Exhibit 96.5

TECHNICAL REPORT SUMMARY ON THE MATERIAL ASSETS OF THE

KLOOF OPERATIONS

Situated near Carletonville, Gauteng, South Africa

31 December 2023

Prepared by:

Qualified Persons from Sibanye-Stillwater

Southern African Gold Operations

COMMITMENT ACCOUNTABILITY RESPECT ENABLING SAFETY

Important Notices

Mineral Resources and Mineral Reserves are declared as 100% attributable to Sibanye-Stillwater Ltd (Registrant).

Wherever mention is made of "Kloof Operations", for the purposes of this Technical Report Summary, it encompasses mining activities under Kloof that Sibanye-Stillwater Limited (Sibanye-Stillwater) control in the Gauteng Province, South Africa, unless specifically mentioned differently.

Kloof No. 1 Shaft is alternatively referred to as "Main Shaft" or "Thuthukani Shaft" or "KM", No. 3 Shaft is called "Hlalanathi Shaft" or "K3", No. 4 Shaft is "Ikamva Shaft" or "K4", No. 7 Shaft is "Manyano Shaft" or "K7", No. 8 Shaft is "Masimthembe Shaft" or "K8", and No. 10 Shaft is "Celemanzi Shaft" or "K10". These names can be used interchangeably.

In this document, a point is used as the decimal marker and the comma is used for the thousands separator (for numbers larger than 999) in the text. In other words, 10,148.32 denotes ten thousand one hundred and forty-eight point three two.

The word 'tonnes' denotes a metric tonne (1,000 kg). The abbreviation "lb" denotes the weight in pounds in the sense understood in the USA.

Cut-off grades and Pay limits are defined as follows:

The **pay limit** (cm.g/t or g/t) of an operation is described as the average value or grade for that operation at which all direct and indirect costs are covered, i.e. the value at which it is estimated that ore can be mined without profit or loss.

The **cut-off** grade (cm.g/t or g/t) of an operation is described as the minimum value or grade at which an area can be mined to maintain an average value in line with the paylimit. The cut-off is unique to the orebody being mined and is dependent on maintaining a mining mix that follows the orebody's value distribution.

Where closure or closed is mentioned in relation to mining or shaft infrastructure in this report, it relates to the cessation of production and not a commitment for final closure and concomitant closure certificate application in terms of section 43(3) of the MPRDA.

Trademarks. Certain software and methodologies may be proprietary. Where proprietary names are mentioned, TM or © are omitted for readability.

Date and Signature Page

Qualified Persons	Position	Signature	Signature Date
Charl Labuschagne	Vice President: Mine Technical Services	/s/ Charl Labuschagne	24 April 2024
Lindelani Mudimeli	Unit Manager Geology	/s/ Lindelani Mudimeli	24 April 2024
Renier van Vuuren	Unit Manager Mineral Resources	/s/ Renier van Vuuren	24 April 2024
Steven Wild	Unit Manager Mine Planning	/s/ Steven Wild	24 April 2024

Stephan Botes	Unit Manager: Mineral Rights	/s/ Stephan Botes	24 April 2024
B Govender	Manager Environmental Compliance SA Region	/s/ B Govender	24 April 2024
M van der Walt	Vice President Finance Integrated Services	/s/ M van der Walt	24 April 2024

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1 Executive Summary

1.1 Introduction

Sibanye-Stillwater Limited (Sibanye-Stillwater or the Registrant) is a multinational mining and metals processing Group with a diverse portfolio of mining and processing operations and projects and investments across five continents.

Sibanye-Stillwater is domiciled in South Africa and listed on both the Johannesburg Stock Exchange (JSE or JSE Limited) and New York Stock Exchange (NYSE).

This Technical Report Summary (TRS) covers Sibanye-Stillwater's wholly owned Kloof mine in South Africa's Gauteng Province. Kloof comprises integrated shaft complexes, a metallurgical plant, and other infrastructure necessary to produce the saleable products and to meet compliance with environmental, health, safety, and social laws and regulations.

Owing to the integrated nature of the different shaft complexes and the ore processing operations, Kloof constitutes a single unit (material property).

This report updates the TRS filed by Sibanye-Stillwater on the Kloof Operations on 22 April 2022 named Exhibit 96.5 Technical Report Summary of Kloof Operations, which was effective 31 December 2021.

There has been no material change to the information between the effective date and the signature date of the Report. The effective date of the Mineral Resource and Mineral Reserve is 31 December 2023 and the date of this TRS is 24 April 2024.

This TRS for the Kloof Operations has been prepared in accordance with the disclosure requirements set out under Subpart 1300 of Regulation S-K (SK-1300).

1.2 Property Description, Mineral Rights and Ownership

The Kloof operation is an established, ongoing mine consisting of three operating shaft complexes and an ore processing plant, extracting the Ventersdorp Contact Reef (VCR), Middelvlei Reef (MVR), Libanon Reef (LR) and Kloof Reef (KR) producing a Doré, a semi-pure alloy of gold, silver and occasionally base metals. The site is situated in a well-developed area, 50km from Johannesburg, and is easily accessible by major roads including the N12 highway.

Sibanye Gold Proprietary Limited (SGL), a wholly owned subsidiary of Sibanye-Stillwater, is the holder of a converted mining right in respect of the Kloof Operations under the Department of Mineral Resources and Energy (DMRE) reference number: GP30/5/1/2/2/66 MR (Kloof MR). The Kloof MR is valid until the 29th of January 2027 and covers a total area of 20,087 hectares (ha), in the Magisterial District of

Westonaria, in the Gauteng Province of South Africa. The rights will be renewed before their expiry in 2027. The current Life of Mine (LoM) plan used to support the Mineral Reserves continues until 2032.

An application was submitted in terms of Section 102 of the Mineral and Petroleum Resources Development Act (MPRDA) to the DMRE, for ministerial consent to amend the Kloof MR, to incorporate the Kloof PR area of the Farm Rietfontein 349 IQ. The mentioned Section 102 application was submitted on the 27th of September 2013 and was granted in April 2023.

There are no material legal proceedings in relation to the Sibanye-Stillwater Kloof Operation.

The mining rights referred to in this document are issued in terms of the MPRDA 28 of 2002 in South Africa. The principal terms and conditions are not materially different to other similar operations in the Republic of South Africa.

1.3 Geology and Mineralisation

Kloof is located along the West Wits Line that forms part of the Far West Rand of the Witwatersrand Basin. The Witwatersrand Basin comprises a 6,000m vertical thickness of sedimentary rocks, extending laterally for some 350km northeast to southwest by some 120km northwest to southeast, generally dipping at shallow angles toward the centre of the Witwatersrand Basin. The Witwatersrand Basin outcrops at its northern extent near Johannesburg, but to the west, south, and east, it is overlaid by up to 4,000m of volcanic and sedimentary rocks. The Witwatersrand Basin is Archaean in age, meaning that the sedimentary rocks are of the order of 2.8 billion years old.

This mine is typical of the many Witwatersrand Basin operations, which have been primary contributors to South Africa's gold production since 1886.

Gold mineralisation occurs within laterally extensive quartz-pebble conglomerates, colloquially called reefs, which are developed above unconformable surfaces. As a result of faulting and primary controls on mineralisation processes, the goldfields are not continuous and are characterised by the presence or dominance of different reef units. The reefs are generally less than two metres thick and are widely considered to represent laterally extensive braided fluvial deposits or unconfined flow deposits, which formed along the flanks of alluvial fan systems around the edge of an inland sea. Dykes and sills of dolerite composition are developed within the Witwatersrand Basin and are associated with several intrusive and extrusive events.

Gold generally occurs in its native form, often associated with pyrite, carbon and uranium. Pyrite and gold within the reefs display a variety of forms, some obviously indicative of detrital transport within the depositional system and others suggesting crystallisation within the reef itself.

Four conglomerates are exploited at Kloof, namely the Ventersdorp Contact Reef (VCR), Kloof Reef, Libanon Reef, and Middelvlei Reef.

As the VCR at the top of the stratigraphy resides on a major unconformity and the underlying sediments are folded in a shallow syncline, the VCR erodes these sediments in the north and south.

Accordingly, both the Kloof and Libanon reefs subcrop below the VCR in the extreme north and south of the property. The approximate dip of all reefs is 25 to 35 degrees to the southeast and the strike is approximately northeast-southwest; however, local variations in structure and the slope and terrace model can see these dips increase to 45 degrees.

1.4 Exploration Status, Development, Operations and Mineral Resource Estimates

Exploration in the area dates from 1898 and mining from the 1930s, with the sinking of the Venterspost No. 1 Shaft commencing in 1934. Initial exploration drilling was executed from the surface, on irregular grids of around 2,000m depending on the exploration strategy, depth of the mineralised horizons, and

geological uncertainty. Once in operation, with underground access established, infill grade control drilling was conducted to provide a 30m to 100m grid depending on geological requirements, evaluation and safety. Kloof in its current form dates from April 2000 when Libanon, Kloof, Leeudoorn and Venterspost mines amalgamated.

The Mineral Resources estimation process used on Kloof is based on surface and underground drillholes as well as underground channel samples. The most fundamental controls of gold distribution are the primary sedimentary features such as facies variation and channel directions. Consequently, the modelling of sedimentary features within the reefs and the correlation of payable grades within certain facies is key to in-situ mineral resource estimation, as well as effective operational mine planning and grade control.

Estimation is constrained within both geologically homogenous structural and facies zones and is derived from either Ordinary Kriged (OK) or Simple Kriged (SK) small-scale grids. Areas close to current workings will have smaller block sizes ranging from 10m to 25m and are derived from OK. Areas further away will have block sizes of 100m and are estimated using SK. The facies and structural models that form the basis of this report have evolved over a long period.

The Mineral Resources estimate for the Kloof Operations is reported as at 31 December 2023. These estimates are in-situ estimates of tonnage and grades reported at a minimum mining width of 120cm, with applicable dip pillar and scattered mining methods as employed at the operation. Cut-off grades are calculated per shaft, based on the planned production and economic parameters. The average cut-off grade applied for this Mineral Resources declaration varies per shaft area reported.

Table 1 details the declared Kloof Operations Mineral Resources statements exclusive of Mineral Reserves as at 31 December 2023.

There are no mineral or metal equivalent Mineral Resources declared for Kloof, with only gold, the primary mineral of economic interest, being declared. Co- or by-products, which may occur at low abundances and of low economic importance are not estimated.

Table 1: Attributable Mineral Resources Exclusive of Mineral Reserves as at 31 December 2023

Classification – Gold	31-Dec-2023			31-Dec-2022		
	Tonnes	Grade	Gold	Tonnes	Grade	Gold
	(Mt)	(g/t)	(Moz)	(Mt)	(g/t)	(Moz)
Measured	26.7	9.6	8.2	24.9	11.2	9.0
Indicated	24.5	5.5	4.3	33.3	6.6	7.1
Measured + Indicated	**51.2**	**7.6**	**12.5**	**58.2**	**8.6**	**16.1**
Inferred	7.0	4.5	1.0	21.7	8.7	6.1
Total	58.2	7.2	13.5	80.0	8.6	22.1

1. Mineral Resources are not Mineral Reserves.
2. Mineral Resources have been reported in accordance with the classification criteria in SK1300.
3. Mineral Resources are reported exclusive of Mineral Reserves.
4. Mineral Resources are calculated using shaft specific cut-off grades.
5. Mineral Resources are reported as in-situ; metallurgical recovery factors have been applied in the cut-off grades calculations and are approximately 98% at Kloof.
6. A 0.0 represents numbers below significant figures reported, and a ("-") represents absent value.

1.5 Mining Methods, Ore Processing, Infrastructure and Mineral Reserves

Kloof is a large, established intermediate to ultra-deep level gold mine that is accessed from the surface through several shaft systems to 40 Level (currently the deepest working level), some 3,200m below the surface. Kloof comprises three producing shaft systems that mine different contributions from pillars and open ground.

The permanent infrastructure required to access and mine the underground operations and to support the LoM plan is already well established and in use. All facilities are in good condition.

Detailed LoM plans for every shaft complex at Kloof support the Mineral Reserve estimates (Table 2) presented below and reported as at 31 December 2023.

The mining methods employed at Kloof are typical for a narrow reef, medium to deep level tabular ore body, and vary between shafts consisting of primarily breast with dip pillars, a minor contribution from scattered mining and shaft pillar extraction. Breast stoping with dip pillars has been selected for the below infrastructure projects. Mining spans and pillar width depend on the location, the reef being mined, and the depth of working.

All mine designs, as well as strategic planning and major design issues, such as shaft pillar extraction, are done in conjunction with input from qualified rock engineers. The mining methods employed at Kloof are designed based on geotechnical engineering inputs, bearing in mind the depth of mining. Mine design is done in line with the mine and stability pillar design applicable to the relevant characteristics of the area. Payability, stability pillars and geological features determine the extraction ratio, which will vary from very high in the shallower areas of the mine, to as low as 50% in the deeper areas.

The Kloof mining complex has two fissure water pumping shafts. These shafts need to pump approximately 50ML/day of fissure water ingress for safety reasons to prevent the operations from flooding. Various safety measures are in place to protect the operations and workers against a potential flooding risk. These are well maintained and tested to minimise any potential flooding risk to the shafts and the mine workings.

The LoM production plans for the Kloof Operations were developed through Mineral Resources to Mineral Reserves conversion processes that utilised dilution factors and mining (stoping and development) parameters informed by historical reconciliation results and performance. The use of factors aligned to historical performance enhances the likely achievability of the plans.

The LoM plans envisage a relatively stable production level for the first seven years, with a continuing decline in production up to the end of life in 2032 as the shafts near the end of their life and close. Economic viability testing of the LoM plans demonstrated that extraction of the scheduled Indicated and Measured Mineral Resources is economically justified, and the declaration of Mineral Reserves is appropriate.

Kloof No. 2 Plant was commissioned in 1990 and currently treats Kloof's underground ore until mid 2024 when the ore will be trucked to Driefontein No. 1 Plant. Kloof No.2 Plant will be closed. The plants use proven technology and forecast metallurgical recoveries and production profiles employed in the LoM plans are informed by historical production.

There is adequate storage capacity at Driefontein No.1 Plant for the additional tailings resulting from processing of Kloof ore at the facility, and the Tailings Storage Facilities (TSFs) are in good condition.

Table 2: Attributable Mineral Reserves as at 31 December 2023

Classification – Gold	31-Dec-2023			31-Dec-2022		
	Tonnes (Mt)	Grade (g/t)	Gold (Moz)	Tonnes (Mt)	Grade (g/t)	Gold (Moz)
Proven	7.6	5.1	1.3	11.0	6.1	2.1
Probable	3.2	5.6	0.6	7.5	5.4	1.3
Grand total	10.8	5.3	1.8	18.6	5.8	3.4

1. Mineral Reserves have been reported in accordance with the classification criteria in SK1300.
2. Mineral Reserves are reported as delivered to the plant (Run-of-Mine)and do not include metallurgical recovery factors, which are applied in the cut-off grades and LoM calculations, which are approximately 98% at Kloof for underground material.
3. Mineral Reserves are calculated with variable pricing for the first five years then a longterm fixed price of 941,374ZAR/kg.
4. Mineral Reserves are estimated using shaft specific cut-off grades. Information on pay limits, cutoffs and modifying factors is found in Sections 12.4., 16.4 and 19.5.
5. A 0.0 represents numbers below significant figures reported, and a ("-") represents absent value.

1.6 Capital and Operating Cost Estimates and Economic Analysis

The LoM plan for Kloof provides appropriate capital expenditure budgets to cater for the sustainability of the operation. Sustaining capital (Stay-in -Business, SIB) costs are benchmarked to historical capital expenditure(Table 3). Similarly, the forecast operating costs included in the LoM plan are based on historical annual expenditures and projected near term costs at the operations(Table 4). All costs are estimated to at least the Pre-Feasibility level of accuracy.

SIB costs cater for mine and surface equipment, capitalised development, projects, infrastructure and environmental capital expenditure. The capital budget ranges between ZAR1,221m and ZAR221m per annum and is dominated by the costs of capitalised development (approximately 68% of the annual capital costs). SIB capital expenditure ranges between R421m and R32m per annum and also includes ZAR420m of Capex for the Kloof Integration project over 5 years.

Table 3: Historical and Forecast Capital Expenditure

		Historical			Real Forecast(5-years)					

	Units	2021	2022	2023	LoM Total	2024 1	2025 2	2026 3	2027 4	2028 5
Project Capital Expenditure - Excluding Development	**(ZARm)**	198	210	117	-	-	-	-	-	-
Capitalised Development	**(ZARm)**	930	620	912	3 737	791	800	422	480	337
Sustaining Capital (SIB)	**(ZARm)**	488	455	421	1 788	429	421	293	255	192
Total	**(ZARm)**	1 616	1 285	1 450	5 525	1 220	1 221	716	734	528

Kloof has budgeted operating costs for underground and surface operations at ZAR3,922/t processed. Underground milled tonnes contribute 93% and processing of surface material will cease in 2025. Allocated and Centralised Operating Costs are included in the Total Operating Costs.

Table 4: Historical and Forecast Operating Costs

	Units	Historical			Real Forecast (5-years)					
		2021	2022	2023	LoM Total	2024 1	2025 2	2026 3	2027 4	2028 5
Underground Mining	**(ZAR/t)**	3,766	6,072	5,271	4,180	4,380	3,875	3,976	3,879	4,073
U/G Mill Tonnes	**(kt)**	1,863	992	1,399	10,800	1,407	1,422	1,264	1,299	1,240
U/G Operating Cost	**(ZARm)**	7,016	6,023	7,375	45,147	6,162	5,510	5,023	5,039	5,050
Surface Mining	**(ZAR/t)**	209	295	370	450	369	818	-	-	-
Surface Mill Tonnes	**(kt)**	4,139	1,953	1,565	805	659	145	-	-	-
Surface Operating Cost	**(ZARm)**	866	576	579	362	243	119	-	-	-
Total Operating Costs	**(ZAR/t)**	1,313	2,241	2,683	3,922	3,100	3,592	3,976	3,879	4,073
	(kt)	6,002	2,945	2,965	11,604	2,066	1,567	1,264	1,299	1,240
	(ZARm)	7,882	6,599	7,954	45,509	6,405	5,629	5,023	5,039	5,050
Allocated Centralised Operating Cost (included in the above)	**(ZARm)**	1,392	1,323	1,420	11,457	1,182	1,279	1,132	1,168	1,128

The market fundamentals for gold are forecast to remain in place in the foreseeable future. The budgeted capital and operating costs, forecast metal prices and other economic assumptions utilised for economic viability testing of the LoM plan are reasonable. The post-tax flows for Kloof derive the discounted cash-flow (DCF) results and net present value (NPV) contained in Table 5 at a discount rate of 5%. This discount rate is in line with the local inflation rate in the recent past and the expected rate in the near future. The table also indicates the overall sensitivity of the Operation to the discount rate.

The economic model has been undertaken for the purposes of declaring Mineral Reserves and is not intended to be a valuation of the property.

Table 5: NPV (Post-tax) Relative to ZAR/kg Gold Prices at 5 % Discount Rate- Current Operations

	Sensitivity Range						
	-20%	-10%	-5%	0%	5%	10%	20%
NPV@ the base case Discount Rate 5% (ZARm)	-5,637	-932	1,421	3,628	5,704	7,444	10,571

Table 6 shows two-variable sensitivity analysis of the NPV Post-Tax to variance in Capital costs at the 5% Discount Rate.

Table 7 shows two-variable sensitivity analysis of the NPV Post-Tax to variance in Revenue and in Operating cost at the 5% Discount Rate. This demonstrates sensitivity to the increase in operating costs and the leverage potential to higher gold prices.

Table 6: Twin Parameter NPV (Post-tax) Sensitivity at a 5% Discount Rate (Capital Costs) _Current Operations

Post-Tax NPV@5%		Revenue Sensitivity Range						
(ZARm)		-20%	-10%	-5%	0%	5%	10%	20%
Capital cost sensitivity range	-20%	-4,653	52	2,404	**4,612**	6,688	8,428	11,555
	-10%	-5,145	-440	1,912	**4,120**	6,196	7,936	11,063
	-5%	-5,391	-686	1,667	**3,874**	5,950	7,690	10,817
	0%	**-5,637**	**-932**	**1,421**	**3,628**	**5,704**	**7,444**	**10,571**
	5%	-5,883	-1,178	1,175	**3,382**	5,458	7,198	10,325
	10%	-6,129	-1,424	929	**3,136**	5,212	6,952	10,080
	20%	-6,621	-1,916	437	**2,644**	4,720	6,460	9,588

Table 7: Twin Parameter NPV (Post-tax) Sensitivity at a 5% Discount Rate (Revenue, Operating Costs) _Current Operations

Post-Tax NPV @ 5%(ZARm)		Revenue Sensitivity Range						
		-20%	-10%	-5%	0%	5%	10%	20%
Total Operating Cost Sensitivity Range	-20%	125	4,830	7,183	**9,390**	11,466	13,206	16,333
	-10%	-2,496	2,209	4,562	**6,769**	8,846	10,585	13,713
	-5%	-3,888	817	3,170	**5,377**	7,454	9,193	12,321
	0%	**-5,637**	**-932**	**1,421**	**3,628**	**5,704**	**7,444**	**10,571**

	5%	-7,430	-2,724	-372	**1,836**	3,912	5,652	8,779
	10%	-9,320	-4,615	-2,262	**-55**	2,022	3,761	6,889
	20%	-13,148	-8,442	-6,090	**-3,882**	-1,806	-66	3,061

While the profitability of the entire operation is tested on a total cost basis, the point at which each individual shaft closure is determined is after direct operational cost. As soon as a shaft does not contribute to its own mining and operational cost, it is considered for closure. The direct allocated costs include the overheads specific to the operation while indirect allocated costs refer to those items which belong to the entire group and which are allocated back to each operation based on a formula.

1.7 Permitting Requirements

The Sibanye-Stillwater Kloof Operations have in place all the necessary rights and approvals to operate, e.g. mines, processing plant, tailings Storage Facilities (TSFs), and ancillary facilities associated with the operations. There are no legal proceedings that may have an influence on the rights to extract minerals. The legal ownership of all mining and surface rights has been verified. No significant legal issue exists which would influence the likely viability of a project and/or the estimation and classification of the Mineral Resources and Mineral Reserves as reported herein.

Any permit and license infringements are corrected as they occur and environmental impacts are managed in close consultation with the appropriate government departments. There are reasonable prospects that the Registrant's tenure to operate on these premises is secure for the foreseeable future, unless terminated by regulatory authorities for other reasons. Based on an assessment of the current permits, technical submittals, regulatory requirements and compliance history, continued acquisition of permit approvals should be possible. There is a low risk of rejection of permit applications by regulatory agencies for the foreseeable future.

1.8 Conclusions and Recommendations

The QPs have conducted a comprehensive review and assessment of all material issues likely to influence the future activities of the Kloof Operations based on information available up to 31 December 2023.

There is a comprehensive Risk Register that is reviewed quarterly by the Kloof Operations management team. All the risks have detailed mitigation plans designed to reduce the risk to a manageable level. The Qualified Persons could not identify any unmanaged material risks that would affect the Mineral Resources and Mineral Reserves reported for Kloof Operations.

The views expressed in this report have been based on the fundamental assumption that the required management resources and proactive management skills will be focused on meeting the LoM plans and production targets.

There are no recommendations for additional work or changes.

2 Introduction

2.1 Registrant

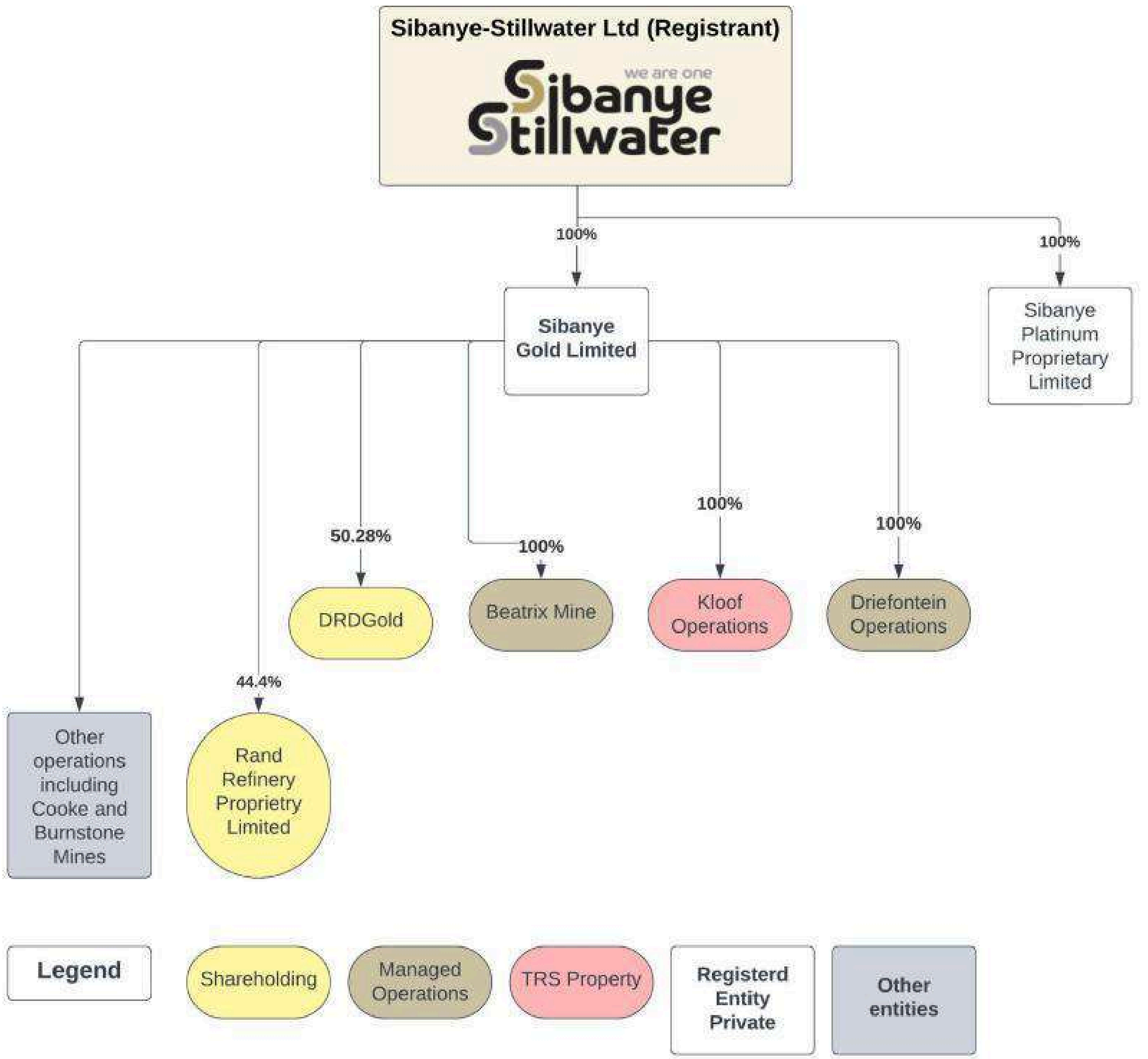
Sibanye-Stillwater is a multinational mining and metals processing Group with a diverse portfolio of mining and processing operations and projects and investments across five continents.

The Registrant is domiciled in South Africa and listed on the Johannesburg Stock Exchange (JSE or JSE Limited) and New York Stock Exchange (NYSE). This TRS covers Sibanye-Stillwater's Kloof Operations (Kloof or the Kloof Operations). Kloof falls under the Gold Operations of the Southern African Region of Sibanye Gold Limited, trading as Sibanye–Stillwater (Figure 1). Sibanye Gold Limited is a wholly-owned subsidiary of the Registrant.

Kloof Operations include shafts, processing facilities and associated infrastructure (the Material Assets) located in the Gauteng Province, South Africa.

Mineral Resources and Mineral Reserves report as 100% attributable to the Registrant.

Figure 1: Ownership and Company Structure for Kloof



2.2 Compliance

Sibanye-Stillwater is listed on the NYSE (Code SBSW) and the JSE (Code SSW). Mineral Resources and Mineral Reserves contained in this TRS were compiled and reported following the United States Securities and Exchange Commission's (the SEC's) Subpart 1300 of Regulation S-K.

2.3 Terms of Reference and Purpose of the Technical Report

This TRS for the Kloof Operations reports the Mineral Resources and Mineral Reserves estimates as at 31 December 2023. Kloof Operations is an established mine and ore processing plants extracting gold from the Ventersdorp Contact Reef (VCR), Kloof Reef, the Libanon Reef, and the Middelvlei Reef of the Witwatersrand Supergroup sediments. Ore is processed at one plant within the operations and one plant at nearby operations. The operation produces a Doré which is sent for further processing and onward sales to the Rand Refinery in Germiston, Gauteng Province of which Sibanye-Stillwater is a major Shareholder.

This report is the first update of the TRS filed by Sibanye-Stillwater on the Kloof Operations superseding the TRS filed on 22 April 2022 named Exhibit 96.5 Technical Report Summary of Kloof operations dated 31 December 2021.

The gold rich layers mined are well known from extensive mining which has taken place, at The Far West Rand and the greater Witwatersrand Basin, over the last 140 years. The Mineral Resource for Kloof contained in this TRS is estimated from the extensive surface and underground drillhole and sampling database. The TRS is signed-off by internal Qualified Persons (QPs). These Mineral Resources are the basis for the Mineral Reserve estimates reported for the operation. Furthermore, the Mineral Reserve estimates are based on detailed Life-of-Mine (LoM) plans and technical studies (at least to a Prefeasibility Study level) completed internally by Sibanye-Stillwater personnel utilizing modifying factors and Capital and Operating Costs informed by the historical performance at the operations.

This TRS was compiled by in-house QPs for Mineral Resources and Mineral Reserves appointed by Sibanye-Stillwater. The QPs are Technical Experts/Specialists registered with professional bodies that have enforceable codes of conduct. A list of the QPs, their role, qualifications and sections which they have prepared is given in Table 8.

Table 8: Details of QPs Appointed by Sibanye-Stillwater

Name	Position	Area of Responsibility	Academic and Professional Qualifications	Section Sign-off
Charl Labuschagne	Vice President Mine Technical Services	Qualified Person Mineral Resources and Mineral Reserves	BSc (Hon) Geology, MSc Environmental Management, GDE Mining Engineering, SACNASP 400237/08	1,2, 3.1,3.3, 4, 5, 7.8, 7.9, 10, 13, 14,15, 16, 17.1-3, 20-26
Lindelani Mudimeli	Unit Manager Geology	Qualified Person Geology	BSc (Hon) Geology, GDE Mining Engineering. SACNASP 013678 GSSA No 967582	1.3, 1.4, 6, 7.1-7.7, 8, 9.1, 9.2.1, 9.2.2, 9.3

Renier van Vuuren	Unit Manager Mineral Resources Geology	Qualified Person Mineral Resources	BSc (Hon) Geology, SACNASP 153249	1.4, 9.2.3,11
Steven Wild	Unit Manager Mine Planning	Qualified Person Mineral Reserves	GDE Mining Engineering, NHD MRM SAIMM 706556	12
Stephan Botes	Unit Manager – Mineral Rights	Mineral Title	LLB, LLM, Postgraduate Certificate in Prospecting and Mining Law, Postgraduate Certificate in Company Law I, Admitted Attorney of the High Court of RSA	1.7, 3.2,3.4
B Govender	Sustainable Development Manager Manager Environmental Compliance SA Region	Environmental Management	MSc, SACNASP 140606, FWISA	**17.4**
M van der Walt	Vice President Finance Integrated Services	Financial Reporting, Compliance and Valuation	B Com Accounting, B Com Honours Accounting, CA(SA), SAICA No 20026270	1.6, 18, 19 , 21.1.1
SAIMM - Southern African Institute of Mining and Metallurgy **SACNASP – South African Council for Natural Scientific Professions** **SAGC – South African Geomatics Council** **GSSA – Geological Society of South Africa** **SAATCA – South African Auditor and Training Certification Authority**				

2.4 Sources of Information

Sibanye-Stillwater Kloof Operations and the Registrant provided most of the technical information utilised for the preparation of this report. This information is contained in internal documents recording various technical studies undertaken in support of the current and planned operations, historical geological work and production performance at the Kloof Operations, and forecast economic parameters and assumptions. Other supplementary information was sourced from the public domain and these sources are acknowledged in the body of the report and listed in the References, Section 24.

2.5 Site Inspection by Qualified Persons

The QPs for Mineral Resources and Mineral Reserves who authored this TRS and the supporting Technical Experts/Specialists are all employees of Sibanye-Stillwater working at the Kloof Operations or Corporate Offices. By virtue of their employment, the QPs visit the Kloof Operations while carrying out their normal duties.

2.6 Units, Currencies and Survey Coordinate System

In the Republic of South Africa (RSA) metric units are used for all measurements and, therefore, the reporting of quantities is in metric units, unless otherwise stated.

All the metal prices and costs are quoted in US Dollars (USD) or South Africa Rand (ZAR). An Exchange rate of 17.00ZAR/USD has been used in this document for Mineral Reserves.

The coordinate system employed for most of the surface and underground surveys and maps shown in this TRS is based on the Gauss Conform Projection (UTM), Hartebeeshoek 94 Datum, Ellipsoid WGS84, Central Meridian (Y-50,000; X+2,900,000). Some regional scale maps in this report may be referenced with Cape Datum, Latitude and Longitude coordinates (WG27) for ease of reading. Maps in WGS84 are annotated as such.

Units of measurement used in this report are described in Table 9.

Table 9: Units Definitions

Units	Description
cm	centimetre(s)
g	gram(s), measure of mass
g/cm^3	density - grammes per cubic centimetre
g/t	grams per tonne
ha	hectares = 100m x 100m
kg	kilograms = 1000grams, measure of mass
km	kilometre(s) = 1000 metres
km^2	square kilometres, measure of area
Koz	kilo ounces= 1000 ounces (troy)
kt	kilotonnes
ktpm	kilotonnes per month
litre	Metric unit of volume = $1000cm^3$
m	metre(s)
m^2	square metres
m^3/a	cubic metres per annum

Units	Description
mamsl	elevation metres above mean seal level
metre	metric unit of distance
mm	millimetre(s) = metre/1000
Moz	Million ounces (troy), measure of weight
Mt	Million metric tonnes
Mtpa	Million tonnes per annum
MVA	Million Volt-Amps(Watts)
MW	Megawatts
oz	Troy ounces = 31.1034768 grams
ppb	parts per billion
ppm	parts per million (grams/metric tonne)
sec	second
t	metric tonne = 1000 kilograms = 1.10231131 short ton
tonnes	metric tonnes = 1000 kilograms = 1.10231131 short ton
USD	United States Dollars
lb	pound USA = measure of weight
WGS84	World Geographic System 1984- map projection system
wt%	weight percent
ZAR	South African Rand
ZARm	Million Rand

2.7 Reliance on Information Provided by Other Experts

The QPs for Mineral Resources and Mineral Reserves have sought input from in-house Technical Specialists on aspects of the modifying factors for the disciplines outside their expertise. Kloof is a large operation and it is not possible for any one person to have the required expertise to comment on all aspects of the operation and inputs to the Mineral Resources and Mineral Reserves. Kloof and Sibanye-Stillwater employ a large team of Technical Experts and Specialist Service providers. The QPs consider it reasonable to rely upon the information provided by these experts. A list of the in-house Technical Specialists and their areas of competency are summarized in Table 10.

Table 10: Technical Experts/Specialists Supporting the QPs

Name	Position	Area of Competency	Academic Qualifications
MT Bane	VP Processing	Mineral Processing	ND , NHD Extractive Metallurgy, SAIMM HD0968
G Coetzee	Unit Manager Survey	Responsible for Survey, Reporting and Historical Mining Factors	MSCC, NHD MRM, ND Survey IMSSA 2253
I Mogohlong	Unit Manager Social Responsibility	Social Sustainability	N/A
K Opperman	Vice President Engineering	Engineering Gold Operations and associated logistics; infrastructure management	B Eng Mechanical, Pr Eng
L Scheepers	Manager Rock Engineering	Rock Engineering	MSc Applied Science, Advanced Rock Eng Certificate, HED (Post Graduate), SANIRE
A du Plessis	Manager Environmental Engineering	Occupational Environment (Hygiene)	Certificate in Mine Environmental Control/ Occupational Hygiene No.937
FC Viviers	Act. Senior Manager Health and Safety	Safety Function	NADSAM (National Diploma Safety Management). Global Minerals Industry Risk Management Council Member AMSPSA (Association of Mine Safety Profesionals of South-Africa)
T Setshedi	Manager Human Resources	Human Resources Management	B Tech HRM AMHRP

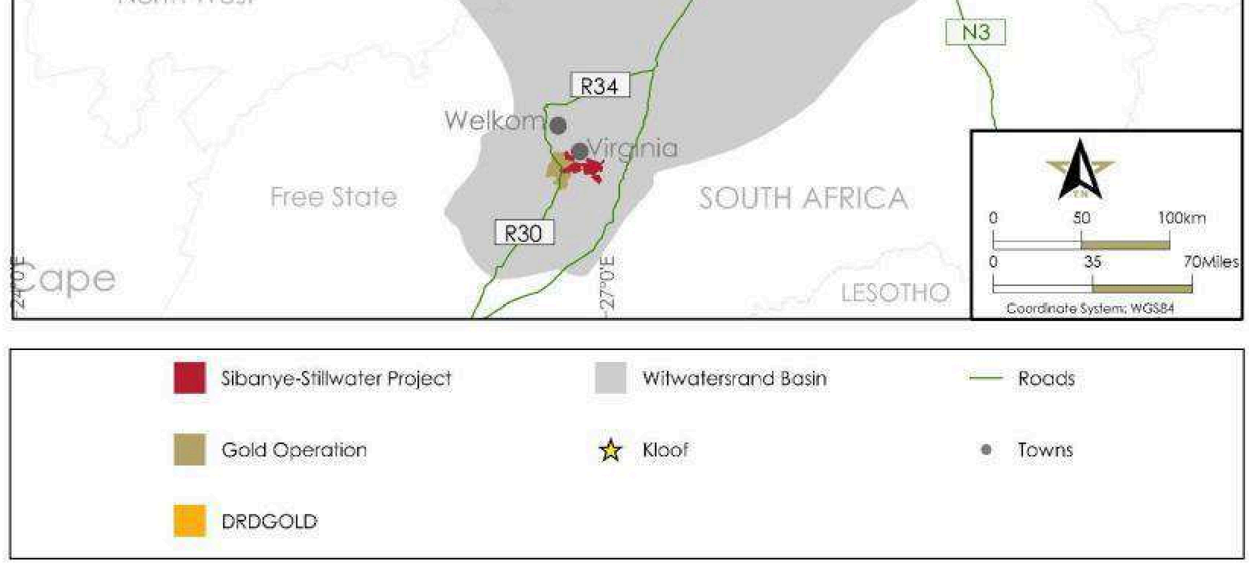
Name	Position	Responsibility	Qualifications
M Netshivhazwaulu	Acting Vice President and Head of Operations	Overall strategic direction, leadership and management of the operation	BSc Mining Engineer Graduate, Mine Manager's Certificate of Competency No. 6947.

3 Property Description

3.1 Location and Operations Overview

The Kloof Operations are situated about 50km west of Johannesburg at latitude 26°24'S and longitude 27°30'E, near the town of Westonaria in the Gauteng Province of South Africa (Figure 2). The Kloof MR covers a mining area totalling 20,087 hectares.

Figure 2: General Location of the Material Assets as at 31 December 2023



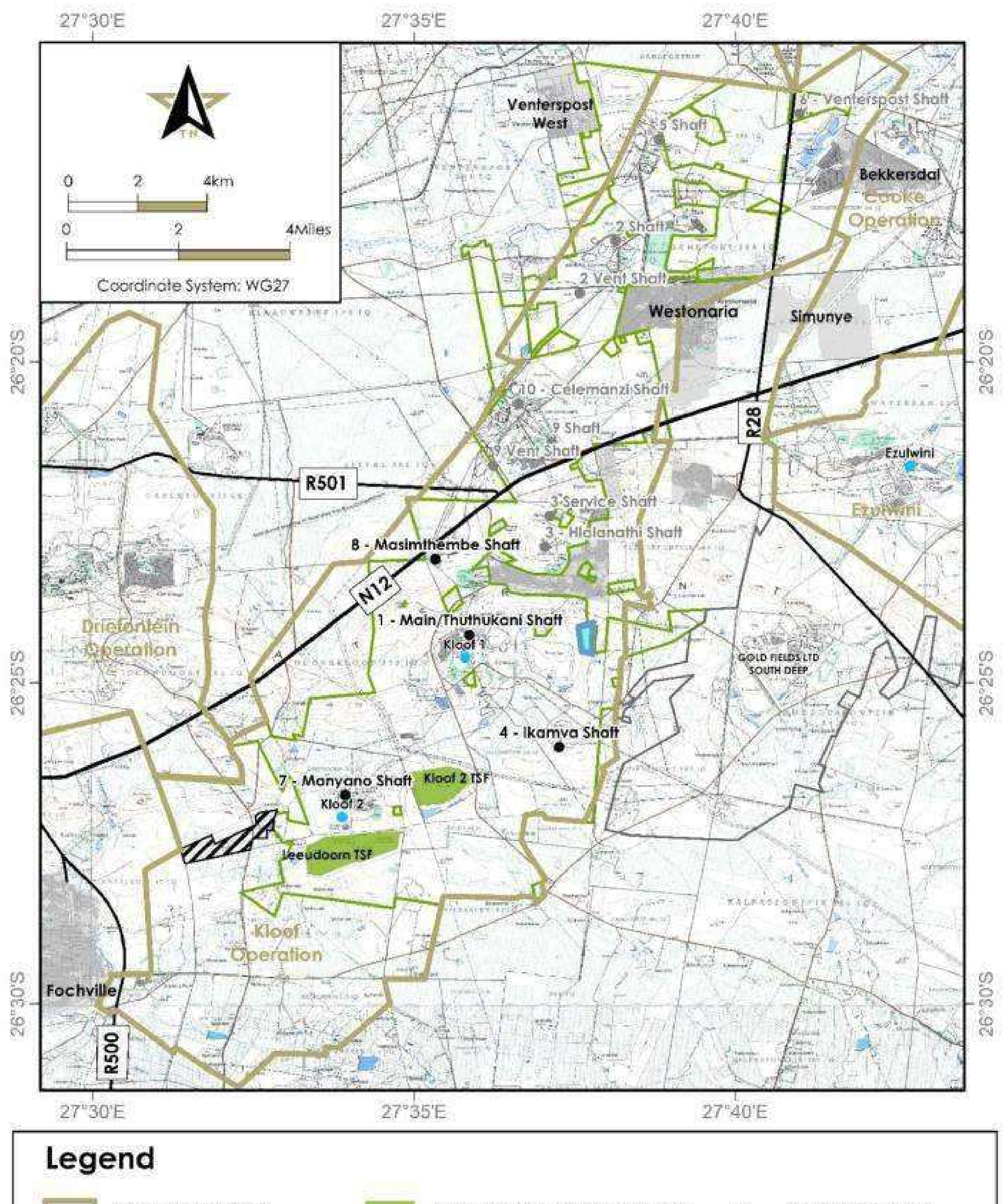
Kloof is surrounded by agricultural land , towns in the north part of the mine and other mines to the east and west (Figure 3). The Sibanye-Stillwater Driefontein Operation is situated to the west of Kloof and the the Ezulwini and Cooke mines, also owned by the Registrant, border Kloof to the east.

Kloof consists of three producing shafts, namely the Main Shaft, No. 7 Shaft and No. 8 Shaft. The deposit is accessed from the surface using underground mining methods to 40 Level (the lowest working level) at No. 7 Shaft, approximately 3,200m below the surface.

The orebodies mined are the Ventersdorp Contact Reef (VCR), Kloof Reef, Libanon Reef and the Middelvlei Reef. These are gold bearing conglomerates of the upper part of the Central Rand Group and the contact between the Central Rand Group and the overlying Ventersdorp Lavas and sediments.

Ore is processed at the Kloof No. 2 Plant, and as from the middle of 2024, Driefontein No. 1 Plant. The capacity of the Kloof plant is 167ktpm and the Driefontein plant is 240ktpm. Kloof No. 2 Plant is situated near No. 7 Shaft and processes underground ore and the Driefontein No.1 Plant, also owned by the Registrant, is approximately 15km away and processes underground ore. Selected Kloof surface material is toll treated at the Driefontein and the Ezulwini Processing Plant, a separate adjacent property to the east and owned by the Registrant.

Figure 3: Kloof Operation Overview



3.2 Mineral Title

The Mining and Prospecting rights referred to in this document are issued in terms of Section 5(1) of the Mineral and Petroleum Resources Development Act 28 of 2002 in South Africa. The principal terms and conditions are not materially different to other similar operations within South Africa. Mineral Rights are obtained through the normal application process mandated by the South Africa Department of Mineral Resources and Energy.

Sibanye Gold Proprietary Limited (SGL), a wholly owned subsidiary of Sibanye-Stillwater Limited, is the holder of a converted mining right in respect of the Kloof operation under the Department of Mineral Resources and Energy (DMRE) reference number: GP30/5/1/2/2/66 MR in respect of the Kloof operations (Kloof MR)(Table 11). The Kloof MR is valid until the 29th of January 2027 and will be renewed prior to expiry in 2027. The current LoM plan used to support the Mineral Reserves continues to 2032.

The Kloof Mining Right covers a mining area totalling 20,087 hectares located in the Magisterial District of Oberholzer and Westonaria, near the town of Westonaria, in the Gauteng Province, as indicated in Figure 3. The Mining Rights comprise various farms (or portions thereof). The names of the farms for the Kloof Operations are listed in Table 12. The Kloof Operations have sufficient rights and access to land to conduct operations.

Sibanye Gold Proprietary Limited was also granted a Prospecting Right (PR) in terms of Section 17 of the Mineral and Petroleum Resources Development Act, 28 of 2002 (MPRDA) under DMRE Reference Number: GP30/5/1/1/2/193 PR (renewal: GP30/5/1/1/2/10096 PR) (Kloof PR). The Kloof PR covered 24.8823 ha on Portion 6 of the farm Rietfontein 349 IQ, in the Westonaria District.

The Kloof PR was granted for a period of 5 (five) years, ending 18 July 2011. Prior to the expiry of the Kloof PR an application for renewal of the prospecting right was submitted to the DMRE Gauteng Regional Office, in terms of Section 18 of the MPRDA, so as to renew the mentioned prospecting right for a further

Office, in terms of Section 18 of the MPRDA, so as to renew the mentioned prospecting right for a further three (3) years. This renewal application was granted on 4 March 2014.

The Kloof PR area will form a natural extension of the Kloof MR mining activities, as no additional capital is required to gain access for exploitation, except for the continuation of the existing infrastructure. Continuous prospecting activities, such as drilling of surface and underground drillholes, have proven it worthwhile to include the area covered by the Kloof PR into the Kloof MR. SGL subsequently submitted an application in terms of Section 102 of the MPRDA to the DMRE, for Ministerial consent to amend the Kloof MR, to incorporate the Kloof PR area of the Farm Rietfontein 349 IQ. The mentioned Section 102 application was submitted on the 27th of September 2013 and was subsequently granted on 24 April 2023. SGL is attempting to execute the amendment deed to give effect to the amendment of the Kloof MR.

SGL submitted a further section 102 application for Ministerial consent to amend the Kloof MR to incorporate, amongst other land portions, the properties over which the Venterspost North and Venterspost South Tailings Storage Facilities (Venterspost TSF's) is located. The mentioned application was granted on 25 August 2021 and SGL is attempting to execute the amendment deed to give effect to the amendment of the Kloof MR. Although the Venterspost TSF's will form part of the Kloof MR after execution of the amendment deed, DRDGOLD Limited, as the owner of the Venterspost TSF's pursuant

to a transaction concluded between the parties on 22 November 2017, retains the right to process the material found within the Venterspost TSF's for its own account.

Table 11: Summary of Mineral Rights held for the Kloof Operations

Operation /Project	Right Holder	Right Number/s	Size (ha)	Minerals	Key Permit Conditions	Expiry Date	Future Requirements	Future Intentions	Brief Summary of Violations/Fines
Kloof	Sibanye Gold Proprietary Limited	GP30/5/1/2/2/66MR	20,087.00	Gold Ore and Associated Minerals	See the summary of permit conditions, general EMP regulatory reporting requirements and SLP regulatory reporting requirements. Annual performance assessment to be conducted on EIA: Record of Decision relating to Operation Diesel Generator and Fridgeplant.	29 January 2027	None	Execution of granted Section 102 applications	None

KEY PERMIT CONDITIONS LIST

MINING

- Mining right renewal applications are to be submitted 60 working days prior to the date of expiry of the right.
- The holder of the Mining Right must continue with mining operations, failing which the right may be suspended or cancelled.
- The terms of the right may not be varied or amended without the consent of the Minister of Mineral Resources and Energy.
- The Holder shall be entitled to abandon or relinquish the right or the area covered by the right entirely or in part. Upon abandonment or relinquishment, the Holder must:
    - Furnish the Regional Manager with all prospecting and/or mining results and/or information, as well as the general evaluation of the geological, geophysical and borehole data in respect of such abandoned area; and
    - Apply for a closure certificate in terms of section 43(3) of the MPRDA.
- The holder shall pay royalties to the State in accordance with section 25(2)g of the MPRDA throughout the duration of the mining right.
- Mining Operations must be conducted in accordance with the Mining Work Programme (MWP) and any amendment to the MWP and an approved Environmental Management Plan (EMP).
- The holder shall not trespass or enter into any homestead, house or its curtilage nor interfere with or prejudice the interests of the occupiers and/or owners of the surface of the Mining Area except to the extent to which such interference or prejudice is necessary for the purposes of enabling the Holder to properly exercise the Holder's rights under the mining right.
- The holder must dispose of all minerals derived from mining at competitive market prices which shall mean, in all cases, non-discriminatory prices or non-export parity prices.
- A shareholding, an equity, an interest or participation in the mining right or joint venture, or a controlling interest in a company/JV may not be encumbered, ceded, transferred, mortgaged, let, sublet, assigned, alienated or otherwise disposed of without the written consent of the Minister, except in the case of a change of controlling interest in listed companies.
- All drillholes, shafts, adits, excavations and openings created by the holder shall be sealed, closed, fenced and made safe in accordance with the approved EMP and the Mine Health and Safety Act 29 of 1996 (MHSA).
- The holder of the mining right, while carrying out mining operations should safeguard and protect the environment, the mining area and any person who is entitled to use the surface of the mining area for possible damage or injury.
- The Minister or a person authorized by the Minister shall be entitled to inspect the Mining Area and the execution of the approved mining right conditions.

- A mining right may be cancelled or suspended subject to Section 47 of the MPRDA if the holder:
    - Submits inaccurate, incorrect and/or misleading information in connection with any matter required to be submitted under this Act;
    - Fails to honour or carry out any agreement, arrangement or undertaking, including the undertaking made by the Holder in terms of the Broad-Based Socio-Economic Empowerment Charter and Social and Labour Plan;

    - Breaches any material term and condition of the mining right;
    - Conducts mining in contravention of the MPRDA;
    - Contravenes the requirements of the approved Environmental Management Programme;
    - Contravenes any provisions of this Act in any other manner.

- The Holder shall submit monthly returns contemplated in Section 28 (2) (a) of the MPRDA no later than the 15th of every month and maintain all such books, plans and records in regard to mining on the mining area as may be required by the Act.
- The Holder shall, at the end of each year, following the commencement of this mining right, inform the Regional Manager in writing of any new developments and of the future mining activities planned in connection with the exploitation/mining of the minerals in the mining area.
- Provisions relating to section 2(d) and section 2(f) of the MPRDA, relating to the Broad Based Socio Economic Empowerment Charter differ in each mining right.
- The Mining right does not exempt the holder from complying with the MHSA or any Act in South Africa.
- Annually, no later than three months before the financial year end, submit a detailed implementation plan to give effect to Regulation 46(e)(i), (ii) and (iii) in line with the Social and Labour Plan.
- Annually, no later than three months after the finalization of its audited annual report submit a detailed report on the implementation of the previous year's Social and Labour Plan.

SOCIAL AND LABOUR PLAN COMPLIANCE REQUIREMENTS

- New Social and Labour Plan to be submitted and reviewed every 5 years.
- Social and Labour Plan Implementation Plans to be submitted annually.
- Social and Labour Plan Annual Report to be submitted annually.

ENVIRONMENTAL MANAGEMENT COMPLIANCE REQUIREMENTS

- Performance assessment relating to the Environmental Management Programme to be conducted bi-annually.
- Performance assessment relating to Water Use License to be conducted annually.
- Performance assessment relating to Atmospheric Emission License to be conducted annually.

Table 12: Summary of Mineral Title Properties - Kloof

Farm Name	Portion
Kraalkop 147 IQ	Portion 21 (a portion of Portion 10), Portion 25 (Blykop) (a portion of Portion 10)
Foch 150 IQ	Portion 1,7,11,21,39, Remaining Extent of Farm
Luipaardsvlei 243 IQ	Portion 3, 29, 34, 46 and Remaining Extent of Portion 1, 2, 31, 32, 33, 47
Middelvlei 255 IQ	Portion 4
Uitval 280 IQ	Portion 11, Remaining Extent of Farm
Libanon or Witkleigat 283 IQ	Portion 2, 3,4,6,7,8,10,11,12 and Remaining Extent of Farm
Venterspos 284 IQ	Portion 6, 92 , and Remaining Extent of Portion 31
[illegible]	[illegible]

Nelshoogte 286 IQ	Portion 1
Gemspost 288 IQ	Portion 3 (Westonaria Ext.2), 4, 5 (a portion of Portion 1), 6,12 ,15-19, 29,34-36, 39, 41, 42, 43 (Bekkersdal), 45-48, 49(Westonaria), 52, 53, Remaining Extent of Portion 38, 40(Westonaria) and Remaining Extent of Farm
Gemsbokfontein 290 IQ	Portion 5, 10, 12 (a portion of Portion 8), 13, 14 (a portion of Portion 8), 16, 20 (a portion of Portion 6), 23 , Remaining Extent of Portion 6, 8
Panvlakte 291 IQ	Portion 2 (Westonaria Ext.1), 3 (Westonaria Ext.6), Remaining Extent of Farm
Elandsfontein 346 IQ	Portion 5 (a portion of Portion 1), 10 (a portion of Portion 1), 14 (a portion of Portion 3), 15, 16, 25, 30, 46 , Remaining Extent of Portion 1, 3, 4,7, 26,
Doornpoort 347 IQ	Portion 5, 15, 26-28, Portion of Portion 37, Remaining Extent of Portion 2
Doornkloof 348 IQ	Remaining Extent of Portion 1, Remaining Extent of Farm
Rietfontein 349 IQ	Portion 6, 9, 12-14, 16, 19, 20, 25, 32, 33, 35, 36, 41, 42, 47, 48, (now Glenharvie Ext.1), 59 (now Glenharvie), 60 (now Glenharvie Ext.2), 61, 63-70, 72, 74, 76, Remaining Extent of Portion 2, 3, 5, 7, 10, 11, 15, 21, 22, 28, 34,58, 73 and Remaining Extent(of Farm?)
Doornkloof 350 IQ	Portion 5, 7, 8, 13, 19-22, 24, 27, 31, 33, 34, 36, 37, 39-41, 43, Remaining Extent of Portion 1,2, 4, 6, 10-12, 16, 23, 25, 29
Leeuwdoorn 351 IQ	Portion 1, Remaining Extent of Farm
Leeuwpoort 356 IQ	Portion 24-26, 57-59, 62, 63, 75, 76, Remaining Extent of Portion 2, 4-8
Weltevreden 357 IQ	Portion 3, 7, 9-13, 20,22, 23, 25, 27, 28, 30, 31, 33, Remaining Extent of Portion 5, 19,21, 26
Wildebeestkuil 360 IQ	Portion 1, 4, 14, 16, Remaining Extent of Portion 3, 5, 13, and Remaining Extent of Farm
Divonia 363 IQ	Farm
Rietfontein 519 IQ	Portion 2, 9, 11-15, 19, 20, 23-25, and Remaining Extent of Portion 3, 7, 22
Rietfontein* 349 IQ	Portion 6 (Kloof 193PR)

3.3 Royalties

Sibanye-Stillwater Kloof Operation is not a royalty company nor receives royalties from any other operation.

3.4 Legal Proceedings and Significant Encumbrances to the Property

The QPs have been advised by Sibanye-Stillwater that there are no material legal proceedings in relation to the Kloof Operations. It should, however, be noted that Sibanye-Stillwater may be involved in various non-material legal matters such as employment claims, third-party subpoenas and collection matters on an ongoing basis, which are not material to the Mineral Resources and Mineral Reserves reported for the Kloof Operations in this TRS.

From the documentation reviewed and input by the relevant Technical Specialists and Experts, the QPs could not identify any significant encumbrances or any other significant factors or risks with regard to the title permitting, access, surface ownership, environmental and community factors that would prevent the mining or the ability to perform work on the Kloof Operations, and the declaration and disclosure of the Mineral Resources and Mineral Reserves for the Kloof Operations. The Kloof Operations comply with all title and environmental permitting requirements of the RSA.

4 Accessibility, Climate, Local Resources, Infrastructure and Physiography

4.1 Topography, Elevation and Vegetation

The Kloof operation is located in the South African high veld (prairie) at an elevation of approximately 1,650m above mean sea level. The area surrounding Kloof is topographically relatively flat, and the vegetation of the area is classified as Bankenveld consisting of grassland. Livestock farming is widespread in the surrounding area. The natural fauna consists of small mammals and avifauna.

This area is drained by the Wonderfonteinspruit, Leeuspruit and the Loopspruit. The northern portion of the mining area consists of gently undulating grassland which is dissected by the Wonderfonteinspruit.

The majority of the Kloof Mining Right area is comprised of valley bottom wetlands associated with local river systems, including the Middelvleispruit, Wonderfonteinspruit, Leeuspruit and Loopspruit.

4.2 Access, Towns and Regional Infrastructure

The Kloof operation is situated in the District Municipality of West Rand (Merafong City Local Municipality) at latitude 26° 24.3'S and longitude 27° 40.1'E near Carletonville in the Gauteng Province of South Africa. The site is accessed via the N12 highway between Johannesburg (50km to the east) and Potchefstroom (75km to the southwest). Gauteng province has a diverse range of airports catering to various needs, including the large-scale OR Tambo and Lanseria international airports.

The town of Westonaria is the closest settlement. The closest city is Johannesburg, some 50km to the east of Westonaria.

Refer to Sections 4.4 and 14 and Figure 2 for additional on Infrastructure.

4.3 Climate

The climate at Kloof is warm and temperate. Köppen and Geiger classify the area as a subtropical highland. Rainfall occurs throughout the year, but predominantly between November and March, mainly as thunderstorms. Annual rainfall averages approximately 711mm. The wettest month is January, with an average monthly total rainfall of 132mm. The driest month is July, with an average monthly total rainfall of approximately 2mm.

Mean annual air temperatures range from 11.8°C in June/ July to 23.8°C in January.

From July to December, the average wind speed is 13km/hr and from January to June, the average wind speed is 10.5km/hr. September is the windiest and March is the calmest. The wind direction varies, but it is predominantly from the north.

Kloof experiences both positive polarity lightning and regular lightning (with lightning ground flash densities of 5 to 15 flashes per square kilometer per year) and has moderate risk to surface infrastructure.

No severe climatic effects influence mining activities and the mining and ore processing operations at the Kloof Operations proceed year-round.

4.4 Infrastructure and Bulk Service Supplies

Kloof and the surrounding mines have been operational since the 1950's. All of the regional and onsite infrastructure required for mining is well-established. There is a good supply chain for all required consumables and equipment in or near the mine site. Kloof, through Sibanye-Stillwater, is well connected to the international supply markets for any materials and equipment not available locally. The railway line passes through the town of Carltonville.

Kloof is supplied with bulk electricity from the regional grid, which is owned and operated by the state-owned company, Eskom. Details for Power supply are shown in Section 15.3, and for Water in Section 17.4.7.

Most services are found in the surrounding towns or in Johannesburg and Potchefstroom.

4.5 Personnel Sources

Kloof Operations have specific policies, procedures and practices in place, which address, on an integrated basis, its human resource requirements. Recruitment is predominantly informed by the operational requirements of the Kloof Operations for specific skills, by the extent of labour turnover levels and by relevant legislation.

The organizational structure currently in place, together with operational management, will remain unchanged until planned shaft closures occur, after which downsizing will be assessed. Organizational structures and staffing requirements (Table 13) are primarily determined by operational requirements and the production profile of the operation. The economic climate, cost infrastructure and the Mineral Reserves profile also influence the organizational structures and required labour complement.

Table 13: Number of Employees

	2020	2021	2022	2023
No. of Employees	11,604	11,389	10,444	8,944

Manpower is sourced from different areas of South Africa and beyond. Table 14 provides a breakdown of the origin of employees as per province, including beyond the border of South Africa. Many of the Kloof Operations' employees live in Carletonville and neighbouring towns.

