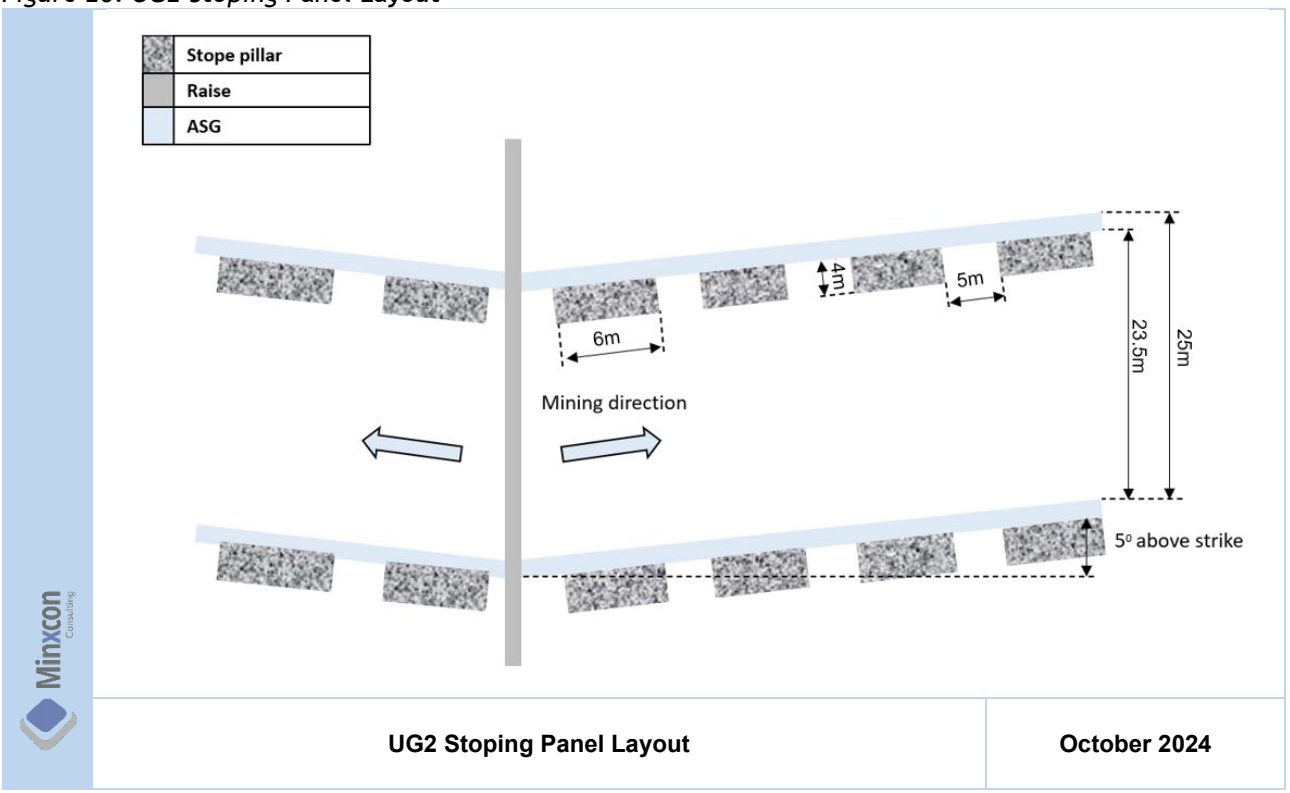
Figure 26: UG2 Stoping Panel Layout



3.4 Mine Design Areas

The Bengwenyama Project is divided into key mining areas, as illustrated in Figure 27, each contributing to the mine's design and operational efficiency. These areas include the Uwe Block, the Primary Access Block, the Early Access Block, and the Fill-up Areas:-

- Uwe Block: separated from the Primary Access Block by a fault zone that measures approximately 130 meters along the z-axis, creating a distinct structural boundary within the Project.
- Primary Access Block: a highly valuable block with Measured Resources, featuring long half levels, making it well-suited for sustained and efficient production.
- Early Access Block: developed early in the Project to enable quick access to ore blocks with Measured Resources, supporting early-stage production.
- Fill-up Areas: utilised to maintain consistent production by filling output gaps, with some lower-grade ore present in the northern fill-up areas.

Each of these zones plays an essential role in achieving a balanced and effective life of mine plan.

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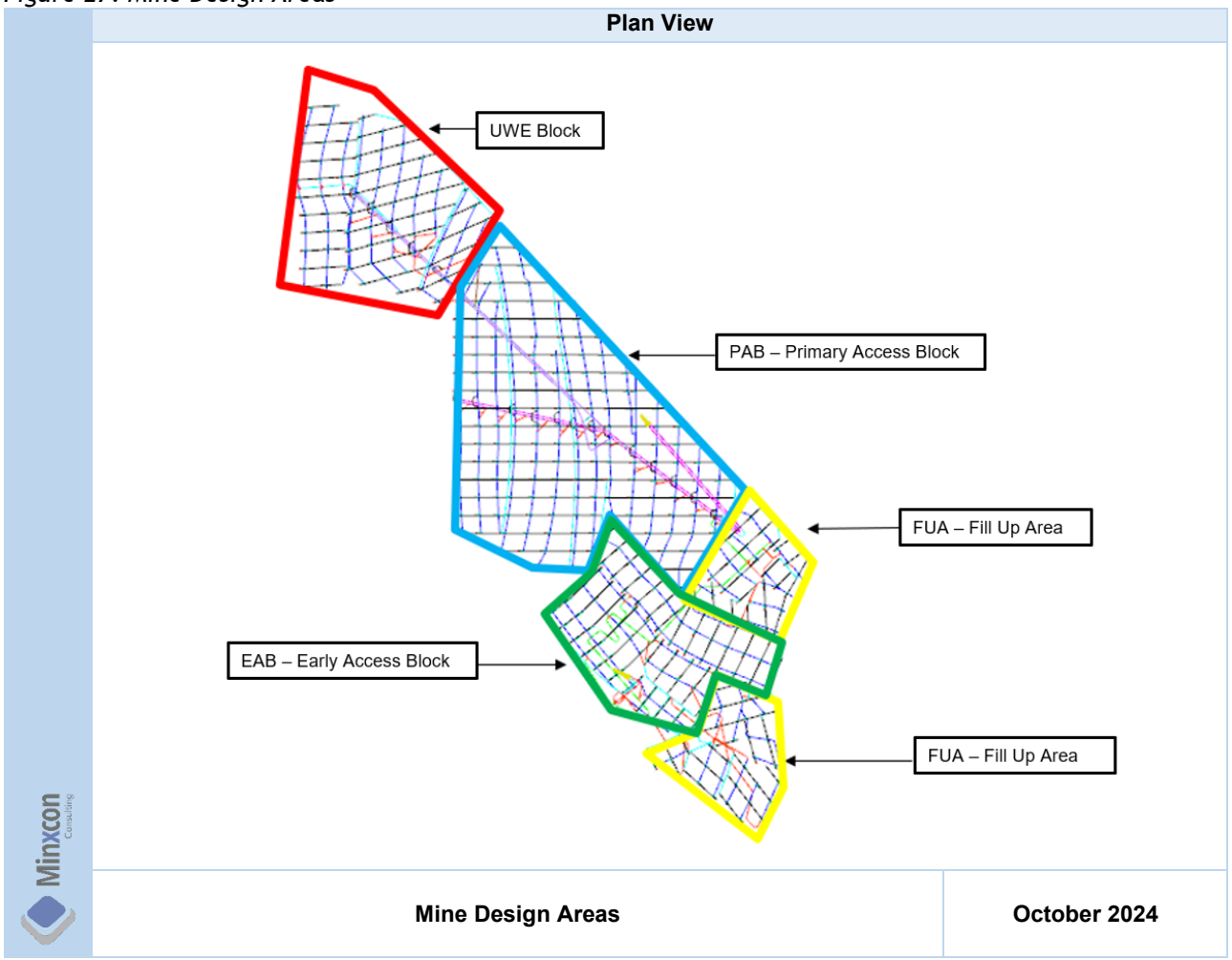
Figure 27: Mine Design Areas



3.5 Mine Design

The mine design for the Bengwenyama Project was developed utilising Deswik.CAD software, a sophisticated tool within the comprehensive suite of Deswik mine planning programs. Illustrated in Figure 28, the design incorporates essential elements such as raises, haulages, and box-cuts, which provide access to the Primary and Early Access Declines. These features are strategically integrated to optimise the overall efficiency and functionality of the mining operation. Effectively, ore mining will begin 50 m below the surface.

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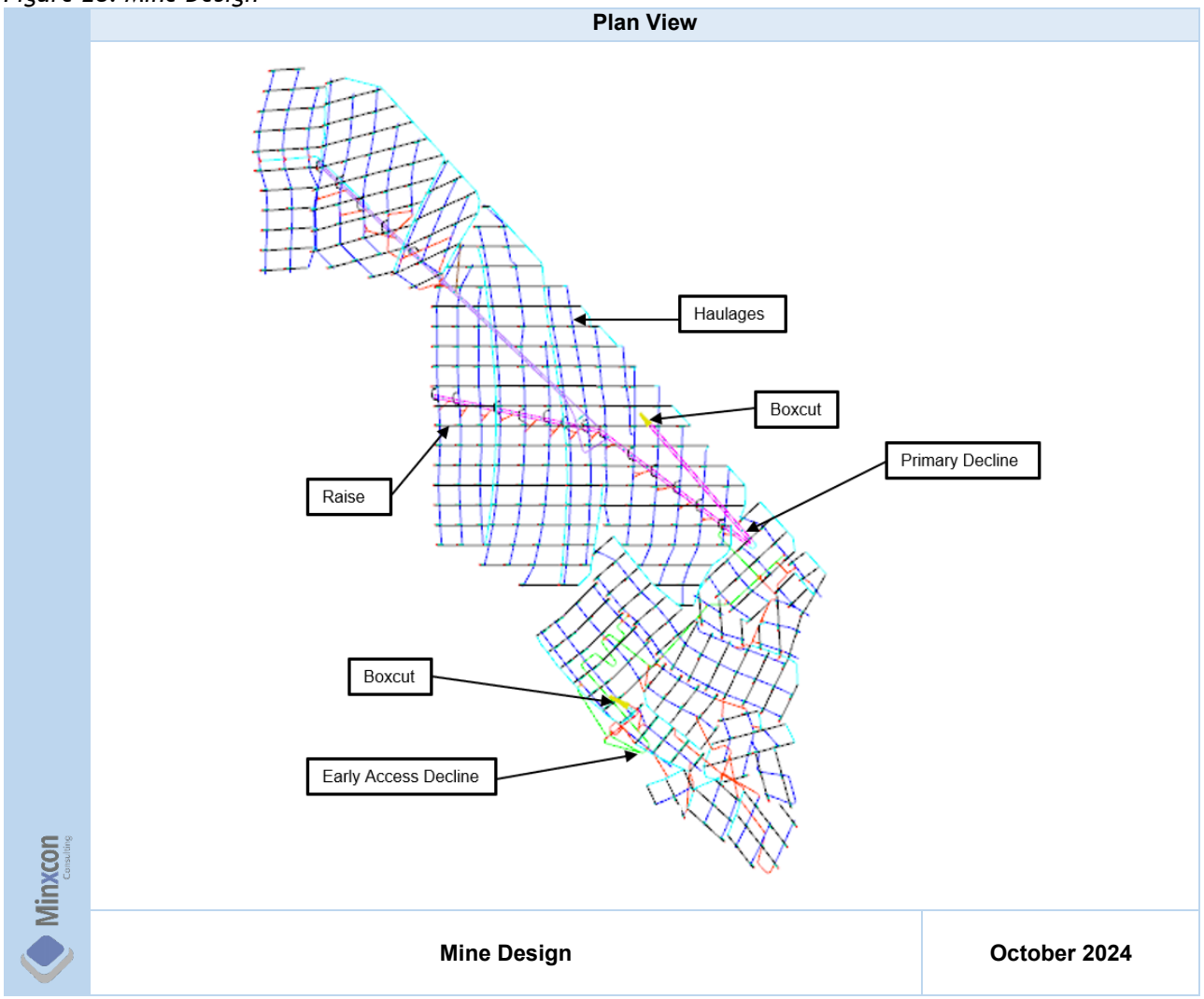
Figure 28: Mine Design



3.6 Mining Inventory

3.6.1 Mining Conversion Factors

The JORC Code defines modifying factors as mining, metallurgical, economic, marketing, legal, environmental, social and governmental considerations that are utilised to convert Mineral Resources to Ore Reserves. A summary of the applicable conversion factors applied to UG2 operations are indicated in Table 8.

Table 8: Mining Conversion Factors

Factors		Unit	Value
Geological Loss	Measured	%	19, 37
	Indicated	%	15, 25, 27
	Inferred	%	15, 25, 27, 36
Pillar Loss		%	subject to design
Panel Stoping Width		cm	100
Mine Call Factor		%	95

Note: **1.** Mining conversion factors are only applicable to on-reef tonnes.
2. No additional geological loss factors was applied apart from the Mineral Resource Geological loss factors that was applied.

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3.6.2 Geological Losses

Geological loss factors were incorporated to address geological uncertainties associated with various Mineral Resource categories. Geological losses were applied to Mineral Resources categorised as Measured, Indicated and Inferred respectively. These geological loss factors were applied to the UG2 reef to account for the inherent uncertainties within these resource categories. The factors can be found in Table 9 where the geological losses are divided into their respective blocks and areas that they are found in.

Table 9: Geological Losses per Block

Block Area	Block Number	Unit	Geological Losses
Fill Up Area	1	%	27
	2	%	27
	3	%	27
	4	%	27
	5	%	27, 37
Early Access	6	%	27, 37
	7	%	27, 37
	8	%	27, 37
	9	%	27, 37
	10	%	15, 19, 27, 37
Fill Up Area	11	%	15
	12	%	15
	13	%	15, 27
	14	%	15
	15	%	15
	16	%	15
	17	%	15
	18	%	15
Primary Access	19	%	15, 19, 27
	20	%	15, 19
	21	%	15, 19
	22	%	15, 19
	23	%	15, 25
Uwe Block	24	%	25
	25	%	25, 36
	26	%	25, 36

Figure 29 illustrates the varying percentages of geological losses in areas within the Bengwenyama Project.

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Figure 29: Geological Loss Areas

3.6.3 Pillar Losses

A pillar provision was allocated to all Mineral Resources within the LoM plan. This provision accounts for the potential inclusion of rock mechanic pillars strategically left in place to provide essential local and regional support within the designated mining areas. A pillar requirements study for the Bengwenyama Project has been completed by an independent rock engineering company, Open House Management Solutions ("OHMS"). Pillar losses were calculated from rock engineering recommendations and applied to the design to account for *in situ* material which will not be mined and left as pillars. The different extraction percentages, based on the depth below surface are listed in Table 10, and applied to the design to account for *in situ* material which will not be mined and left as pillars. A crown pillar was also incorporated into the mine design of 50m.

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Table 10: OHMS Pillar Extraction Percentage

Depth Below Surface	Pillar Width	Pillar Length	Panel Length	Mining Height	W:H Ratio	Factor of Safety	Percentage Extraction
0	4	6	5	1.0	4.8	6.8	90.9%
40	4	6	5	1.0	4.8	6.8	90.9%
60	4	6	5	1.0	4.8	4.5	90.9%
80	4	6	5	1.0	4.8	3.4	90.9%
100	4	6	5	1.0	4.8	2.7	90.9%
120	4	6	5	1.0	4.8	2.3	90.9%
140	4	6	5	1.0	4.8	1.9	90.9%
160	4	6	5	1.0	4.8	1.7	90.9%
180	6	6	5	1.0	6.0	2.3	87.4%
200	6	6	5	1.0	6.0	2.1	87.4%
220	6	6	5	1.0	6.0	1.9	87.4%
240	6	6	5	1.0	6.0	1.8	87.4%
260	6	6	5	1.0	6.0	1.6	87.4%
280	7	8	5	1.0	7.5	2.1	84.0%
300	7	8	5	1.0	7.5	2.0	84.0%
320	7	8	5	1.0	7.5	1.9	84.0%
340	7	8	5	1.0	7.5	1.8	84.0%
360	7	8	5	1.0	7.5	1.7	84.0%
380	8	9	5	1.0	8.5	1.9	81.6%
400	8	9	5	1.0	8.5	1.8	81.6%
420	8	9	5	1.0	8.5	1.7	81.6%
440	8	9	5	1.0	8.5	1.7	81.6%
460	8	9	5	1.0	8.5	1.6	81.6%
480	9	10	5	1.0	9.5	1.8	79.3%
500	9	10	5	1.0	9.5	1.7	79.3%
520	9	10	5	1.0	9.5	1.7	79.3%
540	9	12	5	1.0	10.3	1.8	78.1%
560	9	12	5	1.0	10.3	1.7	78.1%
580	9	12	5	1.0	10.3	1.7	78.1%
600	9	12	5	1.0	10.3	1.6	78.1%

3.6.4 Dilution

Illustrated in Figure 30, dilution refers to the addition of waste material into the ore during the mining process, which subsequently enters the primary crusher or is transported to the processing plant. While this increases the overall tonnage of ore, the inclusion of waste, having either no mineral grade or a low-grade value, ultimately reduces the overall ore grade delivered to the plant.

In the context of the Bengwenyama Project, a specific dilution factor of 10 cm was implemented. This approach involves modifying stoping widths based on predetermined criteria: stoping widths less than 90 cm are increased to 100 cm as the minimum stoping width is 1.0 m.

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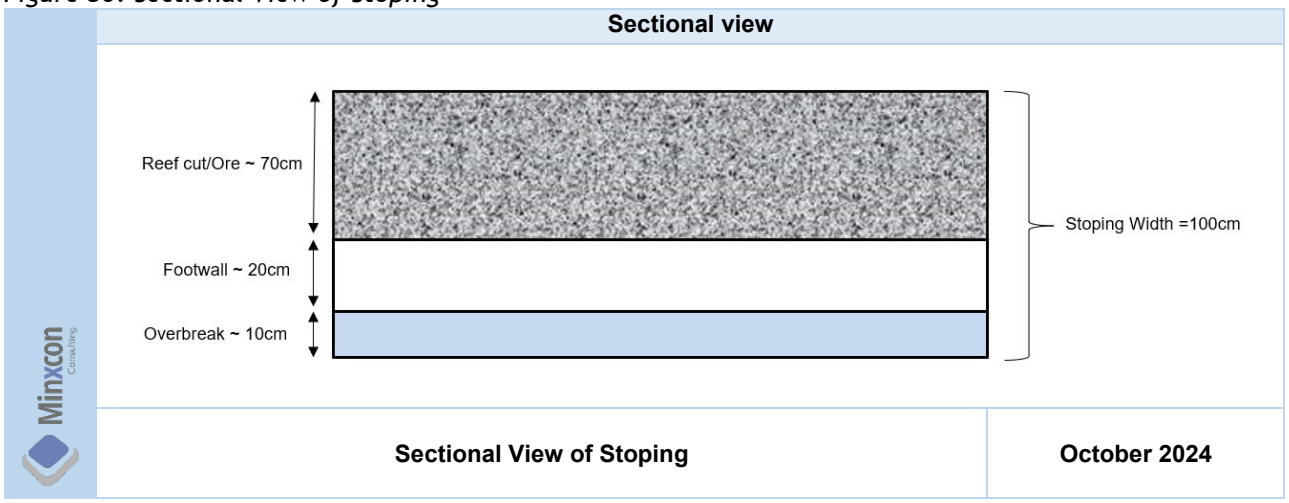
Figure 30: Sectional View of Stoping



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3.6.5 Mine Call Factor

The Mine Call Factor ("MCF") is a percentage ratio that compares the actual quantity of a specific product recovered, including residues, against the quantity indicated by the mine's measurement techniques.

A decrease in MCF often results from various factors, including inaccuracies in measurements, sampling errors, misclassification of content as waste during surface handling, ore loss during tipping, accumulation of ore and debris, and losses during the processing stage. It is important to note that MCF primarily impacts the grade of the recovered product and does not influence the total feed tonnes processed by the plant.

For underground operations, a specific MCF of 95% was applied, drawing from insights and experiences gained in similar mining operations.

3.6.6 Life of Mine Plan

3.6.6.1 Diluted Mineral Resource in LoM plan

The Mineral Resource category is a classification system utilised to estimate the quantity and quality of mineral deposits based on geological confidence levels. It includes three primary classifications: Measured, Indicated, and Inferred Resources.

Measured Resources have the highest confidence level, with detailed geological data available. Indicated Resources are based on less detailed information but provide a reasonable level of confidence. Inferred Resources are estimated with the least confidence, relying on limited geological data.

Table 11 presents the tonnage and grades for 6E (including iridium and ruthenium) across these categories, detailing their respective contents in Measured, Indicated, and Inferred classifications.

Table 11: Diluted Mineral Resource in LoM plan

Mineral Resource Categories	Tonnes	Grade 6E	Content 6E	Contribution
	Mt	g/t	Moz	%
Measured	8.63	6.61	1,834	19%
Indicated	23.09	6.00	4,457	51%
Inferred	13.54	5.94	2,586	30%
Total	**45.26**	**6.10**	**8,876**	**100%**

3.6.6.2 Mineral Resources depleted in LoM Plan

Table 12 details the Mineral Resources in the LoM plan before mining conversion factors were applied. This effectively compares back to the Mineral Resource statement which is also declared before mining conversion factors.

Table 12: Undiluted Mineral Resources depleted in LoM Plan

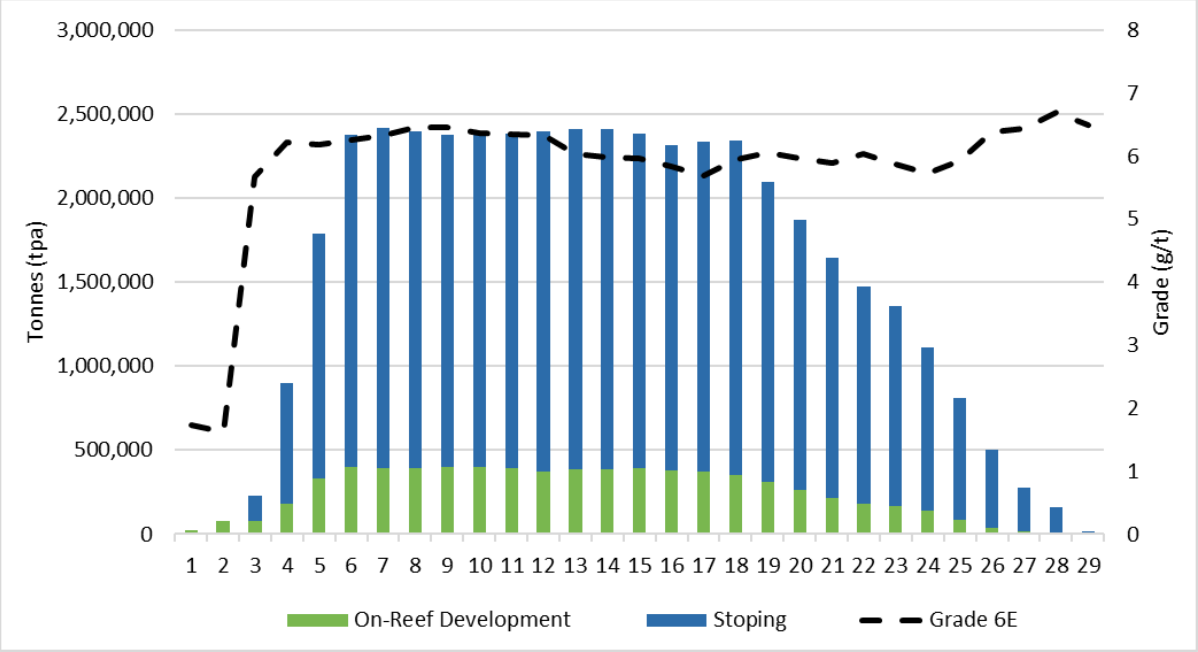
Mineral Resource Categories	Tonnes Mt	Grade 6E g/t	Content 6E Moz	Contribution %
Measured	7.34	9.79	2.31	20%
Indicated	18.18	9.59	5.61	50%
Inferred	11.04	9.60	3.41	30%
Total	**36.56**	**9.63**	**11.32**	**100%**

3.7 Production Scheduling

3.7.1 Diluted Life of Mine Plan Schedule

The LoM plan production schedule is detailed in Figure 31.

Figure 31: Life of Mine Production Schedule



3.7.2 Mineral Resources Category Diluted Life of Mine Plan

The mining area in the Mineral Resource category is illustrated in Figure 32, highlighted in the outlined zone.

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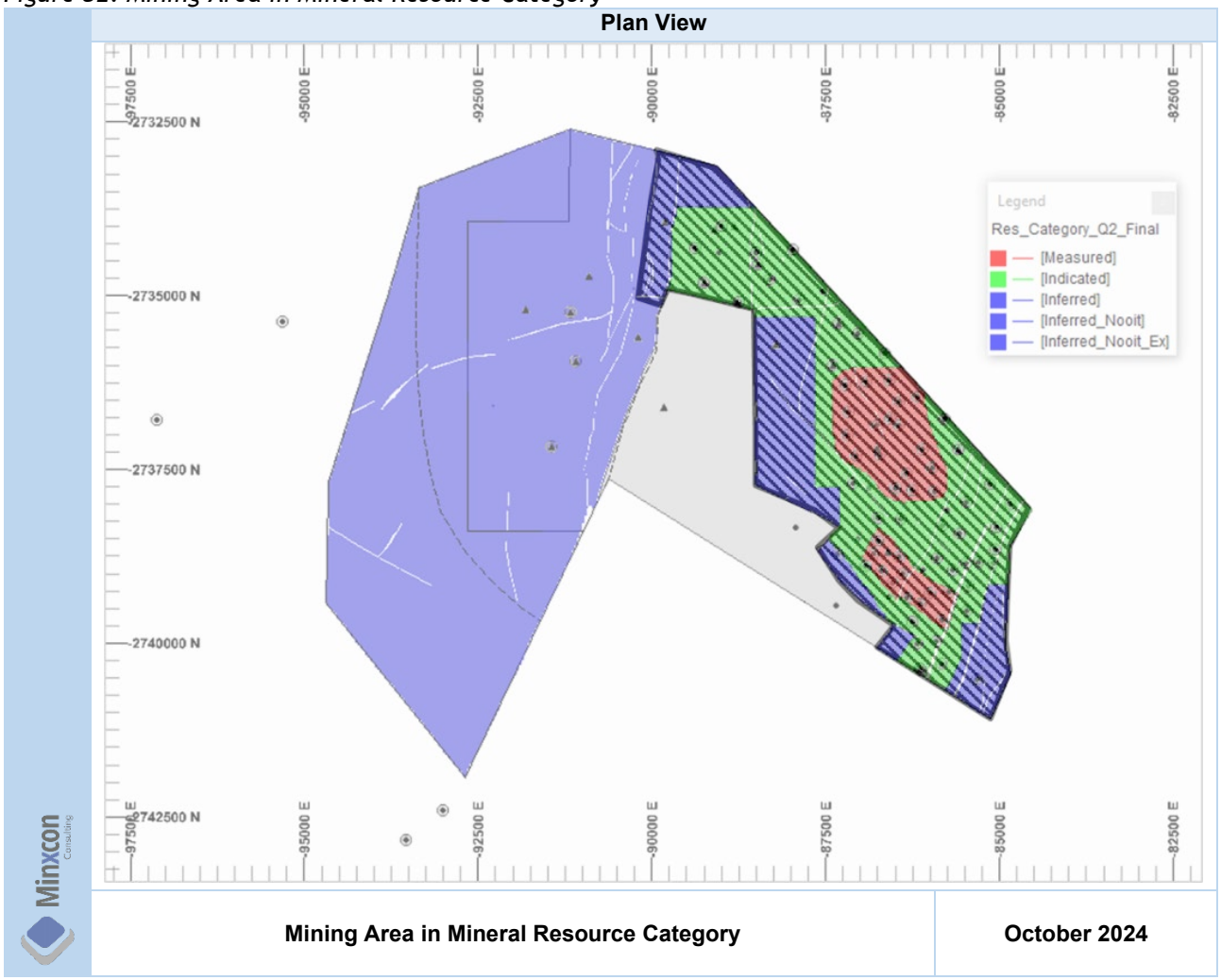
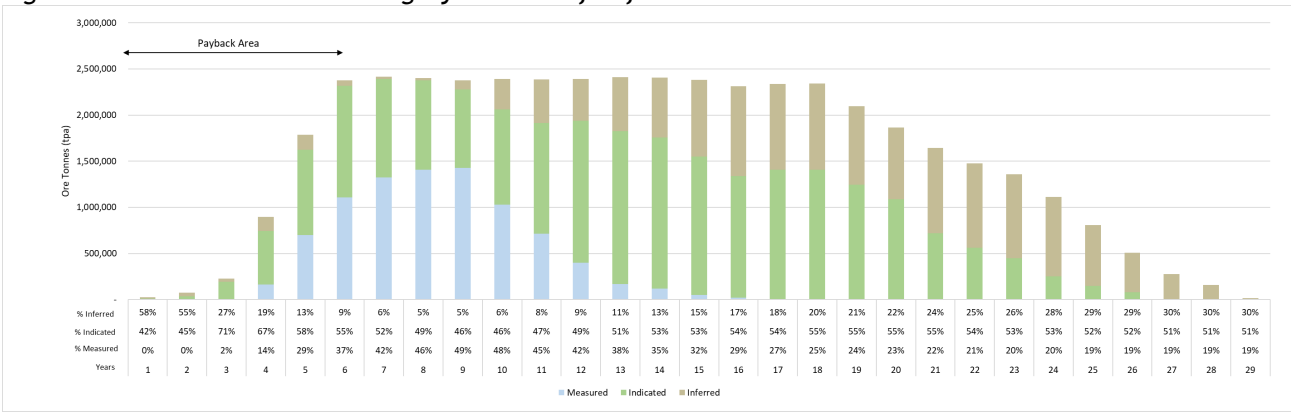
Figure 32: Mining Area in Mineral Resource Category



The LoM plan per Mineral Resource category is detailed in Figure 33, also detailing the cumulative % Mineral Resource category mined in years. The graph illustrates that 91% of the tonnes mined in the payback period (6years) is in the Measured and Indicated Mineral Resource category. A total of 7.8 Moz 6E remains after the payback period.

Figure 33: Mineral Resource Category Diluted Life of Mine Plan



The stoping and development production schedule is illustrated in Figure 36, highlighting the payback period.

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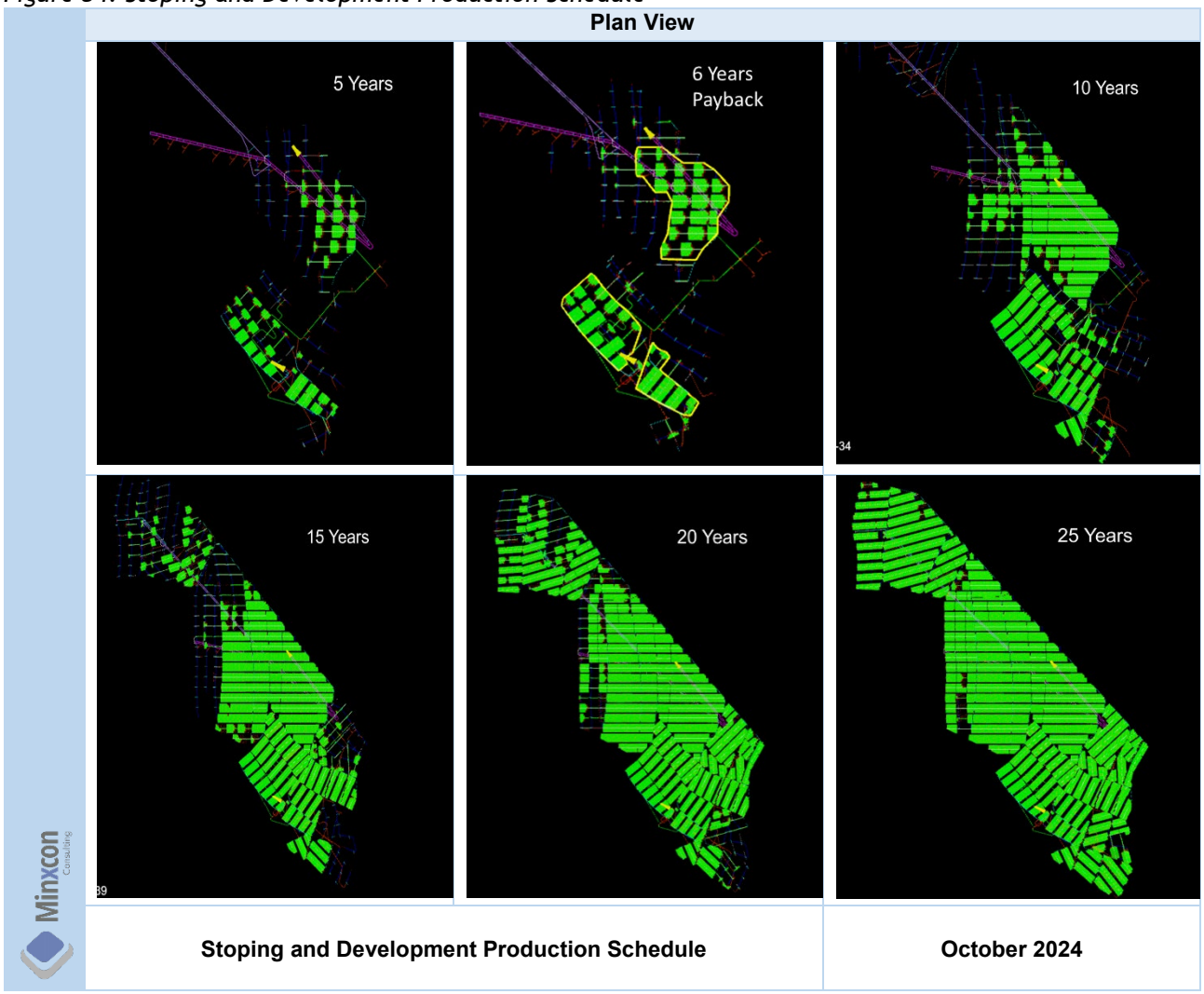
Figure 34: Stoping and Development Production Schedule



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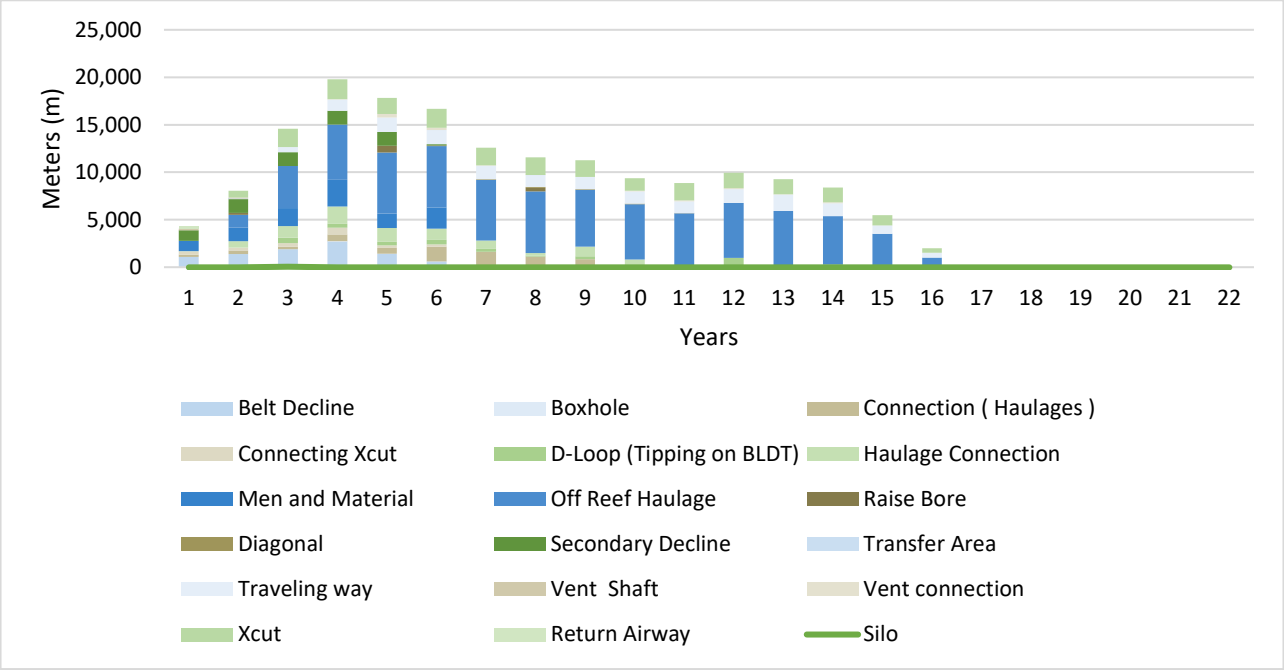
3.7.3 Development Schedule

The development schedule is detailed in Figure 35. This figure offers an in-depth portrayal of the planned progression of development activities throughout the Project life cycle. It outlines the key elements in the design of the Bengwenyama Project. This also illustrates the different phases, milestones, and timelines that will guide the systematic advancement of the mining operations.

Figure 35: Life of Mine Development Schedule



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4 METALLURGY

The PGM recovery to be expected is supported by testwork and can be demonstrated as 85% on a 6E basis. Chromite recovery has been tested and a recovery of 30% can be demonstrated from testwork. Copper recovery of 75% and nickel recovery of 30% can also be supported from testwork. The 6E concentrate grade of 127 g/t can be calculated when the RoM feed grade is 6.16 g/t.

The sample used for the first test campaign originated from the remainder of core sample testing. This implies that the specific bore hole location and associated mass of sample are known. This data provides required confidence of representativity of the composite sample made from the different core samples. The composite sample was the source of the test material for the different tests carried out.

4.1 Flotation Test Campaign

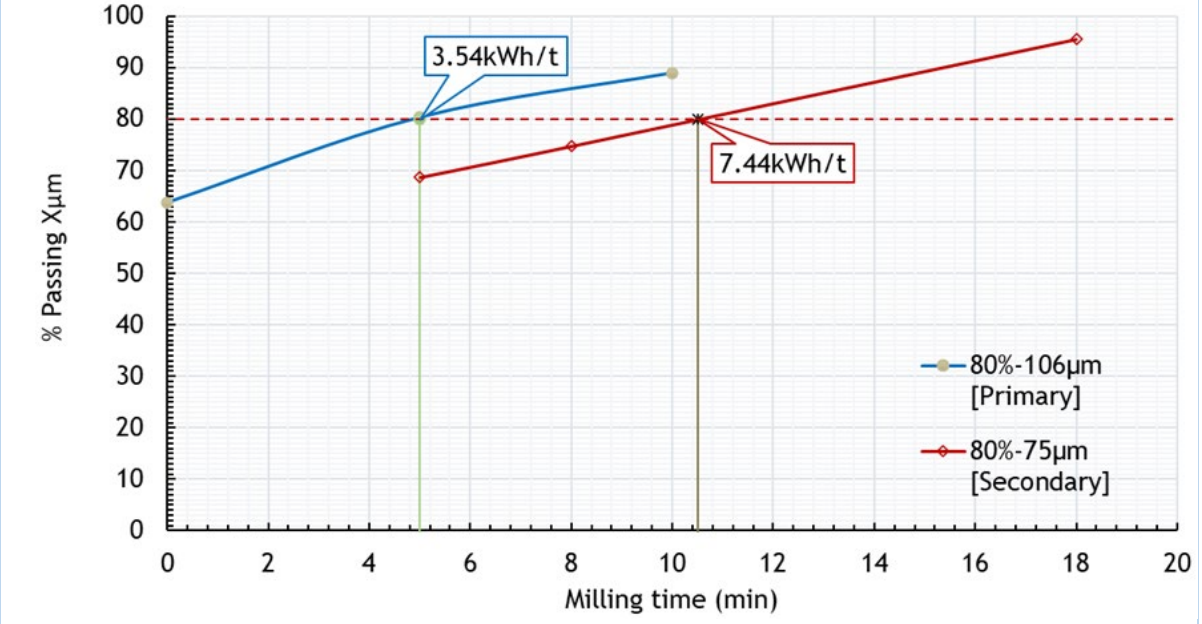
4.1.1 Head Chemical Analysis

The 4E head grade of the composite sample is 7.95 g/t (from 3 different constituent samples). All grades assayed on this test was limited to 4E.

4.1.2 Milling Curve

Figure 36 illustrates the milling curves developed for the sample. The line labelled as 3.54 kWh/t represents the test performed to determine the energy required to obtain the feed size distribution from the primary mill discharge that is required for primary flotation. The test result provided the energy requirement to produce a size distribution of which 80% by mass is sized as large as 106 micrometres for each tonne milled. Similarly, the line labelled as 7.44 kWh/t is the energy requirement to produce a feed for secondary flotation sized at 80% by mass as large as 75 micrometres for each tonne milled.

Figure 36: Primary Milling Curve (3.54 kWh/t) and Secondary Milling Curve (7.44 kWh/t)



Source: Suntech Geomet.

Primary Milling Curve (3.54 kWh/t) and Secondary Milling Curve (7.44 kWh/t)	October 2024

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4.1.3 Locked Cycle Test

Figure 37 indicates the 2x Mill Float (“MF2") locked cycle flotation test protocol. The test was conducted by using a flotation circuit similar to a conventional MF2 PGM recovery process plant. The test is conducted by feeding test material in increments and recycling the tailings as indicated in the diagram for a total of 6 cycles. The test simulates steady state conditions to be expected during stable process plant operations.

The test result indicates the recovery to be expected during full scale process plant operations. This test performed on the test material provides the support for the 85% recovery and a grade of 100 g/t on a 6E basis. The diagram also provides the test protocol used and includes the reagents used, the dosages used and the residence time in every part of the flotation circuit.

The locked cycle test feed material was split off from a composite sample (from a 32 kg composite sample) with 4E PGM grade of 7.95 g/t.

