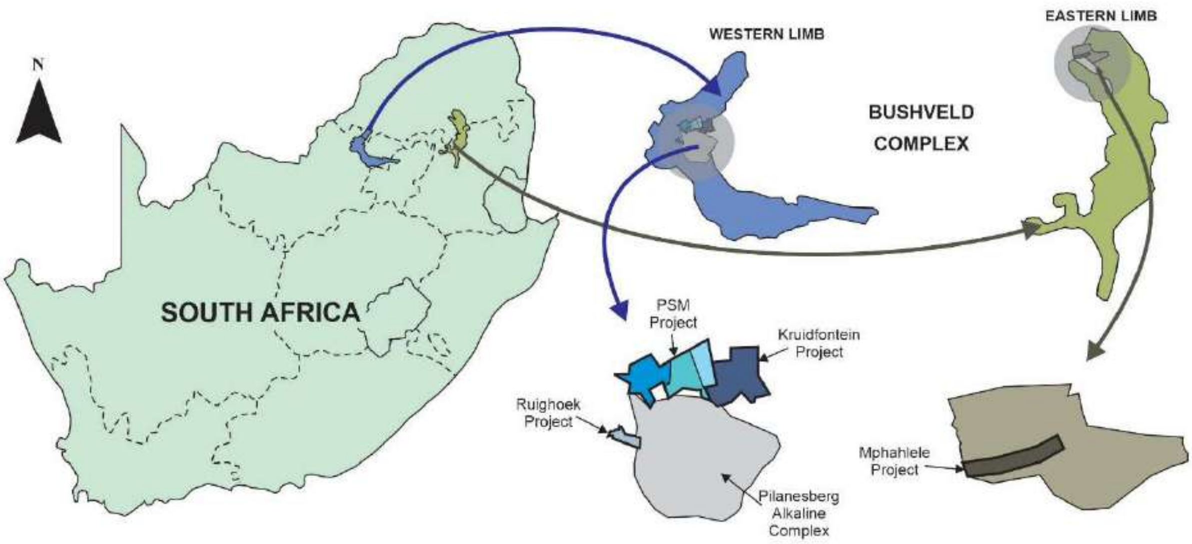
SEDIBELO'S PGM ASSETS IN SOUTH AFRICA, NI43-101 TECHNICAL REPORT

PRELIMINARY ECONOMIC ASSESSMENT

Prepared for

Sedibelo Resources Ltd



Report Prepared by

SRK Consulting (South Africa) (Pty) Ltd

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Report Date: 16 April 2024

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Important Notices

In this document, a point is used as the decimal marker and a space is used in the text for the thousands separator (for numbers larger than 999). 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), unless otherwise stated.

This report contains statements of a forward-looking nature that are subject to several known and unknown risks, uncertainties and other factors that may cause the results to differ materially from those anticipated in this report.

This report includes technical information, which requires subsequent calculations to derive subtotals, totals and weighted averages. Such calculations may involve a degree of rounding and consequently introduce an error. Where such errors occur, SRK does not consider them to be material.

Mineral Resource and Mineral Reserve estimates presented in this Technical Report are estimated and classified according to the SAMREC Code (2016 edition), which would be identical if estimated and reported according to the *CIM Definition Standards on Mineral Resources and Mineral Reserves* adopted by the CIM Council.

The reader and any potential or existing shareholder or investor in the Company or Sedibelo Resources Ltd (SRL) is cautioned that SRL is involved in exploration on its PGM Assets and there is no guarantee that any unmodified part of the Mineral Resources will ever be converted into Mineral Reserves nor ultimately extracted at a profit.

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1 Executive Summary

1.1 Introduction

SRK Consulting (South Africa) (Pty) Ltd (SRK) was appointed by Sedibelo Resources Limited Ltd (SRL, also referred to as the Company) to compile a Technical Report (TR) to present the results of a preliminary economic assessment (PEA) for the exploitation of all SRL's platinum group metal (PGM) mineral assets in the Republic of South Africa (collectively the Assets), comprising:

- The Pilanesberg Platinum Mine (PPM) located some 66 km north of Rustenburg in the North West Province;
- The Ruighoek Open Pit Project, part of PPM and situated west of the Pilanesberg National Park;
- The tailings reclamation and retreatment project associated with the West Pit at PPM (West Pit TRR);
- The PPM-Sedibelo-Magazynskraal (PSM) Project, which exploits ore down to 700 m below surface (mbs) and includes the Central and East Underground area;
- The East Pit within the PSM Project area;
- The Magazynskraal Shaft Project, down-dip of the PSM Project;
- The Kruidfontein Project, which is down-dip of the Magazynskraal Shaft Project; and
- The Mphahlele Project located 50 km south of Polokwane in the Limpopo Province of South Africa, comprising the Decline Project down to 600 mbs and the Shaft Project which is the down-dip extension of the Decline Project down to 1 500 mbs.

This TR has been prepared according to the requirements of the National Instrument 43-101 - Standards of Disclosure for Mineral Projects (NI43-101) of the Canadian Securities Administrators (CSA) and the Form 43-101F1 - Technical Report (the Form).

SRL, formerly Platmin Limited (Platmin), delisted from the Toronto Stock Exchange in 2011, but remained a "reporting issuer" for the purposes of Canadian securities laws and subject to all continuous disclosure obligations under those laws.

The Mineral Resources and Mineral Reserves presented in this TR are reported according to the requirements of the SAMREC Code (2016 Edition), which would be identical if reported according to the CIM Definition Standards on Mineral Resources and Mineral Reserves adopted by the Council of the Canadian Institute of Mining, Metallurgy and Petroleum (CIM). Mineral Resources and Mineral Reserves are reported at the effective date of 31 December 2023.

The achievability of the production schedules on which the PEA is based is neither warranted nor guaranteed by SRK. The PEA and production schedules are based on economic assumptions, many of which are beyond the control of SRL or SRK. There is no certainty that the production schedules presented in this PEA will be realized. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.

This PEA assumes that all capital or funding needed to implement the various projects will be available in the sums and timing required according to the proposed implementation schedules.

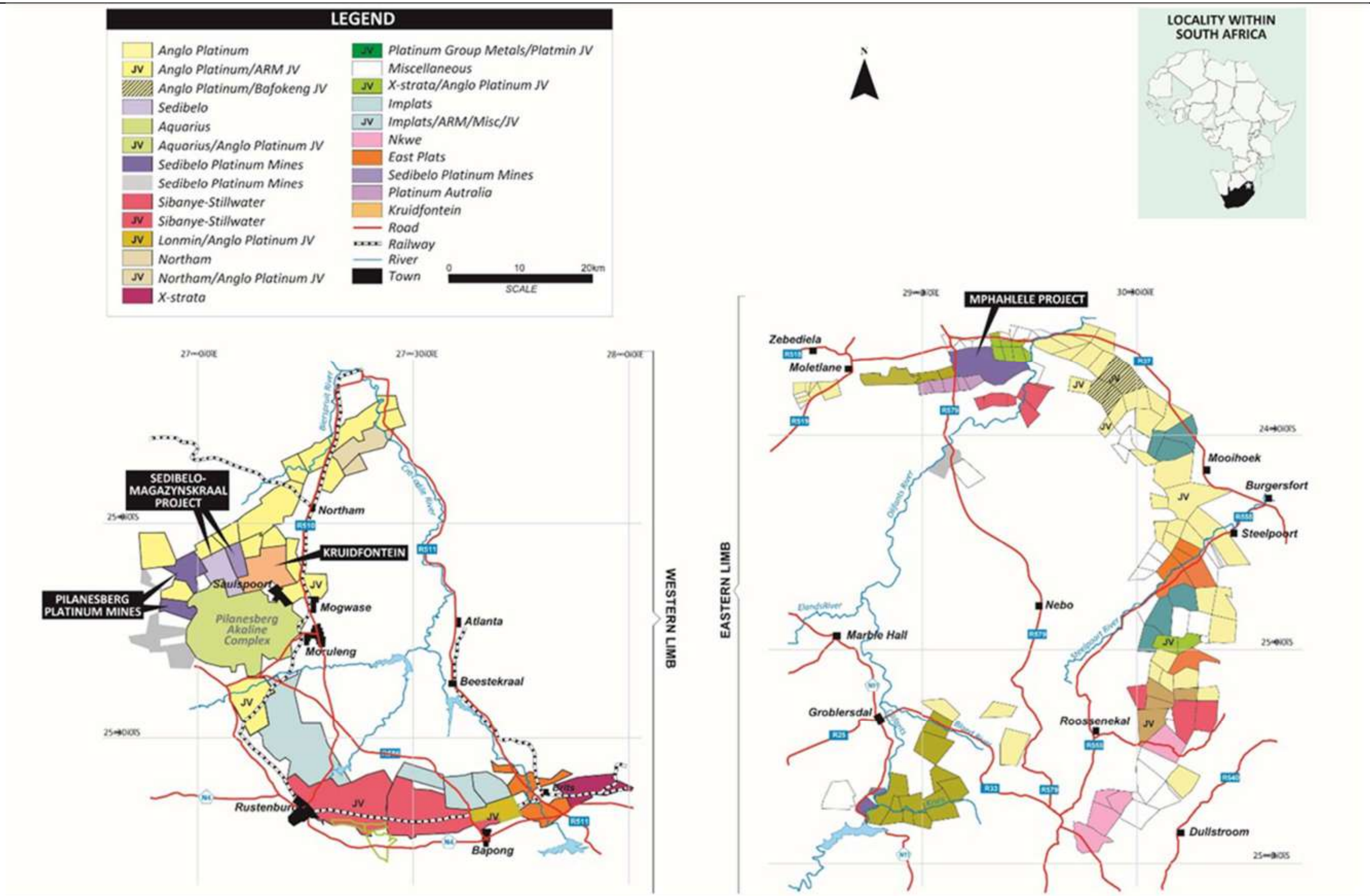
1.2 Location

The properties described in this PEA are located in the Western and Eastern Limbs of the Bushveld Complex, situated in the North West and Limpopo Provinces, respectively (Figure 1-1). Table 1-1 gives the coordinates for the three main project groupings.

Table 1-1: Coordinates of the PSM, Kruidfontein and Mphahlele Projects

Project	Projection: TM (WGS System) Ellipsoid: WGS 1984 LO 27 East			
	WGS27 Co-ordinates		Geographical Co-ordinates	
	Y	X	Latitude	Longitude
PSM (+ Ruighoek)	-1 050.132	+2 777 366.661	25º06'07.64"S	27º00'37.48"E
Kruidfontein	14 126.729	-2 778 612.377	25º06'47.89"S	27º08'24.24"E
Mphahlele	-59 768.0320	+2 693 880.1968	24º20'50.21"S	29º35'20.31"E

Note:
1. The coordinates for PSM are taken as the centre of the current eastern highwall of the West Pit.
2. The coordinates for Kruidfontein are taken as the centre of the new order prospecting right.
3. The coordinates for Mphahlele are taken as the centre of Portal A.



srk consulting	**SRL Total Assets PEA** Location of SRL's Assets [source: SRK (2022a)]	Project No. 600322

Figure 1-1: Location of SRL's Assets

1.3 Ownership

The mineral rights to the Assets, which are held 100% by SRL via its subsidiaries, except for Mphahlele (75% interest), are summarised in Table 1-2.

Table 1-2: Summary Table of Mineral Rights for the Assets

Asset	Mineral Rights and Properties	Minerals Included in NOPR/NOMR	Status / Interest	Licence Expiry Date	Comments
Ruighoek; PSM - West Pit (PPM)	**NOMR NW30/5/1/2/2/320MR**: The farm Tuschenkomst 135JP Ptn 3 of the farm Rooderand 46JQ RE of Ptn 1, Ptns 2,3,4,6,9,13 and 15 of the farm Ruighoek 169JP (Ptns 10,11,12,14 excluded) Ptn 1 and RE of the farm Witkleifontein 136 JP	PGMs, Au, Cu, Ni, Co, and associated minerals, and Cr (Section 102)	Production (100%)	02/2038	NOMR executed on 14/02/2008, registered on 24/06/2008.
	Sedibelo West mining area (Section 102): A portion of the farm Wilgespruit 2JQ Ptn 1 of the farm Rooderand 46JQ	PGMs, Au, Cu, Ni, Co, Cr	Production (100%)	02/2038	Section 102 amendment to incorporate Sedibelo West properties into PPM NOMR
PSM - East Pit and Central Decline (East Decline shared with Magazynskraal)	**NOMR NW30/5/1/2/2/333MR**: The farm Wilgespruit 2JQ A portion of the farm Legkraal 45JQ A portion of the farm Koedoesfontein 42JQ Ptn 1 of the farm Rooderand 46JQ	PGMs, Au, Cu, Ni, Co, Cr	Development (100%)	06/2038	Section 11(2) transfer of controlling interest in IBMR to PPM; cession of rights to PPM approved 29/03/2022. EMP and WUL held by IBMR being transferred to PPM. Relocation of farmers and land-users completed.
PSM - Magazynskraal (East Decline shared with Sedibelo)	**NOMR NW30/5/1/2/2/10029MR**: The farm Magazynskraal 3JQ	PGMs, Au, Ag, Cu, Ni, Co, Cr	Development (100%)	12/2045	NOMR executed on 31/03/2022. Section 102 process to incorporate the right into the Wilgespruit NOMR 333MR underway. Section 25 application to request extension for start of mining operations submitted to DMRE on 21/09/2023. No feedback received from DMRE.
Kruidfontein	**NOPR NW30/5/1/1/3/2/10196MR**: The farm Kruidfontein 40JQ Rem and Ptns 1, 2 of the farm Middelkuil 8JQ Rem and Ptns 1, 2 of the farm Modderkuil 39JQ	All precious and base metals, PGMs, Au, Cu, Ni, Co, Cr	Exploration (100%)	08/2017	NOPR has lapsed Section 102 application to incorporate the right into the IBMR NOMR NW30/5/1/2/2/333MR re-submitted on 25/04/2023. No feedback from DMRE.
	MRA NW30/5/1/2/2/10120MR: Resubmitted on 6/03/2023 and accepted by DMRE on 1/06/2023.			Pending Scoping Report and SLP approval	Scoping Report for the MRA and Section 102 Application were submitted on 19/04/2023 and 25/04/2023 respectively. The DMRE rejected the submitted Scoping Report on 26/09/2023. C&L submitted an appeal against the DMRE decision to the DFFE on 16/10/2023. Appeal pending with DFFE.
Mphahlele	**NOMR LP30/5/1/2/2/87MR**: The farm Locatie van M'Phatlele 457KS	PGMs, Au, Ag, Cu, Ni Cr excluded	Development (75%)	02/2038	NOMR executed on 23/11/2022. MPTRO registration completed. Process of updating MWP, SLP and EMP underway. Application for a WUL underway. Section 25 application to request extension for start of mining operations submitted to DMRE on 21/09/2023.

Notes:
1. NOPR new order prospecting right; NOMR new order mining right; MRA mining right application.
2. Ptn portion; RE remaining rxtent; Rem remainder.
3. IBMR Itereleng Bakgatla Mineral Resources (Pty) Ltd.
4. DMRE Department of Mineral Resources and Energy; DFFE Department of Forestry, Fisheries and the Environment.
5. MPTRO Mineral and Petroleum Titles Registration Office.
6. EMP Environmental Management Programme; WUL Water Use Licence.

1.4 Property Description

The area surrounding the Ruighoek, PSM, Magazynskraal Shaft and Kruidfontein Projects is rural and sparsely populated, with more dense settlements being located along the road running parallel to the northern boundary of the Pilanesberg National Park. The main land uses include residential areas, subsistence dry land agriculture, small-scale commercial agriculture and livestock grazing, conservation and eco-tourism activities.

PPM is an established open pit mine and concentrator, which implemented curtailment of extraction and processing operations due to prevailing economic conditions, particularly the depressed metal prices, general inflationary pressures on the cost of operations and limited access to capital markets. Development of the planned underground mines at the Central and East Portals on Sedibelo-Magazynskraal has similarly been placed on hold due to cost curtailment exercises.

Existing infrastructure such as roads, change houses, offices, sewage and electrical supply situated at PPM will be upgraded to accommodate the additional requirements of the planned underground operations in the Sedibelo-Magazynskraal area. The Central and East Portals will be equipped with dedicated roads, offices, change houses, lamp room, sewage and electrical supply from the existing PPM Substation and Magazynskraal Substation.

The proposed Mphahlele Project area is mainly rural and sufficient land is available for infrastructure, plant and tailings dams. The predominant land uses within and adjacent to the project include residential areas (formal and informal villages under the authority of the Bakgaga Ba Mphahlele Tribal Authority), subsistence dry land agriculture, small-scale commercial agriculture and livestock grazing.

Although the surface area required for mining is not currently held by SRL, SRL believes award of this is only a formality. Both the MWP and the SLP for the Project are out of date and will have to be revised to reflect the new development strategy and resubmitted to the DMRE for approval.

1.5 Geology and Mineralisation

The Bushveld Complex (BC) of South Africa is the world's largest and hence the most important repository of the PGMs in the world with an exposed surface area of some 67 000 km^2. The BC consists of a massive ultramafic mafic layered intrusion and a suite of associated granitoid rocks intrusive into the early Proterozoic Transvaal Basin within the north central Kaapvaal Craton. The ultramafic-mafic layered rocks collectively referred to as the Rustenburg Layered Suite (RLS) are in five so-called lobes, namely the Western, Far Western, Eastern, Northern and Southern (Bethal) lobes. The magmatic layering of the RLS is remarkably consistent and can be correlated throughout most of the BC.

The RLS is divided into five major stratigraphic units, as follows:

- The lowermost Marginal Zone ranges in thickness from several metres to several hundred metres and comprises a heterogeneous succession of generally unlayered basic rocks dominated by norites;
- Ultramafic rocks dominate the Lower Zone. These vary in thickness with the thinnest units developed over structural highs in the basin floor;
- The Critical Zone contains the economic PGM resources of the BC: the Lower Critical Zone, Upper Critical Zone and the chromitite layers which occur in three distinct groupings i.e., the Lower Group (LG), the Middle Group (MG) and the Upper Group (UG);
- The Main Zone is the thickest unit within the RLS and comprises approximately half the RLS stratigraphic interval. It consists of gabbro-norites with some anorthosite and pyroxenite layering. Banding or layering is not as well developed as in the Critical and Lower Zones; and
- The Upper Zone is dominated by gabbros with some banded anorthosite and magnetite. There is no chilled contact with the overlying rhyolite and granophyres of the Lebowa Granite Suite.

The two most economically significant PGM mineralised layers of the BC, namely the Merensky Reef and the UG2, are continuous over hundreds of kilometres. The PGMs include varying proportions of Pt, Pd, Rh, Ru, Ir and Os, as well as elevated concentrations of Ni, Cu and Co as base metal sulfides.

The Western Limb of the BC is subdivided into two sectors separated by the younger intrusive Pilanesberg Alkaline Complex (Pilanesberg): the northern 'Swartklip' sector and the southern 'Rustenburg' sector. In the Swartklip sector where the Ruighoek, PSM, Magazynskraal and Kruidfontein Projects are located, the Upper Critical Zone stratigraphy between the UG2 and Merensky Reef is significantly telescoped, ranging in thickness between 12 and 25 m, compared with a more typical thickness of 120 m or more in other parts of the BC. In addition, the interval between the UG2 and the Merensky Reef contains the PGM bearing Pseudo Reef Package, which is not encountered elsewhere in the BC.

At the Mphahlele Project on the Eastern Limb, the Merensky or UG2 reefs have an average dip of 51° towards the south and are separated on average by 115 m of stratigraphy (190 m vertical separation). The lateral extent of both reef horizons within the project area is approximately 8 km along strike, and has been modelled over a vertical extent of approximately 2 km. The depth extent of the reefs has not been limited by drilling and is open at depth.

1.6 Mineral Resource and Mineral Reserve Estimates

1.6.1 PGM Mineral Resource Estimates

A high-level summary of the in-situ PGM Mineral Resources for the Assets attributable to SRL is presented in Table 1-3. The *in situ* Mineral Resources are reported above an economic cut-off and after the exclusion of geological losses applied to the tonnage and metal content on a percentage basis.

Historical tailings from mining of the West Pit and East Pit are stored on the PPM tailings storage facility (TSF) and reported as Indicated Mineral Resources.

Mineral Resources are reported on an attributable basis to SRL, inclusive of Mineral Reserves.

1.6.2 PGM Mineral Reserve Estimates

The PGM Mineral Reserve estimates for the Assets at 31 December 2023 attributable to SRL are summarised in Table 1-4. Mineral Reserves are reported as run-of-mine (RoM) ore delivered to the RoM stockpile (open pits) or to the surface crusher (underground mines).

Currently the basket prices do not support Mineral Reserves for open pit mining, since:

- West Pit is depleted, no further mining is envisaged;
- East Pit, where curtailment of extraction operations was implemented due to prevailing economic condictions; and
- Ruighoek, which cannot be mined under current price and cost conditions.

The East Pit and Ruighoek Pit have been included in the PEA economic assessment, to start mining after 2048 when increased basket price projections warrant exploitation. This assumption does not permit these Assets to be included as Mineral Reserves at the Effective Date of this TR.

Retreatment of the historical tailings on the PPM TSF is included in the PEA economic assessment. There is insufficient detail in the mining plan and design criteria for the re-mining of the historical tailings to warrant reporting these as Mineral Reserves.

Table 1-3: Summary PGM Mineral Resource Estimates for the Assets as at 31 December 2023 (attributable to SRL)

Classification INCLUSIVE	Attributable to SRL	Tonnage (Mt)	Av. Reef Thickness (m)	PGM Grade (g/t)		Contained PGM (Moz)		Base Metal Grade (%)		Contained Base Metal (kt)	
				4E	6E	4E	6E	Ni	Cu	Ni	Cu
Measured Mineral Resource											
East Underground	100%	11.7	1.39	5.59	6.89	2.10	2.59	0.02	0.004	1.8	0.4
Mphahlele	75%	2.7	1.20	4.56	5.52	0.40	0.49	0.14	0.08	3.8	2.3
Total Measured Resources		**14.5**	**1.35**	**5.39**	**6.63**	**2.51**	**3.08**	**0.04**	**0.02**	**5.6**	**2.8**
Indicated Mineral Resource											
Ruighoek	100%	5.8	1.15	3.49	4.00	0.65	0.74	0.12	0.03	4.7	1.2
West Pit TRR	100%	45.9	Not applicable	0.70	0.85	1.03	1.26	-	-	-	-
East Pit	100%	10.4	0.97	2.78	3.23	0.93	1.08	0.11	0.02	11.1	2.2
Central Underground	100%	16.5	1.15	6.70	8.23	3.57	4.53	0.04	0.01	3.9	1.2
East Underground	100%	53.7	1.40	4.98	5.89	8.59	11.14	0.07	0.03	37.6	14.0
Mphahlele	75%	34.4	1.35	4.23	5.13	4.69	5.68	0.15	0.09	50.5	29.4
Total Indicated Resources		**166.7**	**1.30**	**3.63**	**4.38**	**19.46**	**23.47**	**0.09**	**0.04**	**107.8**	**47.9**
Total Measured & Indicated Resource		**181.1**	**1.31**	**3.77**	**4.56**	**21.95**	**26.55**	**0.09**	**0.04**	**113.4**	**50.6**
Inferred Mineral Resource											
Central Underground	100%	9.1	1.15	6.53	8.23	3.57	4.53	0.04	0.01	3.9	1.2
East Pit	100%	1.1	1.13	2.03	2.22	0.07	0.08	0.15	0.03	1.7	0.3
East Underground	100%	84.2	1.30	5.03	5.95	13.61	16.09	0.07	0.03	62.1	21.3
Kruidfontein	100%	148.8	1.30	6.54	7.60	31.25	36.33	0.30	0.03	197.1	48.1
Mphahlele	75%	50.1	1.36	4.08	4.97	6.58	8.01	0.15	0.09	77.5	47.3
Total Inferred Resource		**293.3**	**1.30**	**5.84**	**6.90**	**55.08**	**65.04**	**0.12**	**0.04**	**342.3**	**118.2**

Notes:

1. 4E is shorthand for Pt + Pd + Rh + Au. 6E is shorthand for 4E + Ir + Ru.
2. The Ruighoek UG2 and the West Pit TRR do not have base metal estimates. The contained metal, and mean grades are calculated for those Mineral Resources that do have base metal estimates only.
3. Mineral Resources are not Mineral Reserves and do not meet the threshold for reserve modifying factors, such as estimated economic viability, that would allow for the conversion to Mineral Reserves. There is no certainty that any part of the Mineral Resources will be converted to Mineral Reserves.
4. The *in situ* Mineral Resources are reported inclusive of any Mineral Reserves that may be derived from them.
5. 1 Troy Ounce = 31.1034768 g.
6. East Underground includes the deeper portions >700 mbs on the Magazynskraal and Koedoesfontein properties.
7. The Open Pit optimisations were based on an assumed 4E basket price of ZAR21 000/oz, assumed mining and processing cost of ZAR445/t and reported within a pit shell that is based on a 120% revenue factor.
8. Central Underground *in situ* Mineral Resources are based on calculated 4E cut-off grades of 1.60 g/t and 1.83 g/t for the PUP and UG2 reefs, respectively. These are based on 4E basket prices of USD2 484/oz and USD2 173/oz and plant recoveries of 85% and 82% for the PUP and UG2, respectively.
9. The East Underground *in situ* Mineral Resources are reported above 4E cut-off grades of 2.34 g/t (UG2), 2.44 g/t (MR PUP), 2.35 g/t (MRC) and 2.55 g/t (UPR). These are based on 4E basket prices of USD2 606/oz, USD2 508/oz, USD2 602/oz and USD2 394/oz, respectively, which include a 20% premium. A plant recovery of 82.8% was applied.
10. Mineral Resources for Kruidfontein are reported above cut-offs of 3.86 g/t 4E for the PUP and 2.89 g/t 4E for the UG2 based on 4E basket prices of USD2 515/oz and USD2 653/oz and plant recovery factors of 75% and 79% for the PUP and UG2, respectively.
11. Mineral Resources for Mphahlele are reported above cut-offs of 1.43 g/t 4E for the MR and 1.51 g/t 4E for the UG2 based on 4E basket prices of USD2 249/oz and USD2 265/oz and plant recovery factors of 87% and 83% for the MR and UG2, respectively.
12. Numbers in the table have been rounded to reflect the accuracy of the estimate and may not sum due to rounding.

Table 1-4: Summary PGM Mineral Reserve Estimates for the Assets as at 31 December 2023 (attributable to SRL)

Classification INCLUSIVE	Attributable to SRL	Tonnage (Mt)	PGM Grade (g/t)		Contained PGM (Moz)		Base Metal Grade (%)		Contained Base Metal (kt)	
			4E	6E	4E	6E	Ni	Cu	Ni	Cu
Probable Mineral Reserve										
Central Underground Block	100%	12.8	4.76	6.05	1.95	2.49	0.017	0.005	2.1	0.6
East Underground	100%	31.4	4.21	5.06	4.25	5.11	0.042	0.015	13.2	4.8
Mphahlele	75%	22.7	3.63	4.36	2.68	3.18	0.09	0.05	20.0	11.4
Total Probable Reserves		**66.9**	**4.12**	**5.01**	**8.88**	**10.78**	**0.054**	**0.025**	**35.3**	**16.8**

Notes:

1. 4E is shorthand for Pt + Pd + Rh + Au. 6E is shorthand for 4E + Ir + Ru.
2. Mineral Reserves are based on various modifying factors and assumptions and may need to be revised if any of these factors and assumptions change.
3. Mineral Reserves should not be interpreted as assurances of economic life.
4. Mineral Reserves (Central and East Underground) are reported at cut-off RoM grades of 2.68 g/t 4E and 2.79 g/t 4E for UG2 and PUP, respectively. These are based on 4E basket prices of USD2 167/oz and USD2 087/oz and plant recoveries of 80% and 82.8% for the UG2 and PUP reefs, respectively.
5. Mineral Reserves at Mphahlele are reported for the UG2 reef only at a cut-off grade of 2.06 g/t 4E based on a 4E basket price of USD1891/oz and a plant recovery of 83%.
6. Numbers in the table have been rounded to reflect the accuracy of the estimate and may not sum due to rounding.
7. 1 Troy Ounce = 31.1034768 g.

1.6.3 Chromite Mineral Resources and Mineral Reserves

The *in situ* Chromite Mineral Resource estimates inclusive of Chromite Mineral Reserves and RoM Mineral Reserves for the PSM Project at 31 December 2023 are summarised in Table 1-5.

Table 1-5: SRK Audited *in situ* Chromite Mineral Resources and RoM Mineral Reserves for the Assets as at 31 December 2023 (100% attributable to SRL)

Mineral Resources (INCLUSIVE of Mineral Reserves)	Tonnage (Mt)	Grade (%)	Content (kt)
Indicated Mineral Resources			
East Underground	34.4	29.4	10 117
Total Indicated Resources	**34.3**	**29.4**	**10 117**
Inferred Resources			
East Pit	3.3	24.7	825
Central Underground	23.4	26.5	6 208
East Underground	66.1	29.4	19 447
Total Inferred Resources	**92.9**	**28.5**	**26 480**

Mineral Reserves	Tonnage (Mt)	Grade (%)	Content (kt)
Probable Mineral Reserves			
East Underground	24.3	23.1	5 613
Probable Mineral Reserves	**24.3**	**23.1**	**5 613**

Notes:

1. Mineral Resources are not Mineral Reserves and do not meet the threshold for reserve modifying factors, such as estimated economic viability, that would allow for the conversion to Mineral Reserves. There is no certainty that any part of the Mineral Resources will be converted to Mineral Reserves.
2. Mineral Reserves are based on various modifying factors and assumptions and may need to be revised if any of these factors and assumptions change.
3. Mineral Reserves should not be interpreted as assurances of economic life.
4. Chromite grade and content refers to Cr_2O_3.

1.6.4 Reconciliation of Mineral Resources and Mineral Reserves

The reported Mineral Resource tonnages and contained 4E PGMs (Inclusive of Mineral Reserves) as reported in the NI43-101 reports for SRL's Assets at 31 December 2021 and per this TR at 31 December 2023 are compared in Table 1-6. The Mineral Resources for the Ruighoek Project have not been previously reported in the public domain. Reasons for the differences are provided under Comments.

Table 1-6: PGM Summary Mineral Resource Comparison (INCLUSIVE of Mineral Reserves)

Reserve Area	Units	SRL NI43-101 Reports (Dec. 2021)[1]	This TR (Dec. 2023)	Comments
Ruighoek [(1)]	(Mt)	29.7	5.8	Estimate within an optimised pit and constrained to the mineral rights
	(Moz 4E)	3.7	0.65	
West Pit	(Mt)	19	-	Production stopped. No further mining envisaged
	(Moz 4E)	1.79	-	
West Pit TRR	(Mt)	-	45.9	Not reported previously in public domain
	(Moz 4E)	-	1.03	
East Pit	(Mt)	14.5	11.5	Difference due to mining depletion.
	(Moz 4E)	1.19	1.00	
Central Underground	(Mt)	25.6	25.6	Changes in cut-off from 1.15 g/t 4E to 1.83 g/t for the UG2 and from 1.62 g/t 4E to 1.60 g/t for the PUP resulted in changes less than the rounding level reported
	(Moz 4E)	5.49	5.49	
East Underground	(Mt)	178.0	149.6	Changes in cut-off did not impact the PUP and UG2 Mineral Resources which are insensetive to cut-off below 4 g/t. The Contact Merensky Reef (MRC) change in cut-off results in a decrease of 35% , while for the UPR the decrease is 55%
	(Moz 4E)	25.90	24.31	The MRC change in cut-off results in a decrease of 20% , while for th UPR the decrease is 31%
Kruidfontein	(Mt)	148.8	148.8	No changes in tonnes or content
	(Moz 4E)	31.25	31.25	
Mphahlele	(Mt)	234.5	236.1	The only changes are due to a decrease in the MR cut-off from 1.80 g/t to 1.43 g/t and increase in the UG2 from 1.38 g/t to 1.51 g/t
	(Moz 4E)	42.88	42.91	

Note:
1 Ruighoek was not reported in the 2021 ITR, the Mineral Resources reported are from the 2010 ITR available on SEDAR.

The reported Mineral Reserve tonnages and contained 4E PGMs as reported in the NI43-101 reports for SRL's Assets at 31 December 2021 and per this TR at 31 December 2023 are compared in Table 1-7. Reasons for the differences are provided under Comments.

Table 1-7: PGM Summary Mineral Reserve Comparison

Reserve Area	Units	SRL NI43-101 Reports (Dec. 2021) (1)	This TR (Dec. 2023)	Comments
Ruighoek (1)	(Mt)	5.1	-	not economic at current basket price.
	(Moz 4E)	0.5	-	
West Pit	(Mt)	13.1	-	Operations ceased, no further mining envisaged
	(Moz 4E)	0.7	-	
East Pit	(Mt)	20.6	-	Operations on hold due to cost curtailment and depressed metal prices; not economic at current basket price
	(Moz 4E)	1.0	-	
Central Underground	(Mt)	12.8	12.8	Small differences due to changes in mining method from breast mining to down-dip mining
	(Moz 4E)	1.9	1.9	
East Underground	(Mt)	31.4	31.4	Small differences due to changes in mining method from breast mining to down-dip mining
	(Moz 4E)	4.3	4.3	
Mphahlele	(Mt)	22.7	22.7	No changes in tonnes and content Reserves only declared for UG2 per 2020 feasibility study.
	(Moz 4E)	2.66	2.66	

Note:

1 Ruighoek was not reported in the 2021 ITR, the Mineral Resources reported are from the 2010 ITR available on SEDAR.

1.7 Status of Exploration, Development and Operations

1.7.1 Exploration

The exploration budget for PSM is approximately ZAR342m for the drilling of 117 diamond drill holes. The exploration budgets for Kruidfontein, Mphahlele and Ruighoek are, respectively, in the order of ZAR590m (for 50 drill holes with four deflections per hole), ZAR400m (for 133 drill holes with four deflections per hole) and ZAR6m for 17 drill holes.

SRK is satified with the layout of the planned drill holes and what they have been earmarked to achieve. The proposed budget over the planned durration is also reasonable.

SRK notes that the previous exploration programme with respect to the East Pit, which targeted the drilling of the shallower Inferred Silicate Mineral Resources, was implemented successfully. The previous exploration programmes for the remaining projects were not implemented primarily because of the cost curtailment effort that became necessary (due to unexpected changes in economic factors) to move the open pits in a cashflow-positive scenario.

1.7.2 Mining Methods

Ruighoek and East Pit

Conventional truck and shovel open pit mining will be undertaken at the Ruighoek and East Pit areas for evaluation purposes in this PEA.

West Pit Tailings Reclamation and Retreatment

At the West Pit Tailings Reclamation and Retreatment (West Pit TRR) mining will be done by hydraulic mining methods for evaluation purposes in this PEA.

PSM above 700 m below Surface

Only the UG2 and PUP (Merensky potholed on to the UPR) reefs are of economic importance underground. Central and East Underground are accessed via two triple-barrel declines, one per block. Construction for the boxcuts and declines for the East and Central Portals is scheduled to commence in January 2025, on the assumption that sufficient funds are available to be able to remove the cost curtailment status. Conventional down-dip mining with off-reef access was selected as the mining method, due to the dip of the orebody (12° to 14°), the narrow channel width of UG2 and PUP reefs and faulting on the reef plane. All footwall development is done using a trackless mechanised mining fleet. Central and East Underground are designed to each produce 80 ktpm of RoM ore down to 700 mbs.

Underground infrastructure in both blocks consists of trucking to ore and waste silos, decline conventional conveyors, chairlifts, ventilation network and staged dewatering.

PSM below 700 m below Surface and Kruidfontein

Access to the underground resources would be via twin vertical shafts of 1 500 m and 2 000 m deep on Magazynskraal and Kruidfontein respectively. The vertical shafts (one for ore, men and materials; one as dedicated upcast ventilation) would be sunk to below the reef plane which would connect to decline systems with conveyor belts and chairlifts in the footwall of the reef plane.

Given the depth of mining, refrigeration plants with a minimum of 24 MW cooling power are incorporated into the project designs for the Magazynskraal and Kruidfontein Shafts.

A conventional breast mining layout was selected for stoping on reef, with mechanized development in the footwall utilizing a localized hydropower system.

The Magazynskraal and Kruidfontein Shafts are assumed to have hoisting capacities of 205 ktpm and 165 ktpm of ore respectively. Both UG2 and Merensky (PUP) reefs will be exploited, with the UG2 leading and being backfilled prior to extraction of the overlying Merensky reef, due to the vertical distance between the two reefs being on average <15 m.

Mphahlele

The Merensky (MR) and UG2 reefs extend approximately 8 000 m on strike with an average dip of 51º towards the south. The depth below surface to the subcrop of the two reefs varies across the property (average 40 mbs).

Access to the Block A and Block B mining blocks is achieved via two portals (Portal A and Portal B, respectively) with twin-barrel declines. With the orebody consisting of narrow reefs (1.2 m - 2.7 m wide) dipping at 51°, open stoping with sublevel extraction (long hole open stoping, LHOS) is the most appropriate mining method and was used for mine design purposes. The stoping areas measure 60 m on strike and 54 m on dip (average 51° dip). The stoping block is supported by means of dip pillars (UG2 – 10 m wide) and sill pillars (6 m on dip). Mining has been planned to an average depth of 600 m below surface.

Ore and waste will be trucked from underground to surface and ore will then be loaded on road trucks and transported to the plant at Portal A. The UG2 ore will first pass through the Rados pre-concentration plant.

Trackless equipment, comprising load-haul-dump (LHD) trucks and both development and long-hole drill rigs, is used. The supporting equipment will make use of cassette carriers and suitable cassettes to provide back-up services to the main development equipment.

Underground infrastructure in both blocks consists of the ventilation network and staged dewatering. A single underground workshop for each mining block will maintain the LHDs and trucks.

1.7.3 Ore Processing

Ruighoek

The silicate and UG2 ores will be transported by road to the PPM site and processed through the existing silicate and UG2 concentrators, as discussed in the section below.

SRL does not hold the chrome rights over Ruighoek. The UG2 ore is excluded as feed through the CRP plant for evaluation purposes. In practice, the ore would report to the CRP plant along with other UG2 feed. The pro-rata chrome concentrate produced would have to be returned to the chrome rights holder.

PSM

The 240 ktpm silicate and 75 ktpm UG2 concentrators at PPM are of conventional mill-float-mill-float (MF2) design located west of the West Pit operation. The PEA envisages that the combined silicate ore mined from East Pit, PSM, Magazynskraal and Kruidfontein can be processed by the existing 240 ktpm concentrator.

Once the East and Central underground operations are underway, an extra 135 ktpm UG2 module will be required at PPM. The tailings from the Merensky and UG2 circuits are combined and fed to a tailings scavenging plant (TSP). The tailings are disposed on an existing TSF in the PPM complex. Additional tailings storage capacity is planned at the Sedibelo TSF situated north of the West and East Pits (see Figure 2-2).

A chrome recovery plant (CRP) utilising a two-stage reverse classifier circuit, which is installed at the inter-stage position (between the primary and secondary circuits) at the UG2 concentrator at PPM, produces metallurgical grade chromite of 40.0% to 42.0% Cr_2O_3 grade. All chromite concentrate is sold in terms of an existing off-take agreement.

As part of the West Pit TRR project, SRL plans to install a 300 ktpm tailings retreatment plant (TRP) to retreat the historical tailings that have been placed on the PPM TSF.

Introduction of additional UG2 ore from Magazynskraal Shaft will necessitate the installation of a 135 ktpm UG2 concentrator adjoining the East Portal. This will include CRP and TSP circuits. Dewatered tailings will be disposed of at either the Sedibelo TSF or Magazynskraal TSF (see Figure 2-2).

The combined PGM concentrate will be treated in a Kell hydrometallurgical modular plant where the PGMs will be refined to a PGM sponge and the base metals (Cu, Ni) to cathode metal. Additional modules will be added to meet increased capacity requirements.

Kruidfontein

A dedicated MF2 UG2 concentrator with 135 ktpm capacity will be erected at Kruidfontein to process UG2 ore mined there. This will include CRP and TSP circuits. The Merensky (silicate) ore will be transported by rail to PPM for processing.

The tailings from the UG2 concentrator will feed to a TSP. The dewatered tailings will be pumped to the Magazynskraal TSF to be established northeast of the East Portal (see Figure 2-2).

Mphahlele

A MF2 flotation circuit with upfront Rados pre-concentration to process the 240 ktpm of UG2 and Merensky RoM ore is proposed. A blend of 60% UG2 and 40% Merensky ore will be processed simultaneously, with the tailings fed to a TSP. A Kell hydrometallurgical plant will treat the concentrate to yield a PGM sponge and Cu/Ni as cathode metal.

SRL does not hold the chrome rights over the property. The chrome contained in the tailings stream will end up on the TSF and belong to the Mphahlele Community Development Trust (MCDT).

1.7.4 Infrastructure

Ruighoek

The Ruighoek area is planned to be mined with open pit mining methods. Currently no mining infrastructure is installed on the Ruighoek area, as most of it will be shared with the current PSM infrastructure. Planned electrical power requirements for the Ruighoek Pit will be as for open pit mining, mining offices and some area lighting and is estimated to be approximately 1 MVA, which can be supplied from the existing 5 MVA construction power infrastructure or via diesel generator/s. However, for Ruighoek to be supplied from the existing construction power infrastructure, the mine needs to consult with the power supply authority for a new Notified Maximum Demand (NMD) application, as the construction power supply contract was cancelled due to it being no longer used by the mine. It was reported that the infrastructure for the construction power supply still exists.

SRK understands that the same maintenance standards and the Industrial and Financial System's Enterprise Repource Planning asset management system at PPM will be implemented at the Ruighoek Pit.

PSM above 700 m below Surface

PPM is an established open pit mine with two concentrators, a TSF, supporting surface infrastructure and offices. The East Portal of the PSM Project which will commence first, will be equipped with dedicated roads, offices, change houses, lamp room, sewage and electrical supply from the existing PPM Substation and Magazynskraal Substation. The Central Portal will have satellite facilities due to its proximity to the East Portal.

The PSM Project assumes surface trucking of ore and waste until each underground block reaches steady state production, at which time surface Doppelmayr RopeCon® systems will be commissioned. These will convey ore across to the RoM ore tip for the PPM concentrators and waste to the pits.

Bulk water and potable quality water for the PSM Project is obtained in adequate quantities from the existing West Pit Reservoir which is connected to the Magalies Water system.

The existing TSF adjoining PPM's concentrators together with the proposed Sedibelo TSF would provide sufficient capacity to handle the tailings generated by the PSM Project, Ruighoek Project and East Pit over the scheduled LoM plan.

Platinum mining activities in the vicinity, as well as proximity to the Pilanesberg National Park and Sun City complex, have ensured a comprehensive infrastructure of roads, power and telecommunications in the region.

Rustenburg to the south is a well-established mining centre due to more than 50 years' of PGM and chrome mining in the area. Iron ore mining took place at Thabazimbi to the north of the PSM Project. The PSM Project is readily accessible from Johannesburg and Pretoria in Gauteng Province, the economic hub of South Africa.

There is a compact international airport located adjacent to the Pilanesberg National Park, serving Sun City and the Pilanesberg National Park. There is also a municipal airport situated near Rustenburg, which is licensed according to South African Civil Aviation Authority standards.

PSM below 700 m below Surface and Kruidfontein

The surface complex at each of the Magazynskraal Shaft and Kruidfontein Shaft is envisaged to comprise the primary men and material vertical shaft with headgear, rock and personnel winders, ventilation shaft, refrigeration plant, change house, lamp room, stores, workshop, control room, mine offices, parking, roads and electrical supply from the existing PPM Substation and Magazynskraal Substation.

Merensky and UG2 ore hoisted to surface at the Magazynskraal Shaft will feed from ore silos into railway trucks for delivery to the Merensky concentrator at PPM and UG2 concentrator at East Portal respectively.

Merensky ore hoisted to surface at the Kruidfontein Shaft will feed from ore silos into railway trucks for delivery to the Merensky concentrator at PPM. The UG2 ore will feed to the UG2 concentrator adjoining the Kruidfontein Shaft.

SRL envisages that the surface rail system will facilitate balancing of ore feed to the various concentrators.

Dewatered tailings from the Kruidfontein UG2 concentrator will be pumped to the Magazynskraal TSF.

Mphahlele

There is currently no infrastructure on site. Sealed roads provide access to within a few kilometres of the project area and link it directly to Polokwane and Mokopane.

All infrastructure is located south of the UG2 subcrop, except for the Eskom substation and water reservoirs. This is to avoid impacting on potential future chromite open-pit operations. The main management offices and store, training centre, mine workshops, primary crushing and Rados Plant will be located at Portal A. Satellite offices and support surface infrastructure will be located at Portal B. Both portals will have a lamp and crush room, a first aid facility/medical stabilization room, change houses and sewage systems, fuel dispensing container, brake test ramp, dirty water settling dam, pollution control dam, fencing and security.

A temporary power supply of 5 MVA at 33 kV was installed in 2010 and connection fees are paid each month. However SRL has indicated that this temporary power supply transformer has since been removed by Eskom for safe keeping. Bulk power supply to the mine will be at 132 kV from a new Eskom supply point. SRL applied in 2017 for a supply of 46.6 MVA building up to 51 MVA.

Provision is made in the capital expenditure to drill boreholes and extract water initially from aquifers. The DWS is currently increasing the supply of water to the area for both mining and agriculture by the building of the De Hoop Dam and allowing additional water to be made available from the Flag Boshielo Dam. The raw water supply will consist of a take-off along the Flag Boshielo/Pruizen line at a point called Immerpan. The water will be pumped approximately 30 km to the Baobab operation (Sibanye-Stillwater) and then 18 km to the Mphahlele project.

1.7.5 Markets

Scenario assessments for Pt, Pd and Rh by SFA Oxford Limited concluded that the Pt price will need to rise in the long term to incentivise production SFA (2023).

The "scenario price outlook" as selected by the Company yields the forecast Pt, Pd and Rh prices in Table 1-8, which consider the following factors:

- The Pt market remains in large deficit in the 2020s. The price rises to incentivise additional production by 2030 and dampen demand;
- Demand side adjustments respond to the rising Pt price via more substitution of Pt out of autocatalysts and substitution in industrial end-uses, coupled with increased production;
- An escalating cost base requires a much higher Pt price to carry the basket with subdued Pd and Rh prices;

- By the mid-2030s the Pt price needs to climb further to incentivise more production as the deficits widen again; and
- An offsetting factor could be the SA Rand. The Rand is forecast to weaken, but the forecast rate of depreciation is much slower than seen historically. If the Rand were to depreciate more rapidly, that would reduce the Pt price necessary to incentivise new production.

Forecast prices for Au, Ni and Cu are taken from the consensus view of analysts' forecasts provided by the Company (SRL, 2024b).

No forecasts are available for Ir and Ru. Projected Ir and Ru prices use the spot values at 31 December 2023 as base, which are then factored by the relative year-on-year changes in the forecast Pt price.

SRK Comments on Projected Ir Price

The mechanistic factoring of the Ir price results in an Ir price of USD24 182/oz in 2040. This price is much higher than any of the other PGM prices, which SRK considers to be too high. The payable Ir contributes some 16% of the total LoM revenue.

SRL contends that this long term (LT) Ir price is justifiable, based on:

- Price increases of 600% over the last 10 years, when extrapolated, yield a similar price in 2040;
- Installed proton exchange membrane (PEM) electrolyser capacities are expected to increase from 0.6 GW (in 2020) to 150 GW (by 2030) (Rinaldi, 2022). PEM electrolysers require 0.5 t of Ir per GW of installed capacity. This translates into a 500 times increase in Ir demand for PEM electrolysers in just eight years; and
- For the production of green hydrogen, PEM electrolysis is the best technology. Richter (2023) states that PEM electrolysers are best suited to handling the large power fluctuations from renewable energy and expects 70 GW of PEM electrolysers by 2030. This equates to a demand in 2030 of 32 t of Ir, compared to the 9 t currently produced.

Nevertheless, SRK believes that the Ir price projections are optimistic. The impact of this is discussed under the sensitivities in Section 1.10.2 and Section 22.3.2.

Chromite Price

The contract price for Cr_2O_3 concentrate is based on a fixed price relative to an index price, which is adjusted for upside price sharing and a penalty for out of specification material.

The price used for evaluation purposes is USD76.70/t, paid on a free on truck (FOT) basis at the mine gate.

Table 1-8: SFA Price Deck - Real Terms (SFA, 2023; SRL, 2024b)

Item	Basis	Units	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Pt	SFA	(USD/oz)	1 023	1 440	1 645	1 846	2 268	2 667	3 921	2 989	2 511	2 665	2 812
Pd	SFA	(USD/oz)	1 170	960	775	692	635	533	436	436	435	435	434
Rh	SFA	(USD/oz)	4 873	4 559	4 229	3 923	3 720	3 557	3 573	3 587	3 599	3 608	3 616
Ru	Factored from Pt	(USD/oz)	492	693	791	888	1 091	1 283	1 887	1 438	1 208	1 282	1 353
Ir	Factored from Pt	(USD/oz)	4 960	6 982	7 977	8 951	10 997	12 932	19 013	14 494	12 176	12 922	13 635
Au	Consensus	(USD/oz)	1 950	1 888	1 850	1 813	1 600	1 600	1 600	1 600	1 600	1 600	1 600
Ni	Consensus	(USD/t)	18 596	19 235	19 004	19 491	17 904	17 904	17 904	17 904	17 904	17 904	17 904
Cu	Consensus	(USD/t)	8 576	9 072	9 435	9 392	8 180	8 180	8 180	8 180	8 180	8 180	8 180
ZAR:USD	SFA	(ZAR)	17.99	18.03	18.04	18.10	18.14	18.09	18.09	18.28	18.46	18.60	18.74

Item	Basis	Units	2035	2036	2037	2038	2039	2040 / LT
Pt	SFA	(USD/oz)	2 953	3 087	3 403	3 855	4 178	4 987
Pd	SFA	(USD/oz)	433	463	492	519	545	570
Rh	SFA	(USD/oz)	3 622	3 627	3 630	3 632	3 633	3 918
Ru	Factored from Pt	(USD/oz)	1 421	1 485	1 637	1 855	2 010	2 399
Ir	Factored from Pt	(USD/oz)	14 319	14 969	16 501	18 693	20 259	24 182
Au	Consensus	(USD/oz)	1 600	1 600	1 600	1 600	1 600	1 600
Ni	Consensus	(USD/t)	17 904	17 904	17 904	17 904	17 904	17 904
Cu	Consensus	(USD/t)	8 180	8 180	8 180	8 180	8 180	8 180
ZAR:USD	SFA	(ZAR)	18.89	19.04	19.18	19.33	19.49	19.65

Note:

1. SFA refers to SFA’s PGM outlook and exchange rate forecasts to 2040.
2. Consensus price forecasts at December 2023 were supplied by JP Morgan to SRL.
3. Projected values for Ir and Ru for 2024 onwards are factored by the year on year change in the Pt price, using December 2023 spot values as the base.

1.7.6 Environmental Permitting and Social Matters

Ruighoek

The Environmental Management Programme (EMP) was approved by the Department of Mineral Resources and Energy (DMRE), New Order Mining Right (NOMR) NW30/5/1/2/2/320MR was awarded during 2008 and encompasses the properties Tuschenkomst 135JP, Witkleifontein 136 JP, Rooderand 46JQ Ptn 3 and portions of Ruighoek 169JP. There is no current closure liability as mining has not commenced.

PSM above 700 m below Surface

Environmental aspects of the PSM Project are administered primarily under several Environmental Management Programme Reports (EMPrs), two Water Use Licences (WULs) and a Waste Management Licence (WML). Based on available documentation, it is understood that a number of environmental authorisations and permits are pending and the Company is engaging with the relevant authorities. All required environmental authorisations and permits will need to be in place prior to project implementation. The 2020-2024 SLP for the PSM Project, which includes East Pit and Central and East Underground, was submitted to the DMRE, which has requested further information. SRL continues to contribute to the improvement of the surrounding areas through its SLP commitments.

The immediate closure liabilities for the West Pit and East Pit have been assessed to be ZAR450m and ZAR167m respectively, relative to a full insurance guarantee facility of ZAR700m. The projected totals to be spent on closure and rehabilitation activities through the life of the West Pit and East Pit are ZAR1 145m and ZAR2 406m respectively.

The projected totals to be spent on closure and rehabilitation activities through the life of the Central Underground and East Underground are ZAR100m and ZAR87m respectively.

The end of life closure liabilities are not supported by any mine closure and rehabilitation plans.

PSM below 700 m below Surface and Kruidfontein

The Kruidfontein Project has an approved EMP for prospecting; however, no mining has been undertaken at the property. A mining right application (MRA) was resubmitted on 06 March 2023 and accepted by the DMRE on 01 June 2023. A Section 102 Application to consolidate the three separate mineral rights (Sedibelo, Magazynskraal and Kruidfontein) into a single mining right under Itereleng Bakgatla Mineral Resources (Pty) Ltd (IBMR), a SRL subsidiary, was submitted to the DMRE on 25 April 2023. The DMRE is yet to accept the Section 102 Application.

An Environmental Impact Assessment (EIA) process was initiated in 2020 as part of the Section 102 Application. The Scoping Report for the MRA and Section 102 Application was submitted on 19 and 25 April 2023 respectively. The MRA will remain pending until the results of the EIA process have been concluded and authorisation obtained.

Recently, the DMRE rejected the Scoping Report for this process, which is being appealed. Once the appeal has been resolved and the Section 102 consolidation finalised, the other permits, authorisations and licences, including a WUL and an SLP, will need to be amended to reflect the consolidated project.

The projected totals to be spent on closure and rehabilitation activities through the life of the Magazynskraal Shaft and Kruidfontein Shaft projects are ZAR414m and ZAR448m respectively.

The end of life closure liabilities are not supported by any mine closure and rehabilitation plans.

Mphahlele

The NOMR for the Mphahlele Project was granted based on a valid and approved EMPr. The proposed changes to the approved EIA/EMPr will need to reflect the changed project description, which will require environmental authorisation prior to construction commencing. A WUL application needs to be made and the relevant specialist studies updated. A rehabilitation and closure plan has not been developed for the project nor closure risks identified.

The projected totals to be spent on closure and rehabilitation activities through the life of the Mphahlele Decline and Mphahlele Shaft projects are ZAR356m and ZAR298m respectively.

The end of life closure liabilities are not supported by any mine closure and rehabilitation plans.

1.7.7 Tailings Storage Facilities

Current PPM TSF Infrastructure

The PPM TSF and associated RWD complex consists of a 198 ha TSF and return water dam (RWD) complex commissioned in May 2009. The eastern and western containment walls are at design elevations with geofabric linings on the inner faces. The return water complex consists of a double compartment high-density polyethylene (HDPE) lined silt trap, a single compartment HDPE-lined RWD and an unlined dirty stormwater containment dam.

Operations of the PPM TSF are undertaken by Enviroserv, and operations are being monitored jointly by Enviroserv as well as PPM’s operators and management.

From observations and reviewed documentation, it can be concluded that the tailings disposal operations are being conducted in a responsible manner by suitably experienced contractors and mine personnel.

There are a number of operational risks that need to be addressed, principally:

- The facility is not being operated to full compliance with the Global Industry Standard on Tailings Management (GISTM) requirements;
- The stormwater control dam (SWCD) is overgrown with reeds and full of stormwater;
- Continued decanting of tailings into and/or through the silt trap and into the return water complex increases risk to the metallurgical plant; and
- The PPM WUL permits disposal of a maximum of 3.18 Mpta tailings in the TSF.

Sedibelo and Magazynskraal TSFs

Further studies will be required so that the designs of the proposed TSFs are done to GISTM requirements.

Mphahlele TSF

Further studies will be required so that the design of the proposed TSF is done to GISTM requirements.

Geotechnical investigation of the selected TSF site will be required to confirm the nature of the underlying strata. In terms of the NEM:WA regulations, the tailings disposal site will require by a Class C containment barrier system.

The footprint ot the TSF as shown in this report can only store 24.8 Mt and will have to be enlarged. SRL advised that the Capex allowed for in the PEA is for a TSF with capacity of some 84 Mt, using the costings of the 2009 FS and escalated to the effective date of this TR.

1.8 Summary Capital and Operating Cost Estimates

1.8.1 Capital Cost Estimates

The capital (Capex) cost summary and Capex contingencies for the various projects discussed in this PEA is shown in Table 1-9.

The total Capex and contingencies for the Western Limb and the Eastern Limb projects are shown in Table 1-10.

The Capex for PSM above 700 mbs and Mphahlele Decline projects were derived from first principles and zero-based budgeting exercises as part of feasibility studies completed in 2020 and recosted to an effective date of 31 December 2021. These have been escalated to the effective date of this TR. The vertical shaft projects were based on conceptual designs with benchmarked and escalated shaft costs.

Capex for PSM above 700 mbs and the Mphahlele Decline project are seen to have an accuracy of ±25%. The vertical shaft projects are each seen to have an accuracy of ±50%.

1.8.2 Operating Cost Estimates

The summary operating costs (Opex) for the various components discussed in this PEA are shown in Table 1-11. The unit costs for each component in a given year are selected to illustrate the Opex at steady-state operations.

The Opex for the East Pit and Ruighoek Pit is based on the rates as set out in the various contracts for the open pit operations, as they were in force immediately prior to operations being suspended due to cost curtailment.

The Opex for the retreatment of the tailings in the PPM TSF use actual costs at PPM for processing and G&A, with assumed industry rates for the hydro-monitoring.

The Opex for PSM above 700 mbs and Mphahlele Decline Projects were derived from first principles and zero-based budgeting exercises as part of feasibility studies completed in 2020 and 2009, respectively, which have been escalated to the effective date of this TR. The Opex for these two projects is seen to have an accuracy of ±25.

The Opex for the Magazynskraal, Kruidfontein and Mphahlele Shaft Projects were derived using typical industry costs and benchmarked against similar operations. The Opex for these three projects is seen to have an accuracy of ±50.

The average contingency applied to each project is shown in Table 1-11.

1.9 Key Risks

Collectlively, social issues appear to have the greatest potential impact at this time in the assessment lifecycle at PSM, Kruidfontein and Mphahlele. The scope of potential social issues include:

- Potential disruption of projects and challenges in maintaining strong stakeholder relations may result from internal tensions between current leadership and community members; and
- General high expectations in the communities.

In addition to social issues, the risk items assessed for PSM included: economic performance; environmental aspects; geology; tailings; rock engineering; and water management.

At Mphahlele, the additional consideration of cross-cutting risks is relevant ;*viz*. artisanal mining in proximity of the Company's operations.

Table 1-9: Capex Summary per Project

Item	Units	OPEN PIT OPERATIONS			UNDERGROUND OPERATIONS					
					PSM above 700 mbs		PSM below 700 mbs and Kruidfontein		Mphahlele	
		West Pit	Ruighoek Pit	East Pit	Central Decline	East Decline	Magazynskraal Shaft	Kruidfontein Shaft	Mphahlele Decline	Mphahlele Shaft
Exploration capex	(ZARm)	-	24	-	43	79	435	676	110	435
Pre-implementation capex	(ZARm)	-	58	-	581	1 006	257	358	600	257
Mining and infrastructure capex	(ZARm)	-	911	-	6 433	6 243	11 543	12 117	11 881	11 282
Surface Infrastructure capex	(ZARm)	-	248	-	2 623	3 005	4 127	4 491	543	2 722
Surface Services capex	(ZARm)	-	212	-	-	206	372	372	1 106	0
Metallurgical Processing	(ZARm)	421	-	-	2 090	3 153	2 294	2 021	5 453	2 600
Closure liability capex	(ZARm)	565	2 793	2 870	95	239	414	448	356	298
Contingency	(ZARm)	133	498	144	1 068	1 346	5 105	5 235	4 997	4 002
Total Capex	**(ZARm)**	**1 119**	**4 744**	**3 014**	**12 932**	**15 277**	**24 546**	**25 718**	**25 046**	**21 596**
Contingency %		13,5%	11.7%	5.0%	9.0%	9.7%	26.3%	25.6%	24.9%	22.7%

Table 1-10: Capex Summary per Limb

Item	Units	Western Limb Projects	Eastern Limb Projects	SRL Total
Capex	(ZARm)	87 244	46 642	133 886
Contingency	(%)	18.2%	23.9%	20.1%

Table 1-11: Opex Summary per Project

Item	Units	OPEN PIT OPERATIONS			UNDERGROUND OPERATIONS					
					PSM above 700 mbs		PSM below 700 mbs and Kruidfontein		Mphahlele	
		West Pit (Retreat TSF) (Year 2039)	Ruighoek Pit (Year 2051)	East Pit (Year 2049)	Central Decline (Year 2039)	East Decline (Year 2039)	Magazynskraal Shaft (Year 2043)	Kruidfontein Shaft (Year 2043)	Mphahlele Decline (Year 2036)	Mphahlele Shaft (Year 2050)
RoM ore mined	(Mt)	3.60	0.65	4.26	1.29	1.33	2.27	1.96	2.51	2.71
Recovered 4E PGM in concentrate	(koz 4E)	25.3	57.2	97.6	183.3	157.3	295.4	281.2	262.0	243.5
Mining Opex (incl ore transport)	(ZARm)	83	657	2 469	1 139	1 346	3 307	3 098	2 139	3 940
Concentrator / Milling	(ZARm)	0	197	709	392	409	692	597	461	499
Rados	(ZARm)	-	-	-	-	-	-	-	56	61
CRP	(ZARm)	-	-	35	21	22	103	89	-	-
TSP / TRP	(ZARm)	156	21	69	43	45	74	63	69	62
Kell / Refining Opex	(ZARm)	52	115	200	267	225	504	472	371	322
SIB Opex	(ZARm)	0	29	118	125	143	490	446	340	519
G&A Opex (incl Environmental & Social)	(ZARm)	0	300	554	491	498	1 052	907	1 117	1 209
Contingency	(ZARm)	39	294	161	80	91	1 307	1 189	822	1 292
Total Opex (at steady-state)	**(ZARm)**	**330**	**1 613**	**4 314**	**2 558**	**2 779**	**7 528**	**6 861**	**5 376**	**7 904**
Unit Cost	**(ZAR/t RoM)**	92	2 489	1 013	1 976	2 087	3 313	3 499	2 143	2 912
	(ZARoz 4E)	13 058	28 229	44 222	13 954	17 664	25 481	24 403	20 519	32 463

1.10 Preliminary Economic Assessment

1.10.1 Financial Results

The key results from the cash flow analysis for the Western Limb (combining Ruighoek, East Pit, West Pit (TSF Retreat), Central and East Underground, Magazynskraal Shaft and Kruidfontein Shaft projects) and Eastern Limb (Mphahlele Decline and Mphahlele Shaft projects) are set out in Table 1-12 and Table 1-13, respectively. The results are presented for the Base Case (using the SFA Oxford Limited (SFA) price deck of Table 19-2), with comparative results from use of the three-year trailing average and spot values at 31 December 2023.

Net Present Values (NPVs) at different discount rates are presented for each of the three price decks. The internal rate of return (IRR), peak funding requirement and payback period in years from start of project for each price deck are provided as well. The final post-tax South African Rand (ZAR) based cashflows are converted to US Dollars (USD) using the projected ZAR:USD exchange rates in Table 19-2.

The Eastern Limb results are presented on a 100% basis, i.e., gross values and not what is attributable to SRL.

Table 1-12: Western Limb: Summary Financial Results

Item	Units	NPV Different Price Decks (ZARbn)			NPV Different Price Decks (USDbn)		
		SFA	3-Year	Spot	SFA	3-Year	Spot
NPV (discount rates)							
10%		90.6	17.7	60.8	4.5	1.1	3.3
11%		72.8	12.0	47.9	3.6	0.7	2.6
12%		**58.4**	**7.4**	**37.3**	**2.9**	**0.4**	**2.0**
13%		46.6	3.6	28.8	2.3	0.2	1.5
14%		37.0	0.6	21.8	1.8	0.0	1.2
IRR	(%)	23%	14%	20%			
Peak Funding	(ZARbn)	33.2	37.4	34.4			
Payback Period	(years)	13	14	13			

Table 1-13: Eastern Limb: Summary Financial Results (100% basis)

Item	Units	NPV Different Price Decks (ZARbn)			NPV Different Price Decks (USDbn)		
		SFA	3-Year	Spot	SFA	3-Year	Spot
NPV (discount rates)							
10%		23.2	1.3	15.4	1.2	0.1	0.8
11%		19.0	0.5	12.5	1.0	0.0	0.7
12%		**15.6**	**-0.2**	**10.1**	**0.8**	**0.0**	**0.5**
13%		12.7	-0.8	8.0	0.6	0.0	0.4
14%		10.4	-1.3	6.3	0.5	-0.1	0.3
IRR	(%)	23%	12%	21%			
Peak Funding	(ZARbn)	11.5	11.6	11.5			
Payback Period	(years)	8	9	8			

1.10.2 Sensitivities

The sensitivities of the NPV @ 12% discount of the post-tax cash flows for the Western Limb projects on a combined basis and Eastern Limb projects on a 100% basis to changes in Revenue and Opex are shown in Table 1-15: Eastern Limb: Twin sensitivity of NPV @ 12% to changes in Revenue and Opex (100% basis)Table 1-14 and Table 1-15 respectively.

Table 1-14: Western Limb: Twin sensitivity of NPV @ 12% to changes in Revenue and Opex

NPV @ 12% (ZARbn)		Revenue Sensitivity				
		-20%	-10%	0%	10%	20%
Opex Sensitivity	-20%	39.1	53.0	66.7	80.4	94.1
	-10%	34.9	48.8	62.5	76.3	89.9
	0%	30.7	44.6	58.4	72.1	85.8
	10%	26.5	40.4	54.2	68.0	81.7
	20%	22.3	36.2	50.1	63.8	77.6

Table 1-15: Eastern Limb: Twin sensitivity of NPV @ 12% to changes in Revenue and Opex (100% basis):

NPV @ 12% (ZARbn)		Revenue Sensitivity -20%	-10%	0%	10%	20%
Opex Sensitivity	-20%	9.2	14.6	20.0	25.4	30.7
	-10%	7.0	12.4	17.8	23.2	28.5
	0%	4.7	10.2	15.6	21.0	26.3
	10%	2.4	7.9	13.4	18.8	24.1
	20%	0.0	5.7	11.2	16.6	21.9

Impact of LT Ir Price

SRK expressed concern that the factored LT Ir price of USD24 182/oz in 2040 was too high.

SRK evaluated the impact by setting the factored price for Ir of USD12 932/oz in 2029 as the LT price. The net effect on the NPV @ 12% discount for the Western Limb and Eastern Limb projects is shown in Table 1-16.

Table 1-16: Comparison of Impact on NPVs of LT Ir price

Item	NPV @ 12% discount (ZARbn) LT Ir Price (USD24 182/oz)	LT Ir Price (USD12 932/oz)	Reduction
Western Limb	58.4	47.5	19%
Eastern Limb (100%, not attributable to SRL)	15.6	12.2	22%

The reduction in the NPV @ 12% discount for the Western Limb and Eastern Limb projects due to a lower LT Ir price is shown to be 19% and 22%, respectively.

With the reduced LT price, Ir contributes some 11% of the total LoM revenue.

1.10.3 Eastern Limb Project - NPV attributable to SRL

The Limpopo Development Corporation (LIMDEV) holds the other 25% interest in the Mphahlele Project, whilst the community has a 5% free-carry. LIMDEV is responsible to provide 25% of the project Capex.

Typically, a portion of the 25% dividend flow to LIMDEV (nominally 10%) would be paid as a trickle dividend until LIMDEV's share of the Capex is repaid. The 5% free-carry to the community would be paid proportionately by SRL and LIMDEV from their respective dividend flows. The remaining 85% part of the LIMDEV dividend would be retained by SRL in lieu of LIMDEV's contribution to the project Capex.

Applying this logic to the post-tax cash flows in Table 22-12 the NPVs of the two sets of cash flows (100% basis and attributable to SRL) are compared in Table 1-17.

Table 1-17: Eastern Limb: Comparison of NPVs at 100% and attributable to SRL

Discount Rates	NPV (ZARbn) using SFA Price Deck 100% Basis	Attributable to SRL
10%	23.2	20.8
11%	19.0	17.0
12%	**15.6**	**13.8**
13%	12.7	11.2
14%	10.4	9.0

1.11 Conclusions and Recommendations

The decision by SRL to approach Eskom in order to ask for a relief in fixed costs and in so doing keeping the contractual agreed NMD at both PPM and Sedibelo substations is a move in the right direction. This will ensure reduction in power costs during the cost curtailment phase at PPM and will also ensure that the capacity for the required demand is readily available when the mine goes into full production again. It is recommended that the mine should continuously engage Eskom to ensure that the approval is granted as soon as possible.

It is also recommended that SRL should carry out a more detailed load study in the next phase of the project, to ensure that power requirements for the Western Limb properties at peak production are correctly stated. High level load estimates currently indicate that the installed capacity of 120 MVA, made of 40 MVA at the PPM substation and 80 MVA at the Sedibelo substation will not be enough to cater for the total power requirements of about 146 MVA at peak production. SRL has, however, indicated that the incoming Eskom line has a capacity of 160 MVA. Therefore, additional transformer/s will be required to cater for the additional load of 26 MVA at peak production.

1.11.1 Economic Analysis

The economic analysis of SRL's Assets has been done at the effective level of a preliminary economic assessment, even though parts of the techno-economic parameters (TEPs) in the analysis are supported by pre-feasibility studies.

The PEA is preliminary in nature, since it includes Inferred Mineral Resources in the LoM plans that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as Mineral Reserves, and there is no certainty that the preliminary economic assessment will be realized. Much of the engineering designs covering the Inferred Mineral Resources have been done at a concept study level, which has a very low level of confidence.

The TR contains statements of a forward-looking nature. The achievability of the projections, LoM plans, budgets and forecast TEPs as included in the TR is neither warranted nor guaranteed by SRK. The projections cannot be assured as they are based on economic assumptions, many of which are beyond the control of the Company or SRK.

This TR is not a Valuation Report and does not express an opinion as to the value of Assets. Aspects reviewed in this TR do include product prices, socio-political issues and environmental considerations; however SRK does not express an opinion regarding the specific value of the assets and tenements involved.

1.11.2 Impact on Previous Feasibility Studies

The impact of the PEA on the results of previous feasibility studies for the PSM above 700 mbs and Mphahlele is discussed here.

PSM above 700 m below Surface

The Probable Mineral Reserves for Central and East Underground are derived from the 2020 FS (SRK, 2022a). The small change in Mineral Reserves as reported in this TR is due to the use of the down-dip mining method vs. the breast mining method on which the 2020 FS was based, and a different set of metal price and exchange rate forecasts.

The processing strategy for Merensky and UG2 ores considered in this TR adds additional UG2 processing capacity, rather than reconfiguring the two concentrators at PPM. The impact is an increase in the metallurgical Capex, which can be offset by avoiding non-production time lost while the reconfiguration of the plants is done.

SRK is satisfied that the results of the 2020 FS are not materially affected by this PEA.

Mphahlele Decline

The Probable Mineral Reserves for the UG2 reef for the Mphahlele Decline Project are based on the 2020 FS (SRK 2022b). The 2009 FS envisaged a much larger project (240 ktpm) exploiting both Merensky and UG2, as used in this TR. The production schedule used in this PEA honours that for the UG2 per the 2020 FS, but adds production from the Merensky.

The General Arrangement (GA) plan presented in this TR follows that of the 2020 FS, where all infrastructure was moved south of the UG2 subcrop, to account for potential third-party mining on the chrome seams to the north. While the plant footprint of the 2020 FS matches that of the 2009 FS, the footprint for the TSF on the GA is considerably smaller (see Figure 2-3: Mphahlele Project Concept). Most of the Capex per the 2009 FS has been escalated to the Effective Date of this PEA, as presented in this PEA. Thus sufficient Capex for a larger TSF to handle the increased throughput and production at Mphahlele is provided.

The 2020 FS used the Rados pre-concentration step for the UG2 ore, which was not considered in the 2009 FS.

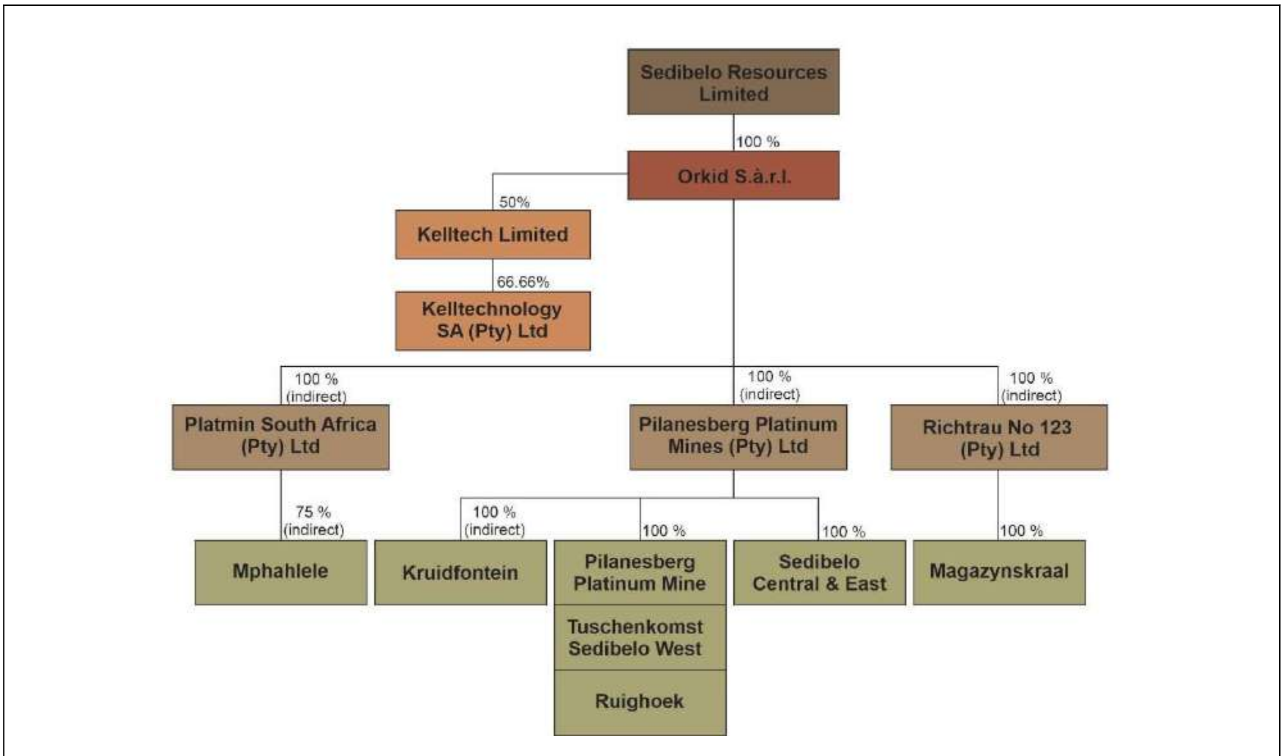
SRK is satisfied that the declaration of Probable Mineral Reserves for the UG2 reef at Mphahlele is still valid. However, the project concept for Mphahlele should be properly defined and the technical and economic merits of that concept re-evaluated by a feasibility study.

2 Introduction

2.1 Issuer

Sedibelo Resources Limited (SRL, also referred to as the Company), a limited public company with its registered office in the Channel Island of Guernsey, is involved in the exploration, development, operation and processing of Platinum Group Metals (PGM) mineral deposits in the Bushveld Complex (BC) in Republic of South Africa.

A simplified corporate structure for SRL with its various PGM assets is shown in Figure 2.1. The shareholders and interests held in SRL are Bakgatla Ba-Kgafela Tribe (BBKT, 25.7%), Industrial Development Corporation of South Africa (IDC, 15.7%), NGPMR (Cayman) LP (6.9%), Pallinghurst EMG African Queen LP (6.7%), Gemfields Resources Fund LP (6.5%), AMCI ConsMin (Cayman) LP (5.5%), Smedvig G.P. Limited (5.5%), Rustenburg Platinum Mines Ltd (RPM, 5.4%), Telok Ayer Street VI Limited (5.2%) and Investec Bank Limited (4.6%), with the remaining 12.3% held by various minority shareholders.



srk consulting	SRL Total Assets PEA Simplified SRL Corporate Structure and Interests in PGM Assets	Project No. 600322

Figure 2-1: Simplified SRL Corporate Structure and Interests in PGM Assets

SRL, formerly Platmin Limited (Platmin), delisted from the Toronto Stock Exchange in 2011, but remained a "reporting issuer" for the purposes of Canadian securities laws and subject to all continuous disclosure obligations under those laws.

2.1.1 The Assets

This Technical Report (TR) describes, at a preliminary economic assessment level (PEA), the exploitation of all SRL's PGM mineral assets in the Republic of South Africa (collectively the Assets), comprising:

- Western Limb Projects (Figure 2-2):
  - PPM, which comprises the West Pit, two concentrators, a chrome recovery plant and a TSF, located some 66 km north of Rustenburg in the North West Province of South Africa;
  - The Ruighoek Open Pit Project which lies southwest of PPM and west of the Pilanesberg National Park;
  - The PPM-Sedibelo-Magazynskraal (PSM) Project, which exploits ore down to 700 mbs. For purposes of this PEA, this includes Central and East UndergroundEast Underground and East Pit (Figure 2-2);
  - The Magazynskraal Shaft Project, down-dip of the PSM Project (Figure 2-2);

    - The Kruidfontein Project, which is down-dip of the Magazynskraal Shaft Project (Figure 2-2); and
- Eastern Limb Project (Figure 2-3):
    - The Mphahlele Project located 50 km south of Polokwane in the Limpopo Province of South Africa, comprising the Decline Project down to 600 mbs and the Shaft Project which is the down-dip extension of the Decline Project.

This TR has been prepared according to the requirements of the National Instrument 43-101 - Standards of Disclosure for Mineral Projects (NI43-101) of the Canadian Securities Administrators (CSA) and Form 43-101F1 - Technical Report (the Form).

SRK Consulting (South Africa) (Pty) Ltd (SRK) was appointed by SRL to compile this Technical Report (TR) to present the results of the PEA for the Assets, which will satisfy SRL's continuous disclosure obligations under applicable Canadian securities laws.

2.2 Terms of Reference and Purpose of TR

2.2.1 Terms of Reference

SRK was required to compile this TR to present the results of the PEA for all SRL's Assets according to the requirements of NI43-101.

2.2.2 Purpose

This TR was prepared to satisfy SRL's continuous disclosure obligations regarding its mineral assets under applicable Canadian securities laws.

This PEA assumes that all capital or funding needed to implement the various projects will be available in the sums and timing required according to the proposed implementation schedules.

This PEA sets out the aggregate cost of production for SRL's PGM Assets which can be compared with SRL's peers in the PGM industry.

2.2.3 Compliance

This TR has been prepared in accordance with the requirements of the NI43-101 and the Form, and conforms with generally accepted CIM "Exploration Best Practices" and "Estimation of Mineral Resources and Mineral Reserves Best Practices" Guidelines.

The Mineral Resources presented in this TR have been prepared and reported according to the requirements of the SAMREC Code (2016 Edition), which would be identical if reported according to the CIM Definition Standards on Mineral Resources and Mineral Reserves adopted by the Council of the Canadian Institute of Mining, Metallurgy and Petroleum (CIM).

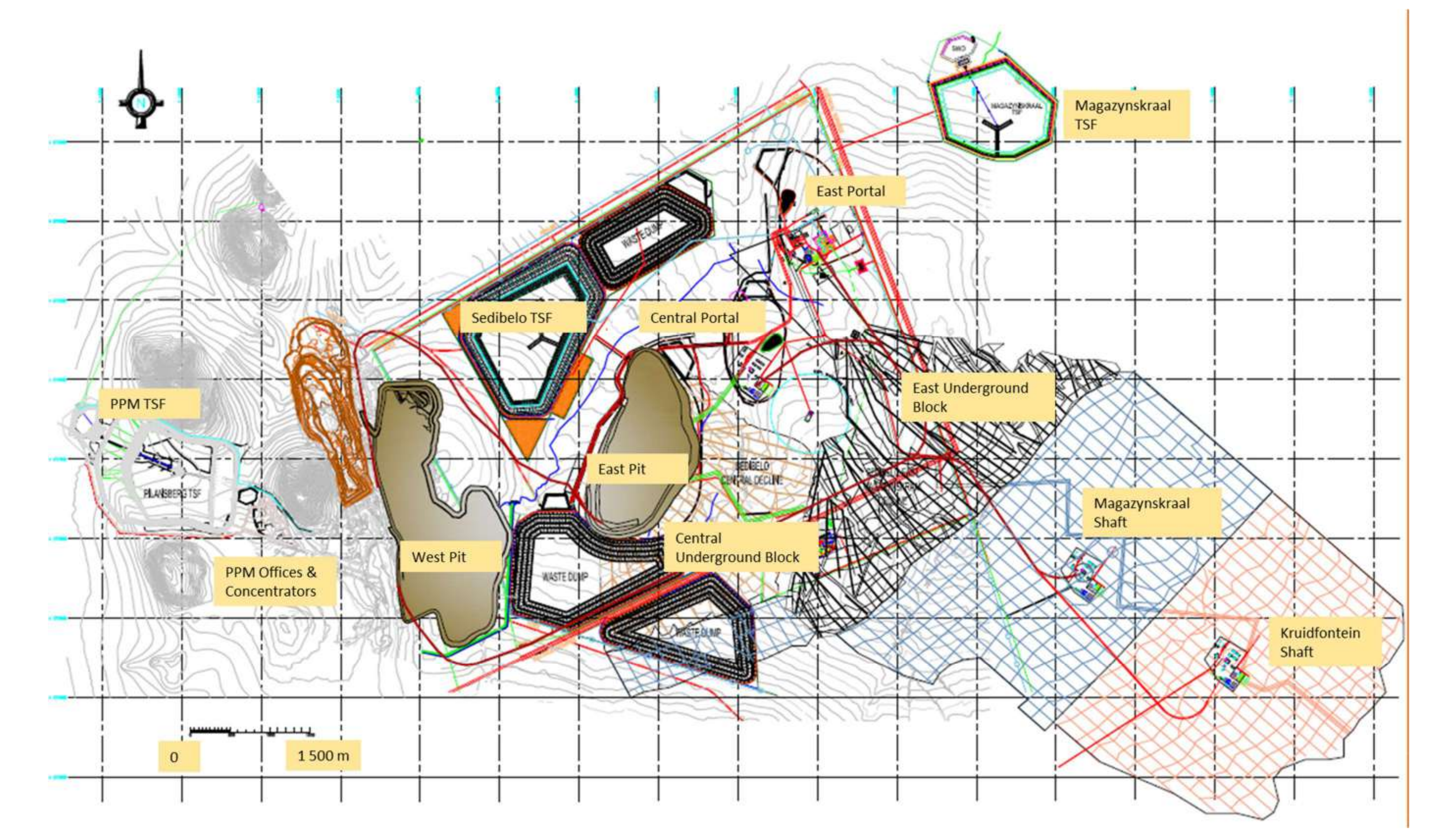
The achievability of the production schedule for the Assets per this PEA is neither warranted nor guaranteed by SRK. The production schedule is based on economic assumptions, many of which are beyond the control of SRL or SRK. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.

2.3 Sources of Information

Sources of information and data used in the preparation of the TR are included in Section 27.

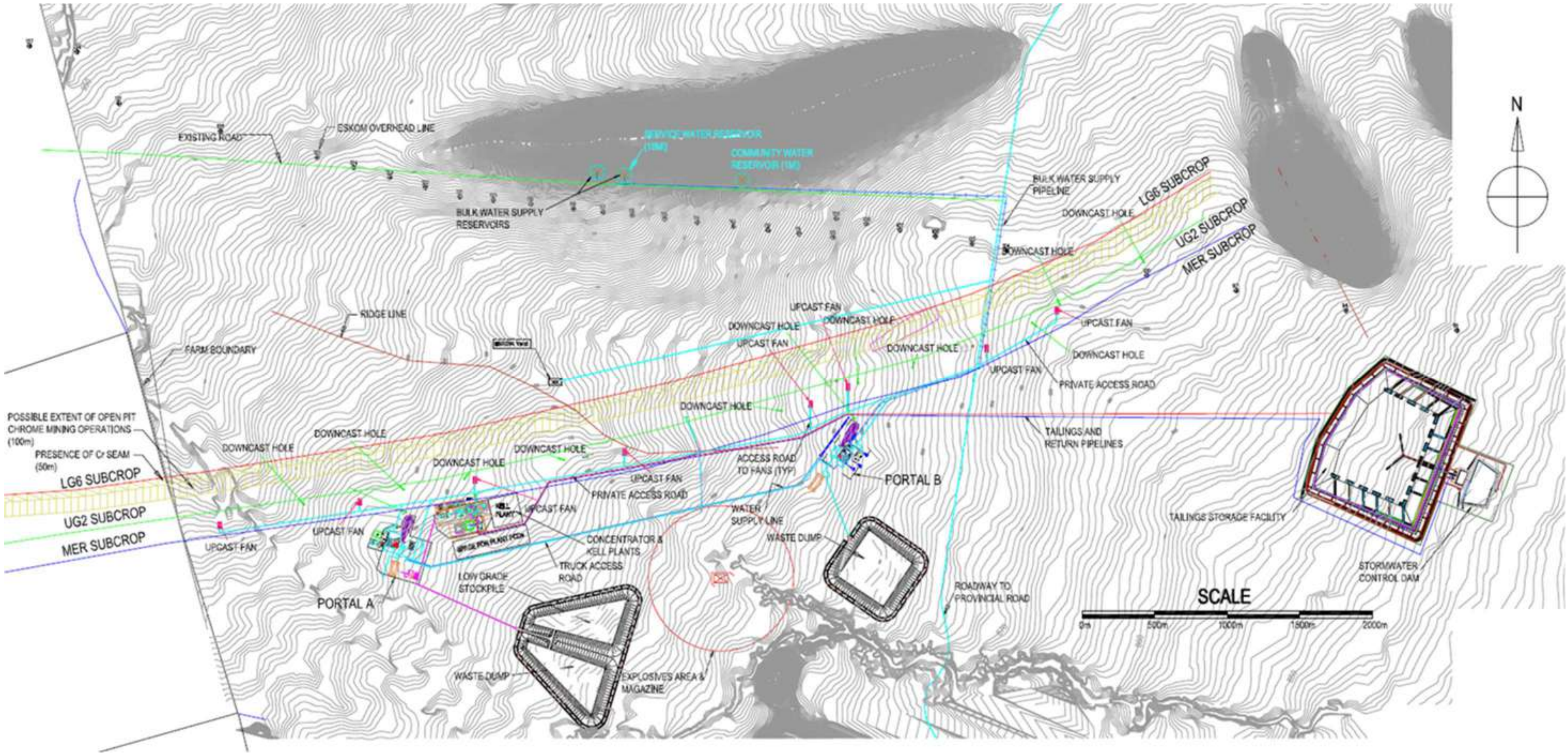
SRL has confirmed that to its knowledge, the information provided by it to SRK was complete and not incorrect, misleading or irrelevant in any material aspect. SRK has no reason to believe that any material facts have been withheld.

All maps and diagrams presented in this TR have been extracted from source documentation provided by SRL and appropriate references are included in the title blocks of such diagrams.



srk consulting	**SRL Total Assets PEA** Components of the PSM and Kruidfontein Projects	Project No. 600322

Figure 2-2: Components of the PSM and Kruidfontein Projects



srk consulting	**SRL Total Assets PEA** Mphahlele Project Concept	Project No. 600322

Figure 2-3: Mphahlele Project Concept

2.3.1 Mineral Resource Estimates

Ruighoek, PSM and Kruidfontein

The information contained in this report with respect to the Mineral Resource estimates for PSM is based on work done in house by SRL, Snowden Mining Industry Consultants Pty Ltd (currently referred to as Snowden Optiro), Cube Consulting Pty and SRK. With respect to Kruidfontein, the information is based on the work of Mitchell *et al* (2010). Where SRK has not compiled the estimates, it has performed all necessary validation and verification procedures deemed appropriate to be able to report and sign-off the Mineral Resource Statement at 31 December 2023.

Mphahlele

The Mphahlele Mineral Resource estimates are based on a database of drill holes provided to SRK by SRL. This includes the definition of the intersections that define the Mineral Resoruce cuts for each of the reefs. SRK reviewed the database, drill core, analytical program and Quality Assurance/Quality Control (QA/QC) data, and based on the selected cuts, generated the orebody wireframes and Mineral Resource estimates.

2.3.2 Mine Design

The mine designs and production schedules for the Assets are based on work done by Sound Mining Solutions as a contributor to the 2020 FS (SRK, 2020) and 2022 TR reports. Vertical shaft designs and ventilation for PSM below 700 mbs (Magazynskraal) and Kruidfontein were compiled by Worley Africa and Bluhm Burton Engineers in 2023/4.

SRK considers that the modifying factors, design criteria, access methods, mine designs and production schedules are appropriate for the underground mines considered in this TR.

2.3.3 Techno-economic Model

The techno-economic model (TEM) for the PEA was compiled by Mr Dean Riley of SRL, using the inputs from the contributors to the 2020 FS (SRK, 2020) and the 2022 TR reports.

The Capex and Opex in the TEM have been adjusted to be correct at 31 December 2023, the Effective Date of this TR, using annual inflation indices and/or repricing of the inputs.

SRK has conducted an extensive review of the TEM and is satisfied that the inputs are correctly captured and the Capex and Opex escalated correctly. SRK has validated the modelling methodologies and the results of the TEM which are presented in Section 22.

2.4 Details of Personal Inspection

2.4.1 PSM

Inspection visits of the PSM Project were conducted as follows:

- Extensive visit to PPM (see Table 2-1) 19/20 February 2020;
- Limited follow-up visit to PPM and Wilgespruit (see Table 2-2) 9 March 2021;
- Visit to West Pit and East Pit (see Table 2-3) 24 February 2022; and
- Visit to the East Portal boxcut and East Pit (Table 2-4) 20 September 2022.

Given SRK's continued involvement with SRL and the PSM Projects over many years and the curtailment of current extraction and processing operations, SRK considers these site visits to still be relevant.

Table 2-1: Summary of Site Visit to PPM in February 2020

Discipline	SRK Consultant			PPM Personnel		Date of Visit	Workplace visited and remarks
	Name	Company	Designation/Role	Name	Designation/Role		
Geology and Mineral Resources	Ivan Doku	SRK	Principal Resource Geologist	Janus Westraat	Chief Geologist	19/02/2020 – 20/02/2020	Mine geology/resource offices, Geology/resource modelling
	Senzeni Mandava	SRK	Senior Resource Geologist	Jan van der Merwe	Consulting Geologist	19/02/2020 – 20/02/2020	
Mining and Mineral Reserve	Jaco van Graan	SRK	Principal Mining Engineer	John Mokgopa	Manager Technical Services	19/02/2020 – 20/02/2020	Sites visited include: • North Pit look out; • Central Pit look out; • RoM Pad; • Rooderant Pit; • Central Pit; • North Pit; and • Central Pit look out.
Rock Engineering	Robert Armstrong	SRK	Principal Rock Engineer	John Mokgopa	Manager Technical Services		
				Billy Stander	Mining Manager		
				Tshegofatso Ntshole	Geologist (Strata Control Officer)		
Metallurgy and Mineral Processing	Mike Valenta	Metallicon	Principal Metallurgist	Barry Davis	General Manager (Processing)	19/02/2020 – 20/02/2020	Concentrator, chrome recovery circuit, TSP
Engineering Infrastructure (Mechanical) and Capital	Chris Smythe	SRK	Principal Engineer (Infrastructure)	J Coetzee	General Manager (Engineering)	19/02/2020 – 20/02/2020	Sites visited include: Process Plant RoM Crushing; Process Plant Workshops; Main consumer substation; Emergency generator station; Maintenance Planning Department; Contractor (Load & Haul) maintenance workshop; and Contractor (Drilling) maintenance workshop. No risks were observed that would materially affect the business plan
Environmental, Social and Governance (ESG)	Ashleigh Maritz	SRK	Senior Environmental Scientist	Peter Lentsoane	Environmental Coordinator	19/02/2020 – 20/02/2020	Visited the general mine areas (predominately surface water infrastructure), plant area and tailings dam.
	Vassie Maharaj	SRK	Partner/ Principal Consultant	Johannes Pule	Human Resources Manager	19/02/2020 – 20/02/2020	No areas visited. Discussions focussed on: • 2015-2019 SLP compliance and implementation of community development projects • Status of 2020-2024 SLP preparation • Status of stakeholder relations and negotiations with Wilgespruit remaining households • Social management system and resourcing.
				Dr Meshack Molope	General Manager: Stakeholder Relations		
	Lisl Pullinger	SRK	Principal Consultant	Casper Badenhorst	COO	19/03/2021	No areas visited. Discussions focussed on: • Corporate governance; • Stakeholder engagement; • Team capacity; • Resettlement; and • International good practice standards
				Mr Christiaan Phephenyane	Executive – Corporate Affairs		
Financial modelling, mineral economics, valuation	Andy McDonald	SRK	Principal Engineer	Casper Badenhorst	COO	19/02/2020 – 20/02/2020	North and central pit look out with mining team; Budget preparation, LoM projections
				Norma	Financial Manager		Clarifying aspects of historical results and five-year plan

Table 2-2: Summary of Site Visit to PPM in March 2021

Discipline	SRK Consultant			PPM Personnel		Date of Visit	Workplace visited and remarks
	Name	Company	Designation/Role	Name	Designation/Role		
Geology and Mineral Resources	Ivan Doku	SRK	Principal Resource Geologist	Janus Westraat	Chief Geologist	09/03/2021	• Proposed drill sites for East Pit Inferred to Indicated conversion • 2020 reconciliations • Cutoff grade consideration for Ruighoek and East Mining Block
Rock Engineering	Des Mossop	SRK	Principal Rock Engineer	John Mokgopa Tshegofatso Ntshole	Manager Technical Services Geologist (Strata Control Officer)	09/03/2021	• Inspect open pit • Inspect face conditions, slope stability
Hydrogeology and Hydrology	Bjanka Korb	SRK	Senior Engineer (Water)	Peter Lentsoane	Environmental Coordinator	09/03/2021	• Surface water control measures and impact of recent heavy rains • Tailings Storage facility – inspect issues for R McNeill, spillage control • Seepages or inflows into mine workings, general state of any groundwater infrastructure
Sustainability (Environmental, Social and Governance)	Lisl Fair	SRK	Senior Environmental Scientist	Casper Badenhorst Peter Lentsoane	Chief Operating Officer Environmental Coordinator	09/03/2021	• Overview of site and nearby communities • interview with Chief Operating Officer on Sustainability • Discuss SLP, Mine Community Development and LED implementation with site-based community development and stakeholder engagement staff
Valuation, Project Management	Andy McDonald	SRK	Principal Engineer	Jan van der Merwe	Exploration Manager	09/03/2021	• Inspect planned portal positions and East Pit footprint on Wilgespruit, planned ore transport routes to PPM • Proposed drill sites for East Pit • Inspect planned Kell plant location near concentrator

Table 2-3: Summary of Site Visit to PSM Project in February 2022

Discipline	SRK Consultant			PPM Personnel		Date of Visit	Workplace Visited and Remarks
	Name	Company	Designation/Role	Name	Designation/Role		
Geology and Mineral Resources	Ivan Doku	SRK	Principal Resource Geologist	Janus Westraat	Chief Geologist	24/02/2022	• Inspect start of mining operations in East Pit – drilling of the boxcut was underway • The East Portal optimised layout design was presented. Tenders for the development and construction of the East Portal were in the process of being adjudicated • Inspect mining operations in the West Pit
Mining and Mineral Reserves	Jaco van Graan	SRK	Principal Mining Engineer	John Mokgopa	Manager Technical Services		
	Joseph Mainama	SRK	Principal Mining Engineer	Tshegofatso Ntshole	Geologist (Strata Control Officer)		

Table 2-4: Summary of Site Visit to PSM Project in September 2022

Discipline	SRK Consultant			PPM Personnel		Date of Visit	Workplace Visited and Remarks
	Name	Company	Designation/Role	Name	Designation/Role		
Geology and Mineral Resources	Ivan Doku	SRK	Principal Resource Geologist	Jan van der Merwe	Exploration Manager	20/09/2022	• Inspection of East Pit • Inspection of East Portal boxcut development and surrounding civil works
Mining and Mineral Reserves	Jaco van Graan	SRK	Principal Mining Engineer	Janus Westraat	Chief Geologist		
	Joseph Mainama	SRK	Principal Mining Engineer	Tshegofatso Ntshole	Geologist (Strata Control Officer)		
Financial modelling, mineral economics	Andy McDonald	SRK	Principal Engineer				

2.4.2 Kruidfontein

Mr Ivan Doku, PrSciNat, a Principal Resource Geologist employed by SRK, conducted a site visit on 14 April 2014 and on 31 March 2022. Ms Vassie Maharaj, a Principal Social Scientist employed by SRK, was present on the 31 March 2022 site visit.

The visits primarily focussed on validating drill hole collars in the field and inspecting drill core at the core yard in Mogwase. Mr Doku noted that the majority of the casings and/or markers indicating drill hole identity were still intact. Mr Doku is satisfied that the description of the core with respect to assay and lithology is as documented in electronic files provided to SRK.

Ms Maharaj inspected the proximity of housing/farming to where mine infrastructure is likely to be and held discussions with SRL's Environmental Officer and Community Liaison Officer.

Since no physical exploration work of any form has been conducted on the property since this date, SRK considers this site visit to still be relevant.

2.4.3 Mphahlele

SRK has conducted inspection visits to the Mphahlele Project, as follows:

- Inspection of the project area, drilling programme and core storage shed by Dr Tony Martin PrSciNat, Principal Resource Geologist, employed by SRK on 4 August 2007;
- Inspection of the core yard and selected core intersections by Dr Tony Martin (PrSciNat) and Mr Mark Wanless (PrSciNat, Principal Resource Geologist, employed by SRK) on 13 March 2008 and Mr Wanless and Ms Ashleigh Maritz (Principal Environmental Consultant, employed by SRK) on 10 March 2023;
- Inspection of project area and selected drill core in the core storage yard by Mr Sello Nzama PrSciNat, Senior Resource Geologist, employed by SRK on 22 October 2013. The logging and sampling of selected drillholes was validated against the drillhole logs and database; and
- Inspection of the site and surrounding areas by Mr Andrew McDonald CEng, Principal Engineer, employed by SRK on 22 October 2013.

Other than the small-scale artisanal mining along the chromitite seams immediately north of the UG2 subcrop, there has not been any activity on the Mphahlele Project since 2013. Since no physical exploration work of any form has been conducted on the property since 2008, SRK considers these site visits to still be relevant.

2.5 Qualifications and Independence

2.5.1 Qualifications

SRK is part of an international group (the SRK Group) which comprises more than 1 400 staff, offering expertise in a wide range of resource engineering disciplines. The SRK Group's independence is ensured by the fact that it holds no equity in any project and that its ownership largely rests with its staff. This permits the SRK Group to provide its clients with conflict-free and objective recommendations on crucial judgement issues. The SRK Group has a demonstrated track record in undertaking independent mineral property valuations, resources and reserves estimations, project evaluations and audits, Competent Person's Reports and independent feasibility evaluations to bankable standards on behalf of exploration and mining companies and financial institutions worldwide. The SRK Group has also worked with a large number of major international mining operations and projects providing mining industry consultancy service inputs and has specific experience in transactions of this nature.

The Qualified Person (QP) who assumes overall responsibility for the TR is Mr. Andrew McDonald, a Principal Engineer with SRK holding a MSc degree in Geophysics (cum laude) from the University of the Witwatersrand and a MBL from UNISA. He is a registered Chartered Engineer (Reg. No. 334897) through the Institution of Materials, Minerals and Mining (IMMM) in London and is a Fellow of the Southern African Institute of Mining and Metallurgy (SAIMM). He has 49 years of diverse experience in a range of management, technical and financial activities in mining and light industrial industries, the past 28 of which have been involved in the fields of feasibility studies, due-diligence audits, financial evaluation and regulatory reporting for mining related projects throughout Africa and other international locations. He has undertaken numerous independent reviews and mineral asset valuations of PGM projects and operating mines since 2000.

The QP who assumes responsibility for the Underground Mineral Reserve estimates as presented in this TR is Mr Joseph Mainama, a Partner and Principal Mining Engineer with SRK. Mr Mainama holds a BSc(Eng) degree in Mining from the University of the Witwatersrand and a MBL from UNISA. He is a registered PrEng (Reg. No 20080413) through the Engineering Council of South Africa and is a Member of the SAIMM and the Mine Managers' Association of South Africa. Mr Mainama is a mining engineer with more than 25 years' experience in the mining industry, specialising in mine design, engineering studies and due diligence reviews of underground mines. He has undertaken numerous studies of PGM projects and operating mines in Southern Africa during the past 10 years.

The QP who assumes responsibility for the Mineral Resource estimates of the East Pit, East Underground and Kruidfontein Projects as presented in this TR, is Mr Ivan Doku, a Partner and Principal Resource Geologist with SRK. Mr Doku holds a BSc(Eng) degree in Geology from the Kwame Nkrumah University of Science and Technology and GDE and MSc(Eng) from the University of the Witwatersrand. He is a registered PrSciNat (Reg. No 400513/14) through the South African Council of Natural and Scientific Professionals and is a Member of SAIMM and the Geological Society of South Africa (GSSA). He is a resource geologist who specialises in orebody computer modelling and geostatistical modelling with 17 years' experience in the mining industry. He has undertaken Mineral Resource estimations and audits for PGM projects and operating mines in Southern Africa and internationally during the past 15 years.

The QP who assumes responsibility for the Mineral Resource estimates of the West Pit Tailings Reclamation and Retreatment Project as presented in this TR, is Mr Peter le Roux, a Principal Resource Geologist with SRK. Mr le Roux holds an MSc degree in Economic Geology from the University of the Witwatersrand. He is a registered PrSciNat (Reg. No 400297/13) through the South African Council of Natural and Scientific Professionals and is a Member of the GSSA. He is a resource geologist with 23 years' experience in the mining industry. He has undertaken Mineral Resource estimations and audits for PGM projects and operating mines in Southern Africa during the past ten years.

The QP who assumes responsibility for the Mineral Resource estimates at Ruighoek, Central Underground and Mphahlele Projects as presented in this TR, is Mr Mark Wanless, a Partner and Principal Resource Geologist with SRK. Mr Wanless holds a BSc(Hons) degree in Geology from the University of Cape Town. He is a registered PrSciNat (Reg. No 400178/05) through the South African Council of Natural and Scientific Professionals and is a Fellow of the GSSA. He is a resource geologist who specialises in orebody computer modelling and geostatistical modelling with more than 25 years' experience in the mining industry. He has undertaken numerous Mineral Resource estimations and audits for PGM projects and operating mines in Southern Africa and internationally during the past ten years.

The following individuals provided input to this TR:

- Carrie Zermatten, PrSciNat, Senior Geologist — Risk Assessment
- Chris Smythe, CertEng, Principal Mechanical Engineer — Infrastructure, Capital Cost;
- Darryll Kilian, EAPSA, Principal Consultant — Environmental;
- Ismail Mahomed, PrSciNat, Principal Hydrogeologist — Ground Water Matters;
- Jacques van Eyssen, Principal Ventilation Engineer — Ventilation, Occupational Health;
- Kenneth Mahuma, PrTechEng, Principal Electrical Engineer — Electrical Infrastructure;
- Lesley Jeffrey, PrSciNat, Principal Geologist — Report Compilation;
- Michael Valenta, PrEng, Associate Principal Metallurgist — Metallurgy, Mineral Processing;
- Peter Shepherd, PrSciNat, Principal Hydrologist — Surface Water Management;
- Rob McNeill, PrTechEng, Principal Geotechnical Engineer — Tailings Storage Facilities;
- Satisha Barath, PrSciNat, Principal Hydrogeologist — Ground Water Matters;
- Vassie Maharaj, Principal Consultant — Social Aspects;
- William Joughin, PrEng, Principal Mining Engineer — Rock Engineering (review);
- Yerisha Rajpal, PrSciNat, Senior Rock Engineer — Rock Engineering.

2.5.2 Independence

Neither SRK nor any of its employees or associates employed in compiling this TR for the PEA on SRL's Assets, nor any directors of SRK, have at the date of this report, nor have had within the previous two years, any shareholding in the Company, SRL's subsidiary companies, Kelltech Limited, BBKT, PPM, the PSM, Mphahlele and Kruidfontein projects, SRL's other PGM assets, any of the Company's Advisors, or any other pecuniary, economic or beneficial interest, or the right to subscribe for such interest, whether direct or indirect, in the

Company, SRL's subsidiary companies, Kelltech Limited, BBKT, PPM, the PSM, Mphahlele and Kruidfontein projects, SRL's other PGM assets, any of the Company's advisors or the outcome of the work.

Consequently, SRK and the QPs consider themselves to be independent of the Company, its directors, senior management, and Advisors.

2.5.3 Consent

The QPs have given, and have not withdrawn, their written consent for the filing by SRL of this TR report on the System for Electronic Document Analysis and Retrieval (SEDAR) of the Canadian Securities Administrators in support of SRL's continuous disclosure obligations under applicable Canadian securities laws.

2.6 Effective Date

The effective date of the TR is 31 December 2023.

The life-of-mine (LoM) plan and associated technical and economic parameters (TEPs) included in the TEM commence in January 2024 for evaluation purposes.

2.7 Forward Looking Statements

This report contains statements of a forward looking nature which are subject to a number of known and unknown risks, uncertainties and other factors that may cause the results to differ materially from those anticipated in this TR.

The Mineral Reserve estimates contained in this TR should not be interpreted as assurances of economic life of the Project. As Mineral Reserves are only estimates based on the factors and assumptions described herein, future Mineral Reserve estimates may need to be revised. It should be noted that Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.

This TR reflects various technical and economic conditions prevailing at the time of writing. These conditions can change significantly over relatively short periods of time and as such the information and opinions contained in this report may be subject to change. Should these change materially, the results of the TR could be materially different in these changed circumstances.

The achievability of the production schedule on which the TR is based is neither warranted nor guaranteed by SRK. The production schedule and financial projections cannot be assured as they are necessarily based on economic assumptions, many of which are beyond the control of SRL or SRK. Future cash flows and profits derived from such forecasts are inherently uncertain and actual results may be significantly more or less favourable.

This TR includes technical information, which requires subsequent calculations to derive subtotals, totals and weighted averages. Such calculations may involve a degree of rounding and consequently introduce an error. Where such errors occur, SRK does not consider them to be material.

3 Reliance on Other Experts

3.1 Principle Source of Information

The data and information considered in this TR include third party technical reports prepared by contractors or consultants that are independent of SRL (Section 27). The authors of this TR have endeavoured, by making all reasonable enquiries in their professional judgement, to confirm the validity, reasonableness and completeness of the third-party technical data upon which this TR is based. The authors believe that the basic assumptions and design parameters used in this TR are reasonable.

However, SRK does not warrant the validity, reasonableness and completeness of any such third-party information. SRK has relied on the reports, assessments and TEPs as provided in forming its opinion as set out below.

3.1.1 Macro-economic and Legal

SRK has relied on information provided by SRL (the issuer) and its advisors in preparing this TR regarding the following aspects of the modifying factors which are outside of SRK's expertise:

- Economic trends, data, assumptions and commodity price forecasts (Sections 19);
- Marketing information (Section 19);
- Legal matters, tenure and permitting/authorisauthorisation status (Sections 4.4 and 4.7); and
- Agreements with local communities (Section 20.7).

SRK believes it is reasonable to rely upon the issuer for the above information, for the following reasons:

- Commodity prices and exchange rates – SRK does not have in-house expertise in forecasting commodity prices and exchange rates and would defer to industry experts, such as SFA, for such information which came via the Company;
- Annual inflation indices as incorporated into the Company's techno-economic models are the consumer price indices (CPI) which the Company had extracted from Statistics South Africa at http://www.statssa.gov.za; and
- Legal matters – SRK does not have in-house expertise to confirm that all mineral rights and environmental authorisations/permits have been legally granted and correctly registered. SRK would defer to a written legal opinion on the validity of such rights and authorisations, which came via the Company.

SRL has confirmed that to its knowledge, the information provided by it to SRK was complete and not incorrect, misleading or irrelevant in any material aspect. SRK has no reason to believe that any material facts have been withheld.

4 Property Descriptions and Locations

The SRL projects are discussed under four groups, as shown in Table 4-1, Figure 4-1 and Figure 4-2.

Table 4-1: SRL Project Groups

Bushveld Limb	Projects	Sub-projects	Components	Area	Farm Names
Western	PSM and Ruighoek	PPM	Ruighoek	Ruighoek	Portions of Ruighoek 169JP
			West Pit	Tuschenkomst + Sedibelo West	Tuschenkomst 135JP, Wilgespruit 2JQ, Rooderand 46JQ
		Sedibelo-Magazynskraal	East Pit	Sedibelo Central	Wilgespruit 2JQ
			Central Underground		Wilgespruit 2JQ,
			East Underground	Sedibelo East + Magazynskraal	Wilgespruit 2JQ, Legkraal 45JQ, Magazynskraal 3JQ, Koedoesfontein 42JQ
	Kruidfontein				Kruidfontein 40JQ, Modderkuil 39JQ, Middelkuil 8JQ
Eastern	Mphahlele		Decline (to 600 mbs)		Mphahlele 457KS
			Shaft (below 600 mbs)		

Note:
1. PPM = Pilanesberg Platinum Mines (Pty) Ltd; SRL's subsidiary
2. PSM = PPM-Sedibelo-Magazynskraal Project
3. Note that Ruighoek, although part of the PPM project, is *not* part of the PSM project.

Project and area names in the Western Limb assets have changed slightly over the years, depending on who the project owner was at the time. As some of the technical work was done according to these names, they still need to be used in this report. The top section of Figure 4-2 (in Section 4.4.2 Mining Rights) shows the location of all these previous project and area names.

4.1 Property Locations

The properties described in this PEA are located in the Western and Eastern Limbs of the Bushveld Complex, situated in the North West and Limpopo Provinces of the Republic of South Africa, respectively (Figure 1-). The relative locations of the PSM and Kruidfontein Projects are shown in greater detail in Figure 2-2.

Table 4-2 gives the coordinates for the three main project groupings.

Table 4-2: Coordinates of the PSM, Kruidfontein and Mphahlele Projects

Project	Projection: TM (WGS System) Ellipsoid: WGS 1984 LO 27 East			
	WGS27 Co-ordinates		Geographical Co-ordinates	
	Y	X	Latitude	Longitude
PSM (+Ruighoek)	-1 050.132	+2 777 366.661	25º06'07.64"S	27º00'37.48"E
Kruidfontein	14 126.729	-2 778 612.377	25º06'47.89"S	27º08'24.24"E
Mphahlele	-59 768.0320	+2 693 880.1968	24º20'50.21"S	29º35'20.31"E

Note:
1. The coordinates for PSM are taken as the centre of the current eastern highwall of the West Pit.
2. The coordinates for Kruidfontein are taken as the centre of the new order prospecting right.
3. The coordinates for Mphahlele are taken as the centre of Portal A.

PSM is situated within the boundaries of the Moses Kotane Municipality along the northern edge of the Pilanesberg in the North West Province of South Africa, 160 km northwest of the city of Johannesburg and some 66 km north of the town of Rustenburg.

Kruidfontein is adjacent to PSM and lies some 130 km northwest of Johannesburg and 45 km north of Rustenburg.

Mphahlele is located within the Lepelle-Nkumpi Local Municipality and Capricorn District Municipality, 5 km southeast of Lebowakgomo, some 70 km east of the town of Mokopane and 50 km south of Polokwane in the Limpopo Province.

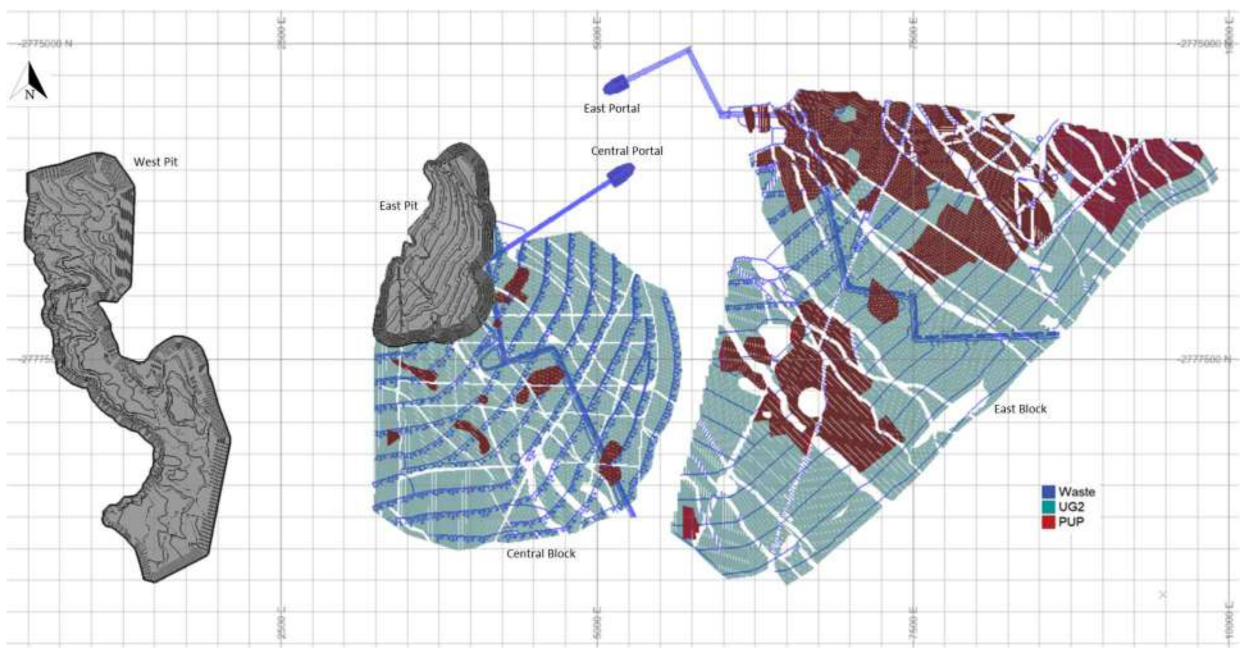
4.2 Property Descriptions

4.2.1 Western Limb Projects

PSM

The PPM-Sedibelo-Magazynskraal (PSM) Project is subdivided into two sub-projects; namely, PPM, comprising the West Pit TRR and Ruighoek, and Sedibelo-Magazynskraal, consisting of the East Pit, Central Underground and East Underground components (Table 4-1 and Figure 4-1); together these properties cover 13 061.3127 ha. PSM is a hybrid operational-development stage project for which Mineral Resources and Mineral Reserves can be declared. PSM envisages the integrated production from an open pit (East Pit on cost curtailment), Central Underground and East Underground.

- PPM: the West Pit operated for 15 years up to November 2023. PPM is located on the farms Tuschenkomst 135JP, Wilgespruit 2JQ and Rooderand 46JQ. The mining infrastructure for the entire PSM Project - such as the concentrators, TSF, etc. - are located here. No further mining from the West Pit is envisaged, with limited mining from Ruighoek from 2048 onwards when the forecast basket price improves the pit economics. SRL plans to reclaim and retreat the historic tailings in the PPM TSF;
- Sedibelo-Magazynskraal: the two underground components are still at development stage, as surface works and portal preparation has commenced although no mining has taken place. The components are located contiguously to the east of PPM on the farms Wilgespruit 2JQ, Magazynskraal 3JQ, Koedoesfontein 42JQ and Legkraal 45JQ. The East Pit operated for roughly two years to November 2023 prior to cost curtailment. Mining of East Pit is envisaged to resume from 2048 onwards when the forecast basket price improves the pit economics.



srk consulting	**SRL Total Assets PEA** Components of the PSM Project	Project No. 600322

Figure 4-1: Components of the PSM Project

PPM is an established open pit mine and concentrator. Existing infrastructure such as roads, change houses, offices, sewage and electrical supply situated at PPM will be upgraded to accommodate the additional requirements for the Sedibelo-Magazynskraal components. The East and Central Portals are located within the area as described in the approved Environmental Management Programme EMP on Wilgespruit per the Barrick Gold study of 2008. The Central and East Portals of PSM (Figure 4-1) will be equipped with dedicated roads, offices, change houses, lamp room, sewage and electrical supply from the existing PPM Substation and Magazynskraal Substation.

The area surrounding PSM is rural and is sparsely populated, with denser settlements being located along the road running parallel to the northern boundary of the Pilanesberg National Park. The main land uses include residential areas, subsistence dry land agriculture, small-scale commercial agriculture and livestock grazing, conservation and eco-tourism activities.

Ruighoek

The Ruighoek Project is located on the farm Ruighoek 69 JP which lies to the southwest of West Pit and west of the Pilanesberg (see Figure 4-).

Kruidfontein

The Kruidfontein Project lies adjacent to and southeast and east of PSM, on the farms Kruidfontein 40JQ, Modderkuil 39JQ and Middelkuil 8JQ. The project area covers 10 007.2343 ha and is situated approximately 15 km west of the major R510 road, which runs approximately south-north between Rustenburg and the town of Thabazimbi, and roughly 10 km northwest of the town of Moruleng (formerly Saulspoort).

It is an exploration stage property on which Mineral Resources can be declared; no mining activities have been undertaken on the property.

The project area comprises settlements and buildings clustered along the main roads and agricultural activities.

4.2.2 Eastern Limb Project

Mphahlele

The Mphahlele Project is a development stage project for which Mineral Resources and Mineral Reserves can be declared. It is located in the northern part of the Eastern Limb of the Bushveld Complex (Figure 1-).

Mphahlele covers an area of 11 725.0951 ha and is located mainly on the farm Locatie van M'Phatlele 457KS; a small section of the mine access and plant road (and associated power and water services corridor) will be located on the remaining extent of the farm Voorspoed 458KS.

No mining activities have been undertaken by SRL on the property. Small-scale artisanal mining along the chromitite seams immediately north of the UG2 subcrop have been undertaken by the local community. The chromite (Cr_2O_3) rights over the Mphahlele Project area are not held by SRL but were granted to the Mphahlele Community Development Trust (MCDT).

Various formal and informal villages under the authority of the Bakgaga Ba Mphahlele Tribal Authority with associated crop fields and grazing lands occur in the surrounding areas. The densely populated areas are located north and west of the mineralised area, and do not represent an impediment to future exploitation of the resource. The proposed project area is mainly rural and sufficient land is available for infrastructure, plant and tailings dams. The predominant land uses within and adjacent to the project include residential areas, subsistence dry land agriculture, small-scale commercial agriculture and livestock grazing.

4.3 South African Regulatory Environment

A brief overview of the regulatory environment in South Africa within which SRL operates and which affects their assets is summarised below.

4.3.1 Constitution of the Republic of South Africa Act

Section 24 of the Bill of Rights in the *Constitution of the Republic of South Africa Act No. 108 of 1996* affords every citizen the right:

- To an environment that is not harmful to their health or well-being;
- To have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that;
  - Prevent pollution and ecological degradation;
  - Promote conservation; and
  - Secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.

The Constitution is the supreme law of the Land, all conduct and legislation inconsistent with its contents is unlawful and will be set aside.

4.3.2 The Mineral and Petroleum Resources Development Act

The *Mineral and Petroleum Resources Development ACT No. 28 of 2002* (MPRDA) was promulgated by the South African Parliament during July 2002 and came into effect on 1 May 2004. The MPRDA is the key legislation in governing prospecting and mining activities within South Africa. It details the requirements and processes which need to be followed and adhered to by mining companies. The DMRE is the delegated authority to deal with all mining related applications and the designated authority to administer this act.

Under the MPRDA, new order prospecting rights (NOPRs) are initially granted for a maximum period of five years and can be renewed once upon application for a further period of up to three years. New order mining rights (NOMRs) are valid for a maximum period of 30 years and can be renewed on application for further periods, each of which may not exceed 30 years. A wide range of factors and principles, including proposals relating to black economic empowerment (BEE), social responsibility and evidence of an applicant's ability to conduct mining optimally, will be pre-requisites for the approval of such applications.

Key requirements under the MPRDA are:

- A social and labour plan (SLP) which sets out a company's commitments relating to Human Resources (HR) and socio-economic development;
- A mining work programme (MWP) which provides a summary of the mining operation;
- Proof of technical and financial competence and
- An Environmental AuthorisAuthorisation (EA) granted, with an approved EMP in terms of *National Environmental Management Act No. 107 of 1998* (NEMA).

Holders of NOMRs could have these suspended or cancelled by the Minister of Mineral Resources and Energy if such holders are deemed to be non-compliant with the empowerment requirements of the MPRDA.

All mines are required to make financial provision for the rehabilitation, closure and ongoing post decommissioning management of negative environmental impacts. Environmental liability provisioning in the South African mining industry is a requirement of the NEMA and must be agreed with the relevant regulatory authorities (mainly DMRE and the Department of Water and Sanitation (DWS). In general, the financial provision can be made up through one or more of an insurance policy, a bank guarantee or trust fund, based on the estimated environmental rehabilitation cost should the mine have to close immediately. The South African Revenue Service (SARS) approves contributions into a trust fund as a tax benefit. Guarantees may be required for the shortfall between the amount available in trust funds and the total estimated closure liability.

4.3.3 The Mineral and Petroleum Resources Development Amendment Bill

The Minister of Mineral Resources and Energy announced during August 2018 that he will propose to cabinet that the MPRDA amendment bill be scrapped.

4.3.4 The Mining Charter

To provide guidance to the mining industry regarding the fulfilment of the broad-based black economic empowerment requirements (B-BBEE), the a policy document, the Mining Charter, was published by the DMRE on 1 May 2004 (Charter I). Charter I embraced a range of criteria against which prospecting and Mining Right Applications (MRAs) and conversion applications would be considered. These criteria included issues such as Human Resources Development (HRD), employment equity, procurement, community and rural development and ownership of mining assets by historically disadvantaged South Africans (HDSAs). Charter I required that mining companies achieve 26% HDSA ownership of mining assets by 1 May 2014.

The DMRE introduced the Amended Mining Charter (Charter II) in 2010 which envisaged but never actually incorporated, inter alia, that mining companies should achieve 40% HDSA demographic representation at board level by 2014.

A third version of the Mining Charter was published in June 2017 (Charter III) but was challenged by the Chamber of Mines (now referred to as Minerals Council of South Africa (Minerals Council) and was subsequently withdrawn. Following consultation by the DMRE with the Minerals Council, unions and interested parties, and public comment, the Charter III was gazetted on 27 September 2018. General legal consensus is that Charter III is an improvement on the June 2017 version but the compliance obligations were more onerous and stringent than set out in Charter II. Among the changes that would have been introduced was a minimum 30% HDSA ownership for a new mining right, comprising 5% for qualifying employees, 5% for host mine communities and 20% for a BEE partner, of which 5% should preferably be for women. There are also prescribed procurement targets to be phased in over a period of five years.

The Minerals Council then instituted its application to review and set aside certain provisions in Mining Charter III. According to the law firm Fasken[1], on the 21 September 2021, the High Court of South Africa (Gauteng Division, Pretoria) set aside a number of these clauses, namely:

- Clauses 2.1.1.2, 2.1.1.4, 2.1.1.5 and 2.1.1.6, which provided that the recognition of continuing consequences will not be applicable upon the renewal and/or transfer of a mining right and that a renewal of an existing mining right will be subject to the requirements imposed under Mining Charter III at the time when the renewal application is submitted (i.e. 30% BEE shareholding). This is the clause commonly referred to as "once empowered, always empowered";
- Clause 2.1.3.2, which required that the minimum 30% BEE shareholding for new mining rights must comprise of a minimum of 5% non-transferable *carried* interest to each of Qualifying Employees and Host Communities, and a 20% effective ownership to BEE entrepreneurs (5% of which must preferably be owned by women);
- Clause 2.1.5.2, which provided that the prescribed minimum 30% target shall apply for the duration of a mining right;
- Clause 2.1.7.1, which permitted a mining right holder to claim the beneficiation equity equivalent against a maximum of 5 percentage points of a BEE Entrepreneur shareholding only;
- Clauses 2.2, which dealt with the provisions of Mining Charter III in relation to inclusive procurement, supplier and enterprise development targets;
- Clause 7.2, which provided that for mining right holders, the ownership and mine community development elements are ring-fenced, requiring 100% compliance at all times; and
- Clause 9.1, which dealt with the penalty and enforcement provisions of the Mining Charter III in case of non-compliance.

4.3.5 Mineral and Petroleum Resources Royalty Act

The Mineral and Petroleum Resources Royalty ACT No. 28 of 2008 was enacted on 1 May 2009 (Royalty Act) and came into effect on 1 May 2010. The Royalty Act embodies a formula-derived royalty rate regime since it provides necessary relief for mines during times of difficulties (low commodity prices or marginal mines) and allows the fiscus to share in the benefits during time of higher commodity prices. As the final product can be either refined or unrefined, two separate formulae are given. Both formulae calculate the royalty rate based on a company's earnings before interest and taxes (referred to as EBIT) and its aggregate gross sales for the assessment period. While the gross sales figure used in the formulae excludes transportation and handling costs, these are considered in the determination of the EBIT figure. The mineral royalty percentage rates (Y%) are based on the following formulae:

- Refined Minerals: $Y(\%) = 0.5\% + \frac{EBIT}{Gross\ Sales\ x\ 12.5}\ x\ 100\%/1$
- Unrefined Minerals $Y(\%) = 0.5\% + \frac{EBIT}{Gross\ Sales\ x\ 9.0}\ x\ 100\%/1$

The maximum percentage rates for refined and unrefined minerals are 5.0% and 7.0% respectively. For PGMs to qualify as refined minerals, Schedule 1 of the Royalty Act requires that the PGMs are refined and smelted to a 99.9% purity. According to Schedule 2 of the Royalty Act, PGMs in concentrate at a grade of less than 150 ppm (150 g/t) are in an unrefined state.

4.3.6 Income Tax

The Company will be subject to income tax in South Africa according to standard corporate tax rates.

1 https://www.fasken.com/en/knowledge/2021/09/23-high-court-ruling-on-mining-charter-2018

In the budget speech of 23 February 2022, the South African Minister of Finance announced that the company tax rate would be reduced to 27% in the 2023/24 tax year. At the same time, the treatment of Assessed Losses will change where only 80% of the assessed loss can be offset against taxable income in any tax year. There is no change in the treatment of Unredeemed Capital.

4.3.7 Carbon Tax

The Carbon Tax Act (Act No. 15 of 2019) was gazetted on 23 May 2019 together with the Customs and Excise Amendment Act (Act No. 13 of 2019).

The carbon tax will play a role in achieving the objectives set out in the National Climate Change Response Policy of 2011 (NCCRP) and the National Development Plan (NDP) of 2012 and will contribute towards meeting South Africa's commitments to reduce greenhouse gas (GHG) emissions. The first phase of the Act will be from 1 June 2019 to 31 December 2022, and the second phase will commence in 2023 and end in 2030 (Table 4-3).

A carbon taxpayer is classified as any person (including partnership, trust, municipal entity and public entity) that conducts an activity or activities in South Africa which result in GHG emissions (fuel combustion, industrial processes, and fugitive emissions) above the prescribed threshold.

Based on the Carbon Tax Act and the proposed operational activities of the Assets, a business should allow for the following financial impacts:

- Direct taxation on fuel combustion emission activities (stationary and mobile);
- Increased cost of up-and downstream carbon intensive activities; and
- In Phase 1, the carbon tax will not have an impact on the price of electricity (Scope 2 emissions).

To provide sectors sufficient time and flexibility to transition their activities through investments in low carbon measures, the design of the carbon tax provides significant tax-free emission allowances for the first phase.

Table 4-3: Carbon Tax

Category Applicable Period	Phase 1 1 June 2019 – 31 December 2022	Phase 2 1 January 2023 - 2030
Tax Rate	ZAR120/tCO_2e (for emissions above the tax-free thresholds). Increased by the amount of the consumer price inflation plus 2% until 31 December 2022.	Revision of R120/tCO_2e The effective tax rate will increase but the magnitude of the increase is not known at this stage Increased expected to be applied from 1 January 2023, by the amount of the consumer price inflation.
Emission scopes included	Scope 1 (direct emissions) only	Scope 1 and potential additions
Emission sources	Combustion emissions Fugitive emissions Industrial process emissions	Same as Phase 1, with possible additions
Excluded Sectors	Agriculture, Livestock, Forestry, Waste and Residential	Unknown, however it is anticipated that more sectors will be added.
Greenhouse gasses covered	GHG classes as defined under the Kyoto Protocol: carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulfur hexafluoride	Same as Phase 1
Tax-free thresholds	Percentage based thresholds from 60% tax-free allowance to up to 95% (ZAR6.00 – ZAR48.00 per tCO2e)	The tax-free thresholds may be decreased progressively or be replaced by absolute emission thresholds.

4.3.8 South African Environmental Legislation

This section covers a high-level summary of selected aspects of legislation applicable to the mining industry in South Africa and relevant to SRL's assets.

The lead agent in implementing environmental legislation in the mining industry is the DMRE.