Table 14: Origin of Employees

Province	Number of Permanent Employees	Number of Contractors	Percentage
Eastern Cape	2,126	409	28%
Free State	273	102	4%
Gauteng	1,263	872	24%
KwaZulu-Natal	902	148	12%
Limpopo	208	62	3%
Mpumalanga	305	71	4%
North West	199	139	4%
Northern Cape	14	9	0%
Western Cape	6	3	0%
Non South Africans	1,679	154	20%
Total	**6,975**	**1,969**	**100%**

5 History

5.1 Ownership History

Exploration in the area dates from 1898 when the VCR and Middelvlei Reef were discovered at depth in the Far West Rand area. Mining at Kloof dates from 1964 when the main two-shaft complex was initiated, although the mine was only officially opened four years later. Kloof in its current form dates from April 2000 when Libanon, Kloof, Leeudoorn and Venterspost mines amalgamated. The historical development of the Kloof mine is summarised in Table 15.

Table 15: Historical Development

Company/Ownership/ Operator	Date	Activity
Unknown	1898	Drilling commenced by the Pullinger brothers intersecting VCR and MVR at depth.
Unknown	1909	A shaft was sunk and subsequently flooded with water from the dolomites and was abandoned.
Gold Fields of South Africa (GFSA)	1930's	Dr Krahmann used geophysical techniques to delineate the extent of the reefs underlying the dolomite.
Unknown	1934	Shaft sinking commenced at Venterspost using the newly developed cementation process.
Unknown	1936	Shaft sinking commenced at Libanon.
Unknown	1939	Crushing of ore began and first gold from the West Wits Goldfield was poured at Venterspost.

Unknown	1939	Sinking of Libanon''s second shaft stopped to curtail capital expenditure - the mine closed for the duration of the war.
Unknown	1945	Mine reopened.
Gold Fields of South Africa (GFSA)	1964	Work commenced on Kloof's main twin-shaft system.
GFSA	1968	Kloof Gold mine officially opened.
GFSA	1982	Prospecting lease obtained over an area to the south and west of the Kloof lease area.
GFSA	1987	Leeudoorn shaft sinking commenced.
GFSA	1992	Venterspost incorporated into Libanon division of Kloof Gold mine.
GFSA	1993	Leeudoorn Shaft completed.
Gold Fields Limited (GFL)	1998	Merger of Gencor and GFSA gold assets under GFL.
GFL	2000	Formation of Kloof in its current form by amalgamation of Libanon, Kloof, Leeudoorn and Venterspost Gold mines.
GFL	2005	Production reached a cumulative 70 million ounces of gold (yield).
GFL	2007	Kloof successfully converted its old order mining right to new order mining rights.
GFL	2010	Kloof and Driefontein were combined to create the Kloof/Driefontein Complex (KDC).
GFL	2011	Surface Rock Dump Python Plant Project and TSFs feasibility study.
Sibanye Gold Limited	2013	Kloof a stand-alone operation again following the unbundling of Gold Fields and the separate listing of Sibanye Gold Limited, of which Kloof formed a part.
Sibanye Gold Limited	2014	concluded a Pre-Feasibility Study (PFS) on the mining area below 45 Level at Kloof No. 4 Shaft embarked on a major exploration programme, targeted at the Kloof and MVR at Main and No. 8 Shafts
Sibanye Gold Limited	2015	- following the completion of the drop-down decline Feasibility Study (FS), capital approval was obtained from the board and development has since commenced - a Section 102 application was submitted to the DMRE to extend the MR boundaries to include the TSFs that form part of the WRTRP
Sibanye-Stillwater Limited	2017	The Kloof No. 4 Shaft depth extension project commences.

Company/Ownership/ Operator	Date	Activity
Sibanye-Stillwater Limited	2018	A project (K3-K4-K7-K Main Integration Project) for the optimisation of current infrastructure is approved. The project aims to shut down expensive and aging infrastructure and create alternative access points for the remaining Mineral Reserves.
Sibanye-Stillwater Limited	2019	production returns to normal levels following a protracted strike by Association of Mining and Construction Workers Union (AMCU), which saw limited production taking place between December 2018 and May 2019 The Kloof Shaft Integration Project and the Kloof No.4 Shaft Depth Extension Project continue as planned
Sibanye-Stillwater Limited	2020	The COVID-19 Pandemic and the associated national lockdown affected all production from April to the middle May, at which point a gradual build-up in production was initiated with a slow return of employees continuing right up into December.
Sibanye-Stillwater Limited	2021	the Kloof No. 4 Shaft depth extension project development is completed down to 46 Level, development continues down to 47 Level the Kloof No. 3 Shaft is placed on care-and-maintenance
Sibanye-Stillwater Limited	2022	production at Main Shaft was halted in December 2021 / January 2022 as part of a management intervention to assess and correct safety concerns following an evaluation of the depth extension project at No. 4 Shaft, a decision was taken to stop further development below 46 Level and remove 47 Level from the LoM and Mineral Reserves due to slow progression of contractors production resumes following a strike by all unions, which saw no production taking place between March 2022 and June 2022
Sibanye-Stillwater Limited	2023	The continued non-profitability and decline in productivity at No. 4 Shaft coupled with the incident in the shaft resulted in early closure and the removal of all Mineral Resources and Mineral Reserves below 41 Level. Kloof No.1 Plant was closed due lack of feed stock from Surface Rock Dumps, it was not processing underground ore.

5.2 Previous Exploration and Mine Development

5.2.1 Previous Exploration

Details of the discovery of the West Wits line in the 1930's by the pioneering work of Dr Rudolf Krahmann's Magnetometer surveys can be found in the following publications Cartwright 1968, Davenpoort 2013, and Handley 2004.

Once the initial surveys were completed, follow-up drilling on the identified targets occurred, which proved the existence of payable reef at depth. Subsequently, the first development of mining was the sinking of the Venterspost Shaft in 1934, however, this was beset with flooding and only began production in 1939 shortly before the outbreak of the Second World War.

Follow-up exploration drilling was executed from the surface on irregular grids of around 2,000m depending on the exploration strategy, depth of the mineralised horizons and geological uncertainty. Once in operation, with underground access established, infill grade control drilling was conducted to provide a 30m to 100m grid depending on geological requirements, evaluation and safety.

Drilling history is given in Table 16. Drilling information above includes cover drilling and structural drilling. It does not include legacy data for which there is no complete/detailed drillhole log captured in the drilling database.

Table 16:Drilling History

Year	Total No. of Holes	Total Metres	Kloof Reef Intersections	Libanon Reef Intersections	Middelvlei R eef Intersections	VCR Intersections
<2000	522	226,458	N/A	N/A	N/A	N/A
2000-2005	156	49,366	N/A	N/A	N/A	N/A
2005-2010	1,164	169,166	61	N/A	359	1,322
2010-2015	913	121,399	98	49	30	147
2015-2020	803	85,716	191	65	76	457
2020-2021	143	15,582	36	13	9	39
2021-2022	64	7,177	19	2	18	3
2022-2023	149	16,247	34	4	39	5
Totals	**3,914**	**691,111**	**439**	**133**	**531**	**1,973**

5.2.1.1 Aeromagnetic Surveys

Kloof has not flown any aeromagnetic surveys over the property. Ground magnetic surveys were undertaken in the 1930's and are well documented in geological literature.

5.2.1.2 3D Seismics

Information on Seismic surveys is given in Section 6.3.3

5.2.2 Previous Development

Table 17 contains details of the historical production and financial parameters in calendar years, 2019 to 2023.

Table 17: Historical Production and Financial Parameters

		Unit	Financial Years				
			2019	**2020**	**2021**	**2022**	**2023**
Main development	Advanced	(km)	9.4	10.8	13.4	7.0	9.3
Area mined		('000m2)	201	203	239	123	205
ROM/Tonnes milled	Underground	('000)	1,489	1,570	1,863	992	1,399
	Surface	('000)	5,868	5,327	4,139	1,953	1,565
	Total	**('000)**	**7,357**	**6,896**	**6,002**	**2,945**	**2,965**
ROM Grade	Underground	(g/t)	6.2	6.3	5.7	4.8	4.8
	Surface	(g/t)	0.4	0.4	0.4	0.4	0.5
	Combined	**(g/t)**	**1.6**	**1.7**	**2.0**	**1.9**	**2.5**
Recovery	Underground	%	96%	92%	90%	91%	101%
	Surface	%	91%	93%	88%	73%	81%
	Combined	**%**	**95%**	**92%**	**89%**	**88%**	**99%**
Gold produced	Underground	(kg)	8,844	9,073	9,558	4,298	6,785
	Surface	(kg)	2,039	1,892	1,385	615	656
	Total	**(kg)**	**10,883**	**10,965**	**10,943**	**4,913**	**7,441**
	Underground	(ZAR/t)	3,871	3,841	3,766	6,072	5,271

Operating Costs)	Surface	(ZAR/t)	196	193	209	295	370
	Total	**(ZAR/t)**	**939**	**1,023**	**1,313**	**2,241**	**3,199**
Operating Costs		(USD/oz)	1,359	1,218	1,516	2,488	1,795
		(ZAR/kg)	634,957	643,399	720,234	1,343,067	1,068,965
All in cost		(USD/oz)	1,564	1,472	1,852	3,002	2,140
		(ZAR/kg)	730,637	777,632	879,907	1,620,269	1,274,642
Capital expenditure		(ZARm)	937	1,270	1,616	1,285	1,450

Note:

- 2019 -2020 Production is affected by extended strike by AMCU
- 2020 influenced by COVID-19.
- 2022 parameters show lower production/higher unit costs due to a prolonged strike during the period.
- 2023 Closure of No4 Shaft lost 6 months of production

6 Geological Setting, Mineralisation and Deposit

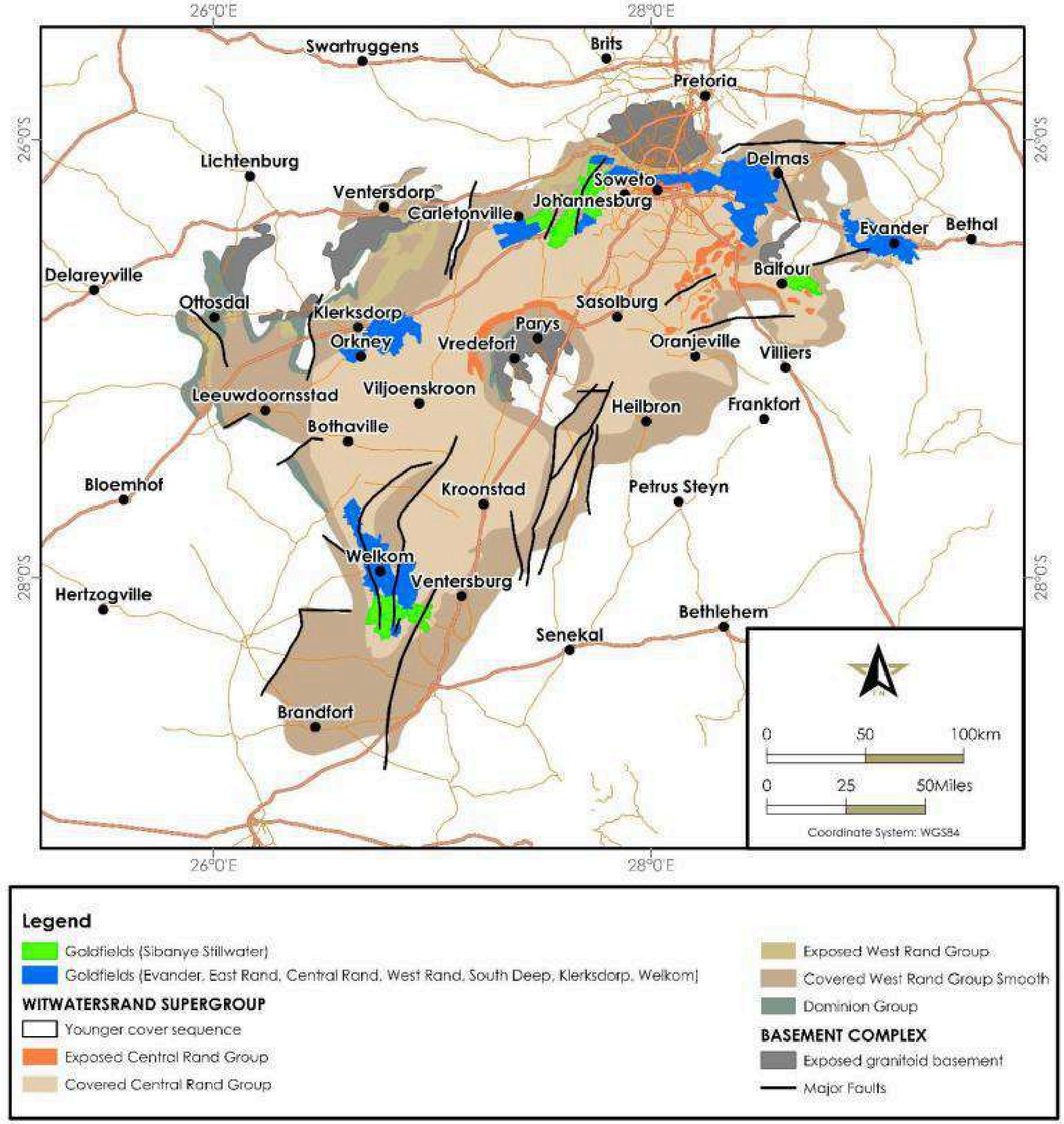
6.1 Regional Geology

Sibanye-Stillwater gold operations are located in the Witwatersrand Basin and are deep to intermediate-level underground mines, exploiting gold bearing, shallow dipping tabular ore bodies. Sibanye-Stillwater operations form part of the gold mines located in the Witwatersrand Basin that have collectively produced over 50kt (1,608Moz) of gold over a period of more than 100 years.

The Witwatersrand Basin comprises a 6km vertical thickness of argillaceous and arenaceous sedimentary rocks situated within the Kaapvaal Craton, extending laterally for some 350km east-northeast and 150km south-southeast (Figure 4). The sedimentary rocks generally dip at shallow angles toward the centre of the basin, while locally this may vary. The basin sediments outcrop to the south of

Johannesburg, but further west these are overlain by up to 4km of Archaean, Proterozoic and Mesozoic volcanic and sedimentary rocks. The Witwatersrand Basin sediments themselves are considered to be between 3,100 and 2,700 million years old.

Figure 4: Surface Extent of the Witwatersrand Basin



Gold mineralisation in the Witwatersrand Basin occurs within quartz-pebble conglomerates, termed reefs. These reefs occur within eight separate goldfields located along the eastern, northern and western margins of the basin. These goldfields are known as:

- Evander Goldfield
- East Rand Goldfield
- South Rand Goldfield
- Central Rand Goldfield
- West Rand Goldfield
- Far West Rand Goldfield
- Klerksdorp Goldfield
- Free State Goldfield

Sibanye-Stillwater gold operations are currently focused in the Free State Goldfield, Far West Rand Goldfield and South Rand Goldfield.

Typically, within each goldfield, there are one or sometimes two major reef units present, which may be accompanied by one or more secondary reef units (Figure 5). As a result of faulting and other primary controls on mineralisation, the goldfields are not continuous and are characterised by the presence or dominance of different reef units. The reefs are generally less than 2m in thickness and are widely considered to represent laterally extensive braided fluvial deposits or unconfined flow deposits, which formed along the flanks of alluvial fan systems that developed around the edge of what was effectively an inland sea.

All major reef units are developed on unconformity surfaces. The angle of the unconformity is typically greatest near the basin margin and decreases toward more distal areas. Complex patterns of syn-depositional faulting have caused complex variations in sediment thickness within the basin. Sub-vertical to over-folded reef structures, characteristic features of basin margins, occur within certain areas. The proponents of most early theories believed the gold to be deposited syn-genetically with the conglomerates, but subsequent research has confirmed that the Witwatersrand Basin has been subjected to metamorphism and that some post depositional redistribution of gold has occurred. Other experts regard the gold to be totally epigenetic and to have been deposited solely by hydrothermal fluids, sometime after deposition of the reef sediments.

Despite these varied viewpoints, the most fundamental control to the gold distribution remains the association with quartz-pebble conglomerates on intra-basinal unconformities. Due to the regional nature of the erosional surfaces, the reefs are relatively continuous. Bedrock (footwall) controls have been established governing the distribution of many of the reefs. Understanding the reef development within channel systems and sedimentary features such as facies variations and channel frequency assist in mapping out local gold distributions. The ore body grade has proven to vary depending on the depositional setting and as such the identification and interpretation of erosional/sedimentary features is the key to in-situ Mineral Resources estimation.

The Witwatersrand was separated into a Lower Witwatersrand System, which contained the basal Hospital Hill Series overlain by the Government Reef Series and finally the Jeppestown Series; and an Upper Witwatersrand System containing the Main-Bird (MB) Series and the Kimberley-Elsburg Series, discovered by Mellor in 1911, and although numerous revisions and adaptations have been done,

including SACS (1980), the basic subdivisions have been retained. The Lower Witwatersrand System is now known as the West Rand Group and the Upper Witwatersrand System is known as the Central Rand Group. The West Rand Group contains numerous well-developed argillaceous units, whereas the Central Rand Group is more arenaceous. The most important gold-bearing horizons are mostly restricted to the Central Rand Group, shown in the stratigraphic columns in Figure 5.

Figure 5: General Stratigraphic Column of the Witwatersrand Basin

Sub Group	Formation	Reefs of interest	Where mined
Malmani	Malmani Dolomite		
Malmani	Black Reef		
Klipriversberg	Alberton		
Klipriversberg	Westonaria		
Klipriversberg	Venterspost	VCR	Driefontein / Kloof
Turffontein	Mondeor		
Turffontein	Elsburg	VS 5 / Beatrix / Kloof Reef UK9 A	Beatrix / Kloof / Burnstone
Turffontein	Kimberley	Kalkoenkrans	Beatrix
Turffontein	Kimberley	Libanon Reef	Kloof
rg	Booysens		

Johannesbu[rg]	Krugersdorp			
	Luipaardsvlei			
	Randfontein		Middelvlei Reef	Driefontein / Kloof
	Main		Carbon Leader	Driefontein
	Blyvooruitzicht			

6.2 Deposit Types

6.2.1 Formation of Deposits

The Witwatersrand gold deposits are generally classified as a type of placer deposit. Placer, from the Spanish meaning alluvial sand, is a deposit made up of material eroded from a weathered rock and transported from the original location to another by means of water. The water carries broken weathered material as a bedload in streams and deposits some or all of the load along the stream beds or if the load reaches the ocean or lake along the coastline or lakeshore. During transport, the load is sorted into size and density fractions by the action of the water and selective deposition according to the load carrying capacity of the stream takes place. When the stream velocity drops, some parts of

the load fall out of suspension and are deposited in the stream bed. Usually the heaviest or largest particles, such as quartz pebbles and other heavy minerals like gold, diamonds and cassiterite (tin)will drop out first with a drop in velocity, and the lighter and less dense particles will be carried further downstream. Where this process is repeated over a long period, thick beds of gravels can build up. If the sediment source areas have heavy minerals that are chemically stable, these can also be concentrated. Placers are mined for gold, platinum, tine, niobium, tantalum, titanium minerals, zircon and diamonds, gemstones such as sapphire and rubies, chromite etc. Any heavy, hard, tough and chemically stable mineral is potentially deposited in placers. The most common mineral is quartz and most placers found in riverine deposits are dominated by quartz pebbles.

Ancient gravels are referred to as conglomerates. Conglomerates are relatively common in the geological record however, economically viable gold deposits that are not Recent gravels are extremely rare as formation requires a complex set of circumstances: a source area with minerals of economic value and the right conditions for weathering, erosion and preservation.

Recent gravel deposits are found in many places in the world. Some of the best known are California, the Yukon, Lena River in Russia, Ghana, and the eastern DRC. Gold deposits are known in a few ancient gravels deposits referred to a paleo-placers (Table 18). These are rare and only two areas have had any significant gold production, the Witwatersrand in South Africa and the Tarkwa deposits in Ghana.

Placer deposits tend to have erratic distributions and can be overall low concentrations of desirable making the deposits difficult to follow along the gravels. For ancient gravels that must be mined underground or in large open pits, the expense is only worthwhile for very high value minerals such as gold. Gold bearing paleo-placers with economically interesting gold contents are found in rock of Archean and Paleoproterozoic age. The mineral distribution has been altered to some extent by metamorphism and fluid flow through the rock however, the gold and other minerals distribution is highly correlated with the original sedimentary structure and the same principles applied to modern gravels work well as predictors of gold concentration in the paleo placers.

Placers in general and metals: gold, platinum, tine, niobium, tantalum, titanium minerals, zircon and diamonds, gemstones such as sapphire and rubies, chromite etc. Any heavy, hard, tough and chemically stable mineral is potentially deposited in placers. The most common mineral is quartz and most placers found in rivierine deposits are dominated by quartz pebbles.

Other types of placers occur such as beach and near shore deposits where the concentration and sorting of material is the result of wave action and near shore currents. Heavy mineral sands containing titanium and iron minerals or diamonds are more common in these types of deposits.

6.2.2 Witwatersrand and other gold-bearing conglomerates

The paleoconglomerates of the Witwatersrand and Tarkwa goldfields are generally interpreted to be the result of complex pacer formation in rivers and possible nearshore deposits modified by regional metamorphism and in the case of the Witwatersrand possible local hydrothermal remobilization for some of the placer constituent. The Witwatersrand is well known in the mining industry and well-documented from mining over the last 140 years.

Table 18: Geologic and Production Information on the Major Quartz-pebble-Conglomerate Deposits of the World.

Basin name	Location	Basin age (Ma)		Basin setting	Gold (Au) production	Iron (Fe) minerals	Significant uranium (U)	Significant hydrocarbon	Likely source	Hosting unit	Selected references
		maximum	minimum								
Witwatersrand	South Africa	2,970	2,714	foreland, retroarc, passive margin, intracratonic sag	**>50,000 t**	pyrite	yes	yes	3.1-3.0 Ga granite-greenstone	Central Rand and Western Rand Groups	Gregory, 1909; Pretorius, 1976, 1981a; Minter, 1977; Minter and others, 1993; Frimmel and others, 2005a
Tarkwa	Ghana	2,133	2,097	foreland	**>280 t**	hematite, magnetite	no	no	Paleoproterozoic greenstone	Tarkwaian Series	Sestini, 1973; Milési and others, 1991; Hirdes and Nunoo, 1994; Pigois and others, 2003
Jacobina	Brazil	2,086	1,883	foreland	**>70 t**	pyrite, hema- tite	no	yes	Archean-Eoproterozoic granite-greenstone	Serra do Córrego Formation	Ledru and others, 1997; Teixeira and others, 2001
Elliot Lake	Canada	2,450	2,219	foreland	negligible	pyrite	yes	yes	Archean granite	Huronian Supergroup	Fralick and Miall, 1989
Moeda	Brazil	2,800	2,200(?)	foreland	>10 t	pyrite	yes	minor	Archean granite-greenstone	Moeda Formation	Minter and others, 1990
Roraima	northern South America	2,000	1,900	foreland	n.d.	magnetite	no	no	2.3-2.1 Ga Guiana Shield granite-greenstone	Roraima Group	Santos and others, 2003; Frimmel and others, 2005b
Bababudan	India	2,900	2,600(?)	foreland	negligible	pyrite	yes	no	Archean granite-greenstone	Bababudan Group	Srinivasan and Ojakangas, 1986
Hamersley	Australia	2,780	2,630	graben	n.d.	pyrite	yes	yes	3.53-2.83 Ga Pil-bara craton granite-greenstone	Mount Bruce Supergroup	Carter and Gee, 1987
Kaarestunturi	Finland	1,880	1,800	graben	prospect	magnetite, hematite	no	no	Lapland greenstone belt	Kumpu Group	Härkönen, 1984

Schematic diagrams of the types of paleoenvironments thought to have formed the initial gold deposits are shown in Figure 6 to Figure 8.

The general sequence is:

- A source area of igneous and methamorphic rocks generally called granite-greenstone terrane which gold-bearing quartz veins is eroded. Deposition is multistaged with the initial deposits being in alluvial fans onto a plain, then furthere erosion and/or transportation forming an alluvial plain consisting of ephemeral debris flow deposits and perineal channels. This may then be modifiedby wave action of par of the alluvial plain forms at the edge of a large body of water or ocean.
- Sediments and heavy minerals are deposited in stream channels with gradual winnowing out of clays and light minerals leaving gravels consisting of mostly quartz and heavy minerals gradually being overlain by sand deposits as the system matures or sedimentation rates slow.
- The gravels are buried and subsequently modified by low-grade methamorphic processes but retain most of their predepositional features. The gold, uranium, sulphide and other heavy mineral distribution is controlled by the original sedimentary features of the deposit.

In the case of the Witwatersrand and Tarkwa goldfields these alluvial plains were large-long lived systems and the source areas were rich in gold-bearing deposits. The resulting gold deposits are extensive, easily identifiable. Gold distribution is locally erratic like modern smaller gravel deposits, however because of the large areas and volumes involved in the Witwatersrand and Tarkwa deposits, the grade distributions can be predicted with a high degree of confidence at the scale of mining.

Figure 6: Interpretation of the Paleoenvironment Setting for Conglomerate-hosted Gold Deposits

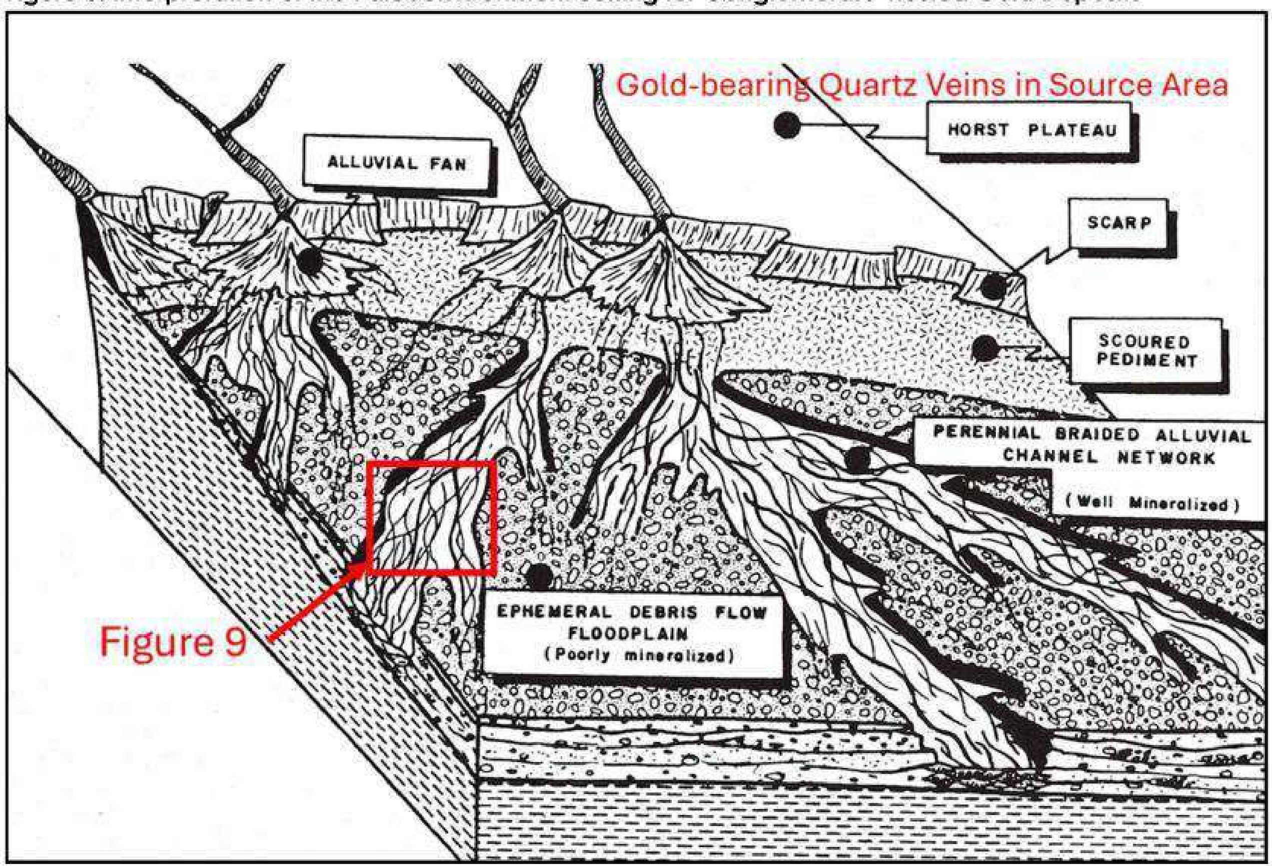
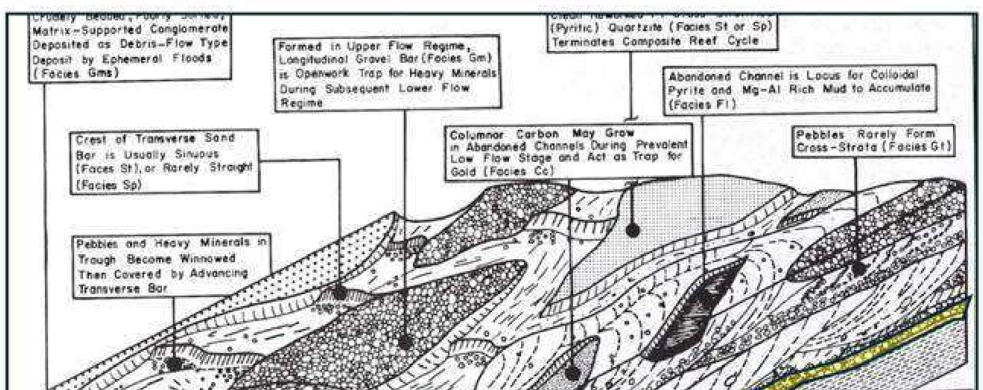


Figure 7: Detail of Paleogravel Deposits and Location of Heavy Mineral Deposition



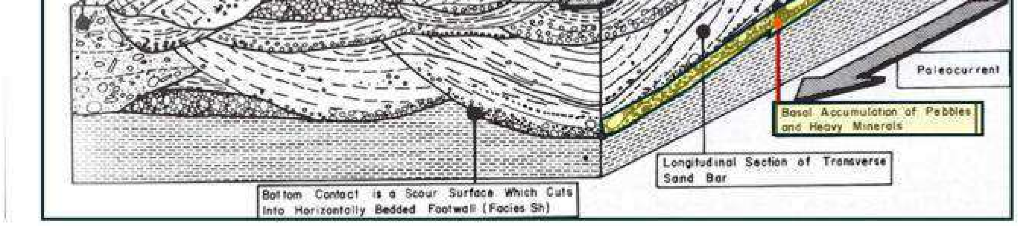
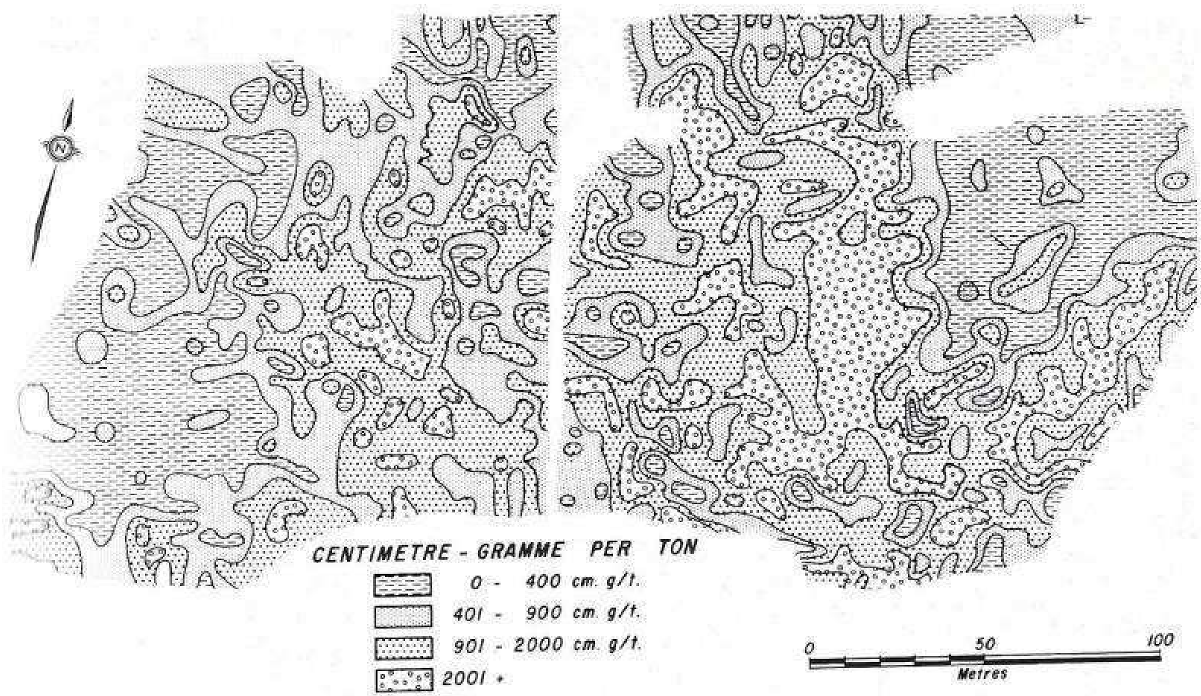


Figure 8: Example of Gold Accumulation (cm.g/t) in a Paleoconglomerate (Middelvlei Reef of the Doornfontein Gold Mine West Wits Line)

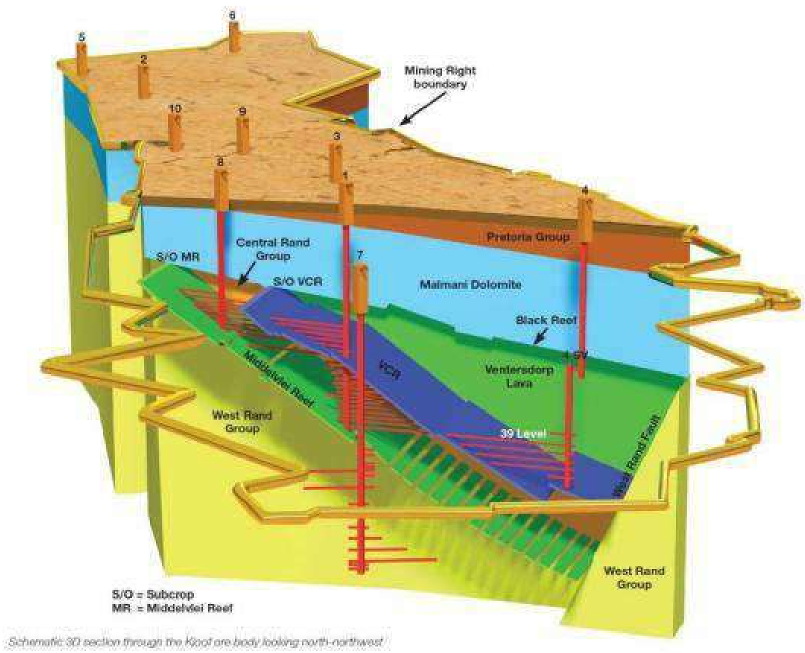


6.3 Local and Property Geology

6.3.1 Stratigraphy

The local stratigraphy and a 3D perspective cross-section of the relationships at Kloof is presented in Figure 9. At the top of the stratigraphic column sediments of the Pretoria Group (shales and quartzites) and Malmani Subgroup (dolomite) are located. Lavas of the Klipriviersberg Group (Ventersdorp Lava) underlie these sediments. The lavas in turn overlie the sediments of the Witwatersrand Supergroup. The Central Rand Group at the Kloof Operations consists of five orebodies, four of which are mined. They are exploited at different levels of extraction. The orebodies, extending from the base of the Central Rand Group upwards through the sequence are Carbon Leader, Middelvlei Reef, Libanon Reef, Kloof Reef, and the VCR(Ventersdorp Contact Reef) of the Venterspost Formation. The Black Reef at the base of the Transvaal Supergroup overlays the Witwatersrand Supergroup and Ventersdorp Supergroup unconformably. Kloof does not mine the Black Reef or Carbon Leader.

Figure 9: Simplified Geology View of Kloof Mineralised Horizons (Not to Scale)



6.3.2 The Mineralised Horizons

Kloof is a well-established mine, and its geological facies are well understood. Generally, over the Sibanye-Stillwater gold operations, two geological interpretations (facies and structure) are maintained and updated yearly or as needed when new information becomes available.

Facies interpretations describe certain characteristics of the various reefs in terms of lithology, grade, channel width, pebble size, assemblage, rounding sphericity, mineralisation, and any other characteristics, which may help to define more homogenous areas of the differing reefs. These more homogeneous areas are then used to assist in defining zones that can be considered as evaluation zones or domains. Kloof maintains facies interpretations for the four reefs mined. The facies interpretations are updated from information collected from underground mapping and sedimentological profiling of reef intersections, from underground investigations and drillholes. Facies maps are given in Section 11.2

6.3.2.1 Ventersdorp Contact Reef (VCR)

The VCR of the Venterspost Formation is an immature conglomerate that rests unconformably on the Witwatersrand series which it has eroded, and hence the footwall topography is controlled by erosion. Additionally, where it has eroded Witwatersrand reefs, it is thought that a degree of scavenging of the gold from that particular reef is evident.

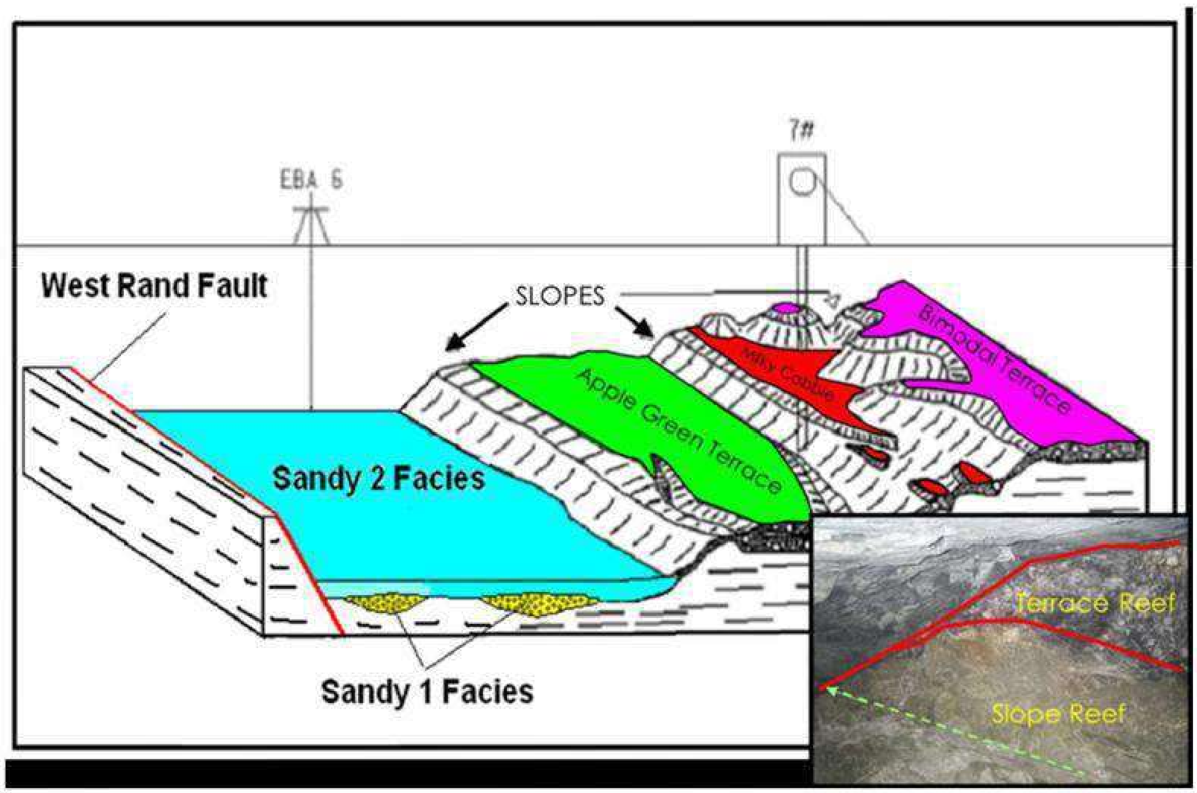
Kloof has adopted the terrace and slope model for the VCR (Figure 10). Within the context of this model, river terraces and their associated deposits were developed on the relatively flat topographic surfaces that marked former river valley floor levels. The terraces were formed within a degradational fluvial environment with a progressive decrease in elevation of the terraces corresponding to successively younger fluvial deposits.

Terrace deposits are characterised by a thicker accumulation of conglomerate and quartzite and are associated with a higher gold value. Slope deposits comprise a thinner accumulation and associated lower gold value.

The relative proportions of terrace type and slope reef may change down dip, in which less of the older terraces (Milky Cobble and Apple Green) will be expected, as they are replaced by younger terraces (Sandy 1 & 2).

The differing facies identified by underground observation are used to underpin the evaluation domains.

Figure 10: The Slope and Terrace Facies Interpretation (Not to Scale)



6.3.2.2 Kloof Reef

The Kloof Reef zone is situated some 50m to 70m above the Libanon Reef and it is exploited at Main Shaft, No. 7 Shaft and No. 8 Shaft. It comprises of several conglomerate bands and interbedded quartzites. The base of the zone is marked by a thin grit to small pebble conglomerate, called the Footwall Marker, overlain by coarse-grained light green to grey quartzite.

The economic Kloof Reef is known as the KRS1, and when payable it comprises robust large pebble conglomerates, generally oligomictic, but with polymictic upper bands common.

Above the reef, an argillaceous quartzite is present and varies from a few centimetres thick to less than 2m. This quartzite is often "blocky" due to the many bedding planes. An argillite marker or argillite parting can often be noted in this zone.

Above the argillite marker is a conglomerate (or occasionally a pair of conglomerates) known as the KRS2. These are small to medium pebble conglomerates usually oligomictic with generally sub-angular small white and smoky quartz clasts. It is often well mineralised and carries gold. Faulting in stopes often exposes this band.

Eight facies types are recognised for the Kloof Reef, these are shown in the image below and are used to underpin the evaluation domains.

6.3.2.3 Libanon Reef

Situated approximately 70m below the Kloof Reef, and on top of the Booysens shale is the Libanon Reef. This was mined locally at Kloof No. 3 Shaft and No. 8 Shaft, but due to variability in grade, it is a minor component of the Kloof Mineral Resources. With the opening of old cross cuts underway in the upper levels of Main Shaft and the expansion at K8, Libanon Reef exposures should become available to enable a detailed geological study of this reef horizon.

The impact of palaeo-topography appears to have been critical during the deposition of Libanon Reef. Channels with thick conglomerate packages contain the highest gold content. The reef zones consist of alternating gravel and sand lithofacies, which are not laterally persistent, with most either pinching out or interfingering with others over a distance of a few metres. A comparison of recorded vertical profiles with sample values shows that high values occur within well-sorted, class supported, and oligomictic conglomerates.

Five facies types have been identified for the Libanon Reef, these are shown in the image below and are used to underpin the evaluation domains. Extension of the Libanon Reef unknown facies is a result of sampling data from crosscut and stope sampling at No. 7 Shaft.

6.3.2.4 Middelvlei Reef

The Middelvlei Reef zone occurs approximately 60m above the Green Bar and is mined extensively at No. 1 SV Shaft. The reef zone consists of a sequence of conglomerates, quartzites, and pebbly quartzite. The bottom band is split into an upper and lower cycle with the upper cycle being erosive, and where channelised it becomes the primary gold carrier. The delineation of these upper-cycle channels, both upstream and downstream, is an important aspect in exploration targeting.

Eight facies types have been recognised for the Middelvlei Reef, these are shown in the image below and are used to inform the evaluation domains.

6.3.3 Structure

The bulk of the Kloof mining right is situated in the Far West Rand Goldfield, but the more northerly portions of Kloof straddle the boundary with the West Rand Goldfield and can be viewed as being marginal to the West Rand area.

The structure of the West Rand area is dominated by the West Rand (or Witpoortjie) and Panvlakte Horst blocks, which are superimposed over a broad fold structure, associated with the southeast plunging West Rand Syncline. The northern limb of the syncline dips in a south-south-westerly direction and the southern limb in an east-south-easterly direction. Evidence of igneous activity consists of Karoo, Pilanesberg, Bushveld and Ventersdorp age dolerite dykes. These strike in a predominantly northerly direction, with a second set of Ventersdorp dykes striking in a north-easterly direction. Most faults are high-angle normal faults trending north-northwest and eastwards with throws of less than 70 m. Faulting generally decreases eastwards.

All the reefs noted above are affected by structures to a greater or lesser degree. Both faulting and dyke intrusion have disrupted the reefs, which can pose hazards to mining, and disrupt planned orebody extraction.

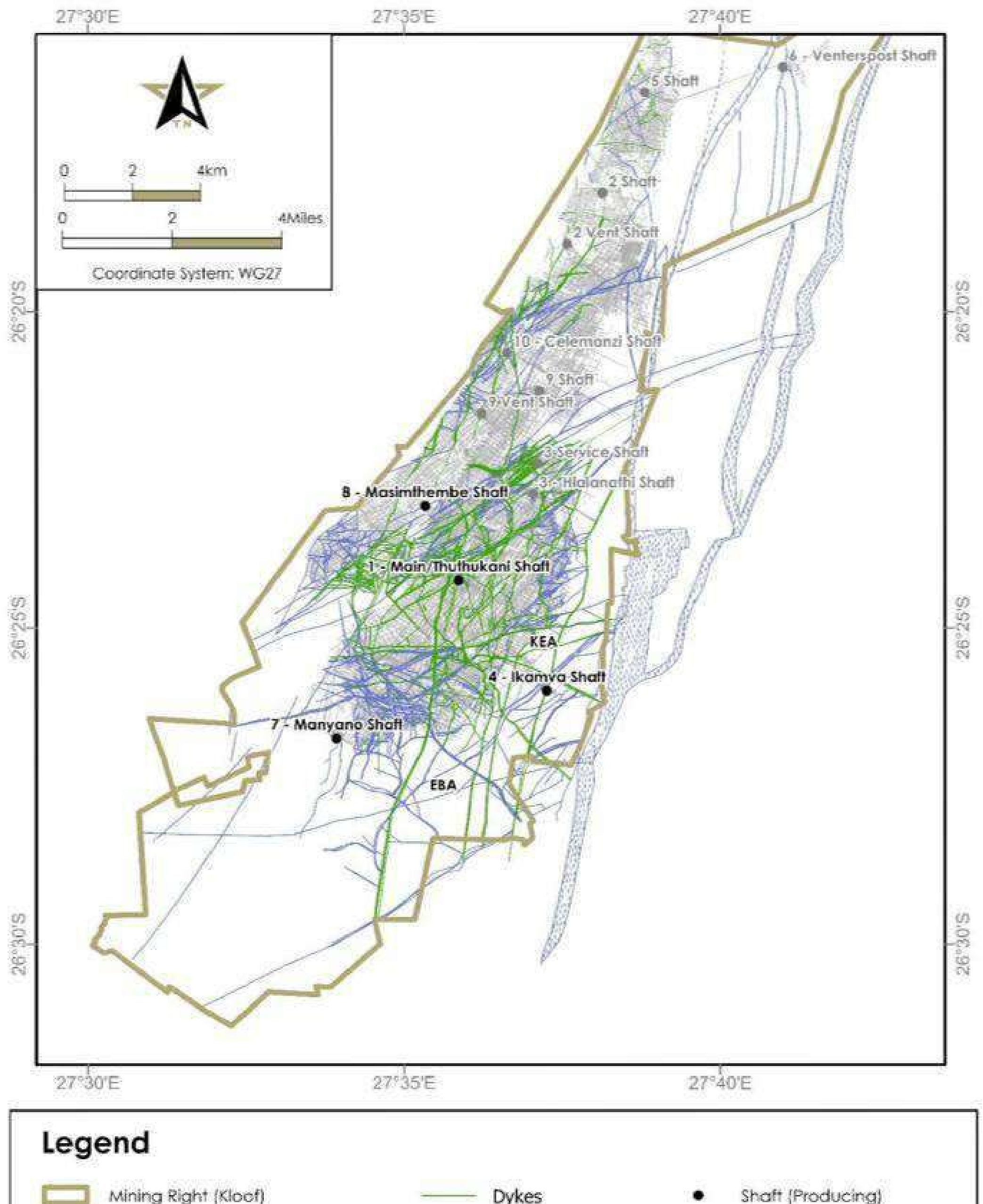
There are generally two structural trends at Kloof. The first set are normal west-east trending faults that dip to the north, with throws of up to 250 m. The second set are north-northeast striking normal faults with generally smaller displacements to the northwest. These faults can also show a certain degree of sinistral displacement, which makes following palaeo-trends difficult. One such fault is the 23-level fault on the MVR between Main and No. 8 Shaft. It is estimated that a left lateral shift along this fault could be as much as 400 m. The original faulting displacements are exacerbated by subsequent post-Bushveld displacement.

Kloof is bounded to the west by the Bank Fault and to the east by the West Rand Fault (Figure 11). In 2003, a three-dimensional (3D) seismic survey was undertaken over a portion of the southeastern lease area of the mine, which covers much of the below-infrastructure area, including the Eastern Boundary Area (EBA) and Kloof Extension Area (KEA) projects. The 3D seismic interpretation changed the interpretation of the West Rand Fault position, leading to gains of ground (an additional two mining levels) and indicated that the downthrow on the West Rand Fault decreases from 1.5 km in the north to 500 m in the southern part of the lease area. Also, the interpretation of the position of a number of major faults moved to the west.

Structure interpretations define differing blocks of the reef. Major changes are updated on a yearly basis or as and when required. The structure changes can result from underground investigations, new drilling or geophysics.

Plan view of the structure is given in Figure 11. Cross-section is shown in Figure 9.

Figure 11: Structure Map of Kloof



Underground Workings | Faults | Shaft (Non-Producing)

6.3.4 Mineralogy

The Witwatersrand gold deposits are of the "Quartz Pebble Conglomerate Au-U type". These are also referred to as "placer gold and uranium in ancient conglomerate", or "palaeo-placer gold and uranium" deposits (Frimmel, 2002).

The mineralised horizons, or reefs, are essentially oligomictic to polymictic, matrix- to pebble-supported conglomerates in which vein quartz pebbles predominate. The matrix, which essentially is quartzitic, accommodates the gold and uraninite largely as disseminated clastic particles.

In addition to gold and uranium, the reefs may also contain substantial amounts (generally 1 to 15%) of sulphide, mainly pyrite associated with pyrrhotite, chalcopyrite and arsenopyrite. Diamonds and monazite have been encountered in trace quantities (Frimmel, 2002).

The conglomerate layers, which may contain laterally extensive quartzite middlings, exhibit remarkable lateral continuity, and may display continuous strike lengths of hundreds of kilometres. However, the gold and uranium are not uniformly distributed within these reefs, and sedimentary facies with differing reef characteristics are present. Locally, varying mineral grades and reef thicknesses may reflect the channelised nature of the conglomerate.

The mode of the gold and uranium mineralisation has been widely debated since the initial discovery, (Frimmel, 1994, Frimmel, 1993), and has involved three major hypotheses, i.e.:

- Placer: The gold and associated minerals were deposited as detrital components within fluvial fans and braided stream systems, derived from a granite/greenstone hinterland provenance;
- Modified Placer: As for placer, but limited hydrothermal re-distribution of gold occurred during diagenesis and low-grade greenschist facies metamorphism; and

- Hydrothermal: Gold was introduced subsequent to the deposition of the conglomerates along geological discontinuities such as faults and dykes. These fluids are proposed to have differentially penetrated the coarse, clastic sediments, where the gold precipitated out of the solution.

The gold-bearing quarzitic and conglomerate bands of the Witwatersrand Supergroup are characterised by rounded pebbles set in a mineralogically complex matrix. The pebbles are predominantly vein quartz, but can include jasper, quartzite, shales and schist, and typically do not contain appreciable mineralisation. The compact matrix that cements the pebbles consists essentially of finer-grained clastic and secondary quartz, and fine-grained phyllosilicates (mainly mixtures of sericite and lesser chlorite, with minor amounts of muscovite, pyrophyllite and chloritoid). This matrix is also host to heavy, allogenic minerals consisting largely of pyrite with lesser amounts of zircon, rutile, chromite, uraninite, 'flyspeck kerogen', arsenopyrite, cobaltite, and rare PGMs. Authigenic minerals within the matrix include pyrite, pyrrhotite, chalcopyrite, uraniferous leucoxene, brannerite, rutile, galena, sphalerite, and gersdorffite (Janisch, 1986).

There are two main varieties of gold. One is (possibly) primary gold, occurring as rare inclusions in detrital grains of massive pyrite, or as detrital grains and nugget like particles in the matrix. The second is a younger generation, possibly the result of metamorphism and recrystallisation virtually in situ, which

seems to have replaced fine-grained matrix material. Fine, flaky, irregular or jagged particles predominate. Gold is distributed throughout the thickness of the reef but tends to concentrate where other heavy minerals and carbon are found (Janisch, 1986).

6.3.5 Dolomitc Ground and sinkhole formation

Overlying the Ventersdorp Lavas are the Black Reef quartzite and dolomite of the Transvaal Supergroup. The Black Reef quartzite comprises coarse to gritty quartzite with occasional economically exploitable conglomerate (reefs). The entire area was peneplained in post-Ventersdorp time and it was on this surface that the Transvaal Supergroup was deposited, some 2200 million years ago. The deposition commenced with the Kromdraai Member, with the Black Reef at its base. The Black Reef has eroded the Witwatersrand outcrop areas and as a result contains zones in which gold is present. The Black Reef is overlain by a dark, siliceous quartzite with occasional grits or small pebble bands. The quartzite grades is overlain by a dark, siliceous quartzite with occasional grits or small pebble bands. The quartzite grades into black carbonaceous shale. The shale then grades into the overlying dolomite through a transition zone of approximately 10 m thick.

Overlying the Kromdraai Member is the dolomite of the Malmani Subgroup of the Chuniespoort Group. The dolomite is approximately 1 500 m thick in the mine area.

The presence of the dolomite results in the formation of sinkholes due to disolition of dolomite under certain conditions.

The following factors or characteristics need to be present in a soil and rock profile in order to be favourable for sinkhole formation:

- Receptacles: in the form of fissures, voids or caves within bedrock or overburden which will receive mobilized materials
- Blanketing layer: which those geological materials which overlie the receptacles. The composition of the blanketing layer is important in contributing to the mobilising potential of these materials. For example, a sandy dolomite residuum will mobilize (erode) much more rapidly than a cemented ferricrete or a shale.
- Maximum agency trigger: is the most critical factor in initiating the formation of a sinkhole. Even if all the above mentioned factors are present sinkholes may often not develop without a mobilising agency or trigger being present. Mobilising agencies include concentrated ingress of water into the profile as a result of surface ponding, ground vibrations, water level changes (drawdown or recharge) or any actions which result in the mobilisation of materials of the blanketing layer into a receptacle.

On dewatering of a compartment, materials of the blanketing layer mobilize into a receptacle at depth. Observations have shown that this action eventually stabilizes and arching conditions develop in the profile. This meta-stable condition may be disturbed by the development of additional mobilising agencies such as concentrated ingress of surface water or earth tremors.

7 Exploration

There is no current exploration on this property. Any drilling, including surface drilling, is related to mine planning. There are no exploration results to report. The information below on surface holes is given to illustrate the type of data that was collected in the past.

7.1 Exploration Data

Extensive mining, surface diamond drilling, and 3D seismic surveys have aided in establishing the geological characteristics of the Reefs at the Driefontein Operations. Direct observations include underground channel sampling and geological stope mapping.

The property is an established mine, and the extent of the mineralisation is well-defined. Geophysical surveys and non-drilling exploration are not relevant to the property at this stage of development.

7.2 Geophysical Surveys

The original ground magnetic surveys that led to the discovery of gold in the area were conducted in the 1930's and are no longer relevant to the mining operations.

No geophysical surveys have been flown over the property recently.

No gravity surveys had been conducted over the property recently.

In 2003 a 3D seismic survey was undertaken over a portion of Kloof. A description and results are presented in Section 6.3.3.

7.3 Topographic Surveys

The topography in the lease areas is well mapped from historical surveys and any recent changes to the surface topography will not affect the geological interpretation or infrastructure. There have been no new surveys related to exploration recently.

7.4 Exploration and Mineral Resource Evaluation Drilling

7.4.1 Overview

The geological models and Mineral Resources at Kloof are based on surface and underground drillholes, as well as underground channel samples. Surface diamond drillholes were generally drilled on irregular grid intervals of 2,000m to 5,000m dependent on historical exploration strategy, depth of the mineralised horizons and geological uncertainty. Once underground access is available, infill development drilling is undertaken from access haulages and crosscuts to provide a 30m to 100m grid depending on geological requirements from structural, safety and evaluation perspectives.

In the case of capital funded surface and underground evaluation diamond drillholes (DDH), the core is halved using a diamond saw, with one half retained for records, and the other half assayed. For routine working cost underground DDH, the drill diameter is generally less than for surface drillholes and usually the entire core is sampled and assayed.

Sample sections are captured directly into the database, where the spatial validity is checked. Planned and unplanned task observations are some of the QA/QC procedures used to ensure sampling protocol is maintained. Final submission of each sample into the Sibanye Gold's Fusion database is only completed following a series of checks and approvals. Kloof relies on the Driefontein Operations assay laboratory.

Interpretation of Drilling and Material Results

There was no material impact on the Mineral Resources from recent exploration drilling, which was conducted to confirm the Life-of-Mine.

Kloof Mine Drillhole Inventory

The drillhole inventories are provided in Table 19 indicating the total number of reef intersections in the database and how many were added to be used in the Mineral Resource estimate as at end 2023.

Legacy data dating 1940s to 2008, which is not necessarily compliant with Sibanye-Stillwater protocols and procedures for drillhole management, is not considered substantially different from current drillholes. Refer to Section 5.2.1 and 7.4.3 for more information on historic exploration and drilling.

Table 19: Drillhole Inventories

Legacy	2022 Reef intersection	New Intersections	Total
4,946	916	89	5,948*

Three duplicates removed

7.4.2 Planned Drilling

Drilling planning is done on a yearly basis according to the needs of the LOM plan.

The overview of the planned drilling and budget for 2024 at the Kloof Operations is tabulated and compared with the actual drilling results of 2023 and 2022 (Table 20). Two types of underground exploration activities are pursued at Kloof. The first is reconnaissance of old areas, mapping of available reef intersections and sampling. The second method of exploration utilised at Kloof includes drilling, using diamond drill rigs and mini Rocor machines (electro-hydraulic), undertaken on an on-going basis in areas close to production.

Additional underground secondary reef exploration drillholes are planned for 2024 at Kloof Main Shaft and Kloof 8 Shaft. Costs include working cost for MiddelvleiReef, Libanon Reef and Kloof Reef. To support the exploration programme, reconnaissance at Main Shaft and No.8 Shaft, which has the purpose of mapping reef intersections in old crosscuts, will continue.

Table 20: Kloof Drilling Budget

Drilling (Working Cost & Capital All Reefs)	2024 Plan		2023 Actual		2022 Actual	
	Metres Planned	ZAR Million	Metres Drilled	ZAR Million	Metres Drilled	ZAR Million
No. 1 Shaft	4,690	6.20	5,976	6.30	5,659	6.66
No. 8 Shaft	8,050	11.00	4,800	8.10	3,532	4.10
No. 4 Shaft	0	0.00	2,168	6.00	3,151	7.10
No. 7 Shaft	3,360	5.78	1,656	4.60	372	0.54
Total	16,100	23.00	14,600	25.00	12,714	18.40

7.4.3 Drilling Methods

7.4.3.1 Surface

Surface drill holes are, at this stage, not currently being or planned to be drilled. The following is a brief description of the procedures in place historically at the time of drilling.

Historically surface drillholes were drilled in the area from the early 1900's to late 2000's, on a scattered grid of between 2,000m to 5,000m spacing. These holes reached depths of greater than 4km. A map of the historical surface boreholes for Kloof and surrounding properties recorded in the current database is shown in Figure 12. The database base may be incomplete due to the age of the data (>60years old) however the missing boreholes are in mined out or excluded areas and no longer material to the to the Mineral Resources at Kloof.

Diamond drill coring was the preferred method of drilling for Witwatersrand gold mines

Diamond drill coring was the preferred method of drilling for Witwatersrand gold mines.

The drilling pattern in a typical hole is shown in Figure 13 and Figure 14. It consisted of a motherhole, and long and short deflections to acquire a minimum of three to acceptable intersections per long deflections per reef. Horizontal distance between the mother hole and intersections could be in the order of 50-60m for a long deflection; short deflections deviations were generally 10-20cm between intersections.