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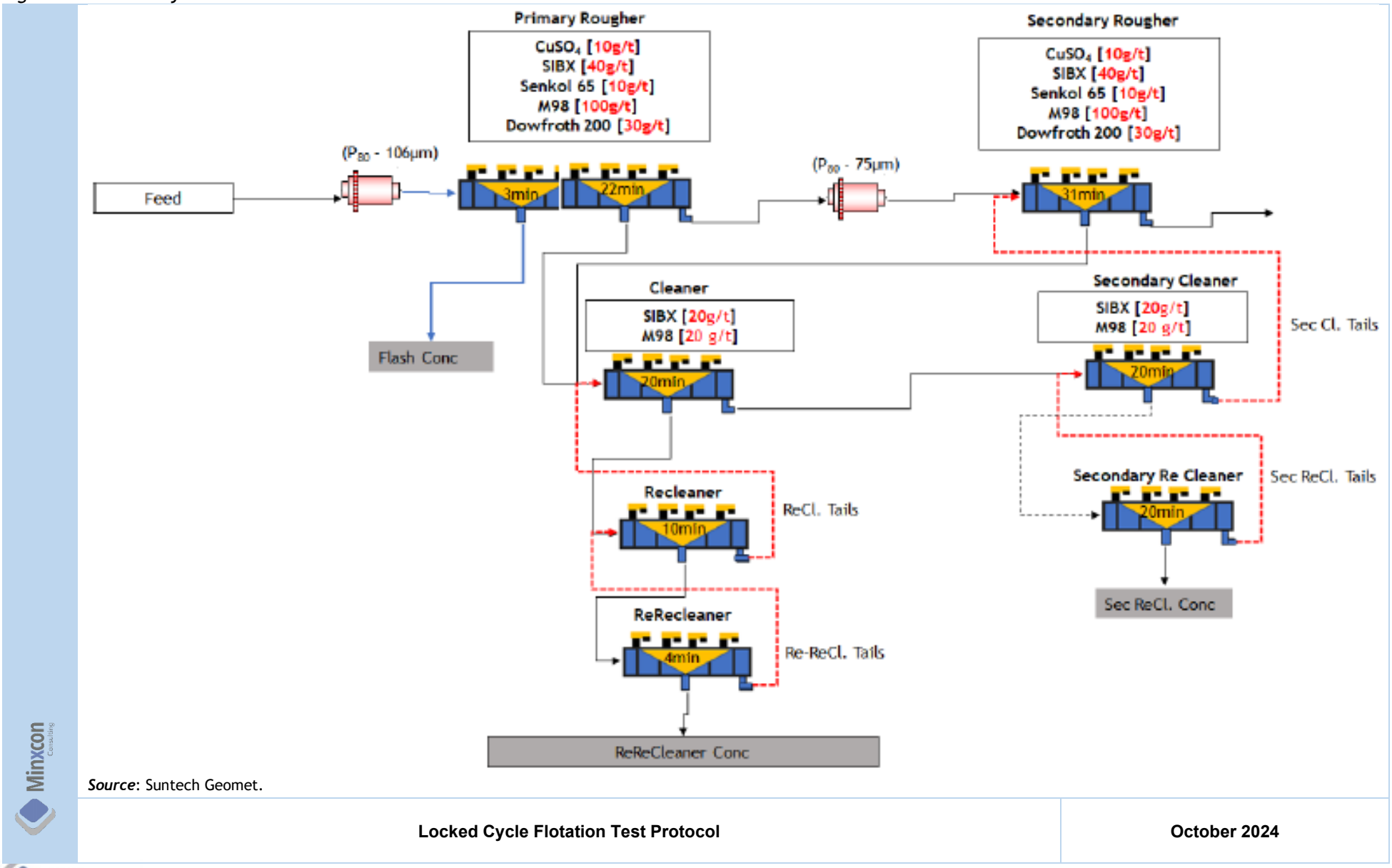
Figure 37: Locked Cycle Flotation Test Protocol

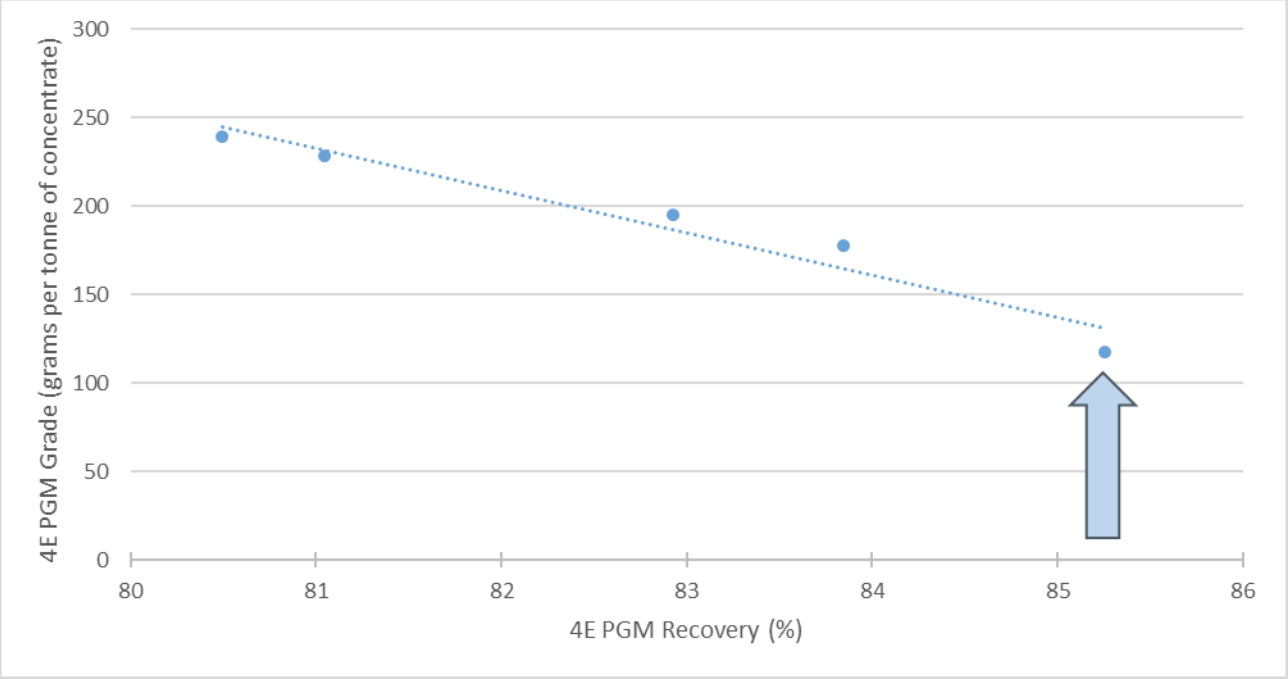


Source: Suntech Geomet.

Locked Cycle Flotation Test Protocol	**October 2024**

Figure 38 illustrates that the 4E grade of 238 g/t obtained during the testwork. The graph illustrates the 4E concentrate grade of 238 g/t that was obtained with an associated 4E recovery of 80.5%. The relationship further illustrates that a lower grade is associated with a higher recovery. For instance, a recovery of 85% will provide a 4E grade of about 140 g/t for the conditions used in this locked cycle test.

Figure 38: Grade-Recovery Relationship Obtained from Locked Cycle Test



Subsequent rougher kinetic testwork which was conducted with an optimised reagent suite, delivered a result of 85% recovery on a 6E basis. It is noted that this subsequent test did not test the cleaning of the rougher concentrate. The concentrate grade is not reported as it is not a locked cycle test. The financial model uses a 6E recovery of 85% and a 6E grade of 100 g/t.

4.1.4 Tailing Particle Size Distribution

Figure 39 indicates that a secondary regrind finer than 80% by mass sized as large as 53 micrometres should be tested due to determine if the lock-up of approximately 58 % of the PGM minerals that are locked up in the flotation tailings within the size range of 75 micrometres to 53 micrometres.

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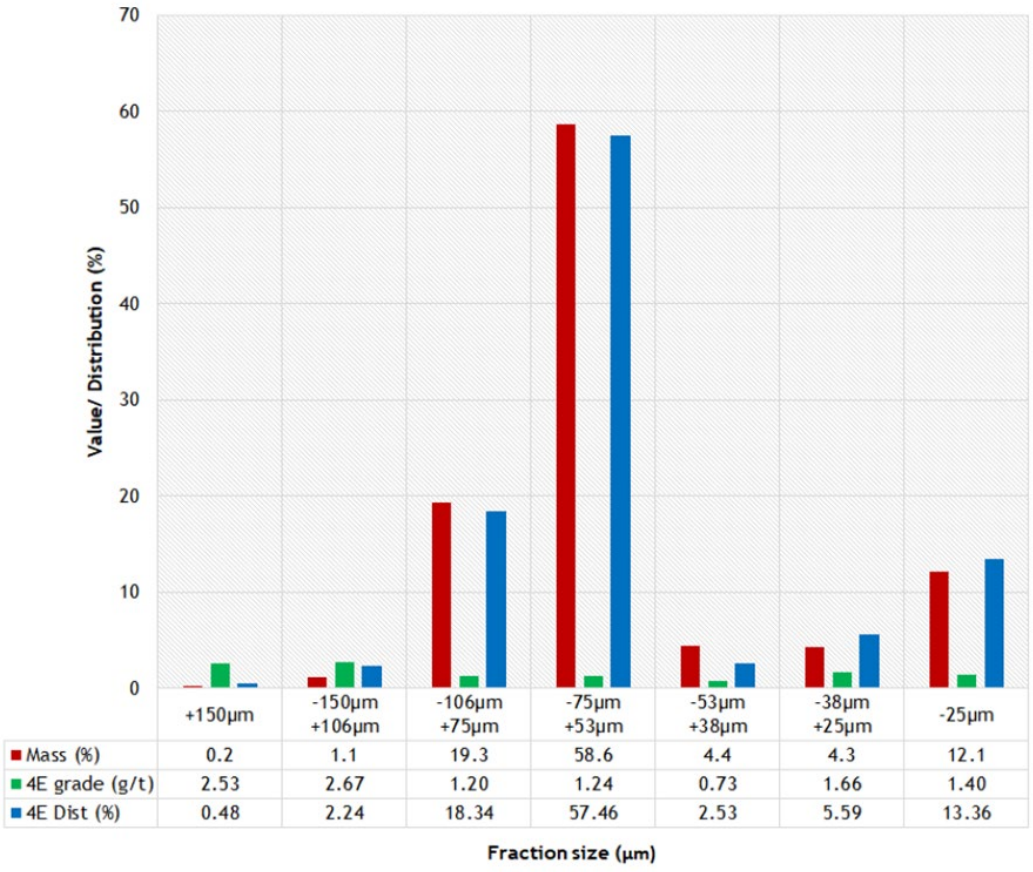
Figure 39: Distribution of Ore Particles in Tailings: Size by Mass; Size by 4E Grade and Size by 4E Distribution by Mass



Source: Suntech Geomet.

Distribution of Ore Particles in Tailings: Size by Mass; Size by 4E Grade and Size by 4E Distribution by Mass	October 2024

4.2 Mineralogical Test Campaign

Table 13 shows that 97.4% of the PGM particles analysed is floatable and only 2.6% is unrecoverable via flotation. The middling is defined as a particle which exhibits a PGM mineral grain that is partly liberated and exposed and partly locked and unexposed. A middling thus can report to the flotation concentrate due the fraction that is partly liberated and exposed and has the potential to attach to a bubble and float to the concentrate.

Table 13: Floatability Index of Bengwenyama UG2 PGM Mineralogy Analysis

Particle Description	Flotation Rate	Mass Fraction %
Well exposed, coarse, liberated	Very fast floating	47.3
Well exposed, fine, liberated	Fast floating	28.1
Moderately exposed, coarse middlings		
Moderately exposed, fine middlings	Medium floating	9.3
Moderately exposed locked		
Poorly exposed middlings	Slow floating	12.7
Poorly exposed locked		
Not exposed	Unrecoverable	2.6
Total		**100**

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4.3 Coarse and Fine Shaking Table Test Campaign

The chromite recovery obtained from the first shaking table test campaign was 61% by mass from the coarse table's combined concentrate and middling. The grade of the coarse table concentrate was 40%. The coarse table was fed with the deslimed primary flotation rougher tailings that was milled to a size of 80% smaller than 106 micrometres. The slime fraction was removed by screening at 25 micrometres. The coarse table tailings was reground together with the slime fraction. The secondary flotation rougher was fed with the secondary mill discharge. The secondary rougher tailings were subsequently fed to a fines table and the concentrate from the fines table achieved a grade of 31% at 5% recovery.

The recovered chromite concentrate grade used in the financial model is 42% by mass.

The sample used for the test campaign originated from core sourced from various locations within the ore resource body. This implies that the specific bore hole location and the associated mass of the sample are known. This data provides required confidence of representativity of the composite sample made from different core samples. The composite sample was the source of the test material for the tests carried out.

The chromite grade of the composite sample was 32% by mass (from a 24 kg composite sample).

Table 14 indicates the 6E assay of the composite sample used for the test campaign.

Table 14: Average Head Grade of Composite Test Sample

Grade	6E PGM	Chromite	Copper	Nickel
Unit	Gram per Tonne	Mass Percent	Gram per Tonne	Gram per Tonne
Composite Sample	7.8	32.1	382	1,571

The chromite recovery was measured by results from gravity testwork and the copper and nickel recovery was measured by rougher kinetic flotation testwork. No cleaning flotation testwork was performed. This flotation testwork was necessary to generate flotation tailings that could be subjected to gravity testwork.

The testwork was performed with a composite sample with a total mass of 10 kg which was split off the master sample of 24 kg. The sample size distribution was milled to 80% by mass smaller than 106 micrometres. The whole sample was then fed to a primary rougher kinetic test. The 6E PGM recovery from the primary rougher kinetic test was 74.2%. The deslimed primary rougher tailings, with slimes smaller than 25 micrometres removed, were fed to a coarse shaking table.

The coarse concentrate and middlings from the coarse shaking table, achieved a chromite grade of 40% at a recovery of 61%. The 6E PGM associated with the coarse-chromite concentrate was 7.5% of PGM contained in the head feed.

The coarse shaking table tailings, together with the slimes from the primary rougher kinetic test tailings, were subsequently re-milled to reduce the size distribution to 80 mass percent smaller than 75 micrometres. This re-milled sample was then fed to a secondary rougher kinetic test. The PGM recovery from the secondary rougher kinetic test was 10.9% of PGM contained in the head feed.

The secondary rougher tailings were fed to a fine shaking table.

The fine concentrate from the fine shaking table, achieved a chromite grade of 31.5% at a recovery of 5.0%. The PGM loss associated with the fine- chromite concentrate was 0.74% of the PGM contained in the head feed. The overall PGM reported to the shaking table concentrates was 8.3% of the PGM contained in the head feed.

The overall results from the flotation test are indicated in Table 15.

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Table 15: Overall Flotation Rougher Concentrate Grade and Recovery

Grade	6E PGM	Chromite	Copper	Nickel
Unit	Gram per Tonne	Mass Percent	Gram per Tonne	Gram per Tonne
Rougher Concentrate	102.1	17.4	3,771	6,258
Recovery	**6E PGM**	**Chromite**	**Copper**	**Nickel**
Unit	**Mass Percent**	**Mass Percent**	**Mass Percent**	**Mass Percent**
Rougher Concentrate	85.1	4.1	75.8	30.6

The primary rougher tailings were first screened to deslime the tailings over a 25-micrometre screen. The slimes constituted 23.7% of the tailings by mass. The deslimed tailings were then fed to a coarse shaking table. The overall recovery and grade achieved are shown in Table 16.

Table 16: Overall Shaking Table Grade and Recovery

Grade	6E PGM	Chromite	Copper	Nickel
Unit	Gram per Tonne	Mass Percent	Gram per Tonne	Gram per Tonne
Table Concentrate	0.02	34.5	1	11.6
Recovery	**6E PGM**	**Chromite**	**Copper**	**Nickel**
Unit	**Mass Percent**	**Mass Percent**	**Mass Percent**	**Mass Percent**
Table Concentrate	14	91.7	22.2	64.2

The recovery obtained for chromite over the coarse shaking table has been verified by a major original gravity equipment manufacturer as being representative of chromite recovery from a non-diluted UG2 reef feed. In full scale operation, dilution will be a factor which will reduce the chromite feed grade in the run-of-mine feed to 18%. The UG2 reef grade for chromite is 32%. The waste material reporting with the rougher tailings will also be directed over the gravity circuit and could likely reduce the recovery of chromite and the saleable grade of 42% could be produced.

4.4 Second Coarse Shaking Table Test Campaign

The coarse shaking table test was repeated to determine how recovery and grade each varied with yield. The cumulative chromite recovery obtained from the second shaking table test campaign was 71.2% by mass when using the composite sample chromite content and 81.8% when using the chromite content in the coarse shaking table feed. The associated cumulative grade obtained was 38.8% which calculated from the chromite content in both concentrates and both middlings.

The sample used for the test campaign originated from core sourced from various locations within the ore resource body. This implies that the specific bore hole location and the associated mass of the sample are known. This data provides required confidence of representativity of the composite sample made from different core samples. The composite sample was the source of the test material for the tests carried out.

The coarse table was fed with the deslimed primary flotation rougher tailings that was milled to a size of 80% smaller than 106 micrometres. The slime fraction was removed by screening at 25 micrometres. The chromite grade of the composite sample was 34.4% by mass (from a 2.71 kg sample taken from the 24 kg composite sample). The results from the second test are indicated in Table 17.

Table 17: Test Results from the Second Coarse Shaking Table Campaign

Source	Stream	Chromite Grade	Chromite Recovery	Chromite Yield
	Unit	Mass Percent	Mass Percent	Mass Percent
Composite	Head Feed	34.4	100	100
Primary Rougher	Concentrate	14.4	1.7	4.1
Coarse Table	Concentrate 1	40.5	5.5	4.6
Coarse Table	Concentrate 2	41.8	17.3	14.3
Coarse Table	Middling 1	39.3	18.0	15.8
Coarse Table	Middling 2	36.7	30.4	28.5
Coarse Table	Tailings	27.7	15.8	19.6
Primary Rougher	Tailings Slimes	29.7	11.3	13.1

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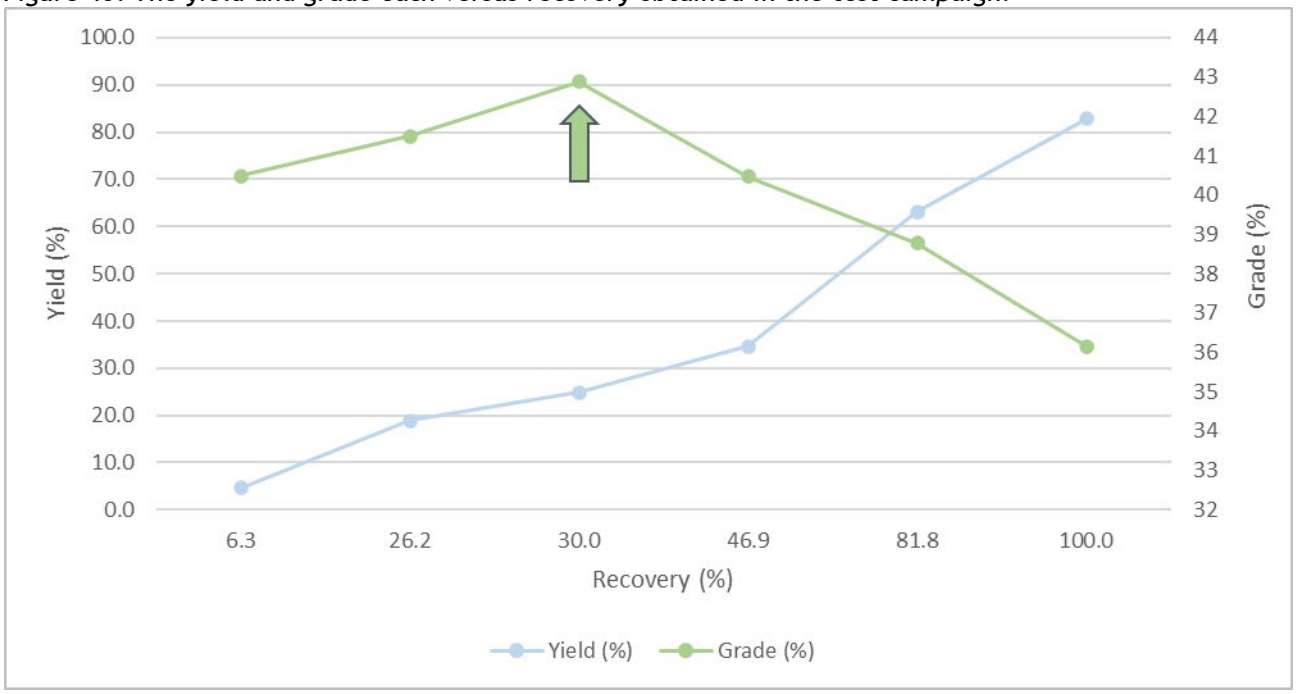
The target chromite concentrate grade is at least 42% by mass. This is possible if the middlings are cleaned and upgraded. Cleaning gravity testwork was not performed during the test campaign.

Figure 40 shows the cumulative grade and recovery each versus cumulative yield obtained in the test campaign. The chromite content in the shaking table feed, is lower than the RoM grade due to content reported out in the flotation test primary rougher concentrate and also that contained in the slimes.

The financial model uses a chromite recovery of 30% to obtain a grade of 42%.

Figure 40: The yield and grade each versus recovery obtained in the test campaign.



4.5 Metallurgical Testwork Sample Sources

Figure 41 illustrates the drill holes locations where the drill cores were taken from for metallurgical testwork. The testwork was performed with two different composites. The first composite yielded an approximate 32 kg sample, and the second composite yielded an approximate 24 kg sample.

Table 18 illustrates the drill hole identification and the associated mass from each drill hole that was utilised to make the tow composite samples that were illustrates for metallurgical testwork. The 32 kg sample material originated from the assay remainer from 22 boreholes (approximately 16 kg) and from five full drill cores (approximately 16 kg). The whole 24 kg sample material originated from 7 drill cores.

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Table 18: Metallurgical Sample Composite Source Description

	32 kg Composite				24 kg Composite	
Count	**Assay ID**	**Mass**	**Core ID**	**Mass**	**Core ID**	**Mass**
Unit		**kg**		**kg**		**kg**
1	E062	0.71	E001D1	3.54	E12D1	4.66
2	E058	0.68	E014D1	2.81	E021D1	5.28
3	E019A	0.79	E062D1	3.11	E126D3	3.21
4	E033	2.23	E062D2	2.45	E125	2.33
5	E028	0.81	E072	4.20	E036D3	3.55
6	E025	0.95			E039	2.6
7	E031	0.46			E051	3.2
8	E004D1	0.50				
9	E071	0.69				
10	E064	0.40				
11	E030	0.37				
12	E016	0.08				
13	E044	0.07				
14	E065	0.42				
15	E015	0.86				
16	E020	0.61				
17	E067	0.69				
18	E024	0.89				
19	E013	0.86				
20	E041	0.82				
21	E001	1.7				
22	E027	0.41				
Total Mass		**16.0**		**16.1**		**24.9**

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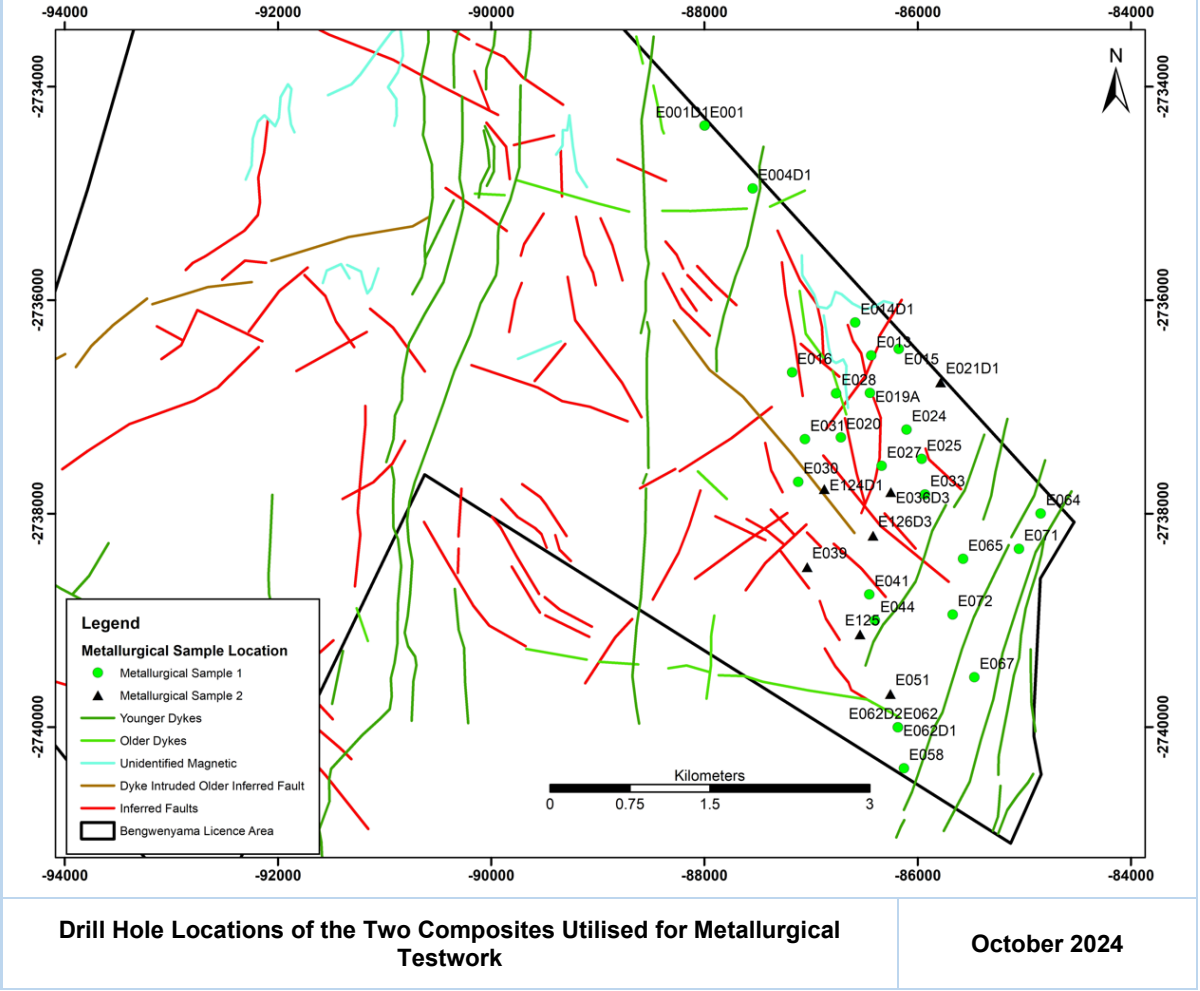
Figure 41: Drill Hole Locations of the Two Composites Utilised for Metallurgical Testwork



Drill Hole Locations of the Two Composites Utilised for Metallurgical Testwork	October 2024

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5 PROCESS PLANT

5.1 MF2 Configuration

Figure 42 shows a block flow diagram of the MF2 process plant which configured as follows:-

- Primary mill to produce a feed size of 80% smaller than 106 micrometres to the primary rougher flotation circuit;
- Primary flotation circuit (including roughers and cleaners);
- Coarse spiral circuit that is fed with primary rougher tailings;
- Secondary regrind mill which is fed with coarse spiral circuit tailings and produces a feed size of 80% smaller than 75 micrometres to the secondary rougher flotation circuit;
- Secondary flotation circuit (including roughers and cleaners);
- Fine spiral circuit that is fed with secondary rougher tailings;
- Chromite concentrate stockpile;
- PGM concentrate thickener;
- PGM concentrate dewatering filter press (not shown);
- PGM concentrate dispatch facility (not shown);
- PGM and chromite tailings thickener (not shown); and
- Tailings storage facility.

Figure 43 and Figure 44 shows a diagrammatic representation to further illustrate the process plant configuration but does not indicate the flows from one unit to another. Figure 42 should be referenced to understand the flows from one unit to another.

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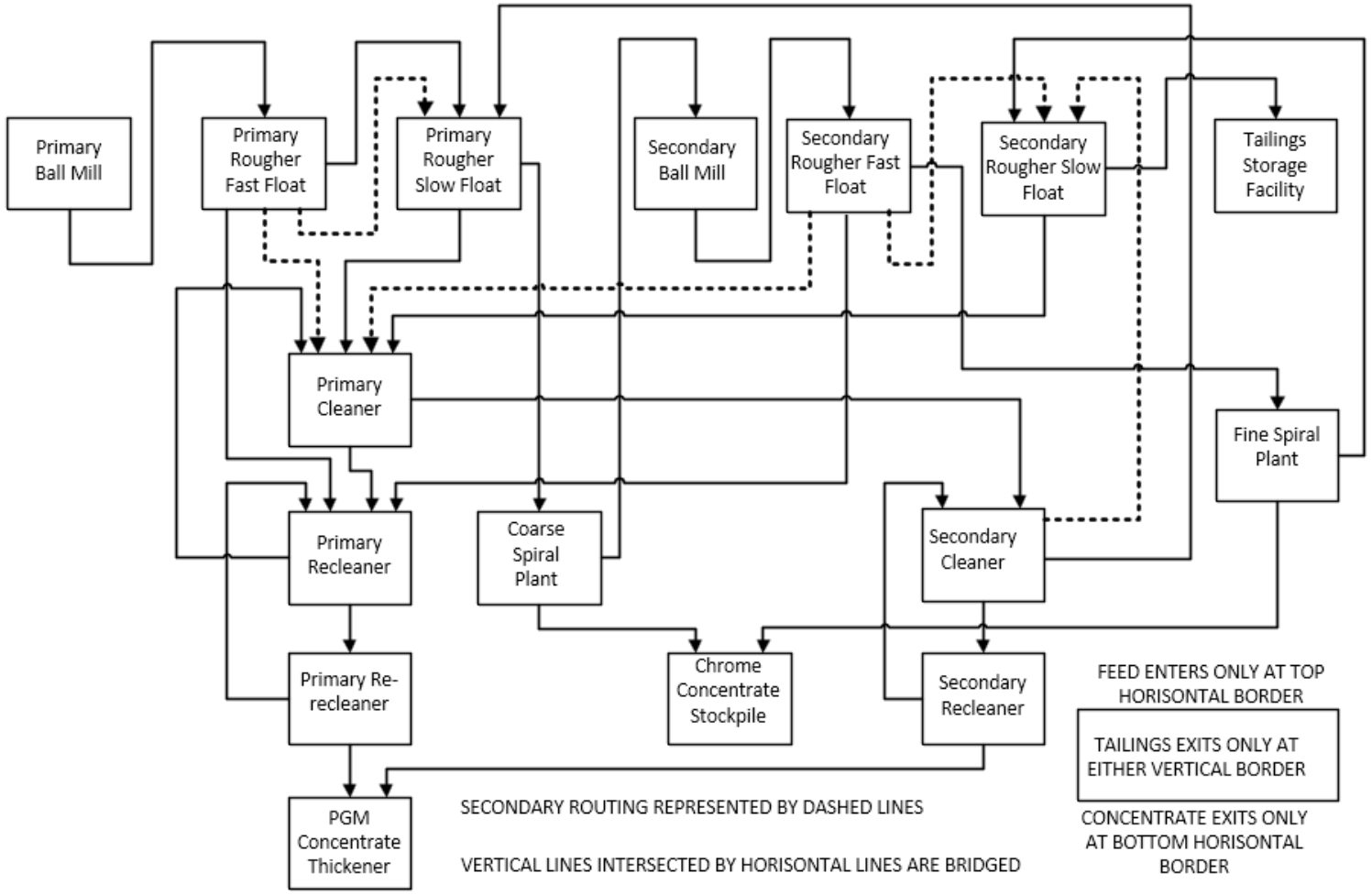
Figure 42: Block flow Diagram of the MF2 Process Plant (the Crushing Section and Secondary Re-recleaner is Not Shown)



Block flow Diagram of the MF2 Process Plant (the Crushing Section and Secondary Re-recleaner is Not Shown)	October 2024

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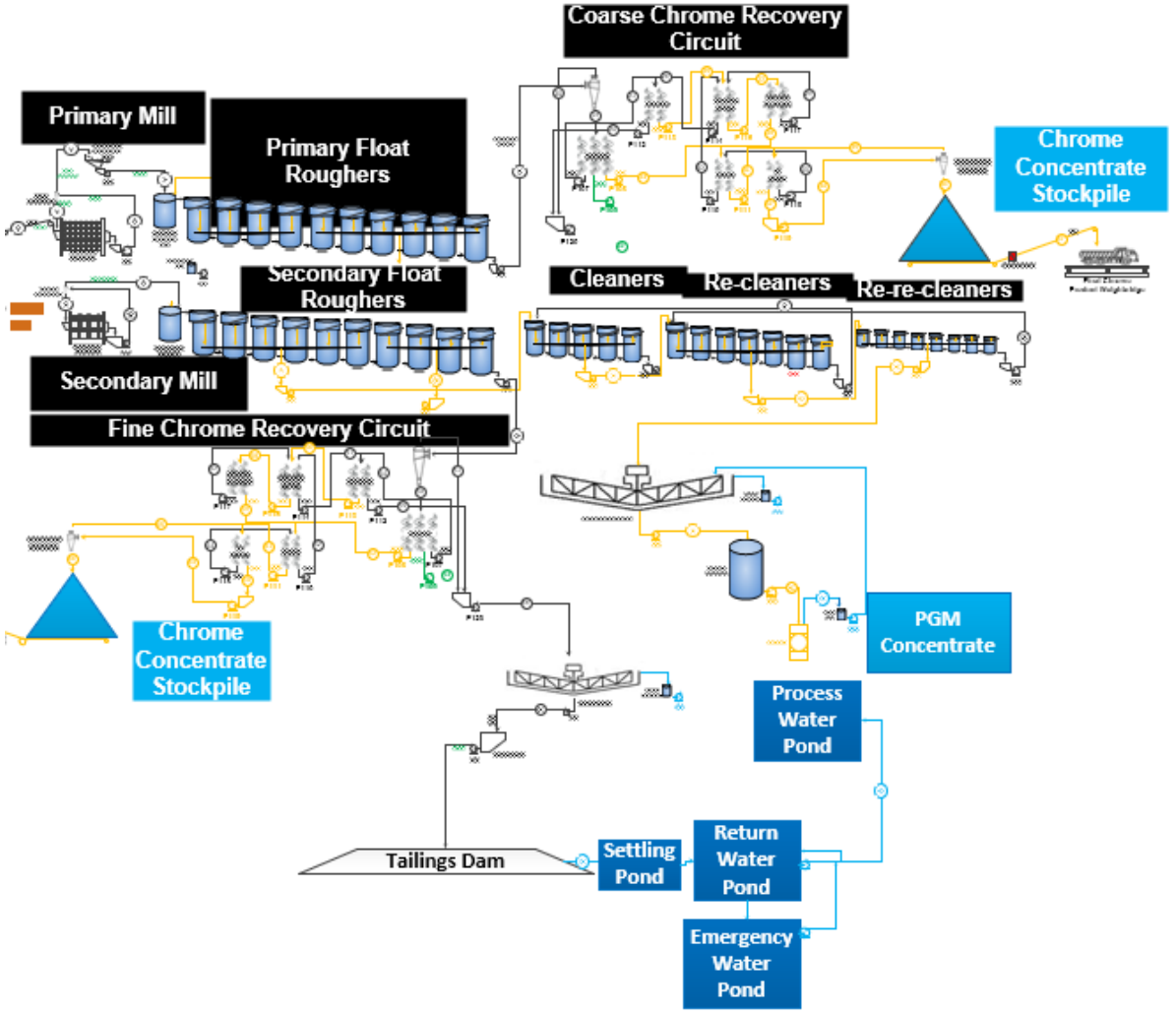
Figure 43: Current Bengwenyama Process Flow Diagram (Crushing & Secondary Cleaning Circuit Not Shown to Enhance Clarity)



Current Bengwenyama Process Flow Diagram (Crushing & Secondary Cleaning Circuit Not Shown to Enhance Clarity)	October 2024

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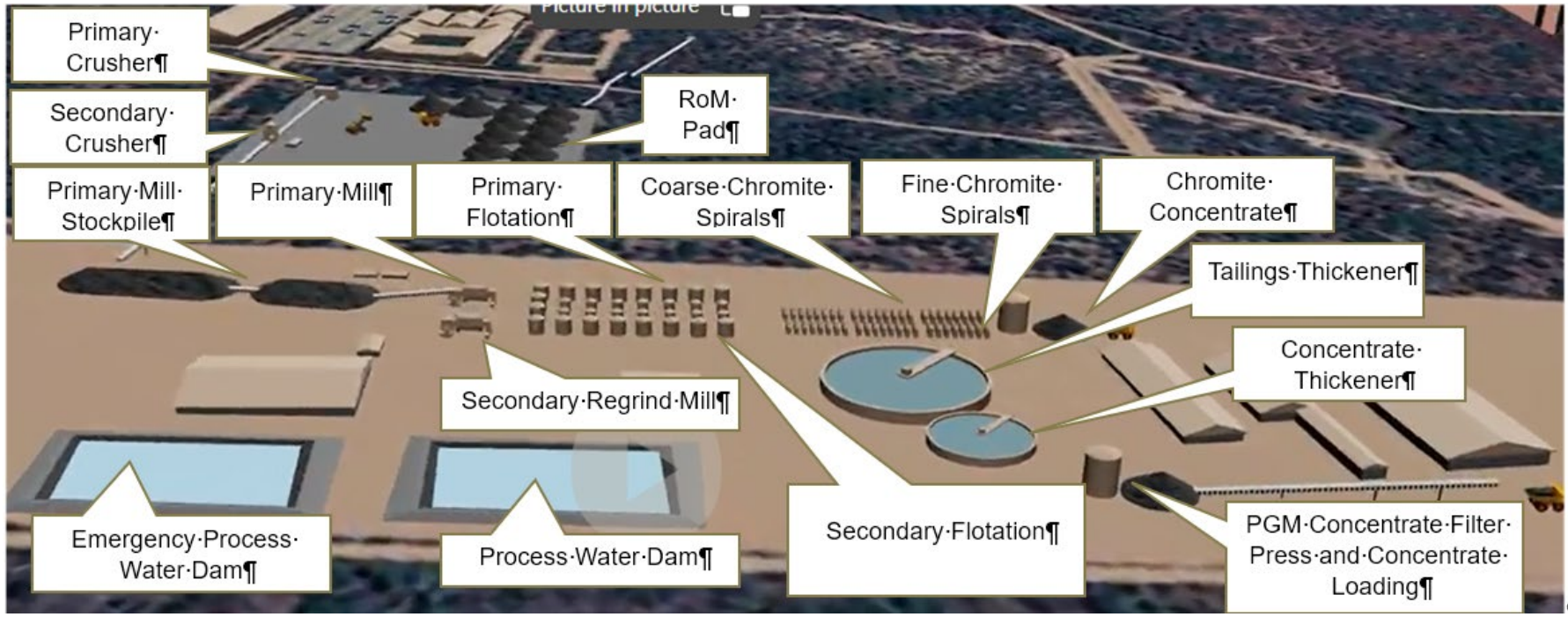
Figure 44: Current Bengwenyama MF2 and Spiral Plant Configuration



Minxcon Consulting	**Current Bengwenyama MF2 and Spiral Plant Configuration**	**October 2024**

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5.2 Process Design Criteria

The process plant has a design capacity of 200 ktpm. The Run of Mine will be subjected to crushing operations to comminute the material. The crushing section will consist of a primary jaw crusher, a secondary cone crusher and two tertiary cone crushers that are operated in closed circuit with vibrating screens. Underflow from the tertiary screen constitutes feed to the primary ball mill.

Classification will ensure the grinding section's primary ball mill receives feed sized at 100% by mass smaller than 13 mm. The mill will further comminute the ore to a size of 80% by mass smaller than 106 micrometres. Classification of the primary mill discharge will be performed via cyclone clusters to ensure the discharged ore size is within specification. The primary flotation circuit will consist of primary roughers where the fast-floating fraction is recovered and fed to the primary cleaning circuit. The primary flotation circuit will also consist of primary cleaners, primary recleaners, and primary re-recleaners.

Concentrate from primary rougher section will be cleaned in the primary cleaning flotation circuit. The cleaned PGM concentrate will report to the PGM concentrate thickener.

Tailings from the primary rougher section will be processed in the coarse spiral circuit where the coarse chromite bearing minerals are recovered and the coarse spiral tailings consist of slow-floating PGM minerals which is fed to the secondary ball mill (regrind mill).

The secondary ball mill will further comminute the slow-floating PGM ore to a size of 80% by mass smaller than 75 micrometres. Classification of the secondary mill discharge will be performed via cyclone clusters to ensure the discharged ore size is within specification. The secondary flotation circuit will consist of secondary roughers, secondary cleaners, secondary recleaners, and secondary re-recleaners.

Concentrate from secondary rougher section will be cleaned in the secondary cleaning flotation circuit. The cleaned PGM concentrate will report to the PGM concentrate thickener.

Tailings from the secondary rougher section will be processed in a spiral circuit where the fine chrome bearing minerals are recovered and separated the PGM fraction that is unrecoverable via flotation. These tailings will be thickened in the tailings thickener before being pumped to a tailings storage facility.

The PGM concentrate from the PGM concentrate underflow will be dewatered in a filter press prior to PGM concentrate dispatch.

5.3 Tailing Storage Facility

A preferred location for the tailings storage facility ("TSF") has been established during a site selection alternatives assessment. The preferred location of twelve potential sites , is in the northern corner of the potential mine lease property, as illustrated in Figure 45.

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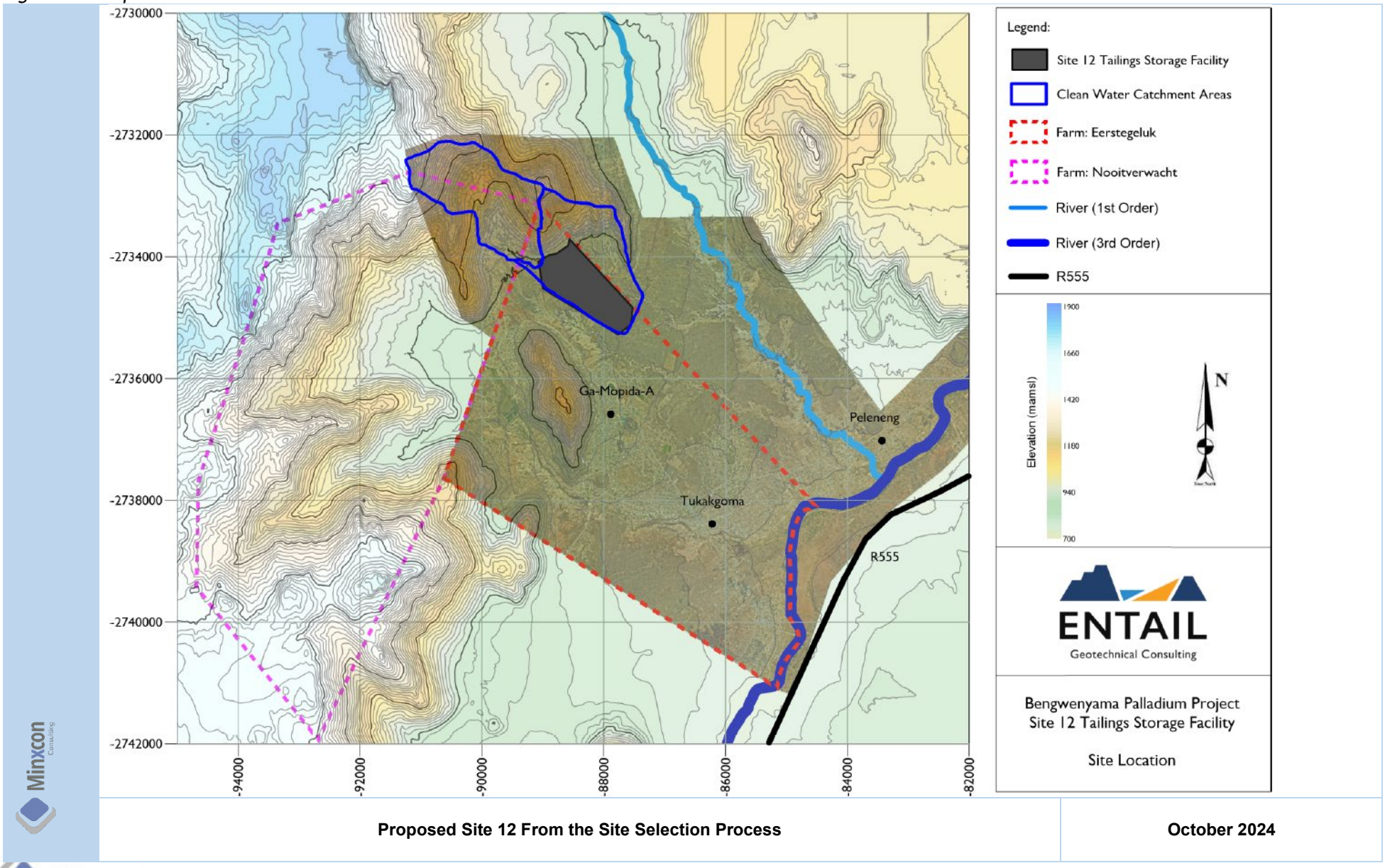
Figure 45: Proposed Site 12 From the Site Selection Process



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A preliminary multi-criteria analysis ("MCA") technologies trade-off was undertaken to select a preferred tailings technology that is site specific. The MCA focussed on the three main accounts including, health, safety, and the environment, engineering complexity, and economics. The preliminary outcome favoured dry stacking, largely to the following:-

- the geometry, or high aspect ratio (the site is almost three times as long as it is wide);
- tolerance to high Rate of Rise of deposition;
- its proximity to the communities and its zone of influence;
- challenging geotechnical conditions that could be exacerbated by wet deposition; and
- decreased water losses.