Key environmental legislation, which is applicable to the South African mining industry, is as follows:

- NEMA, as regulated by the Department of Environment, Forestry and Fisheries (DEFF). This Act overarches South African environmental legislation and lays down basic environmental principles including duty of care, polluter pays and sustainability. NEMA provides for co-operative environmental governance based on the principles that everyone has the right to an environment that is not harmful to one's health or well-being and enabling the administration and enforcement of other environmental management laws. Sections 28 (1) and

(3) of NEMA set out the duty of care principle, which is applicable to all types of pollution and must consider any aspects of potential environmental degradation. Every person who causes, has caused or may cause significant pollution or degradation of the environment must take reasonable measures to prevent such pollution or degradation from occurring, continuing or recurring, or, in so far as such harm to the environment is authorisauthorised by law or cannot reasonably be avoided or stopped, to minimise and rectify such pollution or degradation of the environment. Responsibility for the implementation of NEMA, where the activities directly relate to prospecting, extraction or primary processing of a mineral resource is delegated to the relevant provincial DMRE office. A series of regulations have been promulgated in terms of NEMA including:

  - *NEMA Environmental Impact Assessment Regulations, 2014*, as amended: These regulations were developed to regulate the preparation, evaluation, submission, processing and consideration of, and decision on, applications for environmental authorisauthorisations for the commencement of listed activities, to avoid or mitigate detrimental impacts on the environment, and to optimise positive environmental impacts. EIA Regulation Listing Notices (numbered 1, 2 and 3) identify activities that require Environmental Authorisation from a competent authority prior to commencement. Section 23C of NEMA sets out the DMRE is the competent authority for Environmental Authorisation where the activities directly relate to prospecting, extraction or primary processing of a mineral resource. Section 54A, introduced by the 2017 amendment, sets out that holders of EMPs and EAs approved prior to December 2014, and which are still in effect, must audit compliance and submit an environmental audit report to the relevant competent authority no later than 7 December 2019;
  - *NEMA Regulations pertaining to the Financial Provision for Prospecting, Exploration, Mining or Production Operations, 2015*, as amended: The purpose of these regulations is to regulate the determine and making of financial provision as contemplated in the Act for the costs associated with the undertaking of management, rehabilitation and remediation of environmental impacts from prospecting, exploration, mining or production operations through the lifespan of such operations and latent or residual environmental impacts that may become known in the future. The regulations also include detailed descriptions of the wording required in the documentation to support the provisioning for liability using Bank Guarantees and Trust Funds. It also provides detailed on the information to be contained in the following plans: annual rehabilitation plan; final rehabilitation, decommissioning and mine closure plan; environmental risk assessment report; and care and maintenance plan;
  - *NEMA National Appeal Regulations, 2014*, as amended: these regulate the procedure contemplated in Section 43(4) of NEMA relating to the submission, processing and consideration of, a decision on an appeal on Environmental Authorisations and Waste Management Licences. The DEFF is competent with regards to appeals made on Environmental Authorisations issued by the DMRE for prospecting, extraction or primary processing of a mineral resource;

- MPRDA: The MPRDA makes provision for equitable access to and sustainable development of South Africa's mineral resources. The MPRDA requires that the environmental management principles set out in NEMA shall apply to all mining operations and serves as a guideline for the interpretation, administration and implementation of the environmental requirements at mines. Implementation of the "One Environmental System" from 8 December 2014 removed environmental provisions from the MPRDA and replaced them with the relevant provision in the NEMA. The Minister of Mineral Resources is empowered to issue Environmental Authorisations and Waste Management Licences in terms of the NEMA, and the *National Environmental Management: Waste Act No. 59 of 2008* (NEM:WA), respectively, for mining and directly related activities. The amendment of any right, work programme, EMP or Environmental Authorisation issued in terms of NEMA is subject to consent of the Minister of Mineral Resources and Energy;
- MPRDA *Mineral and Petroleum Resources Development Regulations, 2004*: the Regulations provide guidance and interpretation, as well the 'prescribed manner' of implementing and administering many requirements of the MPRDA. Although the environmental provisions of the Regulations have not been repealed, they are of no effect as the environmental requirements of the MPRDA were replaced by NEMA;
- *National Environmental Management: Biodiversity Act (10 of 2004) (*NEM:BA*)***:** The NEM:BA seeks amongst other things, to manage and conserve biological diversity, to protect certain species and ecosystems, to ensure the sustainable use of biological resources and to promote the fair and equitable sharing of benefits arising from bio-prospecting involving those resources. The NEM:BA includes a regulation related to the

management of threatened and protected species (2007). A similar regulation is applied to Threatened Ecosystems. NEM:BA has a set of norms and standards for the development of management plans for both species (e.g., Threatened or Migratory Species) and ecosystems (Endangered or Critically Endangered). Alien and Invasive Species Regulations were published in 2014 which identify categories of alien and invasive species and define restricted activities with respect to the different species categories;

- *National Environmental Management: Protected Areas Act (57 of 2003) (*NEM:PAA): Protected areas such as nature reserves and special nature reserves are declared and managed in terms of NEM:PAA. Depending on the nature of the protected area, certain activities (such as mining) may require Ministerial consent or be prohibited outright. The Act also aims to promote the sustainable use of protected areas and the participation of local communities in such areas. In addition, it provides for the continued existence of the South African National Parks;
- *National Environmental Management: Air Quality Act (Act No. 39 of 2004) (NEM:AQA):* NEM:AQA regulates atmospheric pollution and repealed the Atmospheric Pollution Prevention Act. The Act came into full effect on 1 April 2010 and entrusts the DEFF with the task of preventing pollution and ecological degradation, while at the same time promoting justifiable economic and social development. The Minister is the licensing authority where the listed activity relates to a prospecting, mining, exploration or production activity as contemplated in the MPRDA. Penalties and criminal sanctions are imposed for non-compliance with NEM:AQA;
- A list of activities, which require atmospheric emission licences, and the minimum emission standards for these listed activities has been published. These include the permissible amount, volume, emission rate or concentration of that substance or mixture of substances that may be emitted into the atmosphere and the manner in which measurements of such emissions must be carried out. The consequences of the listing of these activities are that no person may, without a provisional atmospheric emission licence or an atmospheric emission licence, conduct an activity listed on the list anywhere in the Republic or listed on the list applicable in a province anywhere in that province. It must be shown that the best practical means are being employed to limit air pollution before these licences will be issued:
  - NEM:AQA *National Atmospheric Emission Reporting Regulations, 2015*: regulate the reporting of data and information from an identified point, non-point and mobile sources of atmospheric emissions to an internet-based National Atmospheric Emissions Inventory System towards the compilation of atmospheric emission inventories. Mines are listed as Group C emission sources and must provide data per the Regulations;
  - NEM:AQA *National Greenhouse Gas Emission Reporting Regulations* (NGER), under Section 53(A), (o) and (p) of NEM:AQA, were instituted in 2017 (General Notice Regulation (GNR) 275 of 2017). The regulations provide a list in Annexure 1 of activities and operations that are required to report their GHG emissions through a national system. NGER classifies data providers as follows:
    - Category A: any person in control of or conducting an activity marked in the Category A column above the capacity given in the threshold column of the table in Annexure 1 to these Regulations;
    - Category B: any organ of state, research institution or academic institution, which holds GHG emission data or activity data relevant for calculating GHG emissions relating to a category identified in the table in Annexure 1 to these Regulations;
  - NEM:AQA National Pollution Prevention Plans Regulations 2017: prescribe the requirements that pollution prevention plans of greenhouse gases declared as priority air pollutants need to comply with in terms of section 29(3) of the NEM:AQA. Coal mining is the only mining process currently detailed as a Production Process;
- *National Environmental Management: Waste Act (Act No. 59 of 2008)* (NEM:WA): NEM:WA came into effect on 1 July 2009 and seeks to encourage the prevention and minimization of waste generation, whilst promoting reuse and recycling of the waste and only consider disposal of waste as a last resort. It provides for the licensing of waste management activities. The NEM:WA was amended (with effect from 2 September 2014) to have jurisdiction over residue stockpiles and residue deposit at mines. The Minister of Mineral Resources is the licensing authority where a waste management activity is, or is directly related to prospecting, extraction, primary processing of a mineral resource or residue stockpiles and residue deposits. A series of regulations have been promulgated in terms of NEM:WA including:

  - NEM:WA Regulations regarding the *Planning and Management of Residue Stockpiles and Residue Deposits (2015*), as amended in 2018: These regulations were developed to regulate the planning and management of residue stockpiles and residue deposits from a prospecting, mining, exploration or production operation. The Regulations specify that a competent person must recommend the pollution control measures suitable for a specific RSRD based on a risk analysis;
  - NEM:WA *Waste Classification and Management Regulations (2013)*: These regulations require that waste generators ensure that the waste they generate be classified in accordance with SANS 10234 within 180 days of generation (Chapter 2, 4(2)). If the waste is to be disposed of to landfill, the waste must be assessed in accordance with the Norms and Standards for Assessment of Waste for Landfill Disposal (Chapter 2 (8)1) (a));
  - NEM:WA *National Norms and Standards for the Remediation of Contaminated Land and Soil Quality (2014):* The purpose of these norms and standards is to: provide a uniform national approach to determine the contamination status of an investigation area; limit uncertainties about the most appropriate criteria and method to apply in the assessment of contaminated land; and provide minimum standards for assessing necessary environmental protection measures for remediation activities;
- *National Water Act (Act 36 of 1998)* (NWA), as regulated by the Department of Water and Sanitation (DWS). Chapter 4 of the NWA stipulates that water uses (abstraction, storage, waste disposal, discharge, controlled activities, removal of underground water and alteration to watercourses) must be licensed, unless it is listed in Schedule 1, is an existing lawful use, is permissible under a general authorisation, or if a responsible authority waives the need for a licence. There are transitional arrangements to enable permits under the former 1956 Water Act to be converted into water use licences (WULs). The competency for decisions on WULs for activities directly related to prospecting, extraction, primary processing of a mineral resource or RSRD remains with the DWS. The NWA also has requirements relating to duty of care, pollution control, protection of water resources (Regulation 704 relates to mines), dam safety (for dams with a capacity greater than 50 000 m^3 and a dam wall higher than 5 m) and water-use tariffs:
  - NWA: *Regulations on use of Water for Mining and Related Activities aimed at the Protection of Water Resources, 1999*: The purpose of these Regulations is to regulate the use of water during mining and related activities to ensure the protection of water resources;
  - NWA *Regulations Regarding the Procedural Requirements for Water Use Licence Applications and Appeals, 2017*: The purpose of these Regulations is to prescribe the procedure and requirements for water use licence applications (WULAs) as contemplated in Section 41 of the NWA;
- *National Heritage Resources Act (Act 25 of 1999)* (NHRA), regulated by South African Heritage Resource Agency (SAHRA) or relevant Provincial departments, where established. This Act controls sites of archaeological or cultural significance. Such sites must be investigated and, where necessary, protected for the nation. Procedures for the relocation of graves are also given;
- *Hazardous Substances Act (Act 15 of 1973),* regulated by the Department of Health. This Act controls the declaration of hazardous substances and control of declared substances. It allows for regulations relating to the manufacturing, modification, importation, storage, transportation and disposal of any grouped hazardous substance;
- *Environmental Conservation Act (Act No. 73 of 1989)* (ECA), as regulated by DEFF and DWS. The environmental authorisation sections of the Act (Section 21) were repealed by the NEMA EIA Regulations with effect from 3 July 2006. The waste sections of this Act (Section 20) were repealed and replaced by the NEM: WA, which came into effect on 1 July 2009;
- *Mine Health and Safety Act (Act No. 29 of 1996)* and amendments (MHSA), regulated by the DMRE. This Act deals with the protection of the health and safety of persons in the mining industry but has some implications for environmental issues due to the need for environmental-health monitoring within mine operations; and
- *National Forests Act (84 of 1998)* (NFA): Enforced by DEFF, the NFA supports sustainable forest management and the restructuring of the forestry sector, as well as protection of indigenous trees in general.

The DEFF, and its provincial authorities, the DWS and DMRE departments are key stakeholders in the approvals process. The DMRE is ultimately responsible for decision making with regards Environmental Authorisations in terms of NEMA and Waste Management Licences in terms of the NEM:WA. The DWS remains responsible for Water Use Licensing and the DEFF (or the local municipality if capacity is available) is competent for Atmospheric Emissions Licences on mines.

Under the One Environmental System each of the Ministers of Environment, Forestry and Fisheries, Water and Sanitation and Mineral Resources are empowered to designate Environmental Management Inspectors (EMI). EMIs can be designated to apply NEMA and any of the specific environmental management Acts (including the NWA, NEM:WA, NEM:AQA, etc). All these EMIs potentially have a mandate with respect to environmental matters at mines and thus the right to monitor and enforce compliance with the laws for which they have been designated. Offences are defined in each of NEMA and the specific environmental management Acts. A lack of compliance with the relevant legislation could lead to the closure of an operation, the suspension of authorisations or prosecution and ultimately the implementation of penalties (e.g. fines and imprisonment). It is generally considered more likely that the authorities would issue a directive possibly coupled with a fine. The directive indicates which legislation is being contravened and describes the time period in which the operation must comply. An operation would then be required to present a plan, including timing, to achieve compliance. Directives related to environmental issues, specifically WULs in terms of Section 21 of the NWA and authorisation in terms of NEMA, are being issued more frequently than was historically the case, and legal action is being taken against individuals, including directors, responsible for non-compliance with legislative requirements.

The National Environmental Management Laws Amendment Act No 2 of 2022 (“NEMLAA4”) was assented into law on 24 June 2022 but the majority of the provisions of NEMLAA4 only took effect and came into operation on 30 June 2023. Many of the amendments in NEMLAA4 have been made to address a wide range of issues that were associated with the One Environmental System that was implemented in 2014, which overhauled the manner in which environmental aspects are addressed, including at mines. The amendments will affect the following pieces of legislation: NEMA, NEM:AQA, NEM:WA, NEM:PAA, NEM:BA and the National Environmental Management: Integrated Coastal Management Act, 2008 and the National Environmental Management Amendment Act, 2008. The changes in NEMLAA4 aim to deter non-compliance with environmental laws by, among other things, introducing new offences, increasing the quantum of fines and administrative penalties where laws or licences have been contravened, and will extend enforcement powers to enable more widespread enforcement of environmental laws.

4.4 Mineral Rights

SRK has reviewed the information provided by SRL and is satisfied that the extents of the properties described in the various rights are consistent with the maps and diagrams received from SRL.

SRL has confirmed to SRK that all legal information in this PEA is correct and its title to the mineral rights and surface rights for the PSM, Kruidfontein and Mphahlele Projects is valid.

4.4.1 BEE / HDSA Ownership of Rights

The total percentage held by the BBKT(the BEE partner) directly and indirectly in SRL is 30.55%. This shareholding satisfies the target requirements of BEE/HDSA ownership of mining assets as prescribed by the Charter III.

In addition, SRL only holds an effective 75% interest in the Mphahlele Project, via its indirect 78.9% holding in Mahube Mining (Pty) Ltd (a BEE/HDSA-owned company) and the 5% free-carry interest in the Mphahlele Project held by the local community.

SRL is therefore fully compliant with the BEE ownership requirements of the Mining Charter III.

4.4.2 Mining Rights

The Mining Rights covering the assets are summarised in Table 4-4 and Figure 4-2.

Ruighoek, PSM and Kruidfontein

The NOMR for the West Pit was executed in February 2008 and registered with Mineral and Petroleum Titles Registration Office (MPTRO) on 24 June 2008.. Transfer of the NOMR for Sedibelo (Wilgespruit) to PPM was approved on 29 March 2022. The NOMR for Magazynskraal was executed on 31 March 2022.

A prospecting right application from a third party was accepted by the DMRE over a portion of Portion 15 of Ruighoek 169JP for various minerals. PPM holds via its NOMR the rights to all minerals excluding Cr over Portion 15 and lodged an appeal against the acceptance of the application in January 2023. No feedback has been received from the DMRE.

The Section 102 application in terms of the MPRDA to incorporate the Magazynskraal right into the Wilgespruit NOMR is in progress.

A Section 25 application to request extension for start of mining operations on Magazynskraal submitted to DMRE on 21 September 2023. No feedback has been received from the DMRE.

SRL resubmitted the MRA (NW30/5/1/2/2/10120MR) for the Kruidfontein Project on 6 March 2023, which was accepted by the DMRE on 01 June 2023. A Section 102 Application to incorporate the Kruidfontein right into the Wilgespruit NOMR NW30/5/1/2/2/333MR was resubmitted on 25 April 2023. The DMRE has yet to accept this application. The MRA is necessary because no more renewals of the underlying Kruidfontein NOPR could be granted and a pending Section 102 application does not prevent the DMRE from accepting third party interloper applications in respect of the Kruidfontein Project. The MRA was the only way to ensure security of tenure to the mineral rights of the Kruidfontein Project in accordance with Sections 9, 19(1)(b) and 22(2) of the MPRDA.

The Environmental Scoping Report for the MRA and Section 102 Application for Kruidfontein as part of the environmental permitting process was submitted on 19 April 2023 and 25 April 2023 respectively. The DMRE rejected the submitted Scoping Report on 26 September 2023. SRL's subsidiary C&L Mining submitted an appeal against the DMRE decision to the Department of Forestry, Fisheries and the Environment (DFFE) on 16 October 2023. The appeal with the DFFE is still pending.

Approval of the Section 102 application and granting of a NOMR for the Kruidfontein Project is dependent on approval of a consolidated EMPr for the Sedibelo, Magazynskraal and Kruidfontein properties.

Following receipt of a directive in terms of Section 25 of the MRPDA, C&L Mining submitted the necessary amendments to its SLP within the 21-day prescribed period on 13 September 2023.

The EMP and WUL held by IBMR for the Sedibelo Project is in the process of being transferred to PPM.

Mphahlele

A NOMR for the Mphahlele Project was awarded on 17 February 2012 and executed on 23 November 2022. Registration with MPTRO has been completed.

SRL is busy updating its MWP, SLP and EMP to reflect the new development strategy described in this TR, and has started the process to apply for a WUL.

SRL submitted a Section 25 application to request an extension for the implementation of the mining operations for the project on 21 September 2023.

Chromitite Rights

The chromite rights over the Mphahlele Project area were granted to the MCDT. Any chromite that is mined incidentally by SRL from the UG2 ores or that ends up in the tailings therefore belongs to the MCDT.

Some limited artisanal open pit mining has occurred along the trace of the chromite seams (presumed to be the Lower Group 6 Reef (LG6) north of the UG2.

The likelihood of two separate mining activities occurring simultaneously in close proximity has to be considered in both the design of surface infrastructure and operating procedures.

Grootboom

SRL via Plamin South Africa holds a NOMR LP/30/5/2/2/1/281MR over the Grootboom 336KT property on the Eastern Limb of the BC, which was renewed by letter of grant from the DMRE on 26 July 2023 for a period of 30 years. The NOMR was executed on 18 January 2024 and is the process of being registered at MPTRO.

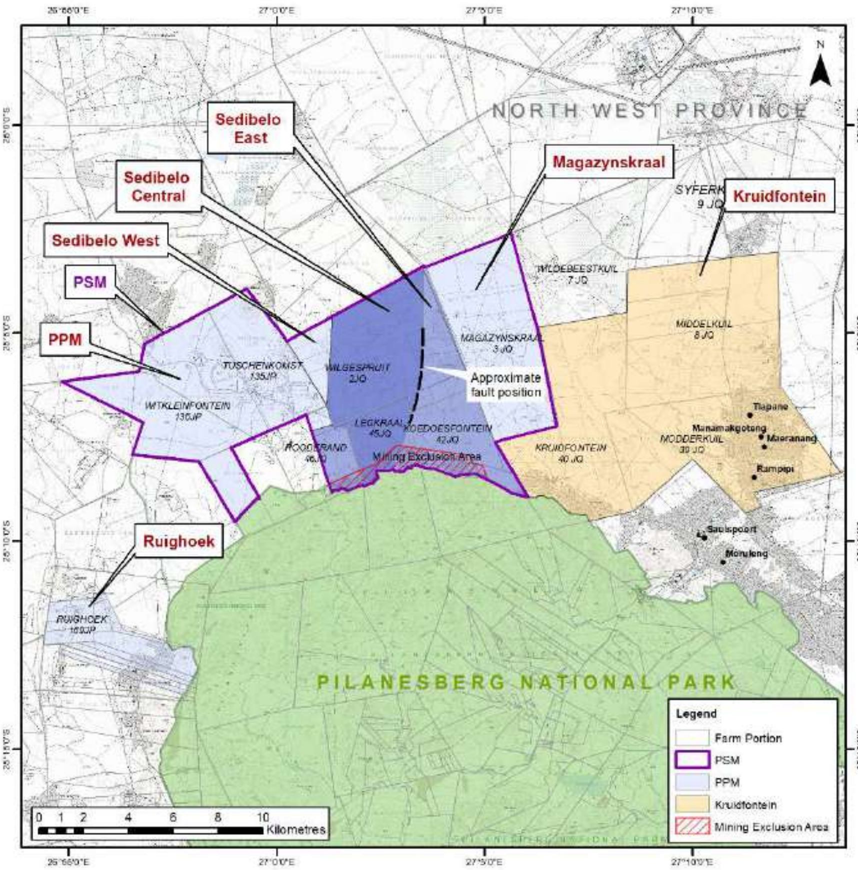
This NOMR is being sold to a third party and does not form part of this PEA. It is not listed in Table 4-4.

Table 4-4: SRL's Mineral Rights

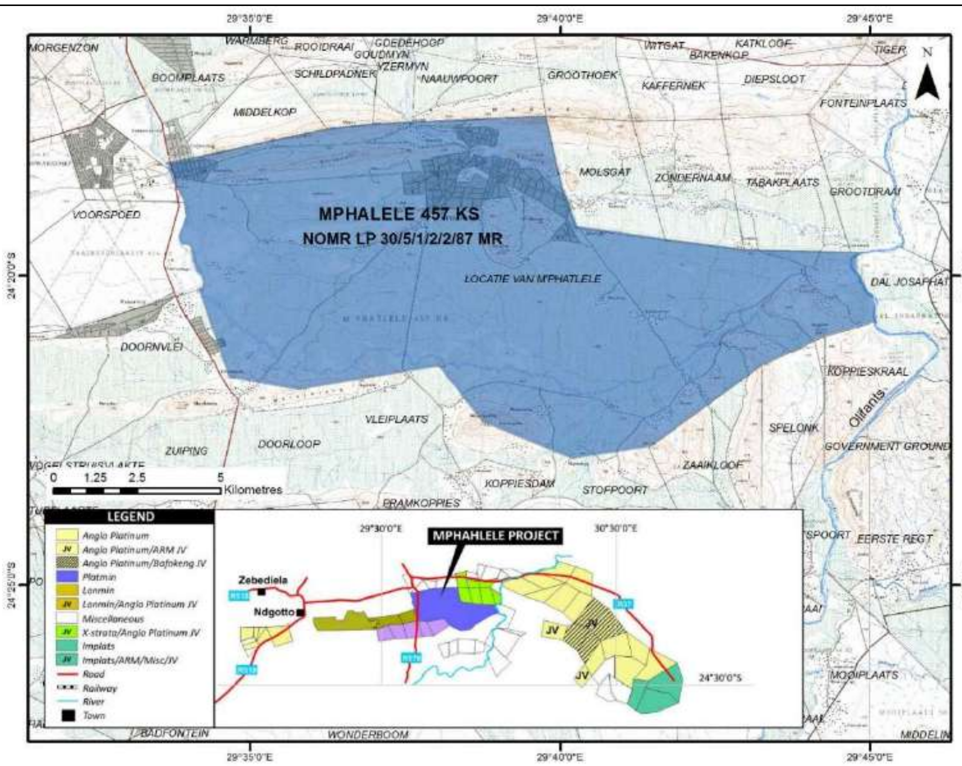
Asset	Mineral Rights and Properties	Minerals included in NOPR/NOMR	Mineral Rights Holder (Interest Held)	Status	Licence Expiry Date	Licence Area (ha)	Comments
Ruighoek, PSM - West Pit	**NOMR NW30/5/1/2/2/320MR:** Ptn 3 of the farm Rooderand 46JQ RE of Ptn 1, Ptns 2,3,4,6,9,13 and 15 of the farm Ruighoek 169JP (Ptns 10,11,12,14 excluded)	PGMs, Au, Cu, Ni, Co, Cr and associated minerals All minerals excluding Cr	PPM (100%)	Production	02/2038	5 453.7380	NOMR executed on 14 February 2008. Registered at MPTRO Pretoria on 24 June 2008. Cr rights on Tuschenkomst were included via a Section 102 approval in July 2015. **SURFACE RIGHTS**: Farms are state-owned land held in trust for the BBKT. No surface lease agreements in place for Ruighoek. Portions are owned by the state or private individuals.
	The farm Tuschenkomst 135JP	PGMs, Au, Cu, Ni, Co, and associated minerals, and Cr (Section 102)					
	Ptn 1 and RE of the farm Witkleifontein 136JP	All minerals					
	Sedibelo West mining area (Section 102): A portion of the farm Wilgespruit 2JQ Ptn 1 of the farm Rooderand 46JQ	PGMs, Au, Cu, Ni, Co, Cr	PPM (100%)	Production	02/2038	439.7830	Section 102 amendment to incorporate Sedibelo West properties executed in April 2012. **SURFACE RIGHTS:** Farms are state-owned land held in trust for the BBKT. IBMR has a registered lease agreement to access the farms.
PSM - East Pit and Central Decline (East Decline shared with Magazynskraal)	**NOMR NW30/5/1/2/2/333MR:** The farm Wilgespruit 2JQ A portion of the farm Legkraal 45JQ A portion of the farm Koedoesfontein 42JQ Ptn 1 of the farm Rooderand 46JQ	PGMs, Au, Cu, Ni, Co, Cr	PPM (IBMR) (100%)	Development	06/2038	4 366.1270 (after transfer of Sedibelo West)	Section 11(2) transfer of controlling interest in IBMR to PPM and cession of rights to PPM approved on 29 March 2022. EMP and WUL held by IBMR being transferred to PPM. **SURFACE RIGHTS:** Farms are state-owned land held in trust for the BBKT. Relocation of farmers and land users completed. IBMR has a registered lease agreement to access the farms.
PSM - Magazynskraal (East Decline shared with Sedibelo)	**NOMR NW30/5/1/2/2/10029MR:** The farm Magazynskraal 3JQ Submitted in July 2012, granted by DMRE in December 2015.	PGMs, Au, Ag, Cu, Ni, Co, Cr	Richtrau (100%)	Development	12/2045	2 801.6647	NOMR executed on 31 March 2022. Section 102 process to incorporate the right into the Wilgespruit NOMR 333MR underway. Section 25 application to request extension for start of mining operations submitted to DMRE on 21 September 2023. No feedback received from DMRE. **SURFACE RIGHTS:** Farm is state-owned land held in trust for the BBKT. Access agreement needs review as state is the owner.
Kruidfontein	**NW30/5/1/1/3/2/1//10196MR** The farm Kruidfontein 40JQ Rem and Ptns 1, 2 of the farm Middelkuil 8JQ Rem and Ptns 1, 2 of the farm Modderkuil 39JQ	All precious and base metals, PGMs, Au, Cu, Ni, Co, Cr	PPM (C&L Mining) (100%)	Exploration	08/2017	10 007.2143	Section 11(2) transfer to PPM received during December 2014. Section 102 application in terms of MPRDA to incorporate the right into the Sedibelo NOMR NW30/5/1/2/2/333MR re-submitted on 25 April 2023. No feedback from DMRE.
	MRA NW30/5/1/2/2/10220MR resubmitted on 6 March 2023 and accepted by DMRE on 1 June 2023.				Pending Scoping Report and SLP approval		Scoping Report for the MRA and Section 102 Application were submitted on 19 April 2023 and 25 April 2023 respectively. C&L submitted required amendments to its SLP on 13 September 2023. The DMRE rejected the submitted Scoping Report on 26 September 2023. C&L submitted an appeal against the DMRE decision to the DFFE on 16 October 2023. Appeal pending with DFFE.
Mphahlele	**NOMR LP30/5/1/2/2/87MR:** The farm Locatie van M'Phatlele 457KS	PGMs, Au, Ag, Cu, Ni Cr excluded	Tameng (75%)	Development	02/2038	11 725.0951	NOMR was granted on 17 February 2012 and executed on 23 November 2022. MPTRO registration completed. Process of updating MWP, SLP and EMP underway. Application for a WUL underway. Section 25 application to request extension for start of mining operations submitted to DMRE on 21 September 2023. **SURFACE RIGHTS**: investigation in progress to determine ownership.

Notes:

1. NOMR new order mining right; NOPR new order prospecting right; MRA mining right application
2. Ptn portion; RE remaining extent; Rem remainder
3. IBMR Itereleng Bakgatla Mineral Resources (Pty) Ltd; BBKT Bakgatla Ba-Kgafela Tribe; MPTRO Mineral and Petroleum Titles Registration Office



PSM Mining Rights and Kruidfontein Mining Right Application (source: modified after SRK, 2022a)



Mphahlele Mining Rights (source: SRK, 2022c)

srk consulting	**SRL Total Assets PEA** SRL's Mining Rights and Mining Right Application	Project No. 600322

Figure 4-2: SRL's Mining Rights and Mining Right Application

4.4.3 Prospecting Rights

Prospecting Rights held by SRL are shown in Table 4-4.

Ruighoek and PSM

The Company does not hold any prospecting rights over or in the vicinity of the PSM Project.

Kruidfontein

The NOPR, which was due to expire in August 2017, could not be renewed again.

SRL submitted a MRA and Section 102 Application for the Kruidfontein Project in 2023 (see discussion above).

Approval of the Section 102 application and granting of a NOMR for the Kruidfontein Project is dependent on approval of a consolidated EMPr for the Sedibelo, Magazynskraal and Kruidfontein properties.

Mphahlele

The Company does not hold any prospecting rights over or in the vicinity of the Mphahlele Project.

Loskop

Via Boynton Investments, SRL held varying interests in the Loskop property via NOPRs LP30/5/1/1/2/2906PR, LP30/5/1/1/2/2927PR, LP30/5/1/1/2/2914PR and LP30/5/1/1/2926PR over the farms Rietfontein70JS and De Wagendrift 79JS on the southern section of the Eastern Limb of the BC.

The NOPRs lapsed in July 2019 and cannot be renewed. SRL is busy with rehabilitation according to the approved EMP in preparation for applying for closure. The closure cost is minimal and excluded from the PEA.

4.4.4 Surface Rights

Ruighoek and PSM

On 25 October 2018, the Constitutional Court ruled that Itereleng Bakgatla Mineral Resources (Pty) Ltd (IBMR, a subsidiary of SRL) was not entitled to an interdict to evict the farmers on Wilgespruit 2JQ because it had not exhausted the internal processes provided for in section 54 of the MPRDA. Further, one of the recommendations of the final report of the presidential advisory panel on land reform is that rights in terms of communal land must be vested in residents of communal areas rather than in traditional councils.

The Company implemented a settlement agreement and relocation plan agreed with the occupiers on the farm and representatives of the Lesethleng Land Community (LLC). All occupiers have relocated to new farming areas, where kraals and dwellings were built.

Details of surface rights held or negotiated by SRL for the different projects are summarised in Table 4-4.

SRL is not aware of any servitude that needs to be negotiated with any surface owners outside of the property areas.

Kruidfontein

SRK understands that the surface rights are held by the State in trust for the local community, except for the RE of Modderkuil 39JQ which is owned by the BBKT.

The findings of the Constitutional Court of October 2018 represent a possible risk to the Kruidfontein Project in the Company's ability to secure the right of access to the surface. Once the Company has decided to proceed with the development of the Project, it will have to initiate consultation with affected communities in conjunction with the tribal authorities.

SRL is not aware of any servitude that needs to be negotiated with any surface owners outside of the property areas.

Mphahlele

SRK understands that the surface rights are held by the State in trust for the local community. Although the surface area required for mining is not currently held by the Company, the Company believes award of this should be a formality.

The findings of the Constitutional Court of October 2018 represent a possible risk to the Mphahlele Project in the Company's ability to secure the right of access to the surface. Once the Company has decided to proceed with the development of the Project, it will have to initiate consultation with affected communities in conjunction with the tribal authorities.

4.4.5 Land Claims

SRL has advised that it is not aware of any current land claims over any of the PGM Assets.

4.4.6 Legal Proceedings

SRL has confirmed to SRK that there are currently no legal proceedings that might influence the integrity of its PGM Assets, the right to prospect for or exploit minerals or the declaration of Mineral Resources and Mineral Reserves.

PSM

Diesel Rebate Matter

SRL advised that it is currently involved in a legal dispute regarding a diesel rebate matter with the South African Revenue Services (SARS).

SARS has demanded that PPM repay diesel refunds that were allowed before 2011 of ZAR62m. PPM has submitted a total of ZAR498m diesel rebate claims to SARS that remain unpaid. On advice from legal counsel, PPM did not respond to SARS' plea and notice to defend of June 2023. Instead, counsel would approach the judge who heard the main application to expedite the process of obtaining a court date (current two year backlog in South African court system). A discovery order and supplementary discovery affidavit was to be filed in January 2024. The matter remains ongoing, but does not impact on SRL's rights to exploit minerals or declare Mineral Resources and Mineral Reserves.

4.5 Royalties and Property Encumbrances

4.5.1 Royalties

Only royalties payable to the Government of South Africa in terms of the Royalty Act would be applicable. Royalties are calculated per the refined formula discussed in Section 4.3.5 and included in the TEM and cash flows in Section 22.

The PEA assumes that the PGM concentrate is processed using the Kell technology (Section 19.5.4). Final product will sold via an internal marketing company to be set up within SRL.

Low-grade PGM concentrate at PPM will be refined by Impala Refining Services.

There is no royalty interest attributable to a third party.

4.5.2 Property Encumbrances

There are no significant encumbrances to the PSM and Mphahlele properties.

Kruidfontein

Approval of the Section 102 application and granting of a NOMR for the Kruidfontein Project is dependent on approval of a consolidated EMPr for the Sedibelo, Magazynskraal and Kruidfontein properties.

The Environmental Scoping Report for the MRA and Section 102 Application for Kruidfontein was rejected by the DMRE on 26 September 2023. SRL's subsidiary C&L Mining submitted an appeal against the DMRE decision to the DFFE on 16 October 2023. The appeal with the DFFE is still pending.

4.6 Environmental Liabilities

Projected environmental rehabilitation and closure liabilities associated with the development of the projects and the LoM plans for this PEA are catered for in the TEM and economic analysis, as follows:

- PSM above 700 mbs
  - West Pit ZAR1 303m
  - East Pit ZAR2 406m
  - Central Decline ZAR100m
  - East Decline ZAR87m
  - Ruighoek Pit ZAR2 793m
- PSM below 700 mbs ZAR414m
- Kruidfontein ZAR448m

- Mphahlele
  - Decline to 600 mbs ZAR356m
  - Shaft ZAR298m.

The closure liability expenditures over the LoM include rehabilitation on closure plus post closure monitoring cost provisions, although there is no supporting estimate of how this quantum was derived for the LoM cost. Furthermore, closure plans have not yet been developed for the various projects, with it being SRK's understanding that the total figure of ZAR8 206m is based on SRL's interpretation of the closure obligations that arise from the authorisation documentation and legislation.

4.6.1 Ruighoek

There are no current environmental liabilities to which the property is subject, as all rehabilitation related to prospecting activities has been completed.

4.6.2 PSM

The immediate closure liability for the operation has been assessed to be ZAR450m, ZAR167m and ZAR42m for West Pit, East Pit and East Underground respectively, relative to a full insurance guarantee facility of ZAR700m.

4.6.3 Kruidfontein

There are no current environmental liabilities to which the property is subject, as all rehabilitation related to prospecting activities has been completed.

4.6.4 Mphahlele

There are no current environmental liabilities to which the property is subject, as all rehabilitation related to prospecting activities has been completed.

4.7 Permitting Requirements

4.7.1 Ruighoek

The EMP was approved by the DMRE, NOMR NW30/5/1/2/2/320MR was awarded during 2008 and encompasses the properties Tuschenkomst 135JP, Witkleifontein 136 JP, Rooderand 46JQ Ptn 3 and portions of Ruighoek 169JP.

4.7.2 PSM

Approved Environmental Management Plan Report

The NOMRs for PPM (West Pit), Sedibelo and Magazynskraal were awarded based on valid and approved EMPRs. A summary of the existing approved authorisations, licences and permits in terms of NEMA, NEM:WA and NWA for the PSM Project is given in Table 20-1. Amendments have been made to the original EMPr to incorporate and obtain approval for further mining related development and infrastructure.

4.7.3 Kruidfontein

Approval of the Section 102 application and granting of a NOMR for the Kruidfontein Project is dependent on approval of a consolidated EMPr for the Sedibelo, Magazynskraal and Kruidfontein properties. According to Section 24 of NEMA, an application for environmental authorisation must be submitted to the competent authority (in this case the DMRE) for activities listed in the NEMA 2014 EIA Regulations as amended, prior to the commencement of those activities. Activities listed in Listing Notices 2 (LN 2) of the NEMA 2014 EIA Regulations, require a full scoping and environmental impact assessment (S&EIA) process to be undertaken as part of the environmental authorisation process. The S&EIA process takes 300 days, which includes two legislated public review processes of 30 days each as well as legislated time for authority review of the application form, scoping report and the EIA/EMPr. The scoping report for the MRA and Section 102 Application for Kruidfontein was rejected by the DMRE on 26 September 2023. SRL's subsidiary C&L Mining submitted an appeal against the DMRE decision to the DFFE on 16 October 2023. The appeal with the DFFE is still pending.

4.7.4 Mphahlele

Approved Environmental Management Plan Report

The NOMR for the Mphahlele Project was awarded based on a valid and approved EMPr.

SRL has commenced the process of revising the MWP and SLP for the project.

Future Permit Requirements

The proposed changes to the approved Mphahlele EIA and EMPr will reflect the changed project description, which will require environmental authorisation prior to construction commencing.

SRL will need to submit an application for a WUL, which is underway.

4.8 Significant Factors and Risks affecting Access, Title

Mining companies in South Africa are exposed to typical mining industry risks associated with rising costs, labour wage demands, resource nationalisation and social licence to operate.

Additional country risk is raised through legislative uncertainty, political interference and bureaucratic ineptitude.

SRL is not aware of any servitude that needs to be negotiated with any surface owners outside of the property areas.

SRL has confirmed to SRK that there are currently no legal proceedings that might influence the integrity of the PGM Assets, the right to prospect for or exploit minerals or the declaration of Mineral Resources and Mineral Reserves.

4.8.1 Kruidfontein

Approval of the Section 102 application and granting of a NOMR for the Kruidfontein Project is dependent on approval of a consolidated EMPr for the Sedibelo, Magazynskraal and Kruidfontein properties.

C&L Mining submitted an appeal against the DMRE decision to reject the Environmental Scoping Report to the DFFE, which is still pending.

Planned work by the Company on the Wilgespruit property (Sedibelo Project) to the northwest of the Kruidfontein Project was prevented due to delays in the relocation of local herders and farmers living on the property. It is possible that similar problems could be encountered on the Kruidfontein Project when it comes time to develop the property.

4.8.2 Mphahlele

The findings of the Constitutional Court of October 2018 represent a possible risk to the Mphahlele Project in the Company's ability to secure the right of access to the surface.

5 Accessibility, Climate, Local Resources, Infrastructure and Physiography

5.1 Topography, Elevation and Vegetation

5.1.1 Ruighoek and PSM

Ruighoek and PSM are located within the Limpopo Water Management Area (WMA), where major rivers include the Limpopo, Matlabas, Mokolo, Lephalale, Mogalakwena Sand, Nzhelele, Mutale and Luvuvhu Rivers. PPM is associated with several ephemeral watercourses, including the Wilgespruit and the Manyedime watercourses on the eastern and northern portions, and the Motlhabe watercourse and its tributary on the western portion, all of which are located within the upper reaches of the Bier River quaternary catchment (A24D), which falls within the Lower Crocodile secondary catchment (SRK, 2022).

Most of the project areas are flat and featureless with an average altitude of 1 075 metres above mean sea level (mamsl), dipping gently to the north, with steep sloping hills of the Pilanesberg forming the eastern and southern boundaries of Ruighoek and PSM, respectively (Figure 4-2, top). All rivers have a gentle gradient and flow mainly in a northerly to northeasterly direction through the project areas. Most of the watercourses in the region are non-perennial and have flowing water for a few days a year after heavy rainfall events/periods (SRK, 2022).

The area is covered either by a layer of *in situ* black turf soils (vertisols) or by Quaternary alluvium derived from the Pilanesberg. A few isolated hills are present on the western boundary of PSM.

Vegetation is typically savannah grasslands mixed with thorn trees and scattered shrubs.

Land use is almost exclusively cattle grazing, with virtually no crop cultivation.

5.1.2 Kruidfontein

The prospect area is relatively flat lying, sloping gently northward from an elevation of approximately 1 140 mamsl at the foot of the Pilanesberg to 1 040 mamsl in the north of the property (Figure 4-2, top).

Vegetation is typically savannah grasslands mixed with thorn trees and scattered shrubs. As with the PSM Project, land use at Kruidfontein is mainly cattle grazing with virtually no crops. Settlements and buildings only occur in the far south of the project area.

5.1.3 Mphahlele

The regional topography varies between 900 and 1 100 mamsl with the Strydpoort Mountains located to the north (Figure 4-2, bottom). The project area is a flat plain sloping very gently towards the Chunies River, which flows almost parallel to the southern boundary of the property.

The area is covered by scrub with scattered trees interspersed with arable lands. The land is only used for scattered subsistence farming and grazing of cattle. Woodlands are found towards the south of the Mphahlele Project.

Due to the high concentration of people, wildlife in the project area, except for birds and small reptiles, is limited.

5.2 Access

5.2.1 PSM and Kruidfontein

A sealed all-weather road from the R510 regional road through the village of Moruleng (formerly Saulspoort) passes through the southern extremity of the project areas, beyond which the properties are is accessed via gravel district roads and farm tracks.

5.2.2 Mphahlele

Sealed all weather roads provide access to within a few kilometres of the project area and link it directly to the towns of Polokwane and Mokopane.

Many tracks off the main roads provide easy access to the project area.

5.3 Proximity to Population Centre and Transport

5.3.1 Ruighoek, PSM and Kruidfontein

Platinum mining activities in the vicinity, as well as proximity to the Pilanesberg National Park and Sun City entertainment complex, have ensured a comprehensive infrastructure of roads, power and telecommunications in the region.

The town of Rustenburg to the south is a well-established mining centre due to more than 50 years' of PGM and chrome mining in the area. To the north of the projects, iron ore mining took place near the town of Thabazimbi in Limpopo Province. The Ruighoek and PSM Projects are readily accessible from the cities of Johannesburg and Pretoria in Gauteng Province, the economic hub of South Africa.

There is a compact international airport located on the western edge of the Pilanesberg, serving Sun City and the Pilanesberg National Park. There is also a municipal airport situated near Rustenburg, which is licensed according to South African Civil Aviation Authority standards.

The area surrounding the projects is rural and is sparsely populated, with more dense settlements being located along the road running parallel to the northern boundary of the Pilanesberg National Park. The main land uses include residential areas, subsistence dry land agriculture, small-scale commercial agriculture and livestock grazing, conservation and eco-tourism activities.

5.3.2 Mphahlele

There is currently no infrastructure on site.

Polokwane, the provincial capital of the Limpopo Province, and the smaller towns of Mokopane and Lebowakgomo provide urban amenities and, along with local villages, provide for sources of skilled and unskilled labour for future operations.

The area surrounding Mphahlele is rural and is sparsely populated. The main land uses include residential areas, subsistence dry land agriculture, small-scale commercial agriculture and livestock grazing.

Platinum mining activities in the vicinity have ensured a comprehensive infrastructure of roads, power and telecommunications in the region.

The major arterial N1 national road connecting Johannesburg to Polokwane and Mokopane is some 40 km west of the project area.

Polokwane International Airport is located 5 km north of Polokwane. It opened in 1996 on the site of a former air force base.

5.4 Climate

5.4.1 Ruighoek, PSM and Kruidfontein

The project areas fall within the Summer Rainfall Climatic Zone. The climate in the area is typical of the South African Highveld with maximum temperatures in summer between 28°C to 32°C and minimum temperatures during winters rarely reaching below −4°C. Winters are dry and sunny.

The area is characteristically warm to hot, with erratic and extremely variable rainfall, ranging from 380 to 750 mm per year, usually in the form of short duration, high intensity thunderstorms during summer. Strong gusty winds are associated with the thunderstorms. Typically, the months from October through to April have the highest rainfall, with maximum rainfall in January. Evaporation ranges from 55 mm (in June) to 163 mm in December. Evaporation demand exceeds rainfall at the site.

The moderate climate means that exploration and mining operations can be undertaken throughout the year, with no extraordinary measures required.

5.4.2 Mphahlele

The climate of the project area is typical of the South African Highveld, comprising warm to hot summers and cool to cold winters. Maximum temperatures in summer are between 28ºC and 32ºC, whilst minimum temperatures during winters rarely reach below −4ºC. Winters are dry and sunny.

Precipitation is usually in the form of thunderstorms during summer. These sudden downpours pose some risk of flooding in low-lying areas, but precautionary measures are routine on most operations. The average annual rainfall varies from 380 mm to 700 mm, with the peak of the rainy season occurring in January. Potential evaporation figures greatly exceed the mean annual precipitation. The predominant wind directions for the study area are from the east and north.

The moderate climate means that exploration and mining operations can be undertaken throughout the year, with no extraordinary measures required.

5.5 Infrastructure Availability, including Bulk Services, Personnel and Supplies

5.5.1 Ruighoek

There is currently no infrastructure on site.

Planned electrical power requirements for the Ruighoek Pit will be as for open pit mining, mining offices and some area lighting and is estimated to be approximately 1 MVA. There is an existing substation on site, which will probably have excess capacity for these requirements. The substation is more than 20 years old and it is anticipated that more work will be required prior to project implementation.

5.5.2 PSM – West Pit, East Pit, East Underground and Central Underground

PPM is an established open pit mine (West Pit) and concentrator, which implemented curtailment of extraction and processing operations due to prevailing economic conditions, particularly the downturn in metal prices, general inflationary pressures on the cost of operations and limited access to capital markets.

Existing infrastructure such as roads, change houses, offices, sewage and electrical supply situated at PPM will be upgraded to accommodate the additional requirements for the underground portions of the PSM Project (East Underground and Central Underground). The East Portal of the PSM Project, however, which will commence first, will be equipped with dedicated roads, offices, change houses, lamp room, sewage and electrical supply from the existing PPM Substation and Magazynskraal Substation.

SRL has approached Eskom to request temporary relief on the capacity and baseload charges for the Sedibelo and Tuschenkomst substations, until such time a return to higher usage is anticipated.

Bulk water is piped to PPM from the Magalies Water Board (MWB). The MWB sources the water from the Vaalkop Dam, which is then piped to the reservoir on the farm Tuschenkomst 135 JP (PPM). A portion of the potable water is allocated to communities. From the Tuschenkomst Reservoir, the bulk water supply for the mine passes to a 1 Mℓ tank from where it is reticulated around the plant.

The MWB supplies PPM with 15.2 Mℓ/day service water which it requires for its operations. The MWB pipeline crosses Wilgespruit in an east-west orientation along the northern boundary of the property, therefore the capital required to establish a bulk water supply to Central and East Underground will be relatively small.

The current PPM operations are serviced by one Sewage Treatment Plant (STP). The STP was registered as a Class D works in May 2013. The STP is located down-gradient of the processing plant area. The mine's approved EMP makes allowance for a sewage treatment plant with the capacity to treat approximately 761 m^3/day. The plant is operated by an independent contractor. Treated sewage effluent reused by the operations in 2021 was 20 721 m^3.

At the Sedibelo-Magazynskraal portion of PSM, mobile toilets are utlised during development phase and the sewage is managed by contractors. Future Sedibelo-Magazynskraal operations will be serviced by the current STP located at PPM, which will be increased to approximately 900 m^3/day to handle the additional staff anticipated for the expansion project. Treated water from the sewage treatment plant will be fed back into the process water circuit during the operational phase. There will be additional pipeline infrastructure from Sedibelo-Magazynskraal to the current STP at PPM.

Human resources are planned according to the approved SLPs for Central Underground and East Underground.

5.5.3 Kruidfontein

There is no installed infrastructure on the site.

The following would be required to support mining:

- Secure the surface rights needed for the surface infrastructure, either via a lease or land purchase;
- Identify suitable site for the processing plant;
- The development of access roads for personnel and supplies to the mine site;
- The extension of the water pipeline from MWB connection to the mine offices and mine site;
- Provision and installation of potable water to offices and mine site;
- Development of a new STP (separate to the PPM works), with the treated water re-used at the mine; and
- Electrical connection to Eskom supply and the installation of a mine-wide electrical reticulation system.

Given that the steady-state labour complement for the Kruidfontein Project was planned at 1 400 employees, potable and sewage water would need to cater for daily volumes in the order of 210 kℓ/day.

5.5.4 Mphahlele

There is currently no infrastructure on the site.

Power and telecommunications are readily available. A temporary power supply of 5 MVA at 33 kV was installed in 2010 and connection fees are paid each month. Bulk power supply to the mine will be at 132 kV from a new Eskom supply point. SRL applied in 2017 for a supply of 46.6 MVA building up to 51 MVA.

The DWS is currently increasing the supply of water to the area for both mining and agriculture by the building of the De Hoop Dam and allowing additional water to be made available from the Flag Boshielo Dam.

The Olifants River Joint Water Forum (ORJWF) was formed to ensure the distribution and development of the water resources in the Steelpoort, Groothoek and Mogalakwena areas. A Memorandum of Agreement has been signed with the DWS for the development of water systems to the ORJWF area. The design and construction of the pipeline from the Flag Boshielo Dam to Pruizen will commence once the take-off agreements have been signed by all the affected parties. The raw water supply will consist of a take-off along the Flag Boshielo/Pruizen line at a point called Immerpan. The water will be pumped approximately 30 km to the Baobab operation (Sibanye Platinum Limpopo) and then another 18 km to the Mphahlele Project. The raw water off take will be stored in a bulk raw water storage reservoir with a capacity of 10 Mℓ. This reservoir will be located at the western end of the ridge north of the plant. Raw water from this reservoir will be distributed to storage reservoirs located at the Concentrator Plant, Portal A and East Decline.

A new Water Treatment Plant (WTP) would need to be developed to supply potable water to the offices and mine site. A new STP would need to be developed for the processing of sewage. In terms of personnel, mining compliment and technical services are forecast to a total of 601 staff at steady state. As such, potable and sewage water would need to cater for daily volumes in the order of 90 kℓ/day.

6 History

6.1 Previous Ownership

6.1.1 Ruighoek and PSM

The properties comprising the PSM Project have been explored by various companies since the 1960s, as follows:

- Johannesburg Consolidated Investment Ltd (JCI, now Anglo Platinum Limited, AngloPlats) (1960s to 1970s) - exploration for Cr and Ni deposits on Tuschenkomst 135JP and Rooderand 46JQ, four diamond drill holes intersected reef;
- General Mining Corporation (Gencor, now Impala Platinum Limited) (late 1980s and early 1990s) - exploration for PGMs on Ruighoek, 15 drill holes;
- Platmin (August 2007) - completed a feasibility study (FS) for PGMs and base metals over Tuschenkomst 135JP and Ruighoek 169JP. Commenced mining at West Pit in April 2008, first PGM concentrate despatched in April 2009. The Sedibelo West mining area was incorporated into the PPM mining right in April 201;
- AngloPlats (1971 to 1999) - exploration on Wilgespruit 2JQ, more than 160 diamond drill holes and sunk an exploration shaft to a depth of 70 m to intersect the Merensky Reef. A 650 m long reef drive was developed along strike to establish the level of structural disturbance and test the grade variation;
- Barrick Limited (2005 to 2005) - exploration during 2004 and 2005 on Wilgespruit 2JQ. Exploration comprising exploration/geotechnical drilling, metallurgical and engineering studies continued from 2005 to 2008, with a positive feasibility study issued in April 2008;
- Rustenburg Platinum Mines (an AngloPlats subsidiary at the time) (1994) - nine diamond drill holes on Magazynskraal 3JQ. A further 22 drill holes between 2001 and 2009;
- Between 2009 and 2011, twelve two-dimensional (2D) seismic traverses were completed and 108 diamond drill holes were drilled by a SRL subsidiary; and
- Consolidation of the PPM, Sedibelo and Magazynskraal properties was approved by the DMRE in May 2012. The consolidated entity was renamed as Sedibelo Platinum Mines Ltd (SPM).

6.1.2 Kruidfontein

The Kruidfontein property has been explored by various companies since the mid-1990s, as follows:

- JCI (mid-1990s) - exploration, single drill hole;
- C&L Mining (Pty) Ltd (C&L Mining), a subsidiary of Afarak Platinum Holdings (Pty) Ltd (Afarak) (2007 to 2009) - a helicopter-borne magnetic and radiometric survey, 2D seismic reflection surveys in 2008, 28 drill holes; and
- Aquarius Platinum Limited acquired Afarak (2011). The entire issued share capital of C&L Mining transferred to PPM in 2014.

6.1.3 Mphahlele

The Mphahlele property has been explored by various companies since the 1970s, as follows:

- JCI (1970s to 1980s) - 24 drill holes.
- Tameng Mining & Exploration Holdings (Pty) Ltd (Tameng) (2004 to 2008) - airborne magnetic and radiometric survey in 2004, drilled 220 drill holes with 306 deflections; and
- Platmin acquired a controlling interest in Tameng in 2007; completed a FS in December 2009; mine design was modified in 2019 to allow crushing and Rados screening on surface.

6.2 Exploration and Development Work

6.2.1 Ruighoek and PSM

The historical development of the Ruighoek Project, West Pit, Sedibelo and Magazynskraal Projects are summarised in Table 6-1 to Table 6-3.

Table 6-1: Ruighoek and PSM - West Pit: Historical Development

Date	Activity	Comments
1960s – 1970s	JCI awarded prospecting rights over Tuschenkomst and Rooderand. Exploration conducted for chromite and Ni deposits. Four diamond drill holes that intersected reef.	No assay results available. JCI allowed options to lapse.
1960s – 1970s	Gencor awarded prospecting rights over Ruighoek. Exploration for PGMs conducted, including geophysical surveys.	Gencor noted faulting but recognised open pit potential. Gencor allowed licences to lapse.
Late 1980s to early 1990s	Impala conducts soil sampling, geological mapping, geophysical surveys, trenching, drilled 15 drill holes.	Non-compliant Inferred Resource identified.
1999	Platmin acquired precious and base metal rights from State, exploration companies and private individuals.	
Sep 2005	Converted Old Order Prospecting Rights awarded in terms of MPRDA over Tuschenkomst, Ruighoek	
Aug 2007	Feasibility Study for the Pilanesberg PGM Project (covering the Ruighoek and Tuschenkomst properties) by SRK completed.	
Feb 2008	EMP approved by DMRE, NOMR NW30/5/1/2/2/320MR awarded.	Encompasses Tuschenkomst, Witkleifontein, Rooderand Ptn 3 and portions of Ruighoek.
Apr 2008	Removal of overburden commenced.	
Mar 2009	UG2 concentrator plant commissioned.	
Apr 2009	First PGM concentrate was despatched.	
Jul 2009	MR concentrator plant commissioned.	
Mar 2011	Sedibelo West Mining Right Abandonment Agreement signed between IBMR, PPM and Platmin, in which IBMR abandoned the Sedibelo West mining area to PPM for USD50m.	Sedibelo West mining area comprises portion of Ptn 1 of the farm Rooderand 45JQ and a portion of the farm Wilgespruit 2JQ (area of 439.7830 ha).
Dec 2011	Platmin delists from Toronto Stock Exchange, suspends shares on JSE.	
Mar 2012	IDC agreed to acquire 16.2% interest in SPM	Conditional on consolidation of PPM, Sedibelo and Magazynskraal
Apr 2012	Mining Right NW30/5/1/2/2/320MR amended to include Sedibelo West properties [Section 102 of MPRDA]	.
Jun 2012	Concentrator operation contract terminated. Platmin took direct control of concentrator.	Management of beneficiation process improved.
Nov 2012	Consolidation of PPM, Sedibelo and Magazynskraal completed.	Consolidated entity renamed SPM.
2014	Acquired Kruidfontein	
2015 - 2016	RADOS testwork at Mintek, POC plant trials confirm laboratory results	
Aug 2020	Integrated FS for West and East Pits and Central and East Underground completed.	
2022	Excavation of boxcut and surface civils for East Portal commenced.	
Nov 2023	Implementation of East Portal and East Decline put on hold due to cost curtailment processes.	

Table 6-2: Sedibelo Project: Historical Development

Date	Activity	Comments
1971 - 1996	Notarial prospecting contract with BBKT granted to AngloPlats	Registered in deeds registry in 1981.
	More than 160 diamond drill holes completed on Wilgespruit	most intersect mineralisation
	Exploration shaft sunk to a depth of 70 m, to reach MR. Reef drive developed for approximately 650 m along strike, north and south of shaft.	Purpose of reef drives was to establish degree of structural disturbance and test grade variation
2002	Placer Dome started negotiations with BBKT.	
Nov 2003	Placer Dome /Bakgatla JV ratified at BBKT tribal council.	
Apr 2004	Prospecting permit granted by DME (now DMRE), was awarded to IBMR. Project renamed the Sedibelo Platinum Project.	Only drill hole locations and depth information obtained. No other exploration results available.
Jan 2005	Barrick takeover of Placer Dome, continues in JV with BBKT.	
2004 to Dec 2005	Exploration included soil sampling, aeromagnetic survey, 2D seismic surveys, prospecting shaft investigations, drilling and bulk sample.	Exploration focused on central up-throw block (the Central Block) and later the eastern up-throw block (the Eastern Block).
Dec 2005	Inferred Mineral Resource estimate of 15.9 Moz declared.	Western, Central and Eastern Blocks.
2006 to 2007	Exploration activities included exploration drilling, geotechnical drilling in open pit area and along planned declines.	
Nov 2006	Bulk sample from the prospecting shaft for pilot scale metallurgical testwork.	Produced favourable results.
Feb 2007	New order converted prospecting right awarded.	
Apr 2007	Second bulk sample extracted, to enhance orebody understanding.	
Apr to Sept 2007	Interim PFS completed, independent peer review conducted, PFS completed in September.	Provided motivation to progress to feasibility study and order long lead items.
Apr 2007	Mining Right Application submitted, together with SLP.	
Oct 2007	EIA/EMP submitted.	
Apr 2008	Amended SLP containing the LED plan submitted.	
Apr 2008	Barrick delivered positive feasibility study. (IRR of 10.6% and after-tax $NPV_{5\%}$ of USD496m)	Open Pit (containing 1.19 Moz PGM), Central Block (3.35 Moz PGM) and Eastern Block (2.75 Moz PGM).
2008	Financial guarantee for the project lodged.	
Jun 2008	NOMR NW30/5/1/2/2/333MR awarded	valid for 30 years
Mar 2011	Sedibelo West Mining Right Abandonment Agreement signed between IBMR, PPM and Platmin, in which IBMR abandoned the Sedibelo West mining area to PPM for consideration of USD50m.	Sedibelo West area comprises portion of Ptn 1 of the farm Rooderand 45JQ and a portion of the farm Wilgespruit 2JQ (area of 439.7830 ha).
Aug 2011	Amended MWP as part of section 102 amendment submitted to DMRE.	
Mar 2012	IDC agreed to acquire 16.2% interest in SPM	
Apr 2012	NOMR NW30/5/1/2/2/333MR amended to exclude Sedibelo West properties	Section 102 of MPRDA
May 2017	Apply for Magazynskraal and Kruidfontein NOPRs into IBMR’s NOMR.	Section 102 application submitted
Aug 2020	Integrated FS for West and East Pits and Central and East Underground completed.	
2022	Excavation of boxcut and surface civils for East Portal commenced.	
Nov 2023	Implementation of East Portal and East Decline put on hold due to cost curtailment processes.	

Table 6-3: Magazynskraal Project: Historical Development

Date	Activity	Comments
1994 to 1994	RPM (AngloPlats subsidiary) drilled 9 diamond drill holes, 261 m to 948 m in depth	
2001 to 2009	RPM drilled 22 diamond drill holes, 351 m to 1 020 m in depth.	
July 2007	New order converted prospecting right NW30/5/1/1/2/1334PR for PGMs awarded to RPM.	
Feb 2008	NOPR NW30/5/1/1/2/1680PR for base metals and Au, Ag awarded to RPM.	
Jul 2008	NOPRs 1334PR and 1680PR ceded to Richtrau	
Dec 2008	Section 11 transfer of controlling interests in NOPRs 1334PR and 1680PR to subsidiaries of Pallinghurst and BBKT.	RPM retains 20% interest.
2009 to 2010	Drilling of 108 diamond drill holes, 279 m to 977 m below surface.	
2010 to 2011	Twelve 2D seismic traverses completed.	
Oct 2011	PFS for Magazynskraal – Sedibelo East completed.	
Mar 2012	IDC agreed to acquire 16.2% interest in SPM	Conditional on consolidation of PPM, Sedibelo and Magazynskraal
May 2012	DMRE gives consent for the consolidation of PPM, Sedibelo and Magazynskraal.	
Jul 2012	MRA reference number NW30/5/1/2/2/10029MR submitted. Renewal application for two NOPRs submitted.	
Nov 2012	Consolidation of PPM, Sedibelo and Magazynskraal completed.	Consolidated entity renamed SPM
Jan 2013	EMP submitted to DMRE.	
May 2016	NOMR granted, but put on hold	Not registered at MPTRO
Aug 2016	Renewed NOPRs were registered in MPTRO.	
May 2017	Apply for Magazynskraal and Kruidfontein NOPRs into IBMR's NOMR.	Section 102 application submitted
Aug 2020	Integrated FS for West & East Pits and Central & East Underground completed.	
2022	Excavation of boxcut and surface civils for East Portal commenced.	
Nov 2023	Implementation of East Portal and East Decline put on hold due to cost curtailment processes.	

A composite aeromagnetic image over SRL's western Bushveld properties is shown in Figure 6-1.

During the intrusion of the BC by the younger Pilanesberg, rocks of the BC were significantly faulted, displaced and intruded by numerous alkaline dykes, visible as blue NW-SE trending lineaments in Figure 6-1.

There has been extensive drilling done within the PSM Project as summarised in Table 6-4. Drill hole locality plans for the various mine areas are provided in Section 10 as shown in Table 6-4.

Table 6-4: Drill Hole Density on the PSM Project

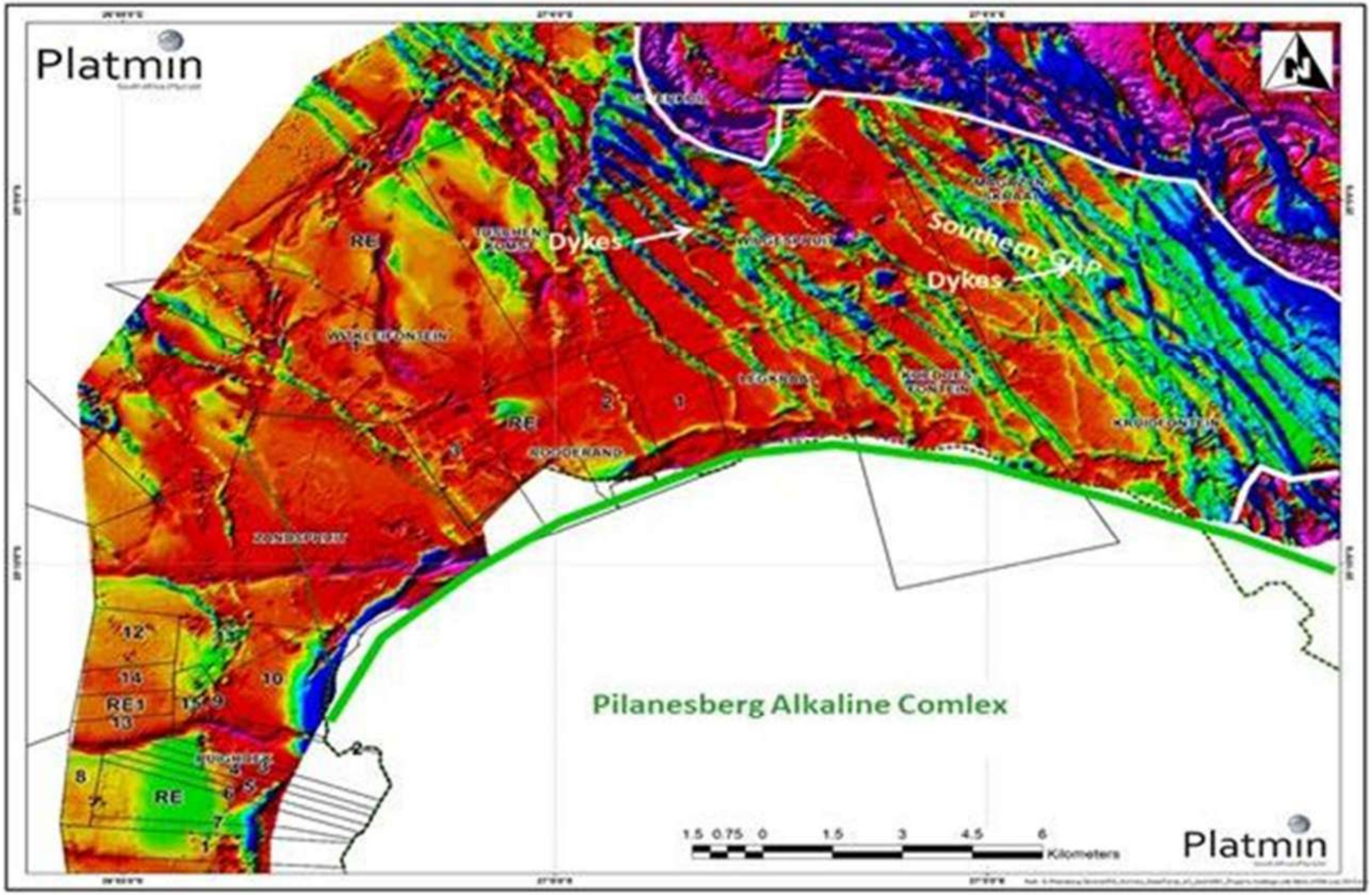
Licence Area	Mine Area	Resource Area (ha)	No of Drill holes (DHs)	Drill hole density (ha/DH) (Resource Area)	Drill Hole Locality Plans
Tuschenkomst	West Pit	218	490	1.2	Not shown
	Sedibelo West Pit	391			
	Ruighoek	n/s	180	n/s	Not shown
	Witkleifontein	n/s	86	n/s	
	Rooderand	n/s	94	n/s	
Sedibelo	East Pit	132	566	2.8	Figure 10-2
	Central Underground	560			
	East Underground	907			
Magazynskraal		1 699	139	12.2	Figure 10-3

Note:

1. n/s - not stated

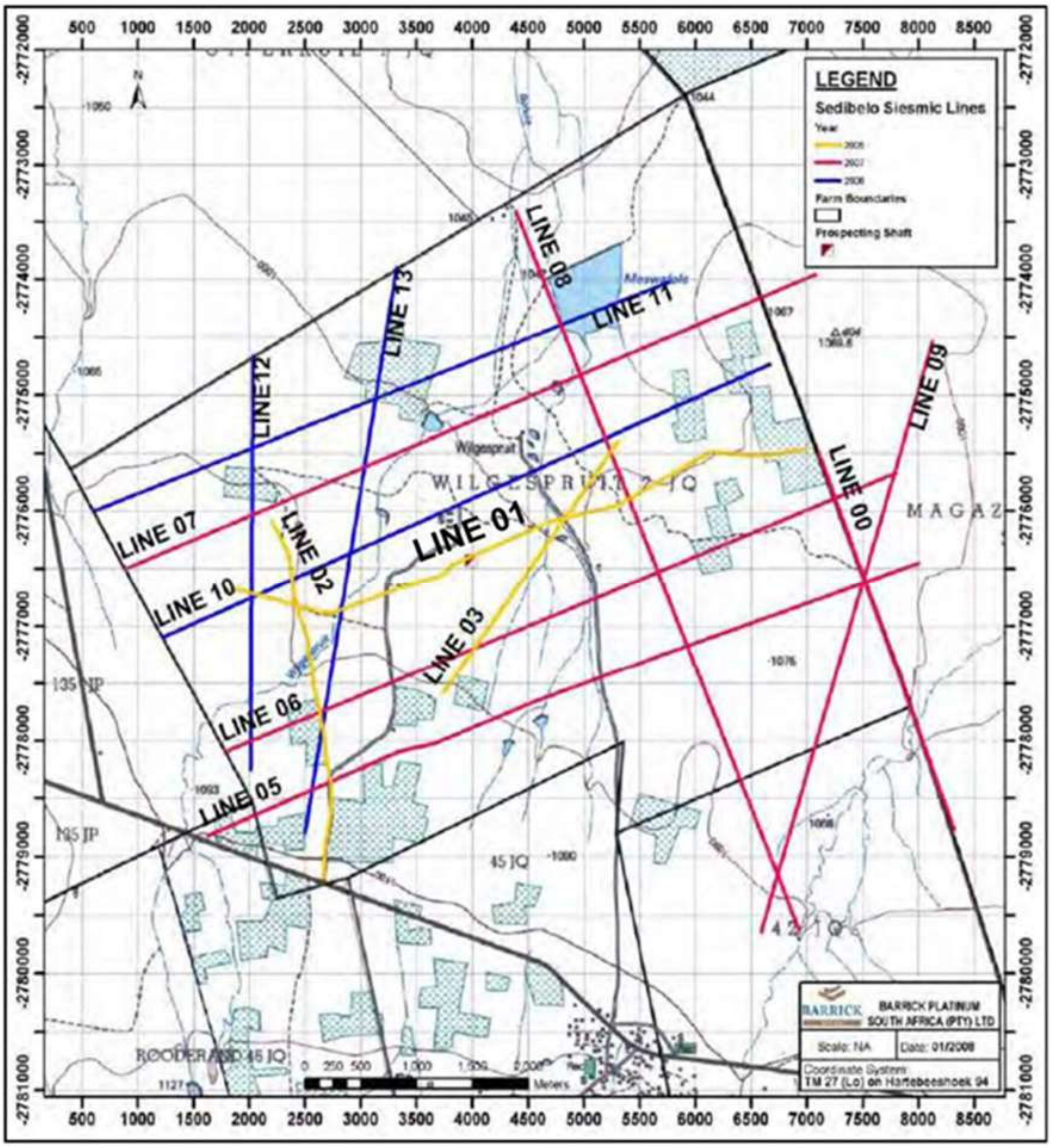
The locations of the 2D seismic traverses that were conducted on Sedibelo and Magazynskraal are shown in Figure 6-2 and Figure 6-3, respectively.

An example of a seismic section along traverse MGZ05 on Magazynskraal is shown in Figure 6-3. Interpreted faults are shown in red, with drill hole traces shown in purple. The orange/purple lines at depth are interpreted to be Transvaal Supergroup sediments which form the footwall of the BC.



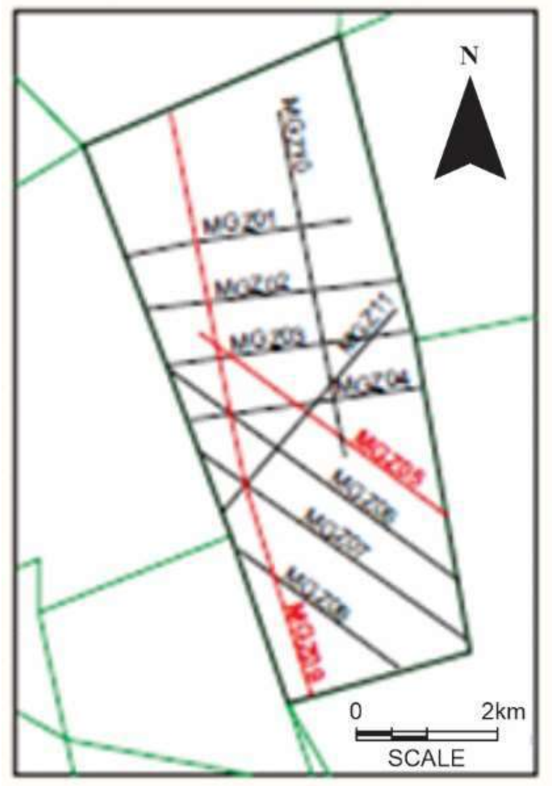
srk consulting	**SRL Total Assets PEA** Western Bushveld Complex Properties with Aeromagnetic Data	Project No. 600322

Figure 6-1: Western Bushveld Compex Properties with Aeromagnetic Data

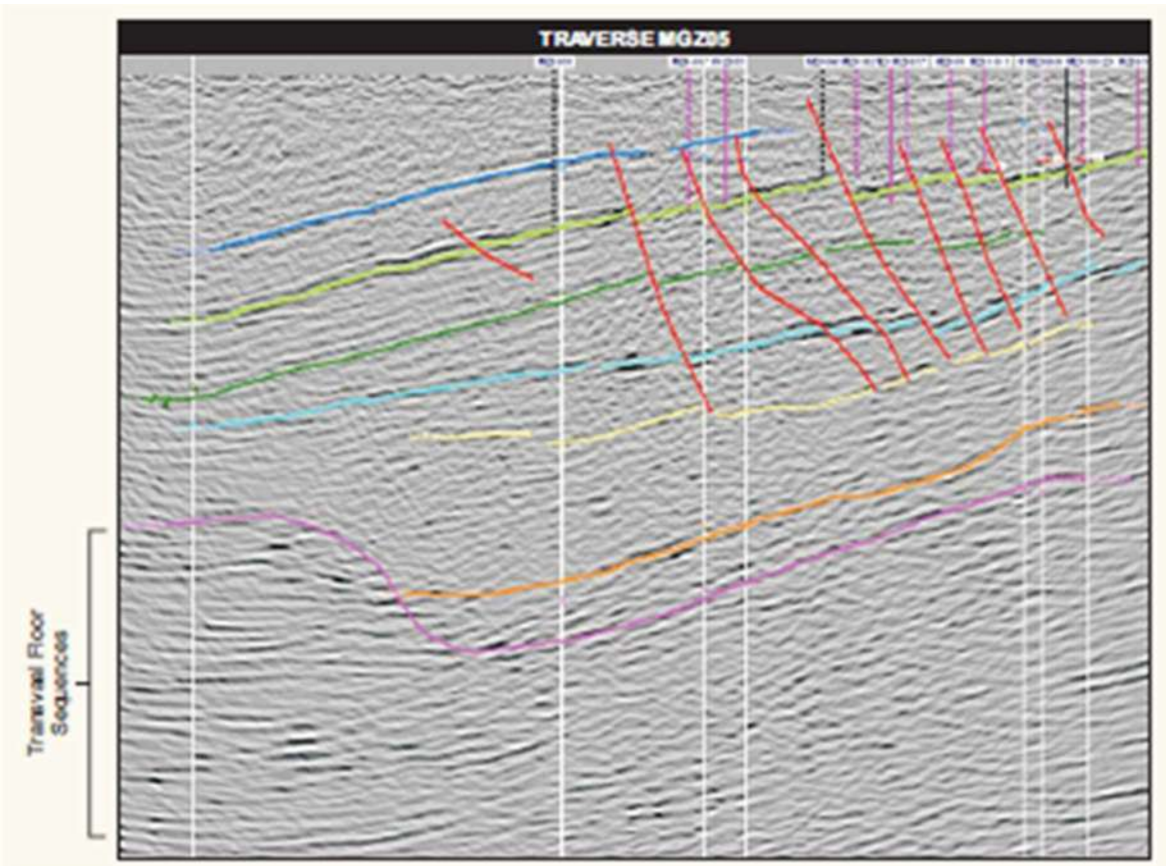


srk consulting	**SRL Total Assets PEA** Locations of 2D Seismic Lines on Farm Wilgespruit 2JQ [source: Snowden Optimro, 2011]	Project No. 600322

Figure 6-2: Locations of 2D Seismic Lines on Farm Wilgespruit 2JQ



SE NW



srk consulting	**SRL Total Assets PEA** 2D Seismic Traverses and Section MGZ05 on Farm Magazynskraal 3JQ [source: SRL, 2020]	Project No. 600322

Figure 6-3: 2D Seismic Traverses and Section MGZ05 on Farm Magazynskraal 3JQ

6.2.2 Kruidfontein

The historical development of the Kruidfontein property is summarised in Table 6-5. The exploration work carried out to date includes aeromagnetic and seismic surveys, regional geological mapping and core drilling.

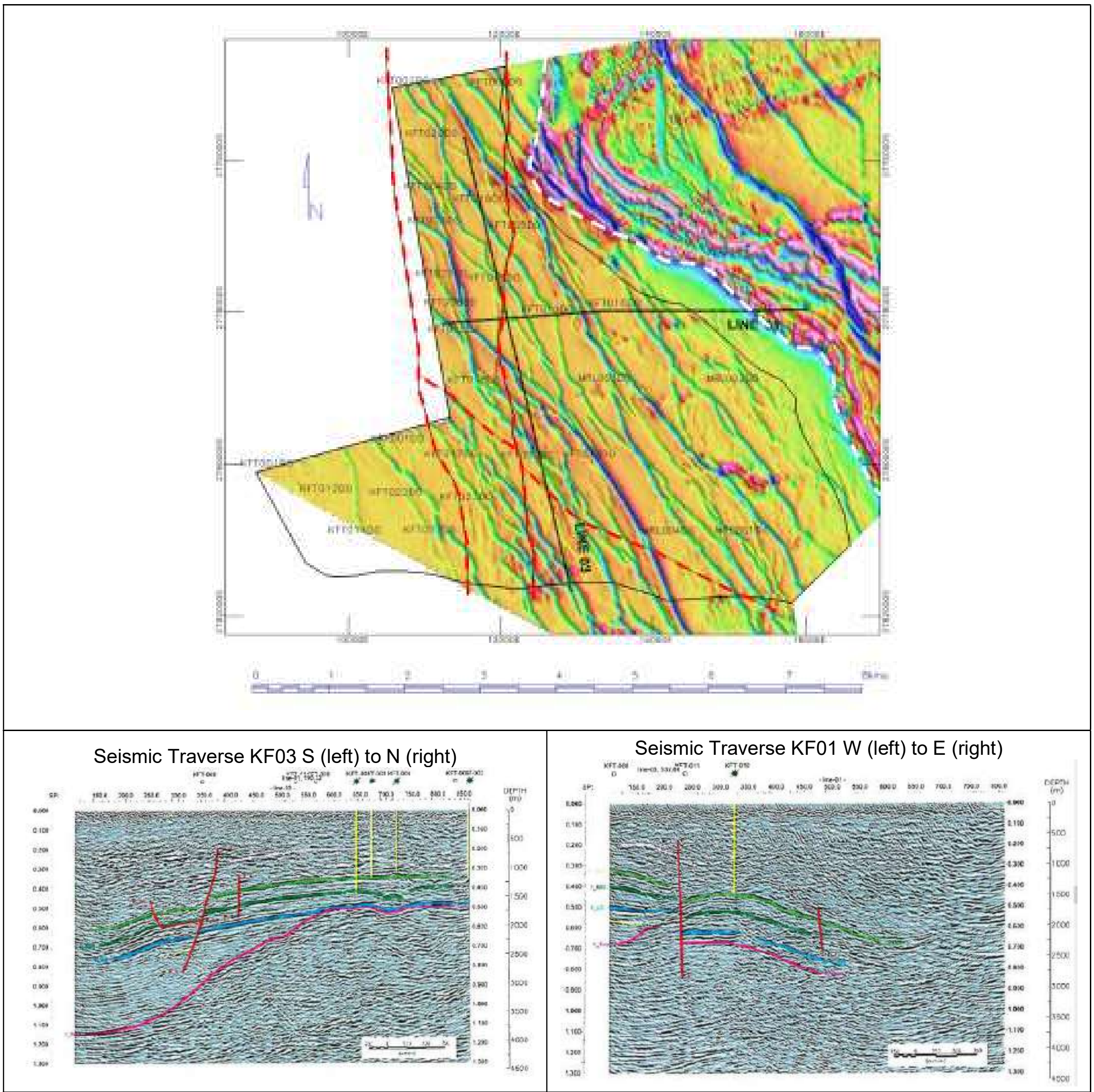
Table 6-5: Kruidfontein: Historical Development

Date	Activity	Comments
1974	Geological understanding comes primarily from the regional mapping by FJ Coertze, which is incorporated into the 1:250 000 scale Map 2526: Rustenburg, Council of Geoscience	
Early to mid-1990s	Exploration conducted by JCI Ltd	Single drill hole (KRF-001) drilled on Kruidfontein
Sep 2005	Richtrau No 80 (Pty) Ltd changes its name to C&L Mining (Pty) Ltd	
Sep 2006	NOPR awarded to C&L Mining, wholly owned subsidiary of Afarak Platinum Holdings (Pty) Ltd	
Dec 2007	Helicopter-borne magnetic gradient and radiometric survey flown under auspices of GAP Geophysics.	Flight line spacing of 50 m, at an elevation of 20 m
Nov 2008	2D seismic reflection surveys undertaken by GAP Geophysics. Two traverse lines (E-W and N-S) totalling 13.9 km completed.	Other two traverse cancelled due to bad weather
Sep 2008 to Jul 2009	Exploration drilling conducted by C&L Mining Phase 1 – 13 diamond drill holes on Kruidfontein 40JQ and 4 drill holes on Modderkuil 39JQ.	
Sep 2009 to Feb 2010	Exploration drilling conducted by C&L Mining Phase 2 – 11 drill holes completed.	
2010	Gemecs compiles structural model for the Kruidfontein project.	
Jun 2010	Competent Persons Report on Kruidfontein Project, by Mitchell et al.	
2008	Memorandum of Understanding signed between C&L Mining and BBKT	
Dec 2010	Concept study report for underground mine compiled for Aquarius Platinum South Africa by RSV (Pty) Ltd	
2011	Aquarius Platinum Ltd acquires Afarak, the holding company of C&L Mining	
Jan 2014	MoU with BBKT revised to cater for Section 11(2) transfer	
Jun 2014	Section 11(2) consent to transfer entire issued capital of C&L Mining to PPM granted	
May 2017	Section 102 application submitted to incorporate the NOPR NW30/5/1/1/2/10259PR into the Sedibelo (IBMR) NOMR NW30/5/1/2/2/333MR	NW30/5/1/1/2/10259PR cannot be renewed again.
July 2017	Mining Right Application MRA NW30/5/1/2/2/10120MR accepted by the DMRE	MRA submitted to secure mineral rights

A composite of the aeromagnetic image, the surveyed seismic lines and interpreted faults and dykes is shown in Figure 6-4. The lines in the seismic traverses were interpreted to represent the following:

- Magenta (lowermost) line floor of the Rustenburg Layered Suite;
- Cyan line LG chromitites;
- Dark green line MG chromitites;
- Pale green line UG2 chromitite;
- Pink line reflector in the Main Zone, possibly the Main Mottled Anorthosite;
- Red lines fault traces; and
- Yellow lines drill hole traces.

An image of the radiometric data was not provided because Pilanesberg outwash and “black turf” soils served to obscure any signal from possible underlying radioactive dykes.

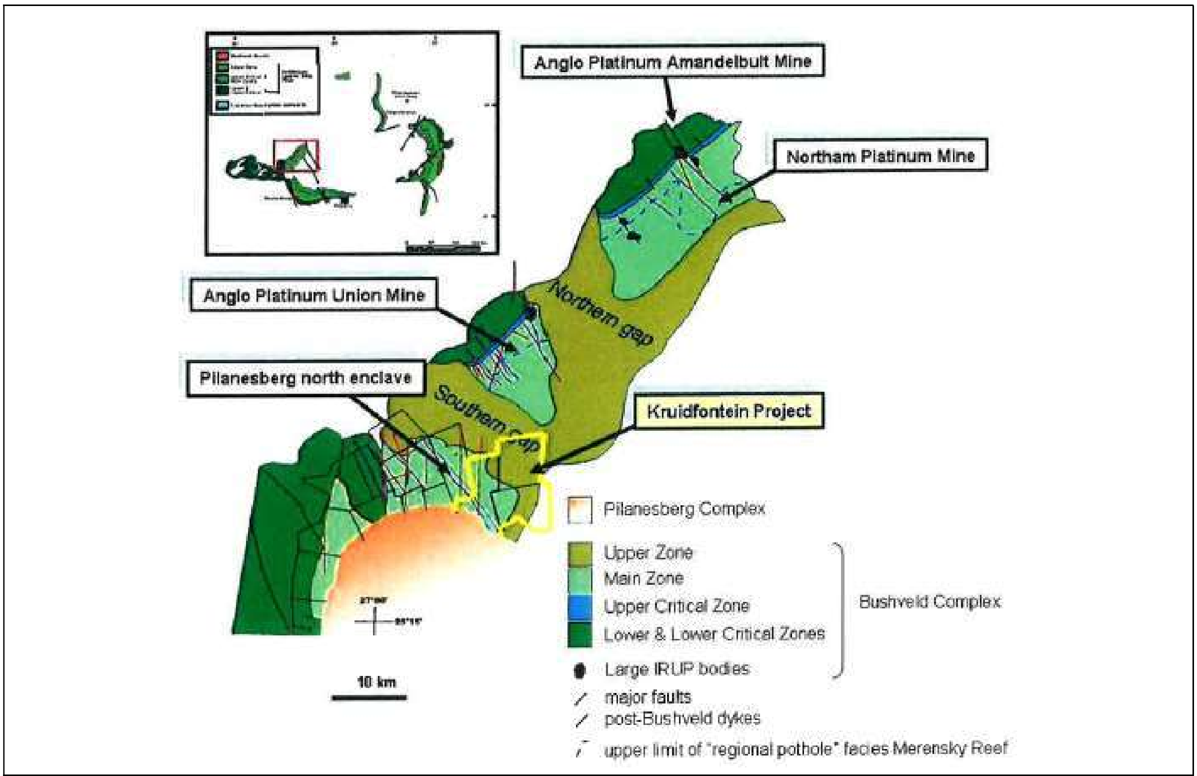


srk consulting	**SRL Total Assets PEA** Kruidfontein: Composite Aeromagnetic Image, Interpreted Dykes and Faults (dashed red lines) and Surveyed Seismic Lines (black lines) [source: Mitchell *et al* (2010)]	Project No. 600322

Figure 6-4: Kruidfontein: Composite Aeromagnetic Image, Interpreted Dykes and Surveyed Seismic Lines

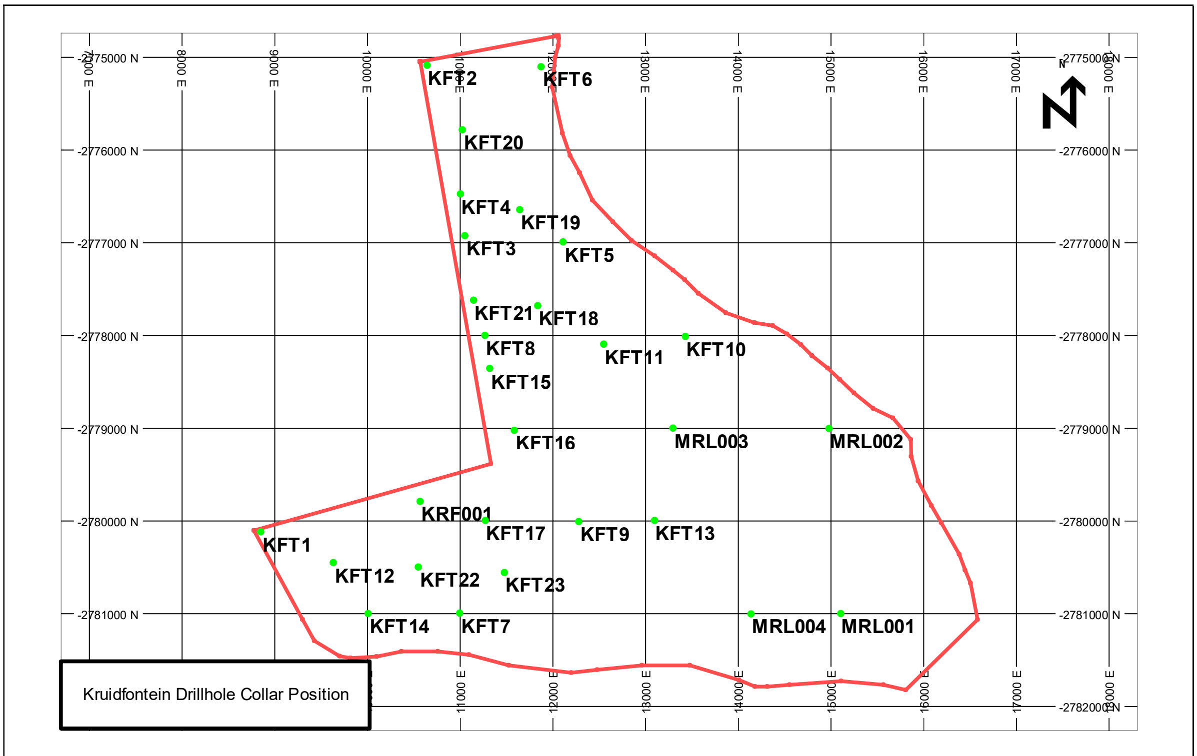
The most significant feature of the approximately N-S trending seismic line KF03 is the prominent up-doming of the floor contact of the Rustenburg Layered Suite in the north of the property, as the contact of the southern gap area is approached (Figure 6-5:). Drill hole KFT-006 in the far northeast of the property did not intersect Upper Critical Zone lithologies.

A total of 28 drill holes were drilled on the property (locations shown in Figure 6-6), giving an average drill spacing of 970 m x 970 m. The mineralised zone identified by the drilling spans approximately 6 km from north to south and 6 km from west to east at its widest.



srk consulting	**SRL Total Assets PEA** Geology of the Swartklip Facies and Kruidfontein Project [source: Mitchell et al, 2010]	Project No. 600322

Figure 6-5: Geology of the Swartklip Facies and Kruidfontein Project



srk consulting	**SRL Total Assets PEA** Kruidfontein: Drill Hole Location Plan	Project No. 600322

Figure 6-6: Kruidfontein: Drill Hole Location Plan

6.2.3 Mphahlele

The exploration history of the project area is summarised in Table 6-6.

The interpreted aeromagnetic results reduced to the pole residual total field in Figure 6-7 show the interpreted traces of the UG2 and Merensky reefs. The first vertical derivative magnetic map clearly delineated the stratigraphy of the Critical and other BC zones and also the eastern contact close to the Wonderkop Fault (see Figure 6-7).

Locality plans of the drill hole collars are shown in Figure 10-4.

Table 6-6: Mphahlele: Historical Development

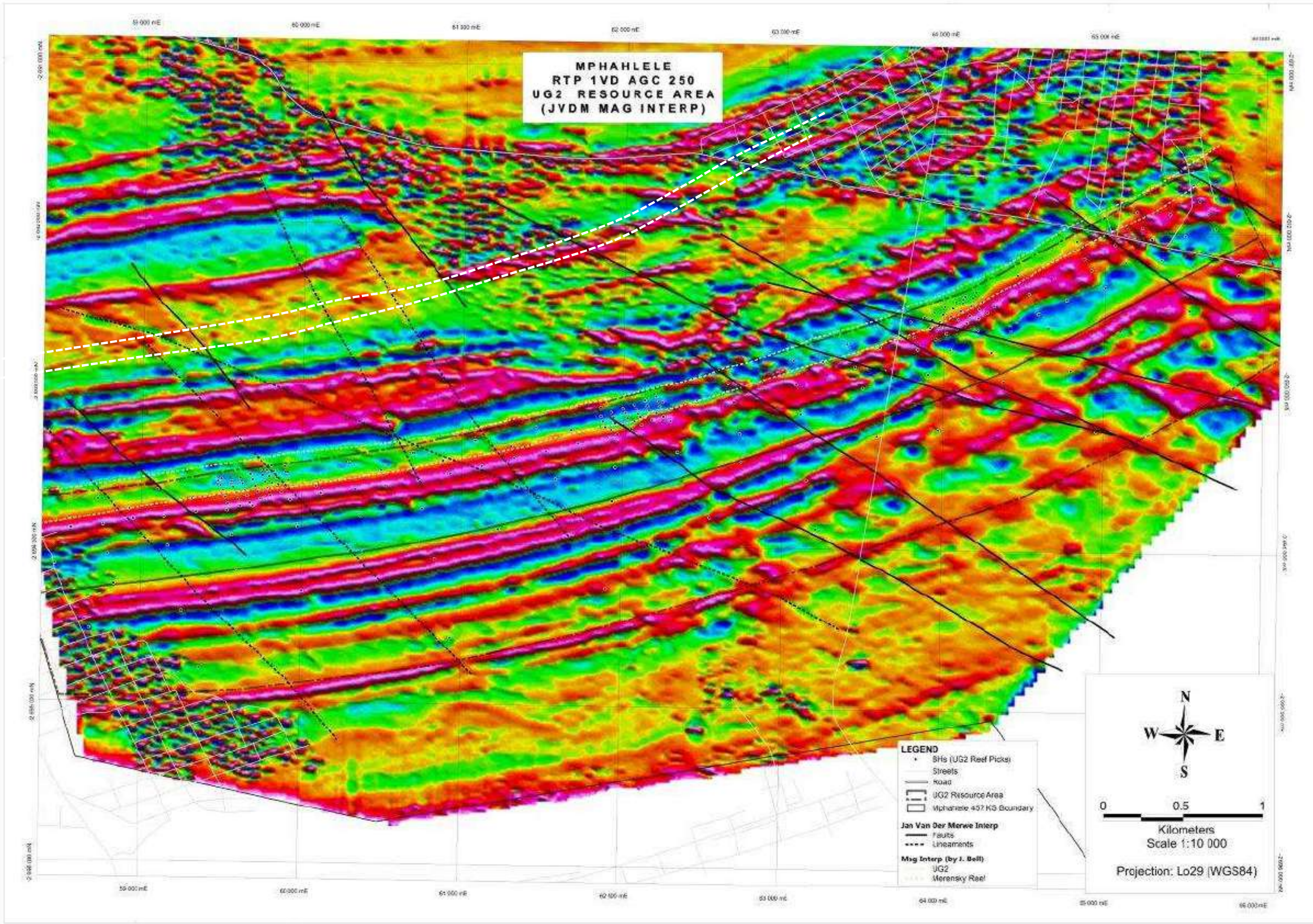
Date	Activity	Comments
Prior to 1966	Regional mapping by the CGS, as well as regional aeromagnetic and gravity surveys that form part of public domain data.	
Early 1970s – late 1980s	AngloPlats (formerly Johannesburg Consolidated Investments, "JCI") undertook exploration, including 24 bore holes.	Collar information acquired from CGS but no access to drill logs or assay results
2002	Mineral rights offered for tender	
Nov 2002	Prospecting Permit awarded to Tameng Mining & Exploration Holdings (Pty) Ltd	Platmin1 (SPM) held 26.2% beneficial interest in Mphahlele
Jan 2004	Airborne magnetic and radiometric survey completed	Colour aerial photographs used to create a digital terrain model
Sept 2004	Platmin (SPM) acquired a further interest from Ashanti Goldfields Cayman Limited	
Sept 2006	Prospecting Permit converted to NOPR in terms of MPRDA	
Jan 2007	Transaction completed with Moepi (BEE partner) whereby Platmin (SPM) acquired increased stake in Mphahlele in return for issue of shares in Boynton Investments (Pty) Ltd (Boynton) to Moepi.	Platmin (SPM) held 54.29% indirect beneficial interest in Mphahlele.
Feb 2004 to June 2008	Drilling programme comprising 220 drillholes (71 822 m – 54 455 m mother holes and 9 181 m of deflections) completed. Assay results for 199 drillholes	Represents 161 and 267 assayed intervals through MR and UG2 respectively Additional 38 MR and 101 UG2 intervals from start-up blocks assayed.
Dec 2007	Application for NOMR reference LP30/5/1/2/2/87MR submitted.	
Feb 2008	NOMR LP30/5/1/2/2/87MR awarded	
Jan 2009	Financial guarantee for environmental rehabilitation provided to DMRE.	
Dec 2009	A feasibility study on the Mphahlele project is completed.	
2010 - 2011	Critical review of the feasibility study and re-engineering of key components undertaken.	
Dec 2016	Underground mine layout redesigned to cater for underground crushing and Rados screening.	Study completed to a Prefeasibility Study (PFS) level of confidence
2019	Mine design modified to allow crushing and Rados screening on surface, targeting 105 ktpm RoM.	FS not completed
Dec 2020	Updated FS for Mphahlele at 125 ktpm RoM ore issued	Extracts UG2 only.
Dec 2020 to Feb 2021	Mine design and schedules revised to include production from Merensky	
May to Jun 2021	Mine design and schedules revised to allow for partial pillar reclamation on retreat (UG2 mining only)	PFS level of confidence

6.3 Historical Mineral Resource Estimate

The Mineral Resource estimates for the components of the SRL Assets are publicly available on CSA's document repository (www.Sedar.com) with an effective date of 30 December 2009 for Ruighoek and 31 December 2021 for all other assets, shown as follows:

- Ruighoek Project Table 6-7;
- West Pit Table 6-8;
- East Pit Table 6-9;
- Central Underground Table 6-10;
- East Underground Table 6-11;
- Kruidfontein Table 6-12; and
- Mphahlele Project Table 6-13.

The previous Mineral Resource estimates are superseded by the current Mineral Resource estimates reported herein.



srk consulting	**SRL Total Assets PEA** Plan View of Mphahlele showing Interpreted Fault and Lineaments overlain on the First Vertical Derivative of the Aeromagnetic Survey [source: SRL, 2020]	Project No. 600322

Figure 6-7: Plan View of Mphahlele showing Interpreted Fault and Lineaments overlain on the First Vertical Derivative of the Aeromagnetic Survey

6.3.1 Ruighoek and PSM

Table 6-7 shows the historical Mineral Resource estimate for the Ruighoek Project, while Table 6-8 to Table 6-11 show the historical estimates for PSM.

6.3.2 West Pit TRR

The West Pit TRR project has not been reported on before.

6.3.3 Kruidfontein

Table 6-12 shows the historical Mineral Resource estimate for Kruidfontein.

6.3.4 Mphahlele

The historical Mineral Resources for the Mphahlele Project are shown in Table 6-13.

Table 6-7: Ruighoek: Historical Mineral Resource Estimate at as 31 March 2009 (SEDAR)

Resource Area	Reef	Tonnage (Mt)	PGM Grade (g/t)					Contained PGM (Moz)	Base Metal Grade (%)		Contained Base Metal (t)	
			4E	Pt	Pd	Rh	Au	4E	Ni	Cu	Ni	Cu
Indicated Mineral Resource												
Ruighoek	Merensky Reef	3.3	3.44	2.20	0.93	0.17	0.14	0.37	0.10	0.03	3 339	1 084
	Upper Pseudo Reef	2.2	1.77	1.10	0.51	0.09	0.07	0.13	0.11	0.02	2 392	417
	Lower Pseudo	3.0	1.96	1.19	0.61	0.06	0.10	0.19	0.11	0.02	3 282	577
	U2D	3.5	4.46	2.76	1.20	0.45	0.04	0.51				
Total Indicated Ruighoek		**12.0**	**3.07**	**1.90**	**0.86**	**0.21**	**0.09**	**1.2**	**0.11**	**0.03**	**9 013**	**2 078**
	4E prill			62%	28%	7%	3%					
Inferred Mineral Resource												
Ruighoek	Merensky Reef	4.9	5.09	3.31	1.37	0.20	0.20	0.81	0.16	0.07	7 753	3 315
	Upper Pseudo Reef	2.0	3.53	2.16	1.10	0.18	0.11	0.47	0.15	0.04	3 008	732
	Lower Pseudo	3.8	2.93	1.78	0.91	0.09	0.15	0.22	0.14	0.03	5 168	1 269
	U2D	7.0	4.76	2.95	1.29	0.48	0.05	0.74				
Total Inferred Ruighoek		**17.7**	**4.33**	**2.73**	**1.21**	**0.30**	**0.09**	**2.2**	**0.15**	**0.05**	**15 929**	**5 316**
	4E prill			63%	28%	7%	2%					

Notes:

1. Indicated Resource to 200m below surface, includes diluting material.
2. Inferred Resource, undiluted.
3. Based on selective mining option.
4. Mining Width: MR variable, UG2 = 1.32m.
5. https://www.sedarplus.ca/csa-party/records/document.html?id=f2df0f92268790fae405d37e75874c870e263ff1dc559bce71eef1730885198a.

Table 6-8: PSM - West Pit: Historical Mineral Resource Estimate at as 31 December 2021 (SEDAR)

Resource Area	Reef	Tonnage (Mt)	Reef Width (m)	PGM Grade (g/t)								Contained PGM (Moz)		Base Metal Grade (%)		Contained Base Metal (t)	
				4E	6E	Pt	Pd	Rh	Au	Ru	Ir	4E	6E	Ni	Cu	Ni	Cu
Measured Mineral Resource																	
West Pit	Upper Pseudo Reef (S2)	0.004	0.42	11.42	12.39	7.17	3.51	0.48	0.27	0.81	0.16	0.002	0.002	0.25	0.12	11	5
	Lower Pseudo (S2)	0.02	1.38	1.72	1.82	1.04	0.52	0.06	0.10	0.08	0.02	0.001	0.001	0.10	0.02	17	3
	U2D	0.05	2.26	4.23	5.22	2.52	1.17	0.52	0.03	0.80	0.19	0.01	0.01	0.00	0.00	1	0
Total Measured West Pit		**0.07**	**1.94**	**4.08**	**4.85**	**2.46**	**1.16**	**0.41**	**0.06**	**0.63**	**0.15**	**0.01**	**0.01**	**0.04**	**0.01**	**28**	**8**
	6E prill					50.6%	23.8%	8.4%	1.3%	12.9%	3.0%						
Indicated Mineral Resource																	
West Pit	Upper Pseudo Reef (S2)	1.33	0.59	7.84	8.66	4.93	2.25	0.40	0.25	0.69	0.13	0.33	0.37	0.20	0.09	2 644	1 180
	Pseudo Reef HZB (S2)	9.05	3.57	1.63	1.78	0.96	0.52	0.08	0.08	0.12	0.02	0.47	0.52	0.18	0.03	16 153	2 263
	Lower Pseudo (S2)	2.68	1.07	2.60	2.76	1.56	0.79	0.10	0.15	0.13	0.03	0.22	0.24	0.12	0.03	3 342	921
	U2D	5.84	2.17	3.95	4.84	2.37	1.09	0.46	0.02	0.72	0.17	0.74	0.91	0.02	0.00	982	239
Total Indicated West Pit		**18.90**	**2.57**	**2.92**	**3.35**	**1.76**	**0.85**	**0.22**	**0.08**	**0.35**	**0.08**	**1.78**	**2.03**	**0.12**	**0.02**	**23 121**	**4 604**
	6E prill					52.6%	25.6%	6.6%	2.5%	10.3%	2.3%						

Note:

1. Mineral Resources are not Mineral Reserves and do not meet the threshold for reserve modifying factors, such as estimated economic viability, that would allow conversion to Mineral Reserves. There is no certainty that any part of the in-situ Mineral Resources will be converted into Mineral Reserves.
2. S1 package is excluded from Mineral Resource Statement because it is impractical to mine selectively.
3. Open pit optimisation was based on an assumed 4E basket price of ZAR21 000/oz, assumed mining & processing cost of ZAR445/t and reported within a pit shell that is based on a 120% revenue factor.
4. Numbers in the tables have been rounded to reflect the accuracy of the estimates, and may not sum due to rounding.
5. Source: https://www.sedarplus.ca/csa-party/records/document.html?id=b5f0f5a461eaada78846d355dbc7170f11926b77c57286fdf98d5c1b2e536164.

Table 6-9: PSM - East Pit: Historical Mineral Resource Estimate as as 31 December 2021 (SEDAR)

Resource Area	Reef	Tonnage (Mt)	PGM Grade (g/t)								Contained 4E	Contained 6E	Base Metal Grade(%)		Contained Base Metal (t)	
			4E	6E	Pt	Pd	Rh	Au	Ru	Ir	(Moz)	(Moz)	Ni	Cu	Ni	Cu
Indicated Mineral Resource																
	UPR	0.65	5.24	5.81	3.25	1.52	0.28	0.19	0.48	0.09	0.11	0.12	0.15	0.07	1 011	438
East Pit	PRHZB	5.77	1.13	1.25	0.65	0.35	0.06	0.07	0.10	0.02	0.21	0.23	0.15	0.02	8 776	1 087
	LPR	1.16	2.81	2.98	1.64	0.90	0.11	0.16	0.14	0.03	0.11	0.11	0.13	0.04	1 560	414
Total Indicated East Pit silicates		**7.59**	**1.74**	**1.91**	**1.03**	**0.53**	**0.09**	**0.09**	**0.14**	**0.03**	**0.42**	**0.47**	**0.15**	**0.03**	**11 348**	**1 939**
	6E prill				53.90%	27.97%	4.61%	4.86%	7.17%	1.50%						
Indicated Mineral Resource																
	U2L	0.25	3.84	4.61	2.46	0.92	0.44	0.03	0.62	0.15	0.03	0.04	0.02	0.01	59	14
	U2P	0.18	3.90	4.75	2.44	0.99	0.44	0.03	0.69	0.16	0.02	0.03	0.02	0.01	40	9
East Pit	U2	2.37	6.35	7.71	3.77	1.85	0.71	0.02	1.11	0.26	0.48	0.59	0.02	0.00	368	107
	U2PEG	1.10	2.20	2.69	1.38	0.54	0.27	0.01	0.39	0.10	0.08	0.09	0.01	0.02	103	247
Total Indicated East Pit UG2		**3.90**	**4.91**	**5.96**	**2.95**	**1.38**	**0.55**	**0.02**	**0.86**	**0.20**	**0.62**	**0.75**	**0.01**	**0.01**	**570**	**377**
	6E prill				49.5%	23.2%	9.3%	0.3%	14.3%	3.4%						
Total Indicated East Pit		**11.49**	**2.82**	**3.28**	**1.68**	**0.82**	**0.25**	**0.07**	**0.38**	**0.09**	**1.04**	**1.21**	**0.10**	**0.02**	**11 917**	**2317**
Inferred Mineral Resource																
	UPR	0.13	6.78	7.73	4.11	1.96	0.47	0.25	0.79	0.15	0.03	0.03	0.17	0.07	223	93
East Pit	PRHZB	2.30	1.00	1.11	0.58	0.31	0.06	0.06	0.09	0.02	0.07	0.08	0.14	0.02	3 238	350
	LPR	0.58	2.48	2.60	1.51	0.73	0.08	0.16	0.10	0.02	0.05	0.05	0.13	0.03	736	188
Total Inferred East Pit silicates		**3.01**	**1.54**	**1.69**	**0.92**	**0.46**	**0.08**	**0.08**	**0.12**	**0.03**	**0.15**	**0.16**	**0.14**	**0.02**	**4 196**	**632**
	6E prill				54.33%	27.30%	4.65%	4.97%	7.24%	1.51%						

Note:
1. PRHZB = Pseudo Reef Harzburgite; U2P =UG2 Parting - barren material ; U2PEG = UG2 Footwall Pegmatoid.
2. Mineral Resources are not Mineral Reserves and do not meet the threshold for reserve modifying factors, such as estimated economic viability, that would allow conversion to Mineral Reserves. There is no certainty that any part of the in-situ Mineral Resource estimated will be converted into Mineral Reserves.
3. S1 package is excluded from Mineral Resource Statement because it is impractical to mine selectively.
4. Open pit optimisation was based on an assumed 4E basket price of ZAR21 000/oz, assumed mining & processing cost of ZAR445/t and reported within a pit shell that is based on a 120% revenue factor.
5. Numbers in the tables have been rounded to reflect the accuracy of the estimates and may not sum due to rounding.
6. 1 troy ounce = 31.1034768.
7. Source: https://www.sedarplus.ca/csa-party/records/document.html?id=b5f0f5a461eaada78846d355dbc7170f11926b77c57286fdf98d5c1b2e536164.

Table 6-10: PSM - Central Underground: Historical Mineral Resource Estimate as at 31 December 2021 (SEDAR)

Resource Area	Reef	Tonnage (Mt)	Reef Width (m)	PGM Grade (g/t)								Contained 4E	Contained 6E	Base Metal Grade (%)		Contained Base Metal (t)	
				4E	6E	Pt	Pd	Rh	Au	Ru	Ir	(Moz)	(Moz)	Ni	Cu	Ni	Cu
Indicated Mineral Resource																	
Sedibelo Central Underground	PUP	1.04	1.20	6.05	6.52	3.82	1.75	0.25	0.23	0.41	0.07	0.20	0.22	0.19	0.08	1 967	847
	UG2	15.42	1.15	6.79	8.71	4.03	1.93	0.80	0.04	1.31	0.61	3.37	4.32	0.01	0.00	1 913	376
Total Indicated Sedibelo Central Underground		**16.46**		**6.75**	**8.58**	**4.01**	**1.92**	**0.77**	**0.05**	**1.26**	**0.58**	**3.57**	**4.53**	**0.02**	**0.01**	**3 880**	**1 222**
	6E prill					47%	22%	9%	1%	15%	7%						
Inferred Mineral Resource																	
Sedibelo Central Underground	PUP	1.14	1.20	7.03	7.78	4.52	1.90	0.40	0.22	0.64	0.11	0.26	0.29	0.21	0.08	2 399	939
	UG2	7.99	1.11	6.46	8.29	3.97	1.70	0.76	0.03	1.25	0.58	1.66	2.13	0.01	0.00	822	162
Total Inferred Sedibelo Central Underground		**9.13**		**6.54**	**8.23**	**4.04**	**1.73**	**0.72**	**0.06**	**1.17**	**0.52**	**1.92**	**2.41**	**0.04**	**0.01**	**3 221**	**1 101**
	6E prill					61.8%	26.4%	11.0%	0.8%	17.9%	8.0%						

Note:

1. Mineral Resource are not Mineral Reserves and do not meet the threshold for reserve modifying factors., such as estimated economic viability, that would allow conversion to Mineral Reserves. There is no certainty that any part of the in-situ Mineral Resources will be converted into Mineral Reserves.
2. The in-situ Mineral resources are reported above 4E cut-off grades of 1.15 g/t and 1.62 g/t for UG2 and PUP reefs, respectively. These are based on 4E basket prices of USD3 037/oz and USD2 086/oz, which include a 20% premium, and plant recoveries of 82% and 85% for UG2 and PUP, respectively.
3. Reef width represents the vertical thickness, and not true thickness.
4. Numbers in the tables have been rounded to reflect the accuracy of the estimates, and may not sum due to rounding
5. 1 troy ounce = 31.1034768
6. Source: https://www.sedarplus.ca/csa-party/records/document.html?id=b5f0f5a461eaada78846d355dbc7170f11926b77c57286fdf98d5c1b2e536164

Table 6-11: PSM - East Underground: Historical Mineral Resource Estimate as at 31 December 2021 (SEDAR)

Resource Area	Reef	Tonnage (Mt)	Reef Width (m)	PGM Grade (g/t)								Contained PGM (Moz)		Base Metal Grade (%)		Contained Base Metal (t)	
				4E	6E	Pt	Pd	Rh	Au	Ru	Ir	4E	6E	Ni	Cu	Ni	Cu
Measured Mineral Resource																	
Sedibelo East	UG2	9.37	1.40	5.61	6.90	3.36	1.53	0.68	0.02	1.04	0.27	1.69	2.08	0.01	0.00	1 402	307
Magazynskraal	UG2	2.31	1.35	5.52	6.84	3.40	1.44	0.66	0.02	1.07	0.26	0.41	0.51	0.02	0.00	400	110
Total Measured Resource		**11.68**	**1.39**	**5.59**	**6.89**	**3.37**	**1.52**	**0.68**	**0.02**	**1.05**	**0.26**	**2.10**	**2.59**	**0.02**	**0.00**	**1 803**	**416**
	6E prill					48.9%	22.0%	9.8%	0.3%	15.2%	3.8%						
Indicated Mineral Resource																	
Sedibelo East	MR PUP	6.21	1.17	5.71	6.28	3.51	1.68	0.29	0.23	0.47	0.10	1.14	1.25	0.19	0.08	11 810	4 704
	MR Contact	6.64	1.18	2.33	2.66	1.47	0.61	0.13	0.11	0.23	0.10	0.50	1.25	0.07	0.04	4 890	2 740
	UPR	8.54	1.16	2.25	2.55	1.38	0.73	0.11	0.09	0.18	0.05	0.62	0.70	0.14	0.03	12 046	2 287
	UG2	16.02	1.42	5.45	6.66	3.28	1.49	0.64	0.02	0.98	0.25	2.81	3.43	0.01	0.00	2 380	524
Magazynskraal	MR PUP	4.51	1.18	6.53	7.22	4.17	1.78	0.37	0.20	0.59	0.11	0.95	1.05	0.22	0.08	9 864	3 765
	MR Contact	4.26	1.17	4.37	4.84	2.99	1.02	0.21	0.14	0.36	0.11	0.60	0.66	0.09	0.05	3 913	2 214
	UPR	5.55	1.18	2.18	2.40	1.29	0.68	0.12	0.08	0.18	0.04	0.39	0.43	0.16	0.03	8 768	1 503
	UG2	17.42	1.50	4.49	5.56	2.76	1.19	0.52	0.02	0.86	0.20	2.51	3.11	0.01	0.00	2 488	664
Total Indicated Resource		**69.15**	**1.31**	**4.28**	**5.04**	**2.64**	**1.18**	**0.38**	**0.08**	**0.61**	**0.15**	**9.51**	**11.89**	**0.08**	**0.03**	**56 158**	**18 400**
	6E prill					52.4%	23.4%	7.5%	1.6%	12.0%	3.0%						
Inferred Mineral Resource																	
Sedibelo East	MR PUP	0.87	1.24	4.60	5.06	2.78	1.39	0.24	0.19	0.39	0.08	0.13	0.14	0.18	0.07	1 560	596
	MR Contact	3.64	1.12	2.41	2.81	1.59	0.58	0.14	0.09	0.24	0.17	0.28	0.33	0.07	0.04	2 669	1 465
	UPR	3.93	1.15	2.26	2.55	1.35	0.71	0.12	0.09	0.18	0.10	0.29	0.32	0.15	0.03	5 785	1 051
	UG2	9.36	1.37	5.23	6.37	3.15	1.44	0.60	0.02	0.93	0.23	1.57	1.92	0.02	0.00	1 482	351
Magazynskraal)	MR PUP	18.75	1.16	6.68	7.35	4.29	1.82	0.34	0.23	0.56	0.10	4.03	4.43	0.23	0.08	42 409	14 471
	MR Contact	7.80	1.18	2.99	3.35	2.03	0.71	0.15	0.09	0.26	0.10	0.75	0.84	0.10	0.05	7 434	3 647
	UPR	6.83	1.18	1.65	1.86	0.97	0.54	0.09	0.06	0.13	0.07	0.36	0.41	0.15	0.02	10 303	1 350
	UG2	46.08	1.42	4.69	5.76	2.84	1.30	0.53	0.02	0.86	0.21	6.95	8.54	0.02	0.00	7 012	1 715
Total Inferred Resource		**97.27**	**1.31**	**4.59**	**5.41**	**2.84**	**1.26**	**0.41**	**0.08**	**0.66**	**0.17**	**14.36**	**16.93**	0.08	**0.03**	**78 654**	24 644
	6E prill					52.6%	23.3%	7.5%	1.4%	12.1%	3.1%						

Note:

1. Mineral Resources are not Mineral Reserves and do not meet the threshold for reserve modifying factors, such as estimated economic viability, that would allow conversion to Mineral Reserves. There is no certainty that any part of the Mineral Resources will be converted into Mineral Reserves.
2. The in-situ Mineral Resources are reported above 4E cut-off grades of 1.25 g/t (UG2), 1.69 g/t (MR PUP), 1.73 g/t (MRC) and 1.64 g/t (UPR). These are based on 4E basket prices of USD3 020/oz, USD2 230/oz, USD2 176/oz and USD2 292/oz respectively which include a 20% premium. A plant recovery of 82.8% was applied.
3. Numbers in the tables have been rounded to reflect the accuracy of the estimates and may not sum due to rounding.
4. Reef width represents the vertical thickness, and not true thickness.
5. 1 troy ounce = 31.1034768 g.
6. Source: https://www.sedarplus.ca/csa-party/records/document.html?id=b5f0f5a461eaada78846d355dbc7170f11926b77c57286fdf98d5c1b2e536164

Table 6-12: Kruidfontein: Historical Mineral Resource Estimate as at 31 December 2021 (SEDAR)

Resource Area	Reef	Tonnage (Mt)	Reef Width (cm)	PGE Grade (g/t)							Contained PGM (Moz)		Base Metal Grade (%)		Contained Base Metal (t)	
				4E	Pt	Pd	Rh	Au	Ru	Ir	4E	6E	Ni			Cu
Inferred Mineral Resource																
	PUP	58.4	1.14	8.12	5.22	2.21	0.43	0.25	0.68	0.12	15.22	16.70	0.239	0.0779	139.53	45.47
	6E prill				58%	25%	5%	3%	8%	1%						
Inferred Mineral Resource																
	UG2	90.4	1.41	5.52	3.40	1.41	0.64	0.07	1.01	0.23	16.03	19.63	0.0637	0.0029	57.6	2.64
	6E prill				50%	21%	10%	1%	15%	3%						
Total Inferred Resource		**148.8**		**6.54**	**4.11**	**1.72**	**0.56**	**0.14**	**0.88**	**0.19**	**31.25**	**36.33**	**0.132**	**0.032**	**197.13**	**48.11**
					54%	23%	7%	2%	12%	2%						

Notes:

1 Mineral Resources are not Mineral Reserves and do not meet the threshold for reserve modifying factors, such as estimated economic viability, that would allow for the conversion to Mineral Reserves. There is no certainty that any part of the Mineral Resources will be converted to Mineral Reserves.

2 The in-situ Mineral Resources are reported exclusive of any Mineral Reserves that may be derived from them. There are no Mineral Reserves declared for the Kruidfontein Project.

3 1 Troy Ounce = 31.1034768g.

4 There are no UG2 Mineral Resources below the determined 4E cut-off grade of 2.97g/t.

5 Strict application of the PUP 4E cut-off grade of 4.85 g/t will result in the exclusion of less than 1% of the PUP Mineral Resources.

6 The cut-off grades are based on 4E basket prices of USD2 982/oz and USD2 206/oz and plant recovery factors of 75% and 79% for the UG2 and PUP respectively.

7 Numbers in the table have been rounded to reflect the accuracy of the estimate and may not sum due to rounding.

8 Source: https://www.sedarplus.ca/csa-party/records/document.html?id=dd907248977c11bf96bacb1f40cd05fa26c391b0b8c8b28fa7b1785bbb8904c1

Table 6-13: Mphahlele: Historical Mineral Resource Estimate at 31 December 2021 (SEDAR)

Classification INCLUSIVE	Reef	Tonnage (Mt)	Reef Width (m)	PGM Grade (g/t)								Contained PGM (Moz)		Base Metal Grade (%)		Contained Base Metal (t)	
				4E	6E	Pt	Pd	Rh	Au	Ir	Ru	4E	6E	Ni	Cu	Ni	Cu
Measured Mineral Resource																	
	Merensky	0.6	1.20	3.00	3.80	1.65	0.99	0.08	0.30	0.12	0.68	0.06	0.08	0.21	0.12	1 280	763
	UG2	2.1	1.20	5.03	6.02	2.55	1.94	0.43	0.10	0.18	0.82	0.34	0.41	0.12	0.07	2 518	1 566
Total Measured Resource		**2.7**		**4.57**	**5.52**	**2.35**	**1.73**	**0.35**	**0.15**	**0.17**	**0.79**	**0.40**	**0.49**	**0.14**	**0.09**	**3 798**	**2 329**
	6E prill					42.52%	31.27%	6.31%	2.66%	3.00%	14.25%						
Indicated Mineral Resource																	
	Merensky	12.1	1.36	3.00	3.75	1.65	0.99	0.08	0.28	0.11	0.64	1.17	1.46	0.20	0.12	23 851	14 218
	UG2	22.0	1.35	4.97	5.96	2.54	1.90	0.44	0.10	0.18	0.81	3.53	4.23	0.12	0.07	26 495	15 148
Total Indicated Resource		**34.1**		**4.27**	**5.18**	**2.22**	**1.58**	**0.31**	**0.16**	**0.15**	**0.75**	**4.69**	**5.69**	**0.15**	**0.09**	**50 346**	**29 366**
	6E prill					42.89%	30.53%	6.02%	3.09%	2.98%	14.49%						
Total Measured + Indicated Resource		**36.9**		**4.30**	**5.21**	**2.23**	**1.59**	**0.31**	**0.16**	**0.16**	**0.75**	**5.09**	**6.18**	**0.15**	**0.09**	**54 144**	**31 694**
	6E prill					42.85%	30.39%	5.62%	3.47%	2.97%	14.70%						
Inferred Mineral Resource																	
	Merensky	23.3	1.46	3.12	3.91	1.71	1.04	0.08	0.29	0.12	0.67	2.33	2.92	0.20	0.12	46 164	27 681
	UG2	25.6	1.28	5.11	6.12	2.59	1.98	0.44	0.10	0.18	0.83	4.20	5.04	0.12	0.07	29 928	18 883
Total Inferred Resource		**48.9**		**4.16**	**5.06**	**2.17**	**1.53**	**0.27**	**0.19**	**0.15**	**0.75**	**6.54**	**7.96**	**0.16**	**0.10**	**76 091**	**46 564**
	6E prill					42.82%	30.28%	5.31%	3.76%	2.97%	14.87%						

Notes:
1. 4E is shorthand for Pt + Pd + Rh + Au. 6E is shorthand for 4E + Ir + Ru.
2. Mineral Resources are not Mineral Reserves. There is no certainty that any part of the Mineral Resources will be converted to Mineral Reserves.
3. The in-situ Mineral Resources are reported on an attributable basis, with only the 75% attributable to SRL included.
4. The in-situ Mineral Resources are reported inclusive of any Mineral Reserves that may be derived from them.
5. 1 Troy Ounce = 31.1034768g
6. The in-situ Mineral Resources are reported above a cut-off of 1.80 g/t 4E for the Merensky and 1.38 g/t 4E for the UG2.
7. The cut-off grades are based on 4E basket prices of USD1 989/oz and USD2 797/oz and plant recovery factors of 87% and 83% for the Merensky and UG2 respectively.
8. Numbers in the table have been rounded to reflect the accuracy of the estimate and may not sum due to rounding.
9. Source: https://www.sedarplus.ca/csa-party/records/document.html?id=5eb5edd97d514f76235ccf286b59f2e1cbb5c520be734742b48e913304fc5a6a

6.4 Historical Production

6.4.1 Ruighoek, PSM and Kruidfontein

Historical production statistics for PPM for 2018 to 2023 are summarised in Table 6-14.

Table 6-14: PPM: Historical Operating Statistics (2018 to 2023)

Item	Unit	2018	2019	2020	2021	2022	2023
Production							
West Pit RoM ore mined/hauled	(kt)	3 758	4 122	3 953	2 256	1 267	855
East Pit RoM ore mined/hauled	(kt)	-	-	-	-	1 165	2 054
Reef milled	(kt)	3 688	3 518	3 089	2 978	2 322	2 597
Mill feed grade	(4E g/t)	1.69	1.57	1.79	1.42	1.51	1.76
Plant recovery	(%)	76%	70%	71%	72%	61%	48%
PGM concentrate produced	(kt)	52.6	51.7	45.4	43.8	34.2	38.2
PGM despatches	(4E koz)	152.6	125.9	128.9	97.6	68.6	89.1
Cr_2O_3 concentrate (40-42%)	(kt)	34.4	35.0	33.6	9.7	0.0	0.0
Revenue							
PGM revenue	(ZARm)	2 267	2 636	4 519	3 951	2 732	2 226
Chrome revenue	(ZARm)	34	37	31	7	0	0
Basket PGM price received	(ZAR/oz 4E in conc.)	15 077	20 932	35 046	40 465	38 189	26 896
Production Costs	(ZARm)	2 196	2 359	2 627	2 881	3 298	3 597
Mining (incl. RoM pad & Geology)	(ZARm)	873	1 004	1 179	1 359	1 772	1 841
Processing (incl. laboratory)	(ZARm)	830	828	865	907	974	1 135
Chrome removal, TSP	(ZARm)	32	47	49	49	0	0
Overheads	(ZARm)	222	253	271	349	381	426
Royalties	(ZARm)	11	13	22	19	16	13
Beneficiation costs (incl. concentrate transport)	(ZARm)	228	215	242	198	156	182
Unit Costs	(ZAR/t RoM)	584	572	529	1 277	1 356	1 236
Mining	(ZAR/t RoM)	232	244	298	602	728	633
Processing	(ZAR/t mill feed)	225	235	283	305	419	437
Beneficiation costs	(ZAR/t mill feed)	62	61	78	66	67	70

SRL advised that the poor plant recoveries reported for 2022 and 2023 were due to the processing of high proportions of oxidised ore from the East Pit. Costs were negatively affected by lower mining and processing volumes in 2022 and 2023. The Company implemented curtailment of operations in November 2023 due to the prevailing economic conditions .

SRK draws two key conclusions from Table 6-14:

- The results of 2022 - 2023 are not a true reflection of the capability of PPM under normal operating conditions; and
- The results relate to open pit operations, which will not be comparable when SRL commences with its underground mining operations.

There has been no previous production at Ruighoek.

There are no historical production statistics for Magazynskraal or Kruidfontein, as mining has yet to commence on these properties.

6.4.2 Mphahlele

There are no historical production statistics for Mphahlele, as mining has yet to commence on this property.

7 Geological Setting and Mineralisation

7.1 Regional, Local and Property Geology

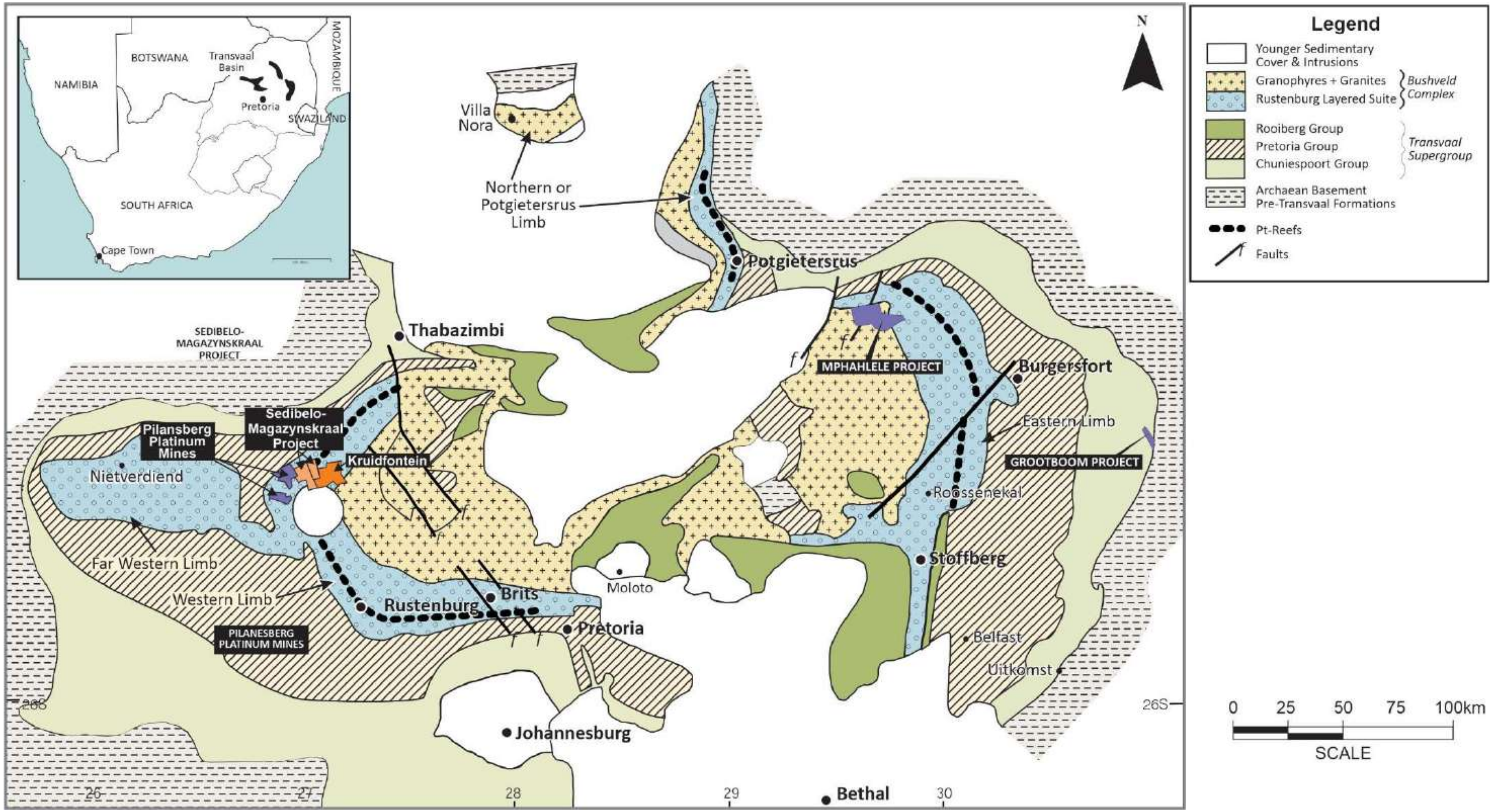
The BC of South Africa (Figure 7-) is the world's largest and hence the most important repository of PGMs with an exposed surface area of some 67 000 km^2. The sub-outcrop areal extent describes a broad ellipse and, when viewed in plan, measures approximately 200 km and 370 km along the north-south and east-west axes, respectively. This geological phenomenon consists of a massive ultramafic-mafic layered intrusion, or more likely a series of interconnected or overlapping intrusions, and a suite of associated granitoid rocks intruded into the early Proterozoic Transvaal Basin within the north central Kaapvaal Craton. This suite of associated granitoid rocks is a penecontemporaneous series of granitic rocks, termed the Lebowa Granite Suite (LGS) and felsic extrusive rocks of the Rooiberg Group (RG), which occur in the central area between the Eastern and Western Limbs of the BC. The ultramafic-mafic layered rocks, collectively referred to as the Rustenburg Layered Suite (RLS), are in five so-called lobes, namely the Western, Far Western, Eastern, Northern and Southern (Bethal) lobes. The mafic layered portion of the BC (i.e., the RLS) is 2 055 million years (Ma) old and is probably the largest layered mafic complex on earth. The magmatic layering of the RLS is remarkably consistent and can be correlated throughout most of the BC.

The RLS is divided into five major stratigraphic units, as follows:

- The lowermost ***Marginal Zone*** ranges in thickness from several metres to several hundred metres and comprises a heterogeneous succession of generally unlayered basic rocks dominated by norites;
- Ultramafic rocks dominate the ***Lower Zone***. The most complete exposures are in the northeastern part of the Eastern Limb where there are a series of cyclically layered units of dunite-harzburgite. These vary in thickness with the thinnest units developed over structural highs in the basin floor;
- The ***Critical Zone*** contains the economic platinum resources of the BC:
  - The Lower Critical Zone is dominated by pyroxenite with interlayered harzburgite and chromitite seams and is restricted to the central part of the Eastern Limb;
  - The Upper Critical Zone is recognisable throughout the Eastern and Western Limbs and consists of layered pyroxenites, norites, anorthosites and chromitites. The layering occurs on a variety of scales and may be regular to highly irregular in aspect;
  - Chromitite layers occur in three distinct groupings; the Lower Group (LG) seams occur in the Lower Critical Zone, the Middle Group (MG) seams straddle the contact between the Lower and Upper Critical Zones, and the Upper Group (UG) layers occur within the Upper Critical Zone. PGMs occur in sub-economic concentrations in association with chromitite layers in the Lower Critical Zone. The two most economically significant PGM mineralised layers of the BC, namely the MR and the Upper Group Chromitite 2 (UG2) Reef, are continuous over hundreds of kilometres. The PGMs include varying proportions of Pt, Pd, Rh, Ru, Ir and Os, as well as elevated concentrations of Ni, Cu and Co as base metal sulfides;
- The ***Main Zone*** is the thickest unit within the RLS and comprises approximately half the RLS stratigraphic interval. It consists of gabbro-norites with some anorthosite and pyroxenite layering. Banding or layering is not as well developed as in the Critical and Lower Zones; and
- The ***Upper Zone*** is dominated by gabbros with some banded anorthosite and magnetite. There is no chilled contact with the overlying rhyolite and granophyres of the LGS.