Figure 12: Historical Surface Drillholes

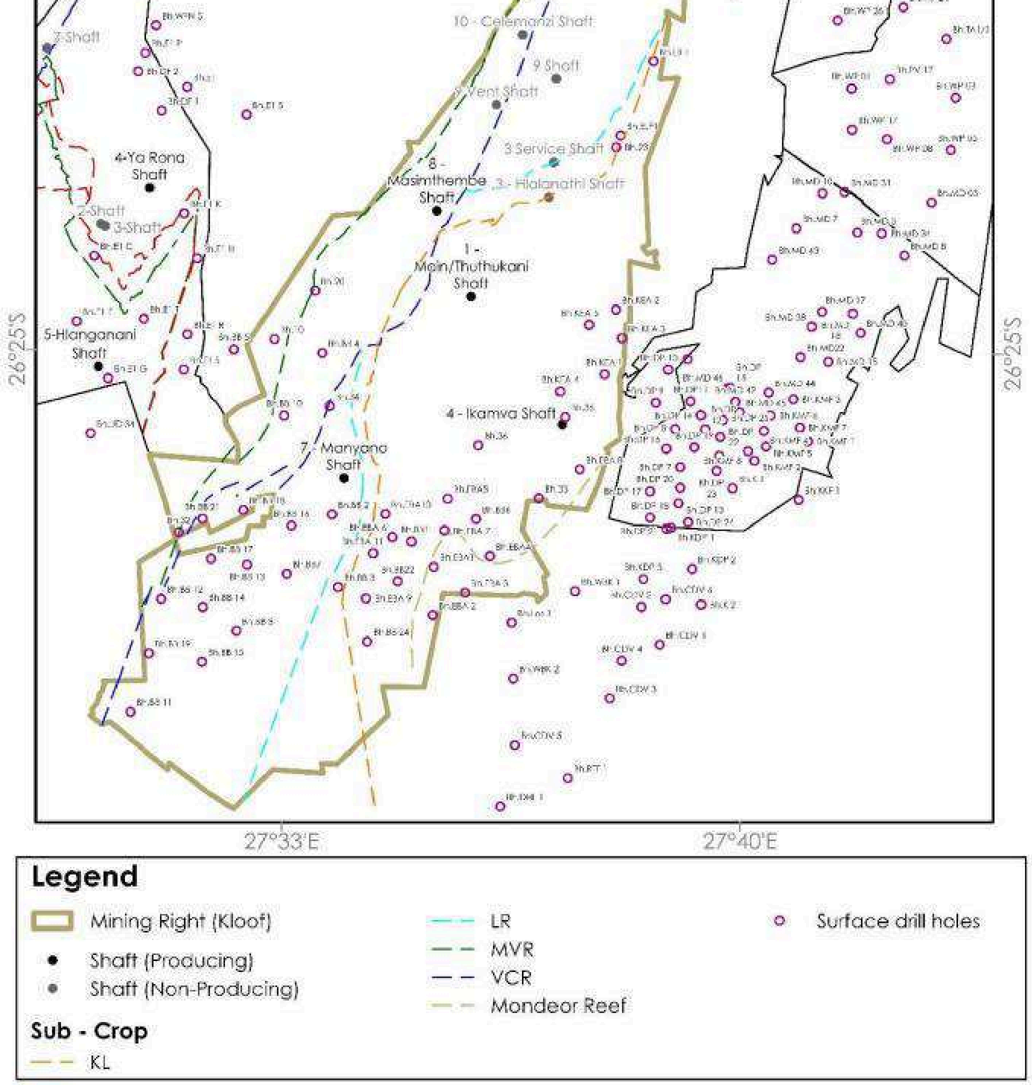

10 - Celemanzi Shaft
9 Shaft
9 Vent Shaft
3 Service Shaft
3 - Hlalanathi Shaft
8 - Masimthembe Shaft
1 - Main/Thuthukani Shaft
4-Ya Rona Shaft
2-Shaft
3-Shaft
5-Hlanganani Shaft
4 - Ikamva Shaft
7 - Manyano Shaft
26°25'S
26°25'S
27°33'E
27°40'E
Legend
Mining Right (Kloof)
Shaft (Producing)
Shaft (Non-Producing)
Sub - Crop
KL
LR
MVR
VCR
Mondeor Reef
Surface drill holes

Figure 13: Schematic Vertical Section of a Typical Surface Drillhole

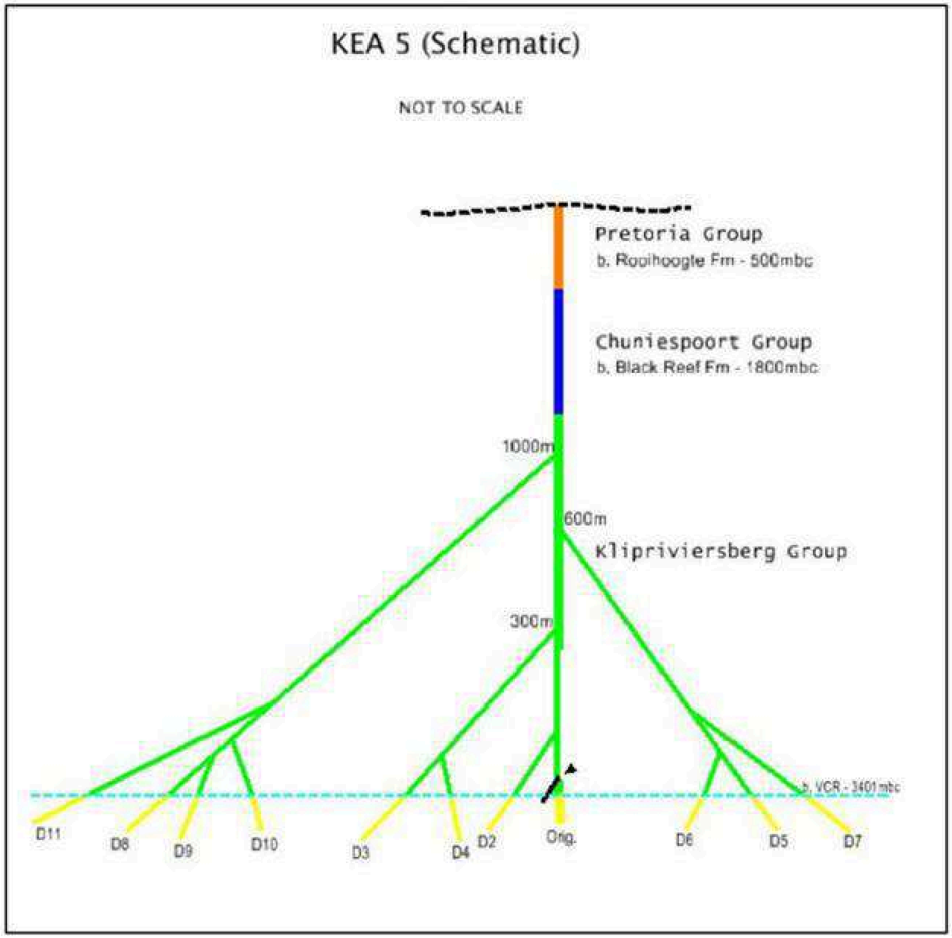
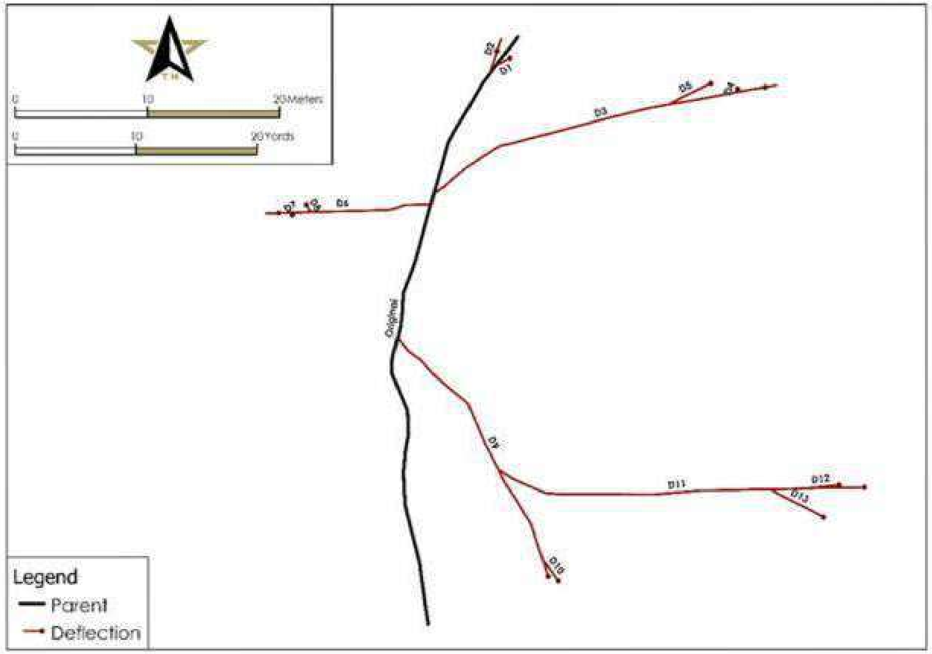


Figure 14: Plan View of a Typical Drillhole



7.4.3.2 Underground Drilling

The diameter of the underground drilling core is typically less than that of surface drilling cores (AXT or AQ vs. NQ/BQ). Four kinds of underground holes are defined by the operations with distinct reasons to drill:

- Cover drilling – generally flat or slightly inclined holes (~5°) ahead of development tunnels or advancing stopes into virgin ground.
- Short hole exploration – drilled typically to target reef intersections to a maximum length of 120 m for pneumatic-powered drilling and 250 m for hydraulic-powered drilling but may also be drilled to intercept faults and dykes. There is no fixed pattern but drillholes are typically spaced to obtain intercepts every 30 – 50 m.
- Long Inclined Boreholes (LIBs) – drilled to target reef far from current development, typically drilled from upper levels to areas below infrastructure. These can be as much as 3 000 m in length and will often have deflections to increase the number of reef intercepts from one drillhole.
- Mining holes (drain holes, holes for geophones, etc.).

7.4.3.3 Surface (Historical 1940's to 1960's)

The following is a brief description of the procedures in place at the time of drilling.

All drillhole core, whether from the surface or underground, is logged and sampled in the same (or very similar) way.

The core is obtained from the core barrel, once the driller has completed a drill run, or preferably on a daily basis and emptied into a suitably sized (core sizes AX, BX, H etc.) core tray.

This tray is transported to the core yard of the operation where the core is cleaned and marked with the depths of the run, the drillhole name and metre marks. Any losses are identified, and core loss amount noted. This mark-up is completed by the drill contractor.

The core is then transferred into a differing 'permanent' core tray so that the transporting tray can return to the drill site.

The geologist then observes the core and immediately checks for stratigraphic correctness.

The following is an extract from the Kloof Operations drillhole geological logging and sampling procedure which details the process

Drilling procedures

- Check that the core is clean, fits together and orientated correctly per core box.
- Core boxes are laid out from shallowest to deepest, with ends of core in each box clearly marked.
- Determine core loss (or gain) and note the position.
- Any sudden changes in lithology without faulting are noted and the core is checked to see if it fits together on either side.
- Any discrepancies identified above are discussed and resolved with the diamond drill foreman.
- Before logging in detail, determine the major stratigraphic units and form a general impression of the hole.
- Mark reef and major lithological contacts with a permanent marker.
- Logging is recorded on the logging sheet with all the required fields captured.

- Sedimentological description of reef as per standard.
- Bedding plane and fault dips are measured parallel to the core axis and recorded..
- Safety precautions.

Data Capture

- Logging and sampling are captured in DH Logger and uploaded into the Fusion database.
- Assays are imported into the Fusion database from comma separated values (CSV) files.
- All quality control analysis on logging and assays is carried out via standard routines in Fusion.
- Once authorised, reef composite data is loaded into Fusion where the evaluation department has access to utilise the data for Mineral Resources estimation. The reef composite may be a full channel or mining cut depending on reef thickness and mining constraints.

7.4.3.4 Underground Channel Sampling

Within underground workings, exposures of the reef have channel samples taken. Individual channels are chipped from the stope and development working faces using a hammer and chisel, and the sample chips are caught using steel pans. A detailed sampling record is kept showing the reef geometry at each section. Kloof's stope and development channel sampling interval standards are 5m and 3m, respectively. Channels are defined perpendicular to the reef plane and each section's position is fixed

by offsetting from survey pegs. The reef is segregated into lithological units and is correlated between sample sections, and individual samples of 10cm to 25cm in length are taken to reflect the internal geometry of the reef, with not less than a 10cm sample being taken on contact. The sample mass taken is in the order of 300g to 500g. Adjacent samples spanning the hanging wall or footwall contact may be taken.

Capture - Underground Sampling

The data is stored in two linked databases. The following capture process is followed.

Sample taken-data entered into MineRP.
Draws section-validated location and geology in MineRP.
Sampling data from MineRP is linked to Fusion database.
Assays received and imported into Fusion

QC checks are carried out in Fusion, fails go for re-assays and 2nd fails are rejected.
Acceptable assay data is linked to MineRP (MRM).
Final authorized assay and location data is sourced from the Fusion Database.

7.4.3.5 Quality Control in Drilling.

Quality control in drilling has been practised over many decades and was a standard feature of drilling procedures both historic and current. Table 21 shows the typical quality control measures adopted for drilling.

Table 21: Quality Control in Drilling

Risk / Mistake	Cause	Mitigation/Remedial Action
Mixed core	Dropped core tray	Ensure pieces lock & stratigraphy lithology is consistent
	Mixed on transfer box to box	
	Transfer core barrel to tray	
	Core tray to sample bag	
Ground core	Core left in the core barrel too long	Core loss should indicate how much ground away, stick up required
	Friable ground	Cement and redrill
Core loss	Ground core	May be redrilled
	Friable/void ground	Cement and redrill
Depth markings	Driller's rule / tape incorrect	Get correct length instrument & remark
	Incorrect from - to recorded	Regular reviews by the responsible person
	Differing core barrel lengths or incorrect lengths used	Increased supervision of drillers

The QPs are satisfied with the core logging, and reef delineation carried out at Kloof Operations. These activities are performed by trained Geologists who are supervised by experienced Geologists. The use of a common procedure for core logging, reef delineation and marking ensures consistent core logging and sampling at Kloof, which facilitates the integration of the datasets during interpretation.

7.5 Survey Data

Typically, the survey types for each drillhole are:

- Collar survey,
- Downhole survey.

Collar surveys for surface holes are usually carried out by a qualified land surveyor, either historically using trigonometric beacons and triangulation, or latterly by using a differential GPS System. Accuracy is within the 10cm range.

Collar surveys for underground holes are usually taken from the nearest survey underground peg and measured using tapes and a clinorule. Accuracy is of the order of 20cm.

Downhole survey methods have changed over the lifetime of the mine. Generally the most up to date methods were used. This has included acid bottle, photographic downhole, and electromagnetic surveys.

Underground Surveys

Historically, most short underground holes are assumed to be straight and therefore not surveyed. Currently all holes that intersect target horizons are surveyed.

The QPs are satisfied with the surveying methodology at the Kloof Operations. These activities are performed by trained surveyors who have sufficient experience with this type of orebody and mining method. The surveys are deemed to be of sufficient quality for use in Mineral Resource estimation.

7.6 Density Determination

7.6.1 Underground Drillholes

Historically, Kloof had a programme in place for the testing of the relative density of the main reef horizons with the values varying between 2.68 and 2.77t/m3 for the measured reefs. Density for Kloof Reef is still being monitored. The relative density used for Middelvlei Reef was 2.70 t/m3 with all other reefs and country rock 2.75t/m3 and this has been validated with reconciliations over an extended period of mining.

The original method is unknown but likely to have been some form of Archimedes principle, whereby sample weights measured in water and air are used to determine Density (Specific Gravity)

Underground channel samples are not routinely tested for density. The use of an average estimate for density determination is not consistent with industry practice, but historical tonnage reconciliation in the mined-out areas suggests that the density estimate used is accurate.

7.6.2 Surface drillholes

There are no surface drillholes for Kloof.

7.7 Underground Mapping

Underground mapping is discussed in Section 9.2.1.

7.8 Hydrological Drilling and Testwork

Section 17.4.7 contains additional information on hydrology. Hydrological testwork is not performed on any current drilling due to the maturity of the mine. Cover drilling serves several purposes including testing for fissure water. However there is no testwork associated with this drilling.

7.9 Geotechnical Data, Testing and Analysis

7.9.1 Surface Geotechnical

The gold mining lease areas on the Far West Rand are all situated on dolomitic ground which is susceptible to various forms of ground movement which can cause harm to people and damage to structures and infrastructure. There is thus a responsibility to be aware of this risk, to monitor it and where it has and could cause harm, to implement suitable remedies.

The Kloof Operations are affected by this hazard as well as staff housing on mine land and in the Merafong and Rand West Municipalities.

Dolomite is notorious for sinkholes. Almost all dolomite subsurface filled with caves and voids, making the ground to be vulnerable to collapse. Sinkholes, collapse of surface ground, often without warning, sometimes preceded by cracks or ground settlement. All (93%) sinkholes triggered by man's activities i.e., leaking water services, ponding water, mine dewatering. Thirty -eight (38) deaths since 1950's were reported which the most was at the neighbouring Driefontein Crusher Plant 1963 where 29 employees were fatally injured).

Sibanye-Stillwater has Ground Stability to monitor ground movement in the Kloof Operations and neigbouring mines. The South African Nationa Standards Authority has normative references for dealing with this risk and These standards require that organizations owning parcels of land underlain by dolomite implement a DRMS (dolomite risk management strategy).

The types of activities in the management programme include:

- Hazard assessment
    - The hazard probability of ground instability at each surface operation shall be assessed by the GSU on a regular basis and should be conducted before new operations are initiated.
    - All geotechnical information (reports, ground movement events, boreholes etc) shall be stored by the GSU. This information shall be and used to produce a dolomite hazard assessment.

- Investigations may be used to produce a more detailed assessment

- Risk Assessment and mitigation procedures
- Monitoring
  - Monthly, Quarterly Yealy as required

- Visual monitoring of ground movement, ponding of water and damage to structures
- Levelling - surveying
- Groundwater level monitoringponding

7.9.2 Underground Geotechnical

Refer to Section 13.3 for details on ongoing geotechnical analysis. Geotechnical test work and analysis is not performed on any current exploration drilling.

7.9.2.1 Data Collection

In the deep level gold mines, Rockmass rating systems are ineffective in describing the potential stability of excavations as the frequency of stress fractures dominates the typical rating systems. Accordingly, geotechnical core logging and other rock property testing is not a standard practice. General rockmass properties like Uniaxial Compressive Strength, Elastic Modulus and Poison's ratio are used as input into mine design and stress modelling. These properties have been determined historically and are described in the COP and updated on an ad hoc basis when new tests are done from time to time.

7.9.2.2 Testing Methods

International Society for Rock Mechanics and Rock Engineering (ISRM) testing methods are used to assess rock properties at accredited rock testing laboratories in South Africa. These are performed on an ad hoc basis. Typically, during a feasibility study, and/or where the rock engineer is unsure of specific rock strength or stress data for mine design purposes. Intact core samples are usually required for such tests and should be handled as per the ISRM sample collection and preparation methods. Kloof does not have an independent quality control program for rock testing. This is a function of the testing laboratory which carries out all testing according to ISRM standards.

As the rockmass is not homogeneous, several samples are usually submitted for testing, and these generate a range of values. The laboratory data is then downgraded (according to specific criteria) for underground in-situ representation for mine design purposes. The information is used to calibrate numerical models for the mine design. As the mine design is being executed, monitoring of the excavations is conducted and the data is used to provide a back analysis of the numerical models. Further optimisation can then be done based on the outcomes of these numerical models.

7.9.2.3 Geotechnical Rockmass Characterisation

Rock mass characterization from testwork is given in Table 22.

Table 22: Rock Mass Characterization

Ground control district	Reef type	Dip of orebody	Reef strength	Hanging wall Type	Hanging wall strength	Footwall type	Footwall strength	Shafts
GCD 1	Ventersdorp contact reef (VCR) Milky cobble terrace	+/- 25°	180MPa	Westonaria formation (WAF)	100MPa – 140Mpa	Elsburg Quartzite	220MPa	K M# K 4# K 7# K 8#
GCD 2	Ventersdorp contact reef (VCR) Sandy 1 facies	+/- 25°	180MPa	Alberton Lava	260MPa	Elsburg Quartzite	220MPa	K 4# K 7#
GCD 3	Ventersdorp contact reef (VCR) Apple green terrace	+/- 25°	180MPa	Westonaria formation (WAF)	100MPa – 140Mpa	Elsburg Quartzite	220MPa	K M# K 4# K 7# K 8#

GCD 4	Ventersdorp contact reef (VCR) Sandy 2 facies	+/- 25°	180MPa	Alberton Lava	260MPa	Elsburg Quartzite	220MPa	K 4# K 7#
GCD 5	Kloof reef	+/- 30°	220Mpa	Elsburg Quartzite	220MPa	Elsburg Quartzite	220MPa	K M# K 7# K 8#
GCD 6	Main reef	+/- 40°	200MPa	Elsburg Quartzite	220MPa	Elsburg Quartzite	220MPa	K M#

7.9.2.4 Geotechnical Results and Interpretation

Results and interpretations of the rock mass characteristics by ground control district are given in Table 23.

Table 23: Rockmass properties Kloof

Ground control district	Results	Interpretation
GCD 1	Hanging wall WAF: poorly laminated, week rock, Mylonite infilling between WAF and reef contact, problems encountered when undercutting mylonite. Reef competent. Channel widths <180cm Footwall competent.	Strata control problems, dense support system. Disaplined mining practices so as not to break into WAF Support requires energy absorption capabilities, support resistance and good areal coverage of the hanging wall. Seismic risk.
GCD 2	Hanging wall Quantize veins present, brittle, low cohesion, unstable blocks, problems encountered when undercutting. Strain bursting Reef competent, Channel widths <200cm, micro reef rolls on dip and strike Footwall competent	Strata control problems, dense support system. Disaplined mining practices, pre-conditioning Support requires energy absorption capabilities, support resistance and good areal coverage of the hanging wall. Challenges experienced when negotiating a reef roll to stay on reef and not expose hanging wall. Seismic risk.
GCD 3	Hanging wall WAF: poorly laminated, week rock, Mylonite infilling between WAF and reef contact, problems encountered when undercutting mylonite. Reef competent. Channel widths <150cm Footwall competent.	Strata control problems, dense support system. Disaplined mining practices so as not to break into WAF Support requires energy absorption capabilities, support resistance and good areal coverage of the hanging wall. Seismic risk.
GCD 4	Hanging wall Quantize veins present, brittle, low cohesion, unstable blocks, problems encountered when undercutting. Strain bursting Reef competent. Channel widths >180cm, micro reef rolls on dip and strike. Footwall competent	Strata control problems. dense support system. Disaplined mining practices, pre-conditioning Support requires energy absorption capabilities, support resistance and good areal coverage of the hanging wall. Challenges experienced when negotiating a reef roll to stay on reef and not expose hanging wall Seismic risk.
GCD 5	Hanging wall stable Reef competent, steep dipping 40° Footwall competent. Reef competent, channel widths >150cm. Footwall competent,	Mining steep dipping orebody challenges. Negotiating small displacements in the reef challenging due to the dip. Seismic risk low but can increase due to VCR abutments and when mine design is not followed.
GCD 6	Hanging wall stable Reef competent, channel widths >120cm. Footwall competent,	Ground becomes blocky when intersecting a geological discontinuity, increase support density and areal coverage, Seismic risk.

8 Sample Preparation, Analyses and Security

This Section addresses sampling related to geological samples only. For sampling related to plant operations please refer to Section 14.3, geotechnical sampling discussed in Sections 7.9 and 13.3. Hydrology and environmental studies monitoring and sampling is discussed in Section 17.4.

Geological samples consist of drill core from both surface and underground drillholes, face sampling. and mapping. Sibanye Gold operations mines maintain their own laboratory for assays and have used other laboratories in the past. Kloof Operations have set protocols for sampling, assaying and recording and storing results. Kloof has a full industry standard quality control programme to ensure the security of the samples and the accuracy of the results.

8.1 Sampling Governance and Quality Assurance

The governance system at the Kloof Operations relies on directive control measures and makes use of internal manuals (standard procedures) to govern and standardize data collection, validation and storage. The QPs are satisfied with the standard procedures, which prescribe methods aligned with industry norms. Furthermore, the standard procedures are mandatory instructions that prescribe acceptable methods and steps for executing various tasks relating to the ongoing gathering, validation, processing, approval and storage of geological data, which is utilised for Mineral Resource estimation. In addition to internal standard procedures, Sibanye-Stillwater implements an analytical quality control protocol that assesses the extent of contamination and analytical precision at the laboratory. Batches of samples sent to the laboratory include routine "blank" samples (Magaliesburg quartzite) and certified reference material (CRM) from accredited suppliers. The results of the analytical quality control are discussed in Section 8.5.2.

The governance system also emphasises training to achieve the level of competence required to perform specific functions in data gathering, validation and storage. Extensive on the job training of new geologists, who will eventually be responsible for logging and sampling, is performed. Lithological data is acquired through the logging of drill core recovered from underground drilling. The logging is undertaken by trained geologists, who are familiar with the various reefs, footwall and hanging wall stratigraphy and rock types. The core logging is also guided by existing drillhole information from previous core logging. Routine validations are undertaken by the experienced geologists at various stages in the data collection process flows, with the final data handover signed off by the QPs.

Another aspect of the governance system is the documentation of the geological data gathering process flow (i.e. data collection, processing and validation). The QPs acknowledge that this documentation facilitates the auditability of the process flow activities and outcomes as well as the measures undertaken to rectify anomalous or spurious data.

Historic surface core is stored in the core yard at Oberholzer, Carletonville. Storage facilities are fenced

Historic surface core is stored in the core yard at Oberholzer, Carletonville. Storage facilities are fenced off to prevent unauthorised entry and have limited access.

Sample Chain of Custody

Samples are counted at the workplace, labelled with unique barcodes and recorded in a field book. All the samples are securely bagged in carry bags before conveying to the surface sampling store where the number of samples is verified to ensure that no samples are lost or unaccounted for. A

Precious Metal Waybill book is completed, and samples are securely locked in a sealed container when in transit to the Driefontein assay laboratory. On delivery, the laboratory confirms the number of samples and sample security.

8.2 Sampling Surface

8.2.1 Reef Sampling – Surface

There is currently no surface drilling or surface drillhole sampling.

8.2.2 Surface Waste Rock Dumps

In general, Kloof Operations employs a statistically based strategy for sampling surface material on mine-waste dumps. Sampling of surface material is used in screening and/or for prioritising historic dumps. This sampling strategy entails the collection of a representative composite sample from individual dumps and allows for regional assessments. One 30-increment dump-composite sample is collected from the top and sides of the rock dumps, along the rail lines at approximately 50m -100m intervals using an excavator. The samples are approximately $10m^3$ for tops of the dumps and $1m^3$ for the sides of the dumps. The increments are combined into one composite sample, for testing. The results are indicative of some gold content. These are not part of the Mineral Resource or Mineral Reserves but form part of the ongoing cleanup and rehabilitation of the surface footprint.

8.3 Reef Sampling – Underground

8.3.1 Core Samples

All known economic horizons (reefs) are completely sampled, other mineralised sections can be

All known economic horizons (reefs) are completely sampled; other mineralised sections can be selectively sampled. Samples include bottom and top contacts together with 2cm of footwall and minimum of 2cm of hanging wall. In addition, at least one sample of unmineralised footwall and hanging wall is included. Samples are broken into individual pieces no less than 25cm to ensure enough material is available for analysis. The entire core sample is submitted to the analytical laboratory and no core splitting is performed. However, for capital project drilling, the core may be split for sampling and half core retained for reference.

The samples are assigned unique sample identification numbers and tags before geologists transport them to the laboratory. In addition, the samples for each drillhole and the associated quality control samples (CRM and blanks) are submitted to the laboratory on the same day that the sampling takes place. The geologists prepare sample submission sheets that accompany the samples. Records of the sample data are captured in the Fusion database.

8.3.2 Channel Sampling

Procedures are described in Section 7.4.3.4.

8.4 Sample Preparation and Analysis

8.4.1 Laboratory

Samples from Kloof are analysed at the Sibanye Gold Limited owned and operated Driefontein Operations laboratory. The analytical laboratory is a secure facility situated in the neighbouring Driefontein Operations, which is fenced off to prevent unauthorised entry by the public and where access is restricted to authorised personnel of Sibanye Gold Limited.

The laboratory has facilities for sample preparation, chemical analysis (via fire assay and instrumental techniques) and is equipped with Laboratory Information Management System (LIMS) software, which facilitates effective and efficient management of samples and associated data. It handles geological drilling and grade control samples as well as samples from plant.

The quality control procedures for assays include:

- regular internal audits of the laboratory
- round robin bench marking
- submission of blanks and standards to the laboratory

The laboratory is certified by the South African National Accreditation System (SANAS) with accreditation number T0379. External audits are conducted every two years as part of the accreditation process, and internally on a quarterly basis. There were four internal audits and one external audit conducted at the Driefontein Assay Laboratory during 2023.

The last SANAS audit was conducted in April 2023. The round robin z-score result for proficiency testing was well within the acceptable limits. There were no material findings from the audits.

8.4.2 Sample Preparation and Analysis

Samples are dried, crushed, and pulverised, and analysed using fire assay techniques. Initial crushing is done to 2mm partial size using a Terminator crusher. The samples are split into two sub-samples by putting it through a 16-hole riffle splitter. One sub-sample (whole sample for chip) is pulverised in a vertical spindle pulveriser to 80% <150µm. One sub-sample is kept for density measurements (pycnometer density on pulp) and possible repeat assay should the batches' blank fail QA/QC. Blank quartzite is used to flush between samples at the crush and pulveriser. The pulveriser is compressed air cleaned between samples. The riffle splitter is compressed air cleaned between samples. Potassium nitrate is used to oxidise sulphides to sulphates in drillhole samples, however for chip samples sodium carbonate is added as oxidising and desulphurising agent.

The fire assay method employed for sample analysis comprises two consecutive pyrochemical separations. The pulverised product (25g sample aliquot) is fused with 100g of pre-mixed assay flux under reducing conditions, which promotes the separation of the precious metals from the gangue, with simultaneous collection as a lead alloy.

The lead is subsequently removed by oxidising fusion (cupellations) and the precious metals are then weighed on scales that are calibrated at the start of every shift. Bullion correction, aimed at correcting fire assay gold values for silver content, is also carried out periodically.

After weighing, the samples are blended with a flux and fused in electric furnaces, and the process described is a fire assay with a gravimetric finish.

Laboratory reporting of underground sampling results was not split into separate gold and silver assays. A combined grade was reported. For chip samples, a "bullion" factor is then generated by the laboratory and released on a periodic basis to the operations to account for the silver content in the analyses.

The laboratory has in place quality assurance and control procedures for the analysis and handling of the samples. An overall high level of cleanliness is maintained to minimise contamination. Furthermore, the laboratory also included standards and blanks in each sample batch and any anomaly identified in the quality control samples is addressed as required.

The QC procedures include regular audits, round robin bench marking, as well as the submission of blanks and standards to the laboratory. In addition to external audits, the Sibanye-Stillwater Mine Technical Services Management (MTS) Department conducts regular audits of the laboratory.

8.4.3 QP Opinion

The QPs are satisfied with the sample preparation, analytical methods, accuracy and precision and the level of cleanliness at the analytical laboratory. The analytical methods employed are suited to the mineralisation style and grades. Accordingly, the analytical data from the laboratory is a suitable input for grade estimation. Security methods employed are appropriate to the level of risk to the samples.

Note on historical assays: Fire assay is a well-established procedure and has been used in South African mines for many decades. The procedure has not changed in ways that significantly affect the accuracy and comparability over the life of the mine.

8.5 Analytical Quality Control

8.5.1 Nature and Extent of the Quality Control Procedures

Kloof Operations implement an analytical quality control protocol requiring ongoing monitoring of the laboratory performance.

No formal laboratory independent quality control programme or analysis exists for the historical drillhole data set. Similarly, no rejection of reef composites in the estimation process has been made based on the results of the assay quality control analyses. During the various earlier drilling campaigns, the samples have been consigned to external laboratories where their internal controls were accepted to be adequate. In 2005, more stringent checks were introduced and only from 2009 onwards, has a laboratory independent quality control programme been actively managed.

The reliability of the channel sample assays is considered in terms of (i) the laboratory's own internal controls and (ii) the external controls introduced in 2013 to assess the assurances that the assays meet an acceptable standard. Formal statistical analyses have been conducted in the past to validate the consistency of the assays results between the historical assays and the more recent ones. If there were any outliers found they were flagged in the database or removed.

8.5.2 Quality Control Results

Analytical results for the blanks and standards are analysed graphically on control charts to facilitate the identification of anomalous data points (Figure 15 and Figure 16).

Where the standard result is reported outside three standard deviations of the certificate value – an investigation is requested from the laboratory. The blank material utilised at Kloof Operations has no certified value, and the blank sample data is analysed visually on plots to identify anomalous values that may suggest contamination or sample swapping. Blank samples are accepted to 0.12 g/t Au after which investigation and re-assay is requested.

Figure 15 and Figure 16 show the blanks analysed for all the Sibanye Gold Limited operations during 2023. Table 24 is a subset of this data pertaining only to Kloof.

Figure 15: Example of CRM Result Monitoring

Figure 16: Example of Blank Result Monitoring

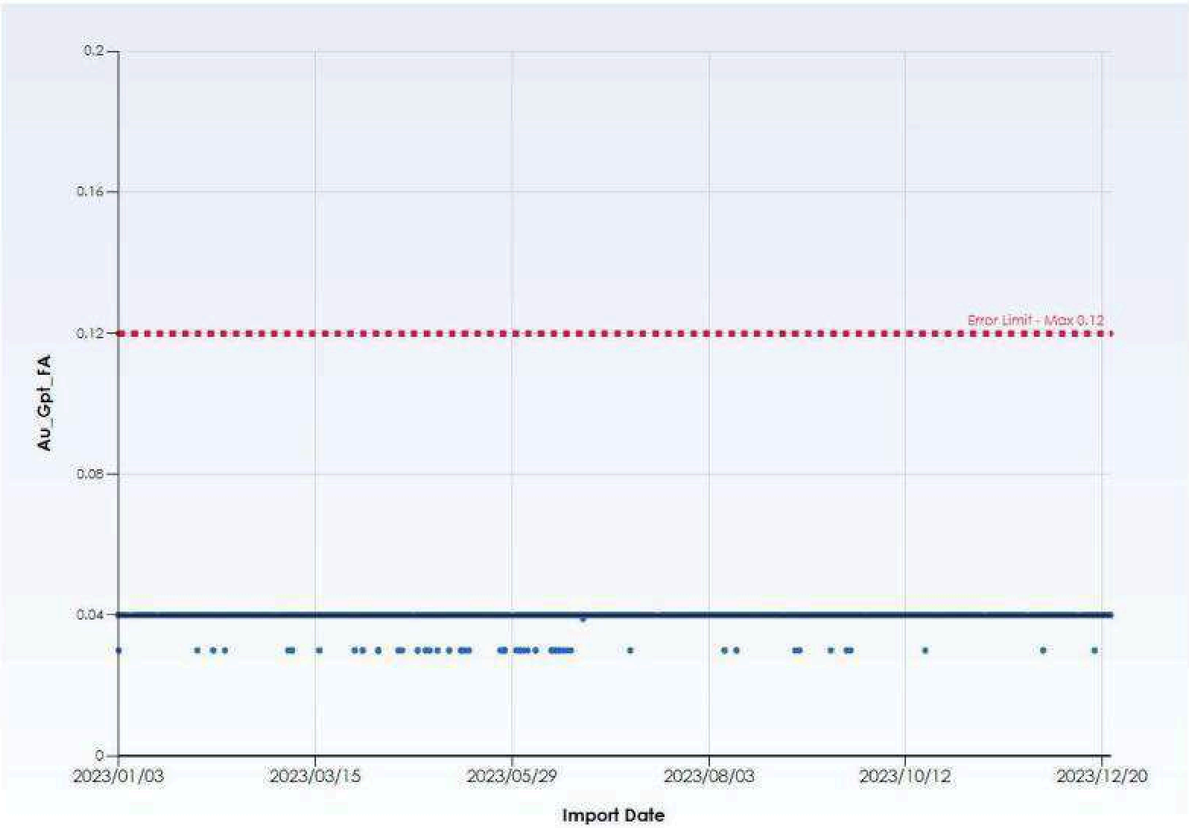


Table 24: Kloof Chip Samples Quality Control Sample Results 2023

Sample Type	Passed	Failed
Blank	1236	0
AMIS0244	4	0
AMIS0302	31	2
AMIS0430	1	0
AMIS0460	43	2
AMIS0705	63	4
AMIS0721	93	10
AMIS0779	20	0
AMIS0782	49	1
AMIS0785	37	0
AMIS0866	53	6
Total	**1630**	**25**

8.5.3 QP Opinion

Based on the foregoing, the QP concludes that the laboratory's analytical data shows overall acceptable precision and accuracy, and there is no evidence of overwhelming contamination by the laboratory that would affect the integrity of the data. As a result, the analytical data from the in-house laboratory is of acceptable integrity and can be relied upon for Mineral Resource estimation.

9 Data Verification

This Section contains information about data verification of geological data for Mineral Resource estimation. For Information on data sources and validation for Mineral Reserve modifying factors or other types of data please see the relevant sections. For Mineral Reserves, see Section 12, for geotechnical data see Section 7.9 for hydrology, see Section 17.4.

9.1 Data Storage and Database Management

All the channel sampling and drillhole data (i.e. collar and downhole survey, lithological, geotechnical, structural, analytical, and mineralisation data) is stored in the Fusion database, which is a Datamine product designed to standardise information gathering during drilling. The drillhole data is imported electronically from DHLogger into the database. Library tables, key fields and codes are the validation tools available in the Fusion database utilised for ensuring correct entries. The Fusion database is stored on a central IT server, where it is backed up and has rigorous controls (e.g. password protection and access restrictions) to ensure security and integrity of the data.

The QPs are satisfied with data storage and validation as well as database management practices, which are all aligned with industry practices. There are sufficient provisions to ensure the security and integrity of the data stored in the Fusion database.

9.2 Database Verification

Internally generated channel samples, surface diamond drilling and mapping data is the primary data utilised for geological interpretation and Mineral Resource estimation. This data has been generated over a long period of time and is stored in an electronic database. The imports into the database and validations are performed by experienced personnel. All data has been through multiple rounds of verification by the operators of the mine at the time. Due to the large volume of information collected, it is not possible for the QPs to directly validate all information. Kloof has quality control systems in place to ensure the integrity of the data and identify deficiencies. The QPs rely on these systems to identify and remove any material errors in the data before authorizing the data for use in Mineral Resource and Reserve estimations or other decision-making tools. Any errors remaining are not material to the outcome of the Mineral Resource estimation results.

Limitations are considered to be confined to the historical data, which may not have been subjected to the current standards. They are considered acceptable because they were collected using industry standard practices in place at the time and they have been validated from continuous mining over several decades.

9.2.1 Mapping

Underground mapping is undertaken on a routine basis and covers all major development tunnels as well as those that have intersected the reef or are designed to expose the reef.

This mapping is plotted at 1:200 scale on a mapping report and later digitised onto Microstation.

The principal objectives of underground mapping are to:

- identify and record the positions of faults, dykes and any other disturbances in a working place, so that projections can be made ahead of the face and/or up to reef plane
- record the thickness and nature of the reef so that sedimentological trends can be delineated and later reconciled with sampling data
- record and bring to the attention of the Mining Department any areas where reef remains in the hanging or footwall of the stope and/or new geological structures identified

Mapping is carried out continuously, using a set of documented procedures, and plans updated as data is collected. Mapping is validated by Planned Task Observations.

9.2.2 Drillholes

The validation of drillhole data is a continuous process completed at various stages during data collection, before and after import into the Fusion database and during geological interpretation and Mineral Resource estimation. Routine validations are undertaken by the experienced geologists at various stages in the data collection process flows, with the final data handover signed off by the QPs. The validated data is used for Mineral Resource estimation.

The logging is guided by a standard procedure, which standardizes data gathering, and the type of detail required for each drillhole log, and any deviations or anomalous entries are flagged by the inbuilt validations tools available in the Fusion database.

Geologists validate the survey data by comparing it against planned coordinates and through visual checks in the Datamine environment.

9.2.3 Channel Sampling

The validation of face samples is a continuous process completed at various stages during data collection. Unique barcoded sample numbers are generated and printed prior to going underground. Samples are captured into the MineRP database with controls in place, which includes drawing of sections and validation of location and geology by experienced fulltime employees.

Plots using the final authorized assays and location data, along with the workings, are printed to ensure that the spatial distribution is correct.

Planned Task Observations are conducted quarterly to ensure sampling procedures are followed correctly.

9.3 QP Opinion

The QPs acknowledge the rigorous validation of the extensive database utilised for Mineral Resource estimation at the Kloof Operations. The data was validated continuously at critical points during collection, in the Fusion database, during geological interpretation and Mineral Resource estimation. For the recent data, the QPs either participated in or supervised the validations which were performed by suitably trained personnel and approved the use of the validated and signed-off data for Mineral Resource estimation. There are no limitations placed on the QP when conducting the data verification. Similar practices were in place with the previous owners for the collection of historical data. The QPs have assessed the historical data and concluded that it is suitable for Mineral Resource estimation. In general, the data validations are consistent with industry practice and the quantity and type of data are appropriate for the nature and style of the mineralisation and the evaluations reported in this TRS. The data is of acceptable integrity and can be relied upon for Mineral Resource estimation.

10 Mineral Processing and Metallurgical Testing

10.1 Nature and Extent of Mineral Processing

The plant is well established and no changes are planned. There has not been any recent testing completed for the purposes of process design and metallurgical amenability assessment as these are unnecessary for operating plants. Regular metallurgical test work is conducted as part of normal operating procedures. The type of ore material is consistent with historical processing, and any metallurgical testing conducted is to support short-term operational issues. The plant recovery factors are benchmarked to actual recoveries achieved by the plant.

A study focusing on the VCR, which involved diagnostic leaching analyses was conducted at an independent laboratory in 2021. In that analyses the gold head grade of VCR sample used was 4.997g/t. Of the gold contained in the sample, 98.69% was recoverable via carbon-in-leach processing, with about 0.61% of the gold associated with preg-robbing material. The majority of the remaining gold (98.1%) was associated with cyanide soluble minerals.

10.2 Representative Nature of Test Samples

The type of material is consistent with historical processing, and routine metallurgical testing is conducted to support short term operational issues.

For mineral processing, refer to Section 14 and for ongoing sampling in the plants, refer to Section 14.1.2.

10.3 Laboratories

Metallurgical samples from Kloof Operations are analysed at the Sibanye-Stillwater owned and

Metallurgical samples from Kloof Operations are analysed at the Sibanye-Stillwater owned and operated Driefontein Operations laboratory details are given in refer to Section 8.4.1. Analytical methods are the same as for the geological samples (Section 8.4).

10.4 Results, Recovery Estimates and Deleterious Elements

The plant recovery factor is supported by the plant design and extensive operational experience and knowledge by Sibanye-Stillwater with similar plants.

Based on the continuing testwork, there are no known deleterious elements or other processing factors that have an impact on the economic extraction of the minerals.

10.5 QP Opinion on Adequacy of Data for the TRS

The QP considers that the sampling and analytical procedures used in the analysis are conventional industry practice, and that the data can be considered adequate for the purpose for which it is used in this TRS. There are no known processing factors that have a negative impact on the recovery that have not been planned for in the in the plant design and operating procedures.

11 Mineral Resource Estimates

The following describes the evaluation of the Mineral Resources of Kloof, including the key assumptions, parameters, and methods used to estimate the Mineral Resources.

All of the Mineral Resources are derived from underground sources.

The interpolation methodology is a combination of Ordinary Kriging (OK) for the block sizes of 10m x 10m and 25m x 25m; and Simple Kriging (SK) for the block sizes of 100m x 100m. All estimations of gold accumulation (cm.g/t), CW (geological thickness), Au (g/t) and SW (stoping width - minimum mining cut) are conducted in 2D space.

The Mineral Resource is classified with varying levels of confidence ranging from Measured, high confidence, in current mining and sampling areas to Inferred, lower confidence, in areas further away from current workings. The classification is based on the robustness of the various data sources available, confidence of the geological interpretation, variography and various estimation parameters (e.g., distance to data, number of data, maximum search radii etc.)

As a point of reference, Mineral Resources are classified and reported at an appropriate in-situ economic cut-off grade, with content (troy oz), tonnages (metric tonnes) and grades (g/t) based on the planned minimum mining width (stoping width). A constant density is used per reef. They may also include estimates of any material below the cut-off grade required to be mined and are quoted as at 31 December 2023.

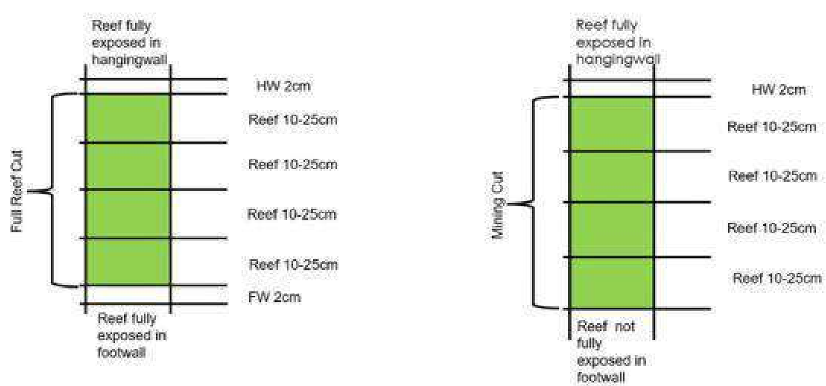
11.1 Estimation Domains

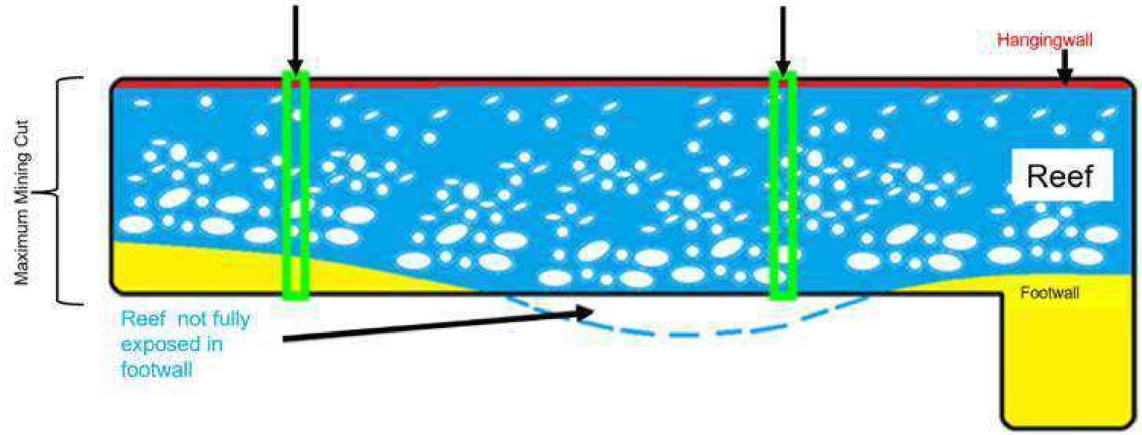
11.1.1 Compositing

The drillhole data and chip samples were composited on full reef, or mining cut, depending on the thickness of the mineralisation.

For most of the reefs, there is little opportunity for vertical selectivity, as the conglomerate units are typically thinner than the minimum mining width as shown in Figure 17.

Figure 17: Schematic Cross-Sectional Drawing of Reef Thickness to Mining Cut





11.1.1.1 VCR

Full reef width (or mining cut width) composites are created from drillholes and chip sample sections. The composites include conglomerate bands and/or internal waste units. In isolated places the conglomerate units are significantly thicker (up to 400cm) than the maximum mining widths. A geotechnical engineering approved mining cut (usually 250cm) would be from the hanging wall contact downwards. The metal accumulation is calculated by multiplying the grade (in grams per tonne) by the reef (or mining cut) width in centimetres, resulting in a centimetre gram per tonne (cm.g/t) variable.

11.1.1.2 Kloof Reef

Full reef width composites are created from drillholes and chip sample sections. The composites include conglomerate bands and/or internal waste units. The metal accumulation is calculated by multiplying the grade (in grams per tonne) by the reef (or mining cut) width in centimetres, resulting in a centimetre gram per tonne (cm g/t) variable. The KRS1 conglomeratic band is the targeted unit for Kloof Reef.

11.1.1.3 Libanon Reef

Full reef width composites are created from drillholes and chip sample sections. The composites include conglomerate bands and/or internal waste units. The metal accumulation is calculated by multiplying the grade (in grams per tonne) by the reef (or mining cut) width in centimetres, resulting in a centimetre gram per tonne (cm g/t) variable.

11.1.1.4 Middelvlei Reef

Full reef width composites are created from drillholes and chip sample sections. The composites include conglomerate bands and/or internal waste units. The metal accumulation is calculated by multiplying the grade (in grams per tonne) by the reef (or mining cut) width in centimetres, resulting in a centimetre gram per tonne (cm g/t) variable. The bottom most unit is the targeted unit for Middelvlei Reef.

11.1.2 Estimation Domains

Geological interpretations based on structural, grade and sedimentological data are used to construct the estimation domains. Estimation domains are numbered per area as per Figure 18 to Figure 21. Estimation domains may be further subdivided or combined to ensure homogeneity and are used as hard boundaries in the estimation. The number of data points for each reef is listed in Table 25.

Table 25: Number of Datapoints Used for Mineral Resources Estimation

Reef	No. Samples
Total VCR	749,768
Total Kloof Reef	67,285
Total Libanon Reef	8,499
Total Middelvlei Reef	373,265

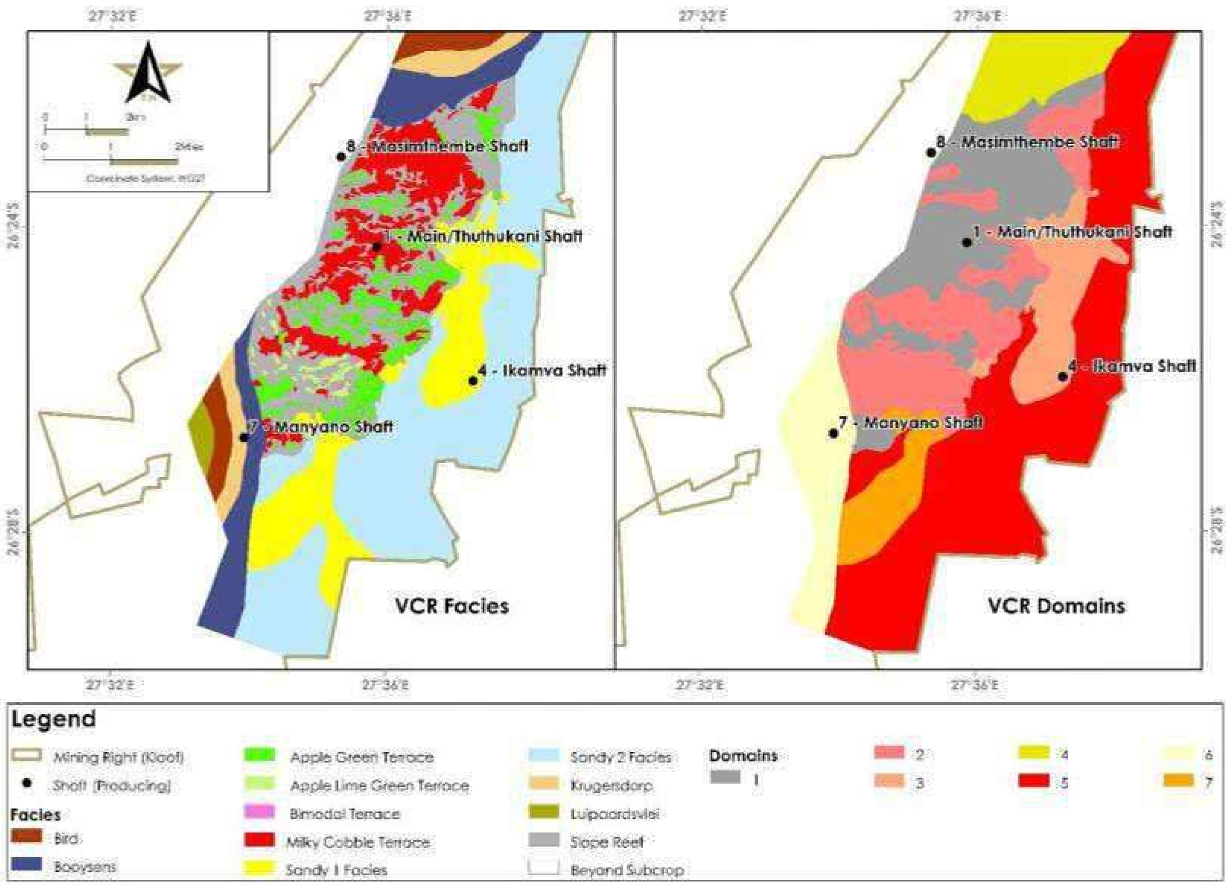
11.1.2.1 VCR Facies and Domains

The VCR estimation domain boundaries are hard (constrained) boundaries, where only data from within the domain is used to estimate blocks within the domain as seen in Figure 18.

The facies classification is based on a terrace-and-slope model. The terraces and slopes represent paleo-depositional environments, where the terraces are relatively flat valley floor planes, where thicker conglomerates are developed, whereas the slopes are angled planes (at the time of deposition) where thinner conglomerates are typically preserved. The individual terraces were formed under a degradational fluvial environment with progressive decrease in elevation of the terraces corresponding to successively younger fluvial deposits.

In some cases, a further subdivided or combined of the facies can be done to ensure homogeneity within the estimation domains.

Figure 18: VCR Facies and Domains



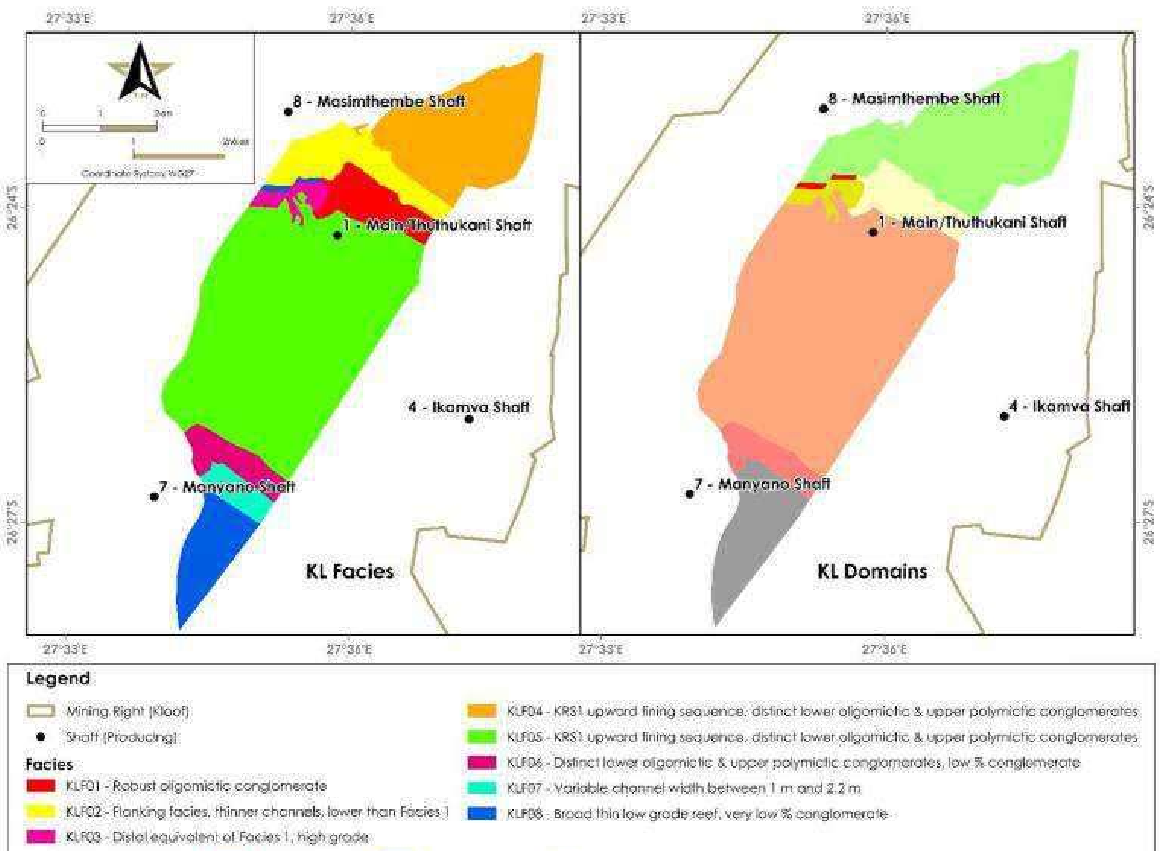
11.1.2.2 Kloof Reef Facies and Domains

The Kloof Reef estimation domain boundaries are hard (constrained) boundaries, where only data from within the domain is used to estimate blocks within the domain as seen in Figure 19.

The facies classification is based on a combination of the sedimentological characteristics of the reef (such as conglomerate or quartzite proportions, pebble sizes and packing, matrix composition, footwall units, vertical fining or coarsening of the pebbles etc.), the reef thickness (also referred to as channel width), grade characteristics, and major structural displacements (Section 6).

In some cases, a further subdivided or combined of the facies can be done to ensure homogeneity within the estimation domains.

Figure 19: Kloof Reef Facies and Domains



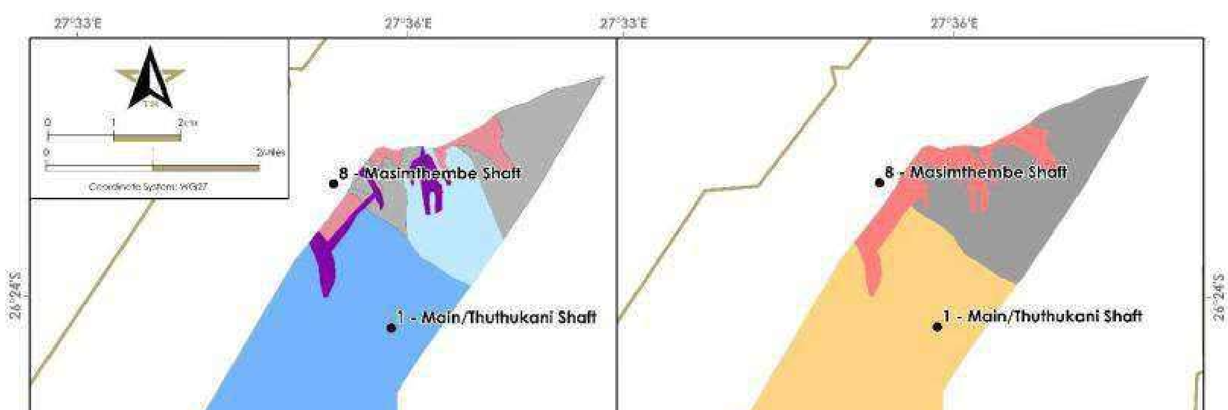
11.1.2.3 Libanon Reef Facies and Domains

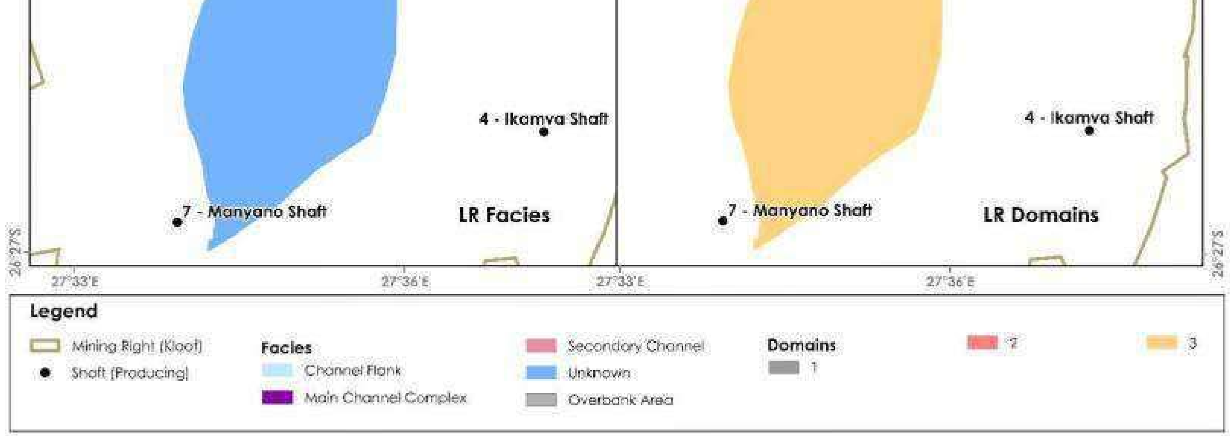
The Libanon Reef estimation domain boundaries are hard (constrained) boundaries, where only data from within the domain is used to estimate blocks within the domain as seen in Figure 20.

The facies classification is based on a combination of the sedimentological characteristics of the reef (such as conglomerate or quartzite proportions, pebble sizes and packing, matrix composition, footwall units, vertical fining or coarsening of the pebbles etc.), the reef thickness (also referred to as channel width), grade characteristics, and major structural displacements (Section 6).

In some cases, a further subdivided or combined of the facies can be done to ensure homogeneity within the estimation domains.