Despite the expectedly higher cost of implementing dry-stacking technology, the site is expected to provide storage for the current LoM without having to expand outside of the mine lease boundary. The TSF is expected to have at least 45 Mt of tailings storage capacity and a maximum height of 82 m, with potential of expandability. Co-disposal of waste rock and material emanating from the shaft sinking provides the opportunity to utilise a single footprint for complete mine residue disposal, as well as progressive side slope rehabilitation. This is aimed at limiting dust emissions and aligning with best-practice principles of designing for closure. Early stripping of material from nearby box cuts will be utilised as a buttress, or starter embankment.

Based on waste classifications according to local regulations, the tailings are expected to have the potential to leach Chromium in concentrations that exceed Type-3 waste limits, and therefore requires that the stack is underlain with a seepage containment barrier.

A further motivator for adopting the dry-stacking technology for the Bengwenyama TSF is the reduced potential for brittle behaviour, and liquefaction, which is illustrated by a zone of influence in Figure 46. The reduced potential for tailings run-out results in a significantly reduced run-out plume when compared to conventional hydraulic deposition methodologies, meaning there is reduced potential for harm to the surrounding communities and to the environment.

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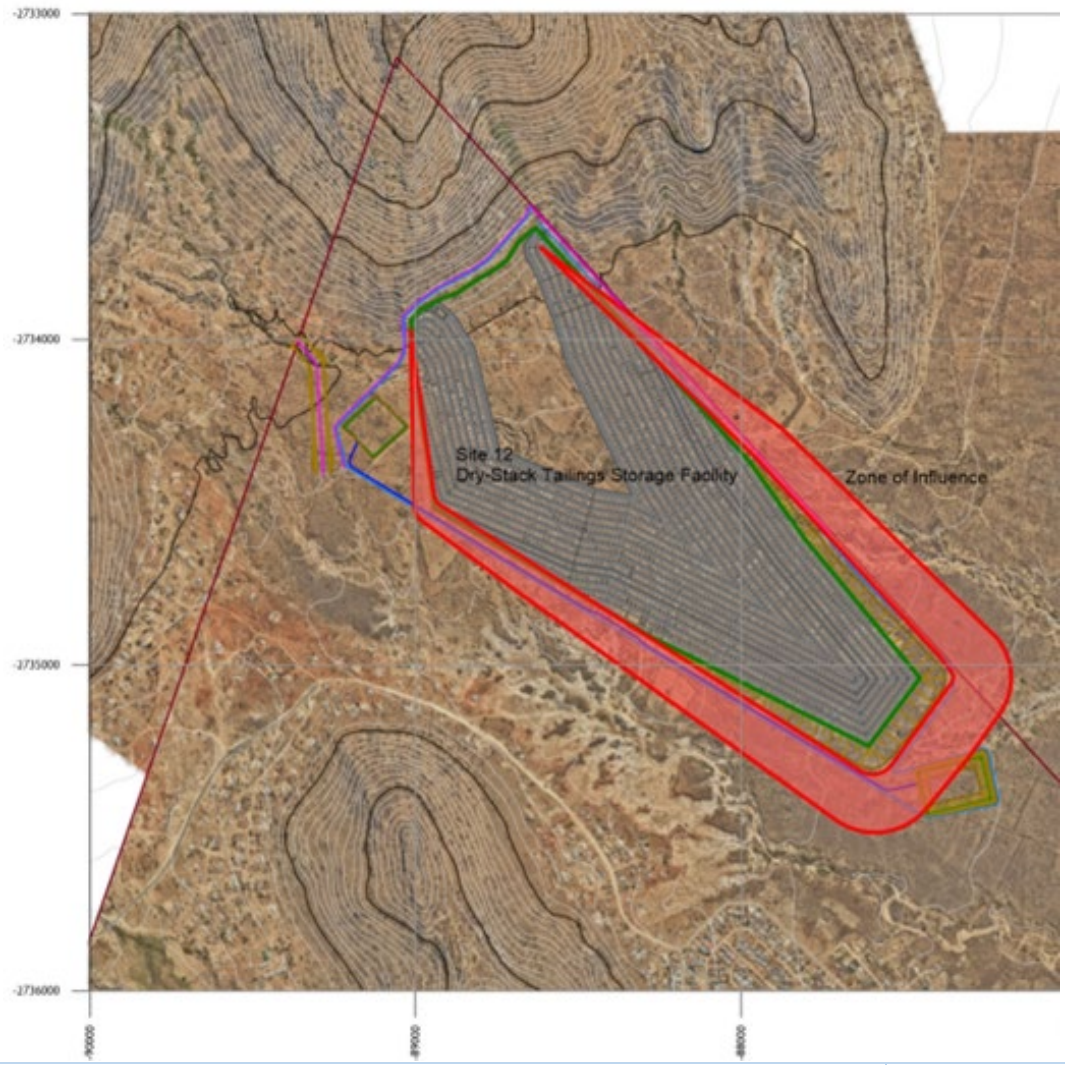
Figure 46: Dry-Stack Zone of Influence



The project aims to align with the principles of the Global Industry Standard for Tailings Management ("GISTM"), and the PFS aims to pave the way for compliance as the design progresses. Great emphasis is being placed on the documentation, and involvement of stakeholders, as well as affected parties during the development of the Project.

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6 MINE SITE INFRASTRUCTURE AND SERVICES

6.1 Access and Security

The project is accessed via the R555 which is a regional road and forms part of the established paved road network. The R555 is the main route to the Project Area, the road heads northeast from the town of Middelburg. 27 km before reaching the town of Burgersfort, a paved D2484 district road on the left leads towards the Eerstegeluk farm where the Project is located. A dedicated access road of approximately 1.5 km will be constructed from the D2484 to provide access to the Projects early access site, a Furter 1 km of access road will be established to access the main site. Upgrades to existing roads and the construction of the new roads will facilitate reliable transport of consumable materials and equipment as well as safe transport of personnel to and from site.

Security and access control will consist mainly of fencing off sensitive/priority areas as well as establishing dedicated entry and exit points to ensure effective control of access to the mining operations and the process plant.

6.2 Power Supply

Power will be supplied to the Project through a 132 kV overhead lines that is connected to the national grid. A line running in close proximity to the Project (+- 3.5 km) is fed by the Merensky and Mampuru transmission and distribution substations. The substations are separated with a switching station and the Project can thus be supplied by both substations adding a level of back-up and redundancy to the Project's power supply.

An 80 MVA consumer substation will be constructed, as this is a standard requirement from local power utility and will assist in the effective management of power to the site whilst also providing effective protection to the Eskom substations.

From the consumer substations power will be fed into the Bengwenyama distribution substations. These substations will be located close to the mine site and plant. Power will either be reticulated to high voltage loads or stepped down with various transformers to supply low voltage areas and equipment. Power will be reticulated and distributed via a combination of overhead lines, above ground and direct buried cables.

Synchronised back-up generators will feed into the Bengwenyama distribution substations, this is to ensure the ventilation fans, compressor unit and dewatering pumps systems and critical processing circuits are supplied with back-up power in the event of a power failure.

A full load list has been drafted and early indications for the total installed power is estimated at 64.6 MW with a power draw of 43.4 MW

An application has been submitted to Eskom (Local power utility) on the 29th of August 2024, for the supply of power as well as obtaining the required cost estimate letter ("CEL") from the utility to determine the detailed requirements to establish the access to the grid. A study has been completed to assess potential carbon emission reduction strategies as well as alternative energy solutions for the project. This included an energy needs assessment, resource and technology assessment, energy modelling, local grid assessment and concept solar PV design. This will be further optimised and assessed during the following study phase.

6.3 Water Supply and Management

Bulk water will be sourced from the Lebalelo Water User Association, a local water supply authority supplying water to communities, neighbouring mining operations, and agricultural activities in the area. A Lebalelo pipeline located in close proximity (roughly 3.5 km from main points of consumption) to the

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project. This will be supplemented by groundwater from the underground workings and collected run-off water that will be contained as part of the general water management process of separating clean and dirty water on site.

Potable water will be sourced directly from the water supply scheme. A supply line will be installed from the project and tie into the existing main line. Water will be contained in provided reservoirs from where potable water will be supplied to both the surface infrastructure and underground workings after treatment to potable quality.

Service water will similarly be supplied from provided reservoirs fed by a supply line from the main Lebalelo pipeline.

Early indications are that the peak total water requirement for the project will be approximately 294,711 m^3/month. During the initial phase of peak production, the requirement will be sourced mainly from Lebalelo as groundwater ingress into the operation will still be low at this time. The water requirement sourced from Lebalelo will systematically reduce till the point when the maximum estimated ground water influx will occur.

Surface water management infrastructure will be established with diversion and catchment trenches installed to divert clean surface run-off water away from the surface mining and process infrastructure areas and to catch and collect dirty run-off water within the surface mining and process infrastructure areas. The dirty runoff water will be collected for use as service water.

6.4 Site Layout/General Infrastructure

The general surface layout of the project is illustrated in Figure 47.

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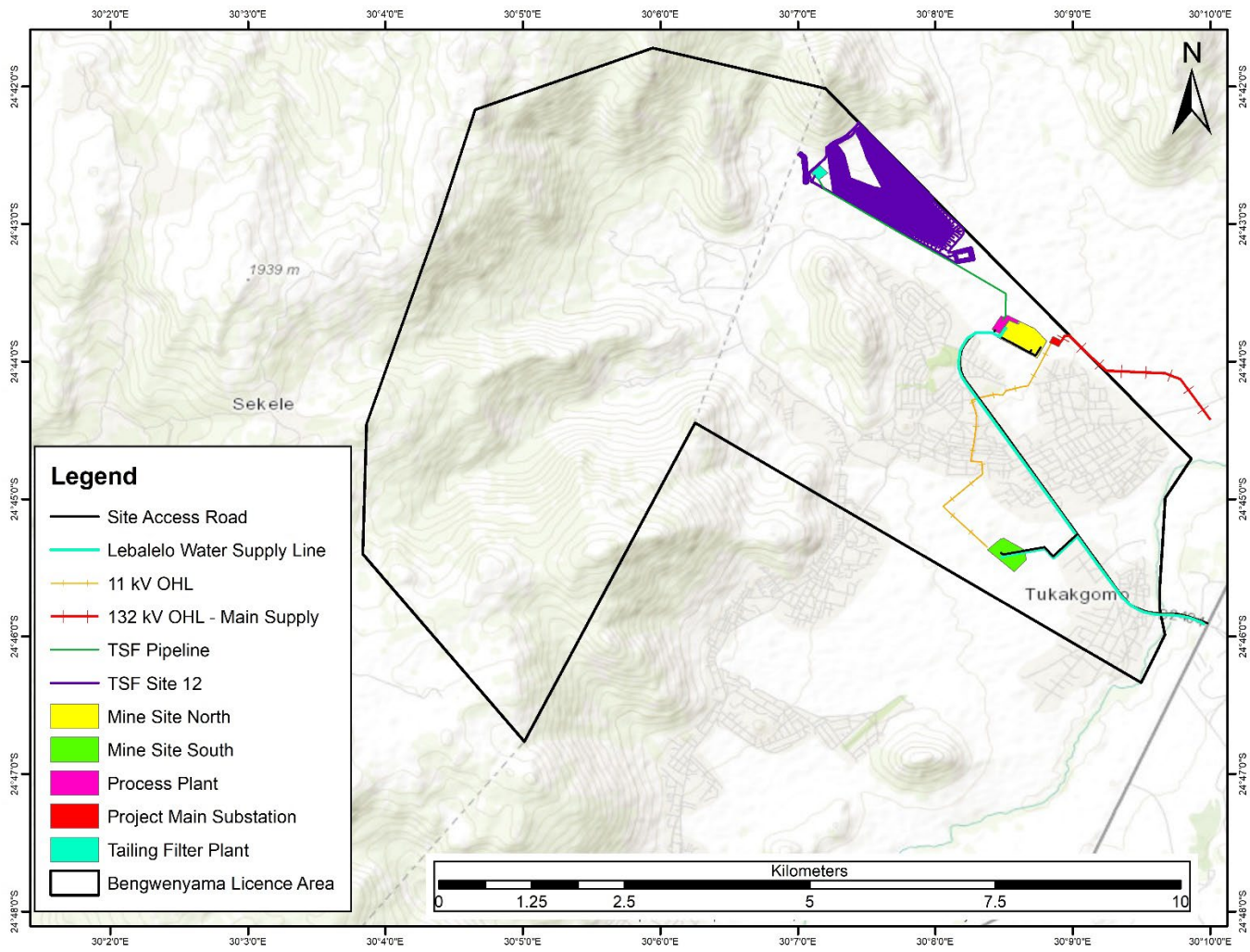
Figure 47: Project Layout



Project Layout	October 2024

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Allowance for non-processing infrastructure has been made and includes but are not limited to:-
security and access control facilities (fencing, access control gates guardhouses etc);
administrative and management buildings and facilities;
change house, ablution and laundry facilities;
control room;
lamp room;
communication infrastructure and facilities;
emergency services facilities;
workshops, stores and laydown areas;
fuel storage and refuelling facilities;
mining magazine and explosives delivery facilities;
waste sorting and management facilities;
sewage treatment and management facilities;
bulk water supply infrastructure;
bulk power supply infrastructure; and
tailings storage facility.
The general arrangements of the mining, processing and supporting infrastructure is illustrated in Figure 48 and Figure 49.

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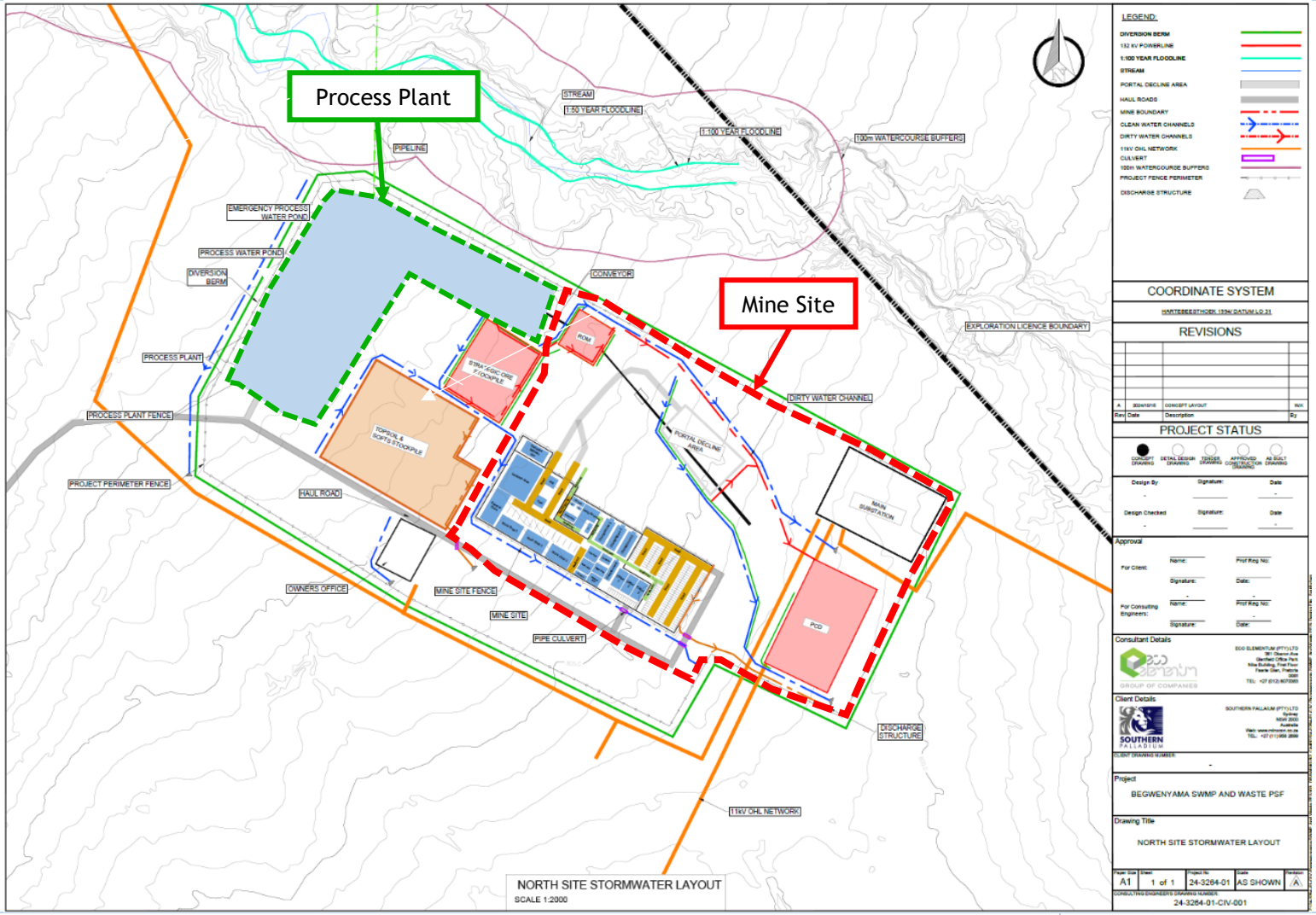
Figure 48: Mining, Processing and Supporting Infrastructure General Arrangement – North Site



Mining, Processing and Supporting Infrastructure General Arrangement – North Site | **October 2024**

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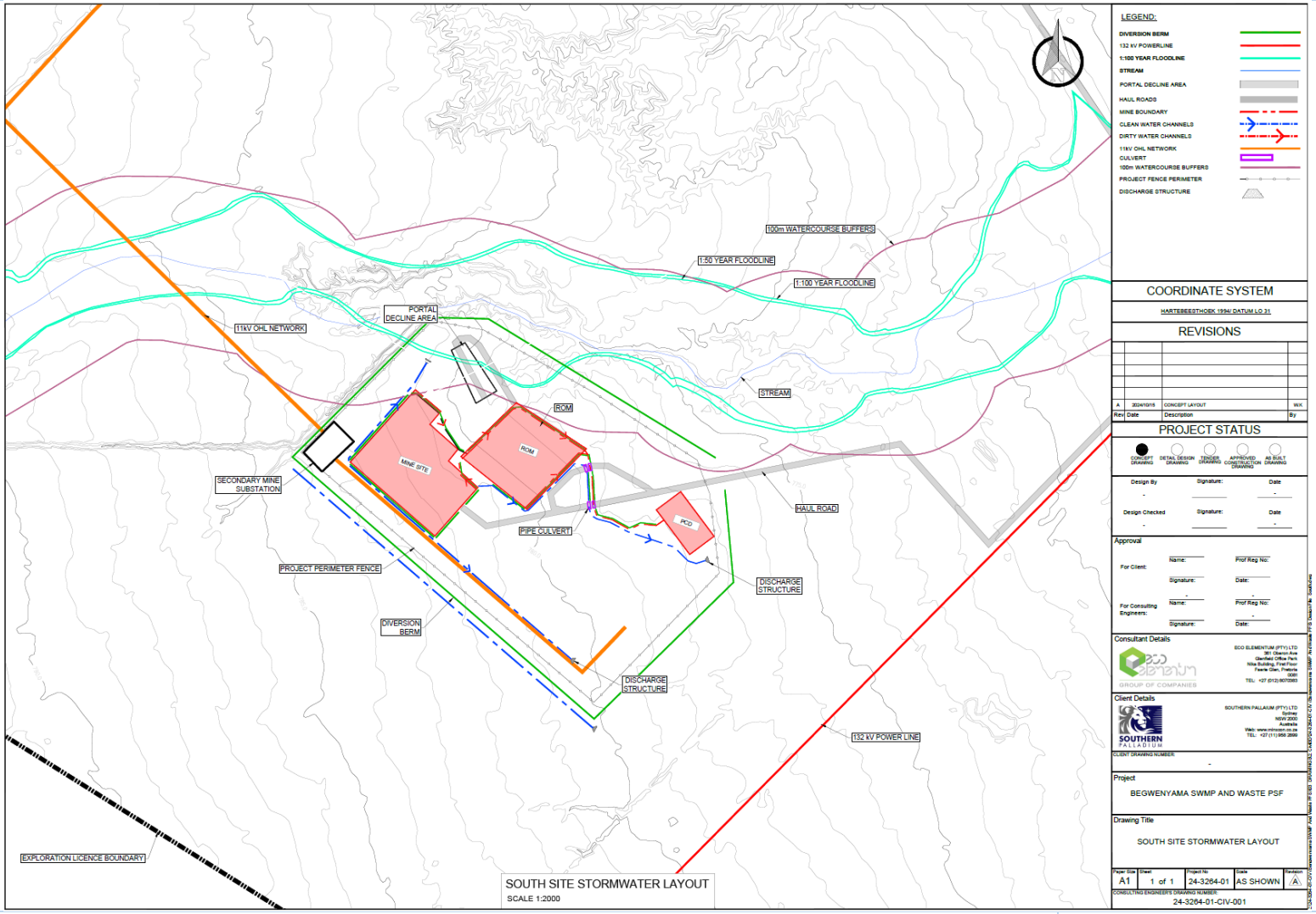
Figure 49: Mining, Processing and Supporting Infrastructure General Arrangement - South Site



Mining, Processing and Supporting Infrastructure General Arrangement – South Site | **October 2024**

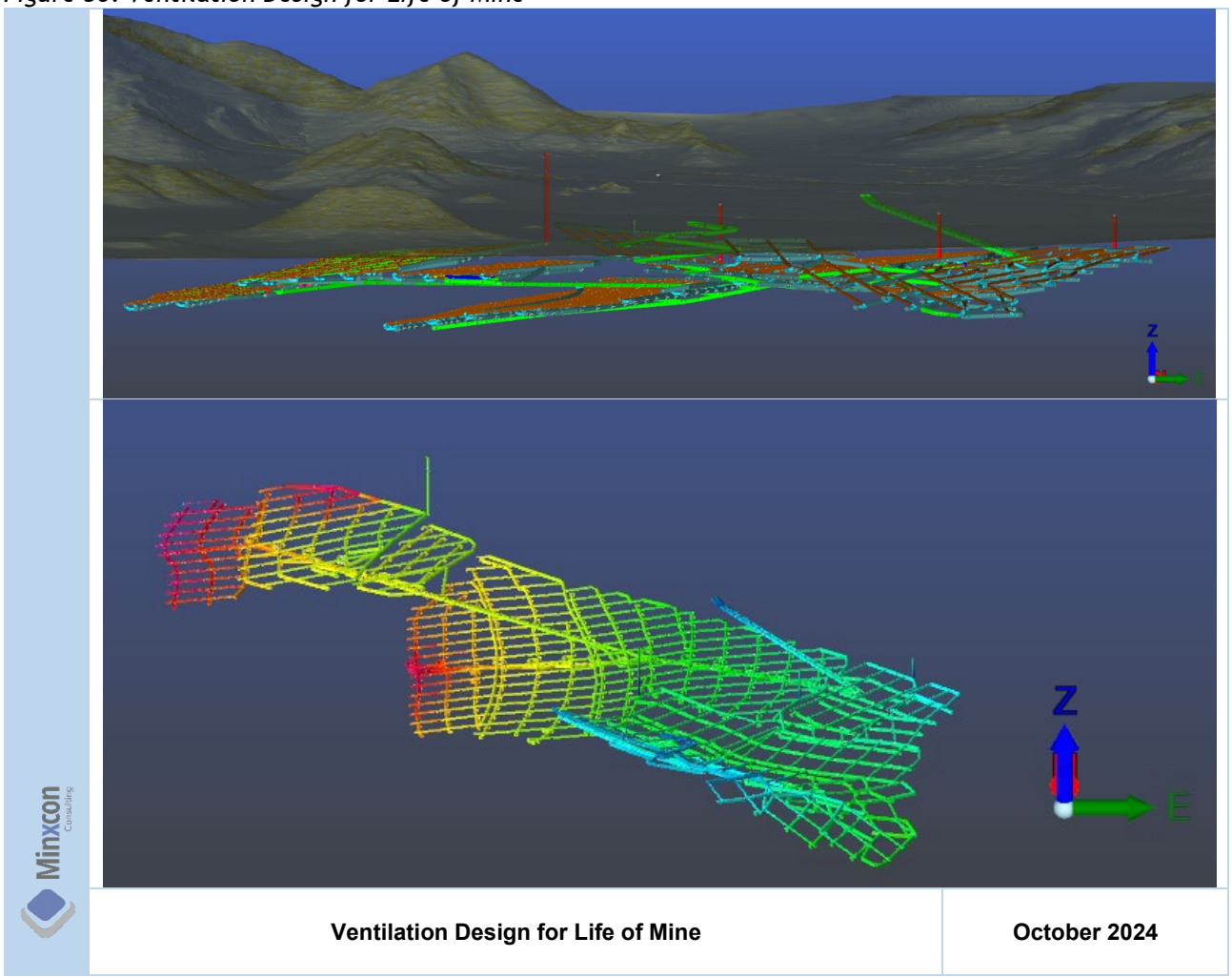
6.5 Ventilation

A LoM ventilation design has been conducted by a specialist, using Ventsim simulation software, the design is based on a snapshot near the end of the LoM at peak production, in the deepest and hottest area of the mine and will require spot cooling in areas.

The results of this study are “worst-case-scenario” for virgin rock temperature (“VRT”) heat. All effort has been made to accurately depict the requirements of mining this ore body, including the planned heat loads of planned equipment and infrastructure. The simulation included fan duty requirement, heat and dilution of diesel particulate matter.

The mine design has been adapted to include vital airway connections that optimise ventilation flow. Shaft sizes are optimised for the maximum ventilation possible in the mine within acceptable standards. This study balances optimisation with sufficient margin for possible changes. The LoM ventilation design is illustrated in Figure 50.

Figure 50: Ventilation Design for Life of Mine



6.6 Underground Infrastructure

6.6.1 Underground Infrastructure Layout

The underground infrastructure of the project consists of but is not limited to:-

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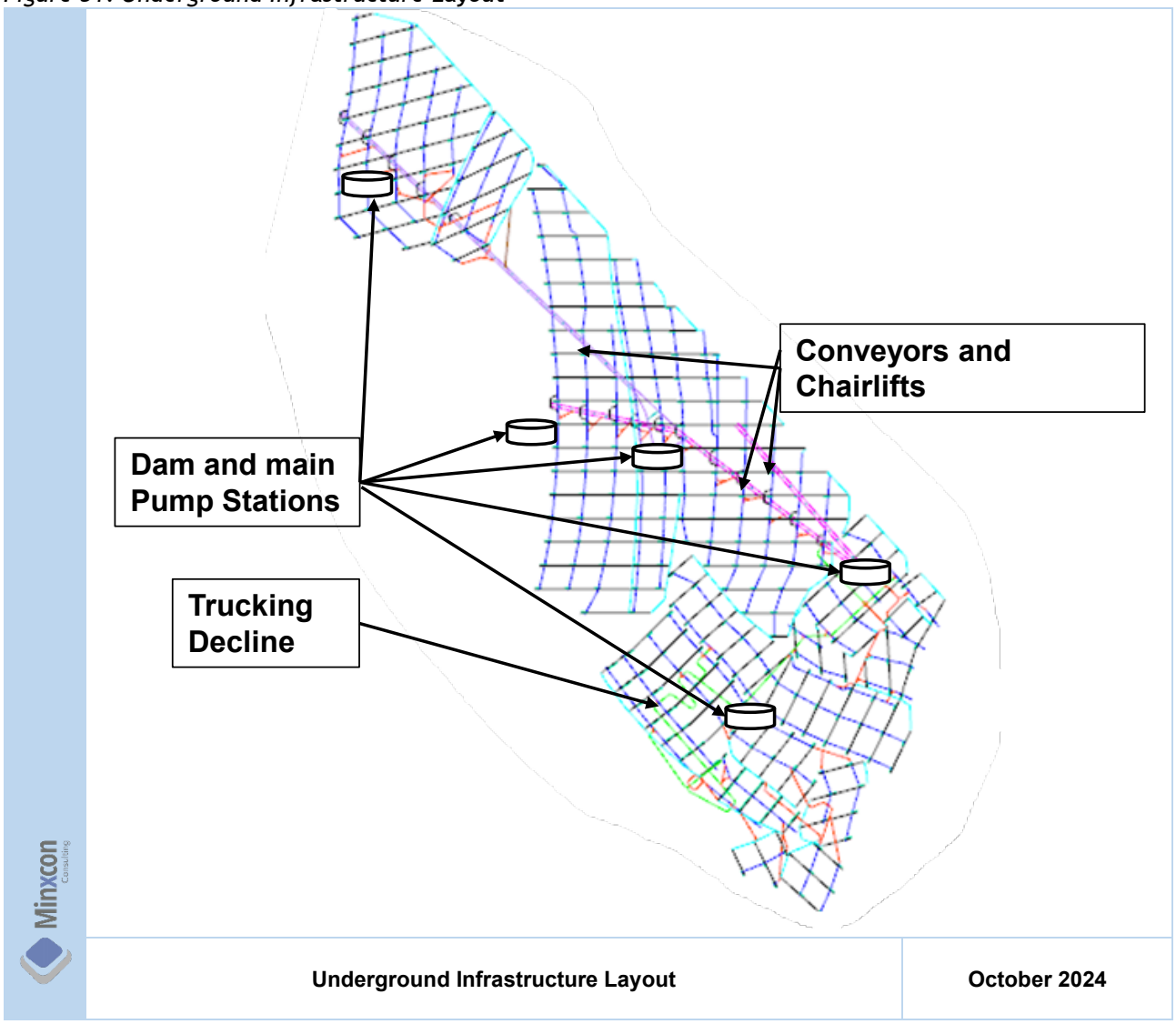
- underground power supply and distribution;
- underground water supply and distribution;
- decline shafts;
- chairlifts;
- conveyors;
- dewatering system – Dams and pump systems;
- underground communications system; and
- centralised blasting system.

A high-level layout of the underground workings and some of the main underground infrastructure is illustrated in Figure 51.

Figure 51: Underground Infrastructure Layout



6.6.2 Underground Logistics

6.6.2.1 Material

In both the northern and southern mining areas, run of mine ore will be cleaned via scraper cleaning, the material will be scraped to the centre gully and collected at a muck bay at the bottom of the raise.

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In the northern section load haul dumpers ("LHD") will load material directly from the muck bay into articulated dump trucks ("ADT") that will transport the material to the conveyor belt in the northern decline.

In the southern section of the mine the material will be hauled from the stopes to the decline, via the ADTs and dumped in muck bays close to the decline, from there the material will be loaded into dump trucks via LHDs and hauled to surface. After a period 60 months the mine will have progressed to a point where the material from the southern section will be transported to the main decline via haul trucks, and the ore transported to surface with conveyors.

6.6.2.2 Personal Transport

Personal transport in the northern section of the mine will be handled via a chairlift system capable of transporting 1,000 persons per hour. In the southern portion of the mine the personal will be transported with dedicated shuttle cars.

6.7 Mining Fleet Simulations

Fleet simulations has been conducted using simulation software, the purpose of which was to determine the optimal trackless equipment size as well as the optimal quantities of equipment. The simulations were run for twelve consecutive months to stress test the equipment. In Conclusion the 28.5 t articulated dump truck and 10 tonne load haul dumper was selected due to the following factors:

- The fleet is not over utilised and that provides redundancy in the fleet compliment.
- The fleet has the lowest capital and operating costs.

In the Northern section the simulations concluded that three LHDs and three ADTs is required per half level and two LHDs and one ADT per half level in the southern section. This is a result of much shorter haulages present in the southern section. Finaly the fleet compliment in the southern decline was simulated separately. It has been determined that ten 28.5 t ADTS and five 10 tonne LHD's is required, further analysis was done, and the fleet was selected due to the following factors:

- The fleet is not over utilised and that provides redundancy in the fleet compliment.
- The fleet has the lowest capital and operating costs.
- Using the same fleet as the rest of the mine make servicing and maintenance more manageable.
- The fleet and operators are interchangeable with the rest of the mine, thus providing flexibility in the total fleet compliment.

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7 PROJECT IMPLEMENTATION

A preliminary development schedule has been compiled for the project. The main activities forming part of the schedule includes:-

- Pre-Feasibility Study ("PFS");
- Environmental Authorisation ("EA");
- Issue of Mining Right;
- Completion of required drilling (Resource infill, Metallurgical Testowork, Geotechnical and Hydrogeological);
- Water Use License Application;
- Feasibility Study ("FS") and Final Investment Decision ("FID");
- Mine Development;
- Construction; and
- Commissioning and Ramp-Up.

Two project schedules have been completed. The first focusses on the next project study phases and the second on the project execution / construction. Subsequent to the completion of the PFS, a 12 months period has been allowed for the completion of the Feasibility ("FS") starting early 2025. The bankable feasibility phase and front-end engineering design ("FEED") could span over an additional 6 to 9 months period after which construction can commence. The technical study work project schedule is illustrated in Figure 52.

Options to potentially fast track the next project study phases as well as early construction (Mine development) are under consideration.

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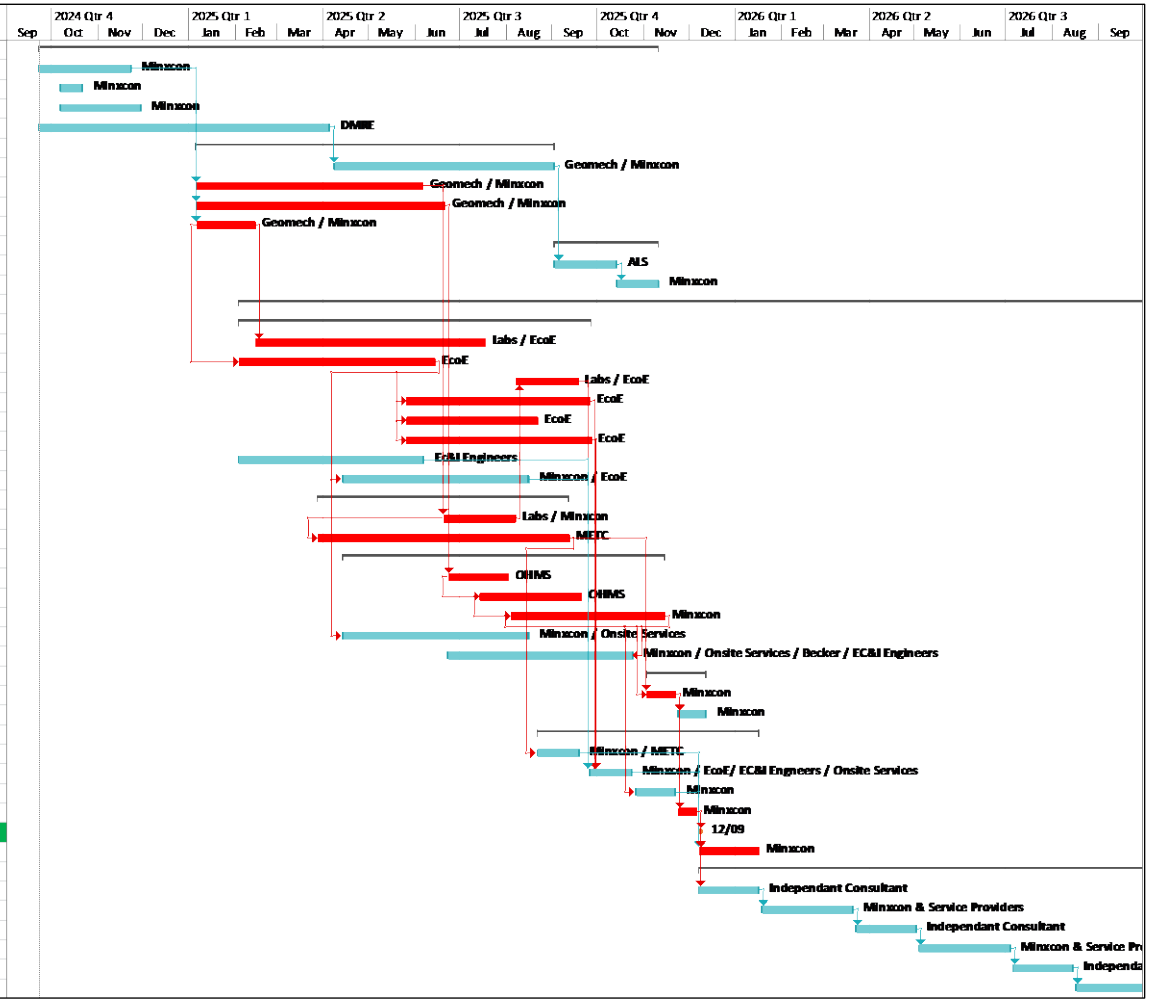
Figure 52: Project Schedule - Next Phases of Work

ID	Task Mode	Task Name	Duration	Start	Finish
1		**Bengwenyama Project Schedule**	**296 days**	**Mon 24/09/23**	**Mon 25/11/10**
2		PFS	45 days	Mon 24/09/23	Fri 24/11/22
3		Reserve CPR	11 days	Mon 24/10/07	Mon 24/10/21
4		Funding Case	40 days	Mon 24/10/07	Fri 24/11/29
5		Issuance of Mining Right	140 days	Mon 24/09/23	Fri 25/04/04
6		**Drilling**	**171 days**	**Mon 25/01/06**	**Mon 25/09/01**
7		Resource Infill	105 days	Tue 25/04/08	Mon 25/09/01
8		Met Testwork	109 days	Mon 25/01/06	Thu 25/06/05
9		Geotech (Mining)	120 days	Mon 25/01/06	Fri 25/06/20
10		Geotech (Surface)	29 days	Mon 25/01/06	Thu 25/02/13
11		**Resource Estimation**	**50 days**	**Tue 25/09/02**	**Mon 25/11/10**
12		Sample Assay	30 days	Tue 25/09/02	Mon 25/10/13
13		Resource Update	20 days	Tue 25/10/14	Mon 25/11/10
14		**DFS**	**445 days**	**Mon 25/02/03**	**Fri 26/10/16**
15		**Supporting Infrastructure**	**170 days**	**Mon 25/02/03**	**Fri 25/09/26**
16		Geotechnical Investiation (Surface) - Testwork	110 days	Fri 25/02/14	Thu 25/07/17
17		Geotechnical Investigations (Surface) - Analysis	95 days	Mon 25/02/03	Fri 25/06/13
18		Testwork for TSF, TSF Delivery Line, etc	30 days	Thu 25/08/07	Wed 25/09/17
19		TSF Design	89 days	Mon 25/05/26	Thu 25/09/25
20		Tailings Delivery and Dewatering System	64 days	Mon 25/05/26	Thu 25/08/21
21		Surface Water Management Infrastructure	90 days	Mon 25/05/26	Fri 25/09/26
22		Power Supply Infrastructure Design	90 days	Mon 25/02/03	Fri 25/06/06
23		Water Supply Infrastructure Design	90 days	Mon 25/04/14	Fri 25/08/15
24		**Processing**	**120 days**	**Fri 25/03/28**	**Thu 25/09/11**
25		Met Testwork	34 days	Fri 25/06/20	Wed 25/08/06
26		Process Plant Design	120 days	Fri 25/03/28	Thu 25/09/11
27		**Mining**	**155 days**	**Mon 25/04/14**	**Fri 25/11/14**
28		Geotechnical Investigations (Mining) - Testwork	30 days	Mon 25/06/23	Fri 25/08/01
29		Geotechnical Investigations (Mining) - Analysis	50 days	Mon 25/07/14	Fri 25/09/19
30		Mining - Mine Design and Schedule Optimisatio	75 days	Mon 25/08/04	Fri 25/11/14
31		Mining - Surface Infrastructure Design	90 days	Mon 25/04/14	Fri 25/08/15
32		Mining - UG Infrastructure Design	90 days	Mon 25/06/23	Fri 25/10/24
33		**Financial Analysis**	**30 days**	**Mon 25/11/03**	**Fri 25/12/12**
34		Update Project Financial Analysis	15 days	Mon 25/11/03	Fri 25/11/21
35		Assist with assessment of funding cases	15 days	Mon 25/11/24	Fri 25/12/12
36		**DFS Reporting**	**106 days**	**Fri 25/08/22**	**Fri 26/01/16**
37		Process and Met Reporting	20 days	Fri 25/08/22	Thu 25/09/18
38		Supporting Infrastructure Reporting	20 days	Fri 25/09/26	Thu 25/10/23
39		Mining Reporting	20 days	Mon 25/10/27	Fri 25/11/21
40		Financial Reporting	10 days	Mon 25/11/24	Fri 25/12/05
41		DFS Completion	0 days	Tue 25/12/09	Tue 25/12/09
42		Update CPR	30 days	Mon 25/12/08	Fri 26/01/16
43		**BFS Phase**	**225 days**	**Mon 25/12/08**	**Fri 26/10/16**
44		Due Diligence - Round 1	30 days	Mon 25/12/08	Fri 26/01/16
45		Study Update - Round 1	45 days	Mon 26/01/19	Fri 26/03/20
46		Due Diligence - Round 2	30 days	Mon 26/03/23	Fri 26/05/01
47		Study Update - Round 2	45 days	Mon 26/05/04	Fri 26/07/03
48		Due Diligence - Round 3	30 days	Mon 26/07/06	Fri 26/08/14
49		Study Update - Round 3	45 days	Mon 26/08/17	Fri 26/10/16



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A preliminary construction schedule has been developed based on an Engineering, Procurement and Construction Management(“EPCM”) basis for the various aspects of the Project.