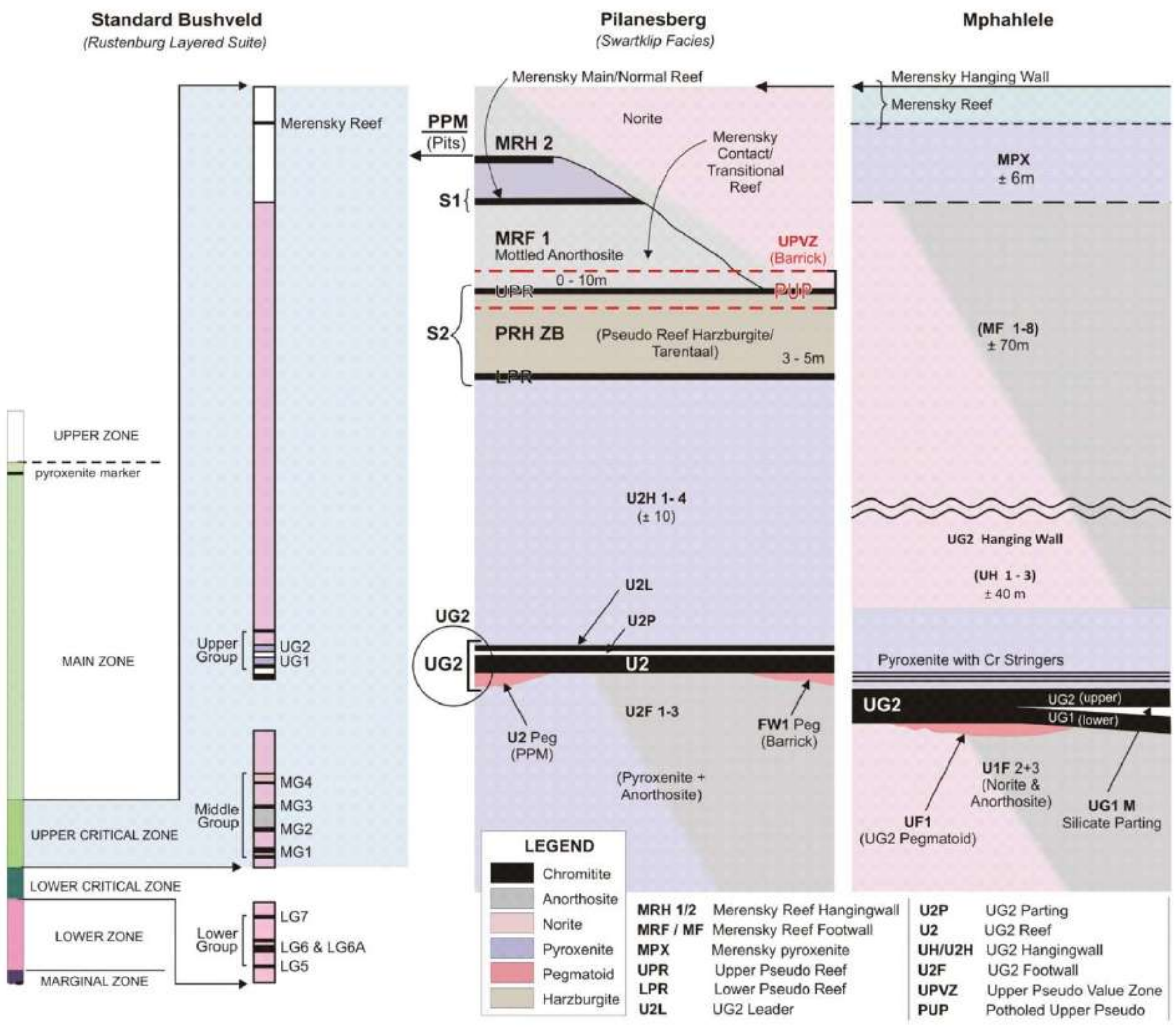
The true thickness of the RLS varies from 7 000 m to 12 000 m. The Marginal Zone is highly variable in thickness whilst the Lower Zone is restricted to isolated trough-like bodies located around the base of the RLS. The Main and Upper Zones are laterally more persistent, and these zones comprise more than 60% by volume of the RLS. The continuity of the Critical Zone is intermediate between that of the Lower Zone and Main/Upper Zones.

A composite stratigraphic section (Figure 7-2) compares the common stratigraphy of the RLS and the Critical Zone, to the local stratigraphy of the Swartklip facies (PSM and Kruidfontein Projects) and the Mphahlele Project.



srk consulting	**SRL Total Assets PEA** Regional Geology of the Bushveld Complex and its Country Rocks	Project No. 600322

Figure 7-1: Regional Geology of the Bushveld Complex and its Country Rocks



srk consulting	**SRL Total Assets PEA** Composite Stratigraphic Section comparing Conventional Critical Zone Stratigraphy to the Local Stratigraphy at the PSM and Mphahlele Projects [source: SRK, 2021a]	Project No. 600322

Figure 7-2: Composite Stratigraphic Section comparing Conventional Critical Zone Stratigraphy to the Local Stratigraphy at the PSM and Mphahlele Projects

The similarity of geology across large areas within each of the lobes, particularly the sequence of igneous layering that includes both the MR and the UG2 Reef, is probably indicative of simultaneous differentiation and replenishment of a basaltic magma under essentially identical conditions. The dip of the igneous layering is generally shallow and towards the centre of the complex.

Post-BC sedimentary successions of the Waterberg Group and Karoo Supergroup, as well as more recent alluvial deposits of Holocene age, cover large parts of the BC.

The Western Limb of the BC is subdivided into two sectors separated by the younger Pilanesberg: the northern ‘Swartklip’ sector where the PSM Project is located and the southern ‘Rustenburg’ sector.

In the Swartklip sector, the Upper Critical Zone stratigraphy between the UG2 and MR is significantly telescoped, ranging in thickness between 12 and 25 m, compared with a thickness of 120 m or more in other parts of the BC (compare Figure 7-2 and Figure 7-) such as the Eastern Limb where the Mphahlele deposit is located. In addition, the interval between the UG2 and the MR contains the PGM-bearing Pseudo Reef Package in the Swartklip sector, which is not encountered elsewhere in the BC.

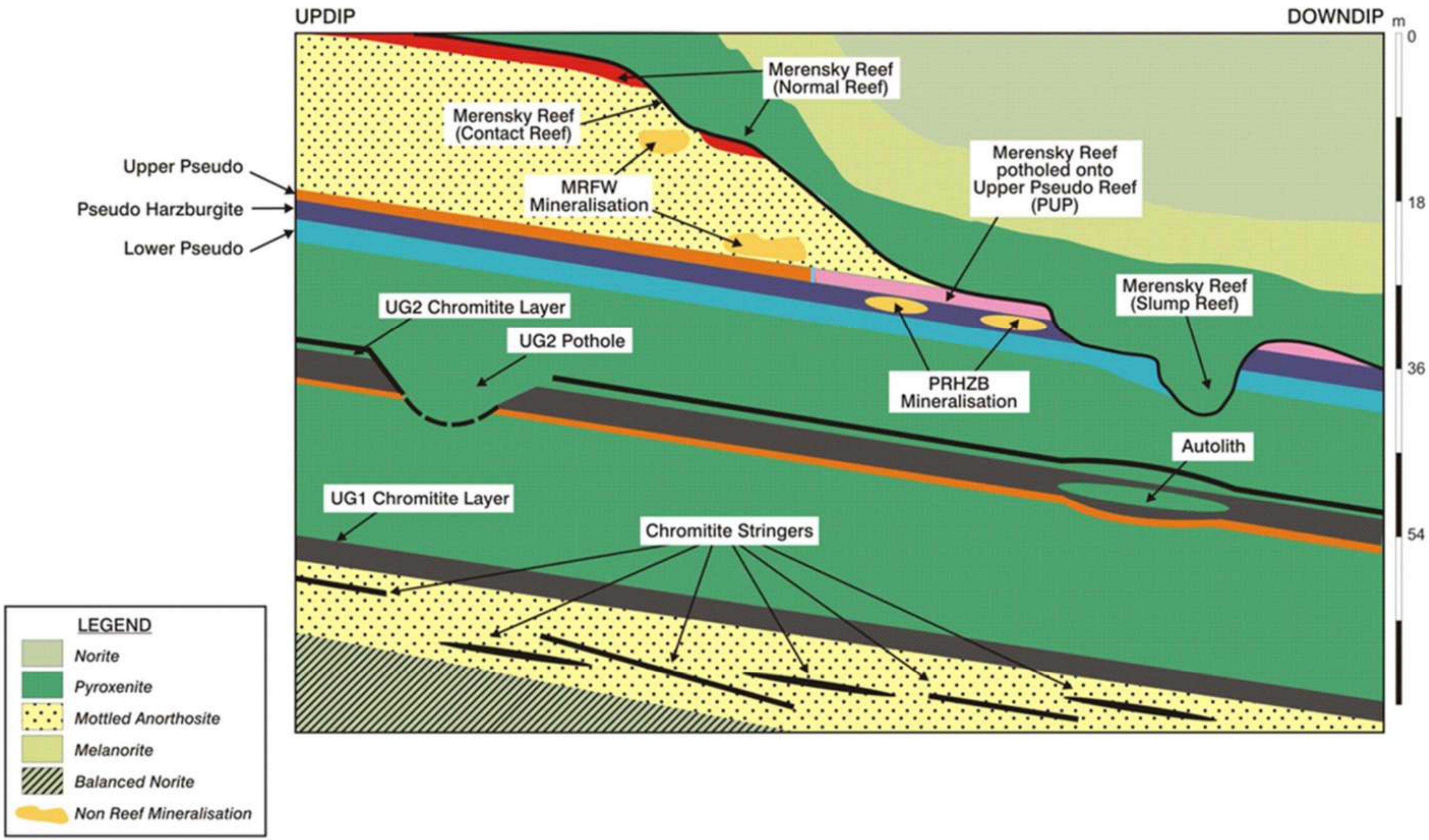
The PGMs are contained throughout the multi-layered sequence but are enriched (by factors of over 1 000) to economic concentrations within the Critical Zone and confined to certain horizons/layers commonly referred to as reefs. The Critical Zone is the host to all chrome and PGM mineralisation within the BC.

7.1.1 Ruighoek and PSM

The local geology around Ruighoek and the PSM Project areas are shown in Figure 7-4 and Figure 7-5, illustrating that the majority of the outcrop over the project area is of the Main Zone, and only in the far west do the Upper, Lower and the Critical Zone outcrop. The Ruighoek and PSM Projects which are located east and north of the Pilanesberg, respectively, are part of the Swartklip facies. The Pilanesberg shown in pale orange in Figure 7-6, and of age 1 300 Ma is an intrusion into the BC.

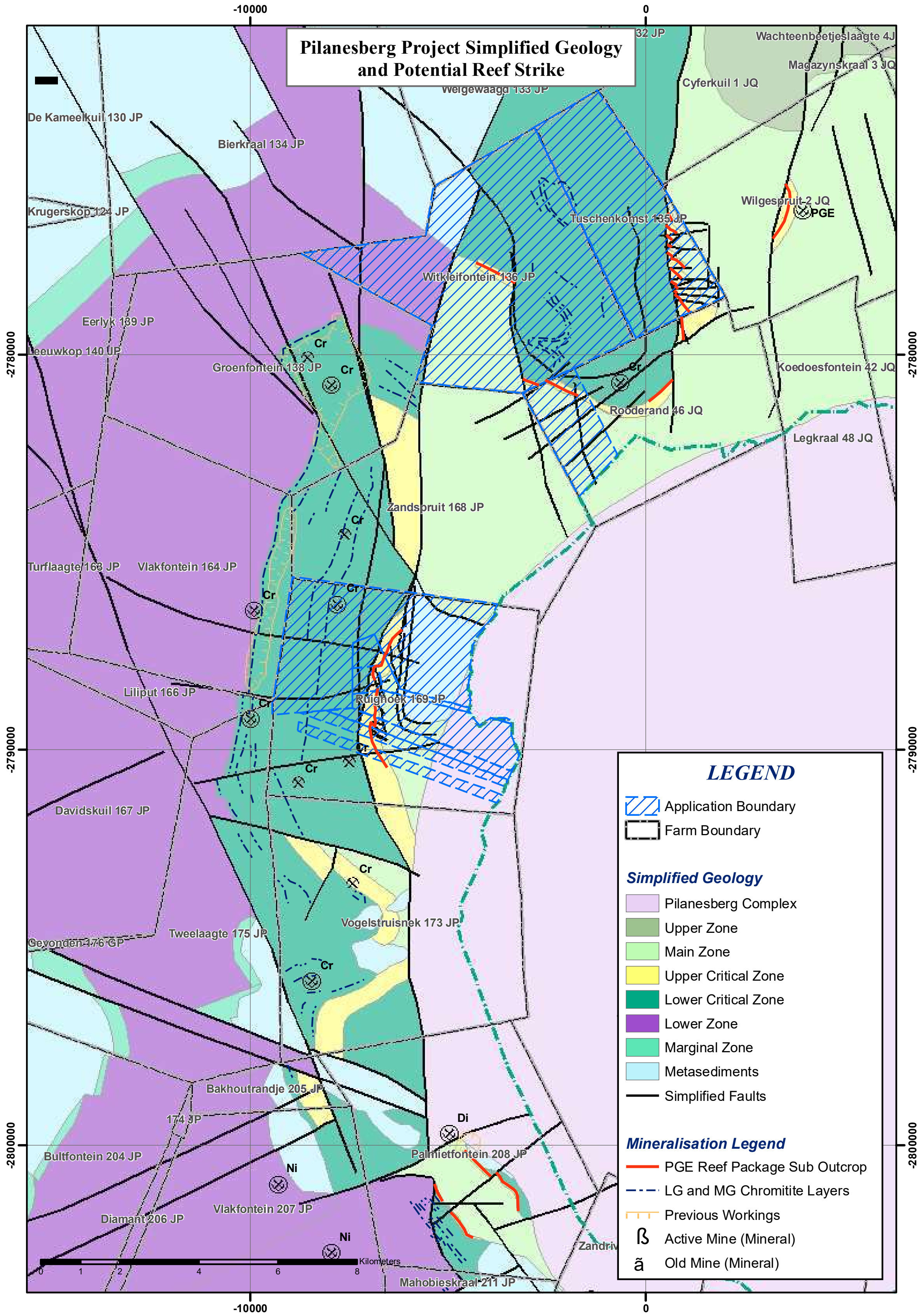
The Swartklip facies extends broadly from the Pilanesberg in the south to the Crocodile River in the north. In this part of the BC, the stratigraphic succession from the Lower Zone up to the lower part of the Main Zone (i.e. including all the PGM enriched layers) is completely eliminated in two areas, known as the Northern and Southern “Gap” areas (Figure 7-4). North and east of the dashed green line in Figure 7-6 is the Southern Gap Area (interpreted from aeromagnetic data), where no Critical Zone rocks are anticipated. The zone shaded pink (Figure 7-6) immediately south of the Southern Gap Area is an area where severe structural complications and disruption of stratigraphy are anticipated. The lines striking approximately NE-SW in Figure 7-6 represent the depth contours to the MR.

The pale blue shaded area represents the area where the MR, Pseudo reef package (unique to the Swartklip sector/facies) and UG2 reefs which are generally considered the mineralised unit of economic interest can be expected. These reef packages sub-outcrop within the project footprint as a result of the faulting. The stratigraphic interval between the MR and the UG2 is considerably attenuated relative to other parts of the BC. This is largely the result of the elimination or primary absence of plagioclase-rich lithologies (norite and anorthosite) that make up a considerable proportion of the Upper Critical Zone stratigraphy elsewhere in the Complex. The interval between the UG2 and the MR ranges from 12 m to 25 m in the Swartklip facies.



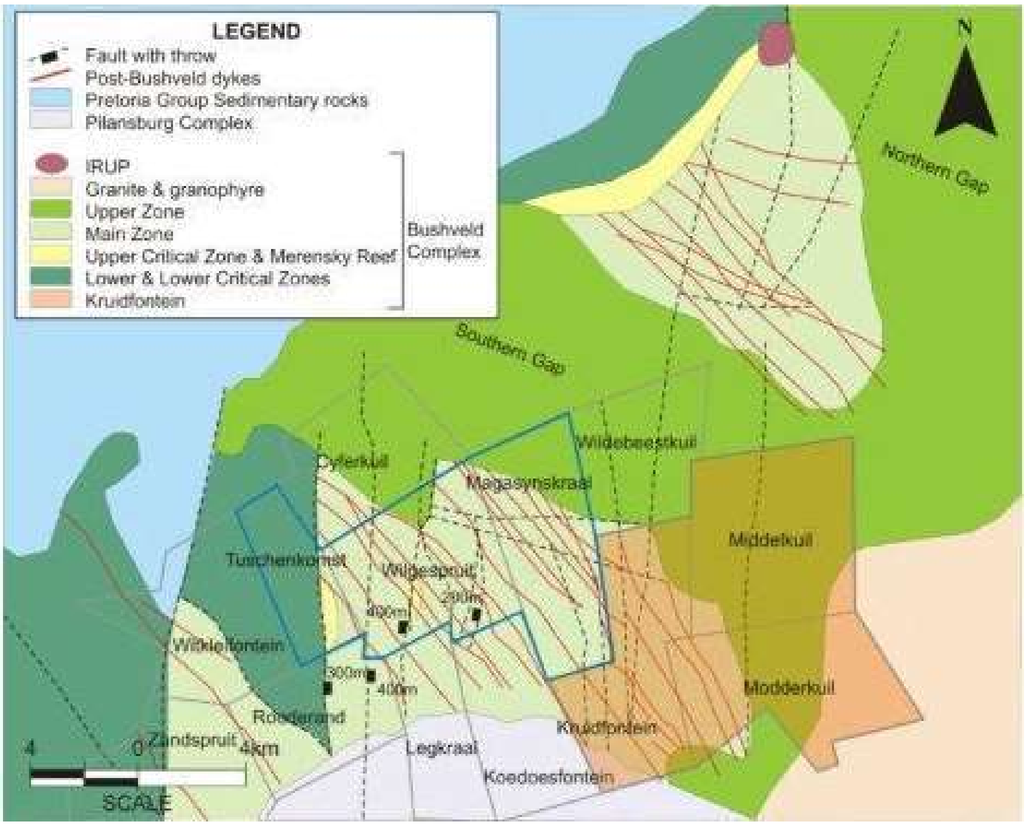
srk consulting	**SRL Total Assets PEA** Upper Critical Zone Stratigraphy between the UG2 and Merensky Reef of the Swartklip Sector, Western Limb of the BC [source: SRL, 2021]	Project No. 600322

Figure 7-3: Upper Critical Zone Stratigraphy between the UG2 and Merensky Reef of the Swartklip Sector, Western Limb of the BC



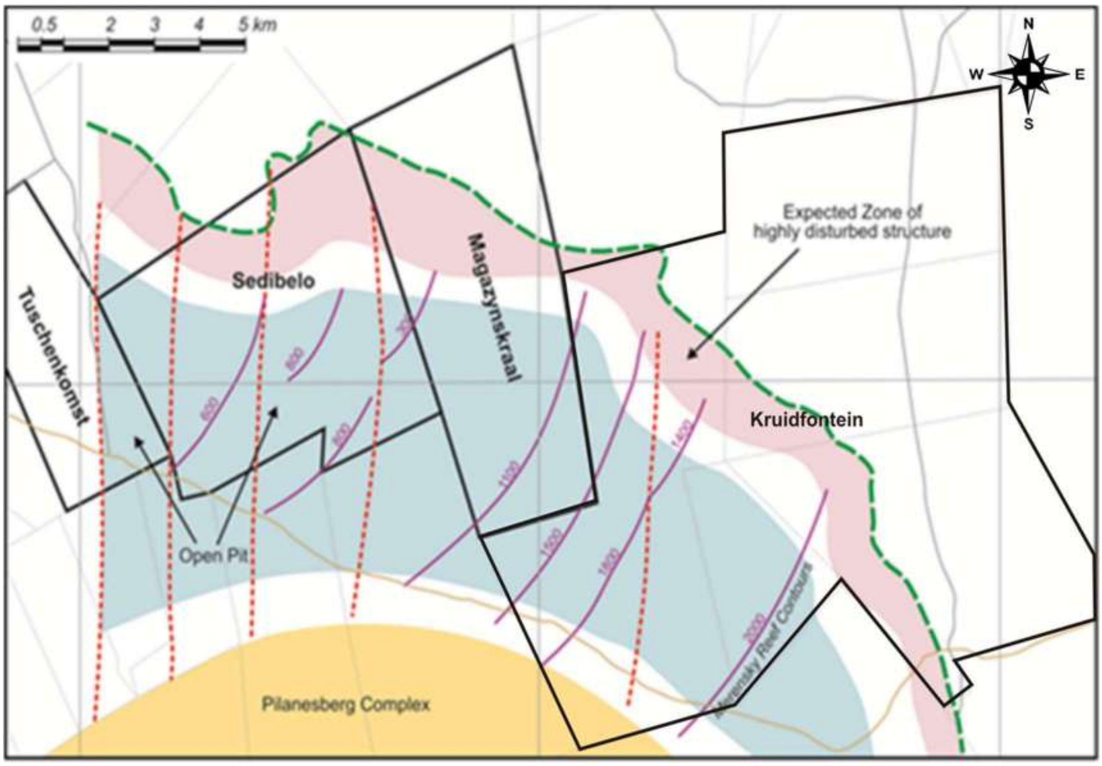
srk consulting	**SRL Total Assets PEA** Local Geology of the Ruighoek Project [source: SRL]	Project No. 600322

Figure 7-4: Local Geology of the Ruighoek Project



srk consulting | **SRL Total Assets PEA** Local Geology of the PSM Project [source: SRL] | Project No. 600322

Figure 7-5: Local Geology of the PSM Project



srk consulting | **SRL Total Assets PEA** Simplified Structural Geology of PSM Project [source: SRL] | Project No. 600322

Figure 7-6: Simplified Structural Geology of PSM Project

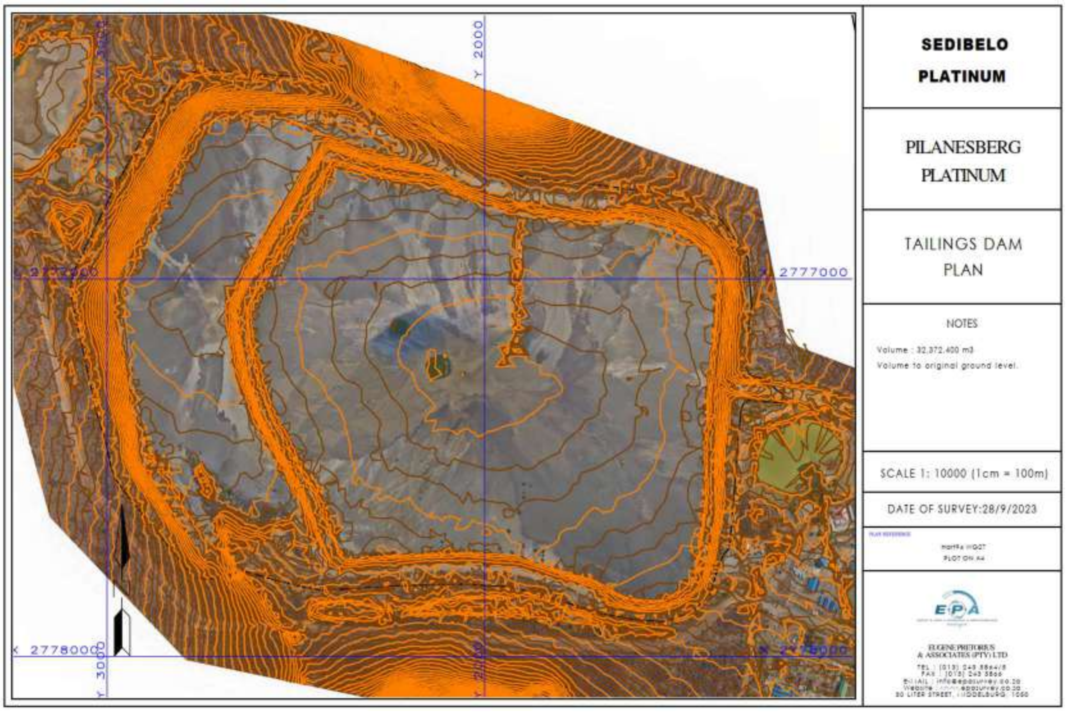
7.1.2 West Pit TRR

The West Pit TRR project aims to reclaim and retreat the historical tailings stored on the PPM TSF. The plant tailings have been accumulated since 2009, the tonnage and grade of which was measured during deposition as shown in Figure 7-7. Since this deposit has been formed from fine pumped slurry, a layered nature to the deposit is to be expected. Deposits of this type are generally fully extracted without selective mining, as the geotechnical behaviour of TSF material does not usually support safe partial extraction.

srk consulting	SRL Total Assets PEA PSM – West Pit TRR: Depositional History	Project No. 600322

Figure 7-7: PSM - West Pit TRR: Depositional History

Being a man made deposit on surface enables the volume of the TSF to be effectively quantified. Figure 7-8 displays a survey performed of the deposit which defines its extent and volume.



srk consulting	SRL Total Assets PEA PSM – West Pit TRR: Extent	Project No. 600322

Figure 7-8: PSM - West Pit TRR:Extent

7.1.3 Kruidfontein

Commentary as captured under Section 7.1.1 is generally applicable here. Although traces of Iron-rich Ultramafic Pegmatoid (IRUP) bodies are visible on aeromagnetic image, drillholes have not intersected any IRUPs and this contrasts with what is observed in Magazynskraal (PSM) to the north of Kruidfontein

7.1.4 Mphahlele

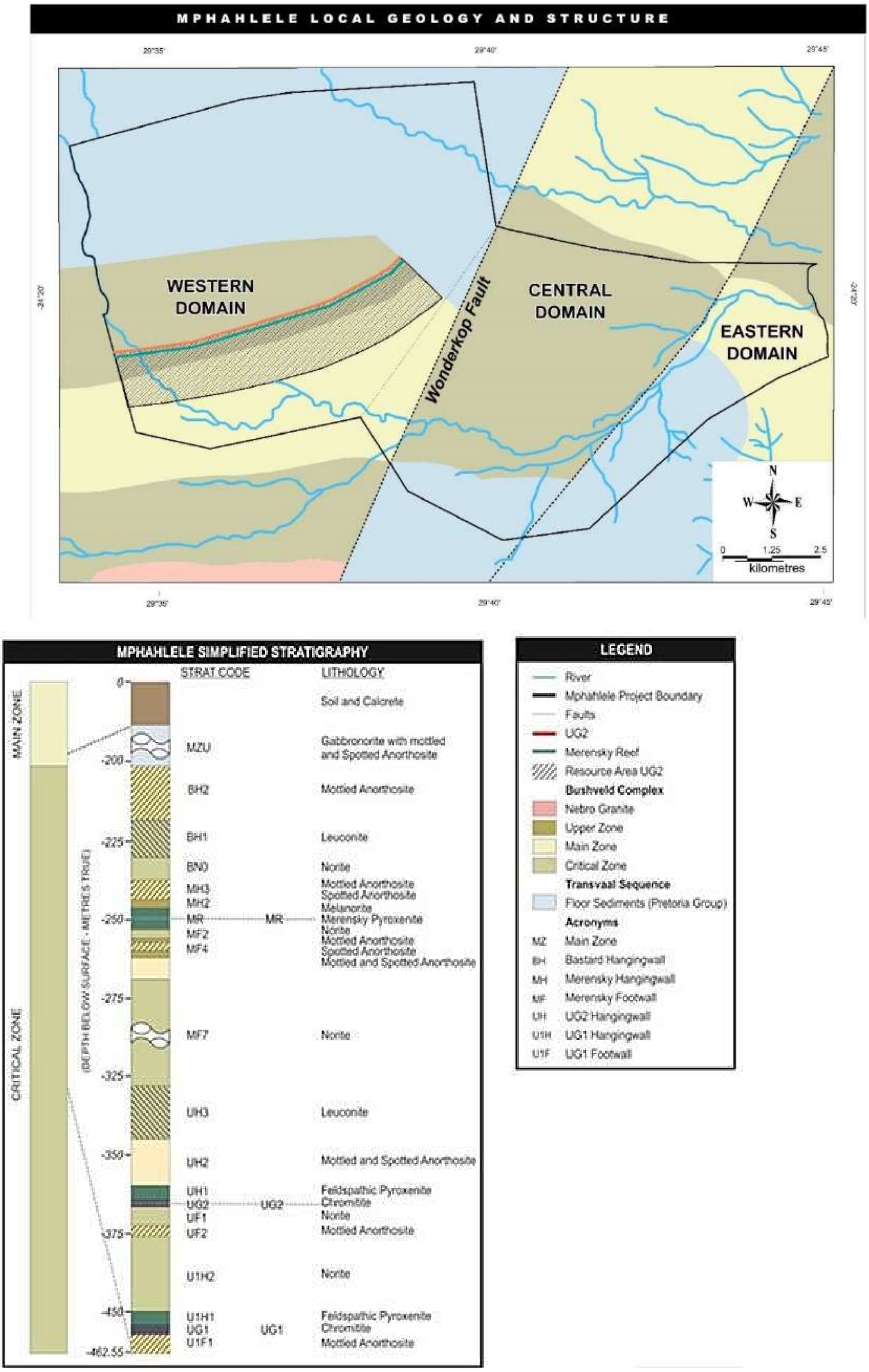
The Mphahlele Project is situated along the east-west trending, northern part of the Eastern Limb of the BC. The PGM mineralisation occurs within the UG2 and the MR, lying within the Upper Critical Zone of the RLS. The typical stratigraphy of the PSM Project and at Mphahlele is shown in Figure 7-2.

The rocks of the Main Zone and the upper parts of the Critical Zone underlie the Mphahlele Project. The main structural controls of the northern parts of the Eastern Limb are the Wonderkop and Dwarsrand Faults that traverse the Mphahlele Project (Figure 7-9). East of the project, in the vicinity of the Lebowa Platinum Mine (previously known as Atok), the igneous stratigraphy is shallow-dipping with a northwesterly strike. West of the faulted region, the Critical Zone trends east-west and on the Mphahlele Project dips at an average of 51° to the south, which increases to near vertical 20 km to the west at Lonmin Platinum's Limpopo mine.

The main Mineral Resource block of the Mphahlele Project is underlain by the Main Zone and the Critical Zone of the RLS (see the stratigraphic column in Figure 7-9). There are no outcrops of either reef because a large alluvial fan emanating from the hills of Transvaal sediments to the north covers the Critical Zone on the Mphahlele Project. Aeromagnetic data indicate that the MR and the UG2 continue for an estimated strike length of almost 8 km through the Mphahlele area (Figure 7-9) and terminate to the east against floor lithologies of Magaliesberg Quartzite that have been dragged against the Wonderkop Fault.

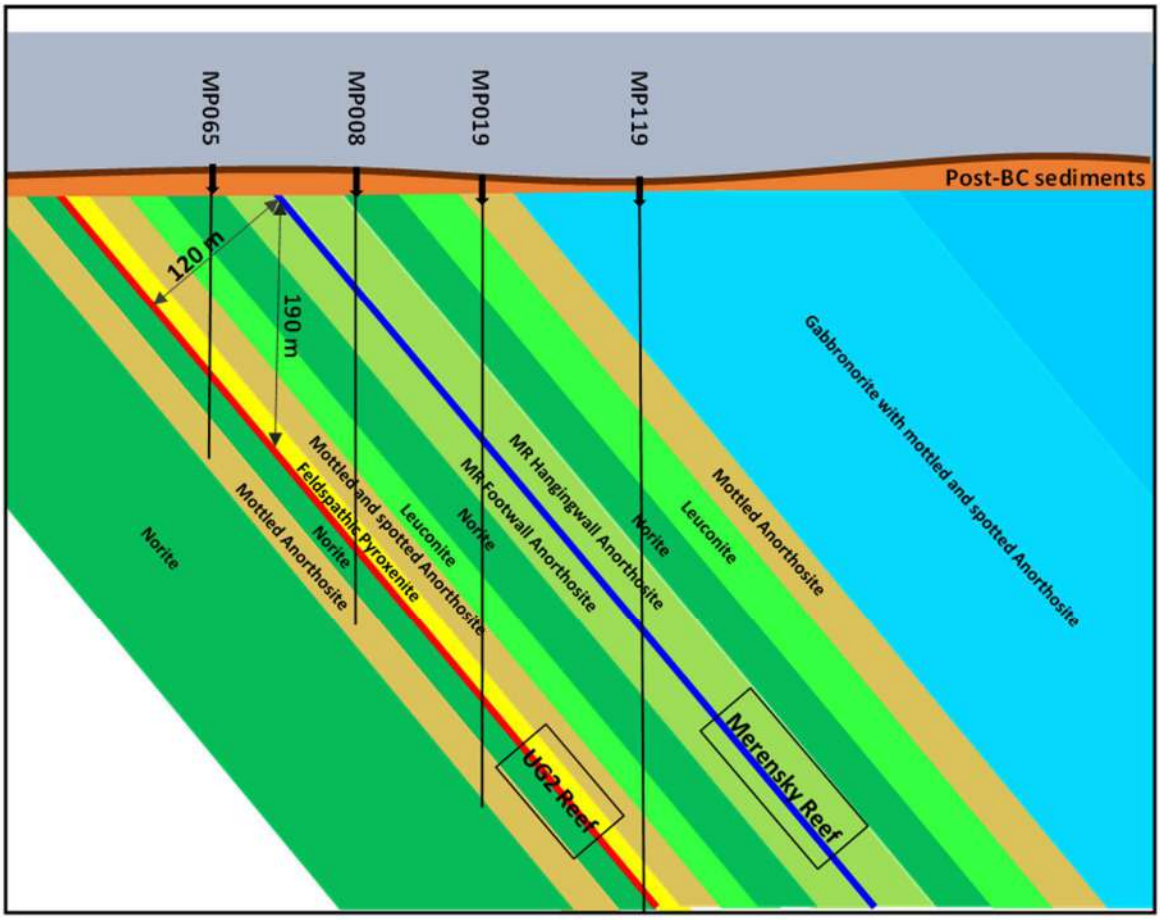
The two reefs are separated on average by 120 m of stratigraphy (190 m vertical separation) (Figure 7-10). The lateral extent of both reef horizons within the project area is approximately 8 km along strike, and has been modelled over a vertical extent of approximately 2 km. The depth extent of the reefs has not been limited by drilling and is open at depth.

Both the MR and UG2 exhibit disturbances that include potholing and the intrusion of pegmatoid, IRUPs and serpentinized harzburgite bodies. The main harzburgite intrusion has not been intersected by drilling but the smaller apophyses emanating from this severely affect the MR.



srk consulting	**SRL Total Assets PEA** Local Geology and Stratigraphy of the Mphahlele Project [source: SRL]	Project No. 600322

Figure 7-9: Local Geology and Stratigraphy of the Mphahlele Project



srk consulting	**SRL Total Assets PEA** Schematic Cross-section of the Mphahlele Project	Project No. 600322

Figure 7-10: Schematic Cross-section of the Mphahlele Project

7.2 The Merensky Reef Layer

The MR has been traced over 150 km along strike in the Eastern Limb and over 110 km strike in the southern sector of the Western Limb. There is also extensive mining on the western sector from Pilanesberg to Thabazimbi giving a total strike length of approximately 250 km. Within the Northern Limb the geological succession is unique with only the Upper Critical Zone present and the Platreef, developed near the floor of the complex, is the local equivalent to the MR. Generally, two types of MR exist; the normal and potholed reefs. Figure 7-3 schematically displays the formation of these two types of reefs in section view relative to the underlying stratigraphic units.

Where fully developed within the Ruighoek and PSM Project footprints, the MR consists of an orthopyroxenitic or harzburgitic pegmatoid, between one centimetre and one metre thick, bounded top and bottom by thin (≤1 cm) chromitite stringers. The MR, where fully developed, is more olivine-rich than in other parts of the BC. Within the MR, the PGMs occur as small (<20 µm) grains, most commonly at the contact between the base metal sulfides and the silicate minerals. Their composition varies considerably, from sulfides through tellurides to Pt-Fe alloys. Grade varies considerably over short distances in the MR. Where the pegmatoidal pyroxenite of the MR is greater than 50 cm, grade is concentrated at or near the upper chromitite with a smaller peak on the lower chromitite. Platinum Group Element (PGE) mineralisation is generally low grade in the body of the pegmatoid itself.

The MR on the Mphahlele Project is similar to that elsewhere in the northern portion of the Eastern Limb of the BC. The MR occurs within the three to six metre thick feldspathic pyroxenite layer (the Merensky Pyroxenite), between a hangingwall of norite-anorthosite and a footwall of norite. Two thin chromitite stringers are present; an upper stringer, 20 cm to 25 cm from the hangingwall contact, and a lower stringer on or just above the basal contact. Both chromitite stringers are typically discontinuous, unlike in other areas of the BC.

At Mphahelel three Merensky Pyroxenite Facies types have been identified: the “A” Facies that occupies the western half of Mphahlele, the “B” Facies to the east while the “C” Facies is central to the two:

- The **Merensky Pyroxenite A Facies** stratigraphic unit averages 9.3 m in thickness and comprises a medium- to coarse-grained, poikilitic feldspathic pyroxenite with a lensoidal and discontinuous chromitite stringer developed near the upper contact termed the **Merensky Upper Chromitite**. This stringer varies from 1 mm to 4 mm in thickness. The upper portion is coarser-grained and contains serpentinized olivine, which is termed the **Merensky Olivine Pyroxenite**, often highly decomposed with a strongly developed joint fabric, with the result that this contact represents a significant plane of weakness. A thin irregular chromitite stringer (1 mm to 4 mm thick) may be present on or just above the lower contact, termed the **Merensky Lower Chromitite**. A pyroxene pegmatoid, some 0.20 m to 0.7 m thick with disseminated sulfides, is often present on the basal contact;
- The **Merensky Pyroxenite B Facies** averages 12.8 m in thickness and consists of fine- to medium-grained feldspathic pyroxenite with the development of the Merensky Upper and Lower Chromitite stringers varying from 1 mm to 4 mm in thickness; and
- The **Merensky Pyroxenite C Facies** stratigraphic unit averages 58.9 m in thickness and contains intercalations of serpentinized harzburgite and dunite, feldspathic pyroxenite, pyroxene pegmatoid, norite, iron-rich ultramafic pegmatoid, chromitite stringers, thin chromitite layers and fragmented lenses of chromitite stringers.

The mineralisation within the Merensky Pyroxenite A and B Facies is similar. The highest PGM-base metal concentration occurs towards the top of the Merensky Pyroxenite and is referred to as the M1 value zone. Maximum values occur across or immediately below the Merensky Upper Chromitite and correspond to the highest visible concentrations of sulfides. The M2 value zone occurs towards the base of the Merensky Pyroxenite, often associated with a pyroxene pegmatoid and the Merensky Lower Chromitite, and values may extend into the anorthosite footwall. A considerable thickness of barren Merensky Pyroxenite occurs between the M1 and M2 value zones.

PGM-Ni-Cu mineralisation within Merensky Pyroxenite C Facies is of a lower tenor and dispersed throughout the thickened stratigraphic sequence.

The lower unit is narrow and too far removed from the economic zone (disseminated mineralisation in the top metre of the pyroxenite) to be exploitable. The bulk of the PGM mineralisation is associated with the upper chromitite stringer and here often occurs over wider intervals below the chromitite stringer. On the Mphahlele property, the MR is defined as the mineralisation at the top of the Merensky Pyroxenite unit and associated with the upper chromitite stringer. In the absence of a well-defined chromitite stringer, the upper contact of the Merensky Pyroxenite defines the top of the reef for sampling purposes and will ultimately probably be used to identify the top of the reef visually during mining. Consequently, the MR Mineral Resources have been defined around the upper chromitite stringer only (Figure 7-11). Sporadic mineralisation is also present within the central parts of the Merensky Pyroxenite, but its erratic distribution precludes its inclusion in the value interval or Mineral Resource.

7.3 The Pseudo Reef Layer

Pseudo Reef consists of two distinct portions; the Lower Pseudo Reef (LPR), a coarse-grained pegmatoidal feldspathic harzburgite, and the Upper Pseudo Reef (UPR), a finer grained feldspathic harzburgite. The Pseudo Reef may contain significant concentrations of PGMs. The lateral continuity of the Pseudo Reef is not as extensive as that of the MR and UG2 reefs. The Pseudo Reef package is limited to the Ruighoek, PSM, and Kruidfontein projects and does not occur at Mphahlele.

7.4 The UG2 Chromitite Layer

The UG2 is hosted within pyroxenites and typically consists of a main chromitite band, typically 50 to 120 cm wide, often accompanied by a series of smaller chromitite stringers in the immediate hangingwall. These stringers range from 0.5 cm to several tens of centimetres in width. Additionally, pyroxenite stringers may be developed within the main chromitite layer. The footwall to the UG2 consists of a coarse-grained feldspathic, pegmatoidal pyroxenite or harzburgite unit of variable thickness. Discontinuous chromitite stringers and blebs are present within the pegmatoid footwall. Pyroxenite is developed beneath the pegmatoidal pyroxenite zone. The common signature of the UG2 reef within this ultramafic layer is the massive one metre thick chromitite found within the package of alternating thin chromite seams. Overlying the UG2 is mostly norite or pyroxenite; the only exception is in the northern part of the Western Limb where the UG2 is overlain by harzburgite.

The PGM mineralogy of the UG2 is simpler than that of the MR, being dominated by PGE sulfides, although the grain size is smaller (<10 μm) than in the MR. The 4E (shorthand for Pt + Pd + Rh + Au) grade tends to peak at the bottom and top contact of the main UG2 chromitite seam.

The UG2 is the most consistently developed mineralised horizon within the Western Limb Project footprints.

At Mphahlele the UG2 comprises a coherent chromitite layer with no parting, approximately 1.2 m thick, normally overlying a norite footwall and underlying a feldspathic pyroxenite hangingwall. The hangingwall contact tends to be planar (although often sheared) but the footwall contact undulates, and this can be seen on a small scale in the core. The upper part of the UG2 is fine-grained, granular and devoid of visible sulfides whereas the lower portion is coarse-grained with visible sulfides. The UG2 is subdivided into two facies:

- The **UG2 Upper Facies**, an upper, fine-grained, poikilitic massive chromite, sometimes accompanied by fine, disseminated sulfide mineralisation; and
- The **UG2 Lower Facies**, a lower facies, with a distinctive poikilitic texture, higher silica content, sulfide-rich oikocrysts and significant disseminated sulfide mineralisation.

The UG2 Chromitite Layer may contain one or more intermittent pyroxenite layers termed the “UG2 Middling”, which separates the Upper and Lower UG2 Facies. Typically, the mineralisation peaks in the lower part of the layer (Figure 7-11). There is a general increase in the 4E grade proportionate to the increase in sulfide content but this is accompanied by a decrease in the Pt/Pd ratio. There is a ten-fold enrichment in Ni and a twenty-fold enrichment in Cu in the UG2 within the Mphahlele Block relative to quoted figures elsewhere in the BC.

Unlike the UG2 on the adjacent property to the west, no leader layers are found above the main chromitite layer and therefore minimal dilution is expected during mining.

7.5 Geological Structures

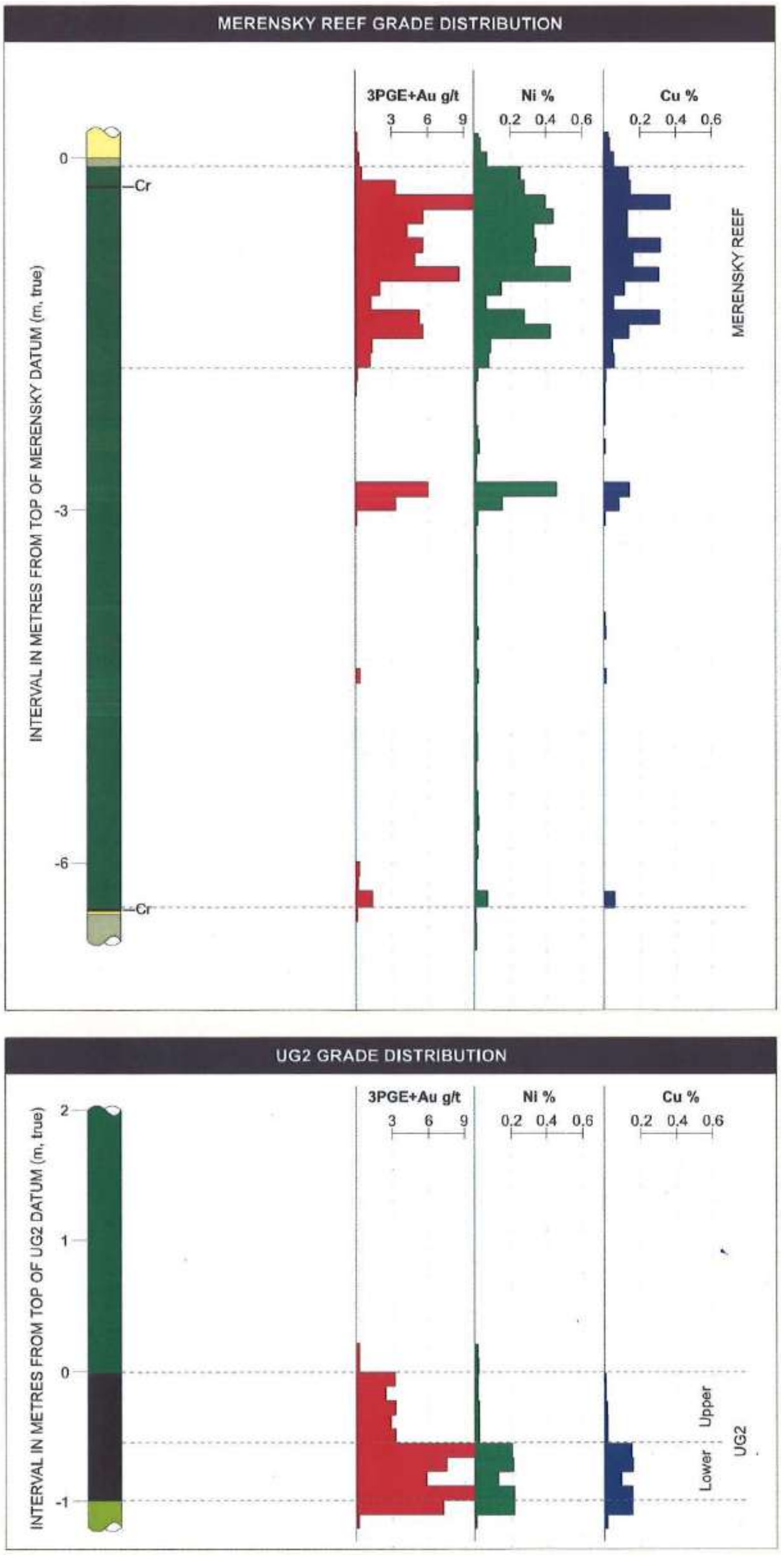
The BC reefs are generally affected by discontinuities including faults, dykes, potholes and IRUPs.

7.5.1 Faults

Major faults of regional extent that bound and transect the BC are the Steelpoort Fault, the Laerdrift Fault, the Vlakfontein Fault (Pilanesberg) and the Brits Graben. The large fault zones that bound the BC are deep-seated crustal lineaments of continental magnitudes; namely, the Johannesburg-Barberton Lineament, the Palala Fault/Shear zone, the Rustenburg Fault) and the Thabazimbi-Murchison Lineament. With the exception of the Rustenburg Fault that strikes NW-SE, the bounding faults generally strike ENE-WNW. The transecting faults run nearly perpendicular to the bounding faults; the only exception is the Steelpoort Fault that strikes NE-SW (Figure 7-1). The interlocking nature of these faults has resulted in discrete structural blocks. The magnitudes of displacements on these structural blocks are significant and are therefore considered in mine planning.

Faulting of the rocks of the BC in response to the intrusion of the Pilanesberg is significant in the west but appears to be progressively less intense eastwards from Ruighoek 169JP and Tuschenkomst 135JP across Wilgespruit 2JQ towards Magazynskraal 3JQ (dashed red lines in Figure 7-6). The vertical displacement on these faults is variable giving rise to horst and graben structures (see section A-A’-A’’ in Figure 7-12). As a result of faulting, the reefs sub-outcrop on the Tuschenkomst 135JP and Wilgespruit 2JQ properties. The reefs in the eastern area of Wilgespruit 2JQ extend into Magazynskraal 3JQ at a depth of some 300 m and continue to more than 1 000 m below surface at the southern boundary of Magazynskraal 3JQ. The Ruighoek Project is affected by a number of Pilanesburg-age faults, which usually strike approximately NNE-SSW, as well as large bounding faults that strike NS.

The Mphahlele deposit is bounded by major faults to the east and west which strike approximately NNE-SSW, and the reefs are interpreted to be intersected by a number of smaller faults, with a similar orientation, that displace the reef by tens, to several tens of metres.



srk consulting	**SRL Total Assets PEA** MR and UG2 Grade Distributions of the Mphahlele Project [source: SRL]	Project No. 600322

Figure 7-11: MR and UG2 Grade Distributions of the Mphahlele Project

7.5.2 Dykes and Sills

The BC is disrupted by several generations of post-BC dykes and sills, which, in the western BC, range from a dominant suite of mafic dykes to less common alkaline lithologies (syenites, lamprophyres and kimberlites), with the latter posing particular problems because of their susceptibility to alteration. Within the PSM Project footprint, swarms of predominantly mafic dykes trend in a NNW direction across the BC, and are accompanied by a suite of associated sills, which may be disruptive to the mineralised sequences in places. The emplacement of the post-Bushveld intrusive suite is not necessarily accompanied by fault displacement. There is limited evidence of dyke intrusions at Mphahlele.

7.5.3 Potholes

The ‘normal’ stratigraphy hosting the UG2 and, particularly, the MR, is disrupted in places by phenomena known as “potholes”, in which the reef-bearing lithological units eliminate their immediate footwall units, apparently by a process of magmatic thermal erosion, coming to rest on stratigraphically lower units than would normally be the case. They are circular to oval-shaped depressions when encountered on the different reef horizons. Within the depression, the reef unit may crosscut the footwall stratigraphy at a high angle and ultimately lie at a lower stratigraphic elevation than the typical reef. Within the pothole, anomalous hangingwall, footwall and reef stratigraphy may be developed. In some instances, the reef within a pothole may have higher than average grades; in others it may be uneconomic. In extreme cases, the reef is not recognisable within the pothole. The scale of potholing is extremely variable, ranging from gentle undulations, often termed “rolling reef” to deeply plunging features. The frequency of potholes varies and the presence of potholes on the UG2 does not imply similar pothole development within the overlying MR.

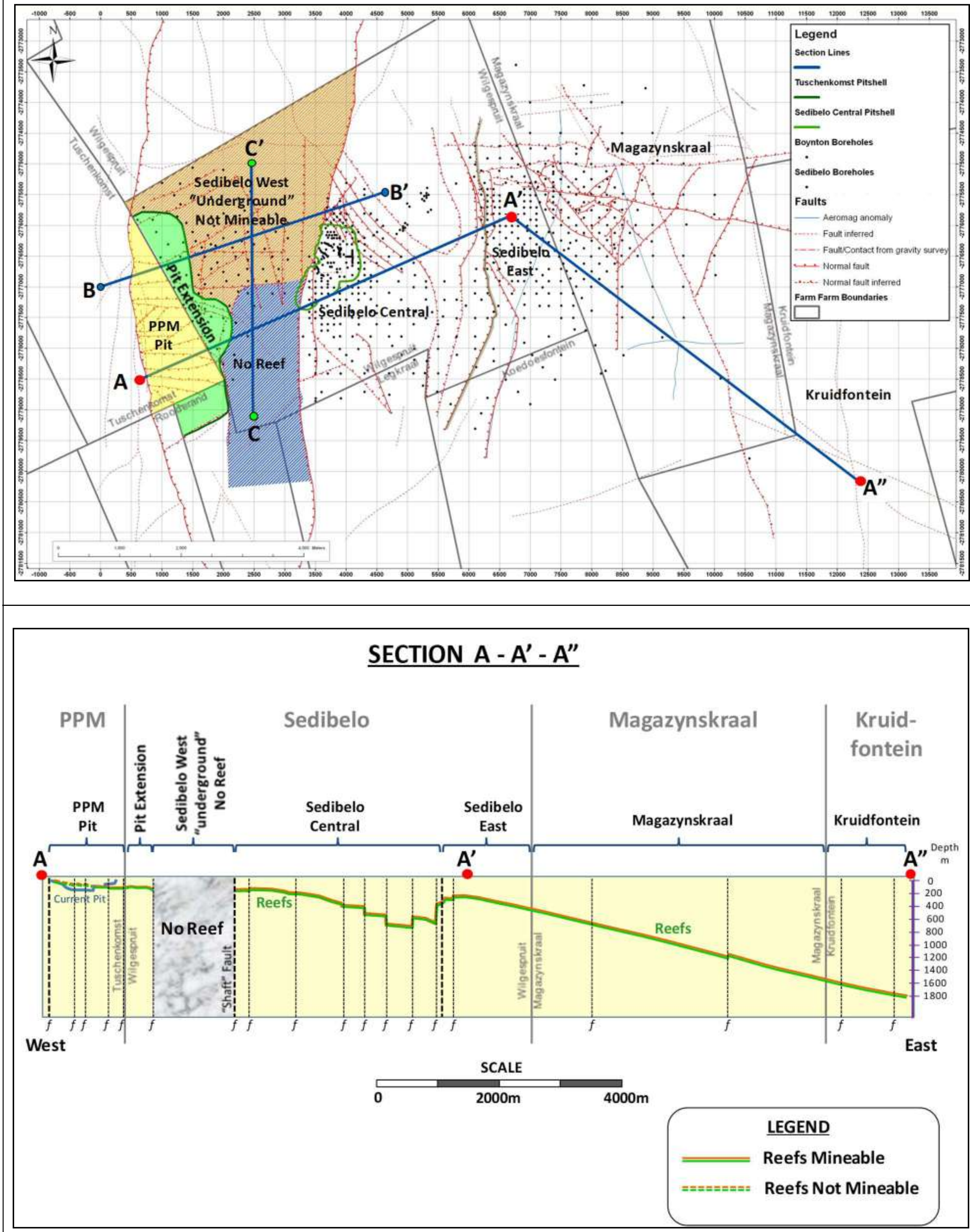
In the Swartklip sector, by contrast with the rest of the BC, MR potholes can erode up to 15 m of footwall anorthosite and leuconorite, ultimately coming to rest on an otherwise sub-economically mineralised package of ultramafic rocks; the Pseudo Reef package. Over much of the Swartklip Facies, the MR directly overlies the Pseudo Reef over large (up to several kilometres in diameter) areas referred to as ‘regional potholes’ which can usually be profitably mined.

Pothole interruptions of the ‘normal’ MR, Pseudo Reef and UG2 layers have important operational and hence financial implications in the viable exploitation of these layers. The majority of the smaller potholes are usually classified as ‘geological losses’ and accounted for in the declaration of Mineral Resources/Mineral Reserves. By contrast, ‘regional potholes’ can usually be mined successfully, provided the many variations of the ‘potholed reef’ are clearly understood.

At Mphahalele there is no regional pothole development and the potholes are the typical circular to oval-shaped depressions as described above. Both rolling reef and deeply plunging features occur along this westerly-trending segment of the BC.

7.5.4 Iron-Rich Ultramafic Pegmatoids

Throughout the BC, the normal stratigraphy, especially in the Upper Critical Zones, may be locally disrupted by a late-magmatic suite of coarse-grained transgressive lithologies, known IRUPs. IRUPs, in the form of pipes, dykes and sheets are common features of the RLS around the BC resulting from metasomatism by iron-rich fluids. The replacement pegmatoid is usually coarse-grained to pegmatoidal but is of variable texture. The degree of alteration is also variable and original mineralogies and textures may be partially preserved. Alteration zones are invariably transgressive across the igneous layering. These pegmatoids do not always result in loss of metal value but the altered ore minerals are not as amenable to flotation.



	SRL Total Assets PEA Geological Section through the PSM Project [source: SRL]	Project No. 600322

Figure 7-12: Geological Section through the PSM Project

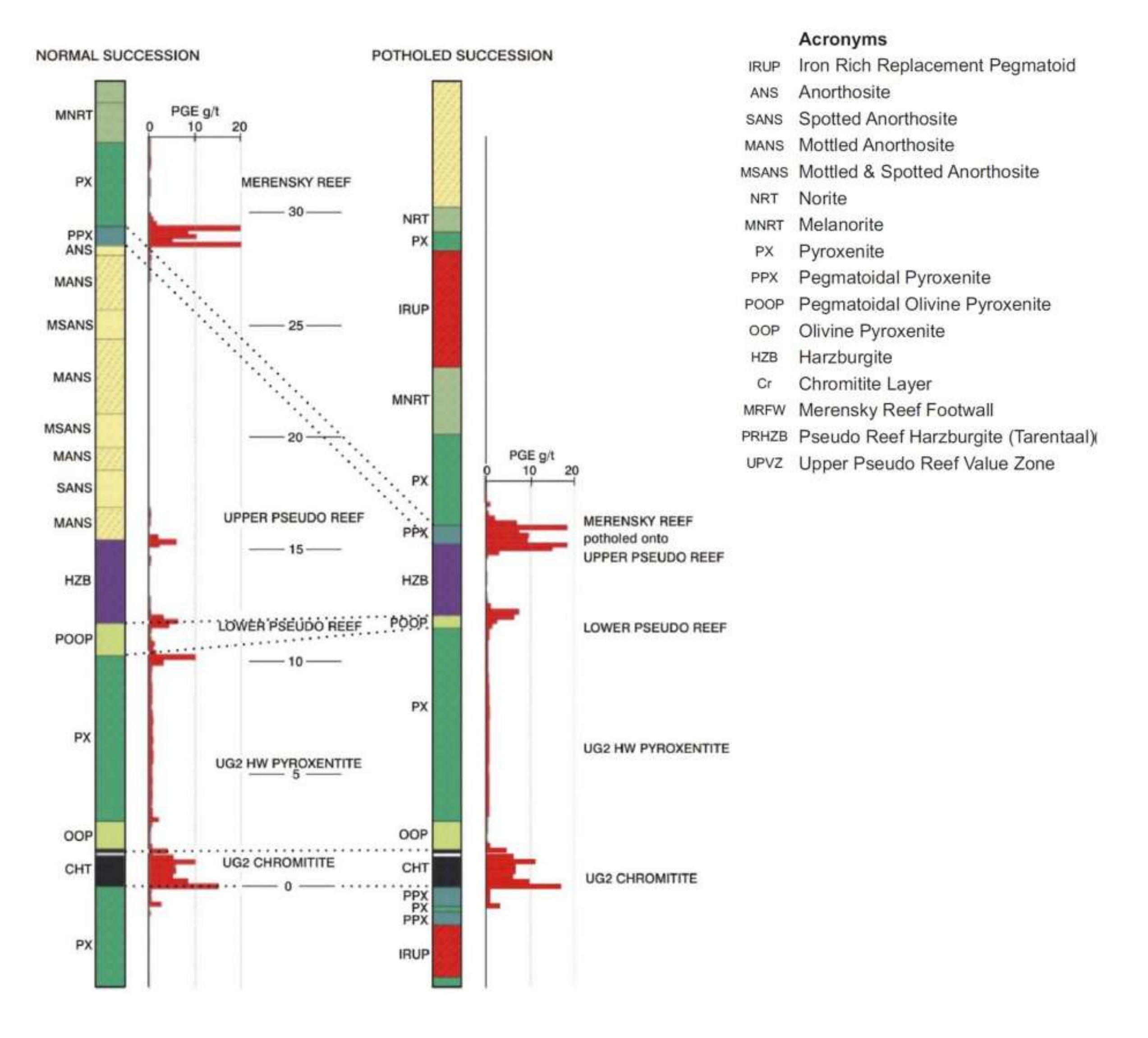
8 Deposit Types

The BC is a magmatic layered mafic intrusion. As one of the largest known differentiated igneous bodies, it hosts world class deposits of PGMs, Ni, Cu, Cr and V.

The Critical Zone is the host to all chrome and PGM mineralisation within the BC. The PGM, base metal and chromium mineralisation targeted at the PSM Project is contained in three cumulate layers, the MR, Pseudo Reef and UG2. The mineralisation in the UG2 is primarily constrained to the main seam and the underlying UG2 Pegmatite units.

The exploration programme follows the well-established model of targeting the respective stratigraphic units, which are readily identifiable in the drill core.

A simplified stratigraphic column of the reef packages specific to the PSM Project footprint is shown in Figure 8-1 and in Figure 7-3 and in Figure 7-10 at Mphahlele.



srk consulting	**SRL Total Assets PEA** Local Stratigraphy and Grade Distributions for Normal and Potholed Reef at PSM Project [source: SRL]	Project No. 600322

Figure 8-1: Local Stratigraphy and Grade Distributions for Normal and Potholed Reef at the PSM Project

The West Pit TRR is a man-made deposit constructed from plant tailings during the mining and processing of the West Pit. This material was deposited as a fine grained slurr,y which has dried out during the years of deposition.

9 Exploration

9.1 Exploration (other than drilling)

9.1.1 PSM

Ruighoek

Detailed geological mapping was conducted on the property at a scale of 1:2 500, which aided in roughly delineating the extent of the PGM mineralisation. Mapping focused on areas where the Upper Critical Zone lithotypes had been identified; subsequently mapping was superseded with trenching.

An orientation soil sampling exercise was done over selected areas on Ruighoek 169JP where the PGM reef package was known to subcrop. This confirmed that the PGM mineralisation could be successfully detected by soil sampling. Soil sampling was then used as the initial exploration tool on many of the other properties.

Three phases of trenching were conducted by the then Platmin (now SRL). Detailed logging on the trenches proved invaluable in delineating the subcrop position of the reefs and facilitating a detailed geological interpretation of the north, central, and southern areas of the project.

Percussion drilling was done on four short lines to assist with the interpretation of the geology. All the detailed exploration completed in the Ruighoek North and Ruighoek South areas was used to interpret the local geology. This involved compiling geological cross-sections with the drilling and trench data and extrapolating the geology and structure between these cross-sections. This integrated geological interpretation was used as a starting point for 3D modelling of the mineralisation.

West Pit TRR

As the West Pit TRR is a recent man-made deposit, data collection was performed during the depositional process. Figure 7-7 displays the average annual grade and total annual tonnage deposited during the depositional process. The total deposited tonnage was cross-checked with the surveyed TSF volume to validate the data collection process. Composite samples were constructed by collecting 100 g of tailings product during every shift and collecting this in a container. The material within this container was homogenised and sampled on a monthly schedule, after which the container was discarded. The tonnage calculation was performed by considering the known slurry density and measuring incremental flow rates to the TSF.

East Pit and Central Underground

In the mid-1990s an exploration shaft was sunk by AngloPlats to a depth of 70 m to reach the MR. A reef drive on the MR was developed for approximately 650 m, running along strike to the north and south of the shaft. The principal purpose of the exploration reef drives was to establish the degree of structural disturbance and to test the grade variation.

Subsequent to 2004, aerial photographic survey, soil sampling, aeromagnetic survey, seismic surveys, prospecting shaft investigations, and the extraction of a bulk sample were pursued as part of the different phases of exploration campaigns. Three seismic surveys comprising 12 traverses were conducted over the Sedibelo Project area between 2005 and 2008 (see Figure 6-2). The resultant interpretation of all of these surveys forms the basis of the structural model at Sedibelo, which has largely been confirmed by drill holes. It is worth mentioning that the assay results of the bulk samples do not contribute to the grade estimates.

East Underground

Exploration at Magazynskraal 3JQ has included soil sampling, aeromagnetic survey and seismic surveys. AngloPlats conducted an airborne magnetic survey over the Pilanesberg area as part of a larger survey during 2004. This survey also covered the Sedibelo Project area. A 2D seismic survey consisting of 12 traverses was conducted over Magazynskraal 3JQ in 2010. The resultant interpretation of all of these surveys forms the basis of the structural model, which has largely been confirmed by drill holes.

9.1.2 Kruidfontein

Regional mapping was conducted by the Council for Geoscience in 1974.

Anglo American Platinum conducted an airborne magnetic survey over the Pilanesberg area as part of a larger survey during 2004.

A helicopter-borne magnetic and radiometric survey was conducted over the project area in 2007. The flight lines were flown at 50 spacing maintaining an elevation of 20 m above the ground level. The interpreted magnetic results are shown in Figure 6-.

A 2D seismic reflection survey consisting of two traverses totalling 13.9 km was conducted over the Kruidfontein project area in 2008. Two other traverse lines were cancelled due to bad weather. The results of the seismic traverses are shown in Figure 6-.

SRL advised the QPs that no new data had been collected on the property since 2010.

9.1.3 Mphahlele

Regional mapping and regional aeromagnetic and gravity surveys done by the CGS form part of the public domain data set.

Tameng, after acquiring the mineral rights over the Mphahlele property, initiated airborne surveys while waiting for environmental approvals to start its drilling programme. Magnetic and radiometric geophysical surveys over the Mphahlele property were completed in January 2004; the colour aerial photographs were taken at the same time from which a digital terrain model was generated. The geophysical surveys were flown by helicopter with a 20 m sensor clearance, taking readings every second for the radiometric data and every 0.1 seconds for the magnetic data. North-south lines were flown at 50 m intervals with tie lines 500 m apart for a total of 2 920 line km.

These surveys were interpreted by a private geophysical consultant, who produced colour-coded plans of the area. The most useful of these was the first vertical derivative magnetic map, which clearly delineated the stratigraphy of the Critical and other BC zones and also the eastern contact close to the Wonderkop Fault (Figure 6-7).

9.2 Logging and Sampling of Exploration Drill Holes

The description below is applicable to PSM and all the projects including Mphahlele.

9.2.1 Drill Core Sampling Procedures

The MR, UG2 and the Pseudo Reef (i.e., the UPR, Pseudo Reef Harzburgite (PRHZB) and LPR) packages are identified for sampling to at least one metre above and below the reef contacts in order to sample the entire mineralisation zone. The Pseudo Reef package in a younging sequence comprises the LPR, PRHZB and the UPR units. Where zones of erratic mineralisation are notable, they are sampled.

Sampling of the reef is done in 20 cm sample intervals, increasing to 50 cm to ensure adequate sampling of the mineralisation in the more erratically mineralised zones. Sample breaks are made based on geology and natural breaks in the core.

Mineralised zones are identified by the presence of disseminated sulfides and in the case of the mineralisation in the MR footwall (MRFW) anorthosite, by a distinct alteration. For a typical hole intersecting all the main reefs, approximately 100 samples are collected.

Drill core samples in the mineralised zone are marked, split by means of a 2 mm thick diamond saw blade and each sample is given a unique sample number. All logging and sampling data is electronically captured. Half core is submitted for analysis and the remaining half marked and stored for future reference or testwork.

SRK notes that the core sampling methods are consistent with the conventional practice in the BC.

The general principles applicable to the drill core sampling are as provided below:

- Detailed sampling of the silicate reefs (MR and Pseudo Reefs) to allow for a finer resolution (down to 10 cm) of the potential mineable portion of the orebody in the areas where decisions regarding the mining cut are likely to be made;
- Minimum allowable sample length must not be less than 10 cm. Samples that need to be sampled at a variable width must be less than 20 cm but more than 10 cm (except where wider samples are required);
- Samples must be taken one centimetre above or below the top or bottom contact of major sampled units and the logged Lithological / Stratigraphic intervals must be taken at the middle of the core intersection of the angled contact;
- Where there is an intrusive in a mineralised interval, the mineralised unit must be capped (by the intrusive) in such a way that all the mineralised material is included in the sample. Where the intrusive is larger than 12 cm, it must be taken as a separate sample (the samples either side will overlap 1 cm into the intrusive on

both ends. If intrusive is smaller than 12 cm, it must be sampled using the normal protocol (as if it is not there);

- Sample information is recorded either directly into the SABLE^{TM} database or on paper sample sheets. The Strat code (according to the Logging Dictionary) is recorded along with other additional pertinent information (e.g., lithology, mineralisation). One ticket must be placed inside the sample bag and one must be stapled onto the outside of the bag; and
- Once the core has been sampled and properly marked up, it is photographed.

Core recoveries in the competent BC are typically extremely good, and in the mineralised units are usually in excess of 99%.

9.2.2 RC Chip Sampling Procedure

Sampling of the chips at East Pit commences five metres above the MR and stops two metres below the LPR, whilst the UG2 is sampled from one metre above the reef to up to three metres below. Each one-metre sample is riffle-split four times to obtain a representative sample of 2.5 kg. Standards and blanks are inserted every 50th sample and the assays are conducted using PPM's internal laboratory at PPM. The assay results are not used for grade control estimation.

Hard copies, as well as electronic records of surveyed hole positions, stratigraphy and sampling are kept, as well as chip tray samples. All data is stored electronically in Maxgeo Datashed and linked to the structural modelling software (MINEX^{TM}).

SRK has reviewed the sampling procedures and notes its consistency with conventional practice in the BC.

10 Drilling

10.1 Type and Extent of Drilling

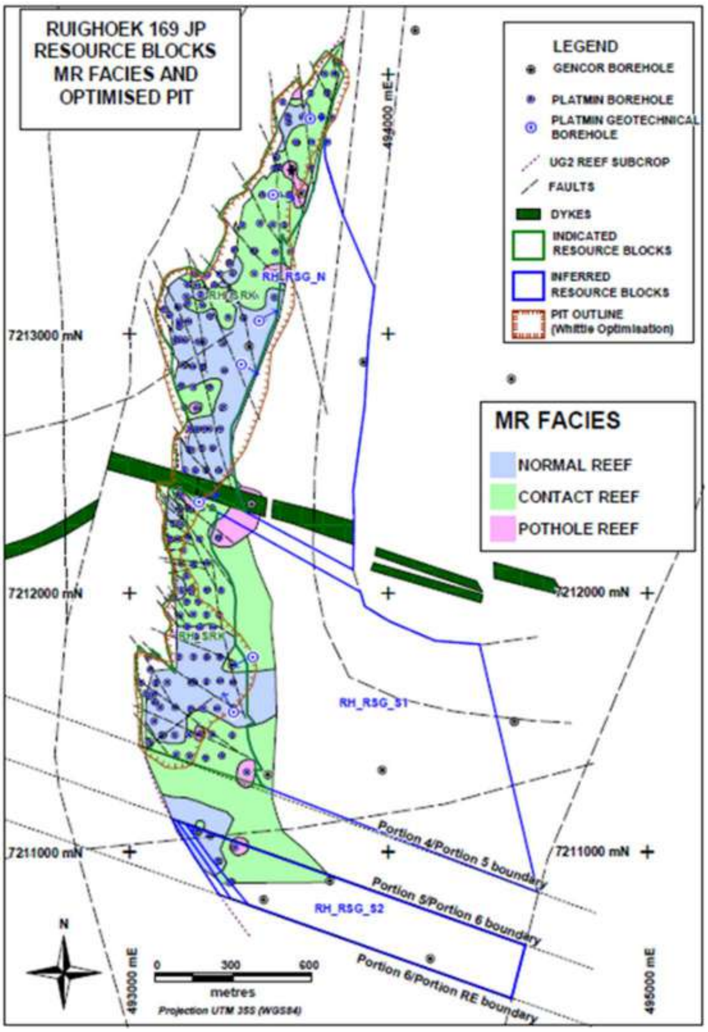
10.1.1 Ruighoek

Historical drilling at Ruighoek commenced in 2003 and was initially done on a 300 m line spacing, which confirmed a three kilometre strike of the PGM reef package. Historical drilling conducted by Gencor confirmed that the PGM reef package extends to depths in excess of 1 000 m below surface.

A second phase of drilling to delineate resources in the north-central and southern areas reduced the line spacing to 100 m with drillhole intervals of 40 m to 80 m along the lines.

During 2006 a further phase of drilling, which targeted the more structurally complex area (Figure 10-1), resulted in the reduction in the line spacing to 50 m. In the same year seven geotechnical drillholes were drilled in the vicinity of the predicted open pit highwalls from previous pit optimisations. The geotechnical drilling involved diamond drilling HQ triple-tube inclined holes at various azimuths. Orientation was done using the EasymarkTM system and geotechnical logging was done by experienced geotechnical engineers.

To date, 180 drillholes (totalling 18 374 m) have been completed at Ruighoek for resource delineation and the results have been used to compile detailed 3D models of the deposits.



srk consulting	**SRL Total Assets PEA** Ruighoek: Drill Hole Collar Locality Plan [source: SRL]	Project No. 600322

Figure 10-1: Ruighoek:Drill Hole Collar Locality Plan

10.1.2 PSM - East Pit and Central Underground

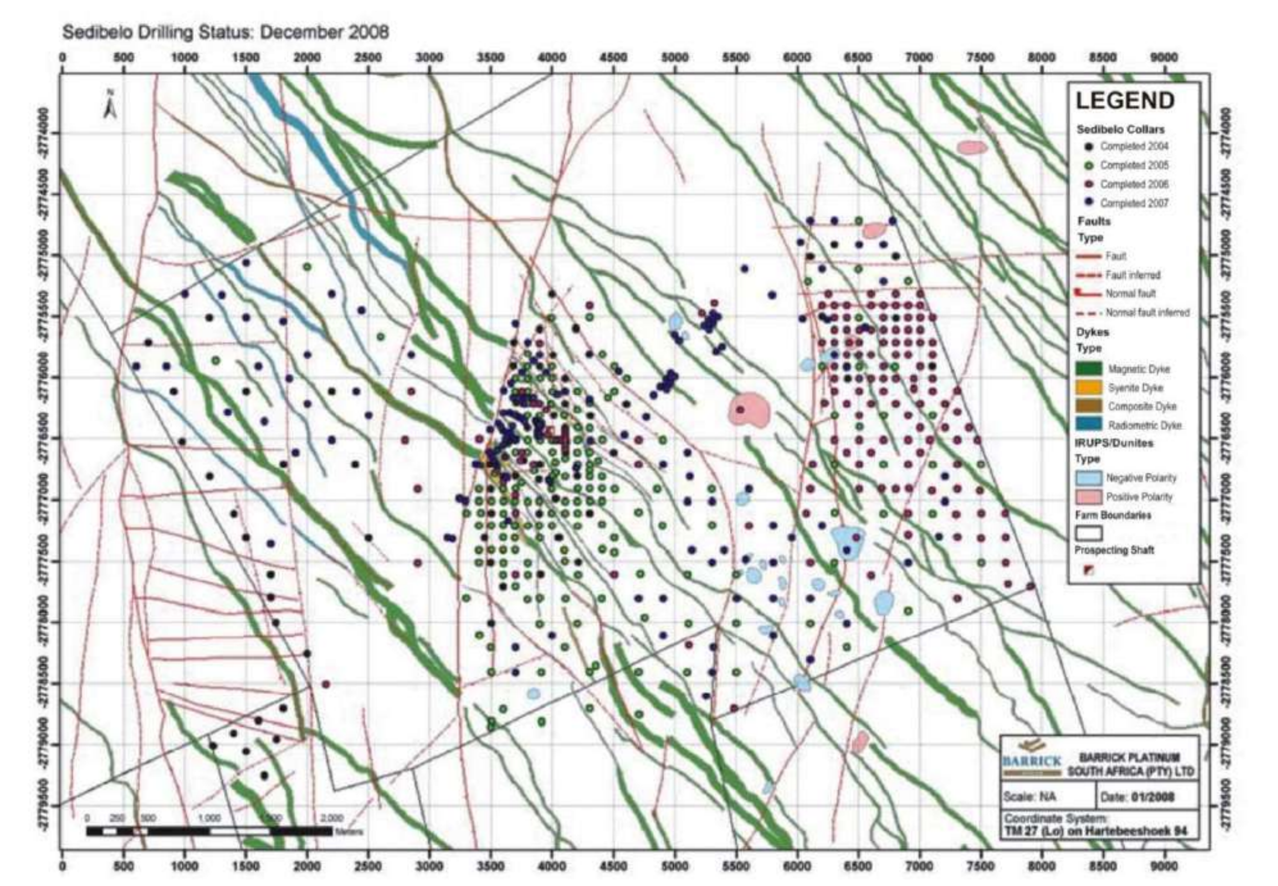
The drilling information presented here is as extracted from the Barrick 2008 BFS report and relates to all drilling completed up to December 2007 on the entire property under Barrick management (i.e., the farms Wilgespruit 2JQ, Rooderant 46JQ, Koedoesfontein 42JQ and Legkraal 45JQ).

All the holes were accomplished using diamond core drill technique. The holes underpinning the Mineral Resource estimates were drilled vertically; the inclined holes were orientated either for geotechnical or structural purposes. Except for geotechnical holes and metallurgical holes, which were drilled in HQ size (63.5 mm core diameter), all the other holes were drilled to NQ size.

Deflections were initially drilled on all holes (three to five deflections) to test for variability of the mineralisation and to obtain additional core for metallurgical testwork and for geotechnical studies. This practice was discontinued in 2005. Subsequent to 2005, only two non-directional deflection holes were drilled.

Core runs were 6 m long in non-mineralised intervals and 3 m long in mineralised intervals. Core barrels were retrieved by wire line. Holes were stopped once they intersected the UG1 Reef which is approximately 10 m into the footwall of the UG2 Reef. The core was transferred into metal core boxes. Drill intervals were marked by plastic blocks showing depth and core loss/gain. Core recovery from diamond drill holes is generally good across the BC rocks that host the mineralisation. The average recovery rate of the holes drilled was greater than 95%. Due to the high rate of the core recovery, it has not been necessary to ascertain the relationship between sample recovery and grade. Core boxes were transported to a central core processing facility where the core was photographed with a digital camera prior to logging and sampling. Ideally, the geotechnical logging should have been performed directly at the drill site to avoid any potential damage/break due to handing and transport.

Drilling started in June 2004 and was largely aimed at testing the preliminary 3D model of the reef surfaces based on AngloPlats' information (collar co-ordinates and depths) and to establish stratigraphy, continuity of the reefs, grade and style of the mineralisation. A few holes were also drilled in the Western Block (i.e., Sedibelo West), an area that was not drilled by AngloPlats, to test for mineralisation and depth to mineralisation. Drill hole spacing on Central Underground area is approximately 200 m x 200 m, and the other areas were only tested by widely spaced holes. Table 10-1 summarises drilling undertaken on the Sedibelo property. The collars of these drill holes can be seen in Figure 10-2. In comparing Table 10-1 with Figure 10-2, the Eastern and Western Blocks refer to the area with easting co-ordinates approximately greater than 5 000 and less than 3 000, respectively. Whereas the Central Block is host to the East Pit and Central Underground projects, the Eastern Block reflects a subsection of the Eastern Underground Block project (excluding the footprint of Magazynskraal Project).



srk consulting	**SRL Total Assets PEA** PSM - East Pit, Central and East Underground: Drill Hole Collar Positions [source: Barrick, 2008]	Project No. 600322

Figure 10-2: PSM - East Pit, Central and East Underground: Drill Hole Collar Positions

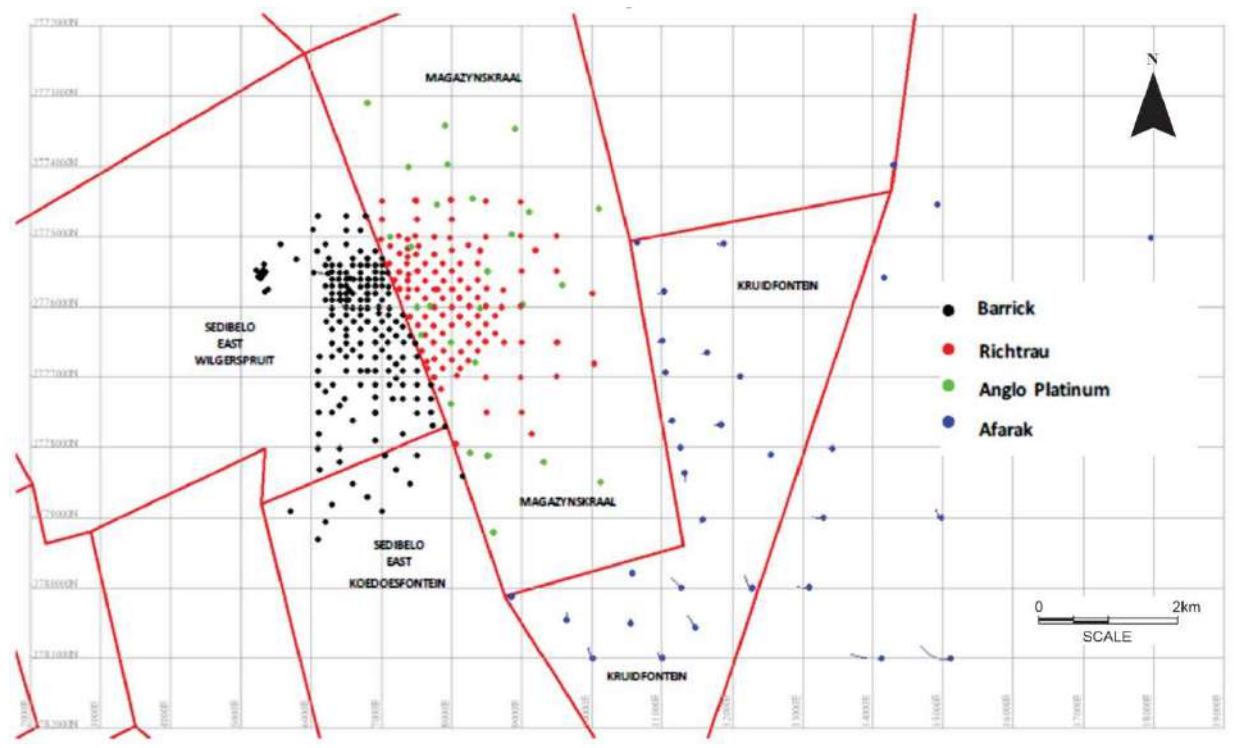
Table 10-1: PSM - Central and East Underground: Summary of Number of Drill Holes (2004 to 2007)

Barrick Holes	2004	2005	2006	2007	Total
Eastern Block (Sedibelo East)	7	24	112	31	174
Central Block	39	146	40	134	359
Western Block	25	2	4	24	55

10.1.3 PSM - East Underground

Drilling on the East Underground area has been undertaken by two companies; namely AngloPlats and Richtrau. Richtrau's initial drilling programme was conducted on a 500 m x 500 m grid. This was followed up with an infill drilling programme on a 250 m x 250 m grid. The AngloPlats holes are on a much wider spacing than that of Richtrau (Figure 10-3). The UG2 was the initial reef targeted at depths of less than 800 m. Drilling was carried out using NQ size and BQ size (36.5 mm core diameter), respectively, by Richtrau and AngloPlats.

Three or more deflections were drilled per hole whenever the mother hole intersected the reef package. Deflections were drilled from the mother-hole at depths of 5, 10, and 15 m above the MR and generally terminated approximately 3 m below the UG2. It is, however, noted that the Richtrau mother holes were drilled 40 m below the bottom contact of the UG2 intersection; on average, 15 m below the bottom contact of the UG1 reef package that underlies the UG2. This was done to obtain geological and geotechnical information in the areas where mine development (haulages) was likely to occur. Table 10-2 shows the breakdown of mother holes drilled on East Underground to date. It must be noted that information associated with the drill hole locality map of Figure 10-3 (excluding Afarak drill holes and the Kruidfontein footprint) is what underpins the resource estimate for the East Underground area, which comprises solely of data from Magazynskraal 3JQ, Koedoesfontein 42JQ and the southeastern portion of Wilgespruit 2JQ. The Barrick drill holes have been accounted for under Figure 10-2. Note, however, that the Afarak drill hole data on the Kruidfontein lease area contribute to the grade estimates for East Underground.



srk consulting	SRL Total Assets PEA PSM - East Underground: Drill Hole Collar Positions [source: SRL]	Project No. 600322

Figure 10-3: PSM - East Underground: Drill Hole Collar Positions

Table 10-2: PSM - East Underground: Summary of Number of Holes Drilled (1994/5 to 2009/10)

Company	1994/5	2001	2007/8	2009/10	Total
AngloPlats - Magazynskraal	9	7	8	7	31
Richtrau - Magazynskraal				111	111

10.1.4 Kruidfontein

The principal method of drilling is diamond core drilling for exploration and resource definition purposes.

Sixteen holes were drilled during the first phase of the drilling campaign between September 2008 and July 2009. During this campaign one historical hole with identity KRF-001 was rehabilitated to allow for the drilling of four reef deflections. In phase 2 of the drilling programme 11 diamond holes were drilled between September 2009 and February 2010. All the mother holes have either three or four deflections. Figure 6-6 is a drill hole location plan within the project area. All drill holes were drilled vertically and by previous operators. There has been no additional drilling since the 2010 programme.

All holes were drilled at BQ core diameter (36.5 mm) by Discovery Drilling (Pty) Ltd. SRK notes that the rocks of the BC have been drilled extensively to a BQ diameter size without posing any risk to the core quality. On each of the first three holes (KFT-001, KFT-002 and KFT-003), three deflections were drilled at TBW diameter (45 mm) from the hangingwall of the MR to the footwall of the UG2 chromitite, a stratigraphic interval of 25 to 40 m. Due to the logistical difficulties associated with TBW drilling at depth, the protocol was subsequently modified to allow for drilling of four deflections at BQ diameter, rather than three TBW. Of the five reef intersections thus obtained (mother hole + four deflections), three were subjected to whole-core sampling for assay purposes, with two being retained for reference purposes.

10.1.5 Mphahlele

The drilling programme, which commenced in early 2004 and continued to late 2008, involved 220 drill holes with 306 deflections for a total of 71 822 m (inclusive of the deflection holes) and comprised four phases:

- In Phase 1, 36 drill holes were drilled at 400 m intervals along strike and targeted UG2 reef at depths of 300 m and 500 m below the drillhole collar. This phase accounted for 17 345 m of drillhole length;
- Phase 2 targeted the UG2 reef at a depth of 1 000 m with drill holes spaced at 800 m apart. Subsequently, the drillholes were spaced at 1 600 m apart and targeted the UG2 reef at 1 500 m depth below the drillhole collar;
- Phase 3 involved infill drilling; the UG2 reef at this locality is relatively shallow (±100 m) in comparison with the other phases. The drillhole spacing in this shallow area was 250 m. Staggered infill drilling was also conducted in the deeper portions at 800 m spacing to intersect the UG2 at 750 m depth, bringing the effective hole spacing in this area to ±450 m; and
- A final phase of drilling on the three proposed mining start-up blocks focused on the planned decline shafts. The grids averaged 40 m line spacings, orientated to provide reef intersections at 20 m depth intervals. This phase involved the drilling of 36, 28 and 27 holes (total 91) over the Western, Central and Eastern start-up blocks respectively.

Most of the drillholes were drilled as a mother hole with two deflections per reef. All holes are vertical and therefore no reef intercepts are at right angles to the plane of the reef. All drillhole data are stored in a database, from which geological cross-sections and 3D models have been constructed. The cross-sections confirm the tabular nature of the UG2 and MR, the dip of 50° to 55° with a MR/UG2 separation of an average of 115 m (true) (see Figure 10-4).

The mother holes were drilled for NQ core (47.6 mm core diameter) and the deflections for TNW core (conventional, 60.5 mm core diameter). Exploration programmes on the BC commonly use BQ (36.5 mm core diameter) and NQ (with TNW for reef intersections), as these provide sufficient volumes of material for half core sampling, as well as sufficiently large intersections to observe and log the major lithostratigraphic features considered important for defining the project and the Mineral Resources. Drill hole collar locations were sited according to the predetermined drilling patterns and located in the field by a hand-held global positioning system (GPS).

As at 30 June 2008 when an initial FS was undertaken, assay samples had been taken for 161 intervals through the MR and 267 through the UG2.

Subsequently, an additional 38 MR and 101 UG2 intervals were sampled from the drilling in the main mineral resource blocks and the three start-up blocks where there were planned declines at the time.

10.2 Drilling Factors

10.2.1 Ruighoek

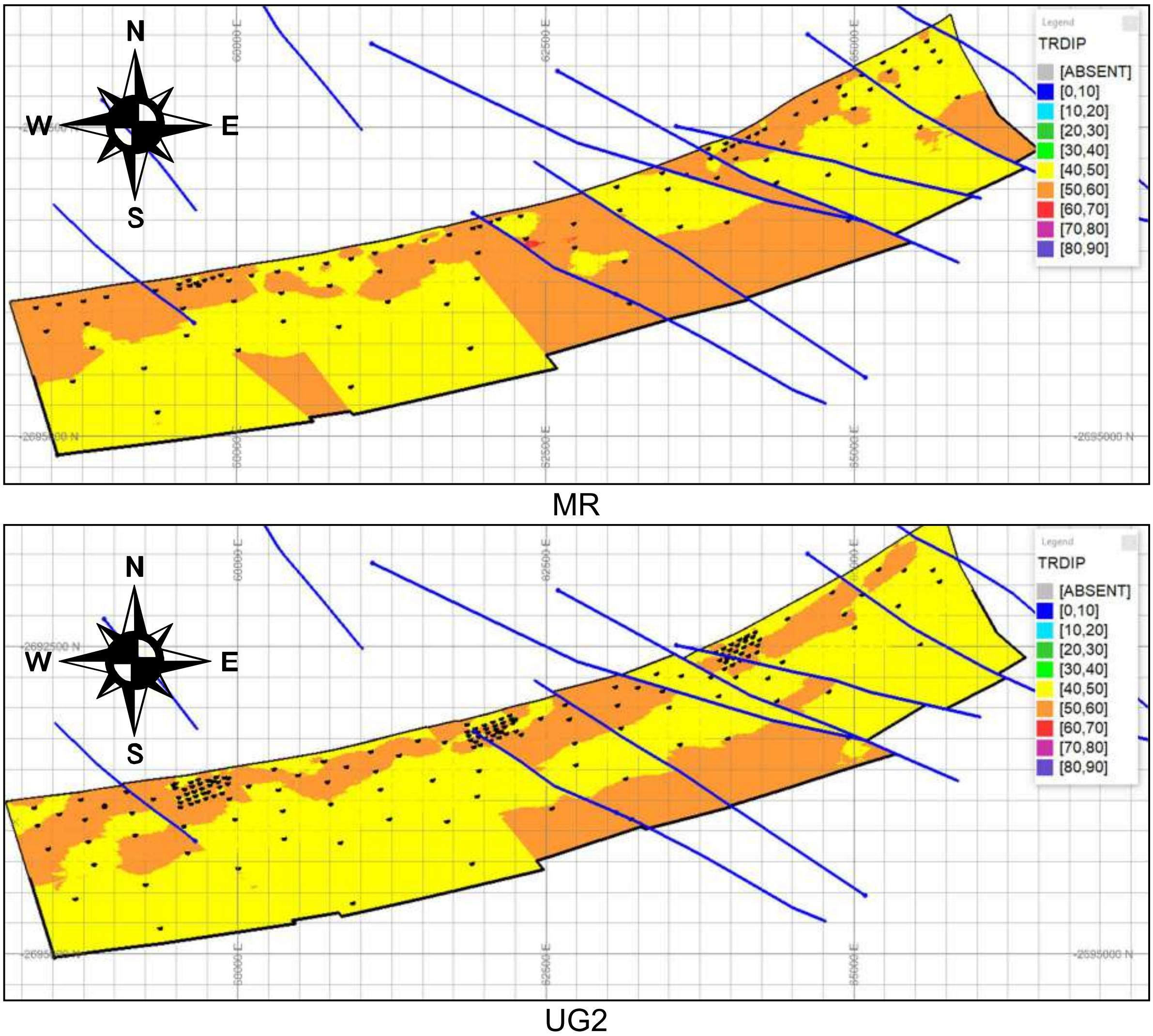
Drillhole collar elevations are based on DGPS readings carried out by Orbital Surveys. The DGPS surveyed X, Y and Z position is taken as the “final” collar position and entered into the SABLE drillhole database. Down-hole survey information was derived from the geophysical down-hole data which has been carried out on a subset of the drillholes selected on an essentially random basis. The data indicates that the average drillhole inclination is -89.17º from 82 readings from 18 surveyed drillholes.

10.2.2 East Pit and Central Underground

The collars were professionally surveyed on a regular basis. The surveyed X, Y and Z position was taken as the collar position into the acQuireTM data base. Only surveyed holes were used for resource estimation and construction of reef surfaces in the geological model. Downhole surveying was carried out by a commercial contractor on selected holes. A maximum deviation of approximately 1.5° was observed on a >300 m deep hole. In more shallow holes the deviation was negligible. For that reason, downhole surveying was not done routinely and vertical holes were given a -90° dip. Drilling wedges were designed to give a 1.5° deflection and each deflection was therefore given a nominal dip of -88.5°.

10.2.3 East Underground

The approach adopted for surveying of drill holes is similar to the description above for East Pit and Central Underground. SRK notes that downhole surveys were completed on all the mother holes; a slight deviation from the practice at East Pit and Central Underground. This was done using a magnetic Reflex EMS survey tool immediately after the mother-hole drilling was completed. In addition, three holes were re-surveyed using gyro surveys and found to correspond reasonably well with original survey records. SRK notes that core recovery was in the order of 95% and above.



srk consulting	**SRL Total Assets PEA** Drill Hole Collar Locations for the MR and UG2 at Mphahlele [source: SRK, 2020]	Project No. 600322

Figure 10-4: Drill Hole Collar Locations for the MR and UG2 at Mphahlele

10.2.4 Kruidfontein

Comments with respect to surveying of drill hole collars are applicable here. The down-hole survey method used is unknown. SRK notes that the down-hole survey data is in digital format. However, SRK cannot confirm what technique was employed to validate the final drill hole collar positions and the down-hole survey results.

SRK also notes that data on core recovery was not captured in the database. There is empirical evidence elsewhere in the Swartklip Facies and the BC in general that indicates that core recovery is generally good and usually better than 99% in mineralised zones.

Only surveyed holes were used for resource estimation.

10.2.5 Mphahlele

The completed hole was marked by a concrete plinth and surveyed by an independent surveyor using a differential GPS with an established base station on the property. Generally, the drillhole locations were found to be within one metre of the targeted position established prior to drilling.

10.3 Property Plan with Drill Hole Locations

Property plans with drill hole locations for the Ruighoek, East Pit, Central Underground, East Underground Kruidfontein and Mphahlele are shown respectively in Figure 10-1, Figure 10-2, Figure 10-3, Figure 6-6 and Figure 10-4.

The locations of drill collars drilled by previous operators are also shown in these property plans.

At Mphahlele the footprints of the MR and UG2 reefs are slightly different due to the stratigraphic separation and steep dip of the units. Many of the drill holes therefore are collared to the north of the MR subcrop position. Collar locations of the holes relevant to the MR and UG2 reefs are shown in Figure 10-4. Also shown on the diagram are the major faults modelled (in blue) and the dip of the reef within the modelled reef footprint.

All holes are drilled vertically. The shorter holes (<100 m) do not show significant deflections; however, the deeper holes can deflect by several degrees. Deflections are typically towards the subcrop position. The deeper holes typically have an original intersection, and two deflections.

11 Sample Preparation, Analyses and Security

The discussion here is drawn from information provided by the Company.

11.1 On-site Sample Preparation Methods and Security of Samples

The approach to packaging of samples dispatched for assay analysis was generally consistent across the projects, operations and the different periods under which they occurred:

After logging, the core was marked up for sampling with nominal intervals of approximately 20 cm but this varied depending on the geology. Sampling was extended from well above to well below the PGM reef in order to close off the mineralisation. The core was then split longitudinally with a diamond-blade saw and sample intervals cut perpendicular to the core axis. Each half of the core was then placed in adjacent channels in a core tray and re-marked in paint with the sample intervals and numbers to ensure consistency between the two. Half core samples were then placed in bags with sample tickets inserted in the bag and attached outside before being sent to the laboratory in batches with appropriate documentation. The remaining core was placed back into the original tray, annotated, photographed and stored in line with normal industry benchmark standards.

Kruidfontein and Mphahlele samples were submitted to SGS Lakefield Research Africa (Pty) Ltd (SGS) Lakefield laboratory (Lakefield) in Johannesburg, while the East Pit, Central Underground, and East Underground were submitted to Genalysis Laboratory Services (Pty) Ltd (Genalysis) sample preparation facility in Johannesburg before shipping to Genalysis' Perth facility for assay.

Before dispatch to the laboratory, internationally recognized reference materials were inserted into the sample stream along with blanks made up of swimming pool filter sand.

It is SRK's opinion that the above approach is satisfactory and consistent with conventional benchmarks employed by most operating mines in the BC.

11.2 Laboratory Sample Preparation, Assaying and Procedures

11.2.1 PSM – Ruighoek

This section should be read in conjunction with Section 10.1.

Platmin – Pre-2008 Samples (Phase 1 - Phase 3)

The sample preparation and analysis were completed at SGS Lakefield in Johannesburg which was accredited by SANAS with accreditation number "T0169". SGS Lakefield is independent of the Company, as is all the other external laboratories mentioned in this report.

The samples were received in SGS Lakefield's sample preparation room in batches enclosed in cloth bags containing the individual samples in separate plastic bags. For the most part, no drying was required because the samples were all diamond core that had been dried in sunlight during the logging and sampling process.

The samples were then crushed with a jaw crusher. The equipment had good bottom extractor fans to prevent dust contamination. The crushers, rifflers and collectors were thoroughly cleaned with air between samples. The crushed sample was then pulverised in mills which were cleaned between each sample.

The milled sample was taken to the fluxing area and a known sample mass measured directly into a weighing bowl. The sample was then added to the flux in a numbered crucible that had been prepared before. The weighing bowl was cleaned with a brush between samples. The crucibles were laid out numerically on the transport trolley. Silver nitrate was then added, and a coppering agent according to a predetermined pattern.

The half cores were submitted for the following analysis at SGS Lakefield:

- **Pt, Pd, Au**: all samples determination using Pb-Ag collector and Inductively Coupled Plasma Optical Emission Spectrometer (ICP-OES) and Inductively Coupled Plasma Mass Spectrometry (ICP-MS);
- **Rh** (separate lead fusion fire assay using Pb-Pd as a collector): selected samples at reef horizons or erratic mineralization identified in core (e.g., mineralization in mottled anorthosite);
- **Ni, Cu** (aqua regia leach with atomic absorption spectrometer (AAS) finish): MR, UPR and LPR and reflect the acid soluble metal results and not Ni contained in silicate minerals. These analytical procedures are standard throughout the industry in South Africa;
- **Cr and Fe** were determined for selected (25% - 50% of intersections) intersections of the UG2 Chromitite unit by X-Ray Fluorescence Spectroscopy (XRF);
- Determination of **Pt, Pd, Rh, Ru and Ir** by Nickel Sulphide (NiS) fusion followed by ICP-OES; and

- NiS analyses on drill core (which included Ru and Ir) - Samples from a limited number of drill hole intersections were submitted to Genalysis Laboratory Services (Pty) Ltd (Genalysis) in Perth Australia for 5PGM+Gold (6E) analysis by fire assay with NiS collection. Genalysis is an accredited NATA (National Association of Testing Authorities, Australia) laboratory (Number 3244) and independent of SRL. The samples were also analysed for Ni and Cu using a sodium peroxide fusion with strong acid digestion (which effectively gives total values) and also a very weak leach known as the PA2 leach (a hydrogen peroxide and ascorbic acid leach intended to remove only sulfide Ni and Cu which were determined by ICP-OES). These numbers provided a check on the aqua regia digestions with AAS determination routinely done at Lakefield. Limited other elements, including Fe and Cr were also determined using the sodium peroxide fusion and strong acid digestion technique.

These analyses confirmed the presence of other economically important metals, such as Ru and Ir in mineralized reefs and zones. Due to the historically low prices for the minor PGMs such as Ru and Ir and the high cost of NiS fire assay techniques, these were not routinely assayed during the exploration programme.

The general procedure used during soil sampling followed in this sequence:

- Soil is dried and sieved;
- A -500 µm fraction is submitted for Pt, Pd, Au, Ni, Cu, Co and Cr analysis to Ultratrace; and
- Pt, Pd, Au concentrations are determined by fire assay and ICP-MS finish whilst Ni, Cu, Co and Cr are determined by sodium peroxide fusion, strong acid digestion and ICP-OES finish.

11.2.2 PSM - Sedibelo West, East Pit, Central Underground, East Underground

Half drill core samples were submitted to the Genalysis preparation laboratory in Johannesburg for sample preparation. The following approach was adopted:

- Dry total sample after crushing was pulverised in LM5 pulveriser for four minutes to a nominal 90% passing 75 µm;
- Packaging of two laboratory assay pulps in paper sample envelopes; and
- Storage of balance of bulk pulp separately in new plastic containers.

One laboratory pulp was submitted to Genalysis (Perth) for Pt, Pd, Au, Cu and Ni assaying, the second pulp was submitted to SGS Lakefield for Rh fire assay.

Routine analysis was undertaken by Genalysis as follows:

- Nominal 25 g lead sulfide collection fire assay in new crucible and ICP-MS for Au (1 ppb detection limit), Pt (1 ppb) and Pd (1 ppb). Method code FA25MS;
- 1 g aqua regia digest and flame AAS for Ni (1 ppm) and Cu (1 ppm); and
- In addition, initially 10% of samples were analysed for all PGMs by nominal 25 g nickel sulfide collection fire assay in new crucible and ICP-MS finish, method code NiSMS. Lower detections limits for this method were Au (5 ppb), Pt (2 ppb), Pd (2 ppb), Rh (1 ppb), Ru (2 ppb), Ir (2 ppb) and Os (2 ppb).

Pulp duplicate analysis was undertaken by SGS Lakefield for Pt, Pd, Rh and Au by 30 g fire assay lead collection with ICP-MS finish (method code FAM313).

Samples originating from the Richtrau drilling programme (Figure 10-3) followed the same routine as described under Section 11.2.1 for the “PPM-2011” samples; the only notable difference is that the remaining pulp was returned to Richtrau and not PPM.

The AngloPlats samples were treated the same way as the Barrick samples.

11.2.3 Kruidfontein

The approach to crushing, pulverizing of samples and aliquot selection is not detailed in the information provided by SRL, nor are there any results of the particle size analysis.

All samples were assayed by SGS Lakefield. SRK is not aware of any information that suggests that SGS is not independent of SRL.

One MR and one UG2 chromitite intersections from each drill hole was submitted for full 6E (Pt, Pd, Rh, Ru, Ir, Au) by NiS collection fire assay with ICP-OES finish. The remaining deflections from each drill hole were assayed for Pt, Pd and Au by lead collection fire assay with ICP-OES finish, with separate determination of Rh by Pb fire assay with a Pd collector.

In the first phase of drilling, all samples were assayed for total Cu and Ni by AAS after aqua regia digestion, with some erratic results obtained. This technique can over-estimate Ni concentrations where secondary minerals after magnesian olivine are present and digested along with sulfide-hosted Ni. For the second phase of drilling, Ni and Cu were determined by XRF spectrometry on pressed powder pellets, knowing that XRF measures total Ni in both sulfides and silicates. UG2 samples were additionally submitted for Cr_2O_3 analysis by XRF after borate fusion.

11.2.4 Mphahlele

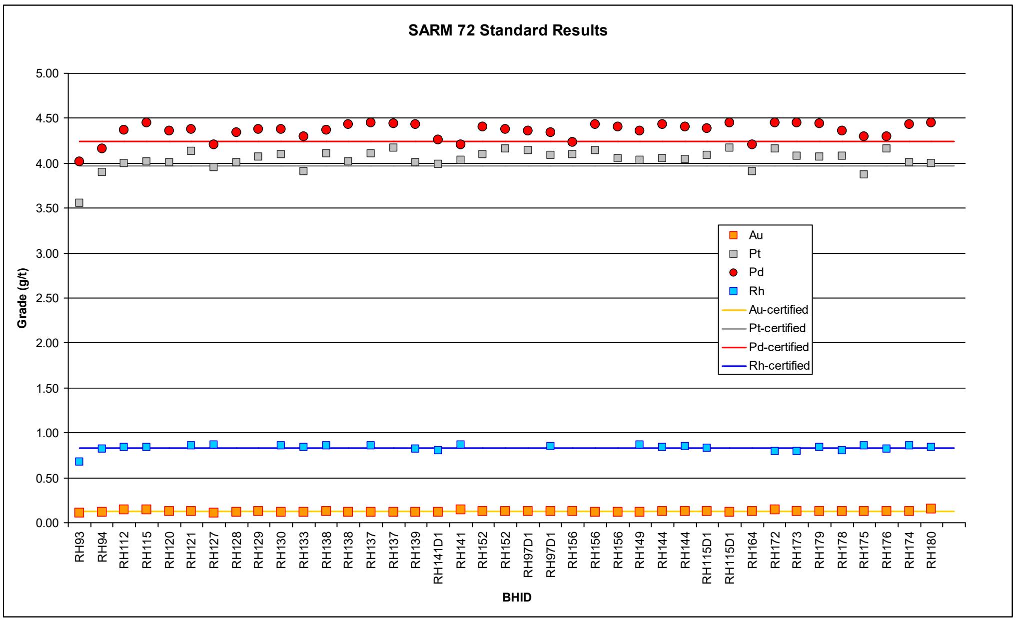
The analytical methods at Mphahalele are the same as those described in Section 11.2.1 for Platmin – pre-2008 samples (Phase 1 - Phase 3), and all analyses were also completed at SGS Lakefiled (Pt, Pd, Rh, Au, Ni and Cu assays) and Genalysis in Perth (NiS collector Assays for Pt, Pd, Rh, Ru and Ir). NiS analyses were conducted on 19 complete reef intercepts of MR and 32 from the UG2, which represent ±12% of all intersections through each reef.

11.3 Quality Control Procedures and Quality Assurance Actions

11.3.1 Ruighoek

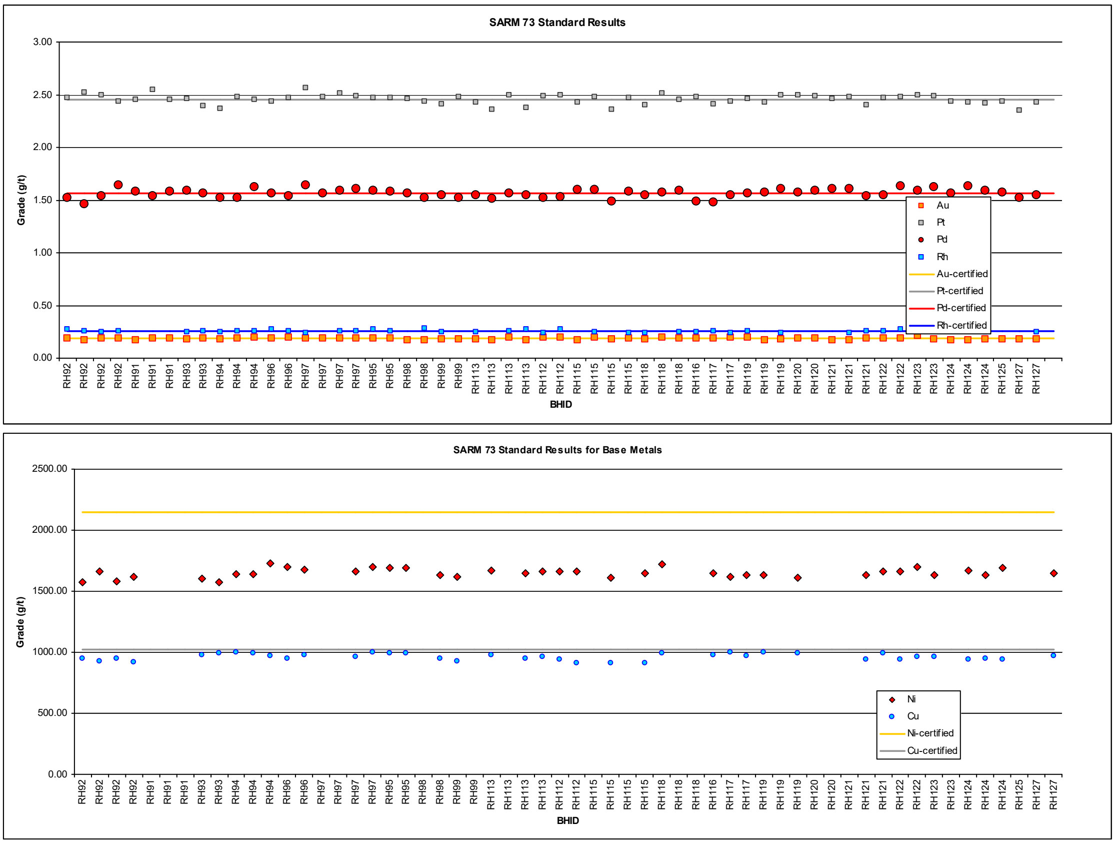
SRL inserted commercially available standards (certified reference materials) into their sample stream to monitor analytical accuracy throughout the sampling campaigns. SGS Lakefield undertook the analyses, using a lead-collector fire assay with ICP-OES finish to determine Pt, Pd and Au. Rhodium is analysed using a palladium-spiked lead-collector fire assay with ICP-OES finish. Nickel and Copper have been determined using a partial-acid leach that is intended to oxidise and release sulphide-hosted base-metals only. In the case of the LPR, some silicate-hosted nickel may be included within the assay as a result of acid-dissolution of garnierite and allied serpentine-hosted nickel species.

SRK developed, using the SRL databases, a series of quality-control charts illustrating the performance of various standards that have been submitted to Lakefield Laboratories. The results for the largest groups of certified reference data that were utilised within the quality control of the analytical programs are presented graphically in this section, with accompanying statistical summaries of the data derived.



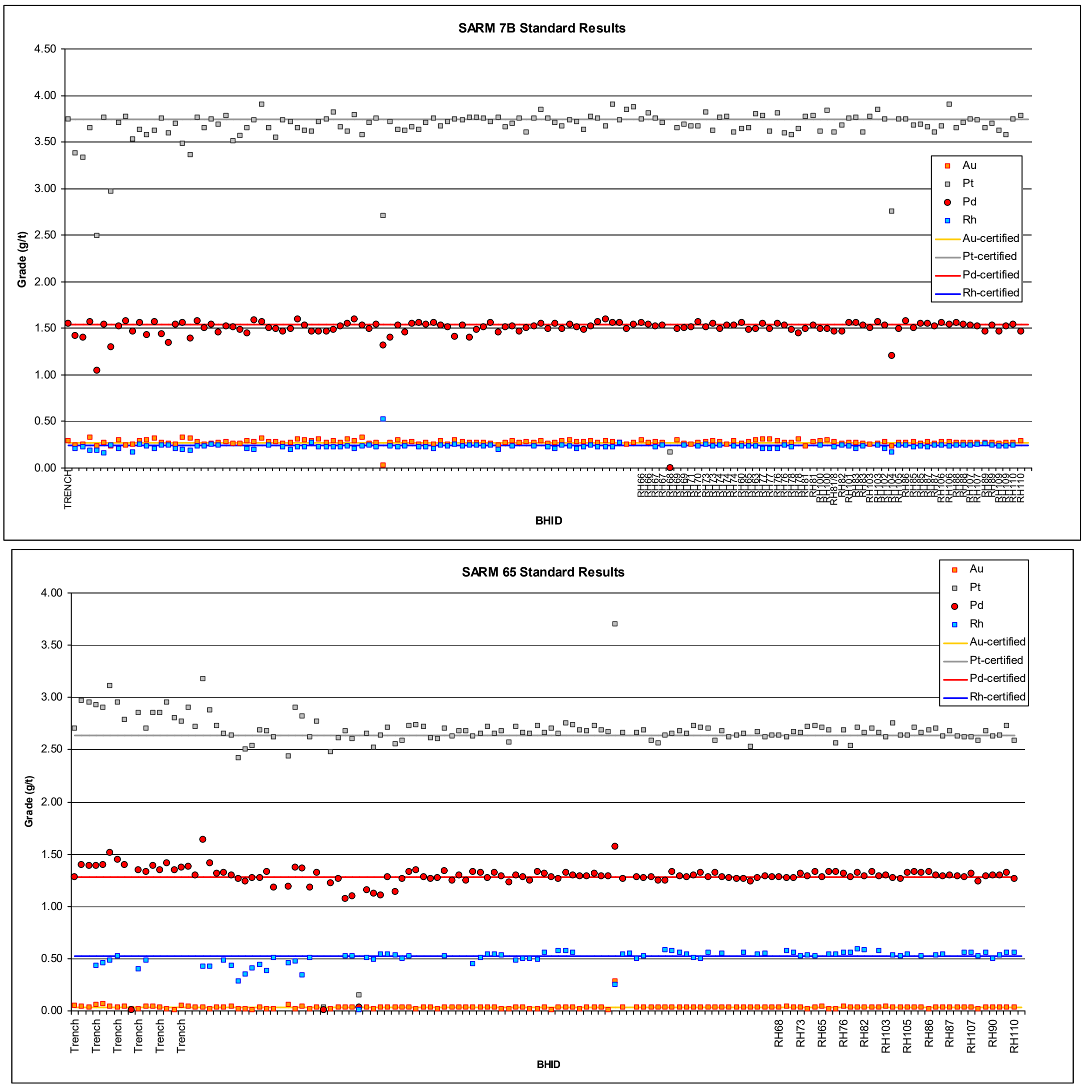
srk consulting	**SRL Total Assets PEA** Qualty Control Chart showing Actual vs Certified Precious Metal (Au, Pt, Pd and Rh Values) in SARM72	Project No. 600322

Figure 11-1: Quality Control Chart showing Actual vs Certified Values for Precious Metals in SARM72



srk consulting	**SRL Total Assets PEA** Qualty Control Chart showing Actual vs Certified Values for Base and precious Metals in SARM73	Project No. 600322

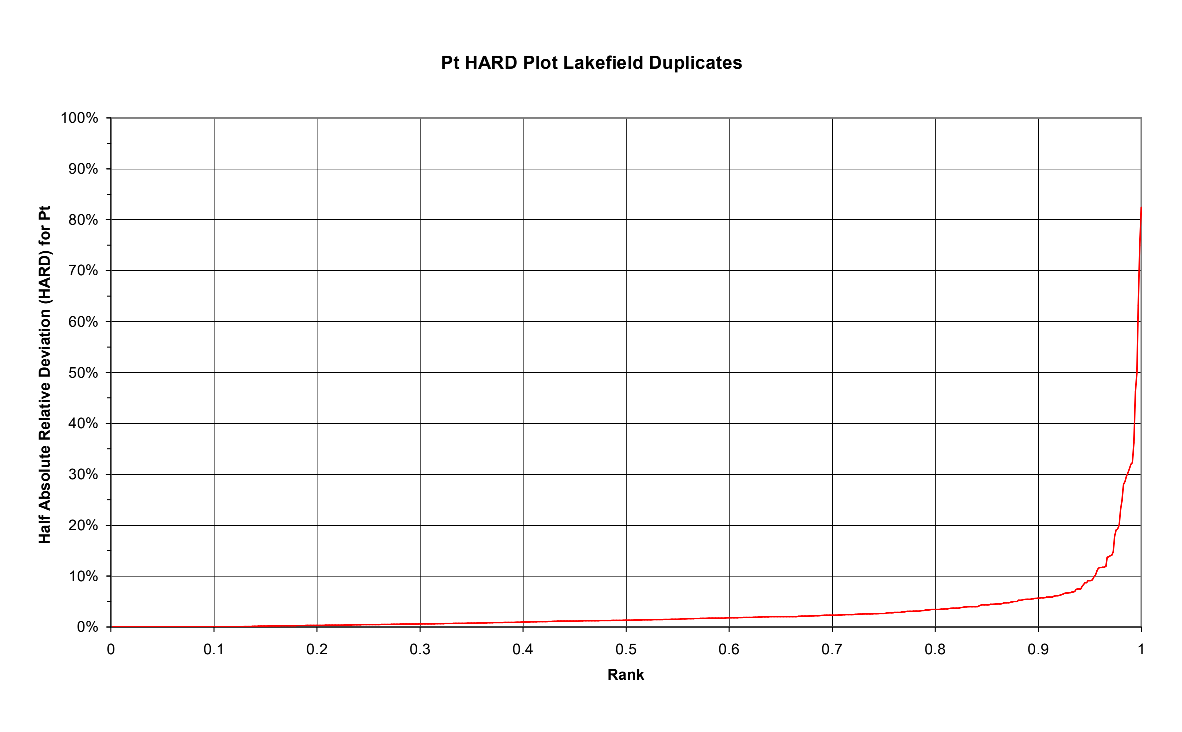
Figure 11-2: Quality Control Chart showing Actual vs Certified values for Base and Precious Metals in SARM73



srk consulting	**SRL Total Assets PEA** Qualty Control Chart showing Actual vs Certified Values for Precious Metals for SARM7b and SARM 65	Project No. 600322

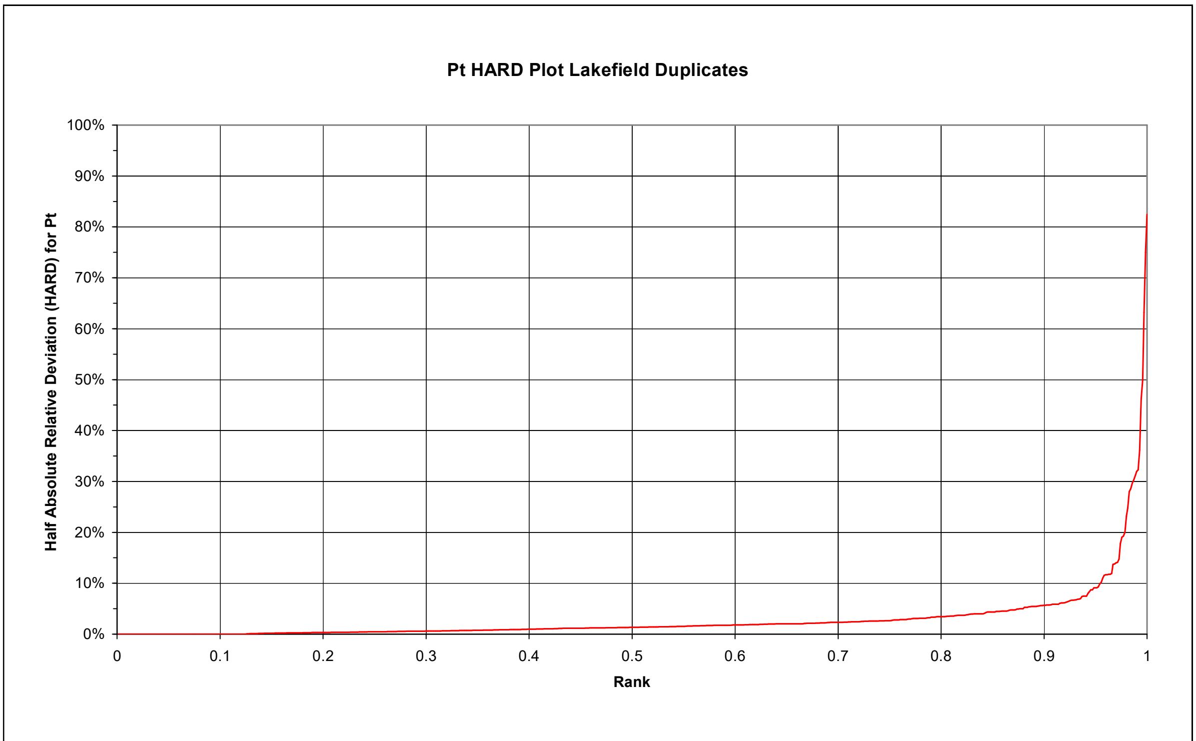
Figure 11-3: Quality Control Chart showing Actual vs Certified Values for Precious Metals in SARM7b and SARM 65

SGS Lakefield also undertook a set of duplicate determinations, made on pulp-split aliquots prepared post sample preparation. SRK examined the original and duplicate Pt and Pd assays within this data set. These paired values were used to derive Half Absolute Relative Deviation (HARD) plots for Platinum and Palladium assays. This comparison strictly examines the analytical reproducibility within the SGS Lakefield analytical process and does not include any variance attributable to sample splitting, other than that variance that arises from the extraction of a sample aliquot from the original pulp sample.



srk consulting	**SRL Total Assets PEA** HARD Plot for Pt Assay (Pt >0.2 g/t, duplicates selected by SGS Lakefield)	Project No. 600322

Figure 11-4: HARD Plot for Platinum Assay (Pt >0.2g/t, duplicates selected by SGS Lakefield)



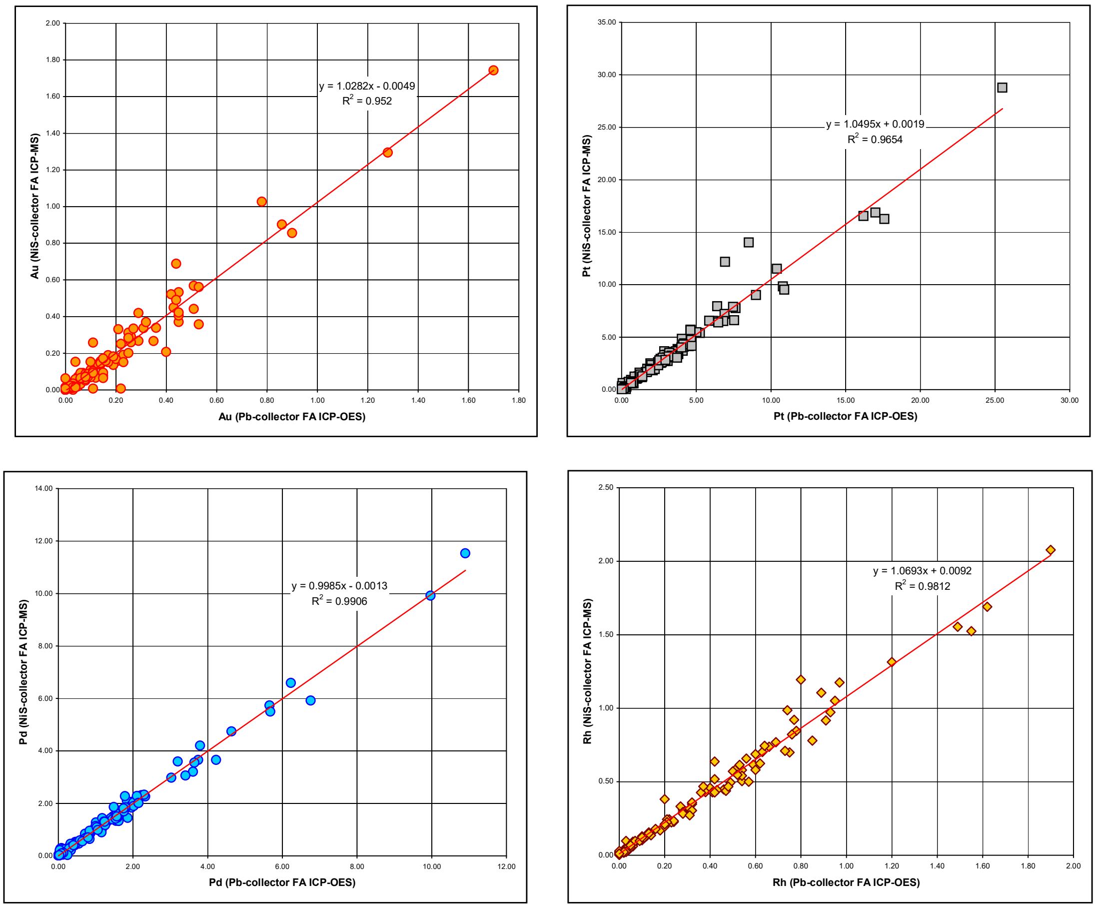
srk consulting	**SRL Total Assets PEA** HARD Plot for Pd Assay (Pt >02 g/t, duplicates selected by SGS Lakefield)	Project No. 6003

Figure 11-5: HARD Plot for Palladium assay (Pt >0.2g/t, duplicates selected by SGS Lakefield)

The standards are pulp materials, whereas the core samples submitted in conjunction with the standards are rock fragments that require initial crushing and pulverisation prior to the abstraction of sample aliquots. In cases where rhodium analyses are completed, a second pulp aliquot must be drawn since this metal is determined using a separate and different fire assay process. In addition to the standards submitted by SRL, SGS Lakefield have provided details of their internal laboratory quality control, including standards results that have been submitted by SGS Lakefield staff. The statistics of the standard sample results reveal good correspondence with generally few aberrant samples observed.

Ranked HARD plots have been used to examine the reproducibility of the Pt and Pd assays at SGS Lakefield. Splits from the original sample pulp have been used to derive duplicate samples that have been re-assayed in total. The HARD plots show that there is a high degree of precision: for Pt approximately 90% of the paired data show HARD values of 6% or less. For Palladium, 90% of the data pairs show HARD values of 8% or less. These values are indicative of a high degree of reproducibility: more than 90% of the data differ by less than 8% (Palladium) and 6% (Platinum).

Sample pulps have also been selected and submitted to Genalysis Laboratories in Maddington, Perth. Genalysis employ a NiS-collector fire assay procedure, with an ICP-MS finish. In general, this technique is regarded as a highly effective analytical method for use on platinum-group elements. With respect to Au, this technique can suffer some minor metal losses; the base-metals that dominate the initial button recovered within the fire assay are dissolved using hot HCl. During this procedure, some Au may be lost resulting in commonly observed Au deficiencies when NiS-assay results are compared against Pb-collector data. Comparison of the analytical data (see Table 11-1) suggests that this loss is negligible in this instance.



srk consulting	**SRL Total Assets PEA** Check Assays showing SGS Lakefield Assays on the X-axis and Genalysis Determinations on the Y-axis	Project No. 600322

Figure 11-6: Check Assays showing SGS Lakefield Assays on the X-axis and Genalysis Determinations on the Y-axis

Table 11-1: Comparative Statistics for Check Assay Sample Data with primary Assay at SGS Lakefield and Check Assay at Genalysis

Statistic	Au		Pt		Pd		Rh	
	Lakefield	Genalysis	Lakefield	Genalysis	Lakefield	Genalysis	Lakefield	Genalysis
Count	150	150	150	150	150	150	141	141
Average	0.15	0.15	2.75	2.89	1.29	1.29	0.30	0.33
Minumum	0.00	0.00	0.00	0.02	0.00	0.01	0.00	0.00
Maximum	1.70	1.74	25.50	28.75	10.90	11.53	1.90	2.08
Std dev	0.23	0.25	3.67	3.92	1.66	1.66	0.36	0.39
Cov	1.56	1.66	1.33	1.36	1.28	1.29	1.22	1.20

The quality control data are consistent with a high quality data set, suitable for use within Mineral Resource estimation.

11.3.2 Sedibelo West, East Pit, Central Underground

PGM

SRK has reviewed the independent 2011 QA/QC report and is satisfied with the findings.

The dataset includes Sedibelo Central and Sedibelo West data, which cannot be easily separated. Focus is placed on the Pt and Pd results as these elements are the greatest contributors to the mineralisation.

The data is spatially integrated with no drill hole having primary samples assayed by more than one technique. The percentage of the data analysed using the different techniques is detailed in Table 11-2Table 11-2.

Table 11-2: Sedibelo Project: Percentage of Data Analysed using Various Analytical Techniques

Variable	Total No of Records	Percentage of Total Mumber per Technique					
		NISMS	FA25M	FAM31	AAS13	BTAAS	FAI35
Pt	1 244	3%	87%	10%			
Pd	1 244	3%	87%	10%			
Rh	4 889	8%					92%
Au	12 419	3%	87%	10%			
Cu	12 162				8%	92%	
Ni	12 178				8%	92%	

Note:
1. FA25M - Pt, Pd and Au fire assay (FA) with Pb collection ICP-MS finish;
2. FAM31 - Pt, Pd and Au FA with Pb collection and ICP-OES finish;
3. FAI35 - Rh FA with Pd collection and ICP-OES finish;
4. NISMS- Pt, Pd and Au total acid digest with ICP-MS finish (Genalysis); and
5. BTAAS- Cu and Ni partial acid digest (Genalysis).

Most of the data was analyzed using the FA25M (for Pt, Pd and Au), BTAAS (for Cu and Ni) and FAI35 (for Rh) techniques.

Several CRMs were inserted with the primary core samples. All of the CRMs inserted were certified for both Pt and Pd using a fire assay technique. MR CRMs were submitted with the S1 (Merensky contact reef), UPR, PRHZB and LPR reef layers and UG2 CRMs.

SRK reviewed the CRM assay report for both Pt and Pd. Most of the CRMs used show accurate results with little or no bias relative to the expected values and standard deviations for both Pt and Pd. However, two CRMs (AMIS008 and AMIS0010) showed poor accuracy for Pt (but good accuracy for Pd) while a further two (AMIS0002 and SARM7B) showed poor accuracy for both Pt and Pd.

The following conclusions from the analysis of the CRM results are drawn:

- AMIS0002 is sourced from Platreef material (the local equivalent of the MR on the Northern Limb of the BC), which has a different composition to the MR. It is possible that the analytical method used in certifying the CRM is not the same as used for the analysis of the samples and this may be the reason for the poor accuracies;
- The Pd results for MR CRM (SARM7B) reported poor accuracy but insignificant (1%) bias. MR CRM (AMIS0007) has a similar Pd grade to SARM7B, which reported acceptably accurate values, so the poor accuracy seen in the SARM7B Pd results is not considered significant;

- The Pt results for MR CRM (SARM7B) report poor accuracy and a 6% bias towards lower than expected values. Unlike Pd, there is no other CRM in a similar grade range for Pt and therefore no conclusions regarding the CRM can be drawn. This CRM is the second highest grade MR CRM used;
- The Pt results for MR CRM (AMIS0008) show poor accuracy and a bias towards lower (12%) results than expected from the certified value. This CRM is the highest grade MR CRM used; and
- The Pt results from UG2 CRM (AMIS010) reported poor accuracy and a bias towards results 3% lower than expected from the certified value. SARM71 is in a similar Pt grade range and, although the results for this CRM are slightly more accurate, also reports results -3% lower than expected from the certified value.

It is noted that the method for the characterization of the SARM standards statistically differs from the way the AMIS standards are characterized. SARM characterization is done on a mean of means, whereas AMIS represents the population of primary analyses.

The duplicate results were analyzed using HARD plots, duplicate plots, Q-Q plots and scatter plots. Pt and Pd show good correlation coefficients and little scatter on the duplicate plots. The HARD plot for Pt shows 83% of the data with a HARD value of less than 10%, which is slightly lower than the 90% SRK expects for pulp duplicate samples. The Pd duplicates report more than 90% of the data with a HARD value of 10% of less. These results are backed up by the duplicate plots. The good pulp duplicate (Pt and Pd) precision is indicative of a low degree of error associated with the pulp sub-sampling. SRK's own analysis of the assay QA/QC results and compilation of the scatter plots (for Pt duplicates), HARD plots (for Pt) and Q-Q plots compare favourably with the reports provided by SRL. SRK considers that the degree of error associated with the pulp sub-sampling is immaterial.