Figure 20: Libanon Reef Facies and Domains





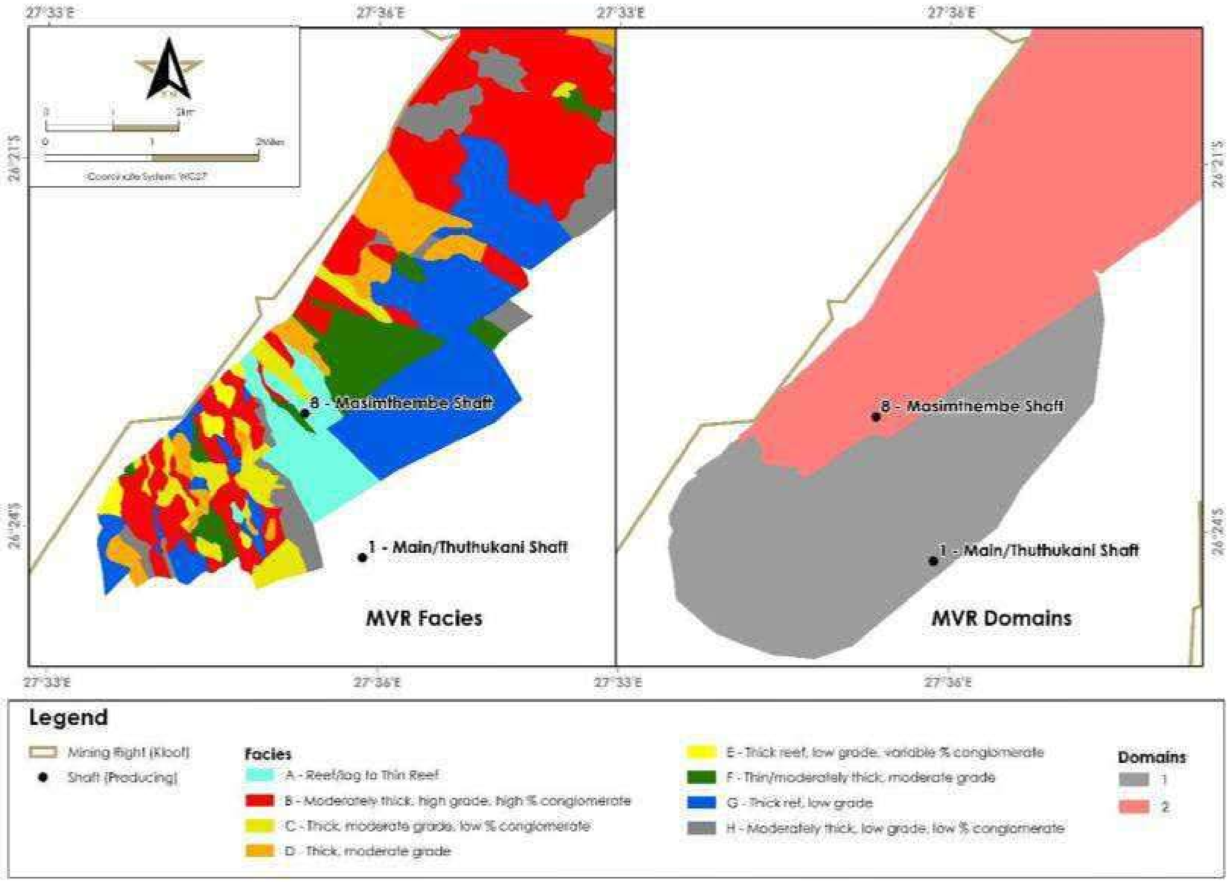
11.1.2.4 Middelvlei Reef Facies and Domains

The Middelvlei Reef estimation domain boundaries are hard (constrained) boundaries, where only data from within the domain is used to estimate blocks within the domain as seen in Figure 21.

The facies classification is based on a combination of the sedimentological characteristics of the reef (such as conglomerate or quartzite proportions, pebble sizes and packing, matrix composition, footwall units, vertical fining or coarsening of the pebbles etc.), the reef thickness (also referred to as channel width), grade characteristics, and major structural displacements (Section 6).

In some cases, a further subdivided or combined of the facies can be done to ensure homogeneity within the estimation domains.

Figure 21: Middelvlei Reef Facies and Domains



11.1.2.5 Geological Modelling and Interpretation

The geological modelling approach is mostly standardised, with the geological interpretations for each reef based on the grade, sedimentology, structural information, and interpretation. For each reef a wireframe surface is generated in 3D, on a reliable marker location (commonly bottom or middle) of the mineralised conglomerate. The wireframe represents the plane of the mineralisation which is usually roughly planar but is affected by folding and faulting. Most of the geological and Mineral Resource modelling is undertaken in two dimensions, projected onto the horizontal plane. The wireframes allow for the modelling of the volumes of the reefs, considering the local dip of the reefs, with the area derived from the reporting polygons. The wireframes are terminated on known or interpreted fault displacements, and the interpreted area of fault loss is excluded from the wireframe surface. These losses (or gains) are also modelled as 2D strings, which are designed to bound each intact reef block. The structural interpretations are based on drilling and underground mapping.

The area in the Mineral Resource blocks is corrected for dip and discounted for fault losses based on the structural interpretation.

11.2 Estimation Techniques

11.2.1 Grade and Tonnage Estimation

11.2.1.1 Statistics and Capping

The primary software used is Datamine Studio RM for estimation and Snowden Supervisor for statistics and variogram fitting.

Based on the structural and geological facies, the Mineral Resource footprint was divided into various geostatistical domains. The constraints of the geological facies differ between reefs. Detailed exploratory data analysis included sample verification, histogram, cumulative frequency plots, outlier checks, mean vs. covariance and trend analysis.

Each domain took cognisance of point data which was regularised using the centre of gravity on a panel size of 5m x 5m, 25m x 25m and 50m x 50m.

After classical statistical analysis, it was determined that capping was necessary on all declustered and original point datasets. Capping was applied at 96% for the point data and the 5m x 5m data, for the 25m x 25m data capping of 98% was used and for the 50m x 50m data 99% capping values were used for cm.g/t and Au. The CW(thickness)and SW(stoping width) variables are not capped at the 96% percentile, but at a higher value of the 99%. All capping was done per domain, to reduce the effects of extremely high grades on each estimated panel.

The capping resulted in the reduction of the variance, hence reducing the coefficient of variance (CoV). The CoV is an indication of the level of dispersion around the mean and by using the capping values the CoV is lower. By using the declustered data as the support for the different block sizes in the kriging, the variance reduces and the mean will stabilise. The capping percentage had a small effect on the overall mean of the data.

Figure 22 shows an example of the capping analyses in Supervisor and Table 26 shows the effect of capping on the actual statistics for Kloof.

Figure 22: Capping Analysis in Snowden Supervisor

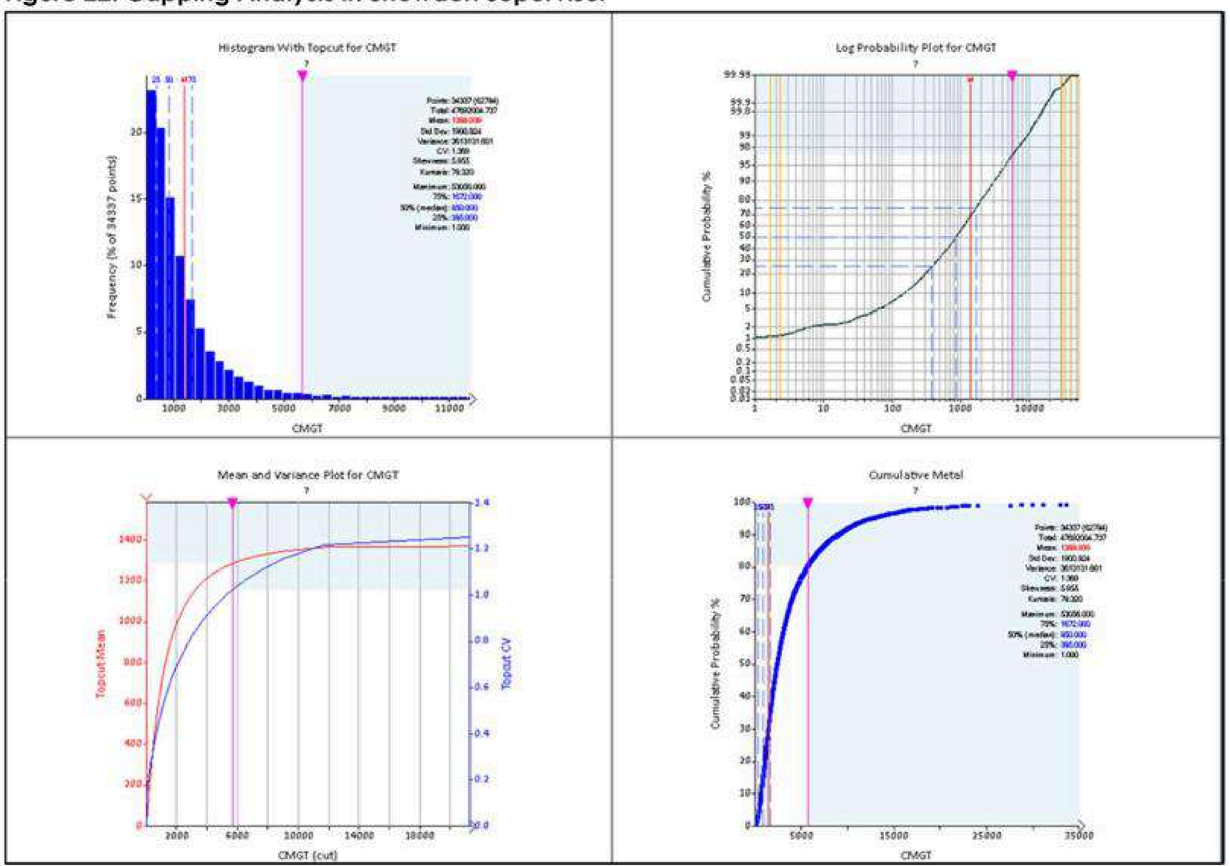


Table 26: Example of Capping Values Applied to the Final Estimation Dataset

REEF	Domain	No. of Samples	Original Mean	Capped Mean	Difference cm.g/t (%)	Original Coefficient of Variance (%)	Capped Coefficient of Variance (%)	Original Variance	Capped Variance
VCR	1	308,621	3,936	3,511	-11	1.61	1.11	40,361,937	15,306,779
VCR	2	228,256	2,231	1,953	-12	1.81	1.25	16,232,222	6,004,975
VCR	3	53,814	3,076	2,759	-10	1.56	1.10	23,013,159	9,276,264
VCR	4	139,292	1,726	1,472	-15	2.19	1.22	14,309,177	3,251,347
VCR	5	12,571	1,045	889	-15	2.04	1.26	4,553,180	1,246,688
VCR	6	417	1,305	992	-24	2.66	1.57	12,063,441	2,423,992
VCR	7	6,797	1,860	1,638	-12	1.75	1.29	10,534,796	4,482,769

11.2.1.2 Variogram Modelling and Estimation Parameter Selection

The variography analyses for the Reefs individual domains was conducted using the validated composites. To determine the orientation of the mineralisation for individual domains, variogram maps were created as depicted in the example in Figure 23. Appropriate directions were selected and detailed variography studies were carried out on point and regularised data. Untransformed variograms were used for kriging. In order to validate the ranges, covariance on normal scores was used as per the illustration in Figure 24. Snowden Supervisor software was used for variogram maps, Kriging Neighbourhood Analysis (KNA) and variography, as per examples in Figure 25 to Figure 27. An example of the type of results obtained for variogram parameters used for kriging are given in Table 27. Headings are Datamine nomenclature.

Figure 23: Example of a Variogram Map

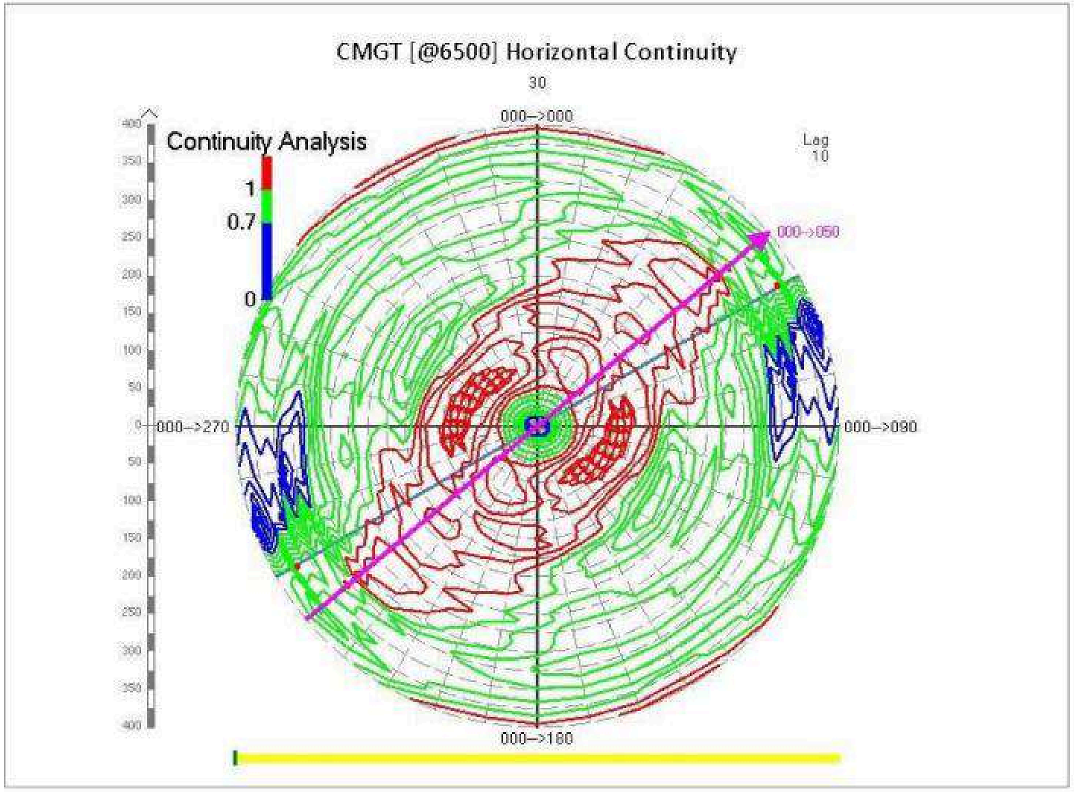

CMGT [@6500] Horizontal Continuity
30
000-->000
Continuity Analysis
1
0.7
0
Lag
10
000->050
000-->270
000-->090
000-->180

Figure 24: Example of Variogram Validation with Covariance

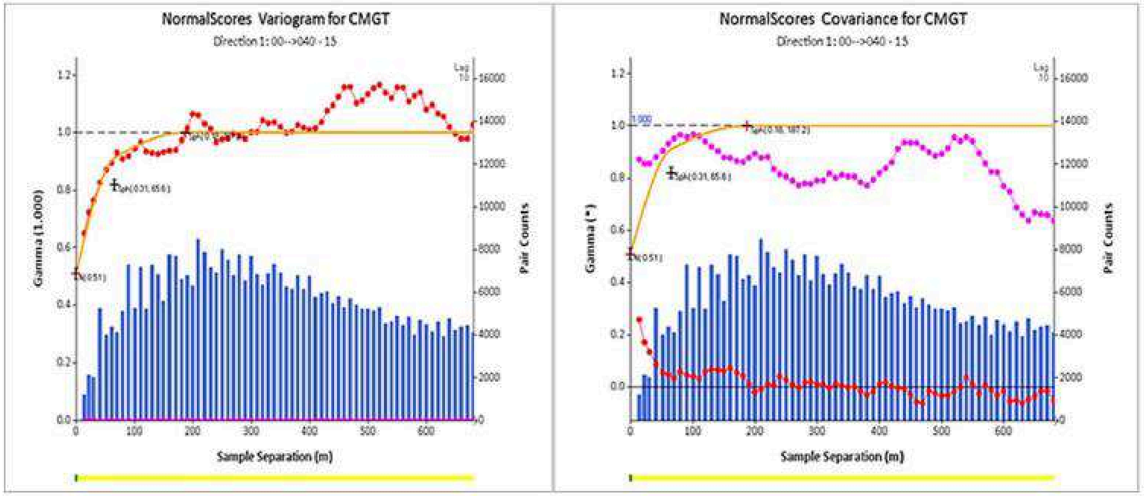


Table 27: Example from Three Domains of Variogram Model Parameters (Kloof Reef)

Block Size	PARAMETER	DOMAIN	VANGLE3	NUGGET	ST1PAR 1	ST1PAR 2	ST1PAR 4	ST2PAR 1	ST2PAR 2	ST2PAR 4	ST3PAR 1	ST3PAR 2	ST3PAR 4
10x10	cm.g/t	1	-150	0.40	117	78	0.44	195	111	0.16	-	-	-
10x10	cm.g/t	2	-160	0.40	42	32	0.12	154	44	0.26	186	92	0.22
10x10	cm.g/t	3	-160	0.38	51	18	0.10	82	109	0.16	159	117	0.36
10x10	cw	1	-150	0.20	34	45	0.18	125	107	0.18	198	108	0.44
10x10	cw	2	-160	0.22	31	35	0.25	161	49	0.09	192	122	0.44
10x10	cw	3	-160	0.13	74	57	0.38	189	127	0.14	-	-	-
25x25	cm.g/t	1	-150	0.40	141	94	0.49	258	185	0.11	-	-	-
25x25	cm.g/t	2	-160	0.38	104	39	0.12	331	60	0.12	382	129	0.38
25x25	cm.g/t	3	-160	0.38	145	116	0.05	241	131	0.38	379	179	0.19
25x25	cw	1	-150	0.19	124	109	0.55	299	150	0.26	-	-	-
25x25	cw	2	-160	0.21	55	55	0.13	169	99	0.36	319	182	0.3
25x25	cw	3	-160	0.17	91	136	0.27	227	196	0.13	363	199	0.32
100x100	cm.g/t	1	-150	0.39	271	36	0.08	307	120	0.40	641	401	0.13
100x100	cm.g/t	2	-160	0.37	326	143	0.19	398	171	0.30	691	320	0.14
100x100	cm.g/t	3	-160	0.37	241	109	0.25	692	356	0.38	-	-	-
100x100	cw	1	-150	0.19	115	136	0.61	456	301	0.20	-	-	-
100x100	cw	2	-160	0.20	292	328	0.58	530	374	0.22	-	-	-
100x100	cw	3	-160	0.19	116	340	0.45	645	474	0.36	-	-	-

The Mineral Resources block widths (BWs), interchangeably referred to as stoping widths, were estimated using variography from CW (thickness) and using Ordinary Kriging or Simple Kriging as applicable from the 100m x 100m block model.

Kriging Neighbourhood Analysis (KNA) is a tool which assists in determining the appropriate estimation parameters as per the examples below. KNA is not done annually, it is done as required on a domain basis . Block size KNA provides appropriate block sizes of 10m x 10m, 25m x 25m and 50m x 50m panels, as per example in Figure 25. These have positive kriging efficiencies (KE) and slope of regression (SR). The graph on the right shows the sum and percentage of negative weights potentially generated in the kriging process for the different block sizes.

The discretization KNA shows a stable KE and SR for the different matrices. Figure 26 shows the sum and percentage of negative weights potentially generated in the kriging process for different discretization patterns. The value used in the estimation was 5x5x1.

The KNA for the number of samples for the 10m x 10m blocks provides the KE vs SR relationship. Figure 27 shows the sum and percentage of negative weights potentially generated in the kriging process for different numbers of samples, on the right. This limits the maximum number of samples to be used. The same exercise is undertaken for all block sizes.

The final search parameters are shown in Table 28.

Figure 25: KNA for Block Sizes

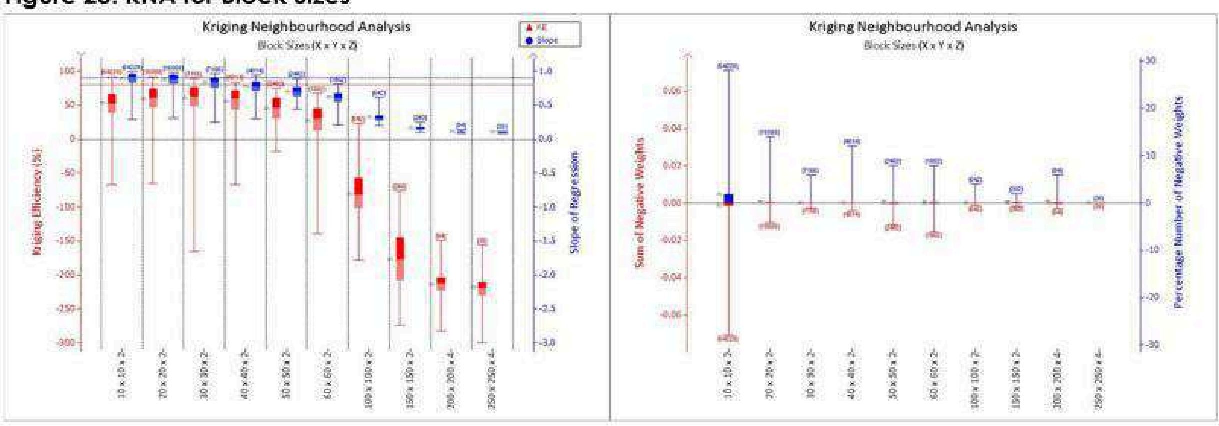


Figure 26: KNA for Discretization

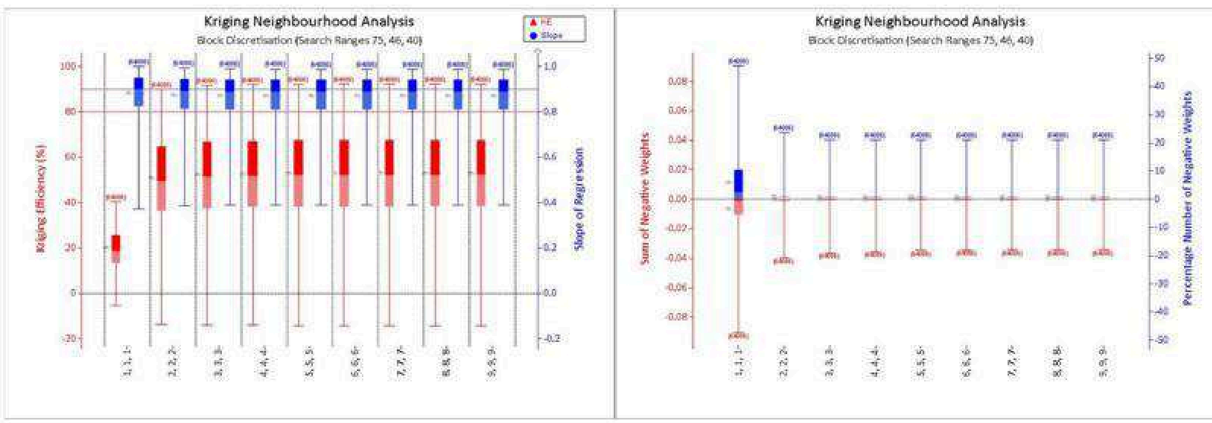


Figure 27: KNA Number of Samples 10x10 Block Size

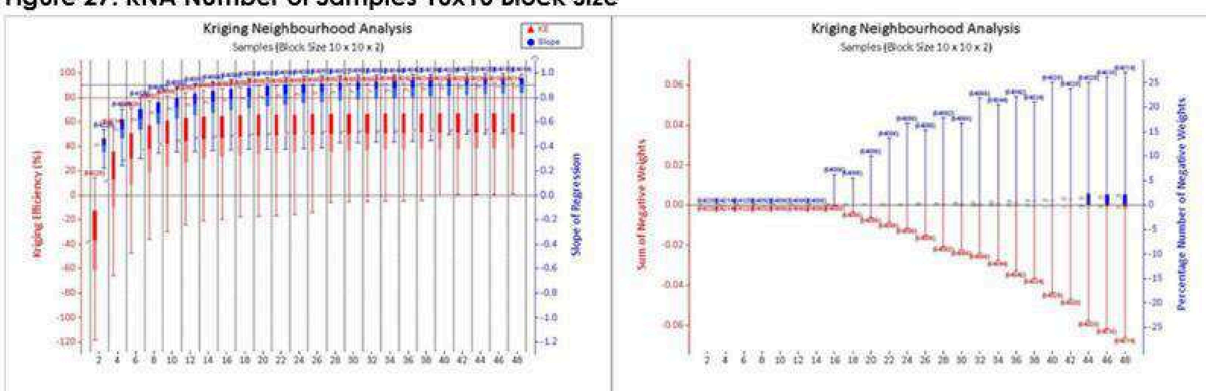


Table 28: Kriging Parameters

Data	Block Size	Minimum number of samples	Maximum number of samples	Search Volume No. 2	Minimum number of samples	Maximum number of samples	Search Volume No. 3	Minimum number of samples	Maximum number of samples
5x5 Regularised	10x10	16	35						
25x25 Regularised	25x25	12	25						
50x50 Regularised	100x100	10	20	2	8	16	20	5	10

11.2.2 Interpolation Methods

11.2.2.1 Methods

The interpolation methodology is a combination of Ordinary Kriging (OK) for the block sizes of 10m x 10m and 25m x 25m; and Simple Kriging (SK) for the block sizes of 100m x 100m. All estimations of cm.g/t, CW(geological thickness), Au(g/t) and SW(stoping width - mining cut) are conducted in 2D space after converting the 3D geological interpretations to 2D and applying a dip correction for tonnage calculation. Because faulting is post mineralisation, the 2D estimation is preferred as this removes statistical discontinuities due to faulting. The OK models are optimised by removing the blocks with negative KE and the next larger block size informs the area and the classification. All these block models are combined to generate the final Mineral Resources Block Model.

The majority of the Mineral Resources, as stated, occur in areas with sparse data. In this case the

The majority of the Mineral Resources, as stated, occur in areas with sparse data. In this case the interpolation methodology is SK with a block size of 100m x 100m, as determined from the KNA exercise. This process uses a known average grade. This influences the weighted values for kriging. In this case, the average grade used as a Local Mean has more support for the areas with sufficient information, or a Global Mean for the exploration areas with only drillholes. The Local Mean search radius is more in line with the Indicated Mineral Resources classification boundaries. The areas using a Global Mean are classified as Inferred in most cases. A declustered weighted mean with ten random origins is used to determine the appropriate Global Mean for each interpolation domain (Table 29).

Table 29: Example of Global Mean Values per Domain Example for the VCR

Reef	Domain	Unit of Measure	Dec-2022	Dec-2023	Percentage Difference (%)
VCR	1	cm.g/t	3,177	3,116	-2
VCR	2	cm.g/t	1,850	1,803	-3
VCR*	3	cm.g/t	2,276	2,096	-8
VCR	4	cm.g/t	950	1,093	-2
VCR*	5	cm.g/t	752	705	-6
VCR	6	cm.g/t	449	451	0
VCR	7	cm.g/t	1,555	1,506	-3
VCR	1	cw	88	88	-
VCR	2	cw	68	68	-
VCR*	3	cw	131	131	-
VCR	4	cw	71	71	-
VCR*	5	cw	129	127	-1
VCR	6	cw	43	43	-
VCR	7	cw	81	80	-

*Domain changes based on Geological Facies update

11.2.2.2 Validation

Block models are validated on several levels including visual checks comparing block grades to sample grades, swath plots comparing actual recovered grades to predicted grades and sampling grades, as well as reconciliations comparing previous estimations to the current estimation. An example of a swath plot used for validation is shown in Figure 28. Block Models for the reefs are shown in Figure 29 to Figure 32.

Figure 28: Swath Plot Showing Block Model vs Data for VCR

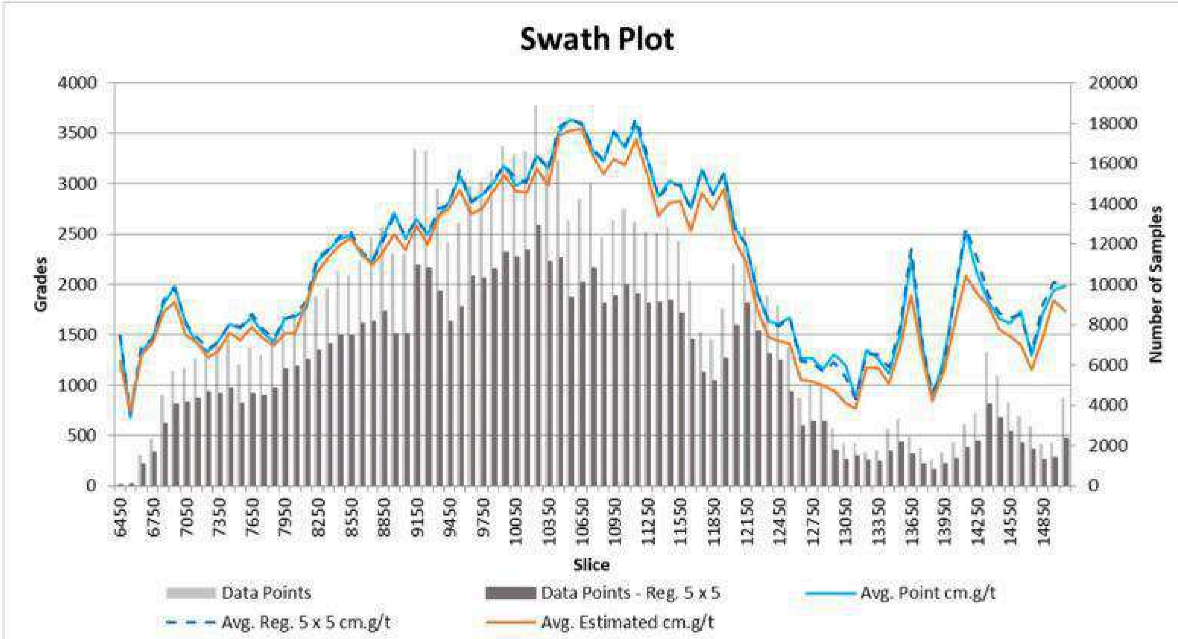


Figure 29: VCR cm.g/t Block Model

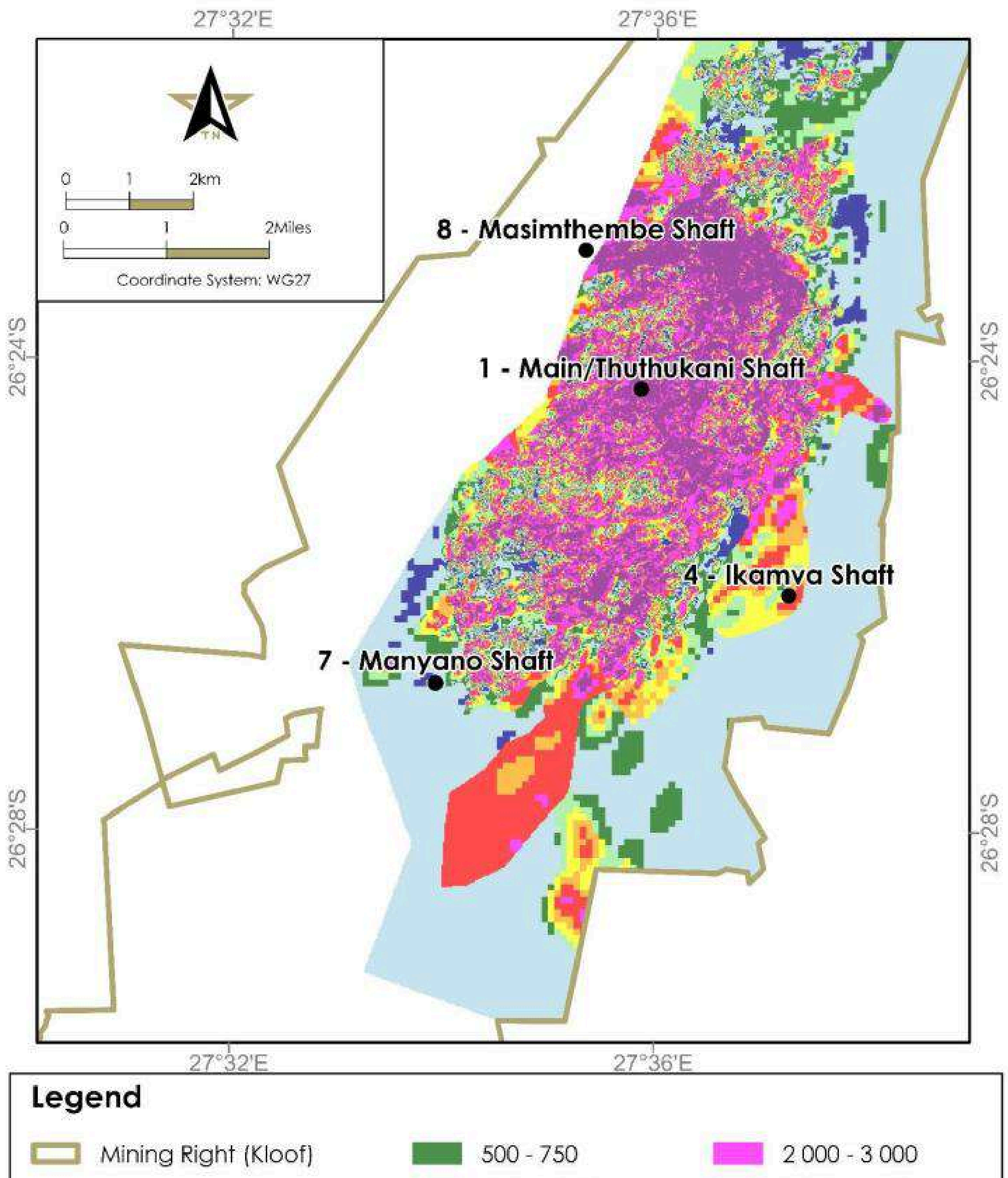
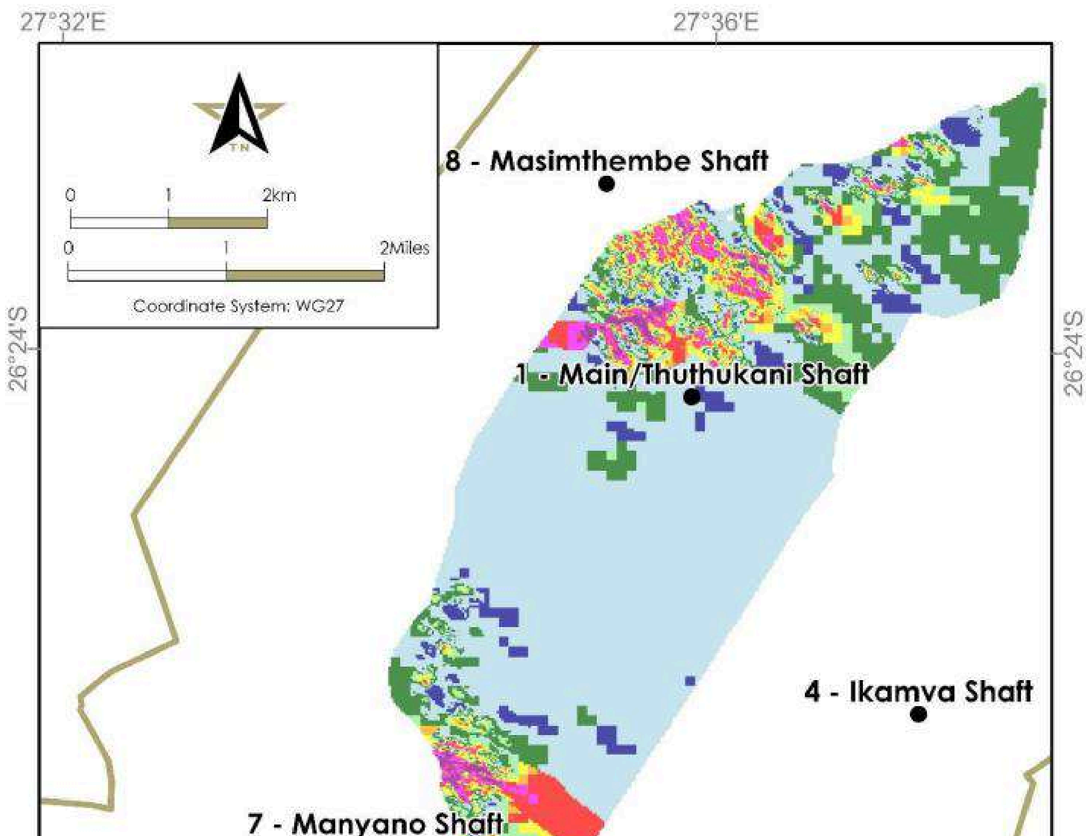


Figure 30: Kloof Reef cm.g/t Block Model



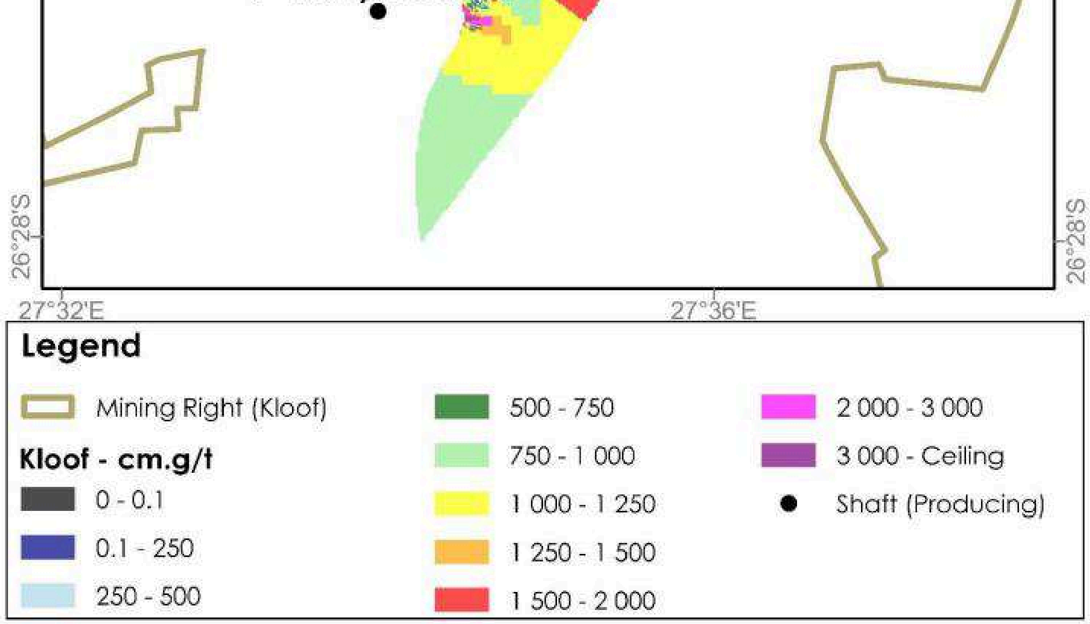
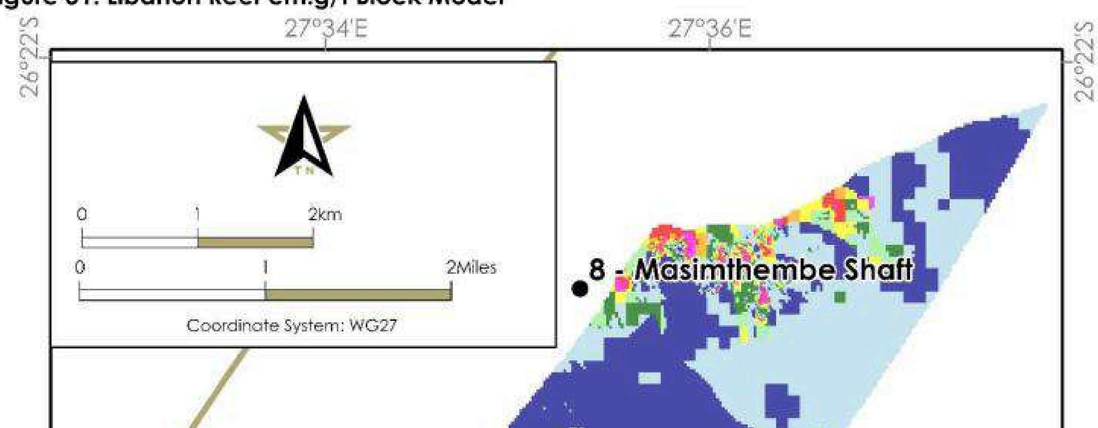


Figure 31: Libanon Reef cm.g/t Block Model



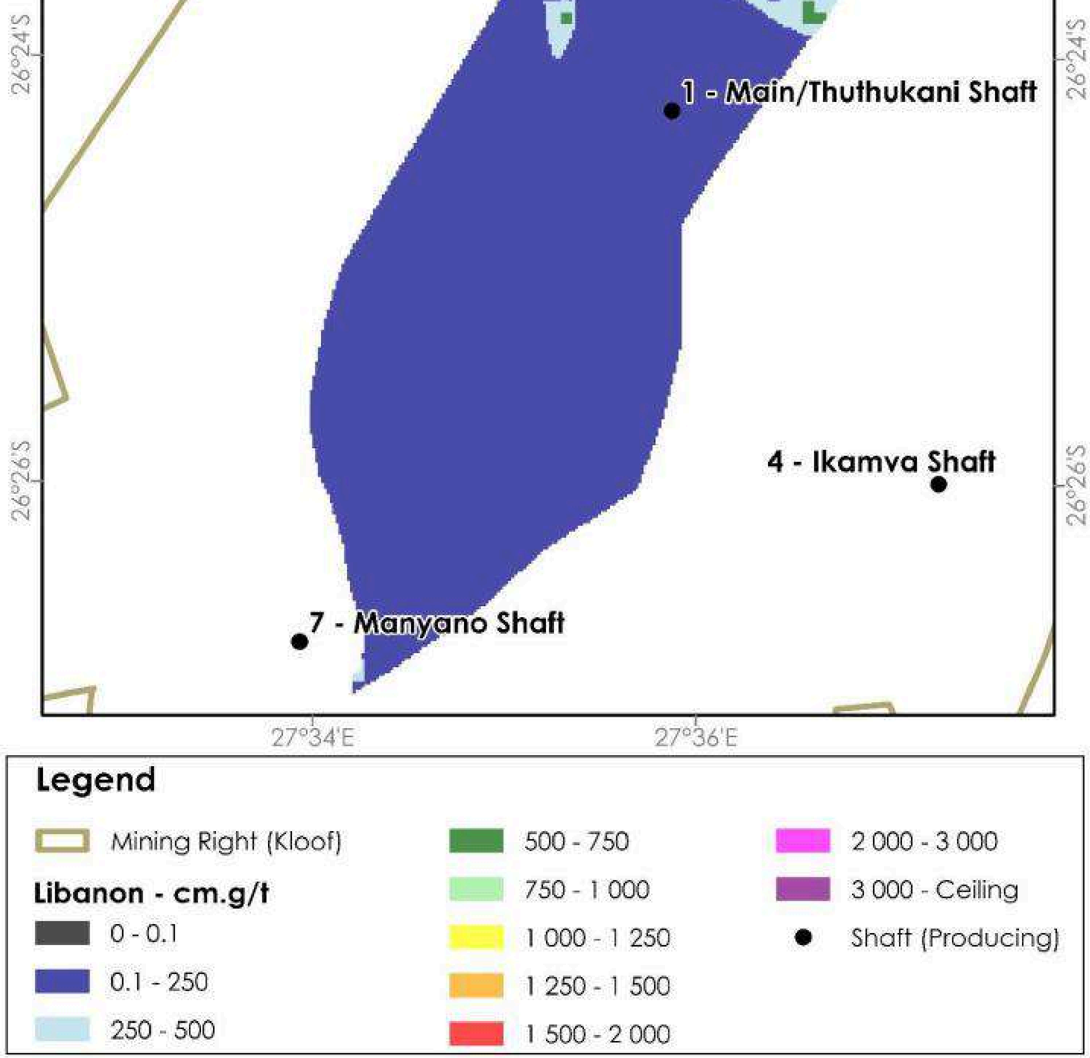
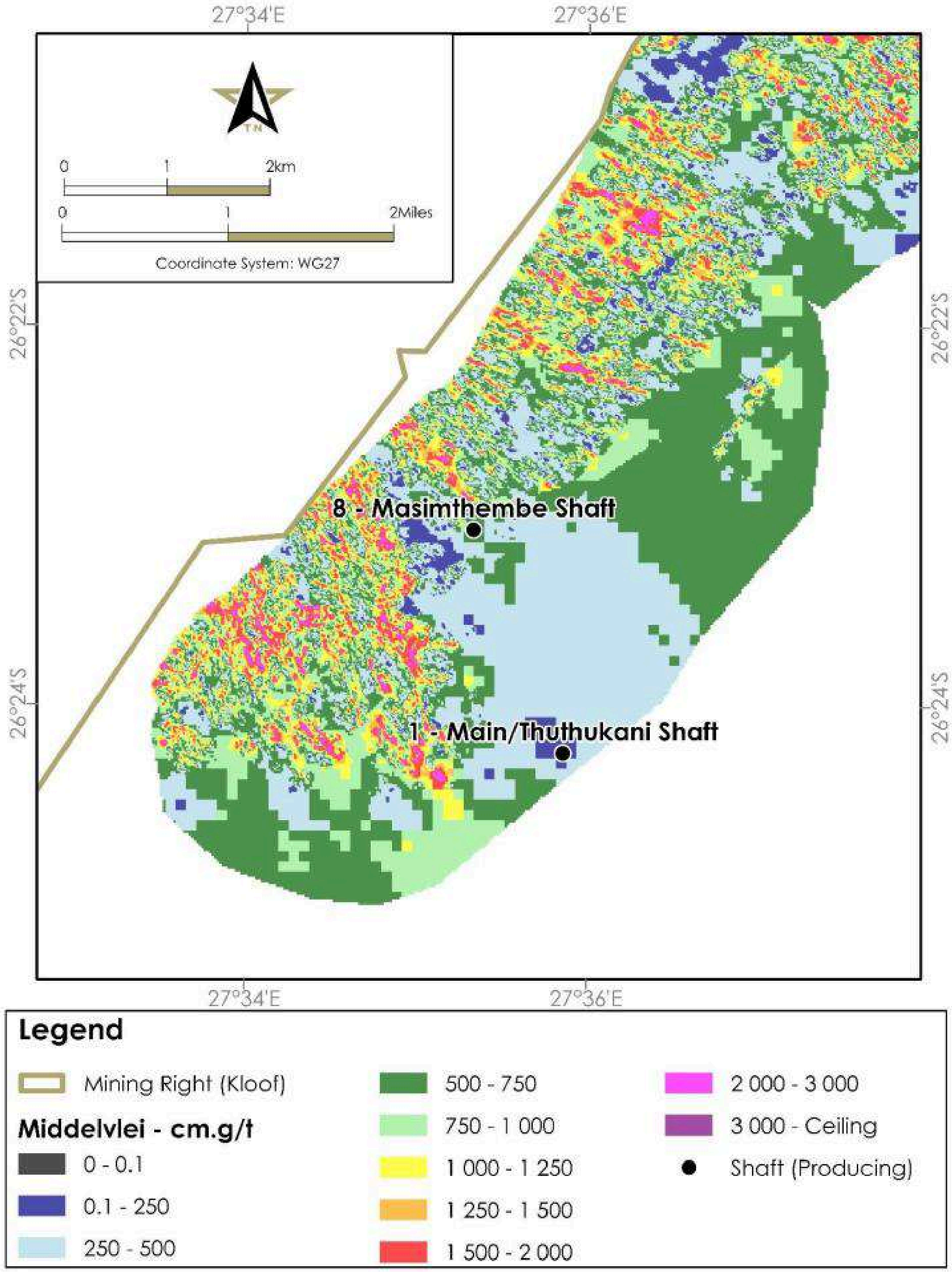

26°24'S
26°26'S
1 - Main/Thuthukani Shaft
4 - Ikamva Shaft
7 - Manyano Shaft
27°34'E
27°36'E
Legend
Mining Right (Kloof)
Libanon - cm.g/t
0 - 0.1
0.1 - 250
250 - 500
500 - 750
750 - 1 000
1 000 - 1 250
1 250 - 1 500
1 500 - 2 000
2 000 - 3 000
3 000 - Ceiling
Shaft (Producing)

Figure 32: Middelvlei Reef cm.g/t Block Model



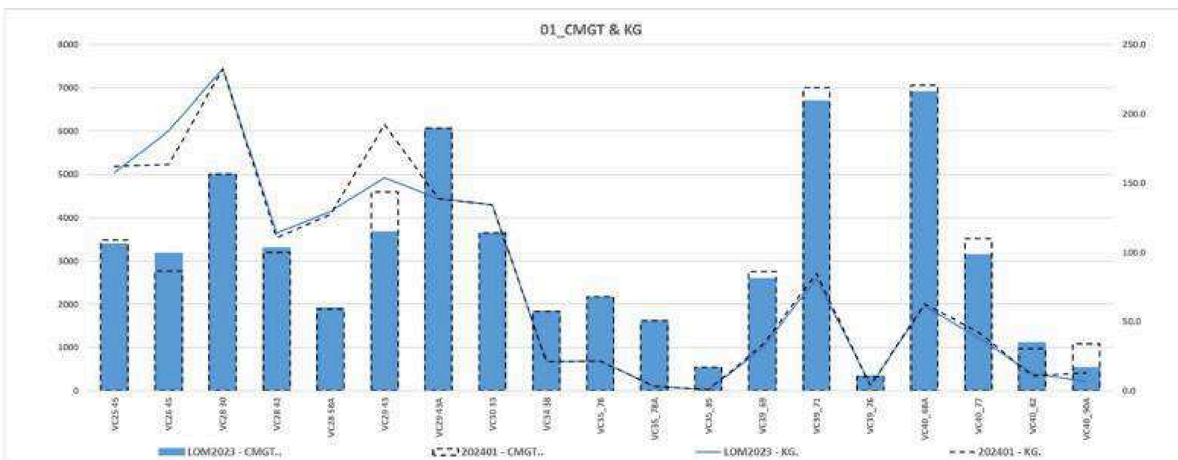
11.2.3 Grade Control and Reconciliation

Grade control and reconciliation practices follow similar procedures to those applied elsewhere on the Witwatersrand deep level gold mining operations. The reefs, hanging wall and footwall lithologies are visually identifiable, and channel sampling ensures that the face grade is monitored accordingly. As part of the reconciliation exercises, physical factors, including channel width, stoping width, dilution and Mine Call Factor, are monitored and recorded on a monthly basis. These results are used to reconcile the Mineral Resource estimates with actual mined tonnages and grades. The monthly kriged grid estimates are reconciled against the Mineral Resource estimates, and a Block Factor is calculated for those blocks, previously estimated and now mined.

Stoping and development are measured monthly to provide an accurate broken ore and gold estimate. Belt sampling is done continually to verify underground grades.

Figure 33 shows an example of detailed plots used to reconcile monthly grade control models.

Figure 33: Plot Showing Monthly Reconciliations for VCR



11.3 Mineral Resource Classification

11.3.1 Classification Criteria

The Mineral Resource is reported as *in-situ* Mineral Resource inclusive and exclusive of Mineral Reserves.

The Mineral Resource is classified with varying levels of confidence ranging from Measured, high confidence, in current mining and sampling areas to Inferred, lower confidence, in areas further away from current workings.

The Mineral Resource categorisation is based on the robustness of the various data sources available, confidence of the geological interpretation, variography and various estimation parameters (e.g., distance to data, number of data, maximum search radii etc.) (Table 30).

Table 30: Confidence Levels for Key Criteria for Mineral Resource Classification

Items	Discussion	Confidence
Drilling Techniques	Diamond core drilling to international standards	High
Drill Sample Recovery	Diamond core drilling sample recovery is good	High/Moderate
Chip Sample Recovery	Chip sample recovery is good	High
Location of Sampling Points	Survey of all drill hole collars and chip sample sections are co-ordinated and plotted on all plans	High/Moderate
Logging	Standard nomenclature and procedures	High/Moderate
Sub sampling Techniques and Sample Preparation	Core samples and chip samples with good QA/QC standards and procedures in place	High
	Minimum data spacing from chip samples is 3m for	

Data Density and Distribution	development, 5m for stoping and drillhole spacing ranging between 100m and 1,000m	High/Moderate
Verification of Sampling and Assaying	QA/QC programme employed. QA/QC monitoring in place and regular follow ups occur with the mine laboratory	High
Historical data	Available historical data is of reasonable quality and has been derived from internationally recognised procedures and techniques.	High
Database Integrity	Errors identified and rectified	High/Moderate
Mineralisation Type	Able to correlate mineralisation across the property along payshoots	High
Geological Interpretation Facies and Structure	Stratigraphic definition and delineation are considered of moderate confidence. Major structures identified	High/Moderate
Estimation Techniques	2D estimation using Ordinary and Simple Kriging	High
Estimated Block Size	10m x 10m and 25m x 25m block size with high confidence and closely spaced data, 100m x 100m moderate to lower confidence due to sparce data distribution	High/Moderate
Search volume	First search radii with high confidence; second search radii moderate and the third search radii with lower confidence.	High

For the Kloof Operations the Mineral Resources were classified as follows:

- Measured Mineral Resources classification have on slope of regression on average greater than 95% in the first range of variograms for the block models of 10m x 10m and 25m x 25m.
- Indicated Mineral Resources are classified have on the first and/or second search ellipse ranges and number of samples averaging 17 from the block model of 100m x 100m.
- The areas in the third range or greater of the variograms on the block size of 100m x 100m are classified as Inferred Mineral Resources.

Mineral Resource classification is shown in Figure 41 to Figure 44, Section 13.10. There was no material change from the previous Mineral Resource classification.

11.3.2 Mineral Resource Technical and Economic Factors

11.3.2.1 Mining Width and Geological Losses

A Minimum mining width of 120cm is applied to the reporting of the Mineral Resources tonnages and grades. No geological loss is applied to the Mineral Resources other than the explicitly modelled major losses.

11.3.2.2 Pay limits and Cut-off

Information on how the gold price and exchange rate are determined can be found in Section 16.4.

A new approach has been implemented for the Mineral Resource as at December 2023. The previous method was the same as described in Section 12.4 under the break-even cut-off with reference to a pay limit and the value/area curve per shaft. The previous methodology was very sensitive to planned production volume changes resulting in potentially unstable declaration as the cut-off changes year-on-year.

The new approach is not so strictly tied to a specific mining volume and allows for a more stable declaration from year-to-year.

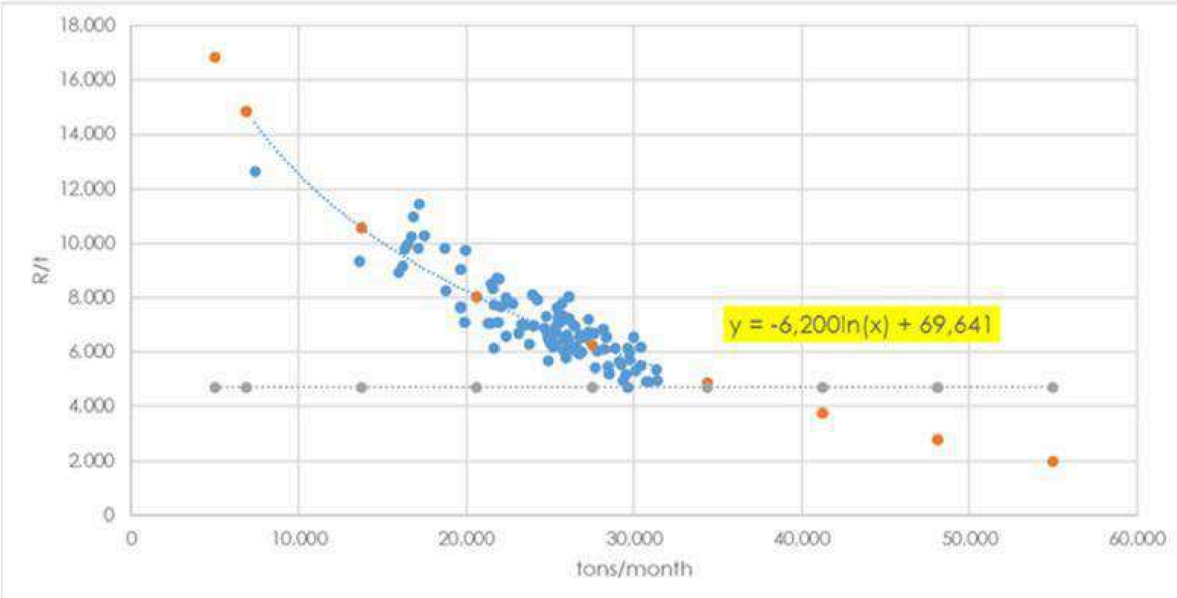
For the new approach, the incremental mining cost is calculated for each shaft as outlined in the incremental cut-off Section 12.4. A discretionary margin is applied to the incremental cost based on the amount of additional estimated and unbudgeted costs (10%-20%). The "mill width factor" (ratio between stoping tonnes and the mill tonnes) is then applied to account for dilution. The breakeven gold is calculated and the various ore flow parameters are applied (Mine Call Factor, Plant Recovery Factor, geological losses) so that an in-stope cut-off can be calculated. Figure 34 shows an example of this calculation.

Figure 34: Example of a Pay Limit Cut-off Per Shaft for Mineral Resources

		KM	K8	K7	K4
		Incremental mining cost	Incremental mining cost	Incremental mining cost	Incremental mining cost
Gold price	$/oz	1,800	1,800	1,800	1,800
Exchange rate	R/$	17.00	17.00	17.00	17.00
oz conversion factor	g/oz	32.1507466	32.1507466	32.1507466	32.1507466
Gold price	R/kg	983,813	983,813	983,813	983,813
Cost	R/t	1,964	1,701	2,058	2,602
Cut-off (recovered)	g/t	2.00	1.73	2.09	2.64
PRF	%	98.0%	98.0%	98.0%	98.0%
Cut-off (head)	g/t	2.04	1.76	2.13	2.70
MCF	%	85.8%	79.6%	75.4%	82.6%
Cut-off (broken)	g/t	2.37	2.22	2.83	3.27
Geological dilution	%	2.4%	1.5%	3.0%	3.1%
Cut-off (after geo losses)	g/t	2.43	2.25	2.92	3.37
Milling width	cm	239	205	197	275
Cut-off (after MW)	cm.g/t	580	460	570	930
Resource width	cm	175	179	164	190
Cut-off	g/t	3.32	2.57	3.49	4.90
Below infrastructure	cm.g/t				
Incremental cost (stoping only)	R/t	1305	1351	1554	1497
Margin	%	10%	10%	10%	20%

In some cases, this incremental mining cost results in an un-realistic cut-off, commonly where current volumes are extremely low, as can be seen in the D4 example in Figure 35. In this case, a series of cost-curves are derived from historical information (scatter plot of historical ZAR/t vs its corresponding t/month) and the fixed ZAR/t can be determined by fitting a function to the data and reading off where it levels off. This can then be applied to the cut-off calculation.

Figure 35: Example of a Cost Curve for a Shaft



11.3.2.3 Selective Mining Units

The Selective Mining Unit (SMU), which represents the minimum practical selection unit, is dependent largely on the mining method and other mining constraints, including rock engineering. The typical SMU used is 20m by 30m for panel mining methods.

There are ongoing programmes to further convert remnants and pillars left in previously mined areas, from the Mineral Resources to the Mineral Reserves category. Many of these pillars are high grade. In these cases, the dimensions of the pillar define the dimensions of the SMU. Smaller remnants, of a size less than the SMU, are practically not mineable and are excluded from the Mineral Resources. Each pillar was investigated underground, where possible, by Rock Engineering, Ventilation, Mining and the Mineral Resource Management disciplines (Geology, Evaluation, Survey and Planning). Pillars were economically examined, both individually and in combinations, to prioritise the planning and safe extraction.

11.4 Mineral Resource Statements

11.4.1 Mineral Resources

Mineral Resources are stated as both exclusive and inclusive of Mineral Reserves (Table 31 and Table 32). Mineral Resources are for in-situ mineralization (reference point) assessed to have reasonable prospects for economic extraction by the QP.

Notes on the Mineral Resource Tabulations:

- Mineral Resources are not Mineral Reserves.
- For gold price information, including the reasons for the selection of the price and material assumptions underlying the selection, see Section 16.4.
- The QP consider Measured, Indicated and Inferred Mineral Resources, as outlined below are both consistent and aligned with those of SK-1300.
- Attributable Mineral Resource for 2023 is 100%.
- Mineral Resources are calculated using shaft specific cut-off grades. They also include estimates of any material below the cut-off grade required to be mined, Section 11.3.2.
- Mineral Resources are reported after the removal of geological losses.
- Mineral Resources are reported as in-situ; metallurgical recovery factors have been applied in the cut-off grades calculations and are approximately 98% for underground at Kloof.
- Grades have been rounded to one decimal place. A 0.0 represents numbers below significant figures reported, and a ("-") represents absent value.

The Mineral Resources as stated are extremely sensitive to changes in the gold price and the ZAR/USD exchange rates. The results of several scenarios are presented in Table 33.