The initial schedule indicates a construction period of 36 months before plant commissioning. A large portion of this will take place concurrently with the development of the mine. Mine development will commence after one year of construction with first production planned after 36 months. The high level project execution schedule for the project is illustrated in Figure 53.

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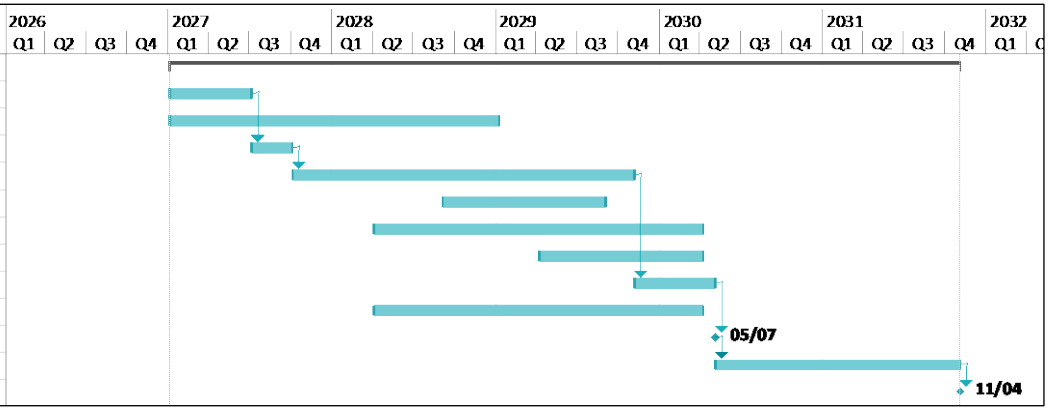
Figure 53: High Level Project Execution Schedule

ID	Task Mode	Task Name	Duration	Start
1		**Bengwenyama Project Execution Schedule**	**1261 days**	**Mon 27/01/04**
2		Establishment of Early Mine Site	131 days	Mon 27/01/04
3		Bulk Power Supply Infrastructure Construction	526 days	Mon 27/01/04
4		Box-cut Development	65 days	Tue 27/07/06
5		Decline Shaft Development	545 days	Tue 27/10/05
6		Main Site Infrastructure Establishment	261 days	Mon 28/09/04
7		Process Plant Construction	526 days	Mon 28/04/03
8		Filter Plant and Slurry Line Construction	261 days	Mon 29/04/09
9		Commencement of Stoping	130 days	Tue 29/11/06
10		TSF Phase 1 Construction	526 days	Mon 28/04/03
11		Plant Feed and Commissioning	0 days	Tue 30/05/07
12		Plant Ramp-Up	390 days	Tue 30/05/07
13		Steady State Production	0 days	Tue 31/11/04



Further construction, specifically mining infrastructure, will continue as the underground mining footprint expands. TSF phases will also be constructed as storage capacity requirements increase over the LoM.

Lead times for critical equipment and long lead items have been provided for based on supplier recommendations and benchmarking from similar projects.

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8 OPERATIONS AND HUMAN RESOURCES

The total labour compliment with different activities is detailed in Table 19.

Table 19: Total Labour Compliment with Paterson Grading

Paterson Grade	Stoping	Development	Mining Support Services	Shaft Operations	Technical Services	Management	Admin Services	Processing	Processing Support Services	Grand Total
A10	0	0	17	3	0	0	7	82	7	116
B11	124	0	181	259	51	0	0	0	10	625
B12	1,757	368	0	0	0	0	0	19	0	2,144
B21	502	28	0	0	5	0	0	0	0	535
B22	837	265	0	0	0	0	0	0	0	1,102
B23	0	55	196	0	7	0	0	0	0	258
B42	0	0	2	0	0	0	0	0	0	2
B43	42	0	59	0	7	0	3	0	0	111
B44	0	0	71	0	0	0	0	0	0	71
B45	209	30	0	0	0	0	12	9	0	260
B46	0	0	0	0	2	0	0	0	0	2
B63	0	0	0	0	0	0	0	0	2	2
C11	0	0	0	0	12	0	0	0	0	12
C13	0	0	0	0	0	0	13	0	0	13
C21	0	0	0	1	5	0	1	0	0	7
C22	54	155	0	0	0	0	0	0	0	209
C23	0	0	0	0	0	0	2	4	0	6
C24	0	0	69	4	0	0	6	0	5	84
C31	0	0	0	2	0	0	0	0	0	2
C33	0	0	0	0	1	0	0	0	0	1
C35	0	0	0	0	9	0	3	0	0	12
C41	18	66	0	0	0	0	3	1	0	88
C51	0	0	0	0	2	7	0	0	0	9
D31	0	0	0	0	2	7	1	0	0	10
D41	0	0	0	0	2	7	0	0	0	9
E21	0	0	0	0	0	1	0	0	0	1
Grand Total	**3,543**	**967**	**595**	**269**	**105**	**22**	**51**	**115**	**24**	**5,691**
Distribution	**62.26%**	**16.99%**	**10.46%**	**4.73%**	**1.85%**	**0.39%**	**0.90%**	**2.02%**	**0.42%**	**100.00%**

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9 ENVIRONMENTAL AND MINING APPROVALS

To meet the environmental requirement component of the Project mining right application ("MRA"), a full scoping and environmental impact assessment ("S&EIA") process has been undertaken in accordance with the environmental impact assessment ("EIA") Regulations (Government Notice Regulations ("GNR") 982 of 2014, as amended) promulgated in terms of the National Environmental Management Act, 1998 ("NEMA; Act No. 107 of 1998"), as amended. This was submitted to the Department of Mineral Resources and Energy ("DMRE") on 29 September 2023 and acknowledgement letter received on 20 December 2023. Subsequently the EIA phase was triggered and completed on 11 July 2024 and the DMRE acknowledgement letter was issued on 17 July 2024. The DMRE will make the final decision within the legislated timeframes. Additional permit applications are in progress and will be completed at a later stage and include a Waste Management Licence ("WML") in terms of the National Environmental Management: Waste Act, 2008 and a Water Use Licence ("WUL") in terms of section 21 of the National Water Act, 1998.

9.1 Key Environmental Attributes

The following specialist assessments, inter alia, were considered as part of the S&EIA authorisation process to ensure legal compliance and best practice: geohydrological, waste, hydrological, watercourse and hydropedological, aquatic, terrestrial biodiversity, soils and agricultural agro-ecosystem, noise, blasting, traffic air quality, socio-economic assessment, heritage (phase 1), palaeontological (phase 1) and visual impact.

Preliminary potential impacts were rated and include but not limited to water quality deterioration, habitat (floral and faunal) loss, decline of functionality of the critical biodiversity areas ("CBA") and ecological sensitive areas ("ESA") sites, reduced floral diversity and loss of threatened and protected floral species, spreading and encroachment of alien invasive species, fragmentation of existing ecological corridors, loss of ephermeral watercourses, soil erosion, compaction and sedimentation of watercourses, contamination of surface water and groundwater, potential decline of surface water and groundwater quantity, loss of land capability, change to the sense of place, air quality and noise impacts, change of social fabric, relocation of people, loss of heritage resources. The positive impacts noted were creation of employment opportunities, skills development and work experience.

9.2 Water Use Licence

A water use license application ("WULA") and integrated water and waste management plan ("IWWMP") as per the requirements of GNR 267 of 2017 has been initiated as part of the process to authorise all planned water use activities triggered by the Project in terms of section 21 of the National Water Act (Act No. 36 of 1998) as amended ("NWA"). It is anticipated that the water use activities to be applied for will include the activities described in NWA sections 21(a), 21(c), 21(g), 21(i) and 21(j). Wetland and aquatic, surface water, groundwater, hydropedology impact assessments were undertaken as part of the EIA report for the Project Area and mitigation and management measures have been proposed to ensure that the potential impacts on water resources are managed.

9.3 Waste Management Licence

For the Project Area, a WML application in terms of the National Environmental Management: Waste Act, 2008 ("Act No. 59 of 2008") ("NEM:WA") List of Waste Management Activities published in Government Notice (GN) 921 of 2013, as amended will be lodged with the competent authority to manage waste products and geochemical hazards. As the project is characterised as Greenfields, legacy issues are non-applicable.

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9.4 Additional Permits

Further potential permits or plans relating to the planned construction and operations may be required to be in in place before Project commencement and these will be denoted in the EA and EMPr, WUL and WML to be issued.

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10 SOCIAL RESPONSIBILITY AND SUSTAINABILITY

10.1 Community Engagements

SPD emphasises the importance of close collaboration with the Community to ensure sustainable operations and deliver economic benefits to the region. The essence of the Community is deeply embedded in the development of the Project and Company. Above being core shareholders with board representation, MUM actively maintains open and frequent communication with officially elected representatives of the authorised Bengwenyama Traditional Council. The representatives are regularly included in progress discussions and consulted, with feedback considered and incorporated into Project planning and impact assessments.

By actively including the Community in the Project developments from exploration to planning, openly communicating activities, and participating in Community initiatives SPD and its subsidiary, MUM maintains a strong relationship with the Community. The above structures are well-established and will be preserved throughout the further developments of the Project. As Project activities expand, opportunities for improved structures and channels will be identified and developed.

10.2 Local Economy Development

10.2.1 Social and labour plan

A social and labour plan ("SLP") has been developed for the Project in compliance with the requirements of the MPRDA, the Mineral and Petroleum Resources Development Regulations, 2004 (GN R527 of 2004) and the Mining Charter, 2018 to promote social and economic development through targeted initiatives and projects. A SLP is required to be submitted and approved as part of the mining right application process and be updated every five years.

As required in Section 3 of the MPRDA, public participation processes with interested and affected parties has been conducted extensively during the mining right application processes to capture the developmental priorities in host communities. In 2023, SPD initiated and completed a socio-economic survey across the seven villages to determine baseline information in support of planning. The planning is separated into the legislative requirement for a Social and Labour Plan ("SLP") in support of a mining right, and, moreover, into a Social Upliftment and Development Plan ("SUDP"). The SUDP intends to provide a framework for the Community to implement and manage initiatives beyond the scope of the SLP, securing empowerment and upliftment in parallel with and far beyond the life of mine. It should be noted that the current SLP has been reviewed by DMRE and MUM is currently awaiting approval from the FTLM through endorsement letter for local economic development ("LED") projects.

LED is an approach towards economic development which allows and encourages local communities, government and the private sector to work together to achieve sustainable economic growth and development, thereby promoting economic benefits and improving the quality of life for all residents in any local municipal area. MUM will implement sustainable community development initiatives to ensure that the Mine meets the requirements of participation in LED programmes, as intended in the SLP and these include early child development (investment in quality early child education), waste management and water supply. It should be noted that the current SLP has been reviewed by DMRE and MUM is currently awaiting approval from the FTLM and issuance of an endorsement letter on local economic development ("LED") projects.

In the interim, the Company has adopted a local day care, Somqhuba pre-school within Soupiana village in order to assist local day care's with improving their classrooms (upgrade works), assist teachers with training

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to improve teaching abilities and ensure that they day cares has dignified structures and an environment that is conducive for early child development.

10.2.2 Workforce and Services

SPD has adopted to preferentially procure skills, services and other resources from the Community. This is has been implemented for the exploration activities, where a team of local residents were trained and employed as technical personnel, and a number of key service providers were sourced from the Community through an official tender process. Security, diesel provision, sanitation and other services were sourced locally. The exploration camp was set up at a site rented from the Community with buildings renovated by SPD. Continuing this preferential procurement culture, the village survey data will also be utilised to identify core available skills, services and other resources from the Community for the planned mine development and operational activities. SPD has committed to continue to open new direct opportunities for local entrepreneurs, SMMEs and residents in the Community. When in peak production, the planned mine will open over 4,000 jobs to the area.

10.3 Environmental Stewardship

Mine development and production planning acutely consider aspects of the biophysical environment. SPD plans to actively implement and promote conservation and reduce reliance on natural resources such as water. Efficient waste and water management are core to the company, aiming to be a responsible steward of the Earth's resources. Site planning and optimisation aim to achieve closed water systems, reduced waste generation, responsible waste disposal and pollution control.

10.3.1.1 Financial Provision for Closure Plan

The Financial Provisioning Regulations, 2015 (GNR 1147 of 2015, as amended) was compiled by OMI solutions (Pty) Ltd and a summary of the closure costs for the planned closure scenario is estimated at R 90, 921, 414.00 for the life of mine ("LoM") closure scenario as of April 2024. The accuracy level for this closure cost estimate falls within Class 5 Estimate (with an accuracy degree of 50%), aligned with the planned LoM. No residual risks are currently costed for. The understanding of the residual and latent risks will gradually improve as more information becomes available.

10.3.1.2 Mine Work Programme

A Mining Work Programme ("MWP") was developed in compliance with the requirements of the MPRDA, the Mineral and Petroleum Resources Development Regulations, 2004, to ensure transparency of proposed mine activities at all phases of operations and how activities align with applicable regulations i.e. MPRDA and NEMA. A MWP has been submitted and approval is pending on issuance of the mining right.

10.3.1.3 Carbon Neutrality

A detailed breakdown of the emission sources of the critical minerals was noted in an emissions inventory discussed as part of the air quality assessment. An ambient air monitoring program has been developed to monitor the impact of emission sources at sensitive receptor locations around the proposed Project site. The information obtained from the monitoring program will feed into the operational management of site-based emission sources to assist scope 1, 2 and 3 emissions.

The use of more efficient and lower carbon intensity sources (including renewable energy sources), innovative technologies and practices have been considered in the technical planning to reduce energy consumption. Energy specialists were appointed and conducted a preliminary carbon neutral energy study. The study included investigation into the establishment of a solar PV project on the properties. Carbon intensity forecasts assessing greenhouse gas emissions per production factors were undertaken and will be

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refined in the Feasibility stage. The impacts of the future operation on climate change and conversely, the impacts of climate change on the operation will be assessed to determine the climate change vulnerability of the Project.

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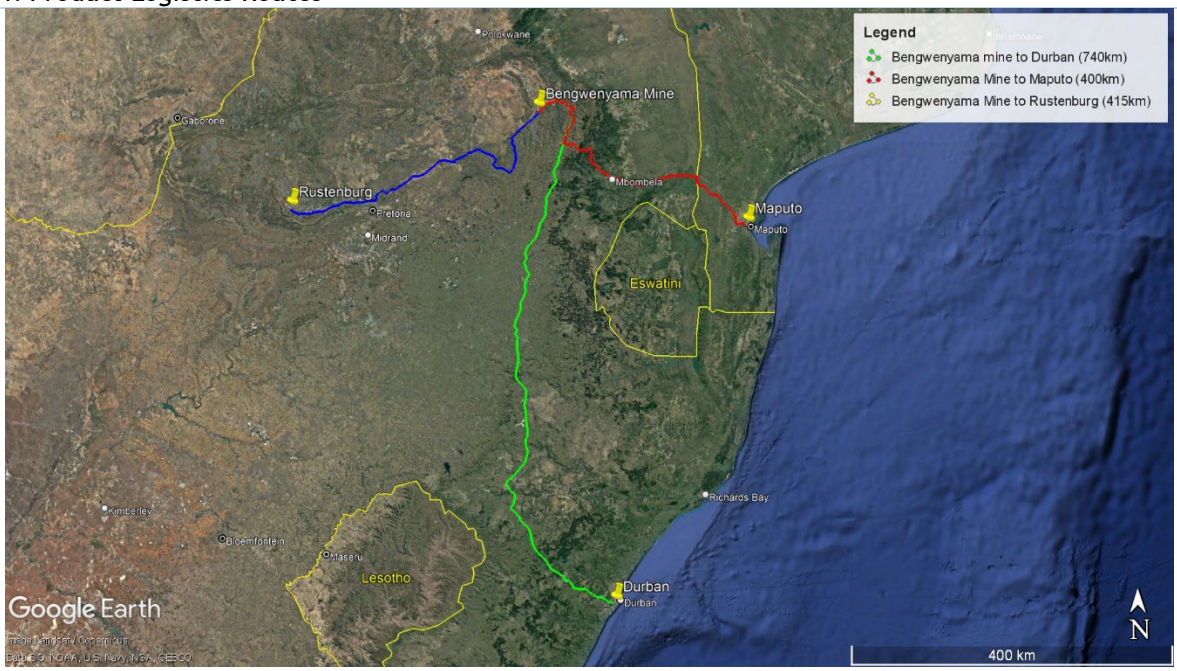
11 PRODUCT LOGISTICS

There is a well-established downstream refining process for PGM concentrate within South Africa, and well-established terms are in place. Most smelters processing the concentrate from the Eastern and Western Limbs are situated in Rustenburg, with almost all the concentrator product in the area being transported by truck to Rustenburg. The Project PGM concentrates are expected to be processed at one of these facilities. The distance from the Project to Rustenburg is approximately 415 km through tarred road. Initial talks have been undertaken with one of these smelters, with expression of interest indicated.

The chrome concentrate, for the purpose of the PFS, will be trucked to either Maputo or Durban port, depending on available allocation, and sold on the open export market. The distance to Maputo is approximately 400 km and the distance to Durban is approximately 740 km.

There is potential to treat the chrome concentrate at a local chrome smelter as there are two within a 10 km radius of the Project. Initial talks have been undertaken with one of these smelters, with expression of interest indicated.

Figure 54: Product Logistics Routes



Product Logistics Routes	October 2024

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12 MARKET AND PRICING ASSUMPTIONS

12.1 Economic Input Parameters

Table 20 illustrates the forecasts up to 2028 along with the long-term forecast used in the financial model in real terms. It should be noted that only the long-term price will contribute to revenue as the first plant production is planned in 2030. The price forecasts and exchange rate forecasts are based on the median of various banks, brokers and analyst forecasts and converted to real terms. From 2029 onwards a constant long-term forecast is applied for the remaining LoM. A long-term Chrome ore concentrate (42%) price is utilised at USD225/t CIF China calculated by Minxcon. The Ruthenium and Iridium prices are constant based on the Spot price as at the effective date.

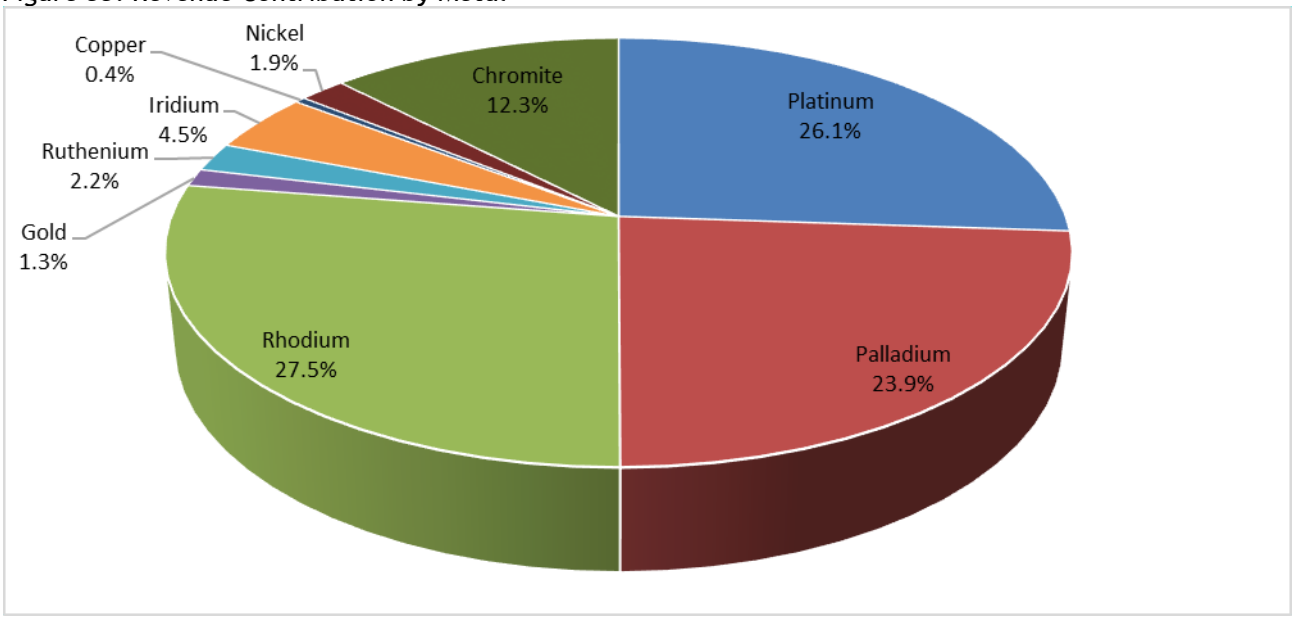
Table 20: Macro-economic Forecasts and Commodity Prices over the Life of Project

Commodity	Unit	Basis	2025	2026	2027	2028	Long-term
Platinum	USD/oz	Real	1,114	1,147	1,143	1,151	1,200
Palladium	USD/oz	Real	1,020	975	922	978	1,100
Rhodium	USD/oz	Real	5,468	5,515	5,333	5,803	6,190
Gold	USD/oz	Real	2,440	2,263	2,163	2,073	1,950
Ruthenium	USD/oz	Real	450	450	450	450	450
Iridium	USD/oz	Real	4,650	4,650	4,650	4,650	4,650
Chrome Conc. 42%	USD/t	Real	225	225	225	225	225
Copper	USD/t	Real	9,585	9,526	9,287	9,211	8,708
Nickel	USD/t	Real	17,025	17,284	17,615	17,805	18,249
Exchange Rate	ZAR/USD	Real	18.51	18.86	19.22	19.58	19.58

Sources: Consensus Economics, Minxcon

Figure 55 illustrates the revenue contribution by each metal as a percentage of the total revenue. The three largest contributors at forecast prices are platinum, palladium and rhodium, contributing approximately 78% of revenue. Chrome contributes an additional 12%, with iridium, ruthenium, gold, nickel and copper contributing the remaining 10%.

Figure 55: Revenue Contribution by Metal



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12.2 Net Smelter Return/Payability

Junior miners have for many years sold PGM concentrates to smelters/refiners within South Africa, with the market and terms well established. The payabilities applied in the financial model were benchmarked from various other mines selling PGM concentrates through a third-party refiner. Chrome ore concentrate (42%) will be sold on the open market, with the financial model assuming export sales. Southern Palladium has had initial talks with smelters with interest expressed for both the PGMs and Chrome.

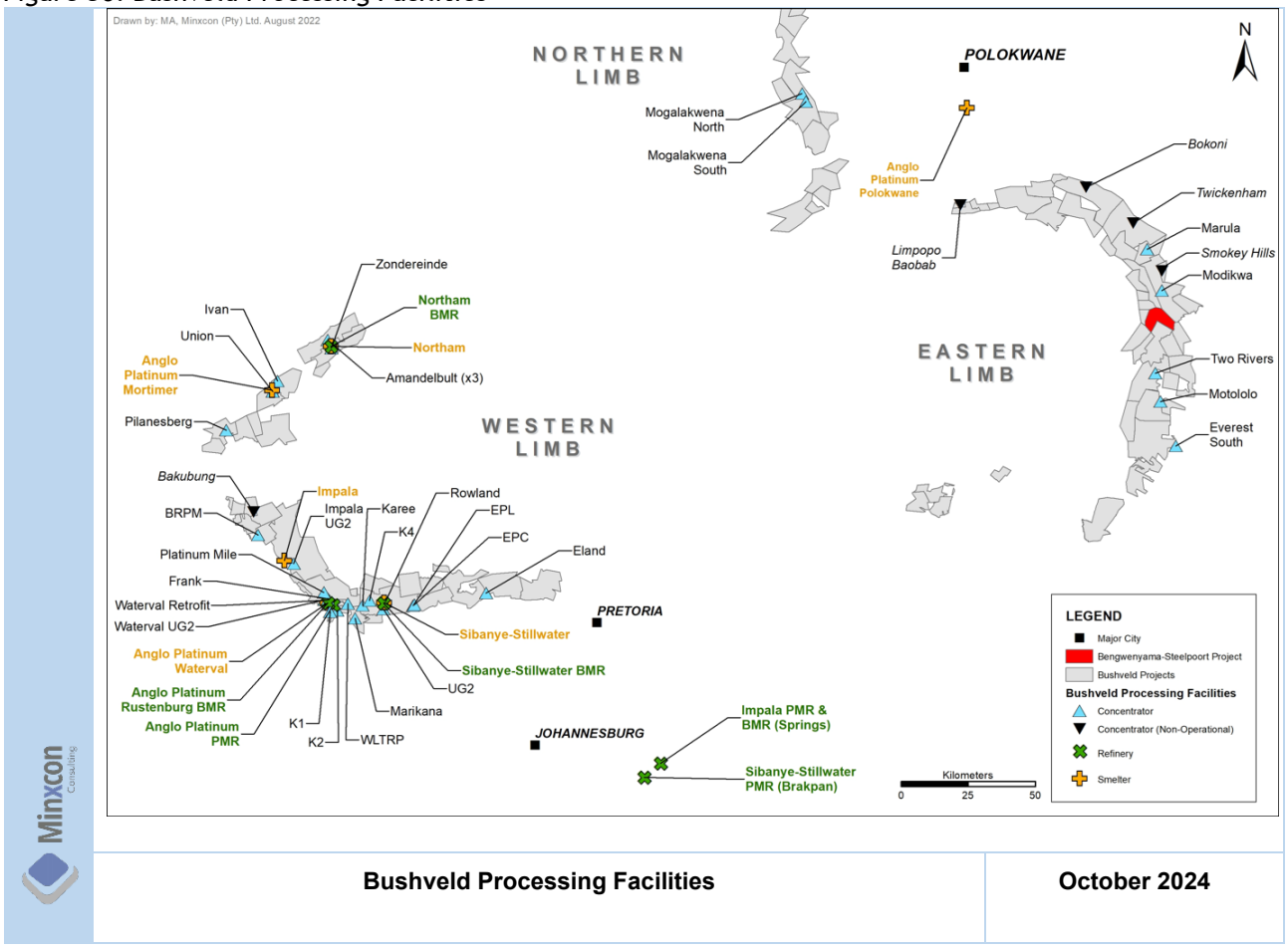
The payabilities applied detailed in Table 21.

Table 21: Payabilities

Commodity	Unit	Payability
Platinum	%	85%
Palladium	%	85%
Rhodium	%	84%
Gold	%	84%
Ruthenium	%	56%
Iridium	%	54%
Copper	%	70%
Nickel	%	72%
Chrome Conc. 42%	%	100%

Figure 56 shows the various processing facilities on the Bushveld Complex in proximity to the Bengwenyama Project. Most smelters are located on the Western Limb, with Bengwenyama targeting the smelters by Rustenburg.

Figure 56: Bushveld Processing Facilities



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13 CAPITAL COST ESTIMATE

Capital costs for the mining, shared and processing infrastructure and facilities of the Bengwenyama project has been estimated. The costs are based on the infrastructure, facilities and equipment required for an underground mining operation with a production rate of 200 ktpm. This includes but is not limited to:-

- access;
- bulk services (power and water);
- surface and underground mining infrastructure and facilities;
- process plant and supporting infrastructure;
- tailings storage facility;
- general supporting infrastructure; and
- EPCM.

The capital expenditure for the Project over the LoM is subdivided into mining, plant and shared infrastructure capital, as indicated in Table 22. The study capital costs estimates are assessed to have an accuracy of ±15 - 25%. The total initial capital for the Project, calculated as direct capital in years one to four (year first metal is produced), is estimated at ZAR6,456 million or USD330 million excluding contingencies and ZAR7,736 million or USD385 million including contingencies. Ongoing capital is defined as direct project capital after year 4. Stay in business capital or sustaining capital consists of renewals and replacement costs over the LoM. A 20% contingency has been applied on all mining and shared infrastructure capital (initial and ongoing) and 15% on plant and TSF capital.

Table 22: Project Capital Expenditure

Capital Expenditure	ZARm	USDm
Initial Capital		
Direct Mining Capital	1,429	73
Capitalised Development	449	23
Plant Capital	2,519	129
TSF Capital	820	42
Shared Infrastructure Capital	1,240	63
Contingency	1,079	55
Total Initial Capital	**7,536**	**385**
Ongoing Capital		
Direct Mining Capital	693	35
Capitalised Development	463	24
Plant Capital	-	-
TSF Capital	388	20
Ongoing Shared Capital	42	2
Contingency	251	13
Total Ongoing Capital	**1,837**	**94**
Stay-in-Business Capital		
Total Stay-in-Business Capital	**9,171**	**469**

Figure 57 and Figure 58 illustrate the capital schedule over the LoM in ZAR terms and USD terms, respectively.

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Figure 57: Project Capital Schedule - ZAR Terms

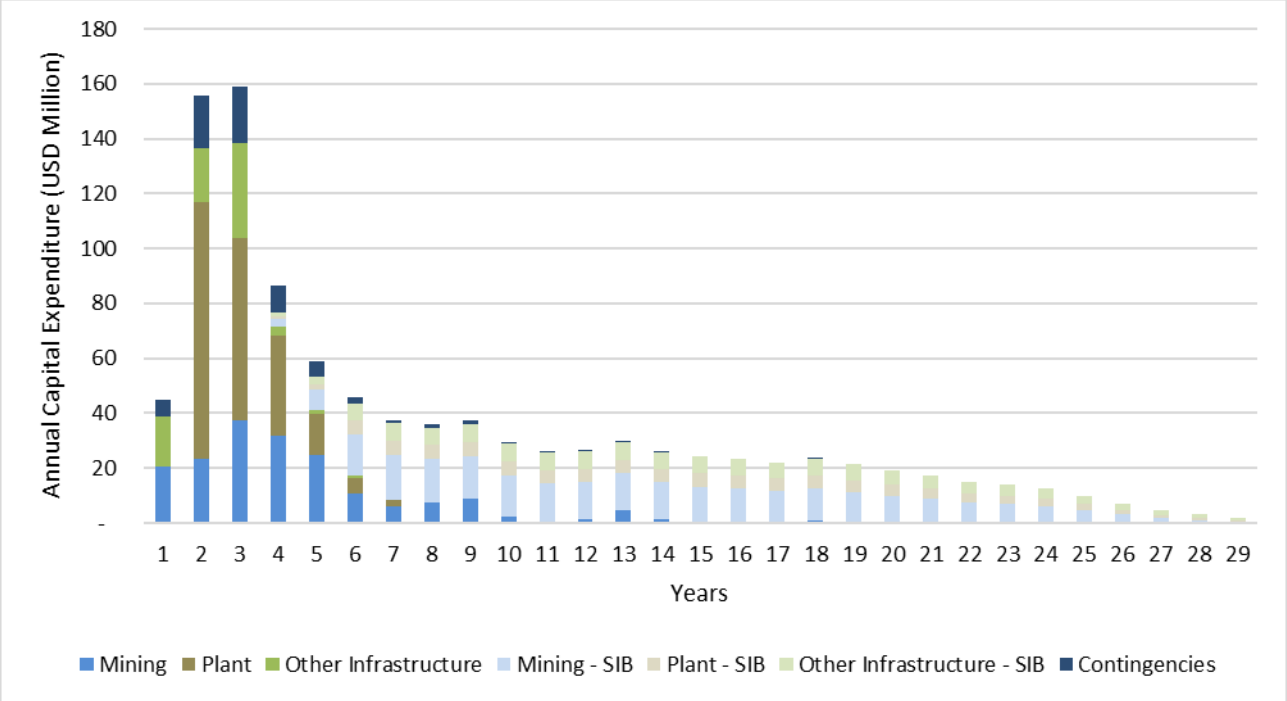
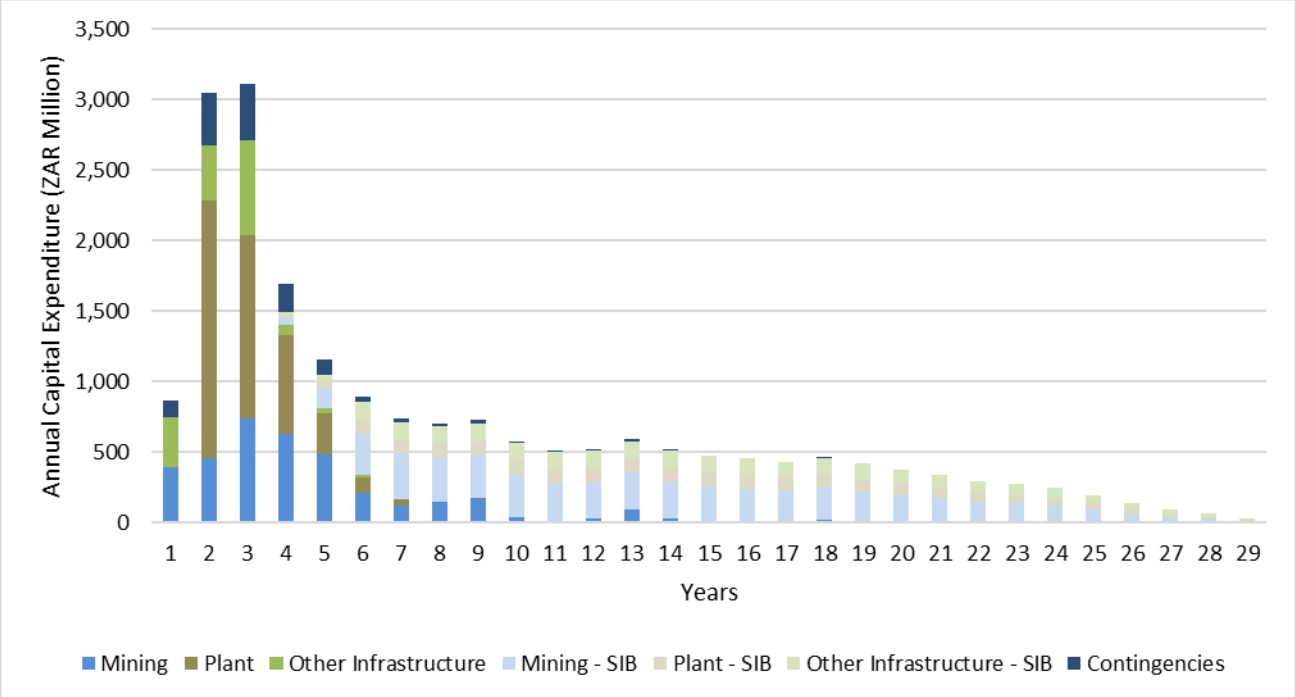


Figure 58: Project Capital Schedule - USD Terms



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14 OPERATIONAL COST ESTIMATE

14.1 Operating Costs

The Minxcon first-principles activity-based cost model was used to calculate operating costs for the underground and the processing operations. The cost model utilises the mine and engineering design criteria and production schedule inputs to derive cost rates for the mining, engineering and processing activities.

The costs for labour, equipment, consumables, services and utilities have been sourced from quotations, actual industry stores costs, industry rates and utility rates. Where costs could not be obtained from these sources, benchmarking with similar-sized projects and operations was conducted. The study operating costs estimates are assessed to have an accuracy of ±15% - 25%. The operating cost summary is detailed in Table 23.

Table 23: Operating Cost Summary

Description	Total LoM	Per Milled t	6E Oz Recovered	% of AISC
Unit	**ZAR Million**	**ZAR/t**	**ZAR/6E oz**	**%**
Mining	52,007	1,149	6,893	44.0%
Processing	18,537	410	2,457	15.7%
Central & Technical Services	24,521	542	3,250	20.8%
Cash Operating Costs	**95,065**	**2,100**	**12,600**	**80.5%**
Royalties	12,630	279	1,674	10.7%
Off-Mine Operating Costs	1,154	26	153	1.0%
Sustaining Capital	9,171	203	1,215	7.8%
Rehabilitation	80	2	11	0.1%
AISC	**118,099**	**2,609**	**15,653**	**100.0%**
Unit	**USD Million**	**USD/t**	**USD/6E oz**	**%**
Mining	2,657	58.7	352	44.0%
Processing	947	20.9	126	15.7%
Central & Technical Services	1,253	27.7	166	20.8%
Cash Operating Costs	**4,857**	**107.3**	**644**	**80.5%**
Royalties	645	14.3	86	10.7%
Off-Mine Operating Costs	59	1.3	8	1.0%
Sustaining Capital	469	10.4	62	7.8%
Rehabilitation	4	0.1	1	0.1%
AISC	**6,034**	**133.3**	**800**	**100.0%**

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15 FINANCIAL ANALYSIS

The scope of this evaluation exercise was to determine the financial viability of mining the UG2 reef of the Bengwenyama Project. This was done by using the Discounted Cash Flow ("DCF") method on a Free Cash Flow to the Firm ("FCFF") basis, to calculate the NPV or intrinsic value of the Project in both ZAR and USD real terms.

A company has different sources of finance, namely common stock, retained earnings, preferred stock and debt. Free cash flow is based on either Free Cash Flow to Equity ("FCFE") or FCFF. FCFF is the cash flow available to all the firm's suppliers of capital once the firm pays all operating expenses (including taxes) and expenditures needed to sustain the firm's productive capacity. The expenditures include what is needed to purchase fixed assets and working capital, such as inventory. FCFE is the cash flow available to the firm's common stockholders once operating expenses (including taxes), expenditures needed to sustain the firm's productive capacity, and payments to (and receipts from) debt holders are accounted for. Therefore, FCFF minus Nett Debt = FCFE.

The NPV is derived from post-tax, and pre-debt real cash flows, after considering operating costs, capital expenditures for the mining operations and the loading arrangement, and, where applicable, using forecast macro-economic parameters.

The project considers the mining of the UG2 Reef recovering and selling 6E metals, base metals (Copper and Nickel) and Chrome ore concentrate.

15.1 Financial Parameters

15.1.1 Discount Rate

The company internal hurdle rate of 8% was utilised as the preferred discount factor the Project in real terms, as per Client's request. The Project NPV is also shown at various discount rates to demonstrate the sensitivity to the applied discount rate.

15.1.2 Saleable Product

The annual saleable 6E ounces per year is illustrated Figure 59. The average 6E recovery over the LoM is 85% with an average recovered 6E grade of 5.18g/t. The Project will produce 400 koz (6E basis) per annum at steady state.

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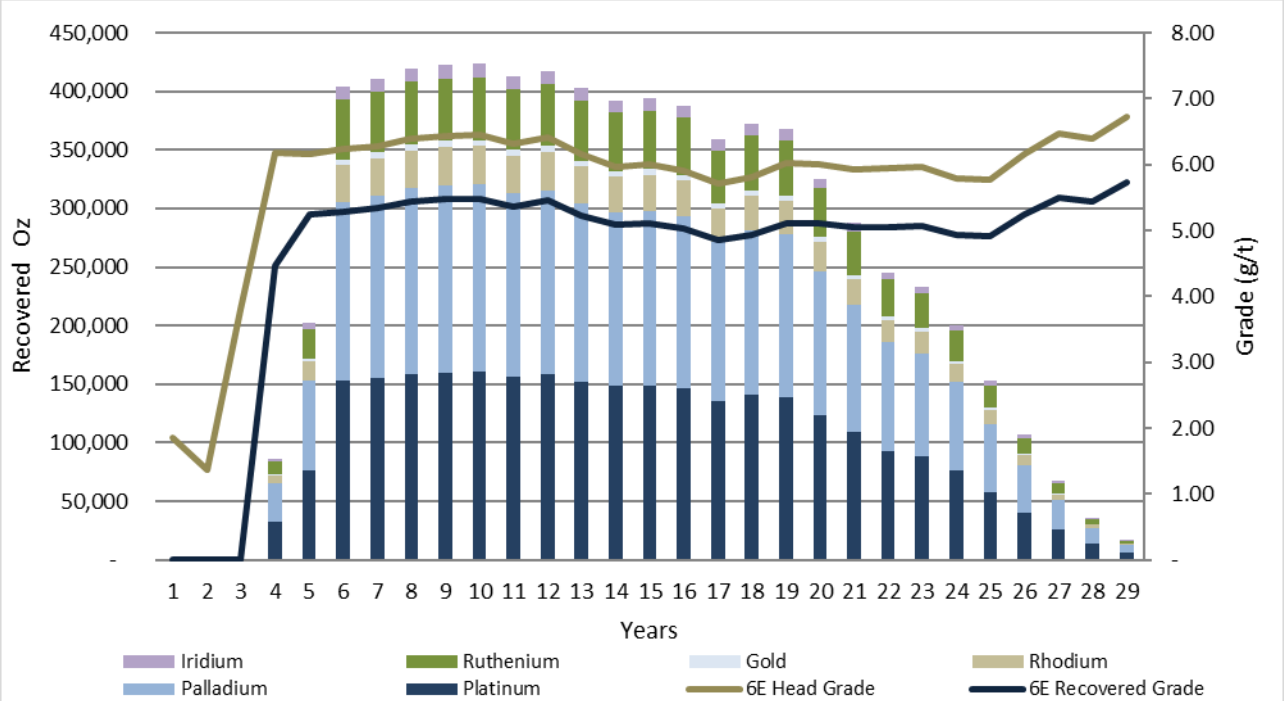
Figure 59: Annual Saleable Product - 6E



A production breakdown of the tonnes and ounces in the LoM are displayed in Table 24.

Table 24: Production Breakdown in Life of Mine

Item	Unit	Bengwenyama
Ore Tonnes Mined	kt	45,262
Total 6E Oz in Mine Plan	oz	8,876,371
Platinum Recovered	oz	2,857,687
Palladium Recovered	oz	2,849,922
Rhodium Recovered	oz	590,175
Gold Recovered	oz	90,079
Ruthenium Recovered	oz	959,034
Iridium Recovered	oz	198,019
6E Grade Delivered to Plant	g/t	6.10
6E Recovered grade	g/t	5.18
6E Recovery	%	85%
Total 6E Oz Recovered	oz	7,544,915
Copper Recovered	kt	7,997
Nickel Recovered	kt	16,515
Chrome Ore Concentrate 42% Produced	kt	6,083

15.1.3 Financial Cost Indicators

Costs reported for the Project are displayed per milled tonne and per recovered 6E ounce in Table 25. It should be noted that costs are inclusive of contingencies.