Blank samples were routinely submitted with the primary samples. Blank samples consisted of half core material from the Main Zone stratigraphic unit. Main Zone lithologies are generally not considered suitable for use as barren material as they often contain some background mineralisation of both PGMs and base metals.

The Blank sample results for both Pt and Pd were plotted, using a limit of 0.1 ppm as an upper acceptable limit for mineralisation. For Pd, 2% of the Blank sample analyses report grades in excess of 0.1 ppm, indicating insignificant levels of contamination. For Pt, 10% of the Blank sample analysed report assay results in excess of 0.1 ppm; however, 2% report values in excess of 0.2 ppm. The Pt results could potentially indicate the presence of low levels of contamination for Pt but could also be reflecting background mineralisationmineralisation in the blank samples used. SRK does not consider the results of the Blank samples submitted to be indicative of any significant cross-contamination of samples.

QA/QC Conclusions

The combined results for the two higher grade MR CRMs (SARM7B and AMIS0008) indicate a potential for the MR Pt results to be under-reported by between 6% and 12% at high grades. This should e investigated because the bias observed in the CRM assay results is towards lower than expected results. The scale of this under-reporting for these specific CRMs relative to the accuracy for the other CRMs does not pose a significant risk to the overall Mineral Resource.

Chrome and Base Metals

There are no QA/QC records available for chrome since the drill hole samples were not analysed for chrome.

Table 11-2 does indicate data for Ni and Cu; however, the associated QA/QC results are not available.

11.3.3 East Underground

PGM

The QA/QC dataset provided to SRK is made up of the following data:

- Assay results of CRMs;
- Assay results of Blanks;
- Assay results of duplicate samples:
- Repeat assay results of Blanks; and
- Reports compiled by independent consultants.

The measure of confidence in the assay dataset for resource estimation is informed by SRK's independent review of the QA/QC dataset and the reports provided by SRL.

The QA/QC dataset is approximately 15% of the entire assay dataset of 15 796 records. Table 11-3 is a breakdown of the percentage composition of the QA/QC dataset.

Table 11-3: PSM - East Underground: Percentage Composition of QA/QC Dataset

QA/QC Composition	Percentage Composition with respect to Assay Dataset
CRMs	3%
Blanks	5%
Duplicates	6%

SRK is of the opinion that for a greenfields exploration project of this scale, the QA/QC dataset should constitute 30% of the assay dataset – 10% each for the CRMs, Blanks and Duplicates.

CRMs

AMIS0027 and AMIS0164 constitute the CRM dataset. SRK has analysed the results of only Pt and Pd, which are based on the NiS ICP-MS assay technique.

SRK noted that the mean assay results of each of the CRMs are confined within the two standard deviation acceptable limits. All the CRMs show a negative bias towards their expected CRM values with AMIS0027 Pd showing the highest negative bias of 3%. It is also noted that three of the assayed results for AMIS0027 exceed the acceptable limits.

SRK notes similar trends in the reports by previous consultants for the CRMs under consideration and that no recommendations were made with respect to these CRMs. The reports indicate that the laboratory analytical accuracy appeared to be excellent for AMIS0027 and AMIS0164 certified grade ranges, for not only Pt and Pd but also for Au, Rh, Cu and Ni. Based on SRK's independent review on Pt and Pd CRM analytical accuracy, SRK concurs with these findings. With the exception of AMIS0034, SRK's findings are similar to those arrived at by the previous consultants for all the other CRMs.

Duplicates

SRK's scatter plots for Pt and Pd duplicate analyses show a positive strong correlation between the pulp duplicate samples and the originals for Pt and Pd assay results. Most duplicate assays are within 10% of the results of the original samples and most duplicate assays that vary by more than 10% are at grades of less than 0.5 ppm.

It is SRK's opinion that the laboratory precision is acceptable. The previous report arrived at the same conclusion for the duplicate analysis. Of all the PGMs + Au reviewed, the duplicate assays of Au show significantly greater variability beyond the 10% results of the original assays. This is because most samples reported values within the detection limit range.

SRK's HARD plots for Pt and Pd shows 84% of the data with a HARD value of 10% or less, which is slightly lower than the 90% SRK expects for pulp duplicate assays. However, by excluding data below 0.5 ppm, 90% of the data reports a HARD value of less than 5%.

Blanks

SRK notes that the Blank material was source from the Main Zone norite. The Blank control plots indicate poor accuracy with erratic and highly irregular results displayed for all PGMs. It is possible that the cross-contamination is likely due to the Main Zone norites having sporadic anomalous metal concentrations; poor characterization of the blank material is more likely the cause of the erratic assay results. This conclusion is further supported by the following observation:

- Blank material inserted by the SGS laboratory for internal QA/QC checks consistently returned PGE and Au values below their respective detection limits; and
- Cross-checking of the assay data for the sample preceding the blank does not indicate any correlation between the grade of the preceding sample and the blank material, which is indicative of the fact that cross-contamination between samples is unlikely to be the issue.

SRK's opinion is based on interpretation from two QA/QC reports compiled by independent consultants, and not the underlying QA/QC data.

Chrome

Chrome was analysed using an XRF spectrometry. Table 11-4 summarises the certified reference material (CRM) results.

Table 11-4: PSM - East Underground Chrome CRM Analysis

CRM	No: of Certified Samples	Certified Value	Average Analysis	Percentage within threshold	% Bias
AMIS0107	12	0.42	0.46	27%	9%
AMIS0053	99	0.49	0.88	45%	45%
AMIS0034	34	0.61	0.65	49%	6%
AMIS0013	42	1.5	1.53	93%	2%
AMIS0074	13	7.12	6.74	54%	-6%
AMIS0006	50	7.89	8.30	70%%	5%
AMIS0027	242	13.74	13.96	99%	2%

Approximately 60% of the chrome blank assay results exceed the detection limit threshold 0.01%. The average grade of the blank assay data exceeding the threshold value is 0.55% (i.e., five times the threshold value). Considering that the average grade of the chrome raw assay dataset is approximately 14% (23% for the UG2), it is SRK’s opinion that the degree of contamination is immaterial.

There is no duplicate assay dataset available for review. SRK is therefore not able to comment on the repeatability of the dataset.

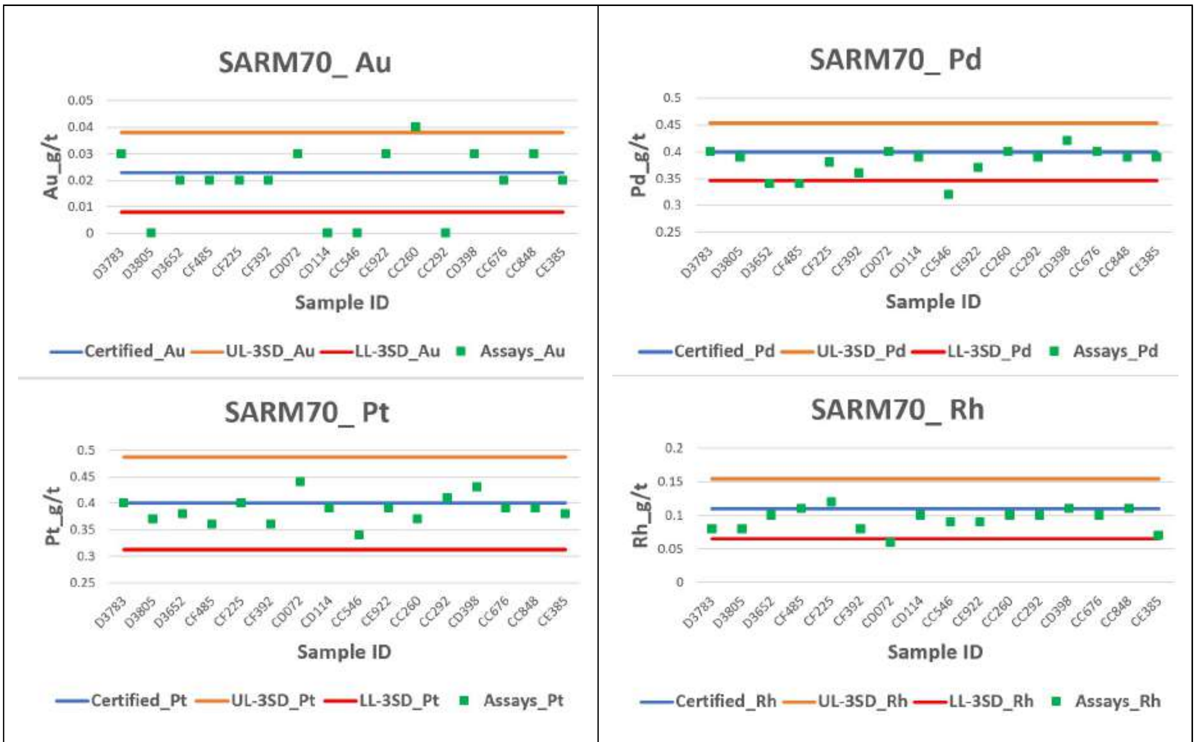
11.3.4 Kruidfontein

The independent QA/QC samples comprised CRMs, Blanks and Repeat samples constituting approximately 12.5% of the total samples submitted for analysis. Based on the QC data reviewed, SRK can only confirm records for the CRMs and Blanks. There is no report/data for internal laboratory QA/QC. SRK places a higher reliability on independent QA/QC results than on internal laboratory QA/QC and hence the absence of the latter should not pose any risk to the assessment of the assay results for grade estimation.

For each CRM, the actual values were plotted against the certified value, with minimum and maximum ranges of three times the standard deviation (3 SD). SRK has validated the control plots against the source data and notes that the plots are accurate plots. The CRM control plot for the 4E variables for SARM70 and SARM72 are shown in Figure 11-7 and Figure 11-8; similar plots are available for AMIS0034 and AMIS0014 but not captured in this report. The upper and lower limits have the abbreviations ‘UL-3SD’ and ‘LL-3SD’, respectively, whereas the certified value is shown by the blue line; the green squares depict the individual actual assayed values. For the low grade Au CRM (SARM70), approximately 25% of the assays plot outside the 3 SD limit. Although this is a significant failure rate (Figure 11-7), it is consistent with expectation for extremely low grade samples with assays approximating detection limits. With respect to SARM72, it is noted that one particular sample (CC017) consistently failed on all the variables under consideration. This sample is most likely a Blank material and not a SARM72 CRM sample. Based on the threshold limits imposed on these plots, it can be concluded that there is no material bias associated with the assay results. SRK notes that even using a more stringent threshold limit (2 SD), the conclusion on ‘bias’ will not be materially different. It is also important to note that the grade range of CRMs considered is largely representative of the grade distribution within the mineralized zone.

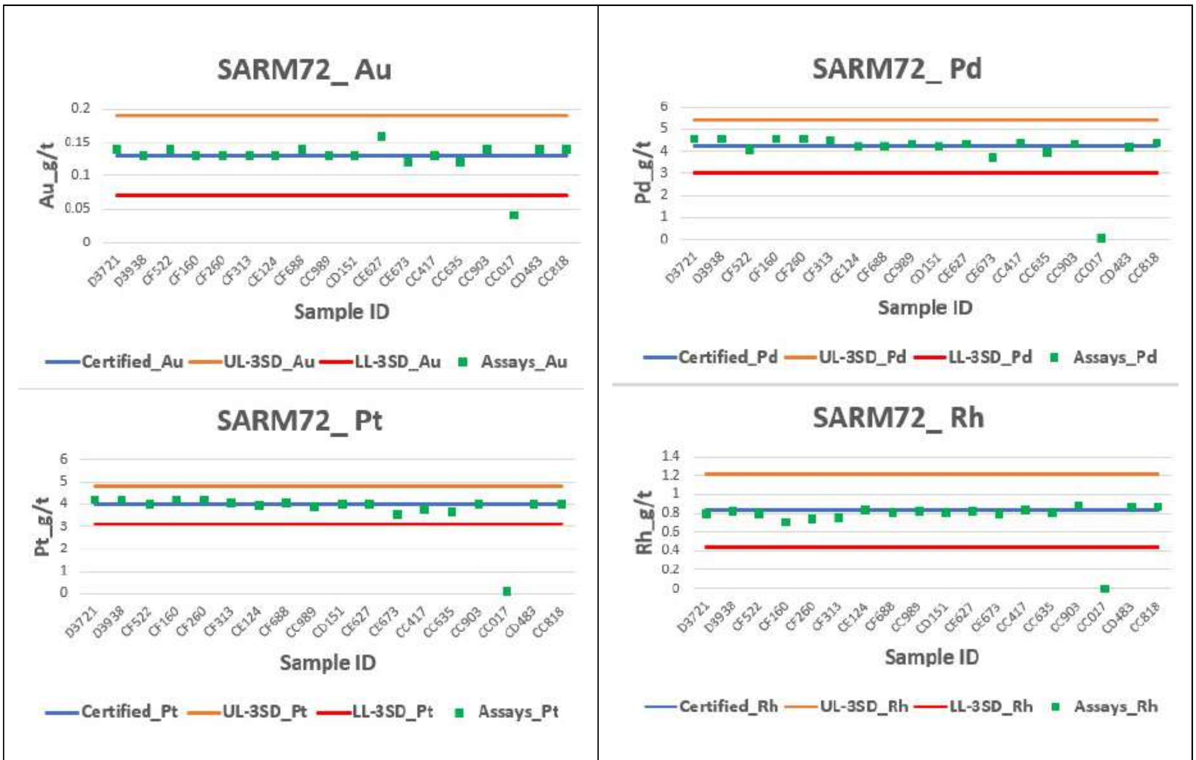
Although the Blanks used were not certified and the background values were not established, the results indicate negligible sample contamination.

SRK notes extremely good correlation for all repeat samples, with R^2 values all above 0.98, were reported. SRK cannot confirm this because the scatter plots and the underpinning data is not available for review.



srk consulting	**SRL Total Assets PEA** Actual vs Certified Au, Pt, Pd and Rh Values (SARM70)	Project No. 600322

Figure 11-7: Actual vs Certified Au, Pt, Pd and Rh Values (SARM70)



srk consulting	**SRL Total Assets PEA** Actual vs Certified Au, Pt, Pd and Rh Values (SARM72)	Project No. 600322

Figure 11-8: Actual vs Certified Au, Pt, Pd and Rh Values (SARM72)

11.3.5 Mphahlele

Core recovery was measured throughout the drill hole. SRK inspected these records through the reef zones and found the average recovery to be very close to 100%, and always above 95%.

Pt, Pd and Au were analysed using a lead collector fire assay technique with a silver co-collector and ICP-OES finish. Rh was analysed by separate fire assay using a Pd collector and ICP-OES finish. Ni and Cu analyses were done by aqua regia with an AAS finish and reflect the acid soluble metal content. Quality control procedures included the submission of CRM with every reef intersection submitted. Sample standards were routinely inserted with each batch at a ratio of one to every 20 samples. Results of the standards and Blanks were reviewed on a batch-by-batch basis along with the internal laboratory standards and repeats. Milled reject pulps returned from SGS were relabelled and resubmitted to SGS for repeat analyses. A selection of pulp rejects with reference materials were also submitted to Genalysis, who acted as the umpire laboratory. The laboratory also reported all its internal duplicates and standards to SRL.

A Mineral Resource estimate for the Mphahlele project with an Effective Date of 1 October 2007 was subsequently updated in December 2008. The QA/QC programme for the 2008 update comprised only Blanks, international reference materials and repeat samples that were not covered in the previous programme. The discussion below is in two parts - it covers the QA/QC dataset as at the time of the NI43-101 report with an Effective Date of 1 October 2007 and QA/QC dataset subsequent to this date.

1 October 2007 NI-43-101 QA/QC Report

SRL inserted 714 samples of international reference material (nine different South African Reference Material (SARM) and African Mineral Standards (AMIS) standards) into the sample stream of 13 809 samples. Eight hundred and fifty repeat samples were re-analysed at Lakefield and 239 Blanks were used. The Blanks were normally inserted immediately after a sample where a higher grade was expected.

The repeat samples returned to Lakefield gave acceptable results for all metals with no detectable bias between the two sample sets.

None of the reference materials returned 100% compliance for all metals although overall they were above 80% for Pt, Pd, Au and Cu with the best compliance for Rh. The Ni results showed that different analytical methods were used for the original certification of the SARM standards whereas the AMIS results gave 100% compliance.

The HARD values comparing the average assay results with the certified value were within accepted norms with the exception of the SARM Ni results. This suggests that the overall rather indifferent compliance with the reference materials is balanced by high and low results against these standards.

SRK reviewed the results of the umpire assays on 307 samples sent to Genalysis. These showed spurious results for 19 samples, which probably resulted from mis-numbering of samples and these were removed from the comparative database. The remaining samples gave acceptable regression slopes for all metals except for Ni, which was due to different acid digestion methods.

Despite these complications, SRK considered the quality and quantity of data as sufficient and therefore approved of its use in the Mineral Resource estimates with an Effective Date of 1 October 2007**.**

QA/QC Insertion Subsequent to 1 October 2007

A further 486 samples of international reference materials were inserted into the sample stream sent to the SGS laboratory along with 252 blanks and 1 381 repeats of milled rejects. The Blanks of quartz river sand are normally inserted after a sample containing the base of visible mineralisation in the MR and at the base of the UG2, where higher grades are expected.

These 1 381 laboratory duplicate samples returned to Lakefield gave acceptable results with no bias between the two sample sets for 3E (Pt, Pd, plus Au). The statistics on HARD values showethat only 3% of these were greater than 10% for Pt values greater than 0.10 g/t. Where the HARD values were higher, they tend to be from assays close to the detection limit. For the 713 base metals results only 1% of the HARD values for Ni were above 5% and seven values were removed with clearly spurious results. The fact that these spurious results exist at all is a reflection of inadequate batch-by-batch monitoring of assay returns at the time.

The blank samples gave acceptable results with one exception, which returned values indicating sample number transposition (6.67 g/t 4E). The average for all other samples at 0.057 g/t 4E showed that there has been no significant contamination and 98% of the values were less than 0.15 g/t 4E. However, SRK noted that sand samples require no crushing and therefore the Blanks only check sample cross-contamination in the milling procedures.

Eleven different reference materials were used appropriate to the two reefs and altogether 486 samples were submitted. Not all of these were assayed for all metals. Table 11-5 summarizes the results of these submissions and gives the reference material identification, type and certified value. The HARD values reflect the variance between the average and certified values.

None of the reference materials returned 100% compliance for all metals and overall, these returns are worse than the first sets of assays reported in October 2007, which reflects a lack of control on each batch at the time.

The SARM standards show far less compliance for the 4E than the AMIS reference materials, which suggests a problem with the SARM reference materials rather than the laboratory.

In some instances, the higher-grade reference material (SARM7b, SARM71, SARM73 and AMIS0008) shows much lower compliance than some of the lower grade standards (SARM70 and AMIS0002).

The HARD values comparing the average assay results with the certified value are within what would normally be accepted for individual assay repeats for this type of sample, with the exception of the SARM Ni results. This suggests that the overall rather indifferent compliance was balanced by high and low results against the standards.

SRK reviewed the results of the umpire assays on 954 samples sent to Genalysis but it was noted that the Genalysis fire assays were done using a NiS rather than a lead collector. This will give a slightly different result for Pt, Pd and Rh but it allows the determination of Ir and Ru, which make a material contribution to the value of the two reefs.

The comparison of the Genalysis and SGS results showed spurious values for 25 samples with HARD values in excess of 40% and an average of 76%. The HARD value of the averages returned from the two laboratories for these samples was 28.1% (Table 11-6). These were removed from the comparative database. The reasons for these anomalies are unknown but could be the result of mis-numbered samples.

In addition, the results were split into two for Pt values above and below 0.1 g/t (Genalysis assays) partly on the assumption that very few of the low values are included in the resource database and the number of high individual HARD values increases as assay detection limits are approached.

The remaining 789 samples gave very acceptable regression slopes and these are shown in Table 11-7 and the scatter plot for the 4E repeats is shown in Figure 11-9. No Ni and Cu repeats were done as the procedures employed by Genalysis were different to those used by SGS.

Table 11-5: Summary of Reference Material Results

Reference	Item	Pt	Pd	Rh	Au	Ni	Cu	4E
Reference Materials	**Total Submitted**	**486**	**486**	**479**	**486**	**485**	**485**	**486**
	Number in Range	**346**	**366**	**392**	**288**	**177**	**172**	**385**
	% Values in Range	**71%**	**75%**	**82%**	**59%**	**36%**	**35%**	**79%**
SARM 65	Number or Assays	45	45	45	45	45	45	45
	Number in Range	20	37	16	24	0	0	26
	% Values in Range	44%	82%	36%	53%	0%	0%	58%
	Certified Value	2.64	1.28	0.52	0.03	0.00	0.00	4.48
	Average Assay	2.69	1.30	0.53	0.03	0.02	0.00	4.56
	HARD Value on Average	1%	1%	1%	10%	100%	100%	1%
SARM 7B	Number or Assays	40	40	40	40	40	40	40
	Number in Range	10	20	30	20	0	0	21
	% Values in Range	25%	50%	75%	50%	0%	0%	53%
	Certified Value	3.74	1.54	0.24	0.27	0.00	0.00	5.79
	Average Assay	3.67	1.55	0.24	0.27	0.16	0.09	5.73
	HARD Value on Average	1%	0%	1%	1%	100%	100%	1%
SARM 70	Number or Assays	62	62	62	62	62	62	62
	Number in Range	51	45	53	37	0	0	53
	% Values in Range	82%	73%	85%	60%	0%	0%	85%
	Certified Value	0.40	0.40	0.11	0.02	0.00	0.00	0.93
	Average Assay	0.40	0.40	0.11	0.02	0.02	0.01	0.92
	HARD Value on Average	0%	0%	2%	10%	100%	100%	0%
SARM 71	Number or Assays	64	64	64	64	64	64	64
	Number in Range	44	47	52	48	0	0	51
	% Values in Range	69%	73%	81%	75%	0%	0%	80%
	Certified Value	2.08	1.67	0.43	0.05	0.00	0.00	4.23
	Average Assay	2.04	1.67	0.45	0.05	0.03	0.02	4.22
	HARD Value on Average	1%	0%	2%	2%	100%	100%	0%
SARM 73	Number or Assays	53	53	53	53	52	52	53
	Number in Range	37	32	52	46	0	0	44
	% Values in Range	70%	60%	98%	87%	0%	0%	83%
	Certified Value	2.45	1.56	0.26	0.19	0.00	0.00	4.46
	Average Assay	2.46	1.56	0.26	0.18	0.17	0.10	4.46
	HARD Value on Average	0%	0%	1%	2%	100%	100%	0%
AMIS0006	Number or Assays	3	3	3	3	3	3	3
	Number in Range	0	2	1	0	0	0	2
	% Values in Range	0%	67%	33%	0%	0%	0%	67%
	Certified Value	1.38	0.91	0.29	0.02	131.00	820.00	2.60
	Average Assay	1.33	0.86	0.21	0.04	0.01	0.05	2.44
	HARD Value on Average	2%	3%	16%	37%	100%	100%	3%
AMIS0007	Number or Assays	8	8	8	8	8	8	8
	Number in Range	8	8	8	7	0	0	8
	% Values in Range	100%	100%	100%	88%	0%	0%	100%
	Certified Value	2.48	1.50	0.25	0.16	0.117	0.136	4.39
	Average Assay	2.46	1.55	0.25	0.14	0.17	0.12	4.41
	HARD Value on Average	0%	2%	1%	5%	100%	100%	0%
AMIS0008	Number or Assays	26	26	26	26	26	26	26
	Number in Range	19	20	25	22	0	0	19
	% Values in Range	73%	77%	96%	85%	0%	0%	73%
	Certified Value	8.66	4.36	0.68	0.36	0.34	0.23	14.06
	Average Assay	8.76	4.46	0.67	0.37	0.34	0.23	14.26
	HARD Value on Average	1%	1%	1%	2%	100%	100%	1%
AMIS0009	Number or Assays	79	79	75	79	79	79	79
	Number in Range	59	58	60	66	74	74	59
	% Values in Range	75%	73%	80%	84%	94%	94%	75%
	Certified Value	1.80	0.95	0.13	0.14	0.12	0.09	3.02
	Average Assay	1.70	0.92	0.12	0.14	0.12	0.09	2.86
	HARD Value on Average	3%	2%	4%	1%	2%	2%	3%
AMIS0010	Number or Assays	86	86	85	86	86	86	86
	Number in Range	83	77	80	0	86	86	84
	% Values in Range	97%	90%	94%	0%	100%	100%	98%
	Certified Value	2.13	1.32	0.41	0.03	0.02	0.08	3.89
	Average Assay	2.15	1.37	0.42	0.03	0.02	0.07	3.97
	HARD Value on Average	0%	2%	1%	11%	0%	2%	1%
AMIS0034	Number or Assays	20	20	18	20	20	20	20
	Number in Range	15	20	15	18	17	12	18
	% Values in Range	75%	100%	83%	90%	85%	60%	90%
	Certified Value	3.69	1.63	0.24	0.43	0.17	0.15	5.99
	Average Assay	3.59	1.60	0.22	0.40	0.17	0.14	5.78
	HARD Value on Average	1%	1%	5%	3%	0%	4%	2%

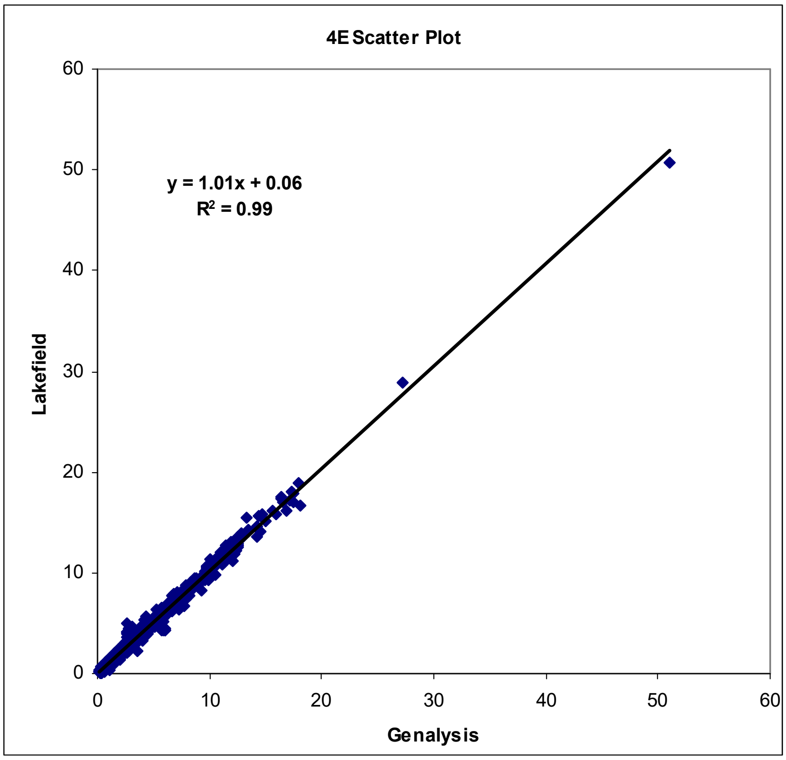
Table 11-6: Statistics on Lakefield Genalysis Anomalous Umpire Assays

	Genalysis 4E	SGS Lakefield 4E	HARD Value 4E
	g/t	g/t	%
All Values Ave.	3.65	3.69	0.6%
All Values No.	954	954	
Values> 0.1 Pt	4.25	4.37	1.4%
Values> 0.1 Pt	789	789	
Values< 0.1 Pt	0.10	0.10	1.1%
Values< 0.1 Pt	142	142	
Wild Values	4.46	2.50	28.1%
Wild Values	25	25	

Table 11-7: Statistics on Lakefield Genalysis Umpire Assays

	No.	Average SGS Lakefield	Average Genalysis	HARD Value of Average	Regression Slope
		g/t	g/t	%	
Pt	789	2.25	2.21	1.1%	1.00
Pd	789	1.65	1.65	0.0%	1.03
Rh	789	0.31	0.31	0.5%	0.95
Au	789	0.16	0.16	0.7%	0.82
4E	789	4.37	4.25	1.4%	1.01

Figure 11-9 gives the results of the standards submitted along with the replicate assays to Genalysis. The only metal showing a low compliance is Au. The Au values are very low, for some standards approaching the detection limit for the assay method. The two SARM standards have been omitted from this assessment because only the Pb collection certified values are quoted and Genalysis used a NiS collector. Similarly, no base metal results were reported because of different acid strengths used for solution of the samples.



srk consulting	**SRL Total Assets PEA** Scatter Plot of 4E Umpire Assays	Project No. 600322

Figure 11-9: Scatter Plot of 4E Umpire Assays

Table 11-8 shows the much better, and acceptable, compliance of the Genalysis results against the certified values than that achieved by SGS.

Table 11-8: Statistics on Standards Submitted to Genalysis

	Pt	Pd	Rh	Au	Ir	Ru	Os
Total Submitted	32	32	32	32	32	32	13
Number in Range	32	29	32	27	32	32	11
% Values in Range	100%	91%	100%	84%	100%	100%	85%

11.4 Adequacy of Sample Preparation, Security and Analytical Procedures

The on-site sample preparation process described in Section 11.1 is a conventional approach adopted by operating mines in the BC and without any evidence of material flaws. The chain of custody of samples from the site to the assay laboratories is well documented. The validation process undertaken when the laboratory/ies receive the samples ensures that all samples intended for submission by the exploration team are accounted for.

Lead collection fire assay for the 4E group is the industry standard method for all samples, and the proportion of samples that have undergone NiS assay is sufficient to characterise the prill splits for Ru and Ir for each of the reefs at each of the projects. The base metal assays report the recoverable metals and appropriately exclude the silicate-bound Ni. The drill core recoveries are typically very good, and there are only rare instances where the recoveries in the orebodies are less than 95%. These intersections are typically excluded from the grade estimation but are used in the geological and structural modelling.

SRK is of the opinion that the above measures are adequate and contribute to the reliability of the assay data for grade estimation.

12 Data Verification

12.1 Data Verification Procedures Applied

Mr Ivan Doku, a Principal Resource Geologist employed by SRK, has undertaken six site visits since 2014, the most recent being August 2022. All the site visits were in partial fulfilment of the listing requirements for the public declaration of Mineral Resources.

The initial visit primarily focussed on validating drill hole collars in the field and inspecting drill core at the core yard in Mogwase. With respect to all the drill hole collars randomly inspected, Mr Doku noted that the casing and marker indicating drill hole identity were still intact. At the core yard, Mr Doku randomly inspected the geological records of selected drill holes by ascertaining its correspondence to what is captured in the electronic database. Considering that half/split drill core within the mineralised zone exists, it was possible to determine the accuracy of the thickness of the different packages of the mineralised unit. Based on the observations made, Mr Doku concluded that the geological record captured in the database is a fair representation of what is notable in the drill holes.

Mr Mark Wanless, a Principal Resource Geologist with SRK, visited the PPM site in October 2013 and August 2022. The initial site visit was prior to commencement of mining, and was focussed on inspection of drill core for the West Pit (which is currently mined out) and Ruighoek project. In March 2021, Mr Doku visited the grounds of the East Pit where, at that time, it was earmarked to drill relatively short holes to intersect the projected subcrop positions of the shallow UG2 and MR. During a subsequent visits in February and August 2022, Mr Doku inspected the ore exposures in the East Pit.

Site visits to the Mphahlele Project area and core storage shed in Polokwane were made by Dr Tony Martin, a Principal Resource Geologist employed by SRK, on 4 August 2007 and 13 March 2008. Two core drill rigs were observed during the first visit, although one was subsequently relocated. Three core trays were observed at one of the operating rigs. The project manager and geologist described the procedures used on the project from receiving and marking drill core, geological logging, sampling and sample despatch. Good field procedures were being followed. All three geologists were knowledgeable on the local geology and the styles of mineralisation and were proficient in sampling procedures.

During the first visit at least 15 mineralised intersections from both the UG2 and MR reefs were examined at the Polokwane storage shed from both previously sampled core and one hole that was in the process of being sampled. These were checked against the logs and the geology assessed. During the second visit of 13 March 2008, Mr Mark Wanless examined the core and facies variations of the two reefs. On 10 March 2023 Mr Wanless visited the core storage facilities in Polokwane and inspected several representative intersections of the MR and UG2 reefs, as well as some anomalous intersections that had an impact on the geological modelling discussed in Section 14, and travelled around the mining licence area.

Mr Sello Nzama, a Senior Resource geologist employed by SRK, visited the Mphahlele Project area and inspected selected drill core in the core storage shed on 22 October 2013. The logging and sampling of selected drill holes was validated against the drill hole logs and database.

Based on the review of the assay QA/QC results/reports as outlined in Section 11.3, Messrs Doku and Wanless are of the general opinion that the respective assay datasets considered for the grade estimation are reasonably accurate. SRK understands that pulp-reject samples of some drill holes within the Central and East footprints have been analysed but are yet to be processed. Where there is an adequate quantity of sample material, 6E analysis using NiS ICP-MS assay technique is being considered. This will provide an additional dataset to confirm the repeatability of assay results.

12.2 Limitations in Data Verification

12.2.1 PSM

Chrome data for Sedibelo Central and a larger portion of Sedibelo East and Magazynskraal are based on inference; i.e., the regressed equation deduced from the density and chrome data outside of these footprints. Although the inference of chrome data results in an Inferred Mineral Resource classification, there are limitations to its accuracy. There is no chrome assay QA/QC data for the greater part of the Sedibelo property.

Where base metal QA/QC information is available, they are either statistically inadequate to make an informed decision or the underlying QA/QC data is not available for review.

For the West Pit TRR, insufficient base metal data are available to confirm the grades, and no base metal grades are reported.

12.2.2 Kruidfontein

The results of the repeat samples underpinning the conclusion about the repeatability of the assay data have not been verified. This is because SRL has not been able to locate the analytical records (results) for the repeat samples (i.e. the results are missing).

SRK therefore cannot independently verify the results of the repeat samples.

12.2.3 Mphahlele

The exploration drilling, logging and sampling between February 2004 and August 2007 was undertaken prior to SRK's involvement in the project.

As such, SRK did not observe the drilling, core collection and sampling processes of this period first-hand, but has reviewed the core remaining in the core trays in relation to the company's standard procedures and against the geological logs.

SRK is satisfied from this review that the company's standard procedures had been consistently applied.

12.3 Adequacy of Data

12.3.1 PSM

Where the grade estimates have been kriged, Messrs Doku and Wanless note that the quantity of 4E data (i.e., Pt, Pd, Rh and Au) is adequate to demonstrate grade continuity. Where the Ru and Ir data/estimate is inferred (especially on the Sedibelo property), the regressed equations derived from available 6E data are robust.

Mr Doku and Mr Wanless undertook independent verification of the exploration procedures, sampling and assay methods, and analytical QA/QC results, as described in Sections 9, 10, and 11 and are satisfied that the data and analytical results are sufficiently reliable for use in Mineral Resource estimation.

Messrs Doku and Wanless are of the opinion that the categories of the respective Mineral Resources are also supported by the available data within their footprint.

The reliability of the assay data for resource estimation is satisfactory based on the QA/QC results and percentage of QA/QC data that constitutes the assay database.

12.3.2 Kruidfontein

From the inspection of the drill core, Messrs Doku is satisfied that the description of the drill core with respect to logging, lithology and sampling is as documented in electronic files provided to SRK.

Based on the CRM results, there is no consistent bias in the assay dataset used for grade estimation.

Considering the degree of confidence assigned to the Mineral Resource estimate, Mr Doku is satisfied with the quantity of composite data contribution to the estimate.

12.3.3 Mphahlele

Mr Wanless is satisfied that the logging and sampling of the core undertaken during the two drilling phases is consistent with general industry best-practice norms.

Mr Wanless undertook independent verification of the exploration procedures, sampling and assay methods, and analytical QA/QC results, as described in Sections 9, 10, and 11 and is satisfied that the data and analytical results are sufficiently reliable for use in Mineral Resource estimation.

13 Mineral Processing and Metallurgical Testing

13.1 Nature of Metallurgical Testing and Analytical Procedures

13.1.1 PSM – West Pit and Ruighoek

Metallurgical testwork was conducted during four separate phases, with Phases I to III comprising bench-scale tests performed between 2004 and 2006 and Phase IV involving pilot-scale tests in 2006. In summary, the testwork involved the following:

- Phase I: to determine flotation kinetics and the character of the flotation products by performing bench-scale tests on MR, UPR, LPR and UG2. The tests were conducted on drill hole core from Tuschenkomst 135JP and Ruighoek 169JP;
- Phase II: to determine flotation kinetics and variability characterization testwork by performing bench-scale tests on cores from Tuschenkomst 135JP and Ruighoek 169JP, representing all silicate reefs and UG2 ore types, including all states of alteration (i.e., weathering and oxidation). The supplied cores had already been cut to allow for the predicted mining dilution;
- Phase III: Tuschenkomst 135JP silicate reef cores were submitted for composited heavy liquid separation (HLS) testwork to separate the chromite-rich and silica-rich portions. No significant recovery benefit was achieved;

  Further HLS evaluations using cores representing bulk silicate reef mining cuts showed that effective separation of the barren interstitial partings was possible. Where mineralisation occurred in the interstitial wastes, the mineralisation was rejected, indicating the need for grade control; and
- Phase IV: pilot plant evaluation on selectively mined bulk samples (approximately 120 t each) extracted from a trial pit at Tuschenkomst 135JP and representing the different available ore types and oxidation states.

Bond Ball Mill Work Index (Wi_{BM}) and Pennsylvania abrasion indices on selected ore and waste samples showed provision of fine grinding in the UG2 process circuit improved recoveries for a feed of >95% passing 75 µm. Silicate ores showed limited recovery improvements but higher concentrate grades when exposed to fine grinding.

Both ore types were found to be amenable to an MF2 circuit. The bench flotation work confirmed the need to treat the UG2 and silicate streams through separate dedicated concentrators.

It was proposed that a dense media separator (DMS) be incorporated ahead of the silicate MR concentrator to remove the barren interstitials from the MR.

The performance of the PPM concentrators which have been operating since 2008 is discussed in Section 17.2.1.

Tailings Scavenging Plant (TSP) and Tailings Retreatment Plant (TRP)

Testwork was conducted at Mintek on bench scale and Suntech on pilot scale on samples from historical tailings (HT) from the PPM TSF and combined current arising tailings (CA) from the UG2 and Merensky concentrators to confirm key process design parameters and the expected plant recoveries and grades for TSP and TRP samples under unmilled and milled conditions (DRA, 2015b).

During the initial phase of the testwork the TSP unmilled and milled samples achieved 3E recoveries of ±15% and ±25% respectively at 3E grades of 20 g/t and 50 g/t respectively. The TRP 3E recoveries achieved for unmilled and milled samples were ±10% and ±12.5% respectively and grades of 20 g/t and 30 g/t respectively. During this initial phase very good results were obtained with high SIBX (Sodium Isobutyl Xanthate) and high mill energy consditions. These results reported >30% 3E recovery and >50 g/t 3E concentrate grade results. These results were achieved at typical mass pulls of between 0.25% and 0.35%.

Confirmatory testwork runs were done at Suntech after the initial testwork results were presented. During this phase the TSP milled results achieved an average 3E recovery of 28.2% at an average concentrate 3E grade of 55 g/t over 9 pilot plant runs, which confirmed the initial interpretation.

The TRP results achieved averaged 3E recoveries of 29.1% and grades of 68 g/t from the five confirmatory and three initial pilot plant runs under similar conditions. The work therefore confirmed that the better results achieved at the 100 g/t SIBX and 17 kWhr/t were repeatable and achievable.

Key conclusions from the testwork were:

- The TSP plant with milling is an economical, technical, and practically viable option;

- The TRP with flotation only is not an economical alternative;
- The TRP with milling is an economical and technically viable option;
- High SIBX addition and high mill power conditions improved metallurgical response;

13.1.2 PSM - East Pit, Central Underground and Western Portion of East Underground

The discussion here relates to the East Pit, Central Underground and that part of East Underground on the farm Wilgespruit 2JQ. The work was done as part of a FS conducted in 2008.

Grind

The UG2 ore samples gave a grind/recovery relationship of 68% 4E recovery at a grind of 48% -38 µm and 78% 4E recovery at a grind of 100% -38 µm. A grind of 70% passing 38 µm (P80 of about 53 µm) was targeted for the UG2 ore as it was expected that increasing the grind further than this point would start to consume considerably more power with only a small increase in recovery.

Wi_{BM} results for the UG2 composite sample gave an average index of 15.2 kWh/t. This implies a “hard” ore type per the typical classification for Wi_{BW} depicted in Table 13-1.

Table 13-1: Bond Ball Mill Work Index Classifications

Wi_{BW} (kWh/t)	7 to 9	10 to 14	15 to 20	>20
Classification	Soft	Medium	Hard	Very hard

Flotation Residence Times

The testwork results suggested that UG2 reef ores from this deposit are slower-floating than normal. Given this information, it was decided to design for longer residence times than in conventional plants for both the rougher and cleaner stages, as well as in the primary and secondary circuit. The residence times for the roughers (both primary and secondary) were fixed at 40 minutes with the residence time for the first cleaning stage being one-and-a-half times that of the roughers. Subsequent cleaning stages were taken at residence times of half that of the first stage of cleaning.

Flotation Reagents

From pilot plant testwork, recommended consumption rates for flotation reagents were as follows:

- Frother (XP200) 40 g/t to the primary rougher and 20 g/t to the secondary rougher flotation cells;
- Collector (SIBX) 175 g/t to the rougher and 215 g/t to the cleaner flotation cells; and
- Depressant (KU5) 110 g/t to the rougher and 300 g/t to the cleaner flotation cells.

Frother, collector and depressant dosages are expected to be reduced, primarily as a result of recycled water containing an excess of these reagents.

Mass Pull

The 4E recovery versus Mass Pull for the UG2 ore from the pilot plant runs was reported as very “flat” at a Mass Pull of 1% - 2% and a 4E recovery of 78%. What is interesting is that the Cr_2O_3 content in the concentrate was 4% at 1% Mass Pull and decreased to 2% at a 2% Mass Pull. This provides an additional degree of freedom in reducing the Cr_2O_3 grade of the concentrate without compromising PGM recovery. A mass-pull of 1.75% is suggested as the design case for the UG2 ore.

The Kell process for refining of concentrate is not sensitive to the Cr_2O_3 grade, which provides some latitude to the concentrator.

Concentrate Grade and 4E Recovery

The pilot plant testwork suggested that concentrate grades of 500 g/t 4E are possible but the recovery will decrease. A recommended mass-pull target would be between 1.7% and 2.3% for a concentrate grade of 200 to 240 g/t 4E at a Cr_2O_3 grade of between 2% and 2.5%. On the Concentrate Grade - Recovery curves, this relates to a 78% 4E recovery.

Oxidised and Transition Zone Material 4E Recovery

The actual depth of the oxide zone in the vicinity of the East Pit, which averages 30 m, is variable due to the number of faults and other geological structures traversing the area. In order to build in a degree of safety, a transition zone was included to extend from 30 m to 50 m.

From a review of testwork results of all samples down to 50 m, 4E recoveries of 50% for the oxide layer, 64% for the transition zone and the 78% for the bottom layer were estimated.

4E Recovery Relationship to Head Grade

The plots indicated that for a head grade of 3 – 7 g/t 4E, any incremental variations in head grade will have no significant impact on recovery performance.

UG2 Reef Variability

Spatial variability testwork on the UG2 ores was covered by 12 composite samples and 88 individual samples used in the work above.

The results show that, on average (i.e., mining from multiple faces), the expected concentrate should be in the region of 200 – 220 g/t 4E at a recovery of 78%. In both test campaigns, the area in the southeastern region of the Eastern Block and central region of the Central Block were identified as poor performers. When these areas are removed from the data sets, concentrate grades in the region of 240 g/t – 260 g/t 4E at recoveries of 78% can be expected.

From a production point of view, concentrate grade and recovery are unlikely to be affected if some ore scheduling measures are adopted which avoid these two areas from being the sole contributors to the mine production. There is a possibility that during certain periods, the plant recovery may decrease to about 70% if mined ore comes predominantly from these areas.

13.1.3 PSM – Eastern Portion of East Underground

The discussion here relates to the eastern portion of East Underground that is on the farm Magazynskraal 3JQ.

The metallurgical testwork was tailored to provide data on the silicate and UG2 ore types with a view to establish whether the two ore types could be batch-treated through a single plant. All the metallurgical testwork was done at Mintek in Randburg.

The mine delivered 24 MR ore core and 25 UG2 ore core samples of approximately 10 kg each to Mintek for the purpose of this study. The cores were each crushed to 6 mm and split into one kilogram representative samples. From each core, four kilograms were used for individual sample testwork, two kilograms for bulk composite sample testwork and another four kilograms for area sample testwork.

For the MR testwork, three area composites were made up comprising the PUP (Merensky Potholed Upper Pseudo Reef), PTA (Potholed onto Tarentaal Reef) and TF (Thin Footwall Contact Reef). For the UG2 testwork, four area composites were made up.

Metallurgical Head Grades

The head grades of the MR and UG2 composites were reported to be as set out in Table 13-2.

Table 13-2: MR and UG2 Ore Composite Sample Grades

Element Unit	4E (g/t)	Pt/Pd	6E (g/t)	Ni (%)	Cu (%)	S (%)	Cr_2O_3 (%)
MR Composites:							
TF Composite	4.05	2.08	4.46	0.19	0.09	0.29	
PTA Composite	6.50	2.51	7.16	0.25	0.11	0.36	
PUP Composite	8.83	2.15	9.73	0.30	0.14	0.49	
Mintek Average	**6.55**	**2.07**	**7.22**	**0.24**	**0.09**	**0.37**	
UG2 Composites:							
Area Composite 1	4.72	2.05	6.00				27.22
Area Composite 2	4.91	2.27	6.25				29.51
Area Composite 3	5.47	2.22	6.96				29.20
Area Composite 4	3.89	1.96	4.94				27.65
Mintek Average	**4.71**	**2.12**	**5.99**				**28.70**

Milling Testwork

The Wi_{BM} test provides useful information for the design of grinding circuits and for estimating the energy requirements for closed circuit milling. The Wi_{BM} is also a basic measure of hardness. Tests were conducted at limiting screen sizes of 75 µm and 106 µm.

Table 13-3 and Table 13-4 reflect the Wi_{BM} results achieved for MR and UG2 ore samples, respectively. In the tables, F_{80} and P_{80} are the 80% passing sizes in µm of the feed and the product, respectively.

Table 13-3: Magazynskraal/Sedibelo East – Bond Ball Mill Work Index MR Ore Samples

Sample ID	Limiting Screen	F_{80} (µm)	P_{80} (µm)	Net Revolution (g/rev)	Bond Ball Mill Work Index (kWh/t)
PUP Area	106 µm	2 640.32	92.71	0.93	21.02
	75 µm	2 424.76	60.73	0.63	24.56
PTA Area	106 µm				
	75 µm	2 417.60	55.67	0.63	23.23
TF Area	106 µm	2 596.09	89.60	0.87	21.78
	75 µm	2 610.31	54.68	0.62	23.31
Bulk Composite	**106 µm**	**2 218.57**	**87.86**	**0.88**	**21.69**
	75 µm	**2 374.26**	**60.04**	**0.65**	**23.75**

F_{80} and P_{80} are the 80% passing sizes in µm of the feed and the product, respectively

Table 13-4: Magazynskraal/Sedibelo East – Bond Ball Mill Work Index UG2 Ore Samples

Sample ID	Limiting Screen	F_{80} (µm)	P_{80} (µm)	Net Revolution (g/rev)	Bond Ball Mill Work Index (kWh/t)
Area Composite	106 µm	1 797.89	85.70	1.31	15.97
1 + 2	75 µm	1 783.64	61.98	0.94	18.52
Area Composite	106 µm	2 067.64	86.63	1.27	16.14
3 + 4	75 µm	1 766.91	54.39	0.83	19.03
Bulk Composite	**106 µm**	**1 842.74**	**86.08**	**1.32**	**15.83**
	75 µm	**1 801.78**	**61.00**	**0.94**	**18.35**

F_{80} and P_{80} are the 80% passing sizes in µm of the feed and the product, respectively

The results of 21.69 to 23.75 kWh/t established that there was no significant variation in ore hardness within the MR composite areas investigated. The classification of the MR ore is thus “very hard”.

Based on the Wi_{BM} classification, the UG2 ore can be classified as “hard”.

The MR bulk composite is the “hardest” and rendered a specific energy requirement of 18.54 kWh/t for the 106 µm fraction, and 25.78 kWh/t for the 75 µm fraction.

Grind Mill Test Results

Batch Grind Mill tests were conducted on the MR and UG2 bulk ore samples with a feed size of -6.7 mm. The batch mill test data indicated that the milling kinetics could be described using the first order rate hypothesis since the modelled data fitted the measured data reasonably well.

The conclusion was that for the MR ore to achieve P80 -75 µm, the specific energy required was calculated to be 23.68 kWh/t. The UG2 ore rendered an equivalent figure of 19.34 kWh/t. In an open circuit, more energy will thus be required to mill the MR ore to P80 -75 µm.

Flotation Testwork

Merensky Ore Flotation

Four tests were conducted at varying primary grinds of 40%, 50%, 60% and 80% passing 75 µm. The results showed that at least 10% of the material is slow floating and that the MR ore would benefit from a two-stage milling and flotation circuit.

Secondary rougher testwork conducted at three varying grinds of 70%, 80% and 90% passing 75 µm proved that processing the ore in a MF2 circuit improved the 4E recovery from about 80% to >90%. It was concluded that a grind of 70% -75 µm was the optimum grind as finer grinds did not result in any significant benefits in terms of metal recovery.

From the results obtained, flotation kinetic data were produced to enable recovery modelling predictions to be made according to the Kelsall model. The Kelsall equation when fitted to the measured recovery data gave the expected results as:

	% Recovery	Concentrate Grade
o 4E	83%	120 g/t and higher
o Ni	60%	3.0% and higher
o Cu	86%	1.7% and higher

Variability testwork on individual MR drill cores and area composites showed there was significant variability in the upgrading response with expected recoveries ranging from 78% to 95%. The variability in flotation response was related to the head grades as the samples with the highest grades (PUP Area) rendered the highest concentrate grades and best recoveries.

UG2 Ore Flotation

Four tests were conducted at varying primary grinds of 40%, 50% and 60% passing 75 µm. The results showed that the 40% passing 75 µm would be used as the norm in for all subsequent tests.

Secondary rougher testwork conducted at three varying grinds of 70%, 80% and 90% passing 75 µm established that a grind of 70% -75 µm was the optimum grind as finer grinds did not result in any significant benefits in terms of metal recovery.

From the results obtained, flotation kinetic data was produced to enable recovery modelling predictions to be made according to the Kelsall model. Simulation of recovery versus time was performed by applying the Kelsall model to the recovery data.

The Kelsall equation when fitted to the measured recovery data using the Solver Routine in Microsoft Excel gave the expected results as:

	% Recovery	Concentrate Grade
o 4E	80%	150 g/t and higher

The consumption of gangue depressant to achieve these grades was relatively high at 400 g/t.

The testwork gave 6 to 12% chromite content in the concentrate, which would need to be addressed in the plant design.

Mineralogical work on the UG2 ore revealed a complex ore type. A small proportion of the PGMs was associated with base metal sulfides, which constrained the primary circuit to a 60% recovery. The second milling stage is thus very important in liberating some of the PGMs from the gangue sulfide mineral composites in lifting the overall recovery to 80%. The nature of the composites and the milling environment did not liberate all the PGM minerals from the gangue and about 10% of the PGM minerals were lost in the tails still locked in with the gangue. Attempts to reduce this loss with a finer grind did not show any promise.

Variability testwork on individual UG2 drill cores showed that the samples were highly variable in their upgrading response with expected 4E recoveries ranging from 60% to 94%. The samples from composite areas 1, 2 and 3 all responded better than the samples from area number 4. The ideal would thus be that ore from area number 4 must be blended with the other three areas when the ore is processed through the plant. This might be difficult, because area 4 is at a greater depth than the other three areas and as such additional testwork is required on area 4 to understand this area and optimize the flotation design.

13.1.4 Kruidfontein

There is no evidence of any metallurgical testwork having been done on samples of drill hole core.

However, the nature of the ore is consistent with that appearing on PPM, Sedibelo and Magazynskraal, so that similar metallurgical performance can be expected.

13.1.5 Mphahlele

Introduction

The Mphahlele Project is adjacent to the Voorspoed, Dwaalkop and Doornvlei properties and both the MR and UG2 ore types are represented on the property. The UG2 ore types on these properties are unique in that the base metal content of the ore is high relative compared with other BC UG2 ores.

Mintek had previously undertaken major work programmes on characterizing these ores, which culminated in the construction by SouthernEra Resources Limited of a single concentrator plant that can treat either ore type or a composited blend of the two in any ratio. This plant was operated successfully on varying ore type blends for approximately four years.

This situation is relatively unique within the PGM industry with most plants treating either MR or UG2 ores due to the different flotation kinetics of the two ore types in the western BC. Where blended ores are treated (e.g. Karee, Waterval Retrofit) the blend is rigorously controlled at a fixed ratio. The advantages of a single concentrator plant are reduced capital and operating costs.

A similar concept plant was envisaged for the Mphahlele orebody and the testwork was tailored to provide data on the individual ore types and various ratio blends, with a view to establishing whether the two ores could be treated through a single plant.

All metallurgical testwork was done at Mintek, Randburg, South Africa.

Metallurgical Head Grades

A total of 12 MR and 12 UG2 half-drillhole core samples from the Mphahlele orebody of approximately 5 kg each, representing the geographical extent and from the nominal 300 m and 500 m mining depths were submitted for flotation and variability characterization testwork. The cores were delivered to Mintek in core trays. The cores as delivered had already been cut to allow for the predicted mining dilution. The bulk of the work undertaken at Mintek was performed on these samples and various blends thereof.

The average head grade of the two types of ore is reflected in Table 13-5.

Table 13-5: Mphahlele: MR and UG2 Average Head Grade from Samples

Item	4E (g/t)	Pt/Pd ratio	Cu (%)	Ni (%)	Cr_2O_3 (%)	S (%)
MerR Ore	2.82	1.66	0.11	0.22	0.56	0.57
UG2 Ore	3.59	1.49	0.07	0.17	25.24	0.21

A further four MR and four UG2 half drill hole cores were delivered during 2008, from deflections on the nominal 750 m mining depth, also representing the geological extent of the orebody. These cores were also cut to represent expected mining dilution. Work undertaken on these cores was limited to bench rougher flotation to confirm the flotation kinetics generated on the shallower cores.

Milling Testwork

The average Bond Work Indices in kWh/t and their ratios for the two types of ore iare reflected in Table 13-6.

Table 13-6: Mphahlele: Merensky and UG2 Composite Samples: Average Bond Work Indices

Sample Name	Limiting Screen (µm)	F80 (µm)	P80 (µm)	Net Production (g/rev)	Wi_{BM} (kWh/t)	Wi_{RM} (kWh/t)	Ratio Wi_{BM}: Wi_{RM}
MR Composite	150	2372.38	119.16	1.51	15.52	13.40	1.16
	106	2372.38	85.22	1.08	17.32	13.40	1.29
	75	2372.38	60.25	0.87	19.08	13.40	1.42
UG2 Composite	150	2123.26	126.29	2.69	14.80	14.31	1.03
	106	2123.26	84.16	1.55	16.55	14.31	1.16
	75	2123.26	60.06	1.05	18.24	14.31	1.28

Note:
1. Wi_{BM} = Bond Ball Mill Work Index
2. Wi_{RM} = Bond Rod Mill Work Index

The MR sample is harder than the UG2 ore, and at 15.5 kWh/t to 18.9 kWh/t is within acceptable limits for a typical MR-type ore. The MR sample is in the middle of the “hardness” classification as reflected in Table 13-6.

As a rule of thumb, Wi_{BM}:Wi_{RM} ratios above 1.25 can indicate a potential critical size build-up or top end competency problem in an autogenous mill. The higher the ratio, the greater the likelihood of a build-up occurring. High ratios can indicate that “scatting” rates (production of material sub-grate size but coarser than the trommel or closing screen mesh) will be correspondingly high. Typically, ores that respond well to AG/SAG milling possess a ratio in the region of 1.1 – 1.2, which is indicative of neither high nor low competency.

The MR and UG2 footwall and hangingwall dilutions are shown to be harder than their respective reef horizons and, in some cases, up to 21 kWh/t. In some instances, the ratio of the Wi_{BM} Wi_{RM} for these materials indicates that these dilutions could potentially result in stable size fractions occurring in the mill. The degree of expected dilution needs be considered when the mills are being specified.

Flotation Testwork

Merensky Ore Flotation

Most of the MR samples tested may be regarded as relatively fast floating and showed reasonable 20 minute recoveries of between 83% - 93% at grades of between 39 g/t and 58 g/t (Figure 13-1).

Most MR samples upgraded well, with combined rougher 4E recoveries of between 83% - 89%. Cleaner trending indicated that most samples should upgrade readily to a concentrate grade acceptable to a smelter.

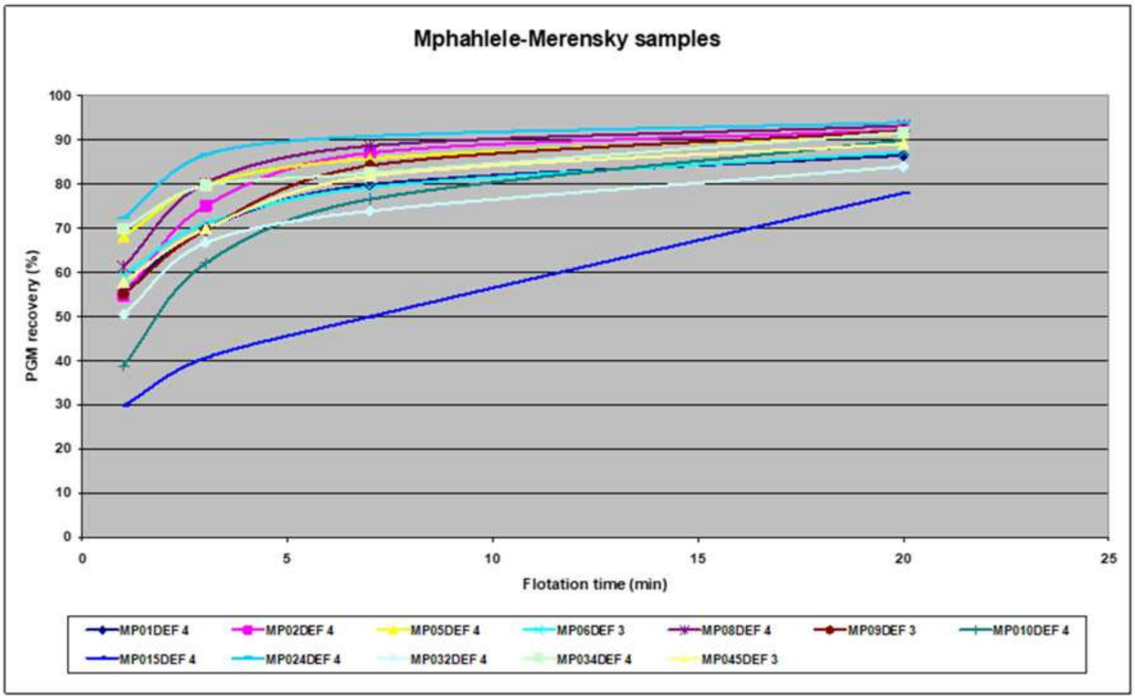
The deeper 750 m MR samples appeared to respond to rougher flotation similarly to the shallower samples.

UG2 Ore Flotation

The majority of the UG2 samples responded well to flotation, with combined rougher 4E recoveries after 20 minutes of flotation of between 83% - 91% at grades between 25 g/t 4E and 96 g/t 4E (Figure 13-2).

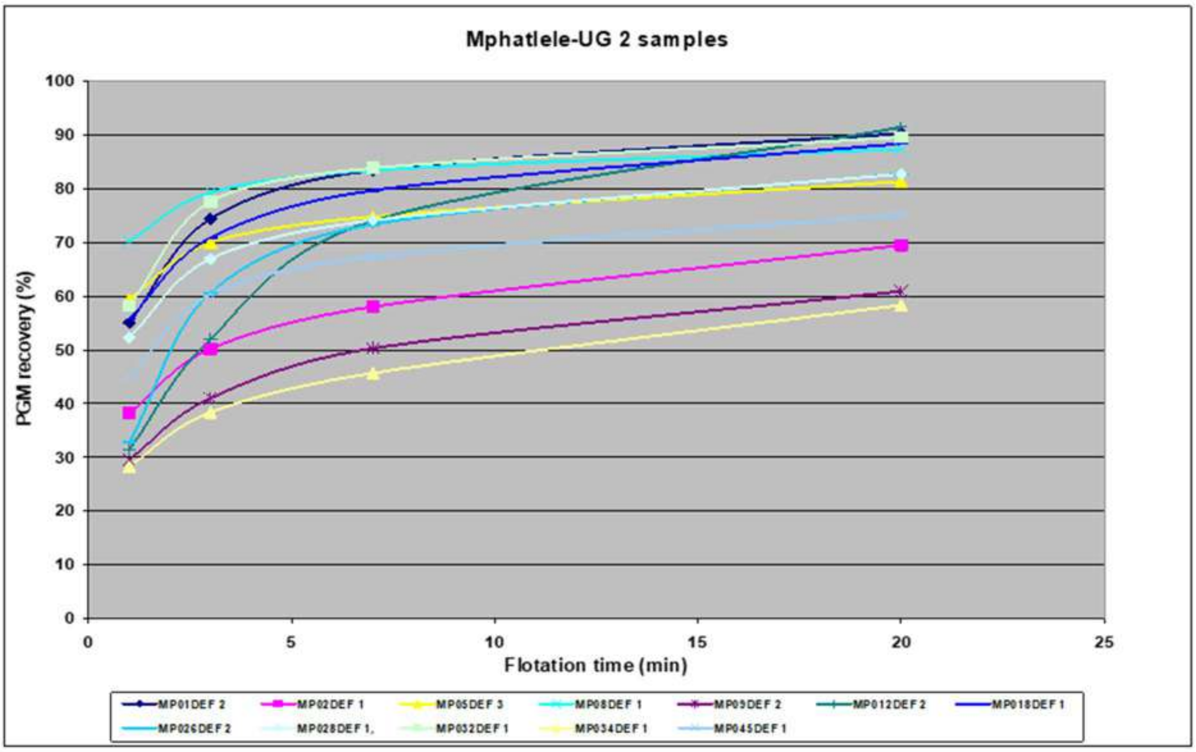
Most of the samples may be regarded as relatively fast floating. However, some samples showed a long slow floating “tail” but are still showing positive kinetic trending after 20 minutes, indicating that increased residence times may benefit the overall recovery profiles of these samples.

The deeper 750 m UG2 samples appeared to respond to rougher flotation as well as the shallower samples.



srk consulting	**SRL Total Assets PEA** Merensky Rougher Kinetics [source: SRK, 2020]	Project No. 600322

Figure 13-1: Merensky Rougher Kinetics



srk consulting	**SRL Total Assets PEA** UG2 Rougher Kinetics [source: SRK, 2020]	Project No. 600322

Figure 13-2: UG2 Rougher Kinetics

The UG2 coarse rougher – cleaner - re-cleaner test recovered 58% of the available 4E into the re-cleaner concentrate at a grade of 198 g/t and 2% mass pull. The cleaner unit efficiency was good at 89.5%, though the re-cleaner unit efficiency returned a relatively low value of 80.4%.

The Cr_2O_3 grade was high at 5%. This indicated that further cleaning stages would be required to produce a smelte- acceptable concentrate. The high Cr_2O_3 grades of the flotation concentrates suggested that the PGMs may not have been completely liberated during the milling process.

Composite Ore Flotation

Blends of 20:80, 40:60, 60:40 and 80:20 UG2:MR were subjected to the standard rougher flotation testwork (Table 13-7). The 4E recoveries were well above 80%. The composite of 40:60 has the fastest kinetics and achieved the highest recovery of 87%.

The worst composite result was the 20 UG2:80 MR, as it showed a 4E rougher recovery of 84.5%, and a low concentrate grade.

Table 13-7: Mphahlele: Summarised Composite Flotation Results

Sample ID	Head Grade	Tailings Grade	Mass Pull	Concentrate Grade	Recovery	Grind -75µm
	4E (g/t)	4E (g/t)	(%)	4E (g/t)	4E (%)	Passing (%)
20UG2/ 80 Mer	2.5	0.46	14.1	15.3	84.5	76
40UG2/ 60 Mer	3.7	0.54	14.5	22.1	87.4	77
60UG2/ 40 Mer	3.6	0.57	13.9	22.2	86.3	78
80UG2/ 20 Mer	3.7	0.64	12.4	25.4	84.9	80

It should be possible to achieve high concentrate grades at higher depressant dosages without sacrificing recovery. Sufficient residence times need to be built into the circuit to minimize losses of any slow-floating PGMs. Depressant dosages should initially err on the conservative side.

Flotation Kinetics and Recovery Predictions

From the results obtained, flotation kinetic data were produced to enable recovery modelling predictions to be made according to the Kelsall model.

The mass ratio calculated Kelsall recoveries could be used to conservatively predict the recoveries expected for various ratio feed blends as would be seen by a single concentrator plant treating both ore types.

The 18 minute Kelsall-calculated recoveries in Table 13-8 have been used for the PEA. These approximate the recoveries achieved on the Voorspoed plant.

Table 13-8: Mphahlele: 18-minute Rougher Recoveries

Ore type	Kelsall Calculated Recovery (%)		
	PGM (4E)	Cu	Ni
Merensky	87.8%	69.4%	74.3%
UG2	79.9%	45.6%	42.3%

Radiometric Sorting (Rados) Testwork

In order to increase the grade of the ore to the concentrator, the viability of pre-concentration of the ore was considered. Two options were considered, namely the DMS technology and sorting by X-Ray fluorescence. A DMS circuit is used at the PPM plant and provides a basis for comparison.

Rados technology sorts the ore on a rock-by-rock basis, as the individual rocks pass in front of an X-Ray head and detector. While the ore particle is falling past the X-Ray head and detector, the Rados control unit analyses the data from the detector, determines the metal concentrations and/or metal ratios, and compares these against the sorting matrix. Based on this analysis, the unit determines whether the ore particle is to be selected as reef or discarded as waste.

A Rados pilot plant was used at Mintek to assess the viability of using the Rados technology on the UG2 ores. Results were very promising, and PPM built a proof -f-concept (PoC) plant at the PPM concentrator. The PoC plant run proved that the technology is viable in processing and upgrading the UG2 ore. A review of the data indicated that the ore sorter results are very close to, or better than, the original Mintek testwork data.

The average discard rate of the Rados sorters for the review period was 0.44 g/t 4E against an expected grade of 0.55 g/t. The average upgrade ratio for the review period was 1.43. The optimum feed size was determined to be >50 mm and <100 mm. Should the feed be <50 mm, then the sorter feed rate is too low because it must "see" every piece of ore, and for >100 mm, the mineral particles are not sufficiently exposed.

Analysis of the sorting of UG2 ore showed that sorting should be done using chrome, Cu and Ni as the selection parameters.

13.1.6 Kell Refining Process

Background to Kell

The Kell process provides a low-cost hydrometallurgical process alternative for treatment of PGM concentrate produced by SRL's operations. The Kell process is not sensitive to the traditional impurity levels in the feed that impact smelters negatively.

The process recovers both base and precious metals into separate product streams. The process offers several advantages over traditional smelting including:

- Lower energy requirements and CO_2 emissions;
- Ability to treat low-grade concentrates as efficiently as high-grade concentrates;
- Resistant to impurities, particularly chromite; and
- High recoveries of both base and precious metals.

Given the precarious power situation in South Africa and the expected high cost of power, the viability of smelters will be compromised and a process like the Kell process is very attractive.

The final products in the base metals flow sheet are copper cathode and nickel/cobalt sulphide concentrate. The final product in the PGM circuit is a high-grade mixed PGM sponge product for sale to existing PGM refineries or PGM users around the world.

Metallurgical Testwork

A FS evaluating the use of the Kell process at PPM was undertaken by Simulus Engineers in Perth, Australia in 2013 and demonstrated positive economics from a robust process.

The laboratory work was done on a total of 3.7 t wet concentrate at a 6E grade of 105 g/t, sent to the laboratory in a number of consignments each of 15 x 200 litre drums. One drum was selected at random for every 15 drums of concentrate received for the laboratory testwork. The balance was kept for the pilot plant run.

Extended pilot plant trials were undertaken between 2014 and 2016. The pilot plant was able to repeat the results achieved in the previous laboratory tests. The report on the pilot plant testwork concluded:

"*A six-week Kell pilot plant campaign was completed in July 2016 at the Laboratories in Welshpool, Australia. A total of 3.9 t of PGM concentrate (45% UG2, 55% Merensky blend, 3PGM 74 g/t, 11.7% moisture) from the Pilanesberg Platinum Mine was processed. Products from the campaign included high (13.4 kg) and low (12.1 kg) grade PGM sulphide intermediate products, copper cathode (17.9 kg) and a mixed, nickel/cobalt sulphide concentrate (101 kg) product. High overall PGM and base metal recoveries were demonstrated. The mass balance closed to within 3% for the front end of the plant and within 8% for the back end of the plant*."

A subsequent memorandum addressed to the developer of the Kell technology concluded:

"*The bulk mineralogy of the POX [pressure oxidation] residue as determined by QEMSCAN was input into the model for both DFS 2013 and BFS 2016 pilot-plant samples. The quantitative mineralogy of the calcine kiln discharge products from both DFS 2013 and BFS 2016 pilot-plant samples was predicted by the model output and compared with QEMSCAN results. The outcomes show a good correlation in both cases*."

The study was reviewed and updated in 2016 when additional piloting was completed. A further review and adjustment of feed concentrate has been completed in 2020 to incorporate recent process improvements and the production of Ni, Co and Cu cathode as well as refined Pt, Pd, Rh and Au.

Testwork was conducted to consider the impact of using only UG2 feedstock. An initial batch testwork programme was completed using the samples of UG2 concentrates from PPM and Union Mine (Siyanda Resources Ltd), provided by PPM for testing. The batch testwork results were used to confirm operating conditions and compared with previous continuous pilot plant results from processing a blend of PPM UG2 and MR concentrates.

Standard equipment was used for the pressure oxidation (POX) testwork, solid-liquid separation and atmospheric leach testwork. Standard analytical analysis procedures were used for the intermediate samples to determine the valuable element content. Analysis of the final metal produced was done by determining the content of the contaminants.

It is recommended in the 2020 report that that the following activities be undertaken as the PSM Project moves forward to gather final design information for detailed design:

- The circuits that are envisaged operate elsewhere in industry; however, they do not form part of the flowsheet as previously piloted for SRL. This is a major shortcoming as both the Ni/Co solvent extraction circuit as well as the PGM Molecular Recognition Technology (MRT) circuits are critical to the operation;
- Vendor testwork be completed as part of detailed design to finalize equipment selection for key items such as filters, thickeners and the acid recovery system;
- Nickel and cobalt solvent extraction circuits be demonstrated semi-continuously at bench/mini-pilot scale as part of detailed design;
- PGM MRT/ion exchange circuits be demonstrated semi-continuously at bench/mini-pilot scale as part of detailed design; and
- The acid recovery circuit be demonstrated semi-continuously at bench/mini-pilot scale as part of detailed design. The circuit configuration has been optimized and re-arranged since piloting was completed.

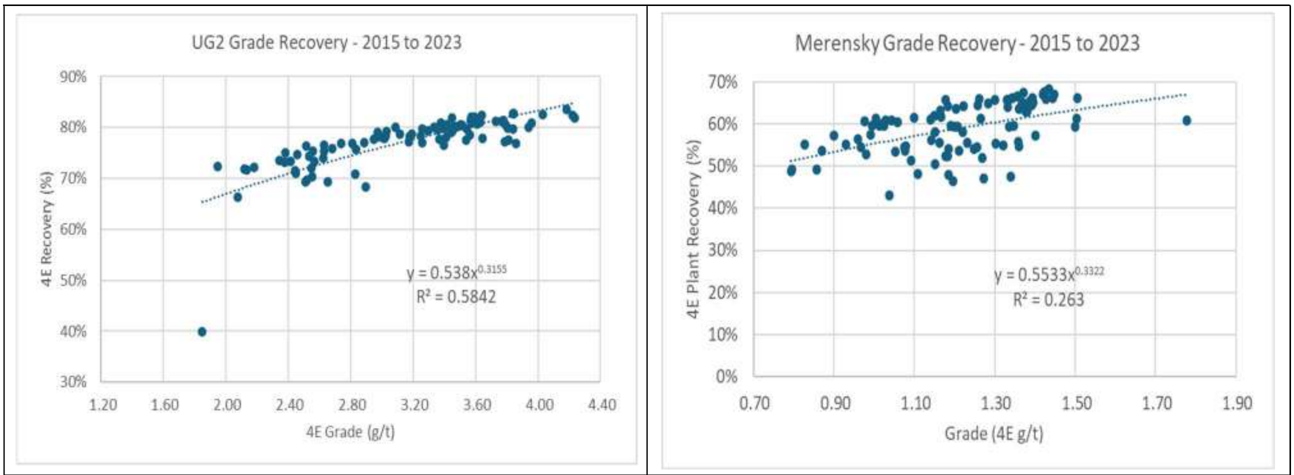
SRK is concerned that the amount of residue generated in the process has been underestimated, e.g., the amount of PGM locked in the chlorine leach residue in the PGM refinery is historically a major contributor to the low first pass efficiency and requires further treatment. In addition, the first pass efficiency of the MRT processes used for the recovery of Pt, Pd and Rh result in significant amounts of metal being recycled through the refinery. This requires additional processing capacity, potentially calcining ovens, which will contribute significantly to the overall operating cost. No mention of the residue/recycle processing costs could be found in the feasibility study.

SRL advised that DRA Global Ltd (DRA) was appointed to conduct a feasibility study which aims to address the above issues.

13.2 Plant Recovery

13.2.1 PSM above 700 m below Surface

Plant grade-recovery data for PPM's UG2 and MR concentrators based on actual performance for 2015 to 2023 show that a range of recoveries for any given feed grade can be achieved (Figure 13-3). Application of a best-fit graph introduces a potential error due to this scatter.



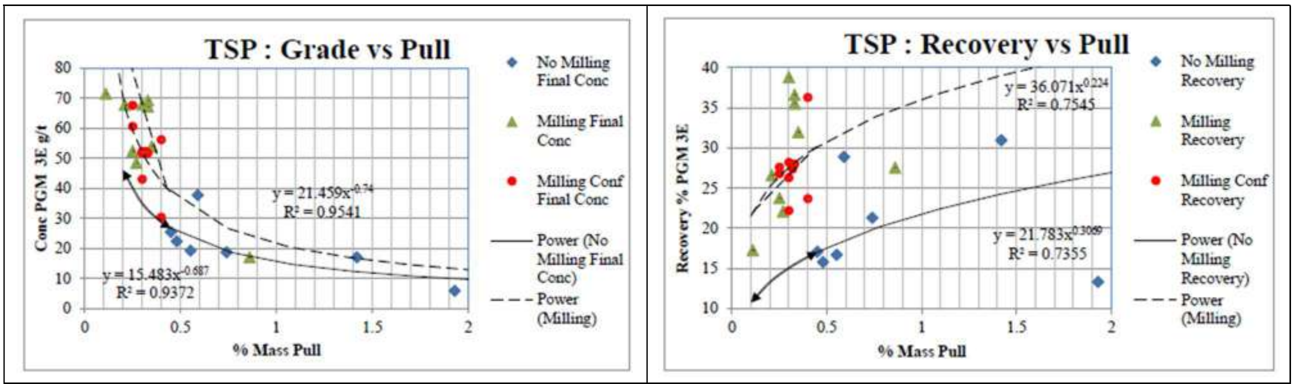
srk consulting	**SRL Total Asset PEA** PPM Plant Grade - Recovery Data – UG2 (left) and MR (right) [source: SRL, 2024a]	Project No. 600322

Figure 13-3: PPM Plant Grade - Recovery Data – UG2 (left) and MR (right)

The Two-Product formulae based on the targeted concentrate grade, feed grade and tailings grade are used to determine the mass pull and recovery into concentrate.

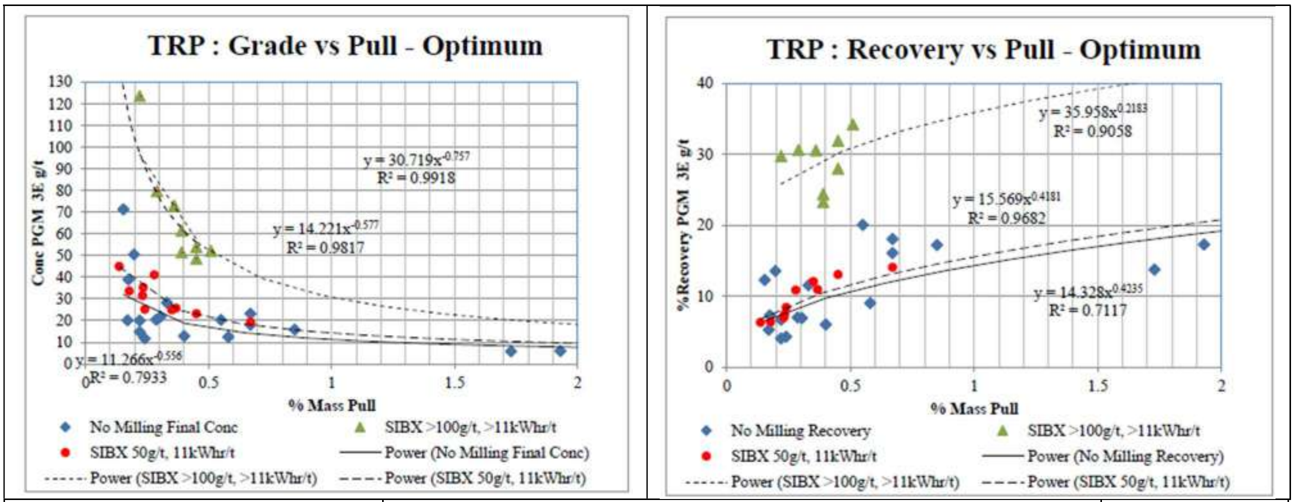
13.2.2 TSP and TRP

The grade, mass pull, and recovery relations for the TSP and TRP plants are illustrated in the graphs in Figure 13-4 and Figure 13-5, respectively.



srk consulting	**SRL Total Asset PEA** Projected Plant Performance for the TSP [source: DRA, 2015b]	Project No. 600322

Figure 13-4: Projected Plant Performance for the TSP



srk consulting	**SRL Total Asset PEA** Projected Plant Performance for the TRP [source: DRA, 2015b]	Project No. 600322

Figure 13-5: Projected Plant Performance for the TRP

13.2.3 Ruighoek and East Pit

The actual PPM operating grade-recovery relationships in Figure 13-3 are applicable for these project components.

13.2.4 PSM below 700 m below Surface and Kruidfontein

The actual PPM operating grade-recovery relationships in Figure 13-3 were used for these project components, as they are the down-dip extension of the same orebody.

The recovered metal is then split according to the 4E mined prill split particular to each operation and adjusted to report the 6E metals.

13.2.5 Mphahlele

PGM grade-recovery curves of the form *A + B x ln [metal grade in g/t]* from the 2009 FS, with distinct variables for MT and UG2 ores, were used for the PEA evaluation. A maximum recovery was applied once individual feed grades exceeded set values. The parameters applied for each 6E metal are shown in Table 13-9.

Table 13-9: Mphahlele: PGM Grade - Recovery Relationships

Item	Grade-Recovery Formula A + B x ln [metal grade in g/t]		Maximum Recovery
	[A]	[B]	
MR recovery			
Pt	0.88763	0.027556	89%
Pd	0.90698	0.037485	90%
Rh	1.0693	0.0656	89%
Ru	0.8445	0.03396	80%
Ir	0.8445	0.03396	80%
Au	0.8945	0.0538	80%
UG2 recovery			
Pt	0.75327	0.036231	80%
Pd	0.82135	0.09221	87%
Rh	0.8816	0.0584	81%
Ru	0.75353	0.091163	75%
Ir	0.75353	0.091163	75%
Au	0.83109	0.069325	70%

Base metal grade-recovery curves from the 2009 FS were of the form *A + B x [metal grade in %],* with distinct variables for MR and UG2 ores. A maximum recovery was applied once individual feed grades exceeded set values. The parameters applied for Ni and Cu are shown in Table 13-10.

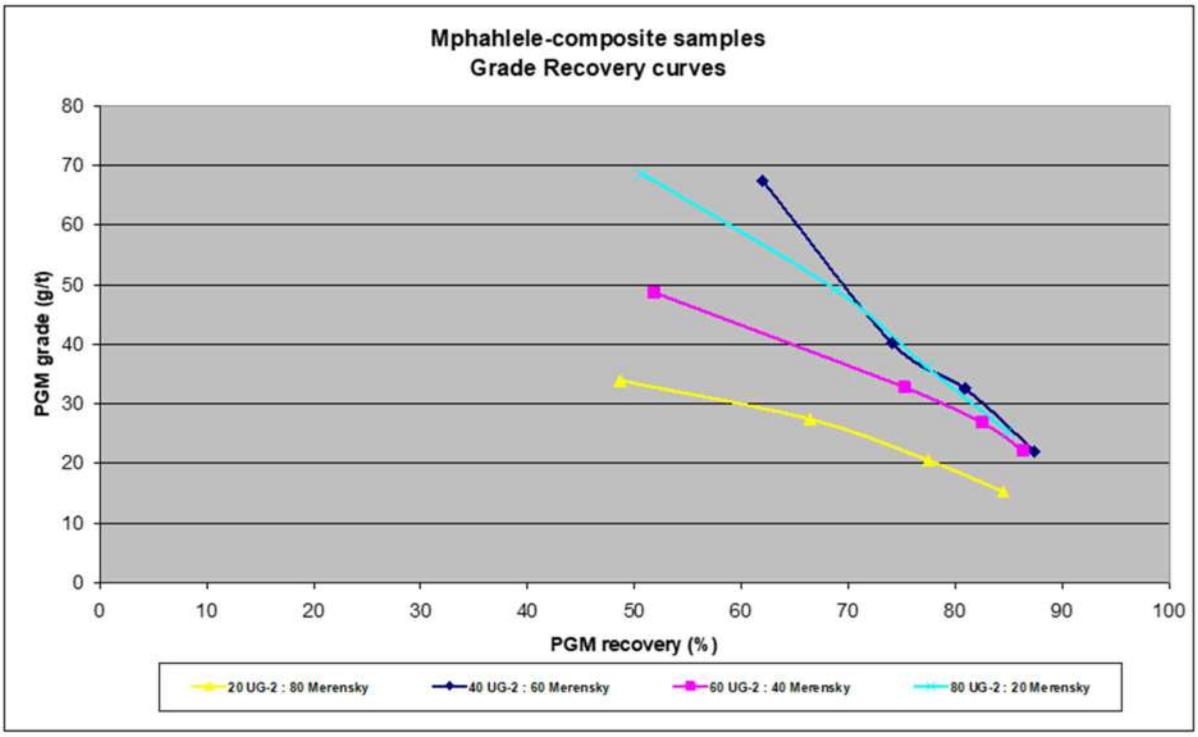
Table 13-10: Mphahlele: Base Metal Grade-Recovery Relationships

Item	Grade-Recovery Formula A + B x [metal grade in %]		Maximum Recovery
	[A]	[B]	
MR recovery			
Ni	0.50213	107.97	75%
Cu	0.44665	220.01	75%
UG2 recovery			
Ni	0.18179	141.03	60%
Cu	0.013124	574.82	60%

The grade-recovery curves generated during the rougher flotation testwork for the composite testwork samples show reasonable upgrading characteristics (Figure 13-6) and should be upgradeable to provide a concentrate that meets the grade requirements of a commercial smelting contract.

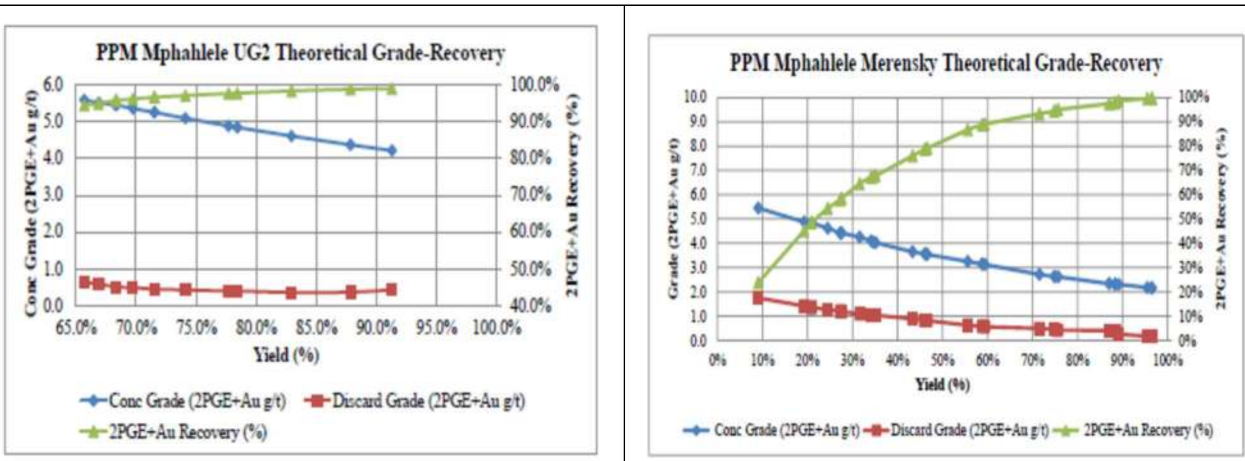
The predicted grade-recovery relationship for the treatment of Merensky and UG2 ore through the Rados plant is shown in Figure 13-7.

At the target yield of 70%, i.e. 30% of the feed is discarded, the Rados plant is expected to deliver 96.8% and 94.8% of the PGMs in the UG2 and Merensky feed respectively. This results in an upgrade in the feed grade to the mill relative to the mined grade of 37% and 35%, respectively.



	SRL Total Asset PEA Composite Sample Grade - Recovery Curves [source: SRK, 2020]	Project No. 600322

Figure 13-6: Mphahlele Composite Sample Grade - Recovery Curves



srk consulting	**SRL Total Asset PEA** Predicted Grade - Recovery Relationship using Rados Cu, Ni and Cr Analysis – UG2 (left) and MR (right)	Project No. 600322

Figure 13-7: Predicted Grade - Recovery Relationship using Rados Cu, Ni and Cr Analysis – UG2 (left) and MR (right)

13.2.6 Kell Process

The predicted recoveries and payabilities expected from the Kell process are generally in line with those obtained from conventional smelting and refining processes.

DRA's review of the feasibility study update of 2020 showed that the work was closer to that of a pre-feasibility study, at +30% -15% accuracy level. The issues and concerns raised in section 13.1.6 form the scope of work for the feasibility study to be conducted by DRA. Part of the work scope is to consider the impact of deleterious elements on the process and optimisation of the process. This work was put on hold due to SRL's cost curtailment process.

13.3 Representivity of Test Samples

13.3.1 PSM

The samples submitted for the testwork were representative of the orebody and included the various ore types.

Ruighoek and West Pit (Tuschenkomst)

The flotation kinetics and variability characterisation testwork during Phase II was performed on cores from Tuschenkomst 135JP and Ruighoek 169JP, representing all silicate reefs and UG2 ore types, including all states of alteration (i.e., weathering and oxidation).

The pilot plant testwork in Phase IV was performed on selectively mined bulk samples (approximately 120 t each) extracted from a trial pit at Tuschenkomst 135JP and representing the different available ore types and oxidation states.

TSP/TRP

Some testwork was done on TSP samples delivered to Mintek that had feed grades of 0.55 g/t 4E or lower. This was not representative of the historical or expected future main plants' tailings grades of 0.69 g/t 4E (DRA, 2015b).

A sample from the TSF used by Mintek had a feed grade of ~0.93 g/t, the expected average grade. The Mintek TRP testwork results were therefore considered in the metal balances for the TRP unmilled scenario only (DRA, 2015b).

Suntech data with an average feed grade of 0.76 g/t was more representative of plant tailings grade and therefore used for TSP values in the metal balances.

Sedibelo (Wilgespruit)

Spatial variability testwork on the UG2 ores was covered by 12 composite samples and 88 individual samples contained in the reports mentioned above.

Magazynskraal

The mine delivered 24 MR and 25 UG2 ore core samples of approximately 10 kg each. The cores were each crushed to 6 mm and split into 1 kg representative samples. From each core, 4 kg was used for individual sample testwork, 2 kg for bulk composite sample testwork and 4 kg for area sample testwork.

For the MR testwork, three area composites were made up comprising the PUP, PTA and TF. For the UG2 testwork, four area composites were made up.

13.3.2 Kruidfontein

Discussion of sample representivity is not necessary, since there is no evidence of any metallurgical testwork having been done.

13.3.3 Mphahlele

A total of 12 MR and 12 UG2 half core samples of approximately 5 kg each, representing the geographical extent and from the nominal 300 m and 500 m mining depths, were used for the flotation and variability characterization testwork.

A further four MR and four UG2 half core samples from deflections on the nominal 750 m mining depth, also representing the geological extent of the orebody were used for bench rougher flotation tests to confirm the flotation kinetics generated on the shallower cores.

Blends of 20:80, 40:60, 60:40 and 80:20 UG2:MR were subjected to the standard rougher flotation testwork.

13.3.4 Kell Process

Extensive testwork has been done on various concentrates (UG2 only, various blends of UG2 and MR) from various orebodies and a significant database of information was generated in the process.

13.3.5 Testing Laboratory and Certification

Concentrators

The majority of the mineralogy and metallurgical testwork was conducted at Mintek. Mintek is a well-respected research institution that is partly funded by the Department of Science and Technology. Mintek has no affiliation with SRL.

The Mintek Assay Laboratory is accredited with ISO 17025 and has a laboratory specializing in the analysis of PGM+Au samples from the BC. It complies with all the QA/QC requirements according to its accreditation.

Kell Process

Testwork for the Kell process was conducted at the Simulus Laboratories in Perth, Australia. At the time of compiling this report, no evidence of the laboratory accreditation could be found.

13.4 Deleterious Factors/Elements

The only deleterious material in the PGM concentrate is the Cr_2O_3 content, which presents problems for the refining process if the content is too high. The generally accepted maximum Cr_2O_3 content is 1.5%, above which the refinery will charge penalties for the excess chromite. The content in concentrate can be managed within accepted limits by adjusting the mass pull but this is achieved at the expense of 4E recovery.

The Kell process can handle much higher Cr_2O_3 contents in the concentrate, which has benefits for recovery.

13.5 Adequacy of Data

Standard metallurgical test procedures were utilised in characterizing the ores. The institutions utilised are well versed in conducting such tests and the test programmes were well structured.

All aspects around milling, flotation, solid-liquid separation and upgrading of the ores were considered. The information was adequate to provide design information for the engineers. Sufficient information was provided to assist in the prediction of future plant performance.

Extensive testwork regarding the Kell process has been done on various orebodies and a significant database of information was generated.

14 Mineral Resource Estimates

14.1 Key Assumptions, Parameters and Methods used to Estimate Mineral Resources

The PGM and base metal Mineral Resource estimates were compiled either by SRL or by independent consultants; the only exception is Central Underground where SRK compiled the estimates based on the reviewed geological model compiled by SRL.

Mr Ivan Doku of SRK has acted in a review capacity and thus accepts responsibility as the Qualified Person for the Mineral Resource estimates for the East Pit, East Underground and Kruidfontein. The Mineral Resources for the East Pit is based on the face positions of the open pit at 31 December 2023.

Mr Mark Wanless of SRK compiled Mineral Resource estimate for Ruighoek in 2008 based on the reef picks calculated by SRL, including the generation of the wiregrame models for the reefs, grade estimates and classification of the Mineral Resources, and Central Underground in 2020, based on the geological model developed by SRL as part of the 2020 FS and accepts responsibility as Qualified Person for these estimates.

With respect to the chrome Mineral Resource estimates, SRL compiled the estimates for the central portion of Magazynskraal; the rest of the chrome estimates have been compiled by Mr Ivan Doku.

SRK performed all necessary validation and verification procedures deemed appropriate to report and sign-off the Mineral Resources statements for the PSM Project and Mphahlele.

14.1.1 Ruighoek

Mineral Resource Cut

The four mineralised horizons that have been defined at Ruighoek are as detailed in the previous sections, the MR, UPR, LPR and UG2 reefs. SRK identified a Mineral Resource cut for each intersection, based on the lithology and stratigraphy around the lithologies that contain the mineralisation. For the MR the definition of the cut varies depending on the facies of MR (Contact, normal or potholed see Figure 7-3). For each unit, a dilution envelop was defined (and separately estimated) based on trial mining undertaken at the time at West Pit. The top and bottom contacts (HW and FW, respectively) and the width of the dilution envelopes around these are detailed in Table 14-1.

Table 14-1: Mineral Resource Cuts and Dilution Envelopes for Ruighoek

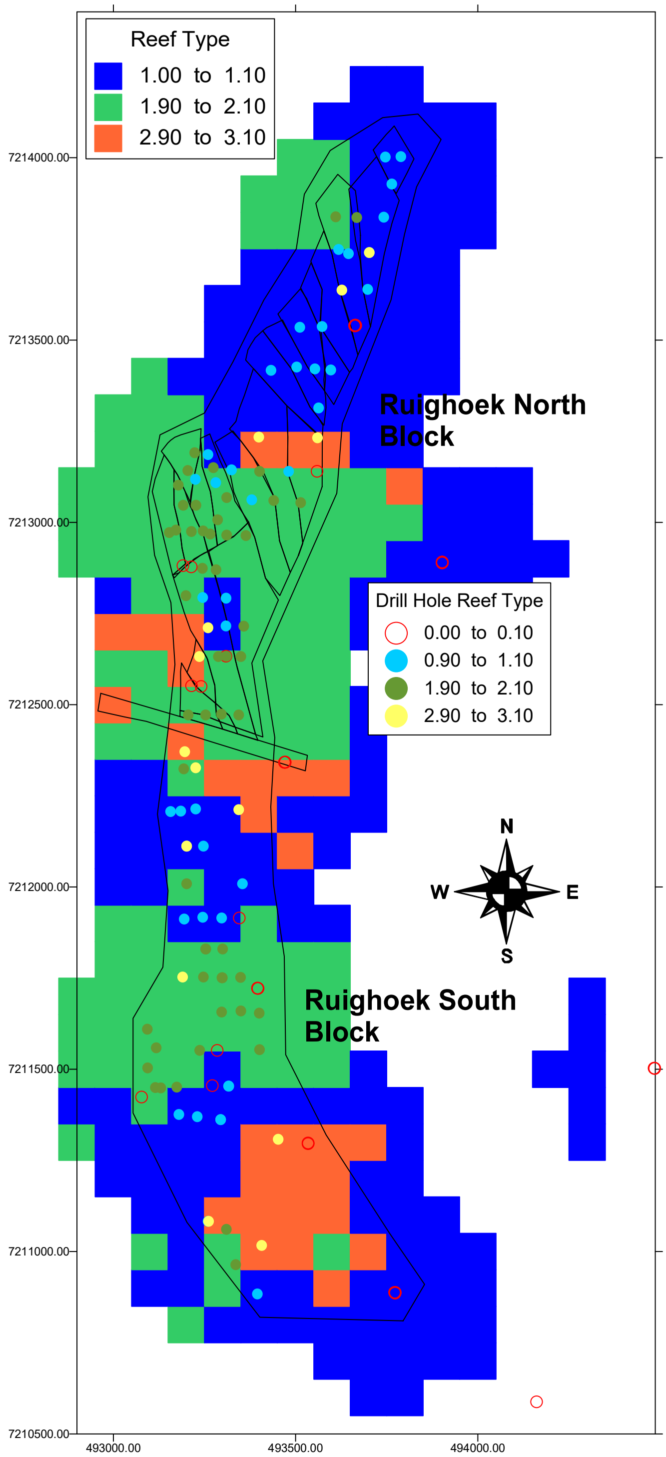
Reef	Cut	Datum	Dilution (Oxide)	Dilution (Fresh)
Merensky Contact	HW	MRHW1 Pyroxenite Base, or MR Chromitite stringer	+ 100 cm	+ 100 cm
	FW	MRHW1 Pyroxenite Base, or MR Chromitite stringer	- 35 cm	- 35 cm
Merensky Normal	HW	Top of upper Chromitite or top of POOP/PPX	+ 35 cm	+ 35 cm
	FW	Top of Merensky FW1 Anorthosite or base of Lower MR Chromitite stringer	- 35 cm	- 35 cm
Merensky Pothole	HW	Top of upper Chromitite or top of POOP/PPX	+ 35 cm	+ 35 cm
	FW	Top of Merensky FW1 Anorthosite or base of Lower MR Chromitite stringer	0 cm or half of Merensky FW1 Anorthosite	0 cm or half of Merensky FW1 Anorthosite
Upper Pseudo Reef	HW	Base of Merensky FW1 Anorthosite	+ 35 cm	+ 35 cm
	FW	Base of Hartzburgite	- 35 cm	- 35 cm
Upper Pseudo Reef below Merensky Pothole	HW	Base of Merensky FW1 Anorthosite or Base of Merensky Reef pick	0 cm or half of Merensky FW1 Anorthosite	0cm or half of Merensky FW1 Anorthosite
	FW	Base of Hartzburgite	- 30 cm	- 35 cm
Lower Pseudo Reef	HW	Base of Harzburgite or chromitite stringer on top of the Lower Pseudo Reef	+ 30 cm	+ 35 cm
	FW	Base of Lower Pseudo Reef POOP and UG2 HW2 Contact	- 10 cm	- 20 cm
UG2 Reef	HW	Top of UG2 Chromitite	+ 5 cm	+ 5 cm
	FW	Base of UG2 Chromitite	- 4 cm	- 4 cm

The Normal facies reef is characterised by chromitite stringers along the upper and lower contacts of a coarse pegmatoidal felspathic pyroxenite unit developed in the lower portions of the Merensky pyroxenite, which is commonly present as a medium-grained felspathic pyroxenite unit, within the Upper Critical Zone. The footwall beneath the lower chromitite stringer consists of mottled anorthosite. Mineralisation is restricted to the chromitite stringers and the coarse felspathic pyroxenite unit located between these two units. In the latter case, coarse base-metal sulphides may be observed within the pegmatoidal unit.

Contact Merensky reef consists of a narrow chromitite layer (typically 0.5 cm -1.5 cm) located at the base of the Merensky pyroxenite unit on the interface with the underlying mottled anorthosite footwall. Mineralisation is spatially restricted to the chromitite stringer and occasionally the felspathic pyroxenite present immediately above this unit. Mineralisation rarely is present within the footwall anorthosites beneath the chromitite stringer.

Potholed Merensky Reef is a minor facies present within the Ruighoek property. Potholed reef transgresses the footwall anorthosite and where well developed, the Pothole Merensky Reef may be located with its footwall contact immediately above the Upper Pseudo Reef. Pothole Merensky Reef shows the most extreme variations in width of all Merensky facies; the data set within the Ruighoek drill holes shows an average width close to that of the Normal Merensky facies, but with significantly more spread. The average metal grades exhibited by the Pothole Merensky Reef are intermediate between those of the Normal and the Contact facies of the Merensky Reef.

The distribution of the MR facies was estimated using Indicator co-Kriging and the resultant facies assignment is shown in Figure 14-1. Comparison of the estimated reef types and the drill hole data, flagged with reef facies yields an acceptable correlation. There are some instances where drill intersections of Pothole reef do not yield blocks of Pothole reef, specifically in the north of Ruighoek North Block. The interpretation here is that these may be small isolated potholes that are sufficiently small not to yield a large area of Pothole reef.

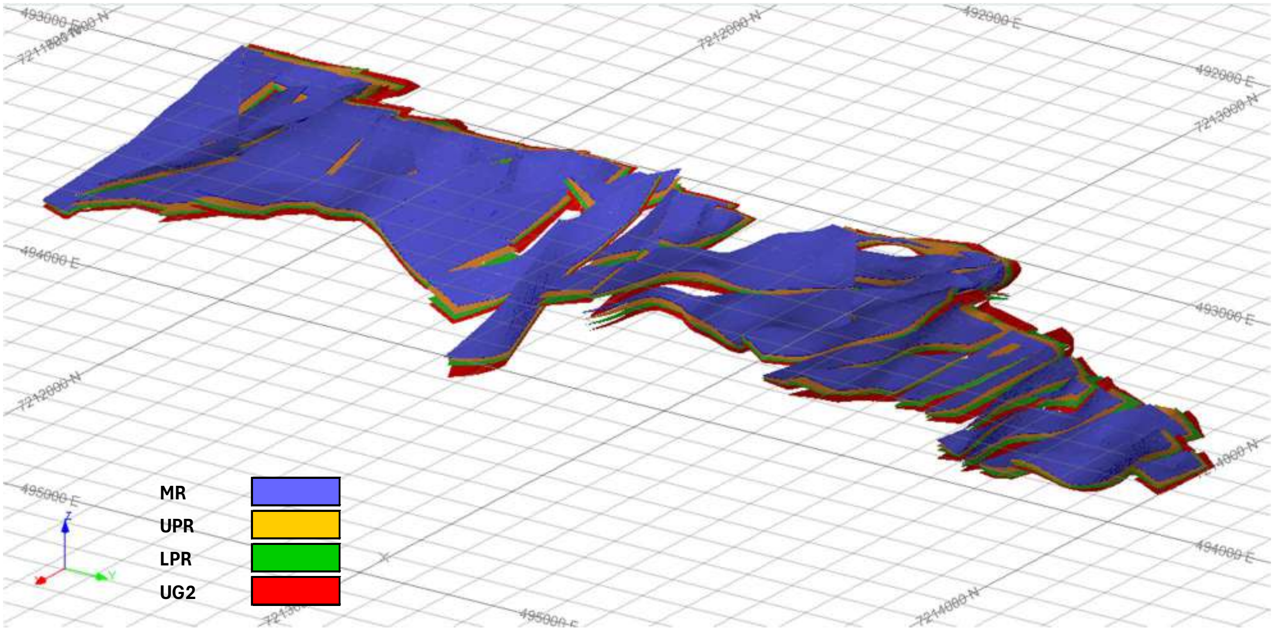


srk consulting	**SRL Total Assets PEA** Ruighoek: MR Facies Estimation	Project No. 600322

Figure 14-1: Ruighoek: MR Facies Estimation

Wireframe Modelling

Wireframe models were developed for the top and bottom contacts of each mineralized horizon based on the Mineral Resource cuts, and the interpreted fault locations based on the structural interpretation of the SRL geologists. These top and bottom surfaces are illustrated in Figure 14-2.



srk consulting	**SRL Total Assets PEA** Ruighoek: Mineral Resource Cut Wireframe Models	Project No. 600322

Figure 14-2: Ruighoek: Mineral Resource Cut Wireframe Models

Data Statistics and Compositing

The samples are composited over the full width of the Mineral Resource cut for each intersection and reef. The metal accumulations (product of reef width and average grade composited over the reef width) have been used for all estimations. These length-weighted variables are linearly additive and the metal grade estimates are recovered as the quotient of the estimated accumulations and the estimated widths. For each reef, the distribution of accumulations and lengths was visualised though correlation plots and histograms, and outlier values capped based on these visual assessments. The univariate statistics of the capped metal accumulations of the composites of each reef are shown in Table 14-2.

Table 14-2: Statistics for the Metal Accumulation and Reef Width Data used to Develop the Ruighoek Mineral Resource Estimates

Reef	Variable	Count	Minimum	Maximum	Mean	Variance	CoV
MR	LENGTH (m)	160	0.15	6	1.07	1.02	0.94
	acc_Au (mg/t)	125	0	1.49	0.23	0.05	1
	acc_Cu (mppm)	89	2	3,215	690	619,510	1.14
	acc_Ni (mppm)	151	27	7,693	1,683	2,860,967	1.01
	acc_Pd (mg/t)	125	0	7.72	1.58	2.9	1.08
	acc_Pt (mg/t)	125	0	19.03	3.79	14.82	1.02
	acc_Rh (mg/t)	125	0	1.21	0.26	0.08	1.08
UPR	LENGTH	137	0.15	4.45	0.65	0.32	0.87
	acc_Au (mg/t)	114	0	0.43	0.07	0.01	1.15
	acc_Cu (mppm)	77	6.46	5,423	317	463,918	2.15
	acc_Ni (mppm)	127	48.79	10,747	1,045	1,518,704	1.18
	acc_Pd (mg/t)	114	0.01	2.8	0.56	0.28	0.94
	acc_Pt (mg/t)	114	0.01	6.26	1.15	1.27	0.98
	acc_Rh (mg/t)	114	0	0.4	0.09	0.01	0.94
LPR	LENGTH	137	0.18	3	1.07	0.36	0.56
	acc_Au (mg/t)	113	0	0.62	0.15	0.02	0.89
	acc_Cu (mppm)	73	7.88	2,510	390	219,811	1.2
	acc_Ni (mppm)	128	72.9	5,536	1,514	1,359,686	0.77
	acc_Pd (mg/t)	113	0.02	3.31	0.86	0.45	0.78
	acc_Pt (mg/t)	113	0.05	6.14	1.75	1.52	0.71
	acc_Rh (mg/t)	113	0	0.43	0.12	0.01	0.86
UG2	LENGTH	184	0.15	3.68	1.16	0.49	0.6
	acc_Au (mg/t)	148	0	0.13	0.03	0	0.89
	acc_Cu (mppm)	40	0.9	153	46	1,416	0.82
	acc_Ni (mppm)	56	12.72	1,589	221	55,835	1.07
	acc_Pd (mg/t)	148	0	6.87	1.47	1.42	0.81
	acc_Pt (mg/t)	148	0.11	13.32	3.39	4.92	0.66
	acc_Rh (mg/t)	148	0	2.53	0.6	0.18	0.71

For the MR, due to the definition of facies within the reef plane, there are limited numbers of composites available within each facies to assess the spatial variance and estimate the metal accumulations and widths. As such, SRK elected to use all the data together for estimation regardless of the facies; however, each block was assigned a global mean grade for the facies assigned to it, which is used in the Simple Kriging. The global mean values for each facies are detailed in Table 14-3.

Table 14-3: Mean Values derived for each of the Major Reef Facies Types and used as Local Mean within the Simple Co-kriging Estimates

	Contact Reef	Normal Reef	Pothole reef
accAu (mg/t)	0.090	0.338	0.280
accPd (mg/t)	0.370	2.275	2.910
accPt (mg/t)	1.030	5.630	6.350
accRh (mg/t)	0.060	0.383	0.470
thick (m)	0.480	1.500	1.800

Variography

For all four Mineral Resource cuts, co-variograms were developed for the precious metals, and individual semi-variograms for the base metals. The composites were interactively masked out and the variograms re-run and where improvements to the structures have been observed, the data have been excluded from the analysis. Except where these data represent unrealistic outliers, these data have been retained for the purposes of estimation. The data show reasonably well-structured experimental results, and these have been modelled using single- or two-structured spherical models with ranges of the order of 100 m to 200 m for the first sills, and of the order of 400 m to 700 m for the longer range second sills. The full semi-variogram ranges were used for the search volumes.

14.1.2 East Pit

Mineral Resource Cut

The Mineral Resource cuts are practical mineable units that include the lithologies that contain the mineralisation. Figure 14-1 shows the lithological units that constitute the Mineral Resource cuts and the range of expected thicknesses. The S1 and S2 (UPR, PRHZB and LPR) are collectively known as the “Silicate Reefs”. For the purposes of the resource estimation, a single composite sample is calculated over the full mineralised unit width.

A brief description of the individual lithological unit(s) constituting the respective resource cuts is as follows:

- The S1 encompasses a single chromitite stringer with a resource cut of one metre thickness incorporating both hanging and footwall units. The S1 is excluded from the declared Mineral Resource statement and hence is not discussed hereafter;
- The S2 resource cut comprises:
  - The UPR, which contains finely disseminated base metal sulfides comprising a chromitite stringer hemmed between an obvious Pegmatoidal Feldspathic Pyroxenite (PFP);
  - The PRHZB is commonly referred to as the Tarentaal Reef. It is a distinctive feldspathic troctolite with disseminated base metal sulfides of varying mineralisation;
  - The LPR lithological unit comprises a chromitite stringer overlain by a PFP. Its contact with the underlying pyroxenite is gradational; and
- The main chromitite layer (U2) of the UG2 ,which ranges from 0.8 m to 1 m on this property, defines the resource cut. The underlying pegmatoid (U2PEG) is sporadically mineralised. The U2L consists of chromitite stringers. The U2P, which is a pyroxenite parting, separates the U2L from the U2. This entire stacked matrix defines the U2D reef resource cut. Each of these four lithological units is estimated independently, using a single composite value for each unit.

Figure 14-3 shows the Mineral Resource cuts. Each resource cut constitutes a mining cut.

The Mineral Resource cuts have been truncated at 10 m below the surface topography (considered as the depth of soil), and below this another 30 m is considered to be weathered and is not part of the Mineral Resource.

Data Statistics and Capping

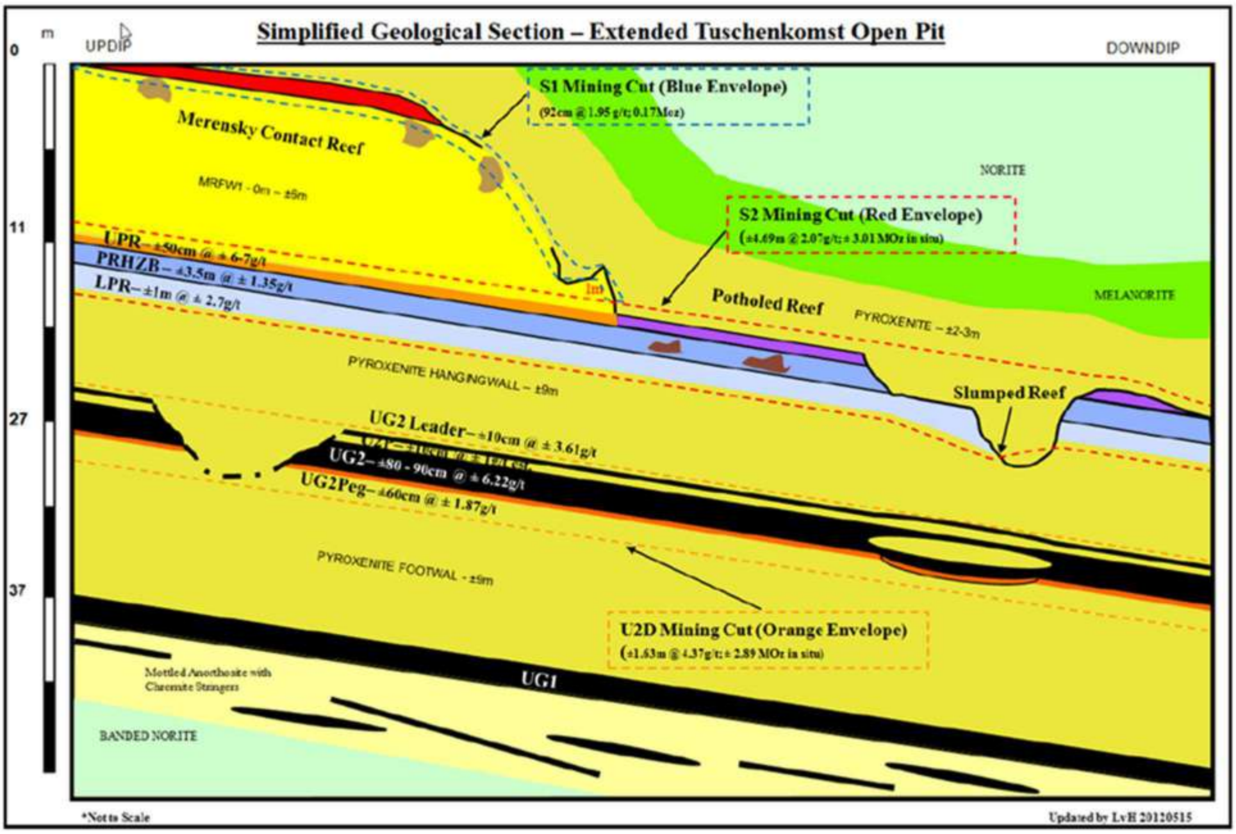
SRK was able to reasonably replicate the basic statistics of the composite dataset upon compositing the raw drill hole data. For cuts where there are differences in the statistics, they are minor and likely due to differences in software packages used. The impact of these differences on the grade and tonnages as captured in the resource model is not considered material.

The need for capping of composites was assessed using histograms, means, variance plots, log probability plots and the population coefficient of variation (CV). SRK reviewed the grade capping exercise and is of the opinion that the capped values are appropriate.

Variography

SRK has noted that the capped composite dataset used for the variography is restricted to data above 300 m depth below surface. SRK is of the opinion that data beyond the anticipated maximum open pit depth of 300 m should have been considered as they belong to the same geostatistical domain. Semi-variogram models generated by SRK compare reasonably with what underpins the grade estimation. At short ranges, the experimental semi-variograms are well-structured for almost all the variables under consideration.

For the LPR mineralised zone, the variogram model of Ni was used for Pt and Pd due to the poorly-structured experimental semi-variograms of Pt and Pd. SRK obtained moderately-structured semi-experimental variograms for Pt and Pd after masking out a few data points. A test run of randomly selected parent cells using SRK’s Pt and Pd variogram models does not materially differ from the grade estimates using the Ni variogram model.



srk consulting	**SRL Total Assets PEA** East Pit – Simplified Geological Section showing the Mineral Resource Cuts [source: SRL]	Project No. 600322

Figure 14-3: East Pit – Simplified Geological Section showing the Mineral Resource Cuts

A nugget and up to three spherical structures were used to model the experimental semi-variogram. Anisotropy was investigated but no strong preferred direction of continuity was identified and so laterally isotropic semi-variograms were modelled. The nugget was obtained by varying the lag and was modelled from either close-spaced deflection data (omnidirectional variogram with a lag of approximately 1 m) or the variogram, whichever was lower. Semi-variograms were modelled for Pt, Pd, Rh, Au, Cu, Ni, Density and Length for each lithological unit or resource cut.

Search Parameters

A maximum of three omnidirectional search passes were used to select samples for estimation for all the variables under consideration. The first search was restricted to the average spacing of 100 m. The second search was restricted to the variogram ranges of the individual variables. The third search pass accounted for cells not populated in the first and second pass. A minimum of eight and maximum of 20 samples were used in the first search, six and 20samples,respectively, in the second, and six and 40samples, respectively, in the third search.

14.1.3 Central Underground

Mineral Resource Cut

Minex™ software described under Variography later in this section was employed. SRK converted the elevation grids into conventional wireframes for the purposes of validation and visualisation outside of Minex™. The MinexTM grids closely matched the mother hole intersection elevations and thicknesses. A 10 m grid was selected by SRL for the modelling, which is sufficient for the complexity of the orebodies observed and for the drill hole spacing over the PSM Project area.

Minex™'s fault modelling is applied using strings digitized by SRL, which are based on assessing preliminary un-faulted grids. Once a fault has been added to the modelling process, it is treated as a hard boundary between data on either side, or in other words, the elevation grids are developed ignoring data across faults.

The definitions of the resource cut differ slightly from what is highlighted under Section 14.1.2. The U2D resource cut under Section 14.1.2 is the equivalent of the "UG2 Reef" resource cut defined here and as illustrated in Figure 14-4. Note that the combined U2P and U2L as defined above (Section 14.1.2) constitute the UG2L (Figure 14-4) with an average thickness of 20 cm. Here, the UPR resource cut comprises two facies, namely, the UPR lithological unit (as defined under Section 14.1.2) and a lateral subset, the PUP where the MR (i.e., the equivalent of S1) has either potholed onto or close to the UPR lithological unit as illustrated by the average thickness on Figure 14-4.

The primary target horizons are the UG2 Chromitite and the UG2 Leader Chromitite stringers, which will be extracted in a single mining cut, and the PUP facies of the UPR resource cut. The UPR lithological unit itself is generally quite thin, and the mineralisation is known to extend below the UPR in the PUP facies into the PRHZB (Figure 7-2). It is noted that outside of the PUP facies, neither the MR nor the UPR typically have sufficient mineralisation on their own to justify extraction.

For the UG2 (equivalent of the U2), the main chromitite is easily distinguishable and is selected as the UG2 cut (refer to Figure 14-4). This cut is typically 1 m thick, but varies from as little as 4 cm, to as large as 10 m. The extremely large intersections are considered to be anomalous and are not used for modelling. Above this the UG2 Leader Chromitite is selected as the UG2L cut. The UG2L cut is taken from the top of the UG2 Chromitite to the top of the UG2 Leader Chromitite, a selection which is typically around 20 cm, but can be as small as 5 cm and as large as 67 cm. Above this is a waste cut selection (Inter-burden or INT2 cut) from the top of the UG2L to the base of the cuts around the UPR. This cut averages around 14 m, and varies between eight metres and 20 m, and will typically include the UG2 leader hangingwall pyroxenite, the LPR and some portion of the PRHZB.

The next cuts are centred around the UPR lithological unit. The UPR cut has a mean thickness of 26 cm and varies from not developed at all to a maximum width of 1.33 m. Above this an ~20 cm cut of the pyroxenite or anorthosite (depending on the potholing of the MR) is selected as the TOP cut. If the MR Chromitite is identified, the cut is extended to a maximum of 1 m above the top of the UPR lithological unit. This cut is 25 cm on average and varies from 15 cm to 100 cm. Below the UPR unit, a portion of the PRHZB is selected, making up the remainder of the PUP. This PRHZB component can vary from zero to 130 cm with an average of 70 cm. For the total UPR/PUP cut, an interval of 1.2 m is targeted. For the thickness modelling, only the mother hole thickness is used.

The general stratigraphy in the UPR/PUP facies, cut definition and average thickness are illustrated in Figure 14-4.

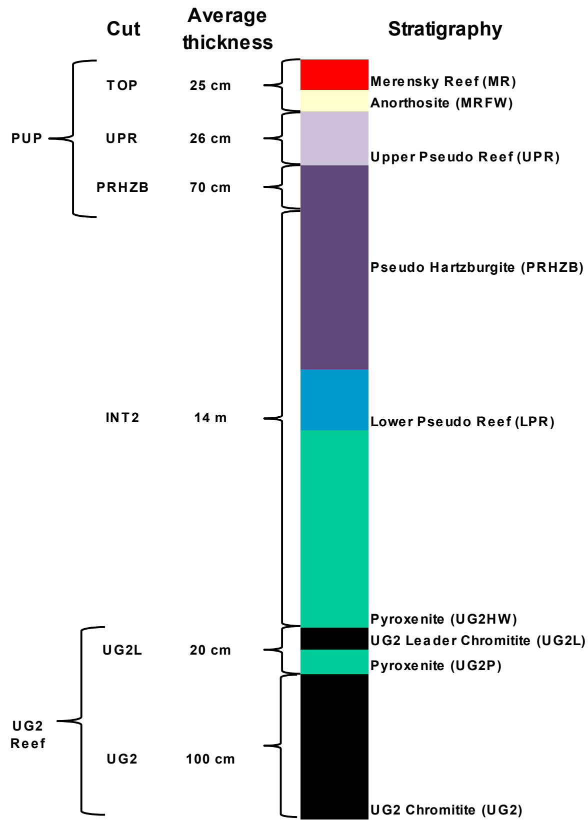
A set of intersections was excluded from the modelling, as they were deemed not representative of the normal seam geology. There were eight holes intersecting the PUP and 23 holes intersecting the UG2. Each of the cuts in Figure 14-4 is estimated separately, but the UG2 and UG2L, and the PRHZB, UPR and TOP are aggregated into the UG2 Reef and PUP, respectively, for reporting purposes.

Compositing

The drill holes are composited over the full width of each mining cut, resulting in a single value per cut per intersection. The original samples are length-weighted during compositing. There are instances, particularly with the UPR cut, where there are unsampled intervals, and in these instances, the unsampled interval is included in the composite, but contributes no metal or a grade calculated from the surrounding samples. SRL indicates that there are two instances where the interval may not have been sampled:

- One scenario is the sill that is part of the UPR cut at times; sills are laterally extensive and will have to be mined; and
- In the second scenario the harzburgite itself was not sampled because there was no sign of visible mineralisation. In this instance, the grade of the missing interval is defined based on the sample above or below, depending on which is expected to be of the same lithology. Typically, 10% of the value of the sample above is inserted as a dummy value; however, there were instances which differed, and 50%, 2%, and 100% of the value above or below was inserted, based on an assessment of the reason for the missing sample, and the surrounding grades and lithologies.

SRK agrees that this is an appropriately conservative approach to treatment of the missing intervals. SRK has independently verified the compositing approach and is satisfied that it has been applied correctly.



srk consulting	SRL Total Assets PEA Underground Mineral Resource Cut Definition [source: SRL]	Project No. 600322

Figure 14-4: Central Underground - Underground Mineral Resource Cut Definition

Data Statistics and Capping

SRK notes that the pattern of mineralisation is consistent for the PGMs Pt, Pd, and Rh, with the highest grades in the UPR and UG2 cuts, followed by the UG2L and the lowest grades in the TOP and PRHZB cuts. The gold and base metals distributions are also similar to one another, with the silicate cuts (UPR, TOP and PRHZB, in that order) having the highest grades, while the UG2L and UG2 are of significantly lower grade relative to the silicate reefs.

In the histograms it is observed that all the metals show a moderate to strong positively skewed distribution in the silicate reefs, and a similar distribution for gold and base metals in the UG2 package chromitite reefs. The PGMs in the UG2 reefs, however, have distributions that are not strongly skewed and are closer to a normal distribution, with a few isolated high-grade outliers.

The density is generally close to normally distributed, except for the TOP cut, which has a strongly bimodal distribution, likely due to the degree of potholing and the content of pyroxenite or anorthosite, and the PRHZB cut which has a less pronounced bimodal distribution.

SRL elected not to cap the composite grades but did cap the estimates. SRK undertook independent testing of the metal distribution of the composites, using a variety of tests based around the concept introduced by Parker (1991) of calculating cumulative population statistics, starting with the first two lowest value samples, and sequentially adding samples and recalculating the population statistics at each addition. Where addition of a sample results in a significant change in the population characteristics, this is an indication of a potential need for capping.

From SRK's capping assessment some variables do not require any capping, while for some variables capping is recommended, depending on the location of the high-grade values. Typically, if the high-grade value is in a well-informed area, it is preferable not to cap the value. However, if the high-grade value is on the periphery of the data, then it can potentially have a significant impact on the estimates.

SRK is of the opinion that capping is recommended for some of the silicate reef in the UPR cut, as there are some outliers on the periphery of the drilling data. The UG2 package, however, does not show such strongly positively skewed distributions, and the high-grade values that would be considered for capping are generally in well-informed areas.

In the silicate cuts, the outliers are generally associated with the PUP facies. These should ideally be domained, assessed and estimated separately.

Variography

The grade estimates were generated in Minex^{TM} using the Growth Algorithm and interpolated into 2D grids.

The Minex^{TM} Growth Algorithm can simplistically be described as fitting a trend surface to a variable, treating the variable value as a Z elevation, although the details of the process are more sophisticated than this. Unlike kriging and inverse distance methods, the Growth Algorithm method can generate values that exceed the data values (Barber, 2011). The Growth Algorithm does not depend on an empirical assessment of the spatial continuity of a variable (such as the semi-variogram in linear geostatistics) but simply uses a scan distance defined by the user.

For all variables, SRL used a constant scan distance of 400 m. To assess the appropriateness of this, SRK generated experimental semi-variograms for some of the major variables and cuts. Based on a directionless and 2D directional experimental semi-variogram analysis undertaken for the UG2, UPR and TOP cuts for Pt and Ni, SRK concluded for standard linear geostatistical assessment the selected range of 400 m may be conservative for some variables, and optimistic for others. The validations conducted by SRK, however, show reasonable reproduction of the composite values in the estimates.

14.1.4 East Underground

Compositing

Full composites have been undertaken per cut and in the same manner as described under Section 14.1.3.

Mineral Resource Cut (MR)

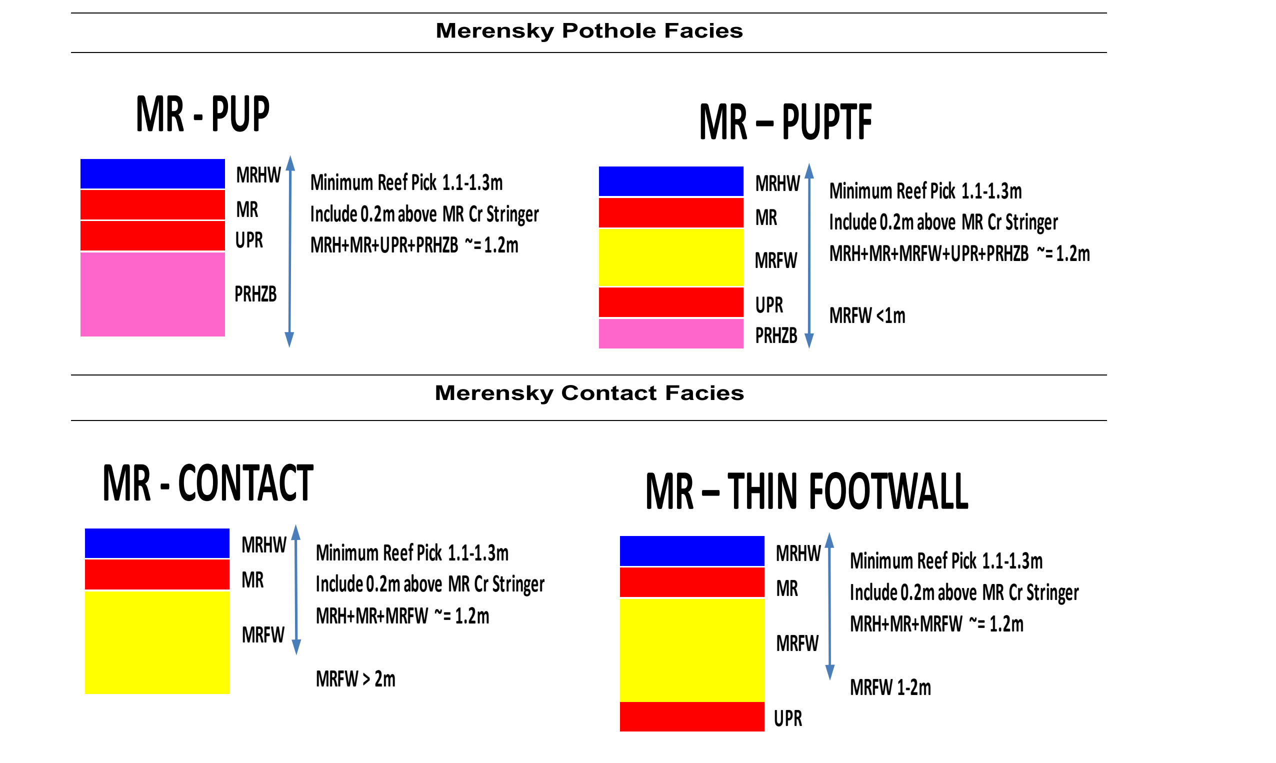
Two lateral facies types are under consideration - the Pothole and Contact Facies (see Figure 14-5). In both instances, the minimum vertical resource cut is 1.2 m. The distinction between the two facies is dependent on the vertical thickness of the MRFW anorthosite. Where the separation between the MR and UPR is less than or equal to 1 m, it is considered as Pothole Facies; the converse holds for the Contact Facies. The minimum resource cut for both facies is inclusive of 0.2 m of the MRHW. In effect, the UPR can directly underly the MR and thus be classified as a Pothole Facies (Figure 14-5).

With respect to the Pothole Facies, when the combined cut of MRHW+MR+MRFW/UPR is less than 1.2 m, it is marked-up with additional samples from the underlying PRHZB – this is termed the MR-PUP in Figure 14-5. In the rare instance where the combined cut is exactly 1.2 m, it is capped with an additional sample from the PRHZB (i.e., termed MR-PUPTF in Figure 14-5); hence the likelihood of the Mineral Resource cut ranging from 1.2 m to 1.3 m. Both the resource cut for the MR-PUP and MR-PUPTF is hereafter referred to as PUP; that of the Merensky Reef Contact Facies is MRC.

In SRK's opinion, the criteria used in differentiating the facies type is robust and eliminates all ambiguities. SRK has stepped through the composite assay dataset and is satisfied that the resource cuts of the individual samples meet the criteria as set out above.

Mineral Resource Cut (UPR)

The UPR resource area occurs outside the PUP, it thus acts as a lateral facies to the PUP. The distinction between the MRFW anorthosite as described for the MR above and that of the UPR is that the latter has a pegmatoidal pyroxenite (PPX) or pegmatoidal olivine pyroxenite (POOP) at the base of the MRFW anorthosite. Frequently, the top and bottom contact of the PPX or POOP has a chromitite stringer. Mineralisation peaks on the lower chromitite stringer and occurs in the PPX above and extends 20 - 50 cm into the harzburgite below.

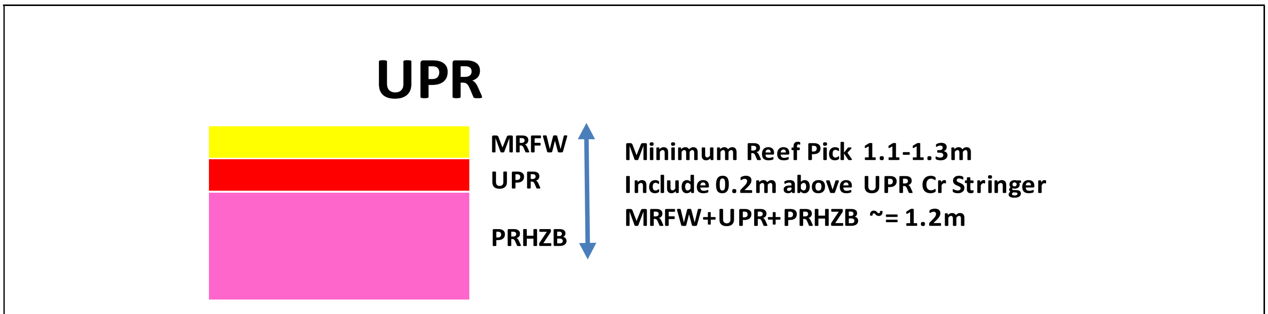


srk consulting	SRL Total Assets PEA Mineral Resource Cut as applicable to the Pothole and Contact Facies [source: SRL]	Project No. 600322

Figure 14-5: Mineral Resource Cut as applicable to the Pothole and Contact Facies

The minimum vertical resource cut applicable to the UPR is 1.2 m. The coded UPR zone extends from 0.2 m above the PPX or POOP (inclusive of the top chromitite stringer) into the overlying MRFW and downwards to the bottom of the PPX or POOP (inclusive of the lower chromitite stringer). The UPR resource cut extends into the underlying PRHZB when the combined MRFW+ UPR is less than 1.2 m. Whole PRHZB samples are added where the combined MRFW +UPR is less than 1.2 m. The Mineral Resource cut for the UPR reef ranges from 1.1 m to 1.2 m. The UPR is always capped with additional samples from the PRHZB to ensure a minimum vertical resource cut of 1.2 m. Figure 14-6 illustrates the stratigraphic components of the UPR Mineral Resource cut.