Table 31: Mineral Resources Exclusive of Mineral Reserves as at 31 December 2023

Classification – Gold	31-Dec-2023			31-Dec-2022		
	Tonnes (Mt)	Grade (g/t)	Gold (Moz)	Tonnes (Mt)	Grade (g/t)	Gold (Moz)
Measured	26.7	9.6	8.2	24.9	11.2	9.0
Indicated	24.5	5.5	4.3	33.3	6.6	7.1
Measured + Indicated	**51.2**	**7.6**	**12.5**	**58.2**	**8.6**	**16.1**
Inferred	7.0	4.5	1.0	21.7	8.7	6.1
Grand total	**58.2**	**7.2**	**13.5**	**80.0**	**8.6**	**22.1**

Table 32: Mineral Resources Inclusive of Mineral Reserves as at 31 December 2023

Classification – Gold	31-Dec-2023			31-Dec-2022		
	Tonnes (Mt)	Grade (g/t)	Gold (Moz)	Tonnes (Mt)	Grade (g/t)	Gold (Moz)
Measured	31.8	9.8	10.0	32.8	11.4	12.0
Indicated	25.5	5.6	4.6	35.8	6.8	7.9
Measured + Indicated	**57.3**	**7.9**	**14.6**	**68.6**	**9.0**	**19.9**
Inferred	7.0	4.5	1.0	21.7	8.7	6.1
Grand total	**64.3**	**7.5**	**15.6**	**90.4**	**8.9**	**25.9**

Table 33: Sensitivity Analysis for Mineral Resource Estimates Inclusive of Mineral Reserve Estimates

Classification	SCENARIO RESERVE PAY LIMIT			SCENARIO -5%			BASE CASE			SCENARIO +5%			SCENARIO +10%			SCENARIO +25%		
	ZAR956,485			ZAR934,622			ZAR983,813			ZAR1,033,004			ZAR1,082,194			ZAR1,229,766		
	Tons Mt	Grade g/t	Gold Moz	Tons Mt	Grade g/t	Gold Moz	Tons Mt	Grade g/t	Gold Moz	Tons Mt	Grade g/t	Gold Moz	Tons Mt	Grade g/t	Gold Moz	Tons Mt	Grade g/t	Gold Moz
Measured	31.1	9.9	9.9	30.6	10.0	9.9	31.8	9.8	10.0	32.9	9.6	10.1	34.1	9.4	10.3	37.4	8.8	10.6
Indicated	24.7	5.6	4.5	24.0	5.7	4.4	25.5	5.6	4.6	27.1	5.4	4.7	28.6	5.3	4.9	34.6	4.9	5.5
Total Measured + Indicated	**55.9**	**8.0**	**14.4**	**54.7**	**8.1**	**14.3**	**57.3**	**7.9**	**14.6**	**60.0**	**7.7**	**14.9**	**62.7**	**7.5**	**15.2**	**72.0**	**6.9**	**16.0**
Inferred	6.3	4.6	0.9	6.0	4.6	0.9	7.0	4.5	1.0	7.7	4.4	1.1	10.1	4.0	1.3	16.9	3.6	2.0
Total Underground	**62.1**	**7.7**	**15.3**	**60.7**	**7.8**	**15.2**	**64.3**	**7.5**	**15.6**	**67.7**	**7.3**	**15.9**	**72.8**	**7.0**	**16.4**	**88.9**	**6.3**	**18.0**

11.4.2 Mineral Resources per Mining Area

Mineral Resource statements per mining area, Inclusive and Exclusive of Mineral Reserves at 31 December 2023 are given in Table 34 and Table 35.

Table 34: Mineral Resource Estimates Exclusive of Mineral Reserve Estimates per Mining Area as at 31 December 2023

Mining Area	Measured			Indicated			Measured + Indicated			Inferred		
	Tonnes (Mt)	Grade (g/t)	Gold (Moz)	Tonnes (Mt)	Grade (g/t)	Gold (Moz)	Tonnes (Mt)	Grade (g/t)	Gold (Moz)	Ton (Mt)	Grade (g/t)	Gold (Moz)
Main Shaft SV 1	4.6	12.1	1.8	7.5	5.2	1.3	12.2	7.8	3.1	2.8	4.8	0.4
Main Shaft SV 2	1.5	16.6	0.8	0.2	4.5	0.0	1.7	14.9	0.8	-	-	-
No. 3 Shaft	2.7	9.1	0.8	7.8	5.5	1.4	10.5	6.4	2.2	1.9	4.6	0.3
No. 4 Shaft	-	-	-	-	-	-	-	-	-	-	-	-
No. 7 Shaft	6.0	9.8	1.9	1.9	7.2	0.4	7.9	9.1	2.3	0.0	5.6	0.0
No. 8 Shaft	11.9	7.7	2.9	7.1	5.3	1.2	19.0	6.8	4.2	2.2	3.9	0.3
EBA	-	-	-	-	-	-	-	-	-	-	-	-
Total	**26.7**	**9.6**	**8.2**	**24.5**	**5.5**	**4.3**	**51.2**	**7.6**	**12.5**	**7.0**	**4.5**	**1.0**

Table 35: Mineral Resource Inclusive of Mineral Reserves per Mining Area as at 31 December 2023 at 100%

Mining Area	Measured			Indicated			Measured + Indicated			Inferred		
	Tonnes (Mt)	Grade (g/t)	Gold (Moz)	Tonnes (Mt)	Grade (g/t)	Gold (Moz)	Tonnes (Mt)	Grade (g/t)	Gold (Moz)	Tonne (Mt)	Grade (g/t)	Gold (Moz)
Main Shaft SV 1	7.2	11.0	2.6	7.9	5.2	1.3	15.1	8.0	3.9	2.8	4.8	0.4
Main Shaft SV 2	2.0	16.2	1.1	0.5	5.2	0.1	2.5	14.1	1.1	-	-	-
No. 3 Shaft	3.3	11.1	1.2	7.9	5.5	1.4	11.2	7.2	2.6	1.9	4.6	0.3
No. 4 Shaft	-	-	-	-	-	-	-	-	-	-	-	-
No. 7 Shaft	6.1	9.8	1.9	1.9	7.2	0.4	8.0	9.2	2.4	0.0	5.6	0.0
No. 8 Shaft	13.0	7.8	3.3	7.4	5.5	1.3	20.5	7.0	4.6	2.2	3.9	0.3
EBA	-	-	-	-	-	-	-	-	-	-	-	-
Total	**31.8**	**9.8**	**10.0**	**25.5**	**5.6**	**4.6**	**57.3**	**7.9**	**14.6**	**7.0**	**4.5**	**1.0**

11.4.3 Changes in the Mineral Resources from Previous Estimates (Inclusive of Mineral Reserves)

The 2023 estimation varies from the 2022, as shown in the waterfall (Figure 36). Mineral Resource depletion due to mining is 0.3 Moz. Changes due to area inclusion and exclusions, geological losses, new data and economical parameters resulted in a decrease of 10.1 Moz.

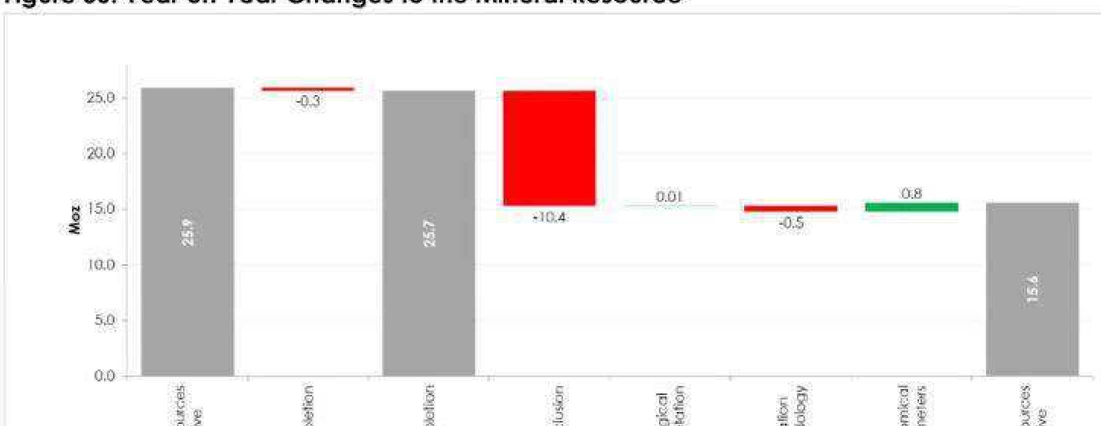
The −10.4Moz in area exclusions is due to the closure of Kloof No. 4 Shaft (−6.1Moz), the exclusion of the below infrastructure Eastern Boundary Area at Kloof 7 Shaft (−4.9Moz) and offset by minor additions elsewhere.

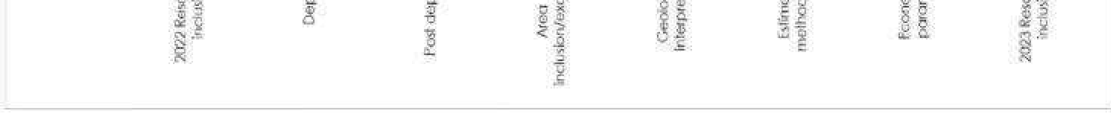
The area below No. 7 Shaft (40 level to 41 level) previously reporting to No. 4 Shaft is still included in the Mineral Resource statement for No. 7 Shaft.

It is not possible to fully separate changes only to the exclusive Mineral Resources as geology, methodology, rock engineering pillars and economic parameters are global estimates and cannot be localized to only exclusive Mineral Resources.

There were no material changes to the estimation or classification parameters between December 2022 and December 2023.

Figure 36: Year on Year Changes to the Mineral Resource





11.4.4 Metal Equivalents

There are no mineral or metal equivalent Mineral Resources declared for Kloof, with only the primary mineral of economic interest being declared, namely gold. Co or by-products, which may occur at low abundances and of low economic importance, are not estimated.

11.5 QP Statement on the Mineral Resource Estimation and Classification

The Mineral Resources declared are estimated based on the geological facies and constrained by appropriate geostatistical techniques, using Ordinary Kriging and Simple Kriging. The Mineral Resources classification follows geostatistical and geological guidelines. The Mineral Resources are declared inside the structural blocks, outside of the mined-out areas and above an economic cut-off value. The underlying grade control and reconciliation processes are considered appropriate.

It is the QP's opinion that all issues relating to any technical or economic factors that would be likely to influence the condition of reasonable prospects for economic extraction are addressed or can be resolved with further work.

12 Mineral Reserve Estimates

12.1 Mineral Reserve Methodology

This Section includes discussion and comment on the mining engineering related aspects of the LoM plan associated with Kloof. Specifically, comment is given on the mine planning process, historical production from the last five years, cut-off grades and modifying factors, Life-of Mine- plan (LOM) and specific inclusions and exclusions, and the underground environment. Some discussion on the planned projects is also included. The mineral reserves statement includes the global Mineral Reserves and Mineral Reserves per shaft, as well as comments on the sensitivity of the Mineral Reserves to cut-off grades and input costs. Mining methods and Infrastructure are discussed in Sections 13 and 15. A map of the LOM layout I is found in Section 13.9. Commodity pricing and financial information are found in Sections 16, 18 and 19.

As a point of reference, Mineral Reserves are quoted in terms of Run-of-Mine (RoM) grades and tonnage as delivered to the metallurgical processing facilities and are therefore fully diluted. Mineral Reserves statements include only the Measured and Indicated Mineral Resources modified to produce Mineral Reserves contained in the LoM plan and are quoted as at 31 December 2023.

12.2 Mine Planning Process

The following planning process applies at Kloof:

- Appoint and ensure competence in mine planning responsibilities per section
- Consider the planning cycle for which the plan is to be prepared
- Obtain an updated geological structural model for design purposes
- Obtain/determine future planning levels for the operation. Identify output levels for the operation (gold(kg)target/tonnage required, development targets)
- Break these down per individual operating level
- Liaise with all senior vice presidents, vice presidents of operations and business unit management teams and brief anticipated production levels and efficiency rates
- Evaluate historical efficiencies against future planned efficiencies and reach agreement of planning performance levels
- Provide base plans for each individual business unit and determine numbers of crews and scheduling systems per business unit
- Document and file all tunnel dimensions and advance rates
- Review tunnel dimensions with ventilation, rock engineering, evaluation and mining engineering teams
- Agree and reach a consensus on all stoping layouts, ledging and extraction sequencing/methodologies
- Review and sign-off with all appropriate business unit management teams
- Document the planned parameters in a shaft or unit planning brief
- Commence designing of mine plan. Specify capital and preferably separate individual elements for later revision. Ensure naming of working place, etc.
- Review development and stoping mine design with appropriate business unit management team members and ancillary support staff including mrm competencies
- Modify if required, or accept and commence with scheduling based on agreed scheduling parameters per area
- Review schedules and outputs in terms of production with vice presidents of operations, to ensure appropriate levels of production and volume efficiencies are obtained for that unit
- Communicate with all service staff (occupational health - environmental / ventilation, rock engineering), horizontal tramming for level capacities and vertical engineering for shaft capacities
- Modify and revise as required with appropriate staff
- Consolidate all sections to create overall operational performance plan
- Run evaluation module/grid and determine gold output

- Provide shaft or unit-based data in terms of volume and grade into acceptable standard database and reporting format
- Review the total plan with MRM staff competency heads
- Revise and review again if required
- Submit for final review with senior vice presidents and vice presidents of operations to ensure operational targets and performance levels are reached
- Submit to the unit manager mine planning to prepare on the appropriate format and for submission to the financial department for total mine financial evaluation
- Identify all areas where differences in design can or may require additional feasibility study work in the future. These would include declines, new shafts, and alternative layouts. Generate cost models in conjunction with the project office
- Review mining plan with rock engineers and provide data sets for design modelling. Obtain support of acceptance of plan as far as rock engineering is concerned
- Review mining plan with occupational health (ventilation) engineers and provide data sets for design modelling. Obtain written support of acceptance of plan as far as occupational health is concerned
- Review with all mining engineering staff and gain acceptance and commitment to plan. Generate and provide appropriate schedules and plans for all manager operations
- Consider alternative scenarios relating to rates of advance, alternative layouts, and risk mitigation
- Formally document all capital projects and compile consolidated project report for each project
- Reconcile the planning mineral reserves per shaft with scheduled and designed mineral reserves and account for all differences. Modify plan to eliminate all differences. This reconciliation is an MRM competency head process
- Prepare operational/ strategic plan presentation to SA Gold Operations MANCO. Modify and amend where required
- Complete the final cycle of the planning process and document all parameters. Make digital backup of mineral reserves model, design model, schedule model, all associated worksheets/presentations
- Roll out and communicate the final plan to all business units with prints of appropriate plans and spreadsheets. Confirm and identify all critical development
- Review and modify on a monthly basis actual achievement versus planned volumes

12.3 Historical Mining Parameters

The planning parameters are primarily based on historical achievements. Mining expenditures are stated in nominal terms.

Historical mining statistics for the shafts from 2019 to 2023, as well as historical averages are provided in

Table 36.

Table 36: Historical Mining Statistics by Section

Shaft	Units	2019	2020	2021	2022	2023	Average
Main Shaft							
Main On-Reef Development	(m)	1025	1,003	1,469	832	1,434	1,153
Main Off-Reef Development	(m)	2,485	2,690	3,635	2,366	3,601	2,955
Area Mined	(m2)	72,300	71,162	81,985	54,840	113,027	78,663
Mill Tonnes	(kt)	539	533	629	452	801	591
Gold produced	(oz)	3,270	2,905	2,963	2,000	3,637	2,955
No. 3 Shaft							
Main On-Reef Development	(m)	178	72	214	0	0	93
Main Off-Reef Development	(m)	324	454	61	0	0	168
Area Mined	(m2)	26,741	19,248	21,622	0	0	13,522
Mill Tonnes	(kt)	191	156	159	1	0	101
Gold produced	(oz)	1,231	1,199	871	12	0	662
No. 4 Shaft							
Main On-Reef Development	(m)	367	540	611	345	280	428
Main Off-Reef Development	(m)	2,122	3,086	3,929	1,586	898	2,324
Area Mined	(m2)	55,548	59,948	72,338	36,004	31,619	51,091
Mill Tonnes	(kt)	419	485	572	285	183	389
Gold produced	(oz)	2,474	2,926	3,628	1,360	852	2,248
No. 7 Shaft							
Main On-Reef Development	(m)	345	73	96	23	177	143

Main Off-Reef Development	(m)	633	409	52	72	140	261
Area Mined	(m2)	23,615	24,298	30,012	14,554	22,224	22,941
Mill Tonnes	(kt)	154	156	187	93	123	143
Gold produced	(oz)	892	872	1033	450	976	844
No. 8 Shaft							
Main On-Reef Development	(m)	536	483	429	484	545	495
Main Off-Reef Development	(m)	1,409	1,947	2,868	1,244	2,240	1,942
Area Mined	(m2)	22,945	28,035	33,059	17,254	38,066	27,872
Mill Tonnes	(kt)	185	239	316	160	292	238
Gold produced	(oz)	977	1171	1,064	475	1,320	1,001
Total Underground Kloof Operations							
Main On-Reef Development	**(m)**	**2,450**	**2,173**	**2,819**	**1,684**	**2,435**	**2,312**
Main Off-Reef Development	**(m)**	**6,973**	**8,585**	**10,546**	**5,268**	**6,879**	**7,650**
Area Mined	**(m2)**	**201,149**	**202,691**	**239,016**	**122,652**	**204,936**	**194,089**
Mill Tonnes	**(kt)**	**1,489**	**1,570**	**1,863**	**992**	**1,399**	**1,462**
Gold produced	**(oz)**	**8,844**	**9,073**	**9,558**	**4,298**	**6,785**	**7,712**

12.4 Shaft and Mine Paylimits

12.4.1 Paylimits

For the purpose of guiding the Mineral Reserve process, two distinct cut-offs are calculated:

- Break-even cut-off
- Incremental Cut-off

The incremental cut-off represents the absolute lowest value that a mining crew can work so that all the direct production costs related to that specific panel are covered.

The following 18-24 month historical parameters are considered:

The following 18-24 month historical parameters are considered:

- The average mining efficiency per shaft (m^2/crew)
- The average number of persons in a mining crew
- Labour cost per manhour translates into average labour cost per crew (R/m^2)
- Stoping stores cost (R/m^2)
- Metallurgical processing cost (R/t)
- Estimated tramming cost (R/t)
- Supervision cost (R/t)
- Estimated equipping cost (ZAR/t)
- Oreflow parameters: stoping width, specific gravity, mine-to-mill dilution, waste mining, Mine Call Factor and Plant Recovery Factors
- Gold price is forward looking. More information can be found in Section 16.4. Gold price used for cut-off grades is a early estimate as these factors are determined before the final decision on gold prices for the Technical -Economic Model (TEM) is provided by the Registrant. The gold price used is within 2% of the long-term gold price in the TEM.

An example of an incremental cut-off calculation is given in Table 37.

Table 37: Example of Parameters Used in Determining the Incremental Cut-off Grade

Shaft		KM	K8	K7
Crew reports dashboard (m²/crew)	m²	146	138	126
2023 planned (m²/crew)		202	186	130
sw	cm	168	193	173
density		2.72	2.75	2.75
OSS	%	104%	103%	107%
Mill tons	t	958	1,011	663
Waste Discount	%	97%	99%	97%
MCF	%	88%	82%	75%
PRF	%	98%	98%	98%
Gold price	ZAR/kg	R956,000	R956,000	R956,000
Crew size	No	20.2	24.5	17.9
Labour Cost (Review Pack P2) / man	ZAR/man	17,800	13,931	13,211
Stoping Stores (Review Pack)	ZAR/m²	3,029	3,798	3,436
Metallurgical Cost (Review Pack)	ZAR/t	241	257	226
Tramming cost	ZAR/t	57	57	57
Supervision (Review Pack P1)	ZAR/t	60	69	151
Equipping cost	ZAR/t	112	112	112
Unit cost	ZAR/m²	6,183	7,358	7,911
Unit cost	ZAR/t	1,305	1,351	1,554
Total Unit Cost (benchmark)	ZAR/t	4,577	4,474	8,656
Labour Cost	ZAR	359,385	341,726	236,785
Stoping Stores	ZAR	440,790	524,405	431,912
Metallurgical Cost	ZAR	230,490	259,388	150,150
Tramming cost	ZAR	54,340	57,338	37,633
Supervision	ZAR	57,479	69,313	100,103
Equipping cost	ZAR	107,321	113,243	74,325
Total cost	ZAR	1,249,805	1,365,415	1,030,908
Cutoff @ R956000 / kg and 0% margin		**394**	**477**	**435**

Break-even Cut-off

The break-even cut-off represents the minimum grade/value at which a shaft can mine so that it doesn't make a profit or loss. It is based on a pay limit and is processed through a grade/tonnage or value/area curve (VAC) based on the specific operations available resource.

The pay limit is calculated using the same parameters issued by the Registrant to the various operations at the start of the budget process. The planned volume, cost and ore-flow parameters are determined from a combination of historical measured parameters and strategic direction for each shaft.

Break-even gold is determined at the mill level and then by applying the various tonnage modifiers and estimated gold loss/dilution parameters in a reverse ore-flow to determine break-even gold at the stope level. The pay limit as a value in cm.g/t can then be used together with the VAC to determine cut-off.

An example of a break-even cut-off calculation is given in Table 38;

Table 38: Break-even Cut-off calculation for a shaft

Shaft		*K8*
	Unit	Volume
Stoping	m²	4,000
Stoping width	cm	195
Discrepancy	%	3.0%
Other sources	%	2.7%
Other sources	g/t	0.0
Reef development	%	3.2%
Reef development	g/t	1.9
Waste development	%	26.8%
MCF	%	79.4%
PRF	%	98.0%
Density	t/m³	2.75
Gold price	ZAR/kg	950,000
All-in cost	ZARm	109.6
	ZAR/t	3,286
Milled tons	t	33,359
Breakeven gold	kg	115
Stope measured tons	t	21,450
Stope measured gold	kg	146
Other gold	kg	2

Pay limit	g/t	6.8
Pay limit	cm.g/t	1,330
Cutoff	g/t	0.8
Cutoff		166

The resource blocks for the specific shaft are summarized and filtered to include only those that represent the planned mining in the medium term. This is thought to be the best representation of the orebody that will be included in the budget process.

These blocks are then grouped and sorted from lowest value to highest value and plotted on a chart. Cumulative area (m²) is presented on left-hand Y axis and the cumulative average value is plotted on the X axis. The value that corresponds to the cumulative value is plotted on the right-hand Y axis.

The calculated pay limit can now be plotted on the X axis and projected onto the cumulative m² line to determine how much area will be available to mine at that pay limit. The same pay limit can also be projected onto the value line and the cut-off can be read off the right-hand Y axis.

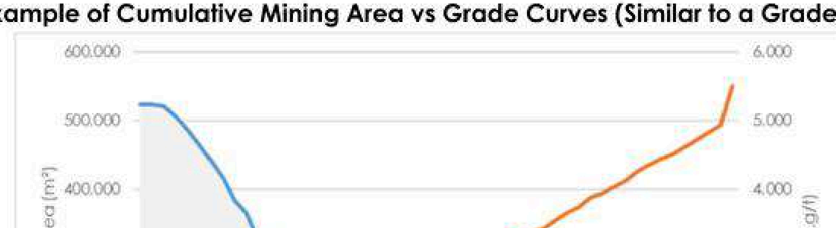
The two cut-offs for each shaft can now be compared. The higher of the two is considered as the final guiding cut-off for planning purposes.

An example of cumulative mining area vs grade curves is given in Figure 37 (This is similar to a grade tonnage curve but uses area instead of tonnage).

Figure 38 shows the relationships between the various cut-off grades for individual shafts.

Table 39 contains the final pay limits for the Mineral Resources and Mineral Reserves.

Figure 37: An Example of Cumulative Mining Area vs Grade Curves (Similar to a Grade/Tonnage Curve)



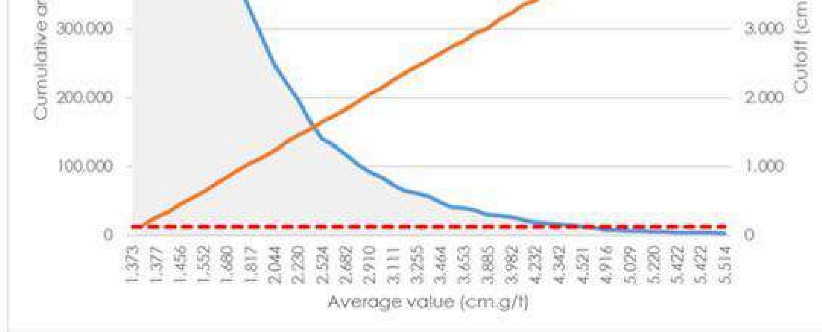
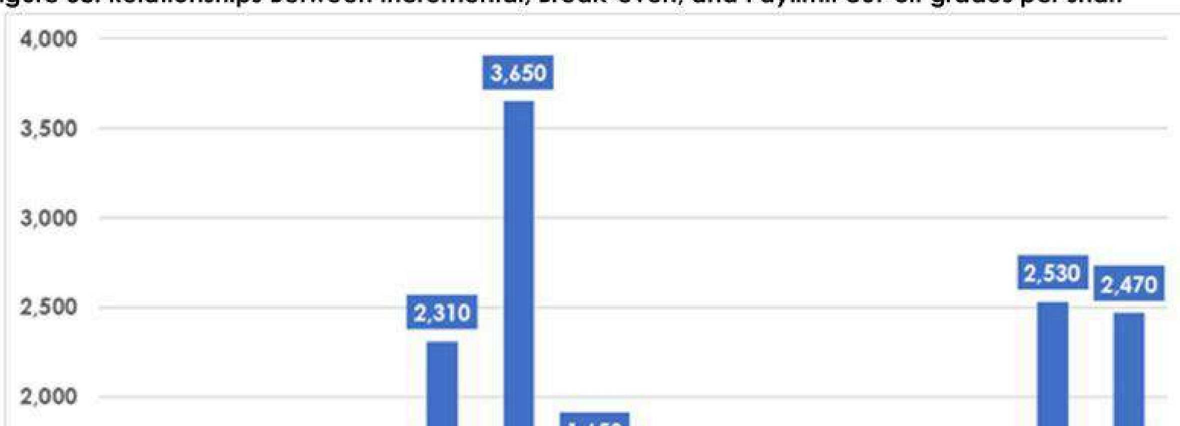


Figure 38: Relationships Between Incremental, Break-even, and Paylimit cut-off grades per shaft



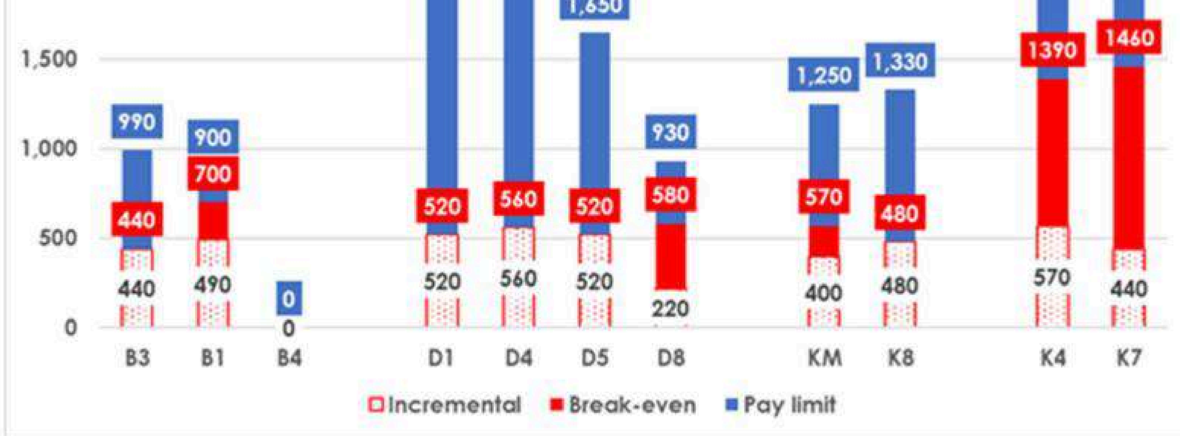


Table 39: Paylimits for the Kloof shafts

Pay Limits						
Shafts	**Gold Price ZAR/kg**	**K Main cm.g/t**	**No. 8 cm.g/t**	**No. 4 cm.g/t**	**No. 7 cm.g/t**	**Total Mine cm.g/t**
2022 Mineral Reserves	800,000	1,310	1,190	1,870	1,850	1,550
2023 Mineral Reserves	850,000	1,300	1,350	2,030	2,460	1,640
2024 Mineral Reserves**	956,485	1,400	1420	-	2,420	1,650
2024 Mineral Resources	983,813	1,370	1,380	-	2,360	1,600

**Used for calculation of the pay limit only. Actual prices used in the LOM and TEM are given in Section 16.4 and Table 77.

12.4.2 Modifying Factors and LoM plan

Kloof has used an overall 84% Mine Call Factor in the 2024 Life-of-Mine plan. The weighted combination of the shafts' Mine Call Factor is the plants' average. The monthly milled tonnes and recovered gold allocated to each shaft is based on the proportion of tonnes and gold content delivered by each shaft to the plant. Belt sampling is done on every shaft, and every belt has a weightometer. The results of the belt sampling are then used to proportionally allocate the final gold and tonnage declaration (as determined at the metallurgical plant).

The Mineral Reserve classification of Proven and Probable was largely a function of the Mineral Resource classification with due consideration of the minimum criteria for the "Modifying Factors" as considered below:

- Mining
- Metallurgical
- Processing
- Infrastructural
- Economic
- Marketing
- Legal and Environmental, social and governmental factors.

Table 40 provides an overview of the Mineral Reserves modifying factors and Table 41 provides details of the historical and projected modifying factors. All modifiers are determined per shaft and applied to their respective production profiles.

The Life-of-Mine plan is shown in Table 42.

Table 40: Mineral Reserve Modifying Factors 2024

Element	Unit	Value
Mined Value (over LoM)	(cm.g/t)	1,444
Waste Mining Factor	(%)	2.2
Mine Call Factor	(%)	84.2
Mining Recovery Factor	(%)	13.0
Plant Recovery Factor	(%)	98.0
Other Sources Stoping	(%)	3.2
Development to Mill	(%)	8.1
Survey Discrepancy	(%)	17.4
Channel Width	(cm)	111
Stoping Width	(cm)	166
Mill Width Factor	(ratio)	1.40
Mill Width	(cm)	232
Mineral Reserves Pay Limit (Year 1)	(cm.g/t)	1,650

Table 41: Historical and Projected Modifying Factors

	Units	2019	2020	2021	2022	2023	LoM Projection
Mine Call Factors							
Main Shaft	(%)	94	90	79	83	89	86
No. 4 Shaft	(%)	78	82	92	74	60	-
No. 7 Shaft	(%)	77	77	71	67	81	75
No. 8 Shaft	(%)	90	81	66	81	82	80
Average	(%)	86	83	80	78	82	84
Other Sources Stoping							
Main Shaft	(%)	4	3	3	3	3	3
No. 4 Shaft	(%)	7	6	5	6	7	-
No. 7 Shaft	(%)	9	6	9	8	11	6
No. 8 Shaft	(%)	2	2	2	4	3	3
Average	(%)	6	5	5	5	4	3
Survey Discrepancy							
Main Shaft	(%)	25	19	18	22	16	21
No. 4 Shaft	(%)	7	7	4	9	-11	-
No. 7 Shaft	(%)	8	-1	0	10	-1	4
No. 8 Shaft	(%)	-2	3	9	7	-2	3
Average	(%)	13	11	10	15	7	17
Development (Reef)							
Main Shaft	(%)	3	3	3	2	2	8
No. 4 Shaft	(%)	0	0	0	1	1	-
No. 7 Shaft	(%)	2	0	0	0	2	8
No. 8 Shaft	(%)	4	3	3	4	3	7
Average	(%)	2	2	2	2	2	8
Stoping Width							
Main Shaft	(cm)	152	167	170	176	172	162
No. 4 Shaft	(cm)	176	179	181	183	178	-
No. 7 Shaft	(cm)	170	196	192	182	170	169
No. 8 Shaft	(cm)	206	209	201	200	202	179
Average	(cm)	173	181	181	182	178	166
Milling Width							

Milling Width							
Main Shaft	(cm)	278	277	285	311	266	241
No. 4 Shaft	(cm)	280	306	293	348	290	-
No. 7 Shaft	(cm)	247	350	229	247	209	206
No. 8 Shaft	(cm)	298	318	355	351	290	205
Average	(cm)	272	289	285	307	255	232

Table 42: LoM Plans – Current Operations 2024-2032

	Units	LoM	2024	2025	2026	2027	2028	2029	2030	2031	2032
			1	2	3	4	5	6	7	8	9
Underground											
Main On-Reef Development	(m)	9,141	1,523	1,497	1,343	592	1,120	1,028	939	628	472
Main Off-Reef Development	(m)	33,300	7,151	7,180	4,303	4,101	2,813	2,864	1,635	1,415	1,837
ROM (Mill Tonnes)	(kt)	10,800	1,407	1,422	1,264	1,299	1,240	1,220	1,154	948	847
ROM Grade(g/t)			4.3	4.4	5.1	4.8	5.8	6.2	5.9	5.2	6.5
Recovery (%)			98	98	98	98	98	98	98	98	98
Yield	(g/t)	5.2	4.2	4.3	5	4.7	5.7	6.1	5.8	5.1	6.3
Gold Produced	(kg)	55,665	5,861	6,075	6,319	6,078	7,079	7,413	6,679	4,805	5,355
Surface											
(ROM) Mill Tonnes	(kt)	805	659	145	-	-	-	-	-	-	-
ROM Grade(g/t)											
Recovery (%)											
Yield	(g/t)	0.4	0.4	0.5	-	-	-	-	-	-	-
Gold Produced	(kg)	305	236	70	-	-	-	-	-	-	-
Total Mine											
(ROM) Mill Tonnes	(kt)	11,604	2,066	1,567	1,264	1,299	1,240	1,220	1,154	948	847
ROM Grade(g/t)											
Recovery (%)											
Yield	(g/t)	4.8	3	3.9	5	4.7	5.7	6.1	5.8	5.1	6.3
Gold Produced	(kg)	55,970	6,097	6,144	6,319	6,078	7,079	7,413	6,679	4,805	5,355

12.5 LoM Projects

An optimisation exercise was completed to rationalise the infrastructure between Main and No. 3 Shafts (Kloof Integration Project). The successful outcome of the planned inter-connecting development and opening-up will result in significant cost savings to the operation.

. This phase entails the re-opening of old development between No. 1 and No. 3 Shafts and will allow the mining of the remaining VCR previously unmined areas at No. 3 Shaft, as well as significant secondary reef potential on the Libanon Reef and Kloof Reef from No. 1 Shaft, well into the latter part of the Kloof LoM.

No. 8 Shaft is developing towards a well-defined pay shoot on the Kloof Reef on three additional upper levels, which should extend the mining life of No. 8 Shaft (No. 8 Shaft Expansion Project).

12.6 Specific Inclusions and Exclusions

The decision on whether to include or exclude potential mining areas is based on a detailed review, which includes:

- Health and safety considerations
- Economic viability
- Technical justification
- Ability to mine the area and
- Infrastructure availability constraints.

All areas included in the LoM plan are mined from current infrastructure and are a normal continuation of mining.

12.6.1 Specific Exclusions

- All mining below 40 Level at the No. 4 Shaft has been excluded from the Mineral Reserve following the closure of the shaft in 2023.

12.6.2 Specific Inclusion

- Blocks of ground which were previously left behind that have been identified for mining through a detailed assessment per area, and are accessible from existing infrastructure (the areas are not always accessible but the FW development to the areas is either open or being developed).
- Mining from secondary reefs below the cut-off grade is sometimes required to destress high grade VCR white areas.
- Includes unavoidable and/or necessary unpay mining and dilution.

12.7 Mineral Reserve Estimation

The tonnage and grades scheduled in Measured Mineral Resources are classified as Proved Mineral Reserves and those in the Indicated Mineral Resources are classified as Probable Mineral Reserves. No Measured Mineral Resources were converted to Probable Reserves. No Inferred Mineral Resources were included in the LoM.

Mineral Reserve estimation at Kloof is based on the development of an appropriately detailed and engineered LoM plan and technical studies to at least the pre-feasibility level. It accounts for all necessary access development and stope designs.

The Mineral Reserves are derived following the production of a LoM plan by incorporating modifying factors into the Mineral Resource estimates. All design and scheduling work for underground is undertaken within the MineRP Planner. Surface mining is planned using GIS and spreadsheets. The planning process incorporates appropriate modifying factors based on the reconciliation exercises described and the use of cut-off grades policies and technical economic investigations.

The mill tonnes are quoted as mill-delivered metric tonnes and RoM grades, inclusive of all mining dilutions and gold losses except mill recovery. Metallurgical recovery factors have not been applied to the Mineral Reserves figures, but to the LoM and financial models, and are approximately 98% and 71% for underground and surface ore respectively.

The Mineral Reserves classification is shown in Figure 41 to Figure 44, Section 13.10.

12.8 Surface Sources

Surface sources refer to processed materials, primarily waste rock dumps, slimes and sand at Kloof. It is planned to process 1.9Mt of surface material at a head grade of 0.6g/t gold. No surface mining has been included in the Mineral Reserve statement but is included in the LOM and in the financial modelling.

12.9 Mineral Reserves Statement

The Mineral Reserves are provided in Table 43.

Mineral Reserves per shaft are given in Table 44.

Figure 39 shows the main changes year on year due to various factors.

Notes on the Mineral Reserves;

- Mineral Reserves have been reported in accordance with the classification criteria in SK-1300.
- Mineral Reserves are calculated using shaft specific cut-off grades Section 12.4.1.
- For Gold Price information see Section 16.4.
- All Mineral Reserves are quoted as 100% ownership.
- Mineral Reserves are reported quoted in terms of RoM grades and tonnage delivered to the plant and do not include metallurgical recovery factors which are applied in the cut-off grades and LoM calculations, which are approximately 98% for underground at Kloof.
- A 0.0 represents numbers below significant figures reported, and a ("-") represents absent value.
- Mineral Reserves statements include only Measured and Indicated Mineral Resources modified to produce Mineral Reserves, and contained in the LoM plan.
- Risks are discussed in Section 21.1

12.10 Mineral Reserve Sensitivity

Table 45 provides details of the Mineral Reserves sensitivity based on the Mineral Reserves modifying factors applied by Kloof. These sensitivities are not based on detailed LoM plans and should be considered on a relative and indicative basis only. Cost sensitivity for the entire operation is given in Section 19.

Table 43: Mineral Reserve as at 31 December 2023 at 100%

Classification – Gold	Tonnes (Mt)		Grade (g/t)		Gold (Moz)	
	Dec23	Dec22	Dec23	Dec22	Dec23	Dec22
Proven	7.6	11.0	5.1	6.1	1.3	2.1
Probable	3.2	7.5	5.6	5.4	0.6	1.3
Total Mineral Reserve	**10.8**	**18.6**	**5.3**	**5.8**	**1.8**	**3.4**

Table 44: Attributable Mineral Reserve per Mining Area as at 31 December 2023 at 100%

Gold per Mining Area	Proven			Probable			Dec23		
	Mt	g/t	Moz	Mt	g/t	Moz	Mt	g/t	Moz
Main Shaft	5.9	4.9	0.9	2.6	5.8	0.5	8.5	5.2	1.4
No. 4 Shaft	-	-	-	-	-	-	-	-	-
No. 4 Shaft Decline	-	-	-	-	-	-	-	-	-
No. 7 Shaft	0.2	6.4	0.1	0	4.6	0	0.3	6.3	0.1
No. 8 Shaft	1.4	5.8	0.3	0.6	4.7	0.1	2	5.5	0.4
Total Underground	**7.6**	**5.1**	**1.3**	**3.2**	**5.6**	**0.6**	**10.8**	**5.3**	**1.8**
Grand Total (Underground and Surface)	**7.6**	**5.1**	**1.3**	**3.2**	**5.6**	**0.6**	**10.8**	**5.3**	**1.8**

Figure 39: The Kloof Operations Mineral Reserve Reconciliation at 31 December 2023

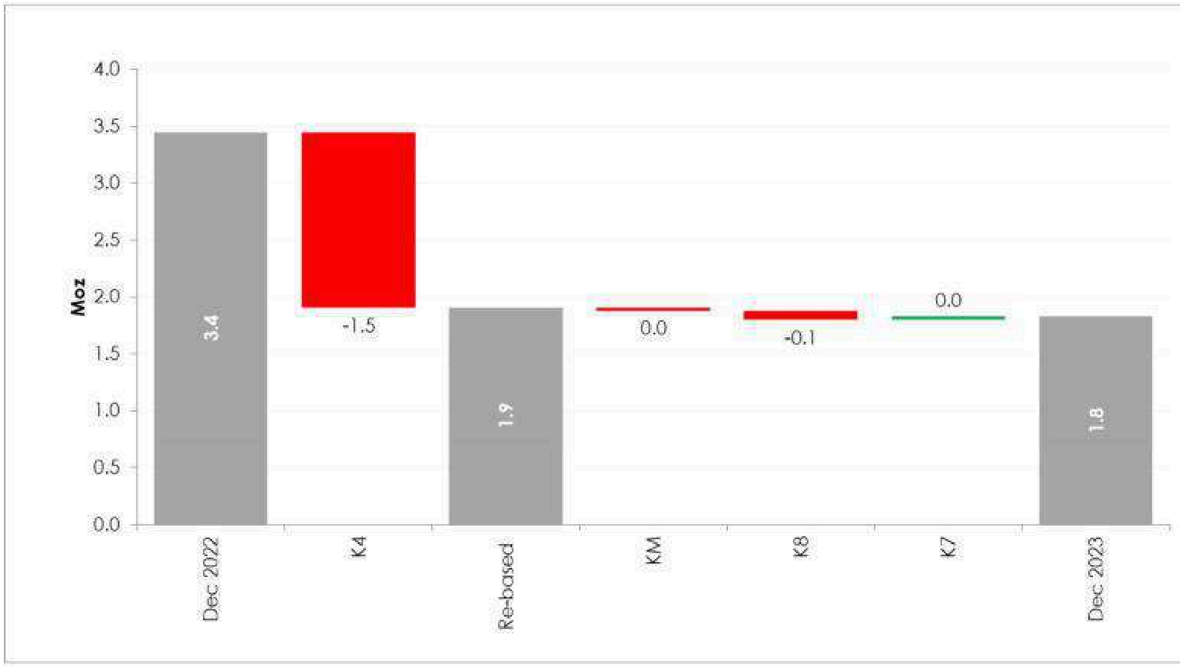


Table 45: Underground Mineral Reserve Estimates Sensitivity as at 31 December 2023

Classification	Scenario -10%			Scenario -5%			Base Case			Scenario +5%			Scenario +10%		
	Tonnes (Mt)	Grade (g/t)	Gold (Moz)	Tonnes (Mt)	Grade (g/t)	Gold (Moz)	Tonnes (Mt)	Grade (g/t)	Gold (Moz)	Tonnes (Mt)	Grade (g/t)	Gold (Moz)	Tonnes (Mt)	Grade (g/t)	Gold (Moz)
Proven	6.9	5.3	1.1	7.1	5.2	1.1	7.6	5.1	1.2	7.9	5.0	1.3	8.2	4.9	1.3
Probable	2.9	5.8	0.5	3.0	5.7	0.6	3.2	5.6	0.6	3.4	5.5	0.6	3.6	5.4	0.6
Total Underground	9.8	5.4	1.7	10.1	5.3	1.7	10.8	5.3	1.8	11.3	5.1	1.9	11.7	5.0	1.9
Grand Total	**9.8**	**5.4**	**1.7**	**10.1**	**5.3**	**1.7**	**10.8**	**5.3**	**1.8**	**11.3**	**5.1**	**1.9**	**11.7**	**5.0**	**1.9**

12.11 QP Statement on the Mineral Reserve Estimation

The Mineral Reserves declared are estimated from detailed LoM plans developed per shaft and are based on the Mineral Resource estimates as at 31 December 2023, together with a set of modifying factors based on recent historical achievements. The assumptions applied in determining the modifying factors are reasonable and appropriate. Modifying Factors are chosen to minimized the long-term risk to the Mineral Reserves. The LoM plans were developed with an approach that allows the production team's input into the process and is sufficient in detail to ensure achievability. All the inputs used in the estimation of the Mineral Reserves have been thoroughly reviewed and can be considered technically robust. The QP considers the modifying factors to be based on a robust historical database of several years history and no material changes are anticipated that will have a significant bearing on the estimation process. Risks are further discussed in Section 21.

13 Mining Methods

13.1 Introduction

This Section includes discussion and comment on the mining engineering related aspects of the LoM plan associated with Kloof. Specifically, comment is given on the mine planning process, mining methods, geotechnics and mine ventilation. Some discussion on the planned projects is also included. The mine layout, showing the final mine outline of the LoM planning blocks is shown in Figure 41.

13.2 Shaft Infrastructure, Hoisting and Mining Methods

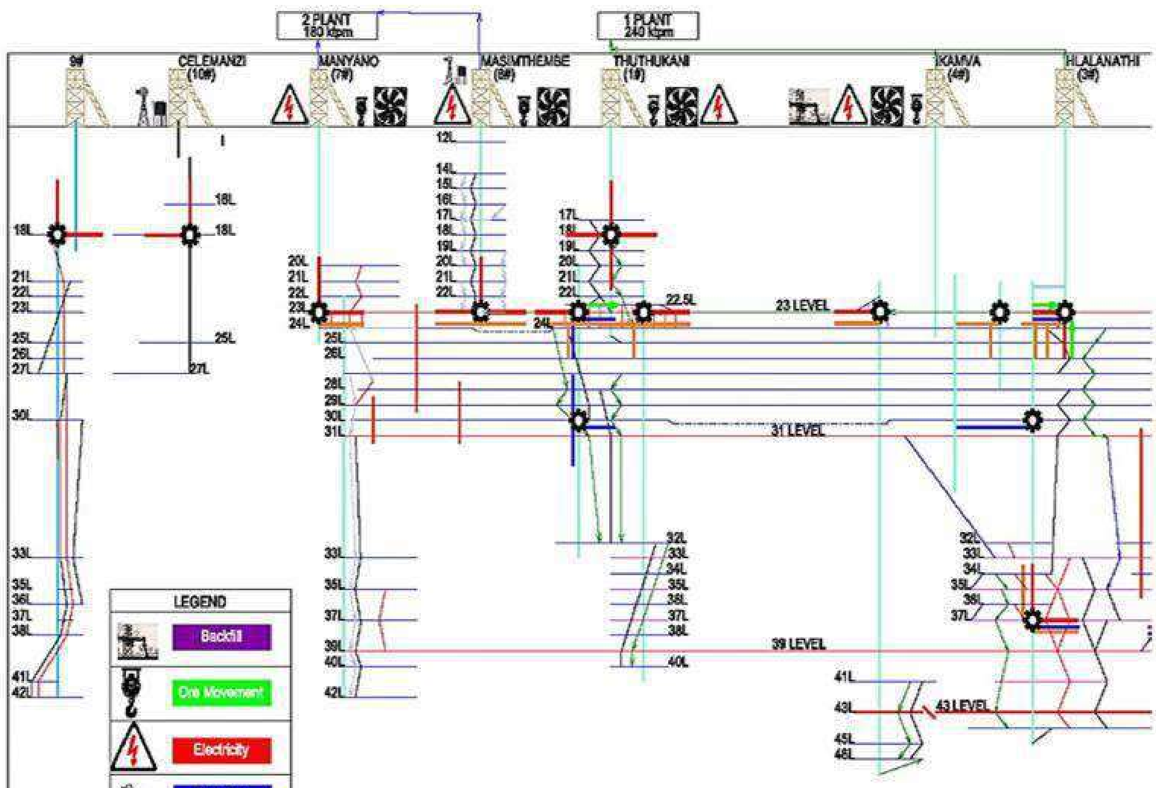
13.2.1 Shaft Infrastructure

Kloof is a large, established intermediate to ultra-deep level gold mine that is accessed from surface through several shaft systems to 40 Level (currently the deepest working level), some 3,200m below surface. Kloof comprises three producing shaft systems that mine different contributions from pillars and open ground.

The Kloof shaft layout is depicted in Figure 40 and shaft positions are shown in

Figure 3, Figure 9, Figure 11 and Figure 41. Surface and other infrastructure to support the shafts is discussed in Section 15.

Figure 40: Schematic Section Indicating the Kloof Infrastructure



13.2.2 Hoisting

The hoisting capacity of the shafts is given in Table 46. Unconstrained capacity is the maximum capacity of the winders. The constrained capacity is the reduced capacity due to load shifting. Load shifting reduces the available capacity by reducing the operating hours. This is done to reduce power costs by not operating during peak power grid hours.

Table 46: Hoisting Capacities

Shaft	Capacity-unconstrained (ktpm)	Capacity Load shifting (ktpm)
Main Shaft	162	115
No. 8 Shaft	84	40
No. 4 Shaft	-	-
No. 7 Shaft	97	63

13.2.3 Mining Methods

As Kloof is a well-developed orebody that has been extensively mined, the choice of mining method is constrained by this historical mining. The orebody is narrow tabular in nature and is accessed through vertical shafts, with evenly spaced development in the footwall. On reef development is advanced on true dip, with conventional finger or wide raises and then stoped to either side in the direction of strike. All mining at Kloof is conventional in nature and is consistent with other similar orebodies.

Mining methods are based on a number of factors and are shaft, infrastructure and orebody specific. They are made by experienced mining engineering professionals, with input from all disciplines.

The mining methods employed at Kloof are subdivided as follows:

- The predominant mining layout at Kloof is scattered grid with breast stoping and dip pillars.
- Scatterred mining of white blocks (previously left unmined).
- Mining of blocks previously left as pillars is mostly up-dip.
- Standard dimensions for the mine planning block is 150m spans with 30 m dip pillars.
- Interlevel spacing is 70-80m.

No backfill operations are conducted. No stripping is required as operations are accessed through underground development and surface sources are readily available.

All mining, specifically from white areas, undergoes a continual risk assessment process and those areas that currently pose a risk are excluded from the Mineral Reserves.

Mineral Reserves generation is done through the development of footwall drives (approximately 90m in the footwall) and crosscuts to reef. Crosscut spacing is based on a selective grid (100m to 180m apart), depending on evaluation, rock engineering principles and structure.

Finger-raise development with breast ledging is done on the secondary reefs and in selected areas on the VCR where the hangingwall consists of Alberton lava. The majority of the VCR mining at all shafts makes use of wide raising, with the hangingwall consisting of Westonaria Formation lava (WAF), to ensure the excavation is properly de-stressed during development.

The underground development requirements are listed in the LoM in Table 42

A Schematic mining layout is given in Figure 9(3D stratigraphy and shafts)

13.3 Geotechnical Analysis

Strategic planning and major design issues were completed with the relevant input from the responsible rock engineers. The primary aspects making up the geotechnical analysis are:

- depth and stress conditions
- rock type and rockmass strength (reef, hanging wall and footwall)
- remnant or virgin ground mining
- geology
- modelled Excess Shear Stress (ESS[MPa]) or modelled Ride [m3] on geological structures
- modelled Average Pillar Stress (APS[MPa]) on mining faces and regional stability pillars
- modelled Energy Release Rate (ERR[MJ/m²]) on active mining faces
- modelled closure [m] and closure volume [m3] in mined out areas
- Modelled convergence (crushing) based on the limit equilibrium modelling method
- modelled Rockwall Condition Factor (RCF) on tunnels
- seismic history and other seismic parameters
- mining geometry and sequencing
- mining rate (m²/month)

13.3.1 Geotechnical Conditions

In the planning process the following is taken into consideration:

- abutments of other reefs in proximity to one another are indicated on all plans, and consideration given to the potential interaction between the reefs due to the effect of mining
- second outlets are of prime importance and where possible are planned for, or a contingency plan put in place
- leads and lags (distance between two adjacent, operating faces) of stoping panels are generally planned not to exceed 10m where practical, and where grade or other constraints do not exist
- the 70m rule has been applied, in that a series of panels may not mine toward one another within 70m. This rule does not result in gold loss, but may affect the mining schedule
- pillars that are within 300m radius from each other are not mined simultaneously
- final remnants are planned to be in the ideal position
- the leaving of bracket pillars along major geological structures is considered

13.3.2 Stress and Seismological Setting

Strategic planning and major design issues, such as shaft pillar extraction, was completed with the relevant input from the responsible rock engineers.

The mining methods employed at Kloof can be classified into the following categories on the basis of geotechnical engineering as follows:

- scattered breast mining is primarily employed in shallow- and intermediate depth mining areas. The crosscuts and raises spacing takes cognisance of rock engineering considerations. This allows some pre-development for selective mining to take place. Conventional support methods are used and regional stability pillars are incorporated against dykes and sub economic blocks of ground as far as possible, therefore payability of the reef and geological features have the main influence on the final extraction ratio. Previously unmined (white) area extraction is taking place at present, but before any such areas are targeted a detailed evaluation of each area is undertaken to determine the level of risk. This includes detailed rock engineering and risk evaluations, an estimate of the scope of work required to access the area, as well as a financial estimate. Extensive use is made of the up-dip mining method where white areas are extracted, and
- in the deep mining areas, a closely spaced dip pillar layout is employed. The typical layout used in the VCR environment consists of dip pillars with a width of 30m, spaced 100m apart. Mining between the pillars mostly consists of an overhand breast mining configuration with mining taking place on both sides of the raise progressing systematically up the raise, with footwall drives at an appropriate distance below the reef plane to locate them in competent rock types. This method allows for some pre-development and hence a certain amount of selective mining is possible. Payability, stability pillars and geological features determine the extraction ratio. In areas of the VCR with a WAF hanging wall, wide-raising is commonly used to establish the new mining areas, as this rock type is not amenable to finger raising. Up-dip mining is additionally used in areas where it is deemed to pose low risk

13.4 Mine Ventilation

The ventilation design for the various shafts at Kloof is based upon the accepted and signed-off design criteria, laid out in the Group standard for ventilation planning criteria. The ventilation systems are designed to provide a minimum specific cooling power of 260W/m², in all working areas of the mine.

The total volume of air circulated through Kloof workings is in excess of 2,000m³/s, as measured at the end of the fourth quarter in 2023.

Ventilation zones have been created throughout the Kloof workings, utilising the natural geological features or by means of designing support pillars or crush pillars to create ventilation pillars. These ventilation zones form an integral part of the fire preparedness strategy on the mine. Numerous booster fans are required, to assist the main surface fans, to ventilate the mine. Wherever possible these booster fans are used in conjunction with bulk-air coolers and spot-coolers to ensure that adequate cooling is delivered as close as possible to the working places of the mine. In-stope ventilation control is installed using conventional ventilation curtains and brattices to minimise air losses to, and heat input from, worked out areas.

worked-out areas.

Project 31/10 (<31°C wet bulb temperature and less than 10% leakage per 100m development column) contributed greatly towards the achievement and maintenance of temperatures in workings to <31.0°C wet bulb, and maintenance of force column leakage, in development ends, below the 10%/100m range.

Temperature limits inside all working places are set at Temperature Wet Bulb (TWB) ≤31.0°C and Temperature Dry Bulb (TDB) ≤37.0°C (i.e. no work, other than to rectify conditions, is allowed within the range of 31.0°C to 32.5°C wet-bulb temperature).

13.5 Refrigeration and Cooling

The total installed capacity of refrigeration plants on Kloof is 165 megawatts (MW) of which 46MW is required to operate to meet the mining plan as of 2024.

The heat loads for each zone have been determined, and projects to optimise cooling systems have been established to counter heat loads where required. Where necessary, surface or mid-shaft bulk air coolers are used to offset heat gain from auto compression. At the deeper levels, smaller bulk air coolers and spot coolers are strategically installed in the haulages, to maintain acceptable environmental conditions in the working places (to maximise positional efficiency).

13.6 Flammable Gas Management

Historically, infrequent flammable gas intersections have been encountered on the shafts of Kloof, and there are currently no active flammable gas sources in the mine. These flammable gas intersections are well controlled by the procedures described in the mine's Flammable Gas Code of Practice. Continuous flammable gas measuring instruments, personally issued to supervisory staff and crew leaders, are used to detect flammable gas on Kloof. All supervisors and crew leaders receive annual training regarding the detection of flammable gas and procedures to be followed when gas is detected.

13.7 Mine Equipment

All conventional narrow reef mining equipment required for ongoing mining operations is currently in place and in use at Kloof mine. Equipment includes winches, scrapers, rock drills, pumps, rolling stock etc. An equipment list is given in Table 47.

Table 47: Major Mine Equipment

Asset Type Description	Count	Asset Type Description	Count
Hopper	1479	Truck Tractor	10
Chain Block	365	Semi-Trailer	10
Substations	287	Armoured Vehicle	10
Transformers	235	Plant Ammonia	9
Guard Car	224	Minibus	8
Locomotive - Diesel	172	SMP Settler	7
Cutting Torch	164	Coaster	7
Substation Mini	153	Compressed Air Column	6
Box Front	132	Tank Chilled Water	6
Cleaning Tool	126	Brokk	6
Man Carriages	99	Crane Mobile	5
Loading Box	99	Pump, Grit	5

Asset Type Description	Count	Asset Type Description	Count
Hydropower Box Front	88	Pump Water	5
Pump - Highlift	79	Combi	5
Crane Overhead	74	STATION WAGON	5
Pumps	73	Surface Loader	5
LDV	73	Fire Engine	5
Loader	71	Caboose	4
Drain hole	69	Building Emergency Generators	4
Locomotive - Battery	68	Mud Pump Column	4
Cooling Car	63	Tank	4
Pump Column	52	Bakkie	3

Tips	44	Bob Cat	3
Trailer	43	Sewage Plant	3
Winders	33	Mobi Lift	3
Sedan	32	Drill Rig	2
Cooling Tower	30	Transport Diesel Tank	2
Hydro Power Loader	27	Scissor Lift	2
Forklift	27	LHD	2
Water Pump	26	Air Box Front	2
Compressors Rotary	25	Compressor	2
Plant Refrigeration	24	Welding Machine	2
SUV	20	Tanks Water	2
Fan Main Extracting	20	Loader, Avant	2
Ring Mains	19	Chairlift	1
Conveyors	19	Dump Truck	1
Generator Emergency	16	Roofbolter	1
Universal Rig	15	Grader	1
Truck	13	Excavator	1
Panelvan	12	Transport Petrol Tank	1
Tractor	12	Heat Exchangers	1
Bulk Air Cooler	12	Scaler	1
		Loco Drill Rig	1

13.8 Personnel Requirements

At present 995 people are allocated for 2023 development. Additional personnel requirements and related information are available in Sections 4.5 and 17.2.

13.9 Requirements for Stripping, Underground Development and Backfilling

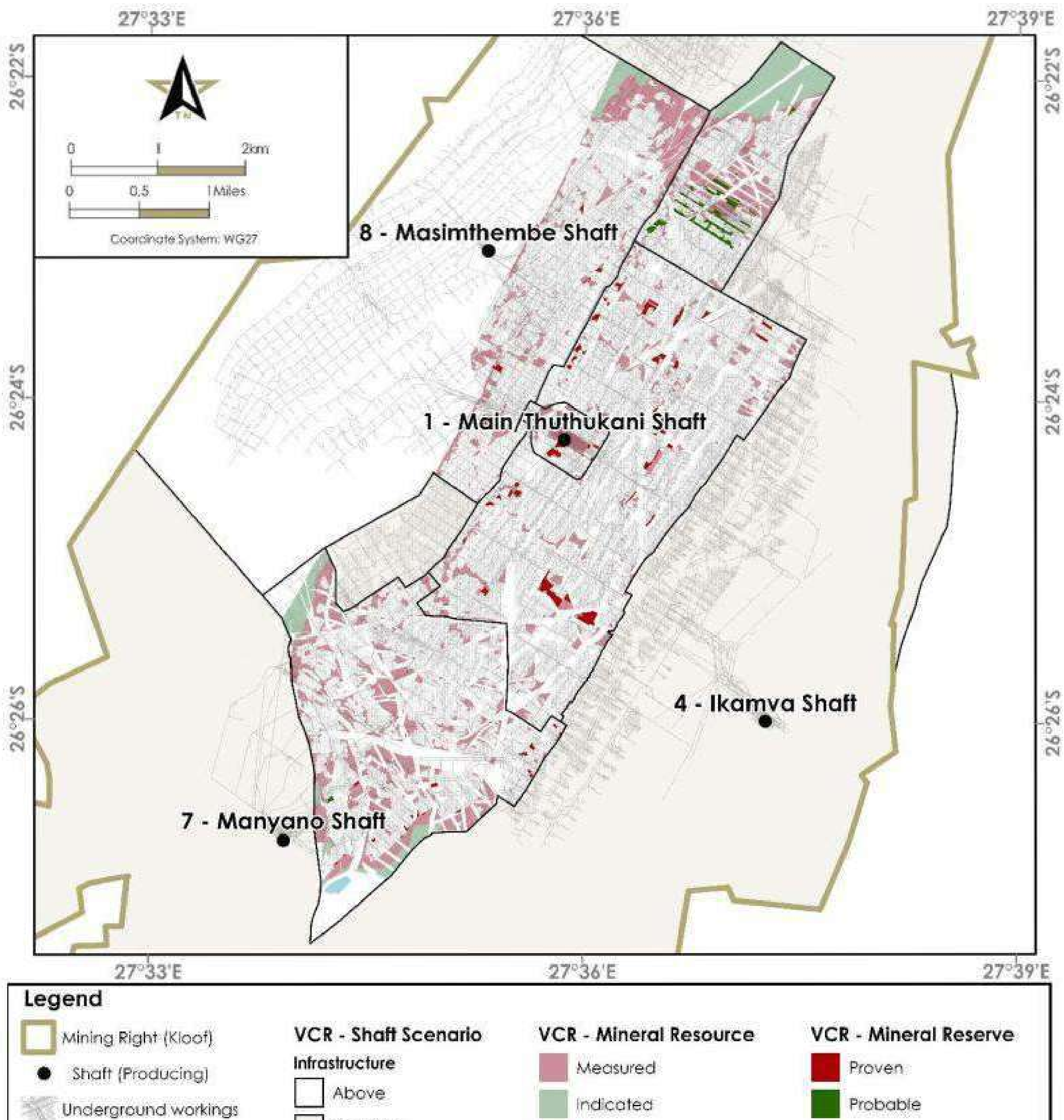
No backfill operations are conducted, with regional and small support pillars left, where possible, in preferably unpay areas.