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Table 25: Project Cost Indicators (Weighted Average over Life of Mine)

Description	Unit	Value
Revenue	**ZAR/Milled tonne**	**4,831**
Mine Cost	ZAR/Milled tonne	1,149
Plant Costs	ZAR/Milled tonne	410
Other Costs	ZAR/Milled tonne	542
Royalties	ZAR/Milled tonne	279
Adjusted Operating Cost	**ZAR/Milled tonne**	**2,379**
Sustaining Capex	ZAR/Milled tonne	203
Rehabilitation	ZAR/Milled tonne	2
Off-Mine Overheads	ZAR/Milled tonne	26
All-in Sustaining Cost (AISC)	**ZAR/Milled tonne**	**2,609**
Non-Sustaining Capex	ZAR/Milled tonne	207
Non-Current Costs	ZAR/Milled tonne	-
All-in Cost (AIC)	**ZAR/Milled tonne**	**2,816**
EBITDA*	ZAR/Milled tonne	2,425
EBITDA Margin	%	50%
4E oz Recovered	oz	6,387,863
Revenue	**USD/4E oz**	**1,749**
Mine Cost	USD/4E oz	416
Plant Costs	USD/4E oz	148
Other Costs	USD/4E oz	196
Royalties	USD/4E oz	101
Adjusted Operating Cost	**USD/4E oz**	**861**
Sustaining Capex	USD/4E oz	73
Reclamation	USD/4E oz	1
Off-Mine Overheads	USD/4E oz	9
All-in Sustaining Cost (AISC)	**USD/4E oz**	**945**
Non-Sustaining Capex	USD/4E oz	75
Non-Current Costs	USD/4E oz	-
All-in Cost (AIC)	**USD/4E oz**	**1,020**
EBITDA	USD/4E oz	878
6E oz Recovered	oz	7,544,915
Revenue	**USD/6E oz**	**1,481**
Mine Cost	USD/6E oz	352
Plant Costs	USD/6E oz	126
Other Costs	USD/6E oz	166
Royalties	USD/6E oz	86
Adjusted Operating Cost	**USD/6E oz**	**729**
Sustaining Capex	USD/6E oz	62
Reclamation	USD/6E oz	1
Off-Mine Overheads	USD/6E oz	8
All-in Sustaining Cost (AISC)	**USD/6E oz**	**800**
Non-Sustaining Capex	USD/6E oz	63
Non-Current Costs	USD/6E oz	-
All-in Cost (AIC)	**USD/6E oz**	**863**
EBITDA	USD/6E oz	743

Note: 4E costs were included for comparison with mines reporting only 4E oz.

The Bengwenyama Project is estimated to cost in the lower quartile of the PGM cost curve (R. Hochreiter, 2024) as illustrated in Figure 60.

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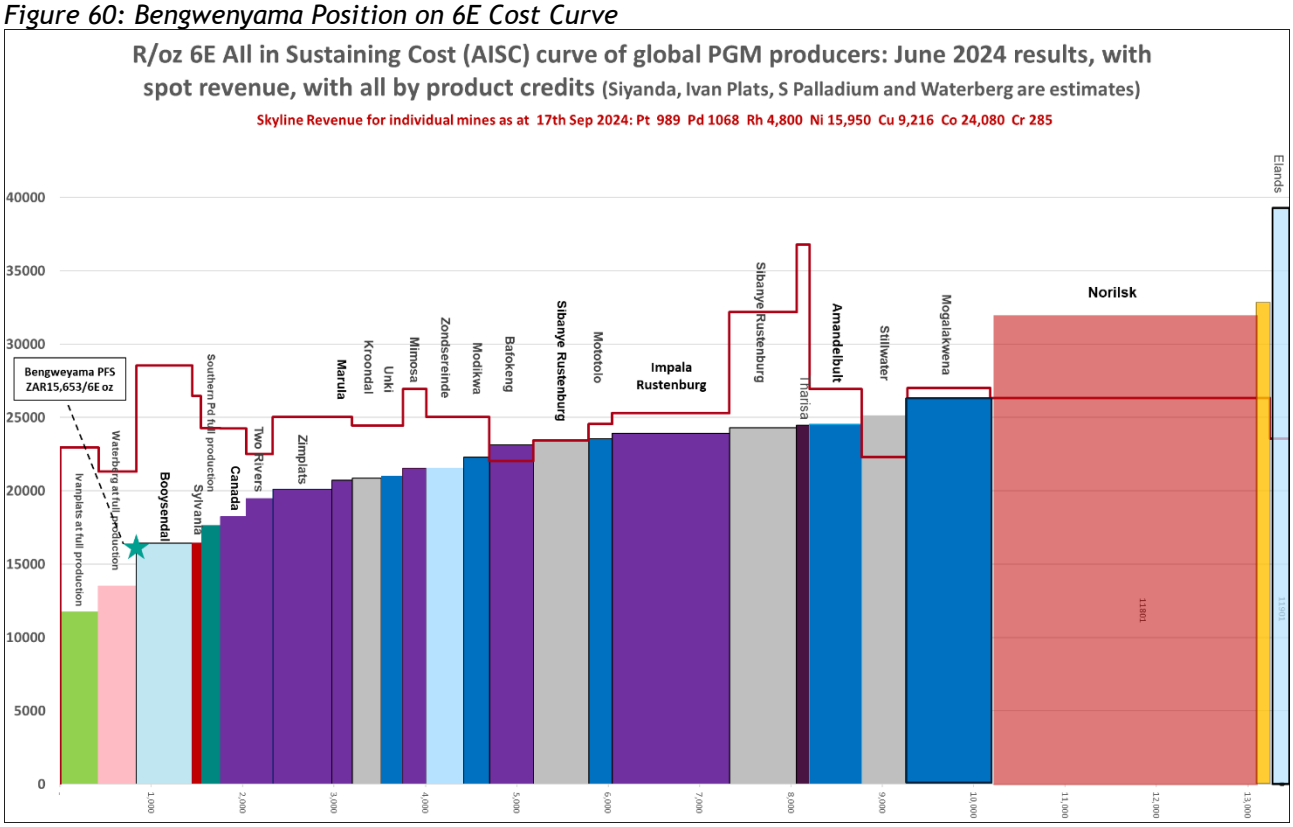
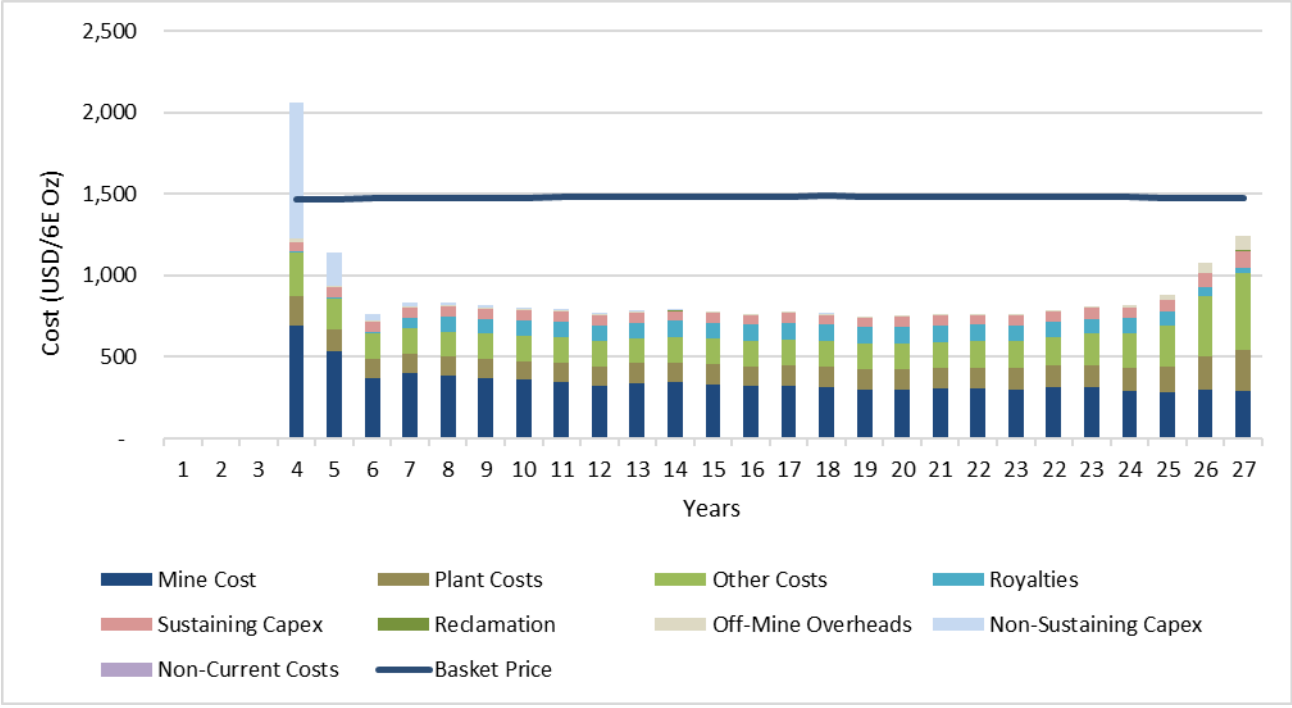
Figure 60: Bengwenyama Position on 6E Cost Curve



Source: Adapted from Rene Hochreiter (NOAH Capital Markets & Sieberana Research, 2024)

The AIC per recovered 6E ounce for the Project together with the 6E equivalent Basket price that was used in the LoM is displayed in Figure 61 on an annual basis.

Figure 61: All-in Costs vs Revenue (Annual) - 6E



The AISC per recovered 4E ounce for the Project together with the 4E equivalent Basket price that was used in the LoM is displayed in Figure 62 on an annual basis.

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Figure 62: All-in Sustaining Costs vs Revenue (Annual) - 6E

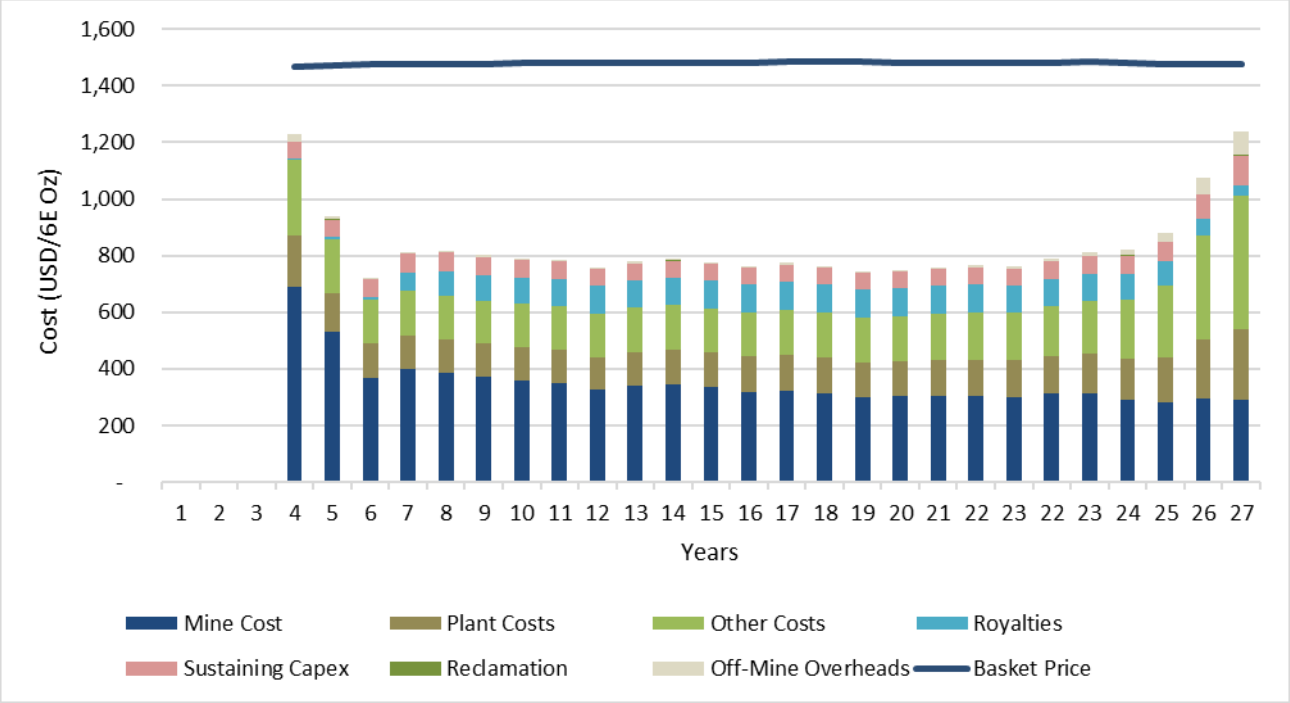
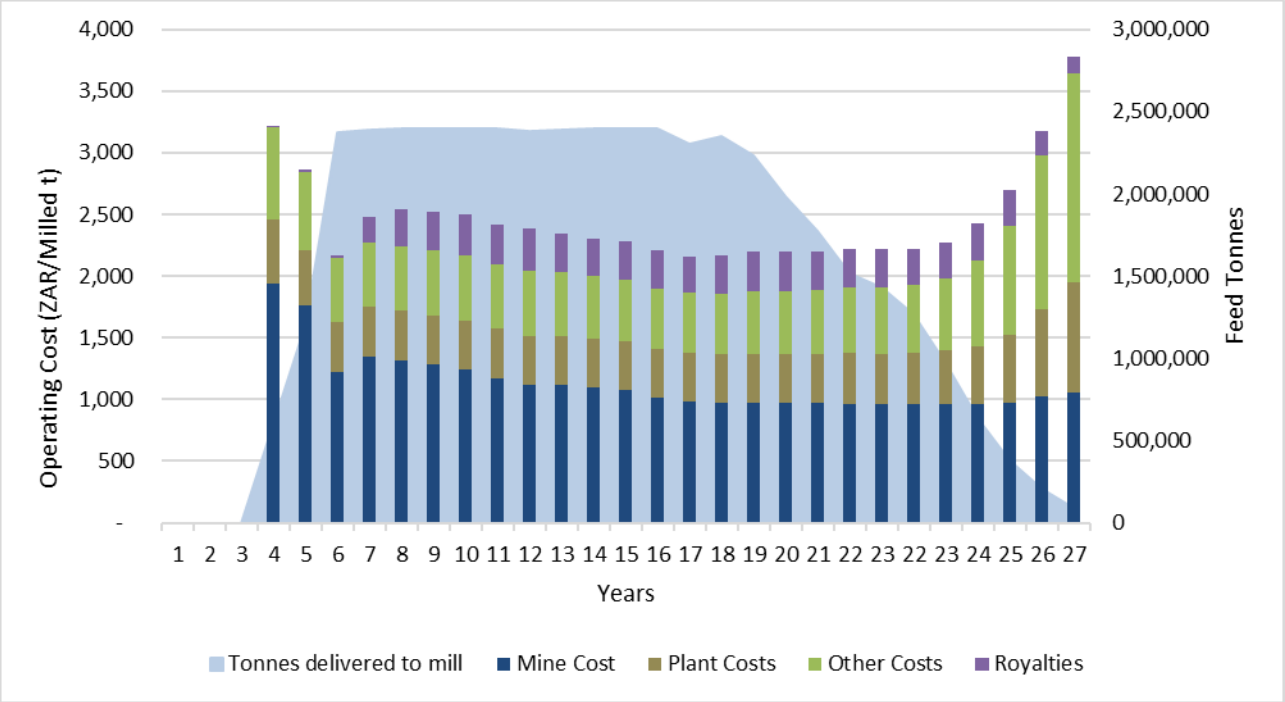


Figure 63 displays the Adjusted Operating Costs against the milled tonnes per year for the LoM plan.

Figure 63: Adjusted Operating Cost vs Milled Tonnes (Annual)



15.2 Effective Date

Value relates to a specific point in time. The effective date for the economic analysis is 1 October 2024.

15.3 Financial Results

Minxcon's in-house DCF model was populated with the data to illustrate the NPV for the operation in real ZAR terms, which was subsequently converted to real USD terms using the exchange rate forecast. The NPV

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is derived from post-tax, pre-debt real cash flows, using the techno-economic parameters, commodity price and macro-economic projections.

This economic analysis is based on a free cash flow and measures the economic viability of the overall Project as well as the economic viability of the orebody to demonstrate the extraction of the above-mentioned project is viable and justifiable under a defined set of realistically assumed modifying factors.

15.3.1 Basis of Evaluation

In generating the financial model and deriving the valuations, the following were considered:-

- This Report details the optimised cash flow model with economic input parameters.
- The cash flow model is in real money terms and completed in ZAR.
- The DCF evaluation was set up in calendar years.
- The annual ZAR cash flow used real term forecast exchange rates for the LoM period.
- The financial results have been converted to USD terms using the average exchange rate over the LoM.
- A company hurdle rate of 8.0% (in real terms) was utilised for the discount factor.
- The impact of the Mineral Royalties Act using the formula for unrefined metals was included.
- Sensitivity analyses were performed to ascertain the impact of discount factors, commodity prices, exchange rate, grade, operating costs and capital expenditures.
- Valuation of the tax entity was performed on a stand-alone basis.
- The full NPV of the operation was reported for the Bengwenyama Project.

15.3.2 Summary of Discounted Analysis

The Project NPVs for the Project are various real-term discount rates are detailed in Table 26 in ZAR and USD, respectively. The real term best-estimated value for the Project at a real discount rate of 8.0% is ZAR20,724 million or USD1,059 million with an IRR of 28.0%. This indicates that the Project is financially viable.

Table 26: Project NPVs at Various Discount Rates (Real Terms)

Project Value	Unit	Bengwenyama
NPV @ 0%	ZARm	66,608
NPV @ 5%	ZARm	31,648
NPV @ 8%	**ZARm**	**20,724**
NPV @ 10%	ZARm	15,684
NPV @ 15%	ZARm	7,698
NPV @ 20%	ZARm	3,400
IRR	**%**	**28.0%**
NPV @ 0%	USDm	3,403
NPV @ 5%	USDm	1,617
NPV @ 8%	**USDm**	**1,059**
NPV @ 10%	USDm	801
NPV @ 15%	USDm	393
NPV @ 20%	USDm	174
AISC Cost Margin	%	46%
Peak Funding Requirement	ZAR million	8,847
Peak Funding Requirement	USD million	452
Payback Period from Ground Break	Years	6.5
Payback Period from First Mining	Years	6.0
Payback Period from First Plant Production	Years	3.5

The profitability ratios for the Project are detailed in Table 27.

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Table 27: Project Profitability Ratios

Description	Unit	Bengwenyama
Internal Rate of Return (IRR)	%	28.0%
NPV - ZAR/oz	ZAR/6E oz	2,335
NPV - USD/oz	USD/6E oz	119
LoM	Years	29
Undiscounted Cash Flow	ZARm	66,608
Discounted Cash Flow 8%	ZARm	20,724
Investment	ZARm	8,847
Undiscounted Cash over Investment*	Ratio	8.5
Discounted Cash 8% over Investment*	Ratio	3.3
Payback Period from Ground Break	Years	6.5
Payback Period from First Mining	Years	6.0
Payback Period from First Plant Production		3.5
Peak Funding Requirement	ZARm	8,847
Peak Funding Requirement	USDm	452
Breakeven 6E Basket Price (Excluding Capex)	USD/oz	738
Breakeven 6E Basket Price (Including Capex)	USD/oz	864

Note: * Calculated as net cash flow divided by investment (peak funding requirement)

15.3.3 Cash Flow

The Project capital expenditure, cash flow, and cumulative cash flow over the LoM are displayed in Figure 64 and Figure 65, on an annual basis in ZAR and USD terms, respectively. The peak funding requirement is ZAR8,847 million (or USD452 million) (inclusive of contingencies), with a pay-back period of 6.0 years from start of mining or 6.5 years from start of construction.

Figure 64: Annual and Cumulative Cash Flow - ZAR (Real Terms)

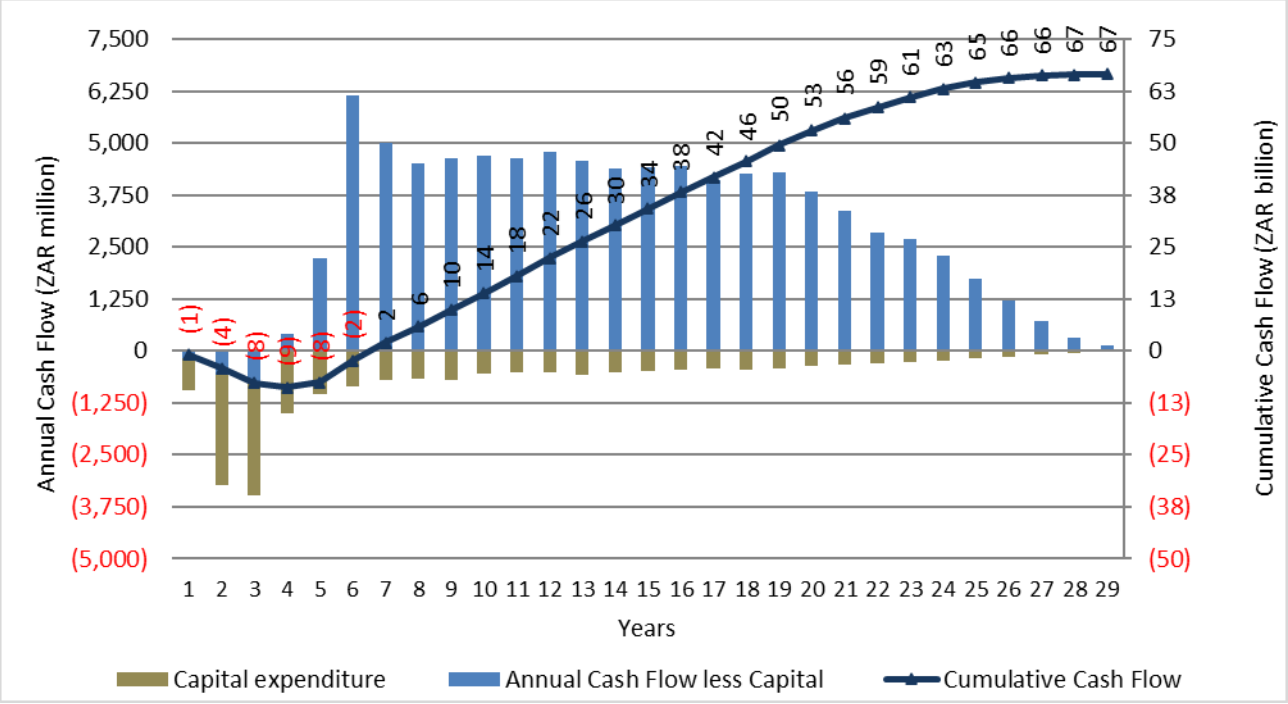

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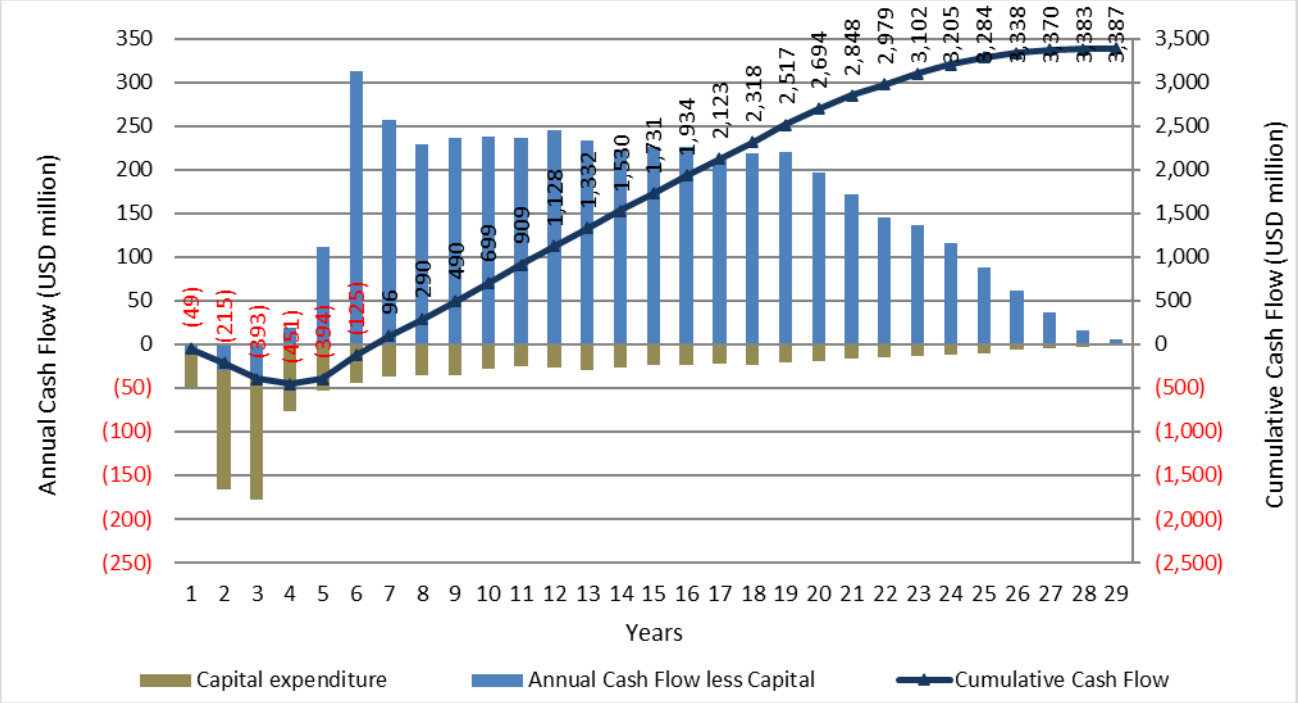
Figure 65: Annual and Cumulative Cash Flow - USD (Real Terms)



15.3.4 Sensitivity Analysis

Based on the real cash flow calculated in the financial model, Minxcon performed single-parameter sensitivity analyses to ascertain the impact on the NPV. The bars represent various inputs into the model; each being increased or decreased by 15%. The left-hand side of the graph indicates a negative 15% change in the input while the right-hand side of the graph indicating a positive 15% change in the input. A negative effect to the NPVs represented by red bars and a positive effect represented by blue bars. For the DCF, the exchange rate, grade and PGM prices have the biggest impact on the sensitivity of the Project followed by the mining operating costs. The Project is least sensitive to the base metal prices, capital and processing operating costs.

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Figure 66: Project Sensitivity ZAR ($NPV_{8.0\%}$)

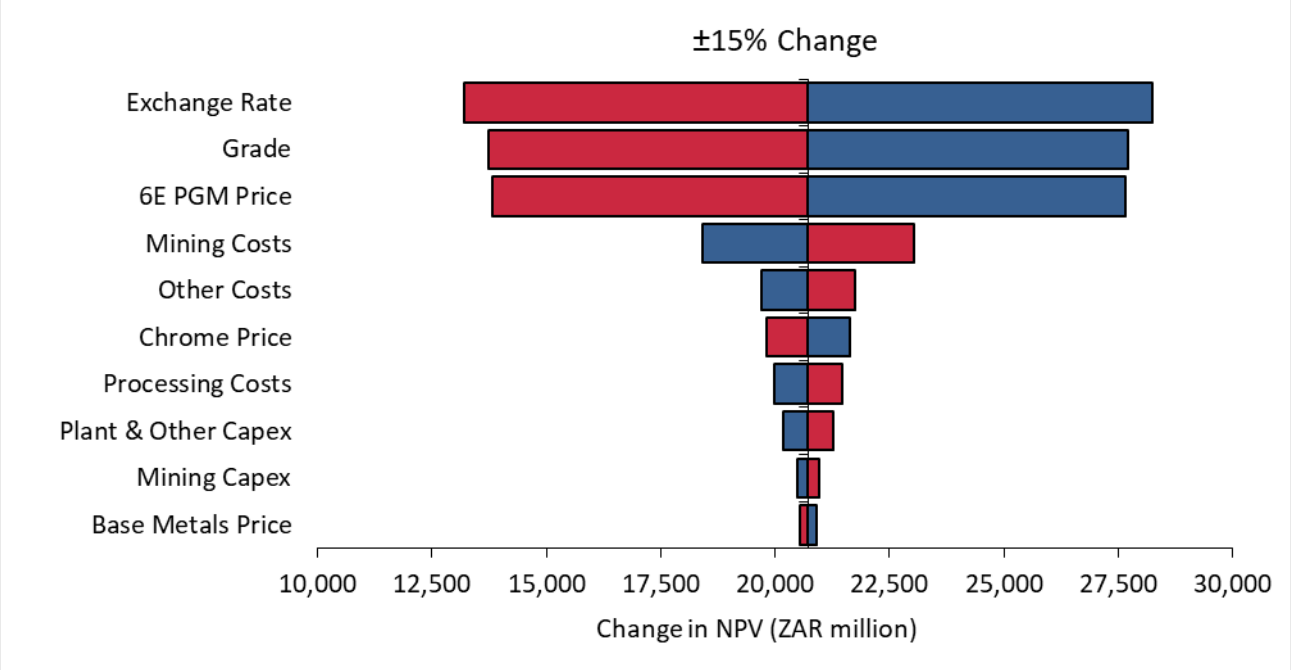
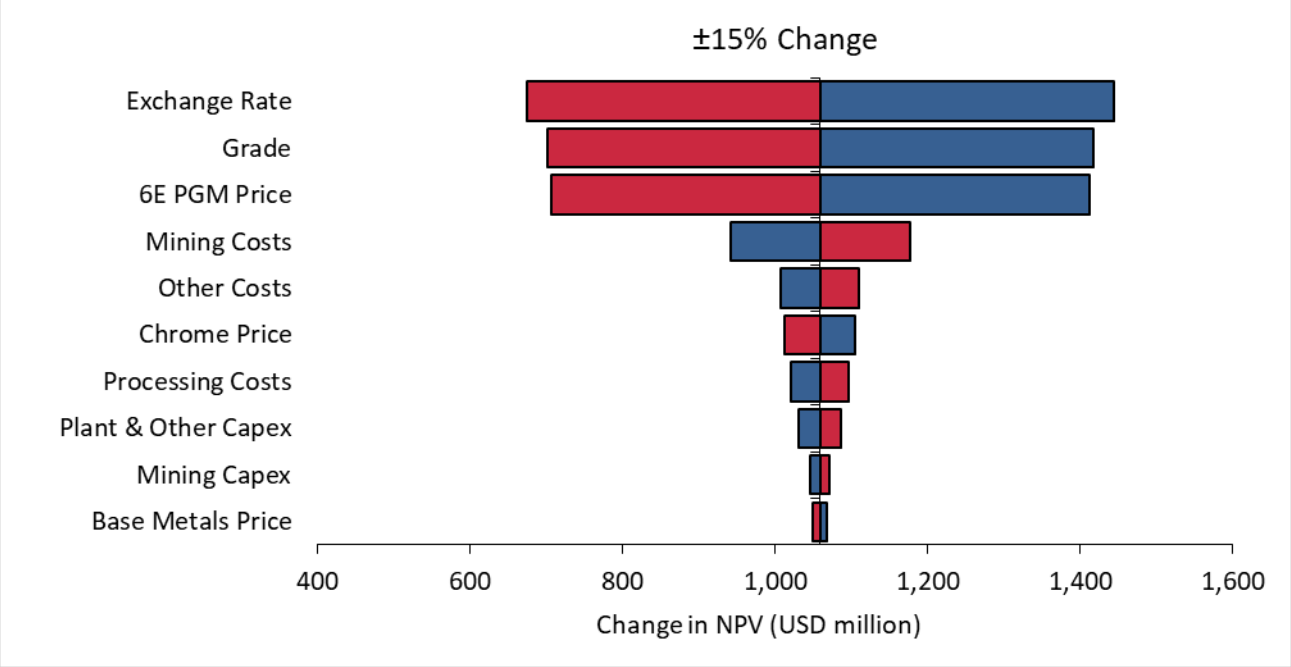


Figure 67: Project Sensitivity USD ($NPV_{8.0\%}$)



A sensitivity analysis was also conducted on the exchange rate and the commodity prices to better indicate the effect these two factors have on the NPV as well as the grade and the operating costs. This is displayed, for Project at an NPV of 8%, in Table 28 and Table 29 in ZAR terms, and Table 30 and Table 31 in USD terms.

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Table 28: Sensitivity Analysis of PGM Prices and Exchange Rate to $NPV_{8.0\%}$ (ZARm)

	Exchange Rate (ZAR/USD)	13.70	14.68	15.66	16.64	17.61	18.59	**19.57**	20.55	21.53	22.51	23.49	24.46	25.44
6E Basket Price (USD/oz)	% Change	-30%	-25%	-20%	-15%	-10%	-5%		5%	10%	15%	20%	25%	30%
1,090	-30%	-4,906	-2,763	-746	1,202	3,110	4,989	6,847	8,698	10,530	12,360	14,190	16,004	17,818
1,168	-25%	-2,999	-844	1,229	3,255	5,252	7,224	9,188	11,135	13,081	15,020	16,948	18,876	20,804
1,246	-20%	-1,193	1,010	3,162	5,278	7,367	9,445	11,508	13,570	15,619	17,662	19,705	21,748	23,791
1,324	-15%	545	2,828	5,066	7,275	9,470	11,649	13,827	15,989	18,147	20,305	22,462	24,620	26,778
1,402	-10%	2,249	4,616	6,948	9,263	11,558	13,852	16,129	18,401	20,674	22,947	25,222	27,500	29,798
1,479	-5%	3,928	6,387	8,824	11,235	13,645	16,039	18,426	20,814	23,201	25,592	27,993	30,418	32,855
1,557		5,591	8,147	10,680	13,206	15,719	18,221	**20,724**	23,226	25,734	28,255	30,803	33,361	35,934
1,635	5%	7,234	9,894	12,536	15,169	17,787	20,404	23,021	25,646	28,286	30,954	33,633	36,327	39,030
1,713	10%	8,875	11,633	14,390	17,122	19,854	22,587	25,326	28,083	30,869	33,668	36,483	39,305	42,127
1,791	15%	10,499	13,372	16,228	19,075	21,922	24,774	27,647	30,549	33,466	36,400	39,341	42,283	45,224
1,869	20%	12,122	15,104	18,066	21,028	23,993	26,979	29,994	33,027	36,080	39,140	42,200	45,261	48,322
1,947	25%	13,745	16,827	19,904	22,982	26,080	29,204	32,351	35,521	38,700	41,880	45,059	48,239	51,419
2,024	30%	15,359	18,550	21,742	24,946	28,179	31,441	34,724	38,022	41,321	44,620	47,918	51,217	54,516
2,102	35%	16,967	20,274	23,583	26,923	30,296	33,691	37,106	40,524	43,942	47,360	50,778	54,195	57,624

Note: Prices and Exchange rates indicated are average numbers over the LoM. Adjustments are made as a percentage change which applies to each year in the forecast to derive the desired average number.

Table 29: Sensitivity Analysis of Cash Operating Costs and Capital to $NPV_{8.0\%}$ (ZARm)

	6E Grade (g/t)	4.27	4.57	4.88	5.18	5.49	5.79	**6.10**	6.40	6.71	7.01	7.32	7.62	7.93
Operating Cost (ZAR/t)	% Change	-30%	-25%	-20%	-15%	-10%	-5%		5%	10%	15%	20%	25%	30%
2,733	30%	-1,864	652	3,101	5,505	7,877	10,235	12,572	14,910	17,231	19,546	21,861	24,176	26,491
2,628	25%	-383	2,088	4,507	6,894	9,260	11,602	13,941	16,272	18,589	20,905	23,222	25,539	27,853
2,523	20%	1,065	3,506	5,907	8,276	10,629	12,970	15,309	17,627	19,946	22,264	24,583	26,901	29,206
2,417	15%	2,491	4,906	7,287	9,652	11,994	14,337	16,663	18,983	21,303	23,623	25,943	28,255	30,572
2,312	10%	3,899	6,295	8,667	11,016	13,360	15,694	18,016	20,338	22,660	24,982	27,301	29,627	31,978
2,207	5%	5,296	7,673	10,033	12,379	14,723	17,046	19,370	21,694	24,017	26,343	28,679	31,042	33,420
2,102		6,675	9,047	11,395	13,742	16,073	18,398	**20,724**	23,049	25,382	27,730	30,103	32,487	34,885
1,997	-5%	8,052	10,407	12,756	15,096	17,423	19,750	22,078	24,419	26,781	29,161	31,553	33,958	36,369
1,892	-10%	9,416	11,767	14,115	16,444	18,773	21,104	23,454	25,832	28,216	30,616	33,028	35,441	37,854
1,787	-15%	10,774	13,126	15,462	17,793	20,126	22,488	24,880	27,271	29,678	32,093	34,508	36,924	39,339
1,682	-20%	12,132	14,476	16,808	19,148	21,521	23,921	26,324	28,738	31,155	33,572	35,989	38,406	40,823
1,577	-25%	13,487	15,821	18,170	20,555	22,960	25,375	27,794	30,213	32,632	35,051	37,470	39,889	42,308
1,471	-30%	14,830	17,189	19,586	21,999	24,425	26,846	29,267	31,688	34,109	36,530	38,951	41,372	43,793

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Table 30: Sensitivity Analysis of PGM Prices and Exchange Rate to $NPV_{8.0\%}$ (USDm)

	Exchange Rate (ZAR/USD)	13.70	14.68	15.66	16.64	17.61	18.59	**19.57**	20.55	21.53	22.51	23.49	24.46	25.44
6E Basket Price (USD/oz)	% Change	-30%	-25%	-20%	-15%	-10%	-5%		5%	10%	15%	20%	25%	30%
1,090	-30%	-251	-141	-38	61	159	255	350	444	538	632	725	818	910
1,168	-25%	-153	-43	63	166	268	369	469	569	668	767	866	965	1,063
1,246	-20%	-61	52	162	270	376	483	588	693	798	902	1,007	1,111	1,216
1,324	-15%	28	144	259	372	484	595	706	817	927	1,037	1,148	1,258	1,368
1,402	-10%	115	236	355	473	591	708	824	940	1,056	1,172	1,289	1,405	1,523
1,479	-5%	201	326	451	574	697	820	942	1,063	1,185	1,308	1,430	1,554	1,679
1,557		286	416	546	675	803	931	**1,059**	1,187	1,315	1,444	1,574	1,705	1,836
1,635	5%	370	506	641	775	909	1,043	1,176	1,310	1,445	1,582	1,718	1,856	1,994
1,713	10%	453	594	735	875	1,014	1,154	1,294	1,435	1,577	1,720	1,864	2,008	2,153
1,791	15%	536	683	829	975	1,120	1,266	1,413	1,561	1,710	1,860	2,010	2,160	2,311
1,869	20%	619	772	923	1,074	1,226	1,379	1,533	1,688	1,844	2,000	2,156	2,313	2,469
1,947	25%	702	860	1,017	1,174	1,333	1,492	1,653	1,815	1,977	2,140	2,302	2,465	2,627
2,024	30%	785	948	1,111	1,275	1,440	1,606	1,774	1,943	2,111	2,280	2,448	2,617	2,786
2,102	35%	867	1,036	1,205	1,376	1,548	1,721	1,896	2,071	2,245	2,420	2,595	2,769	2,944

Note: Converted to USD at average exchange rate of 19.57.

Table 31: Sensitivity Analysis of Cash Operating Costs and Capital to $NPV_{8.0\%}$ (USDm)

	6E Grade (g/t)	4.27	4.57	4.88	5.18	5.49	5.79	**6.10**	6.40	6.71	7.01	7.32	7.62	7.93
Operating Cost (USD/t)	% Change	-30%	-25%	-20%	-15%	-10%	-5%		5%	10%	15%	20%	25%	30%
140	30%	-95	33	158	281	402	523	642	762	880	999	1,117	1,235	1,354
134	25%	-20	107	230	352	473	593	712	831	950	1,068	1,187	1,305	1,423
129	20%	54	179	302	423	543	663	782	901	1,019	1,138	1,256	1,375	1,492
124	15%	127	251	372	493	613	733	851	970	1,088	1,207	1,326	1,444	1,562
118	10%	199	322	443	563	683	802	921	1,039	1,158	1,276	1,395	1,514	1,634
113	5%	271	392	513	633	752	871	990	1,108	1,227	1,346	1,465	1,586	1,708
107		341	462	582	702	821	940	**1,059**	1,178	1,297	1,417	1,538	1,660	1,782
102	-5%	411	532	652	771	890	1,009	1,128	1,248	1,368	1,490	1,612	1,735	1,858
97	-10%	481	601	721	840	959	1,078	1,198	1,320	1,442	1,564	1,688	1,811	1,934
91	-15%	551	671	790	909	1,028	1,149	1,271	1,393	1,516	1,640	1,763	1,887	2,010
86	-20%	620	740	859	978	1,100	1,222	1,345	1,468	1,592	1,715	1,839	1,962	2,086
81	-25%	689	808	928	1,050	1,173	1,297	1,420	1,544	1,667	1,791	1,915	2,038	2,162
75	-30%	758	878	1,001	1,124	1,248	1,372	1,495	1,619	1,743	1,867	1,990	2,114	2,238

Note: Converted to USD at average exchange rate of 19.57.

16 CONCLUSIONS & RECOMMENDATIONS

CONCLUSIONS

Environmental

As the Project currently stands, it satisfies all material issues relating to environmental, social and governance which have been considered inclusive of compliance to MPRDA and NEMA requirements. The Company is in the process of acquiring the environmental authorisations it requires to commence with mining activities (process was completed in July 2024 and the outcome of the decision from the DMRE on the application is still pending) and other licences i.e., water use licence and waste management licence before any commencement of activities related to the Project. There is reasonable basis to believe that all governmental requirements for the Project can be obtained. The qualified persons are not aware of any factors or risks that may affect access, title or right or the ability to perform work on the property.

Mining

Ore production is estimated to start in year 3 after project commencement. Access location trade-off was investigated with this PFS to determine optimal position for early production. Additional access was also investigated to increase early ramp-up production.

Processing

The plant will be constructed to treat RoM using a crushing, screening, milling and conventional MF2 flotation and spiralling to deliver a PGM concentrate and a chrome concentrate. A processing plant capable of treating 200 ktpm nominally will be established to treat RoM ore.

The estimated recoveries derived from testwork results are 85% with an associated 4E grade of 140 g/t derived from a 6-cycle locked cycle test. Subsequently optimisation of the flotation reagent suite produced an 85% recovery from rougher only kinetic testwork (no cleaning of the rougher concentrate was performed) and the associated 6E grade was 102 g/t. This rougher kinetic testwork was performed to generate rougher tailings for the shaking table test. The flotation recovery for copper was 75.8% and for nickel it was 30.6%.

The estimated recovery of chromite is 30% with an associated grade of 42% based on testwork results.

Engineering and Infrastructure

The Bengwyenyama Project is located in an area that is well established in terms of infrastructure and services. Sufficient provision has been made for critical infrastructure and facilities to support the operation at the planned production rates.

Tailings Storage Facility

Various locations and deposition methods have been considered for the construction of a tailings storage facility for the project. The preferred location and method has been selected as part of the PFS study and a design completed. The deposition method selected that will allow for the optimal utilisation of the selected site is dry-stack deposition. The site showed positive results due to the fact that it can cater for storage of tailings for the life of mine, as well as being a lower risk option in terms of structural integrity and long-term closure considerations. The design has been completed considering GISTM requirements. The design allows for the construction of the facility and will be established in three phases. The three phases allow for sufficient storage capacity of tailings material for the LoM.

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Development Timeline

Further development of the project includes the completion of the PFS work (Including resource drilling and resource update), FS study work (Including drilling – resource infill, geotechnical, metallurgical test work and hydrogeological) as well as FEED designs.

Early indications are that construction could commence early 2026 with a construction period of 24 months. Construction is planned to take place concurrently with the development of the main declines that will ensure first stoping ore in month 24 after commencement.

Financial

The Project recovering 7.5 Moz 6E is economically feasible with a post-tax NPV of ZAR20,724 million or USD1,050 million at a real discount rate of 8%. The Project has an IRR of 28.0% with a payback period of 6.5 years from the start of construction. The peak funding requirement of the Project is ZAR8,847 million or USD452 million.