SRK has stepped through the composite assay dataset and is satisfied that the resource cuts of the individual samples meet the criteria as described above.

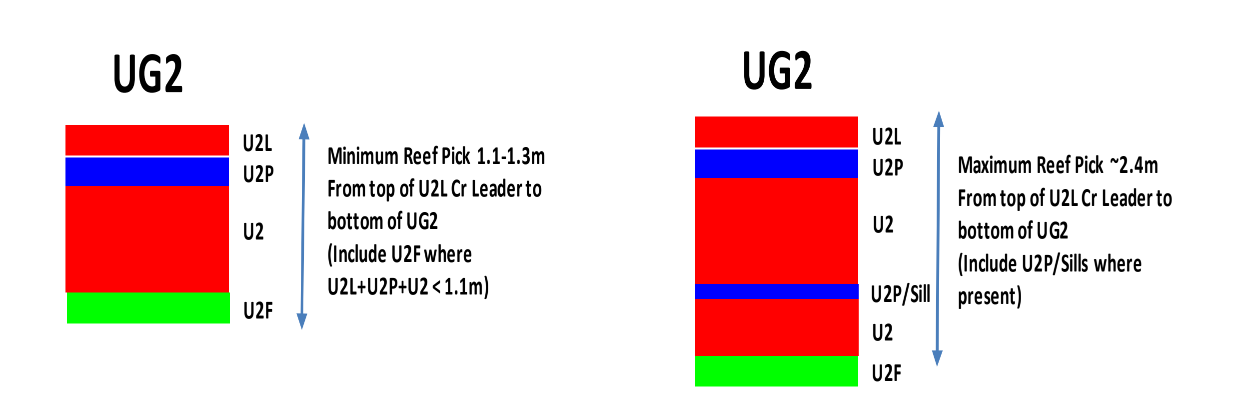


srk consulting	SRL Total Assets PEA Mineral Resource Cut as applicable to the UPR Reef. [source: SRL]	Project No. 600322

Figure 14-6: Mineral Resource Cut as applicable to the UPR Reef

Mineral Resource Cut (UG2)

The minimum vertical resource cut applicable to the UG2 is 1.2 m. The coded UG2 zone includes the U2L and U2P where present, together with U2. The UG2 resource cut extends into the underlying UG2 footwall (UG2FW, labelled as U2F in Figure 14-7 and the equivalent of UG2PEG elsewhere) when the combined U2L+U2P+U2 is less than 1.2 m. Whole UG2FW samples were added where the combined U2L+U2P+U2 was less than 1.2 m. The resource cut for the UG2 reef ranges from 1.1 m to 1.2 m; however, the resource cut does extend beyond this in instances where the U2 package is thicker. The UG2 is always capped with additional samples from the UG2FW to ensure a minimum vertical resource cut of 1.2 m. Figure 14-7 illustrates the lithological components of the UG2 Mineral Resource cut.



srk consulting	**SRL Total Assets PEA** Mineral Resource Cut as applicable to the UG2 Reef [source: SRL]	Project No. 600322

Figure 14-7: Mineral Resource Cut as applicable to the UG2 Reef

SRK has stepped through the composite assay dataset and is satisfied that the resource cuts of the individual samples meet the criteria as described above.

Data Statistics and Capping

The raw datasets for both PUP and MRC show that there is a strong bivariate relationship amongst the five PGMs (Pd, Pt, Rh, Ru and Ir). Based on this strong relationship, a regression formula was deduced and used as the basis for assigning regressed values to all PGM un-sampled intervals. A constant value is assigned to Ir because it was often below detection limit. SRK has reviewed the approach and is of the opinion that the methodology is appropriate. There are no regressed values for Au, Pd and Pt because values are available for all samples.

Full width composites were derived from the raw dataset after the regression analysis. The length and ‘triple accumulation’ (i.e., the product of thickness, grade and density) was estimated. Final block grade was calculated by dividing the estimated accumulation by the estimated thickness.

SRK reviewed the outliers in the dataset and is satisfied that the capped values applied to each of the variables do not significantly impact on the global mean of the dataset. The UG2 metal grade and accumulation did not show any material anomaly to warrant cutting.

Semi-variography (MRC and PUP)

The MRC experimental semi-variograms for 4E accumulations show a similar structure to that of the PUP (Figure 14-8), which SRK considers to be poorly to moderately structured and thus not robust.

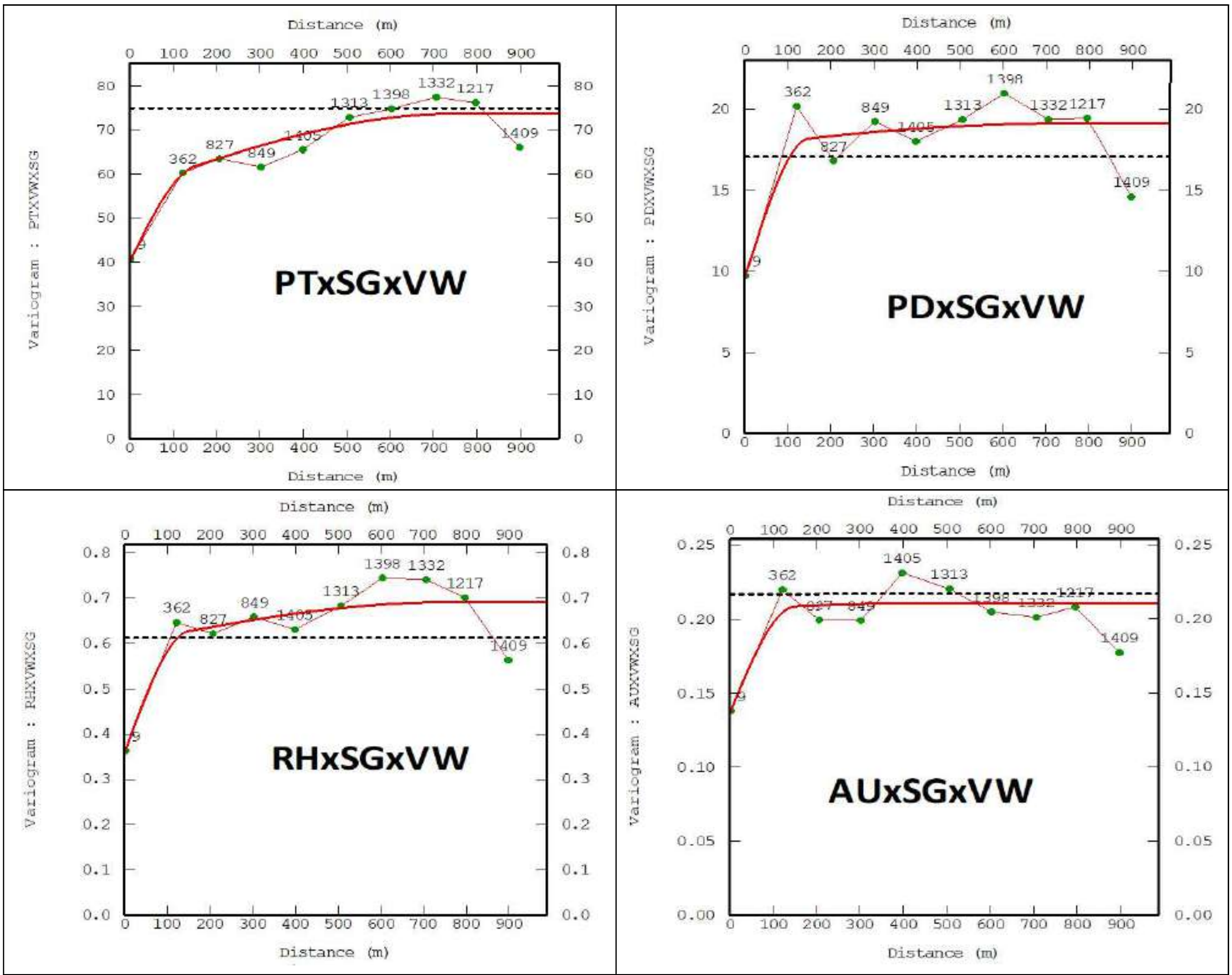
With respect to the PUP, a lag of 100 m was used to generate the experimental variograms (Figure 14-8). The PGM accumulations exhibit moderate to high relative nugget effects (50 - 60%) and demonstrate maximum continuity of around 750 m. A notable feature of the PUP variography is that a significant proportion of the total variance is accounted for at relatively short distances (150 m to 200 m). This feature of the variogram indicates the presence of significant short-scale variability of grades and widths within the pothole zone. In the case of MCR, a lag of 150 m was used to compute the experimental variograms. The PGM accumulations exhibit moderate to high relative nugget effects (50 - 60%) and demonstrate maximum continuity of around 1 400 m.

For the vertical width volume estimation, all the PUP and MRC vertical data were combined. The experimental variogram for the combined dataset is poorly structured up to 500 m with maximum continuity up to 1 400 m. The poorly structured component of the experimental variogram indicates the likelihood of significant spatial variability at a more local scale.

Semi-variography (UPR)

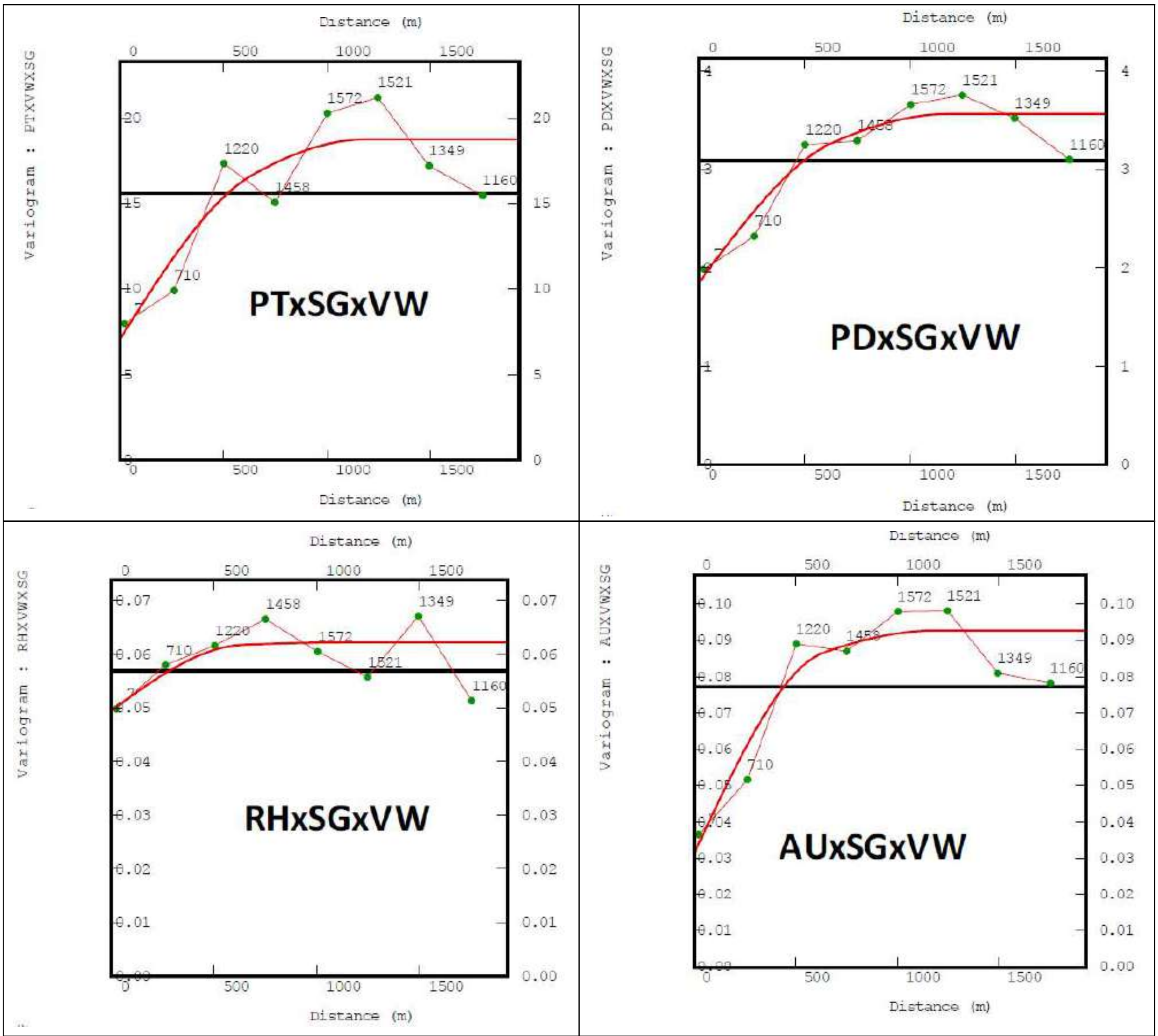
SRK is of the opinion that the experimental semi-variograms for the variables under consideration are moderately to well structured (Figure 14-9) with a moderate to strong spatial correlation between the PGM variables. The relationship between the PGMs thus supports the application of a multivariate estimation method. A lag of 150 m was used to compute the experimental semi-variograms. The PGM accumulations exhibit moderate to high relative nugget effects (40 - 60%) and demonstrate maximum continuity of around 1 300 m.

The short-scale structure (up to 300 m) notable in the vertical thickness variogram model is moderately to well-structured until 300-m. SRK finds the variogram models to be appropriate.



srk consulting	SRL Total Assets PEA PUP Semi-Variogram Models – 4E Metal Accumulation	Project No. 600322

Figure 14-8: PUP Semi-Variogram Models – 4E Metal Accumulation



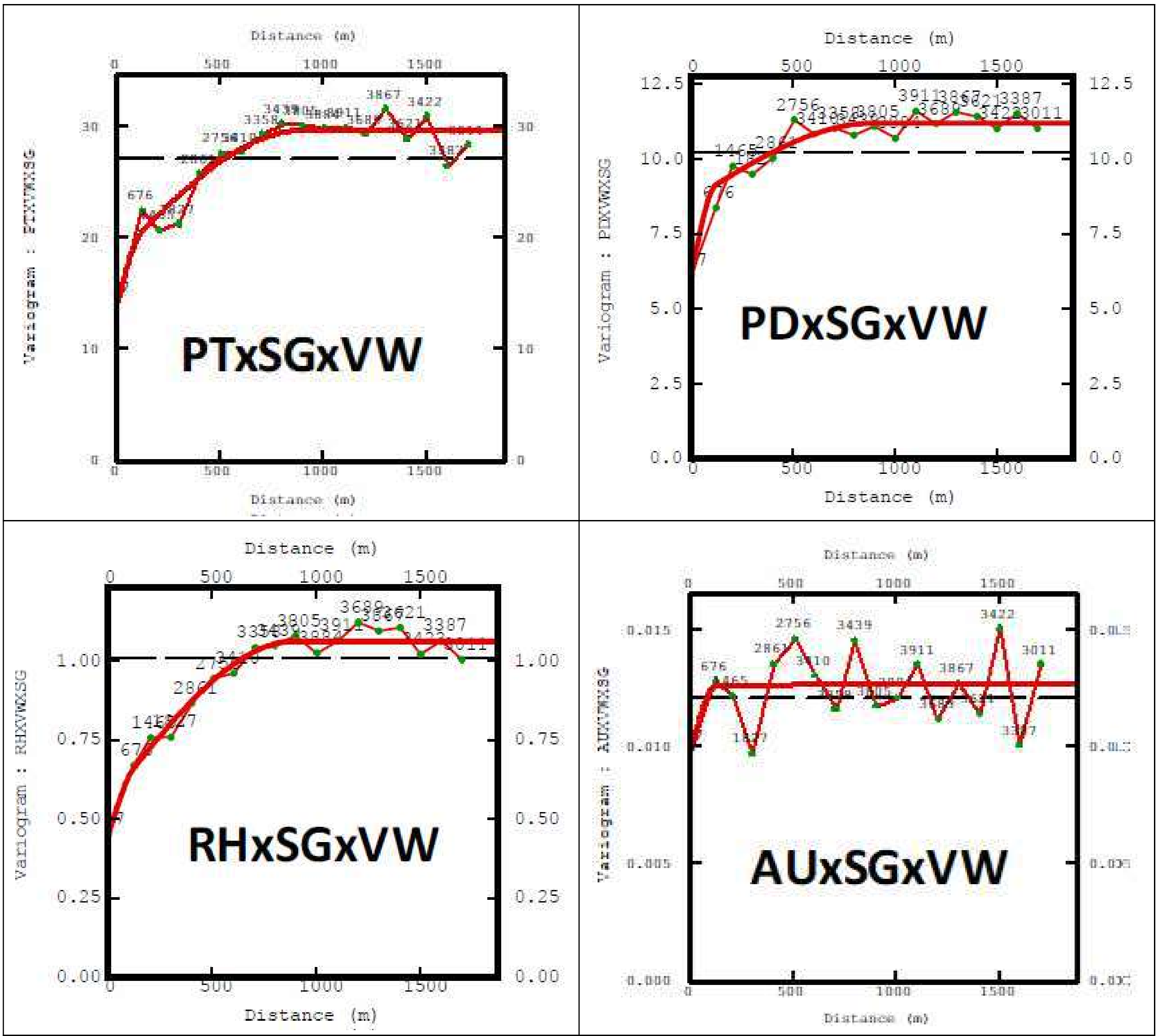
srk consulting	**SRL Total Assets PEA** UPR Semi-Variogram Models – 4E Metal Accumulation	Project No. 600322

Figure 14-9: UPR Semi-Variogram Models – 4E Metal Accumulation

Semi-variography (UG2)

Two dimensional experimental semi-variograms were computed for all the PGMs and Au metal accumulations together with density-weighted vertical width. The semi-variograms for 4E accumulations are shown in Figure 14-10 for UG2. Except for Au, the experimental semi-variograms are moderately to well structured. The models fitted unto the experimental semi-variograms for Rh, Pd, Pt are reasonably robust.

The variograms for the Pt, Pd and Rh share similar spatial structure and variance proportions (intrinsic correlation) and thus support the use of a simplified single variogram model for all variables. A lag of 100 m was used to compute the experimental semi-variograms. The PGM accumulations exhibit low to moderate relative nugget effects (20 - 40%) and demonstrate maximum continuity of around 1 000 m. Au was estimated independently considering its poor spatial correlation with the other PGMs.

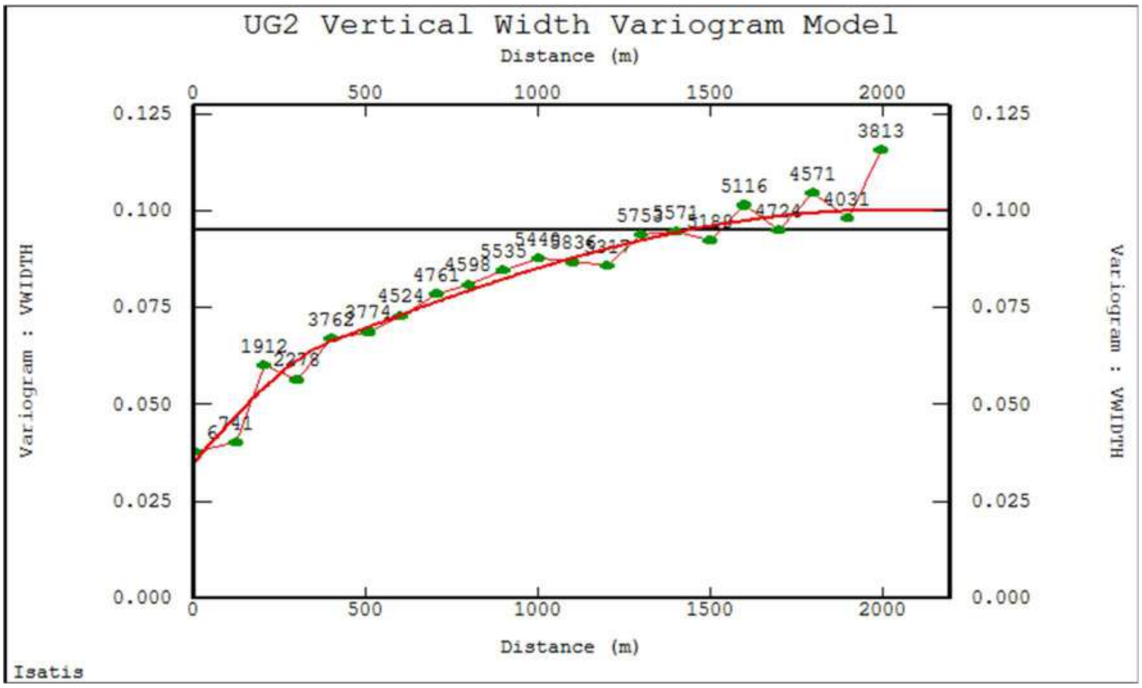


srk consulting	**SRL Total Assets PEA** UG2 Semi-Variogram Models – 4E Metal Accumulation	Project No. 600322

Figure 14-10: UG2 Semi-Variogram Models – 4E Metal Accumulation

Figure 14-11 shows the variogram model based on all available UG2 vertical thickness data. The resulting experimental variogram and fitted model demonstrates exceptional structure and continuity with a maximum range of 2 000 m.

Based on a Quantitative Kriging Neighbourhood Analysis (QKNA), a search radius of 1 500 m quadrant search was used with a minimum of three and maximum of 20 intercepts for both the PUP and MRC estimations. SRK deems the results satisfactory for this style of mineralisation. The same search radius parameters were applied for the UPR and UG2. SRK is of the opinion that ideally, QKNA should have been carried out separately for each of the mineralisedmineralised units.



srk consulting	**SRL Total Assets PEA** UG2 Variogram – Vertical Width used for Volume Estimate	Project No. 600322

Figure 14-11: UG2 Variogram – Vertical Width used for Volume Estimate

14.1.5 Kruidfontein

Geological modelling was done using the Minex™ software. In cases where one or both reefs were absent due to geological disturbances, the estimated stratigraphic position was used. The model integrity was tested with the aid of the 2D seismic lines, which provided accurate fault information to further enhance the structural model. The grade estimates have been compiled using polygonal estimation technique and hence variography is not applicable here.

Mineral Resource Cut (MR)

Two facies types, viz. the PUP and normal MR were considered. The resource cut incorporates a 20 cm of hangingwall sample, and then a minimum 1 m cut. However, SRK has noted reef picks of less than 1 m in some of the drill holes. It is SRK's opinion that, when the combined cut of MRHW+MR+MRFW/UPR is less than 1.0 m, it must be marked-up with additional samples from the underlying PRHZB; this is to allow for the minimum mining width conventionally associated with the BC. The maximum width defined in these cuts is 162 cm.

SRK has stepped through the assay composite database and is satisfied that the resource cuts of the individual samples meet the criteria set out above.

Mineral Resource Cut (UG2)

The resource cut takes into consideration the total UG2 reef package The minimum vertical resource cut applicable to the UG2 is 1 m. The UG2 is capped with additional samples from the UG2FW/PG to ensure a minimum vertical resource cut of 1 m. However, SRK has noted that the UG2 reef picks are inconsistently defined across drill holes (inclusive of deflections). The inconsistency is also because there is no criterion for the inclusion or exclusion of the U2P/L. Where the reef pick is greater than 1 m, the UG2 main chromitite has been marked up with varying thicknesses of footwall units.

The final reef pick measurements (Potholed MR and UG2) used for the resource estimation are based on the trace and have not been corrected for true thickness of the reef.

It is noted that for each of the samples with assay values for the PGMs, density determinations were undertaken. However, in compositing over the full width, the density component has not been factored in. On a random inspection undertaken by SRK on some of the composites, it is noted that the length and density weighting yield a slightly different set of PGM composite values, which on average is less than 5% over the full width. This uncertainty is considered in the resource classification criteria in Sections 14.3 and 14.4.

14.1.6 Mphahlele

The definition and selection of the mineral resource cuts was undertaken and reviewed by SRL staff. Mr Mark Wanless, a Principal Resource Geologist employed by SRK, undertook the geological modelling and Mineral Resource estimation.

All the mineral resource cuts were independently reviewed in detail by SRK, including cross-referencing the original log sheets and interpretive logs. In addition, the analytical data were reviewed for any drill holes identified as having unusual grades or metal ratios.

The geological modelling was undertaken in Leapfrog Geo version 5.01, and the grade estimation and block modelling was undertaken in Datamine Studio RM version 1.5.55, and Isatis version 18.03.

Various risks of a legal, environmental, social and political nature that could have an impact on the development of Mineral Resources or Mineral Reserves have been considered in Sections 1.3, 4.4, 20 and 24.2. These are not unique to the Mphahlele Project, but affect all mining projects in South Africa. These risks are unlikely to prevent the project from going ahead, but could impact on the time and cost to implement the project.

The Mineral Resource cuts were defined by SRL and coded into Excel spreadsheets. The drill hole logs were reviewed using graphical logs and the available assay database. The top contacts of both the MR and UG2 reefs were used as individual references. The cuts are defined considering both the nature of the metal distribution, as well as the practicality of minimum mining dimensions, and are considered to adhere to a minimum mining thickness appropriate for the mining method selected.

Mineral Resource Cut (MR)

The Mineral Resource cut was generated based on a set of rules applied to all reef intersections. The upper contact of the Merensky Pyroxenite serves as the top of all intersections. The peak of mineralisation is generally offset from the top of the pyroxenite and is associated with a chromitite stringer. The top portion of the pyroxenite above the chromitite stringer typically varies in thickness between 15 cm and 40 cm and is generally poorly mineralised. However, the chromitite stringer is not ubiquitously observed in the drill holes, and hence it is more appropriate to consider the consistently observable pyroxenite contact as a visual marker for the top of the mineralisation.

For the MR a maximum downhole apparent thickness of 2.4 m was allowed for. This represents a true thickness of between 1.4 m and 1.8 m if an intersection angle between 35º and 50º is assumed. Picks and grade values are based on the sample widths and results captured in the assay database. Some intersections show the potential for a second cut for the MR in the footwall of the Mineral Resource cut; however, this has not been modelled in the current estimate and will require additional assessment of its continuity and economic potential before being declared as a Mineral Resource.

Using the MR Mineral Resource cut calculated for every drill hole and deflection, a composite grade and width was calculated for each metal over the selected width. The metal accumulations were calculated as the sum of the product of each sample metal grade and width, expressed as cm.g/t, and an average deflection cluster grade back-calculated as the total metal accumulation divided by the total cut thickness for each deflection cluster (mother hole plus deflections).

Mineral Resource Cut (UG2)

The top of the chromitite was used as the start of all the composites. The chromitite and associated stringers are all included in the Mineral Resource cut, inclusive of any internal pyroxenite. On rare occasions the Mineral Resource cut is extended into the footwall samples where the mineralisation persists into the footwall, as the expectation is that grade control drilling will be able to identify this prior to mining. A number of the composites defined by SRL have true thicknesses of less than one metre, assuming a ~50º dip, which is less than a reasonable minimum mining width. Although the dilution will be accounted for in the conversion to a Mineral Reserve, SRK recommends that a minimum true width of at least one metre, for LHOS, should be applied, as this is the conventional approach for declaration of a Mineral Resource on tabular orebodies. Over 20% of the composites on the UG2 are less than one metre true width, and as a result, the Mineral Resource tonnage is likely understated, and the Mineral Resource grade overstated.

The maximum thickness used in the Mineral Resource estimate was 4.39 m (vertical width – or approximately 2.8 m true width) against a maximum thickness of in excess of 15 m for some intersections logged as UG2. SRL reviewed all intersections and excluded some as disturbed or potholed, such as intersections where the chromitite units are interlayered with pyroxenite and anorthosite for several metres. The UG2 is known, as discussed in Section 7.4, to occur in places as two discrete chromitite seams, separated by a pyroxenite parting of variable thickness. Although there has not been a strict rule applied with respect to maximum thickness of the parting (which is generally poorly or not mineralised), where the parting is large, only the top Chromitite is selected as part of the Mineral Resource cut.

Wireframe modelling

SRK undertook the wireframe modelling in Leapfrog Geo 5.01 implicit modelling software. The modelling incorporated a structural interpretation done by SRL. SRK reviewed and accepted the SRL fault interpretation.

The interpretation of the fault locations by SRL is based on the knowledge of the regional structural trends, the drilling undertaken on the property, and the aeromagnetic survey undertaken over the lease area. SRL's interpretation of the fault locations from the geophysical data is also premised on an earlier interpretation. The interpreted faults and major lineaments are shown in Figure 6-7, the first vertical derivative as solid and dashed black lines, respectively. The approximate subcrops of the MR and UG2 are plotted as dashed white lines, visible across the centre of the image.

Structural interpretation was based on interpretation of the aeromagnetic and radiometric survey that was completed over the Mphahlele lease area in 2004. The flight line spacing is 50 m and the survey covered an area of 117 km^2.

Faults and lineaments were identified from the various sun-shaded derivatives of the aeromagnetic data. The original interpretation was re-evaluated to produce the version that was used in this report. Structures trend largely northwest to southeast, while the strike of the layering in the BC rocks is close to east-southeast to north-northwest. This assists with the interpretation of the faults and lineaments. Towards the east the resource area is cut-off by a large fault structure, associated with folding.

SRK created the wireframes as veins in Leapfrog, as this approach allows the software to explicitly honour the intersection top and bottom contacts and models the thickness in between the intersections. Leapfrog projects the interpreted fault traces vertically and models the elevation of the top and bottom contacts of the composites within each fault block, ignoring the data outside of a fault block. The wireframes were set up to honour the contacts exactly, and the wireframes developed from the isosurfaces generated on an adaptive 20 m grid, which will generate triangles on a grid closer than 20 m if required to fit the isosurface. The model is constructed to a constant depth of 620 m below sea level (~1 535 m below surface) and clipped against the topography surface supplied by SRL.

The faulted wireframe models are illustrated in Figure 10-4, with the surface is coloured according to the dip. Note that even if a fault line does not intersect the wireframes, as can be seen at the top of each image, Leapfrog will project the fault line and use this as a fault boundary. The reef dips are generally between 45º and 55º.

Compositing

A single composite is defined over the full thickness of the selected Mineral Resource cut for each reef for each drill hole cluster. Each of the drill holes plus deflections are length-weighted and averaged to calculate the composite. The metal accumulation (grade multiplied by thickness or cm.g/t) is calculated for each composite, and is the estimated variable, along with the vertical thickness to allow the back calculation of grades after estimation.

Data Statistics and Capping

The statistics of the full width composite data are presented in Table 14-4 and Table 14-5. The UG2 is markedly higher grade than the MR except for the base metals where the MR grades are marginally higher.

In histograms of metal grades and accumulations, the pattern of mineralisation is consistent for the PGMs Pt, Pd, and Rh and Au in both the MR and UG2. The distributions are not strongly skewed, and there are no significant outliers. The MR density distribution is negatively skewed, as is the UG2, but not as strongly skewed. The MR accumulation distribution matches the grade distribution fairly well, due to the relatively tightly constrained distribution of length (vertical thickness) values. The UG2 accumulation distribution, while also being reasonably close to normally distributed, shows a distinct character from the grade value, due to the wider range of length values. There are, however, no significant outliers, high or low, in the accumulation distributions.

Table 14-4: Statistics of the Grade Variables for the Full Width Composites per Seam

Variable	Reef	Count	Minimum	Maximum	Mean	Std. Dev.	CoV
4E ppm	MR	97	0.12	6.07	2.74	1.28	0.47
Pt ppm	MR	97	0.07	3.42	1.51	0.72	0.48
Pd ppm	MR	97	0.04	2.01	0.9	0.45	0.50
Rh ppm	MR	97	0.01	0.16	0.07	0.03	0.43
Au ppm	MR	97	0.01	0.61	0.26	0.12	0.46
Ni ppm	MR	97	0.01	0.38	0.18	0.07	0.39
Cu ppm	MR	97	001	0.24	0.11	0.05	0.45
Density	MR	99	2.67	3.26	3.13	0.1	0.03
Length	MR	99	0.86	2.74	2.1	0.26	0.12
4E ppm	UG2	178	1.36	9.49	5.09	1.43	0.28
Pt ppm	UG2	178	0.42	3.9	2.6	0.58	0.22
Pd ppm	UG2	178	0.21	5.38	1.94	0.82	0.42
Rh ppm	UG2	178	0.13	0.69	0.44	0.1	0.23
Au ppm	UG2	178	0.01	0.25	0.1	0.04	0.40
Ni ppm	UG2	178	0.02	0.33	0.12	0.05	0.42
Cu ppm	UG2	178	0.01	0.19	0.07	0.03	0.43
Density	UG2	178	3.2	4.16	3.75	0.15	0.04
Length	UG2	178	0.67	4.82	2.17	0.83	0.38

Table 14-5: Statistics of the Estimated Metal Accumulation Variables for the Full Width Composites per Seam

Variable	Reef	Count	Minimum	Maximum	Mean	Std. Dev.	CoV
4E cm.g/t	MR	97	29.71	1 328.87	540.61	318.90	0.59
Pt cm.g/t	MR	97	15.14	749.54	294.71	176.63	0.60
Pd cm.g/t	MR	97	8.72	460.21	180.78	111.80	0.62
Rh cm.g/t	MR	97	2	36.37	14.08	8.34	0.59
Au cm.g/t	MR	97	2.4	130.21	51.08	28.14	0.55
Ni cm.g/t	MR	97	1.23	85.57	36.98	17.51	0.47
Cu cm.g/t	MR	97	0.49	52.39	21.88	11.16	0.51
Density	MR	97	2.67	3.26	3.14	0.08	0.03
Length	MR	97	0.86	2.74	2.09	0.23	0.11
4E cm.g/t	UG2	178	194.22	2 994.68	1 065.42	477.58	0.45
Pt cm.g/t	UG2	178	72.16	1 367.51	542.91	233.16	0.43
Pd cm.g/t	UG2	178	24.78	1 334.08	408.90	221.60	0.54
Rh cm.g/t	UG2	178	20.58	236.74	92.79	39.68	0.43
Au cm.g/t	UG2	178	0.77	66.00	20.84	10.40	0.50
Ni cm.g/t	UG2	178	1.39	84.32	25.45	14.01	0.55
Cu cm.g/t	UG2	178	0.81	43.44	15.42	8.04	0.52
Density	UG2	178	3.2	4.16	3.78	0.16	0.04
Length	UG2	178	0.67	4.82	2.16	0.86	0.40

SRK tested the metal accumulation distribution of the composites, using a variety of tests based around the concept introduced by Parker (1991). Box and whisker plots for each variable were used as an additional way of assessing the distribution for statistical outliers. However, a statistical outlier does not necessarily require capping as this assessment is based on a normal distribution, to which most of the variables do not strictly conform. Very few of the outliers in the box and whisker plots are on the high side of the distribution.

SRK's assessments do not unequivocally show a need to cap the data, and SRK has elected to retain the previous SRL decision not to cap any of the composite datasets. The highest-grade UG2 composites for all variables are generally in well-informed areas, and these are not expected to exert an overly significant influence on the estimates. The deepest MR composites (in the southwestern portion of the deposit) are amongst the highest value composites, resulting in a large high grade area in the estimates around these composites (see Figure 14-20); however, these are not isolated values, and appear to represent a real trend in the grade distribution.

On the low value side, there are two anomalously low-grade PGM values for the UG2, which have been investigated and retained as valid. They are not in well-informed areas and do have an impact on the estimates (see Figure 14-21). These may represent potholed intersections and were excluded from the wireframe modelling but included in the grade modelling. An area surrounding the intersections is physically excluded from the block models.

The density values show the most significant low value outliers. For both the MR and UG2 these composites are very shallow and in well-informed areas. There is no relationship between the low density values and metal grades; both the MR and UG2 low density values are spread across the typical grade distribution.

14.2 Mineral Resource Estimation

14.2.1 Ruighoek

The PGM metal Mineral Resource estimation was carried out using Ordinary co-Kriging for all Mineral Resource cuts except the MR where Simple co-Kriging was applied. For the base metals (Ni and Cu), Ordinary Kriging (OK) and Simple Kriging were applied. All the estimates were done into 2D grids with block sizes of 100 m by 100 m. For the MR, the global means are allocated to each block per facies, as discussed in the previous section. Metal accumulations are estimated, and the metal grade estimates for each block were obtained as the quotient of the metal accumulation estimates and the reef width estimates. The estimates were migrated vertically into a sub-celled block model, which was developed using the same parent block dimensions as the 2D grid, but with sub-cells that model the volume between the top and bottom wireframes of each cut discussed in the previous section. In addition to the Mineral Resource cuts, a dilution envelope was estimated above and below each cut. The samples within the envelopes were identified for each cut, and the mean of each of the metals calculated. In the case of the Merensky Pothole reef, the base of the Merensky is usually either in contact with or very close to the top of the Upper Pseudo reef. In this case the reefs will be mined as a single package, and for the purposes of dilution, the width is set to zero where the reefs are in contact, or the MR footwall anorthosite is divided evenly between each reef.

The hangingwall and footwall dilution of each reef unit was treated as a separate population, and univariate statistics calculated for each. Each dataset was inspected for outlier values, on the basis of the 3PGE+Au grade. Isolated samples whose grades appear highly anomalous with respect to the general population of samples were cut from the dataset, and the length-weighted grade of the remaining data calculated for each metal. The Merensky Pothole Reef was accorded the same dilution grades as the Merensky Normal Reef facies, due to the limited number of intersections. Table 14-6 presents the grades of diluting material added to the estimated mineralised horizons.

Table 14-6: Estimated Grades of Diluting Material

	Length	Au	Pt	Pd	Rh	Ni	Cu	Density	3PGE+Au
MR-Contact-HW	0.67	0.035	0.094	0.063	0.015	407	221	3.19	0.20
MR-Normal-HW	0.15	0.065	0.206	0.126	0.013	665	384	3.24	0.41
MR-Pothole-HW	0.15	0.065	0.206	0.126	0.013	665	384	3.24	0.41
MR-Contact-FW	0.30	0.020	0.134	0.073	0.018	119	58	2.79	0.24
MR-Normal-FW	0.33	0.013	0.042	0.031	0.011	78	33	2.83	0.10
MR-Pothole-FW	0.33	0.013	0.042	0.031	0.011	78	33	2.83	0.10
UPR-HW	0.40	0.018	0.150	0.077	0.018	323	101	2.94	0.26
UPR-FW	0.27	0.014	0.100	0.068	0.016	1369	153	2.91	0.20
LPR-HW	0.20	0.016	0.115	0.045	0.013	1195	54	2.89	0.19
LPR-FW	0.24	0.022	0.221	0.093	0.014	536	76	3.12	0.35
UG2-HW	0.04	0.013	0.180	0.107	0.020	431	72	3.13	0.32
UG2-FW	0.05	0.014	0.397	0.151	0.076	331	127	3.23	0.63

The tonnage and metal content of each envelope are added to the tabulation of the Mineral Resource based on the thickness and mean grade of the diluting envelope.

14.2.2 East Pit

The PGM and base metal Mineral Resource estimation was carried out using OK. The attainment of structured experimental variograms justifies the use of OK. With an average drill hole spacing of 100 m within the optimised pit shell, the parent block size of 50 m x 50 m x 10 m per reef package is appropriate. Parent cell estimation was carried out using a cell discretisation of 6 m x 6 m x 1 m. The topped capped composite data files were used for the resource estimation. Because the top and bottom contacts of each reef were modelled using wireframes, any areas where potholes exist is reflected in the geological models and resulting block models.

Known areas of dyke intersection (as delineated using geophysical surveys) are also excluded. A 5% geological loss has been applied to the Mineral Resource estimate to account for any unknown dyke and pothole losses.

The UG2 chrome grade estimate is purely based on classical statistics. Due to the paucity of chrome assays within the Sedibelo property in general (and none within the East Pit footprint), SRK carried out multi-variate analysis on the combined chrome and density sample data of the adjoining projects (i.e., East Underground and the mined out West Pit footprint). Based on regression analysis, SRK modelled the best-fit relationship between chrome and density for each of the UG2 sub-units (i.e., U2, U2L, U2P and U2PEG). The sub-unit U2 demonstrated the strongest correlation between density and chrome.

Considering that there are density data points at East Pit and Central Underground, SRK used the regression equations established for the different UG2 sub-units to calculate the chrome grades for each of the data points for both footprints. Because of the uncertainty in the actual chrome grades at the drill hole locations, SRK calculated a de-clustered mean value per sub-unit.

14.2.3 Central Underground

SRL did not define any estimation domains for the UG2 package cuts and SRK did not find any rationale for defining sub domains when assessing the UG2 package cuts data. While there are some higher and lower grade composites in many of the variables, the distributions are generally tightly constrained and approximately symmetrically distributed.

For the UPR and surrounding cuts, a set of polygons which outline the PUP facies where the units are potholed together was defined. SRK's validations of the estimates indicate that it is advisable to estimate the PUP areas and non-potholed areas independently, as there are different population characteristics between the potholed and non-potholed areas in the TOP and UPR cuts. The differences are observed most strongly in the density, base metals and gold, but also in the PGM values, all of which are elevated in the potholed facies. Failing to constrain these higher value populations can result in over estimation, where these intersections are in poorly informed or peripheral areas.

SRK notes that future work would consider independent estimates using the PUP outlines as hard domain boundaries. The impact of the lack of domain boundaries is discussed in the validations. To address the impact of the skewed distribution and the location of the high values on the southern periphery of the deposit, these polygons were used to constrain the Mineral Resource reporting, and only the areas within these polygons are reported as a Mineral Resource. This is also consistent with the Mineral Reserve reporting, as only PUP facies areas are targeted for mining.

Because the Growth Algorithm can generate estimates that are greater than the input variables maximum values and lower than the minimum, a set of limits was imposed on the estimates during estimation. These are tabulated in Table 14-7, and the percentage of estimates which were affected by the top capping in Table 14-8. Only a small number of estimates required capping.

Table 14-7: Lower and Upper Caps Enforced on the Estimates

Limit	Cut	Pt (g/t)	Pd (g/t)	Rh (g/t)	Au (g/t)	Ni (ppm)	Cu (ppm)	Density
Lower	TOP	0.01	0.01	0.01	0.01	0.01	0.01	2.68
	UPR	0.07	0.03	0.01	0.01	12.45	52.00	2.69
	PRHZB	0.01	0.01	0.01	0.01	0.01	0.01	2.68
	UG2L	0.01	0.01	0.01	0.01	0.01	0.01	3.12
	UG2	0.01	0.01	0.01	0.01	0.01	0.01	3.50
Upper	TOP	8.30	5.04	0.40	0.46	2 200	3 900	3.40
	UPR	21.48	7.67	2.36	0.93	2 500	5 000	3.52
	PRHZB	5.80	3.29	0.39	0.41	1 775	3 300	3.23
	UG2L	3.72	1.84	0.73	0.36	80	651	4.49
	UG2	6.05	5.51	1.38	0.48	76	391	3.40

Table 14-8: Percentage of Estimates Capped

Cut	Pt (g/t)	Pd (g/t)	Rh (g/t)	Au (g/t)	Ni (ppm)	Cu (ppm)	Density
TOP	0.38%	0.19%	0.18%	0.25%	0.13%	0.25%	0.13%
UPR	0.92%	0.63%	0.03%	0.25%	0.13%	0.25%	0.09%
PRHZB	0.28%	0.44%	0.06%	0.28%	0.63%	0.16%	0.06%
UG2L	0.13%	0.13%	0.00%	0.27%	0.13%	0.54%	0.13%
UG2	0.63%	0.00%	0.00%	0.00%	0.00%	0.60%	0.00%

Figure 14-12 is a Pt post plot of the grade estimates; similar plots were undertaken for Ni, density and vertical thickness respectively. The Pt plot is generally representative of the PGM and Au distributions, while the Ni plot has similar patterns to and is representative of the distribution of grade for Cu. The highest grades for the PGMs and Au are the UPR and UG2, with the TOP and PRHZB cuts locally enriched due to potholing. It is clear from Figure 14-12 that the elevated grades are not limited to the potholed areas, as would be expected. In addition, the periphery of the UPR, particularly to the south and east shows very high grades, is not informed by densely-distributed data.

The density estimates indicate higher densities associated with the chromitite UG2 package cuts compared to the silicate cuts. The thickest units are the UG2 package cuts followed by the PRHZB cut.

14.2.4 East Underground

Pothole Boundary (MR & UPR)

With the understanding from the nearby deposits that the MR and UPR are generally enriched within the pothole areas, separate estimation treatment to the surrounding contact facies material was warranted. Indicator kriging was thus carried out to delineate the boundary between these facies. Based on the kriging outcome, it was observed that the PUP facies tends to become more discontinuous or 'broken up' where drill hole density is relatively high. The intent of the indicator kriging exercise was to ensure that MR estimation was carried out into blocks/locations identified by the different facies. This is only a representation and may not necessarily reflect the precise location of the boundary. The uncertainty with respect to the pothole boundary is aggravated where drill spacing is wider.

SRK is satisfied with the methodology employed in delineating the ‘hard’ boundary.

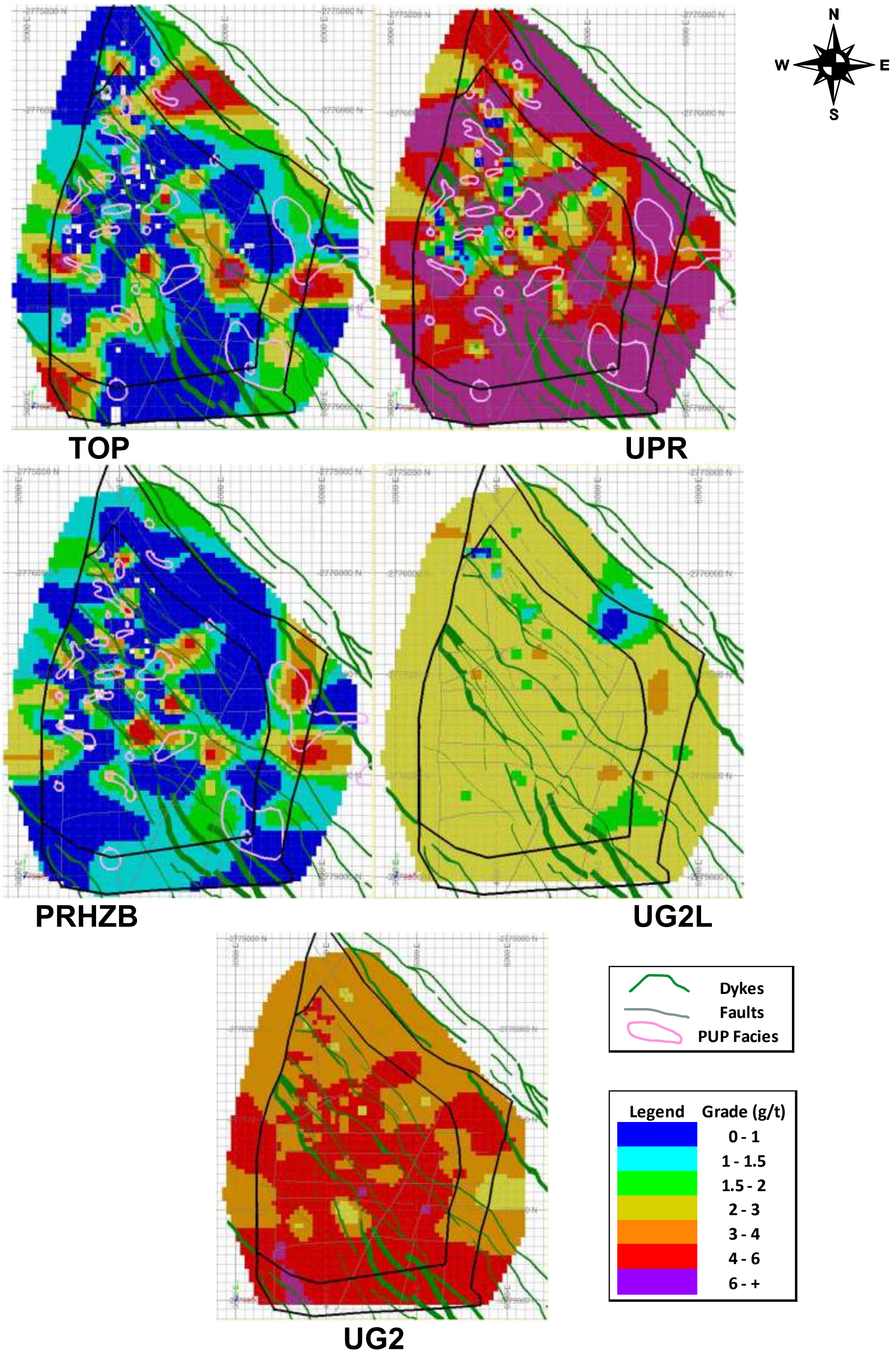
Estimation Methodology

The estimation of the PUP and MRC is based on a 2D metal accumulation approach. The PUP and MRC accumulations and density weighted vertical width were estimated using both Ordinary Co-Kriging and univariate OK. In the case of univariate OK, the estimation of density weighted vertical width uses the same variogram model as for the accumulations. This simplification ensures no instability in the back calculated grades due to unstable or unexpected width estimations which may occur when a different variogram is used. The parent block size is 100 m x100 m in the X-Y plane. Block discretisation is on a 5 m x 5 m in the X-Y plane. SRK cannot confirm the basis of the choice of the block size. SRK has noted that the dataset is not on a regular grid - the average drill hole spacing increases from West to East and ranges from 100 m to 500 m.

The methodology and estimation parameters used for the UPR and UG2 are the same as for the PUP and MRC. The drill hole distribution is close to uniformity towards the central and western portion of the UPR lease boundary and has an average drill hole spacing of 100 m. On the eastern portion the average drill hole spacing is in the range of 400 m to 500 m. SRK is of the opinion that the block size (100 m x 100 m) is sub-optimal in the eastern portion and notes that this is reflected in the resource classification.

Comparison between Multivariate Co-Kriging and Univariate OK (MR)

There is a strong correlation between the co-kriged and univariate OK estimates for the PUP; the correlation for MRC is less robust. The Mineral Resource statement is however based on univariate OK estimates. The local scale instability in the PUP multivariate results and misgivings with respect to the stability of MRC multivariate results is the primary reason for opting for the univariate OK estimates. Multivariate analysis works best in the determination of values for unsampled data points for certain variables and this was done when the raw data was transformed into intercept data. SRK is satisfied with the choice of univariate OK estimates.



srk consulting	**SRL Total Assets PEA** Plan View of the Pt Grade Estimates for the Mineral Resource Cuts	Project No. 600322

Figure 14-12: Plan View of the Pt Grade Estimates for the Mineral Resource Cuts

Comparison between Multivariate Co-Kriging and Univariate OK (UPR)

The correlation between the co-kriged and univariate OK estimates for the UPR is also less robust in comparison with the PUP described above. The univariate OK estimates were preferred to the co-kriged estimates for the same reasons highlighted above for MR. SRK is satisfied with the choice.

Comparison between Multivariate Co-Kriging and Univariate OK (UG2)

Comments and choice of kriged estimate are the same as above.

Vertical Width for Volume Model

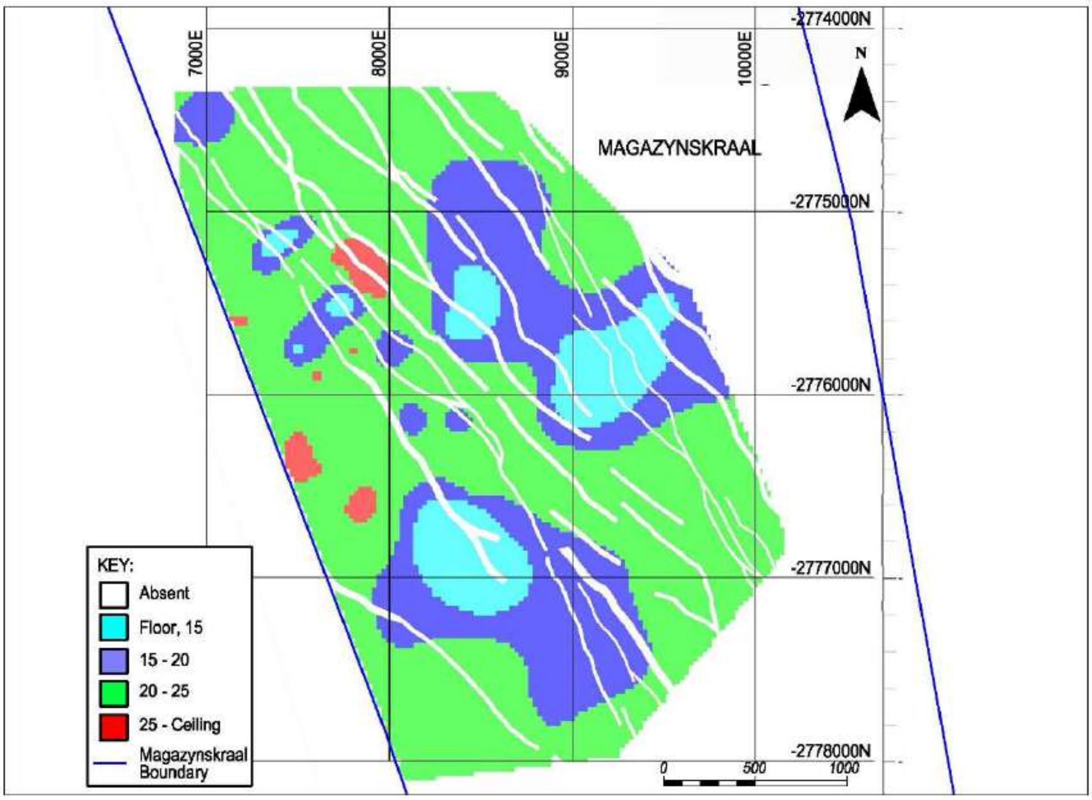
Volume estimates for all reefs were achieved by applying an OK vertical width estimate to the relevant structural surface. The PUP and MRC intercept composites were combined for the purposes of estimating the Merensky volume model.

The same process was followed for the UPR and UG2 reefs.

UG2 Chrome Estimates

It is noted that only a subset of the drill hole data within the central portion of Magazynskraal was analysed for chrome. A chromite Mineral Resource estimate was compiled to cover the lateral extent of the chrome data points (Figure 14-13). Resource estimation was carried out in Minex software using 2D grids. The UG2 chrome resources were estimated using the Minex growth algorithm, with a search distance of 300 m, and no constraints on the number of samples used. In the validation process, SRK's variography indicated an experimental semi-variogram with a short-range of approximately 260 m, and a long range of approximately 600 m. SRK thus considers the search distance of 300 m to be appropriate. The block estimate is based on a mining cut dataset which encompasses a full width composite of the UG2.

Outside of the block model, SRK extrapolated the average chrome grade (based on the block estimate) into the entire project footprint. The maximum distance of extrapolation is approximately 2 km.



srk consulting	**SRL Total Assets PEA** Classed Post Plot of Chrome Block Estimate in the Central Portion of Magazynskraal	Project No. 600322

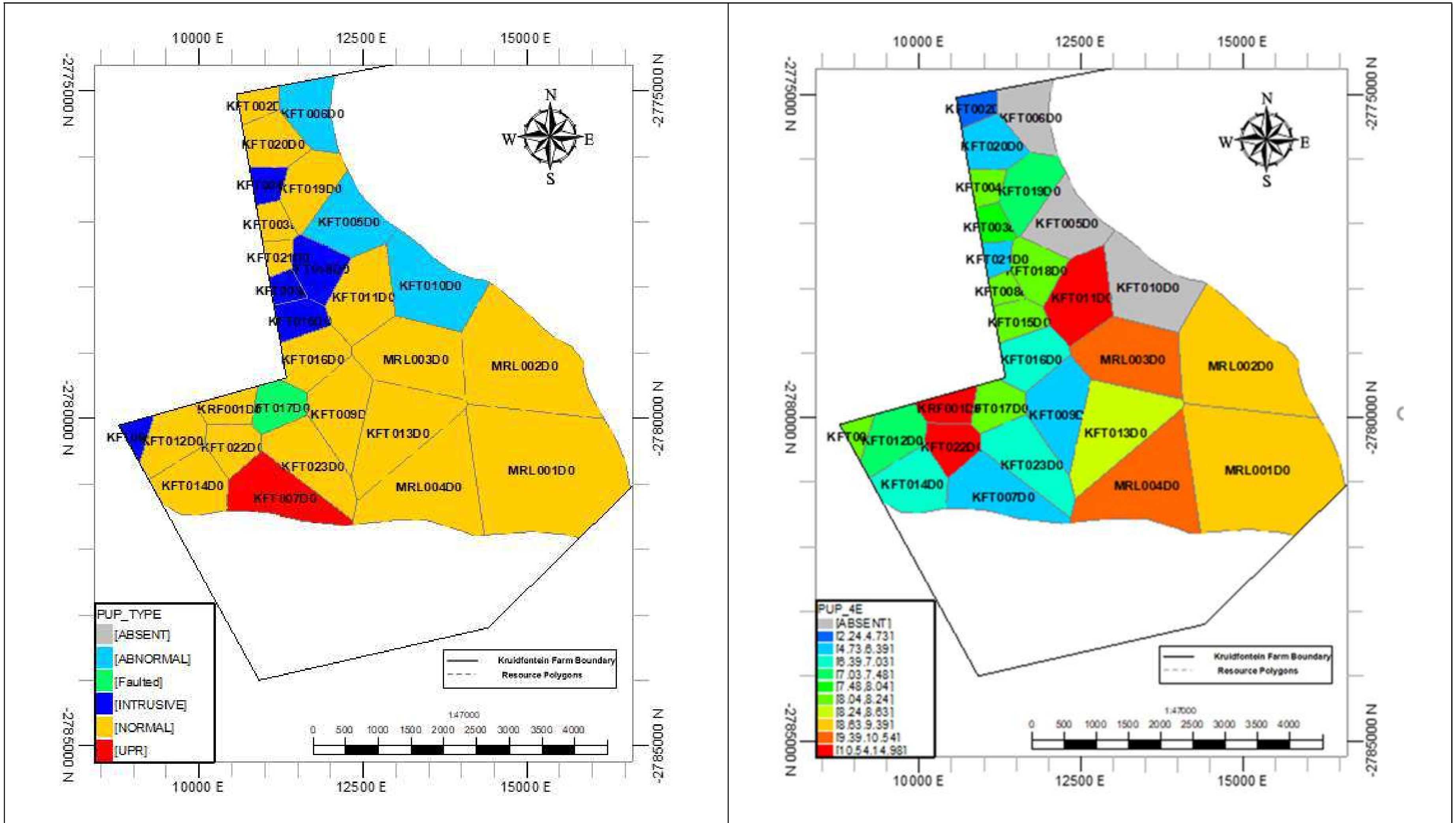
Figure 14-13: Classed post Plot of Chrome Block Estimate in the Central Portion of Magazynskraal

14.2.5 Kruidfontein

The polygonal estimation technique was used in compiling the grade estimates; primarily because of the relatively wide drill hole spacing which SRK notes to be in the order of a 1 000 m. Reef intersections of mother and deflection holes have been composited into a single datapoint (by averaging each composite) prior to delineating the polygonal boundaries. It is worth noting that the compositing is based on the drillhole trace lengths, which are apparent widths, and thus should be corrected for true width. The model values generated for each polygon area were weighted according to the polygon area and number of intersections and then reported separately for the UG2 and Merensky Reefs for each polygon area. Polygon values were added to report totals for each reef across the resource area. In situations where the drillholes were disrupted by potholes or intrusives, the average value representative of the entire study area for the relevant reef was applied to those polygon areas. This was done based on the assumption that these geological disturbances are localized, and that the polygon is still representative of reef intersection and grade. The left-hand images in Figure 14-14 and Figure 14-15 show the geologically disturbed/undisturbed resource polygons for both the PUP and UG2 cuts respectively, whereas the right-hand images show the estimates for the corresponding 4E profiles.

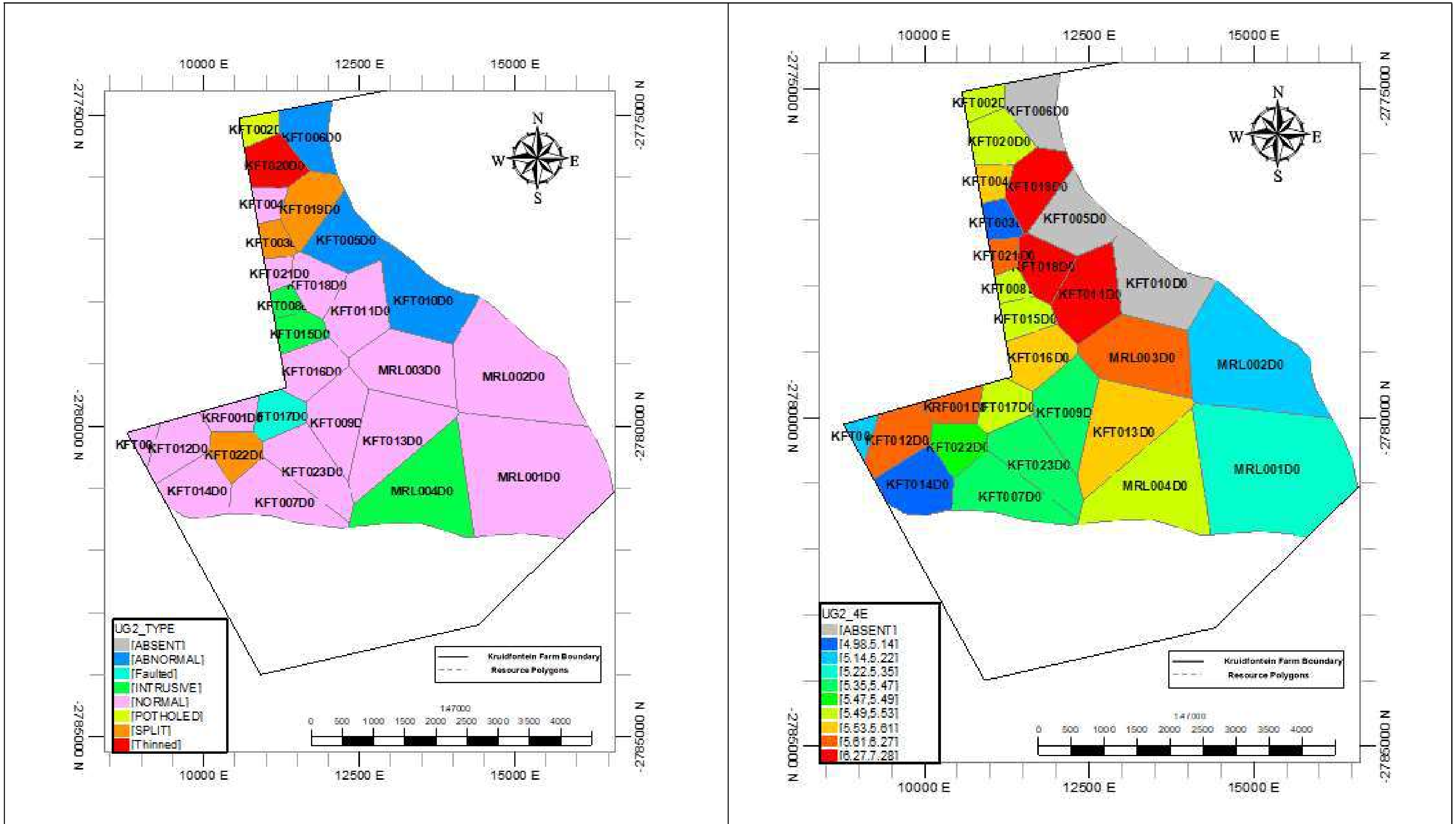
The fundamental issues SRK identified with the estimation process are as follows:

- The reef picks on the UG2 and MR have not been consistently selected; there is inconsistency in the inclusion/exclusion of the U2P (internal barren material) and U2L into the reef package/unit. It is also not clear what grade thresholds in the UG2 footwall inform its inclusion into the reef picks. With respect to the MR, composites less than one metre have not been bulked up to the minimum cut. SRK notes that an application of a consistent reef pick philosophy (based on the one metre minimum width and constrained to only the reef unit) will result in a 5% change in the estimated MR tonnages. Although SRK is able to replicate the composite values for each of the reef picks, the uncertainty associated with the selection criteria requires consideration in the classification of the Mineral Resources;
- The thickness used in the tonnage estimate is per the drill hole trace and has not been corrected to reflect the true thickness of the reef. The deviation of the drill hole trace from the vertical is less than 2° for any given hole and hence its overall impact when corrected to true thickness is immaterial in SRK's opinion. Hence, SRK is of the opinion that this must not lead to any downgrade;
- The composite PGM grade values are only weighted on length and do not consider the available density determinations of the samples used in compiling the full width composites. It is noted that the correct application yields slightly different composite values for some of the drill holes randomly reviewed; and The Mineral Resource volume calculation is a product of the resource area (in the X- and Y-plane) and the apparent drill hole trace thickness (i.e. Mineral Resource cut). SRK notes that the apparent thickness is not corrected to vertical thickness to allow for accurate tonnage calculation. SRK understands that the deviation of the drill hole trace from vertical at the reef intersection is less than 2% and hence the associated tonnage error is immaterial.



srk consulting	**SRL Total Assets PEA** Geological Disturbance and 4E Grade Profile (PUP)	Project No. 600322

Figure 14-14: Geological Disturbance and 4E Grade Profile (PUP)



srk consulting	**SRL Total Assets PEA** Geological Disturbance and 4E Grade Profile (UG2)	Project No. 600322

Figure 14-15: Geological Disturbance and 4E Grade Profile (UG2)

14.2.6 Mphahlele

No estimation domains have been applied in the estimation process. The UG2 does not show any strong grade trends across the deposit, and there is no strong evidence for the need to apply sub-domaining based on grade. There is a very subtle trend of decreasing thickness from west to east and south to north, but this is gradual, and there is no clear break in the distribution.

Previous estimates in 2012 subdivided the MR into three domains for estimation (see discussion in Section 7.2). The central area was interpreted to be significantly disturbed and was excluded from estimation and Mineral Resource reporting. The previous SRL and current SRK estimate include the entire strike length of the deposit but do not include any subdivision into estimation domains. The grade tends to be higher in the west than in the east and central portions of the deposit, with the lowest grades observed in the central, previously excluded, portion of the deposit. There is no significant trend in the thickness across the orebody; however, this is due to the definition of the Mineral Resource cut over a relatively fixed interval, and not due to the true thickness of the stratigraphic unit, which is truncated in the Mineral Resource cut.

SRK generated a two-dimensional (2D) estimate. For all variables, the 2D grid dimensions are the same, and are detailed in Table 14-9.

Table 14-9: Estimation of Grid Dimensions

	X	Y
Origin	58125	-2695200
Grid dimension (m)	25	25
No. grid cells	340	150
Extent	66625	-2691450

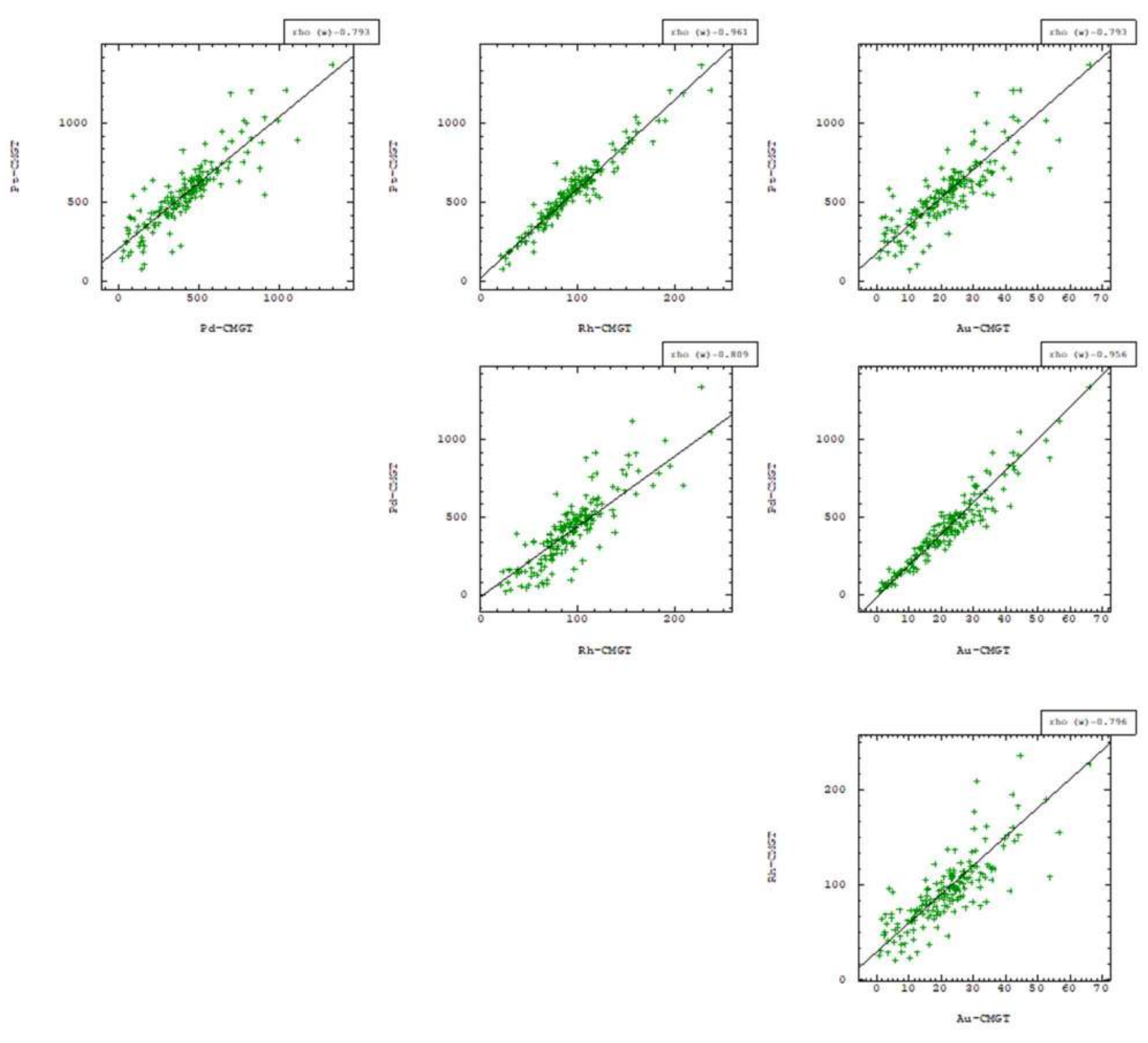
The PGM and Au grade and accumulation variables are highly correlated, as are the base metal grades. The PGM and gold correlations for the UG2 accumulations are illustrated in Figure 14-16, and the base metals show similarly strong correlations. Because of the strong correlations, SRK elected to co-krig the PGMs and gold, and the base metals.

Semi-variogram modelling refers to the fitting of mathematical models (smooth curves) to the experimental semi-variograms generated in the analysis process. Experimental semi-variograms are an empirical measure of the continuity of grade (i.e., how similar sample grades are) dependent on the distance between samples, calculated by measuring the normalized variance between sample grades and plotting this against the distance between the samples. Semi-variogram models form the mathematical basis for the estimation process via the grade interpolation methods, e.g. kriging.

SRK was not able to generate experimental semi-variograms for the MR, even when testing using sub-domain areas, which did not show an interpretable pattern in the grade variance with distance. The UG2 data do show interpretable grade continuity and the semi-variogram models fitted to the experimental data are shown in Figure 14-17 to Figure 14-19. Note that the cross semi-variograms in Figure 14-17 have been omitted for legibility.

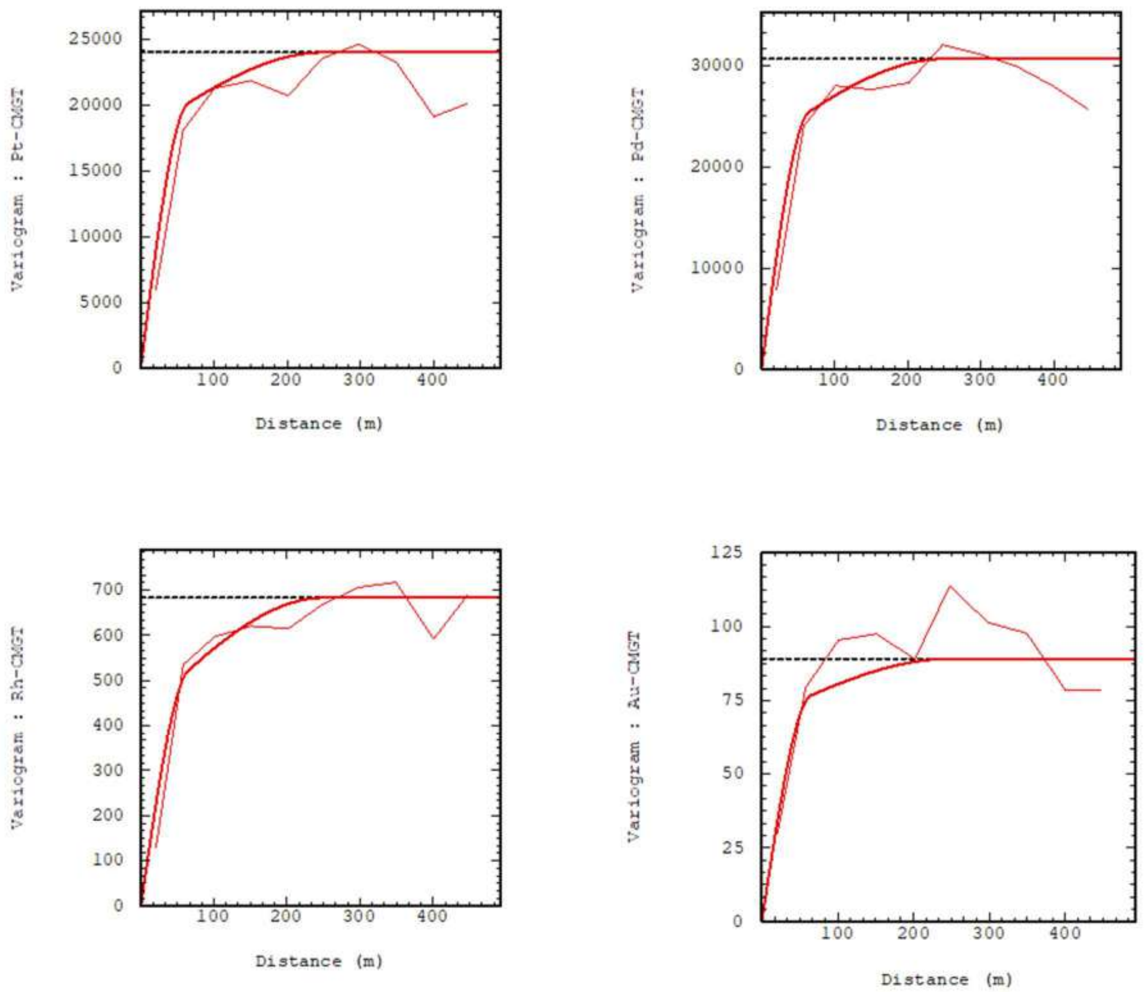
No meaningful anisotropy was observed in the experimental semi-variograms, and omni-directional (2D) semi-variograms are calculated and modelled for all variables. Dual structures spherical models were fitted to all variables.

The nugget effect is modelled as a vertical offset at the origin of the fitted model and represents the intrinsic very short-scale variability in the grades of immediately adjacent samples, due to the irregular distribution of metals in the orebody at that scale (and incorporating any errors that may be introduced during sampling, sample processing and assay). The range is defined as the distance where the slope of the experimental semi-variogram changes, and the full range is modelled where the experimental semi-variogram levels out. The sills are the values on the vertical axis where these inflections are modelled, and the sum of the nugget plus each sill value is expected to be equivalent to the population variance (plotted on the semi-variograms as a horizontal dashed black line) of the sample dataset.



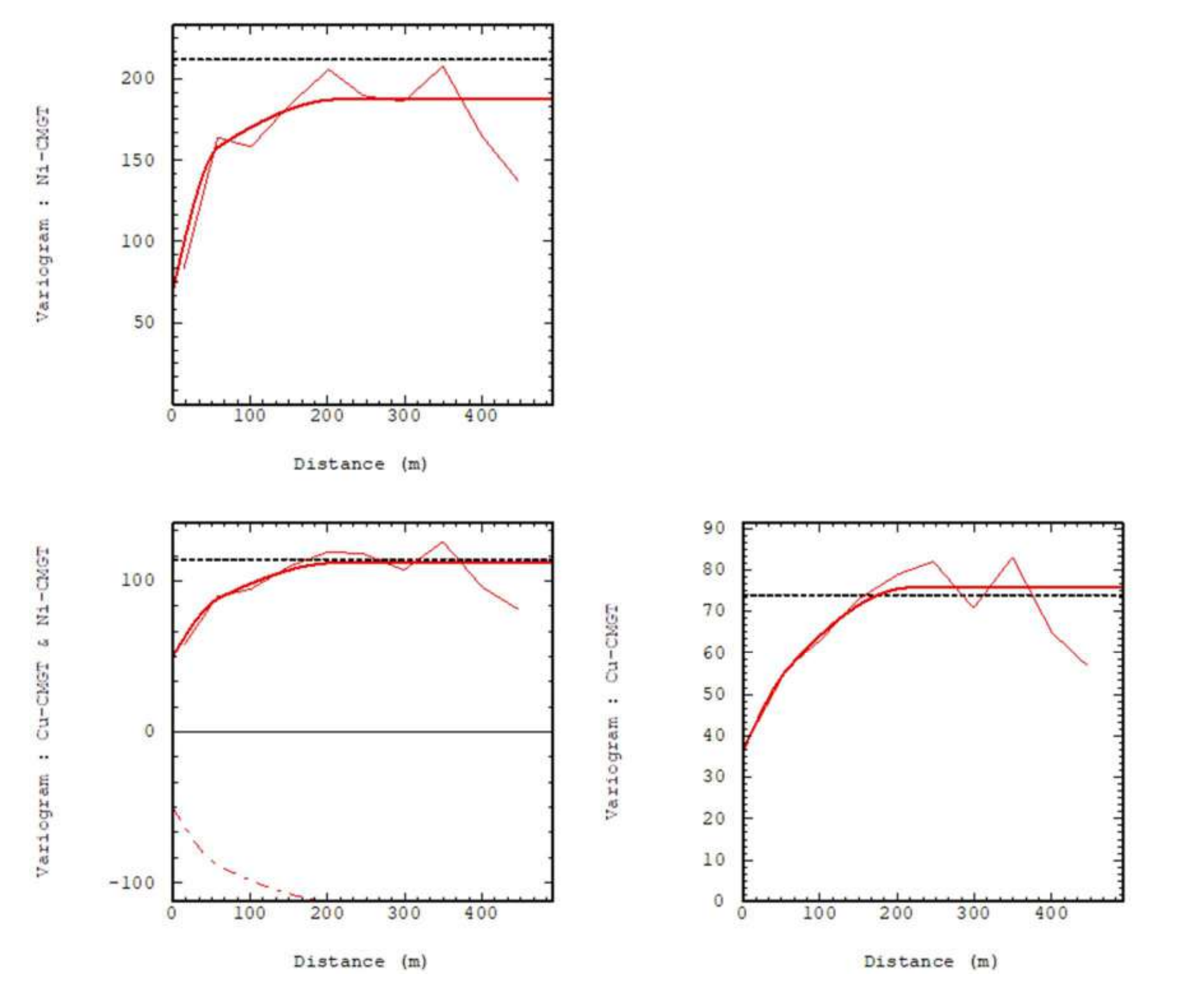
srk consulting	**SRL Total Assets PEA** Scatter Plot for the UG2 PGM and Au Metal Accumulation [source: SRK, 2021a]	Project No. 600322

Figure 14-16: Scatter Plot for the UG2 PGM and Au Metal Accumulation



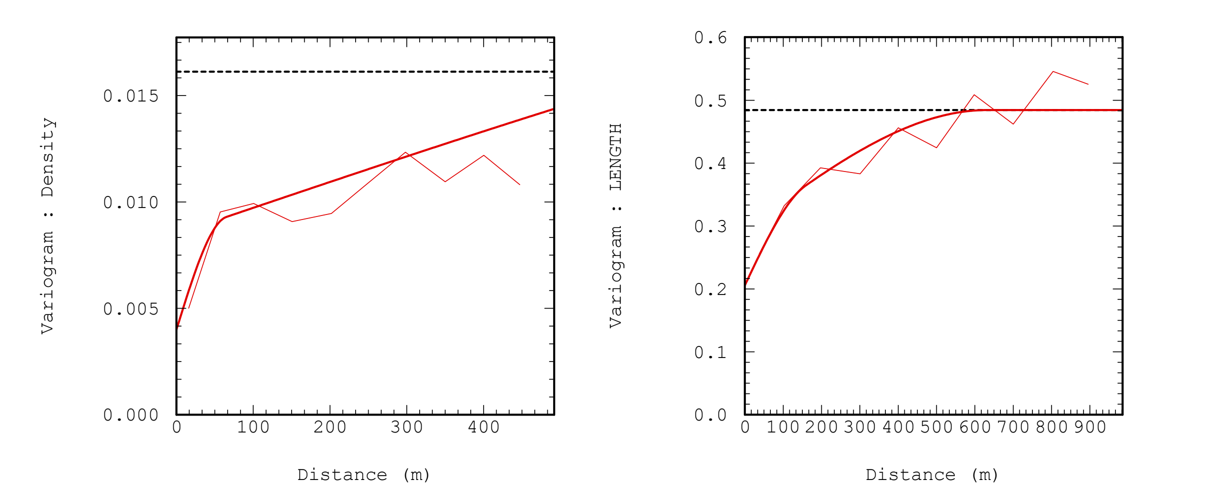
srk consulting	**SRL Total Assets PEA** Experimental Semi-variograms and Cross Semi-variograms for the UG2 PGM and Gold Accumulations [source: SRK, 2021a]	Project No. 600322

Figure 14-17: Experimental Semi-variograms and Cross Semi-variograms for the UG2 PGM and Au Accumulations



srk consulting	**SRL Total Assets PEA** Experimental Semi-variograms and Cross Semi-variograms for the UG2 Base Metal Accumulations [source: SRK, 2021a]	Project No. 600322

Figure 14-18: Experimental Semi-variograms and Cross Semi-variograms for the UG2 Base Metal Accumulations



srk consulting	**SRL Total Assets PEA** Experimental Semi-variograms for the UG2 Density and Thickness [source: SRK, 2021a]	Project No. 600322

Figure 14-19: Experimental Semi-variograms for the UG2 Density and Thickness

The semi-variogram models are summarised in Table 14-10. Note that the long range fitted to the density is to ensure the semi-variogram model reaches the population variance and would not be considered during the search range selection.

Table 14-10: UG2 Semi-variogram Model Parameters

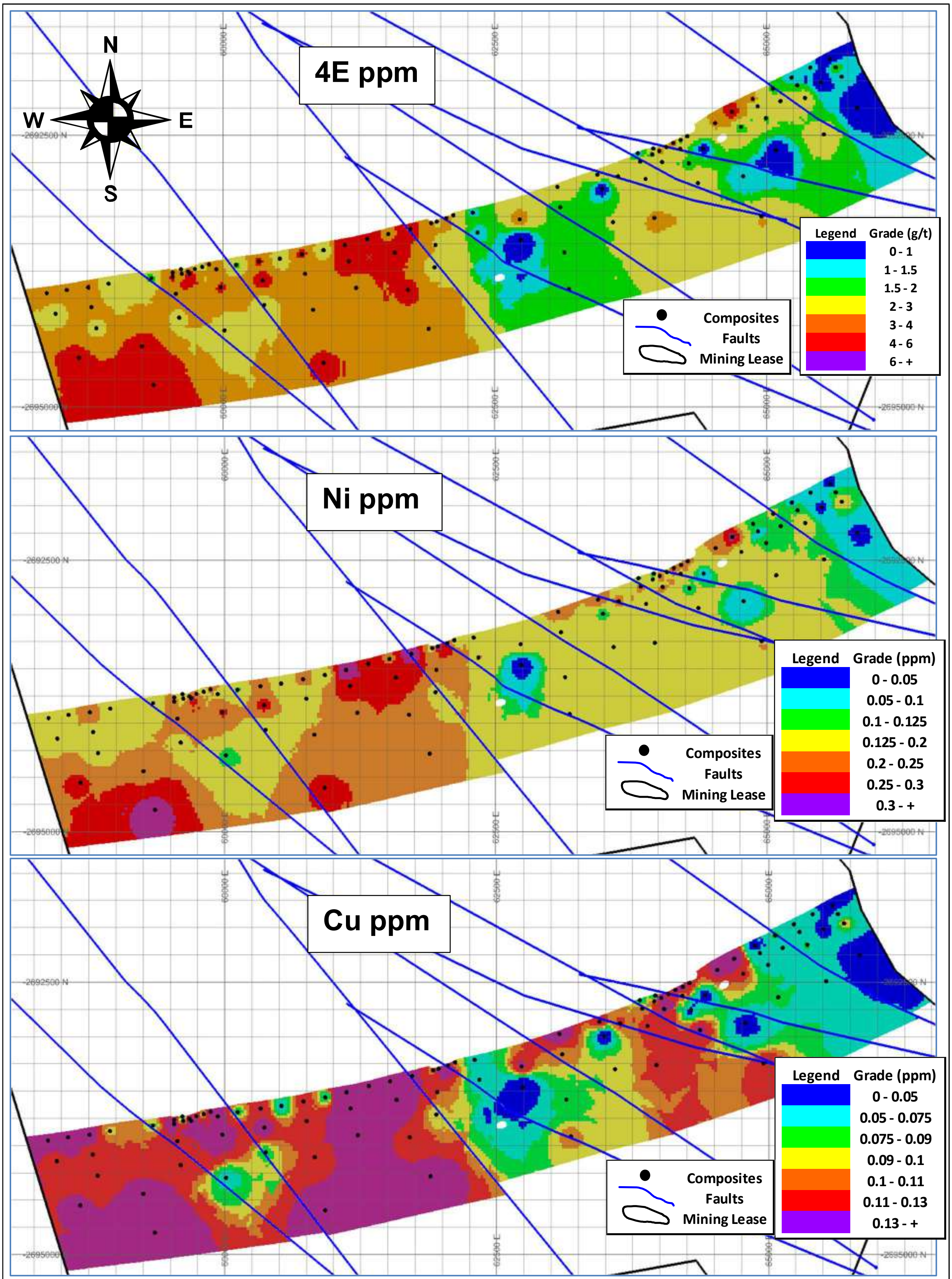
			Range			Range	
Variable	**Nugget**	**Sill 1**	**X**	**Y**	**Sill 2**	**X**	**Y**
Pt-cm.g/t	0	17 766.88	65	65	6 219.83	250	250
Pd-cm.g/t	0	22 206.04	65	65	8 497.53	250	250
Rh-cm.g/t	0	423.37	65	65	259.35	250	250
Au-cm.g/t	0	69.16	65	65	19.95	250	250
Ni-cm.g/t	70.61	68.44	59.07	59.07	68.44	218.1	218.1
Cu-cm.g/t	36.25	7.42	59.07	59.07	7.42	218.1	218.1
Density	0.004	0.0045	65	65	0.0147	1 800	1 800
Vertical Thickness	0.2057	0.0885	159.2	159.17	0.1903	631.2	631.2

OK was selected as the estimation algorithm for the UG2. As it was not possible to model robust semi-variograms for the MR, the estimate was undertaken using inverse distances squared (ID^2) weighting. SRK used the same search parameters for all variables on both reefs. SRK selected the parameters through test kriging of the PGMs and Au on the UG2 and visually assessing the grade and kriging statistic outputs. The estimates were completed in three passes, whose parameters are summarised in Table 14-11. The third search pass is intentionally set to a very large range to ensure all blocks are estimated.

Table 14-11: Search Pass Strategy

Search Pass	1	2	3
Range	150	500	1 200
Min Composites	3	3	3
Max Composites	5	10	5

The grade estimates for the 3PGMs plus Au, Ni and Cu are shown in Figure 14-20 and Figure 14-21 for the UG2 and MR, respectively. Plan views of the vertical thickness of the UG2 and MR are shown in Figure 14-22.



srk consulting	**SRL Total Assets PEA** Plan View of Grade Estimates for the MR [Source: SRK, 2020]	Project No. 600322

Figure 14-20: Plan View of Grade Estimates for the MR

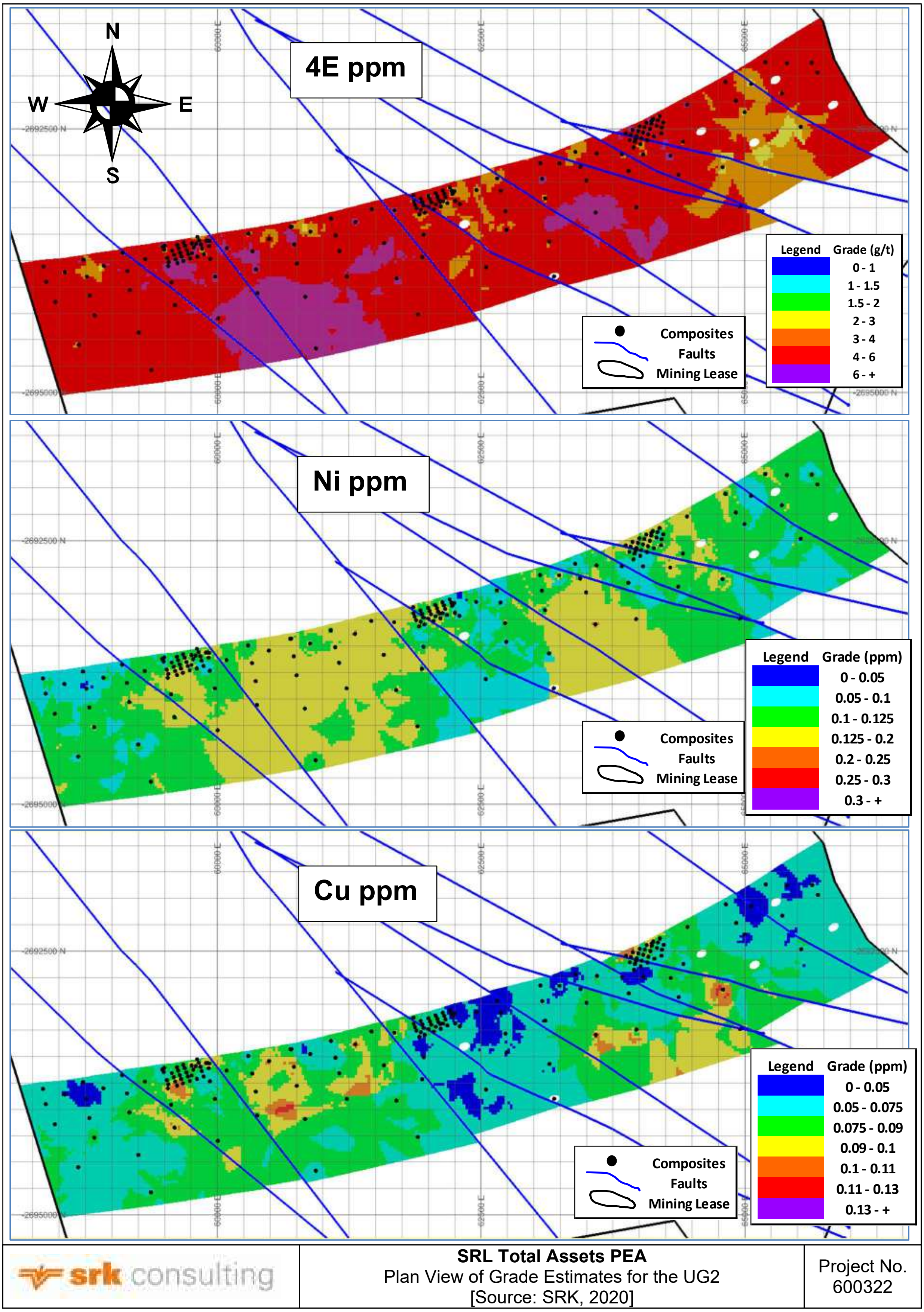
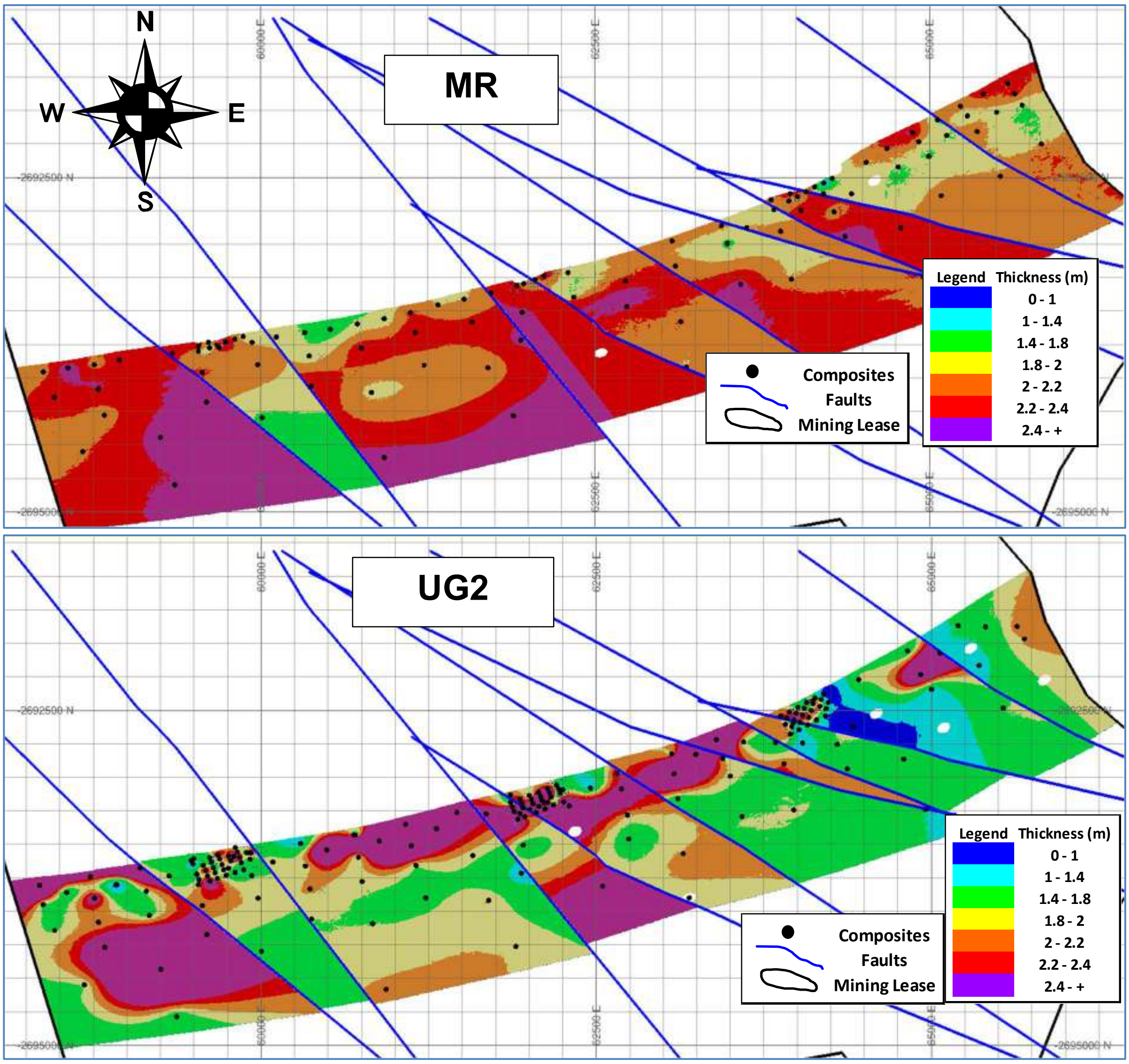


Figure 14-21: Plan View of Grade Estimates for the UG2

For the MR, the PGM distributions are all fairly similar, with Pt slightly dominating over Pd. There is a strong grade trend from west to east, with the lowest grades in the central area, previously excluded from the Mineral Resource, and the most eastern portion of the deposit. The same pattern is also observable in the base metal grade plots. While there is not necessarily evidence of a sharp change in grade from the available data, the patterns do support the use of sub-domains and SRK recommends that future estimates investigate the impact of this. SRK did not undertake testing of this during the current estimate as the agreed scope was to follow the interpretation of the SRL geologists.

In the UG2 estimates, the PGM distribution is relatively uniform, except for specific intersections that diverge from the relatively uniform grades. Specifically, the very low grades for all metals of the MP088 and MP089 at depth in the east are examples of unusual intersections that are anomalously low, compared with the majority of intersections. MP122 at X: 63 587 has anomalous metal grades, where the Pd (5.39 g/t) is higher than the Pt (3.21 g/t) and the base metals are likewise significantly higher. If this is a potholed intersection or is selected from the bottom chromitite layer of the UG2 rather than the top chromitite layer, it may result in local over-estimation. The source data for these intersections have been validated in detail, and the grades are confirmed as correct.

Note that small parts of the block models are absent, where SRK has specifically excluded an area around an intersection that was identified as potholed, and wthat was excluded from the wireframe or grade estimation. These specific exclusions are in addition to the geological losses applied.



srk consulting | SRL Total Assets PEA
Plan View of Vertical Thickness of the MR and UG2
[source: SRK, 2020] | Project No. 600322

Figure 14-22: Plan View of Vertical Thickness of the MR and UG2

The Mineral Resources are reported in accordance with the definitions and guidelines of the SAMREC Code (2016), which would be identical if estimated and reported according to the CIM Standards. The Mineral Resources are reported inclusive of any Mineral Reserves that may be declared from them.

The Mineral Resources are reported after the application of geological loss factors applied to the tonnage and metal content on a percentage basis (Table 14-12).

The geological loss factors for the UG2 are assigned based on classification (reflecting the relative confidence in the modelling and estimation).

The geological loss for the MR is similarly sub-divided based on the same factors but, in addition, the central portion of the Merensky orebody, which is potentially disturbed and was previously not reported, and the area to the east of this, which may be more structurally complicated, are additionally discounted.

Table 14-12: Geological Loss Discount Factors applied to the Mineral Resource Reporting

Reef	Classification	Area	Discount Applied
UG2	Measured	All areas	12%
	Indicated	All areas	15%
	Inferred	All areas	20%
Merensky	Measured	All areas	12%
	Indicated	West	12%
		Central	30%
		East	25%
	Inferred	West	20%
		Central	30%
		East	25%

14.3 Mineral Resource Classification Criteria

14.3.1 Ruighoek

In considering the classification to be applied to the Mineral Resources at the Ruighoek project, several factors have been considered in a score-card style approach:

- Drill hole logging: SRK visited the site and has observed several of the SRL drill holes and the nature of the logging that has been completed;
- Sampling and analytical quality control: The analytical QA/QC data is reflective of high-quality analyses, with good reproducibility demonstrated by duplicate samples and accuracy demonstrated through CRMs submitted with the samples;
- Geological interpretation and modelling: The structural modelling is considered to provide a good abstract of reality; within localised areas, there are always minor details that cannot be easily honoured within the model and the materiality of these features must also be carefully considered in the context of the total Resource Model. SRK are of the opinion that the modelling is sufficient to use within a Mineral Resource model and that this is not a significant limitation to the estimation of Mineral Resources;
- Quantity of data: Within the shallower portions of the Ruighoek project area, the drill hole density approximates 50 m x 100 m, with the slightly deeper areas that have been modelled sampled at wider spacings, namely 80 m x 100 m and 100 m x 100 m. Within platinum industry standards, this drill density would be considered as high. In the context of this estimate, this drill hole spacing is adequate; these data are required to permit simultaneous definition of the metal grades through geostatistical estimates and the detailed definition of comparatively complex structure, suitable to permit the derivation of an optimised pit estimate;
- Estimation quality: various quality indicators are available from the kriging system to illustrate the quality of the estimates. In general, individual block estimates are not considered to be of particularly high quality as demonstrated by indicators such as the theoretical regression Z|Z* and the kriging efficiency. This said, there is also considered to be limited capacity to indulge in highly selective mining based on the estimated block grades. The geostatistical parameters of the estimates, most specifically the variograms, support a situation for all of the reefs of a low block variance, controlled predominantly by the high relative nugget effect observed within the variograms. Under this circumstance, there is very limited capacity within the orebody to access specific areas and achieve significantly different grades. The only possible exception here is where the MR

facies variations control large-scale grade variations. In summary, it is not considered significant that individual block estimates do not display high kriging efficiencies and high theoretical regression slopes; and

- Quality of other data: density determinations have been made within the reef units. The Upper Pseudo Reef is the most sparsely sampled of the orebodies in this respect.

The entire resource above 200 m is classified as an Indicated Mineral Resource, with the exception of a block of ground within the project area, previously estimated by RSG, based on the mean value of the drill holes intersecting the Mineral Resource cuts, which is classified as Inferred. Of this, the only Indicated Mineral Resources are within the reporting pit shell constraint.

14.3.2 East Pit

The classification of the resource estimate was based on the following criteria:

1. The quality of the QA/QC results;
2. The geological confidence, which is dependent on the spacing and structural complexity/confidence; and
3. The geostatistical/estimation confidence, which amongst other factors such as estimation method, is also dependent on the search pass.

The QA/QC data is satisfactory and hence it has not impacted on the classification footprints based on the remaining criteria.

The geological confidence is based on different search distance thresholds. The following confidence categories were delineated:

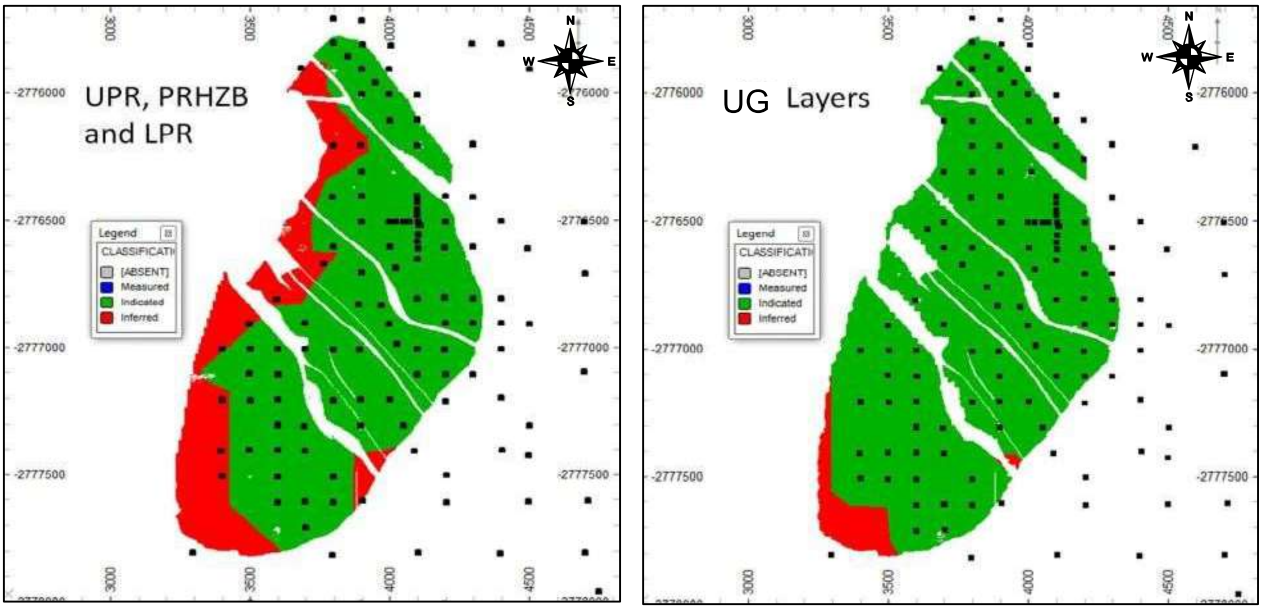
- A high geological confidence footprint with less than 200 m drill hole spacing;
- A medium geological confidence footprint with approximately 200 m drill hole spacing ; and
- A low geological confidence footprint with drill hole spacing greater than 200 m.

Areas with high structural complexity were defined separately with a resulting down grade to their geological confidence. This ultimately resulted into two major footprints; medium and low geological confidence. SRK is satisfied with the exclusion of the high geological confidence category considering that it is premature at this stage of the project for grade control drilling and pit mapping.

The estimation confidence is informed by the search pass, with the first search pass being high estimation confidence, the second medium estimation confidence and the third search pass being low estimation confidence.

The Mineral Resource classification is the combination of the data confidence (which is considered high across the entire project area), the geological and the estimation confidence. The lower of the latter two was the accepted overall confidence. High, medium and low overall confidence translates to Measured, Indicated and Inferred classifications. A Measured Mineral Resource footprint was not declared due to the downgrade of the high geological confidence into a medium category. The classified Mineral Resources are illustrated in Figure 14-23 for each of the packages. The Cr Mineral Resources is reported at an Inferred category because the estimates are based on a regressed analysis. Note that the reporting is limited to the volumes within the optimised pit shell, and also excludes explicitly modelled geological losses (thin S1 reef areas, and modelled faults and dykes).

SRK has reviewed the resource classifications in all the models representing the reef packages and is satisfied with the assigned confidence categories.



srk consulting	**SRL Total Assets PEA** PSM - East Pit: Classification of the Reefs	Project No. 600322

Figure 14-23: PSM - East Pit:Classification of the Reefs

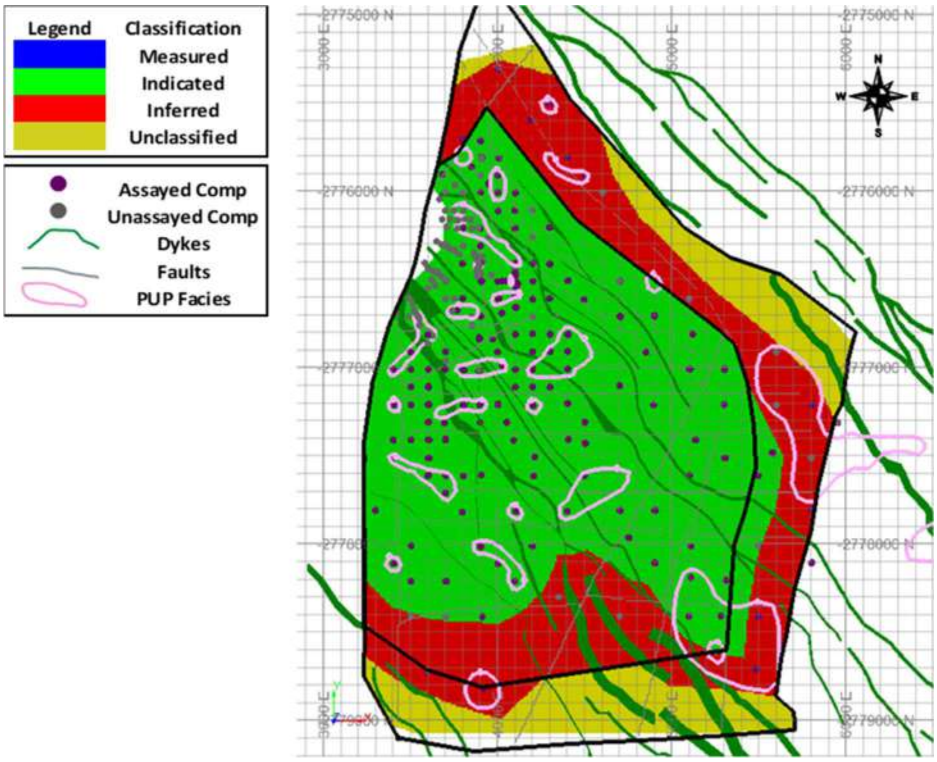
14.3.3 Central Underground

The classification of the Mineral Resources considers several aspects of the data quality and estimation. The quality of the data is considered to be high, due to the confidence in the location of the data, due to accurate surveys, detailed and appropriate geological logging, sampling procedures which are consistent with industry best practice, and confidence in the accuracy of the analytical results, as determined thought the comprehensive QA/QC programme. The geological modelling honours the location and distribution of data well, and the structural interpretation has resulted in a sensible model, which is consistent with the understanding of the orebody and structural environment in the area.

Although the Minex Growth Algorithm method does not output statistical indicators of the quality of the estimate, such as the Regression Slope (RS) and Kriging Efficiency of Kriging, previous studies and estimates over the deposit, as well as the widely accepted continuity of the orebodies of the BC, provide a background within which to consider the classification. SRL's classification is primarily based on the data spacing, and on the experience of the Competent Person.

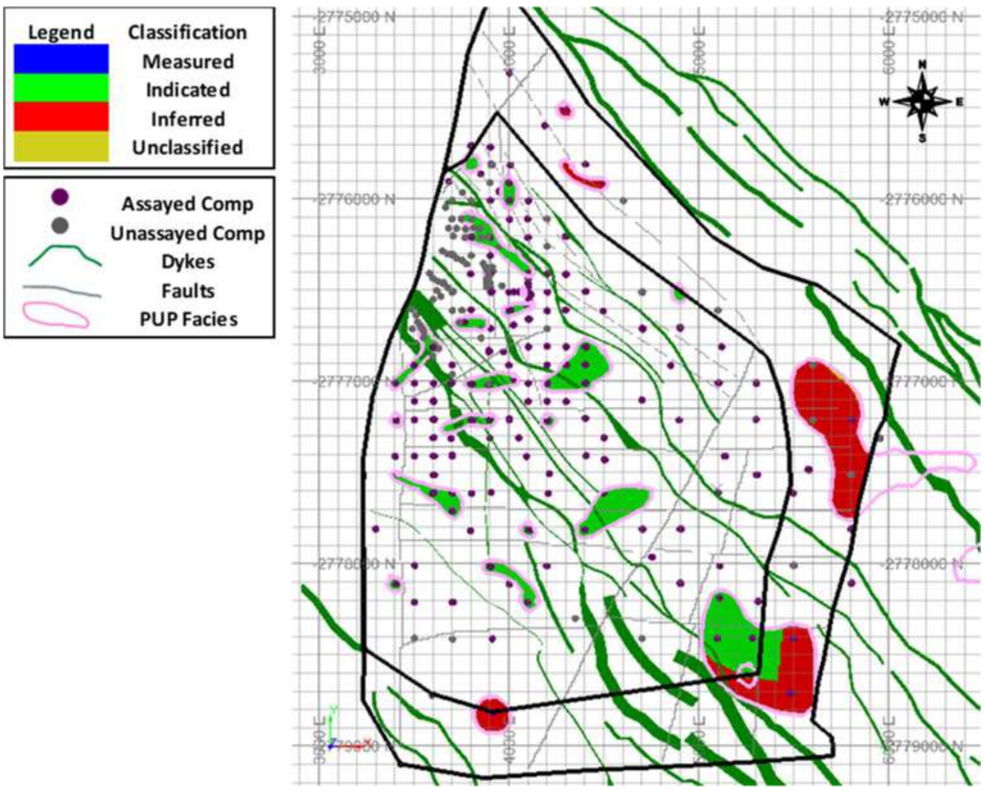
Where the drill hole spacing is approximately 250 m to 300 m, SRL has classified the Mineral Resources as Indicated, and beyond that the Mineral Resource is classified as Inferred. Where there is lower confidence in the estimates due to a very wide grid, and extrapolation of distances greater than 400 m, or across faults with large throws which are poorly understood, no Mineral Resource is declared (the estimates remain unclassified). The classification of the Mineral Resources is illustrated in Figure 14-24 to Figure 14-26 for the PUP package, the PUP package that is reported as a Mineral Resource (i.e., within the PUP facies) and the UG2 Package, respectively.

The chromitite estimates are classified as an Inferred Mineral Resource. The data density is not sufficient to support Measured and Indicated Mineral Resources for the PGM volumes, tonnes and 4E grades; the regression relationship between the density and chrome grade is relatively robust for the U2 but not as strong for the U2L. However, the lack of assays to confirm the grades and enable a robust spatial estimate to be determined limit the confidence in the chromitite estimates to the Inferred category.



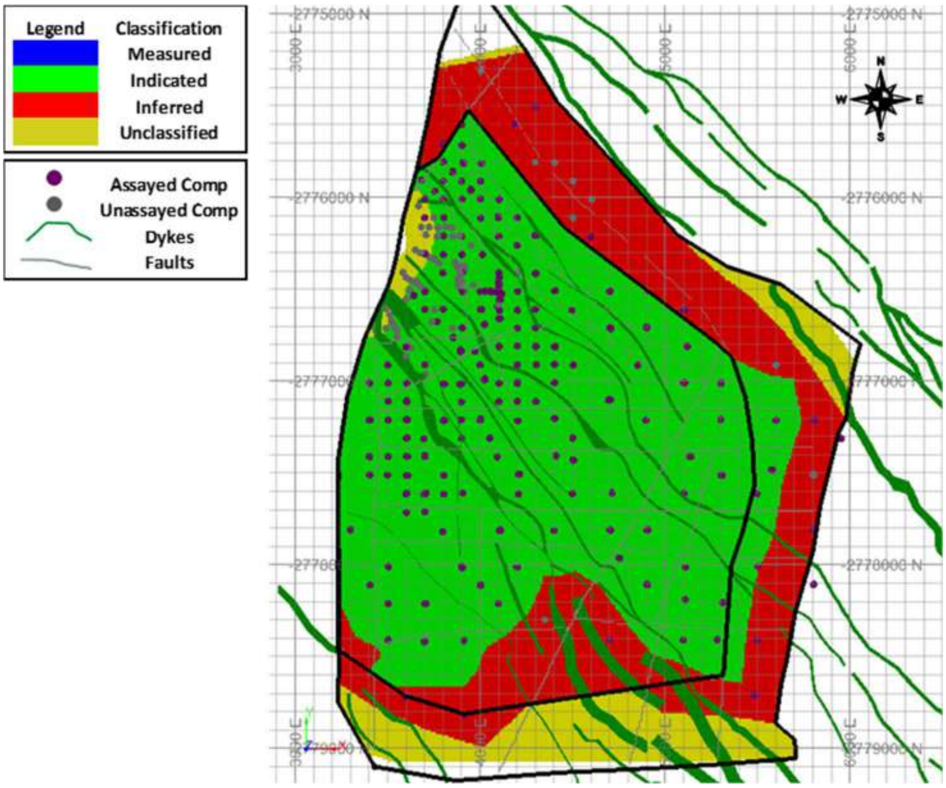
srk consulting	**SRL Total Assets PEA** PSM - Sedibelo Central: Classification of the PUP Package	Project No. 600322

Figure 14-24: PSM - Sedibelo Central: Classification of the PUP Package



srk consulting	**SRL Total Assets PEA** PSM - Sedibelo Central: Classification of the PUP Package declared as a Mineral Resource	Project No. 600322

Figure 14-25: PSM - Sedibelo Central: Classification of the PUP Package declared as a Mineral Resource



srk consulting	**SRL Total Assets PEA** PSM - Sedibelo Centra:- Classification of the UG2 Package	Project No. 600322

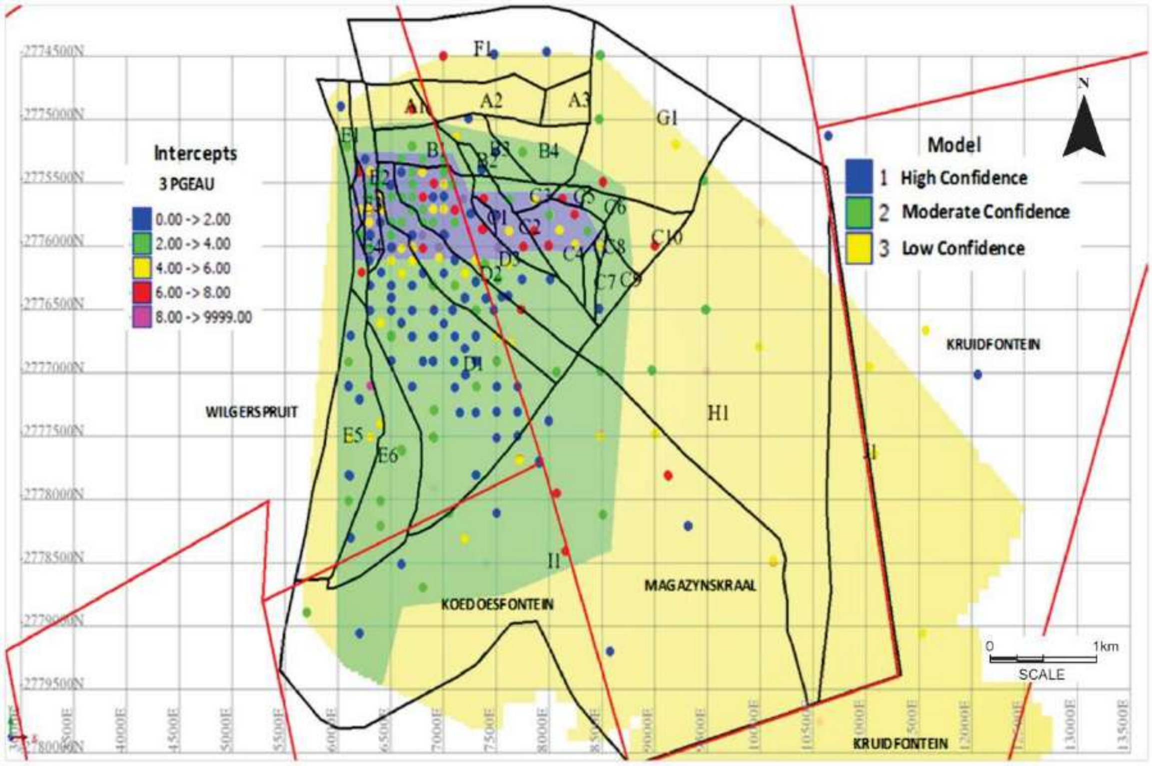
Figure 14-26: PSM - Sedibelo Centra:- Classification of the UG2 Package

14.3.4 East Underground

The classification criteria considered the following:

- Data quality;
- Structural complexity and geological continuity; and
- Geostatistical confidence.

Three categories were delineated with respect to geostatistical confidence; namely high, moderate and low. The geostatistical confidence is dependent solely on the RS output parameter from the kriging process. This was analysed via RS classed post plots for all the accumulation variables and vertical width estimated. Upon superimposition of the RS footprints for all the variables per reef type, representative footprints as per the three categories were delineated. Figure 14-27 provides a pictorial view of the overall geostatistical confidence for the MR; it is noted that the greater the drill hole density, the higher the RS which is an indication of a high confidence in the estimation results. This was done for the UPR and UG2 packages as well. Generally, the estimation confidence has a direct linear relation with the drill hole density and the RS. The RS for Au accumulation is generally weaker than the PGMs due to the higher nugget effect and poor spatial continuity as characterised by the variogram model. The RS is considerably lower around the periphery of the model (especially to the east) where the data spacing is sparse and irregular. SRK is satisfied with the methodology and final confidence ranking for the respective reefs.

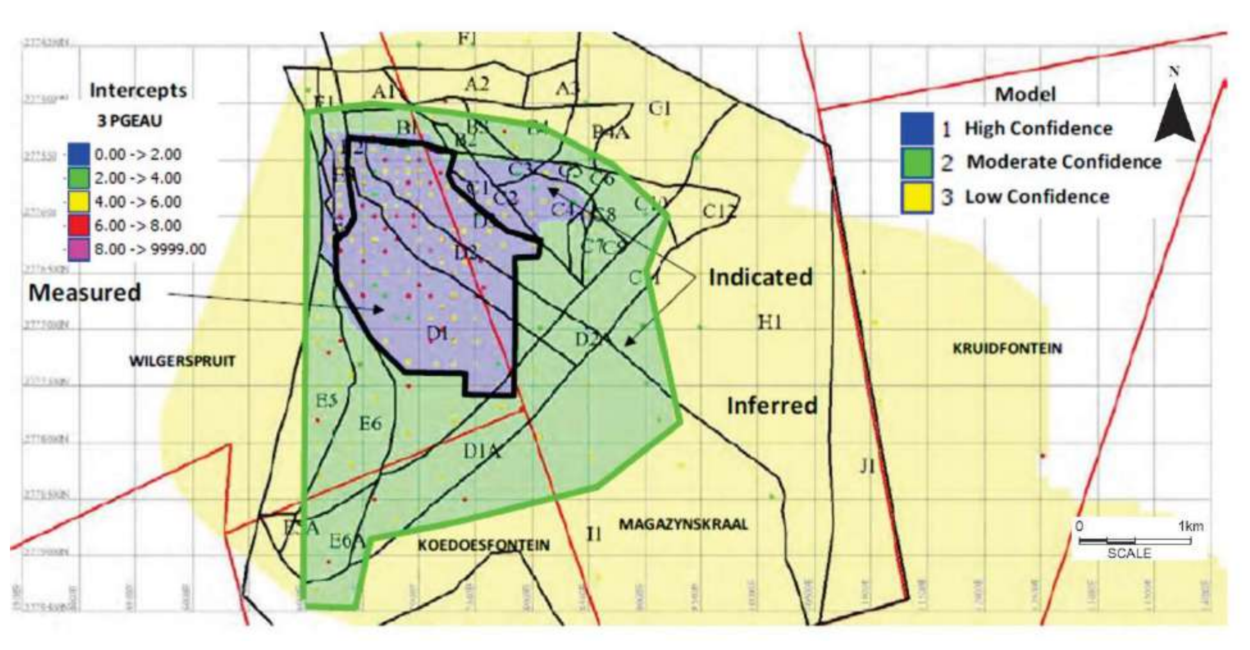


srk consulting	**SRL Total Assets PEA** PSM - East Underground: MR Geostatistical Confidence (Dark polygons depict structural blocks)	Project No. 600322

Figure 14-27: PSM - East Underground: MR Geostatistical Confidence

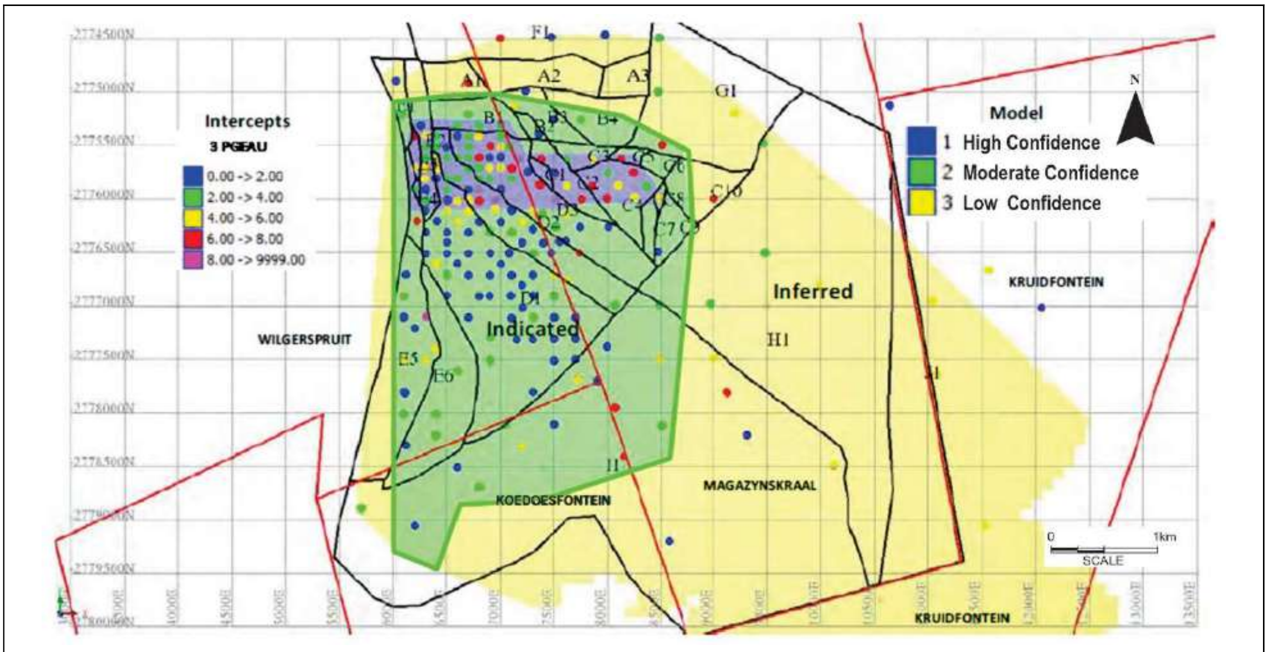
The structural complexity was based on a geotechnical assessment of the major structural blocks (dark outlines/polygons shown in Figure 14-27). For the UG2, the Measured Mineral Resource footprint coincided with areas with high geostatistical confidence and minimal disturbance within the structural blocks (i.e., Blocks D1, D1A, D2 and D3 as shown on Figure 14-28). Indicated Mineral Resources generally reflect areas with moderate to high geostatistical confidence categories and sufficient uncertainty with respect to geological continuity and structural complexity. Areas outside these two demarcations were considered as Inferred Mineral Resources. SRK concurs that the QA/QC results are satisfactory and hence must not warrant the downgrade of any part of the UG2 classification footprints. The UG2 Mineral Resource footprint is as shown in Figure 14-28.

The resource classification for MR and UPR followed a similar approach (Figure 14-29 and Figure 14-30). However, the uncertainty associated with the exact nature and continuity of the PUP and MRC facies resulted in certain areas being considered as high resource risk. Thus, areas which under the current general criteria would have been earmarked as Measured Mineral Resources are downgraded when associated with the high resource risk footprint. Based on the above, a Measured Mineral Resource category for MR was not declared; likewise, the UPR, which also has high resource risk footprints. In the case of the UPR, the footprint of the high resource risk is based on uncertainty associated with the structural and geological complexity and elevated level of grade.



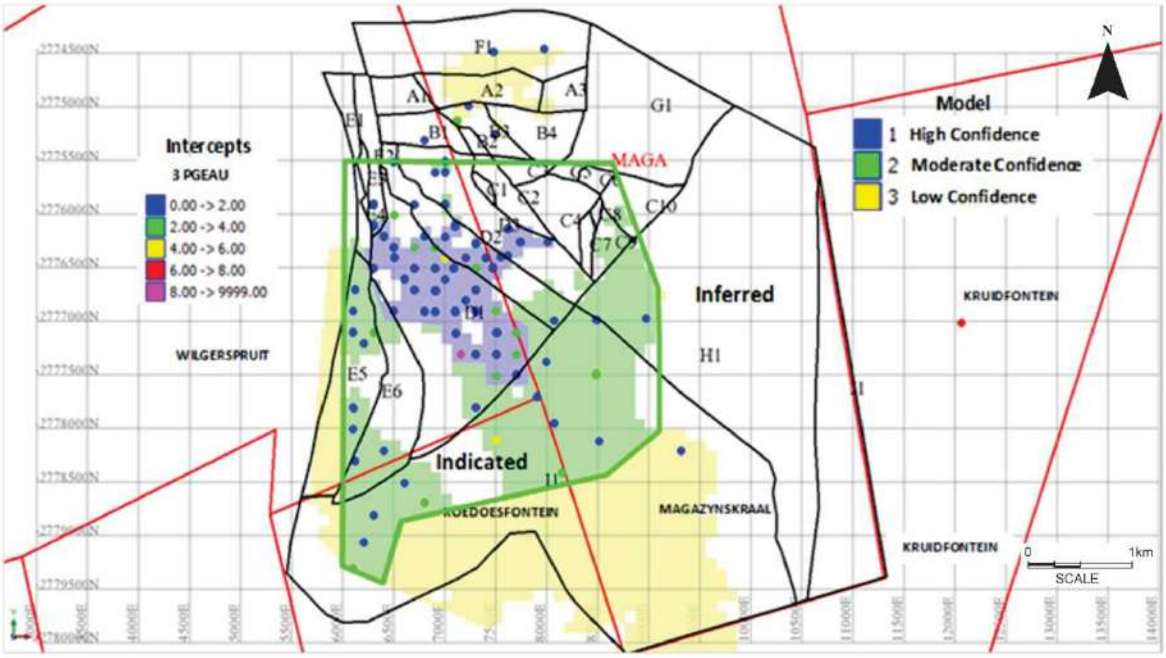
srk consulting	**SRL Total Assets PEA** PSM - Magazynskraal/Sedibelo East: UG2 Mineral Resource Classification (dark polygons depict structural blocks)	Project No. 600322

Figure 14-28: PSM - Magazynskraal/Sedibelo East: UG2 Mineral Resource Classification



srk consulting	**SRL Total Assets PEA** PSM - Magazynskraal/Sedibelo East: MR Mineral Resource Classification (dark polygons depict structural blocks)	Project No. 600322

Figure 14-29: PSM - Magazynskraal/Sedibelo East: MR Mineral Resource Classification



SRL Total Assets PEA
Magazynskraal/Sedibelo East - UPR Mineral Resource Classification (dark polygons depict structural blocks)

Project No. 600322

Figure 14-30: Magazynskraal/Sedibelo East - UPR Mineral Resource Classification

UG2 Chromite Mineral Resource Classification

It is noted that the footprint of the UG2 chrome block estimate as compiled by SRL (Figure 14-13) lies within the Measured and Indicated categories/footprint of the UG2 PGM classification; the larger portion of it conforms to the UG2 Indicated category. SRK has thus classified the chrome estimates as Indicated Mineral Resources. All the blocks beyond the Indicated Mineral Resource footprint, which have been assigned the global chrome mean grade, are classified as Inferred Mineral Resources.

14.3.5 Kruidfontein

Although a polygonal method was used in compiling the resource estimate, a 3D semi-variogram model was generated and the variogram ranges used as the basis for resource classification. This resulted in grade and thickness continuity ranges of 1 150 m and 810 m, respectively, for the UG2 and 1 075 m and 1 200 m, respectively, for the MR.

The following guideline for resource classification was originally applied:

- Indicated Mineral Resource: areas up to a drillhole spacing of 600 mx 600 m, supported by positive reef intersections, and where at least three drill holes are within the required range; and
- Inferred Mineral Resource: areas exceeding a drillhole spacing of 600 m x 600 m, supported by positive reef intersections and surrounding drill holes.

Based on the fundamental issues highlighted under Section 14.3.5, SRK has accordingly classified the entire resource as Inferred Mineral Resources, since the grade and structural continuity are estimated based on limited geological evidence and sampling. SRK does not consider the confidence levels high enough to apply relevant technical and economic factors.

14.3.6 Mphahlele

The classification of the Mineral Resources considers a number of aspects of the data quality and estimation. The quality of the data is considered to be high, due to the confidence in the location of the data, accurate surveys, detailed and appropriate geological logging, sampling procedures that are consistent with industry best practice, and confidence in the accuracy of the analytical results, as determined thought the comprehensive QA/QC programme. No material uncertainty is considered to be introduced to the Mineral Resource estimates by these aspects of the data collection. As noted in Sections 10 and 11, the performance of some aspects of the analytical QA/QC programme is seen as sub-optimal. However, the overall good correlation between the original and umpire analyses supports the interpretation that the assays are sufficiently accurate for use in Mineral Resource estimation.