As Kloof is an operating mine with a long history, all the necessary equipment for mining, extraction and processing is already on-site and is in use. The mine's completed grid development is sufficient to support a two-year mining window, and the future development to support the LoM is shown in Table 42. Historical underground development performance is included in Section 5.2.2.

13.10 Final Layout Map

Refer to Section 11.4 and Section 12.7 for the distribution of Mineral Resources and Mineral Reserves. The final layout map shows the distribution, per reef, of the Classified Mineral Resource Exclusive of Mineral Reserves, the classified Mineral Reserves and the mined out areas.

Figure 41: Kloof Mine VCR Plan



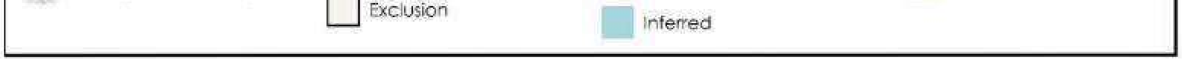
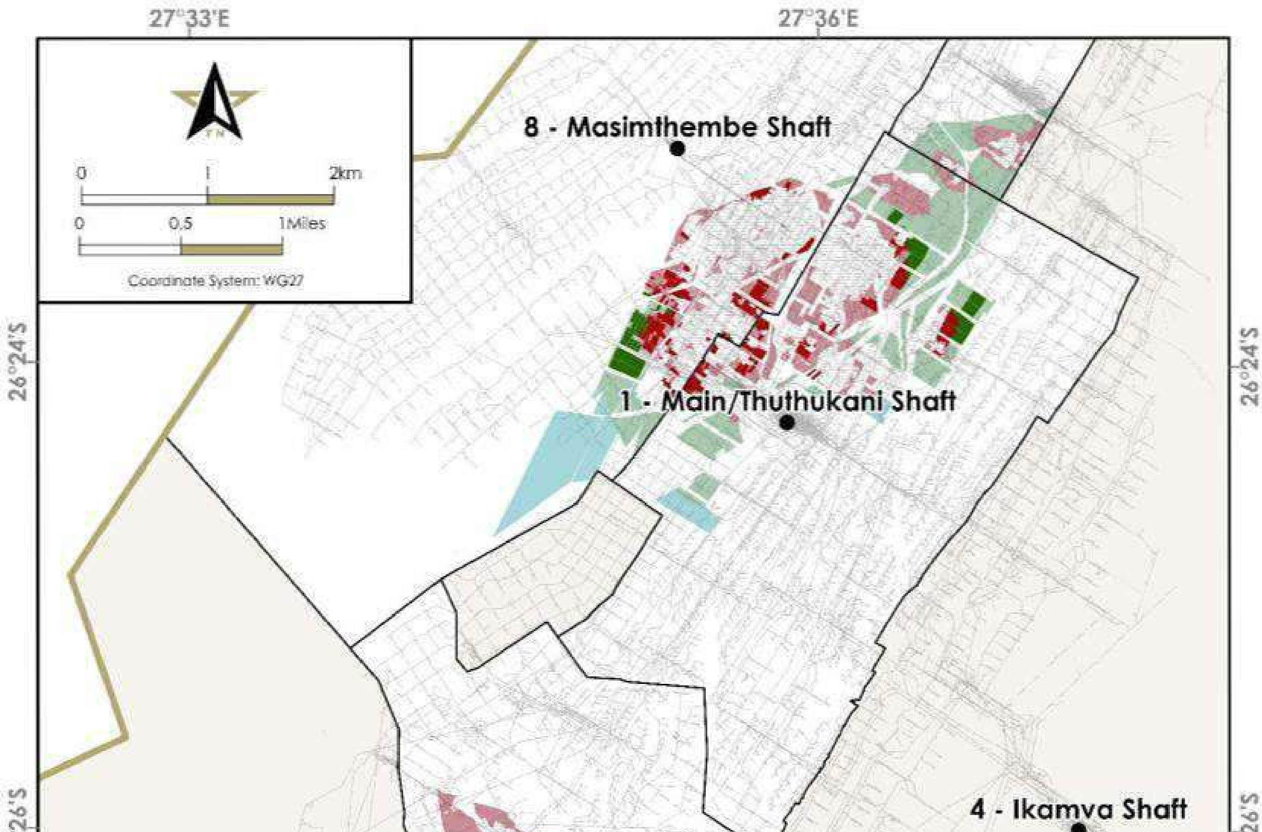


Figure 42: Kloof Mine Kloof Reef Plan



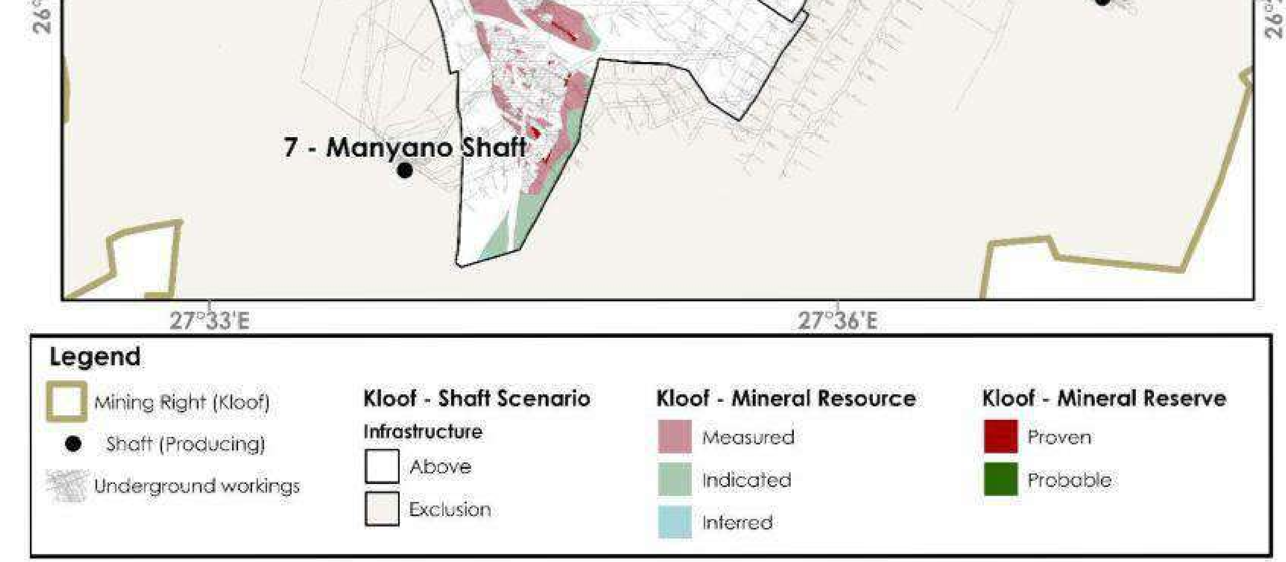
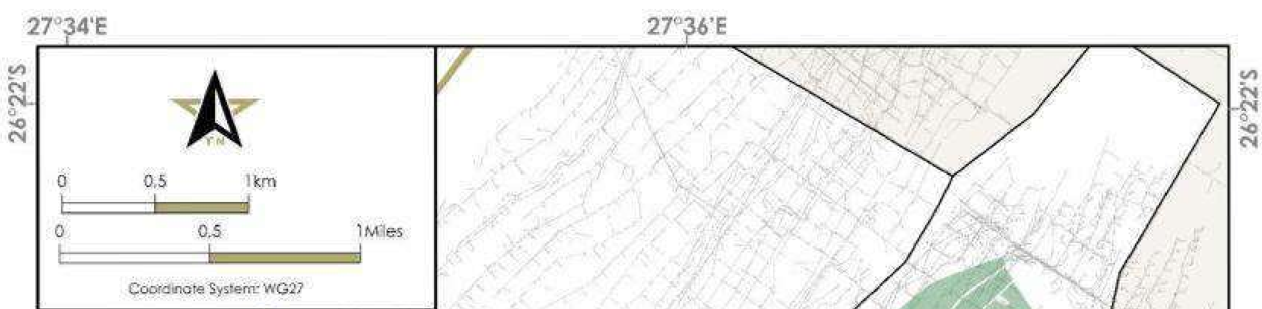


Figure 43: Kloof Mine Libanon Reef Plan



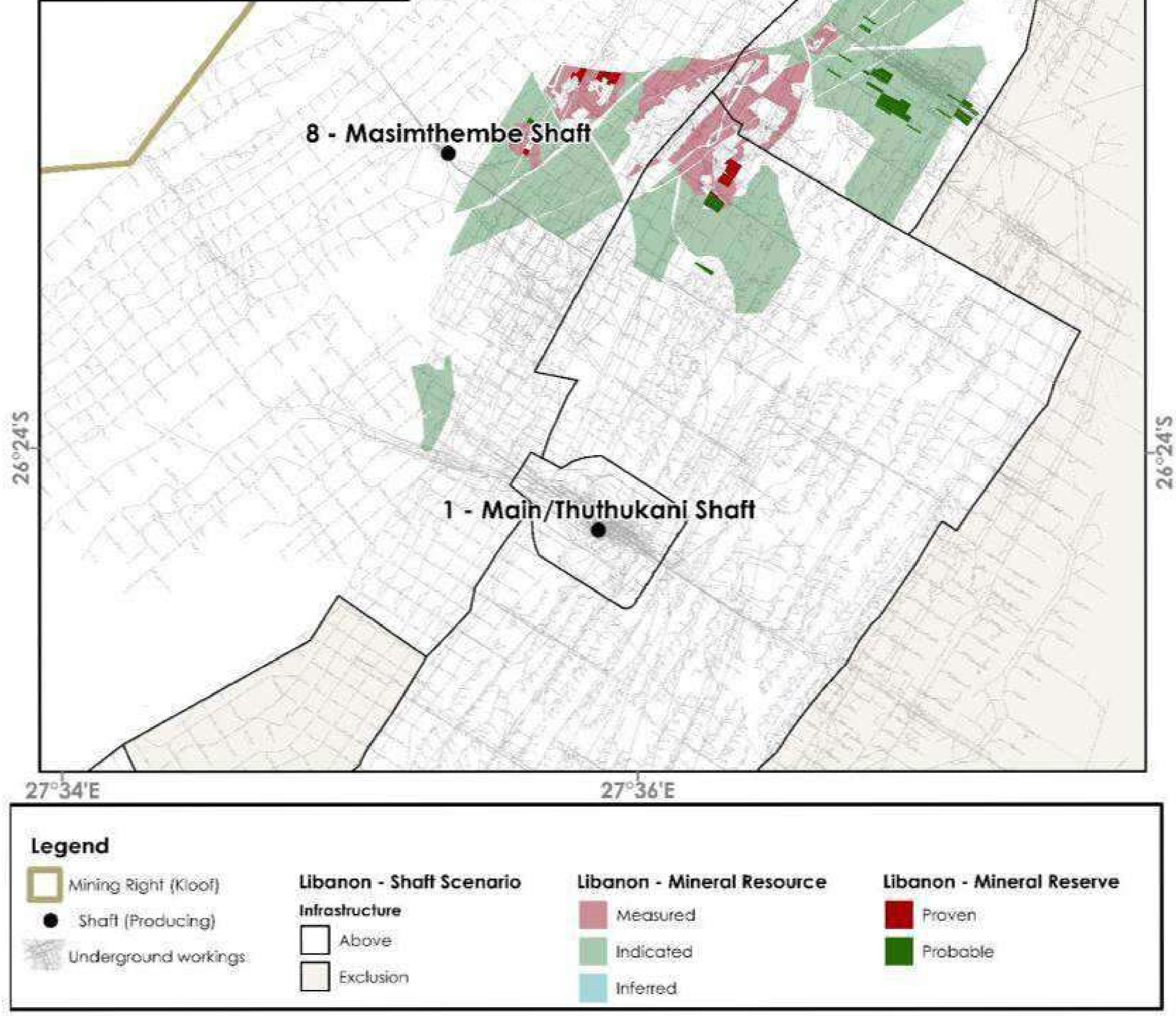
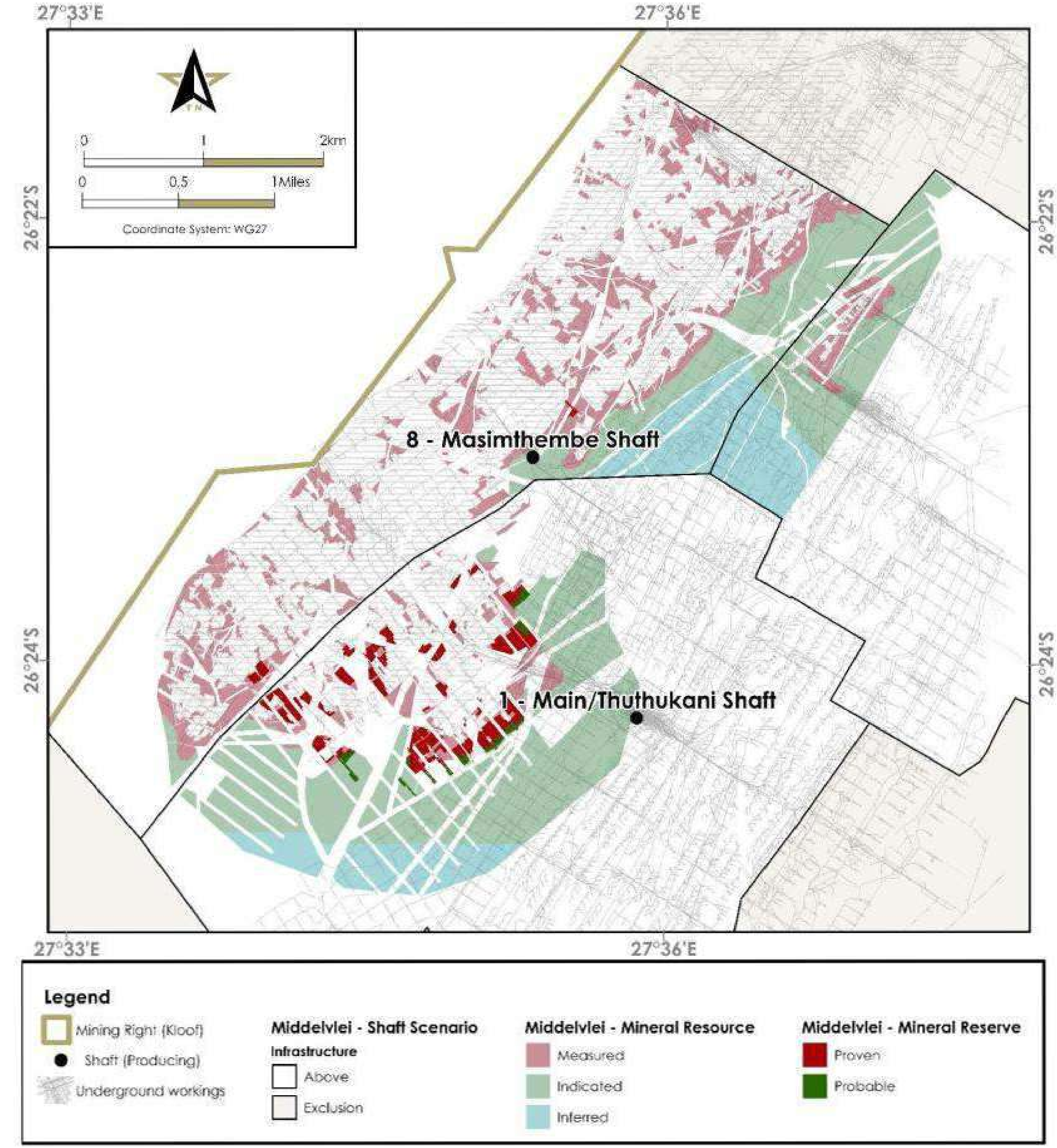

8 - Masimthembe Shaft
1 - Main/Thuthukani Shaft
26°24'S
26°24'S
27°34'E
27°36'E
Legend
Mining Right (Kloof)
Shaft (Producing)
Underground workings
Libanon - Shaft Scenario
Infrastructure
Above
Exclusion
Libanon - Mineral Resource
Measured
Indicated
Inferred
Libanon - Mineral Reserve
Proven
Probable

Figure 44: Kloof Mine Middelvlei Reef Plan



14 Processing and Recovery Methods

This Section covers the metallurgical and mineral processing aspects associated with Kloof. Specifically, on the process metallurgy and process engineering aspects relating to plant capacity, metallurgical performance and metal accounting practices as incorporated in the LoM plan.

14.1 Processing Facilities No.2 Plant

Kloof currently has only No. 2 Plant operating and is situated at No. 7 Shaft with No.1 plant having closed in December 2022.

The No. 2 Plant has a long operational history. The current operational capacity of Kloof No. 2 Plant is 167t per month. The underground feed sources are the Main Shaft, No. 7 Shaft and No. 8 Shaft. The plant is considered to be both mechanically and structurally in good condition. No 2 plant is scheduled for closure in July 2024. There after all ore will be trucked to the plant at the neighbouring Driefontein mine for Processing.

Kloof is currently sending surface material to neighbouring operations Driefontein No. 1 Plant and Ezulwini Plant on a toll-treatment basis. The SRDs at the operation have been mined since the early 2000's and has resulted in a significant reduction in the environmental liability of the operation. All SRDs are extensively sampled and screened prior to milling. Surface material can be treated as a top-up to underground material at No. 2 Plant and has been done in the past.

Kloof has access to all material requirements through local suppliers or international suppliers.

Plant capacities are given in Table 49.

The following major process equipment (Table 48) is installed and utilised at Kloof Operations processing plants.

Table 48: Major Process Equipment Utilised at Kloof

Major Equipment	Quantity
SAG Mill	2
Thickener	2
Leach tanks	10
Carbon In Pulp tanks	8
Elution columns	2
Smelthouse Furnace	2
Electrowing reactors	6
Calciner	1
Kilns	2
Scrubber	1
Transformers	24
Jaw crushers	3
Conveyors	17
Cyanide tank	3
Industrial Burning Fuel tank	2
Lime tank	1
Caustic tank	2

Table 49: Mineral Processing Plant Capacity

Plant	Design Capacity (ktpm)	Operational Capacity (ktpm)*
Kloof No. 2 Plant	167	167
Driefontein No. 1 Plant	240	240

* Capacity based on current leach retention times and historical achievement.

14.1.1 Production Plan

Historical and planned production to end LOM. Production includes material processed at Kloof up to July 2024 and then processed at Driefontein for the rest of the LOM. (Table 50 and Table 51, Figure 45).

Table 50: Kloof No2 plant Production Forecast and Operational Data

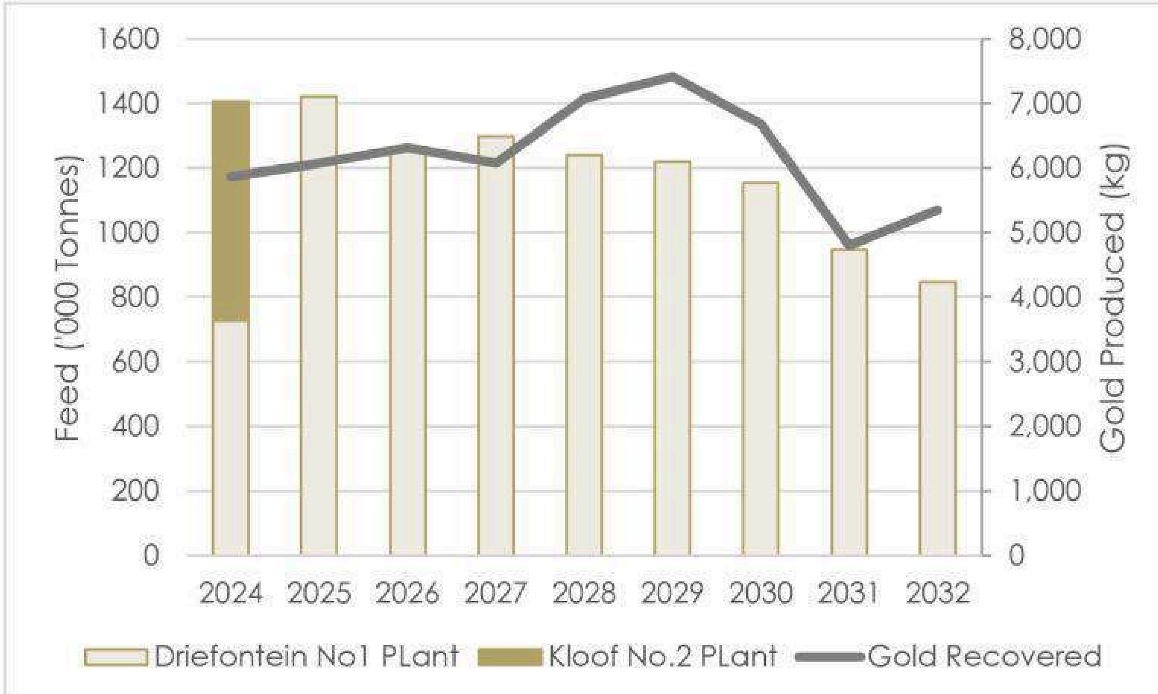
Parameter	Units	Actual			Budget
		2021	2022	2023	2024
Total Feed	**(kt)**	1 902	988	1390	679
Head Grade	**(g/t)**	6,7	5,8	4.8	4.4
Gold Recovery	**(%)**	98%	99%	99	98%
Gold Produced	**(kg)**	10,943	4,913	7,441	2,897

Table 51: Driefontein No.1 Plant Production Forecast and Operational Data- From Kloof Mine

Parameter	Units	LoM	2024	2025	2026	2027	2028	2029	2030	2031	2032

Parameter	Units	Total	1	2	3	4	5	6	7	8	9
Total Tonnes Milled	**(kt)**	10,121	728	1,422	1,264	1,299	1,240	1,220	1,154	948	847
Gold Head grade	**(g/t)**	5.3	4.2	4.4	5.1	4.8	5.8	6.2	5.9	5.2	6.5
Recovery	**(%)**	98%	98%	98%	98%	98%	98%	98%	98%	98%	98%
Recovered Gold	**(kg)**	52,768	29,64	6,075	6,319	6,078	7,079	7,413	6,679	4,805	5,355

Figure 45: Kloof No.2 and Driefontein No. 1 Plant Throughput Forecast from Kloof Mine-



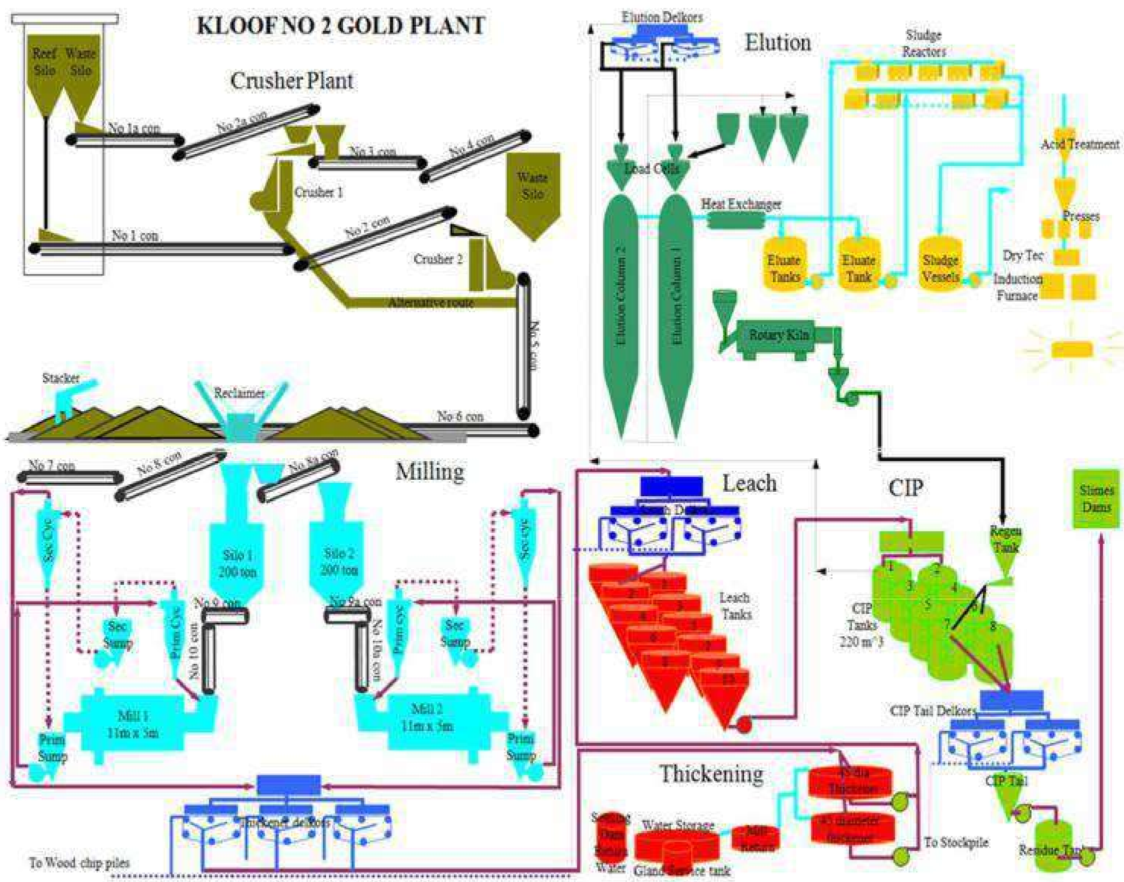
14.1.2 Process Description

Kloof No. 2 Plant, which was commissioned in 1990, currently treats most of Kloof's underground ore. Reef is trucked and conveyed to a central stacker pad which feeds two SAG mills equipped with variable speed ring motor drives. The two SAG mills can be operated as fully autogenous units, or as currently being operated, as semi-autogenous units by adding steel grinding balls. Milled ore is thickened ahead of cyanide leaching in air-agitated tanks and adsorption onto activated carbon in a conventional CIP circuit. Loaded carbon is eluted in an AARL elution circuit, which was upgraded in June 2001 and further in October 2003, and now serves as the central elution facility for Kloof. The upgrade included the installation of Continuous Electro-winning Sludge Reactors which are working very efficiently. Cathode sludge is filtered and smelted to produce doré.

The underground tonnages sent to the mill include waste development tonnages which are hoisted and trammed separately at the shaft and then sent through to the mill. The inclusion of these development tonnages exceeds the current plant capacity. The waste development will therefore be stockpiled at the plant and used to supplement the underground feed as required. The waste development has been planned at 0.0 g/t but in reality, has been shown to contain approximately 0.5 g/t and compliments the MCF when milled due to the occurrence of uncalled footwall bands.

Flow diagram of the Kloof Plant is given in Figure 46.

Figure 46: The Schematic Process Flow Diagram for Kloof No. 2 Plant.



14.2 Future Projects

There are no future projects for Kloof processing facilities.

14.3 Sampling, Analysis, Metal Accounting and Security

Underground plant feed tonnage is generally measured at the source i.e. shaft conveyor weightometers. Plant feed tonnage is measured via conveyor weightometer scales and online moisture analyser on mill feed belts or leach feed mass flow systems. Plant feed from underground sources is sampled at the shafts but surface rock dump plant feed is not sampled continuously, but rather at source through ad hoc sampling.

Leach feed and residue samples are taken automatically, with Multotec cross-stream samplers. Shift composites are accumulated and prepared in the standard way.

The quality control done is weekly checks done in house on the weightometers and online moisture analysers and sample cutters are checked daily. The OEMs for all the units come through monthly for inspections.

All analyses are conducted at the Driefontein laboratory. Analytical methods are the same as for Mineral Resources (Section 8.4.1)

14.4 Plant Lock-up

The quantity of clean-up gold that can be anticipated on the closure of a plant is uncertain. Reported figures for South African plants have shown an order of magnitude difference, varying from 0.4% and 0.04% of the total gold produced through the plant during its life.

Factors affecting the quantity of gold that is eventually recovered are plant age, installed treatment route, plant layout and detailed design features, plant operational management and the procedure and efficiency of the plant clean-up. Generally, it can be assumed that 0.15% for older crushing and milling plants and 0.10% for more recent relatively clean plants is typical. Where low-level waste has been processed in the latter years of a plants' life significant gold purging is likely to have occurred and lower gold accumulations can be expected. Saleable gold from plant clean-up has been included in the TEM but not in the Mineral Reserve. No costs are associated with this clean-up as it is expected that the salvage value of the Kloof plants will offset the costs of collecting the gold and their break-up (Table 52).

Table 52: Assumed Gold Lock-up

Plant	Assumed Lock-Up (kg)
Kloof No. 2 Plant*	400/400
Driefontein No.1 Plant	150

* Clean-up material has been estimated at 800kg to be included in the financial modelling over two years, 2024 and 2025

14.5 Final Product

Doré gold, an unrefined alloy of gold with variable quantities of other base and precious metals, is produced at Kloof before being sent for refining to Rand Refinery Limited (Rand Refinery). Further details are provided in Section 16.

14.6 Personal, Energy and Water Requirements

Kloof No. 2 Plant Projected Requirements for Energy, Water, Electricity and Personnel (2024 Budget)(Table 53).

Table 53: Kloof No. 2 Plant Projected Requirements for Energy, Water, Electricity and Personnel (2024 Budget)

Plant	Electricity Usage (kWh)	Electricity Cost (ZAR)	Water Usage (Kl)	Water Cost (ZAR)	Stores Cost (ZAR)	Total Employees (No.)	Labour Costs (ZAR)
No.2	61,234,686	893,841,000	403,615	10482,,000	146,464,000	137	23,878,000

14.7 QP Opinion on Processing

The QP is satisfied that the mineral processing and recovery methods are appropriate and sufficient to support the LoM and that all material issues have been addressed in this document. Kloof has access to all material requirements through local or international suppliers.

15 Infrastructure

15.1 Overview of Infrastructure

Surface infrastructure (Figure 81) includes headgear and winding systems, primary ventilation, process facilities, office blocks, training centres, workshops, stores, lamp rooms, change houses and accommodation. There are also a number of services and supply centres. These include compressed air supply stations and minor workshops for small repairs to plant and equipment, surface fridge plants and pumping stations.

Pipelines exist for various uses throughout the mine, underground and on the surface, mainly for water and compressed air for mining. The process plant pipeline infrastructure includes that used for tailings deposition. No additional pipelines will be required for the LoM.

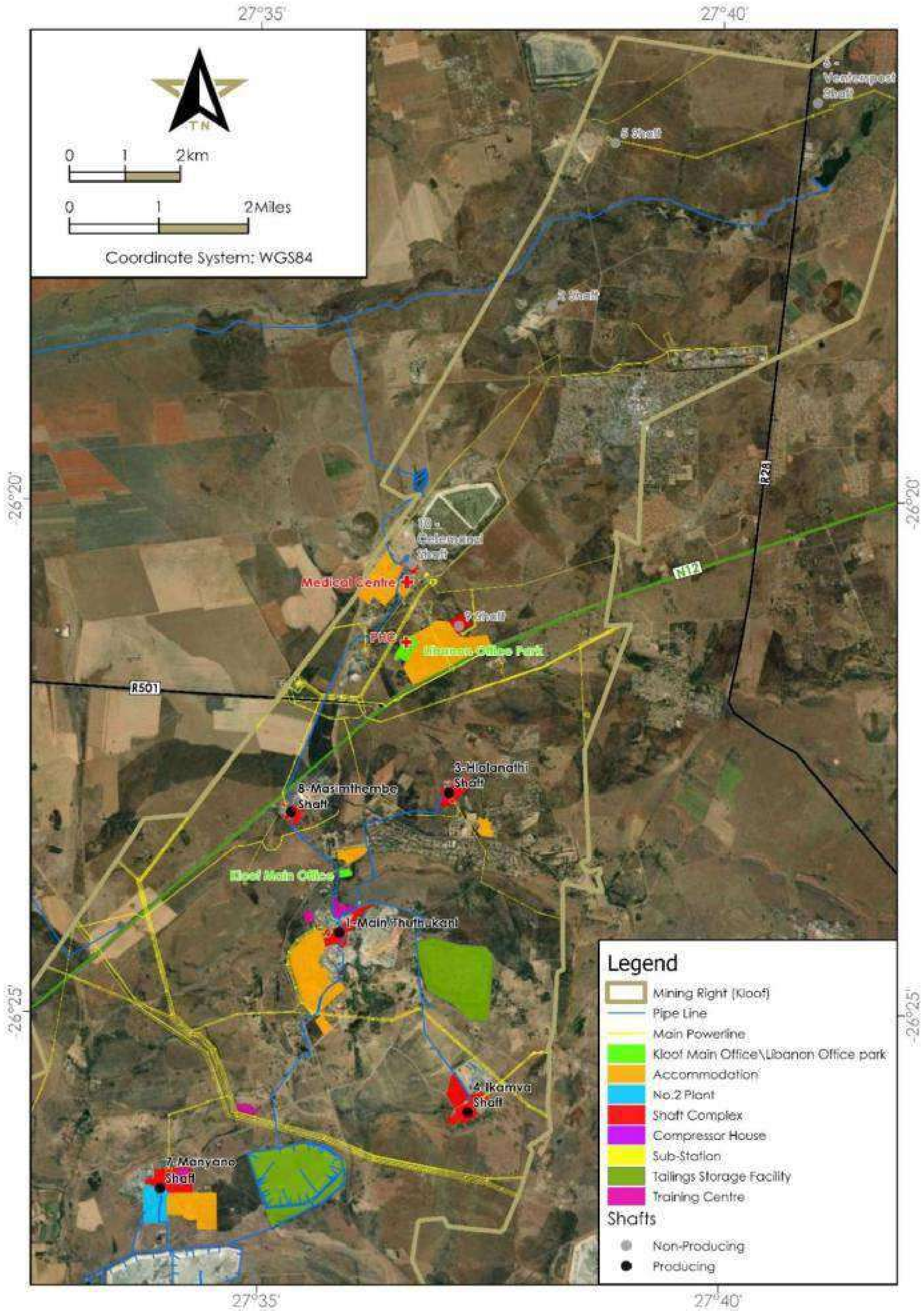
Notwithstanding the age of the general infrastructure, all surface and underground infrastructure is maintained and equipped. In conjunction with the planned maintenance programmes, including specific remedial action, the current infrastructure, pumping-, hoisting- and logistic capacities are considered adequate to satisfy the requirements of the LoM plan. The power generation and distribution systems water sourcing and reticulation systems are appropriate as envisaged in the LoM plan, notwithstanding the renewable energy drive.

Aside from existing underground rail infrastructure, no surface rail infrastructure is in use. No port facilities exist on the Kloof operations. No additional surface rail infrastructure will be required for the LoM.

See section 13.2, for details on shaft infrastructure.

Figure 47 shows the layout of the mine, the placement of shafts and other surface infrastructure within the mine boundaries. Shared services infrastructure not on the mine is not shown.

Figure 47: Locations of Major Surface Infrastructure at Kloof



15.2 Tailings Storage Facilities

15.2.1 Tailings Overview

A group tailings management system has been implemented and Tailings Storage Facilities (TSFs) are managed in accordance with all relevant legislation and SANS 10286: Code of Practice for Mine Residue deposits, 1998. The Global Industry Standard for Tailings Management (GISTM) was launched in August 2020. As a member of the International Council on Mines and Metals (ICMM), Sibanye-Stillwater has committed to aligning tailings management with the GISTM requirements. Significant progress was made during 2022 with 17 out of 22 active Very High and Extreme consequence TSFs compliant by end 2022 tailings management with the GISTM requirements. Significant progress was made during 2022 and 2023 with all SA region's TSFs, regardless of consequence classification, being conformant with the GISTM by mid-December 2023.

Kloof's TSF annual consultants report that the phreatic levels are low. Although the TSFs are generally in a good condition it appears that rat-holing does occur periodically at the Leeudoorn TSFs primarily caused by the very fine grind of the product.

Continuation reports were conducted during 2021 by Knight Piesoldt. They were appointed as the Engineer of Record (EoR) for the facilities and the data from the continuation report will flow into the annual report and a possible restatement of the capacity left will follow through from this report.

Kloof currently operates two TSFs namely:

- Kloof No. 2 TSF for Kloof Plant No. 1
- Leeudoorn TSF for Kloof Plant No. 2

A summary of Active tailings dams is given in Table 54.

Table 54: Summary for Active Tailings Dams

Tailings Dam	Commissioned	Expected end of life	Comment
Kloof No. 2	1960	August 2022	Status changed to care and maintenance with the closure of Kloof 1 Plant.
Leudoorn	1982	2043	Operations could cease earlier depending on closure of Kloof 2 plant.

Tailings capacity is adequate for the LoM plan (Table 55).

Table 55: LoM Assessment of Tailings Facilities

Tailings Facility	LoM Deposition (Mt)	Available Capacity (Mt)	Surplus / (Shortfall) (%)	Capital Requirement (ZARm)

Kloof (Upper and Lower TSF)	24.9mt	36.4	11.5Mt / 31%	

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15.2.2 Kloof No 2 TSF

The TSF is under care and maintenance. The TSF is in good condition, and no undue risks are posed.

15.2.3 Leeudoorn TSF

The TSF remains active with sufficient capacity for LoM, although its life is a function of the LoM of the Kloof KP2 Plant. The TSF is in a good condition and is operated in accordance with the design intent and OMS manual. There are no undue concerns on the TSF.

15.2.4 Other Surface Dumps

The Surface Rock Dumps are generally material from off-reef waste development conducted in support of accessing the orebody. As there may have been a degree of misclassification of the reef to waste historically, these rock dumps are a potential source of low-grade, readily available surface material, and where economic and with sufficient Plant capacity are exploited.

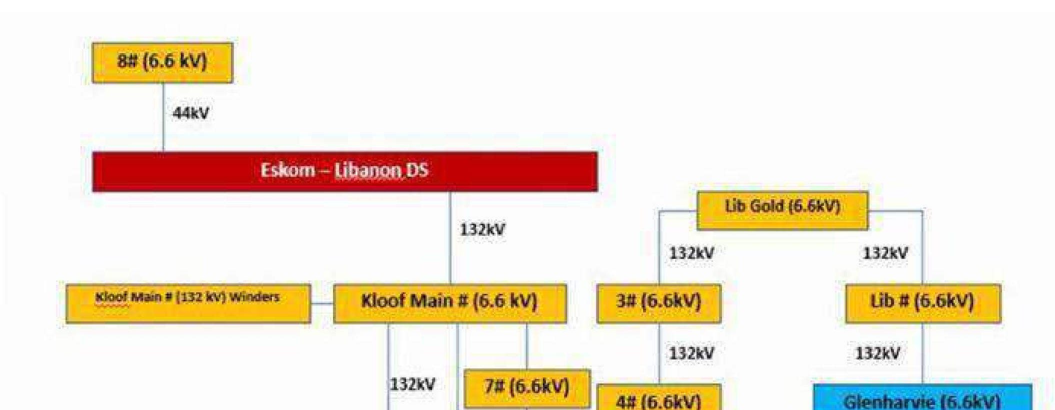
There are no leach pads used at Kloof.

15.3 Electrical Power Supply

Power supply (Figure 48) at Kloof is obtained from the Eskom grid via a 44kV transmission network as well as a 132kV transmission network. One Point of Distribution (PoD) is fed from the Libanon 44 kV Eskom distribution substation and seven PoD's from the Bernina and Libanon DS 132kV Eskom distribution substation. Kloof has a total of 507.5MVA installed capacity and a combined Notified Maximum Demand (NMD) of 299.5 MW and an average energy usage of 158.9MW for 2021. The average for 2022 was 125.5MW. Production was affected by a major labour strike and this usage is not representative of normal operating conditions.

normal operating conditions.

Figure 48: Schematic Layout of Power Points of Supply and Surface Infrastructure



Kloof has reduced its demand for electricity from an average of ±159MW in 2019 to ±147MW currently. Kloof has an extensive energy-saving programme in place, with projects that range from an onsite energy management service provider assisting with air and water-saving initiatives to major infrastructure, like the Three Chamber Pipe Systems and Turbines. Usage is extensively managed in order to mitigate the risk of potential carbon taxes in the future.

Renewable Energy

Relaxing of regulatory requirements and the anticipated ability to trade electricity in South Africa has allowed Sibanye-Stillwater to grow its portfolio of renewable projects to 553MW, including solar and wind projects. These projects are being pursued in support of the carbon neutrality by 2040 commitment and mitigating the risks associated with Eskom electricity supply.

Anticipated capital cost of the project is anticipated to be between ZAR11 billion and ZAR13 billion and will be funded by third parties through power purchase agreements. Renewable electricity will be delivered at a 20-30% discount to grid tariffs, escalating at CPI. It is planned to also leverage these projects to promote local socioeconomic development and a just energy transition.

The SA gold operations 50MW solar photovoltaic (PV) project is targeted for financial close H1 2023, having been delayed due to a land claim, and commercial operation by late 2024. A local project developer has been appointed on a 20-year PPA basis. The project will directly generate electricity for the SA gold operations. 332MW of wind energy capacity has also been secured through the appointment of two project developers for three remote wind projects. Power generated will be 'wheeled' to the SA gold operations and will offset a portion of their electricity requirements, reducing their carbon footprint and electricity costs.

15.4 Bulk Water and Pumping

See Section 17.5.7 for information on Bulk Water, Fissure Water and Pumping.

15.5 Roads and Transport Infrastructure

The road network on the Kloof Operations site consists of paved and unpaved roads which are primarily used for the transport of personnel and for access to the offices, shafts, plants, and infrastructure positioned around the mine site. Pipelines are discussed in Sections 15.1 and 17.5.1. Rail and port infrastructure are not required as the supplies and products are transported by road to the local refineries and by road or commercial airlines to the end consumer.

15.6 Equipment Maintenance

15.6.1 Surface Workshops

Surface workshops for major repairs were converted to off-site repair facilities operated by third party suppliers or vendors in the neighbouring towns. Only minor repairs are done on the shaft site.

15.6.2 Underground Workshops

Underground workshops are used for routine maintenance of equipment. All areas are well equipped. Facility configuration depends on the equipment that is being service to ensure compliance as per the requirements of the planned maintenance schedules. Areas well-ventilated and illuminated; floor areas are concreted.

15.7 Offices, Housing, Training Facilities, Health Services Etc.

Sibanye-Stillwater gold operations have central offices at various mines for shared services and offices at Kloof shafts and plant for mine services.

Kloof mine is near to several towns and cities in which some of the mine personnel live. The mine also provides mine housing and hostels for some of the personnel. Transportation from high density areas serving the mine is operated by a third-party supplier. Otherwise, all transportation is public services or personal vehicles.

Training facilities are through the Sibanye-Stillwater Gold Academy and central training is located near the Kloof Operations (see adjacent properties Section 20).

Primary Health services are centralised at Kloof, shared by the Sibanye-Stillwater gold operations in the West Wits Line.

All hospitals have been privatised and are run by independent third parties.

15.8 QP Opinion on Infrastructure

The QP is satisfied that the infrastructure is appropriate and sufficient to support the LoM plan and that all material issues have been addressed in this document. No other infrastructure components are material to the Kloof operations.

16 Market Studies

16.1 Concentrates and Refined Products

Doré gold, an unrefined alloy of gold with variable quantities of other base and precious metals, is produced at Kloof before being sent for refining to Rand Refinery Limited (Rand Refinery).

16.2 Metals Marketing Agreements

Rand Refinery, an independent private Company, is owned by a consortium of the major gold producers in South Africa, refines doré gold to London Good Delivery standard. Sibanye-Stillwater has a 33.2% direct interest in the Rand Refinery operations (Figure 1). Rand Refinery is the primary gold refinery in Southern Africa and has been refining gold for over 100 years.

Sibanye-Stillwater has an agreement with Rand Refinery for the refining of all Kloof's gold and silver, which is the Kloof operation's only material contract for the refining of gold and silver. It is not believed that the terms obtained from Rand Refinery are influenced through Sibanye-Stillwater's direct interest in it, however two Sibanye-Stillwater employees are non-executive directors on the board of Rand Refinery.

Rand Refinery markets the gold and associated minerals produced in all its various forms to customers across the globe. Gold and silver have wide and fluid markets and can be readily sold on the open market as and when produced.

Sibanye-Stillwater does not generally enter into forward sales, commodity derivatives or other hedging arrangements in order to establish a price in advance of the sale of its production, unless these derivatives are used for risk mitigation and project funding initiatives. As a result, Sibanye-Stillwater is normally fully exposed to changes in commodity prices for its mined production.

16.3 Markets

16.3.1 Introduction

Gold and silver are both sold as bullion. Physical gold and silver are used locally in manufacturing in the jewellery and industry sectors. Refined gold bars are normally exported to the international market. The major product consumers are:

- investment
- jewellery
- industry and technology
- central bank purchases

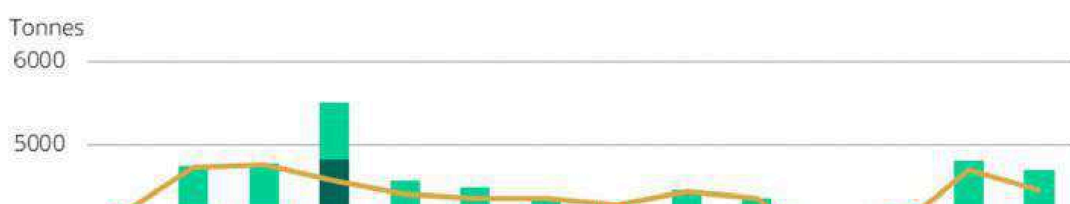
- gold markets

16.3.2 Demand Summary

According to the World Gold Council (WGC) research document (Gold Demand Trends Full Year 2023, from www.wgc.org. Disclaimers as per their and this document), highlights for 2023 and points of note included the following:

- Second year of strong central bank and retail investor purchases and excluding over the counter (OTC) transactions, however, the annual gold demand excluding OTC sales dropped by 5% to 4,448t,
- Demand including OTC and stock flows was a record high of 4899t
- OTC and Other category saw sharp increases in 2023 while ETF continued outflows.
- Total annual gold supply increased by 3% in 2023, to 4,898. Mine production increased by only 1% to3,644t, with recycling also posting gains of 8% from 1,140.1t in 2022 to 1,237.3t in 2023
- Jewellery, bars and coins central bank buying are all down slightly from 2022 but remain the largest consumers of gold at 44%, 24% and 21% of the market respectively
- Changes in demand per major sector since 2010 is shown in Figure 49.

Figure 49: Global Annual Demand by Sector*



*Data to 31 December 2023. For an explanation of gold market sectors, please see the Notes and definitions download: http://www.gold.org/goldhub/research/gold-demand-trends/gold-demand-trends-q2-2023/notes-and-definitions
Source: Metals Focus, Refinitiv GFMS, World Gold Council

16.3.3 Supply Summary

A gold supply summary for the World Gold Council annual reporting is given in Table 56. Total annual gold supply increased by 3% in 2023, to 4,898.8t. Mine production increased by a1% to 3,644.4t, with recycling also posting a larger growth of 9%. Supply for 2023 is anticipated to rise slightly, primarily from expansions in mine production and higher grades.

Table 56: Gold Supply 2023

Tonnes	2022	2023
Total supply (tonnes)	4751.9	4898.8

Mine production	3,624.8	3,644.4
Net producer hedging	-13.1	17
Recycled gold	1,140.1	1,237.3
Recycled gold	1,140.1	1,237.3

Source: ICE Benchmark Administration, Metals Focus, World Gold Council

16.3.4 Gold Price Outlook

The gold market is expected to remain strong. Analysis by the WGC, JP Morgan and others suggests that although central bank to drop, buying is likely remain well above previous annual averages, in 2024. Investment demand is expected to remain strong as are coins and bars and OTC and other category. Some analysists are predicting a possible uptick in EFT demand after three years of outflows. Jewellery demand is expected to remain flat.

An increase in mine production is expected due to both new mines entering production and higher overall grades.

Price prediction is currently showing peaks at between nominal USD2,100-2,200/oz in 2024 continuing into 2025.

16.4 Metals Price Determination

Sibanye-Stillwater considers multiple trailing averages and forecasting scenarios for determination of the commodity prices and exchange rates used as modifying factors for estimating Mineral Reserves. Mineral Reserves are estimated before the end of the calendar year. Mineral Resources price assumptions typically focus on longer timeframes than Mineral Reserves and are based on higher prices (to better capture the long-term but still reasonable prospect for economic extraction), whilst Mineral Reserves rely on medium term, “through the cycle” pricing that would not unreasonably result in large annual swings.

Sibanye-Stillwater intends to use prices that will stay stable for at least three to five years, and will only change if there is a fundamental, perceived long-term shift in the market, as opposed to basing it only on short term analyst consensus forecasts. Sibanye-Stillwater has also in the process considered its general view of the market, the relative position of its operations on the costs curve, as well as its operational and Company strategy. Sibanye-Stillwater has opted to apply forward-looking prices.

For consideration during the determination of forward-looking prices and exchange rates, Sibanye-Stillwater does source independent reports from the likes of BMO Capital, BoA-Merill Lynch, Morgan Stanley, RBC and UBS, as well as internal research reports from SFA Oxford.

On a monthly basis, the Sibanye-Stillwater Business Development team receives an independent report from UBS Bank, called the Commodity Consensus Forecasts Report. This report contains consensus outlooks, from the various banks listed, on a broad range of commodities. Consensus forecasts are for the next four years and expected long-term averages. These forward prices, in general, correlate with Sibanye-Stillwater's internal views.

Additional comment on Risk is provided in Section 21.1.2.

16.4.1 Exchange Rate

The consensus forward price and the price that Sibanye-Stillwater used for its Mineral Resources and Mineral Reserves declaration as at 31 December 2023 is ZAR17/USD which is higher than the previous year's ZAR16/USD reflecting the expected long term deterioration in the ZAR/USD exchange rate

16.4.2 Gold Price

The consensus forward price for gold and the price that the QPs used for Mineral Resources and Mineral Reserves declaration as at 31 December 2023 reflects the short term higher process expected while maintaining a conservative long term outlook (Table 57). The Mineral Resource price reflects a long term outlook.

Mineral Resource prices as at 31 December 2023 are for year Financial year 2024.

Table 57: Gold Price Scenarios (Forward prices for Financial Model)

	Unit	2022	2023	2024	2025	2026	2027	2028/ Long Term
Gold Reserve Price	ZAR/kg	800,000	850,000	1,179,872	1,091,092	975,333	934,075	941,374
Gold Resource Price	ZAR/kg	868,000	925,941	983,813	983,813	983,813	983,813	983,813

17 Environmental Studies, Permitting, Plans, Negotiations/ Agreements with Local Individuals or Groups

17.1 Social and Community Agreements

17.1.1 Overview- Mine Community Development

The section focuses on strategic programmes that cover the Local and regional priorities of economic development, education, health, community upliftment and the improvement of the people's lives and long-term sustainability beyond the life of the Mine.

These LED projects address the targeted development priorities of Rand West City Local Municipality as identified in their Integrated Development Plans through the Social and Labour Plan commitments (SLP).

An integrated approach is applied to ensure the implementation of economic development that will have a ripple effect and benefit the local municipal area as a whole.

17.1.2 Legislation

The legislative framework is detailed in Section 17.5.1. As pertains to the social and community agreements The Mining Charter includes Social and Labour Plan guidelines. Regulation 42 to the Minerals and Petroleum Resources Development Act requires mining companies to submit to the Department of Mineral Resources and Energy a Social and Labour Plan (SLP) as a pre-requisite for the granting of a mining right. These pans are required to be revised and resubmitted every five years during the life of a mining right.

Pillars within the Mining Charter III, endorsed through the SLP & Targets:

- Ownership
- Mine Community Development
- Housing and living conditions
- Employment equity
- Human Resource development
- Inclusive Procurement, Supplier and Enterprise development

17.1.3 LED Implementation Strategy

SLP is an instrument that seeks to address the operation's socio-economic development and transformation objectives in accordance with the Mineral and Petroleum Resources Development Act (MPRDA) Regulation 46 (a – f), by detailing a Preamble, Human Resources Development (HRD) Programmes, a Local Economic Development Programme (which includes amongst others, Housing

Programmes, a Local Economic Development Programme (which includes amongst others, "Housing and Living Conditions and a Procurement Progression Plan), Processes Pertaining to Management of Downscaling and Retrenchment, Financial Provision and an Undertaking by the holder of the mining right. It is further aligned to the principles of relevant legislation advancing transformation, more importantly MPRDA and its regulations.

Of importance to note is that this SLP is underpinned by our social closure strategy. This is based on the recognition that notwithstanding economic benefits to an area, mining precipitates socio-economic and environmental impacts that can endure over a long period. We also recognise that socio-economic closure planning is generally not integrated in the mine life cycle. As such, our approach is a deliberate attempt aimed at avoiding the creation of "ghost towns", unemployment and a shrinking job market. Our SLP is therefore directed at socio-economic closure planning to ensure that we leave economically viable communities that can sustain themselves in future, independent of the mine.

Sibanye-Stillwater fosters and maintains constructive engagement with all stakeholders in order to deliver on our vision to create superior value for all stakeholders. We work closely with all stakeholders for the successful implementation of these projects.

Our approach to stakeholders is based on understanding the context and the dynamic stakeholder universe and as such recognises the importance of all stakeholders in planning their development agenda.

Sibanye-Stillwater is therefore committed to proactive, open and constructive stakeholder engagement, which informs participative decision-making.

The stakeholder engagement process will ensure that:

- There are regular engagements and quick responses to issues material to stakeholders
- There is an accurate understanding of the influence of business activities on stakeholders and the potential impact stakeholders may have on the business, whether positive or negative, to enhance the engagement process.
- Engagements are conducted in a timely, accurate and relevant manner
- The continuous monitoring, reviewing and improvement of engagement activities

Kloof has a approved Slocial and Labour Plan running form 2022 to 2026. The local community projects are listed in Table 58. Back log Projects for the previous two Social and Labour Plans are listed in Table 59 and Table 60.

Table 58: SLP Host Community Projects for Kloof (2022-2026)

Project Name	Thematic Area	Project Partner/s	Municipality	Budget Allocation
ECD Infrastructure Programme	Infrastructure	Gauteng Department of Education	Rand West City	ZARm 7.2
Community Outreach Mobile Clinics	Community Social Wellbeing	Gauteng Department of Health	Rand West City	ZARm 4.8
Municipal Skills Programme	Skills Development	Rand West City Local Municipality	Rand West City	ZARm 4.8
Solar Entrepreneurship Programme	Diversification of Livelihoods	Rand West City Local Municipality	Rand West City	ZARm 4.6
Municipal Waste Support Programme	Community Social Wellbeing	Rand West City Local Municipality	Rand West City	ZARm 2.7
Total – Host Community				**ZARm 24.2**

Table 59: Backlog Projects (2017-2021 SLP)

Project Name	Location	Status	% Completion
Waste Management (Sibanye_Stillwater and RWCLM partnering to promote waste management within communities through provision of waste recycling resources, access to market, and training of beneficiary community enterprises at Libanon Waste Processing Plant and Mohlakeng Buy-back Centre)	Rand West City LM	In progress	55
Resourcing of Toekomsrus Youth Centre (To enable optimal information access and youth training, Sibanye-Stillwater donated computers and IT equipment with Wi-Fi infrastructure and fixed-term internet connectivity, office furniture and appliances, outdoor concrete tables and chairs, and minor building alterations)	Rand West City LM	Completed (awaiting handover)	99

Refurbishment of Badirile Multi-Purpose Centre (Sibanye-Stillwater refurbished this community centre that houses government service delivery departments for Badirile community)	Rand West City LM	Completed	100
Farmer Out-grower Scheme (Development of 4 commercial farmers and 40 farm workers on 20ha of Sibanye-Stillwater land in Libanon)	Rand West City LM	In progress	55
Manufacturing Incubator (Incubation programme of 37 community based SMMEs from Rand West and Merafong in automotive industry value chain)	Rand West City LM	In progress	10

Table 60: Backlog Projects (2012-2016 SLP)

Project Name	Project Impact	Municipality	Budget
Simunye Secondary School (Installation of science laboratories; Sec 102 application with DMRE to transfer project to adjacent Kgothalang Secondary School)	Infrastructure Development	Rand West City Local Municipality	ZARm 2. 0
TVET College (A partnership to build Westcol TVET College campus in Westonaria to offer agriculture and related curricula to align with West Rand economic strategy beyond mining in Rand West City)	Infrastructure and Skills Development	Rand West City Local Municipality	ZARm 7,1
Total – Host Backlog			**ZARm 9.10**

17.2 Human Resources

17.2.1 Introduction

This section includes discussion and comment on the human resources, health and safety related aspects associated with Kloof Specifically, information is included on the current organizational structures and operational management, recruitment, training, productivity initiatives and remuneration policies, industrial relations, safety statistics and performance.

Kloof follows the Sibanye-Stillwater Code of Ethics, which is fully compliant with the Sarbanes-Oxley Act of the United States of America. This policy was adopted and communicated to all employees. A Human Rights Policy has also been adopted, which confirms full compliance with all applicable International Labour Organization Conventions.

17.2.2 Human Resources

17.2.3 Legislation

Kloof is committed to promoting Historically Disadvantaged South African's (HDSA) in its management structure by instituting a framework geared toward local recruitment and human resources development (Table 61 to Table 64). Vacancies are primarily filled by candidates from local communities. Where specialist skills are not available locally, they are sourced from outside local communities. The mine's long-term objective is to have these skills shortages addressed via skills development programmes. Normal Employee turnover is approximately 6-7% annually. Labour unavailability is approximately 13% with the primary reasons for absenteeism being annual leave, sick leave and training.

Various regulatory authorities, in addition to mining and labour codes, govern labour legislation in South Africa. In general, these are well established in conjunction with current operating policies and form the cornerstone of human resource management.

High level compliance in terms of the following key acts and associated regulations was assessed:

- Constitution of the RSA (Act 108 of 1996) (Constitution)
- Mine Health and Safety Act, (Act 29 of 1996) and amendments (MHSA)
- The Occupational Health and Safety Act (85 of 1993) (OHSA)
- Labour Relations Act 66 of 1995 as amended
- Employment Equity Act, 1998(also includes specific reference to medical testing and HIV/AIDS)
- Compensation for Occupational Injuries and Diseases Act 130 of 1993
- Basic Conditions of Employment Act 75 of 1997, as amended
- Promotion of Equality and Prevention of Unfair Discrimination Act 4 of 2000 and
- Protection of Personal Information Act 4 of 2013

Table 61: Undertaking and Guidelines

Undertaking	Kloof Operations is committed to attaining the 40% HDSAs in management target as set by the DMRE and recognizes that this refers to Management in the D, E and F Patterson bands.
Guidelines	Build capacity within the organization through HRD initiatives with preference given to individuals from designated groups. These employees to form the pipeline for the Company's talent pool and succession planning.

Table 62: Breakdown of Employee Profile as at the end December 2023

Grade	Occupational Level	Number of Employees
E Band	Senior Management	4
D Band	Professionally Qualified, Experienced Specialists and Middle Management	72
C Band	Skilled Technical, Academic Qualified, Junior Management and Supervisors	952
B Band	Semi-Skilled and Discretionary Decision Making	4,735
A Band	Unskilled and Defined Decision making	2,462
Total Permanent and Temporary Employees		
Contractor Employees		148
Temporary Employees		1,557
Total Head Count		9,953

Table 63: Kloof Total Employees - Snapshot Report for the Month December 2023

Occupational Level	Male				Female				Foreign Nationals		Total
	A	C	I	W	A	C	I	W	Male	Female	
Top management	3	0	0	5	2	0	0	1	1	1	13
Senior management	1	0	0	3	0	0	0	0	0	0	4
Professionally qualified and experienced specialists and mid-management	21	2	0	36	6	0	0	2	5	0	72
Skilled technical and academically qualified workers, junior management, supervisors, foremen, and superintendents	423	2	4	200	157	0	1	8	152	5	952
Semi-skilled and discretionary decision	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Semi-skilled and discretionary decision making	2,600	1	0	22	339	1	0	4	1739	29	4,735
Unskilled and defined decision making	1,402	2	0	2	557	3	0	1	464	31	2,462
TOTAL PERMANENT	4,450	7	4	268	1,061	4	1	16	2,361	66	8,238
Employee-Temporary	89	1	0	2	53	0	0	1	1	1	148
GRAND TOTAL	4539	8	4	270	1114	4	1	17	2,362	67	8,386

Note: A= African, C= Coloured, I= Indian, W= White.

Table 64: Kloof Total Contractors (Excluding Ad-Hoc Contractors)

Occupational Level	Male				Female				Foreign Nationals		Total
	A	C	I	W	A	C	I	W	Male	Female	
Top management	0	0	0	0	0	0	0	0	0	0	0
Senior management	3	0	0	4	0	0	0	1	1	0	9
Professionally qualified and experienced specialists and mid-management	0	0	1	20	1	0	0	1	0	0	23
Skilled technical and academically qualified workers, junior management, supervisors, foremen, and superintendents	43	0	1	75	3	0	1	4	9	0	136
Semi-skilled and discretionary decision making	165	1	0	34	8	0	0	3	81	1	293
Unskilled and defined decision making	908	8	0	52	61	2	0	1	64	0	1,096
TOTAL EMPLOYEES	1,119	9	2	185	73	2	1	10	155	1	1,557

Note: A= African, C= Coloured, I= Indian, W= White

17.2.4 Human Resource Development (Training)

Kloof has instituted a comprehensive programme to train and develop its employees to the extent that they are able to function competently in their specific jobs, with particular reference to compliance they are able to function competently in their specific jobs, with particular reference to compliance with legislative requirements and to providing the capacity for individuals and teams to work safely and productively. The training programme includes both technical/vocational training and supervisory and managerial skills development. Normally, Kloof spends a total of 5% of payroll on employee training and development programmes.