RECOMMENDATIONS

Environmental

As the Project currently stands, SPD is in the process of acquiring environmental permits for the Project. All environmental licences including a water use licence and waste management licence should be in place before construction commences. SPD must ensure adherence to all the environmental and sustainability principles as set out in the MPRDA and NEMA.

Processing

Additional testwork is required to optimise the flotation performance. Such work must include reagent optimisation for the cleaner flotation circuits. Spiral testwork is also required to confirm spiral design selection to facilitate chromite recovery as demonstrated by shaking table testwork and to minimise PGM content reporting to the chromite concentrate.

Engineering and Infrastructure:

Further detailed study work and engagement with the suppliers of bulk services to the project will be required in the next study phases. Alternative solutions to power supply should be investigated to comply with future carbon neutral requirements. Detailed hydrological and geohydrological studies should be completed to fully understand the requirements for the effective use and management of ground and surface water and in turn minimise the impact on the environment and local communities. Further detailed engineering designs should be undertaken to increase the level of accuracy and confidence of the infrastructure provision as well as the associated capital and operating costs.

Tailings Storage Facility

Further detailed studies and test work to inform detailed designs should be undertaken on the tailings storage facility. All designs should be conducted in accordance with GISTM and local legislative requirements. The selected site and deposition method of the tailings storage facility along with the design should aim to minimise or eliminate any short, medium and long term risk to the environment, local community and the project.

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Financial

The PFS confirms the 2.4 Mtpa, 400 kozpa Bengwenyama Project is economically and technically feasible. It is recommended that the Project proceed to the next phase of study, namely a Feasibility Study.

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Appendix 1

Ore Reserves

The Ore Reserves for this project consist of Measured and Indicated Resources only. The Ore Reserve classification was conducted by converting Measured and Indicated Mineral Resources to Probable Ore Reserves. Table 32 provides a detailed summary of the tonnage and grades for Probable Ore Reserves within the Bengwenyama Project, highlighting the content.

Table 32: UG2 Ore Reserves Estimation as at 23 October 2024

Ore Reserve Category	Tonnes	Pt	Pd	Rh	Au	Ir	Os	Ru	4E	6E	Cu	Ni	Cr_2O_3	Moz(4E)	Moz(6E)
	Mt	(g/t)	(g/t)	(g/t)	(g/t)	(g/t)	(g/t)	(g/t)	(g/t)	(g/t)	(%)	(%)	(%)		
Probable	31.72	2.34	2.33	0.48	0.07	0.16	-	0.78	5.22	6.17	0.02	0.12	19.03	5.32	6.29
Total	**31.72**	**2.34**	**2.33**	**0.48**	**0.07**	**0.16**	**-**	**0.78**	**5.22**	**6.17**	**0.02**	**0.12**	**19.03**	**5.32**	**6.29**

Notes:

1. The Ore Reserve estimation included diluted Measured and Indicated Mineral Resources only.
2. No Inferred Mineral Resources have been included in the Ore Reserve.
3. The Ore Reserve estimation was completed using a 6E basket price (before payabilities) of USD1,557/oz over the LoM.

The waterfall method is an analytical tool for evaluating the total UG2 *in situ* Mineral Resources and converting 6E into Ore Reserves by applying various modifying factors. In Figure 68 the process begins with the total *in situ* Mineral Resources after geological losses for the UG2 Reef only. From this, Mineral Resources excluded from the LoM plan are removed, which accounts for Mineral Resources that are not included in the mining schedule. The difference between these two values gives the Mineral Resources in the LoM plan. The stoping width adjusted tonnes are then calculated, which involves adjusting the tonnes based on the stoping method. Subsequently, several deductions are made:-

- Pillar loss, which refers to the portion of resources left behind to support the mine structure.
- Mining loss, accounting for inefficiencies and losses during the extraction process.
- Mine Call Factor, representing the ratio of material mined to the amount estimated to be recoverable.
- Inferred Resources, which are removed as they cannot be classified as Ore Reserves due to a lack of confidence.

After these deductions, the result is the Ore Reserves, providing a practical and actionable estimate of the Mineral Resources available for extraction. This method ensures a clear and structured approach to determining what is economically and technically feasible for mining operations.

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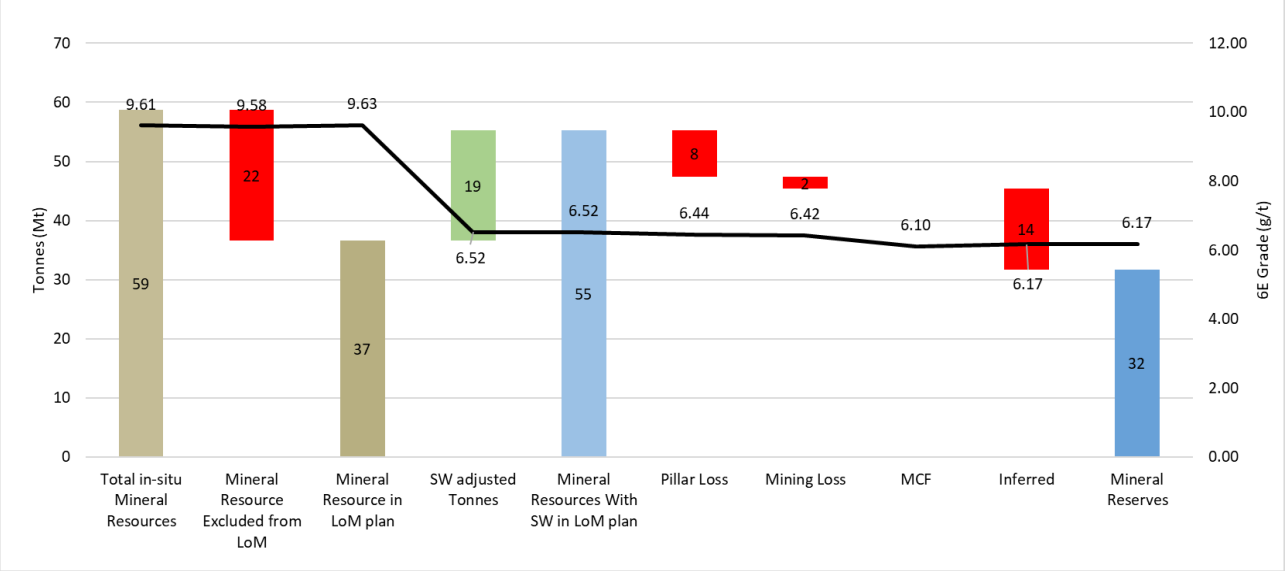
Figure 68: UG2 Mineral Resources to Ore Reserve Conversion Tonnes (6E)

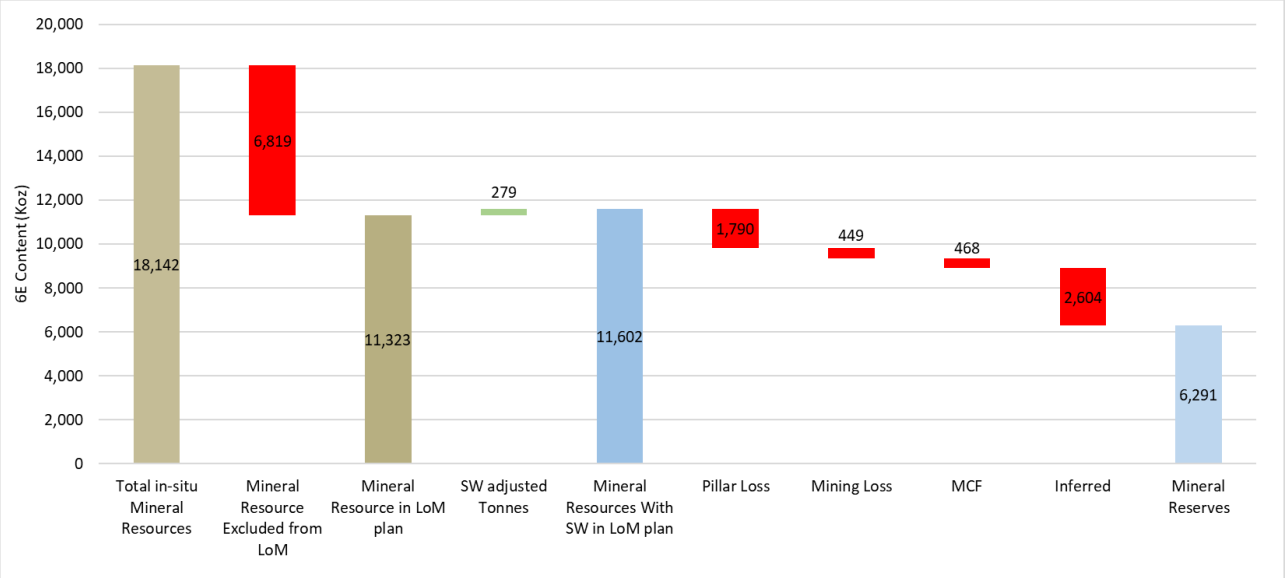


Notes:

1. The Total in situ Mineral Resources started includes Geological Losses and is for UG2 only.
2. SW Adjusted Tonnes refer to the waste and footwall tonnes added as a mining conversion factor which includes a small portion of footwall metal content.

The same method is applied to the content (6E) in Figure 69 to determine the Ore Reserves content available.

Figure 69: UG2 Mineral Resources to Ore Reserve Conversion Content (6E)



Notes:

1. The Total in situ Mineral Resources started includes Geological Losses and is for UG2 only.
2. SW Adjusted Tonnes refer to the waste and footwall tonnes added as a mining conversion factor which includes a small portion of footwall metal content.

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JORC CHECKLIST – TABLE 1 ASSESSMENT AND REPORTING CRITERIA

JORC Checklist – Table 1 Assessment and Reporting Criteria

SECTION 1: SAMPLING TECHNIQUES AND DATA		
Criteria	**Explanation**	**Detail**
Sampling techniques	Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.	20 cm samples are taken within the reef horizon unless there is a lithological reason to deviate from this. A single sample is also taken in the hanging wall and footwall to test for mineralisation in the direct waste rock. The samples are split with a core saw and one half is submitted to the laboratory and the other half keep in the core tray.
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	The core is orientated in such a way that the two halves are equal.
	Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.	The sampling methodology is standard and as per industry practice in the Bushveld Complex (BC). The samples are 20 cm in length and are split into two equal halves with one half being submitted for analysis. The core size starts as HQ (10 m to 50 m) but is NQ by the time the reef is intersected.
Drilling techniques	Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).	The drillholes start with HQ (for approximately 10-50 m) in the weathered zone but are then drilled NQ once in the fresher material. The drill rigs that were utilised have been the CS 1500, Delta 520 and a smaller Longyear 44. The drill contractor is Geomech Africa.
Drill sample recovery	Method of recording and assessing core and chip sample recoveries and results assessed.	Initially the core was scanned in with the software ScanIT which scans the core with high resolution photos and the geologists reconcile the depths and core losses per 3 m run. The Core recoveries and RQD are then calculated for the drillhole. ScanIT has however been discontinued and the core is now photographed and the core recovery and RQD is calculated manually by the geological assistants.
	Measures taken to maximise sample recovery and ensure representative nature of the samples.	The geologist informs the drilling supervisor at what depth the reef is expected so that they can take extra precautions around the anticipated reef depth. The core recoveries are measured per 3 m run and if there is excessive core loss in the reef horizon it is marked as a non-representative sample and will not be used in the resource estimation process.

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SECTION 1: SAMPLING TECHNIQUES AND DATA		
Criteria	**Explanation**	**Detail**
	Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	The core recoveries for the intersections submitted to the laboratory are all above 98%. If the core loss is excessive the sample is not submitted to the laboratory for Mineral Resource estimation purposes. Therefore, there will not be any sample bias due to poor recoveries.
Logging	Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.	The core was initially scanned into ScanIT software which produced high resolution images. This has however been discontinued. The logging is conducted on paper log sheets or tablets at the core yard with dropdown menus. Legends have been set up in excel that cover the necessary detailed required for Mineral Resource estimation. Alpha angles and structure detail is also observed and logged. The beta angle is not measured as the core is not orientated but the downhole televiewer survey supplies structural orientation information which is incorporated into the logs.
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.	Core logging is qualitative and utilises excel spreadsheets on tablets.
	The total length and percentage of the relevant intersections logged.	The total drillhole is geologically logged and photographed and the televiewer survey is conducted from 100 m above the reef horizon for additional structural information.
Sub-sampling techniques and sample preparation	If core, whether cut or sawn and whether quarter, half or all core taken.	The core is cut in two equal halves for sampling and storage purposes.
	If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.	This project only makes use of core drilling.
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	The sample preparation code at ALS is PREP-31H which has the following procedure: - Login of samples into the system, weighing, fine crushing of entire sample to 70% - 2 mm, split off 500 g and pulverize split to better than 85% passing 75 microns.
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	The QAQC sequence is as follows: - If the batch is less than 20 samples the batch starts and ends with a blank and a CRM and duplicate are inserted into the sample stream. If the batch is great than 20 samples then the batch starts and ends with a blank and every tenth sample is either a CRM, duplicate or blank. This equates to between 20% and 10% QAQC samples.
	Measures taken to ensure that the sampling is representative of the in-situ material collected, including for instance results for field duplicate/second-half sampling.	The sampling of the reef is reef material only except for the first and last sample of the reef as it will have 2 cm of hanging wall or footwall material to ensure the entire mineralisation is captured. This 2 cm dilution will be calculated into the reef width. The hanging wall and footwall are sampled separately to the reef. Hence the reef samples are representative of the *in-situ* reef horizon. Requested duplicates are pulp duplicates and the CRMs are material from the UG2 and MR from African Mineral Standards (AMIS).
	Whether sample sizes are appropriate to the grain size of the material being sampled.	The reef horizon is sampled in 20 cm increments so that the grade distribution can be observed if a mining cut is required. The UG2 reef is approximately 70 cm wide and will have three to four samples which will be composited later. The MR is wider at around 200 cm and will have about ten individual samples to determine the grade distribution. These will also be composited later for Mineral Resource Estimation purposes. Hanging wall and footwall samples are also taken to check if there is any mineralisation in the direct surrounding waste rock.

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SECTION 1: SAMPLING TECHNIQUES AND DATA		
Criteria	**Explanation**	**Detail**
		This is industry best practice for the BC.
Quality of assay data and laboratory tests	The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.	The UG2 reef will be assayed for 4E and 7E as well as for Cu, Ni, Co, Cr and Fe. The MR will be assayed for the same except the Cr and Fe as it is not a chromitite seam but a pyroxenite layer. The ALS methods are as follows: - PGM-ICP23 - Pt, Pd, Au package using lead fire assay with ICP-AES finish. 30 g nominal sample weight. Rh-ICP28 - Fire assay fusion using lead flux with Pd collector for Rh determination by ICPAES. 10 g nominal sample weight. PGM-MS25NS - The Platinum Group Metals are separated from the gangue material using the Nickel Sulphide Fire Assay procedure. After dissolution of the pulp with aqua regia, PGMs are determined by ICP-MS. ME-XRF26s - Analysis of Chromite ore samples by fused disc / XRF. This method is suitable for the determination of major and minor elements in ore samples which require a high dilution digest such as Chromite ores. Elements that will be analysed are Cr, Cu, Ni, Fe and Co. The overall pass rate of the various QAQC samples is 90%. All methodologies are total.
	For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.	All analytical work is undertaken by ALS Chemex South Africa (Pty) Ltd, located in Johannesburg, which is part of the ALS group. The South African laboratory is ISO 17025 accredited by SANAS (South African National Accreditation System). The historical Anglovaal samples were sent to the Anglovaal Research Laboratory (AVRL), which was located in Florida, South Africa when it existed, for analysis.
	Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	QAQC procedure has been described above. In addition to the QAQC samples the analytical methodologies are also correlated with each other i.e. PGM-ICP23 and RH-ICP28 is compared to PGM-MS25NS. There is a good correlation and on average are within 1 - 2% of each other over the 4E grade.
Verification of sampling and assaying	The verification of significant intersections by either independent or alternative company personnel.	Two umpire laboratories were used, Suntech and Mintek. The umpire samples showed good correlation for the overall 4E grades as well as the individual elements for the prill splits.
	Discuss any adjustment to assay data.	No adjustments have been made to the assayed results.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	The assay results are received from the laboratory in pdf format and excel format. The excel form is imported into the Minxcon excel database. These are checked by the senior geologist. The assay certificates are stored in the project folder.
	The use of twinned holes.	No twinning has been undertaken to date. However, statistics was utilised to confirm that the Nkwe dataset and new SPD dataset can be combined.
Location of data points	Accuracy and quality of surveys used to locate drillholes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.	Drillhole collar positions are initially recorded by handheld Garmin GPS. Drillhole collar survey was conducted by Aero Geomatics (Pty) Ltd. All completed drillholes were surveyed by post-processing Kinematic methodology. (“PPK”). The accuracy of PPK is 5 mm + 0.5 ppm horizontally and 10 mm

SECTION 1: SAMPLING TECHNIQUES AND DATA		
Criteria	**Explanation**	**Detail**
		+ 1 ppm vertically. The survey was based on the World Geodetic System 1984 ellipsoid, commonly known as WGS84.
	Specification of the grid system used.	The coordinate system used is LO31.
	Quality and adequacy of topographic control.	Regional three-dimensional (3D) topography was constructed from regional surface contours and Shuttle Radar Topography Mission (SRTM) data. The surface was trimmed 300–500 m beyond the Project perimeter. A Lidar DTM will however be flown for the mining studies.
Data spacing and distribution	Data spacing for reporting of Exploration Results.	The final drillhole spacing will be between 200 m and 350 m. There could be gaps in this grid if there is sufficient confidence in the structure of the fault / structural block.
	Whether the data spacing, and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.	Geological continuity is based on the knowledge of the surrounding area and 3D model constructed from historical data. 82 drillholes and 50 deflections have been completed confirming the position of the UG2 and Merensky reefs. The total drilling meters is 30,746m.
	Whether sample compositing has been applied.	The 20cm (or larger) samples are composited to obtain the weighted average of the entire intersection.
Orientation of data in relation to geological structure	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.	The drillholes are vertical drillholes and intersect the reef close to right angles. The sample is therefore unbiased. If the reef is faulted it will be noted and if the reef intersection is not representative, it will not be used in Mineral Resource estimations.
	If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	No sampling bias will be introduced based on the drilling orientation as they are close to perpendicular.
Sample security	The measures taken to ensure sample security.	Samples are only handled by the drilling contractor and the Minxcon geological staff. There is a strict chain of custody that is followed from the time the core leaves the drill site to the time the sample is received by the laboratory.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	An audit on the exploration processes and geological interpretations was undertaken by Dr. Richard Hornsey from Richard Hornsey Consulting (Pty) Ltd from 17 to 19 January 2024. No issues were identified in terms of the procedures and data but valuable geological input around the geology of the dome structure was supplied. Additional historical Anglovaal drilling data was shared by Dr. Richard Hornsey with SPD for the utilisation in the geological interpretation, 3D modelling and estimation of the Nooitverwacht area.

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SECTION 2: REPORTING OF EXPLORATION RESULTS		
Criteria	**Explanation**	**Detail**
Mineral tenement and land tenure status	Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.	The Company has submitted a Mining Right Application to the Competent Authority, Department of Mineral Resources and Energy for the proposed Bengwenyama Mine Underground Project. To date, the following environmental milestones have been achieved. The granting of the Preferent Prospecting Right number LP30/5/1/1/3/2/1/002PPR under Section 104 of the Mineral and Petroleum Resources Development Act, 2002 as amended issued June 2015 and execution and completion of exploration activities with respective environmental compliance monitoring was February 2024. The Prospecting Right covers all elements of potential economic interest and has expired but an application for a Mining Right is pending approval. Assessments have been undertaken to determine the status of the environment and to determine any potential sensitivities to be avoided and / or mitigated.
	The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	The prospecting right was valid until February 2024. However, the application for the Mining Right has begun and is in progress.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	Drilling was undertaken by Rustenburg Platinum Mines from 1966 to 1985. Trojan exploration completed drilling on Eerstegeluk between 1990 and 1993. Drilling prior to 1994 was not used as part of this Mineral Resource estimate (MRE) due to the incomplete nature or availability of the drillhole data. Nkwe completed drillholes in 2007–2008. This drilling supports the MRE. Reconnaissance mapping has been completed by previous operators. However, new historical drilling data from 1988 to 1991 from Anglovaal has been discovered through Dr. Richard Hornsey and has been utilised in the estimation of the Nooitverwacht extension inferred Mineral Resource. The drilling that was completed was a joint venture between Anglovaal through Midvaal Mining Company and Severin Mining and Development Company (Pty) Ltd.
Geology	Deposit type, geological setting and style of mineralisation.	The target UG2 and Merensky reefs occur within the Upper Critical Zone of the Rustenburg Layered Suite of the BC. These reefs are laterally continuous for tens to hundreds of kilometres. The UG2 comprises mineralised chromitite, whereas the Merensky Reef is defined as the mineralised pyroxenitic zone between upper and lower chromitite stringers. The BC is the world's largest igneous intrusion and also the largest global repository of PGEs and chromitite. Both reefs are stratiform with relatively minor disruptive structural features and replacement deposits.

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Drillhole Information	A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drillholes: * easting and northing of the drillhole collar * elevation or RL (Reduced Level – elevation above sea level in metres) of the drillhole collar * dip and azimuth of the hole * down hole length and interception depth * hole length.	

Drilling									
BHID	Northing	Easting	Elevation	Dip	Azimuth	From	To	Drilled Metres	Comment
	WG31		m	°	°	m	m	m	
E001	-87997	-2734366	856	-90	0	0.00	554.75	554.75	EOH, completed
E001D1	-87997	-2734366	856	-90	0	508.00	552.02	44.02	EOH, Completed
E003	-87886	-2735050	841	-90	0	0.00	563.75	563.75	EOH, Completed
E004	-87545	-2734954	836	-90	0	0.00	524.50	524.50	EOH, completed
E004D1	-87545	-2734954	836	-90	0	457.00	518.75	61.75	Deflection completed
E007	-87016	-2735561	823	-90	0	0.00	422.80	422.80	EOH, completed
E010	-86653	-2735835	815	-90	0	0.00	365.90	365.90	EOH, Completed
E010D1	-86653	-2735835	815	-90	0	301.00	363.96	62.96	EOH, Completed
E010D2	-86653	-2735835	815	-90	0	295.00	365.90	70.90	EOH, Completed
E011	-86918	-2736242	815	-90	0	0.00	407.75	407.75	EOH, Completed
E011D1	-86918	-2736242	815	-90	0	74.00	100.00	26.00	EOH, Completed
E011D2	-86918	-2736242	815	-90	0	68.00	98.75	30.75	EOH, Completed
E013	-86433	-2736520	805	-90	0	0.00	327.22	327.22	EOH, completed
E014	-86585	-2736211	811	-90	0	0.00	354.10	354.10	EOH, completed
E014D1	-86585	-2736211	811	-90	0	302.00	344.04	42.04	EOH, Completed
E014D2	-86585	-2736211	811	-90	0	292.00	346.55	54.55	EOH, Completed
E015	-86175	-2736459	801	-90	0	0.00	298.72	298.72	EOH, completed
E016	-87176	-2736677	812	-90	0	0.00	454.68	454.68	EOH, completed
E017	-87228	-2736278	820	-90	0	0.00	461.65	461.65	EOH, Completed
E019	-86451	-2736870	802	-90	0	0.00	32.42	32.42	Abandoned
E019a	-86446	-2736871	802	-90	0	0.00	323.77	323.77	EOH, completed
E020	-86719	-2737286	796	-90	0	0.00	350.75	350.75	EOH, completed
E021	-85783	-2736771	790	-90	0	0.00	249.05	249.05	EOH, Completed
E021D1	-85783	-2736771	790	-90	0	203.00	247.00	44.00	EOH, Completed
E021D2	-85783	-2736771	790	-90	0	197.00	247.00	50.00	EOH, Completed
E021D3	-85783	-2736771	790	-90	0	187.00	247.55	60.55	EOH, Completed
E024	-86103	-2737214	799	-90	0	0.00	284.75	284.75	EOH, completed
E025	-85961	-2737488	793	-90	0	0.00	267.58	267.58	EOH, completed
E027	-86336	-2737554	789	-90	0	0.00	290.75	290.75	EOH, completed
E028	-86763	-2736874	804	-90	0	0.00	383.75	383.75	EOH, completed
E029	-86619	-2737663	789	-90	0	0.00	320.78	320.78	EOH, Completed
E029D1	-86619	-2737663	789	-90	0	248.00	320.78	72.78	EOH, Completed
E030	-87118	-2737703	798	-90	0	0.00	413.75	413.75	EOH, completed
E031	-87055	-2737304	800	-90	0	0.00	423.22	423.22	EOH, completed
E032	-87186	-2737011	807	-90	0	0.00	467.75	467.75	EOH, Completed
E033	-85929	-2737822	784	-90	0	0.00	261.58	261.58	EOH, completed
E034	-86501	-2737763	787	-90	0	0.00	298.38	298.38	EOH, Completed
E034D1	-86501	-2737763	787	-90	0	232.00	296.88	64.88	EOH, Completed
E034D2	-86501	-2737763	787	-90	0	227.00	296.51	69.51	EOH, Completed
E035	-85755	-2738095	773	-90	0	0.00	260.62	260.62	EOH, Completed
E035D1	-85755	-2738095	773	-90	0	213.00	257.62	44.62	EOH, Completed
E036	-86252	-2737800	781	-90	0	0.00	276.47	276.47	EOH, Completed
E036D1	-86252	-2737800	781	-90	0	231.00	273.47	42.47	EOH, Completed
E036D2	-86252	-2737800	781	-90	0	225.00	277.97	52.97	EOH, Completed
E036D3	-86252	-2737800	781	-90	0	219.00	276.99	57.99	EOH, Completed
E037	-86265	-2738275	774	-90	0	0.00	282.45	282.45	EOH, completed
E039	-87036	-2738502	781	-90	0	0.00	249.30	249.30	EOH, Completed
E039D1	-87036	-2738502	781	-90	0	166.00	229.23	63.23	EOH, Completed
E041	-86452	-2738759	768	-90	0	0.00	258.77	258.77	EOH, completed
E043	-86097	-2738943	767	-90	0	0.00	266.14	266.14	EOH, Completed
E043D1	-86097	-2738943	767	-90	0	193.00	263.00	70.00	EOH, Completed
E043D2	-86097	-2738943	767	-90	0	182.00	263.89	81.89	EOH, Completed
E044	-86399	-2739001	774	-90	0	0.00	263.73	263.73	EOH, completed
E045	-86703	-2738971	779	-90	0	0.00	206.55	206.55	EOH, Completed
E046	-86818	-2738720	781	-90	0	0.00	245.68	245.68	EOH, Completed
E048	-85474	-2737965	769	-90	0	0.00	236.70	236.70	EOH, Completed
E049	-85950	-2739599	769	-90	0	0.00	322.75	322.75	EOH, completed, extended to UG1 for
E050	-85990	-2739275	768	-90	0	0.00	193.31	193.31	Abandoned due to lost equipment
E050D1	-85990	-2739275	768	-90	0	185.00	279.98	94.98	EOH, Completed
E051	-86256	-2739690	774	-90	0	0.00	105.56	105.56	EOH, Completed
E051D1	-86256	-2739690	774	-90	0	50.00	99.36	49.36	EOH, Completed
E052	-86338	-2739349	774	-90	0	0.00	252.55	255.55	EOH, Completed
E054	-85732	-2739268	762	-90	0	0.00	287.57	287.57	EOH, Completed
E056**	-87026	-2739473	784	-90	0	0.00	335.70	335.70	EOH, Completed
E057**	-87351	-2739458	789	-90	0	0.00	299.68	299.68	EOH, Completed
E058	-86128	-2740387	776	-90	0	0.00	158.25	158.25	EOH, completed
E059	-85913	-2739975	770	-90	0	0.00	99.55	99.55	EOH, Completed
E060	-85837	-2740293	773	-90	0	0.00	206.72	206.72	EOH, completed
E060D1	-85837	-2740293	773	-90	0	139.00	185.53	46.53	EOH, completed
E062	-86184	-2740003	775	-90	0	0.00	120.34	120.34	EOH, completed, extended to UG1 for
E062D1	-86184	-2740003	775	-90	0	18.30	34.92	16.62	Deflection completed, faulted UG2
E062D2	-86184	-2740003	775	-90	0	13.30	33.00	19.70	Deflection completed, faulted UG2
E064	-84844	-2738000	749	-90	0	0.00	166.40	166.40	EOH, completed
E065	-85573	-2738426	762	-90	0	0.00	239.75	239.75	EOH, completed
E066	-85299	-2738831	753	-90	0	0.00	225.32	225.32	EOH, Completed
E066D1	-85299	-2738831	753	-90	0	161.00	225.62	64.62	EOH, Completed
E067	-85466	-2739534	760	-90	0	0.00	306.45	306.45	EOH, completed
E069	-85315	-2740512	761	-90	0	0.00	305.45	305.45	EOH, Completed
E069D1	-85315	-2740512	761	-90	0	180.00	251.65	71.65	EOH, Completed
E070	-85144	-2737715	763	-90	0	0.00	191.90	191.90	EOH, Completed
E070D1	-85144	-2737715	763	-90	0	125.00	191.90	66.90	EOH, Completed
E071	-85049	-2738331	749	-90	0	0.00	188.80	188.80	EOH, completed
E072	-85670	-2738947	759	-90	0	0.00	254.75	254.75	EOH, Completed
E072D1	-85670	-2738947	759	-90	0	208.00	251.75	43.75	EOH, Completed
E072D2	-85670	-2738947	759	-90	0	203.00	251.75	48.75	EOH, Completed
E076	-85482	-2738844	755	-90	0	0.00	239.75	239.75	EOH, Completed
E077	-85821	-2738313	769	-90	0	0.00	264.22	264.22	EOH, Completed
E077D1	-85821	-2738313	769	-90	0	191.00	263.68	72.68	EOH, Completed
E079	-85446	-2739178	756	-90	0	0.00	270.13	270.13	EOH, Completed
E080	-85065	-2738654	746	-90	0	0.00	195.17	195.17	EOH, Completed
E082	-85905	-2738776	760	-90	0	0.00	248.90	248.90	EOH, Completed
E082D1	-85905	-2738776	760	-90	0	177.00	245.90	68.90	EOH, Completed
E085	-86750	-2738523	776	-90	0	0.00	251.90	251.90	EOH, Completed
E086	-86127	-2739438	770	-90	0	0.00	68.75	68.75	Abandoned due to lost equipment
E086A	-86130	-2739442	770	-90	0	0.00	260.75	260.75	EOH, Completed

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SECTION 2: REPORTING OF EXPLORATION RESULTS		
Criteria	**Explanation**	**Detail**

All drillholes were drilled -90 degrees.

The UG2 and MR geological and estimation models have been updated to include drilling and assaying data as at end of May 2024. The structural / geological model utilised 20 historical Nkwe drillholes and 82 SPD drillholes while the estimation model utilised 10 historical Nkwe drillholes and 73 SPD drillholes for the UG2 and 10 historical Nkwe drillholes and 18 SPD drillholes for the MR. 9 historical Anglovaal drillholes were used in the estimation of the Nooitverwacht extension.

Anglovaal Data - UG2 Reef composites

BHID	X	Y	Z	REEF_FROM	REEF_TO	Thickness (m)	Pt (g/t)	Pd (g/t)	Rh (g/t)	Au (g/t)	4E (g/t)
BK1D0	-93871.10	-2746009.31	-710.68	1577.43	1578.84	1.41	3.38	2.25	0.54	0.08	6.25
BK1D3	-93871.10	-2746009.31	-710.48	1577.29	1578.59	1.30	3.57	2.42	0.39	0.11	6.50
BK1D4	-93871.10	-2746009.31	-710.10	1576.85	1578.26	1.41	2.84	2.04	0.34	0.08	5.29
BK3D0	-93007.69	-2742403.59	-502.44	1990.38	1991.62	1.24	4.40	2.98	0.60	0.11	8.09
BK3D1	-93007.69	-2742403.59	-502.72	1990.65	1991.90	1.25	2.36	1.41	0.21	0.09	4.08
BK3D2	-93007.69	-2742403.59	-503.42	1991.37	1992.58	1.21	3.52	2.09	0.45	0.09	6.14
BK3D3	-93007.69	-2742403.59	-502.94	1990.85	1992.15	1.30	3.49	2.24	0.52	0.08	6.32
BK4D0	-94248.49	-2744589.36	-665.12	2023.17	2024.39	1.22	2.49	0.77	0.25	0.00	3.51
BK4D1	-94248.49	-2744589.36	-664.04	2022.12	2023.27	1.15	3.24	1.32	0.39	0.00	4.96
BK4D2	-94248.49	-2744589.36	-664.92	2022.77	2024.39	1.62	2.76	1.66	0.40	0.00	4.82
BK4D3	-94248.49	-2744589.36	-665.70	2023.79	2024.92	1.13	3.70	1.47	0.63	0.02	5.83
BK4D4	-94248.49	-2744589.36	-665.33	2023.39	2024.59	1.20	3.57	3.78	0.59	0.19	8.12
BK5D6	-92712.94	-2743946.78	-615.94	1579.92	1581.77	1.85	1.88	1.53	0.31	0.07	3.80
BK5D7	-92712.94	-2743946.78	-616.14	1579.89	1582.21	2.32	2.10	0.81	0.27	0.00	2.04
BK6D2	-93537.11	-2742829.71	-526.14	1928.83	1929.67	0.84	3.65	3.52	0.50	0.11	7.77
BK6D4	-93537.11	-2742829.71	-525.37	1927.73	1929.23	1.50	2.17	2.18	0.27	0.43	5.05
BK6D5	-93537.11	-2742829.71	-525.59	1927.91	1929.50	1.59	2.45	2.31	0.34	0.07	5.17
BK6D6	-93537.11	-2742829.71	-525.68	1928.06	1929.51	1.45	3.04	3.40	0.41	0.11	6.95
MM1D0	-94698.22	-2748411.82	-1099.48	1941.77	1943.98	2.21	2.19	1.24	0.34	0.02	3.79
MM1D1	-94698.22	-2748411.82	-1099.42	1941.62	1944.02	2.40	1.91	1.12	0.35	0.01	3.39
MM1D2	-94698.22	-2748411.82	-1099.40	1941.59	1944.00	2.41	1.55	0.98	0.26	0.02	2.81
MM1D3	-94698.22	-2748411.82	-1099.34	1942.04	1943.44	1.40	2.43	1.22	0.34	0.02	4.02
MM1D4	-94698.22	-2748411.82	-1099.56	1942.03	1943.89	1.86	1.88	1.40	0.25	0.06	3.59
SPA1D9	-95315.53	-2735374.36	-178.58	1950.61	1952.31	1.70	3.69	1.07	0.29	0.02	5.08
SRD1D0	-97725.53	-2737258.09	-463.33	1848.98	1849.49	0.51	2.05	0.23	0.23	0.10	2.60
SRD1D4	-97725.53	-2737258.09	-463.47	1849.16	1849.60	0.44	0.95	0.15	0.07	-	1.18
SRD1D7	-97725.53	-2737258.09	-463.31	1848.97	1849.47	0.50	2.29	0.10	0.05	-	2.43

Anglovaal Data - Merensky Reef Composites

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<table>
<tr><th colspan="3">SECTION 2: REPORTING OF EXPLORATION RESULTS</th></tr>
<tr><th>Criteria</th><th>Explanation</th><th>Detail</th></tr>
<tr><td></td><td></td><td>
<table>
<tr><th>BHID</th><th>X</th><th>Y</th><th>Z</th><th>REEF_FROM</th><th>REEF_TO</th><th>Thickness (m)</th><th>Pt (g/t)</th><th>Pd (g/t)</th><th>Rh (g/t)</th><th>Au (g/t)</th><th>4E (g/t)</th></tr>
<tr><td>BK1D0</td><td>-93871.00</td><td>-2746009.00</td><td>-481.07</td><td>1346.63</td><td>1349.50</td><td>2.87</td><td>1.59</td><td>0.79</td><td>0.10</td><td>0.06</td><td>2.54</td></tr>
<tr><td>BK1D2</td><td>-93871.00</td><td>-2746009.00</td><td>-481.18</td><td>1346.78</td><td>1349.58</td><td>2.80</td><td>1.83</td><td>0.82</td><td>0.11</td><td>0.13</td><td>4.77</td></tr>
<tr><td>BK1D3</td><td>-93871.00</td><td>-2746009.00</td><td>-481.13</td><td>1346.74</td><td>1349.52</td><td>2.78</td><td>1.56</td><td>0.79</td><td>0.09</td><td>0.14</td><td>2.57</td></tr>
<tr><td>BK1D4</td><td>-93871.00</td><td>-2746009.00</td><td>-481.13</td><td>1346.75</td><td>1349.51</td><td>2.76</td><td>1.29</td><td>0.66</td><td>0.06</td><td>0.18</td><td>2.20</td></tr>
<tr><td>BK2D0</td><td>-92838.00</td><td>-2744076.00</td><td>-414.56</td><td>1354.41</td><td>1356.71</td><td>2.30</td><td>0.88</td><td>0.29</td><td>0.04</td><td>0.06</td><td>1.28</td></tr>
<tr><td>BK3D0</td><td>-93008.00</td><td>-2742404.00</td><td>-274.05</td><td>1762.78</td><td>1763.31</td><td>0.53</td><td>1.97</td><td>1.02</td><td>0.03</td><td>0.29</td><td>3.32</td></tr>
<tr><td>BK3D2</td><td>-93008.00</td><td>-2742404.00</td><td>-273.72</td><td>1762.17</td><td>1763.26</td><td>1.09</td><td>2.25</td><td>1.47</td><td>0.00</td><td>0.08</td><td>3.80</td></tr>
<tr><td>BK3D3</td><td>-93008.00</td><td>-2742404.00</td><td>-274.05</td><td>1762.55</td><td>1763.54</td><td>0.99</td><td>4.30</td><td>1.29</td><td>0.03</td><td>0.34</td><td>5.96</td></tr>
<tr><td>BK4D0</td><td>-94248.00</td><td>-2744589.00</td><td>-426.20</td><td>1783.80</td><td>1786.60</td><td>2.80</td><td>2.14</td><td>1.48</td><td>0.20</td><td>0.16</td><td>3.98</td></tr>
<tr><td>BK4D2</td><td>-94248.00</td><td>-2744589.00</td><td>-426.15</td><td>1783.89</td><td>1786.40</td><td>2.51</td><td>1.99</td><td>0.86</td><td>0.03</td><td>0.19</td><td>3.07</td></tr>
<tr><td>BK4D3</td><td>-94248.00</td><td>-2744589.00</td><td>-426.40</td><td>1784.18</td><td>1786.62</td><td>2.44</td><td>2.64</td><td>1.79</td><td>0.01</td><td>0.36</td><td>4.80</td></tr>
<tr><td>BK4D4</td><td>-94248.00</td><td>-2744589.00</td><td>-425.34</td><td>1782.84</td><td>1785.84</td><td>3.00</td><td>3.57</td><td>1.86</td><td>0.17</td><td>0.31</td><td>5.91</td></tr>
<tr><td>BK5D2</td><td>-92713.00</td><td>-2743947.00</td><td>-401.97</td><td>1366.03</td><td>1367.91</td><td>1.88</td><td>2.22</td><td>1.06</td><td>0.00</td><td>0.21</td><td>3.49</td></tr>
<tr><td>BK6D10</td><td>-93537.00</td><td>-2742830.00</td><td>-283.10</td><td>1685.38</td><td>1686.82</td><td>1.44</td><td>0.79</td><td>0.39</td><td>0.00</td><td>0.04</td><td>1.22</td></tr>
<tr><td>BK6D7</td><td>-93537.00</td><td>-2742830.00</td><td>-283.09</td><td>1685.26</td><td>1686.91</td><td>1.65</td><td>0.95</td><td>0.35</td><td>0.00</td><td>0.04</td><td>1.34</td></tr>
<tr><td>BK6D8</td><td>-93537.00</td><td>-2742830.00</td><td>-283.25</td><td>1685.53</td><td>1686.96</td><td>1.43</td><td>1.24</td><td>0.60</td><td>0.04</td><td>0.07</td><td>1.95</td></tr>
<tr><td>MM1D0</td><td>-94698.00</td><td>-2748412.00</td><td>-874.02</td><td>1715.51</td><td>1718.53</td><td>3.02</td><td>1.76</td><td>1.01</td><td>0.03</td><td>0.18</td><td>2.98</td></tr>
<tr><td>MM1D1</td><td>-94698.00</td><td>-2748412.00</td><td>-873.78</td><td>1715.10</td><td>1718.45</td><td>3.35</td><td>2.55</td><td>2.37</td><td>0.13</td><td>0.10</td><td>5.15</td></tr>
<tr><td>MM1D2</td><td>-94698.00</td><td>-2748412.00</td><td>-873.95</td><td>1715.55</td><td>1718.35</td><td>2.80</td><td>2.16</td><td>1.10</td><td>0.06</td><td>0.19</td><td>3.51</td></tr>
<tr><td>MM1D3</td><td>-94698.00</td><td>-2748412.00</td><td>-873.74</td><td>1715.20</td><td>1718.28</td><td>3.08</td><td>1.25</td><td>1.01</td><td>0.06</td><td>0.19</td><td>2.51</td></tr>
<tr><td>MM1D4</td><td>-94698.00</td><td>-2748412.00</td><td>-873.87</td><td>1715.31</td><td>1718.42</td><td>3.11</td><td>2.04</td><td>0.91</td><td>0.12</td><td>0.26</td><td>3.33</td></tr>
<tr><td>SPA2D3</td><td>-95607.00</td><td>-2738195.00</td><td>-70.65</td><td>1742.61</td><td>1744.69</td><td>2.08</td><td>2.27</td><td>1.17</td><td>0.09</td><td>0.21</td><td>3.78</td></tr>
<tr><td>SPA2D4</td><td>-95607.00</td><td>-2738195.00</td><td>-70.59</td><td>1742.69</td><td>1744.48</td><td>1.79</td><td>0.74</td><td>0.24</td><td>0.00</td><td>0.02</td><td>1.02</td></tr>
<tr><td>SRD1D0</td><td>-97726.00</td><td>-2737258.00</td><td>-196.32</td><td>1581.39</td><td>1583.24</td><td>1.85</td><td>3.49</td><td>2.41</td><td>0.21</td><td>0.46</td><td>6.57</td></tr>
<tr><td>SRD1D11</td><td>-97726.00</td><td>-2737258.00</td><td>-196.62</td><td>1581.85</td><td>1583.39</td><td>1.54</td><td>1.68</td><td>0.73</td><td>0.07</td><td>0.08</td><td>2.67</td></tr>
<tr><td>SRD1D12</td><td>-97726.00</td><td>-2737258.00</td><td>-196.27</td><td>1581.55</td><td>1582.99</td><td>1.44</td><td>3.25</td><td>1.54</td><td>0.16</td><td>0.45</td><td>5.40</td></tr>
<tr><td>SRD1D9</td><td>-97726.00</td><td>-2737258.00</td><td>-196.49</td><td>1581.78</td><td>1583.19</td><td>1.41</td><td>2.70</td><td>1.15</td><td>0.12</td><td>0.09</td><td>4.06</td></tr>
</table>
</td></tr>
<tr><td></td><td>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</td><td>N/A</td></tr>
<tr><td rowspan="3">Data aggregation methods</td><td>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.</td><td>With the Mineral Resource update the statistical analysis recommended no top cutting of the grade for the UG2 reef. However, there is an instance (E121D1) within the MR where one sample had to be capped. The Mineral Resource has been declared at a paylimit of 2.2 g/t for the UG2 and 1.6 g/t for the MR.</td></tr>
<tr><td>Where aggregate intercepts incorporate short lengths of high-grade results and longer lengths of low-grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</td><td>The individual 20cm samples are combined per drillhole per reef intersection for the composite grades used in the estimation process.</td></tr>
<tr><td>The assumptions used for any reporting of metal equivalent values should be clearly stated.</td><td>No metal equivalent has been reported but the various elements have been combined for 3PGE+Au grades (4E) and 6PGE+Au grades (7E).</td></tr>
</table>

SECTION 2: REPORTING OF EXPLORATION RESULTS		
Criteria	**Explanation**	**Detail**
Relationship between mineralisation widths and intercept lengths	If the geometry of the mineralisation with respect to the drillhole angle is known, its nature should be reported. If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').	The intersection lengths stated are the downhole lengths. The drillholes are drilled at -90 degrees and the reef dip is expected to be approximately 6 degrees. Therefore, the difference will be minimal.
Diagrams	Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drillhole collar locations and appropriate sectional views.	A map of the drillhole positions and the stratigraphic column was included in the previous press releases. A section has also been included in previous press releases.
Balanced reporting	Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	Reef intersection depths for all the drillholes have been reported in the table below.