The selection of the Mineral Resource cuts has been undertaken in a systematic fashion, based on a set of rules that incorporate consideration of the grade distribution, lithostratigraphy, and technical mining limitations such as minimum width. The cuts have been independently reviewed both within SRL and by SRK and found to be reasonable and consistent with the definition rules. SRK does not consider the definition of the Mineral Resource cuts to be a source of any significant uncertainty, noting, however, that there is mineralisation outside of the Mineral Resource cuts, and a different set of rules could result in an alternative interpretation of the cuts.

The geological modelling honours the location and distribution of data well in the current models. This is assured through the use of implicit modelling for the orebody wireframe generation and defining this requirement in the modelling software. The overall morphology of the orebody is consistent, with a relatively consistent planar attitude that is consistent with the expectation of the northern margin of the main BC intrusion. On a macro-scale there are no significant fault displacements over the Mineral Resource area; the interpreted faults have relatively small displacements that can fairly easily be navigated during the mining process. The exact location of the faults is only known within the resolution of the drilling and the geophysical surveys. The density of the drilling is therefore a good proxy for the confidence in the structural interpretation and the uncertainly around the scale and location of the faults.

The decision to not use estimation domains is subject to review in the future, and may be a source of uncertainty. For the MR in particular, there are regional changes in the metal distribution that may be related to the presence of serpentenized harzburgite within the Merensky Pyroxenite unit. The nature of the transition between areas affected by this feature and those not affected is expected to be gradational; however, this is an aspect of uncertainty. This does not affect the definition of the Mineral Resource cut, which is based on defined rules as discussed previously, but can affect the metal accumulation. This is reflected in the Mineral Resource cut grades, which are observed to be lower in the central portion of the orebody.

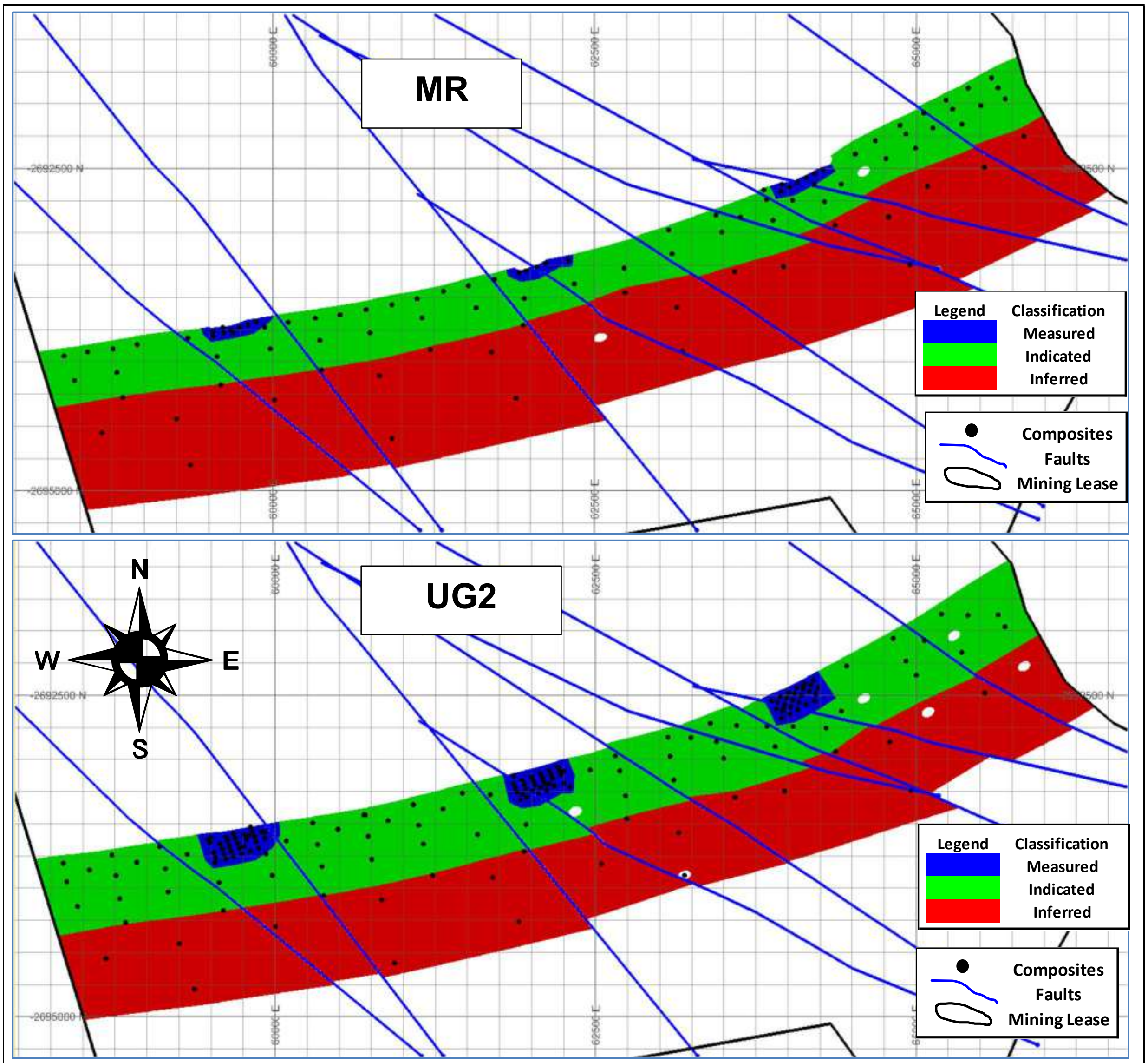
For the MR estimate, using ID^2 no kriging statistics are generated, but are generated for the UG2 estimates using OK. Indicators such as the Slope of Regression and Kriging Efficiency indicate high confidence in the estimates in the densely drilled areas, with the Slope of Regression typically above 0.8. In the more widely-spaced drilling areas, where the drilling varies between 150 m to 400 m (and of course in the areas with even wider drill spacing), there is no continuity in the Slope of Regression values, with high values clustered around the intersections, and reducing to below 0.5 between intersections. The shorter range of the first structures in the semi-variograms, which comprise the majority of the variance (60 % to 90 %), is responsible for this pattern.

However, the very consistent PGM and Au grades in both reefs, as well as the known grade continuity of the BC mineralisation, as well as the high confidence in the data and the geological modelling, support a classification better than would be applied if considering the kriging statistics alone. SRK's classification is primarily based on the data spacing, the experience of the Qualified Person, and the previous Mineral Resource classification done by SRL in 2019 and SRK in the 2008 estimate.

The classification outlines for the previous estimates were used as a starting point, which classified the areas above a Z elevation of 350 m for the MR, and 170 m for the UG2, as Indicated Mineral Resources and the areas deeper than that as Inferred Mineral Resources. These elevations were selected as they approximate the transition between drill holes spaced at 400 m to 500 m (i.e., less than the variogram range modelled in the previous estimate) and the wider-spaced drill holes.

The densely drilled areas, around the site of the declines in the previous study, have a drilling density, as well as kriging statistics, that support the classification of Measured Mineral Resources. The classification assigned is shown in Figure 14-33.

SRK is of the opinion that, with consideration of the recommendations in Section 26.1.1, any issues relating to all applicable technical and economic factors likely to influence the prospect of economic extraction can be resolved with further work.



srk consulting	**SRL Total Assets PEA** Plan view of Mineral Resource Classification assigned to the MR and UG2 [source: SRK, 2020]	Project No. 600322

Figure 14-31: Plan View of Mineral Resource Classification assigned to the MR and UG2

14.4 Reasonable Prospects of Eventual Economic Extraction (RPEEE)

The assessment of RPEEE for the Mineral Resources designated for potential open pit or underground extraction are undertaken separately as the required approaches are fundamentally different.

The open pit Mineral Resource are constrained by a pit optimisation where all of the mineralisation within the constraining pit shell is considered to have RPEEE. The definition of the mining cuts in the open pit Mineral Resource is done such that the estimated and classified blocks are technically extractable with the proposed equipment and designs.

For the underground Mineral Resources the determination of the portion of the Mineral Resource that has RPEEE includes application of a cut-off grade, as well as assessment of the technical ability for the blocks to be mined using the proposed mining method, as some areas may be excluded due to other factors such as the geotechnical stability detailed below.

As the open pit mining requires up-front capital outlay and designs for pushbacks, for example, which are challenging to modify, the pit optimsations are not updated as regularly as the underground cut-off calculations and therefore the price assumptions used in the assessment for open pit and underground differ, as detailed in Sections 14.4.1 and 14.4.2.

The metal prices and exchange rate used in the calculation of the 4E basket price are the forecast prices for 2029 (Table 19-2), which are taken as a reasonable proxy for long-term prices.

The 4E basket price was calculated by weighting each price by the metals' contribution to the 4E grade value for each reef package cut (see Table 14-13 and Table 14-16Table 14-16: 4E Basket Prices and Cut-off Calculation Parameters for Underground Mineral Resources). The contribution of Ru, Ir and base metals has not been considered. 4E Basket prices were calculated for the different resource cuts. This includes a 20% premium over the actual basket prices for the cut-off calculation, as this is considered a reasonable price for the Mineral Resource use. The economic analysis in Section 22 covers a period of 46 years and is done in real (constant money) terms.

14.4.1 Open Pit Mineral Resources

Optimisation parameters considered for the delineation of the resource pit shell for East Pit and Ruighoek are given in Table 14-13 and Table 14-14 respectively. The metal prices, exchange rate and costs are those at the time when the optimisation was performed (August 2019) and are deemed valid for reporting purposes in this TR.

Table 14-13: PSM - East Pit: Optimisation Parameters

Parameter	Unit	Input	
Selling		**Prices**	**Prill**
Pt	(ZAR/oz)	870	59%
Pd	(ZAR/oz)	1 700	30%
Rh	(ZAR/oz)	5 500	5%
Au	(ZAR/oz)	1 460	5%
Exchange Rate	(ZAR:USD)	15.13	-
4E Basket Price	(ZAR/oz)	21 000	
Plant Cost and Fixed Cost	(ZAR/t)	328.00	
Mining Cost - Soft Overburden	(ZAR/t)	16.53	
Overburden	(ZAR/t)	26.07	
UG2	(ZAR/t)	25.32	
Silicates	(ZAR/t)	23.05	
Inter-burden	(ZAR/t)	25.54	
Incremental Bench Cost	(ZAR/bench/t)	0.16	
Mining/Geological Loss	(%)	5	
Mining Recovery	(%)	95	
Pit Slope Angles	(°)	55	
Bench Height	(m)	15	
Dilution Silicates	(%)	43	
Dilution UG2	(%)	93	

Table 14-14: Ruighoek:Pit Optimisation Parameters

Parameter		Unit	Input
Revenue			
1	6E/4Eg Price MR	ZAR/gr	662.5
2	6E/4Eg Price UPR	ZAR/gr	674.0
3	6E/4Eg Price LPR	ZAR/gr	654.9
4	6E/4Eg Price UG2	ZAR/gr	697.5
Processing			
5	Planned steady state production	tpa	600 000
6	Plant Cost	ZAR/t	274.70
7	Transport Cost	ZAR/t	30.00
8	Silicate Recovery	%	As per model
9	Ug2 Recovery	%	As per model
Mining			
10	Mining Cost (SOB)	ZAR/t	23.73
11	Mining Cost (Waste) 1080 bench	ZAR/t	26.08
12	Mining Cost (Ug2) 1080 bench	ZAR/t	25.33
13	Mining Cost (Silicates) 1080 bench	ZAR/t	23.06
14	Mining Cost (Interburden) 1080 bench	ZAR/t	25.54
15	Fixed and O/H Cost	ZAR/t	101.1
16	Incremental Bench Cost	ZAR/bench/t	0.05
17	Mining Loss	%	5
18	Mining recovery	%	95
19	Geo Loss	%	15
20	Mining dilution	%	As per model
Pit Slope Angles			
21	Weathered (20m below Surface)	°	37
22	Waste and Ore Fresh	°	55
Pit Parameters			
23	Bench Height	m	5

14.4.2 Underground Mineral Resources

The underground Mineral Resource cut-off values are calculated based on forecast Pt, Pd and Rh prices and ZAR:USD exchange rates supplied by SFA (2023) and forecast Au price from SRL (2024) (Table 14-15). The metal prces are weighted according to the prll splits for each Mineral Resource cut to calculate the basket price (Table 14-16), which is used with the costs for each project as detailed in Table 14-17 to calculate the cut-off values for each Mineral Resource cut on each project.

Table 14-15: Metal Prices and Exchange Rates for Underground Mineral Resources

Parameter	Unit	Prices
Selling		
Pt	(ZAR/oz)	2 667
Pd	(ZAR/oz)	533
Rh	(ZAR/oz)	3 557
Au	(ZAR/oz)	1 600
Exchange Rate	(ZAR:USD)	18.09

Table 14-16: 4E Basket Prices and Cut-off Calculation Parameters for Underground Mineral Resources

Project	Item	Unit	Values in Calculation 4E Prill			
			MR	PUP	UPR	UG2
Central Underground	Pt	%		64		60
	Pd	%		28		28
	Rh	%		5		12
	Au	%		3		1
	4E Basket Price	USD/oz		2 484		2 173
East Underground	Pt	%	67	64	59	61
	Pd	%	24	27	32	28
	Rh	%	5	5	5	11
	Au	%	3	3	4	
	4E Basket Price	USD/oz	2 602	2 508	2 394	2 606
Kruidfontein	Pt	%		64		62
	Pd	%		27		26
	Rh	%		5		12
	Au	%		3		1
	4E Basket Price	USD/oz		2 515		2 653
Mphahlele	Pt	%	55			51
	Pd	%	33			39
	Rh	%	3			9
	Au	%	9			2
	4E Basket Price	USD/oz	2 249			2 265
Central Underground	Cut-off grade	g/t		1.60		1.83
East Underground			2.35	2.44	2.55	2.34
Kruidfontein				3.86		2.98
Mphahlele			1.43			1.51

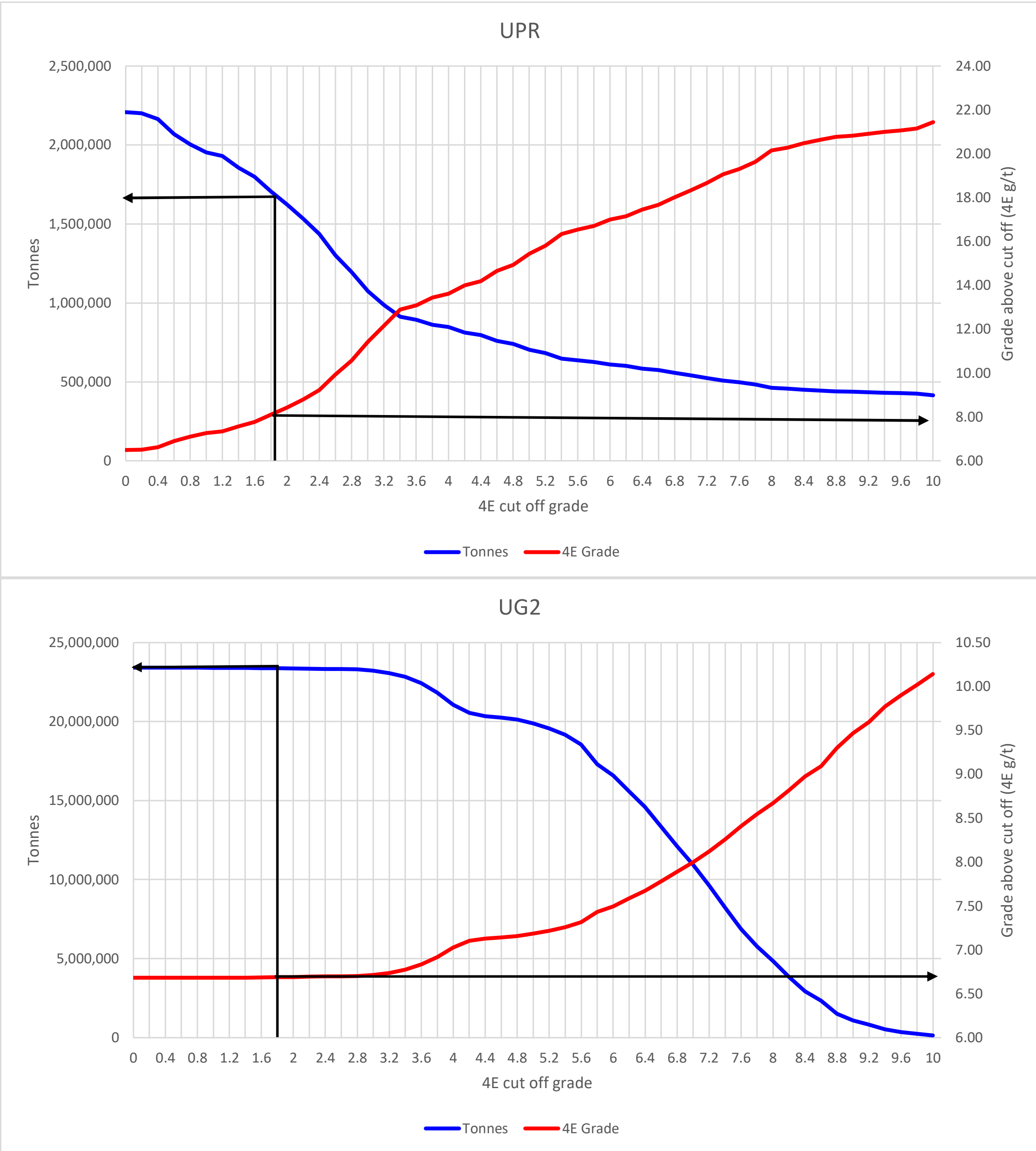
Table 14-17: Opex Parameters for the Underground Mineral Resources

Item	Units	Central Underground	East Underground	Kruidfontein Shaft	Mphahlele
Mining (Silicate)	R/t (Rom)	1020	1126	1809	853
Mining (UG2)	R/t (Rom)	1020	1126	1396	853
Rados	R/t (Rom)				6
SLP	R/t (Rom)	248	229	239	
G&A	R/t (Rom)	200	236	223	224
Ore transport	R/t (Rom)	19	19	6	
Processing	R/t (Rom)	367	441	366	287
Concentrate Transport	R/t (Rom)	2.6	2.76	3	4.08
Kell / Refining	R/t (Rom)	183.78	161.18	172.48	172.48
Mining recovery	Percent	97	97	85	97
Plant Recovery (Silicate)	Percent	85	82.8	75	87
Plant Recovery (UG2)	Percent	85	82.8	79	83.2
NSR	Percent	92.4	80	84	92.4
MCF (Silicate)	Percent	97	97	97	93.6
MCF (UG2)	Percent	97	97	97	97

PSM - Central Underground

The grade distribution of the Mineral Resource cuts is illustrated in Figure 14-32 for the UPR and UG2 mineral Resource estimated. The UG2 is practically insensitive to cut-off grades below 3 g/t, as almost all the estimates are higher than this value. Therefore changes in the techno-economic parameters do have materially impact the reported mineral Resource. In contrast, the UPR is more sesetive to cut-off grade due to the lower grade tail of mineralisation seen in the grade tonnage curve. Improvements in the basket price or reduction in the costs would see a marginal increase in the available Mineral Resources on the UPR, but would not affect the UG2 in any significant way. Approximately 20 % of the UPR is below the current cut-off grade of 1.60 g/t.

Additional exploration will increase the extent of the Measured an Indicated Mineral Resources, and can potentially convert the Inferred Resources to the south and east of the project to higher confidence categories.



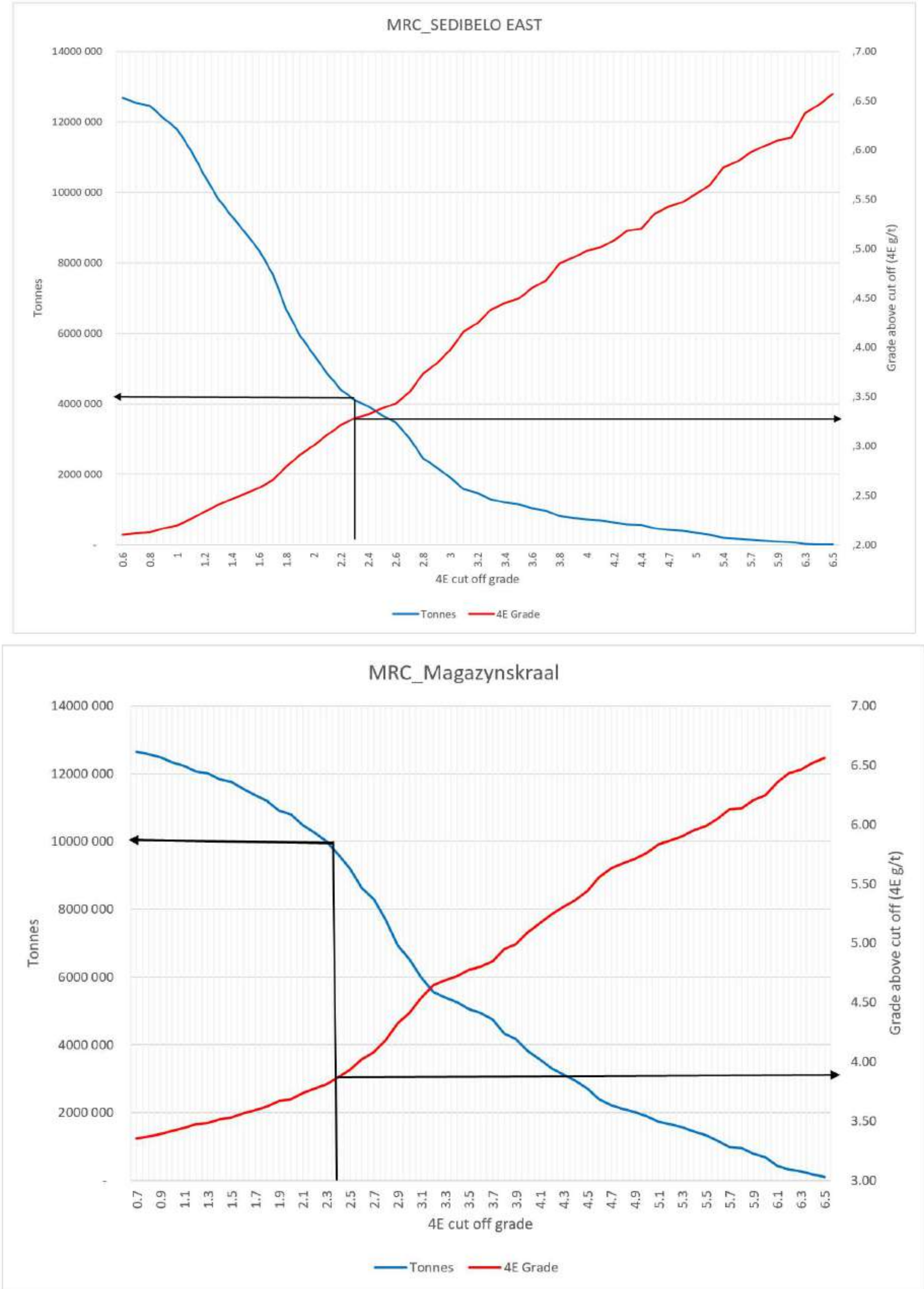
srk consulting	**SRL Total Assets PEA** Central Underground Grade Tonnage Curves for the UPR and UG2	Project No. 600322

Figure 14-32: Central Underground Grade Tonnage Curves for the UPR and UG2

PSM - East Underground

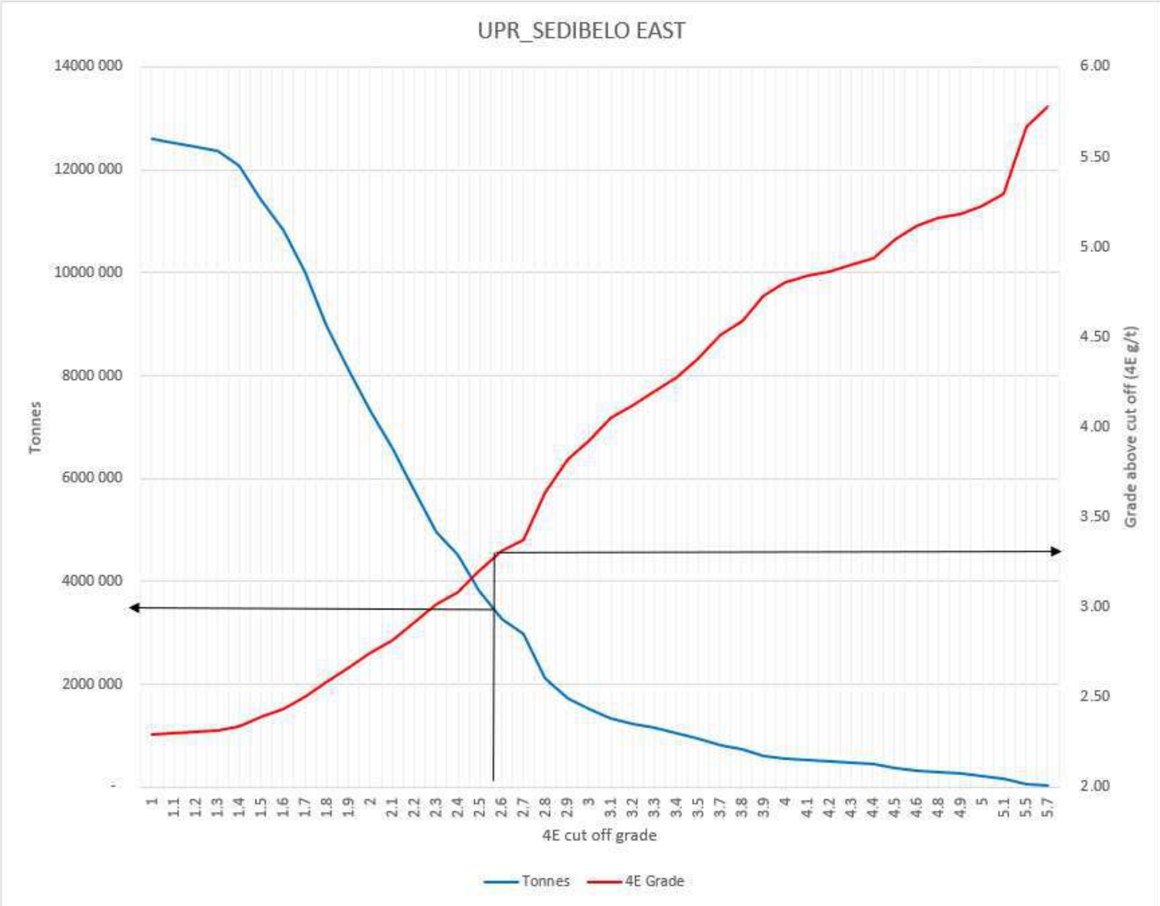
The grade distribution of the Mineral Resource cuts is illustrated in Figure 14-33 to Figure 14-35 for the MRC, PUP, UPR and UG2 Mineral Resource estimated; this has been done separately for the Sedibelo East and Magazynskraal footprints. Like with Central Underground, the UG2 is practically insensitive to cut-off grades below 3 g/t and 4.5 g/t at Magazynskraal and Sedibelo East, respectively. All the estimates for the UG2 are higher than the calculated cut-off grade of 2.34 g/t. Therefore, changes in the techno-economic parameters do not have material impact on the reported Mineral Resource. A similar observation is made for the PUP where it is also practically insensitive to cut-off grades below 2.8 g/t at Sedibelo East and 4 g/t at Magazynskraal.

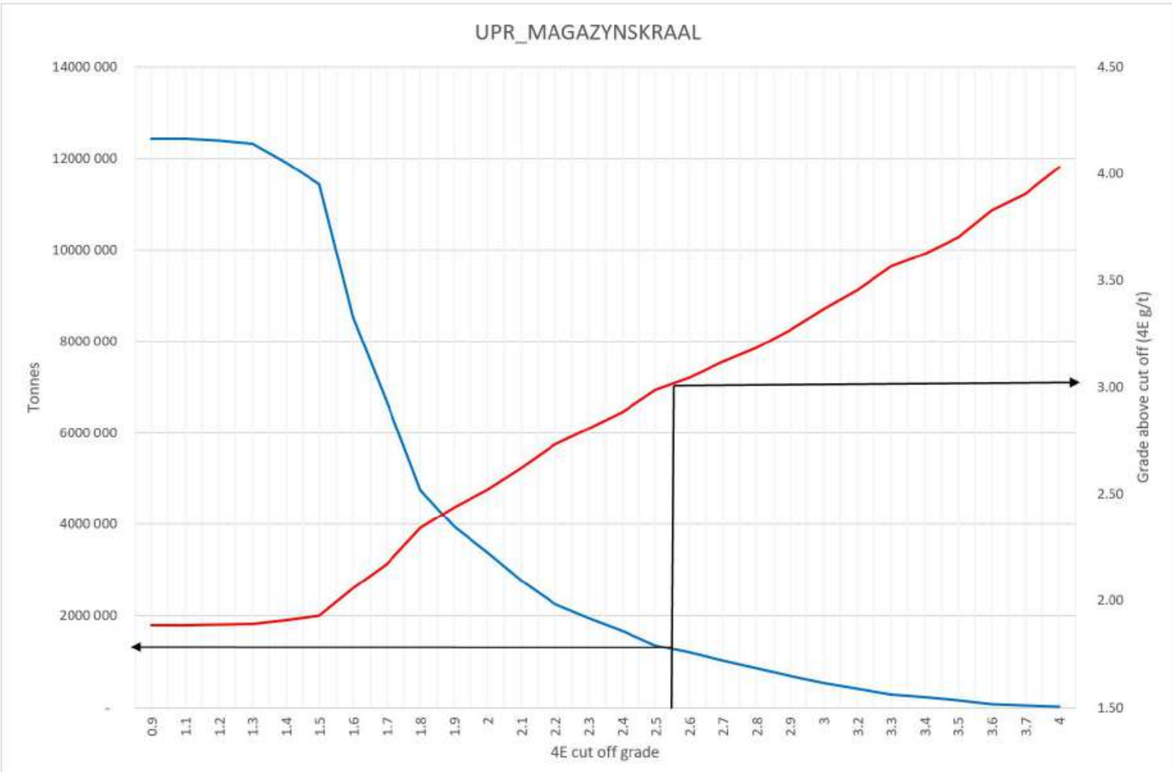
In contrast, the MRC and UPR is more sensitive to cut-off grade. More than 70% of the UPR combined is below the current cut-off grade; for the MRC at Sedibelo East, this is more than 60%.



srk consulting	**SRL Total Assets PEA** Grade Tonnage Curves for the MRC	Project No. 600322

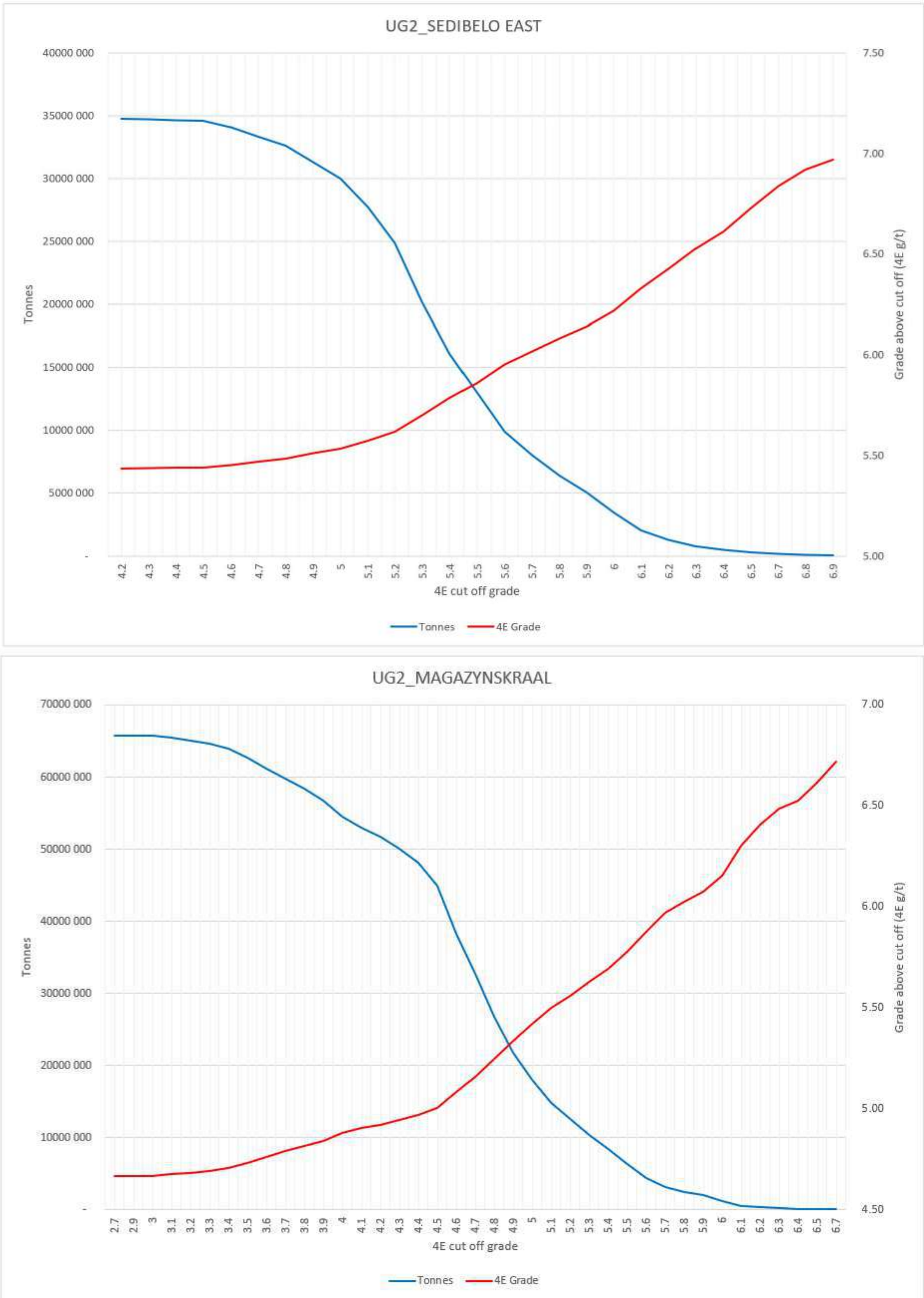
Figure 14-33: East Underground - Grade Tonnage Curves for the MRC at Sedibelo and Magazynskraal





srk consulting	**SRL Total Assets PEA** Grade Tonnage curves for the UPR for the UPR at Sedibelo and Magazynskraal	Project No. 600322

Figure 14-34: East Underground - Grade Tonnage Curves for the UPR at Sedibelo and Magazynskraal



srk consulting	**SRL Total Assets PEA** Grade Tonnage Curves for the UG2 at Sedibelo and Magazynskraal	Project No. 600322

Figure 14-35: East Underground - Grade Tonnage Curves for the UG2 at Sedibelo and Magazynskraal

Kruidfontein

Due to the grade estimation technique employed (i.e., polygonal estimation), the sensitivity of cut-off grade relative to the tonnage can only be tested on an areal extent and not locally (i.e. on a parent cell support as done elsewhere for the the other underground projects). All the UG2 blocks have grades well in excess of the calculated cut-off grade; only one block of PUP has a grade lower than the calculated cut-off grade and contributes less than 1% of the 4E metal content (refer to right hand image of Figure 14-14).

Mphahlele

Parts of the MR have relatively low grades that are below the calculated economic cut-off grade, while almost none of the UG2 reports below the calculated cut-off grade. This is illustrated in the grade tonnage curves in Figure 14-36 where virtually none of the UG2 model is below the cut-off grade, while approximately 40% of the MR Mineral Resource falls below the current cut-off grade (1.43 g/t 4E).

The effective date of the Mineral Resource is 31 December 2023, and the techno-economic assumptions that have been applied in the calculation of the RPEEE are as of that date. Additional exploration is likely to be able to increase the extent of the Measured and Indicated Mineral Resources and therefore potentially the mine life. Projections of metal prices and economic parameters such as the exchange rate over such time periods are inherently uncertain, and future market conditions could be substantially different from those assumed. The risk to the UG2 is considered to be relatively low as the estimated grades are materially higher than the cut-off grade over the majority of the orebody. The MR is more sensitive to changes in the commodity prices, but is currently not part of the Mineral Reserve. Improvements in the techno-ecoomic parameters in the future would present upside potential for expansion of the mine’s production, or extension of the economic life of the mine.

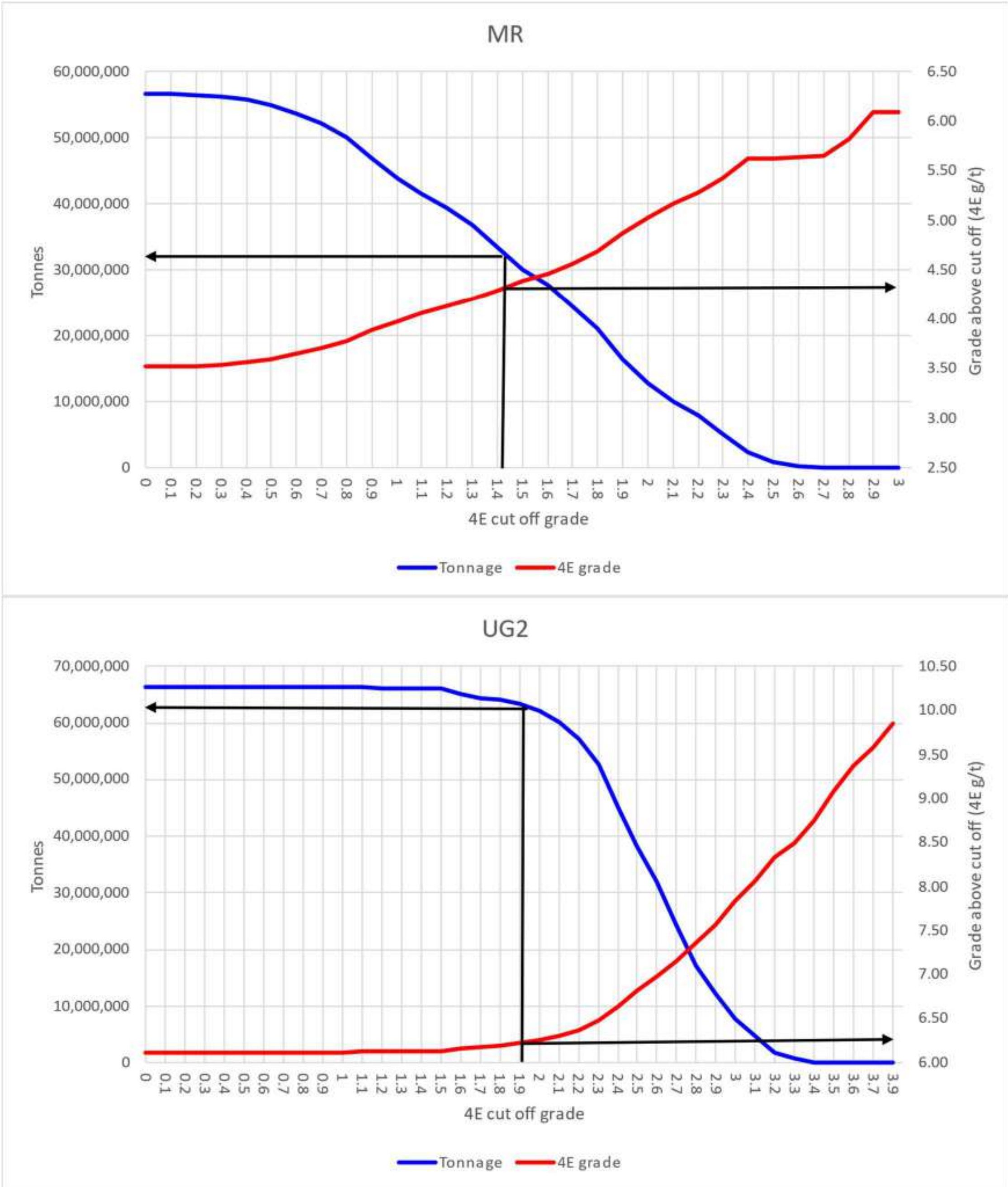
14.5 Mineral Resource Statements

All Mineral Resources are quoted inclusive of the Mineral Reserves derived therefrom.

14.5.1 PSM - Ruighoek and East Pit

The Ruighoek Mineral Resource process makes use of the reef structural models developed by SRL and incorporates these models into a three-dimensional model. For this specific reason, geological features such as potholes, which would normally be considered to represent a geological loss in an underground mine plan, have not been excluded from this particular Mineral Resource estimate. No additional losses for undefined geological features, such as small IRUP bodies, have been applied in the development of the Mineral Resource estimate. Dyke features have been modelled by SRL geologists, who have also modelled an intrusive harzburgite plug situated within the northern part of the Ruighoek North block and has been explicitly excluded from the reporting.

The in situ PGM and chromite Mineral Resource statements for the East Pit are shown in Table 14 20 and Table 14 21, respectively, and takes into consideration depletion (mined out) for the projected face positions as at the end of December 2023. The in situ East Pit Mineral Resources are stated using a 4E basket price of ZAR21 000/oz and reported within a pit shell that is based on 120% revenue factors.



srk consulting	**SRL Total Assets PEA** Mphahlele - Grade Tonnage Curves for the MR and UG2	Project No. 600322

Figure 14-36: Mphahlele - Grade Tonnage Curves for the MR and UG2

The Mineral Resource within the optimised pit shell, and within the portions of Ruighoek 169JP that are included in the Mining Right are reported in Table 14-18.

The consideration of the East Pit’s pit shell (used for reporting) is largely constrained by the adjacent Central Underground mine design. There are resources outside the pit shell that are classified as potentially extractable from underground. This would require a pit optimisation that considers the economic viability of the silicate reefs above the UG2 (based on the open pit block model), excluding the PUP reef facies of the UPR, and the full reef package that is not currently planned for extraction by underground methods (based on the underground block model). The pit optimisation will have to demonstrate that the remaining silicate reefs are both technically extractable following the underground extraction, as well as economically extractable without the UG2 and PUP contributions where this is mined from underground. SRK understands that the merits of such a study are under consideration.

No economic cut-off grade has been applied for the reporting of the *in situ* Mineral Resources constrained within the pit shells. The Mineral Resources are reported exclusive of explicitly modelled dyke and fault losses, exclusive of the S1 layer, and exclusive of an additional 5% unknown geological loss factors (East Pit) for all reefs. No Mineral Resources are reported within 10 m of the topography surface.

14.5.2 PSM – West Pit TRR

The *in situ* PGM Mineral Resources are reported without considering a geological loss factor, as total extraction would be performed and no selectivity is required. Thus the economic viability is considered to support reporting the entire TSF at the mean grade of all deposited material within it. Pril split fractions are calculated from available monthly TSF grade averages for 2020 to 2023. The Mineral Resources are reported inclusive of any Mineral Reserves. Expected 6E content is calculated from the analysed 4E results considered in calculating the deposit mean. The *in situ* PGM Mineral Resource statement for the West Pit TRR is reported for the entire deposit (Table 14-19).

14.5.3 PSM - Central Underground

The *in situ* Mineral Resources are reported by applying a geological loss factor of 15%; this is in addition to the modelled dykes, which are explicitly excluded from the reporting. The *in situ* underground Mineral Resources are constrained to be outside the practical pit constraint applied in the East Pit reporting, and further beyond the crown pillar around the open pit highwall.

The PGM and chromite Mineral Resource statements for Central Underground are reported above an economic cut-off, as shown in Table 14-22 and Table 14-23, respectively.

14.5.4 PSM - East Underground

The geological loss considerations were based on the geotechnical assessment of the different blocks of ground as discussed under Section 14.3.4. The geological losses range from 14% to 20% for the UG2 and 19% to 37% for the silicates.

The *in situ* PGM and chromite Mineral Resource statement for the East Underground is as reported in Table 14-24 and **Table** 14-25, respectively.

14.5.5 Kruidfontein

Table 14-26 presents the audited *in situ* Mineral Resource statement for Kruidfontein, where the entire Indicated Mineral Resource has been downgraded to an Inferred Mineral Resource, for the reasons as discussed above.

SRK tested the application of a consistent reef pick philosophy (over the reef package) and found that this will result in less than 5% change in the estimated tonnages when compared to the tonnages reported in information provided by SRL. It is in this regard that SRK deems the tonnages reflected in the resource statement to be reasonable.

The *in situ* Mineral Resources, whether reported on an inclusive or exclusive basis, would be identical, since no Mineral Reserves have been estimated for the Kruidfontein Project.

14.5.6 Mphahlele

The *in situ* Mineral Resource statement given in Table 14-27 is reported above an economic cut-off and after the exclusion of geological losses. Mineral Resources are inclusive of any Mineral Reserves derived therefrom.

All of the UG2 resource model has grades that are above the economic cut-of grade of 1.38 g/t, as determined above.

SRL is the beneficial owner of 75% of the Mphahlele Project and only the portion of the metal and tonnes attributable to SRL is included in the tabulations.

Table 14-18: Ruighoek: SRK Audited PGM Mineral Resource Statement as at 31 December 2023

Resource Area	Reef	Tonnage (Mt)	Reef Width (cm)	PGM Grade (g/t)					Contained 4E	Base Metal Grade (ppm)		Contained Base Metal (t)	
				4E	Pt	Pd	Rh	Au	(Moz)	Ni	Cu	Ni	Cu
Indicated Mineral Resource													
Ruighoek	Merensky	1.9	Var.	3.87	2.49	1.05	0.17	0.16	0.24	1 249	376	2 399	723
	Upper Pseudo	0.9	Var.	1.52	0.90	0.49	0.08	0.06	0.04	1 109	182	943	155
	Lower Pseudo	0.5	Var.	2.05	1.23	0.64	0.07	0.12	0.03	1 264	230	611	111
	UG2	1.7	112.0	4.49	2.77	1.21	0.49	0.02	0.24	-	-	-	-
Total Indicated Ruighoek		**4.92**	**-**	**3.49**	**2.18**	**0.97**	**0.25**	**0.09**	**0.55**	**804**	**201**	**3 953**	**988**
	4E prill				62.2%	27.7%	7.2%	2.9%					

Table 14-19: PSM - West Pit TRR: SRK Audited PGM Mineral Resource Statement as at 31 December 2023

Classification	Reef	Tonnage (Mt)	Reef Width (m)	PGM Grade (g/t)								Contained PGM (Moz)	
INCLUSIVE				4E	6E	Pt	Pd	Rh	Au	Ir	Ru	4E	6E
Indicated Mineral Resource													
	West Pit TRR	45.9	n/a	0.70	0.86	0.41	0.21	0.06	0.02	0.03	0.13	1.03	1.27
Total Indicated Resource		**45.9**	**n/a**	**0.70**	**0.86**	**0.41**	**0.21**	**0.06**	**0.02**	**0.03**	**0.13**	**1.03**	**1.27**
	6E prill					47.90%	24.08%	6.70%	2.78%	3.63%	14.95%		

Note: no Cu/Ni grades reported for the West Pit TRR.

Table 14-20: PSM - East Pit: SRK Audited PGM Mineral Resource Statement as at 31 December 2023

Resource Area	Reef	Tonnage (Mt)	Reef Width (m)	PGM Grade (g/t)								Contained 4E	Conbtained 6E	Base Metal Grade(%)		Contained Base Metal (t)	
				4E	6E	Pt	Pd	Rh	Au	Ru	Ir	(Moz)	(Moz)	Ni	Cu	Ni	Cu
Indicated Mineral Resource																	
Silicates		**7.1**	**1.49**	**1.77**	**1.94**	**1.05**	**0.54**	**0.09**	**0.10**	**0.14**	**0.03**	**0.40**	**0.44**	**0.15**	**0.03**	**10 600**	**1 847**
	6E prill					53.87%	27.97%	4.61%	4.89%	7.16%	1.50%						
UG2		**3.3**	**0.49**	**4.92**	**5.97**	**2.95**	**1.39**	**0.55**	**0.02**	**0.86**	**0.20**	**0.53**	**0.64**	**0.01**	**0.01**	**486**	**324**
	6E prill					49.4%	23.3%	9.3%	0.3%	14.3%	3.4%						
Total Indicated East Pit		**10.4**	**0.97**	**2.78**	**3.23**	**1.66**	**0.82**	**0.24**	**0.07**	**0.37**	**0.08**	**0.93**	**1.08**	**0.11**	**0.02**	**11 086**	**2 171**
Inferred Mineral Resource																	
Silicates		**1.1**	**1.42**	**2.03**	**2.22**	**1.21**	**0.61**	**0.10**	**0.11**	**0.16**	**0.03**	**0.07**	**0.08**	**0.15**	**0.03**	**1 706**	**321**
	6E prill					54.38%	27.37%	4.58%	5.09%	7.10%	1.49%						

Note:
1. Mineral Resources are not Mineral Reserves and do not meet the threshold for reserve modifying factors, such as estimated economic viability, that would allow conversion to Mineral Reserves. There is no certainty that any part of the *in situ* Mineral Resource estimated will be converted into Mineral Reserves
2. S1 package is excluded from Mineral Resource Statement because it is impractical to mine selectively.
3. The individual S2 packages combined is referred to as Silicates
4. The individual packages U2L, U2P, U2 and U2PEG are combined together and referred as UG2 in the table
5. Open pit optimisation was based on an assumed 4E basket price of ZAR21 000/oz, assumed mining & processing cost of ZAR445/t and reported within a pit shell that is based on a 120% revenue factor.
6. Numbers in the tables have been rounded to reflect the accuracy of the estimates and may not sum due to rounding.
7. 1 troy ounce = 31.1034768

Table 14-21: PSM – East Pit: SRK Audited Chromite Mineral Resource Statement as at 31 December 2023

Mineral Resources	Reef	Tonnage (Mt)	Cr_2O_3 Grade (%)	Cr_2O_3 Content (kt)
Inferred Mineral Resources				
East Pit	UG2	**3.3**	**24.74**	**825.4**
Total Inferred Resources		**3.3**	**24.74**	**825.4**

Note:
1 Cr to Cr_2O_3 conversion is 1:1.461.
2 The chromite resources are classified in the Inferred category due to the uncertainty in the grade which is derived from a regression analysis on a small sample of UG2 density and chrome grades. The UG2 is mined as part of the LoM plan for its PGM content. While a chromite concentrate is produced in the plant, the recovered chromite is excluded from the economic analysis.

Table 14-22: PSM - Central Underground: SRK Audited PGM Mineral Resource Statement as at 31 December 2023

Classification	Reef	Tonnage (Mt)	Reef Width (m)	PGM Grade (g/t)								Contained 4E	Contained 6E	Base Metal Grade (%)		Contained Base Metal (t)	
				4E	6E	Pt	Pd	Rh	Au	Ir	Ru	(Moz)	(Moz)	Ni	Cu	Ni	Cu
Indicated Mineral Resource																	
	PUP	1.0	1.20	6.04	6.51	3.82	1.75	0.25	0.22	0.07	0.41	0.20	0.22	0.19	0.081	1 969	847
	UG2	15.4	1.15	6.79	8.71	4.03	1.93	0.80	0.04	0.61	1.31	3.37	4.32	0.01	0.002	1 913	376
Total Indicated Resource		**16.5**		**6.75**	**8.57**	**4.01**	**1.92**	**0.77**	**0.05**	**0.57**	**1.25**	**3.57**	**4.53**	**0.02**	**0.007**	**3 882**	**1 222**
	4E Prill					59.5%	28.4%	11.3%	0.8%	8.5%	18.5%						
Inferred Mineral Resource																	
	PUP	1.1	1.20	7.02	7.76	4.51	1.89	0.39	0.22	0.11	0.64	0.26	0.29	0.21	0.082	2 404	940
	UG2	8.0	1.12	6.46	8.29	3.97	1.70	0.76	0.03	0.58	1.25	1.66	2.13	0.01	0.002	822	162
Total Inferred Resource		**9.1**		**6.53**	**8.23**	**4.04**	**1.73**	**0.72**	**0.06**	**0.52**	**1.17**	**1.92**	**2.41**	**0.04**	**0.012**	**3 226**	**1 102**
	4E Prill					61.8%	26.4%	11.0%	0.8%	8.0%	17.9%						

Note:
1. Mineral Resource are not Mineral Reserves and do not meet the threshold for reserve modifying factors., such as estimated economic viability, that would allow conversion to Mineral Reserves. There is no certainty that any part of the in-situ Mineral Resources will be converted into Mineral Reserves.
2. The *in situ* Mineral resources are reported above 4E cut-off grades of 1.15 g/t and 1.62 g/t for UG2 and PUP reefs, respectively. These are based on 4E basket prices of USD3 037/oz and USD2 086/oz, which include a 20% premium, and plant recoveries of 82% and 85% for UG2 and PUP, respectively.
3. Reef width represents the vertical thickness, and not true thickness.
4. Numbers in the tables have been rounded to reflect the accuracy of the estimates, and may not sum due to rounding
5. 1 troy ounce = 31.1034768

Table 14-23: PSM - Central Underground: SRK Audited Chromite Mineral Resource Statement as at 31 December 2023

Mineral Resources	Reef	Reef Width (m)	Tonnage (Mt)	Cr_2O_3 Grade (%)	Cr_2O_3 Content (kt)
Inferred Mineral Resources					
Central Underground	UG2	1.14	23.4	26.5	6 208
Total Inferred Resources		**1.14**	**23.4**	**26.5**	**6 208**

Note:
1 Cr to Cr_2O_3 conversion is 1:1.461.
2 The chromite resources are classified in the Inferred category due to the uncertainty in the grade which is derived from a regression analysis on a small sample of UG2 density and chrome grades. The UG2 is mined as part of the LoM plan for its PGM content. While a chromite concentrate is produced in the plant, the recovered chromite is excluded from the economic analysis.

Table 14-24: PSM – East Underground: SRK Audited PGM Mineral Resource Statement as at 31 December 2023

Resource Area	Reef	Tonnage (Mt)	Reef Width (cm)	PGM Grade (g/t)								Contained 4E	Contained 6E	Base Metal Grade (%)		Contained Base Metal (t)	
				4E	6E	Pt	Pd	Rh	Au	Ru	Ir	(Moz)	(Moz)	Ni	Cu	Ni	Cu
Measured Mineral Resource																	
Sedibelo East	UG2	9.4	1.40	5.59	6.90	3.36	1.53	0.68	0.02	1.04	0.27	1.68	2.08	0.01	0.00	1 402	307
Magazynskraal	UG2	2.3	1.35	5.52	6.84	3.40	1.44	0.66	0.02	1.07	0.26	0.41	0.51	0.02	0.00	400	110
Total Measured Resource		**11.7**	**1.39**	**5.58**	**6.89**	**3.37**	**1.52**	**0.68**	**0.02**	**1.05**	**0.26**	**2.09**	**2.59**	**0.02**	**0.00**	**1 803**	**416**
	6E prill					48.9%	22.0%	9.8%	0.3%	15.2%	3.8%						
Indicated Mineral Resource																	
Sedibelo East	Silicates	10.7	1.17	4.80	5.30	2.97	1.39	0.24	0.20	0.39	0.12	1.64	1.82	0.16	0.06	17 302	6 572
	UG2	16.0	1.42	5.43	6.66	3.28	1.49	0.64	0.02	0.98	0.25	2.80	3.43	0.01	0.00	2 380	524
Magazynskraal	Silicates	9.6	1.17	5.31	5.87	3.47	1.38	0.28	0.17	0.46	0.10	1.64	1.81	0.16	0.06	15 466	6 215
	UG2	17.4	1.50	4.49	5.56	2.76	1.19	0.52	0.02	0.86	0.20	2.51	3.11	0.01	0.00	2 488	664
Total Indicated Resource		**53.7**	**1.4**	**5.0**	**5.9**	**3.1**	**1.4**	**0.5**	**0.1**	**0.7**	**0.2**	**8.6**	**10.2**	**0.1**	**0.0**	**37 635**	**13 975**
	6E prill					52.3%	23.0%	7.8%	1.4%	12.4%	3.1%						
Inferred Mineral Resource																	
Sedibelo East	Silicates	4.1	1.15	3.29	3.76	2.08	0.91	0.18	0.12	0.29	0.18	0.43	0.49	0.13	0.05	5 188	1 851
	UG2	9.4	1.37	5.21	6.37	3.15	1.44	0.60	0.02	0.93	0.23	1.57	1.92	0.02	0.00	1 482	351
Magazynskraal)	Silicates	24.7	1.17	5.88	6.49	3.81	1.58	0.30	0.20	0.50	0.11	4.67	5.14	0.20	0.07	48 402	17 335
	UG2	46.1	1.4	4.7	5.8	2.8	1.3	0.5	0.0	0.9	0.2	6.95	8.54	0.02	0.00	7 012	1 715
Total Inferred Resource		**84.2**	**1.3**	**5.0**	**5.9**	**3.1**	**1.4**	**0.5**	**0.1**	**0.7**	**0.2**	**13.6**	**16.1**	**0.1**	**0.0**	**62 084**	**21 251**
	6E prill					52.3%	23.0%	7.8%	1.4%	12.4%	3.1%						

Note:
1. Mineral Resources are not Mineral Reserves and do not meet the threshold for reserve modifying factors, such as estimated economic viability, that would allow conversion to Mineral Reserves. There is no certainty that any part of the Mineral Resources will be converted into Mineral Reserves.
2. The individual cuts/packages namely MRC, PUP and UPR are combined together and referred as Silicates in the table.
3. The *in situ* Mineral Resources are reported above 4E cut-off grades of 2.34 g/t (UG2), 2.44 g/t (MR PUP), 2.35 g/t (MRC) and 2.55 g/t (UPR). These are based on 4E basket prices of USD2 606/oz, USD2 508/oz, USD2 602/oz and USD2 394/oz, respectively, which include a 20% premium. A plant recovery of 82.8% was applied.
4. Numbers in the tables have been rounded to reflect the accuracy of the estimates and may not sum due to rounding.Reef width represents the vertical thickness, and not true thickness.
5. One troy ounce = 31.1034768 g.

Table 14-25: PSM - East Underground: SRK Audited Chromite Mineral Resources and Mineral Reserves Statement as at 31 December 2023

Mineral Resources (INCLUSIVE)	Reef	Reef Width (cm)	Tonnage (Mt)	Cr_3O_8 grade (%)	Contained Cr_2O_3 (kt)
Indicated Mineral Resources					
Magazynskraal	UG2	150	34.4	29.4	10 107
Total Indicated Resources			**34.4**	**29.4**	**10 107**
Inferred Mineral Resources					
Magazynskraal	UG2		31.4	29.4	9 231
Sedibelo East	UG2		34.8	29.4	10 216
Total Inferred Resources			**66.2**	**29.4**	**19 447**

Mineral Reserves	Tonnage (Mt)	Cr_3O_8 grade (%)	Contained Cr_2O_3 (kt)
Probable Mineral Reserves			
Magazynskraal	24.3	23.1	5 613
Total Probable Reserves	**24.3**	**23.1**	**5 613**

Note:

1 Cr to Cr_2O_3 conversion is 1:1.461.

Geological losses applicable are consistent with that of Table 14-24: PSM – East Underground: SRK Audited PGM Mineral Resource Statement as at 31 December 2023

2

3 The chromite resources on Sedibelo East are classified in the Inferred category due to the uncertainty in the grade which is derived from a regression analysis on a small sample of UG2 density and chrome grades. The UG2 is mined as part of the LoM plan for its PGM content. While a chromite concentrate is produced in the plant, the recovered chromite is excluded from the economic analysis.

Table 14-26: Kruidfontein: SRK Audited PGM Mineral Resource Statement as at 31 December 2023

Resource Area	Reef	Tonnage (Mt)	Reef Width (cm)	PGE Grade (g/t)							Contained PGMs		Base Metal Grade (%)		Contained Base Metal (kt)	
				4E	Pt	Pd	Rh	Au	Ru	Ir	(4E Moz)	(6E Moz)	Ni	Cu	Ni	Cu
Inferred Mineral Resource																
	PUP	58.4	1.14	8.12	5.22	2.21	0.43	0.25	0.68	0.12	15.22	16.70	0.239	0.0779	139.53	45.47
	6E prill				58%	25%	5%	3%	8%	1%						
Inferred Mineral Resource																
	UG2	90.4	1.41	5.52	3.40	1.41	0.64	0.07	1.01	0.23	16.03	19.63	0.0637	0.0029	57.6	2.64
	6E prill				50%	21%	10%	1%	15%	3%						
Total Inferred Resource		**148.8**		**6.54**	**4.11**	**1.72**	**0.56**	**0.14**	**0.88**	**0.19**	**31.25**	**36.33**	**0.132**	**0.032**	**197.13**	**48.11**
	6E				54%	23%	7%	2%	12%	2%						

Notes:

1 Mineral Resources are not Mineral Reserves and do not meet the threshold for reserve modifying factors, such as estimated economic viability, that would allow for the conversion to Mineral Reserves. There is no certainty that any part of the Mineral Resources will be converted to Mineral Reserves.

2 The *in situ* Mineral Resources are reported exclusive of any Mineral Reserves that may be derived from them. There are no Mineral Reserves declared for the Kruidfontein Project.

3 1 Troy Ounce = 31.1034768g.

4 There are no UG2 Mineral Resources below the determined 4E cut-off grade of 2.98g/t.

5 Strict application of the PUP 4E cut-off grade of 3.86 g/t will result in the exclusion of less than 1% of the PUP Mineral Resources.

6 The cut-off grades are based on 4E basket prices of USD2 653/oz and USD2 515/oz for the UG2 and PUP respectively.

7 Numbers in the table have been rounded to reflect the accuracy of the estimate and may not sum due to rounding.

Table 14-27: Mphahlele: SRK Audited PGM Attributable Mineral Resource Statement, effective 31 December 2023

Classification INCLUSIVE	Reef	Tonnage (Mt)	Reef Width (m)	PGM Grade (g/t)								Contained PGM (Moz)		Base Metal Grade (%)		Contained Base Metal (t)	
				4E	6E	Pt	Pd	Rh	Au	Ir	Ru	4E	6E	Ni	Cu	Ni	Cu
Measured Mineral Resource																	
	Merensky	0.6	1.20	3.00	3.80	1.64	0.98	0.08	0.30	0.12	0.68	0.06	0.08	0.21	0.12	1,284	765
	UG2	2.1	1.20	5.03	6.02	2.55	1.94	0.43	0.10	0.18	0.82	0.34	0.41	0.12	0.07	2,518	1,566
Total Measured Resource		**2.7**		**4.56**	**5.52**	**2.35**	**1.72**	**0.35**	**0.15**	**0.17**	**0.79**	**0.40**	**0.49**	**0.14**	**0.08**	**3,802**	**2,331**
	6E prill					42.52%	31.27%	6.31%	2.66%	3.00%	14.25%						
Indicated Mineral Resource																	
	Merensky	12.4	1.35	2.91	3.65	1.60	0.97	0.07	0.27	0.11	0.63	1.16	1.45	0.19	0.11	24,041	14,217
	UG2	22.0	1.35	4.97	5.96	2.54	1.90	0.44	0.10	0.18	0.81	3.53	4.23	0.12	0.07	26,495	15,148
Total Indicated Resource		**34.4**		**4.23**	**5.13**	**2.20**	**1.56**	**0.31**	**0.16**	**0.15**	**0.75**	**4.69**	**5.68**	**0.15**	**0.09**	**50,536**	**29,365**
	6E prill					42.88%	30.48%	6.00%	3.12%	2.98%	14.53%						
Total Measured + Indicated Resource		**37.2**		**4.26**	**5.16**	**2.21**	**1.58**	**0.31**	**0.16**	**0.15**	**0.75**	**5.09**	**6.17**	**0.15**	**0.09**	**54,338**	**31,696**
	6E prill					42.85%	30.54%	6.03%	3.09%	2.98%	14.51%						
Inferred Mineral Resource																	
	Merensky	24.5	1.45	3.01	3.77	1.64	1.01	0.08	0.28	0.11	0.65	2.37	2.97	0.19	0.12	47,523	28,453
	UG2	25.6	1.28	5.11	6.12	2.59	1.98	0.44	0.10	0.18	0.83	4.20	5.04	0.12	0.07	29,928	18,883
Total Inferred Resource		**50.1**		**4.08**	**4.97**	**2.13**	**1.50**	**0.26**	**0.19**	**0.15**	**0.74**	**6.58**	**8.01**	**0.15**	**0.09**	**77,451**	**47,337**
	6E prill					42.79%	30.27%	5.29%	3.79%	2.97%	14.90%						

Notes:

1. 4E is shorthand for Pt + Pd + Rh + Au. 6E is shorthand for 4E + Ir + Ru.
2. Mineral Resources are not Mineral Reserves. There is no certainty that any part of the Mineral Resources will be converted to Mineral Reserves.
3. The in-situ Mineral Resources are reported on an attributable basis, with only the 75% attributable to SRL included.
4. The in-situ Mineral Resources are reported inclusive of any Mineral Reserves that may be derived from them.
5. 1 Troy Ounce = 31.1034768g
6. The in-situ Mineral Resources are reported above a cut-off of 1.43 g/t 4E for the Merensky and 1.51 g/t 4E for the UG2.
7. The cut-off grades are based on 4E basket prices of USD2 249/oz and USD2 265/oz and plant recovery factors of 87% and 83% for the Merensky and UG2 respectively.
8. Numbers in the table have been rounded to reflect the accuracy of the estimate and may not sum due to rounding.

14.6 Reconciliation of Mineral Resources

The Mineral Resource tonnages and contained 4E PGMs on SEDAR at 31 December 2021 are reported on an inclusive basis (Table 6-8 to Table 6-13). These values are compared to the Mineral Resources as per this TR at 31 December 2023 on an inclusive basis (Table 14-22 to Table 14-27).

14.6.1 PSM – East Pit

The only driver contributing to changes between the December 2021 and December 2023 estimates for the respective pits is depletion; all other parameters have remained unchanged.

At East Pit, more than 50% of the Indicated 4E Mineral Resource has been depleted (i.e., from 0.15 Moz to 0.07 Moz). This depleted footprint is the shallower Silicate Mineral Resource, which has been drilled quite extensively in the period being reconciled to convert it to an Indicated category. At the time of this current review, the update to the Mineral Resource estimate has not being completed. A 10% decrease is notable for the Indicated Category (i.e., from 1.04 Moz to 0.93 Moz) without any material change in 4E grade. No Measured Mineral Resources exist for the period being reconciled.

14.6.2 Central Underground

Table 14-28 compares the Mineral Resources for December 2021 and December 2023.

Table 14-28: PSM - Central Underground: Mineral Resource Comparison (100% attributable, inclusive basis)

Item	Units	SEDAR TR (Dec. 2021)	This TR (Dec. 2023)	Comments
Indicated Resources				
PUP	(Mt)	1.04	1.04	The only changes to the Mineral Resource are due to the change in the cut-off values applied. For the both reefs the quantum of change is less than the rounding reported
	(Moz 6E)	0.22	0.22	
UG2	(Mt)	15.42	15.42	
	(Moz 6E)	4.32	4.32	
Inferred Resources				The only changes to the Mineral Resource are due to the change in the cut-off values applied. For the both reefs the quantum of change is less than the rounding reported
PUP	(Mt)	1.14	1.14	
	(Moz 6E)	0.29	0.29	
UG2	(Mt)	7.99	7.99	
	(Moz 6E)	2.13	2.13	

1. 4E is shorthand for Pt + Pd + Rh + Au.
2. 1 Troy Ounce = 31.1034768g.

The only change between the December 2021 and December 2023 estimates is the update to the cut-off grade based on the updated techno-economic parameters. For the PUP the cut-off changed from 1.62 g/t 4E to 1.60 g/t 4E, and for the UG2 the cut-off changed from 1.15 g/t 4E to 1.83 g/t 4E. The change in the PUP cut-off grade is immaterial and has a very minor impact on the Mineral Resoruce statement. The change in the UG2 cut-off is much larger, however as observed in Figure 14-32. The UG2 is insensitive to changes in cut-off grade below a value of approximately 3 g/t.

14.6.3 PSM – East Underground

Updates in the Silicate cut-off grades for the MRC and UPR are the only drivers contributing to the changes between the December 2021 and December 2023 estimates. The cut-off grades for the UG2 increased by approximately 80% between the two effective dates; while that of the PUP increased by 40%. However, due their insensitivity to changes in cut-off grade below approximately 4 g/t (as demonstrated in Figure 14-34 and Figure 14-35), their statements remain unchanged for the period being reconciled. There is a decrease of approximately 44% in 4E metal ounces for the combined MRC and UPR (over the Sedibelo East and Magazynskraal footprint) due the changes in cut-off grades for the period under consideration; this has resulted in a 42% increase in average 4E grade.

14.6.4 Kruidfontein

The Mineral Resource statements for the period under review have remained unchanged irrespective of the changes in cut-off grades for the PUP and UG2.

14.6.5 Mphahlele

The Mineral Resource tonnages and contained 4E PGMs quoted on SEDAR at 31 December 2021 are reported as the attributable resource (i.e. 75%) on an inclusive basis (Table 6-13). These values are compared with the Mineral Resources as per this TR as at 31 December 2023 on an inclusive basis in Table 14-29.

Table 14-29: Mphahlele: Mineral Resource Comparison (75% attributable, inclusive basis)

Item	Units	SEDAR TR (Dec. 2021)	This TR (Dec. 2023)	Comments
Measured Resources				
Merensky	(Mt)	0.6	0.6	The only changes to the Mineral Reosurce are due to the change in the cut-off values applied. For the UG2 the quantum of change is less than the rounding reported
	(Moz 4E)	0.08	0.08	
UG2	(Mt)	2.1	2.1	
	(Moz 4E)	0.41	0.41	
Indicated Resources				
Merensky	(Mt)	12.1	12.4	The only changes to the Mineral Reosurce are due to the change in the cut-off values applied. For the UG2 the quantum of change is less than the rounding reported
	(Moz 4E)	1.46	1.45	
UG2	(Mt)	22.0	22.0	
	(Moz 4E)	4.23	4.23	
Inferred Resources				
Merensky	(Mt)	23.3	24.5	The only changes to the Mineral Reosurce are due to the change in the cut-off values applied. For the UG2 the quantum of change is less than the rounding reported
	(Moz 4E)	2.92	2.97	
UG2	(Mt)	25.6	25.6	
	(Moz 4E)	5.04	5.04	

Notes:
1. 4E is shorthand for Pt + Pd + Rh + Au.
2. 1 Troy Ounce = 31.1034768g.

The only change between the December 2021 and 31 December 2023 estimates is the update to the cut-off grade based on the updated techno-economic parameters. For the MR, the cut-off changed from 1.80 g/t 4E to 1.43 g/t 4E, and for the UG2 the cut-off changed from 1.38 g/t 4E to 1.51 g/t 4E.

14.7 Metal or Mineral Equivalents

No metal equivalents are reported.

Summation of the Pt, Pd, Rh and Au is reported as 4E grades of metal quantities, and summation of Pt, Pd, Rh, Au, Ir, and Ru is reported as 6E. This is a simple arithmetic addition and not weighted by relative metal prices.

In cut-off calculations, the revenue from each of these is considered and summed to arrive at a composite grade cut-off value (either 4E or 6E). The metal prices are detailed in Section 19.

15 Mineral Reserve Estimates

Mineral Reserves have been declared for Central and East Underground, as well as for Mphahlele.

There are no Mineral Reserves declared for the Ruighoek, West Pit (TRR), East Pit and Kruidfontein Projects.

15.1 Key Assumptions, Parameters and Methods used to Estimate Mineral Reserves

15.1.1 PSM and Kruidfontein

Ruighoek, West Pit and East Pit

Currently the basket prices do not support Mineral Reserves for open pit mining, since:

- West Pit is depleted, no further mining is envisaged;
- East Pit, where curtailment of extraction operations was implemented due to prevailing economic conditions; and
- Ruighoek, which cannot be mined under current price and cost conditions.

The East Pit and Ruighoek Pit have been included in the PEA economic assessment, to start mining after 2048 when increased basket price projections warrant exploitation. This assumption does not permit these Assets to be included as Mineral Reserves at the Effective Date of this TR.

Retreatment of the historical tailings on the PPM TSF is included in the PEA economic assessment. There is insufficient detail in the mining plan and design criteria for the re-mining of the historical tailings to warrant reporting these as Mineral Reserves.

Central and East Underground Operations

The modifying factors applied in the Mineral Resource to Mineral Reserve conversion and incorporated into the mine design for Central and East Underground are set out in Table 15-1. The project area is diagrammatically illustrated in Figure 16-10. There are two orebodies of economic interest, namely, the UG2 and PUP reefs.

Table 15-1: PSM – Central and East Underground: Modifying Factors

Description	Units	PUP	UG2
Final Planned Mining Cut	(m)	Channel width from model	Channel width from model
Density	(t/m^3)	From model	From model
4E Grade	(g/t)	From model	From model
Geological Losses Known		From model and design	From model and design
Geological Losses Unknown		As per geology	As per geology
Pillar Losses		As per rock engineering	As per rock engineering
Mining Losses	(%)	11.9%	16.5%
Stoping H/W Dilution Density	(t/m^3)	3.1	3.1
Stoping H/W Dilution Grade	(g/t)	0	0
UG2 10 cm FW Density	(t/m^3)	N/A	3.1
UG2 10 cm FW Grade 4E	(g/t)	N/A	0
Stoping F/W Dilution Density	(t/m^3)	2.75	3.0 to 3.1
Stoping F/W Dilution Grade	(g/t)	0	0
F/W +1.5 m Density	(t/m^3)	2.75	3.0 to 3.1
F/W +1.5 m Grade	(g/t)	0	0
F/W +30 m Density	(t/m^3)	2.8	2.8
Stoping Overbreak	(%)	10	7
Stoping in Geological Structures (Waste)	(%)	10% of geological losses	10% of geological losses
Winch Beds, etc.	(%)	1.50	1.50
Cross Tramming	(%)	3	3
Sub Development		230 m development in a raise line of 210 m by 245 m	
Mining Recovery	(%)	94%	96%
Extraction Ratio	(%)	61%	60%

The point of reference for the Mineral Reserves is RoM ore delivered to the RoM pad at PPM's concentrator.

The frequency of dykes and faults results in the mining area being divided into several structural domains, with varying panel lengths, ranging from 14 m to 25 m, and extraction percentages.

Those PUP portions where the interburden between the PUP footwall and UG2 hangingwall is greater than 12 m are available to be mined. All other PUP material was excluded from the mine design.

A crown pillar of 25 m thick was left between the floor of the East Pit and the underground workings of Central Underground.

Magazynskraal Shaft and Kruidfontein Shaft

There are no Mineral Reserves declared for the Kruidfontein Project.

15.1.2 Mphahlele

The MR was excluded from the mine design in the 2020 FS (mining of only UG2 is considered for the Mineral Reserve declaration), for the following reasons:

- A reduced production requirement (only 125 ktpm RoM);
- Lower grades than UG2;
- MR is present in the western portion of the property, absent in the central portion and geologically disturbed in the eastern portion;
- Cut-off grades exclude large portions of reef; and
- The declines and all underground development/infrastructure are in the footwall of the UG2, requiring extensive waste development to access the MR.

The MR is included for evaluation purposes in this PEA, with modifying factors taken from the 2009 FS with a combined production rate of 240 ktpm.

All design and scheduling work was carried using the Datamine Studio 5D Planner and Enhanced Production Scheduler mine planning software packages. The modifying factors applied in the Mineral Resource to Mineral Reserve conversion and incorporated into the mine design are set out in Table 15-2. These parameters are in line with those used on similar mining operations within the BC and are sufficient for a PFS-level engineering study.

Table 15-2: Mphahlele: Modifying Factors

Parameter	Units	UG2 Reef
Final Planned Mining Cut	(m)	Minimum 1.2 m + defined dilution
Density	(t/m^3)	From geology model
4E Grade	(g/t)	From geology model
Geological Losses Known		From model and design
Geological Losses Unknown		15%
Pillar Losses		As per rock engineering
Rib Pillar Extraction Factor		60% (of 63%) of the rib pillars
Stoping Hanginwall Dilution Density	(t/m^3)	2.9
Stoping Hangingwall Dilution Grade	(g/t)	0
Stoping Over-break	(cm)	30
Development Over-break	(%)	7%
Mining Recovery	(%)	95%
Stoping Dilution Block A	(%)	29%
Stoping Dilution Block B	(%)	33%

The geotechnical design criteria used in the mine design for LHOS are set out in Table 15-3. The criteria dictate that 10 m wide rib pillars on-reef will be left *in situ* every 60 m along strike for UG2. Sill pillars are generally left *in situ* at 6 m on dip.

Table 15-3: UG2: Geotechnical Design CriteriaTable

Depth (mbs)	Strike Span (m)	Rib Pillar (m)	Vertical Span (m)	Sill Pillar (m)
100	60	10	42	6
200	60	10	42	6
300	60	10	42	6
400	60	10	42	6
500	60	10	42	6

Provision was made in the mine design for the partial extraction of sill pillars on retreat (Section 16.4.3). The geotechnical assessment for the partial extraction of pillars considered the degree of deformation in the hangingwall and the average pillar stress with increasing pillar extraction. The factor of safety and pillar extraction percentages for different depth ranges are shown in Table 15-4.

Table 15-4: Pillar Extraction based on Factor of Safety with Increasing Depth below Surface

Depth (mbs)	Factor of Safety	Pillar Type	Recommended Pillar Extraction (%)
0 – 300	1.3 – 1.5	Rigid	
300-600	1.2 – 1.3	Yield	
>600	≥0.8	Crush	
200			60
400			50
600			30

The geotechnical considerations placed several restrictions on pillar extraction to ensure this can be done safely:

- Pillar extraction is prohibited within 17.5 m of the decline;
- Pillar extraction cannot be carried out above 100 m below surface, as this would require subsidence evaluation and special exemptions from the DMRE and relevant stakeholders;
- In areas where geological structures are intersected, pillar extraction should not be carried out for 10 m on either side of the structure; and
- Pillar extraction cannot be carried out above or below the rib pillars left between the open stopes.

15.2 Mineral Reserve Estimates

15.2.1 PSM and Kruidfontein

Ruighoek, West Pit and East Pit

There are currently no Mineral Reserve estimates declared for the open pits (refer to Section 15.1.1**).**

East and Central Underground

The combined Mineral Reserves for Central and East Underground as RoM ore delivered to surface at 31 December 2023 are given in Table 15-5.

Only Probable Mineral Reserves have been declared for the PSM Project. The Measured Mineral Resources for the underground operations were converted into Probable Mineral Reserves to reflect the mining confidence and concerns regarding the extent of the geological and structural complexities.

A Proved Reserve implies a very high level of certainty about the short-term mine planning (three to four months) and that any geological disturbances have been identified. For example, an unexpected pothole exposed during underground development, or especially stoping, significantly disrupts the detailed planning schedule.

SRL will only declare Proved Mineral Reserves for an underground operation when the required development to support a mining block has been established and the ore block has been sampled. This is in keeping with other underground mining operations in South Africa. SRK supports this view.

No Inferred Mineral Resources were included in the mine design for purposes of the Mineral Reserve declaration.

Table 15-5: PSM - Central and East Underground: SRK Audited PGM Mineral Reserves as at 31 December 2023

Area	Reef	Tonnage (Mt)	PGM Grade (g/t)								Contained PGMs		Base Metal Grade (%)		Contained Base Metal (t)	
			4E	6E	Pt	Pd	Rh	Ru	Ir	Au	(4E Moz)	(6E Moz)	Ni	Cu	Ni	Cu
Probable Mineral Reserves																
Central Underground	PUP	0.7	4.59	4.90	2.93	1.33	0.16	0.27	0.04	0.17	0.1	0.1	0.14%	0.06%	1.0	0.4
	UG2	12.1	4.77	6.12	2.82	1.36	0.56	0.92	0.43	0.03	1.9	2.4	0.01%	0.00%	1.1	0.2
Total Central Block		**12.8**	**4.76**	**6.05**	**2.83**	**1.35**	**0.54**	**0.89**	**0.41**	**0.04**	**2.0**	**2.5**	**0.02%**	**0.00%**	**2.1**	**0.6**
	6E prill PUP				59.8%	27.1%	3.3%	5.4%	0.9%	3.5%						
	6E prill UG2				46.1%	22.2%	9.2%	15.1%	7.0%	0.5%						
East Underground	PUP	7.1	4.52	4.99	2.84	1.27	0.25	0.40	0.08	0.16	1.0	1.1	0.15%	0.06%	10.4	4.1
	UG2	24.3	4.11	5.08	2.50	1.11	0.49	0.77	0.19	0.01	3.2	4.0	0.01%	0.00%	2.9	0.7
Total East Block		**31.4**	**4.21**	**5.06**	**2.58**	**1.14**	**0.44**	**0.69**	**0.17**	**0.05**	**4.3**	**5.1**	**0.04%**	**0.02%**	**13.2**	**4.8**
	6E prill PUP				56.9%	25.5%	5.0%	8.0%	1.6%	3.1%						
	6E prill UG2				49.3%	21.8%	9.7%	15.2%	3.8%	0.3%						
Total Underground	PUP	7.8	4.52	4.99	2.85	1.28	0.24	0.39	0.07	0.16	1.1	1.2	0.15%	0.06%	11.3	4.5
	UG2	36.4	4.33	5.42	2.61	1.19	0.52	0.82	0.27	0.02	5.1	6.3	0.01%	0.00%	4.0	0.9
Total Probable Mineral Reserves		**44.2**	**4.37**	**5.35**	**2.65**	**1.20**	**0.47**	**0.74**	**0.24**	**0.04**	**6.2**	**7.6**	**0.03%**	**0.01%**	**15.3**	**5.4**

Notes:

1. Mineral Reserves are reported as RoM ore delivered to the surface.
2. Mineral Reserves are based on various modifying factors and assumptions and may need to be revised if any of these factors and/or assumptions change.
3. Mineral Reserves should not be interpreted as assurances of economic life.
4. Mineral Reserves are reported at cut-off RoM grades of 2.68 g/t 4E and 2.79 g/t 4E for the UG2 and PUP, respectively. These are based on 4E basket prices of USD2 167/oz and USD2 087/oz and plant recoveries of 85% for both the UG2 and PUP reefs.
5. 1 Troy Ounce = 31.1034768g.
6. Numbers in the table have been rounded to reflect the accuracy of the estimate and may not sum due to rounding.

15.2.2 Mphahlele

The declared Mineral Reserves for Mphahlele as at 31 December 2023, reported as RoM ore delivered to the surface crusher, attributable to SRL, are set out in Table 15-6.

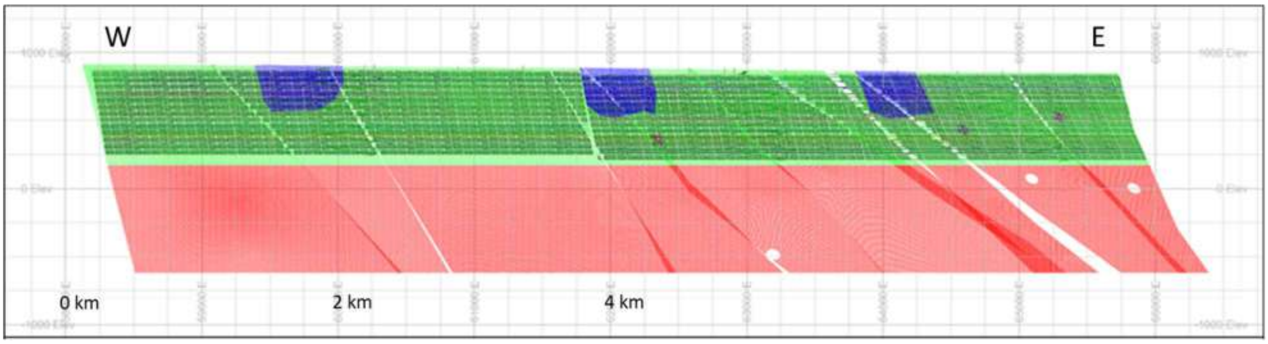
Only Probable Mineral Reserves have been declared for Mphahlele.

A Proved Reserve implies a very high level of certainty about the short-term mine planning (three to four months) and that any geological disturbances have been identified. For example, an unexpected pothole exposed during development, or especially stoping, significantly disrupts the detailed planning schedule.

SRL will only declare Proved Mineral Reserves for an underground operation when the required development to support a mining block has been established and the ore block has been sampled. This is in keeping with other underground mining operations in South Africa. SRK supports this view.

No Inferred Mineral Resources were included in the mine design.

The "hatched areas" in Figure 15-1 illustrate the extent of the mine design over the entire strike length of the Mphahlele deposit (Blocks A and B) and the portion of Mineral Resources down to 600 mbs converted to Mineral Reserves as part of the 2020 FS.



srk consulting	**SRL Total Asset PEA** Portion of UG2 Mineral Resources converted to Mineral Reserves [red – Inferred; green – Indicated; blue – Measured] (Combined mining Blocks A and B, viewed perpendicular to reef looking approximately north-northwest) [source: SRK, 2020c]	Project No. 600322

Figure 15-1: Portion of UG2 Mineral Resources converted to Mineral Reserves

Table 15-6: Mphahle:SRK Audited PGM Mineral Reserves as at 31 December 2023 (attributable to SRL)

Area	Reef	Tonnage (Mt)	PGM Grade (g/t)								Contained PGM		Base Metal Grade (%)		Contained Base Metal (kt)	
			4E	6E	Pt	Pd	Rh	Ru	Ir	Au	(4E Moz)	(6E Moz)	Ni	Cu	Ni	Cu
Probable Mineral Reserves																
Mphahlele	UG2	22.7	.63	4.36	1.85	1.39	0.32	0.59	0.13	0.07	2.68	3.18	0.09%	0.05%	20.0	11.4
Total Mphahlele		**22.**	**3.63**	**4.36**	**1.85**	**1.39**	**0.32**	**0.59**	**0.13**	**0.07**	**2.68**	**3.18**	**0.09%**	**0.05%**	**20.0**	**11.4**
6E Prill					42.5%	32.0%	7.4%	13.6%	3.0%	1.6%						

Notes:
1. Mineral Reserves, as RoM ore delivered to the surface crusher, are reported on an attributable basis, with only the 75% attributable to SRL included.
2. Mineral Reserves are based on various modifying factors and assumptions and may need to be revised if any of these factors and/or assumptions change.
3. Mineral Reserves should not be interpreted as assurances of economic life.
4. Mineral Reserves are reported at a cut-off grade of 2.06 g/t 4E based on a 4E basket price of USD1 891/oz and a plant recovery of 83.2%.
5. 1 Troy Ounce = 31.1034768g.
6. Numbers in the table have been rounded to reflect the accuracy of the estimate and may not sum due to rounding.

15.3 Cut-off Grade Calculations

15.3.1 PSM and Kruidfontein

Ruighoek, West Pit and East Pit

Cut-off grades (CoGs) for the open pits were not determined, as the entire reef package is mined in the open pit.

There are no Mineral Reserves declared for these projects (see Section 15.1.1).

Central and East Underground

The CoG calculation is used to determine which areas of each reef can be profitably mined. The unprofitable areas are filtered out from the geological block model and no mine design is applied in these areas. The calculation excludes all Capex and only takes account of estimated Opex. Mining in areas that are below the CoG would destroy value. The cut-off grade calculations for the underground mine design were re-assessed using Opex and parameters as defined in this TR (Table 15-7). The metal prices and ZAR:USD exchange rate shown are the projected values in 2029 as provided by SFA (2023).

Table 15-7: PSM – Central and East Underground: Cut-off Calculation Parameters applied in Mine Design

Parameter	Units	Central Underground		East Underground	
		UG2	PUP	UG2	PUP
Metal Prices (4E)					
Pt	(USD/oz)	2 667	2 667	2 667	2 667
Pd	(USD/oz)	533	533	533	533
Rh	(USD/oz)	3 557	3 557	3 557	3 557
Au	(USD/oz)	1 458	1 458	1 458	1 458
Mining and Metallurgical Factors					
Net Smelter Return	(%)	92.4	92.4	80.0	80.0
Concentrator Recoveries	(%)	85	85	83.0	83.0
Mining Recovery	(%)	97.0	97.0	97.0	97.0
Mine Call Factor	(%)	97.0	97.0	97.0	97.0
Costs					
Mining Cost	(R/t)	1 468	1 468	1 126	1 126
Ore Transport	(R/t)			19	19
Concentrator	(R/t)	386	386	441	441
Concentrate Transport				2.6	2.6
Smelter and Refining Opex (including Kell)	(R/t)	186	186	161.2	161.2
Subtotal	*(R/t)*	*2 040*	*2 040*	*1 750*	*1 750*
G&A+SLP	(R/t)			465	465
Total Opex Cost	(R/t)	**2 040**	**2 040**	***2 215***	***2 215***
Exchange Rate	(ZAR/USD)	**18.09**	**18.09**	**18.09**	**18.09**
Prill Split					
Pt	(%)	61	65	61	64
Pd	(%)	27	29	28	27
Rh	(%)	11	5	11	5
Au	(%)	0	4		3
Cut-off Grade (4E)	**(g/t)**	**2.06**	**2.10**	**2.68**	**2.80**

Note:
1. G&A General and Administration Cost
2. SLP Social and Labour Plan Cost

The grade plot shows that almost the entire UG2 and PUP orebodies would be mined as the *in situ* grades are higher than the CoGs. The CoGs are 2.1 g/t 4E for both the UG2 and PUP for Central Underground and 2.7 g/t 4E and 2.8 g/t 4E for the UG2 and PUP in East Underground, respectively.

Kruidfontein

A CoG calculation for Mineral Reserves is not necessary, since no Mineral Reserves are reported.

15.3.2 Mphahlele

The CoG calculations for both the shafts and decline mine designs were re assessed using Opex and parameters as defined in this TR (Table 15-8). The metal prices and ZAR:USD exchange rate shown are the projected values in 2029 as provided by SFA (2023).

Table 15-8: Mphahlele: Cut-off Calculation Parameters applied in Mine Design

Parameter	Units	Shafts UG2	Shafts MR	Declines UG2	Declines MR
Metal Prices (4E)					
Pt	(USD/oz)	2 667	2 667	2 667	2 667
Pd	(USD/oz)	533	533	533	533
Rh	(USD/oz)	3 557	3 557	3 557	3 557
Au	(USD/oz)	1 458	1 458	1 458	1 458
Mining and Metallurgical Factors					
Net Smelter Return	(%)	93.6%	95.6%	93.6%	95.6%
Concentrator Recoveries	(%)	83.2%	87.0%	83.2%	87.0%
Mining Recovery	(%)	97.0%	97.0%	97.0%	97.0%
MCF	(%)	97.0%	97.0%	97.0%	97.0%
Costs					
Mining Cost	(R/t)	1 643.0	1 643.0	1 077.0	1 077.0
Rados	(R/t)	6.0	6.0	6.0	6.0
Concentrator	(R/t)	415.0	415.0	491.0	491.0
Smelting and Refining Opex (Including Kell)	(R/t)	172.5	172.5	172.5	172.5
Subtotal	*(R/t)*	*2 236*	*2 236*	*1 746*	*1 746*
G&A+SLP	(R/t)	0	0	0	0
Total Opex Cost	**(R/t)**	**2 236**	**2 236**	**1 746**	**1 746**
Exchange Rate	(ZAR/USD)	18.1	18.1	18.1	18.1
Prill split					
Pt	(%)	50.0	55.0	50.0	55.00
Pd	(%)	39.0	33.0	39.0	33.00
Rh	(%)	9.0	3.0	9.0	3.00
Au	(%)	2.0	9.0	2.0	9.00
Cut-off Grade (4E)	**(g/t)**	**2.6**	**2.5**	**2.1**	**1.9**

The scheduled ore is above the CoG and is value-adding.

15.4 Mineral Reserve Classification Criteria

15.4.1 PSM and Kruidfontein

East and Central Underground

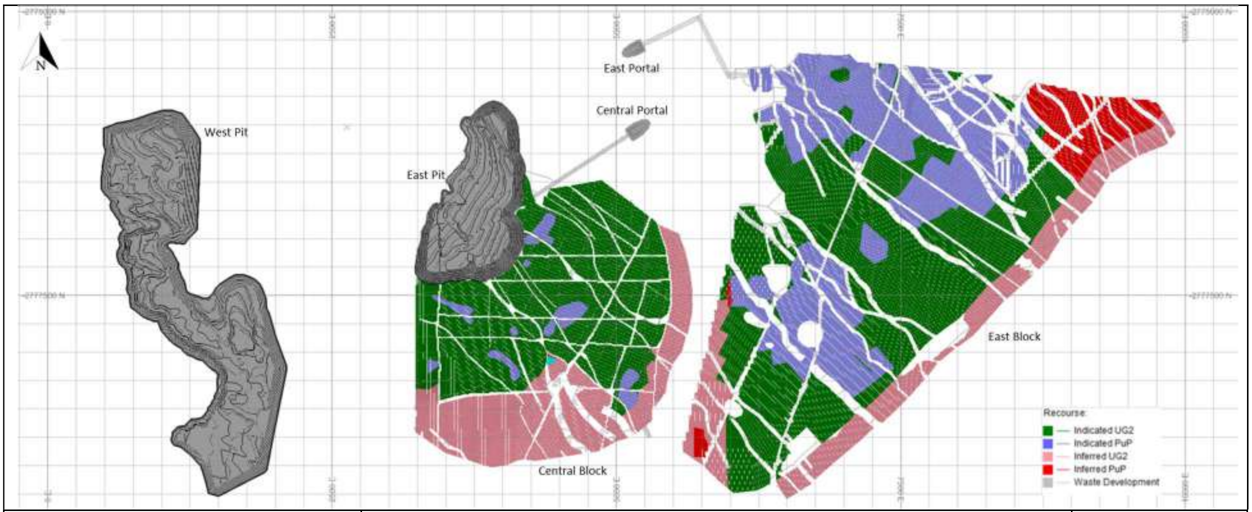
The UG2 and PUP Mineral Resource classification is presented in Figure 15-2. The dyke and fault losses are not shown but were taken into consideration during the mine design process.

No Inferred Mineral Resources were included in the mine design.

The PUP resource in Central Underground is limited to small, scattered areas throughout the block and is not as widespread and concentrated as in East Underground.

Only Probable Mineral Reserves have been declared for Central and East Underground. The Measured Mineral Resources in East Underground were converted to Probable Mineral Reserves due to the uncertainty around short-term mine planning, the ability to achieve the production and development targets and concerns regarding the extent of sympathetic faults and dykes parallel to the major structural features identified in the geophysical surveys. Since a Proved Reserve classification implies a very high level of certainty, it is more appropriate to classify these reserves as Probable.

SRL will only declare Proved Mineral Reserves for an underground operation when the required development to support a mining block has been established and the ore block has been sampled. This is in keeping with other underground mining operations in South Africa. SRK supports this view.



srk consulting	**SRL Total Asset PEA** PSM - Central and East Underground: Resource Classification [source: SMS, 2024; SRL]	Project No. 600322

Figure 15-2: PSM - Central and East Underground: Resource Classification

The Inferred Mineral Resources have been included in the mine design and LoM production schedule for the purposes of the PEA to illustrate upside potential. The Inferred Mineral Resources have, however, not been included in the declared Mineral Reserve.

15.4.2 Mphahlele

All Mineral Reserves for Mphahlele have been classified in the Probable category.

All Indicated Mineral Resources were converted to Probable Mineral Reserves. Measured Mineral Resources were converted to Probable Mineral Reserves to reflect the mining confidence.

A Proved Reserve implies a very high level of certainty about the short-term mine planning (three to four months) and any geological disturbances have been identified. For example, an unexpected pothole exposed during development, or especially during stoping, throws the detailed planning schedule out significantly.

SRL will only declare Proved Mineral Reserves for an underground operation when the required development to support a mining block has been established and the ore block has been sampled. This is in keeping with other underground mining operations in South Africa. SRK supports this view.

No Inferred Mineral Resources were included in the mine design.

15.5 Metal or Mineral Equivalents

The Mineral Reserves are not reported as a metal- or mineral-equivalent grade, which is defined as a single equivalent grade of one major metal.

Summation of the Pt, Pd, Rh and Au is reported as 4E grades of metal quantities, and summation of Pt, Pd, Rh, Au, Ir, and Ru is reported as 6E. This is a simple arithmetic summation of individual grades, which have not been weighted by respective metal prices.

15.6 Risk Factors to Mineral Reserve Estimates and Modifying Factors

15.6.1 PSM and Kruidfontein

Central and East Underground

- The conversion of Indicated Mineral Resource categories to Mineral Reserves complies with the requirements of the SAMREC Code. The estimated Mineral Reserves are based on a comprehensive LoM plan and represent what can be economically mined in practice;
- The mine design and scheduling have been conducted with reasonable care and conform to best practice standards;
- SRK concurs with the conventional up- and down-dip mining method selected for the PUP and the UG2 and believes it is appropriate for the orebody characteristics. The planned production rate is based on sound

planning parameters and modifying factors, which consider the characteristics of the orebody and operational constraints;

- The trackless development in the haulages and crosscuts will enable achievement of the development rates and facilitate the opening up of the half levels on the levels; and
- The ventilation design concludes that total ventilation quantities of 500 m^3/s and 650 m^3/s for Central and East Underground, respectively, would be required, which is premised on a ventilation rate of 0.06 m^3/s/kW. This assumes that Tier 4 diesel engines and 10 ppm fuel will be available to keep emission levels below 0.16 mg/m^3 when the project commences. When mining is required at rock temperatures in excess of 35.0ºC, ventilation for removal of heat generated from diesel machinery is as important as ventilation for diesel emission dilution.

Kruidfontein

There is no guarantee that the Company will be able to secure the surface rights required to develop and exploit the Kruidfontein Project.

There is no guarantee that all permits and authorisations required to develop the Kruidfontein Project will be forthcoming.

15.6.2 Mphahlele

The mine layouts based on the geotechnical design criteria in Table 15-3 are subject to certain precautions:

- Sill pillar sizes should be reviewed for the deeper sections of the mine to ensure stability can be maintained;
- Abutment effects, resulting from unmined ground and bracket pillars, are not accounted for in the current design and could result in some optimization. This will, however, require confirmation during future studies;
- Island pillars can be left in-stope as an operational control where stability concerns are identified. This will significantly reduce the hydraulic radius of the stope and assist with maintaining stability;
- A numerical analysis should be included in subsequent studies to validate the design criteria;
- While an average stoping dilution of around 30% has been allowed for, this could increase due to unknown geological disturbances such a minor faults and potholes; and
- The LHOS mining method has not been used widely in South Africa before. It was run on a trial basis at the Voorspoed mine to the west of Mphahlele more than ten years ago. Availability of skills for this mining method may be limited. SRL would be advised to set up programmes to train suitable operators, particularly given the accurate drilling required to control dilution.

16 Mining Methods

16.1 Geotechnical Parameters Relevant to Mine Designs

16.1.1 Ruighoek

Ground conditions interpreted from the geotechnical drill holes are judged to range from “very poor” to “very good” quality when considering future wall stability.

The “very poor” quality ground conditions are interpreted to occur within the completely weathered and highly weathered rocks encountered above the “base of complete oxididation” (BOCO) contact. The conditions reflect the lower intact rock strength and clay-rich defects present within rocks with these weathering conditions.

The underlying moderately weathered rocks occurring between the BOCO and the “top of fresh rock” (TOFR) range locally from “very poor” to “good” quality, with Rock Quality Designation (RQD) values ranging from zero to around 90%. They are judged to be of overall “poor” to borderline “fair” quality, reflecting an increased intact rock strengths (with respect to the highly weathered rocks) and average RQD values measured from all drill holes of approximately 45%.

Fresh (unweathered) rocks occurring below the TOFR are judged to be of “very good” quality in the main. These conditions reflect primarily on the high intact rock strengths and wider defect (joint) spacings (RQD values measured from fresh rock cores in all drill holes very commonly exceed 90%), with fracture frequencies commonly in the order of two per metre or less.

Locally, poorer quality rock zones associated with faulting or shearing occur in fresh rock. Examples of poorer quality rock associated with more fractured zones were encountered in drill hole GTRH03 between inclined depths of 46 m and 47 m around 92 m and 94 m, and 152 m and 153 m; and in drill hole GTRH06 at an inclined depth of around 84.5 m. Syenite dyke contacts encountered in drill hole GTRH01 are “tight” and show no evidence of “broken” (faulted) rock.

Geological Strength Index values for the “mining package” rocks and syenite dyke exhibiting various rock weathering grades have been assessed as ranging from approximately 20 to 30 for the weathered rocks occurring above the TOFR, and between 50 and 75 for the fresh rocks located outside faulted zones below the TOFR.

Pit wall design parameters considered suitable for use in open pit mining at Ruighoek have been based on:

- The results obtained from the Mining Rock Mass Rating (MRMR) rock classification system applied to geological conditions inferred from the drill hole cores;
- The results of kinematic stability assessments; and
- Experience with wall stability in pits of similar depth, mined in “hard rock” conditions elsewhere.

The recommended “base case” wall design parameters for the eastern highwalls, and northern and southern sidewalls are shown in Figure 16-1.

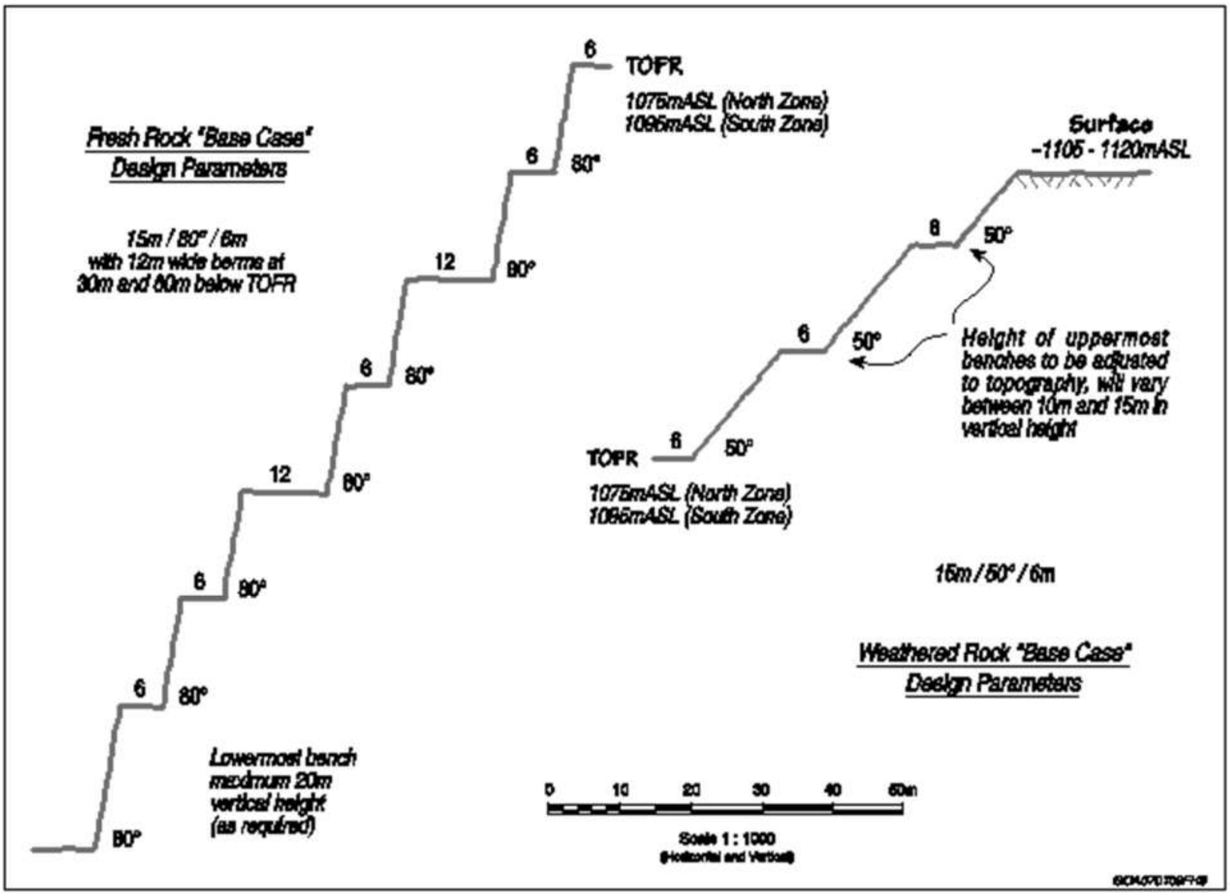
Within “weathered rock” zones, 10 m and 15 m vertical height benches, mined at face angles of 50°, separated by 6 m wide berms are recommended. The maximum vertical height of the uppermost bench, mined predominantly in soil and completely to highly weathered rock, would ideally be limited to 10 m.

Within “fresh rock”, the recommended design is based on a series of 15 m vertical height benches, mined at face angles of 80°, separated by 6 m wide berms. Twelve metre wide (double width) berms should be mined at depths of 30 m and 60 m below the TOFR contact (assumed to be at 1 075 mamsl and 1 095 mamsl in the northern and southern zones, respectively) as an aid to reducing the impact on mining activities of possible future rockfall events. If required, the vertical height of the lowermost bench face may be increased to 20 m.

Mining to these “base case” wall design parameters within a 110 m vertical height fresh rock slope, for example, yields a local toe-to-crest wall angle of around 58.5°.

The “base case” design parameters for the weathered and fresh rock zones have been supplied in a generalised form as variations in surface topography, depths of rock weathering and likely mining depths make it impossible to provide a “standardised” design applicable to all walls.

It must be stressed that amendments will be required (and must be allowed for) to the local wall designs prepared using the aforementioned parameters, as a result of variations in rock weathering depths (and hence rock competency) encountered in mining.



srk consulting	**SRL Total Assets PEA** Ruighoek: "Base Case" Wall Design Parameters for Weathered and Fresh Rock Zones in the Hangingwall	Project No. 600322

Figure 16-1: Ruighoek: "Base Case" Wall Design Parameters for Weathered and Fresh Rock Zones in the Hangingwall

The following points must be noted with respect to the wall design recommendations:

- The designs within the fresh rock slopes are considered to be moderately aggressive;
- The design parameters provided in this report must be regarded as "base case" designs. They have been prepared from interpreted geological and structural geological conditions from a limited number of drill holes drilled in rocks displaying inferred complex structural geological and erratic rock weathering conditions;
- Pit wall mapping, rock defect surveys and wall stability monitoring must be carried out in the pits as soon as mining activities permit, and data analysed on an ongoing basis;
- Results obtained from this observational approach, will allow the influence of geological and geotechnical parameters on the stability of all walls to be more accurately assessed, and design changes (localised wall steepening or shallowing) to be implemented, if required;
- More detailed subdivision of the pit walls into further geotechnical domains or sub-domains should also be possible following interpretation of future wall mapping results;
- Wall stability reviews should be initiated once mining has reached a depth of around 25 m below natural ground surface and at regular (say 30 m depth increments) thereafter;
- A Ground Control Management Plan, the contents of which will provide more detailed recommendations on pit wall mapping and slope stability monitoring methods, will be prepared once mining commences and ground condition quality variations can be more accurately assessed;

- Part-bench scale, rock defect controlled “drop-outs” and wall failures, and rockfalls, must be expected when mining in the “blocky” and “wedgy” ground in all walls. In particular, “breakbacks” to subvertically inclined geological structures in bench faces, and crest loss on berms along moderately steep dipping geological structures, must be expected during final bench face digging. It is anticipated that “saw tooth” shape bench faces will be formed;
- The “stack design” concept (utilising “wide berms” mined at depths of 30 m and 60 m below the TOFR) used in the recommended highwall and sidewall designs aims to minimise the potential detrimental influence of part-bench scale wall failures and rockfalls on the safety of personnel and equipment operating in the pit;
- The impact on mining of future and ongoing rockfall occurrences may be reduced by ensuring overall wall angle design parameters are maintained (ie, berm crests are mined to design), walls are carefully scaled during digging of final profiles, and ground conditions and local wall stability are closely monitored;
- Good quality blasting and digging practices (causing minimal blast disturbance to final walls and minimising undercuts of bench faces) will need to be carried out consistently over the life of the project in order that wall stability performance adequate for mining purposes can be maintained, and rockfall hazards be reduced;
- The recommended pit wall designs assume that all walls will be substantially dewatered (and hence depressurised) as mining proceeds;
- The presence of undissipated groundwater pressures within the planned highwall and sidewall would be expected to increase the likelihood of wall failures taking place along geological structures;
- Drilling of sub-horizontal wall depressurisation holes may be required to maintain wall stability adequate for mining purposes where “wet” ground conditions are encountered. Design of sub-horizontal depressurisation holes can only be carried out following inspection of the walls as these are mined; and
- Wall designs are for unreinforced slopes.

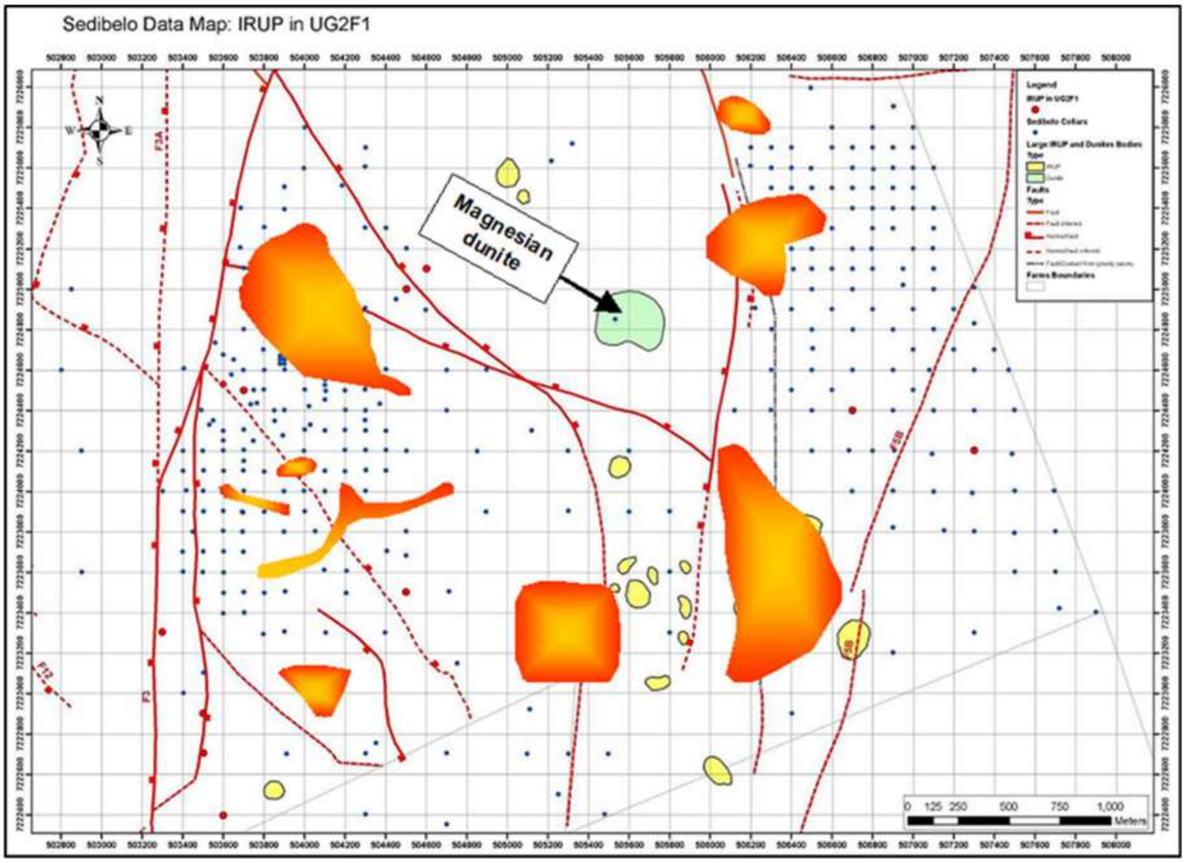
16.1.2 PSM above 700 m below Surface

Geotechnical data acquisition occurred between 2006 and 2011 which comprised logging of unoriented core, rock strength testing and downhole geophysical surveys, which is considered suitable for a PFS level of accuracy. There were 125 drill holes drilled across the PSM Project area, with diameters of HQ size or NQ size. Nineteen of the drill holes were surveyed using the Acoustic Televiewer Probe to supplement the database with discontinuity orientation data. Figure 16-2 shows the drill hole locations (blue circles), faults (red lines) and dunite and IRUP intrusions (orange shaded areas).

Core recoveries were above average and acceptable logging standards were followed by suitably qualified personnel. Core was geotechnically logged from the Merensky hangingwall pyroxenite (10 m above MR) to the UG2 footwall pyroxenite (5 m – 10 m into the UG2 footwall). Basic parameters were recorded which allowed for the derivation of rock mass classifications, Q Index and RMR. Logging intervals generally ranged between 3 m and 6 m with minor instances (<8% of the data) where intervals were less than 2 m in length.

The rock testing programme consisted of 240 uniaxial compressive strength (UCS) tests and 25 triaxial compressive strength (TCS) tests across the significant lithologies. Tests were performed by The University of Witwatersrand in 2006 and by Rocklab in 2010 and 2011. Both facilities are accredited and reputable with tests being conducted according to the industry accepted International Society for Rock Mechanics (ISRM) suggested methods. A summary of the UCS results for East and Central Underground is provided in Table 16-1 and

Table 16-2, respectively. The average Young’s Modulus secant values ranged from 40 Gpa to 150 Gpa, while average Poisson’s ratio secant values ranged from 0.21 to 0.33, depending on the rock type. The test results indicate values that are representative of typical rock strengths found in the BC.



srk consulting	**SRL Total Assets PEA** PSM – Central and east Underground: Plan View of Drill Hole Locations	Project No. 600322

Figure 16-2: PSM - Central and East Underground: Plan View of Drill Hole Locations

Table 16-1: PSM - East Underground: Summary of Rock Strengths

Lithological Unit	Rock Type	UCS (Mpa)			
		Average	Minimum	Maximum	Standard Deviation
BH1	Norite	202.68	133.51	250.79	41.40
BH2	Anorthosite	156.55	102.40	210.43	40.66
BH3	Mottled Anorthosite	185.53	114.06	243.96	45.23
BR2	Feldspathic Pyroxenite	146.92	20.48	203.45	59.13
MRH1	Anorthosite	122.68	49.57	201.41	44.57
PRHZB	Harzburgite	133.22	39.75	204.57	35.85
LPR2	Olivine Pyroxenite	104.76	24.68	154.71	28.50
U2H2	Pyroxenite	145.51	64.09	201.00	54.85
U2H3	Feldspathic Pyroxenite	164.71	101.10	207.11	30.41
U2H2A	Olivine Pyroxenite	170.48	86.76	244.14	39.61
U2	Chromitite	73.71	11.81	149.04	32.92
U2PEG	Pegmatite	140.91	123.53	168.72	19.09
U1F2	Norite	181.14	95.47	223.79	36.82

Table 16-2: PSM - Central Underground: Summary of Rock Strengths

Lithological Unit	UCS (Mpa)			
	Average	Minimum	Maximum	Standard Deviation
Merensky Hangingwall	162.08	129.72	194.44	32.36
Pseudo Reef	77.95	46.10	109.80	31.85
Tarentaal	145.09	99.41	190.77	45.68
Merensky ootwall	173.02	141.21	204.83	31.81
UG2 Hangingwall	173.61	125.93	221.29	47.68
UG2	87.61	61.18	114.04	26.43
UG2 Footwall	172.06	133.43	210.69	38.63

The orebody is intersected by numerous dykes and major faults which have been interpreted from the magnetics and drill hole database. While the throw on these features appears to be minimal, the combined frequency of dykes and faults divides the mining area into smaller blocks complicating the mine design and access methodology to the reef horizons, hence the introduction of a down-dip mining method. The hangingwall of the Pothole reef (PUP) is traversed by four joint sets and the UG2 by five with the sporadic occurrence of a low angled joint set on both horizons. Blocky rock mass conditions are expected as Q ratings range between poor to fair (Q range 1 – 5). The vertical middling between the PUP footwall and UG2 hangingwall varies between 10 m and 24 m, with only those PUP portions where the inter burden is greater than 12 m being mineable.

The underground geotechnical aspects comprised designs of the mine accesses, crown pillar, stoping and support. The design process employed mainly empirical and analytical techniques, as well as numerical modelling investigations to a lesser extent. Findings from previous studies indicate that the PSM Project is robust and no significant concerns were identified.

A 25 m thick crown pillar is to be left between the pit floor and underground workings at Central Block. The original position of the East boxcut was changed so that major dyke intersections within the boxcut and the first leg of the decline would be avoided. Construction of the East Portal has been completed and the Central boxcut is scheduled to commence in January 2024.

Good and poor ground control districts have been identified based on rock mass ratings for both UG2 and PUP conditions. Maximum panel lengths of 23 m and 17 m are permissible for good and poor ground conditions, respectively. Mining of the PUP is restricted to areas where the interburden between the PUP and UG2 exceeds 12 m and pillars are superimposed to ensure the stability of the beam between the UG2 and PUP reefs. Multi-reef mining in areas where the interburden is less than 12 m may not be possible without the use of backfill.

A concept level support strategy for tunnels and stopes in Central and East Underground are shown in Table 16-3 and Table 16-4, respectively.

Table 16-3: Bolting Strategy in Horizontal Development

Area	Q	ESR	Bolt length sides (m)	Bolt length roof (m)	Bolt spacing (m)
Central East	Good	1.6	1.8	1.6	1.5
Central East	Poor	1.6	1.8	2.8	1.0

Note:
1. Q Barton's Q Rock Mass Rating System
2. ESR Excavation Support Ratio

Table 16-4: Stope Support Strategy

Support type	Area of application	Purpose
Timber elongates/3-pole clusters	Stopes	Support 1.5-2.0 m of hangingwall and prevention of cantilever of feldspathic pyroxenite
Grout packs	Stopes	Support of total interburden between UG2 and PUP
0.9 m hydrabolts	Stopes	Beam building of reef parallel parting in PUP and support of the Leader and sills in the UG2
2.2 m bolts	Gullies and drives	Pinning beyond layers to build self-supporting beam
W-straps and OSRO straps	Gullies and drives	Areal coverage in blocky ground conditions
3.5 m cable anchors	Raises/ tunnels	Support of up to 3 m high wedges /secondary support

Sufficient provision for ground control monitoring should be allowed for in the implementation plan, especially after the recent change in mining method to a down-dip layout.

Due to the complex influence that selective mining of the PUP will have on the UG2 horizon coupled with the extreme blockiness of the rock mass created by the intersection of joints, rock falls would dominate project risks. Hangingwall overbreak in down-dip mining is also a practical problem that can be expected.

Additional geotechnical work should be carried out before the implementation phase commences, which would include:

- Directional, orientated drilling along the line of the decline development to validate structural orientation and design rock mass data;

- Detailed portal slope engineering designs, with their associated risk management programmes, such as slope stability monitoring and depressurisation;
- Review and optimization of spans and pillar designs by numerical modelling based on additional data gathered;
- Update of detailed cost estimates to improve accuracy and source current cost quantities;
- Update to the conceptual stope support strategy considering the down-dip mining layout; and
- Detailed numerical modelling for support of sills within the first 2-10 m into the hanging-wall of the UG2.

16.1.3 PSM and Kruidfontein below 700 m below Surface

No geotechnical studies particular to the deeper PSM and Kruidfontein project areas were available for review, however, geological, structural, rock mass and hydrogeological conditions are expected to be similar to those of the neighbouring project areas. Geotechnical work was carried out on the shallower sections (surface to 700 mbs) of the PSM property at a PFS level of accuracy, from which geotechnical parameters were extended to include the deeper sections of the deposit or modified to reflect typical expected geotechnical character. This introduces some level of uncertainty and confirmatory drilling and testing should be carried out during PFS and FS stages to address potential risks. Conceptual geotechnical design aspects and parameters are tabulated in Table 16-5, and support strategies for development excavations, stoping excavations and the vertical shaft provided in Table 16-6, Table 16-7 and Table 16-8, respectively.

Table 16-5: Geotechnical Design Aspects and Criteria

Criteria Description	Value or Description	Design Basis
Spacing between Declines (skin to skin)	≥ 20.0 m	Pillar FoS >1.5
Shaft Pillar	900 m diameter	Budavari (1986) Analytical shaft pillar radius
Horizontal Footwall Development	25 m below UG2 bottom contact	Typical industry practice
Seismicity	Neighboring operations experience seismicity from depth approximately 950 m	Excavation geometries and support cater for ground motion
Single-reef Mining Spans (UG2)	≤ 25.0 m	Rock mass rating
Multi-reef Mining Spans (10 – 20 m middling)	14.0 m	Rock mass rating
Multi-reef Mining Spans (>20 m middling)	≤ 25.0 m	Rock mass rating
Regional Pillar Losses (Single reef)	10.00%	Width: height ratio ≥ 10

Table 16-6: Development Support Strategy

Area	ESR	Bolt Length (m)	Bolt Spacing (m)	Additional support
Decline / Horizontal development	1.6	2.2	1.5 – 2.0	May include shotcrete / cable anchors depending on specific conditions
Capital excavations	1.6	2.2	1.5 – 2.0	Unreinforced shotcrete (25 mm flash coat after blast, 50 mm after cleaning)

Note:
1. ESR Excavation Support Ratio

Table 16-7: Stope Support System

Support type	Area of Application	Purpose
Timber Elongates	Stopes	Support 1.5-2.0 m of hangingwall and prevention of cantilever of feldspathic pyroxenite
Grout Packs	Stopes	Support of total interburden between UG2 and PUP
0.9 m Hydrabolts	Stopes	Beam building of reef parallel parting in PUP and support of the Leader and sills in the UG2
2.2 m bolts	Gullies and drives	Pinning beyond layers to build self-supporting beam
W-straps and OSRO straps	Gullies and drives	Areal coverage in blocky ground conditions
3.5 m cable anchors	Raises/ tunnels	Support of up to 3 m high wedges /secondary support
Backfill	Stopes deeper 1 000 m	Maintains middling and regional stability

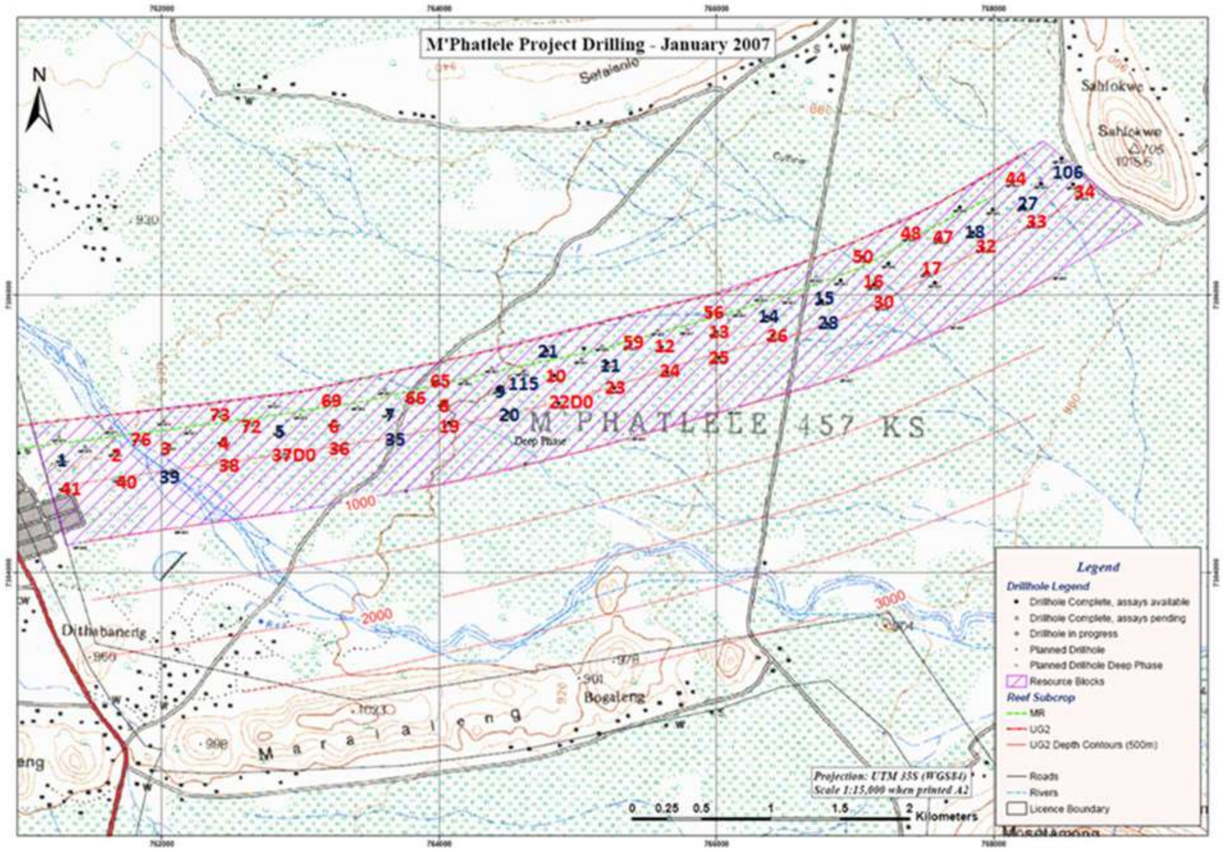
Table 16-8: Vertical Shaft Support Measures

Depth (m)	Support Measures	Sinking Measures
0 – 40	Ground consolidation through grout injection at least 20 m ahead of the face. Application of shotcrete between the curb ring and shaft bottom incorporated into the primary support cycle. Installation of cable anchors as a secondary support application prior to drilling the shaft bottom.	Sinking rates are estimated at 1.2 m per day within a 3-shift per day cycle.
40 – 1500	Curb ring placed 30 m from the bottom of the shaft. Approximately 300 mm thick concrete lining with strength of 30Mpa. 1.2 m split sets used a temporary support. 2.4 m grouted rebars placed in a 2.0 m square pattern.	Sinking rates are estimated at 4.2 m per day
1 500 – 1 900	Curb ring placed 30 m from the bottom of the shaft. Appr oximately 50 mm shotcrete between the curb ring at the bottom. Approximately 300 mm thick concrete lining with strength of 30 Mpa. 1.2 m split sets used a temporary support. 2.4 m grouted rebars placed in a 2.0 m square pattern.	Sinking rates are estimated at 2.4 m per day

16.1.4 Mphahlele

The geotechnical investigation for shallower mining areas at Mphahlele was completed in 2009 based on logging of core from vertical drillholes and laboratory strength testing, to determine the expected geotechnical conditions and provide mine design criteria. An assessment of the available information indicated that the data was of quality to be suitable for a prefeasibility study in the shallower sections (<600 mbs). Geotechnical parameters were once again extrapolated to reflect typical conditions at depth (600 – 1 200 mbs). The core from 53 drill holes evenly spread across the mining area (Figure 16-3) were geotechnically logged from 20 m above to 20 m below the reef horizon. An acceptable logging procedure was employed with parameters such as drilling interval, geological unit, joint surface condition, core recoveries, weathering and fracture frequency being recorded, from which rock mass classifications and support requirements for the off-reef and access developments were derived. Twenty of the 53 holes were selected for logging of the immediate 5 m above and below the top and bottom reef contacts using Barton’s Q Rock Mass Rating System (Q). This dataset was used specifically for the stope stability analysis.

Uniaxial Compressive Strength (UCS) tests with the unit weight, Young’s modulus € and Poisson’s ratio (v) were carried out at the University of the Witwatersrand Rock Mechanics Laboratory according to the International Society of Rock Mechanics suggested methods on representative sections of intact core. A total of 44 samples were tested from critical lithologies, which were well spread across the property and the results exclude samples that had failed along discontinuities or created a sampling bias. A summary of the laboratory test results per domain is presented in Table 16-9 which is representative of typical rock strengths from the eastern limb of the BC.



srk consulting	**SRL Total Assets PEA** Mphahlele: Plan View of Geotechnically Logged Drill Hole Locations [source: SRK, 2020]	Project No. 600322

Figure 16-3: Mphahlele: Plan View of Geotechnically Logged Drill Hole Locations

Table 16-9: Summary of Laboratory Test Results

Domain	Number of Samples	Minimum UCS (MPa)	Mean UCS (MPa)	Maximum UCS (MPa)	Mean E (GPa)	Mean
UG2 Hangingwall	17	78	147	198	114	0.27
UG2 Reef	12	42	82	162	103	0.29
UG2 Footwall	15	132	205	285	93	0.36

Note:
1. UCS Uniaxial Compressive Strength

Two rock mass rating systems were used; namely, Laubscher's MRMR System and Barton's Q System, to classify the rock mass in the UG2 horizon. A modified Q' is used in the determination of the Stability Number (N') to assess hangingwall stability. The rock mass condition of the middling between the MR and UG2 was not logged in detail but was analysed as some of the off-reef excavations will be situated within these lithologies. Rock mass rating results are tabulated in Table 16-10, from which the following can be deduced:

- The data used for the rock mass classification was evenly distributed across the mining area;
- Ground conditions range from poor to good;
- The poor hangingwall conditions in the UG2 can be attributed to alteration and shearing, particularly where the harzburgite intrusion affects the deposit, and the presence of chromitite stringers; and
- The UG2 footwall exhibits poor to fair rock mass conditions.

The range of rock mass conditions was catered for in the design by assessing a cumulative distribution of N' and hydraulic radii.

Table 16-10: Rock Mass Quality

Domain	Number of Drill Holes	Mean MRMR	MRMR Standard Deviation	Q Value Range
UG2 Hangingwall	37	54	11	1–2 - 163
UG2 Immediate Hangingwall		48	8	1–1 - 75
UG2 Reef		49	8	0–9 - 76
UG2 Immediate Footwall		55	11	-
UG2 Footwall		55	13	1.1 – 158

Note:
1. MRMR Mining Rock Mass Rating
2. Q Barton's Q System

A summary of the design aspects and methodology employed is provided in Table 16-11. In general, ground conditions in the project area are of a fair quality and at this stage no major geological structures, which could adversely affect stability have been identified. There are areas where poor ground conditions occur and these should be inspected to confirm that the current support is appropriate. The mine design criteria and support strategy are tabulated in Table 16-12 and Table 16-13, respectively.