Specific areas of focus in the training and development programmes include:

- functional literacy and numeracy
- safe working practice training by means of programmes aligned with the requirements of the National Qualifications Framework
- interventions aimed at improving the business awareness and teamwork of employees at the lower levels of the organisation in particular
- improved middle management skills through the implementation of an internal leadership programme to help fulfil the human resources requirement of the Mining Charter
- systems to track and manage, on an integrated basis, employee development and performance
- portable skills training

17.2.5 Remuneration Policies

Kloof Operations operates remuneration and employee benefit policies that recognize labour market conditions, collective bargaining processes, equity and legislation. The provisions of the Sibanye-Stillwater approval framework guide remuneration policies.

17.2.6 Industrial Relations

Industrial relations are managed at a number of levels and in a number of formalized structures, encompassing the corporate and mining asset domains in accordance with a number of key driving factors. These include the prevailing legislative requirements, regulatory bodies, labour representation, collective bargaining arrangements, sectoral and operation specific employer-employee agreements, and the quality of labour relations management philosophies and practices.

An Employee Relations/Engagement framework also governs all engagements with organized labour and other stakeholders. The principal strategy elements are to entrench an improved understanding of the business imperatives on the part of labour, appropriate and timely intervention to pre-empt industrial relations issues and timely delivery by management on its undertakings to labour and to maintain labour harmony continuously.

Approximately 94.22% of the permanent employees of Kloof Operations are paid up members of a registered trade union. The substantial majority of these unionized employees are from the lower skilled level and are represented by the National Union of Mineworkers (NUM). Historically, a trade union with such a constitution have exercised a strong influence over social and political reform. The labour legislative framework reflects this by strongly empowering trade unions in the collective bargaining processes. The clear implication is that industrial relations are an area of focus for Kloof Operations.

17.2.7 Employment Equity and Women in Mining (WIM)

The purpose of the Employment Equity Plan is to ensure that a demographically appropriate profile is achieved through the participation of HDSAs in all decision-making positions and core occupational categories at the Operation. In striving to achieve 60 - 70% HDSA representation in the management structure and 25 - 30% participation of women in core mining occupations, Kloof seeks to redress the existing gender and racial disparities. The plan reflects Sibanye-Stillwater's annual progressive targets and embrace the challenge to transform the composition of the Company's workforce and management. This is a business imperative to ensure that we tap into the entire skill base of the South African population. All efforts in this regard have been aligned with the National Development Plan and the UN Global Goals for Sustainable Development.

Where appropriate, Employment Equity is implemented in consultation with employee representative bodies. As a key business imperative for Kloof Employment Equity is critical in assisting the Operation to place competent employees in the correct jobs aligned with the Operation's objectives

17.3 Health and Safety

17.3.1 Policies and Procedures

Since Sibanye-Stillwater's inception, Kloof Operations has formed part of the Health and Safety Strategy and Policy development process, as well as the adoption and implementation thereof. The Safe Production Strategy that was developed as part of an ongoing safety improvement journey, takes into account "fit for purpose systems" such as ISO 45001 that was published during 2018. The Sibanye-Stillwater Health and Safety Strategy and Policy is further aligned with the Mine Health and Safety Act, the International Council on Mining & Metals, the World Bank Policies and Guidelines, International Finance Corporation Operational Policies and International Labour Organisation Conventions.

17.3.2 Statistics

Table 65 presents safety statistics for Kloof Operations and includes the total number of fatalities, fatality rate and the lost day injury frequency rate (LDIFR) from 2019 to 2023.

Table 65: Safety Statistics

	Units	2019	2020	2021	2022	2023
Fatalities	(No)	0	1	6	1	1
Fatality Rate	(per mmhrs)	0	0.05	0.25	0.06	0.05
LDIFR	(per mmhrs)	7.56	5.7	5.37	3.71	2.13
MHSA Section 54's	(No.)	51	15	15	4	5

mmhrs = million man hours worked

17.3.3 Occupational Health and Safety Management

As part of the rollout of the Safe Production Strategy, the management of Critical Controls, Rules of Life, Risk Management as well as management of A Hazards were a key focus area at the operations. The challenges in terms due to COVID-19 are ongoing and are dealt with commendably all at the shafts.

17.3.4 HIV/AIDS

Kloof applies HIV education and preventative measures, including the Highly Active Anti-Retroviral Therapy programme to manage the risk of HIV.

17.4 Environmental Studies

17.4.1 Introduction

As part of the Sibanye-Stillwater Integrated, Compliance, Governance and Risk (ICGR) framework, the Company has embedded a process for improved regulatory risk profile and action plans to address any gaps in the identification of risk, level of adequacy and effectiveness of control measures. This has provided the Environmental and other Departments with a much clearer picture of all the legal requirements, its risk exposure and what mitigatory actions (compliance risk management plans) need to be put in place to improve and ensure compliance. Updated and detailed public reports are available at https://www.sibanyestillwater.com

The following generic environmental risks have been identified and are applicable to the Kloof Operations:

- Third party liability claims because of uncontrolled grazing on mine-owned properties
- Unintended Non-compliance with applicable environmental legislation, due to external factors such as watershed changes and pollution from external sources/ background environmental conditions
- Ageing infrastructure and its contribution toward legal non-compliances (environmental)
- Increase in illegal activity, sabotage and theft of environmental infrastructure leading to increased frequency and severity of associated environmental non-compliances
- Failure to obtain applicable environmental approvals, timeously because of slow responses from Regulators in respect of approving licenses and amendments
- Undue reliance on Rand Water Board (with a resultant increase in water costs)
- Poor surface and ground water quality
- Climate change and global warming.

In addition, and from an Environmental, Social and Governance (ESG) perspective, the following key environmental legislation, and its associated subsequent amendments, were identified to be applicable, wholly or partially, to the Kloof Operations:

- Constitution of the RSA, 1996.
- The Companies Act, Act 71 of 2008.
- King IV Report on Corporate Governance for South Africa 2016 (Institute of Directors in Southern Africa NPC).
- Promotion of Administrative Justice Act, Act 3 of 2000.
- Protection of Personal Information Act, Act 4 of 2013.
- Minerals & Petroleum Resources Development Act (MPRDA), Act No 28 of 2002 and all its Regulations and subsequent Amendments.
- National Environmental Management Act (1998).
- National Environmental Management: Biodiversity Act, Act No 10 of 2004.
- National Environmental Management: Waste Act, 2008.
- National Nuclear Regulatory Act, 1999.
- National Environmental Management: Air Quality Act (NEM:AQA), Act No 39 of 2005.
- National Water Act (NWA), Act No 36 of 1998.
- Water Services Act (NWS), Act 108 of 1997.

- Labor Relations Act, Act 66 of 1995.
- Mineral and Petroleum Resources Royalty Act 28 of 2008.
- Hazardous Substances Act, Act No 15 of 1973.
- National Heritage Resources Act (NHRA), Act No 25 of 1999.
- National Forest Act, Act No 84 of 1998.
- National Road Traffic Act, Act 93 of 1996.

- Road Transportation Act, Act 74 of 1977.
- Fertilizers, Farm Feeds, Agricultural Remedies and Stock Remedies Act, Act No 36 of 1947.
- Conservation of Agricultural Resources Act (CARA), Act No 43 of 1983.
- National Veld and Forest Fire Act, Act No 101 of 1998.
- National Environmental Management: Protected Areas Act, Act 57 of 2003.
- Promotion of Access to Information Act, 2000.
- Agricultural Pest Act, Act No 36 of 1983.
- Carbon Tax Act, Act 15 of 2019 and related Regulations

The development of environmental policies and regulations by the DFFE has been quite prolific over the last few years. Keeping in mind that section 24 of the Constitution of 1996 and the National Environmental Management Act (NEMA) of 1998 remain the cornerstone of the environmental legislative framework in South Africa, there have been some key environmental legislative changes/amendments over the last few years. These include but are not limited to:

- National Environmental Management Laws Act (NEMLA, 24 June 2022)
- Financial Provisioning Regulations of 2015
- National Mine Closure Strategy (currently at draft stage for consultation)

An important change in the regulation of mining-related environmental activities was that on 8th December 2014, with the launch of the so-called "One Environmental System" (OES), the Minister and thus the newly-renamed DMRE became the Competent Authority for environmental issues within the mining industry. The Minister of the Department of Minerals, Resources and Energy (DMRE) became the appeal authority for mine environmental issues. Since its inception in 2014, the OES has not as yet fully taken off as not all of the relevant Government Departments/Regulators seem to be on-board with the new, stricter approvals timeframes and/or other OES requirements which has led to the implementation of OES being, at best, mediocre and at worst, not meeting applicants' expectations.

In November 2015, the regulations regarding Financial Provisioning Regulations, 2015 (FP Regulations) were gazetted, with onerous legal obligations around financial provisioning on several closure-related issues. The mining industry has and is in the process of challenging these proposed regulations, with a view to having the most onerous regulations excluded from any revisions. Stakeholder engagement and consultation on the revised regulations is ongoing, and while the compliance date has been set as 19 June 2022, the final amended regulations have not been formally promulgated as yet. Sibanye-Stillwater has participated in previous public participation processes on these regulations, either as an interested and affected party, or as a member of the Minerals Council of South Africa.

These legislative amendments and changes, which is an ever-evolving process, have the sole objective of making the enviro-legal framework more robust, practical and enforceable as well as to align any piece of environmental legislation or regulation to be in line with the Constitution and/or framework environmental legislation such as NEMA.

To comply with South African mining legislation, the commitments undertaken in the EMP and to ensure that operations are conducted to international good practice standards, it is necessary to regularly

assess performance and progress against the EMP and the relevant Company policies. Environmental auditing is a well-developed field and provides the methodology and approach required to measure environmental performance.

Sibanye-Stillwater currently holds all material permits/authorisations required to conduct mining and exploration at the Kloof operation.

Table 66 shows the key environmental permits and authorisations that have been obtained by the mine.

Amendments to any or all the permits and authorisations will be made based on Kloof's operational and applicable legal requirements.

Sibanye-Stillwater confirms that, as far as is practicable, Kloof is aware of and compliant with the legal and other requirements that are applicable to its mining operations.

Table 66: Key Environmental Permits and Authorisations

Category	Licence/Registrations/Permits	Prefix to permit
Environment	Kloof Gold Mine Environmental Management Programme (EMP)	GP30/5/1/2/2(66)EM
Water	Water Use Licence	08/C23D/ACEFGIJ/4342
	General Authorisation	27/2/2/C423/20/1
Air	Atmospheric Emissions Licence	WR/16-17/AEL/14/2
Other	Approved polychlorinated biphenyls (PCB) phase out plan	PCB Registration 14/11/11/PCB/069
	Record of Decision (RoD) for refrigeration plant	Gaut 002/07-08/N0758
	RoD for the emergency diesel generators	Gaut 002/08-09/N0407

It is important to note that Kloof is an established mine that has been in operation in excess of 50 years. As such, while permits and other approvals are in place for the operational phase of the mine, there are no new surface exploration activities, and thus some of the above requirements may not be applicable. Kloof operations form part of a wider SA gold operations ISO 14001: 2015 certification obtained in December 2021, and on that basis, a legal register is currently being kept and maintained to list all the applicable legal requirements linked to operational activities, and Kloof will also conduct legal compliance audits at predetermined intervals.

17.4.2 Baseline Studies 2016-2012

17.4.2.1 History

Kloof Operations began before the current Regulations were in place. The composition of the Kloof operations has changes substantially since the 1960's. Kloof Mine has an EMPr (GP 30/5/1/2/2 (66) MR) that was approved on the 16th of February 2012. The EMPr compilation date is 2011, with the specialist studies in support of the EMPr being performed even earlier than this, resulting in the requirement for updating some of the activity descriptions as well as ensuring a focus on concurrent rehabilitation and footprint reduction with an overall aim to closure.

Further to this, some assets of the Kloof Mine have been sold to Far West Gold Recoveries (FWGR), namely Tailings Storage Facility (TSF) No. 1, Libanon TSF and Venterspost North and South TSFs, and associated infrastructure.

As a result of the need to update the activity description and rehabilitation plan, to include the waste related activities, and the selling of assets,the EMPr amendment application was submitted in early 2021 to the Department of Mineral Resources and Energy (DMRE) to ensure any existing gaps are covered and future activities are considered, particularly rehabilitation. The Records of Decision (RoD) for an emergency diesel generator (Gaut 002/08-09/N0407) and a refrigeration plant (Gaut 002/07-08/N0758) also need to be included in the updated EMPr. Approval of the EMPr is awaiting a Section 102 application (details can be found in Section 3.2) to amend the mining right.

The selling of assets, new activities and the updating of the rehabilitation plan changes the scope and possibly the nature of the environmental impacts, resulting in the need to amend the existing authorisation as defined in Regulation 31 of the EIA Regulations, 2014 (as amended). Baseline studies have been extracted from the Kloof Operations Environmental Authorisation Amendment, Gauteng- Draft Amended Environmental Management Programme of November 2021.

17.4.2.2 Impact Assessment

The original EMPr was approved in 2012 and the studies were done between 2009 and submittal of the application. There have been many changes and amendments since then and the original assessments have been superseded.

The impact management outcomes for the project are as follows:

- Minimise air pollution and dust fallout;
- Reduce groundwater pollution and seepage;
- Reduce surface water pollution;
- Prevent land contamination;
- Maintain transparent engagement and communication; and
- Ensure the full rehabilitation of a site by removing sources of pollution and radiation and re-instating the land for its intended future use.
- The following compliance mechanisms are required by Kloof on an annual basis:
- An environmental audit of the EMPr should be undertaken on a basis as required by the NEMA EIA regulations (as amended) by an independent auditor.

The 2021 amendment document does not include an impact ranking rather is sets out the known and likely impacts, affected areas/parties, mitigation plans, and monitoring activities. Environmental studies undertaken or data accessed since the 2009 EMPr are listed in Table 67. Results from studies for water resources, air, quality, noise and visual impacts are summarized in Sections 17.4.3 to 17.4.7.

Table 67: Summary of Updated Environmental Impacts Studies for Amended EMPr,2021)

Key Issue*	Reporting area	Service Providere	Year
Air Quality	Audit of the Atmospheric Emissions Licence	Shangoni	2020
Air Quality	Air Quality Management Plan.	SSW	2016
Biodiversity	Kloof Baseline Biodiversity Assessment.	Natural Scientific Services,	2017
Biodiversity	ibanye-Stillwater Aquatic Biomonitoring 2019-2020 Report – Kloof Mining Operation.	The Biodiversity Comp	2021
Biodiversity	Kloof Mine Environmental Management Programme.	Ecopartners	2010
Biodiversity	Kloof Ecological Wetland Assessment	Digby Wells	2017
Heritage	PGS Heritage Audit (	PGS Heritage,	2016
Noisue Impact	Environmental Noise Monitoring Report	Acoustech	2019
Radiation	Quarterly Dose Report for Underground Employees for the Period Ending June 2019 (RD 011) - DRN-R012 7-0.	SSW	2019
Soils, Land, Use and Land Capability	Land Type Survey Map 2626	Soil and Irrigation Research Institute,	1984
Visual Impact	Visual Impact Assessment	Natural Scientific Services CC	2017
Visual Impact	Visual Impact Assessment in compliance with the Environmental Management Plan for the Kloof Gold Mine, Gauteng Province	SRK Consulting, 2018.	2018
Water	Surface Water Study for the Kloof Operations Environmental Management Programme and Water Use Licence Update.	Hydropsatial.	2020
Water	Kloof Dumps. Groundwater Quality and Geochemistry Assessment.	Groundwater Abstract (Pty) Ltd,	2020
Water	Groundwater Quality and Geochemical Assessment.	Groundwater Abstract (Pty) Ltd	2020
Water	Kloof Water Quality Monitoring Programme 2019-2020	SSW	2020

Water	Integrated Water and Waste Management Plan in support of an integrated water use licence amendment application for Kloof Gold Mine	Golder	2020

*Updated Quarterly to present

17.4.3 Zone of Influence

17.4.3.1 Studies and Methodologies

The Zone of Influence of a project (Kloof as a whole) is defined as the area within which it has or can have material impacts or can influence impacts due to the establishment and continuation of the project's activities, products or services. The Zone of Influence is unique to each project and each aspect thereof, is larger than the actual project footprint and can either be positive or negative.

The Zone of Influence is determined by evaluating and mapping the following environmental and social components of the project:

- Footprint and areas directly adjacent to the infrastructure erected for the project
- The areas affected due to the following definitions
    - Secondary impacts arise from other impacts that are directly due to the development.
    - Induced impacts are due to unplanned/unintended/secondary activities that are 'catalysed' by the project.
    - Cumulative impacts are results of numerous individual activities, which might not be material on their own, but which can interact or combine to cause material impacts.
    - These areas can typically be impacted by surface and groundwater abstraction, surface and groundwater usage or discharges, ground stability, air quality, noise, visual and soil impacts, as well as invader vegetation infestation, protected areas destruction, loss of important biodiversity areas, and any other material impacts that may be identified during the Zone of Influence determination
    - Areas that will be deriving economic benefits from the project like adjacent towns and communities, as well as labour sending areas and
    - Surrounding environmental areas that can benefit or be impacted upon by the project.

For each environmental aspect, the Zone of Influence is determined independently and displayed on a map. A composite Zone of Influence for the entire project is then eventually determined.

For its major environmental aspects (e.g.: water discharges and air emissions) and resulting material impacts Kloof has extended monitoring programs and management systems in place to ascertain its impact on the environment and surrounding communities and therefore has a very good understanding of its material impacts on the above-mentioned areas. Management systems and procedures are in place to deal with those identified material impacts. Specialist studies required by environmental authorisations and Environmental Impact Assessments (EIA's) are further valuable sources of information to determine those areas potentially impacted upon by the project. Future specialist studies are expected to include an update or revision of the Zone of Influence map for each aspect and material impact as well as a combined Zone of Influence per aspect. These are updated at varying frequencies as informed by specialist studies.

The determination and display of a composite Zone of Influence that includes environmental, social and economic issues is a complex matter and has not been attempted by Kloof yet.

Individual specialist Zone of Influences have been compiled as part of environmental risk management. Examples: noise, visual, air, surface and groundwater.

The planned update to consolidate a composite Zone of Influence was deferred to allow for numerous alternative approaches to be followed, including the development of GIS-based online land-use, rehabilitation and tailings management systems, the update of specialist studies and methods used to assess the zones of influence, and the alignment of these various studies to national and international best practice.

17.4.3.2 Groundwater

The groundwater Zone of Influence represents the following two scenarios:

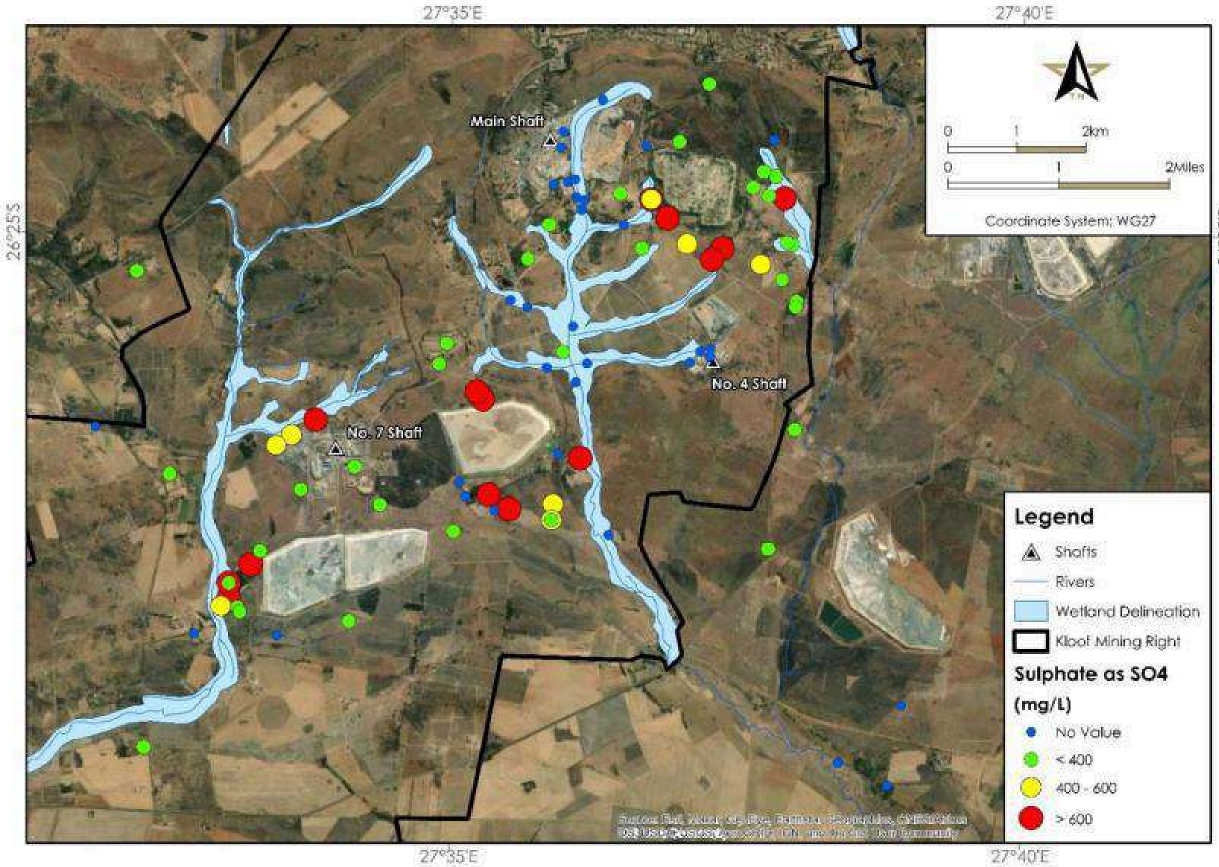
- Secondary Impacts: These are currently defined by the pollution plumes emanating from waste storage facilities, namely the TSFs and Surface Rock Dumps (SRDs); and
- Induced and Cumulative Impacts: These are presented by the dewatered areas caused by historical mining. The dewatering occurred at all mines linked to the dolomites to the north of the

Gatsrand and includes both Sibanye-Stillwater and other mining companies

Secondary Zone of Influence

The Secondary Zone of Influence is presented in Figure 50 and indicates the current simulated pollution plumes emanating from the TSFs and SRDs. It can be noted that no Zone of Influence has been indicated for the areas to the north of the "Dolomite contact" line or Gatsrand area, as these areas have been dewatered and therefore no groundwater quality data is available to determine the simulated pollution plumes.

Figure 50: Kloof Secondary Groundwater Zone of Influence



Induced and Cumulative Zone of Influence

The extent of dewatering of the dolomites as a result of the combined mining activities below the dolomitic areas is extensive and extends to the entire area where active mining is still taking place. The water levels will recover after mine closure when pumping ceases, and re-watering will take place.

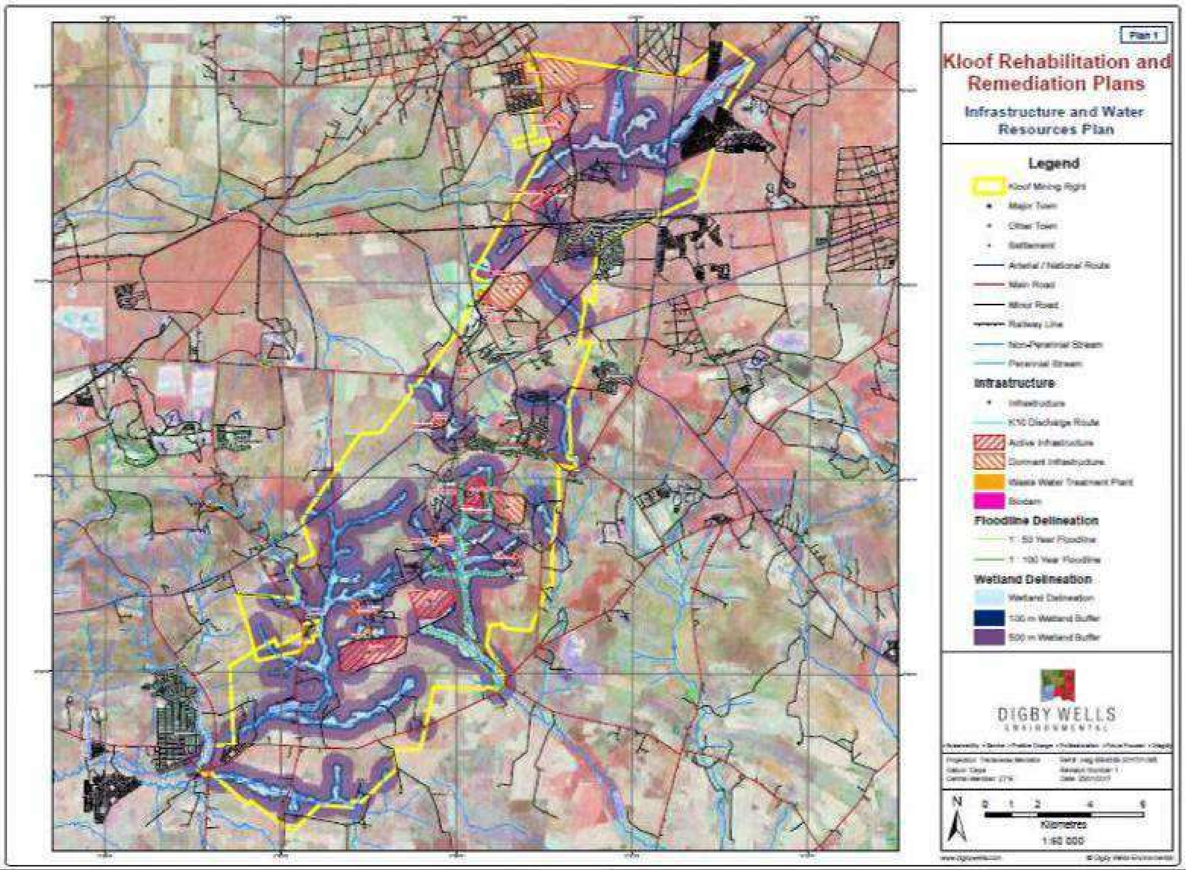
17.4.3.3 Surface Water

The surface water Zone of Influence is made up of areas influenced by secondary, induced and cumulative impacts. However, the assessment of cumulative and induced impacts still requires further investigation as these impacts may be far-reaching and they become less apparent due the activities of others in the catchment. Alternatively, they may only become apparent in the future dependent on the environmental context, such as the climatic conditions. The Zone of Influence's represented below consider the secondary impacts that have been evaluated as associated with the current operational area of the mine.

Secondary Zone of Influence

The watercourses within this section of the Zone of Influence represent activities within the wetlands, drainage lines, rivers and the recommended buffer areas that have the potential or have already caused a change to the ecological function and service provision of the wetlands (Figure 51). It should be noted that additional watercourses are influenced by the various discharges at the mine, which will be indicated in the next Section.

Figure 51: Secondary Watercourse Zone of Influence Associated with Kloof



Induced and Cumulative Impacts Zone of Influence

The Zone of Influence for the induced and cumulative impacts has been determined based on the compliance of the water quality of the surface water bodies, where the end of the impact is considered compliance of the water quality of the surface water bodies, where the end of the impact is considered to be the point at which 95% compliance to the Resource Water Quality Objectives (RWQO) has been achieved for the year to date. It should however be noted that the induced and cumulative impacts would also be influenced by changes caused by flow and habitat alterations, which largely requires further assessment due to the complex nature of the discharges within the catchments in which Kloof operates, which receive impacts from a plethora of other water users. However, the 1m diameter

pipeline and canal systems installed to allow for mining at Kloof (among other mines) has already been included, as these are clearly attributable to mining water uses.

It should be noted that Figure 52 and Figure 53 do not include the watercourses indicated above, but rather the further downstream impacts. The use of water quality as a means to determine compliance means that all potential impacts whether from direct discharges, diffuse seepage and/or groundwater interflows, would be assessed against the current applicable standards. The current update includes a review of the 2021 data.The current update includes a review of the 2021 data.

With phosphate and the existing uranium limit included the compliance at the combined discharge point (DSW36) was 85%. The phosphate concentrations within the Wonderfonteinspruit are discussed in greater detail in the Driefontein TRS 2022 (reference Section 24). The reason for the exclusion of phosphate is that Kloof has shown 100% compliance to the RWQOs for phosphate at the combined discharge point WS107. Therefore, the 100% non-compliance noted for the year-to-date records shows that these phosphate exceedances instream are not as a result of the Kloof activities, but rather other water users. The Kloof discharge would contribute to the dilution of the impacts and therefore providing a positive impact on the Zone of Influence. The Zone of Influence upstream of Kloof extends more than 20 km upstream of the discharge into the Wonderfonteinspruit, due to the inclusion of the Luipaardsvlei and Donaldson Dams that act as attenuation facilities. This is to control the inflow into the 1m diameter pipeline across the Wonderfonteinspruit. The dams and the 1m pipeline were constructed to reduce the pumping requirements due to surface water infiltration into the underground workings for Kloof and Driefontein, as well as other non-Sibanye-Stillwater mines. The upstream Zone of Influence is included in this TRS as Kloof would be the first mine to be impacted should this infrastructure no longer function.

The Zone of Influence in the Loopspruit (Figure 52) catchment was determined to be the point LP006, which is less than 1 km from the final potential impact from Kloof, but showed 85% compliance (consistent with 2020) to the RWQO for Mooi River, with the uranium limit of 30 µg/L as discussed above.

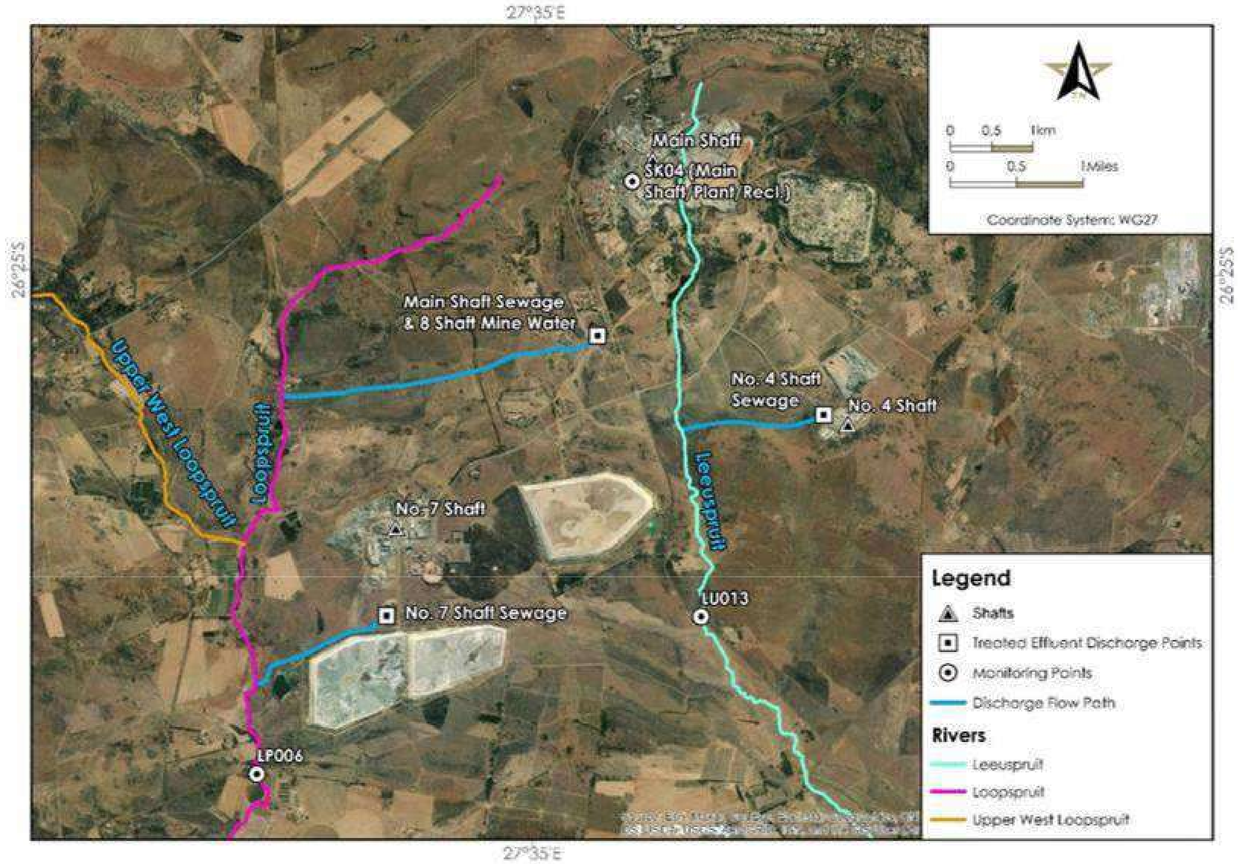
With phosphate excluded, the compliance percentage is 92% (incremental improvement of 1% from 2020). The phosphate exceedances of the RWQO can be attributed to both the higher WUL limits for discharge as well as agricultural inputs. The Leeuspruit point LU013 (Figure 53) showed 81% compliance to the Mooi River RWQO and is also less than 1 km from the final potential impacts from Kloof. A decline in compliance was noted and the periodicity of both salt and nitrate exceedances was noted. Further investigation was instituted, and ad hoc, largely unmonitored mine process water overflows had occurred, leading to the spikes noted. Since action plans were implemented, improvement was evident in the last quarter of 2021. The situation will continue to be monitored, whilst simultaneously a detailed watercourse rehabilitation study is underway, to inform additional mitigation and restoration measures.

Sibanye-Stillwater has contacted the Department of Water and Sanitation (DWS) to discuss these limits, but there has been a delay in finding the relevant responsible persons and specialists within the DWS. The process is ongoing, and Sibanye-Stillwater aims to release a science-based limit guideline in 2023 to support and improve upon its current risk-based management system for water quality.

Figure 52: KLoof Zone of Influence in the Wonderfonteinspruit

Donaldson Dam
Legend
Monitoring Point
Wonderfonteinspruit Dams
1m Diameter Pipeline
Discharge Canals
Rivers
Middelvleispruit
Rietfonteinspruit
Wonderfonteinspruit
Mooirivierloop
Historic Kloof-Middelvlei Operations
Wonderfonteinspruit
Mooirivierloop
Abe Bailey
DSW38
No. 10 Shaft Discharge
26°20'S
27°25'E
27°30'E
27°35'E
27°40'E
27°45'E

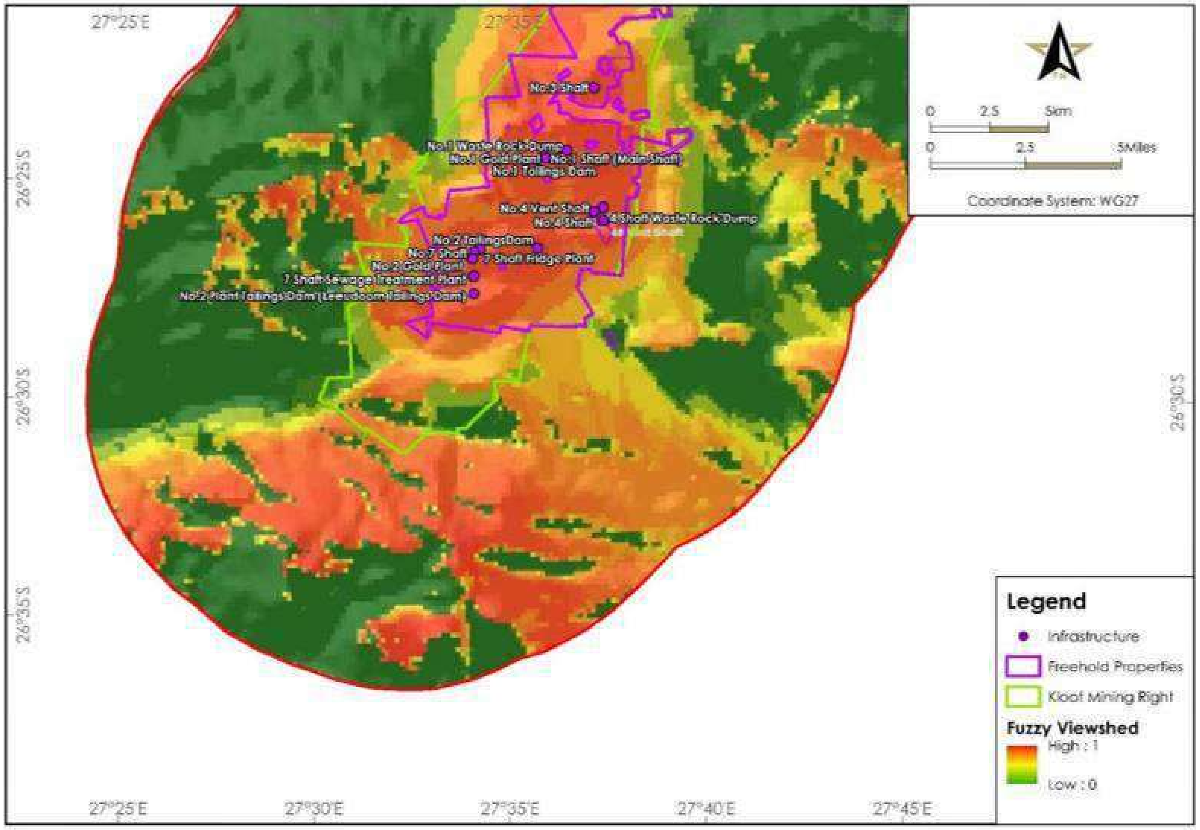
Figure 53: Kloof Zone of Influence in the Loopspruit and Leeuspruit Catchments



17.4.3.4 Visual Zone of Influence

The visual Zone of Influence has been modelled using standard specialist assessment criteria, to determine visibility from high to low based on the likely receptors. This is shown in Figure 54, as per an assessment conducted in 2017.

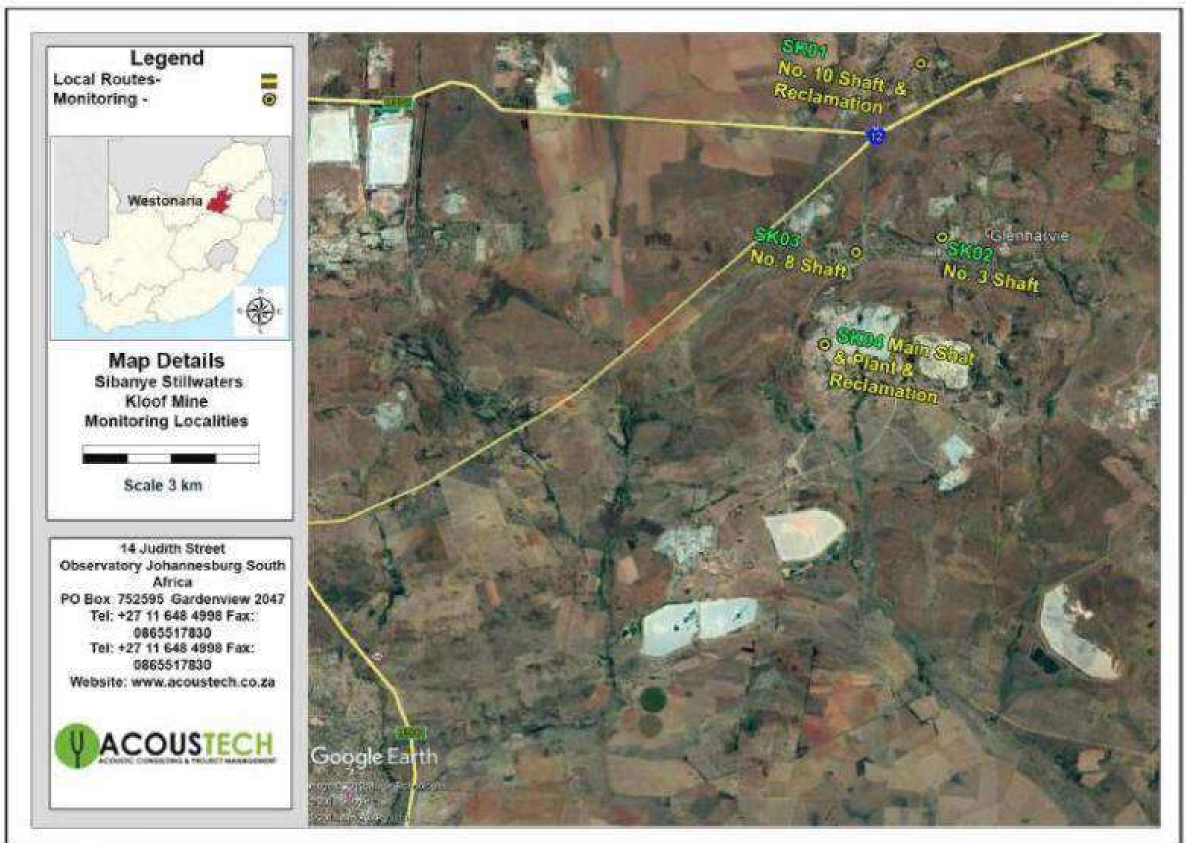
Figure 54: Kloof North Visual Zone of Influence



17.4.3.5 Noise Zone of Influence

As per the specialist noise assessment for 2019, there were no exceedances of the Gauteng Noise Control Regulations GN 5479, which was confirmed in the 2021 updated survey. Therefore, the Zone of Influence for noise does not extend beyond the existing mining infrastructure. The monitoring points that showed compliance are indicated in Figure 55.

Figure 55: Kloof Noise Zone of Influence



17.4.4 Climate Change and Greenhouse Gas Emissions, Air Quality

Sibanye-Stillwater considers climate change as one of the most pressing global environmental challenges of our time. Sibanye-Stillwater recognises the importance of proactively managing its carbon footprint in the global context and is committed to contributing to a global solution through the deployment of responsible strategies and actions. To this effect, Sibanye-Stillwater monitors and reports on its carbon emissions. Sibanye-Stillwater uses the Department of Forestry, Fisheries and the Environment's Technical Guidelines for monitoring, reporting and verification of greenhouse gas emissions by industry (Version No. TG-2016.1 of April 2017) and the World Resources Institute: Greenhouse Gas Protocol for determining its carbon inventory.

To this effect, Sibanye-Stillwater monitors and reports on its carbon emissions. Sibanye-Stillwater uses the Department of Environmental Affairs, Technical Guidelines for monitoring, reporting and verification of greenhouse gas emissions by industry (Version No. TG-2016.1 of April 2017) and the World Resources Institute, Greenhouse Gas Protocol for determining its carbon inventory.

Furthermore, Sibanye-Stillwater is committed to contributing to a global solution by deploying responsible strategies and actions in the areas within which the mines operate.

Kloof activities influence the ambient environment in terms of particulate matter (TSP, PM_{10} and $PM_{2.5}$ as the significant pollutants). Sources include mining and associated activities, vehicle entrainment from paved and unpaved roads, materials handling (i.e. loading and unloading), wind erosion from TTailings Storage Facilities, and emission from the processing activities.

Emissions from Kloof for 2022 are given in Table 68.

Table 68: Kloof Emissions Inventory as at 2023

Scope of Emissions	Emissions (Tonnes Carbon Dioxide Equivalent – tCO_2e)

Scope 1: Emissions from direct fuel sources such as petrol and diesel	8 117
Scope 2: Emissions from purchased electricity	1 108 913
Scope 3: Emissions from other indirect sources such as purchased goods and services	26 947

17.4.5 Biodiversity Management

Since Sibanye-Stillwater took ownership of the Operations, there were no major infrastructure expansions that would have resulted in the loss of key biodiversity areas. Nevertheless, biodiversity management continues in terms of the following initiatives:

- Update of Biodiversity Management and Action Plans associated with specialist studies with a specific focus on alien and invasive plant management;
- Wetland delineations and health assessments, including impact assessments where new projects or project changes are planned to occur;
- Surface water monitoring in terms of quality, quantity and biological taxa composition; and
- For any new projects, the Environmental Impact Assessment and Basic Assessment processes are also implemented which incorporate the identification of important biodiversity areas such as wetlands, cave systems and ridges.

In partnership with the Endangered Wildlife Trust (EWT), an assessment to align with the Biological Diversity Protocol was completed in 2021 and was reported on this in the Sibanye-Stillwater 2021 Annual Integrated Report. The assessment included hectare equivalency accounts for ecosystems and plots the planned changes over time. It will inform management and provide mitigation measures to achieve the target of a net gain in biodiversity, as based on the ecosystem state at the date at which Sibanye-Stillwater took ownership of Kloof.

The assessment currently focuses on ecosystems and new mechanisms will be investigated to effectively assess species population data in a meaningful manner, as current assessment measures are considered to be unviable (due to large areas and security considerations) and arbitrary (due to challenges in seasonality, specialist availability and geographical extent).

Sibanye-Stillwater developed its first Biological Diversity Procedure that embeds the mitigation hierarchy into all decision-making processes from feasibility to post-mining. It ensures the use of the best practice local science-based methods for monitoring and assessment. The outcomes thereof are then incorporated into option analyses along with consideration of health, safety, engineering, social and economic considerations, to arrive at the best practicable and sustainable way forward. Ultimately it aims to enhance avoidance of impacts on sensitive ecosystems and thereafter integrate mitigation, restoration and off-setting, to achieve the net gain and no net loss targets as applicable to the sites.

17.4.6 Waste Management

Kloof has a waste management plan in place. The waste management process is detailed in the Integrated Water and Waste Management Plan and is aligned with the Sibanye-Stillwater Waste Management Procedures. The plan prescribes measures for the collection, temporary storage and safe disposal of the various waste streams, including mining waste and hazardous waste, associated with the project and includes provisions for the recovery, re-use and recycling of waste. The purpose of this plan is therefore to ensure that effective procedures are implemented for the handling, storage, transportation and disposal of waste generated from the project activities on site.

Site personnel and contractors responsible for the operation and safe handling of the various waste streams will receive appropriate job-specific training on the risks and potential consequences of their appointment and work situation, how to avoid environmental impacts and how to respond during an environmental incident or emergency situation. Kloof must ensure that training and awareness programmes cover the safe transportation, handling, storage, transfer, handling, use and disposal of all waste streams, and the location of waste receptacles for each waste stream. All waste management activities must be done in accordance to the Kloof internal procedures and in terms of registers dealing with storage of waste in specific areas.

17.4.7 Water Use Strategy

Gold mines are dependent on water to sustain operations. Kloof receives water from two main water sources:

- excess underground fissure water
- potable water is purchased from the Rand Water Board network, which draws water from the Vaal River System

Sibanye-Stillwater recognises water as a critical resource. The Company further considers its integrated approach to the management of the water footprint and the water systems infrastructure as a key component of its business strategy.

17.4.7.1 Licensing

Kloof received a new WUL in July 2016. In October and December 2021 an EMP amendment and IWULA applications were submitted respectively to the relevant authorities for inclusion of new activities, amendment requirements, focus on rehabilitation and closure activities as well as authorisation of activities associated with the production suspension of No. 3 Shaft, and exclusion of activities associated with the sale of assets for Far West Gold Recoveries (FWGR). The EMP process is paused by the DMRE due to the pending Section 102 application and the IWULA is currently in phase 1 of the e-WULAAS. Kloof AEL renewal application was submitted in December 2022.

The IWULA and amendment also aim to ensure consolidation of all RODs and general authorisations with these primary licences and incorporate closure and rehabilitation activities.

An internal WUL audit was conducted in December 2022 and Kloof achieved 97% compliance, which is an increase from the 94% 2020 internal audit and 93% 2021 external audit. The report will be submitted on the 31st January 2023 to the DWS. Regular detailed reviews of the WUL are conducted to ensure that the WUL fits the operational requirements.

17.4.7.2 Geohydrological Analysis and Pumping

Ground Water

A geophysical survey to identify drilling targets at Driefontein Gold mine by MVB Groundwater Consulting in 2017, found that the groundwater occurrences in the study area are predominantly restricted to the following types of terrains:

- weathered and fractured rock aquifer in the Transvaal Formations
- dolomitic and karst aquifers

The dolomite aquifers in the region are known to contain large quantities of groundwater and are commonly associated with sustainable groundwater abstraction. About 1,300 million years ago (MYA) ago the region was subjected to tension resulting in the formation of several large north to north-easterly striking faults. Many of the faults penetrated the full Transvaal sequence, as well as the underlying Ventersdorp and Witwatersrand Supergroups. Some of the faults were filled by Pilanesberg age diabase (dolerite) dykes, which subdivided the dolomite into watertight compartments. The water that plagues the underground mining is primarily derived from the dolomite aquifer overlying the workings. The dolomite aquifer has been formed as a result of the karstification, which has taken place prior to the deposition of the Karoo sediments on top of the dolomite.

There is general agreement that this aquifer is the significant source of water within the dolomite. The weathered altered dolomite (WAD), together with its dissolution residues, forms the main aquifer in the area. Therefore, the near surface dolomite, which is extensively karstified, contains huge water storage potential. Kloof mine is located underneath the Venterspost compartment, which has been dewatered over time.

Kloof is a water positive mine and is required to pump excess water from the underground aquifer to ensure that its mining activities are carried out safely. This water quality is good and the discharge into various rivers is done in accordance with its current legally compliant WUL.

The Kloof mining complex has two fissure water pumping shafts. These shafts need to pump approximately 50ML/day of fissure water ingress for safety reasons to prevent the operations from flooding. Various safety measures are in place to protect the operations and workers against a potential flooding risk. These are well maintained and tested to minimise any potential flooding risk to the shafts and the mine workings.

Various initiatives are being pursued to reduce and optimise the pumping volume and associated costs. These include early closure and isolation of No. 8 Shaft and No. 10 Shaft (feasibility stage). This will allow the long-life shafts at Kloof to operate without the burden of fissure water pumping.

One of the positive preliminary outcomes of recent geohydrological modelling (a study done as part of a project previously called Sibanye-Stillwater: Amanzi, aimed to assess various post mining scenarios and opportunities) is that in preparation for closure the suggested post mining sealing of the shaft barrels at depth will allow the natural water table to re-establish and the natural eyes to start flowing, similar to the pre-mining environment. This might eliminate the need to continue pumping after closure of the mine. The next update in the model is planned for 2023.

The Far West Rand Dolomitic Association (FWRDA) was established to provide oversight over the land that was affected by the dewatered dolomites due to mining. The area is known for sinkhole formation. The key infrastructure that the FWRDA manages is the 1m diameter pipeline, which was installed to prevent water from the Wonderfonteinspruit entering sinkholes, thus rewatering mine workings or forming new sinkholes. The recent spate of illegal activity in the region saw illegal miners break the 1m pipeline to access water for their operations, causing new sinkholes to form and had a noticeable impact on pumping at Celemanzi Shaft, where increased volumes need to be pumped.

17.4.7.3 Surface Water Resource Sources and Wetlands

Water Sources

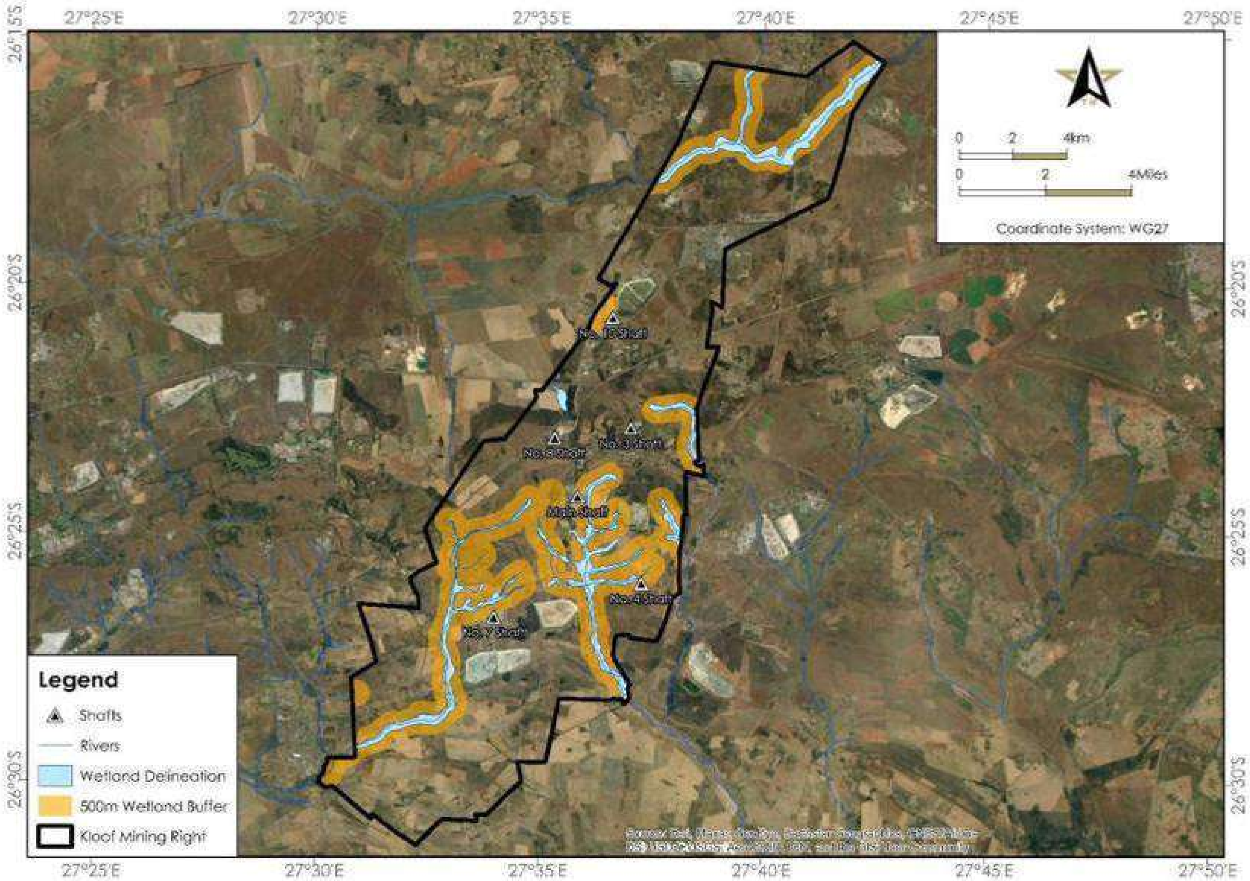
Kloof is located in the Vaal Water Management Area, within the C23D and -J as well as the C22J quaternary catchments (Figure 56) within the Upper-Vaal Catchment. Three sub quaternary reaches are potentially affected by the Kloof operations, namely: The Lower Wonderfonteinspruit (C23E-01384), Leeuspruit (C22J-01468) and Loopspruit (C23J-01487). The Lower Wonderfonteinspruit receives an underground water discharge, pumped to surface to allow for mining activities underground to continue. The Loopspruit receives both underground water as well as treated sewage effluent, while the Leeuspruit receives only a discharge of treated sewage effluent. The relevant surface water resources have been mapped as per Figure 57 in terms of the various sub quaternary reaches. It can be noted that the three reaches do not form any confluences with each other, however the Loopspruit and Wonderfonteinspruit both report to the Mooi River. The Leeuspruit reports to the Rietspruit.

Additionally, there are several wetland areas that have been demarcated as per Figure 57.

Figure 56: Sub-quaternary Reaches Around Kloof


Upper West Loopspruit
No. 4 Shaft
No. 7 Shaft
C22J-01468
Loopspruit
C23J-01487
Google Earth
N
4 km

Figure 57: Wetland Features Within the Vicinity of Kloof



Discharge

Kloof is licensed under Section 21(f) of the NWA to discharge excess mine water and treated sewage effluent into the nearby surface water resources. Excess fissure and mine water is discharged into three river systems (Loopspruit, Leeuspruit and Wonderfonteinspruit). Bulk fissure water is abstracted from No. 10 Shaft and discharged into two bio dams before it is discharged into the 1m pipeline, which finally discharges into the Wonderfonteinspruit. Excess underground water from No. 8 Shaft is discharged into the Loopspruit.

Treated sewage water is discharged from the No. 4 Shaft Wastewater Treatment Works (WWTWs) into the Leeuspruit, as well as from Main Shaft and No. 7 Shaft WWTWs into the Loopspruit.

Usage and Storage

Water is used for:

- processing and transportation of ore material
- cooling and humidification of ventilation air for underground mining
- underground mining activities such as drilling

- cooling of equipment
- chemical make-up dosing
- consumption and sanitation
- irrigation

The water system is operated such that water is recycled and re-used wherever possible.

Excess fissure water is extracted and discharged under license conditions as described above. Mine water is recycled and re-used where possible. The separation of mine water and fissure water is a key focus area to prevent the contamination of fissure water by the mining processes.

17.4.7.4 Water Conservation and Demand Management (WCDM)

Sibanye-Stillwater's vision for water management can be described as: "…creating value for all our stakeholders through the optimal management of the water resource and our water infrastructure, ensuring water safety, security and regulatory compliance through the effective use of knowledge and innovative technology."

Sibanye-Stillwater is committed to achieving its water management vision through:

- providing water that is safe and secure (available) for its people, machinery, infrastructure and the environment
- ensuring that water abstracted, used, stored and/or discharged is compliant with legal and regulatory requirements
- responsible compliance and proactive incident management supported by enabling technologies and comprehensive reporting
- implementation of sound water management practices and systems, and the development of fit for purpose water standards and procedures that promote continual improvement
- hands-on management of water management contracts, thereby ensuring the efficient operation of water infrastructure
- developing and maintaining regional water strategies
- implementation of a sustainable mine closure strategy for effective socio-economic and environmental closure
- maintaining ring-fenced water accounts and holding users accountable for the use of water
- effective stewardship and promoting water awareness among all stakeholders

By applying and implementing these principles, systems, strategies and policies, Sibanye-Stillwater aims to reduce its water footprint in order to minimise its:

- impact on water resources
- dependence on external water suppliers, such as water boards and municipalities

- cost associated with the purchase and treatment of water

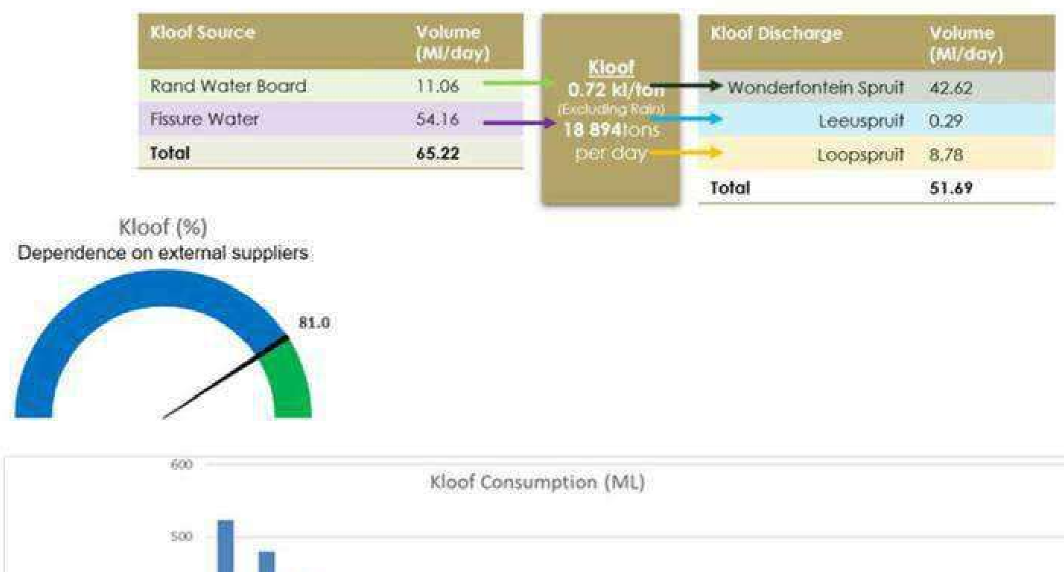
To achieve this, Sibanye-Stillwater's Water Conservation and Water Demand Strategy consists of various components. These include:

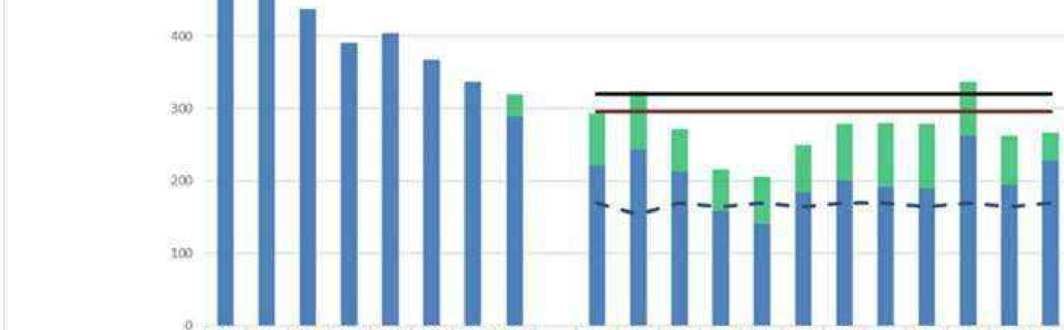
- using alternative available underground water sources to replace purchased water (i.e. the water treatment facility at North Shaft mentioned earlier)

- Identifying and reducing water losses through improved monitoring and water balance management
- reducing water wastage through optimisation strategies
- optimising water quality management (i.e. treatment and polishing of water mentioned earlier)

A summary of Kloof's water user context is shown in Figure 58. A schematic of water handling at Kloof is shown in Figure 59.