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Drilling	Merensky Reef				UG2 Reef			
BHID	From	To	Width	Comment	From	To	Width	Comment
	m	m	m		m	m	m	
E001	259.82	261.64	1.82	Complete intersection	548.07	549.21	1.14	Complete intersection
E001D1	-	-	-	Deflection below MR	547.78	548.26	0.48	Complete Intersection
E003	272.02	274.20	2.18	Complete intersection	558.16	559.16	1.00	Complete intersection
E004	210.77	212.90	2.13	Complete intersection	517.33	517.57	0.24	Pothole
E004D1	-	-	-	Deflection below MR	515.83	516.52	0.69	Pothole
E007	100.38	102.54	2.16	Complete intersection	417.42	418.14	0.72	Complete intersection
E010	48.24	50.42	2.18	Complete intersection	361.67	362.20	0.52	Complete intersection
E010D1	-	-	-	Deflection below MR	361.89	362.49	0.60	Complete intersection
E010D2	-	-	-	Deflection below MR	361.25	361.90	0.64	Complete intersection
E011	94.89	96.88	1.99	Incomplete intersection, Grinding	399.23	400.43	1.20	Complete intersection
E011D1	94.89	96.91	2.02	Incomplete intersection, Grinding	-	-	-	Deflection drilled for MR
E011D2	94.99	97.20	2.22	Complete intersection	-	-	-	Deflection drilled for MR
E013	12.43	14.53	2.10	Highly weathered & friable,	321.26	321.76	0.50	Complete intersection
E014	37.28	39.68	2.40	Complete intersection	342.62	343.68	1.06	Complete Intersection
E014D1	-	-	-	Deflection below MR	343.29	343.74	0.45	Incomplete intersection,
E014D2	-	-	-	Deflection below MR	342.19	343.06	0.87	Complete Intersection
E015	-	-	-	No MR expected - East of MR subcrop	291.89	292.63	0.74	Complete intersection
E016	159.68	160.59	0.91	Pothole	449.24	450.01	0.77	Complete intersection
E017	154.50	156.55	2.05	Complete intersection	452.63	453.35	0.73	Complete intersection
E019	20.25	22.45	2.20	Highly weathered & friable,	-	-	-	Hole stopped short
E019a	19.55	22.35	2.80	Highly weathered & friable,	315.85	316.61	0.76	Complete intersection
E020	54.20	55.39	1.19	Faulted	342.90	343.56	0.66	Complete intersection
E021	-	-	-	No MR expected - East of MR subcrop	243.25	243.94	0.69	Complete intersection
E021D1	-	-	-	No MR expected - East of MR subcrop	243.27	243.92	0.64	Incomplete Intersection
E021D2	-	-	-	No MR expected - East of MR subcrop	243.19	243.65	0.46	Complete intersection
E021D3	-	-	-	No MR expected - East of MR subcrop	243.32	243.98	0.66	Complete intersection
E024	-	-	-	No MR expected - East of MR subcrop	278.77	279.26	0.49	Complete intersection
E025	-	-	-	No MR expected - East of MR subcrop	260.42	261.32	0.90	Complete intersection
E027	9.58	12.04	2.46	Highly weathered, friable, core loss &	284.47	285.04	0.57	Complete intersection
E028	66.70	68.66	1.96	Complete intersection	373.26	373.79	0.53	Complete intersection
E029	40.03	42.00	1.97	Highly weathered, friable, core loss &	314.68	314.88	0.20	Pothole
E029D1	-	-	-	No MR expected - East of MR subcrop	315.08	315.10	0.02	Pothole
E030	143.00	144.68	1.68	Complete intersection	409.55	410.07	0.52	Complete intersection
E031	122.40	124.29	1.89	Complete intersection	416.57	417.19	0.62	Complete intersection
E032	171.69	173.78	2.09	Complete intersection	462.66	463.98	1.32	Complete Intersection
E033	-	-	-	No MR expected - East of MR subcrop	253.62	254.25	0.63	Complete intersection
E034	25.67	28.00	2.33	Highly weathered & friable,	292.00	292.94	0.94	complete intersection
E034D1	-	-	-	No MR expected - East of MR subcrop	292.38	292.97	0.59	Incomplete intersection,
E034D2	-	-	-	No MR expected - East of MR subcrop	292.74	293.27	0.53	Incomplete intersection,
E035	-	-	-	No MR expected - East of MR subcrop	253.92	254.43	0.51	Incomplete intersection,
E035D1	-	-	-	No MR expected - East of MR subcrop	253.94	254.44	0.50	Incomplete intersection,
E036	0.00	1.98	1.98	Highly weathered & friable,	271.34	271.65	0.31	Complete intersection
E036D1	-	-	-	No MR expected - East of MR subcrop	271.26	271.80	0.55	Complete intersection
E036D2	-	-	-	No MR expected - East of MR subcrop	271.30	271.90	0.60	Complete intersection
E036D3	-	-	-	No MR expected - East of MR subcrop	271.21	271.64	0.43	Complete intersection
E037	-	-	-	No MR expected - East of MR subcrop	-	-	-	Pothole
E039	-	-	-	No MR expected - East of MR subcrop	226.54	226.89	0.34	Incomplete intersection,
E039D1	-	-	-	No MR expected - East of MR subcrop	226.85	227.56	0.71	Complete intersection
E041	-	-	-	No MR expected - East of MR subcrop	250.95	251.60	0.65	Complete intersection
E043	-	-	-	No MR expected - East of MR subcrop	258.25	258.41	0.15	Pothole
E043D1	-	-	-	No MR expected - East of MR subcrop	257.55	258.36	0.81	Pothole
E043D2	-	-	-	No MR expected - East of MR subcrop	258.00	258.32	0.32	Pothole
E044	-	-	-	No MR expected - East of MR subcrop	258.75	259.42	0.67	Complete intersection
E045	-	-	-	No MR expected - East of MR subcrop	202.21	202.82	0.61	Complete Intersection
E046	-	-	-	No MR expected - East of MR subcrop	238.66	239.22	0.56	Complete Intersection
E048	-	-	-	No MR expected - East of MR subcrop	229.77	230.36	0.59	Complete Intersection
E049	-	-	-	No MR expected - East of MR subcrop	-	-	-	Pothole
E050	-	-	-	Abandoned in the hanging wall	-	-	-	Hole stopped short
E050D1	-	-	-	No MR expected - East of MR subcrop	276.37	276.90	0.53	Complete Intersection
E051	-	-	-	No MR expected - East of MR subcrop	95.09	95.60	0.51	Incomplete intersection,
E051D1	-	-	-	No MR expected - East of MR subcrop	95.22	95.97	0.75	Complete intersection
E052	-	-	-	No MR expected - East of MR subcrop	246.01	246.65	0.64	Complete Intersection
E054	-	-	-	No MR expected - East of MR subcrop	280.52	280.94	0.42	Complete Intersection
E056**	-	-	-	No MR expected - East of MR subcrop	*324.59* *325.29* *325.82*	*325.02* *325.56* *326.54*	*0.43* *0.27* *0.72*	*LG6A reef* *LG6 reef* *LG6 reef*
E057**	-	-	-	No MR expected - East of MR subcrop	29.96 *237.73* *238.30* *238.66*	30.76 *238.06* *238.63* *239.85*	0.80 *0.33* *0.33* *1.19*	Highly weathered & friable, *LG6A reef* *LG6 reef* *LG6 reef*
E058	-	-	-	No MR expected - East of MR subcrop	140.88	141.29	0.41	Complete intersection
E059	-	-	-	No MR expected - East of MR subcrop	95.17	95.70	0.53	Complete Intersection
E060	-	-	-	No MR expected - East of MR subcrop	-	-	-	Reef Missing
E060D1	-	-	-	No MR expected - East of MR subcrop	178.78	179.29	0.51	Complete intersection
E062	-	-	-	No MR expected - East of MR subcrop	31.27	32.30	1.03	Complete intersection,
E062D1	-	-	-	No MR expected - East of MR subcrop	31.45	32.27	0.82	Moderately weathered &
E062D2	-	-	-	No MR expected - East of MR subcrop	31.16	31.56	0.40	Moderately weathered &
E064	-	-	-	No MR expected - East of MR subcrop	156.19	157.05	0.86	Complete intersection
E065	-	-	-	No MR expected - East of MR subcrop	231.81	232.50	0.69	Complete intersection
E066	-	-	-	No MR expected - East of MR subcrop	221.30	221.64	0.34	Incomplete Intersection
E066D1	-	-	-	No MR expected - East of MR subcrop	221.19	221.63	0.44	Complete Intersection
E067	-	-	-	No MR expected - East of MR subcrop	299.70	300.20	0.50	Complete intersection
E069	-	-	-	No MR expected - East of MR subcrop	240.98	241.39	0.41	Complete intersection
E069D1	-	-	-	No MR expected - East of MR subcrop	241.33	241.63	0.30	Complete Intersection
E070	-	-	-	No MR expected - East of MR subcrop	185.15	185.72	0.57	Incomplete intersection,
E070D1	-	-	-	No MR expected - East of MR subcrop	185.29	186.08	0.79	Complete intersection
E071	-	-	-	No MR expected - East of MR subcrop	180.04	180.73	0.69	Complete intersection
E072	-	-	-	No MR expected - East of MR subcrop	248.48	249.01	0.53	Incomplete intersection,
E072D1	-	-	-	No MR expected - East of MR subcrop	248.71	249.44	0.73	Complete Intersection
E072D2	-	-	-	No MR expected - East of MR subcrop	248.64	249.22	0.58	Complete Intersection
E076	-	-	-	No MR expected - East of MR subcrop	233.22	233.68	0.46	Complete Intersection
E077	-	-	-	No MR expected - East of MR subcrop	259.56	259.93	0.37	Incomplete intersection,
E077D1	-	-	-	No MR expected - East of MR subcrop	259.82	261.07	1.25	Complete intersection
E079	-	-	-	No MR expected - East of MR subcrop	263.00	263.39	0.39	Complete intersection
E080	-	-	-	No MR expected - East of MR subcrop	188.64	189.12	0.49	Complete intersection
E082	-	-	-	No MR expected - East of MR subcrop	243.15	243.47	0.32	Incomplete intersection,
E082D1	-	-	-	No MR expected - East of MR subcrop	243.25	243.67	0.42	Complete intersection
E085	-	-	-	No MR expected - East of MR subcrop	247.34	247.91	0.57	Complete intersection
E086	-	-	-	Abandoned in the hanging wall	-	-	-	Abandoned in the hanging

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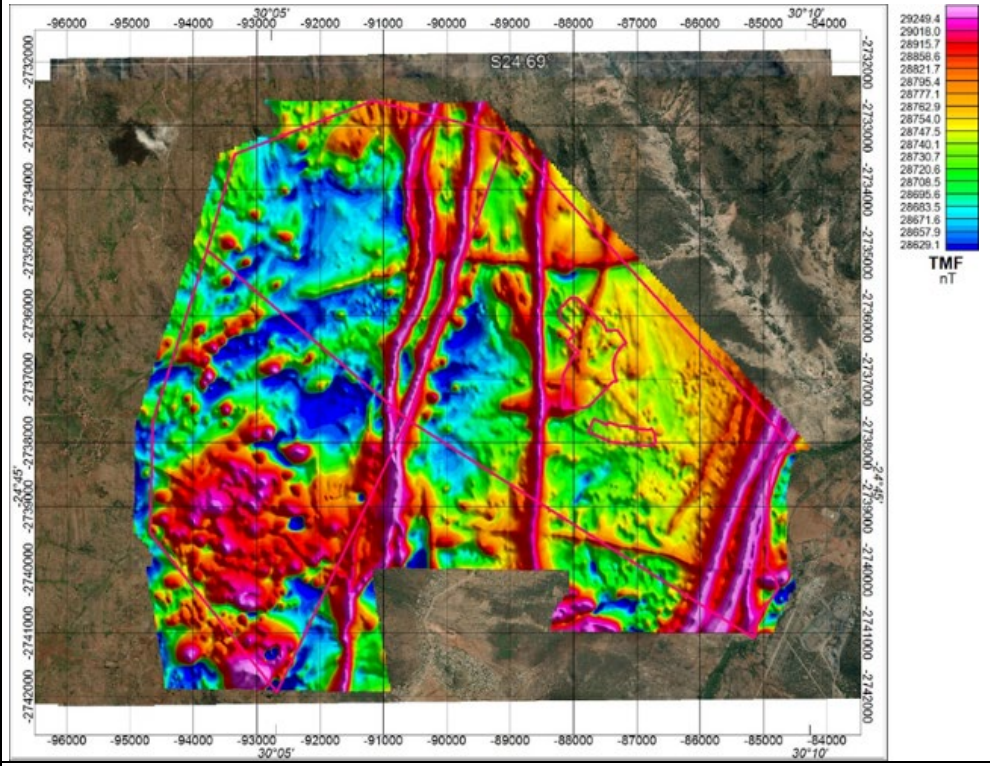
SECTION 2: REPORTING OF EXPLORATION RESULTS		
Criteria	**Explanation**	**Detail**
Other substantive exploration data	Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	A high-definition helicopter borne Total Magnetic Field (TMF) gradient and gamma-ray spectrometry survey was completed by New Resolution Geophysics (Pty) Ltd (NRG) in January of 2022 which highlighted the major structural features that could be expected. The total line kilometres flown was 1,425 lkm over the farms Eerstegeluk 327 KT and Nooitverwacht 324 KT with the survey being flown at a height between 25 m and 80 m due to the topography and residential areas with an average height of approximately 35 m to 40 m and a line spacing of 50 m. 
Further work	The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).	The PFS drilling campaign has been completed with 30,746m of drilling consisting of 82 drillholes and 50 deflections. Deflections will now be drilled for short range variability work.
	Diagrams clearly highlighting the areas of possible extensions, including the main geological	

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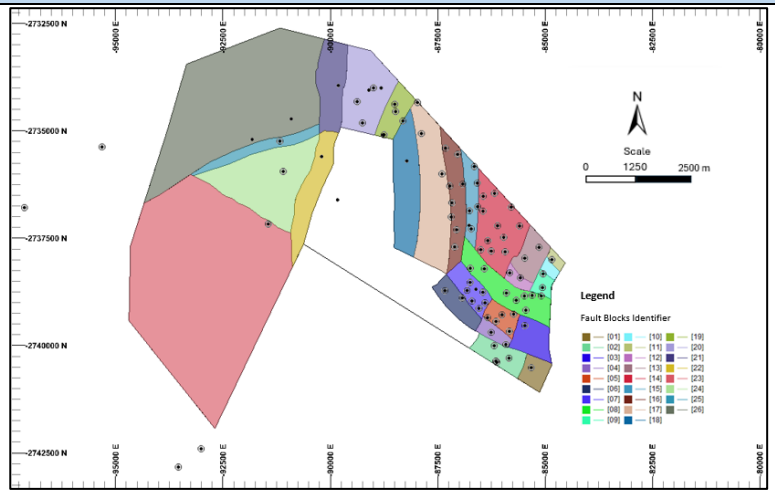
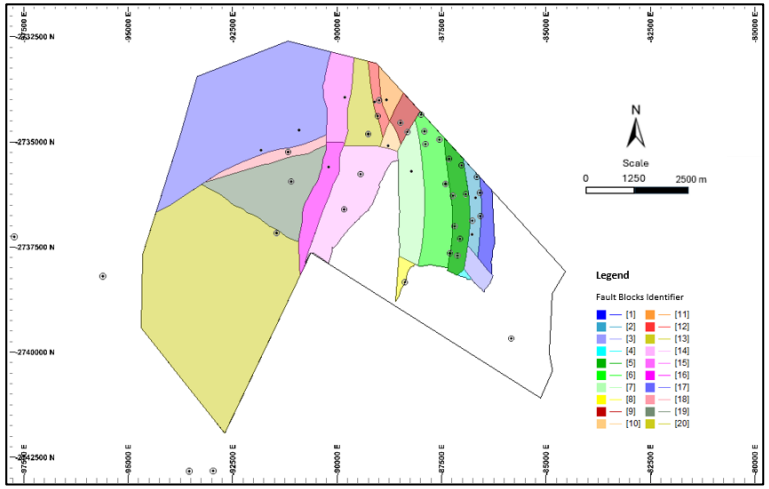
SECTION 2: REPORTING OF EXPLORATION RESULTS		
Criteria	**Explanation**	**Detail**
	interpretations and future drilling areas, provided this information is not commercially sensitive.	  Above are the structural blocks modelled from the drillhole database (UG2 on top and MR the second). The entire UG2 and MR area is now a Mineral Resource so there is limited upside potential within the project boundaries.

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SECTION 3: ESTIMATION AND REPORTING OF MINERAL RESOURCES		
Criteria	**Explanation**	**Detail**
Database integrity	Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.	Geological data in the form of drillhole collar surveys, downhole surveys and geological logs captured on paper records was compared to data captured and saved in soft copy Excel spreadsheets that form the geological repository which informs the modelling database. Any errors, omissions, and invalid transcriptions identified were returned to the exploration team for rectification before the data was processed any further for use in 3D-structural modelling and grade estimation processes.
	Data validation procedures used.	Base geological data informing the estimate was validated using in-built functionality in Datamine StudioRM software. Validation routine involved checking spatial location of drillholes collars and intersections, validity of stratigraphic logging, checking for repetition of logged intersections, reasons for the absence of analytical data, negative thicknesses and an assessment of the correlation of all aspects of the new drilling data to the historic drilling data from the Nkwe drillhole database. The Nkwe database was inspected for erroneous / non representative datapoints and removed based on the knowledge gained from the recent SPD drilling. The historical Anglovaal drilling database was captured from scanned copies into an excel spreadsheet and verified as much as possible with the surrounding reef intersection depths. The database reviewed to check for representative intersections that could be used in the resource estimation.
Site visits	Comment on any site visits undertaken by the Competent Person and the outcome of those visits.	The Competent Person regularly visits the project site with the latest visit having been carried out on 20 May 2024.
	If no site visits have been undertaken indicate why this is the case.	Refer to above.
Geological interpretation	Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.	The Bengwenyama project is bounded to the northern extremity by a mine that is in current operation and economically exploiting the same UG2 reef. Several SPD drillholes are sited in areas in which similar drilling was completed by Nkwe Platinum during the early 2000s. Geological interpretation as informed from the current SPD holes, correlates well with interpretation from the historic Nkwe drill data. The historical Anglovaal data also confirms the 3D geological model of the reefs.
	Nature of the data used and of any assumptions made.	The consolidated SPD database informing this estimate incorporates data from historic Nkwe drilling. This data was compiled by transcribing information from documents available in the public domain. Analytical data in the Nkwe drillholes is presented as 4E only. Individual PGEs were not reported. Results from QQ plots (R^2=0.93 for the UG2 and R^2=0.81 for the MR) suggest that SPD data is highly comparable to the Nkwe data. Accordingly, the data has been consolidated into a single geological database. Additional historic exploration drilling data from Anglovaal, although spatially located outside the licence footprint, has been incorporated into the database informing the estimate. Analysis of this data suggests, a change of the UG2 morphology into a main chromitite seam and multiple stringers in the hanging wall of the UG2 bearing a materially different PGE mineralisation 4E prill split over the south-west section of farm Nooitverwacht compared to PGE mineralisation over farm Eestergeluk. This suggests different facies warranting modelling of the section as a separate domain. Consequent of low data density, grade interpolation for this

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SECTION 3: ESTIMATION AND REPORTING OF MINERAL RESOURCES		
Criteria	**Explanation**	**Detail**
		section was achieved through Simple Kriging (SK) techniques with the resultant block model then appended to the rest of the block model completed via Ordinary Kriging techniques. The Anglovaal data provides support of insights into geological and grade continuity over undrilled west sections over farm Nooitverwacht with the quality of the data enabling declaration of Mineral Resources over farm Nooitverwacht. The MR data from the Anglovaal database was treated in the same manner as the UG2 data. The MR did however seem to be more similar to the SPD MR intersections but the area was still modelled separately as per the UG2 methodology.
	The effect, if any, of alternative interpretations on Mineral Resource estimation.	The recently completed drilling campaign by SPD has confirmed that the dome structure on Eerstegeluk is larger than initially expect and this area has been excluded from the Mineral Resource. In the case of the MR there is a portion of the dome structure that does still have MR present. The additional Anglovaal drillhole data has however confirmed that the UG2 and MR continue to the southern boundary of Nooitverwacht.
	The use of geology in guiding and controlling Mineral Resource estimation.	Contouring of the elevation of the UG2 reef and MR top contact as interpreted from geological logging, knowledge of the regional structural geology, incorporation of mapped faults, dykes, sills, and the use of data from the TMF gradient and gamma-ray spectrometry survey completed by New Resolution Geophysics (Pty) Ltd (NRG) in January of 2022, highlighting the major structural features, guided delineation of fault blocks and culminated in the generation of the associated UG2 and MR 3D wireframe model.
	The factors affecting continuity both of grade and geology.	The project area is bisected by faults and several dyke swarms with throws in excess of 200m. Current structural interpretation postulates the Eerstegeluk Dome area comprises a stack of several upthrow faults culminating in an overall upthrow of the UG2 reef to a location as shallow as 30m below surface. Other than potholing observed in the areas limited to the northern periphery, the PGE grades appear unaffected. The dome structure does however disrupt the reefs and has been excluded from the resource in these areas.
Dimensions	The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.	The Bengwenyama project covers an area of approximately 52.9km$^{2.}$ with a strike of approximately 4km. Data from the drillholes suggests a down-dip continuity of UG2 and MR reef over approximately 11km at an average true dip of approximately 6-7˚, north-west. A typical West-East cross section through the deposit showing separation of the UG2 and Merensky reefs is provided below. This section does not show the dome structure to the south of Eerstegeluk.

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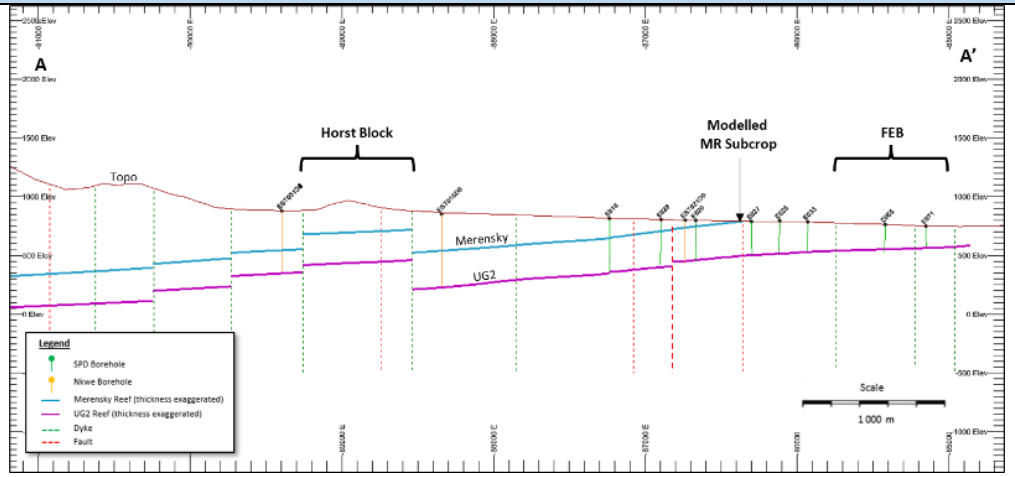
SECTION 3: ESTIMATION AND REPORTING OF MINERAL RESOURCES		
Criteria	**Explanation**	**Detail**
		 Location of the UG2 reef is shallowest in the south-east corner of the project area at approximately 30m below surface and deepest in the north-west corner where it is in excess of 1,000m below surface. The MR is approximately 260m above the UG2 reef and subcrops in the central portion of the farm Eerstegeluk.
Estimation and modelling techniques	The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.	The 3D wireframe modelling process was completed in Seequent's LeapFrog Geo® Version 2023.2.3 geological modelling software. Statistical analysis (CoV<1) on the base geological data informing UG2 grade estimates suggests no capping or treatment of extreme values is necessary. However, for the MR one sample needed capping to values as provided below. **Reef / Element / Capping Value** MR / Pt / 3.028 MR / 4E / 4.680 MR / Thickness / 1.01 Ordinary Kriging, an industry best choice for evaluation of PGEs, has been applied for all grade interpolation with all grade estimation processes completed in Datamine StudioRM™ Version 2.1.125.0 geological modelling software. No geological domains, except for the Nooitverwacht split reef domain (simple kriging domain) have been defined and anisotropy has not been identified. A facies plan has been developed with the majority (77%) of the UG2 reef falling into

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SECTION 3: ESTIMATION AND REPORTING OF MINERAL RESOURCES		
Criteria	**Explanation**	**Detail**
		the massive UG2 facies. The Merensky reef also has defined facies but not separate geological domains, except for the Nooitverwacht extension for the simple kriging. Kriging neighbourhood analysis (KNA) recommended a parent block size of 350m (in X and Y directions) with a minimum and maximum number of samples of 5 and 15 respectively for the first search volume which is matched to the range of the 4E modelled variogram (approximately 2,000m). Three search volumes with decreasing samples were used for the estimation. All PGE elements, Pt, Pd, Rh, Au, Ir, Os and Ru as well as base metals Cu, Ni, Cr and Fe were individually estimated in addition to estimation of combined 4E (Pt, Pd, Rh & Au) and 7E (Pt, Pd, Rh, Ir, Os, Ru & Au) grades, density and reef thickness. Extrapolation has been carried out to half the average drillhole spacing and where applicable terminated on the major geological structures.
	The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.	The Bengwenyama Project is a green field project with no mining activity ever recorded. As such no depletion of Mineral Resources is applicable. The previous estimate for the Bengwenyama Project declared as at 01 December 2023 presented 20.8Mt at 8.08g/t 4E (5.4 Moz) Indicated Resources and 29.99Mt at 7.87g/t 4E (7.58 Moz) Inferred Resources. Concerted effort with the additional SPD drilling completed to date resulted in filling of gaps within the previous wide spaced grid (approximately 500 m x 500 m) reducing it to approximately 350 m x 350 m on farm Eestergeluk. This has resulted in significant elevation of confidence in structural interpretation enabling upgrading of various sections of the Minerals Resources to higher categories. Although the direct reconciliation of the current estimate to previous estimates is now convoluted, consistency in 4E and 7E grade between the current and all previous estimate remains notable.
	The assumptions made regarding recovery of by-products.	Metallurgical testwork is currently underway to establish the viability of recovery of any by-products, in particular chromite. There is no record of previous similar testwork completed in the Bengwenyama project area. However, the UG2 on the eastern limb of the BC is well known and understood and the average recoveries have been assumed for now.
	Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).	Other than the base metals Cu, Ni and Fe, no deleterious elements have been identified. The base metals have all been estimated on elemental basis with the Cr:Fe ratio of the UG2 chromitite horizon, from modelled Cr and Fe analysis, observed to be around 1.21.
	In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.	Drillhole spacing is not on a defined grid owing to challenges drilling in a populated space. The well drilled areas are typically informed by an average drillhole spacing of approximately 350m with areas even closer at approximately 200m spacing with poorly informed areas informed by drilling spacing in excess of 750m to 1,000m. Kriging neighbourhood analysis (QKNA) recommended a parent block size of 350m (in X and Y directions) with a minimum and maximum number of samples of 5 and 15 respectively for the

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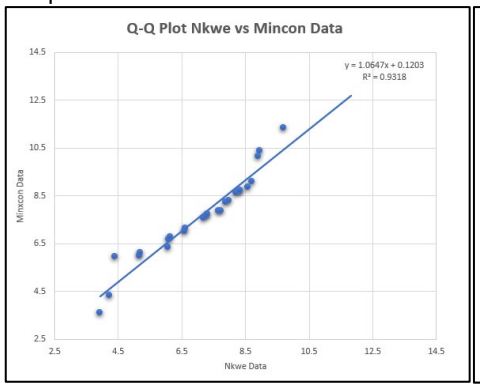
SECTION 3: ESTIMATION AND REPORTING OF MINERAL RESOURCES		
Criteria	**Explanation**	**Detail**
		first search volume which is matched to the range of the 4E modelled variogram (approximately 1,000m). Three search volumes with decreasing samples were used for grade estimation.
	Any assumptions behind modelling of selective mining units.	A study to test the viability of several possible options and in some cases combinations of mining methods is currently underway. The current modelling does not incorporate guidance from knowledge of any possible proposed mining method or selective mining approach.
Estimation and modelling techniques (continued)	Any assumptions about correlation between variables.	The QQ plot results (R^2=0.93 for the UG2 and R^2=0.81 for the MR) suggest SPD data is highly comparable to the Nkwe historic drill data.  Accordingly, the data was consolidated into a single database. The consolidation enabled expansion of the database to incorporate back-calculated individual Pt, Pd, Rh and Au grades from the single analytical 4E grade in the Nkwe drillholes basing on prill splits as established from the complete empirical SPD analytical dataset. The grades for Os, Ir and Ru were then determined from regression relationships enabling the estimation and eventual reporting to 7E grade and including base metals.
	Description of how the geological interpretation was used to control the resource estimates.	Major structural discontinuities were identified from interpretation of the TMF gradient and gamma-ray spectrometry survey, field mapping and contouring of elevation of the UG2 reef top contact. Knowledge of regional structural geology and regional geological losses guided delineation of fault blocks and the generation of the resultant UG2 and MR 3D wireframe model. The additional historic Anglovaal drilling data informed UG2 and MR wireframe models generated for areas located spatially outside the licence footprint. The models provide support of geological and grade continuity over undrilled west sections over farm Nooitverwacht with the quality of the Anglovaal data enabling declaration of Mineral Resources over Nooitverwacht. Further analysis of the Anglovaal data suggests a different UG2 facies towards the west warranting modelling of the section as a separate domain. Due to low data density, grade interpolation for this section has been completed through Simple Kriging (SK) techniques with the resultant block model appended to the rest of the block model which was completed via Ordinary Kriging techniques. The MR was treated in a similar fashion even though the MR facies seem to be more similar.

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<table>
<tr><th colspan="3">SECTION 3: ESTIMATION AND REPORTING OF MINERAL RESOURCES</th></tr>
<tr><th>Criteria</th><th>Explanation</th><th>Detail</th></tr>
<tr><td></td><td></td><td>Guidance from kriging quality parameters such as spatial continuity of kriging efficiencies, assessment of bias through analysis of the slope of regression results, sample search volume used and number of samples informing a grade estimate underpin constraint of grade extrapolations beyond known drilling.</td></tr>
<tr><td></td><td>Discussion of basis for using or not using grade cutting or capping.</td><td>Other than one MR sample, statistical analysis (CoV<1) on raw data informing the estimate suggests that no capping or treatment of extreme values is necessary.</td></tr>
<tr><td></td><td>The process of validation, the checking process used, the comparison of model data to drillhole data, and use of reconciliation data if available.</td><td>Integrity of grade estimation was validated through swath plots in the X and Y directions, sample-to-model box-whisker plots on global means for all estimated grades and the visual analysis of grade plans for the 4E and 7E grades as well as plans showing the spatial distribution of the UG2 reef thickness, Slope of Regression, Kriging Efficiencies, Search Volume and the number of samples used to inform grades estimates.</td></tr>
<tr><td>Moisture</td><td>Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.</td><td>All tonnages are reported on a dry basis.</td></tr>
<tr><td>Cut-off parameters</td><td>The basis of the adopted cut-off grade(s) or quality parameters applied.</td><td>Zone specific geological losses have been applied and the Mineral Resources are declared at a paylimit of 2.2 g/t and 1.6 g/t 4E using a basket price of USD 2,691/oz and USD 1,969/oz for the UG2 Reef and MR respectively. The Mineral Resource has been stated as in-situ or over reef widths. However, a mining cut has been estimated for the UG2 which includes the low-grade PGE mineralisation in the footwall as part of the mining dilution. The mining is being planned at a stope width of 1m.

Below are the parameters used for the basket price and pay limit calculation.

<table>
<tr><th>Element</th><th>Resource price (USD/oz)</th><th>4E prill split_UG2</th><th>7E prill split_UG2</th><th>Recovery</th><th>Payability</th></tr>
<tr><td>Platinum</td><td>1,074</td><td>45.0%</td><td>37.0%</td><td>85%</td><td>86%</td></tr>
<tr><td>Palladium</td><td>2,309</td><td>45.0%</td><td>37.0%</td><td>85%</td><td>86%</td></tr>
<tr><td>Rhodium</td><td>12,751</td><td>9.0%</td><td>8.0%</td><td>85%</td><td>86%</td></tr>
<tr><td>Gold</td><td>2,116</td><td>1.0%</td><td>1.0%</td><td>85%</td><td>86%</td></tr>
<tr><td>Ruthenium</td><td>400</td><td>0.0%</td><td>12.5%</td><td>71%</td><td>55%</td></tr>
<tr><td>Iridium</td><td>4,700</td><td>0.0%</td><td>2.5%</td><td>75%</td><td>45%</td></tr>
<tr><td>Osmium</td><td>400</td><td>0.0%</td><td>2.0%</td><td>75%</td><td>45%</td></tr>
</table></td></tr>
<tr><td>Mining factors or assumptions</td><td>Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating</td><td>It is envisaged that the Mineral Resource mining cut will be approximately 1m for the UG2 due to the absence of stringers in the footprint of the currently drilled area. The hanging wall contact is a distinct Leuconorite plane referred to as the Leuconorite Parting Plane (LPP) and forms a distinct sharp hanging wall contact with no chromitite stringers above it. For the MR the mining cut will probably be the reef width, which is approximately 2,00m plus 10cm hanging wall and 10cm footwall dilution.</td></tr>
</table>

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SECTION 3: ESTIMATION AND REPORTING OF MINERAL RESOURCES		
Criteria	**Explanation**	**Detail**
	Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.	Mining studies on the possible practical mining methods or a combination thereof are currently being concluded. The current geological modelling does not incorporate any assumptions or provide any form of guidance for a chosen specific mining method.
Metallurgical factors or assumptions	The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.	The metallurgical process proposed and the appropriateness of that process to the style of the mineralisation. The PGM content of the UG2 reef is mined and treated for recovery of PGM on an economic basis for multiple decades and by very many UG2 mining operations, on a very similar treatment process named as a Mill-Float-Two (“MF2”) process and which is defined as requiring a primary mill and primary flotation circuit and a secondary mill and secondary flotation circuit. The PGM content in the UG2 reef is associated with various sulphides, which are recoverable by flotation processes. The MF2 process requires sufficient fineness to ensure optimal liberation of the PGM grains to facilitate optimal recovery by flotation. The chromite associated with the UG2 reef is mined and treated on a for recovery of chromia (Cr_2O_3) on an economic basis for multiple decades and by very many UG2 mining operations, on a very similar treatment process named as a gravity separation process. The chromia content in the UG2 reef is associated with chromite, which is recoverable by a gravity separation process. The gravity process requires sufficient fineness to ensure optimal liberation of the chromite to facilitate optimal recovery by gravity separation.
Environmental factors or assumptions	Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.	The following specialist assessments, inter alia, were considered as part of the S&EIA authorisation process to ensure legal compliance and best practice: geohydrological, waste, hydrological, watercourse and hydropedological, aquatic, terrestrial biodiversity, soils and agricultural agro-ecosystem, noise, blasting, traffic air quality, socio-economic assessment, heritage (phase 1), palaeontological (phase 1) and visual impact. Preliminary potential impacts were rated and include but limited to water quality deterioration, habitat (floral and faunal) loss, decline of functionality of the critical biodiversity areas (“CBA”) and ecological sensitive areas (“ESA”) sites, reduced floral diversity and loss of threatened and protected floral species, spreading and encroachment of alien invasive species, fragmentation of existing ecological corridors, loss of ephermeral watercourses, soil erosion, compaction and sedimentation of watercourses, contamination of surface water and groundwater, potential decline of surface water and groundwater quantity, loss of land capability, change to the sense of place, air quality and noise impacts, change of social fabric, relocation of people, loss of heritage resources. The positive impacts noted were the creation of employment opportunities, skills development and work experience. Mining methods, inclusive of optimal and practical extractions have been identified based on social, environmental and production-proximity factors. Additional permit applications are in progress and will be completed at a later stage and include a Waste Management License and a Water Use License.

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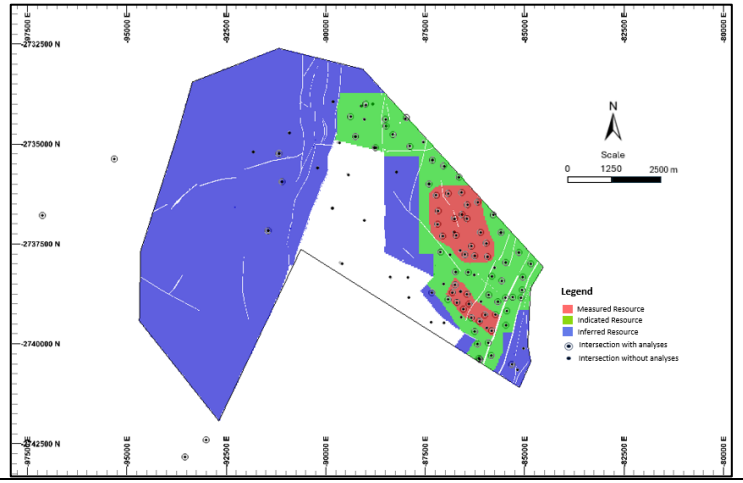
SECTION 3: ESTIMATION AND REPORTING OF MINERAL RESOURCES		
Criteria	**Explanation**	**Detail**
		The current geological modelling supporting this estimate does not incorporate any assumptions or provide guidance to achieve the least environmental impact.
Bulk density	Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.	The density for the UG2 was modelled and the average density is 3.92 t/m^3 for the UG2 and an average density of 3.28 t/m^3 was used for the MR in the tonnage estimation. The density was determined empirically using the Archimedes method on UG2 reef and MR intersection samples from the SPD drillholes. The determination of density is an ongoing exercise conducted by the field exploration team to expand the database for use to support tonnage estimates. Limited bulk density information was available for the Anglovaal drillholes. An average density of 3.77 t/m^3 and 3.18 t/m^3 for the UG2 and MR respectively, was used for the simple krige portion of the estimation.
	The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc.), moisture and differences between rock and alteration zones within the deposit.	The density was determined empirically using the Archimedes method on UG2 reef and MR intersection samples.
	Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.	Not applicable
Classification	The basis for the classification of the Mineral Resources into varying confidence categories.	The Mineral Resource categories were determined based on drillhole density, data quality, QAQC, slope of regression (SOR), kriging efficiency (KE), sample search volumes and knowledge of the continuity of the UG2 reef horizon. Mineral Resource Classification – UG2 Reef 

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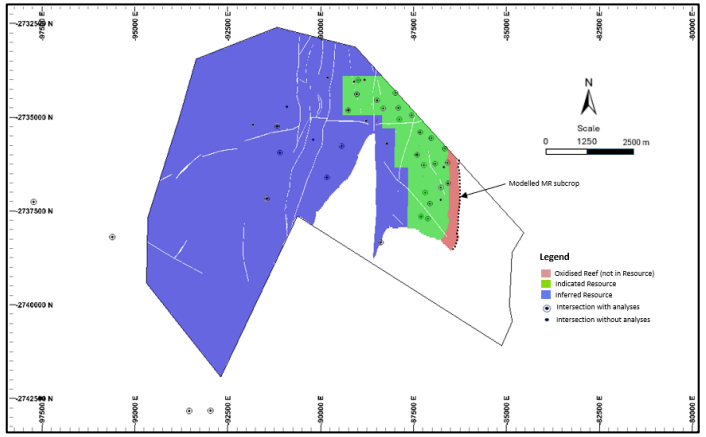
SECTION 3: ESTIMATION AND REPORTING OF MINERAL RESOURCES		
Criteria	**Explanation**	**Detail**
		Mineral Resource Classification – UG2 Reef  The Measured Mineral Resources are based on a drill spacing of 200m x 200m (in structurally complex areas) and 350m x 350m (in less structural complex areas), SOR greater than 0.75, sample search within first volume (4E variogram range), a minimum of 5 drillholes and high confidence in UG2 structural interpretation. The Indicated Mineral Resources are based on a general drill spacing of 350m x 350m, a SOR between 0.6 and 0.75, a KE greater than 0.25, sample search within second volume, high confidence in UG2 structural interpretation and application of local knowledge of areas with high confidence in UG2 reef continuity. The Inferred Mineral Resources are based on drill spacing greater than 500m x 500m, a SOR of less than 0.6, extrapolation based on one and a half the distance of the range of the 4E grade variogram with termination on major structural discontinuities such as interpreted or mapped major faults and dykes. The extrapolated inferred is beyond the inferred criteria, up to project boundary.
	Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).	Geological losses have been applied to the resource to account for the effects of faults, dykes, and potholes. This was estimated by considering the successful drillhole intersections, identified major faults and dykes from the TMF geophysics and additional minor losses. The project area was divided into larger blocks representing various degrees of geological losses. The geological losses for the UG2 range from 15% to 50% with the Eerstegeluk Dome area completely excluded at this stage of reporting. For the MR the geological losses range from 25% to 50% for the extrapolated inferred portion and the top 40m (vertically) at the subcrop for the MR is also excluded due to weathering and oxidation.