Table 16-11: Summarised Design Aspects and Methodology Employed

Design Aspect	Rock Mass Data Used	Methodology Employed
Stope Span	Immediate hangingwall UCS	Potvin (1988) unsupported stability chart
Pillar Design	UCS	Hudyma (1988) empirical rib pillar stability chart Elastic RS2 model for partial pillar extraction
Development Support Design: Declines Reef drives Ramps/crosscuts	 Hangingwall Hangingwall and reef Footwall	Barton & Grimstad (1993), Barton (2002) support guidelines Stimpson (1989) estimation of depth of instability around excavations

Table 16-12: Summary of Mine Design Criteria

Depth (m)	Strike span (m)	Rib pillar (m)	Vertical span (m) On reef plane	Sill pillar (m)	Extraction ratio (m^2)
100	60	10	54	6	77
200	60	10	54	6	77
300	60	10	54	6	77
400	60	10	54	6	77
500	60	10	54	6	77
600	60	15	54	11	66
700	43	15	54	11	62
800	43	15	54	11	62
900	43	15	54	11	62
1 000	85	15	54	11	69
1 100	85	17	54	11	69
1 200	85	17	54	11	69
1 300	72	17	54	11	67

Table 16-13: Support Design for Development Excavations

Design	Support Type	Support Length (m)	Square Spacing (m)	Additional Primary Support
Declines	Resin bolts	2.4	1.8 x 1.8	3 m Anchors on a 2 m x 2 m spacing along with wiremesh
Ramps and Crosscuts	Resin bolts	2	1.8 x 1.8	N/A
Collection and RAW drives	Resin bolts	2	1.5 x 1.5	N/A
Reef Drives	Splitsets	1.5	1.5 x 1.5	N/A
Drawpoints	Resin bolts	2	1.5 x 1.5	3 m Anchors along with wiremesh, spacing to be determined by reef intersection (max 2 m x 2 m)

Note:
1. RAW Return airway

The geotechnical study at Mphahlele conformed to sound design principles and techniques suitable for a prefeasibility study level of accuracy, and no significant concerns were identified, however no joint orientation data was available from the logging data and had to be benchmarked. It is recommended to verify key assumptions used in the design as the mine is established or when data, not available at the time of the study, becomes available, especially in the deeper mining sections.

16.2 Hydrogeological Parameters Relevant to Mine Designs

The hydrogeology of the Western Limb is characterised by four key hydrostratigraphic units:

1. A localised shallow aquifer, which is associated with a primary alluvial and weathered aquifer zone adjacent to the rivers and non-perennial streams. In some areas, this zone is underlain by a clay aquitard where it forms wetlands, which are not groundwater supported;
2. A weathered and fractured aquifer that is pronounced in topographically low-lying areas. This is an important aquifer zone for community water supply. The weathered norite/gabbro forms a low potential aquifer and is approximately 20 - 40 m thick and exhibits only secondary porosity, from the weathering and fracturing. Depths of weathering vary in the study area and increases towards the drainages and southwards;
3. Discrete sub-vertical fault and fracture zones that form major aquifers in the study area. Groundwater potential is enhanced along several north-south trending faults associated with major post intrusive faulting during the Pilanesberg volcanic emplacement; and
4. A fractured/solid bedrock (norite/gabbro) aquifer that underlies the weathered zone.

16.2.1 Ruighoek

Ruighoek is situated about 10 km southwest of the West Pit, along the Western Limb of the BC.

There are no specific reports on the hydrogeology of the Ruighoek area. This provides some level of uncertainty and additional work will be required to reduce the risk.

16.2.2 West Pit (TRR)

Accumulation of silt in the silt trap and HDPE-lined RWD complexes reduces their effectiveness under storm events where supernatant water containing high concentrations of suspended tailings could overflow into the environment; this represents a potential risk.

The area is prone to drought. Although mine water security has been established, the allocation of 24.2 Mℓ/d from Magalies Water may be compromised should a water shortage occur, as water for basic human needs will be prioritised above mine water requirements. The cumulative impact is a reduction in mine water availability and production.

In April 2019, poor water quality was reported for the surface water monitoring point SW13, located in the tributary of the Mothlabe River that flows next to the West Pit WRD. Elevated concentrations of nitrate and sulphate continued to be measured in January and February 2020, which correlates with the groundwater chemistry for monitoring boreholes (PPMMON5 and PPMMON6) near the WRD and suggest potential seepage from the West Pit WRD. The significance of this risk, remedial and/or mitigation measures is not well documented in the report received.

The existing groundwater monitoring network is insufficient to identify point sources of contamination and allocate the contamination profile to individual facilities. To mitigate the uncertainties identified in the previous groundwater reports and establish baseline conditions, it necessary to undertake a comprehensive groundwater monitoring programme. Data collected should be used to assess impacts to sensitive receptors in the immediate surrounds.

Water levels around the open pit will be impacted and deterioration of water quality downstream of the TSF, WRD and SWDs is anticipated. Scavenger boreholes around the TSF and WRD have proven to retard plume migration and capture seepage to an extent; however, additional scavenger boreholes are required to optimise effectiveness.

16.2.3 PSM and Kruidfontein

At the nearby Amandelbult and Northam Mines, there is minimal water ingress down to approximately 600 mbs. Below 600 mbs, a deep-seated groundwater table coupled with NW-SE oriented water-bearing structures (faults, joints, dykes) contributes to groundwater inflows into the mine workings. An escalation in groundwater inflows correlates with depth advancement.

Water in stopes was not a threat as long as the stopes did not transgress any water-bearing fissure. Where these fissures are encountered in the footwall development, the mine leaves barrier pillars around these fissures in the stopes and does not mine through them. Cover drilling is crucial to identify any such fissures ahead of the development, so that the barrier pillars can be correctly planned.

A 3D numerical groundwater flow model predicted maximum unmitigated inflows of 1 300 m³/d (East Pit), and inflows of 3 300 m³/d and 8 000 m³/d for Central and East Underground, respectively. The assumptions and hydraulic parameters used in the 3D model (hydraulic conductivity, storage) are appropriate for the hydrostratigraphy, and within the ranges provided in literature. SRK is of the opinion that the recharge estimate (1% - 2.5% of mean annual precipitation) used in the model should be higher (7% - 10%), based on its work in adjacent and similar environments, and fault zones defined as highly conductive for groundwater within the zones.

The gaps in direct data from the site may result in underestimation of the projected groundwater inflow rates and prediction of impacts on local groundwater resources. This should be investigated as part of future drilling programmes.

The groundwater chemistry monitoring data reveals the presence of elevated fluoride, nitrate and nickel concentrations. The elevated F originates from the fluoride-rich geological environment (rhyolite and foyaite), while the elevated NO_3-N can be associated with mining activities at PPM. Ni is associated with the MR and to a lesser extent with the UG2 and is the source of the elevated Ni within the groundwater environment. During periods of increased groundwater abstraction, elevated nitrate concentrations have been measured in community borehole AGES4. The likely source of nitrate contamination detected in AGES4 is presumed to be the waste rock dump (WRD) and the unlined North SWCD. Increased abstraction of third-party boreholes will alter natural groundwater hydraulics and enhance groundwater plume migration towards sensitive receptors. With mining progression, adequate measures should be implemented to mitigate such risk.

There are no specific reports on the hydrogeology of the Kruidfontein area. This provides some level of uncertainty and additional work will be required to reduce the risk.

16.2.4 Mphahlele

The geology of the Eastern Limb of the BC forms five hydraulic zones that are controlled by the lithological units, structural geology and surface water features:

1. Soil and calcrete overburden, up to 8 m depth, not associated with a perched aquifer;
2. Weathered/fractured gabbro, 5 m to 50 m depth, the minor or secondary aquifer, with low potential;
3. Unweathered solid gabbro host rock with low transmissivities from 50 m depth;
4. Fault zones may form preferential pathways for groundwater flow; and
5. Sandy alluvial beds, gravels and boulders approximately 50 m to 100 m wide, adjacent to the rivers.

The semi-arid climate and geology contribute to poor groundwater quality which displays elevated concentrations of total dissolved solids, fluoride, sodium and chloride.

A 3D groundwater flow model indicated that a maximum inflow rate of 3 800 m³/d could be expected during the 20 years of mining to a depth of 280 mamsl. For approximately the first three and a half years of mining and development, the majority (~65%) of total inflow volumes will originate from the weathered zone, where mine development is situated within the more permeable hydraulic zones. From year 4 onwards, the ratio between weathered zone inflow volumes and that from faults and structures migrates towards a 50:50 ratio as the deeper fractured matrix is less permeable, and fault zones have a higher permeability.

The maximum drawdown between 40 m – 45 m is within 300 m of Portal A as the mining is the shallowest in this area relative to the topography. Management measures for groundwater are still dependent on ongoing monitoring and subsequent planning, with generic mitigation measures proposed at this stage, including some reliance on the control of ingress of water and oxygen as a post-closure strategy. The effectiveness of this solution has not been established.

Community water supply is via reticulated water from the Lepelle bulk water supply scheme and groundwater is used as an alternate water supply subject to service delivery. Fifty private boreholes located within an approximately 5 km radius from the proposed mining area were identified during a 2019 hydrocensus. Although several community water supply boreholes will be impacted by mine dewatering, potable water supply can be addressed via the Lepelle Water Scheme.

The main groundwater issues for the mine are as follows:

- A delay in the construction of the groundwater supply scheme may delay the project or reduce the tonnage to the available groundwater yield. A WUL will be required for the wellfield development;

- Reduction in groundwater levels/availability; and
- The groundwater quality is likely to impacted.

16.3 Production Rates, Mine Life, Mining Dimensions, Mining Dilution / Recovery Factors

16.3.1 Production Rates and Mine Life

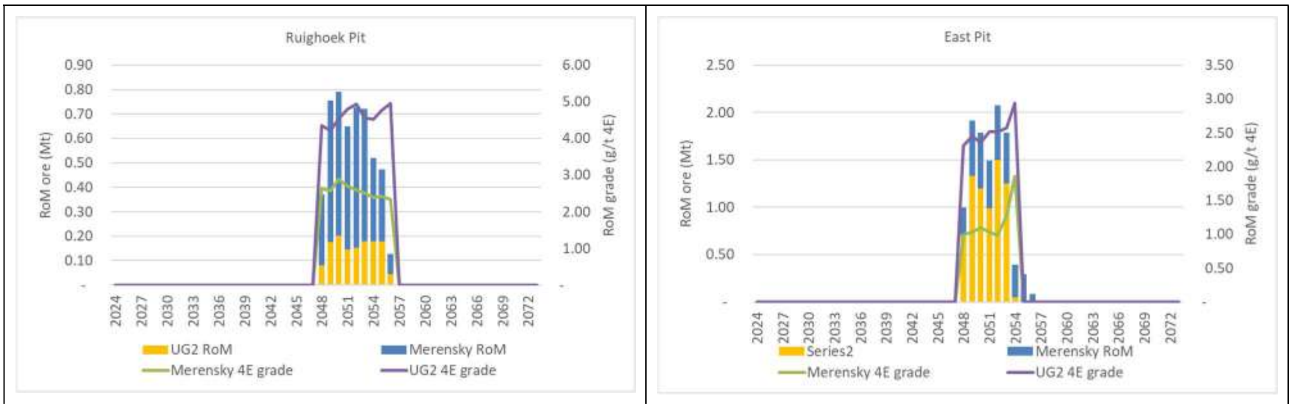
Ruighoek

The planned production profile for Ruighoek from 2048 to 2056 is shown graphically in Figure 16-4 and tabulated in Table 16-25.

PSM above 700 m below Surface

East Pit

The planned production profile for East Pit from 2048 to 2054 is shown graphically in Figure 16-4 and tabulated in Table 16-26.



srk consulting	**SRL Total Asset PEA** Planned Production Profiles for Ruighoek (left) and East Pit (right) [source: SRL, 2024a]	Project No. 600322

Figure 16-4: Planned Production Profiles for Ruighoek (left) and East Pit (right)

West Pit TRR

The West Pit TRR production schedule provides for 3.6 Mtpa to be reclaimed from the PPM TSF and retreated through a new TRP from 2029 to 2042, as tabulated in Table 16-27.

Central Underground and East Underground

Approximately ten months is required to complete the development necessary to achieve steady state production per level. Three to four raise lines (630 m to 840 m on strike) are required to sustain steady state production.

When steady state production is achieved on a half-level, the development reverts to a ‘just-in-time’ philosophy and only development required for stope replacement is undertaken.

The PSM Project used the advance rates presented in Table 16-14: PSM above 700 mbs: Underground Advance Table 16-14, with some minor adjustments on the rates in the faulted areas situated on the western and eastern extremities of the mining area.

Table 16-14: PSM above 700 mbs: Underground Advance Rates

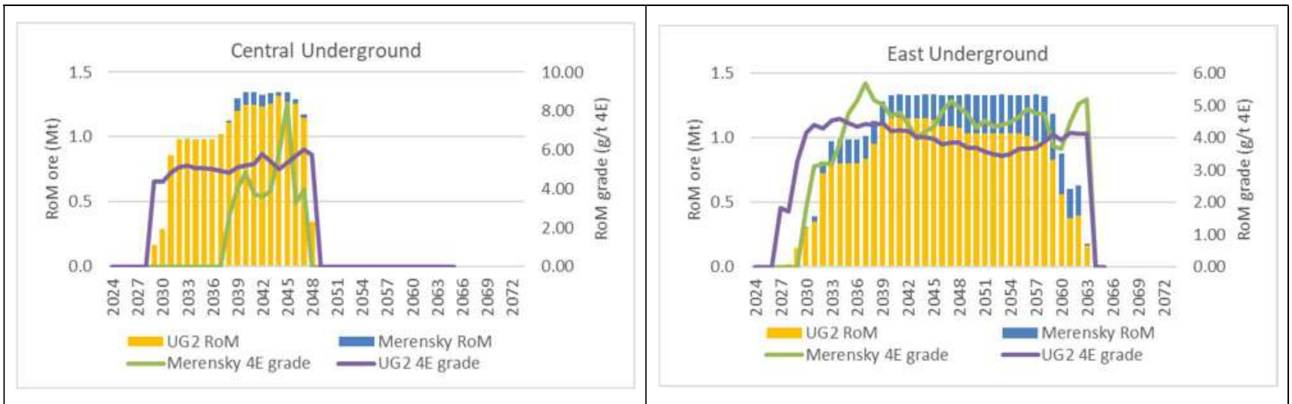
Description	Units	Rate of Advance in Good Conditions	Rate of Advance in Faulted Areas
Decline	(m/month)	60	N/A
Level Access and Laterals	(m/month)	55	N/A
Infrastructure	(m/month)	55	30
Haulage	(m/month)	55	40
RAW (on-reef)	(m/month)	35	30
Vent Holes (Pilot and Ream)	(m/month)	40	
X-cut, Tip Cubbies, Cubbies etc.	(m/month)	55	40
Box Holes	(m/month)	30	20
Conventional Development	(m/month)	22	15
Stoping Crew UG2	(m^2/month)	330	300
Stoping Crew PUP	(m^2/month)	300	270
Ledging Crew	(m^2/month)	300	270
Equipping Delay before Ledging		1 month	
Equipping Delay before Stoping		2 months	

The dimensions for each excavation associated with the primary access infrastructure are shown in Table 16-15.

Table 16-15: Access Infrastructure Dimensions

Excavation	Width (m)	Height (m)
Declines and Rail Haulage	5.5	5.0
Access Infrastructure	5.0	4.5
Workshop	5.0	5.0
Truck Tip	5.0	6.0

The planned production profiles for Central and East Underground are presented graphically in Figure 16-5 and tabulated in Table 16-28 and Table 16-29, respectively. Production from Central and East Underground is shown to end in 2048 and 2063, respectively.



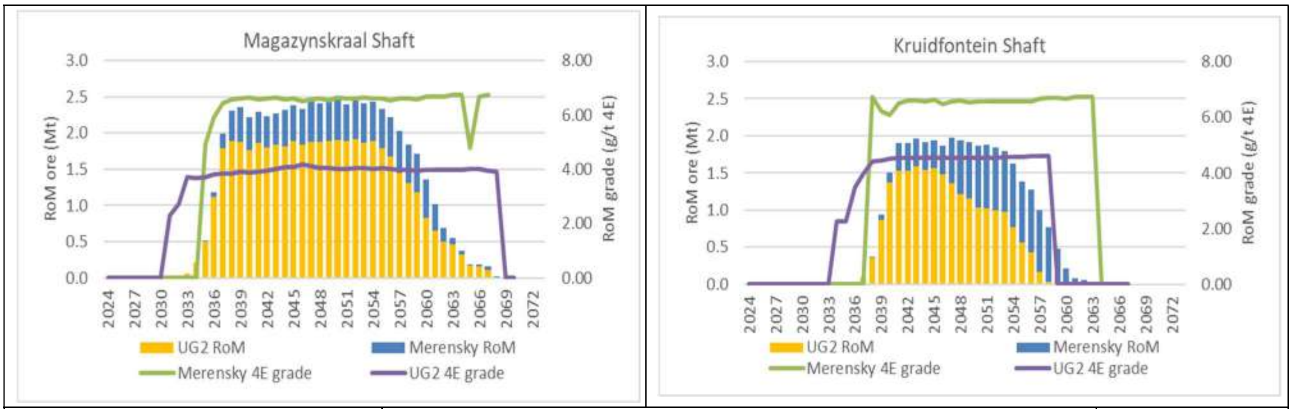
SRL Total Asset PEA
Planned Production Profiles for PSM - Central Underground (left) and East Underground (right) [source: SRL, 2024a]

Project No. 600322

Figure 16-5: Planned Production Profiles for PSM - Central Underground (left) and East Underground (right)

PSM below 700 m below Surface and Kruidfontein

The production profiles for the Magazynskraal Shaft and Kruidfontein Shaft are presented graphically in Figure 16-6 and tabulated in Table 16-30 and Table 16-31, respectively. Production is shown to end for Magazynskraal and Kruidfontein Shafts in 2068 and 2062, respectively.



srk consulting	**SRL Total Asset PEA** Planned Production Profiles and 4E Grades for Magazynskraal Shaft (left) and Kruidfontein Shaft (right) [source: SRL, 2024a]	Project No. 600322

Figure 16-6: Planned Production Profiles and 4E grades from Magazynskraal Shaft (left) and Kruidfontein Shaft (right)

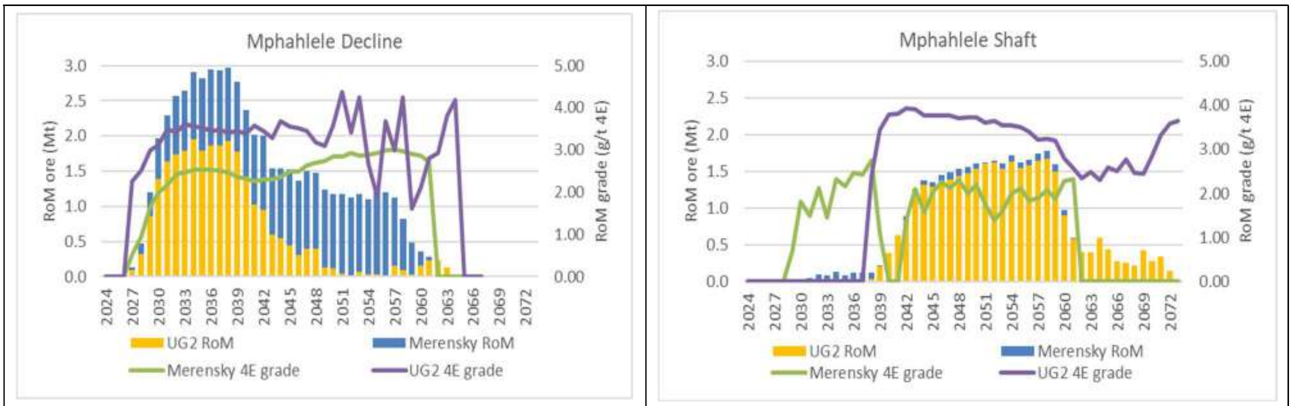
Mphahlele

The production schedule provides for 95% of the waste (dilution) mined to be removed from the UG2 ore stream by the Rados system. The system is unlikely to be 100% efficient, so a 2% metal loss has been applied to the Rados system.

Linear panel advance rate is planned at approximately 16.8 m per month. Each stope consists of three panels (on dip) mining towards the central point of the stope from the east and west sides (i.e., six panels per stope). Stoping production rates are planned at an average of 252 m² per month. Approximately twelve stopes (six panels per stope) will be required to provide sufficient ore to maintain the production rate.

Stoping operations will follow an overhand sequence. The general mining direction within a stope will be from the sides of the stoping block towards to the centre. Slot raises for all panels will be established before the stoping can commence. Upper panels will lead lower panels by approximately 5 m.

The production profiles for the Mphahlele Decline and Mphahlele Shaft are presented graphically in Figure 16-7 Figure 16-7and tabulated in Table 16-32 and Table 16-33, respectively. Production is shown to end for the Mphahlele Decline and Shaft components in 2063 and 2072, respectively.



srk consulting	**SRL Total Asset PEA** Planned Production Profiles for Mphahlele Decline (left) and Mphahlele Shaft (right) [source: SRL, 2024a]	Project No. 600322

Figure 16-7: Planned Production Profiles for Mphahlele Decline (left) and Mphahlele Shaft (right)

16.3.2 Mining Dimensions

Ruighoek

The Ruighoek open pit is extends from north to south for approximately 3 km and is 500 m wide at the deepest area of the pit, at approximately 150 m deep.

PSM above 700 m below Surface

East Pit

The East Pit design is approximately 2 km long from north to south, 1 km wide and 200 m deep, with ore dipping from west to east.

West Pit Tailings Retreatment

The West Pit tailings facilty is approximately 1.5 km long and 1 km wide.

PSM above 700 m below Surface

Central Underground and East Underground

A reef raise every 215 m on-strike would be developed from the bottom level upwards. Centre gully raises would be on average 246 m in length on-dip. Every raise would have two in-stope ore passes, one to accommodate four panels and the other eight panels. The dip gully would be equipped with a mechanical scraper winch with an average pull length of 180 m. The excavation dimensions are provided in Table 16-16.

Table 16-16: Excavation Dimensions for PSM -Central and East Underground

Excavation	Width (m)	Height (m)	Comments
Declines and Rail Haulage	5.5	5.0	
Access Infrastructure	5.0	4.5	
Workshop	5.0	5.0	
Truck Tip	5.0	6.0	
RAW	4.5	4.0	
Material Decline (Material)	5.0	4.5	
Conveyor Decline (Conveyor)	4.5	4.0	
Lateral (Material to Conveyor)	4.5	4.3	15 m skin to skin. Every 75 m
Lateral (Chairlift to Conveyor) Decline)	4.5	4.3	
Transfer Belt Crosscut	6.0	4.3	21 m long at 45˚ to the decline
Level Access	5.0	5.0	Height needed for pipes
Decline Passes	3.2		Diametre as per ventilation specifications
Station Landing Chairlift	6.0	4.0	
Chairlift	4.0	4.0	
Chairlift Access	4.0	4.0	

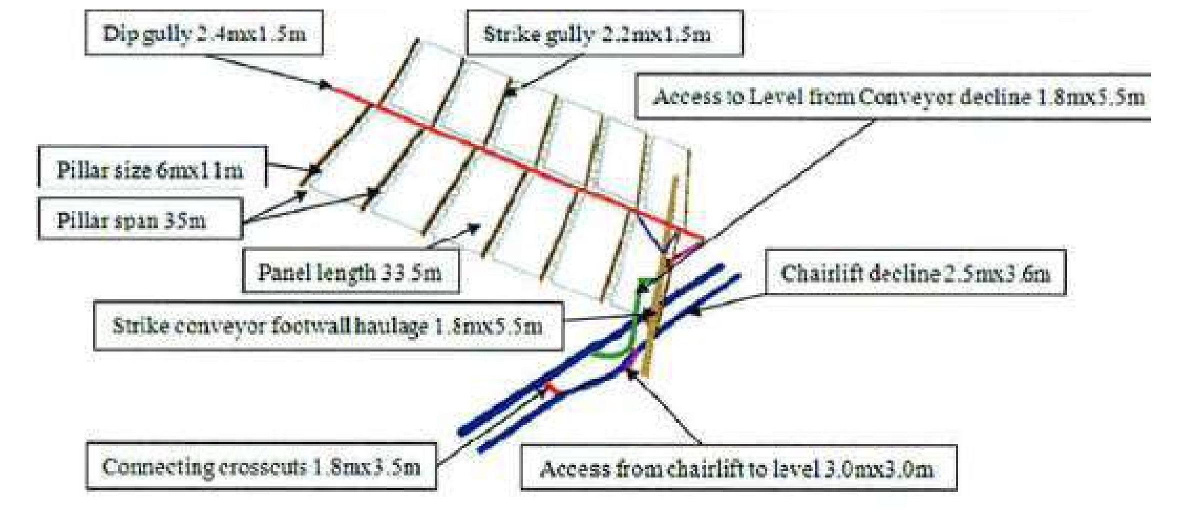
Note:
1. RAW Return airway

Every raise line would accommodate 12 conventional mining panels, six on either side of the raise (Figure 16-8). The stope panels would be 33.5 m in length and every panel would have an advance strike gully (ASG) 1.5 m wide, which would be carried at least 6 m ahead of the toe of the advancing face.

The maximum span between pillars would be 35.0 m skin-to-skin on-dip. This length comprises the stope panel length of 33.5 m and the ASG of 1.5 m. All strike gullies and each face would be equipped with a mechanical scraper winch and winch shovel.

Strike pillars would be left *in situ* on the down-dip side of each gully and would be on average 6 m wide on-dip and 11 m in length o- strike. Pillars would be spaced 35 m apart, skin-to-skin, on-dip and the distance from centre to centre would vary depending on the width of the pillar.

A stoping grid would comprise a 246 m reef raise (on average) in the centre of the grid, which serves as the centre dip gully during stoping operations. Six breast panels on either side of the raise line would be developed to provide a total of 12 panels per raise line (Figure 16-8). Figure 16-8 provides a typical view of a breast mining grid which would be 215 m long and 246 m on-dip.



srk consulting	**SRL Total Asset PEA** PSM – Central and East Underground: Side View of Stoping Grid showing Geometry and Layout source: RSV, 2010]	Project No. 600322

Figure 16-8: PSM – Central and East Underground: Side View of Stoping Grid showing Geometry and Layout

PSM and Kruidfontein below 700 m below Surface

The excavation dimensios are given in Table 16-17.

Table 16-17: Access Infrastructure Dimensions

Excavation	Width (m)	Height (m)	Comments
RAW	4.5	4.0	
Material Decline (Material)	5.0	4.5	
Conveyor Decline (Conveyor)	4.5	4.0	
Lateral (Material to Conveyor)	4.5	4.3	15 m skin to skin. Every 75 m
Lateral (Chairlift to Conveyor) Decline)	4.5	4.3	
Transfer Belt Crosscut	6.0	4.3	21 m long at 45˚ to the decline
Level Access	5.0	5.0	Height needed for pipes
Decline Passes	3.2		Diameter as per ventilation specifications
Station Landing Chairlift	6.0	4.0	
Chairlift	4.0	4.0	
Chairlift Access	4.0	4.0	

Mphahlele

The mining dimensions of key excavations are provided in Table 16-21.

16.3.3 Mining Dilution/Recovery Factors

Ruighoek

For the Ruighoek open pit various mineral layers have been included for mining as ore to create the diluted ore feed, as listed in Table 16-18.

Table 16-18: Ruighoek RoM Composition, Dilution and Recovery

Mineral Layer	Oxide		Fresh	
	Pothole	Contact	Pothole	Contact
MR Dilution	100.0%	100.0%	100.0%	100.0%
MR	96.0%	92.5%	96.0%	92.5%
MRFW (Anorthosite)	97.0%	97.0%	97.0%	97.0%
UPR	96.0%	96.0%	96.0%	96.0%
PRHZ (Harzburgite)	97.0%	97.0%	97.0%	97.0%
LPR	92.5%	92.5%	92.5%	92.5%
LPR Dilution	100.0%	100.0%	100.0%	100.0%
UG2 HW Dilution	100.0%	100.0%	100.0%	100.0%
UG2	94.5%	94.5%	94.5%	94.5%
UG2 FW Dilution	100.0%	100.0%	100.0%	100.0%

PSM above 700 m below Surface

East Pit

For East Pit the assumed mining and geological losess are 5% and the mining recovery is 95%. The dilution is calculated in the mining model with the UG2 being diluted by the hangingwall and footwall, and the silicate layers combined for the MR ore. The resulting dilution for this is shown in Table 16-19.

Table 16-19: PSM - East Pit: RoM Composition, Dilution and Recovery

Description	Units	Silicates	UG2
Dilution applied in Model	(%)	20%	40%
Unknown Geological Losses	(%)	5%	5%
Dilution (applied in schedule)	(%)	47%	70%
Mining Losses (applied in schedule)	(%)	10%	5%
Content Recovery	(%)	99%	100%
Total Dilution and Loss	**(%)**	**158%**	**221%**

West Pit TRR

No dilution or mining loss is applied to the West Pit TRR facilities.

Central Underground and East Underground

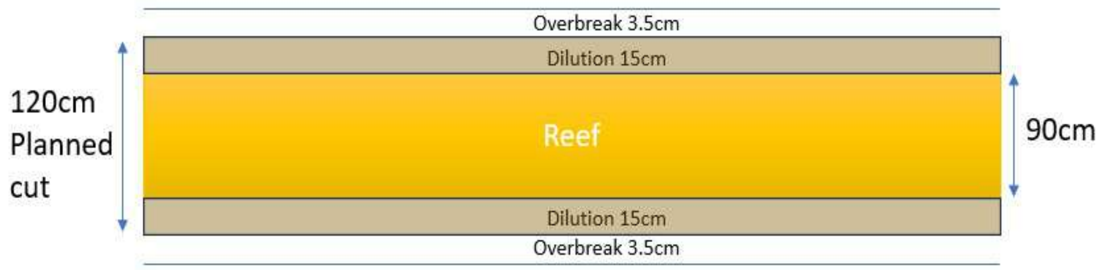
The thickness of the UG2 and PUP reefs varies between 0.8 m – 1.55 m, the planned mining cut is 1.2 m in order for employees to access the panels to mine the orebody. An additional 7 cm of overbreak is applied to the UG2 stopes and 10 cm to the PUP stopes.

The up-dip/down-dip configuration requires extra on-reef development to establish and maintain the required blueprint (technical health) for the half-level. Therefore, a slight increase in dilution is expected but more independent raise lines offer flexibility in terms of facelength available for mining:

- Central Underground has an average dilution of 23%; and
- East Underground has an average dilution of 18%.

The resource model shows that the reef in East Underground is thicker than the reef in Central Underground. East Underground has widths between 1 m and 1.55 m, whereas Central Underground has widths between 0.8 m and 1.3 m; with a planned cut of 1.2 m the dilution in central block will be higher.

The basic dilution diagram is shown in Figure 16-9.



srk consulting	**SRL Total Asset PEA** Stope Profile for both Central and East Underground	Project No. 600322

Figure 16-9: Stope Profile for both Central and East Underground

A geological loss field has been generated in the block model according to the geologist's and rock engineers' recommendations. Geological loss varies between 14% – 20% in different areas according to the ground conditions.

Due to the challenging ground conditions, an extra geological loss factor of 15% is applied to accommodate unexpected features, based on experience gained from the current open pit mining.

PSM and Kruidfontein below 700 m below Surface

Magazynskra

The estimation of dilution is similar as described above for the East and Central Underground projects.

Kruidfontein

Based on the head grades used in the economic analyses for the UG2 and MR options in the Concept Study, no mining dilution was included in the mining cut.

The following aspects would impact on dilution:

- MR – due to seven different identified facies, the reef could be complicated to mine and may result in substantial dilution during mining; and
- UG2 – exclusion of the Leaders/Triplets would be problematic and could create hangingwall instability. However, inclusion of the Leaders/Triplets would lower the average grade.

A mining recovery of 100% was included in the RoM ore production schedule.

The only mining losses (scheduled tonnes relative to Mineral Resource tonnage estimates) appear to relate to pillars left for stope stability.

Mphahlele

The primary source of waste dilution during stoping is expected from block failure in the UG2 hangingwallas a result offrom the presence of discontinuous chromitite stringers in the immediate UG2 hangingwall. The Triplets above the UG2 observed elsewhere are not persistent at Mphahlele. A minimum planned mining width of 130 cm was selected for mine planning purposes. Mining dilution was added dependent on the true width of the reef, yielding an average stope width on the UG2 of 177 cm. The calculated dilution for each mining block is indicated in Table 16-20. The eastern portion of the orebody indicates a higher dilution due to the narrow true width of the reef in this area.

Table 16-20: Stoping and Total Dilution

Description	Blocks A and B	Block A UG2	Block B UG2
Stoping Dilution	31%	29%	33%

As discussed above, a 2% metal loss has been applied to the Rados system.

16.4 Access, Underground Development and Backfilling

16.4.1 Mine Access

Ruighoek

Three additional sections of haul roads will be constructed between the Ruighoek Pit and the concentrator plant. The haul roads will be constructed of suitably-sized compacted waste rock. A new intersection on the P50-1 public road to access the plant and the haul road to Ruighoek.

PSM above 700 m below Surface

East Pit

All access roads and haul roads are already in place.

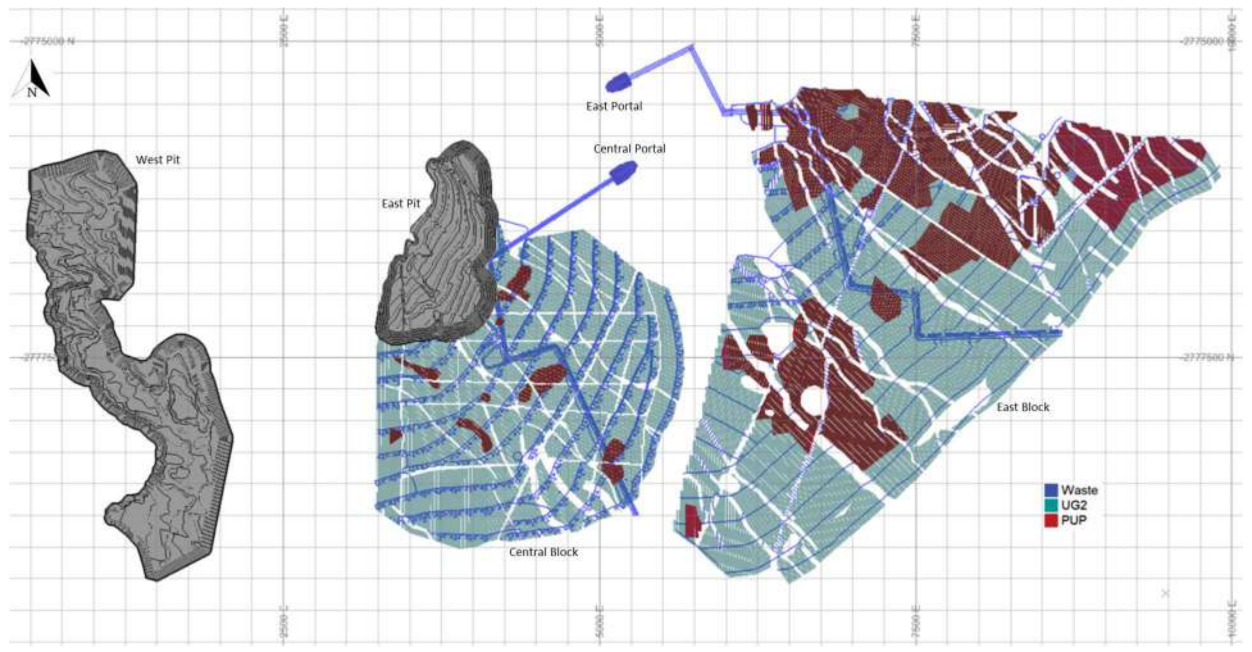
Central Underground and East Underground

Access to the underground workings is through a three-barrel decline system, consisting of a main decline, a conveyor decline, and a chair lift decline, for each of the mining areas. The mine layout with the reefs are illustrated in Figure 16-10.

The declines are planned at a gradient of approximately 9º to a final depth of 700 mbs and will maintain a depth of approximately 50 m below the UG2 horizon. The motivation for development of the declines in the footwall is to reduce technical challenges in accommodating faults and to provide a buffer capacity between the UG2 horizon for the ore handling system. A boxcut for each of the portals was planned to intersect unweathered ground at a depth of approximately 35 mbs. Cover drilling is planned to ensure that water fissures are detected upfront and sealed to prevent ingress of water into the excavations.

The boxcut excavations for the East Portal are essentially complete, while support work and stabilisation of the sidewalls was completed. All work related to the East Portal is on hold due to SRL's curtailment of extraction and processing activities. This PEA assumes that development of the East decline cluster will commence in January 2025 and will be developed to intersect the main infrastructure and truck tip area of East Underground. Development of the Central portal and decline cluster is also assumed to commence in January 2025.

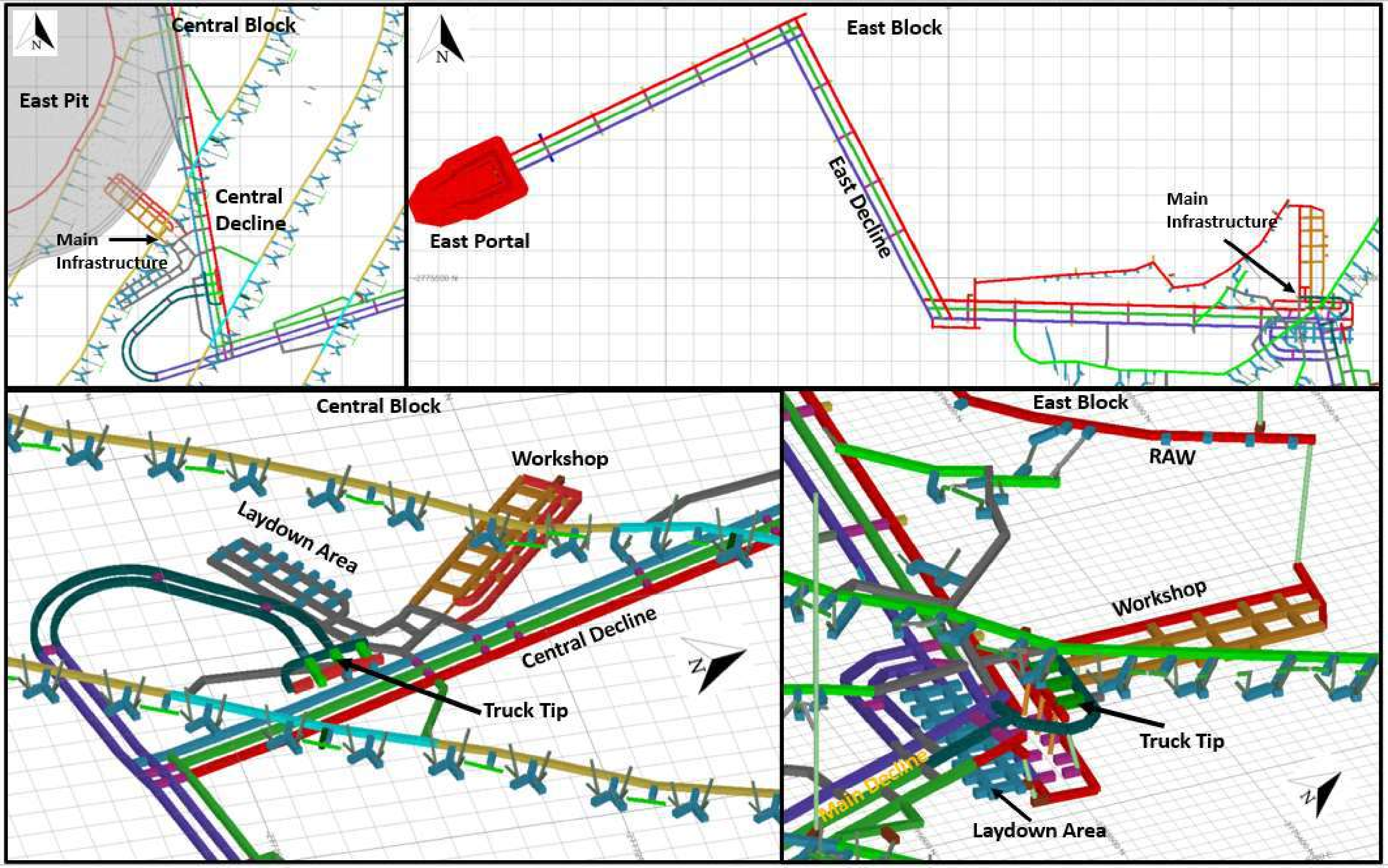
Once the main rock handling facilities are established, two intake declines and a chair lift will continue downwards to the final depth of extraction in each block. The main infrastructure and tipping areas are critical as the construction of the conveyor belt to surface cannot commence until these are established. Trucking of rock to surface will continue until the completion of the tipping infrastructure and the conveyor belt. Access to the PUP horizon and ore removal therefrom will be via a travelling way and passes extended from the UG2.



srk consulting	SRL Total Asset PEA Extent of Mineable Reef Horizons for PSM - Central and East Underground Areas [source: SMS, 2024]	Project No. 600322

Figure 16-10: Extent of Mineable Reef Horizons for PSM - Central and East Underground Areas

The top two diagrams in Figure 16-11 are plan views of the primary access development and main tip areas associated with Central and East Underground, while the bottom two diagrams are isometric views.



srk consulting	**SRL Total Asset PEA** Primary Access and Main Tip Areas for PSM - Central and East Underground. (top diagrams are plan views; bottom diagrams are isometric views) [source: SMS, 2023]	Project No. 600322

Figure 16-11: Primary Access and Main Tip Areas for PSM - Central and East Undergound

PSM and Kruidfontein below 700 m below Surface

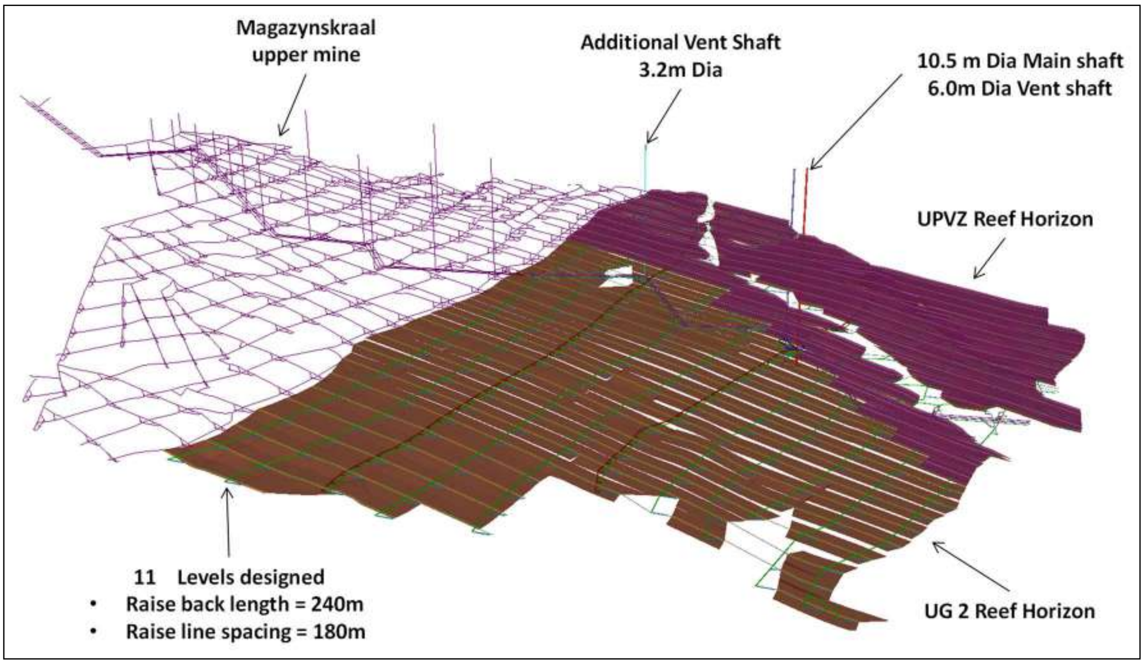
Magazynskraal Shaft

The depth at which the East Underground orebody ends is 700 mbs. The bottom boundary for the extension into Kruidfontein is 1 300 mbs

A twin shaft complex was positioned in the centre of the mining area to optimise its utilisation. Figure 16-12 shows the twin shaft complex and decline positions.

East Underground achieves steady state production ten years from start of shaft sinking and maintains a production of ±155 ktpm UG2 and 20 ktpm PUP for 17 years.

The declines will be developed at an initial gradient of 10˚ to a depth of 1 300 mbs and will be kept at depth of 50 m below the UG2 horizon. The motivation for development of the declines in the footwall is to reduce technical challenges in accommodating faults and to provide a buffer (i.e., silo capacity) between the UG2 horizon and the declines for the ore handling system.



srk consulting	**SRL Total Asset PEA** Magazynskraal Shaft Project - Twin Shaft and Decline Positions [source: SMS, 2024]	Project No. 600322

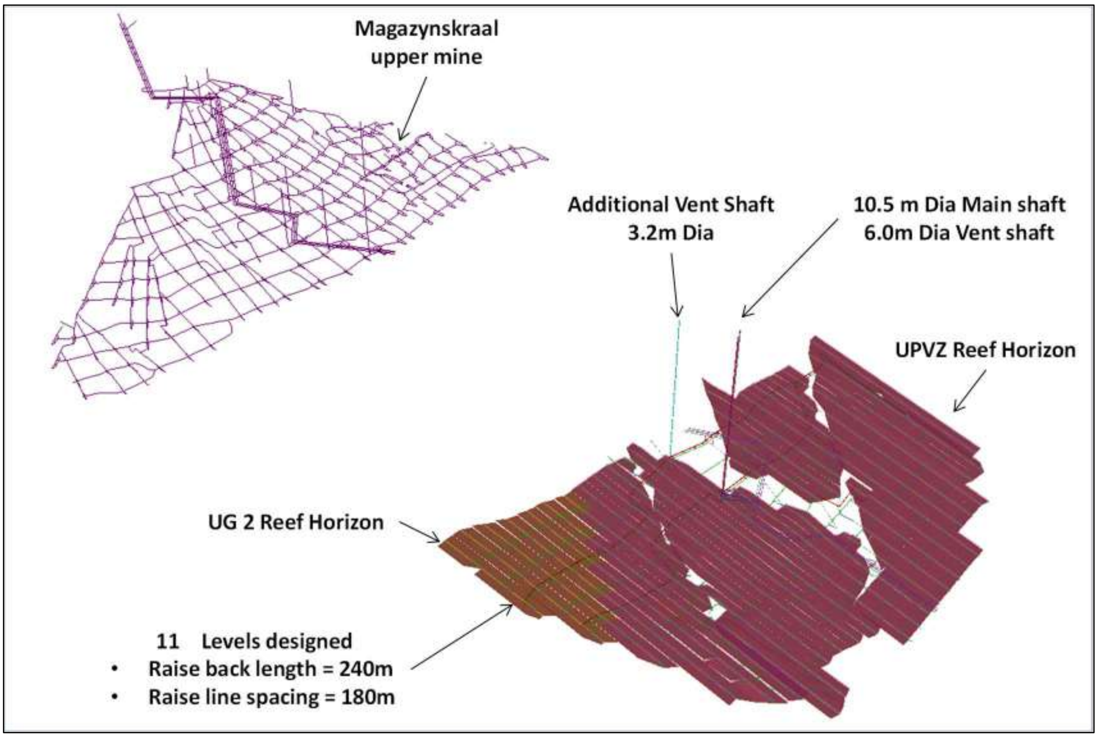
Figure 16-12: Magazynskraal Shaft Project - Twin Shaft and Decline Positions

Kruidfontein

The depth at which the orebody starts for this portion of the study is 1 300 mbs. The bottom boundary is 2 000 mbs. A twin shaft complex was also positioned in the centre of this mining area to optimise its utilisation (Figure 16-13).

Kruidfontein achieves steady state production 11 years from start of shaft sinking and maintains a production of ±155 ktpm UG2 and 20 ktpm PUP for 11 years.

The declines will be developed at an initial gradient of 10˚ to a depth of 2 000 mbs and will be kept at a depth of 50 m below the UG2 horizon. The motivation for development of the declines in the footwall is to reduce technical challenges in accommodating faults and to provide a buffer (i.e., silo capacity) between the UG2 horizon and the declines for the ore handling system.



srk consulting	**SRL Total Asset PEA** Kruidfontein Shaft Project - Twin Shaft and Decline Positions [source: SMS, 2024]	Project No. 600322

Figure 16-13: Kruidfontein Shaft Project – Twin Shaft and Decline Positions

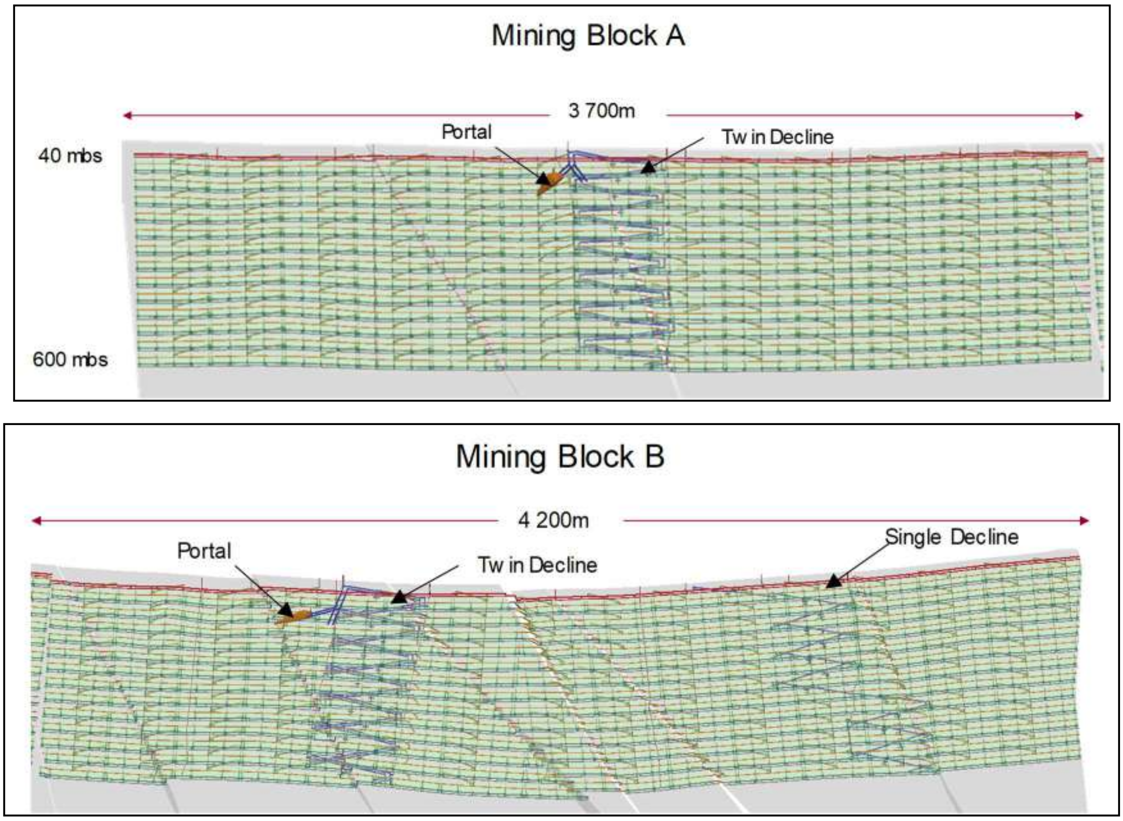
Access for the underground mining is planned using vertical shaft systems, one for ore, material and people transport (MMR) and the other a dedicated upcast ventilation. The shaft dimensions are as follows:

- A 10.5 m diameter vertical down shaft (MMR); and
- A 8.0 m diameter vertical upcast ventilation shaft.

The Concept Study envisaged that the vertical shafts would be sunk to just below the reef and then decline systems with conveyor belts and chairlifts will be used to access the orebody. The main access decline would be carried approximately 40 m vertically below the reef position. Main strike footwall conveyor haulages would be situated above the main access declines and would be approximately 25 m vertically below the reef. Strike conveyor haulages would be equipped with a conveyor belt and would be 5.5 m wide to accommodate movement of trackless mining machinery (TMM) and people.

Mphahlele Decline

Access to the UG2 on Block A and Block B mining blocks is achieved via two portals (Portal A and Portal B, respectively) and declines (illustrated in Figure 16-14). The decline ramps will access the UG2 Reef at the planned elevation of the reef drives. The decline ramps will continue downwards, while the reef drives will then commence with horizontal development in an easterly and westerly direction.



srk consulting	**SRL Total Asset PEA** Mining Areas (on UG2) (mining blocks viewed perpendicular to reef approximately north-northwest; Block B vertical scale same as Block A) [source: SRK, 2020]	Project No. 600322

Figure 16-14: Mining Areas (on UG2)

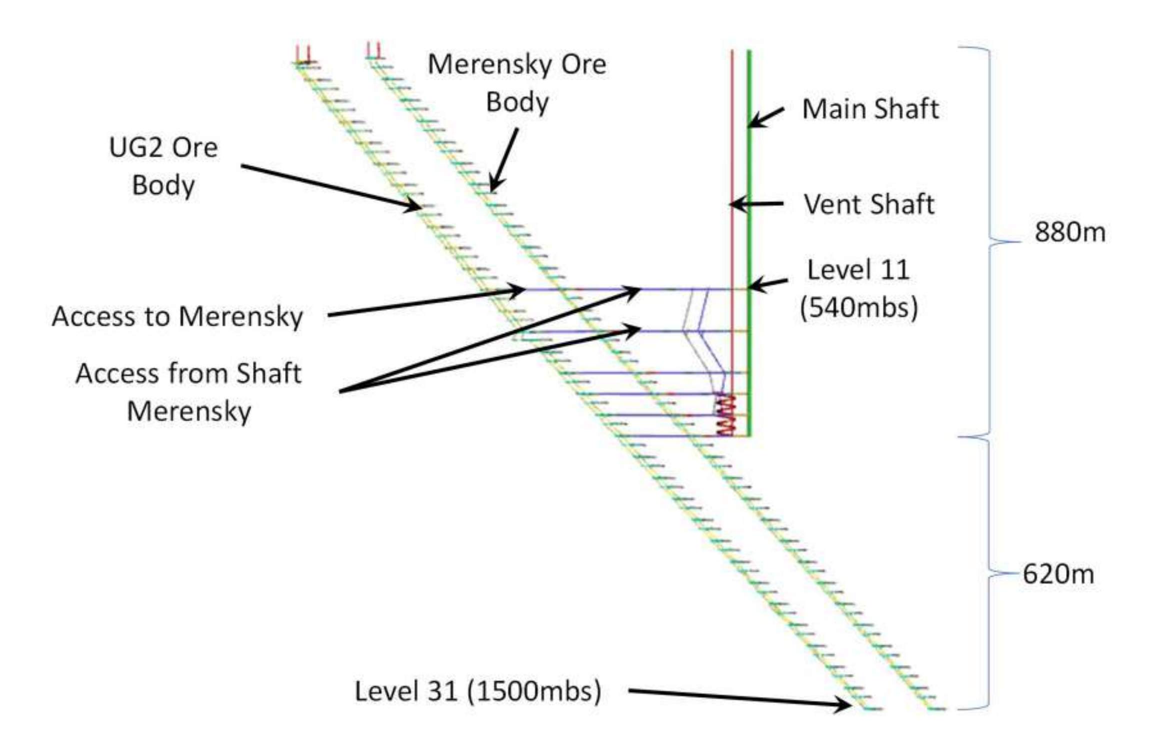
Each decline is a single barrel at the portal entrance (5.5 m wide by 5 m high) to accommodate 45 t dump trucks and fresh intake ventilation requirements. A second barrel is added just below the portal excavation. The second underground decline ramp is included for trucking considerations, to reduce congestion and improve safety.

The portals have been designed with a minimum depth of some 25 m to tunnel floor at the portal, which will provide a minimum hard rock cover of some 5 m above the portal entrance. The portals are located on the southern side of the reefs to maintain a large distance from the artisanal chromite workings on the northern side of the reefs.

Mphahlele Shaft

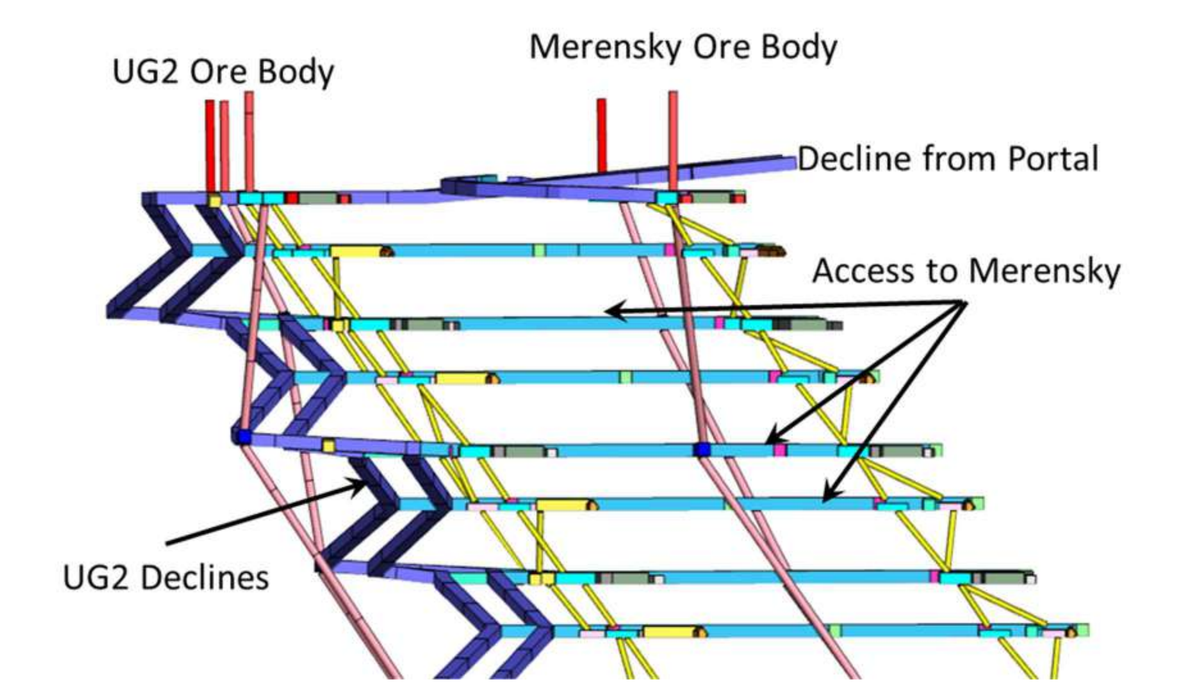
For the UG2 and MR a vertical shaft complex has been conceptually planned to access the reef from hangingwall drives between 540 mbs and 880 mbs and then to connect to ramps for futher levels down to 1 500 mbs. The designed shaft system consists of a ventilation shaft and a main shaft with ore hoisting capacity and will support mining below 600 mbs. This shaft complex has been positioned to minimise trucking distances from both ore bodies from the extreme ends of the mine. Once mining below 600mbs commences the shaft will be in position and all trucking will then be diverted to the shaft tipping arrangements. The shaft design parameters are discussed in Section 18.1.4 and the layout is illustrated in Figure 16-15.

Poor ground is found in the immediate hangingwall (HW) of the UG2 Reef and there are shear zones in the FW of the MR. Any infrastructure positioned between the UG2 Reef and MR would need to pass through this poor ground to access the two reefs. As a result, designing the main infrastructure between the UG2 Reef and MR is not advisable and could increase mining risks in terms of safety, advance rates and support costs. Therefore, the infrastructure was placed in the FW of the UG2 Reef. Access to the Merensky is via access cross cuts from the UG2 infrastructure. An isometric view of the layout is shown in Figure 16-16.



srk consulting	**SRL Total Asset PEA** Mphahlele: Shaft and Infrastructure [source: SMS, 2023]	Project No. 600322

Figure 16-15: Mphahlele: Shaft and Infrastructure



srk consulting	**SRL Total Asset PEA** Merensky: Access from UG2 Infrastructure [source: SMS, 2023]	Project No. 600322

Figure 16-16: Merensky: Access from UG2 Infrastructure

16.4.2 Development

Ruighoek

No development has occurred on the Ruighoek property.

The necessary access roads and haul roads will have to be established prior to start of mining.

PSM above 700 m below Surface

East Pit

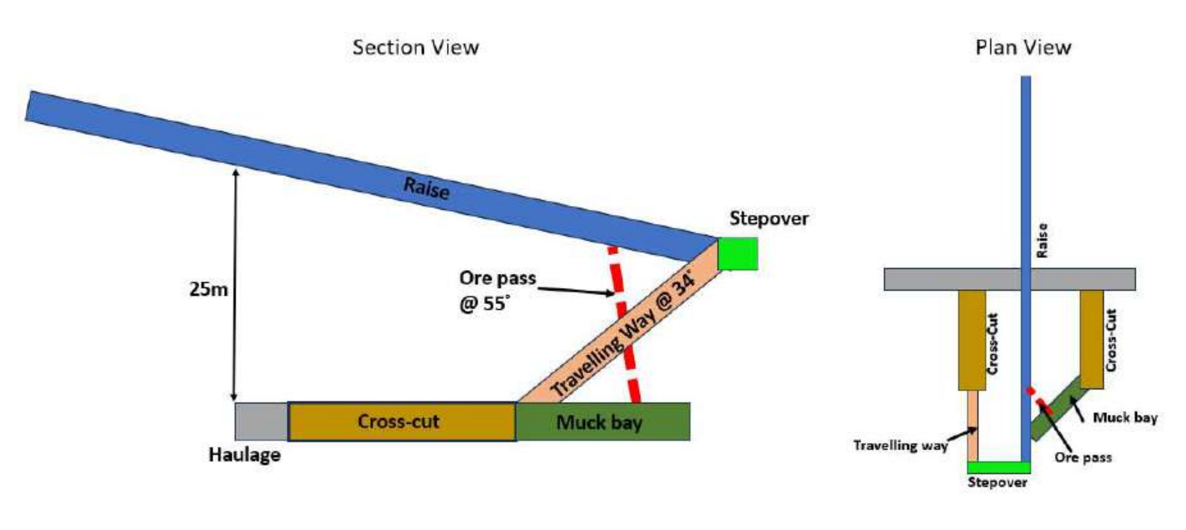
Open pit production at the East Pit has been underway since 2022 until extraction operations were curtailed in November 2023. All necessary haul roads and pit ramps are already in place.

Central Underground and East Underground

Secondary development to access the orebody, starting from the declines, will be excavated using trackless equipment. Single trackless haulages will be developed at a gradient of less than 5° to the horizontal and maintained approximately 25 m vertically below the reef, along strike. The haulage dimensions were designed to accommodate 45 t capacity haul trucks taking cognisance of ventilation columns and other services.

Crosscuts will be developed from the haulages to service both reef horizons. A travelling way equipped with a mono-winch will be developed at an angle of 34º to access the reef horizon.

Two ore passes (approximately 18 m in length) will service production from the stope panels, as illustrated in Figure 16-17. The ore passes will not be equipped with box fronts as LHDs will collect the blasted rock from the footwall and load it directly into the trucks.



srk consulting	SRL Total Asset PEA East and Central Underground - Crosscut Section Development [source: SMS, 2023]	Project No. 600322

Figure 16-17: East and Central Underground - Crosscut Development

Reef development consisting primarily of raises, stepovers, stope preparation drives (SPD) and winch cubbies will be developed using hand-held rock drills and cleaned with scraper winches.

The raise lengths average 200 m between levels. The back-length (raise length) changes according to the dip of the reef and the impact of faults. SPDs will be developed at a slight angle above the horizontal to assist with water drainage.

Once the trackless development section completes a crosscut, the conventional crews will commence with the development of the travelling way to access the UG2 horizon.

Once the travelling way intersects the reef, a step-over will be developed on strike for 15 m in both directions to access the raise position. The raise will then continue up-dip for approximately 200 m to establish through ventilation to the upper level. A single development crew consisting of a seven-man team will be assigned to each raise line.

Pre-development of the muck bays and ore passes is necessary so that there is no delay in raise development once the raise is holed in the level above; only small holings are needed by the ore passes. This is necessary for tipping rock directly onto the footwall of the crosscut. The LHD will collect the ore and load the dump trucks.

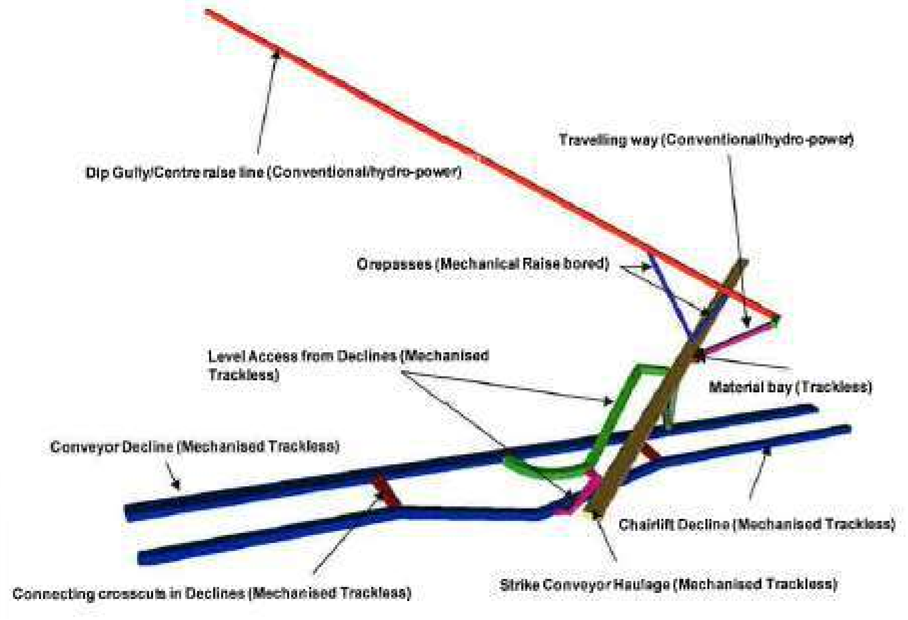
PSM and Kruidfontein below 700 m below Surface

Waste development was designed using TMM. All off-reef infrastructure, which would be placed in the footwall, would be developed using the TMM fleet (Figure 16-18).

The on-reef raise development and stoping operations (Figure 16-18) would be carried out with hydropower rock drills mounted on stope and gully rigs designed for this purpose.

There would be two ore passes between the strike footwall conveyor and reef horizon, which would deliver the ore from the stoping operations directly onto the conveyor belt. These ore passes would be equipped with box fronts, control chutes and vibrating feeders.

The reef horizon would be accessed from the strike conveyor haulage via a travelling way (developed at 34° above the horizontal). Travelling ways would be equipped with steps and a bratticed material way, the latter for the transport of equipment and support consumables into the stope by means of a mono winch.



srk consulting	**SRL Total Asset PEA** Underground Development Layout [source: RSV, 2010]	Project No. 600322

Figure 16-18: Underground Development Layout

Mphahlele

Ramp Declines

The ramp declines will be developed at an approximate inclination of 9° (maximum) below horizontal and located some 25 m in the footwall (FW) of the UG2. Placing the infrastructure and ramps between the UG2 and MR is not advisable, due to the variable distance between the two reefs, poor ground conditions in the hangingwall of the UG2 and footwall of the MR, increased risk in terms of safety and advance rates and increased support costs.

The decline ramps will access the UG2 at the planned elevation of the reef drives. The decline ramps will continue downwards, while the reef drives will then commence with horizontal development in the east and west directions.

Stope Development

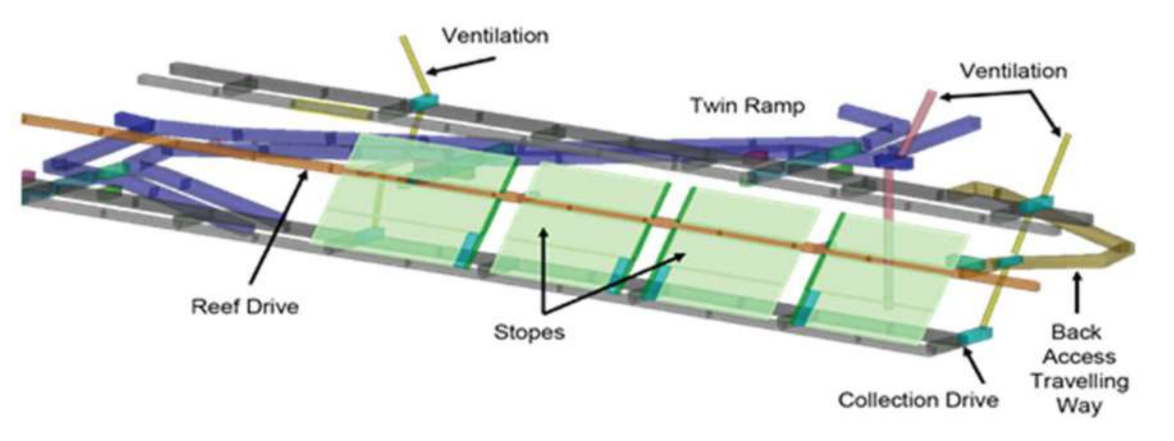
Table 16-21 summarizes the main development types on reef and in waste, with the planned advance rates. The development rates depend on the working shift configuration, which is planned on an eleven-shift fortnight (22 working days per month) and two shifts per day, with blasting taking place at the end of each shift (twice per day).

Table 16-21: Development Dimensions and Advance Rates

Development	Reef/Waste	Dimensions (m) (W x H)	Advance Rate (m/month)
Return airway Reef Drive	Reef	4.0 x 3.5	35
RAW Collect Drive	Waste	4.5 x 4.5	40
Reef Drive	Reef	3.2 x 3.5	35
Ramp Decline	Waste	5.5 x 5.0	50
Collection Drive	Waste	4.5 x 4.5	40
Dam and Electrical Cubby	Waste	4.5 x 5.0	50
Back Access Travelling Way	Waste	3.0 x 2.0	25
Ventilation RAWs	Waste	2.5 m Ø	40
Decline Ramp Ventilation	Waste	3.5 m Ø	40
Ventilation to Surface	Waste	3.5 m Ø	40

Note:
1. RAW Return airway

An isometric view of the access development and stoping layout is provided in Figure 16-19. The purpose of the back-access travelling way is to provide access to the reef drives at different points along strike so that multiple stopes can be accessed and prepared for simultaneous stoping operations. The collection drive will be used to transport ore and must accommodate the large dump trucks. The collection drive forms part of the main level. Dams, electrical cubbies and loading bays are provided on each level at the connections.



srk consulting	SRL Total Asset PEA Isometric View of the Development and Stoping Layout [source: SRK, 2020]	Project No. 600322

Figure 16-19: Isometric View of the Development and Stoping Layout

All ramp and haulage cross sections were optimized for efficient trackless operation. The sublevels will be developed on a shanty back arrangement (i.e., sloping roof) to enhance stability of the stope back and to minimize the waste dilution within the reef development.

16.4.3 Mining

Ruighoek

Conventional open cast mining operations including drill and blast and load and haul activities, will be carried out by a mining contractor.

PSM above 700 m below Surface

East Pit

Conventional open cast mining operations including drill and blast and load and haul activities, will be carried out by a mining contractor.

Central and East Underground

The mining method selected for the mining of both the UG2 and PUP, is conventional up-dip/down-dip stoping. This mining method was selected for the following reasons:

- This mining method is conducive to selective mining and enables focussed mining in the ground control districts selected, for geotechnical considerations;
- The channel widths are approximately 1.4 m for UG2 and 1.2 m for PUP, respectively, and this narrow reef mining method assists with minimising dilution of the ore;
- The dip of the orebodies ranges from 12° to 14°, which is too steep for trackless mobile equipment to operate effectively;
- Although the trackless layouts could have been designed on apparent dip, the reef mineralisation is not developed consistently along the reef plane; therefor, long hole, or hybrid stoping options were discarded;
- The orebodies are highly faulted and are intruded and displaced by dykes. Although the throw is generally small, the variable strike direction of the orebodies from east (western boundary) to northeast (eastern boundary) would pose considerable challenges for trackless mining; and
- This mining method allows for less redevelopment when geological structures are encountered.

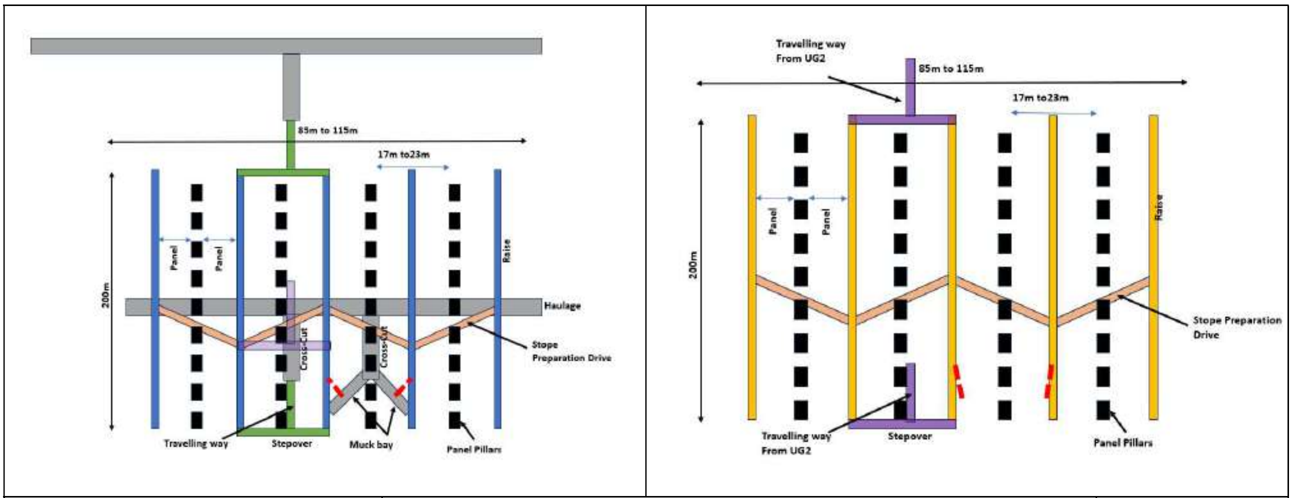
As discussed under above, the mine design is based on the up/down-dip mining method. Access to the reef horizon and ore removal from the PUP will be via a travelling way and passes extended from the Stoping of the PUP reef above the UG2 horizon will only commence once the UG2 stoping in that raise line has been completed.

The stoping panel advance rates for areas in good and poor mining conditions are presented in Table 16-22.

Table 16-22: Stoping Panel Advance Rates

Description	Units	UG2 Good Conditions	UG2 Poor Conditions	PUP Good Conditions	PUP Poor Conditions
Panel Length	(m)	23	17	23	17
Effective Operating Panel Length	(m)	23	17	23	17
Panels per Crew	(/crew)	2	2	2	2
Drill Length	(m)	1.2	1	1.2	1
Effective Advance/Blast	(m)	1	0.9	1	0.9
Shifts/Month	(/month)	22	22	22	22
Blasting Rate	(%)	70	62	70	62
Advance/Month	(m)	15.4	12.3	15.4	12.3
Extraction	(%)	83	80	83	80
Crew Calculated	(m^2/crew)	294	151	294	151
Crew Schedule applied	(m^2/crew)	**300**	**160**	**300**	**160**

Figure 16- shows the stope layout for UG2 on the left and for PUP on the right.



srk consulting	**SRL Total Asset PEA** Stope Layout for the UG2 (left) and the PUP (right) [source: SMS, 2024]	Project No. 600322

Figure 16-20: Stope Layout for the UG2 (left) and the PUP (right)

PSM and Kruidfontein below 700 m below Surface

Central and East Underground

Mining would be conducted on a conventional up-dip/down-dip mining layout, which would be accessed from footwall structures. Cleaning of the face and raise lines would be with conventional scrapers. Ore transport from the raise line boxholes to the decline conveyor would be carried out with strike conveyors.

On-reef development and stope drilling would use hydropower drills powered from a localised source. The use of hydropower equipment is demonstrated to be energy efficient and more productive when compared with pneumatic drills.

Mphahlele

With the orebody consisting of narrow reefs (1.2 m to 2.7 m wide) dipping at 51°, LHOS with sublevel extraction is the most appropriate mining method and was used for mine design purposes. The sub levels were referred to as reef drives in the 2020 FS.

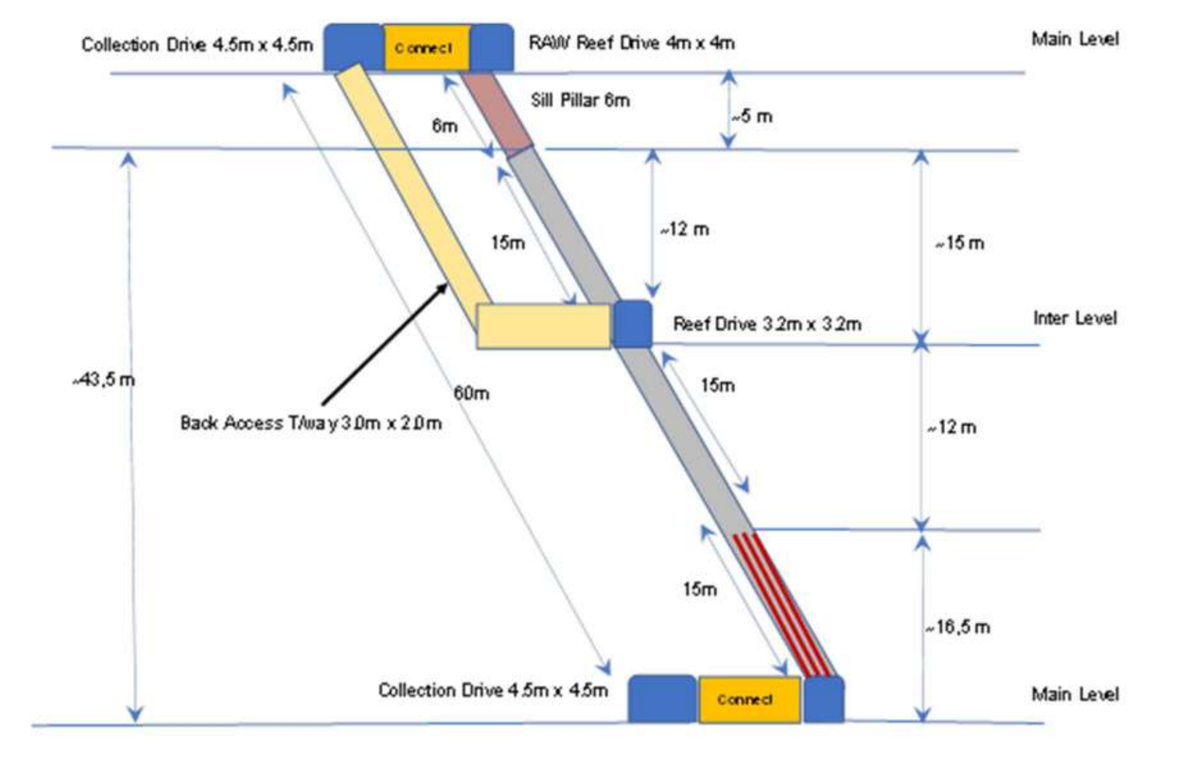
Above 500 m depth, the stoping areas measure 60 m on strike and 54 m on dip (average 51° dip). The stoping block is supported by means of dip pillars (UG2 – 10 m wide) and sill pillars (6 m on dip). Below 500 m, the pillar width will increase. Figure 16-21 illustrates a schematic cross section view of the mining layout on the UG2. The long hole drilling was restricted to 15 m on dip, which means a vertical spacing of 14 m between drill hole lengths. The long-hole drill rigs will drill up-dip and down-dip from the reef drives.

Once development of the reef drive is completed, a slot is developed on-dip adjacent to the dip pillar. The dip pillars are specified to be 10 m wide and 60 m apart skin to skin (Figure 16-22). Mining retreats away from the slot towards the centre of the block as illustrated in Figure 16-22. Note that the RAW reef drive and collection drive are developed parallel to one another (with a middling of 15 m skin to skin) and at the same elevation. Connections between the two excavations will be developed with a middling of 15 m skin to skin. The collection drive and reef drive at the bottom of the stoping block are also developed parallel to one another, on the same elevation as indicated in Figure 16-21.

Once the slots are established against the dip pillars, drilling of the long holes will commence and the stoping faces will be advanced from the slot towards the centre of the stoping block. The faces will advance in an overhand configuration with the top panels leading. Blasted material from stopes will report to the bottom reef drive where LHDs will load the ore and transfer the ore to dump trucks. Dump trucks will transport the ore to surface via the ramp declines.

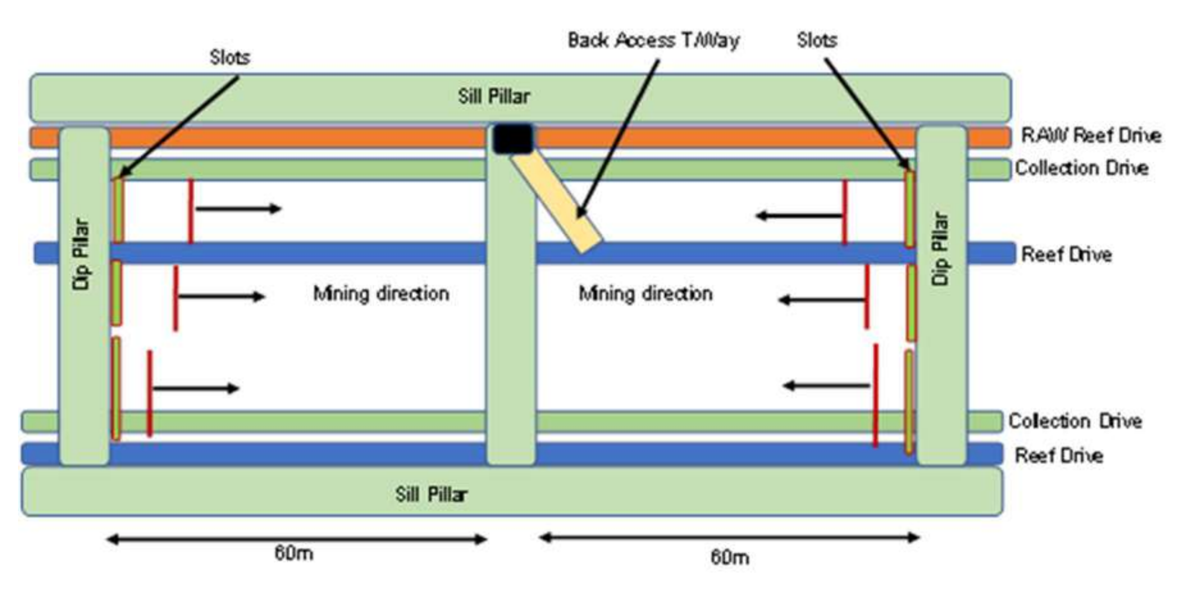
The ramp declines and other infrastructure are located some 25 m in the FW of the UG2. Access to the centre point of each stoping block will be developed in the FW of the UG2 (back access) and will link up with the ramp declines (as indicated in Figure 16-22.

The mine design includes sill pillars that are left *in situ* every 43.5 m (approximate vertical height) and that equate to approximately 54 m on dip, based on the geotechnical recommendations. The sill and dip pillars will provide suitable stability for open stopes and should minimize dilution from the hangingwall.



srk consulting	**SRL Total Asset PEA** Schematic UG2 Mining Layout (cross-section) [source: SRK, 2020]	Project No. 600322

Figure 16-21: Schematic UG2 Mining Layout (cross-section)



srk consulting	**SRL Total Asset PEA** Schematic UG2 Mining Layout (longitudinal section) [source: SRK, 2020]	Project No. 600322

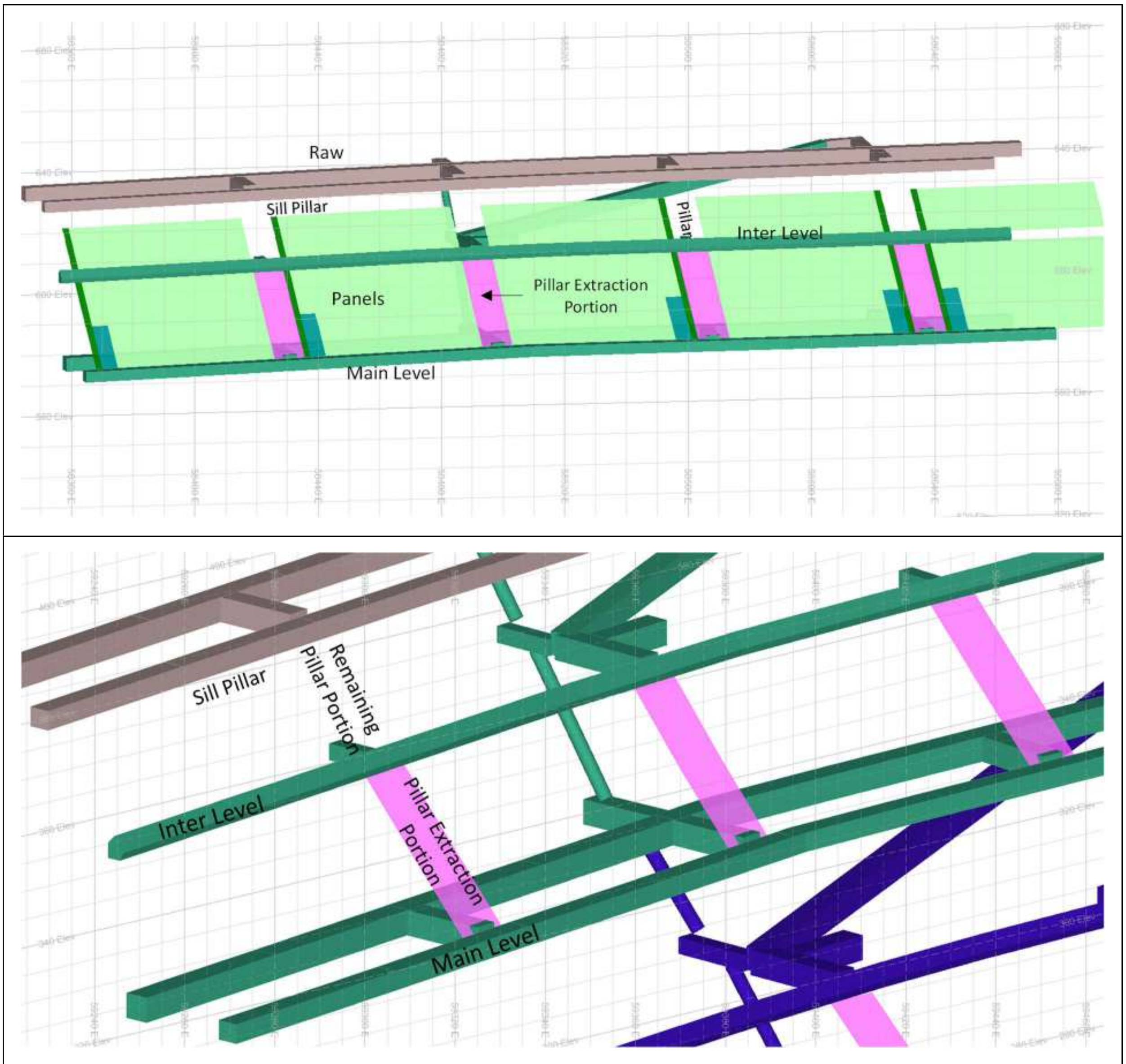
Figure 16-22: Schematic UG2 Mining Layout (longitudinal section)

The 2020 FS blasting is based on bulk emulsion; bulk emaulsion offers benefits for safety and blast performance control, which is required for the planned narrow reef stoping operation.

Reef loading from the stope operation involves LHDs loading ore at the bottom of every third reef drive. The LHD (LH410, 10 t capacity) hauls the reef in the collection drive to a loading bay where the reef is transferred to a waiting dump truck (45 t capacity). The average LHD tramming distance for the Mphahlele is approximately 120 m.

The dump trucks will transport the reef to surface via the ramp decline.

Pillar recovery is planned to commence near the end of LoM. It is planned to target the bottom two-thirds(approximately) of the rib pillars and excludes any of the sill pillars situated below the main levels (illustrated in Figure 16-23).



srk consulting	**SRL Total Asset PEA** Planned Rib Pillar Recovery [source: SRL]	Project No. 600322

Figure 16-23: Planned Rib Pillar Recovery

The pillars are typically 32 m long and 10 m wide, but dimensions may vary depending on the depth below surface. Access to these pillars will be from the Level Collection Drives via the Level Connections, which will remain open for the extraction process. A 60% extraction factor was applied to the planned pillars, which results in an overall extraction factor for the rib pillars of about 38%.

The total tonnage planned from pillars is approximately 25 ktpm. Pillar recovery is planned to commence near the end of the life of the project from the extremities of the orebody, from where it will advance towards the decline systems. This is to maintain the integrity of main infrastructure.

16.4.4 Backfilling

PSM above 700 m below Surface

Central Underground and East Underground

No backfilling is envisaged in these areas.

PSM and Kruidfontein below 700 m below Surface

Magazynskraal and Kruidfontein

All stopes deeper than 1 000 mbs at Magazynskraal and Kruidfontein will be backfilled to assist with maintaining regional stability. In addition, where reef interburdens are less than 12 m, multi-reef mining can occur if stiff backfill is introduced.

The backfill, sequencing and support strategy should consider the following:

- Since only “pay” Merensky reef (MR) will be mined, the UG2 shall be mined prior to the MR;
- The UG2 shall lead the MR by a distance (approximately the limit of a raise line = 240 m) sufficient to allow for:
    - The UG2 not to be influenced by MR face stresses;
    - Ability to conduct geological exploratory work from the UG2 horizon to establish better definition of the MR mineralisation;
    - Any interburden instability not to influence level hauling routes on the UG2 which could either be on or off-reef;
    - Sufficient time to institute measures on the UG2 should instability be expected;
    - Closure on the UG2 to take place prior to mining the MR;
- Cemented Hydraulic Fill or Paste fill would be considered suitable backfill systems;
- The extent of PUP mining must as far as reasonably practicable be known and planned well in advance of the second and subsequent raise development on the UG2;
- Geological exploratory work for the PUP from the UG2 horizon must be a standard operating procedure that is fully incorporated in the mining process;
- Critical remnant sizes must be defined for the PUP horizon:
    - A support and mine design strategy must be formulated and instituted for areas on the UG2 under the influence of PUP remnants;
- Emergency response plans must include procedures to be instituted when PUP is mined above the UG2; and
- There is a possibility in a multi-reef scenario that timber support and grout packs on the upper MR horizon may become ineffective if a tight fill is not achieved and/or there is closure in the UG2, during MR mining.

Mphahlele

No backfilling is required at Mphahlele.

16.5 Required Mining Fleet, Machinery and Personnel

16.5.1 Mining Fleet

Ruighoek

The Ruighoek open pit operations will be mined by conventional mining methods with mining contractors to execute the mining, as was historically done for the West Pit operations.

PSM above 700 m below Surface

West Pit TRR

The West Pit TRR will by done by hydraulic mining. This method applies high pressure water from a hydraulic monitor gun. The water, together with the tailings, creates a slurry that flows to a pumpstation and is pumped to the Retreatment Plant (TRP), which produces a low-grade concentrate.

East Pit

The East Pit operations will be mined by conventional mining methods with mining contractors to execute the mining, as was historically done for the West and East Pit operations.

Central Underground and East Underground

Trackless equipment will be used on all access development. Three development sections will be used during steady state production, of which one will operate in the declines.

Hand-held electric-operated rock drills will be used for travelling ways, raises, advance strike gullies and stope faces. The ore broken in the stopes will be scraped to the in-stope ore passes using winches via the ASGs and raises. Winch sizes will vary but, in general, 55 kW units will be used in raises and ASGs. The ore will be removed from the ore passes into 20 t haul trucks and transferred to the main decline tips for conveying to surface via the conveyor belt decline.

The UG2 output per level will average 1 100 tpd. The majority of the tonnage will be tipped on the night shift. The decline ore pass capacity of 460 t allows for unforeseen conveyor problems. Several hours of uninterrupted tramming can also be accommodated should this occur. The levels are all equipped with a second ore pass to facilitate separate handling of waste and reef.

All footwall access development and the on-reef return airway (RAW) situated on Level 0 will make use of trackless equipment.

Central and East Underground will peak at five and four trackless crews, respectively. Due to the odd shape and smaller size of Central Underground, the strike distance on the upper and lower levels is reduced, which results in an increased development rate to achieve steady state.

On-reef mining equipment will utilise hydropower equipment except for the scraper winches. Two 55 kW power pack units each delivering 12 l/s at 18 MPa will be installed in the haulage cubbies to supply high pressure water for two stoping and one development raise line. High pressure pipes will also be installed into every operating panel.

Winches and scrapers, 55 kW rated units for the raises will be used on-reef to remove rock to the central raise ore passes. From there, dump trucks in the footwall will haul the rock to main level passes that feed the decline conveyor belt.

From the cross cuts, the rock will be loaded by LHDs into trucks and transported to the main tips situated on Level 3 for Central Underground and Level 0 for East Underground. The trucking operation is planned to take place on a double shift (day and night shift).

Trucking distances for Central Underground peak at 2.7 km in 2042 before production starts declining. A maximum trucking distance for East Underground of just over 5 km (one way) is reached in 2056. However, by this time the production rate is reducing and the distance does not materially impact on the trucks required.

The truck demand for Central Underground increases as the production rate from deeper levels increases and peaks at eleven trucks. The longer distances and slightly higher production rate from East Underground increases the number of trucks required to a total of 14 during the latter stages of the life of the block

PSM and Kruidfontein below 700 m below Surface

SRK expects that the TMM fleet for waste development would be similar to that required for the underground mining in the East and Central Underground Projects, comprising single/double boom drill rigs, LHDs, bolters and support vehicles.

Hand-held electric -perated rock drills will be used for travelling ways, raises, advance strike gullies and stope faces. The ore broken in the stopes will be scraped to the in-stope ore passes using winches via the ASGs and raises. Winch sizes will vary but, in general, 55 kW units will be used in raises and ASGs. The ore will be removed from the ore passes into 20 t haul trucks and transferred to the main decline tips for conveying to surface via the conveyor belt decline.

Mphahlele

The project is a fully trackless and mechanised operation and the equipment will be supplied by Original Equipment Manufacturers (OEMs). The key production equipment include:

- Development drill rigs;
- Rock bolters;
- Long hole rigs;
- Dump trucks; and
- LHDs.

The utility vehicles are supplied with cassettes or dedicated vehicles to perform different functions, which may include:

- Scissor lifts;
- Man carriers;
- Fuel/oil tankers;
- Charging vehicles; and
- Agicars and shotcreters.

16.5.2 Personnel

Ruighoek

Mining activities will be conducted by a mining contractor. SRL staff based at PPM will provide an oversight role.

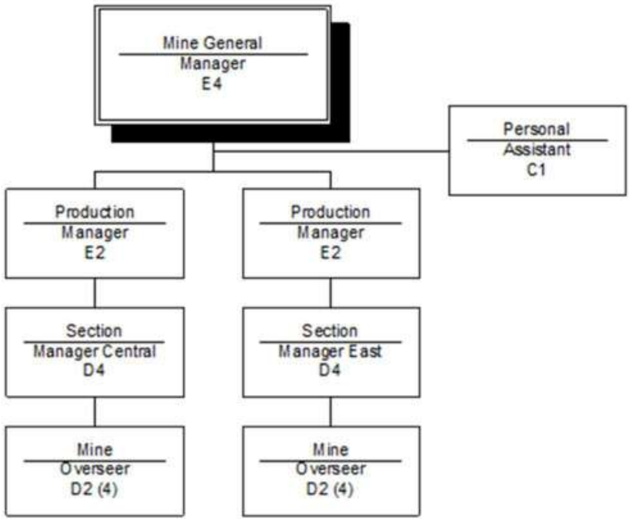
PSM above 700 m below Surface

East Pit and West Pit TRR

All mining activities will be conducted by mining contractors. SRL staff based at PPM will provide an oversight role.

Central Underground and East Underground

The underground mine is planned to be staffed to meet the production requirements and to comply with legal requirements as a minimum standard. The departmental structure for the mining department is illustrated in Figure 16-24. The classification of the different posts as E4, E2, C1, etc., is according to the Paterson Job Grading System. The summary for mining manpower for Central and East Underground is provided in Table 16-23.



srk consulting | **SRL Total Asset PEA** High-level Departmental Structure for Underground Mining | Project No. 600322

Figure 16-24: High-level Departmental Structure for Underground Mining

Table 16-23: Summary Mining Manpower for Central and East Underground

Designation	Central Block		East Block	
	At work Complement	In Service Complement	At work Complement	In Service Complement
Mining Management	**12**	**12**	**13**	**13**
Development				
Mine Trackless Development	74	77	108	122
Conventional Development On-reef Contractor	shared		7	12
Total Development	**74**	**77**	**115**	**134**
Stoping & Ledging				
Ledging	104	108	104	117
Stoping	549	610	549	614
Raise Bore and Drop Raise / contracting	27	27	30	30
Section Management	28	28	28	28
Construction(per level)	18	24	18	24
Total Stoping and Ledging	**726**	**792**	**729**	**808**
Conventional Development on Reef	105	112	105	112
Total UG Mining Complement at Steady State	**917**	**993**	**962**	**1 067**

PSM and Kruidfontein below 700 m below Surface

Magazynskraal Shaft and Kruidfontein Shaft

No organizational designs for the Magazynskraal Shaft and Kruidfontein Shaft have been completed.

Based on the approach adopted in this TR, all support services, general admin staff and management would be located at PPM.

The proposed working arrangement for all operational employees envisages two nine-hour shifts within the traditional 11-shift fortnight system.

Mphahlele

Manpower requirements as estimated at steady state (full) production for both decline sections by the 2020 FS are shown in Table 16-24. An eleven-day fortnight operation is planned, with fixed-time blasting at the end of each shift.

Table 16-24: Mining Manpower Complement at Steady State (UG2)

Area	Total	Operators	Assistants	Maintenance	Supervision
Large End Development	263	88	103	52	20
Reef Drive	95	28	36	24	7
Production/Mining	203	90	40	53	20

16.6 Ventilation

This section considers the effectiveness of risk control measures related to workplace ventilation design. These are aimed at minimizing occupational health exposures to below occupational exposure limits (OELs) as contemplated in best practice mine ventilation design criteria. The following methodology was applied:

- Ventilation designs to provide ventilation and cooling for the LoM business plan;
- Mine production plan aligned with ventilation and cooling supply;
- Emergency preparedness including flammable gas explosion prevention, mine fires and second outlets; and
- Capital requirements.

The mining method, rate of production and occupational health risks were determined, before determining ventilation quantities and cooling requirements.

The overall airflow quantities should be assessed in terms of airflow provision for diesel emission dilution or provision of a ventilation rate per 1 000 t mined per month, whichever is the greatest.

16.6.1 PSM above 700 m below Surface

The East Underground is designed to mine to a depth of 750 mbs and Central Underground to 640 mbs. The production rate at each mine will be 110 ktpm with a down-dip mining method. The UG2 and Upper Psuedo Reef value zone will be mined.

Ore transport will be by means of LHDs and dump trucks. The total ventilation quantities for Central and East Underground were dominated by airflow requirements for diesel emission dilution. To satisfy the diesel particulate matter (DPM) occupational exposure limit of 0.16 mg/m^3, a ventilation rate of 0.06 m^3/s per kW was used to determine the total ventilation quantities. The ventilation rate assumes low emission (Tier 4) engines will be available for the project. A total ventilation quantity of 1 080 m^3/s will be available for each mine.

For both mines, the intake airways will consist of a decline and six 3.2 m diameter raise boreholes (RBHs) established along the length of the decline. Ventilation will be returned via six 3.2 m diameter RBHs to two surface fans per raise borehole. The conveyor decline and workshop will be ventilated direct to return airways. The intake and return airway infrastructure has sufficient capacity to provide ventilation for the LoM.

Other industry mines practising down-dipdown-dip mining experienced difficulties to provide constant ventilation flow to the corners of the panels. The reduced ventilation quantity resulted in an accumulation of toxic blasting fumes in the corners of the panels. Air-jet fans will be installed in the stope panels to mitigate this risk. In addition to the panel ventilation, air-jet fans will be utilised for the ventilation of pillar holing development.

The raise development ventilation design is for 406 mm diameter fans and columns. The design is based on a leakage factor of 10% per 100 m over the length of a 180 m raise. This is achievable in in declines and haulages. However, in the confined space of a raise (2.4 m x 1.5 m), because of blast concussion, ventilation column and scraper interaction, the leakage in a raise ventilation column can be as high as 30% per 100 m. With a reduced ventilation quantity below the minimum requirement, the dilution of gases can be compromised and the risk of a situation immediately dangerous to health can occur. SRK recommends increasing the raise dimensions and replacing the 406 mm diameter fans and columns with 570 mm diameter fans and columns to mitigate the risk. With possible leakage of ±50% over the length of the raise, 570 mm fans and columns can still provide ventilation quantities greater than the minimum requirement. Other PGM industry mines have adopted this approach.

The maximum underground environment design temperature is 29.0°C wet bulb. The criterion for introducing refrigeration is when wet bulb temperatures exceed 29.0°C. The mines can be classified as cool mines with rock temperatures less than 40.0°C. The ventilation (1 080 m^3/s) cooling capacities are sufficient to maintain wet bulb temperatures below 29.0°C. However, wet bulb temperatures are expected to exceed 27.5°C, the limit where a heat stress management program (including heat tolerance screening) is required. The design requirements are for ventilation without cooling (refrigeration). When mining with trackless diesel machinery, cooling should be considered when rock temperatures exceed 40.0°C.

16.6.2 PSM below 700 m below Surface and Kruidfontein

The orebody lies between 750 m and 2 000 m below surface. Between 750 m and 1 500 m, decline systems and the Magazynskraal vertical shaft complex will access the orebody; between 1 500 m and 2 000 m, the Kruidfontein vertical shaft complex will be utilised. At full production, the Magazynskraal shaft complex will produce 200 ktpm and the Kruidfontein shaft complex will produce 160 ktpm; both areas will utilise the breast mining method.

Ore transport will be by means of LHDs and dump trucks. The total ventilation quantities for the Magazynskraal and Kruidfontein areas were dominated by airflow requirements for diesel emission dilution, the need to remove heat and dilution of blasting fumes.

To maintain wet bulb temperatures below 29.0°C when mining below 750 m, the ventilation must be supplemented with cooling (refrigeration). The estimated rock temperatures will be 46.0°C at 1 000 m and 68.0°C at 2 000 m below surface.

Ventilation and cooling will be provided to the following mining zones:

- 750 m to 1 000 m (Magazynskraal Shaft):
  - Total ventilation quantity: 760 m³/s (four surface fans);
  - Intake airways will consist of a decline system and strategically placed return boreholes (RBH). A new Ø3.2 m RBH is planned to 750 m below surface.Return airways (RAWs) will consist of the existing RBHs in the upper mine and a new Ø5.0 m RBH to 860 m below surface;
  - Total cooling: 6.0 MW surface bulk air cooler (BAC) linked to the new Ø3.2m intake RBH to 750 m below surface;
- 1 000 m to 1 500 m (Magazynskraal Shaft):
  - Total ventilation quantity: 820 m³/s (two centrifugal fans);
  - Intake airways will consist of RBHs down to 750 m, the Ø5.0 m RBH (ex. Return RBH) established to 860 m, and the Magazynskraal main shaft (Ø10.0 m). Return airways will consist of twin RAWs and the Magazynskraal ventilation shaft (Ø8.0 m);
  - Total cooling: 26.0 MW consisting of surface BACs linked to an intake RBH and to the Magazynskraal main shaft (Ø10.0 m);
- 1 500 m to 2 000 m (Kruidfontein Shaft):
  - Total ventilation quantity: 880 m³/s (two centrifugal fans);
  - Intake airways will consist of the Ø5.0 m Magazynskraal BAC and the Kruidfontein main shaft (Ø10.0 m). The RAW will consist of a Ø5.0 m RBH and the Ø8.0 m Kruidfontein ventilation shaft; and
  - Total Cooling: ±46.4 MW consisting of BACs (32.0 MW) linked to the Magazynskraal BAC and the (Ø10.0 m) Kruidfontein main shaft, chilled service water plant (9.3 MW) and underground cooling plant (5.1 MW).

With the above ventilation and cooling infrastructure, high-level computer simulations indicate that wet bulb temperatures will be maintained below 29.0°C. However, when conducting the feasibility study, it will be necessary to re-evaluate the ventilation and cooling requirements.

16.6.3 Mphahlele

The orebody dips at an average of 51°. Mining has been planned to an average depth of 600 mbs and covers 12 levels. The UG2 will be mined and ore transport will be with LHDs and dump trucks to surface. No conveyor belts are planned. Production is planned at a rate of 136 ktpm (including waste) with a LHOS and sublevel extraction mining method. The orebody has been split into two mining blocks (Blocks A and B). Block A will be accessed from a single decline, while Block B will be accessed with two sets of declines linked by a twin haulage (see Figure 16-28).

Overall airflow requirements are assessed in terms of airflow provision for diesel emission dilution, heat removal and clearance of blasting fumes, provision of a ventilation rate per tonne mined and ventilation requirements for the LHOS mining method. The total airflow requirement for Mphahlele per the 2020 FS for mining on the UG2 only was dominated by the ventilation required for the LHOS stoping and use of trackless mobile machinery for development and underground ore hauling. To satisfy the DPM occupational exposure limit of 0.16 mg/m^3, a ventilation design rate of 0.06 m^3/s/kW was used to determine the total ventilation quantities. The ventilation rate assumes low emission (Tier 4) engines will be available for the project. A total ventilation quantity of 750 m^3/s will be required for Block A. Block B will require 500 m^3/s.

For the mining blocks, the intake airways will consist of single declines (Blocks A and B) and Ø3.5 m RBHs established along the length of the decline. Ventilation will be returned via return airways on 0 Level and four Ø3.5 m RBHs (two fans per RBH) for Block A and three Ø3.5 m RBHs (two fans per RBH) for Block B. The workshops will be ventilated directly to the return airways. The intake and return airway infrastructure has sufficient capacity to provide ventilation for the LoM.

With intake RBHs from surface direct to the working levels, the design confirms that no cooling will be required down to 700 m. Computer simulations indicate that the wet bulb temperature on the lowest level will not exceed 29.0ºC.

The ventilation infrastructure includes eight fan stations on the UG2. Secondary ventilation equipment includes fans, duct, refuge bays, stoppings and other auxiliary equipment, and an environmental monitoring system.

The design details above support the mining of the UG2 per the 2020 FS, but will have to be revised to include the Merensky.

The ventilation design for mining of both the UG2 and Merensky per the 2009 FS forms the basis for the Capex in this PEA. While the Capex provision including contingency is likely to be of the correct order of magnitude, the design will have to be redone to a feasibility study level to match the desired production rate and underground layouts as envisaged in this PEA.

No conceptual ventilation design has been compiled for the Mphahlele Shaft portion. With a depth of mining down to 1 500 mbs, SRK expects the design details will be similar to those for the Magazynskraal Shaft as given above.

16.6.4 Ventilation-related Codes of Practice

Flammable gas (methane) is one of the principal hazards in underground mines; most flammable gas intersections are associated with dykes and faults. The risk of intersecting flammable gas cannot be discounted and the risk appears to increase as mines go deeper. Mitigation measures are included in the Prevention of Flammable Gas Explosions CoP.

In the event of an underground fire and release of toxic gases that could lead to an atmosphere immediately dangerous to life (irrespirable atmosphere), personnel will be issued with oxygen-producing self-contained self-rescuers for escape to refuge chambers. The portable refuge chambers equipped with oxygen cylinders will be located within 500 m of working places. For escape purposes to surface, the mines will have second outlets. At the PSM mines, the conveyor declines and workshops will be ventilated direct to return airways to mitigate the risk of conveyor belt and workshop fires. Mphahlele will not have conveyor belts. The workshops will be ventilated to return airways.

Before mining commences at PSM, Kruidfontein and Mphahlele, the DMRE requires that mandatory CoPs must be in place. The main ventilation-related CoPs include Prevention of Mine Fires, Prevention of Flammable Gas Explosions, and Emergency Preparedness and Response.

In the event of an emergency (mine fire etc.), the following will be provided:

- Self-contained self-rescuers;
- Refuge bays (self-sustaining); and
- Second outlets.

16.7 Final Mine Outline

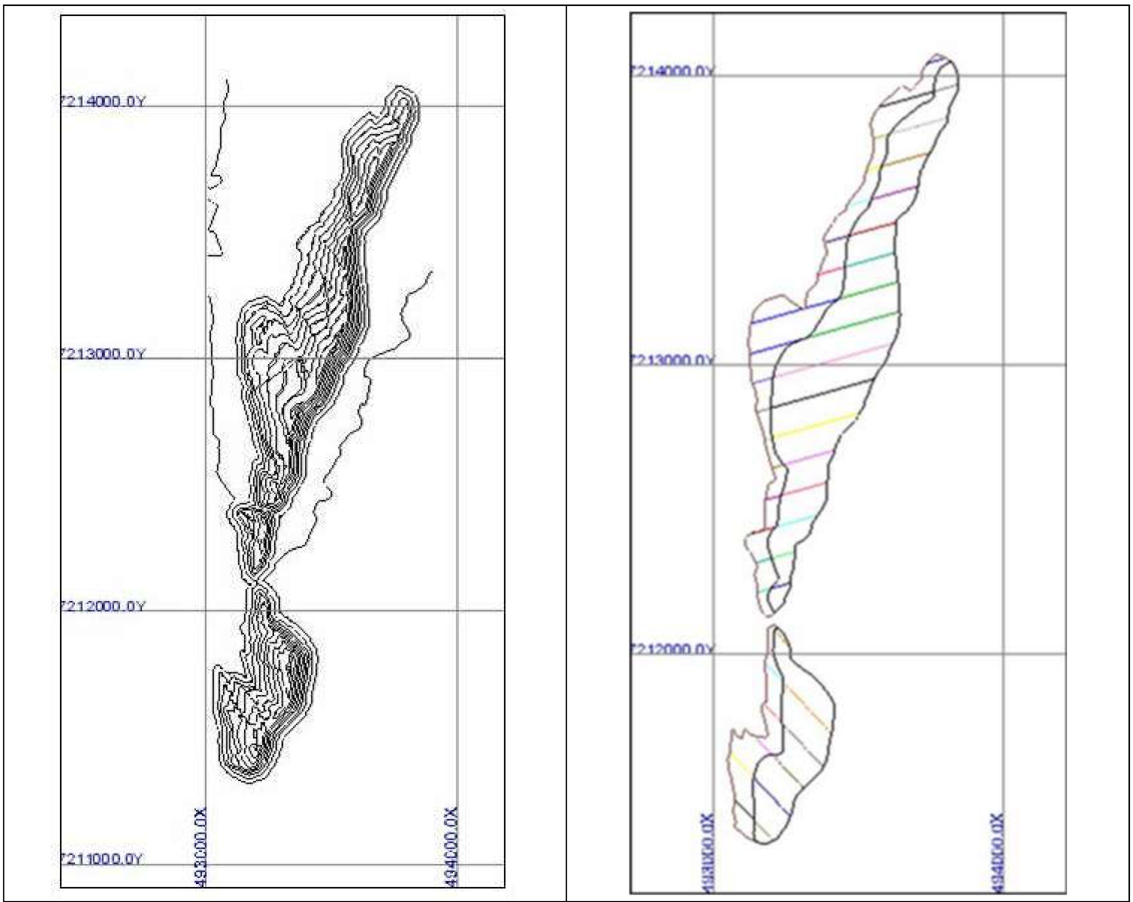
16.7.1 Ruighoek

The final pit outline for Ruighoek is shown in Figure 16-25.

16.7.2 PSM above 700 m below Surface

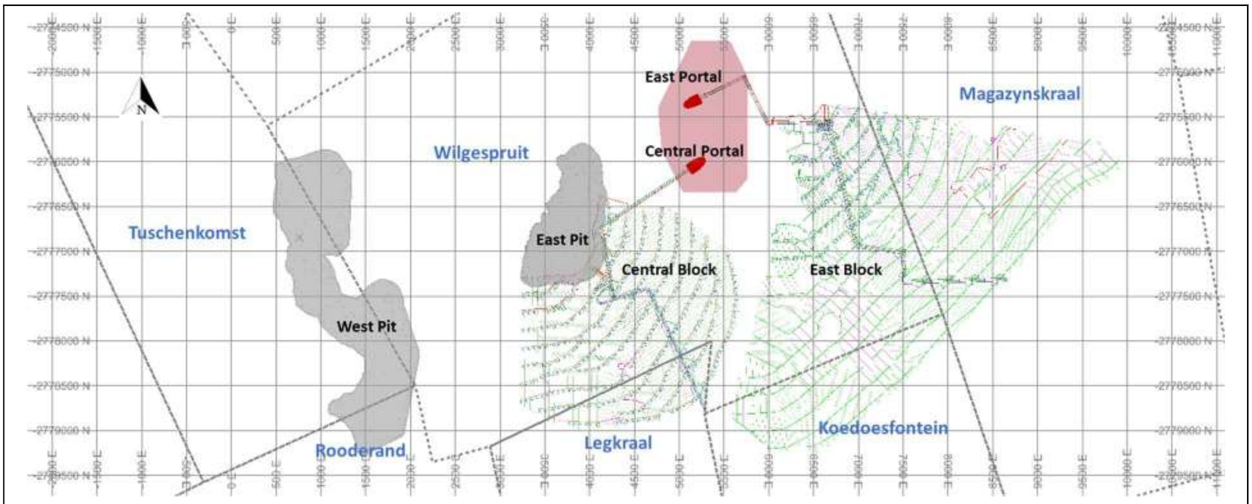
The final pit outline for the East Pit is shown in Figure 16-26.

The final mine outline for Central and East Underground is shown in Figure 16-26.



srk consulting	**SRL Total Asset PEA** Ruighoek - Plan of the Optimum Whittle Pit (left) and North and South Practical Pits (right)	Project No. 600322

Figure 16-25: Ruighoek - Plan of the Optimum Whittle Pit (left) and North and South Practical Pits (right)

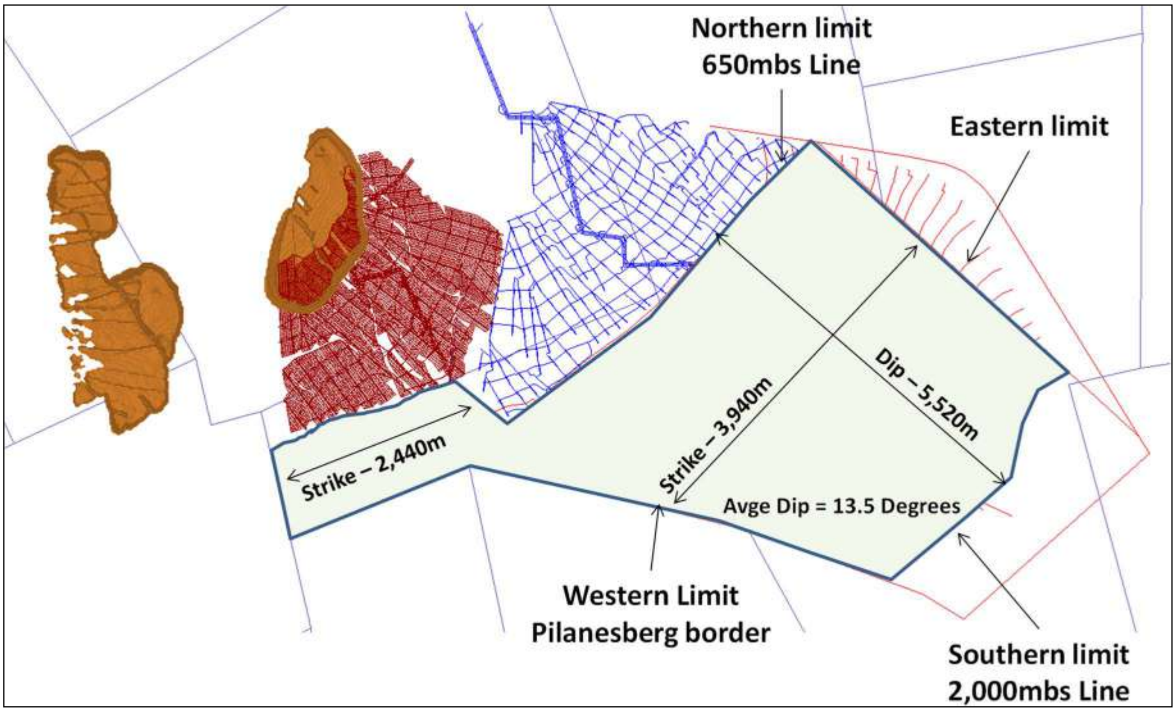


srk consulting	**SRL Total Asset PEA** Final Mine Outline for PSM - Central and East Underground[source: SRK, 2020b; SRL]	Project No. 600322

Figure 16-26: Final Mine Outline for PSM - Central and East Underground

16.7.3 PSM and Kruidfontein below 700 m below Surface

The mining areas for Magazynskraal and Kruidfontein are shown in Figure 16-27.

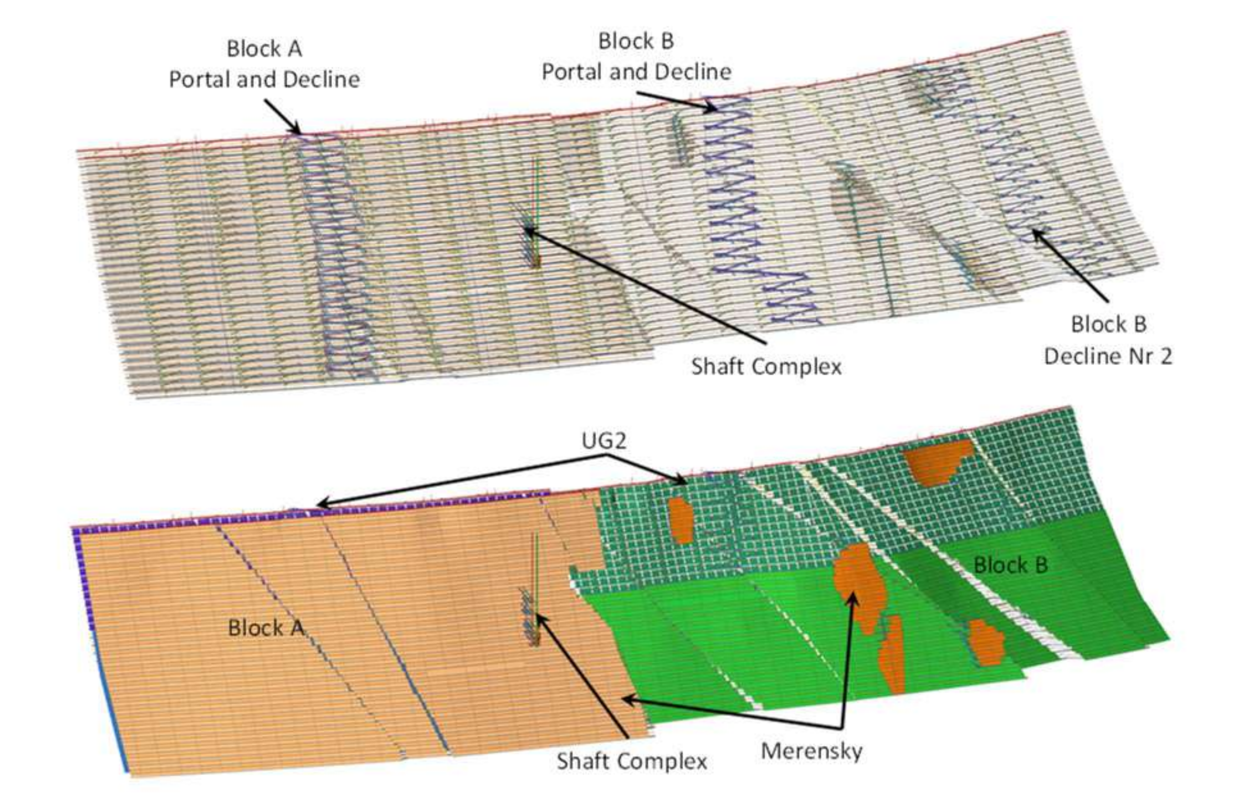


srk consulting	**SRL Total Asset PEA** Mining Areas for Magazynskraal and Kruidfontein [Source: SMS, 2024]	Project No. 600322

Figure 16-27: Mining Areas for Magazynskraal and Kruidfontein

16.7.4 Mphahlele

The final mine outline is shown in Figure 16-26. A cross-sectional view of the mine design on the UG2 for the Project is shown in Figure 16-14.



srk consulting | **SRL Total Asset PEA** Mphahlele - Final Mine Outline [source: SMS, 2023] | Project No. 600322

Figure 16-28: Mphahlele - Final Mine Outline

16.8 Planned Mining Production Schedules

The mining production schedules for the various properties and projects are summarised as follows:

- Ruighoek Pit Table 16-25;
- PSM - East Pit Table 16-26;
- PSM - West Pit TRR Table 16-27;
- PSM - Central Underground Table 16-28;
- PSM - East Underground Table 16-29;
- PSM - Magazynskraal Shaft Table 16-30;
- Kruidfontein Shaft Table 16-31;
- Mphahlele Decline Table 16-32; and
- Mphahlele Shaft Table 16-33.

16.9 Mining Risks

16.9.1 Ruighoek

From a technical mining perspective Ruighoek is a low-risk project, but needs to be re-evaluted and costed to ensure it is stil a viable Mineral Resource that can add value.

16.9.2 PSM above 700 m below Surface

West Pit TRR

The West Pit TRR project is a low-risk mining project, which can be executed under the correct economic conditions. No detailed mine plan, production sequence or design criteria are available for the reclamation of the tailings in the PPM TSF.

East Pit

From a technical mining perspective, the East Pit is a low-risk project, which is currently not operational due toto cost curtailment and depressed metal prices; not economic at current basket price.

Central Underground and East Underground

Geotechnical risks have been identified and suitably mitigated through the following design criteria:

- A minimum 25 m thick crown pillar between pit floor and mine workings agrees with acceptable design criteria. Subsurface monitoring should be implemented to monitor the crown pillar stability;
- Declines are to be developed 50 m into the footwall of the UG2 reef in a norite rock type. The rock is heavily jointed and appropriate ground support will be required to secure the long life access system;
- Inter-pillar mining spans should be limited to 16-28 m in response to ground conditions and multiple extraction sequences, and an underhand stoping sequence should be implemented;
- Drill core assessments have not provided the necessary data for adequate fallout height estimation;
- The height of the tensile zone above access ways and between UG2 and PUP stoping has been suitably evaluated. Support designs and excavation layouts adequately account for the tensile height; and
- The decision regarding single- or multi-reef mining depends on:
    - Where inter-burdens are less than 12 m only single reef mining is permitted. Multi-reef mining can occur if stiff backfill is introduced as a regional support measure,
    - Multi-reef mining is permitted where inter-burdens vary between 12-18 m, provided that permanent support consists of high strength grout packs integrated into the elongate support,
    - Mining on both reefs is permitted for interburden distances between 18 m -30 m provided breaker line grout pack support is introduced, and
    - Both reefs can be treated as separate non-influencing entities at inter-burdens greater than 30 m.

16.9.3 PSM and Kruidfontein below 700 m below Surface

The mine design has been done on a deposit where the Mineral Resources have been classified in the Inferred category. There is no guarantee that these Inferred Mineral Resources will be upgraded to either Indicated or Measured Mineral Resources with further exploration.

There is also no guarantee that further engineering studies will show that the Mineral Resources can be extracted economically, allowing Mineral Reserves to be declared.

Without any detail of the composition of the TMM fleet, SRK is unable to confirm whether the TMM fleet is sufficient and appropriate for the assumed activities.

The reported results from the economic analysis should be treated as preliminary in nature as they are derived from a LoM plan which exploits Inferred Mineral Resources that are of insufficient confidence to provide certainty that the conclusions presented in this report will be realized.

16.9.4 Mphahlele

The main areas of mining risk are common to all mining operations and include the control of dilution and mining losses. Sufficient dilution provision is included in the production schedule and extracted grade (some 30% on average).

Mining losses have been estimated at 3%, which is deemed to be reasonable. Remote control loading could be implemented if mining losses exceed the 3% planned target.

The requirement to meet the social and labour plan (SLP) targets for employment of local people is a high risk to the Project particularly with regard to safety performance. This has been addressed by substantial provision of additional labour to allow for a high level of training input into a skills development programme.

Originally, the design catered for two inter level reef drives which relied on drilling up holes only. Subsequently it was decided to remove one of these reef drives (to minimise development costs) and utilise only one reef drive. This design meant that the single reef drive would be used for drilling up and down holes. Accurate drilling is of major importance and drill hole lengths have been limited to approximately 15 m to minimise hole deviation.