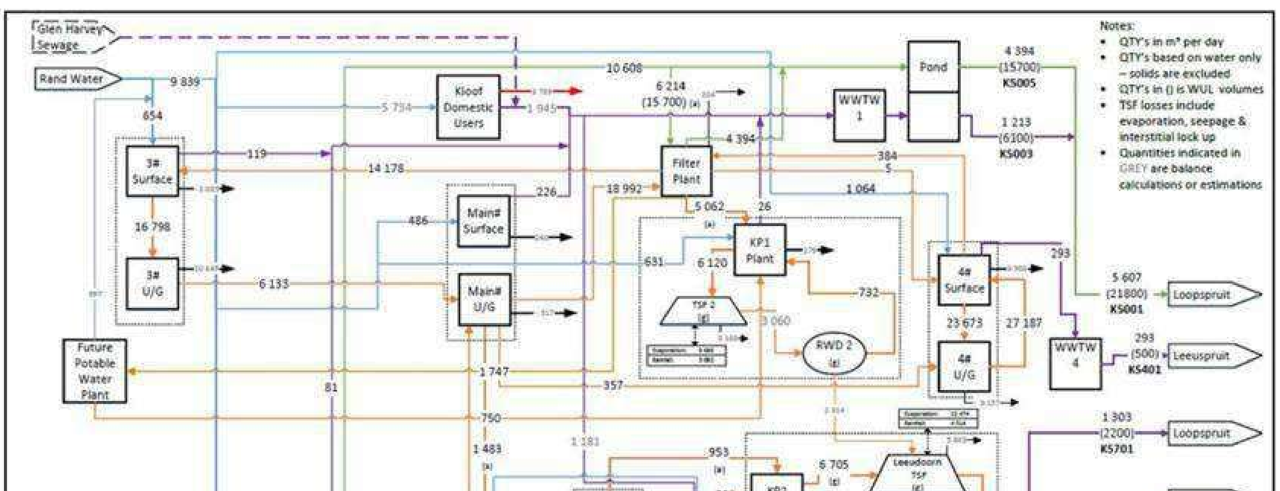
Figure 58: Kloof Water Use Context

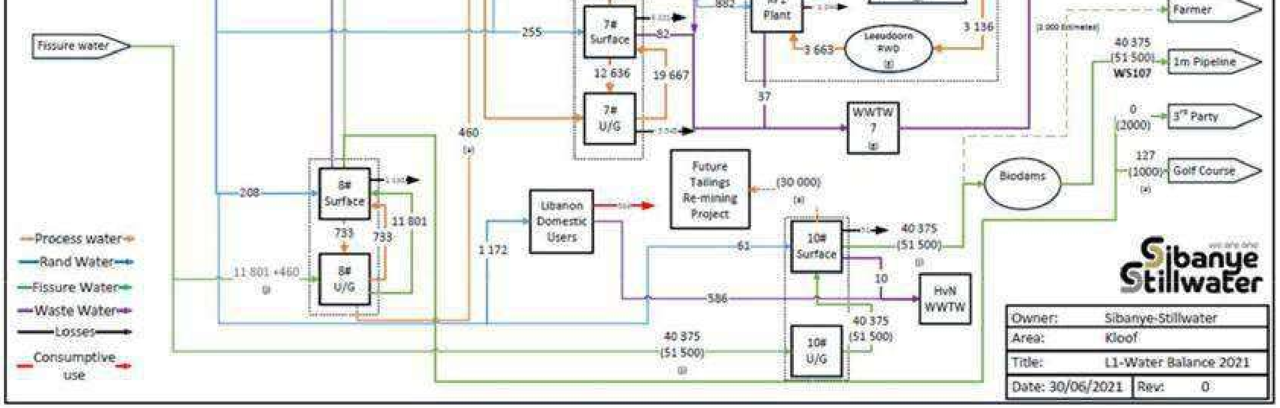




	2014	2015	2016	2017	2018	2019	2020	2021	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Kloof Produced (ML)								30	72	80	60	57	65	66	78	88	89	75	68	38
Kloof Purchased (ML)	523	480	437	391	404	367	336	289	222	243	212	158	141	184	201	191	189	262	194	228
Kloof 2021 Average									319	319	319	319	319	319	319	319	319	319	319	319
Kloof 2022 Benchmark									169	154	169	164	169	164	169	169	164	169	164	169
Kloof ESG Target									295	295	295	295	295	295	295	295	295	295	295	295

Figure 59: The Schematic Process Flow Diagram for Water Handling at the Kloof Operation





17.4.8 Environmental Reporting

17.4.8.1 Audits

To ensure continued compliance to the various licenses in place for the Operation, numerous audits are performed on varying timelines, based on the regulatory, as well as practical management requirements associated with the relevant authorization (Table 69).

Table 69: Kloof Environmental Audits

Authorisation	Frequency of audit
Environmental Management Plan	Biennial
Emergency Generator Record of Decision	Annual
Water Use Licence	Annual
Atmospheric Emissions Licence	Annual

The auditing process follows the standard approach for auditing, with the final compliance percentage only considered to be those conditions that were found to be 100% compliant (Table 70).

Table 70: Summary of 2023 Audits for Kloof

Authorisation	Type of audit	Area	Date completed	Name of auditor	Qualification of auditor
Emergency Generators Record of Decision	External and independent	Environmental Compliance	December 2023	Ci Group Environmental: Renee Janse van Rensburg	
Water Use License	IExternal audit	Environmental Compliance	Dec-23	Madeleni Environmental Division	MSc Aquatic Ecology, BSc Honours Zoology, BSc Biodiversity and Conservation Pr.Sci.Nat, EAPASA, ELA, IAIAsa, ESSA, South African Wetland Forum I
Atmospheric Emissions Licence	External and Independent	Environmental Compliance	September 2023	Rayten Environmental and Engineering Consultants: Lerato Tshisi	BSc Hons

17.4.8.2 Findings

The following material risks and action plans were identified from the audits conducted for the operation (Table 71). It should be noted that action plans are reviewed and revised if necessary, as actions are implemented to ensure the best way forward is continually followed. Therefore, action plans may vary over time.

Table 71: Kloof Material Risks and Action Plans (Results from 2023 Audits)

Audit	Overall Compliance (%)	Finding	Action plan
Record of Decision for the Generators	100		
Record of Decision for the Ammonia Refrigeration Plant	96%		
Atmospheric Emission Licence	95		
Water Use Licence	91	The WC/WDM plan needs to be completed and regularly updated. Conduct audits as per condition	Alternating audits instead of annually, variables exceeding monthly limits, no soil monitoring, water balance not updated for audit period, no WQ for golf course irrigation, PCDs not lined, IWWMP not updated annually, WC/WDM not updated annually, no toxicity tests at TSF.

Findings are discussed in terms of overall compliance with the legislation that pertains to the environment and community (Table 72).

Sibanye-Stillwater confirms that, as far as is practicable, Kloof is aware of, and compliant with the legal and other requirements that are applicable to its mining operations.

Table 72: Kloof Compliance to Legislation

License type	Licence No.	License holder	Commencement date	Expiry date	Key Permit conditions	Regulatory body
Environmental Management Programme/Environmental Authorisation (EMP/EA)	GP 30/5/1/2/2 (60)MR	Kloof Gold Mine (Goldfields)	16/02/2016	NA	Authorizes the Environmental Management Programme submitted with the EIA.	Department of Mineral Resources & Energy (DMRE)-Gauteng
Water use Licence (WuL)	27/2/2/2/C423/11 /4	Sibanye Gold Limited:Kloof Mine	07/07/2016	20years	Authorizes the Section 21 water uses as per the NWA, 36 of 1998. Sec 21 a,c,e,f,g,I, j.	Department of Water and Sanitation (DWS)-Gauteng
Atmospheric Emission Licence (AEL)	WR/16-17AEL 14/2	Sibanye Gold Limited:Kloof Division	28/04/2028	5years	Authorizes the triggered activities as per NEM:AQA, 39 of 2004. Category 4 sub cat 4.1, and 4.17	West Rand District Municipality
General Authorisation (GA)	27/2/2/C423/20/1	Sibanye Gold Limited:Kloof Mine	02/03/2018	NA	Authorizes K8 railway embankment reclamation within c23d quartenary catchment, vaal water management area.	Department of Water and Sanitation (DWS)-Gauteng
Record of Decision: Emergency Generators	002/08-09/NO407	Gold Fields (Pty)LTD Kloof,Driefontein &South Deep Gold Mine	01/09/2009	NA	Authorizes the use of Emergency Diesel Generators.	Department of Mineral Resources & Energy (DMRE)-Gauteng
Record of Decision: Ammonia Refrigeration	002/08-09/NO758	Kloof Gold Mine (Goldfields)	01/09/2009	NA	Authorizes the use of Ammonia Refrigeration Plants	Department of Mineral Resources & Energy (DMRE)-

Plant						Gauteng

It is important to note that Kloof is an established mining operation that has been in operation for more than 50 years. As such, whilst permits and other approvals are in place for the operational phase of the mine, there are no new surface exploration activities, and thus some of the above requirements may not be applicable to it. Going forward, coupled with the implementation and certification of the ISO 14001: 2015 environmental management system (EMS), Kloof Operations will compile and implement a comprehensive Legal Register, as well as conducting legal compliance audits at pre-determined intervals.

17.4.9 Closure Planning and Cost Estimates

17.4.9.1 Decommissioning and Cost Estimate

The Operations are committed to on-going closure planning. Scheduled and unscheduled mine closure costs are reviewed and updated annually for financial reporting and regulatory compliance.

The National Environmental Management Act (NEMA), pertains to the financial provision for prospecting, exploration and mining and requires that a final rehabilitation, decommission and mine

closure plan is developed which includes the determination of financial provision to guarantee the availability of sufficient funds to undertake rehabilitation and remediation of the adverse environmental impacts of mining. An amendment to GNR 1147 (Regulations for Financial Provision for Prospecting, Exploration, Mining and Production Operations,2015) in October 2016, extended the Transitional Arrangements until further notice. The alignment of these plans and documents are within compliance with the draft regulations.

In order to ensure that all aspects potentially applicable during the closing of a facility is considered during the quantum assessment, a standard checklist have been provided by the guidelines which was used in compilation of this plan. It is however recognized that all the items will not always be applicable for all the areas, but it was considered in any event to make sure that all possible issues were addressed and assessed.

Closure Components to be considered during the Quantum Assessment are given in Table 73.

In addition, Long Term Care and Maintenance plans as well as Future Monitoring programmes will be established as part of the Closure Plans.

Table 73: Closure Components

Component No.	Description
1	Infrastructural Areas
1.1	Dismantling of processing plant and related structures (including overland conveyers and powerlines)
1.2	Demolition of steel buildings and structures
1.3	Demolition of other buildings and structures
1.4	Rehabilitation of roads and paved surfaces
1.5	Demolition and rehabilitation of railway lines
1.6	Other linear infrastructure
1.7	Disposal of demolition waste
1.8	Making good of infrastructure
2	Mining Areas
2.1	Open pit rehabilitation, including final voids and ramps
2.2.	Sealing of shafts, adits and inclines
2.3	Rehabilitation of stockpiles and processing residues
2.4	Rehabilitation of clean water impoundments
2.5	Rehabilitation of dirty water impoundments
3	General surface rehabilitation
3.1	Infrastructural areas
3.2	Other surface disturbances
4	Runoff Management
4.1	River diversions and watercourse reinstatement
4.2	Reinstatement of drainage lines
5	P&Gs, Contingencies and additional allowances
6	Pre-site relinquishment monitoring and aftercare

17.4.9.2 Life of mine planning and closure

A site specific, detailed rehabilitation, decommissioning and closure plan was developed for Kloof, detailing the mine's environmental and social baseline and presents the planned closure measures required to achieve the mines planned next land use. The document also reflects the financial provisioning required to implement these closure measures, which are developed to ensure a stable non-polluting end state that is able to support the next land use.

Sibanye_Stillwater is committed to reducing the environmental liability of each of its operations on an on-going basis throughout their respective LoM's. To this end, Kloof has been reprocessing Waste Rock Dumps (WRDs) and rehabilitating the resultant footprint areas where possible.

As per current planning, most or all of the existing Kloof Tailings Storage Facilities (TSFs) will also eventually be reprocessed by third parties in the medium-to long term. The second-generation tailings arising from the process will be deposited on a new, off-site mega-TSF. At present, three of the dormant Kloof TSFs have already been transferred to DRD Gold for reprocessing, namely the Venterspost No. 1, Venterspost No. 2/Rietfontein and Kloof No. 1 TSFs.

Kloof will continue to operate the active TSFs for the remainder of their lifespans, where after these will also be transferred to third parties for reprocessing, if financially viable to do so. The resultant footprint areas will then be rehabilitated to enable the intended next land uses to eventually be implemented over these areas. The liability for the closure of the transferred TSFs and gold plants as well as associated infrastructure will ultimately vest with the parties that they have been transferred to.

The larger balance of rehabilitation-related activity is expected to occur at the time of mine closure, when the redundant mining infrastructure will be demolished, any potentially remaining TSFs and WRDs will be rehabilitated in-situ, and all other disturbed or transformed areas restored as far as possible.

From a water management perspective, further investigations and monitoring are being conducted to confirm the post-closure water management strategy for the mine. Investigations are also ongoing with regards to remediation of the section(s) of Wonderfonteinspruit and other water resources impacted by Kloof Gold Mine's activities and will be implemented on an ongoing basis throughout operations towards closure where feasible.

17.4.9.3 Unscheduled Closure Cost Estimate

Kloof's total closure liability and associated financial provision is based on unplanned closure, with specific costs allocated to the demolition of mining and associated infrastructure, the rehabilitation of mine-impacted land and post-closure monitoring and maintenance. The mechanisms and methods of the demolition, remediation and rehabilitation processes are described in rehabilitation and final closure plans.

A closure cost estimate for an unscheduled closure at the Kloof Operations is updated annually, in line with the International Financial Reporting Standards ("IFRS") of the International Accounting Standards Board and South African Statements of Generally Accepted Accounting Practice as well as applicable environmental legislation (MPRDA and NEMA) and in accordance with the Draft GN1147.

The closure cost assessment included an update and escalation of the unit rates applied in the C2023 update, and the inclusion of additional construction and removal of existing infrastructure since the previous closure cost update. The base rates applied in the closure cost assessment were determined as at March 2023.

During the 2023 closure costs assessment, an estimate of ZAR 1,312,489,941 has been calculated for unscheduled closure costs which is made up of the following elements:

- infrastructural aspects – ZAR 469,898,239 (38,57% of the total estimate)
- mining aspects – ZAR 361,207,596 (29,65% of the total estimate)
- general surface rehabilitation – ZAR 102,921,134 (8,45% of the total estimate)
- surface water reinstatement – ZAR 1,071,588 (0.1% of the total estimate)
- preliminary and general – ZAR 56,105,913 (4.61% of the total estimate)

- contingencies – ZAR 72,625,051 (5.96% of the total estimate)
- post closure cost – ZAR 120,856,054 (9,97% of the total estimate)
- additional studies – ZAR 33,509,487 (2.75% of the total estimate)

The Kloof 2023 closure liability of ZAR 1,312,489,941 will be fully funded through a combination of cash in trust funds as well as replacement guarantees.

Efforts to reduce the Kloof closure liability resulted in a ZAR113.7m reduction using the 2022 closure liability as a baseline. Efforts included demolition projects, surface rehabilitation, changes in rehabilitation methodologies and the reworking of SRDs and TSFs where applicable.

17.5 QP's Opinion on ESG Matters

The QP is satisfied that all material issues relating to Environmental, Social and Governance have been considered in Kloof's planning, including material issues related to environmental compliance,

permitting and local individuals or groups. All relevant issues are being addressed, and plans in place to remedy any deficiencies or have been identified for further consideration.

18 Capital and Operating Costs

18.1 Overview

Sustaining capital costs cater for mine and surface equipment, capitalised development, projects, infrastructure and environmental capital expenditure. The capital budget ranges between ZAR1,221m and ZAR221m per annum and is dominated by the costs of capitalised development (approximately 68% of the annual capital costs). Stay-in-business capital expenditure ranges between R421m and R32m per annum and also includes R420m for integration projects over 3 years.

Accuracy limits for metal pricing and costs is given in Table 87 in Section 21.1.1. All costs are estimated to at least the Pre-Feasibility level of accuracy. Risks are discussed in Section 21.1.221.

18.2 Capital Costs

The major ongoing capital items at Kloof are:

- the completion of items within the scope of Kloof Integration Project which will give access to the remaining 3 shaft mineral reserves

Ongoing capital estimates (stay in business or sustaining capital) are based on provisions of an effective 5% of operating expenditures excluding electricity cost. The stay-in-business capital estimate is based on historical expenditure. These amounts cater for unforeseen expenditures and are considered prudent provisions, given that limited detail is provided beyond the current three-year horizon. The percentage is reduced closer to the end of life of a shaft. Stay in business capital projects mainly consist of

- Winder Upgrades - Obsolete equipment being upgraded predominantly on Man-Winders (Regulators, Brakes, DCB etc.)
- Strategic Pumping - installing of new pump column & increasing pumping capacity.

- Electrical Upgrades - Upgrade of obsolete breakers, protection automation etc.
- RIMMS - Rail infrastructure maintenance for safe RBE handling.
- Winder Ropes – Legal compliance across Service, Man and Rock Winder Ropes
- SIMMS – Shaft Steelwork & Infrastructure maintenance

The total capital expenditure requirements over the LoM of Kloof amounts to ZAR5,525 million (real) planned to be spent through to 2032, including Ore Reserve Development (ORD) of ZAR3,737 million (Table 74).

Financial Accuracy for Capital Costs is given in Section 22.1.1. Cost estimates are to at least the Pre-feasibility level of accuracy.

Table 74: Historical and Forecast Capital Expenditure – Current Operations

		Historical			Real Forecast									
	Units	2021	2022	2023	LoM	2024	2025	2026	2027	2028	2029	2030	2031	2032
					Total	1	2	3	4	5	6	7	8	9
All Sections Capital Expenditure - Excluding Development	(ZAR m)	198	210	117	-	-	-	-	-	-	-	-	-	-
Capitalised Development	(ZAR m)	930	620	912	**3,737**	791	800	422	480	337	327	186	174	221
Sustaining Capital	(ZAR m)	488	455	421	**1,788**	429	421	293	255	192	103	63	32	
Total	(ZAR m)	1,616	1,285	1,450	**5,525**	1,220	1,221	716	734	528	430	249	207	221

18.3 Operating Costs

This section provides details on the forecast operating cost estimates for Kloof Operations.

18.3.1 Operating Costs by Activity

Table 75 provides details of historical and forecast Operating Costs by activity grouped according to:

- Direct Shaft Costs /Mining costs – underground mining costs and surface sources costs, including ore handling costs
- Production overheads are for metallurgy both U/g and Surface
- Shared Costs are for pumping, hoisting and traming
- Processing costs, including tailings and waste disposal costs and
- The cost of maintaining key on mine infrastructure.

In addition, Kloof has incorporated costs for environmental rehabilitation and closure and costs associated with terminal benefits, which will be payable on cessation of mining activities. No salvage values have been assumed for the plant and equipment.

The Operating Costs are based on the current year's operational business plan and projected forward using the required production profile taking into account the likely physical changes in the operating parameters over the full period of the LoM plan.

Financial Accuracy for Operating Costs is given in Section 22.1.1. Cost estimates are to at least the Pre-feasibility level of accuracy

18.3.2 Operating Costs

Operating cost for the Mineral Reserves in the LoM plan is ZAR3,922/tonne. The actual average operating cost for 2023 was ZAR2,683/t (Table 75). Operating costs include costs relating to all mining activities to be able to extract the ore from underground and maintain infrastructure, processing, and allocated costs.

18.3.3 Surface Sources Costs

Surface costs averaged ZAR370/t for 2023; the average over the LoM plan is ZAR450/t. Surface source costs include transport and processing costs of SRD material.

18.3.4 Processing Costs

The treatment cost for 2023 was ZAR266/t and planned at ZAR212/t for underground material. The LoM

The treatment cost for 2023 was ZAR[illegible]/t and planned at ZAR212/t for underground material. The LoM average is ZAR190/t and reduced from the previous years in line with the business decision to close Kloof 2 plant in 2024 and process Kloof underground material at Driefontein 1 plant. Additional R60/ton is included in the mining cost for the transport of ore.

18.3.5 Allocated Costs

Allocated costs have been forecast at an average of ZAR1,166 million per annum in the next five years. These costs include costs for rehabilitation, Royalties, Retrenchment cost, Engineering, Occupational Environment and Hygiene, Environmental Management, Health and Safety, and other typical centralized costs.

Table 75: Historical and Forecast Operating Costs -Current Operations

		Historical			Real Forecast									
	Units	2021	2022	2023	LoM	2024	2025	2026	2027	2028	2029	2030	2031	2032
					Total	1	2	3	4	5	6	7	8	9
Direct Production cost	(ZARm)	5,036	4,149	5,175	28,396	4,211	3,576	3,169	3,121	3,208	3,171	3,101	2,503	2,337
Alloated production cost	(ZARm)	287	299	409	4,344	427	400	518	522	517	516	510	473	461
Processing cost	(ZARm)	301	252	370	2,060	342	254	229	234	225	222	211	179	163
Allocated overheads	(ZARm)	1,392	1,323	1,420	10,347	1,182	1,280	1,107	1,162	1,099	1,124	1,131	952	1,310
Total U/G Operating Cost	**(ZARm)**	**7,016**	**6,023**	**7,375**	**45,147**	**6,162**	**5,510**	**5,023**	**5,039**	**5,050**	**5,033**	**4,954**	**4,106**	**4,271**
Surface Operating Cost	(ZARm)	866	576	579	362	243	119	-	-	-	-	-	-	-
Total Operating Costs	**(ZARm)**	**7,882**	**6,599**	**7,954**	**45,509**	**6,405**	**5,629**	**5,023**	**5,039**	**5,050**	**5,033**	**4,954**	**4,106**	**4,271**

Total Operating Costs	**(ZARm)**	**7,882**	**6,599**	**7,954**	**45,509**	**6,405**	**5,629**	**5,023**	**5,039**	**5,050**	**5,033**	**4,954**	**4,106**	**4,271**
Unit Costs														
U/G Mill Tonnes	(kt)	1,863	992	1,399	10,800	1,407	1,422	1,264	1,299	1,240	1,220	1,154	948	847
Surface Mill Tonnes	(kt)	4,139	1,953	1,565	805	659	145							
Underground Mining	(ZAR/t)	3,766	6,072	5,271	4,180	4,380	3,875	3,976	3,879	4,073	4,125	4,293	4,332	5,042
Surface Mining	(ZAR/t)	209	295	370	450	369	818	-	-	-	-	-	-	-
Total Operating Costs	**(ZAR/t)**	**1,313**	**2,241**	**2,683**	**3,922**	**3,100**	**3,592**	**3,976**	**3,879**	**4,073**	**4,125**	**4,293**	**4,332**	**5,042**
	(kt)	**6,002**	**2,945**	**2,965**	**11,604**	**2,066**	**1,567**	**1,264**	**1,299**	**1,240**	**1,220**	**1,154**	**948**	**847**
	(ZARm)	**7,882**	**6,599**	**7,954**	**45,509**	**6,405**	**5,629**	**5,023**	**5,039**	**5,050**	**5,033**	**4,954**	**4,106**	**4,271**

19 Economic Analysis

19.1 Introduction

The following section presents a discussion and comment on the economic assessment of Kloof Operations. Specifically, comment is included on the methodology used to generate the financial models for Kloof Operations to establish a base case, including the basis of the techno-economic model, modelling techniques and evaluation results.

19.2 Economic Analysis Approach

Kloof can be classified as a Production Property as it has significant, detailed cost and capital information specific to the geographic and economic locality of its assets. The cash-flow approach is the most appropriate method to use for the economic analysis. There is no appropriate secondary analysis approach.

19.3 Economic Analysis Basis

The assumptions on which the economic analysis is based include:

- All assumptions are on 31 December 2023 money terms, which is consistent with the Mineral Reserve declaration date
- Royalties on revenue are consistent with relevant South African legislation (0.5 - 7.0% based on formula) (refer to Table 76)
- Corporate taxes that can be offset against assessed losses and capital expenditure (refer to Table 76)
- A Real base case Discount Rate of 5% and
- Discounted cash-flow (DCF) techniques applied to post-tax pre-finance cash. Sensitivity analysis was performed to ascertain the effect of discount factors, product prices, total cash costs and capital expenditures. The post-tax pre-finance cash flows presented for the mining asset incorporate the macroeconomic projections set out in Table 77.
- The Technical – Economic Model (TEM) is presented in real terms are based on annual cash-flow projections determined at end-point 31 December 2022.
- As the Kloof operations are on-going with an annual positive cashflow, the internal rate of return (IRR) and payback period are not applicable.

19.4 TEM Parameters

Table 76 provides details of the parameters applied in the TEM.

Table 76: TEM Parameters

Parameter	Units	Historical
Mining		y=34 -170/x
Corporate Tax Rate	(%)	27
Royalties (based on formula)*	(%)	0.5
Trading Terms		
Debtors	(Days)	3
Creditors	(Days)	45
Stores	(Days)	45
Balance as at 31 December 2023		
Debtors	(ZARm)	**173**
Creditors	(ZARm)	**6 279**
Stores - opening balances	(ZARm)	N/A
Unredeemed Capital - 31 December	(ZARm)	**2 739**
Environmental Closure Liability – 31 December	(ZARm)	**1 176**
Terminal Benefits Liability Based On LoM	(ZARm)	**715**
Assessed Losses	(Years)	N/A

*Sibanye-Stillwater Kloof operations are subject to royalties due to the South African Government on all production. Currently only gold is being produced and subject to royalties. Royalties are calculated as using the formula for refined metals [Royalty Payable = 0.5+ (EBIT/Gross Sales)/12.5].

Activity	Driver	Fixed / variable ratio	Allocation method	% Re-allocated at shaft closure
Development	metres	100% variable		0
Stoping	Square metres	100% variable		0
Engineering	Milled tons	70% fixed		0
Direct Services	Milled tons	70% fixed		0
Shared Cost (Pumping)	Gold produced	70% fixed	Gold produced	70
Metallurgy	Milled tons	70% fixed	Milled tons	70
Direct Allocated	Gold produced	70% fixed	Gold produced	70
Indirect Allocated	Gold produced	70% fixed	Gold produced	70

Direct (Central Engineering, MRM, HR, etc) and Indirect (Corporate, Rehab, Retrenchment, SGA, SGPS, Property) allocated costs are based on the 2024 budget.

Model assumes indirect and pumping cost will be phased out with the close of the last remaining shaft.

Ramp down approach applied on direct and indirect cost to simulate restructuring of service departments in line with the decrease in production.

LoM Fundamentals	
Base	2024 Operational Plan.
Efficiencies	No efficiencies applied.

Engineering and Infrastructure
Annual electricity increase at 10% from 2025 to 2026 (5.3% real term) and back to CPI from 2027 onwards. Energy savings projects included at Kloof and Driefontein
Electricity costs on pumping shafts fixed at 70%
Investment capital expenditure included on the modelling.
Finance and Capital
Royalty and Carbon Tax included in LoM based on the current formula.
Benefit of Energy savings projects included at Kloof and Driefontein
Carbon tax low-cost assumption calculation is used in the module
Inflation is forecast by Monetary Fund at 4.8% for 2024, and 4.5% for 2025 onwards.
Stay in business capital at 5% of working cost and excludes the cost of electricity and reduces by 1% in the last 5 years before shaft closure with zero capital spent in the last year. Shallow mines at 4%.
Payroll cost is budgeted at 5.2% for P1 and 5.5% for P2 in 2025 and 2026 and back to inflation from 2027 onwards. Restructuring cost incorporated at ZAR155k per employee minus 10% natural attrition.

The following working capital parameters have been applied in the model: Debtors – 3 days; Creditors – 45 days; and Stores – 45 days. Sibanye-Stillwater has indicated that the balances for working capital will be settled at the effective date of the Mineral Reserve declaration, and as such the opening balances have been set to zero.

19.5 Technical Economic Model

The technical inputs used to determine the financial parameters for the TEMs are provided in Table 77 to Table 79, as well as an assessment of the financial parameters on a unit cost basis: ZAR/kg.

Table 77: TEM – Mining, Processing, Gold Sold and Revenue – 2024-2034 (table split for readability)

Description	Units	Real Forecast									
		LoM Total	2024 1	2025 2	2026 3	2027 4	2028 5	2029 6	2030 7	2031 8	2032 9
Underground Mining											
Development	(m)	**43,805**	8,834	9,052	5,715	5,156	4,030	3,892	2,574	2,243	2,309
RoM / Tons milled	(kt)	**10,800**	1,407	1,422	1,264	1,299	1,240	1,220	1,154	948	847
RoM Grade	(g/t)	**5.3**	4.3	4.4	5.1	4.8	5.8	6.2	5.9	5.2	6.5
Recovery	%	**98**	98	98	98	98	98	98	98	98	98
Gold Recovered	(Kg)	**55,665**	5,861	6,075	6,319	6,078	7,079	7,413	6,679	4,805	5,355
Surface Sources											
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]							

RoM / Tons milled	(kt)	**805**	659	145	-	-	-	-	-	-	-
RoM Grade	(g/t)	**0.5**	0.5	0.8	-	-	-	-	-	-	-
Recovery	%	**70**	73	60	-	-	-	-	-	-	-
Gold Recovered	(Kg)	**305**	236	70	-	-	-	-	-	-	-
Plant Clean-up	(Kg)	**950**	150	400	400	-	-	-	-	-	-
Processing											
RoM / Tons milled	(kt)	**11,604**	2,066	1,567	1,264	1,299	1,240	1,220	1,154	948	847
RoM Grade	(g/t)	**4.9**	3.1	4.0	5.1	4.8	5.8	6.2	5.9	5.2	6.5
Recovery	%	**99**	99	104	104	98	98	98	98	98	98
Gold Recovered	(Kg)	**56,920**	6,247	6,544	6,719	6,078	7,079	7,413	6,679	4,805	5,355
Revenue											
Gold Price	(ZAR/kg)	**987,990**	1,179,872	1,091,092	975,333	934,075	941,374	941,374	941,374	941,374	941,374
Revenue from Gold Sales	(ZARm)	**56,237**	7,370	7,140	6,554	5,677	6,664	6,979	6,288	4,523	5,041

Table 78: TEM –Cash Costs, Taxation, Capital Expenditure and Free Cash – 2024-2034

Description	Units	Real Forecast									
		LoM	2024	2025	2026	2027	2028	2029	2030	2031	2032
		Total	1	2	3	4	5	6	7	8	9
Operating Cost											
Underground Mining Cost	(ZARm)	**44,432**	6,162	5,413	5,018	5,034	5,039	4,986	4,863	4,083	3,834
Add: Mining Cost Capitalised	(ZARm)	**3,737**	791	800	422	480	337	327	186	174	221
Expensed Mining Cost	**(ZARm)**	**48,169**	**6,953**	**6,213**	**5,440**	**5,513**	**5,376**	**5,313**	**5,049**	**4,258**	**4,055**
Surface Sources Cost	(ZARm)	**362**	243	119							
Less Mining Cost Capitalised	(ZARm)	**-3,737**	-791	-800	-422	-480	-337	-327	-186	-174	-221
Total Direct Cost	**(ZARm)**	**44,794**	**6,405**	**5,532**	**5,018**	**5,034**	**5,039**	**4,986**	**4,863**	**4,083**	**3,834**
Other Cost											
Terminal Benefits Costs	(ZARm)	**715**		97	6	5	10	47	90	23	437
**Environmental Closure Costs	(ZARm)										
Royality Payable	(ZARm)	**572**	40	39	83	39	42	92	123	43	73
Total Central cost	**(ZARm)**	**1,288**	**40**	**136**	**88**	**44**	**52**	**138**	**213**	**66**	**510**

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Recurring pre-tax income from continuing operations (EBITDA)	(ZARm)	**10,155**	**925**	**1,473**	**1,448**	**600**	**1,573**	**1,854**	**1,212**	**374**	**698**
Income tax expense											
Taxation	(ZARm)	**0**	0	0	0	0	0	0	0		0
Net Income From Continuing Operations	**(ZARm)**	**10,155**	**925**	**1,473**	**1,448**	**600**	**1,573**	**1,854**	**1,212**	**374**	**698**
Capital expenditure											
Direct Capex	(ZARm)	**418**	181	102	50	51	35	0	0	0	
Capitalised Development	(ZARm)	**3,737**	791	800	422	480	337	327	186	174	221

Description	Units	Real Forecast									
		LoM Total	2024 1	2025 2	2026 3	2027 4	2028 5	2029 6	2030 7	2031 8	2032 9
Sustaining Capital	(ZARm)	**1,370**	249	319	243	204	157	103	63	32	
Total Capital Expenditure	**(ZARm)**	**5,525**	**1,220**	**1,221**	**716**	**734**	**528**	**430**	**249**	**207**	**221**
Net free cash	(ZARm)	**4,630**	-294	252	732	-135	1,044	1,424	963	167	477
NPV @ 5%	(ZARm)	**3,628**									

** Environmental Liability is fully funded an no additional provision is required.

Table 79: TEM – TEM – Unit Analysis (ZAR/kg) – 2024-2032

Description	Units	Real Forecast									
		LoM Total	2024 1	2025 2	2026 3	2027 4	2028 5	2029 6	2030 7	2031 8	2032 9
Unit Revenue (Kg)											
Revenue from Gold Sales	(ZAR/kg)	987,990	1,179,872	1,091,092	975,333	934,075	941,374	941,374	941,374	941,374	941,374
Unit Costs (kg)											
Expensed Mining Costs	(ZAR/kg)	846,253	1,113,010	949,388	809,589	907,108	759,408	716,655	755,973	886,062	757,095
Surface Sources Costs	(ZAR/kg)	6,359	38,902	18,174							
Less: Mining Costs Capitalised	(ZAR/kg)	-65,654	-126,574	-122,272	-62,853	-78,902	-47,560	-44,056	-27,845	-36,266	-41,229
Total Operating Costs	**(ZAR/kg)**	786,958	1,025,338	845,289	746,735	828,207	711,848	672,599	728,128	849,795	715,867
Other Costs	(ZAR/kg)	22,622	6,376	20,790	13,166	7,225	7,364	18,649	31,844	13,813	95,216
Total Working Costs	**(ZAR/kg)**	809,579	1,031,714	866,079	759,901	835,432	719,212	691,248	759,971	863,608	811,082

Description	Units	Real Forecast									
		LoM Total	2024 1	2025 2	2026 3	2027 4	2028 5	2029 6	2030 7	2031 8	2032 9
Operating Margin	(ZAR/kg)	178,411	148,158	225,013	215,432	98,643	222,161	250,125	181,403	77,765	130,291
Capital Expenditure	(ZAR/kg)	97,071	195,302	186,555	106,484	120,818	74,634	57,994	37,274	43,005	41,229
Notional Cash Expenditure	(ZAR/kg)	906,650	1,227,016	1,052,634	866,385	956,250	793,846	749,242	797,245	906,613	852,311
Free Cash Before Tax	**(ZAR/kg)**	81,340	-47,144	38,458	108,948	-22,175	147,528	192,132	144,128	34,760	89,062
Unit Revenue (t)											
Revenue from Gold Sales	(ZAR/t)	4,846	3,567	4,556	5,187	4,371	5,375	5,720	5,450	4,772	5,952
Unit Costs (t)											
Expensed Mining Costs	(ZAR/t)	4,151	3,365	3,964	4,305	4,245	4,336	4,354	4,377	4,492	4,787
Surface Sources Costs	(ZAR/t)	31	118	76							
Less: Mining Costs Capitalised	(ZAR/t)	-322	-383	-511	-334	-369	-272	-268	-161	-184	-261
Total Operating Costs	**(ZAR/t)**	3,860	3,100	3,530	3,971	3,876	4,064	4,087	4,215	4,308	4,526
Other Costs	(ZAR/t)	111	19	87	70	34	42	113	184	70	602
Total Working Costs	**(ZAR/t)**	3,971	3,119	3,616	4,041	3,909	4,106	4,200	4,400	4,378	5,128
Operating Margin	(ZAR/t)	875	448	940	1,146	462	1,268	1,520	1,050	394	824
Capital Expenditure	(ZAR/t)	476	590	779	566	565	426	352	216	218	261
Notional Cash Expenditure	(ZAR/t)	4,447	3,710	4,395	4,607	4,475	4,533	4,552	4,615	4,596	5,389

19.8 DCF Analysis

The following NPV sensitivities are included in this Section (Table 81 to Table 83):

- NPV's at a range of discount factors in relation to the Discount Rate of 5% (Real) are shown in Table 80. A range of discount factors from 0% to 10% with their associated NPVs are presented for each case at different discount factors and the sensitivity to the discount factor can be evaluated. Based on the sensitivity of the discount rate, it can be seen that the Kloof operation is very robust and supports the declaration of the 31 December 2022 Mineral Reserve.
- NPV sensitivity to sales revenue and capital expenditure (Table 81) derived from twin parameter sensitivities at the Discount Rate of 5% (Real). Twin parameter sensitivities are presented evaluating Revenue against capital expenditure costs. Capital expenditures are estimates until contracts, which specify the deliverable, are signed by clients. It is for this reason that the QP presents sensitivities for capital costs from -20% to +20%. The most optimistic analysis, which assumes prices have been under-estimated by 20% and capital expenditure costs over-estimated by 20%, yields an NPV in the top right-hand corner of Table 81. Conversely, the most pessimistic analysis, which assumes prices have been over-estimated by 20% and capital expenditure costs under-estimated by 20%, yields an NPV in the bottom left-hand corner of Table 81.
- Twin parameter sensitivities are presented evaluating Revenue against Operating Costs. NPVs at higher product price levels are shown up to a 20% increase in price, which captures any upside potential. Since markets are inherently volatile, the downside risk is reflected in the 20% decrease in price in increments. The achievability of LoM plans, budgets and forecasts cannot be assured as they are based on economic assumptions, many of which are beyond the control of Kloof Operations. Future cash flows and profits derived from such forecasts are inherently uncertain and actual results may be significantly more or less favourable. It is for this reason that the QP presents sensitivities for Operating Costs, ranging from -20% to +20%. The most optimistic analysis, which assumes prices have been under-estimated by 20% and Operating Costs over-estimated by 20%, yields an NPV in the top right-hand corner of Table 82. Conversely, the most pessimistic analysis, which assumes prices have been over-estimated by 20% and Operating Costs under-estimated by 20%, yields an NPV in the bottom left-hand corner of Table 82.

Table 80: NPV (Post-tax) at Various Discount Factors

Discount Factor (%)	NPV Current Ops (ZARm)
0.00%	4,630
2.00%	4,191
5.00%	3,628
7.00%	3,306
10.00%	2,887

Table 81: Twin Parameter NPV (Post-tax) Sensitivity at a 5% Discount Rate (Revenue, Operating Costs) _Current Operations

Post-Tax NPV @ 5%		Revenue Sensitivity Range						
(ZARm)		-20%	-10%	-5%	0%	5%	10%	20%
Total Capital Cost Sensitivity Range	-20%	(4,653	52	2,404	**4,612**	6,688	8,428	11,555
	-10%	(5,145	(440	1,912	**4,120**	6,196	7,936	11,063
	-5%	(5,391	(686	1,667	**3,874**	5,950	7,690	10,817
	0%	**(5,637**	**(932**	**1,421**	**3,628**	**5,704**	**7,444**	**10,571**
	5%	(5,883	(1,178	1,175	**3,382**	5,458	7,198	10,325
	10%	(6,129	(1,424	929	**3,136**	5,212	6,952	10,080
	20%	(6,621	(1,916	437	**2,644**	4,720	6,460	9,588

Table 82: Twin Parameter NPV (Post-tax) Sensitivity at a 5% Discount Rate (Revenue, Capital Expenditure) – Current Operations

Post-Tax NPV @ 5%		Revenue Sensitivity Range						
(ZARm)		-20%	-10%	-5%	0%	5%	10%	20%
Total Operating Cost Sensitivity Range	-20%	125	4,830	7,183	**9,390**	11,466	13,206	16,333
	-10%	(2,496)	2,209	4,562	**6,769**	8,846	10,585	13,713
	-5%	(3,888)	817	3,170	**5,377**	7,454	9,193	12,321
	0%	**(5,637)**	**(932)**	**1,421**	**3,628**	**5,704**	**7,444**	**10,571**
	5%	(7,430)	(2,724)	(372)	**1,836**	3,912	5,652	8,779
	10%	(9,320)	(4,615)	(2,262)	**(55)**	2,022	3,761	6,889
	20%	(13,148)	(8,442)	(6,090)	**(3,882)**	(1,806)	(66)	3,061

Table 83: Twin Parameter NPV (Post-tax) Sensitivity at a 5% Discount Rate (Revenue, Discount Rate) – Current Operations

Post-Tax NPV (ZARm)		Gold Price Sensitivity Range				
		-10%	-5%	0%	5%	10%
	0%	(769)	2,029	4,630	7,052	9,033
	1%	(806)	1,891	4,404	6,748	8,675
	2%	(841))	1,762	4,191	6,463	8,339
	3%	(873)	1,641	3,992	6,195	8,023

NPV @ Discount factor	**4%**	(904)	1,527	3,804	5,942	7,725
	5%	**(932)**	**1,421**	**3,628**	**5,704**	**7,444**
	6%	(959)	1,320	3,462	5,480	7,179
	7%	(983)	1,226	3,306	5,269	6,929
	8%	(1,007)	1,137	3,158	5,069	6,692
	9%	(1,028)	1,053	3,019	4,881	6,469
	10%	(1,048)	974	2,887	4,702	6,257

As can be seen from the tables, the operation is especially sensitive to the gold price received in ZAR/kg, and the NPV is negative when the gold price is 10% down (at a 5% discount rate). The operation is heavily leveraged to the up-side, with the NPV nearly tripling in value with a 20% increase in gold price.

While the profitability of the entire operation is tested on a total cost basis, the point at which each individual shaft closure is determined, is after direct operational including pumping cost. As soon as a shaft does not contribute to its own mining and operational cost it is closed. Table 84 shows the profit per shaft at the various stages. The direct allocated costs include the overheads specific to the operation, while indirect allocated costs refer to those items which belong to the entire Group and which are allocated back to each operation based on a formula. These are discretionary costs and should not really be considered (Table 84).

Table 84: Summary Revenue and Costs per Area (On Reef Dev excluded from the calculation, Profit excludes Royalty and taxes)

	Units	No.1 Shaft	No.23 Shaft	No.4 Shaft	No. 5 Shaft	No.8 Shaft	UG	SRD	Clean-up gold	LOM Total
Gold Produced	Kg	43,300	0	0	1,605	10,760	55,665	305	950	56,920
Revenue	**ZARm**	**42,316**	**0**	**0**	**1,823**	**10,740**	**54,879**	**354**	**1,004**	**56,237**
Working cost: Direct	ZARm	25,908	0	543	1,675	6,067	34,193	362		34,555
Profit after Direct cost	**ZARm**	**16,408**	**0**	**-543**	**149**	**4,672**	**20,686**	**-8**		**21,682**
Working cost: Pumping cost	ZARm	3,588	0	0	111	644	4,344	0		4,344
Profit after Pumping cost	**ZARm**	**12,820**	**0**	**-543**	**37**	**4,028**	**16,342**	**-8**		**17,337**
Working cost: Direct Allocated	ZARm	2,482	0	0	106	618	3,206	0		3,206
Profit after Direct Allocated cost	**ZARm**	**10,338**	**0**	**-543**	**-69**	**3,410**	**13,136**	**-8**		**14,132**
Capital cost: Ongoing	ZARm	1,420	0	0	95	273	1,788	0		1,788
Profit after Ongoing Capital	**ZARm**	**8,918**	**0**	**-543**	**-164**	**3,137**	**11,348**	**-8**		**12,343**
Working cost: Indirect Allocated	ZARm	5,621	0	0	225	1,295	7,141	0		7,141
Profit after Indirect Allocated cost	**ZARm**	**3,297**	**0**	**-543**	**-389**	**1,842**	**4,206**	**-8**		**5,202**
Capital cost: Project	ZARm	0	0	0	0	0	0	0		0
Profit after Project Capital	**ZARm**	**3,297**	**0**	**-543**	**-389**	**1,842**	**4,206**	**-8**		**5,202**

19.7 Summary Economic Analysis

The summary economic analysis of Kloof is based on the Cash-Flow Approach. There is no other appropriate method of analysis for this operation.

The summary economic evaluation for Kloof is based on the current business plan of the operation and excludes any impact of Secondary Taxation on Companies and adverse international or local events, impact of that risk is illustrated in Table 80 to Table 85 indicating sensitivity impact as a result of fluctuations in operating cost, capital and metal price sensitivities. The economic model has been undertaken to support the declaration of Mineral Reserves. The economic model has been undertaken for Mineral Reserves (Table 85).

Table 85: NPV (Post-tax) Relative to ZAR/kg Gold Prices Prices at 5 % Discount Rate-Current Operations

Long Term Price (ZAR/oz) (ZARm)	Sensitivity Range						
	-20%	-10%	-5%	0	5%	10%	20%
NPV@the base case Discount Rate (ZARm)	(5,637)	(932)	1,421	3,628	5,704	7,444	10,571

19.8 QP Opinion

The QP is satisfied that the economic analysis fairly represents the financial status of the operation as at 31 December 2023.

20 Adjacent Properties

Kloof is part of the West Wits Line which currently hosts over five operating mines. Below is a list of adjacent mines (Table 86). The table below gives the mine, owner, commodities mined and link to the Company websites. For current information on these properties the reader should refer to the official websites. These properties are part of the same geological feature however, variations across the deposit occur and the quantum and grade of the mineralisation at these mines may not be indicative of the same at Kloof.

Driefontein and Cooke Operations are owned and operated by the Registrant. There are shared services between these operations and the Kloof Operations. Some of the QPs for the Mineral Resources and Mineral Reserves in this mine are the same as for the Kloof Operations. Due to the use of the mineral Processing facilities at Driefontein from 2024 some operational information from this operation has been used in the estimation on the Mineral Reserves. The QPs have verified the information in the public sources. The South Deep mine is owned by 3rd parties and the QPs have not verified the information from public sources.

The positions of these mines are shown in Table 87 and Section 3.1.

Table 86: Adjacent Mines, West Wits Line

Mine name	Owners	Commodities	Source of info
Cooke/Ezulwini (Care and Maintenance)	Sibanye-Stillwater	Gold	https://www.sibanyestillwater.com
South Deep	Gold Fields Ltd	Gold	https://www.goldfields.com
Driefontein Gold Mine	Sibanye-Stillwater	Gold	https://www.sibanyestillwater.com

21 Other Relevant Data and Information

21.1 Risk Analysis

21.1.1 Financial Accuracy

Table 87 provides details of accuracy limits in the major financial categories. Kloof does not directly report contingencies for Operating costs but rather provides for this as part of sustaining capital at and effective 5% of Operating Costs.

Capital Projects and Operating Costs are assessed to at least Pre-Feasibility Level.

Table 87: Financial Risks

Risks	Mitigation Measures
Price Risk (Mineral Reserve Risk) - Revenue	-assessed the prices using various sensitivities
	(-10% to +10%)
	- the forecast price considered multiple scenarios
Economic Viability Risk (Mineral Reserve Risk) - Operating Costs	-assessed the Operating Costs using various sensitivities
	(-20% to +20%)
Economic Viability Risk (Mineral Reserve Risk) - Capital Expenditure	-assessed the Capital Expenditure based on 4% of operating costs for sustaining capital and technical studies for new projects
	(-20% to +20%)

21.1.2 Risk to the Mineral Resources and Mineral Reserves

As part of the annual operational planning process, the Kloof Operations management team assessed all the major risks that impact the execution of the plan. Sibanye-Stillwater maintains a risk register at the corporate level detailing all significant risks that may impact the operations. The Risk Register is updated quarterly.

Risks are listed by the source of the risk, the type of operational risk. Risks are assessed for likelihood of occurrence and severity for inherent risks to assess the unmitigated impact on the operations. The risk is reassessed once reasonable mitigation plans have been applied to give a residual risk using the same scale as for inherent risk. The following major risks have been identified.

Mineral Resources

There are no deemed material risks to the Mineral Resource Estimate.

Mineral Reserves

The key operational risks that could impact the Mineral Reserves are listed below.

Commodity prices and exchange rate assumptions

Sibanye-Stillwater has adopted forward-looking price assumptions. Any material deviations from these assumptions could impact the Mineral Reserves, especially at marginal operations. The QPs are of the view that these prices applied to our LoM valuations are realistic considering the external guidance received.

Ageing infrastructure:

All the operating mines were developed between the 1960s and 1980s, and most of the original infrastructure needs regular maintenance, without which frequent break-downs and mining interruptions could occur. All major installations are continuously reviewed and a comprehensive planned maintenance system is in place.

Seismic risk

Mining at depth and the extraction of high-stressed areas makes the mines prone to mining-induced seismic events, which could result in interruptions, loss of mineable areas and serious injury. All mine plans are reviewed and approved by qualified rock engineers, a comprehensive seismic monitoring system is in place, and seismic response to production is monitored daily.

Sinkholes and Ground Movement

Due to the presence of dolomite the area has a history of sinkhole formation on the surface. On the property, there is a risk of sinkhole formation at the surface and fissure water ingress in the mine workings. Sinkhole risk affects the surface infrastructure on the mine property. Monitoring systems are in place to continually assess the risks and remedial action is taken when necessary.

Power supply interruptions and cost increases

Loadshedding and load curtailment due to unreliable and erratic electricity supply from the national service provider have started to impact productivity at the operations. Even though Sibanye-Stillwater is actively working towards becoming less reliant on Eskom, with various renewable energy projects in the construction phase, it will still be exposed to this risk in the short to medium term.

Illegal mining

Mining activities are occasionally disrupted by illegal miners who gain access to the underground workings and operating footprints. These issues pose threats to the safety of our employees and to our operations, and contribute to increasing security-related costs. All shafts are completely fenced off, with strict access control; all operating areas are monitored via CCTV, and are patrolled by security personnel.

Operational performance

Operational underperformance and a slower than planned production build-up at projects may result in variations between planned and achieved production rates. Short interval controls are in place to enable the implementation of timeous interventions and, therefore, correction of deviations to plans.

21.2 Mineral Processing Toll Treatment Arrangement

The Driefontein planned LoM tonnages cannot meet even half the current plant capacity of 240ktpm.

Instead of running two processing facilities below capacity, the decision was made to move the material from Kloof to Driefontein and close the Kloof No. 2 Plant(Figure 60, Table 88 and Table 89).

All Kloof underground material will be milled at Driefontein No. 1 Plant as from July 2024. Plant costs will be apportioned back to the two operations in a fair ratio. The processing cost has been factored into the Kloof processing costs.

The material will be trucked from the various Kloof shafts, using the current transport contractor, to the pad at Driefontein No. 2 Shaft from where it will go via a surface conveyor belt into the plant. The additional transport cost has been factored into the Kloof milling cost over LOM.

Gold will be split as per the current process used to split between the shafts at Driefontein. Tonnages are measured over surface belts at each of the shafts and is sampled at regular intervals. The gold is apportioned using this belt estimation back to the various sources.

Figure 60: Driefontein No. 1 Plant Throughput Forecast

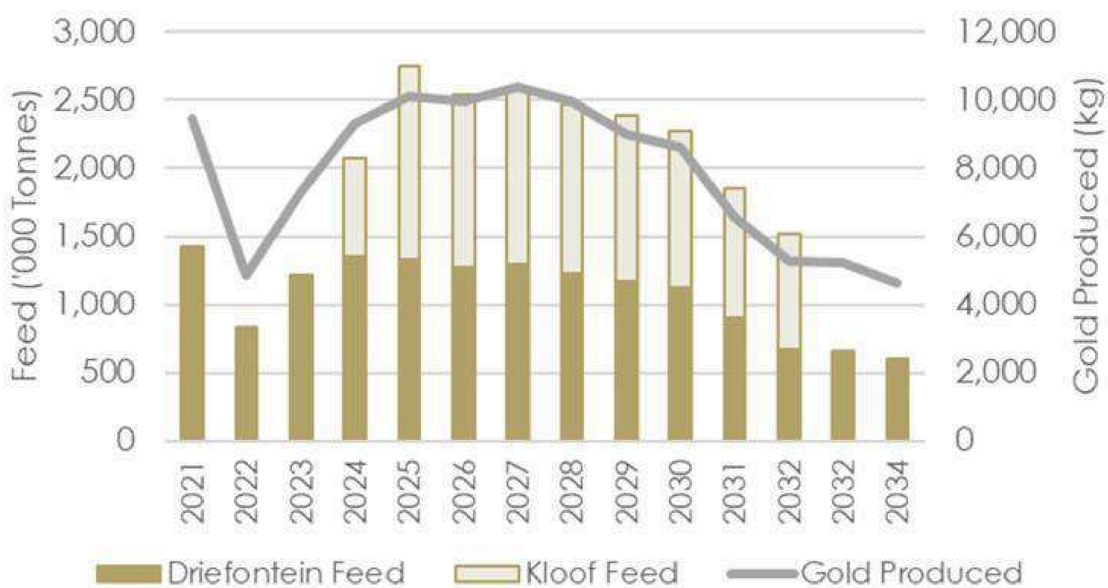


Table 88: Driefontein No.1 Plant Production Forecast and Operational Data – From Dreifontein Mine

	Units	2021	2022	2023	LoM	2024	2025	2026	2027	2028	2029	2030	2031	2032	2032	2034
					Total	1	2	3	4	5	6	7	8	9	10	11
Underground																
Tonnes Milled	(kt)	1,428	835	1,213	11,598	1,353	1,333	1,271	1,294	1,230	1,166	1,119	905	667	663	597
Gold Head grade	(g/t)	6.29	5.46	5.80	7.9	7.0	7.8	8.1	8.3	8.3	8.0	8.0	7.5	8.2	8.1	8.0
Surface Rock																
Tonnes Milled*	(kt)	1,368	668	819	199	199										
Gold Head grade	(g/t)	0.34	0.45	0.35	0.4	0.4										

grade																
Processing																
Total Tonnes Milled	(kt)	2,796	1,503	2,032	11,798	1,552	1,333	1,271	1,294	1,230	1,166	1,119	905	667	663	597
Gold Head grade	(g/t)	3.379	3.231	3.605	7.8	6.2	7.8	8.1	8.3	8.3	8.0	8.0	7.5	8.2	8.1	8.0
Recovery	(%)	96.2	96.6	97.7	97%	97.0%	97.0%	97.0%	97.0%	97.0%	97.0%	97.0%	97.0%	97.0%	97.0%	97.0%
Recovered Gold	(kg)	9,449	4,857	7,323	89,093	9,307	10,124	9,953	10,394	9,952	9,016	8,635	6,579	5,281	5,242	4,611

Table 89: Driefontein No.1 Plant Production Forecast and Operational Data- From Kloof Mine

	Units	2021	2022	2023	LoM	2024	2025	2026	2027	2028	2029	2030	2031	2032
					Total	1	2	3	4	5	6	7	8	9
Underground														
Tonnes Milled	(kt)				10,121	728	1422	1264	1299	1240	1220	1154	948	847
Gold Head grade	(g/t)				5.3	4.2	4.4	5.1	4.8	5.8	6.2	5.9	5.2	6.5
Surface Rock														
Tonnes Milled*	(kt)													
Gold Head grade	(g/t)													
Processing														
Total Tonnes Milled	(kt)					728	1422	1264	1299	1240	1220	1154	948	847
Gold Head grade	(g/t)					4.2	4.4	5.1	4.8	5.8	6.2	5.9	5.2	6.5
Recovery	(%)				98%	98%	98%	98%	98%	98%	98%	98%	98%	98%

Recovered Gold	(kg)				52,768	2,964	6,075	6,319	6,078	7,079	7,413	6,679	4,805	5,355

22 Interpretation and Conclusions

The views expressed in this TRS have been based on the fundamental assumption that the required management resources and proactive management skills to access the adequate capital necessary to achieve the LoM plan projection for Kloof are sustained.

Kloof has all the required permitting to conduct mining operations.

The QPs consider that the geology is well understood and the Mineral Resources are well defined. The modifying factors for the Mineral Reserves are derived from a long history of operations and have a good record of reconilation year-on-year. The Mineral Reserves are consideres accuaratly estimated and the Life-of Mine schedule and Technical-Economic models are realistic. The there are no know factors that could negatively affected the processing of the ore sa these plants have been functioning well fro several decades. Kloof will stop processing ore on mid 2024 at which time the ore will be transported to the adjacent Driefontin mine for processing. All infrastructure is available and in good condition.

Where risks to the operation exists, there are management plans on place (Section 21.1)

The LoM plan for Kloof Operations has been reviewed in detail for appropriateness, reasonableness and viability, including the existence of and justification for departure from historical performance. The QPs consider that the LoM plan is based on sound reasoning, engineering judgment and a technically achievable mine plan, within the context of the risk associated with the gold mining industry.

23 Recommendations

There are no recommendations for additional work or changes.

24 References

24.1 List of Reports and Sources of Information

24.1.1 Publications and Reports

Beukes, J.P and van Zyl, P.G., (2017). Review of Atmospheric SO2 Data Collected with Passive Sampling and Regional Perspective, Atmospheric Chemistry Research Group, North West University, p. 27.

Tetteh, M. and Cawood, F., (2014). Mine call factor issues from a surface mine perspective, https://www.ee.co.za/article/mine-call-factor-issues-surface-mine-perspective.html#:~:text=The%20theory%20of%20mine%20call%20factor%20%28MCF%29%20compares,the%20mines%20evaluation%20methods%20expressed%20as%20a%20percentage.

24.2 Glossary of Terms

South African Mining terms

Mine Call Factor(MCF) - compares the sum of metal produced in recovery plus residue to the metal called for by the mines evaluation methods expressed as a percentage. For explanation, see Tetteh and Cawood(2014).

Reef – South African Mining term for a Seam. Derived from Afrikaans/Dutch *rif*- ridge for the Witwatersrand goldfields where the seam formed ridges in outcrop.

Milling width – Calculated width based on the stoping width plus all dulition form the mining process. It includes other sources stoping such as gulleys, footwall ripping, falls of ground. It also includes survey discrepancies and anydevelopment tonnages sent to mill.

25 Reliance on Information Provided by the Registrant

The QPs have relied on information provided by the Registrant in preparing the findings and conclusions regarding the following aspects of the Modifying Factors outside of the QPs' expertise:

Macroeconomic trends, data and assumptions (Section 16)

The QPs believe that it is reasonable to rely on the Registrant for such information because Sibanye-Stillwater assesses the factors above at a corporate level and has the necessary skills to make these assessments.

26 Qualified Person's Disclosure

We, the signees, in our capacity as Qualified Persons in connection with the Technical Report Summary

We, the signees, in our capacity as Qualified Persons in connection with the Technical Report Summary of Kloof Operations effective 31 December 2023 (the Kloof Operations Technical Report Summary) as required by Subpart 1300 of Regulation S-K (SK-1300) and filed as an exhibit to Sibanye-Stillwater Limited's annual report on Form 20-F for the year ended 31 December 2023 and any amendments or supplements and/or exhibits thereto (collectively, the Form 20-F), each hereby consent to:

- the public filing and use by Sibanye-Stillwater of the Kloof Operations Technical Report Summary for which I am responsible;
- the use and reference to my name, including my status as an expert or "Qualified Person" (as defined by SK-1300) in connection with the Form 20-F and Technical Report Summary for which I am responsible;
- the use of any extracts from, information derived from or summary of, the Kloof Operations Technical Report Summary for which I am responsible in the Form 20-F; and
- the incorporation by reference of the above items as included in the Form 20-F into any registration statement filed by Sibanye-Stillwater.

I am responsible for authoring, and this consent pertains to, the Kloof Technical Report Summary for which my name appears in Table 90 below and certify that I have read the 20-F and that it fairly and accurately represents the information in the Kloof Technical Report Summary for which I am responsible.

Table 90: Qualified Person's Details

Property Name	Date	QP Name	Affiliation to Registrant	Field or Area of Responsibility	Signature
Kloof Operations	24 April 2024	Charl Labuschagne	Vice President Mine Technical Services	1.2, 3.1,3.3, 4, 5, 7.8, 7.9, 10, 13, 14,15, 16, 17.1-3, 20-26	/s/ Charl Labuschagne
Kloof Operations	24 April 2024	Lindelani Mudimeli	Unit Manager Geology	1.3, 1.4, 6, 7.1-7.7, 8, 9.1, 9.2.1, 9.2.2, 9.3	/s/ Lindelani Mudimeli
Kloof Operations	24 April 2024	Renier van Vuuren	Unit Manager Mineral Resources Geology	1.4, 9.2.3,11	/s/ Renier van Vuuren
Kloof Operations	24 April 2024	Steven Wild	Unit Manager Mine Planning	12	/s/ Steven Wild
Kloof Operations	24 April 2024	Stephan Botes	Unit Manager – Mineral Rights	1.7, 3.2,3.4	/s/ Stephan Botes
Kloof Operations	24 April 2024	B Govender	Sustainable Development Manager Manager Environmental Compliance SA Region	17.4	/s/ B Govender
Kloof Operations	24 April 2024	M van der Walt	Vice President Finance Integrated Services	1.6, 18, 19, 21.1.1	/s/ M van der Walt