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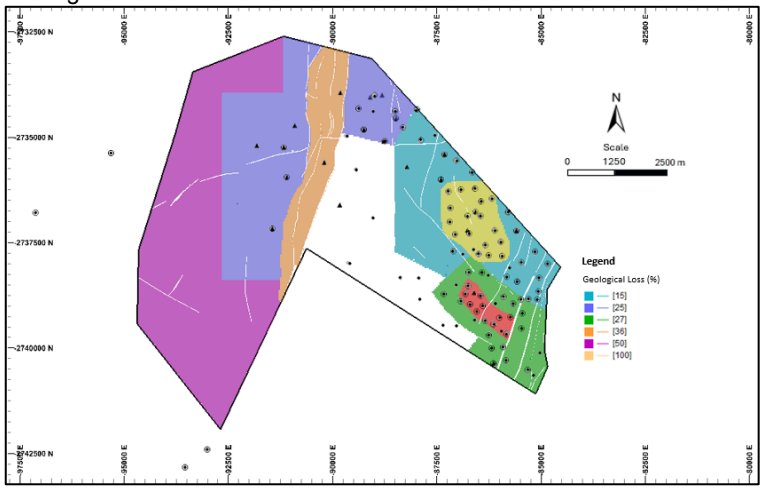
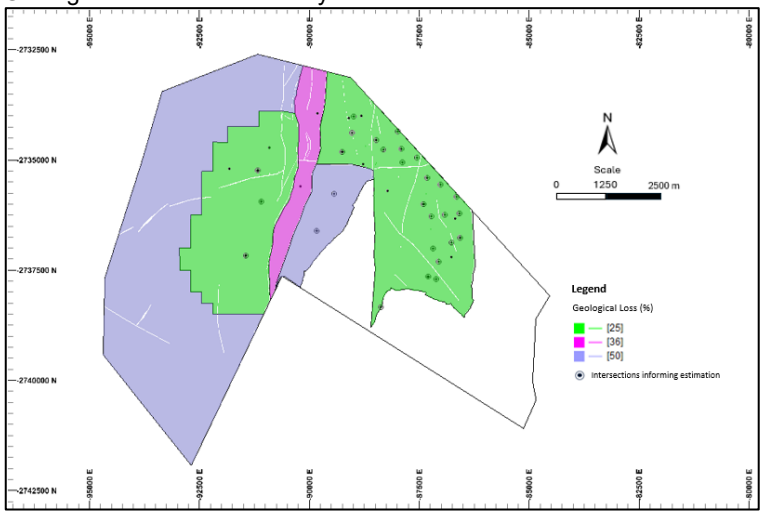
SECTION 3: ESTIMATION AND REPORTING OF MINERAL RESOURCES		
Criteria	**Explanation**	**Detail**
		Geological Losses – UG2 Reef  Geological Losses – Merensky Reef 

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SECTION 3: ESTIMATION AND REPORTING OF MINERAL RESOURCES		
Criteria	**Explanation**	**Detail**
	Whether the result appropriately reflects the Competent Person's view of the deposit.	The CP is of the opinion that the Mineral Resource classification criteria and associated results are a true reflection of the Bengwenyama orebody and demonstrate the current levels of confidence as informed by drill data.
Audits or reviews	The results of any audits or reviews of Mineral Resource estimates.	The Mineral Resources estimate, as well as processes associated with estimation work as contained in this press release has been reviewed by an independent third party, Mr. Garth Mitchell, of ExplorMine Consultants (Pty) Ltd. Mr. Mitchell confirms validity and reasonableness of estimate and confirms that due care and diligence was applied in the compilation. SRK Consulting (Pty) Ltd in South Africa have also reviewed the Mineral Resource estimation and have not found any fatal flaws.
Discussion of relative accuracy/ confidence	Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.	The QQ plot results (R^2=0.93 for the UG2 and R^2=0.81 for the MR) suggest the SPD data is highly comparable to the Nkwe historic drill data and that the two datasets can be consolidated into a single database without any issues. The consolidation enabled back-calculation of individual Pt, Pd, Rh and Au grades from the single analytical 4E grade in the Nkwe drillholes basing on prill splits established from the complete empirical SPD analytical dataset as well at determining individual grades for Os, Ir and Ru from regression relationships. This has enabled reporting to 7E grade. In contrast to the Nkwe data, analysis of the Anglovaal data suggests a change in the PGE mineralisation 4E prill split and UG2 reef morphology into a split reef comprising a main chromitite seam and multiple stringers in the hanging wall over the south-west section of farm Nooitverwacht. As this suggests different facies, modelling of the section as a separate domain was warranted. In addition, due to low data density, grade interpolation for this section has been completed through the Simple Kriging (SK) technique with the resultant block model appended to the rest of the block model which was completed via the Ordinary Kriging technique. Accordingly, 4E grade and UG2 reef thickness estimates within this west section approach global means of the Anglovaal dataset. However, the quality of the supporting data is of such high standard it provided insights into geological and grade continuity to enable successful declaration of Mineral Resources over undrilled sections of Nooitverwacht.
	The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.	The CP is of the opinion that geological modelling underlying the estimate contained in this press release is a true reflection of the Bengwenyama orebody and considers the grade and tonnage estimates robust.
	These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	Not applicable

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SECTION 4: ESTIMATION AND REPORTING OF ORE RESERVES		
Criteria	**Explanation**	**Detail**
Mineral Resource estimate for conversion to Ore Reserves	Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.	The 2024 Mineral Resource estimation for the Bengwenyama Project as at 23 October 2024 has been utilised for the conversion to Ore Reserves.
	Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.	All Mineral Resources are stated as inclusive of the Ore Reserves.
Site visits	Comment on any site visits undertaken by the Competent Person and the outcome of those visits.	The Competent Person Mr van Heerden has conducted a number of site visits to the Bengwenyama properties held by MUM in the Limpopo Province of South Africa. Mr van Heerden visited the Project Area throughout 2024 to become familiar with project location and state of the land. From the site visits, an understanding of the potential layouts, as well as a general understanding of the practical design considerations.
	If no site visits have been undertaken indicate why this is the case.	Site visits have taken place, as described above.
Study status	The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.	These maiden Ore Reserves are supported by a prefeasibility study (PFS) including the estimation of a Mineral Resource and Ore Reserve for the Bengwenyama Project. These Ore Reserves have included all aspects of the PFS study which includes economic analyses based on a mine schedule incorporating only the stated Ore Reserves and the relevant parameters developed within that study.
	The Code requires that a study to at least Prefeasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.	A PFS was completed as required by the Code to convert Mineral Resources to Ore Reserves. This study has determined a mine plan that is both technically achievable and economically viable, with all relevant Modifying Factors thoroughly considered.
Cut-off parameters	The basis of the cut-off grade(s) or quality parameters applied.	A paylimit grade of 3.78 g/t was calculated and applied as the cut-off as the minimum grade required to make mining economically viable. The entire Life of Mine (LoM) plan exceeded this cut-off, meaning all areas had grades higher than 3.78 g/t, with no areas exclude in the LoM plan.
Mining factors or assumptions	The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design).	Only Measured and Indicated Mineral Resources have been converted to Probable Ore Reserves. No Inferred Mineral Resources have been included in the Ore Reserve estimation. The basis of the Ore Reserve estimation is detailed LoM designs and schedules for the underground operations. The Mineral Resource to Ore Reserve conversion requires application of appropriate factors which would account for any changes to the Mineral Resources in the LoM plan as a result of mining the ore. As part of the technical studies, the Ore Reserve conversion factors were determined and applied to the Mineral Resources in the LoM plan available for conversion to Ore Reserves. *Ore Reserve Conversion Factors*

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SECTION 4: ESTIMATION AND REPORTING OF ORE RESERVES

Criteria	Explanation	Detail

Factors		Unit	Value
Geological Loss	Measured	%	19, 37
	Indicated	%	15, 25, 27
	Inferred	%	15, 25, 27, 36
Pillar Loss		%	~9% to ~22%
Panel Stoping Width		cm	100
Mine Call Factor		%	95

The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc.

The selected mining method for the Bengwenyama Project is a hybrid approach designed for narrow reef orebodies, combining mechanised development with conventional stoping to optimise ore extraction and minimise dilution. Mining begins with pre-development, including off-reef haulage drives and centre gulleys, followed by production drilling using hydro-powered handheld drills. Stoping is carried out in a breast mining layout to maximise working faces and productivity. Ore is scraped from the face to loading bays using scraper winches, then transported by Load-Haul-Dump ("LHD") vehicles to dump trucks. This system enhances safety, efficiency, and overall ore extraction. The table highlights the stoping criteria used.

Stoping Mine Design Criteria

Description	Mine Design Criteria
Face Advance rate	14 m/month
Panel Width	23.5 m
Advance Strike Gully	1.5 m width x 1.8 m height
Stope Height	100 cm

The assumptions made regarding geotechnical parameters (e.g. pit slopes, stope sizes, etc.), grade control and pre-production drilling.

Geotechnical studies for the Bengwenyama Project have been completed by OHMS. The recommendations as per the geotechnical reports have been applied to Mineral Resources in the LoM plan to account for pillar losses and pillar dimensions. The design guidelines in the table below are supported by the geotechnical study.

Pillar Configuration

Detail	Description	Unit	Value
Pillars	In-stope pillars (w x l)	m	4 x 6
	In-stope pillar holing	m	5
	Crown pillar vertically below surface	m	50

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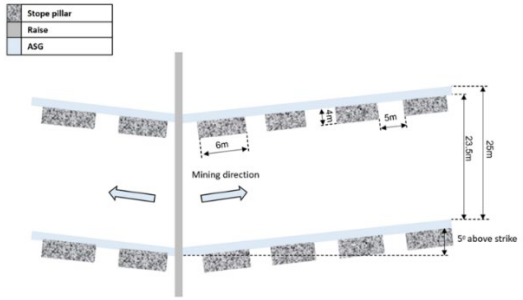
SECTION 4: ESTIMATION AND REPORTING OF ORE RESERVES		
Criteria	**Explanation**	**Detail**
		Stoping Layout 
	The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).	Geological Losses applied to the underground operations various from 15 to 37 % for different blocks and areas. These geological loss factors were applied to the UG2 reef to account for the inherent uncertainties within the Mineral Resource categories
	The mining dilution factors used.	The dilution factor incorporated was done within the minimum mining width of 100 cm. For reef widths less than 90 cm, the stoping width is increased to the 100 cm minimum which allows for dilution and for reef widths greater than 90 cm, an additional 10 cm is added to account for dilution, ensuring efficient ore extraction while maintaining operational standards.
	The mining recovery factors used.	For underground operations, a specific MCF of 95% has been applied, drawing from insights and experiences gained in similar mining operations.
	Any minimum mining widths used.	A minimum stoping width of 100 cm was incorporated into the underground operation design. For reef widths less than 90 cm, the width is increased to the 100 cm minimum. For reef widths greater than 90 cm, an additional 10 cm is added to account for dilution, ensuring efficient ore extraction while maintaining operational standards.
	The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.	The total Mineral Resource in the Life of Mine (LoM) plan amounts to 45.34 Mt, of which 13.62 Mt, or 30%, is classified as Inferred Mineral Resources. These Inferred Resources have been excluded from the Ore Reserve estimate. The Inferred Mineral Resources was deliberately scheduled at the end of the LoM plan. A separate mining schedule was also done excluding Inferred Resources to demonstrate that the mine plan is economically viable without Inferred Resources.
	Ore Reserve Estimation	The Ore Reserve estimates for the underground operations are detailed in the table below. The Ore Reserves exclude Inferred Mineral Resources in the LoM plan.

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<table>
<tr><th colspan="3">SECTION 4: ESTIMATION AND REPORTING OF ORE RESERVES</th></tr>
<tr><th>Criteria</th><th>Explanation</th><th>Detail</th></tr>
<tr><td rowspan="2"></td><td></td><td>Ore Reserve Estimation as at 23 October 2024
<table>
<tr><th rowspan="2">Ore Reserve Category</th><th>Tonnes</th><th>Pt</th><th>Pd</th><th>Rh</th><th>Au</th><th>Ir</th><th>Os</th><th>Ru</th><th>4E</th><th>6E</th><th>Cu</th><th>Ni</th><th>Cr_2O_3</th><th>Moz(4E)</th><th>Moz(6E)</th></tr>
<tr><th>Mt</th><th>(g/t)</th><th>(g/t)</th><th>(g/t)</th><th>(g/t)</th><th>(g/t)</th><th>(g/t)</th><th>(g/t)</th><th>(g/t)</th><th>(g/t)</th><th>(%)</th><th>(%)</th><th>(%)</th><th></th><th></th></tr>
<tr><td>Probable</td><td>31.72</td><td>2.34</td><td>2.33</td><td>0.48</td><td>0.07</td><td>0.16</td><td>-</td><td>0.78</td><td>5.22</td><td>6.17</td><td>0.02</td><td>0.12</td><td>19.03</td><td>5.32</td><td>6.29</td></tr>
<tr><td>Total</td><td>31.72</td><td>2.34</td><td>2.33</td><td>0.48</td><td>0.07</td><td>0.16</td><td>-</td><td>0.78</td><td>5.22</td><td>6.17</td><td>0.02</td><td>0.12</td><td>19.03</td><td>5.32</td><td>6.29</td></tr>
</table></td></tr>
<tr><td>The infrastructure requirements of the selected mining methods.</td><td>Infrastructure for the selected mining method includes:-
Mining site – Trackless mining equipment and engineering workshops, stores, offices, changing facilities, fuel storage facility, wash bay, site power and water supply, surface water management, sewage handling facilities etc;
Administrative and other offices and facilities;
Underground trackless mining fleet and anciliray fleet;
Haul and service roads;
Waste Rock Dump;
Strategic ore stockpile;
RoM stockpile;
Topsoil stockpile;
Surface water management infrastructure – Dirty and clean water separation and storage of water from the underground dewatering system.
Underground water management infrastructure – Dewatering system and water storage facilities.
Water supply and distribution infrastructure;
Power supply and distribution infrastructure;
Underground ore transport (Conveyor systems and Trackless Fleet);
Surface ore load out and storage facilities;
Processing Plant; and
Tailings Storage Facility.</td></tr>
<tr><td rowspan="2">Metallurgical factors or assumptions</td><td>The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.</td><td>The PGM content of the UG2 reef is mined and treated for recovery of PGM on an economic basis for multiple decades and by very many UG2 mining operations, on a very similar treatment process named as a MF2 process. The PGM content in the UG2 reef is associated with various sulphides, which are recoverable by flotation processes. The MF2 process requires sufficient fineness to ensure optimal liberation of the PGM grains to facilitate optimal recovery by flotation.

The chromite associated with the UG2 reef is mined and treated for recovery of chromite on an economic basis for multiple decades and by very many UG2 mining operations, on a very similar treatment process named as a gravity separation process. The chromite content in the UG2 reef is associated with chromite, which is recoverable by a gravity separation process. The gravity process requires sufficient fineness to ensure optimal liberation of the chromite to facilitate optimal recovery by gravity separation.</td></tr>
<tr><td>Whether the metallurgical process is well-tested technology or novel in nature.</td><td>The MF2 treatment process for recovery of PGM content associated with UG2 sulphides is very well tested and not novel in any respect as demonstrated by the many UG2 sulphide operations</td></tr>
</table>

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SECTION 4: ESTIMATION AND REPORTING OF ORE RESERVES		
Criteria	**Explanation**	**Detail**
		proximate to the Bengwenyama orebody, such as the Two Rivers and Modikwa operations amongst many others located on both the Eastern and Western limbs of the Bushveld Igneous Complex. The gravity separation treatment process for recovery of chromite associated with chromitite is very well tested and not novel in any respect as demonstrated by the many chromite operations proximate to the Bengwenyama orebody, such as the Two Rivers and Modikwa operations amongst many others located on both the Eastern and Western limbs of the Bushveld Igneous Complex.
	The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.	The nature of the metallurgical testwork undertaken is grinding (milling), flotation and gravity separation testwork appropriate for a pre-feasibility study level as following: - • The flotation rougher and cleaner kinetic test and the Bond Ball Work Index test was the first test campaign and was completed by SGS Randfontein Laboratory. The 4E PGM recovery obtained was 81% at a grade of 94 g/t. The Bond Ball Work Index was determined as 13.5 kWh/t (medium hardness). • The flotation recovery from a 6-stage locked cycle test was the second test campaign and was completed by Suntech Geomatics Laboratory. The 4E PGM recovery was 80% at a concentrate grade of 238 g/t and a mass pull of 2.6%. The test also showed that a recovery of 85% with a concentrate grade of 100 g/t is possible. • The characterisation of the chemical and the mineralogical composition of two different drill core samples from the orebody was the third test campaign and was completed by Suntech Geomatics Laboratory. The results showed that as much as 97.4% of the PGM could be recovered via flotation. • The initial coarse and fine gravity separation recovery of chromite test was the third test campaign and was completed by Geolabs Laboratory. The coarse recovery was 61% and the associated grade was 40%. The tests were done with a shaking table. • The second coarse gravity separation recovery of chromite test was the fourth test campaign and was completed by Geolabs Laboratory. The coarse recovery was 30% with and associated grade was 42% and a concentrate yield of 25%. The tests were done with a shaking table. The representativeness of metallurgical test work undertaken is described in terms of the representatives of the sample material used for the different test campaigns and is classified as fully representative. The figure below illustrates the locations of the two different metallurgical samples used for all the metallurgical test work performed. The drill cores used for the metallurgical samples consisted of only the chromitite seam from the UG2 reef with a minimal allowance of hanging and footwall to ensure no part of chromitite seam was not included in the two metallurgical samples. Metallurgical Sample 1 was a composite sample with material derived from assay remainder material and drill cores with a total mass of 32 kilograms. Metallurgical Sample 2 was a composite sample with material derived from drill cores with a total mass of 24 kilograms.

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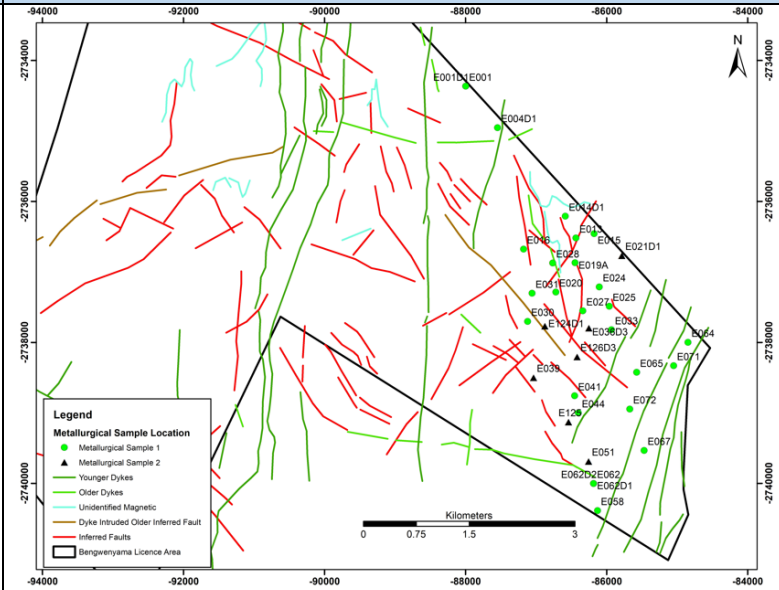
SECTION 4: ESTIMATION AND REPORTING OF ORE RESERVES		
Criteria	**Explanation**	**Detail**
		
	Any assumptions or allowances made for deleterious elements.	No assumptions were made for deleterious elements testwork was performed on the chromitite seam with only a minimal allowance for the presence of hanging and footwall to ensure no part of the chromitite seam was omitted from the metallurgical sample material.
	The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole.	No pilot scale test work was performed, or bulk sample were obtained.
	For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?	The PGM process plant could produce a PGM concentrate with a 6E grade of 100 g/t. The chromite spiral circuit, which forms part of the PGM process plant and is utilised for chromite recovery could produce a chromite concentrate with a grade of 40% Cr_2O_3. The testwork performed provides the required support for this statement. The Metallurgical Sample 1 & 2 are representative of the appropriate mineralogy that will be mined and processed.
Environmental	The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.	The following specialist assessments, inter alia, were considered as part of the S&EIA authorisation process to ensure legal compliance and best practice: geohydrological, waste, hydrological, watercourse and hydropedological, aquatic, terrestrial biodiversity, soils and agricultural agro-ecosystem, noise, blasting, traffic air quality, socio-economic assessment, heritage (phase 1), palaeontological (phase 1) and visual impact. Preliminary potential impacts were rated and include but limited to water quality deterioration, habitat (floral and faunal) loss, decline of functionality of the critical biodiversity areas (“CBA”) and ecological sensitive areas (“ESA”) sites, reduced floral diversity and loss of threatened and protected floral species, spreading and encroachment of alien

SECTION 4: ESTIMATION AND REPORTING OF ORE RESERVES		
Criteria	**Explanation**	**Detail**
		invasive species, fragmentation of existing ecological corridors, loss of ephermeral watercourses, soil erosion, compaction and sedimentation of watercourses, contamination of surface water and groundwater, potential decline of surface water and groundwater quantity, loss of land capability, change to the sense of place, air quality and noise impacts, change of social fabric, relocation of people, loss of heritage resources. The positive impacts noted were the creation of employment opportunities, skills development and work experience. Potential infrastructure sites, with alternative sites, have been identified based on social, environmental and production-proximity factors. Additional permit applications are in progress and will be completed at a later stage and include a Waste Management License and a Water Use License.
Infrastructure	The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.	The Bengwenyama project is a green fields project with no existing project infrastructure in place. As the general area surrounding the project is a well-established mining area, it is well serviced with infrastructure such as road networks, bulk power supply, bulk water supply and services. The availability of land for the project's establishment and construction has been thoroughly assessed. This includes key facilities that require significant land areas, such as the TSF, process plant, mining infrastructure, box-cuts, and portals. Sufficient land is available within the proposed mining lease area, and the locations for the necessary infrastructure and facilities have been carefully chosen to minimize the impact on the local community within the project zone. Bulk power for the project will be sourced from the local grid at 132 kV and supplied to an 80 MVA consumer substation that will be constructed as part of the project. Power will be distributed form the consumer sub-station to the various project substations, motor control centres and underground workings. The estimated installed power for the project is 64.5 MVA with and estimated draw of 43.3 MVA. Application documentation has been submitted to Eskom (Local power utility) on the 29th of August 2024,for the supply of power as well as the required cost estimate letter (“CEL”) to determine the detailed requirements to establish the access to the grid. Bulk water supply will mainly consist of water sourced from the Lebalelo Water User Association (“LWUA”), a local water supply authority in the area that mainly supply local communities, neighbouring mining operations and agricultural activities. In addition to the Lebalelo water supply, wate will be sourced from dewatering the underground workings and collected dirty run-off water. Water requirements have been estimated for the individual water usage areas including the underground mining operations, process plant, offices and admin areas as well as the tailings storage facilities. A water balance has been completed for each of the project operational areas. Estimations indicate that the operation will be water-positive at peak inflow of water into the underground operations. Water from the underground operations will also be utilised for the supply of service and process make-up water while potable water will only be sourced from the Lebalelo supply to the Project. Well established roads are in place in the project areas that allows for easy access and transport of product (Concentrate), material and equipment to and from the projects.

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Criteria	**Explanation**	**Detail**
		The Bengwenyama project is located in the Limpopo province on the eastern limb of the bushveld complex. This has long been associated with mining and well established in terms of infrastructure and services to support the mining industry. Skilled labour can be sourced from nearby towns such as Steelpoort, Burgersfort, Lydenburg and Nelspruit. Towns such as Steelpoort, Burgersfort and Lydenburg are well developed with facilities such as hospitals, police stations, schools and churches. These towns are located such that it can provide accommodation to employees of the project.
Costs	The derivation of, or assumptions made, regarding projected capital costs in the study.	The capital costs for the Bengwenyama project were estimated from engineering designs and first principles. Bills of quantities were utilised to obtain quotations for the capital cost estimation. The project capital has a base date of October 2024 and an exchange rate of ZAR/USD 19.57 was utilised where applicable to convert to USD terms. Considerations for the estimation of the capital costs include: • Metallurgical test work – design of metallurgical process and process plant • Geotechnical Investigation – Design of TSF and Plant Earthworks • Geohydrology and Hydrology – Design of surface water management infrastructure and underground dewatering systems • Grid assessment – design of planned bulk power supply infrastructure • Mine plan – design and quantifying underground services. A large portion of the big capital cost items have been quoted by OEM's.
	The methodology used to estimate operating costs.	Operating cost for the mining, supporting service, processing and infrastructure was estimated from first principles as well as utilizing operating costs provided by OEM's for the selected equipment. The mining operating cost estimations were completed utilising the Minxcon first-principles activity-based cost model. The cost model utilises the mine and engineering design criteria as well as production schedule inputs to derive cost rates for the mining and engineering activities. The underground mining costs for labour, equipment, consumables, services and utilities have been sourced from quotations, actual industry stores costs, industry rates and utility rates. Where costs could not be obtained from these sources, benchmarking with similar-sized projects and operations was conducted and historical costs escalated. Labour compliment has been estimated and assessed in detail to ensure alignment with the mine plan. Labour compliment and cost have been benchmark against actual operations. Major equipment, spares and consumables cost was provided by OEM's. Simulation have been completed on the mining fleet to ensure adequate fleet compliment.
	Allowances made for the content of deleterious elements.	No deleterious elements have been identified or are expected.

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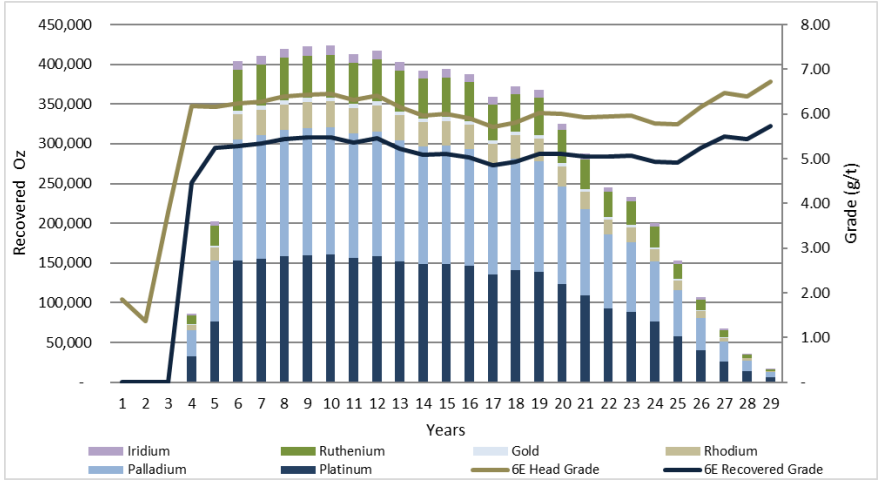
SECTION 4: ESTIMATION AND REPORTING OF ORE RESERVES		
Criteria	**Explanation**	**Detail**
	The derivation of assumptions made of metal or commodity price(s), for the principal minerals and co-products.	The price forecasts for Platinum, Palladium, Gold, Copper and Nickel are based on forecasts from Consensus Economics which considers various brokers and analyst forecasts. The Rhodium price was calculated in-house based on the Platinum and Palladium forecasts. The long-term chromite price was calculated in-house using the real-terms historic prices. The Ruthenium and Iridium prices are based on spot prices as at effective date of the Project.
	The source of exchange rates used in the study.	The short-term exchange rate forecasts are based on forecasts sourced from various South African banks (Investec, First National Bank and Nedbank) with the medium and long-term exchange rate calculated using an in-house model based on the historic purchasing price parity of the Rand to the Dollar.
	Derivation of transportation charges.	Transport costs were benchmarked based on transport costs of similar PGM projects.
	The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.	The price forecasts for Platinum, Palladium, Gold, Copper and Nickel are based on forecasts from Consensus Economics which considers various brokers and analyst forecasts. The Rhodium price was calculated in-house based on the Platinum and Palladium forecasts. The long-term chromite price was calculated in-house using the real-terms historic prices. The Ruthenium and Iridium prices are based on spot prices as at effective date of the Project.
	The allowances made for royalties payable, both Government and private.	The unrefined Mineral and Petroleum Resources Royalty Act formula was used for this Project.
Revenue factors	The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc.	The head-grade is based on a monthly LoM plan. *Saleable Product - Annual*  Commodity prices and exchange rate are detailed in table below. The price forecasts for Platinum, Palladium, Gold, Copper and Nickel are based on forecasts from Consensus Economics which

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SECTION 4: ESTIMATION AND REPORTING OF ORE RESERVES

Criteria	Explanation	Detail
		considers various brokers and analyst forecasts. The Rhodium price was calculated in-house based on the Platinum and Palladium forecasts. The long-term chromite price was calculated in-house using the real-terms historic prices. The Ruthenium and Iridium prices are based on spot prices as at effective date of the Project.

Macro-economic Forecasts and Commodity Prices over the Life of Project – Principal Metals

Commodity	Unit	Basis	2025	2026	2027	2028	Long-term
Platinum	USD/oz	Real	1,114	1,147	1,143	1,151	1,200
Palladium	USD/oz	Real	1,020	975	922	978	1,100
Rhodium	USD/oz	Real	5,468	5,515	5,333	5,803	6,190
Gold	USD/oz	Real	2,440	2,263	2,163	2,073	1,950
Ruthenium	USD/oz	Real	450	450	450	450	450
Iridium	USD/oz	Real	4,650	4,650	4,650	4,650	4,650
Exchange Rate	ZAR/USD	Real	18.51	18.86	19.22	19.58	19.58

***Sources*:** Consensus Economics, Minxcon

Transport costs were benchmarked based on transport costs of similar PGM projects.

Payabilities have been benchmarked based on numerous offtake agreements for PGM concentrates on the Bushveld Complex.

Payabilities – Principal Metals

Commodity	Unit	Payability
Platinum	%	85%
Palladium	%	85%
Rhodium	%	84%
Gold	%	84%
Ruthenium	%	56%
Iridium	%	54%

	The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.	As described above. The Co-product metal prices and payabilities are shown in the tables below.

Macro-economic Forecasts and Commodity Prices over the Life of Project – Co-product metals

Commodity	Unit	Basis	2025	2026	2027	2028	Long-term
Chrome Conc. 42%	USD/t	Real	225	225	225	225	225
Copper	USD/t	Real	9,585	9,526	9,287	9,211	8,708
Nickel	USD/t	Real	17,025	17,284	17,615	17,805	18,249

***Sources*:** Consensus Economics, Minxcon

Payabilities – Co-product metals

Commodity	Unit	Payability
Copper	%	70%
Nickel	%	72%
Chrome Conc. 42%	%	100%

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Criteria	**Explanation**	**Detail**
Market assessment	The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.	The following market situation and outlook is summarised from the Johnson Matthey PGM market report (2024):- **Demand** • Platinum: Demand in 2023 rose due to automotive recovery (8% increase in global vehicle output) and strong industrial use, particularly in the glass sector. However, jewellery demand slightly declined, especially in China. • Palladium: Automotive demand increased due to a surge in gasoline vehicle production. Industrial demand continued its downward trend on the back of price-stimulated substitution. • Rhodium: Automotive demand grew but was offset by weak demand in the glass industry, which saw continued sales of surplus rhodium from Chinese glassmakers. **Supply** • Platinum: Primary supply in South Africa remained constrained, with maintenance and electricity disruption issues in smelters. Russian platinum sales to China surged. Secondary supply contracted with a drop in recycling due to fewer end-of-life vehicles entering scrapyards. • Palladium: Russian palladium supply increased sharply (up by 17%) due to heavy sales to Hong Kong and China. South African palladium supply increased slightly (~3%). Secondary supply dropped to a seven-year low, particularly from automotive recycling. • Rhodium: Primary supply fell in South Africa, particularly due to refinery issues, but was partially offset by an increase in supply from Russia. Secondary supply of rhodium also fell due to lower recycling from the automotive industry. **Outlook (2024)** • The market balance of Platinum, Palladium and Rhodium are expected to remain in deficit. • Platinum: Deficit is expected to continue due to lower primary supplies and strong industrial demand. Automotive and jewellery use will decline slightly but remain high. Investment demand is expected to rise. Overall demand is expected to remain stable. • Palladium: Demand is predicted to fall by 6%, while supply shortfalls will shrink as vehicle production slows and recycling slightly improves. The deficit in palladium will reduce slightly, though the market remains sensitive to auto sector changes. • Rhodium: Industrial demand is forecast to increase by 9%, but automotive demand will decline by 6%. Overall demand is expected to decrease 4%. A modest rebound in South African supplies and a slight recovery in recycling is expected but will not be sufficient to erase the deficit.

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<table>
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<tr><th>Criteria</th><th>Explanation</th><th>Detail</th></tr>
<tr><td></td><td>A customer and competitor analysis along with the identification of likely market windows for the product.</td><td>No customer and competitor analysis has been undertaken. Indicative talks have been held with smelters that have expressed interest in the offtake of all metals produced. The project is in the bottom quartile of the cost curve on a cost per recovered ounce basis.</td></tr>
<tr><td></td><td>Price and volume forecasts and the basis for these forecasts.</td><td>Volume forecasts based on reserve LoM plan. The price forecasts are based on forecasts from Consensus Economics which considers various brokers and analyst forecasts, spot prices for Ruthenium and Iridium and an internally calculated long-term price for Chrome concentrate.</td></tr>
<tr><td></td><td>For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.</td><td>N/A</td></tr>
<tr><td rowspan="2">Economic</td><td>The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc.</td><td>In generating the financial model and deriving the valuations, the following were considered:-
The cash flow model is in real money terms and completed in ZAR.
The DCF evaluation was set up in calendar years.
The annual ZAR cash flow used real term forecast exchange rates for the LoM period.
The financial results have been converted to USD terms using the average exchange rate (19.57) over the LoM.
A company hurdle rate of 8.0% (in real terms) was utilised for the discount factor.
The impact of the Mineral Royalties Act using the formula for unrefined metals was included.
Sensitivity analyses were performed to ascertain the impact of discount factors, commodity prices, exchange rate, grade, operating costs and capital expenditures.
Valuation of the tax entity was performed on a stand-alone basis – Corporate tax rate of 27%.
The full NPV of the operation was reported for the Bengwenyama Project.</td></tr>
<tr><td>NPV ranges and sensitivity to variations in the significant assumptions and inputs.</td><td>The Project NPV ranges are detailed in the following table. The sensitivity to the inclusion of Inferred Mineral Resources in the LoM plan is demonstrated in the second set of results, illustrating the Ore Reserve is economically viable.

Project NPVs at Various Discount Rates (Real Terms)
<table>
<tr><th>Project Value</th><th>Unit</th><th>LoM Plan</th><th>LoM Excluding Inferred Mineral Resources</th></tr>
<tr><td>NPV @ 0%</td><td>ZARm</td><td>66,608</td><td>41,499</td></tr>
<tr><td>NPV @ 5%</td><td>ZARm</td><td>31,648</td><td>21,519</td></tr>
<tr><td>NPV @ 8%</td><td>ZARm</td><td>20,724</td><td>14,595</td></tr>
<tr><td>NPV @ 10%</td><td>ZARm</td><td>15,684</td><td>11,228</td></tr>
<tr><td>NPV @ 15%</td><td>ZARm</td><td>7,698</td><td>5,581</td></tr>
<tr><td>NPV @ 20%</td><td>ZARm</td><td>3,400</td><td>2,323</td></tr>
<tr><td>IRR</td><td>%</td><td>28.0%</td><td>26.3%</td></tr>
<tr><td>NPV @ 0%</td><td>USDm</td><td>3,403</td><td>2,120</td></tr>
<tr><td>NPV @ 5%</td><td>USDm</td><td>1,617</td><td>1,100</td></tr>
<tr><td>NPV @ 8%</td><td>USDm</td><td>1,059</td><td>746</td></tr>
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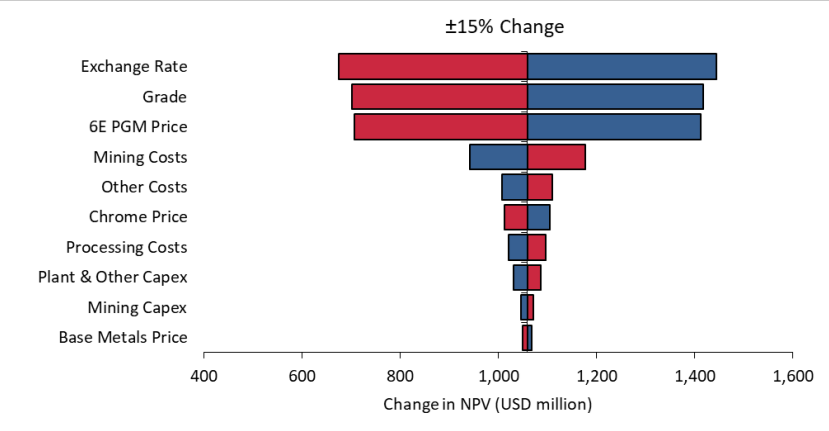
<tr><th>Criteria</th><th>Explanation</th><th>Detail</th></tr>
<tr><td></td><td></td><td>
<table>
<tr><td>NPV @ 10%</td><td>USDm</td><td>801</td><td>574</td></tr>
<tr><td>NPV @ 15%</td><td>USDm</td><td>393</td><td>285</td></tr>
<tr><td>NPV @ 20%</td><td>USDm</td><td>174</td><td>119</td></tr>
</table>

For the DCF, the exchange rate, grade and PGM prices have the biggest impact on the sensitivity of the Project followed by the mining operating costs. The Project is least sensitive to the base metal prices, capital and processing operating costs.

LoM Project Sensitivity USD (NPV8.0%)
 

</td></tr>
<tr><td>Social</td><td>The status of agreements with key stakeholders and matters leading to social license to operate.</td><td>Through the proposed Project, the Company is committed to delivering improvements in the social and human capacities of the people who surround this operation. To maintain the social licence to operate, a social labour plan has been reviewed by the competent authority and is awaiting approval from the local Municipality. The social labour plan entails a local economy development action plan that is continually assessed within the local municipality every five years. Currently a signed Framework and Cooperation Agreement is in place between MUM and the Bengwenyama Community that includes surface rights usage and access agreements, compensation, moratorium on the mining right footprint, identification of culturally important areas, and subject to a pending restitution land claims by the Bengwenyama-ya-Maswazi tribal authority who are shareholders in the proposed Project. The local economic development programmes include sustainable projects that will be initiated, implemented and supported financially, which should be detailed in the SLP.</td></tr>
<tr><td rowspan="3">Other</td><td colspan="2">To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:</td></tr>
<tr><td>Any identified material naturally occurring risks.</td><td>A risk assessment has been conducted as part of the PFS. No material risks have been identified.</td></tr>
<tr><td>The status of material legal agreements and marketing arrangements.</td><td>There are no legal or marketing agreements in place for the Project. Indicative talks have been held with smelters with expression of interest indicated for offtake of concentrates.</td></tr>
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Criteria	**Explanation**	**Detail**
	The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.	The Company has submitted a Mining Right Application to the Competent Authority, Department of Mineral Resources and Energy for the proposed Bengwenyama Mine Underground Project. To date, the following environmental milestones have been achieved. The granting of the Preferent Prospecting Right number LP30/5/1/1/3/2/1/002PPR under Section 104 of the Mineral and Petroleum Resources Development Act, 2002 as amended was issued June 2015 and execution and completion of exploration activities with respective environmental compliance monitoring was February 2024. Submission of the Mining Right application, reference LP30/5/1/2/2/10252MR by the Company was accepted on 17 October 2023. Parallel to the mining right application submission, an environmental authorisation application was triggered through a scoping and environmental impact assessment in terms of National Environmental Management Act, No. 107 of 1998 and Environmental Impact Assessment Regulations (Government Notice Regulations 982 of 2014, as amended), was submitted to the DMRE on 29 September 2023 and acknowledgement letter received on 20 December 2023. Subsequently the environmental impact assessment phase was triggered and completed on 11 July 2024 and the DMRE acknowledgement letter was issued on 17 July 2024. The DMRE will make the final decision within the legislated timeframes during the last quarter of 2024. Additional permit applications are in progress and will be completed at a later stage and include a Waste Management Licence in terms of the National Environmental Management: Waste Act, 2008 and a Water Use Licence in terms of section 21 of the National Water Act, 1998. Additionally, agreements will be entered into between the Company and Eskom for overhead transmission lines and consumer substations as well as with Lebalelo Water User Association pipeline for bulk water supply.
Classification	The basis for the classification of the Ore Reserves into varying confidence categories.	The Ore Reserve estimation for the Bengwenyama Project has been conducted in accordance with the guidelines as set out in the JORC Code (2012). Measured and Indicated Mineral Resources have been converted to Probable Ore Reserves by applying the applicable modifying factors. There is sufficient confidence in the modifying factors that have been applied in the Mineral Resource to Ore Reserve conversion which enabled the conversion of Measured and Indicted Mineral Resources to Probable Ore Reserves.
	Whether the result appropriately reflects the Competent Person's view of the deposit.	The results as presented appropriately reflect the CP's view of the deposit.
	The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).	The Measured Mineral Resources in the LoM plan have been converted to Probable Ore Reserves. No portion of Measured Mineral Resources were converted to Proved Ore Reserves. The portion of Measured Resources that was converted to Probable Ore Reserves is 19% of the total Probable Ore Reserve. The other 81% Probable Ore Reserve was converted from Indicated Mineral Resources.
Audits or reviews	The results of any audits or reviews of Ore Reserve estimates.	SRK are in progress of reviewing the PFS. No fatal flaws have been identified to date
Discussion of relative accuracy/ confidence	Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical	A detailed mine design and monthly schedule has been completed for the Project. The modifying factors applied in the Mineral Resource to Ore Reserve conversion have been derived from technical studies completed for the Project. The Ore Reserve conversion factors applied correlate well with operational values at similar operations.

SECTION 4: ESTIMATION AND REPORTING OF ORE RESERVES		
Criteria	**Explanation**	**Detail**
	procedures to quantify the relative accuracy of the reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate.	Diluted Measured and Indicated Mineral Resources have been converted to Probable Ore Reserves. There is sufficient confidence in the modifying factors applied in the Mineral Resource to Ore Reserve conversion to convert diluted Measured Mineral Resources to Probable Ore Reserves.
	The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.	A local Mineral Resource estimate was completed in the Project area. The Mineral Resource estimate completed by Minxcon as at 23 October 2024 formed the basis of the Ore Reserve estimation of 31.72 Mt. All assumptions made and the procedures used have been stated as part of the CPR.
	Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage.	The modifying factors applied were determined by technical studies at the appropriate level of confidence producing a mine plan and monthly production schedule that is technically achievable and economically viable. It is Minxcon's view that the information provided to Minxcon is sound and no other undue material risks pertaining to mining, metallurgical, environmental, permitting, legal, title, taxation, socio-economic, marketing, political, and other relevant issues pose a material risk to the Ore Reserve estimates.
	It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	This is a maiden Ore Reserve statement. However, the modifying factors were determined by technical studies and based on current operations utilising the selected mining method and are at the appropriate level of confidence to produce a mine plan and production schedule that is technically achievable and economically viable. No production data available but compared to neighbouring operations.

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