Table 16-25: Ruighoek: Planned Mining Production (2048 to 2056)

Item	Units	Totals / Averages	2048	2049	2050	2051	2052	2053	2054	2055	2056
Merensky RoM ore	(Mt)	3.80	0.29	0.58	0.59	0.50	0.58	0.54	0.34	0.29	0.08
Merensky RoM 4E grade	(g/t)	2.61	2.63	2.57	2.88	2.70	2.60	2.52	2.38	2.42	2.33
Merensky RoM Ni grade	(%)	0.201%	0.201%	0.201%	0.201%	0.201%	0.201%	0.201%	0.201%	0.201%	0.201%
Merensky RoM Cu grade	(%)	0.044%	0.044%	0.044%	0.044%	0.044%	0.044%	0.044%	0.044%	0.044%	0.044%
UG2 RoM ore	(Mt)	1.34	0.08	0.18	0.20	0.14	0.15	0.18	0.18	0.18	0.05
UG2 RoM 4E grade	(g/t)	4.61	4.36	4.21	4.55	4.80	4.94	4.57	4.53	4.77	4.96
UG2 RoM Ni grade	(%)	-	-	-	-	-	-	-	-	-	-
UG2 RoM Cu grade	(%)	-	-	-	-	-	-	-	-	-	-
Total RoM ore	(Mt)	5.1	0.37	0.76	0.79	0.65	0.73	0.72	0.52	0.47	0.13
Total RoM contained 4E	(koz)	499.7	34.7	69.4	81.4	63.9	70.0	67.9	50.6	48.8	12.9
Total RoM contained Ni	(t)	7 629.0	581.1	1 165.6	1 185.9	1 012.8	1 155.8	1 087.0	685.2	589.7	165.8
Total RoM contained Cu	(t)	1 670.0	127.2	255.2	259.6	221.7	253.0	238.0	150.0	129.1	36.3

Table 16-26: PSM - East Pit: Planned Mining Production (2048 to 2054)

Item	Units	Totals / Averages	2048	2049	2050	2051	2052	2053	2054
Merensky RoM ore	(Mt)	15.00	1.36	2.93	2.89	2.98	2.35	2.49	0.01
Merensky RoM 4E grade	(g/t)	1.08	0.99	1.04	1.10	1.03	0.98	1.28	1.86
Merensky RoM Ni grade	(%)	0.090%	0.085%	0.091%	0.093%	0.087%	0.085%	0.094%	0.123%
Merensky RoM Cu grade	(%)	0.015%	0.014%	0.015%	0.016%	0.013%	0.013%	0.021%	0.031%
UG2 RoM ore	(Mt)	7.02	0.71	1.33	1.20	0.99	1.50	1.25	0.05
UG2 RoM 4E grade	(g/t)	2.47	2.31	2.45	2.35	2.51	2.52	2.57	2.94
UG2 RoM Ni grade	(%)	0.007%	0.008%	0.007%	0.007%	0.007%	0.008%	0.008%	0.007%
UG2 RoM Cu grade	(%)	0.005%	0.006%	0.004%	0.004%	0.005%	0.006%	0.005%	0.004%
Total RoM ore	(Mt)	22.03	2.07	4.26	4.08	3.97	3.85	3.74	0.06
Total RoM contained 4E	(koz)	1 041.1	93.1	195.8	186.0	172.8	189.4	198.7	5.3
Total RoM contained Ni	(t)	13 983.7	1 217.8	2 755.9	2 751.4	2 678.6	2 117.8	2 442.5	19.7
Total RoM contained Cu	(t)	2 664.3	224.0	508.6	505.9	445.4	390.7	583.8	6.0

Table 16-27: PSM - West Pit TRR: Planned Mining Production (2029 to 2042)

Item	Units	Totals / Averages	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
Tailings from PPM TSF	(Mt)	45.80	-	3.60	3.60	3.60	3.60	3.60	3.60	3.60	3.60	3.60	3.60	3.60	3.60	2.60
Av.tailings 4E grade	(g/t)	0.68	-	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68
Total contained 4E in tails	(koz)	974.4	-	76.6	76.6	76.6	76.6	76.6	76.6	76.6	76.6	76.6	76.6	76.6	76.6	55.3

Table 16-28: PSM – Central Underground: Planned Mining Production (2024 to 2048)

Item	Units	Totals / Averages	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
Merensky RoM ore	(Mt)	0.64	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Merensky RoM 4E grade	(g/t)	4.48	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Merensky RoM Ni grade	(%)	0.142%	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Merensky RoM Cu grade	(%)	0.061%	-	-	-	-	-	-	-	-	-	-	-	-	-	-
UG2 RoM ore	(Mt)	19.89	-	-	-	-	-	0.17	0.29	0.86	0.98	0.99	0.98	0.98	0.98	1.03
UG2 RoM 4E grade	(g/t)	5.23	-	-	-	-	-	4.38	4.37	4.85	5.10	5.20	5.04	5.05	5.00	4.93
UG2 RoM Ni grade	(%)	0.008%	-	-	-	-	-	0.008%	0.010%	0.013%	0.012%	0.012%	0.013%	0.013%	0.013%	0.012%
UG2 RoM Cu grade	(%)	0.002%	-	-	-	-	-	0.001%	0.001%	0.002%	0.002%	0.002%	0.002%	0.002%	0.002%	0.002%
Total RoM ore	(Mt)	20.5	-	-	-	-	-	0.17	0.29	0.86	0.98	0.99	0.98	0.98	0.98	1.03
Total RoM contained 4E	(koz)	3 326.5	-	-	-	-	-	22.49	39.39	129.33	156.10	159.32	154.21	154.49	152.92	157.33
Total RoM contained Ni	(t)	2 533.2	-	-	-	-	-	12.52	29.26	114.66	122.56	120.56	124.78	127.94	130.64	124.01
Total RoM contained Cu	(t)	756.3	-	-	-	-	-	2.10	3.78	14.79	18.89	16.36	16.54	15.59	17.65	20.36

Item	Units	Totals / Averages	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
Merensky RoM ore	(Mt)	0.64	0.02	0.10	0.10	0.10	0.09	0.08	0.03	0.07	0.04	0.02	-
Merensky RoM 4E grade	(g/t)	4.48	2.65	4.00	4.84	3.73	3.57	3.87	5.83	8.34	3.30	3.97	-
Merensky RoM Ni grade	(%)	0.142%	0.096%	0.148%	0.172%	0.129%	0.115%	0.127%	0.130%	0.157%	0.162%	0.176%	0.000%
Merensky RoM Cu grade	(%)	0.061%	0.038%	0.066%	0.090%	0.047%	0.045%	0.048%	0.050%	0.081%	0.055%	0.062%	0.000%
UG2 RoM ore	(Mt)	19.89	1.11	1.20	1.25	1.25	1.23	1.26	1.32	1.27	1.25	1.15	0.35
UG2 RoM 4E grade	(g/t)	5.23	4.81	5.10	5.18	5.27	5.78	5.44	5.00	5.35	5.69	6.03	5.72
UG2 RoM Ni grade	(%)	0.008%	0.012%	0.011%	0.007%	0.005%	0.006%	0.005%	0.003%	0.002%	0.002%	0.004%	0.005%
UG2 RoM Cu grade	(%)	0.002%	0.002%	0.002%	0.002%	0.002%	0.002%	0.002%	0.002%	0.002%	0.002%	0.002%	0.002%
Total RoM ore	(Mt)	20.5	1.13	1.29	1.34	1.35	1.33	1.34	1.34	1.34	1.29	1.17	0.35
Total RoM contained 4E	(koz)	3 326.5	167.49	201.97	215.33	216.13	232.11	222.79	209.45	230.18	225.86	218.09	61.53
Total RoM contained Ni	(t)	2 533.2	150.78	269.48	256.02	191.33	182.48	163.06	74.29	142.51	88.29	89.24	18.77
Total RoM contained Cu	(t)	756.3	29.24	83.35	107.32	65.84	67.06	63.82	39.39	82.18	45.06	39.75	7.26

Table 16-29: PSM – East Underground: Planned Mining Production (2024 to 2061)

Item	Units	Totals / Averages	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
Merensky RoM ore	(Mt)	7.49	-	-	-	-	-	0.01	0.07	0.13	0.18	0.18	0.18	0.18	0.18	0.18
Merensky RoM 4E grade	(g/t)	4.52	-	-	-	-	-	2.59	3.28	3.13	3.36	4.24	4.95	5.41	5.46	5.15
Merensky RoM Ni grade	(%)	0.147%	-	-	-	-	-	0.092%	0.123%	0.138%	0.137%	0.142%	0.147%	0.148%	0.152%	0.149%
Merensky RoM Cu grade	(%)	0.057%	-	-	-	-	-	0.035%	0.046%	0.049%	0.045%	0.050%	0.053%	0.057%	0.061%	0.059%
UG2 RoM ore	(Mt)	30.31	-	-	0.01	0.05	0.23	0.32	0.48	0.78	0.80	0.80	0.80	0.80	0.89	1.00
UG2 RoM 4E grade	(g/t)	3.98	-	-	1.76	2.26	3.66	4.37	4.28	4.45	4.55	4.59	4.39	4.37	4.40	4.42
UG2 RoM Ni grade	(%)	0.011%	-	-	0.007%	0.007%	0.017%	0.012%	0.012%	0.011%	0.011%	0.012%	0.012%	0.011%	0.012%	0.012%
UG2 RoM Cu grade	(%)	0.003%	-	-	0.002%	0.002%	0.005%	0.002%	0.003%	0.003%	0.002%	0.003%	0.003%	0.002%	0.002%	0.003%
Total RoM ore	(Mt)	37.79	-	-	0.01	0.05	0.23	0.34	0.55	0.91	0.98	0.98	0.98	0.98	1.07	1.18
Total RoM contained 4E	(koz)	4 808.6	-	-	0.38	3.64	26.16	45.18	71.31	120.91	131.88	138.44	137.48	139.54	151.91	166.73
Total RoM contained Ni	(t)	14 443.0	-	-	0.51	3.63	38.11	50.85	138.59	265.88	333.30	348.72	361.81	356.55	377.05	393.67
Total RoM contained Cu	(t)	5 116.9	-	-	0.15	0.81	10.45	12.54	43.26	82.77	100.23	111.49	118.74	122.54	131.09	134.95

Item	Units	Totals / Averages	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051
Merensky RoM ore	(Mt)	7.49	0.18	0.18	0.18	0.18	0.18	0.18	0.22	0.24	0.24	0.28	0.30	0.30	0.30	0.30
Merensky RoM 4E grade	(g/t)	4.52	4.85	4.71	4.65	4.27	3.96	4.28	4.56	5.03	5.00	4.88	4.52	4.38	4.43	4.39
Merensky RoM Ni grade	(%)	0.147%	0.149%	0.147%	0.141%	0.139%	0.137%	0.142%	0.146%	0.155%	0.161%	0.161%	0.150%	0.145%	0.148%	0.145%
Merensky RoM Cu grade	(%)	0.057%	0.058%	0.061%	0.060%	0.057%	0.053%	0.054%	0.056%	0.059%	0.063%	0.063%	0.060%	0.059%	0.061%	0.060%
UG2 RoM ore	(Mt)	30.31	1.14	1.15	1.15	1.15	1.15	1.15	1.11	1.09	1.09	1.05	1.03	1.03	1.03	1.03
UG2 RoM 4E grade	(g/t)	3.98	4.36	4.18	4.26	4.13	4.01	4.01	3.88	3.79	3.88	3.79	3.66	3.66	3.46	3.47
UG2 RoM Ni grade	(%)	0.011%	0.013%	0.012%	0.013%	0.012%	0.012%	0.011%	0.011%	0.011%	0.012%	0.012%	0.011%	0.011%	0.010%	0.010%
UG2 RoM Cu grade	(%)	0.003%	0.003%	0.003%	0.003%	0.003%	0.003%	0.003%	0.003%	0.003%	0.003%	0.003%	0.003%	0.003%	0.003%	0.002%
Total RoM ore	(Mt)	37.79	1.32	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
Total RoM contained 4E	(koz)	4 808.6	182.11	176.19	178.92	171.65	165.72	167.70	165.77	166.25	168.99	166.32	159.91	158.27	152.43	152.15
Total RoM contained Ni	(t)	14 443.0	413.18	405.55	401.92	390.96	382.34	385.69	449.73	494.37	511.86	575.52	567.46	545.04	549.98	539.54
Total RoM contained Cu	(t)	5 116.9	140.44	145.31	146.08	139.12	130.24	130.59	155.70	173.79	180.88	207.93	211.22	203.77	209.48	205.09

Item	Units	Totals / Averages	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061
Merensky RoM ore	(Mt)	7.49	0.30	0.30	0.30	0.34	0.36	0.35	0.34	0.28	0.19	0.18
Merensky RoM 4E grade	(g/t)	4.52	4.48	4.49	4.85	4.71	4.89	4.30	3.52	3.99	4.84	5.12
Merensky RoM Ni grade	(%)	0.147%	0.147%	0.147%	0.156%	0.149%	0.153%	0.139%	0.127%	0.134%	0.155%	0.170%
Merensky RoM Cu grade	(%)	0.057%	0.059%	0.058%	0.061%	0.059%	0.061%	0.056%	0.049%	0.049%	0.055%	0.061%
UG2 RoM ore	(Mt)	30.31	1.03	1.03	1.03	0.99	0.97	0.96	0.68	0.42	0.41	0.42
UG2 RoM 4E grade	(g/t)	3.98	3.51	3.52	3.66	3.70	3.71	3.99	4.09	3.90	4.13	4.15
UG2 RoM Ni grade	(%)	0.011%	0.011%	0.010%	0.011%	0.011%	0.010%	0.011%	0.011%	0.011%	0.012%	0.012%
UG2 RoM Cu grade	(%)	0.003%	0.003%	0.002%	0.002%	0.002%	0.002%	0.002%	0.002%	0.003%	0.003%	0.003%
Total RoM ore	(Mt)	37.79	1.33	1.33	1.33	1.33	1.33	1.32	1.03	0.70	0.59	0.60
Total RoM contained 4E	(koz)	4 808.6	154.87	154.63	162.67	163.87	167.33	166.75	124.78	85.20	80.13	82.40
Total RoM contained Ni	(t)	14 443.0	552.15	549.44	577.73	609.64	650.97	597.61	514.01	418.24	336.21	355.22
Total RoM contained Cu	(t)	5 116.9	204.49	198.91	207.22	224.55	243.19	222.16	184.71	147.88	113.57	121.58

Table 16-30: Magazynskraal Shaft: Planned Mining Production (2027 to 2068)

Item	Units	Totals / Averages	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Merensky RoM ore	(Mt)	12.78	-	-	-	-	-	-	-	-	0.01	0.06	0.20	0.42	0.48	0.45
Merensky RoM 4E grade	(g/t)	6.59	-	-	-	-	-	-	-	-	4.94	5.90	6.42	6.57	6.60	6.64
Merensky RoM Ni grade	(%)	0.155%	-	-	-	-	-	-	-	-	0.155%	0.155%	0.155%	0.155%	0.155%	0.155%
Merensky RoM Cu grade	(%)	0.062%	-	-	-	-	-	-	-	-	0.062%	0.062%	0.062%	0.062%	0.062%	0.062%
UG2 RoM ore	(Mt)	46.02	-	-	-	-	0.00	0.01	0.06	0.21	0.50	1.13	1.79	1.89	1.88	1.77
UG2 RoM 4E grade	(g/t)	3.99	-	-	-	-	2.30	2.75	3.70	3.69	3.70	3.81	3.83	3.86	3.91	3.89
UG2 RoM Ni grade	(%)	0.018%	-	-	-	-	0.018%	0.018%	0.018%	0.018%	0.018%	0.018%	0.018%	0.018%	0.018%	0.018%
UG2 RoM Cu grade	(%)	0.004%	-	-	-	-	0.004%	0.004%	0.004%	0.004%	0.004%	0.004%	0.004%	0.004%	0.004%	0.004%
Total RoM ore	(Mt)	58.80	-	-	-	-	0.00	0.01	0.06	0.21	0.51	1.19	1.99	2.31	2.36	2.21
Total RoM contained 4E	(koz)	8 326.2	-	-	-	-	0.1	0.7	6.6	24.4	59.7	144.5	253.9	312.5	327.0	305.7
Total RoM contained Ni	(t)	28 282.7	-	-	-	-	0.1	1.6	10.6	39.2	109.6	300.3	645.3	995.0	1 088.8	1 016.4
Total RoM contained Cu	(t)	9 781.2	-	-	-	-	0.0	0.3	2.3	8.6	27.2	82.9	198.8	335.1	373.0	347.8

Item	Units	Totals / Averages	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054
Merensky RoM ore	(Mt)	12.78	0.43	0.43	0.43	0.51	0.49	0.49	0.55	0.53	0.55	0.56	0.51	0.55	0.55	0.54
Merensky RoM 4E grade	(g/t)	6.59	6.58	6.60	6.65	6.56	6.62	6.51	6.56	6.61	6.54	6.62	6.60	6.59	6.65	6.59
Merensky RoM Ni grade	(%)	0.155%	0.155%	0.155%	0.155%	0.155%	0.155%	0.155%	0.155%	0.155%	0.155%	0.155%	0.155%	0.155%	0.155%	0.155%
Merensky RoM Cu grade	(%)	0.062%	0.062%	0.062%	0.062%	0.062%	0.062%	0.062%	0.062%	0.062%	0.062%	0.062%	0.062%	0.062%	0.062%	0.062%
UG2 RoM ore	(Mt)	46.02	1.86	1.80	1.84	1.81	1.89	1.84	1.88	1.88	1.88	1.90	1.88	1.92	1.86	1.89
UG2 RoM 4E grade	(g/t)	3.99	3.92	3.94	4.00	4.07	4.08	4.17	4.11	4.05	4.04	4.00	4.02	4.05	4.04	4.00
UG2 RoM Ni grade	(%)	0.018%	0.018%	0.018%	0.018%	0.018%	0.018%	0.018%	0.018%	0.018%	0.018%	0.018%	0.018%	0.018%	0.018%	0.018%
UG2 RoM Cu grade	(%)	0.004%	0.004%	0.004%	0.004%	0.004%	0.004%	0.004%	0.004%	0.004%	0.004%	0.004%	0.004%	0.004%	0.004%	0.004%
Total RoM ore	(Mt)	58.80	2.29	2.23	2.27	2.32	2.39	2.33	2.43	2.41	2.44	2.46	2.40	2.47	2.41	2.43
Total RoM contained 4E	(koz)	8 326.2	315.1	308.0	318.2	333.9	341.9	338.3	351.9	345.0	349.4	352.2	341.0	354.3	347.8	345.1
Total RoM contained Ni	(t)	28 282.7	1 012.8	991.7	1 004.0	1 126.1	1 114.4	1 100.9	1 195.9	1 160.9	1 206.7	1 222.0	1 143.1	1 204.5	1 197.7	1 178.8
Total RoM contained Cu	(t)	9 781.2	343.3	336.8	340.3	390.1	382.8	379.1	415.8	401.7	420.0	425.5	394.6	417.9	417.1	408.5

Item	Units	Totals / Averages	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068
Merensky RoM ore	(Mt)	12.78	0.54	0.55	0.58	0.54	0.54	0.54	0.37	0.18	0.08	0.05	0.01	0.03	0.04	0.01
Merensky RoM 4E grade	(g/t)	6.59	6.59	6.55	6.59	6.61	6.56	6.66	6.68	6.68	6.72	6.72	4.79	6.68	6.72	6.72
Merensky RoM Ni grade	(%)	0.155%	0.155%	0.155%	0.155%	0.155%	0.155%	0.155%	0.155%	0.155%	0.155%	0.155%	0.155%	0.155%	0.155%	0.155%
Merensky RoM Cu grade	(%)	0.062%	0.062%	0.062%	0.062%	0.062%	0.062%	0.062%	0.062%	0.062%	0.062%	0.062%	0.062%	0.062%	0.062%	0.062%
UG2 RoM ore	(Mt)	46.02	1.79	1.68	1.45	1.30	1.18	0.83	0.65	0.51	0.47	0.33	0.17	0.16	0.12	0.02
UG2 RoM 4E grade	(g/t)	3.99	4.04	4.01	3.97	3.97	3.96	3.97	3.97	3.97	3.97	3.99	4.01	4.02	3.95	3.91
UG2 RoM Ni grade	(%)	0.018%	0.018%	0.018%	0.018%	0.018%	0.018%	0.018%	0.018%	0.018%	0.018%	0.018%	0.018%	0.018%	0.018%	0.018%
UG2 RoM Cu grade	(%)	0.004%	0.004%	0.004%	0.004%	0.004%	0.004%	0.004%	0.004%	0.004%	0.004%	0.004%	0.004%	0.004%	0.004%	0.004%
Total RoM ore	(Mt)	58.80	2.33	2.22	2.03	1.84	1.71	1.36	1.02	0.69	0.55	0.37	0.18	0.19	0.16	0.03
Total RoM contained 4E	(koz)	8 326.2	334.9	320.6	297.7	271.2	254.4	213.0	156.1	100.4	74.8	50.3	22.6	26.3	22.6	4.2
Total RoM contained Ni	(t)	28 282.7	1 164.5	1 156.6	1 164.3	1 071.6	1 047.9	984.1	687.1	374.9	211.1	133.9	40.6	75.7	83.6	20.5
Total RoM contained Cu	(t)	9 781.2	406.2	406.8	417.2	385.1	379.8	365.9	253.1	133.0	68.9	42.8	10.5	24.9	29.6	7.7

Table 16-31: Kruidfontein Shaft: Planned Mining Production (2024 to 2063)

Item	Units	Totals / Averages	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
Merensky RoM ore	(Mt)	12.84	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Merensky RoM 4E grade	(g/t)	6.58	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Merensky RoM Ni grade	(%)	0.179%	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Merensky RoM Cu grade	(%)	0.059%	-	-	-	-	-	-	-	-	-	-	-	-	-	-
UG2 RoM ore	(Mt)	21.63	-	-	-	-	-	-	-	-	-	-	0.00	0.00	0.01	0.09
UG2 RoM 4E grade	(g/t)	4.54	-	-	-	-	-	-	-	-	-	-	2.27	2.27	3.49	3.96
UG2 RoM Ni grade	(%)	0.049%	-	-	-	-	-	-	-	-	-	-	0.049%	0.049%	0.049%	0.049%
UG2 RoM Cu grade	(%)	0.002%	-	-	-	-	-	-	-	-	-	-	0.002%	0.002%	0.002%	0.002%
Total RoM ore	(Mt)	34.47	-	-	-	-	-	-	-	-	-	-	0.00	0.00	0.01	0.09
Total RoM contained 4E	(koz)	5 677.7	-	-	-	-	-	-	-	-	-	-	0.0	0.1	1.2	11.4
Total RoM contained Ni	(t)	33 554.2	-	-	-	-	-	-	-	-	-	-	0.2	0.7	5.3	45.0
Total RoM contained Cu	(t)	7 996.2	-	-	-	-	-	-	-	-	-	-	0.0	0.0	0.2	2.1

Item	Units	Totals / Averages	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051
Merensky RoM ore	(Mt)	12.84	0.00	0.07	0.14	0.37	0.37	0.37	0.37	0.37	0.39	0.61	0.73	0.76	0.83	0.85
Merensky RoM 4E grade	(g/t)	6.58	6.72	6.21	6.09	6.51	6.58	6.59	6.57	6.63	6.46	6.55	6.59	6.54	6.55	6.55
Merensky RoM Ni grade	(%)	0.179%	0.179%	0.179%	0.179%	0.179%	0.179%	0.179%	0.179%	0.179%	0.179%	0.179%	0.179%	0.179%	0.179%	0.179%
Merensky RoM Cu grade	(%)	0.059%	0.059%	0.059%	0.059%	0.059%	0.059%	0.059%	0.059%	0.059%	0.059%	0.059%	0.059%	0.059%	0.059%	0.059%
UG2 RoM ore	(Mt)	21.63	0.36	0.86	1.37	1.53	1.53	1.59	1.54	1.56	1.47	1.35	1.21	1.15	1.04	1.02
UG2 RoM 4E grade	(g/t)	4.54	4.41	4.46	4.51	4.53	4.55	4.54	4.54	4.55	4.55	4.55	4.54	4.54	4.53	4.54
UG2 RoM Ni grade	(%)	0.049%	0.049%	0.049%	0.049%	0.049%	0.049%	0.049%	0.049%	0.049%	0.049%	0.049%	0.049%	0.049%	0.049%	0.049%
UG2 RoM Cu grade	(%)	0.002%	0.002%	0.002%	0.002%	0.002%	0.002%	0.002%	0.002%	0.002%	0.002%	0.002%	0.002%	0.002%	0.002%	0.002%
Total RoM ore	(Mt)	34.47	0.37	0.94	1.51	1.90	1.90	1.96	1.91	1.93	1.86	1.97	1.94	1.91	1.86	1.88
Total RoM contained 4E	(koz)	5 677.7	50.5	134.0	218.2	290.7	292.4	300.9	293.7	297.3	286.2	316.8	321.0	317.5	314.5	318.6
Total RoM contained Ni	(t)	33 554.2	184.3	553.0	911.4	1 412.0	1 409.3	1 442.6	1 420.3	1 424.0	1 411.4	1 761.0	1 900.2	1 926.3	1 985.4	2 029.2
Total RoM contained Cu	(t)	7 996.2	10.8	62.4	110.1	252.1	250.4	253.9	253.7	251.2	259.2	389.7	454.6	471.5	506.3	522.5

Item	Units	Totals / Averages	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063
Merensky RoM ore	(Mt)	12.84	0.85	0.82	0.85	0.82	0.84	0.83	0.73	0.48	0.21	0.09	0.06	0.00
Merensky RoM 4E grade	(g/t)	6.58	6.58	6.56	6.57	6.57	6.57	6.65	6.68	6.69	6.67	6.72	6.72	6.72
Merensky RoM Ni grade	(%)	0.179%	0.179%	0.179%	0.179%	0.179%	0.179%	0.179%	0.179%	0.179%	0.179%	0.179%	0.179%	0.179%
Merensky RoM Cu grade	(%)	0.059%	0.059%	0.059%	0.059%	0.059%	0.059%	0.059%	0.059%	0.059%	0.059%	0.059%	0.059%	0.059%
UG2 RoM ore	(Mt)	21.63	0.99	0.97	0.77	0.56	0.43	0.17	0.03	-	-	-	-	-
UG2 RoM 4E grade	(g/t)	4.54	4.55	4.56	4.57	4.56	4.59	4.59	4.60	-	-	-	-	-
UG2 RoM Ni grade	(%)	0.049%	0.049%	0.049%	0.049%	0.049%	0.049%	0.049%	0.049%	0.000%	0.000%	0.000%	0.000%	0.000%
UG2 RoM Cu grade	(%)	0.002%	0.002%	0.002%	0.002%	0.002%	0.002%	0.002%	0.002%	0.000%	0.000%	0.000%	0.000%	0.000%
Total RoM ore	(Mt)	34.47	1.84	1.79	1.62	1.38	1.28	1.00	0.76	0.48	0.21	0.09	0.06	0.00
Total RoM contained 4E	(koz)	5 677.7	314.8	305.6	283.3	247.4	234.1	196.5	156.9	99.2	44.1	18.0	11.8	1.0
Total RoM contained Ni	(t)	33 554.2	2 011.0	1 949.1	1 897.3	1 747.0	1 722.5	1 575.9	1 330.7	854.1	381.2	154.4	101.1	8.6
Total RoM contained Cu	(t)	7 996.2	520.8	503.6	513.5	493.9	503.2	491.1	430.2	278.7	124.4	50.4	33.0	2.8

Table 16-32: Mphahlele Decline: Planned Mining Production (2024 to 2064) (100% basis)

Item	Units	Totals / Averages	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
Merensky RoM ore	(Mt)	13.57	-	-	-	0.04	0.16	0.38	0.62	0.71	0.92	0.95	1.09	1.12	1.20	1.18
Merensky RoM 4E grade	(g/t)	2.38	-	-	-	0.31	1.00	1.64	2.02	2.15	2.40	2.40	2.52	2.50	2.52	2.49
Merensky RoM Ni grade	(%)	0.143%	-	-	-	0.143%	0.143%	0.143%	0.143%	0.143%	0.143%	0.143%	0.143%	0.143%	0.143%	0.143%
Merensky RoM Cu grade	(%)	0.098%	-	-	-	0.098%	0.098%	0.098%	0.098%	0.098%	0.098%	0.098%	0.098%	0.098%	0.098%	0.098%
UG2 RoM ore	(Mt)	18.56	-	-	-	0.06	0.22	0.60	0.97	1.15	1.22	1.25	1.36	1.25	1.30	1.31
UG2 RoM 4E grade	(g/t)	4.87	-	-	-	3.23	3.60	4.26	4.45	4.99	4.87	5.16	5.09	5.05	4.93	4.96
UG2 RoM Ni grade	(%)	0.083%	-	-	-	0.083%	0.083%	0.083%	0.083%	0.083%	0.083%	0.083%	0.083%	0.083%	0.083%	0.083%
UG2 RoM Cu grade	(%)	0.045%	-	-	-	0.045%	0.045%	0.045%	0.045%	0.045%	0.045%	0.045%	0.045%	0.045%	0.045%	0.045%
Total RoM ore	(Mt)	32.14	-	-	-	0.11	0.38	0.98	1.59	1.86	2.14	2.20	2.45	2.38	2.51	2.48
Total RoM contained 4E	(koz)	3 819.8	-	-	-	6.9	30.0	98.7	173.2	226.2	252.8	272.2	300.6	284.3	294.7	292.8
Total RoM contained Ni	(t)	34 655.9	-	-	-	116.0	411.8	1 034.7	1 685.3	1 964.8	2 312.5	2 388.2	2 671.1	2 634.9	2 791.3	2 753.8
Total RoM contained Cu	(t)	21 587.0	-	-	-	71.9	256.1	639.3	1 042.2	1 212.7	1 442.9	1 490.6	1 671.6	1 659.3	1 760.5	1 734.7

Item	Units	Totals / Averages	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051
Merensky RoM ore	(Mt)	13.57	1.15	0.98	0.89	0.75	0.66	0.38	0.24	0.13	0.03	-	-	-	-	-
Merensky RoM 4E grade	(g/t)	2.38	2.48	2.34	2.40	2.43	2.48	2.60	2.67	2.84	2.40	-	-	-	-	-
Merensky RoM Ni grade	(%)	0.143%	0.143%	0.143%	0.143%	0.143%	0.143%	0.143%	0.143%	0.143%	0.143%	-	-	-	-	-
Merensky RoM Cu grade	(%)	0.098%	0.098%	0.098%	0.098%	0.098%	0.098%	0.098%	0.098%	0.098%	0.098%	-	-	-	-	-
UG2 RoM ore	(Mt)	18.56	1.34	1.25	0.99	0.72	0.66	0.42	0.38	0.31	0.21	0.28	0.27	0.09	0.08	0.03
UG2 RoM 4E grade	(g/t)	4.87	4.89	4.94	4.84	5.12	4.94	4.68	5.25	5.09	5.01	4.94	4.54	4.43	5.12	6.25
UG2 RoM Ni grade	(%)	0.083%	0.083%	0.083%	0.083%	0.083%	0.083%	0.083%	0.083%	0.083%	0.083%	0.083%	0.083%	0.083%	0.083%	0.083%
UG2 RoM Cu grade	(%)	0.045%	0.045%	0.045%	0.045%	0.045%	0.045%	0.045%	0.045%	0.045%	0.045%	0.045%	0.045%	0.045%	0.045%	0.045%
Total RoM ore	(Mt)	32.14	2.49	2.23	1.88	1.47	1.32	0.80	0.62	0.43	0.24	0.28	0.27	0.09	0.08	0.03
Total RoM contained 4E	(koz)	3 819.8	292.8	262.9	215.6	171.2	152.4	91.9	81.8	59.7	35.0	43.0	38.4	12.1	13.4	6.3
Total RoM contained Ni	(t)	34 655.9	2 742.2	2 428.1	2 080.5	1 665.7	1 486.5	890.1	652.3	432.1	213.6	230.7	224.2	72.6	69.4	26.6
Total RoM contained Cu	(t)	21 587.0	1 722.3	1 518.7	1 309.9	1 057.6	941.4	560.9	402.8	260.4	121.9	125.8	122.3	39.6	37.9	14.5

Item	Units	Totals / Averages	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064
Merensky RoM ore	(Mt)	13.57	-	-	-	-	-	-	-	-	-	-	-	-	-
Merensky RoM 4E grade	(g/t)	2.38	-	-	-	-	-	-	-	-	-	-	-	-	-
Merensky RoM Ni grade	(%)	0.143%	-	-	-	-	-	-	-	-	-	-	-	-	-
Merensky RoM Cu grade	(%)	0.098%	-	-	-	-	-	-	-	-	-	-	-	-	-
UG2 RoM ore	(Mt)	18.56	0.01	0.04	0.02	0.02	0.01	0.11	0.06	0.02	0.11	0.16	0.16	0.09	0.01
UG2 RoM 4E grade	(g/t)	4.87	4.86	6.07	3.82	2.70	5.27	4.27	6.07	2.29	3.02	4.01	4.18	5.44	5.97
UG2 RoM Ni grade	(%)	0.083%	0.083%	0.083%	0.083%	0.083%	0.083%	0.083%	0.083%	0.083%	0.083%	0.083%	0.083%	0.083%	0.083%
UG2 RoM Cu grade	(%)	0.045%	0.045%	0.045%	0.045%	0.045%	0.045%	0.045%	0.045%	0.045%	0.045%	0.045%	0.045%	0.045%	0.045%
Total RoM ore	(Mt)	32.14	0.01	0.04	0.02	0.02	0.01	0.11	0.06	0.02	0.11	0.16	0.16	0.09	0.01
Total RoM contained 4E	(koz)	3 819.8	1.0	8.4	2.6	1.6	2.3	14.3	11.9	1.2	10.2	20.3	20.7	14.9	1.7
Total RoM contained Ni	(t)	34 655.9	5.4	36.6	18.3	15.5	11.5	88.5	51.9	14.2	89.8	134.0	131.3	72.6	7.4
Total RoM contained Cu	(t)	21 587.0	3.0	20.0	10.0	8.5	6.3	48.3	28.3	7.8	49.0	73.1	71.6	39.6	4.0

Note:

1. Values represent 100% of production and not the amount attributable to SRL.

Table 16-33: Mphahlele Shaft: Planned Mining Production (2029 to 2070) (100% basis)

Item	Units	Totals / Averages	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
Merensky RoM ore	(Mt)	18.87	-	-	-	-	-	-	-	-	0.06	0.20	0.43	0.56	0.79	1.00
Merensky RoM 4E grade	(g/t)	2.67	-	-	-	-	-	-	-	-	1.19	1.69	1.92	2.06	2.22	2.39
Merensky RoM Ni grade	(%)	0.143%	-	-	-	-	-	-	-	-	0.143%	0.143%	0.143%	0.143%	0.143%	0.143%
Merensky RoM Cu grade	(%)	0.098%	-	-	-	-	-	-	-	-	0.098%	0.098%	0.098%	0.098%	0.098%	0.098%
UG2 RoM ore	(Mt)	32.67	-	-	-	-	-	-	0.02	0.19	0.38	0.62	0.81	1.19	1.29	1.30
UG2 RoM 4E grade	(g/t)	3.44	-	-	-	-	-	-	2.43	3.33	3.80	3.81	3.92	3.91	3.77	3.79
UG2 RoM Ni grade	(%)	0.083%	-	-	-	-	-	-	0.083%	0.083%	0.083%	0.083%	0.083%	0.083%	0.083%	0.083%
UG2 RoM Cu grade	(%)	0.045%	-	-	-	-	-	-	0.045%	0.045%	0.045%	0.045%	0.045%	0.045%	0.045%	0.045%
Total RoM ore	(Mt)	51.53	-	-	-	-	-	-	0.02	0.19	0.43	0.82	1.24	1.75	2.08	2.30
Total RoM contained 4E	(koz)	5 064.6	-	-	-	-	-	-	1.7	19.2	46.7	83.8	124.1	181.0	206.3	227.4
Total RoM contained Ni	(t)	53 833.1	-	-	-	-	-	-	18.3	152.7	390.0	795.0	1 280.1	1 779.6	2 193.9	2 499.0
Total RoM contained Cu	(t)	33 093.7	-	-	-	-	-	-	10.0	83.3	223.6	473.2	783.4	1 080.9	1 353.1	1 561.5

Item	Units	Totals / Averages	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056
Merensky RoM ore	(Mt)	18.87	1.09	1.20	1.17	1.20	1.13	1.13	1.13	1.18	1.15	1.27	1.26	1.09	0.86	0.58
Merensky RoM 4E grade	(g/t)	2.67	2.46	2.59	2.65	2.68	2.78	2.84	2.89	2.79	2.82	2.89	2.91	2.93	2.87	2.73
Merensky RoM Ni grade	(%)	0.143%	0.143%	0.143%	0.143%	0.143%	0.143%	0.143%	0.143%	0.143%	0.143%	0.143%	0.143%	0.143%	0.143%	0.143%
Merensky RoM Cu grade	(%)	0.098%	0.098%	0.098%	0.098%	0.098%	0.098%	0.098%	0.098%	0.098%	0.098%	0.098%	0.098%	0.098%	0.098%	0.098%
UG2 RoM ore	(Mt)	32.67	1.35	1.40	1.43	1.46	1.52	1.63	1.61	1.54	1.63	1.55	1.57	1.65	1.70	1.50
UG2 RoM 4E grade	(g/t)	3.44	3.75	3.79	3.71	3.71	3.75	3.59	3.67	3.56	3.54	3.51	3.43	3.21	3.23	3.22
UG2 RoM Ni grade	(%)	0.083%	0.083%	0.083%	0.083%	0.083%	0.083%	0.083%	0.083%	0.083%	0.083%	0.083%	0.083%	0.083%	0.083%	0.083%
UG2 RoM Cu grade	(%)	0.045%	0.045%	0.045%	0.045%	0.045%	0.045%	0.045%	0.045%	0.045%	0.045%	0.045%	0.045%	0.045%	0.045%	0.045%
Total RoM ore	(Mt)	51.53	2.44	2.60	2.60	2.67	2.65	2.76	2.74	2.71	2.78	2.82	2.83	2.73	2.56	2.07
Total RoM contained 4E	(koz)	5 064.6	241.2	261.7	261.6	269.2	274.8	281.5	285.1	272.4	280.2	283.5	281.2	263.7	247.3	199.0
Total RoM contained Ni	(t)	53 833.1	2 673.3	2 869.6	2 847.1	2 922.7	2 859.4	2 957.5	2 936.2	2 946.1	2 982.7	3 093.0	3 091.4	2 906.5	2 624.0	2 058.9
Total RoM contained Cu	(t)	33 093.7	1 674.5	1 803.3	1 783.8	1 832.0	1 782.5	1 837.4	1 825.1	1 840.0	1 854.2	1 938.8	1 935.8	1 799.9	1 600.5	1 237.5

Item	Units	Totals / Averages	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070
Merensky RoM ore	(Mt)	18.87	0.31	0.08	0.00	-	-	-	-	-	-	-	-	-	-	-
Merensky RoM 4E grade	(g/t)	2.67	2.71	2.58	2.70	-	-	-	-	-	-	-	-	-	-	-
Merensky RoM Ni grade	(%)	0.143%	0.143%	0.143%	0.143%	-	-	-	-	-	-	-	-	-	-	-
Merensky RoM Cu grade	(%)	0.098%	0.098%	0.098%	0.098%	-	-	-	-	-	-	-	-	-	-	-
UG2 RoM ore	(Mt)	32.67	0.95	0.60	0.39	0.41	0.58	0.45	0.28	0.26	0.21	0.41	0.28	0.34	0.15	0.03
UG2 RoM 4E grade	(g/t)	3.44	2.82	2.55	2.37	2.47	2.32	2.59	2.50	2.74	2.50	2.41	2.80	3.29	3.57	3.63
UG2 RoM Ni grade	(%)	0.083%	0.083%	0.083%	0.083%	0.083%	0.083%	0.083%	0.083%	0.083%	0.083%	0.083%	0.083%	0.083%	0.083%	0.083%
UG2 RoM Cu grade	(%)	0.045%	0.045%	0.045%	0.045%	0.045%	0.045%	0.045%	0.045%	0.045%	0.045%	0.045%	0.045%	0.045%	0.045%	0.045%
Total RoM ore	(Mt)	51.53	1.26	0.68	0.40	0.41	0.58	0.45	0.28	0.26	0.21	0.41	0.28	0.34	0.15	0.03
Total RoM contained 4E	(koz)	5 064.6	109.2	53.8	29.1	31.1	42.0	36.4	21.5	22.3	16.73	30.67	24.73	34.50	16.52	3.38
Total RoM contained Ni	(t)	53 833.1	1 220.0	604.1	326.9	334.8	479.6	372.7	228.0	215.7	177.11	337.87	233.97	277.92	122.88	24.73
Total RoM contained Cu	(t)	33 093.7	726.0	344.6	178.6	182.6	261.6	203.3	124.4	117.7	96.61	184.29	127.62	151.60	67.03	13.49

Note:

1. Values represent 100% of production and not the amount attributable to SRL.

17 Recovery Methods

17.1 Description of Flowsheet

17.1.1 Ruighoek and PSM above 700 m below Surface

The concentrator at PPM is divided into two main sections, Merensky and UG2 concentrators with nameplate mill feed capacity of 240 ktpm and 75 ktpm, respectively.

The process flow sheet for both the Merensky and UG2 concentrators is the standard flow sheet that has been used for the extraction of PGMs from these ores. Utilization of the DMS stage for the upgrading of the UG2 is not common and is as a result of the lower head grade from excess dilution in the open pit operation. Use of a TSP for the extraction of PGMs from the tailing streams at very low grades is common practice in the industry.

A simplified Process Flow Diagram of the current process at the PPM concentrator is shown in Figure 17-1 .

Merensky Concentrator

Silicate (MR) is fed through the Merensky Primary RoM (MPR) tip via a static grizzly set at 300 mm; the oversize is crushed via the oversize crusher, is combined with the static grizzly undersize and gets transferred to the MPR primary jaw crusher. The material is then re-crushed via the secondary crusher arranged in closed circuit to provide the MPR silo with material of -18 mm. The MPR silo can also be fed directly from the RoM tip via the MCR crushing circuit where the MCR is equipped with the exchange belt arrangement to direct the MCR dry screen product to the MPR silo feed belt as opposed to allowing the material to transfer to DMS silo feed belt. The Merenskyplant is configured in a MF2 arrangement where the material in the MPR silo is fed to the primary mill. The material is then transferred to the primary roughers to recover any liberated PGM-bearing particles that are liberated at coarser grind. The tails from the primary roughers are sent to the secondary mill for further milling. The fine-ground material is sent to the secondary roughers to recover further PGMs before the tails are combined with the UG2 plant tailings and sent to the TSP. The material recovered at the primary and secondary roughers is directed to the primary and secondary cleaners, respectively. The cleaner circuit is equipped with scavenger cells, the cleaner cells, the re-cleaner cells and the final re-re-cleaner cells.

The final concentrate from the re-re-cleaner cells is directed to the final concentrate thickener to recover excess water and is combined with the final concentrate from the UG2 circuit.

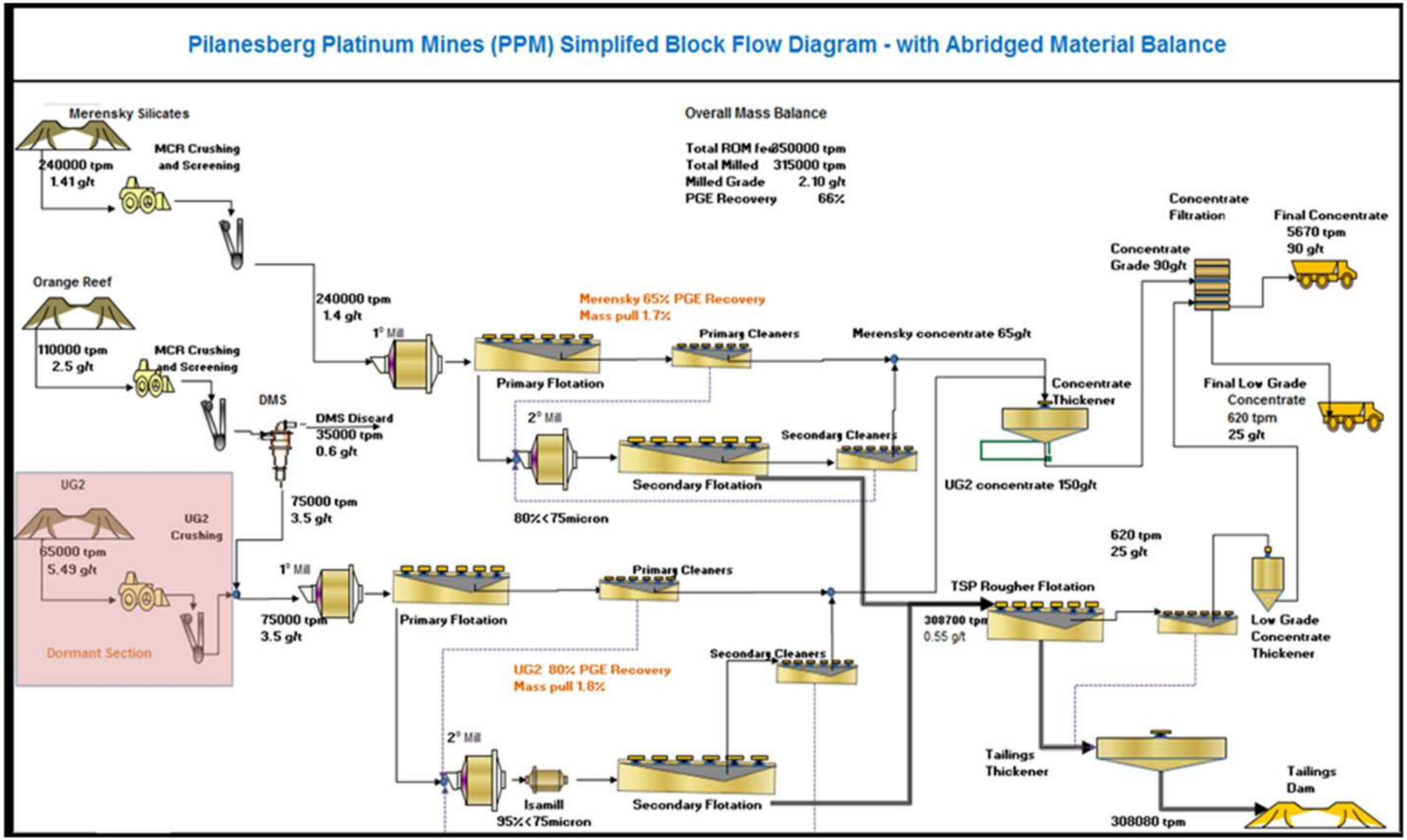
UG2 Circuit

U2D ore (locally referred to as Orange Reef) is fed through the MPR tip via a static grizzly set at 300 mm; the oversize is crushed via the oversize crusher and is combined with the static grizzly undersize and transferred to the MCR primary jaw crusher. The material is then re-crushed via the secondary crushing arranged in the closed circuit to provide the DMS silo with material of -25 mm. This material is then fed to the DMS plant where the material is first classified by the screen to ensure only +2 mm and -25 mm is treated by the DMS cyclones and the -2 mm is directed straight to the DMS thickener. The DMS cyclones reject lighter, largely barren material at the yield of 68% via the overflow. The DMS underflow is directed to the UG2 mill feed silo. The UG2 silo can also be fed directly from the RoM tip via the UG2 crushing circuit ,which is used only when there is a need, either due to unavailability of the MCR or DMS plants, or even for special needs such as treating oxidised silicates via the UG2 plant. The UG2 plant is configured in an MF2 arrangement where the material in the UG2 silo is fed to the primary mill but is also combined with the DMS thickener underflow fines. The material is then transferred to the primary roughers to recover any liberated PGM-bearing particles that are liberated at coarser grind and the tail from the primary roughers is sent to the CRP.

The CRP utilises a two-stage Reverse Classifier circuit for the recovery of chromite from the UG2 stream into a chromite concentrate (see below).

The material recovered at the primary and secondary roughers is directed to the primary and secondary cleaners, respectively. The cleaner circuit is equipped with scavenger cells, the cleaner cells, the re-cleaner cells and the final re-re-cleaner cells.

The final concentrate from the re-re-cleaner cell circuit is directed to the final concentrate thickener to recover excess water and is combined with the final concentrate from the silicate circuit. The thickened final concentrate is transferred to the holding tanks in preparation for filtering via the Larox filter. The filtered concentrate will be transferred to the Kell plant.



srk consulting	**SRL Total Asset PEA** PPM Plant Simplified Flow Sheet [source: SRK, 2022a]	Project No. 600322

Figure 17-1: PPM Plant Simplified Flow Sheet

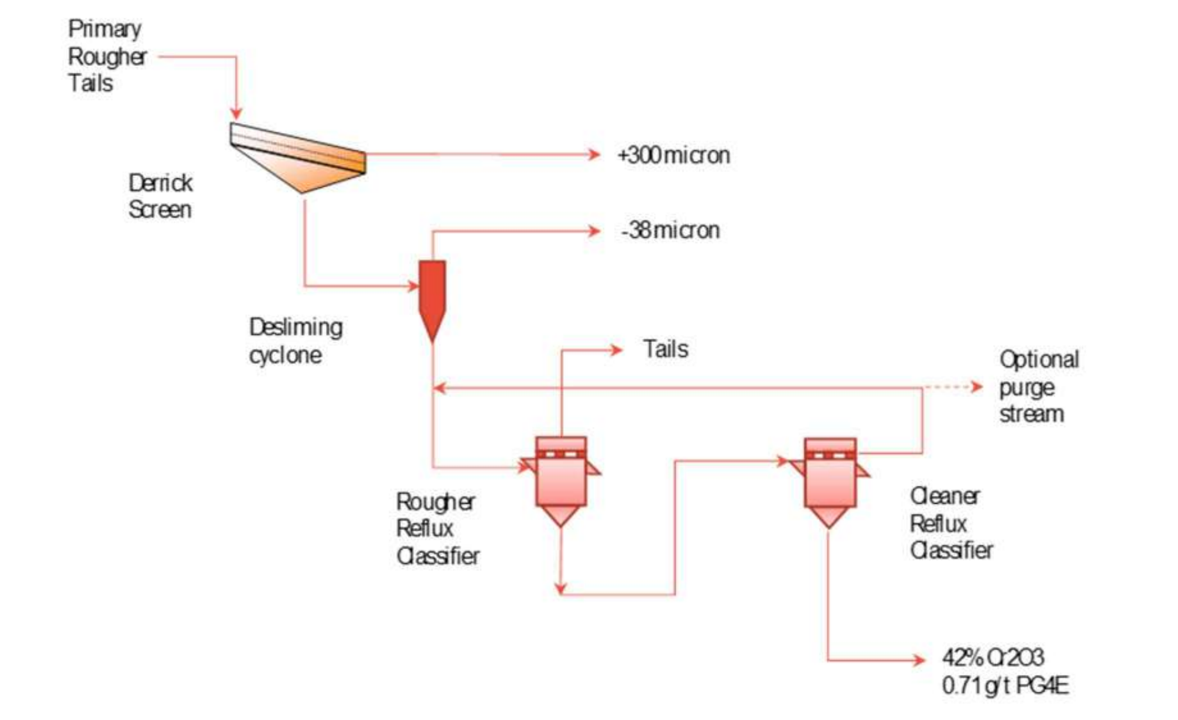
TSP Circuit

Tailings from the Merensky and UG2 circuits are combined and fed to the Tailings Scavenging Plant (TSP) plant. The TSP is made up of a rougher flotation circuit and cleaner cells with an added box cell to maximize the concentrate grade. The cleaner concentrate is transferred to the low concentrate thickener and campaigned through the same final Larox filter to generate separate low-grade final concentrate, which then gets trucked separately to the smelters. Both the TSP rougher flotation tailings and cleaner flotation tailings are combined and directed to the main plant final tailings thickener to recover the water before sending the thickened slurry to the TSF.

Chromite Recovery Plant

SRL installed a CRP in the PPM UG2 concentrator in the inter-stage position between the primary and secondary circuits, instead of at the conventional position at the end of the circuit on the secondary rougher tailings position. The inter-stage circuit consists of a Reflux Classifier in a rougher configuration and then a second Reflux Classifier unit in a cleaner configuration with a Derrick Screen to remove the coarse +300 µm fraction from the feed to the plant (Figure 17.2). The rougher stage produces an intermediate concentrate, which is then processed in a cleaner stage that upgrades the concentrate to a saleable product.

The chromite recovery plant produces metallurgical grade chromite of 40.0% to 42.0% Cr_2O_3 grade.



srk consulting	**SRL Total Asset PEA** Chromite Recovery Circuit [source: SRK, 2022a]	Project No. 600322

Figure 17-2: Chromite Recovery Circuit

Tailings Retreatment Plant

A TRP of the same design as the TSP (flotation with high shear reactors and addition of fine grind milling) is planned to be built to treat the re-mined tailings from the PPM TSF.

SRL plans to process the historic tailings and deposit the residue in the Sedibelo TSF.

Kell Process

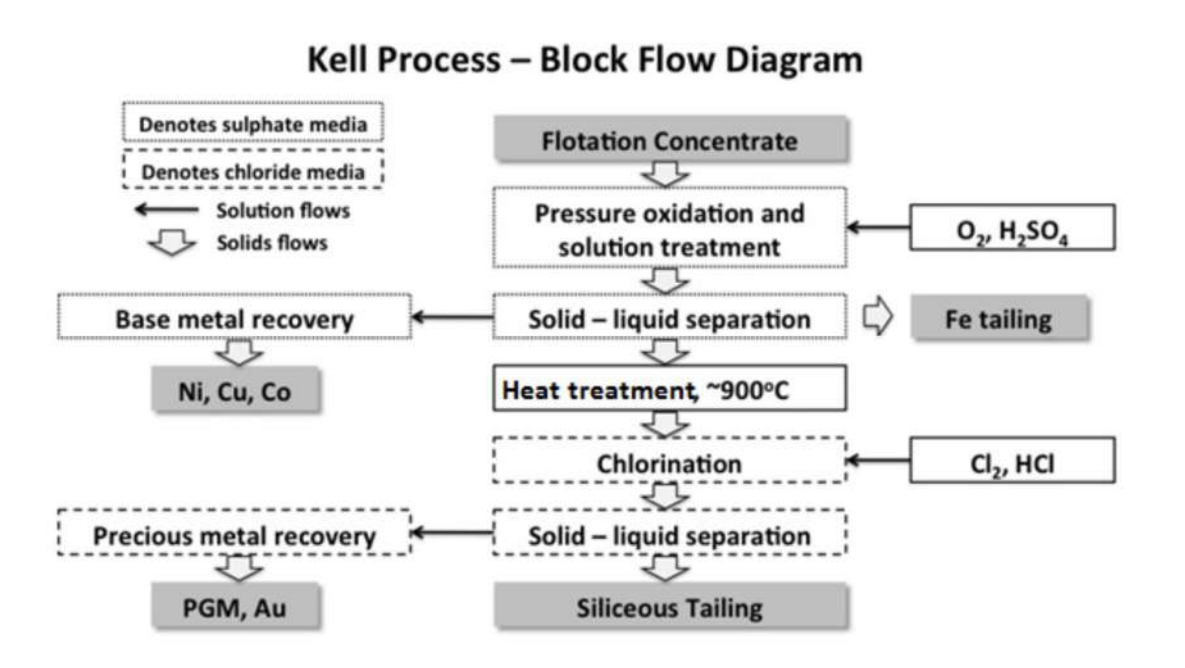
The combined concentrate from the concentrators and TSP will be fed to the Kell plant. Figure 17-3 sets out the block flow diagram of the Kell process. The Kell plant will be of modular design, with each module of 50 ktpa capacity. One module is installed initially, with extra modules added as dictated by concentrate production levels.

The hydrometallurgical process consists of three key stages:

- Pressure oxidation (POX) to leach base metal sulphides;
- Reducing gas heat treatment of the sulfate leach residue in kilns up to 900°C to condition the PGM minerals; and
- Atmospheric leaching of the precious metals in chloride media (chlorine gas and hydrochloric acid).

A pre-leach is introduced to remove carbonaceous gangue mineral prior to the POX stage. The POX process uses standard autoclaves as used in the processing of base metals and refractory gold.

Copper extraction and electrowinning follow conventional process routes as used in other base metal refineries. Ni and Co are extracted using solvent extraction followed by electrowinning.



srk consulting	**SRL Total Asset PEA** Kell Process Block Flow Diagram [source: SRK, 2022a]	Project No. 600322

Figure 17-3: Kell Process Block Flow Diagram

The remaining residue containing the PGMs is then treated in a flash dryer-rotary kiln combination at a temperature of *circa* 900°C to liberate and prepare the PGMs for a chloride leach to digest the precious metals. The rest of the process follows a similar path as used in some of the precious metals refineries. The metals are leached using hydrochloric acid and chlorine gas. Gold is recovered first from solution to prevent it from following the Pd in the extraction process. MRT, using element-specific ionic resins, is used to extract the Pd and Rh. Pt is precipitated and the remainder (Ru and Ir) is sent to toll refiners. The remaining liquor is then disposed of on the TSF after the recovery of the hydrochloric acid.

There are two main acidic residue streams from the process:

- Barren solution from base metal sulphide precipitation; and
- Final washed filter cake from chlorination.

In addition, minor waste streams include:

- Metal hydroxides/gypsum solids from iron removal;
- Low-strength HCl pre-leach filter wash; and
- Vent scrubber bleed solutions.

The effluent streams are combined and are pumped to the main flotation plant tailings disposal system. The natural neutralising capacity of the flotation tailings is expected to be well in excess of any acid content of the slurry. The final pH and thus dissolved metals content are set to meet the site and local legislative requirements.

17.1.2 PSM below 700 m below Surface and Kruidfontein

The combined annual silicate (MR) production from PSM above 700 mbs, PSM below 700 mbs and Kruidfontein can be processed though the existing 240 ktpm Merensky concentrator at PPM.

With the increased UG2 production from the three areas, three additional UG2 concentrators have to be added, each of nominal capacity of 135 ktpm, by the following dates:

- September 2032 – second UG2 module installed at PPM;
- December 2044 - a UG2 concentrator installed at the East Portal on Sedibelo; and
- December 2037 – a UG2 concentrator installed at Kruidfontein shaft.

Each UG2 plant comprises the MF2 UG2 design as discussed above, together with a CRP in the inter-stage position and a TSP.

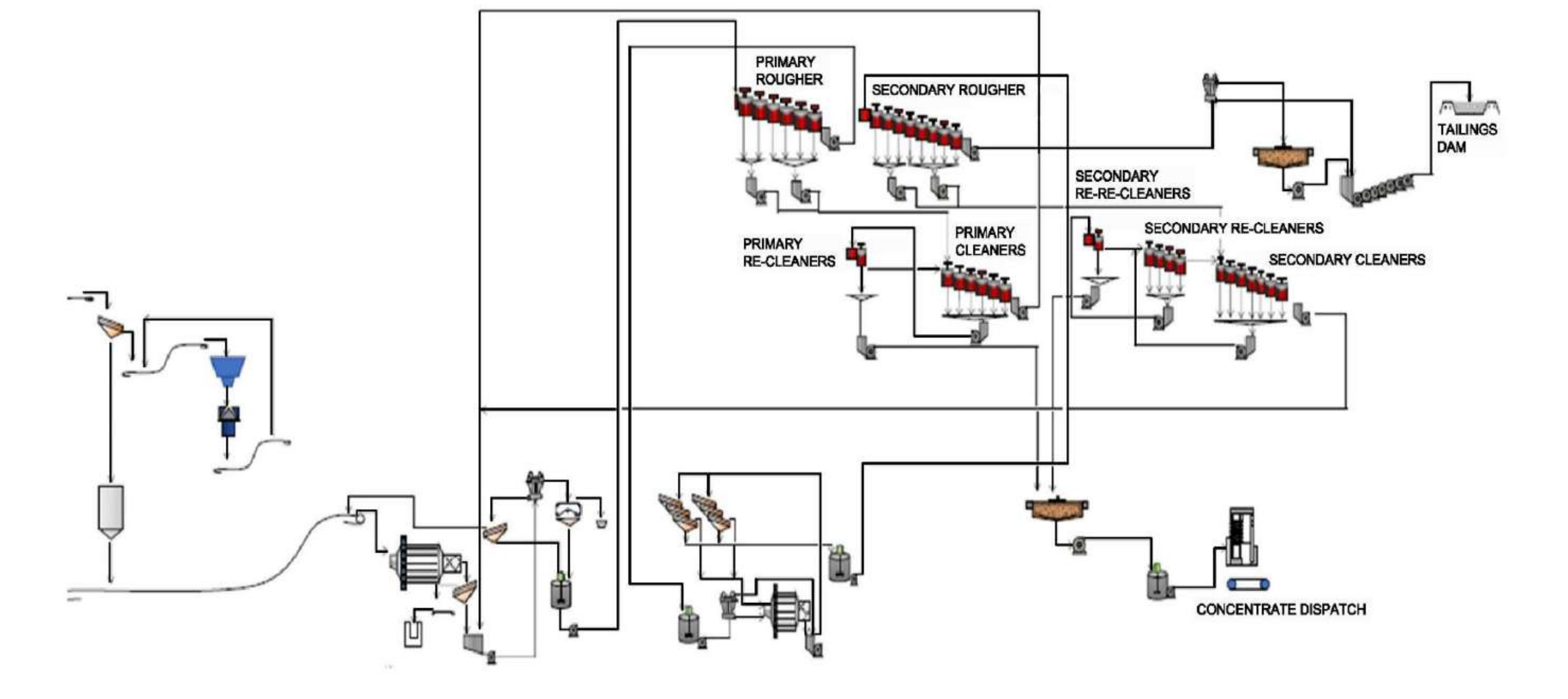
Two additional Kell modules of 50 ktpa capacity each are planned to be added as concentrate production volumes increase.

17.1.3 Mphahlele

The design of the concentrator is based on a 240 ktpm processing plant, which formed part of the 2008 FS for the Mphahlele Project. A pre-concentration step utilising Rados technology will be employed to reduce waste dilution and increase the head grade of the UG2 feed to the plant to circa 4 g/t 4E.

The proposed flowsheet is illustrated in Figure 17-4 and comprises the following steps:

- **RoM ore handling** - RoM ore is crushed and separated in a triple-deck screen to produce a Rados feed of +30 mm -100 mm where the waste rock is removed. The upgraded ore from the Rados sorter joins the -30 mm product and is then conveyed to the concentrator;
- **Secondary crushing** – produces a -28 mm product for the mill;
- **Primary milling** - single grate discharge primary ball mill operating in closed-circuit with a vibrating classification screen to produce a product 80% -212 µm. The fines report to the primary rougher flotation surge tank, and the coarse material is recycled to the primary mill;
- **Primary rougher flotation** - the primary milled product passes, via a two-stage automated sampling system and mechanically agitated surge tank, to the primary rougher flotation section that consists of a bank of tank-type flotation cells. Two rougher concentrates are produced from the rougher bank that are pumped to the primary cleaner circuit. Primary rougher tailings are pumped to the secondary milling section;
- **Secondary milling** - Primary rougher tailings are pumped to the secondary mill dewatering cyclone cluster from where the thickened slurry reports to the secondary mill. Mill discharge is then classified in the secondary mill circuit cyclone cluster where the underflow returns to the mill whilst the overflow proceeds to the secondary rougher flotation surge tank;
- **Secondary rougher flotation -** The secondary rougher flotation section consists of a bank of tank cells where two concentrates are produced and pumped to the secondary cleaner section. Secondary rougher tailings are pumped to the tailings dewatering section;
- **Primary cleaner flotation** - The primary cleaner section consists of a classical two-stage cleaner and re-cleaner circuit. Re-cleaner concentrate reports to the concentrate dewatering section while the tailings from the cleaner returns to the primary mill circuit;



srk consulting	**SRL Total Asset PEA** Process Flow Diagram for the Mphahlele Concentrator [source: SRL, 2020]	Project No. 600322

Figure 17-4: Process Flow Diagram for the Mphahlele Concentrator

- **Secondary cleaner flotation** - The secondary cleaner section consists of a three-stage flotation of cleaners, re-cleaners and re-re-cleaners. Conventional tank cells are proposed for the first two stages, while a Jameson cell is proposed for the re-re-cleaner. Re-re-cleaner concentrate is pumped to the concentrate thickener and the cleaner tailings are also returned to the primary mill circuit;
- **Concentrate dewatering** - The combined concentrates are thickened in the concentrate thickener. In a change to the feasibility study, the concentrate is then fed to the Kell process for refining into PGM sponge and base metal cathode; and
- **Tailings dewatering and disposal** - Cyclone underflow passes directly to the tailings tank, whilst cyclone overflow passes to the tailings thickener. Tailings thickener underflow is pumped to the tailings tank whilst overflow passes to the process water circuit for recycling around the plant.

17.2 Plant Throughput and Design, Specifications

The actual average tonnage processed through the PPM concentrators for the period June 2020 to December 2023 was 208 ktpm for the Merensky Concentrator and 57 ktpm for the UG2 Concentrator.

Throughputs of up to 242 ktpm for the Merensky concentrator and 79 ktpm for the UG2 concentrator have been achieved.

17.2.1 PSM above 700 m below Surface

Metal Accounting

Metal accounting within the PPM concentrators is challenging for the following reasons:

- The production of a DMS discard;
- The production of three flotation concentrates; and
- Shipping of two concentrates: a high-grade concentrate and a low-grade concentrate.

Historically, the recovery in the concentrator is estimated using the following expression:

$$Recovery = \frac{f-t}{f} x100$$

Where : f is the feed grade; and
t is the tailings grade

This is a common expression used in daily operation on concentrators to estimate the recovery. It is, however, not commonly used to report the monthly production for metal accounting purposes.

A physical inspection of the weightometers and the sample cutters found that they were all in good order. Inspection registers and calibration certificates were able to be produced during the inspection.

The housekeeping standards in the laboratory are very good. The laboratory is being operated very well and the necessary checks and balances are in place. QA/QC procedures are in place and are reported.

Due to the quality of the sampling, sample preparation and assay laboratory, SRL calculates mass pulls to concentrate and recovery using the Two-Product formula on the five distinct modules in the plant:

$$Recovery = \frac{c}{f}\ x\ \frac{f-t}{c-t}\ x\ 100$$

Where : c is the concentrate grade;
f is the feed grade; and
t is the tailing grade.

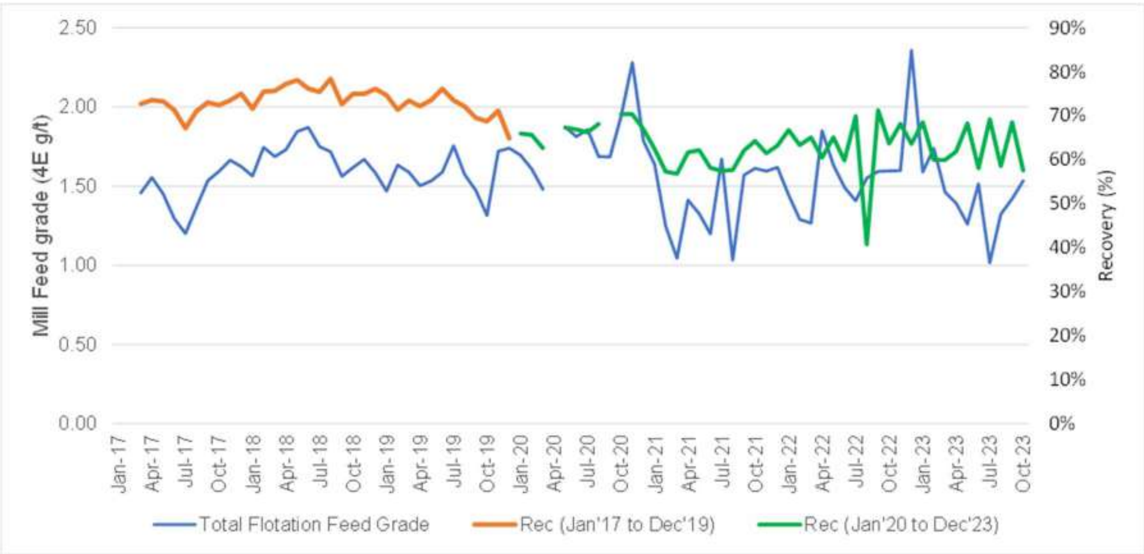
The five modules considered are:

- The DMS circuit producing a flotation plant feed and DMS discards;

- The two separate UG2 and MR flotation circuits, each producing a flotation concentrate and tailings;
- The TSP plant producing a flotation concentrate and tailings; and
- The entire plant from the RoM feed to the concentrate dispatch and final TSP tailings.

Head Grade and Recovery

Overall plant recovery for the two concentrators for January 2017 to December 2023 is illustrated in Figure 17-5. The decrease in overall recovery for the 2020 and 2021 financial years is attributed to the decrease in recovery in the Merensky plant due to a change in the mineralogy of the ore in the southern section of the orebody. Variable recoveries in 2023 are attributed to varying proportions of oxidised ore from the East Pit in the plant feed.

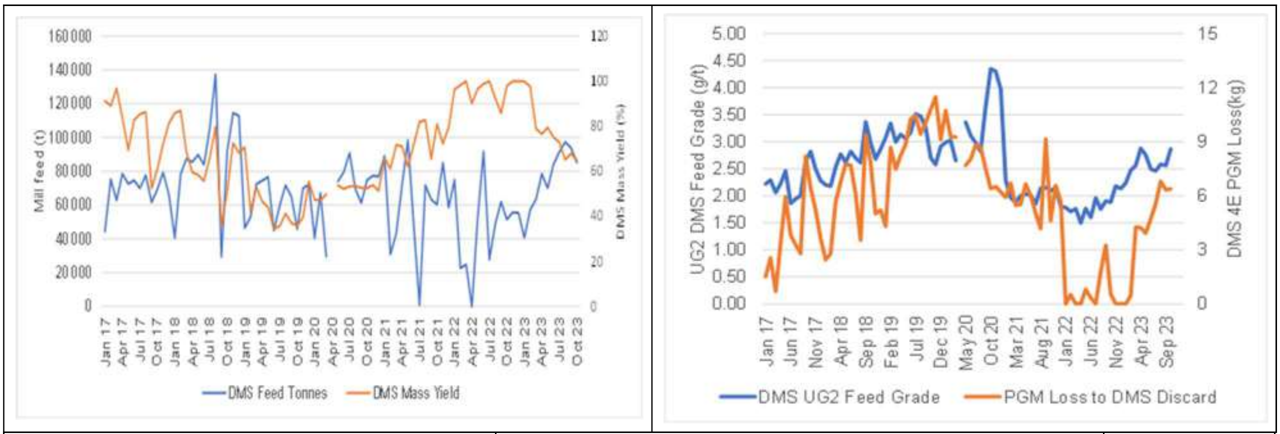


srk consulting	**SRL Total Asset PEA** Overall 4E Recovery January 2017 to December 2023	Project No. 600322

Figure 17-5: Overall 4E Recovery January 2017 to December 2023

DMS Feed, Mass Yield and DMS Losses

Tonnage of UG2 to the DMS has varied significantly for the period in review (Figure 17-6). The mass yield from the DMS was below 50% in 2020, after which it increased significantly. This was due to the reduction in the feed to the DMS artificially increasing the percentage mass yield.



srk consulting	**SRL Total Asset PEA** DMS Feed and Mass Yield (left) and DMS Feed Grade and Losses (right) – Jan 2017 to Dec 2023	Project No. 600322

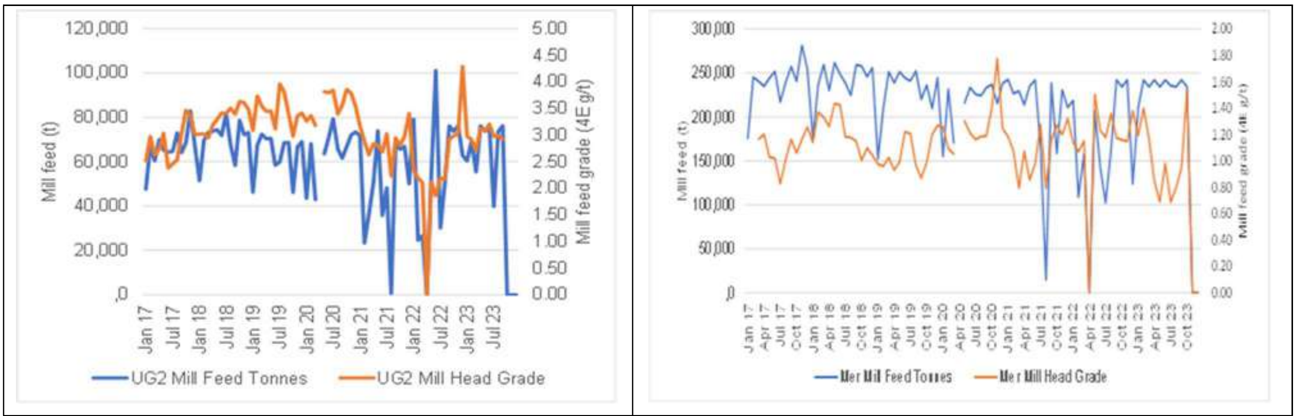
Figure 17-6: DMS Feed and Mass Yield (left) and DMS Feed Grade and Losses (right) – Jan 2017 to Dec 2023

The UG2 DMS feed grade was lower in 2021, in line with grades achieved in 2017 (Figure 17-6). The losses to the DMS discard during 2021 were generally well controlled, averaging around 6% for the year. The significant increase in the masss yield in January 2022 resulted in a significant decrease in the PGM losses to the DMS discards.

Mill Feed Tonnes and Grade

The UG2 grade to the mill was lower during 2021 in line with 2017 levels, as shown in Figure 17-7. The UG2 mill feed tonnes have been somewhat erratic since 2021.

MR tonnes to the flotation plant have been relatively consistent at *circa* 230 ktpm for January 2017 to December 2023 although a downward trend is evident. Figure 17-7 shows that the head grade since January 2021 reduced initially, more in line with historical values, with a slight improvement towards the end of the year. There has been a significant decrease in feed grade for 2023.

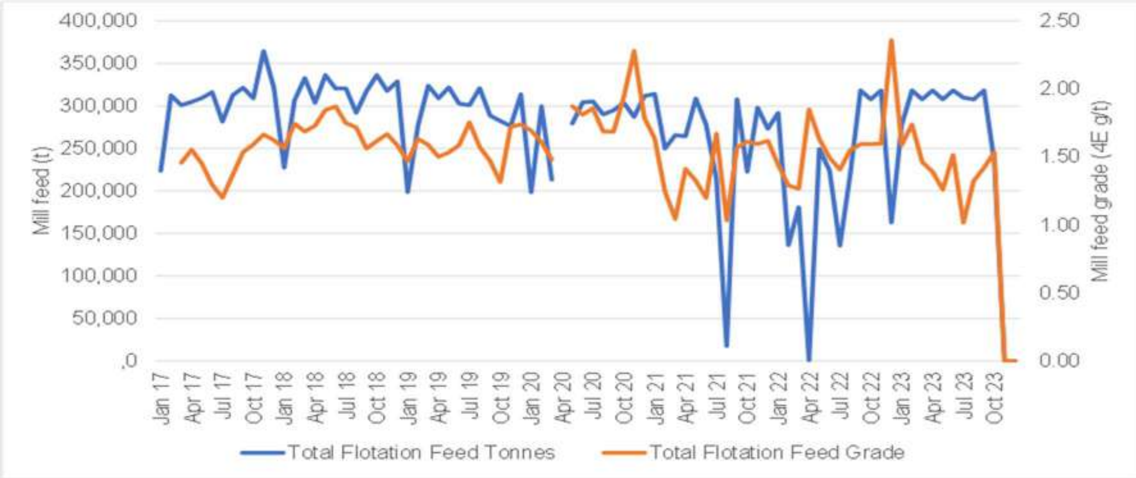


srk consulting	**SRL Total Asset PEA** Mill Feed Tonnes and Grade - UG2 (left) and MR (right) – January 2017 to December 2023	Project No. 600322

Figure 17-7: Mill Feed Tonnes and Grade - UG2 (left) and MR (right) – January 2017 to December 2023

Flotation Plant

The variability in both Flotation Plant feed grade and tonnes is illustrated in Figure 17-8 for the combined MR and UG2 feed to the plant. As mentioned earlier in this section, the decrease can be primarily attributed to the MR feed grade.

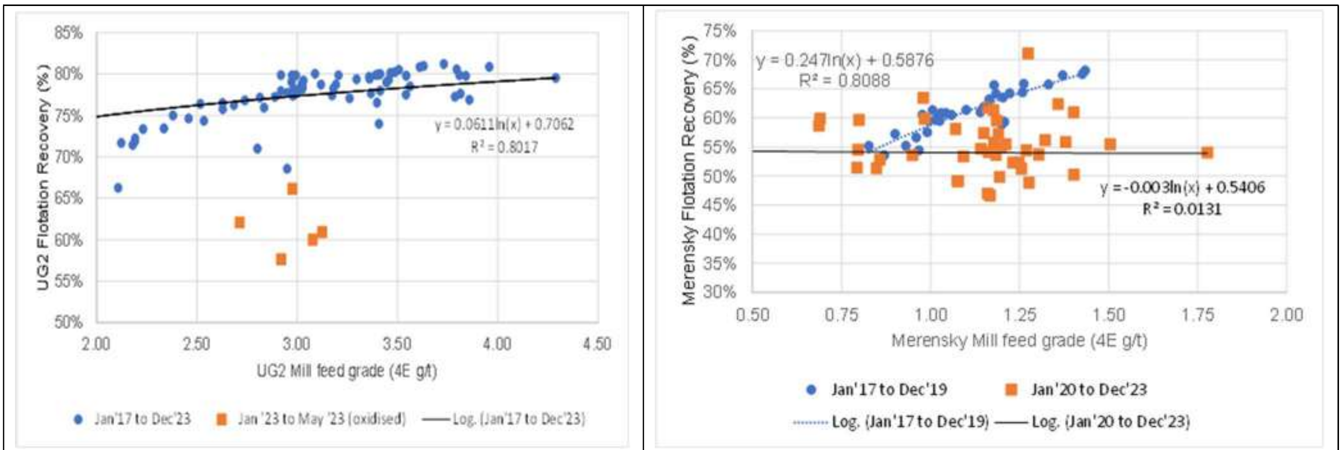


srk consulting	**SRL Total Asset PEA** Flotation Feed Tonnes and Grade January 2017 to December 2023	Project No. 600322

Figure 17-8: Flotation Feed Tonnes and Grade January 2017 to December 2023

The impact of the increase in feed grade on the flotation 4E recovery from the UG2 ore is evident in Figure 17-9. A similar plot for the MR ore revealed what appear to be two distinct relationships (Figure 17-9).

Despite higher head grades since December 2019, the reduction in the MR recovery is attributed to changed ore mineralogy and mode of occurrence of the PGMs in the southern region of the orebody.

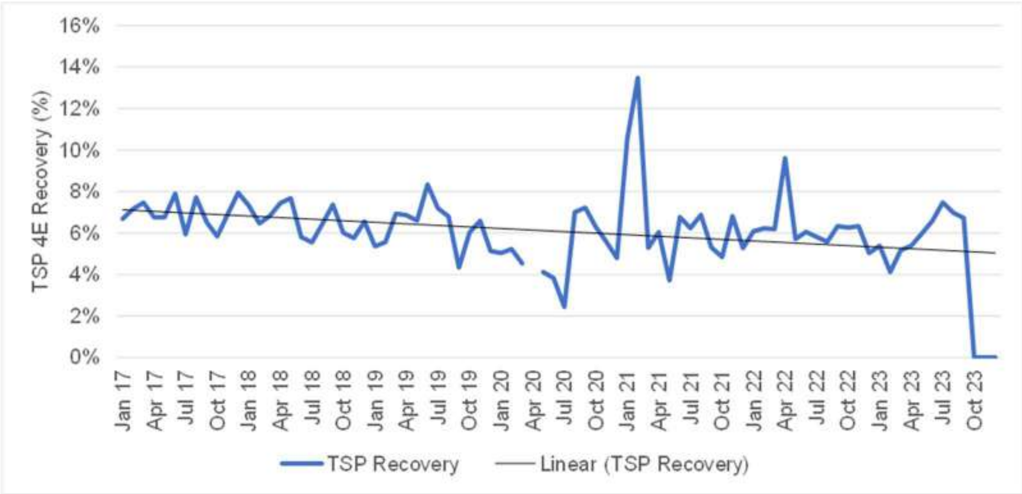


srk consulting	**SRL Total Asset PEA** Impact of Flotation Feed Grade on Flotation Recovery – UG2 (left) and MR (right)	Project No. 600322

Figure 17-9: Impact of Flotation Feed Grade on Flotation Recovery – UG2 (left) and MR (right)

TSP Recovery

From Figure 17-10, it is evident that the TSP recovery has been gradually dropping for the period in review. This may be due to an improvement in the main plant operation with less floatable feed reaching the TSP.

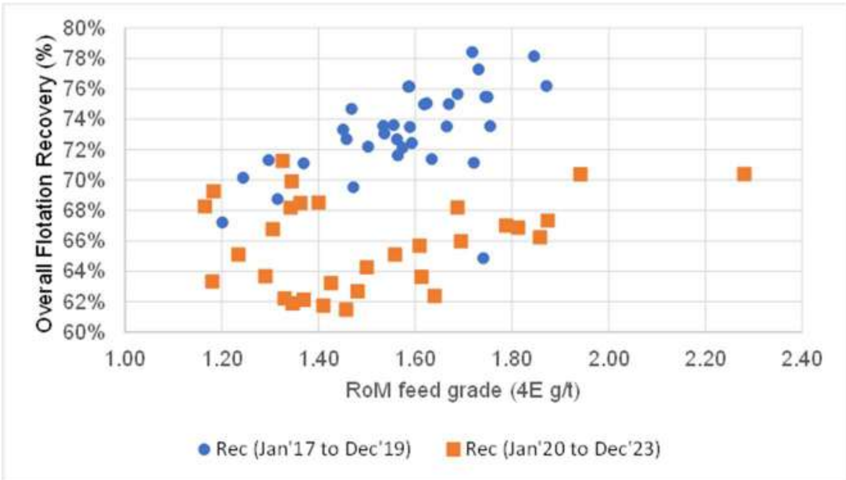


	SRL Total Asset PEA	Project No.
srk consulting	**SRL Total Asset PEA** 4E Recovery in TSP Jan 2017 to Dec 2023	Project No. 600322

Figure 17-10: 4E Recovery in TSP Jan 2017 to Dec 2023

Overall Recovery

Combining the data for the two ores for the period January 2017 to December 2023 yields two distinct relationships (Figure 17-11). The decrease in recovery is due to the change in the mode of occurrence of the PGMs in the MR ore in the southern region of the pit that was mined in the 2020 - 2021 financial years.



srk consulting	**SRL Total Asset PEA** Effect of RoM Feed Grade on Overall Recovery Jan 2017 to Dec 2023	Project No. 600322

Figure 17-11: Impact of RoM Feed Grade on Overall Recovery Jan 2017 to Dec 2023

Concentrate 4E Grade and Recovery

The average monthly 4E concentrate grade, recovery and dispatches for the period January 2017 to December 2023 are tabulated in Table 17.1.

Table 17-1: Average Monthly Concentrate Production (Jan 2017 to Dec 2023)

Item	Average Concentrate Grade (4E g/t)	Average Recovery (%)	Average Monthly Dispatched (oz 4E)
Merensky concentrate	64	60.4%	4 495
UG2 concentrate	214	75.0%	4 650
TSP	34	6.3%	1 006

Chromite Recovery Plant

The chromite recovery plant produces metallurgical grade chromite of 40.0% to 42.0% Cr_2O_3 grade. All chromite concentrate produced is sold to Noble Trading (see Section 19.5.3).

From March 2018 to 2019, dispatches of chromite concentrate averaged 3 150 tpm. From the latter half of 2019 the chromite concentrate was stockpiled and dispatched in 5 kt or 6 kt batches.

17.2.2 PSM below 700 m below Surface and Kruidfontein

The current plants are adequate for the treatment of the ore. As the ore is mineralogically similar to the fresh ore from the West Pit and East Pit, the grades and recoveries that have been achieved on the plant on the fresh ore are applicable.

17.2.3 Mphahlele

The Mphalele ore characteristics and mineralogy are such that the current plants will be able to process the ore. From the test work and the flotation modelling done, the ore will be producing much-improved recoveries than the current ore. The modelling indicates that an MR and UG2 PGM recovery of up to 88% and 80%, respectively, can be achieved.

17.3 Requirements for Energy, Water, Consumables and Personnel

Extraction of PGMs from MR and UG2 ores is relatively energy intensive with the majority of the energy being consumed in the milling section. Ore hardness varies and a WI_{BW} of about 19 kWh/t is necessary to reduce the ore to the required particle size.

The current energy shortage in South Africa means that energy-intensive operations have to enter into agreements with Eskom, the national electricity supplier. These agreements may require the operation to voluntarily shut done operations to reduce the load on the network.

The primary motivation for the Kell Process is the lower power consumption compared to the conventional smelting-refinery route. Electricity consumption is estimated at 0.3 MWh/t of concentrate processed.

Water is normally consumed at a rate of 0.8 m^3/t of RoM ore. South Africa has a shortage of water and various projects have been developed, with the assistance of the local government and central government bodies, to find alternate sources of water.

Reagents used in the extraction of the PGMs are readily available and are commonly used in the extraction of base metals. The chemicals are manufactured within South Africa and alternative reagents can be used in their stead.

The projects are located in areas that are home to a number of the largest platinum mines in South Africa. Recent closure/downsizing of some of the neighbouring operations has created a pool of employees that are skilled in the operating and maintenance of the concentrator and equipment.

17.3.1 Kell Plant

The consumption rates of the chemicals used in the Kell Process are set out in Table 17-2: Kell Reagent Consumption .

Table 17-2: Kell Reagent Consumption

Reagent	Consumption per tonne of feed (kg/t feed)
H_2SO_4 (Sulphuric Acid)	267
NaOH (sodium hydroxide)	36
MRT Resin	0.011
Coal	193
Limestone	284
Hydrochloric Acid	46

Although the consumption rate of the MRT resin is relatively low, it still contributes 13% to the reagent cost. Reagent costs are the highest cost item and make up 42% of the overall operating cost per tonne of concentrate feed.

17.4 Projected Plant Performance

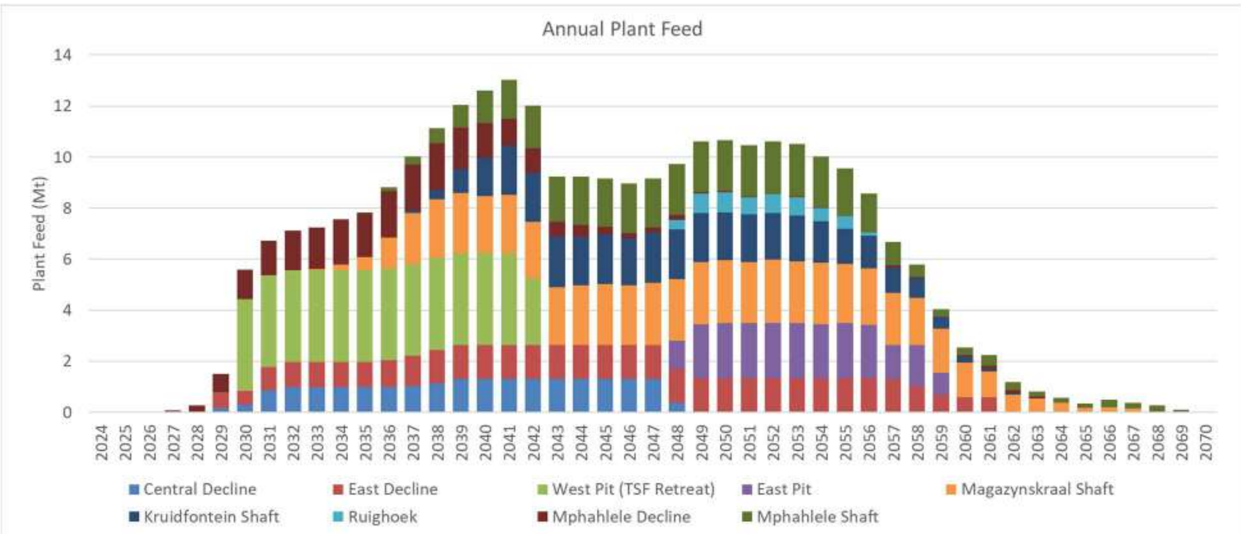
The plant feed schedules, plant performance and concentrate produced from the concentrators and TSP/TRP circuits for the various properties and projects are summarised as follows:

- Ruighoek Pit Table 17-3Table 17-3: Ruighoek: Predicted Plant Performance (2048 to 2056);
- East Pit Table 17-4Table 17-4: PSM - East Pit: Predicted Plant Performance (2048 to 2059);
- West Pit (TRR) Table 17-5
- Central Underground Table 17-6Table 17-6: PSM - Central Underground: Predicted Plant Performance (2024 to 2048);
- East Underground Table 17-7Table 17-7: PSM – East Underground: Predicted Plant Performance (2024 to 2061);
- Magazynskraal Shaft Table 17-8;
- Kruidfontein Shaft Table 17-9
- Mphahlele Decline Table 17-10; and
- Mphahlele Shaft Table 17-11.

Average 4E recoveries of metals for Merensky and UG2 feed into concentrate are provided. The high-grade concentrate is produced by the Merensky and UG2 concentrators, while the low-grade concentrate comes from the TSP and TRP plants.

The chrome (40.5% - 42.0% Cr_2O_3) concentrates produced by the CRP plants for each project component are presented. No chrome concentrate is included for Mphahlele or Ruighoek as SRL does not hold the Cr mineral rights.

The combined plant feed for all projects on an annual basis is shown in Figure 17-12.



srk consulting	**SRL Total Asset PEA** Annual Plant Feed for the Project Components	Project No. 600322

Figure 17-12: Annual Plant Feed for the Project Components

17.5 Non-commercial Process or Plant Design

17.5.1 Concentrators

None of the processes or technologies utilised on the concentrators are novel. There is therefore very little risk in applying the process route in the extraction of the PGMs and base metals.

17.5.2 Kell Process

The Kell process is novel in that it applies well-recognized technologies in the processing of the flotation concentrate without the need of a smelter step. The technologies include POX, atmospheric leach, precipitation, solvent extraction, ion exchange, flash drying and rotary kilns. Two distinctive leach processes are used, sulphuric and hydrochloric, to leach the base metals and PGMs, respectively, from the flotation concentrate. This is identical to what has been the common processing route for PGM concentrates, with the exception that power-intensive smelting is not included.

Should the Kell Process not deliver the expected results, SRL can revert to the conventional smelting and refining process. There is thus no risk that would prevent the declaration of the Mineral Reserves presented in this report.

Table 17-3: Ruighoek: Predicted Plant Performance (2048 to 2056)

Item	Units	Totals / Averages	2048	2049	2050	2051	2052	2053	2054	2055	2056
Merensky Mill Feed	(Mt)	3.8	0.29	0.58	0.59	0.50	0.58	0.54	0.34	0.29	0.08
UG2 Mill Feed	(Mt)	1.3	0.08	0.18	0.20	0.14	0.15	0.18	0.18	0.18	0.05
Merensky Feed Content	(koz 4E)	307.6	23.6	46.4	52.9	42.4	46.5	42.4	25.3	22.1	6.0
UG2 Feed Content	(koz 4E)	192.2	11.0	23.0	28.5	21.5	23.5	25.6	25.4	26.7	6.9
Merensky Recovery	(%)	76.0%	76.0%	76.0%	76.0%	76.0%	76.0%	76.0%	76.0%	76.0%	76.0%
UG2 Recovery	(%)	83.7%	83.7%	83.7%	83.7%	83.7%	83.7%	83.7%	83.7%	83.7%	83.7%
CRP Yield	(%)	-	-	-	-	-	-	-	-	-	-
TSP Recovery	(%)	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%
High-grade Concentrate	(kt)	83.4	6.0	12.3	12.8	10.5	11.9	11.7	8.4	7.6	2.1
Low-grade Concentrate	(t)	15.9	1.1	2.3	2.4	2.0	2.2	2.2	1.6	1.5	0.4
PGM in High-grade Concentrate	(koz 4E)	413.8	28.5	57.2	67.2	52.7	57.7	56.2	42.3	41.0	10.8
PGM in Low-grade Concentrate	(koz 4E)	34.1	2.4	4.8	5.6	4.4	4.9	4.6	3.3	3.1	0.8
Ni in Concentrate	(t)	1 757.8	133.3	267.8	273.1	232.5	264.9	250.2	159.5	138.0	38.6
Cu in Concentrate	(t)	822.3	62.2	125.0	127.7	108.5	123.5	116.9	75.1	65.2	18.2
Chromite (Cr_2O_3) Concentrate	(kt)	-	-	-	-	-	-	-	-	-	-

Table 17-4: PSM - East Pit: Predicted Plant Performance (2048 to 2059)

Item	Units	Totals / Averages	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059
Merensky Mill Feed	(Mt)	15.0	0.73	1.31	1.31	1.31	1.31	1.31	1.31	1.31	1.31	1.32	1.61	0.86
UG2 Mill Feed	(Mt)	7.0	0.36	0.81	0.85	0.85	0.86	0.85	0.80	0.85	0.77	-	-	-
Merensky Feed Content	(koz 4E)	502.0	23.5	40.8	43.0	42.9	42.6	43.0	45.1	45.1	45.2	45.6	55.5	29.5
UG2 Feed Content	(koz 4E)	539.1	35.4	80.6	83.5	86.7	88.2	89.0	46.3	15.4	13.9	0.0	0.0	0.0
Merensky Recovery	(%)	59.6%	59.2%	58.5%	59.3%	59.3%	59.1%	59.3%	60.0%	60.0%	60.0%	60.0%	60.0%	60.0%
UG2 Recovery	(%)	77.1%	78.8%	79.0%	78.8%	79.3%	79.4%	79.6%	74.7%	48.3%	48.3%	0.0%	0.0%	0.0%
CRP Yield	(%)	11.9%	12.9%	14.9%	15.4%	15.4%	15.4%	15.4%	14.2%	14.4%	13.0%	0.0%	0.0%	0.0%
TSP Recovery	(%)	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%
High-grade Concentrate	(kt)	224.6	11.4	22.1	23.2	23.6	23.7	24.0	21.0	18.4	17.9	13.7	16.7	8.9
Low-grade Concentrate	(t)	47.3	2.4	4.8	5.0	5.1	5.1	5.1	4.4	4.0	3.9	2.6	3.2	1.7
PGM in High-grade Concentrate	(koz 4E)	739.0	43.2	90.5	94.4	97.4	98.5	99.6	63.7	35.7	35.0	28.3	34.4	18.3
PGM in Low-grade Concentrate	(koz 4E)	67.4	3.5	7.0	7.3	7.3	7.3	7.4	6.2	5.4	5.2	3.8	4.6	2.4
Ni in Concentrate	(t)	2 949.6	151.0	258.2	265.8	262.7	259.8	258.0	258.2	255.7	256.0	252.8	307.7	163.7
Cu in Concentrate	(t)	1 185.9	54.2	103.1	106.7	105.1	105.1	107.7	110.4	109.0	108.0	96.6	117.6	62.5
Chromite (Cr_2O_3) Concentrate	(kt)	2 143.7	127.58	285.06	299.08	298.99	299.85	298.92	210.96	169.98	153.24	-	-	-

Table 17-5: PSM - West Pit (TRR): Predicted Plant Performance (2029 to 2042)

Item	Units	Totals / Averages	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
TSF Feed (ex TSF)	(Mt)	45.8	0.0	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	2.6
Feed PGM Content	(koz 4E)	974.4	0.0	76.6	76.6	76.6	76.6	76.6	76.6	76.6	76.6	76.6	76.6	76.6	76.6	55.3
TSP Recovery	(%)	31.9%	0.0%	31.9%	31.9%	31.9%	31.9%	31.9%	31.9%	31.9%	31.9%	31.9%	31.9%	31.9%	31.9%	31.9%
Low-grade Concentrate	(kt)	159.8	0.0	12.6	12.6	12.6	12.6	12.6	12.6	12.6	12.6	12.6	12.6	12.6	12.6	9.1
PGM in Low-grade Concentrate	(koz 4E)	321.3	0.0	25.3	25.3	25.3	25.3	25.3	25.3	25.3	25.3	25.3	25.3	25.3	25.3	18.2
Ni in Concentrate	(t)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cu in Concentrate	(t)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromite (Cr_2O_3) Concentrate	(kt)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note: Ni and Cu are likely to be recovered into concentrate. However, these are excluded from the Mineral Resource declaration since the grades and metallurgical recoveries are not sufficiently defined to satisfy RPEEE requirements.

Table 17-6: PSM - Central Underground: Predicted Plant Performance (2024 to 2048)

Item	Units	Totals / Averages	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
Merensky Mill Feed	(Mt)	0.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
UG2 Mill Feed	(Mt)	19.9	-	-	-	-	-	0.17	0.29	0.86	0.98	0.99	0.98	0.98	0.98	1.03
Merensky Feed Content	(koz 4E)	89.7	-	-	-	-	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
UG2 Feed Content	(koz 4E)	3 236.8	-	-	-	-	-	22.5	39.4	129.3	156.1	159.3	154.2	154.5	152.9	157.3
Merensky Recovery	(%)	85.6%	-	-	-	-	-	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
UG2 Recovery	(%)	85.3%	-	-	-	-	-	83.0%	82.9%	84.2%	84.9%	85.1%	84.7%	84.8%	84.6%	84.5%
CRP Yield	(%)	30.8%	-	-	-	-	-	31.9%	31.9%	31.9%	31.8%	31.8%	31.8%	31.8%	31.8%	31.9%
TSP Recovery	(%)	20.0%	-	-	-	-	-	14.5%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%
High-grade Concentrate	(kt)	375.5	-	-	-	-	-	2.4	4.2	14.0	17.0	17.4	16.8	16.8	16.6	17.1
Low-grade Concentrate	(t)	69.9	-	-	-	-	-	0.4	1.0	2.9	3.4	3.4	3.4	3.4	3.4	3.5
PGM in High-grade Concentrate	(koz 4E)	2 932.4	-	-	-	-	-	19.3	33.8	112.6	137.0	140.2	135.1	135.4	133.8	137.3
PGM in Low-grade Concentrate	(koz 4E)	101.0	-	-	-	-	-	0.6	1.4	4.2	4.9	4.9	4.9	4.9	4.9	5.1
Ni in Concentrate	(t)	421.5	-	-	-	-	-	1.4	3.4	13.2	14.1	13.9	14.4	14.7	15.0	14.3
Cu in Concentrate	(t)	315.9	-	-	-	-	-	0.8	1.4	5.7	7.2	6.3	6.3	6.0	6.7	7.8
Chromite (Cr_2O_3) Concentrate	(kt)	5 696.8	-	-	-	-	-	47.41	83.30	245.88	281.75	282.44	281.80	281.80	281.82	294.11

Item	Units	Totals / Averages	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
Merensky Mill Feed	(Mt)	0.6	0.02	0.10	0.07	0.06	0.08	0.05	-	0.03	0.05	0.16	0.03
UG2 Mill Feed	(Mt)	19.9	1.11	1.20	1.25	1.25	1.23	1.26	1.32	1.27	1.25	1.15	0.35
Merensky Feed Content	(koz 4E)	89.7	1.7	11.9	10.0	7.3	9.0	5.8	0.0	6.0	8.8	25.0	4.1
UG2 Feed Content	(koz 4E)	3 236.8	165.8	190.0	200.9	205.0	221.6	212.8	204.5	211.8	222.0	215.3	61.5
Merensky Recovery	(%)	85.6%	74.8%	83.1%	87.0%	83.2%	81.7%	81.3%	0.0%	90.2%	88.6%	87.8%	87.8%
UG2 Recovery	(%)	85.3%	84.1%	84.9%	85.1%	85.3%	86.5%	85.8%	84.6%	85.5%	86.3%	87.2%	86.4%
CRP Yield	(%)	30.8%	31.3%	29.5%	30.2%	30.4%	29.9%	30.6%	31.8%	31.0%	30.5%	27.9%	29.5%
TSP Recovery	(%)	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%
High-grade Concentrate	(kt)	375.5	18.3	23.4	24.3	24.1	26.6	24.7	22.3	24.7	26.7	30.0	7.8
Low-grade Concentrate	(t)	69.9	3.8	4.4	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.4	1.3
PGM in High-grade Concentrate	(koz 4E)	2 932.4	145.5	177.0	185.6	187.1	205.8	193.5	178.9	192.8	206.2	216.7	58.7
PGM in Low-grade Concentrate	(koz 4E)	101.0	5.5	6.4	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.3	1.8
Ni in Concentrate	(t)	421.5	20.2	51.3	39.6	28.9	33.5	22.9	4.4	15.8	22.7	65.8	12.1
Cu in Concentrate	(t)	315.9	11.7	36.2	34.9	23.2	26.7	20.3	9.8	18.8	23.6	52.7	9.9
Chromite (Cr_2O_3) Concentrate	(kt)	5 696.8	317.86	343.58	357.26	358.18	352.35	360.06	377.08	364.21	358.91	328.20	98.85

Table 17-7: PSM – East Underground: Predicted Plant Performance (2024 to 2061)

Item	Units	Totals / Averages	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
Merensky Mill Feed	(Mt)	7.5	-	-	-	-	-	0.01	0.07	0.13	0.18	0.18	0.18	0.18	0.18	0.18
UG2 Mill Feed	(Mt)	30.3	-	-	-	-	-	0.61	0.48	0.78	0.80	0.80	0.80	0.80	0.89	1.00
Merensky Feed Content	(koz 4E)	1 053.6	-	-	-	-	-	1.1	6.8	12.5	18.8	23.7	27.7	30.3	30.6	28.8
UG2 Feed Content	(koz 4E)	3 755.0	-	-	-	-	-	74.3	64.5	108.4	113.1	114.7	109.8	109.3	121.3	137.9
Merensky Recovery	(%)	85.8%	-	-	-	-	-	74.9%	78.9%	78.1%	79.4%	84.3%	87.5%	89.5%	89.7%	88.5%
UG2 Recovery	(%)	81.9%	-	-	-	-	-	81.5%	82.7%	83.2%	83.4%	83.5%	83.0%	82.9%	83.0%	83.1%
CRP Yield	(%)	25.6%	-	-	-	-	-	31.3%	28.0%	27.4%	26.0%	26.0%	26.1%	26.1%	26.5%	27.0%
TSP Recovery	(%)	19.9%	-	-	-	-	-	12.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%
High-grade Concentrate	(kt)	637.6	-	-	-	-	-	8.0	8.3	14.2	16.1	17.7	18.2	18.9	20.3	21.6
Low-grade Concentrate	(t)	118.8	-	-	-	-	-	1.4	1.8	3.0	3.2	3.2	3.2	3.1	3.4	3.8
PGM in High-grade Concentrate	(koz 4E)	4 112.2	-	-	-	-	-	63.4	60.7	103.3	113.0	119.7	119.2	121.7	132.5	144.8
PGM in Low-grade Concentrate	(koz 4E)	170.5	-	-	-	-	-	1.7	2.6	4.3	4.7	4.7	4.6	4.5	4.9	5.5
Ni in Concentrate	(t)	3 227.2	-	-	-	-	-	12.4	27.8	56.0	73.5	76.5	79.3	78.8	82.3	83.6
Cu in Concentrate	(t)	2 250.9	-	-	-	-	-	9.5	18.7	36.0	43.9	48.8	52.0	53.9	57.6	58.9
Chromite (Cr_2O_3) Concentrate	(kt)	8 709.4	-	-	-	-	-	176.25	139.03	224.67	229.21	230.54	230.67	230.67	254.30	287.98

Item	Units	Totals / Averages	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051
Merensky Mill Feed	(Mt)	7.5	0.18	0.18	0.18	0.18	0.18	0.18	0.22	0.24	0.24	0.28	0.30	0.30	0.30	0.30
UG2 Mill Feed	(Mt)	30.3	1.14	1.15	1.15	1.15	1.15	1.15	1.11	1.09	1.09	1.05	1.03	1.03	1.03	1.03
Merensky Feed Content	(koz 4E)	1 053.6	27.1	26.4	26.1	23.9	22.1	23.9	30.9	37.9	37.3	42.5	42.3	40.9	41.3	40.9
UG2 Feed Content	(koz 4E)	3 755.0	155.0	149.8	152.8	147.8	143.6	143.8	134.5	128.7	131.7	123.9	117.6	117.4	111.1	111.2
Merensky Recovery	(%)	85.8%	87.2%	86.4%	86.1%	84.4%	83.1%	84.5%	85.7%	87.9%	87.9%	87.5%	85.9%	85.3%	85.6%	85.1%
UG2 Recovery	(%)	81.9%	82.9%	82.4%	82.6%	82.2%	81.8%	81.8%	81.4%	81.1%	81.5%	81.3%	80.8%	80.8%	80.1%	80.2%
CRP Yield	(%)	25.6%	27.6%	27.6%	27.6%	27.6%	27.6%	27.6%	26.7%	26.1%	26.2%	25.2%	24.8%	24.8%	24.8%	24.8%
TSP Recovery	(%)	19.9%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%
High-grade Concentrate	(kt)	637.6	22.9	22.0	22.2	21.0	20.0	20.6	21.2	22.4	22.6	22.9	22.0	21.5	20.9	20.8
Low-grade Concentrate	(t)	118.8	4.3	4.3	4.3	4.3	4.3	4.3	4.2	4.1	4.1	4.1	4.1	4.1	4.0	4.0
PGM in High-grade Concentrate	(koz 4E)	4 112.2	157.2	151.1	153.7	146.4	140.5	142.5	140.6	142.4	144.8	142.5	135.8	134.1	128.5	128.2
PGM in Low-grade Concentrate	(koz 4E)	170.5	6.2	6.2	6.3	6.2	6.2	6.2	6.1	6.0	6.0	5.9	5.9	5.9	5.8	5.8
Ni in Concentrate	(t)	3 227.2	85.8	84.4	82.4	80.5	79.3	80.7	96.8	110.6	113.8	130.6	129.7	124.7	126.4	124.1
Cu in Concentrate	(t)	2 250.9	60.9	63.1	63.3	60.2	56.4	56.6	67.4	76.8	79.5	91.6	93.1	90.0	92.6	90.8
Chromite (Cr_2O_3) Concentrate	(kt)	8 709.4	327.98	330.68	331.52	330.73	330.83	331.07	320.33	313.78	313.70	302.30	297.46	296.64	296.79	296.78

Item	Units	Totals / Averages	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061
Merensky Mill Feed	(Mt)	7.5	0.30	0.30	0.30	0.34	0.36	0.35	0.34	0.28	0.19	0.18
UG2 Mill Feed	(Mt)	30.3	1.03	1.03	1.03	0.99	0.97	0.96	0.68	0.42	0.41	0.42
Merensky Feed Content	(koz 4E)	1 053.6	41.9	41.9	45.2	49.8	54.9	47.3	37.7	34.5	27.9	28.7
UG2 Feed Content	(koz 4E)	3 755.0	113.0	112.8	117.5	114.1	112.5	119.5	87.1	50.7	52.2	53.7
Merensky Recovery	(%)	85.8%	85.4%	85.4%	87.1%	86.4%	87.2%	84.7%	80.5%	82.9%	87.0%	88.2%
UG2 Recovery	(%)	81.9%	80.4%	80.4%	80.9%	81.0%	81.0%	81.9%	82.2%	81.6%	82.2%	82.3%
CRP Yield	(%)	25.6%	24.8%	24.8%	24.8%	23.8%	23.3%	23.4%	21.2%	19.2%	21.9%	22.3%
TSP Recovery	(%)	19.9%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%
High-grade Concentrate	(kt)	637.6	21.3	21.2	22.8	23.4	24.5	23.3	17.3	13.0	12.0	12.5
Low-grade Concentrate	(t)	118.8	4.0	4.0	4.2	4.4	4.3	4.1	3.3	2.2	1.8	1.8
PGM in High-grade Concentrate	(koz 4E)	4 112.2	130.9	130.7	138.9	140.0	143.6	142.5	105.3	72.3	69.5	71.9
PGM in Low-grade Concentrate	(koz 4E)	170.5	5.8	5.8	5.9	5.9	5.9	6.0	4.7	3.1	2.7	2.7
Ni in Concentrate	(t)	3 227.2	126.6	126.2	133.0	142.1	153.4	139.0	121.6	101.3	79.7	84.5
Cu in Concentrate	(t)	2 250.9	90.5	88.1	91.8	99.7	108.2	98.6	82.2	66.0	50.4	54.0
Chromite (Cr_2O_3) Concentrate	(kt)	8 709.4	297.56	296.75	296.63	285.12	280.02	276.80	196.66	120.00	116.60	119.41

Table 17-8: PSM - Magazynskraal Shaft: Predicted Plant Performance (2027 to 2068)

Item	Units	Totals / Averages	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Merensky Mill Feed	(Mt)	12.8	-	-	-	-	-	-	-	-	0.01	0.06	0.20	0.42	0.48	0.45
UG2 Mill Feed	(Mt)	46.0	-	-	-	-	0.00	0.01	0.06	0.21	0.50	1.13	1.79	1.89	1.88	1.77
Merensky Feed Content	(koz 4E)	2 620.4	-	-	-	-	0.0	0.0	0.0	0.0	1.7	11.1	40.7	85.3	98.4	92.1
UG2 Feed Content	(koz 4E)	5 705.7	-	-	-	-	0.1	0.7	6.6	24.4	58.0	133.4	213.2	227.2	228.6	213.6
Merensky Recovery	(%)	94.0%	-	-	-	-	0.0%	0.0%	0.0%	0.0%	88.2%	91.5%	93.4%	94.0%	94.1%	94.2%
UG2 Recovery	(%)	81.8%	-	-	-	-	75.2%	77.5%	80.8%	80.8%	80.8%	81.2%	81.2%	81.3%	81.5%	81.4%
CRP Yield	(%)	17.6%	-	-	-	-	17.6%	17.6%	17.6%	17.6%	17.6%	17.6%	17.6%	17.6%	17.6%	17.6%
TSP Recovery	(%)	30.9%	-	-	-	-	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%
High-grade Concentrate	(kt)	1 259.8	-	-	-	-	0.0	0.1	0.7	2.8	7.1	17.8	33.9	46.2	49.2	46.0
Low-grade Concentrate	(t)	180.7	-	-	-	-	0.0	0.0	0.2	0.7	1.6	3.7	6.2	7.1	7.3	6.8
PGM in High-grade Concentrate	(koz 4E)	7 368.4	-	-	-	-	0.0	0.6	5.5	20.4	50.0	122.4	218.4	273.9	288.3	269.4
PGM in Low-grade Concentrate	(koz 4E)	382.6	-	-	-	-	0.0	0.1	0.4	1.5	3.6	8.3	13.6	15.2	15.4	14.4
Ni in Concentrate	(t)	9 589.7	-	-	-	-	0.0	0.5	3.5	13.0	36.6	100.7	217.5	336.9	369.0	344.5
Cu in Concentrate	(t)	6 105.6	-	-	-	-	0.0	0.1	0.6	2.2	10.1	38.3	108.5	203.5	230.6	214.8
Chromite (Cr_2O_3) Concentrate	(kt)	7 281.8	-	-	-	-	0.12	1.35	9.10	33.70	79.74	178.05	283.21	299.35	297.33	279.39

Item	Units	Totals / Averages	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054
Merensky Mill Feed	(Mt)	12.8	0.43	0.43	0.43	0.51	0.49	0.49	0.55	0.53	0.55	0.56	0.51	0.55	0.55	0.54
UG2 Mill Feed	(Mt)	46.0	1.86	1.80	1.84	1.81	1.89	1.84	1.88	1.88	1.88	1.90	1.88	1.92	1.86	1.89
Merensky Feed Content	(koz 4E)	2 620.4	88.5	87.4	88.8	104.3	101.8	99.6	112.0	108.0	112.9	115.9	105.5	112.6	114.1	109.8
UG2 Feed Content	(koz 4E)	5 705.7	226.6	220.6	229.5	229.5	240.1	238.7	239.9	237.0	236.5	236.3	235.6	241.6	233.6	235.3
Merensky Recovery	(%)	94.0%	94.0%	94.0%	94.2%	93.9%	94.1%	93.7%	93.9%	94.1%	93.8%	94.1%	94.1%	94.0%	94.2%	94.0%
UG2 Recovery	(%)	81.8%	81.5%	81.6%	81.8%	82.0%	82.0%	82.3%	82.1%	81.9%	81.9%	81.8%	81.9%	81.9%	81.9%	81.8%
CRP Yield	(%)	17.6%	17.6%	17.6%	17.6%	17.6%	17.6%	17.6%	17.6%	17.6%	17.6%	17.6%	17.6%	17.6%	17.6%	17.6%
TSP Recovery	(%)	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%
High-grade Concentrate	(kt)	1 259.8	46.6	45.5	46.2	50.0	50.2	49.4	52.8	51.7	53.2	53.8	51.1	53.4	52.7	52.3
Low-grade Concentrate	(t)	180.7	7.1	6.9	7.0	7.1	7.3	7.2	7.5	7.4	7.5	7.6	7.4	7.6	7.4	7.5
PGM in High-grade Concentrate	(koz 4E)	7 368.4	277.0	271.0	280.5	295.9	302.7	299.6	312.4	305.8	309.7	312.5	301.8	314.1	309.0	305.6
PGM in Low-grade Concentrate	(koz 4E)	382.6	15.1	14.6	15.0	15.2	15.7	15.5	15.9	15.7	15.9	15.9	15.7	16.1	15.6	15.8
Ni in Concentrate	(t)	9 589.7	343.1	336.0	340.1	381.9	377.7	373.2	405.6	393.6	409.3	414.5	387.6	408.5	406.3	399.8
Cu in Concentrate	(t)	6 105.6	209.9	206.3	208.1	243.9	237.4	235.6	261.0	250.9	263.9	267.5	245.8	261.7	262.3	255.6
Chromite (Cr_2O_3) Concentrate	(kt)	7 281.8	294.20	285.00	291.73	286.94	299.18	291.25	297.11	297.85	298.02	300.68	298.07	303.65	294.24	299.44

Item	Units	Totals / Averages	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068
Merensky Mill Feed	(Mt)	12.8	0.54	0.55	0.58	0.54	0.54	0.54	0.37	0.18	0.08	0.05	0.01	0.03	0.04	0.01
UG2 Mill Feed	(Mt)	46.0	1.79	1.68	1.45	1.30	1.18	0.83	0.65	0.51	0.47	0.33	0.17	0.16	0.12	0.02
Merensky Feed Content	(koz 4E)	2 620.4	110.5	111.4	118.6	110.3	109.4	111.2	76.1	37.7	16.8	10.0	0.8	6.2	8.4	2.4
UG2 Feed Content	(koz 4E)	5 705.7	224.4	209.2	179.2	160.8	144.9	101.9	80.1	62.7	57.9	40.3	21.7	20.1	14.1	1.8
Merensky Recovery	(%)	94.0%	94.0%	93.9%	94.0%	94.1%	93.9%	94.3%	94.3%	94.3%	94.5%	94.5%	88.4%	94.4%	94.5%	94.5%
UG2 Recovery	(%)	81.8%	81.9%	81.8%	81.7%	81.7%	81.7%	81.7%	81.7%	81.7%	81.7%	81.8%	81.8%	81.9%	81.6%	81.5%
CRP Yield	(%)	17.6%	17.6%	17.6%	17.6%	17.6%	17.6%	17.6%	17.6%	17.6%	17.6%	17.6%	17.6%	17.6%	17.6%	17.6%
TSP Recovery	(%)	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%
High-grade Concentrate	(kt)	1 259.8	51.1	50.1	48.8	44.7	43.0	38.5	27.4	16.0	10.3	6.7	2.6	3.6	3.6	0.8
Low-grade Concentrate	(t)	180.7	7.1	6.8	6.2	5.6	5.2	4.2	3.1	2.1	1.7	1.1	0.6	0.6	0.5	0.1
PGM in High-grade Concentrate	(koz 4E)	7 368.4	297.4	285.0	266.5	243.1	228.6	194.4	141.8	89.7	65.4	43.8	19.1	23.1	20.2	3.9
PGM in Low-grade Concentrate	(koz 4E)	382.6	15.1	14.3	12.8	11.5	10.6	8.0	6.1	4.3	3.7	2.5	1.3	1.3	1.0	0.2
Ni in Concentrate	(t)	9 589.7	395.0	392.5	395.5	364.1	356.2	334.9	233.7	127.3	71.3	45.2	13.6	25.6	28.4	7.0
Cu in Concentrate	(t)	6 105.6	255.9	258.2	269.7	249.6	248.1	244.5	167.7	85.2	40.4	24.5	4.3	14.8	18.9	5.2
Chromite (Cr_2O_3) Concentrate	(kt)	7 281.8	282.90	265.26	229.77	206.19	186.19	130.55	102.68	80.27	74.15	51.44	27.56	25.49	18.24	2.39

Table 17-9: Kruidfontein Shaft: Predicted Plant Performance (2024 to 2063)

Item	Units	Totals / Averages	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
Merensky Mill Feed	(Mt)	12.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
UG2 Mill Feed	(Mt)	21.6	-	-	-	-	-	-	-	-	-	-	0.00	0.00	0.01	0.09
Merensky Feed Content	(koz 4E)	2 625.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
UG2 Feed Content	(koz 4E)	3 051.9	-	-	-	-	-	-	-	-	-	-	0.0	0.1	1.2	11.4
Merensky Recovery	(%)	94.0%	-	-	-	-	-	-	-	-	-	-	-	-	-	-
UG2 Recovery	(%)	83.4%	-	-	-	-	-	-	-	-	-	-	75.0%	75.0%	80.4%	81.7%
CRP Yield	(%)	17.6%	-	-	-	-	-	-	-	-	-	-	17.6%	17.6%	17.6%	17.6%
TSP Recovery	(%)	30.9%	-	-	-	-	-	-	-	-	-	-	30.9%	30.9%	30.9%	30.9%
High-grade Concentrate	(kt)	988.2	-	-	-	-	-	-	-	-	-	-	0.0	0.0	0.2	1.4
Low-grade Concentrate	(t)	105.1	-	-	-	-	-	-	-	-	-	-	0.0	0.0	0.0	0.3
PGM in High-grade Concentrate	(koz 4E)	5 181.0	-	-	-	-	-	-	-	-	-	-	0.0	0.1	1.0	9.6
PGM in Low-grade Concentrate	(koz 4E)	212.5	-	-	-	-	-	-	-	-	-	-	0.0	0.0	0.1	0.7
Ni in Concentrate	(t)	12 976.5	-	-	-	-	-	-	-	-	-	-	0.1	0.4	2.9	24.4
Cu in Concentrate	(t)	5 876.5	-	-	-	-	-	-	-	-	-	-	0.0	0.0	0.1	0.7
Chromite (Cr_2O_3) Concentrate	(kt)	3 422.3	-	-	-	-	-	-	-	-	-	-	0.06	0.21	1.71	14.61

Item	Units	Totals / Averages	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051
Merensky Mill Feed	(Mt)	12.8	0.00	0.07	0.14	0.37	0.37	0.37	0.37	0.37	0.39	0.61	0.73	0.76	0.83	0.85
UG2 Mill Feed	(Mt)	21.6	0.36	0.86	1.37	1.53	1.53	1.59	1.54	1.56	1.47	1.35	1.21	1.15	1.04	1.02
Merensky Feed Content	(koz 4E)	2 625.8	1.0	14.2	25.7	75.4	75.6	76.4	76.6	76.2	77.6	125.2	149.8	154.8	168.3	174.1
UG2 Feed Content	(koz 4E)	3 051.9	49.5	119.8	192.5	215.4	216.9	224.5	217.1	221.1	208.6	191.6	171.2	162.7	146.2	144.5
Merensky Recovery	(%)	94.0%	94.5%	92.8%	92.2%	93.7%	94.0%	94.0%	94.0%	94.2%	93.5%	93.9%	94.0%	93.8%	93.9%	93.9%
UG2 Recovery	(%)	83.4%	83.0%	83.2%	83.3%	83.4%	83.4%	83.4%	83.4%	83.4%	83.4%	83.4%	83.4%	83.4%	83.4%	83.4%
CRP Yield	(%)	17.6%	17.6%	17.6%	17.6%	17.6%	17.6%	17.6%	17.6%	17.6%	17.6%	17.6%	17.6%	17.6%	17.6%	17.6%
TSP Recovery	(%)	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%
High-grade Concentrate	(kt)	988.2	5.7	16.9	27.7	42.3	42.2	43.2	42.5	42.7	42.2	52.1	55.9	56.6	58.2	59.4
Low-grade Concentrate	(t)	105.1	1.1	2.9	4.6	5.8	5.8	6.0	5.9	5.9	5.7	6.0	5.9	5.8	5.7	5.7
PGM in High-grade Concentrate	(koz 4E)	5 181.0	43.5	116.6	190.2	258.6	260.4	267.8	261.5	264.8	254.9	286.7	293.2	290.4	289.3	293.5
PGM in Low-grade Concentrate	(koz 4E)	212.5	2.7	6.8	10.9	12.9	12.9	13.4	13.0	13.1	12.7	12.6	11.9	11.7	11.1	11.1
Ni in Concentrate	(t)	12 976.5	98.1	270.2	439.5	614.7	614.5	631.1	618.3	622.4	608.6	705.5	733.6	735.0	741.0	753.2
Cu in Concentrate	(t)	5 876.5	4.9	39.5	71.2	177.9	176.5	178.7	179.0	176.9	183.8	284.1	334.6	348.0	375.4	387.8
Chromite (Cr_2O_3) Concentrate	(kt)	3 422.3	57.13	136.74	217.02	241.71	242.70	251.27	243.06	247.37	233.28	214.26	191.76	182.09	164.09	161.87

Item	Units	Totals / Averages	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063
Merensky Mill Feed	(Mt)	12.8	0.85	0.82	0.85	0.82	0.84	0.83	0.73	0.48	0.21	0.09	0.06	0.00
UG2 Mill Feed	(Mt)	21.6	0.99	0.97	0.77	0.56	0.43	0.17	0.03	-	-	-	-	-
Merensky Feed Content	(koz 4E)	2 625.8	174.4	168.1	173.2	168.1	172.4	172.2	152.5	99.2	44.1	18.0	11.8	1.0
UG2 Feed Content	(koz 4E)	3 051.9	140.5	137.5	110.1	79.2	61.7	24.3	4.3	-	-	-	-	-
Merensky Recovery	(%)	94.0%	94.0%	93.9%	93.9%	93.9%	94.0%	94.2%	94.3%	94.4%	94.3%	94.5%	94.5%	94.5%
UG2 Recovery	(%)	83.4%	83.4%	83.4%	83.5%	83.5%	83.5%	83.5%	83.6%	-	-	-	-	-
CRP Yield	(%)	17.6%	17.6%	17.6%	17.6%	17.6%	17.6%	17.6%	17.6%	-	-	-	-	-
TSP Recovery	(%)	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%
High-grade Concentrate	(kt)	988.2	58.9	57.1	55.4	50.8	50.0	45.5	38.3	24.5	10.9	4.4	2.9	0.2
Low-grade Concentrate	(t)	105.1	5.6	5.5	4.9	4.2	3.8	3.0	2.3	1.4	0.6	0.3	0.2	0.0
PGM in High-grade Concentrate	(koz 4E)	5 181.0	290.5	281.8	263.2	231.6	220.7	188.7	152.5	96.8	43.0	17.6	11.5	1.0
PGM in Low-grade Concentrate	(koz 4E)	212.5	10.8	10.5	9.2	7.4	6.6	4.5	3.0	1.8	0.8	0.3	0.2	0.0
Ni in Concentrate	(t)	12 976.5	744.1	722.1	683.9	612.5	590.7	515.2	422.3	268.9	120.0	48.6	31.8	2.7
Cu in Concentrate	(t)	5 876.5	386.7	373.9	383.0	369.9	377.9	370.5	325.3	210.9	94.1	38.1	25.0	2.1
Chromite (Cr_2O_3) Concentrate	(kt)	3 422.3	157.03	153.50	122.47	88.32	68.35	26.90	4.80	-	-	-	-	-

Table 17-10: Mphahlele Decline: Predicted Plant Performance (2024 to 2064) (100% basis)

Item	Units	Totals / Averages	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
Merensky Mill Feed	(Mt)	9.9	-	-	-	0.03	0.12	0.28	0.45	0.52	0.67	0.69	0.79	0.82	0.88	0.86
UG2 Mill Feed	(Mt)	13.6	-	-	-	0.05	0.16	0.44	0.71	0.84	0.89	0.92	0.99	0.92	0.95	0.95
Merensky Feed Content	(koz 4E)	985.9	-	-	-	0.4	4.8	18.9	38.3	46.7	67.0	69.4	83.2	85.6	92.6	89.5
UG2 Feed Content	(koz 4E)	2 757.6	-	-	-	6.4	24.6	77.9	131.4	174.9	180.7	197.3	211.4	193.1	196.2	197.5
Merensky Recovery	(%)	88.9%	-	-	-	83.9%	85.9%	87.6%	88.3%	88.5%	88.9%	88.9%	89.0%	89.0%	89.0%	89.0%
UG2 Recovery	(%)	80.9%	-	-	-	79.4%	79.8%	80.4%	80.6%	81.0%	80.9%	81.1%	81.1%	81.1%	81.0%	81.0%
CRP Yield	(%)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TSP Recovery	(%)	30.9%	-	-	-	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%
High-grade Concentrate	(kt)	444.6	-	-	-	1.5	5.3	13.7	22.2	26.1	29.5	30.4	33.6	32.3	34.0	33.7
Low-grade Concentrate	(t)	86.7	-	-	-	0.3	1.0	2.7	4.3	5.1	5.7	5.9	6.6	6.3	6.6	6.6
PGM in High-grade Concentrate	(koz 4E)	3 212.7	-	-	-	5.6	24.6	81.9	144.4	189.2	212.7	229.2	253.7	240.5	249.4	247.6
PGM in Low-grade Concentrate	(koz 4E)	164.6	-	-	-	0.6	2.0	5.1	8.2	9.7	10.9	11.3	12.5	12.0	12.6	12.5
Ni in Concentrate	(t)	12 589.5	-	-	-	42.8	150.5	387.9	629.8	739.6	834.4	860.8	952.3	915.5	963.5	955.4
Cu in Concentrate	(t)	9 977.8	-	-	-	33.0	118.1	291.3	475.6	551.5	668.9	691.3	778.9	781.4	831.3	817.5
Chromite (Cr_2O_3) Concentrate	(kt)	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Item	**Units**	**Totals / Averages**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	**2051**
Merensky Mill Feed	(Mt)	9.9	0.84	0.72	0.65	0.55	0.48	0.28	0.17	0.09	0.02	-	-	-	-	-
UG2 Mill Feed	(Mt)	13.6	0.98	0.91	0.72	0.52	0.48	0.31	0.28	0.22	0.15	0.20	0.20	0.06	0.06	0.02
Merensky Feed Content	(koz 4E)	985.9	86.7	70.2	64.6	55.7	49.9	30.2	19.3	10.8	2.0	0.0	0.0	0.0	0.0	0.0
UG2 Feed Content	(koz 4E)	2 757.6	200.3	187.5	146.6	112.0	99.5	59.9	60.9	47.7	32.3	42.1	37.6	11.9	13.1	6.2
Merensky Recovery	(%)	88.9%	89.0%	88.8%	88.9%	88.9%	89.0%	89.1%	89.2%	89.4%	88.9%	0.0%	0.0%	0.0%	0.0%	0.0%
UG2 Recovery	(%)	80.9%	80.9%	81.0%	80.9%	81.1%	81.0%	80.8%	81.2%	81.1%	81.0%	81.0%	80.7%	80.6%	81.1%	81.8%
CRP Yield	(%)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TSP Recovery	(%)	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%
High-grade Concentrate	(kt)	444.6	34.0	30.6	25.5	19.7	17.8	10.9	8.7	6.3	3.7	4.4	4.3	1.4	1.3	0.5
Low-grade Concentrate	(t)	86.7	6.6	6.0	5.0	3.8	3.5	2.1	1.7	1.2	0.7	0.9	0.8	0.3	0.3	0.1
PGM in High-grade Concentrate	(koz 4E)	3 212.7	247.3	221.3	182.0	145.1	129.1	77.8	68.9	50.0	28.9	35.3	31.4	9.9	11.0	5.2
PGM in Low-grade Concentrate	(koz 4E)	164.6	12.6	11.3	9.5	7.3	6.6	4.0	3.2	2.3	1.4	1.6	1.6	0.5	0.5	0.2
Ni in Concentrate	(t)	12 589.5	963.2	867.6	723.5	558.8	504.1	308.3	245.1	177.2	103.4	125.2	121.7	39.4	37.7	14.5
Cu in Concentrate	(t)	9 977.8	807.6	707.0	616.7	505.0	447.7	264.5	183.3	113.3	47.4	43.7	42.5	13.8	13.2	5.1
Chromite (Cr_2O_3) Concentrate	(kt)	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Item	**Units**	**Totals / Averages**	**2052**	**2053**	**2054**	**2055**	**2056**	**2057**	**2058**	**2059**	**2060**	**2061**	**2062**	**2063**	**2064**	
Merensky Mill Feed	(Mt)	9.9	-	-	-	-	-	-	-	-	-	-	-	-	-	
UG2 Mill Feed	(Mt)	13.6	0.00	0.03	0.02	0.01	0.01	0.08	0.05	0.01	0.08	0.12	0.12	0.06	0.01	
Merensky Feed Content	(koz 4E)	985.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
UG2 Feed Content	(koz 4E)	2 757.6	1.0	8.2	2.6	1.6	2.2	14.0	11.6	1.2	10.0	19.9	20.3	14.6	1.6	
Merensky Recovery	(%)	88.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
UG2 Recovery	(%)	80.9%	81.0%	81.7%	80.3%	78.8%	81.3%	80.5%	81.7%	78.3%	79.2%	80.2%	80.4%	81.3%	81.7%	
CRP Yield	(%)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
TSP Recovery	(%)	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%	
High-grade Concentrate	(kt)	444.6	0.1	0.7	0.4	0.3	0.2	1.7	1.0	0.3	1.7	2.6	2.5	1.4	0.1	
Low-grade Concentrate	(t)	86.7	0.0	0.1	0.1	0.1	0.0	0.3	0.2	0.1	0.3	0.5	0.5	0.3	0.0	
PGM in High-grade Concentrate	(koz 4E)	3 212.7	0.8	6.9	2.1	1.3	1.9	11.6	9.8	1.0	8.2	16.5	16.8	12.3	1.4	
PGM in Low-grade Concentrate	(koz 4E)	164.6	0.0	0.3	0.1	0.1	0.1	0.6	0.4	0.1	0.6	1.0	0.9	0.5	0.1	
Ni in Concentrate	(t)	12 589.5	3.0	19.9	9.9	8.4	6.2	48.0	28.1	7.7	48.7	72.7	71.2	39.4	4.0	
Cu in Concentrate	(t)	9 977.8	1.0	6.9	3.5	2.9	2.2	16.8	9.8	2.7	17.0	25.4	24.9	13.8	1.4	
Chromite (Cr_2O_3) Concentrate	(kt)	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	

Note:

1. Values represent 100% of production and not the amount attributable to SRL.

Table 17-11: Mphahlele Shaft: Predicted Plant Performance (2029 to 2070) (100% basis)

Item	Units	Totals / Averages	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
Merensky Mill Feed	(Mt)	13.8	-	-	-	-	-	-	-	-	0.04	0.15	0.31	0.41	0.58	0.73
UG2 Mill Feed	(Mt)	23.8	-	-	-	-	-	-	0.02	0.14	0.28	0.45	0.59	0.87	0.94	0.95
Merensky Feed Content	(koz 4E)	1 536.4	-	-	-	-	-	-	0.0	0.0	2.0	10.3	25.3	35.0	53.6	73.1
UG2 Feed Content	(koz 4E)	3 426.9	-	-	-	-	-	-	1.6	18.8	43.8	71.8	96.4	142.4	148.6	149.7
Merensky Recovery	(%)	89.3%	-	-	-	-	-	-	0.0%	0.0%	86.5%	87.7%	88.1%	88.3%	88.6%	88.9%
UG2 Recovery	(%)	81.0%	-	-	-	-	-	-	79.7%	80.9%	81.3%	81.3%	81.4%	81.4%	81.3%	81.3%
CRP Yield	(%)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TSP Recovery	(%)	30.9%	-	-	-	-	-	-	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%
High-grade Concentrate	(kt)	560.6	-	-	-	-	-	-	0.2	2.0	4.7	8.9	13.5	19.1	22.7	25.0
Low-grade Concentrate	(t)	111.5	-	-	-	-	-	-	0.0	0.4	0.9	1.8	2.7	3.8	4.5	5.0
PGM in High-grade Concentrate	(koz 4E)	4 286.3	-	-	-	-	-	-	1.4	15.7	38.6	69.7	104.1	151.8	173.9	193.0
PGM in Low-grade Concentrate	(koz 4E)	211.7	-	-	-	-	-	-	0.1	0.8	1.8	3.4	5.1	7.2	8.6	9.4
Ni in Concentrate	(t)	16 185.2	-	-	-	-	-	-	6.9	58.0	135.7	256.7	388.8	550.1	654.5	722.5
Cu in Concentrate	(t)	13 410.6	-	-	-	-	-	-	2.4	20.3	70.1	172.0	313.1	421.2	554.0	664.9
Chromite (Cr_2O_3) Concentrate	(kt)	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Item	Units	Totals / Averages	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056
Merensky Mill Feed	(Mt)	13.8	0.80	0.88	0.85	0.88	0.82	0.83	0.83	0.86	0.84	0.93	0.92	0.79	0.62	0.42
UG2 Mill Feed	(Mt)	23.8	0.99	1.02	1.05	1.07	1.11	1.19	1.17	1.12	1.19	1.13	1.14	1.20	1.24	1.09
Merensky Feed Content	(koz 4E)	1 536.4	82.0	94.9	94.3	98.4	95.6	98.1	99.7	100.4	98.8	112.0	111.8	96.8	74.8	48.1
UG2 Feed Content	(koz 4E)	3 426.9	154.5	161.5	162.0	165.4	173.7	177.8	179.7	166.5	175.8	165.9	163.8	161.5	167.6	146.9
Merensky Recovery	(%)	89.3%	88.9%	89.1%	89.2%	89.2%	89.4%	89.4%	89.5%	89.4%	89.4%	89.5%	89.5%	89.5%	89.5%	89.3%
UG2 Recovery	(%)	81.0%	81.3%	81.3%	81.2%	81.2%	81.3%	81.1%	81.2%	81.1%	81.1%	81.0%	80.9%	80.7%	80.7%	80.7%
CRP Yield	(%)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TSP Recovery	(%)	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%
High-grade Concentrate	(kt)	560.6	26.6	28.3	28.3	29.0	28.8	30.0	29.8	29.5	30.2	30.7	30.8	29.7	27.8	22.6
Low-grade Concentrate	(t)	111.5	5.3	5.6	5.6	5.8	5.7	6.0	5.9	5.9	6.0	6.1	6.1	5.9	5.5	4.5
PGM in High-grade Concentrate	(koz 4E)	4 286.3	205.1	223.2	223.0	229.7	234.3	239.7	243.0	232.3	238.6	242.5	240.5	224.4	209.0	167.0
PGM in Low-grade Concentrate	(koz 4E)	211.7	10.0	10.7	10.7	11.0	10.9	11.3	11.2	11.1	11.4	11.6	11.6	11.2	10.5	8.5
Ni in Concentrate	(t)	16 185.2	768.2	817.9	817.6	838.3	831.5	867.1	859.8	852.7	873.2	887.1	889.0	858.8	803.4	651.3
Cu in Concentrate	(t)	13 410.6	718.1	780.7	765.7	787.4	753.7	769.2	765.1	782.4	777.6	833.4	829.5	746.2	632.5	465.5
Chromite (Cr_2O_3) Concentrate	(kt)	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Item	Units	Totals / Averages	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070
Merensky Mill Feed	(Mt)	13.8	0.22	0.06	0.00	-	-	-	-	-	-	-	-	-	-	-
UG2 Mill Feed	(Mt)	23.8	0.69	0.44	0.29	0.30	0.42	0.33	0.20	0.19	0.16	0.30	0.21	0.25	0.11	0.02
Merensky Feed Content	(koz 4E)	1 536.4	25.3	6.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
UG2 Feed Content	(koz 4E)	3 426.9	81.7	46.7	28.4	30.5	41.1	35.7	21.0	21.8	16.4	30.1	24.2	33.8	16.2	3.3
Merensky Recovery	(%)	89.3%	89.3%	89.1%	89.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
UG2 Recovery	(%)	81.0%	80.2%	79.9%	79.6%	79.7%	79.5%	79.9%	79.8%	80.1%	79.8%	79.7%	80.2%	80.8%	81.1%	81.1%
CRP Yield	(%)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TSP Recovery	(%)	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%	30.9%
High-grade Concentrate	(kt)	560.6	13.7	7.4	4.3	4.4	6.3	4.9	3.0	2.8	2.3	4.5	3.1	3.7	1.6	0.3
Low-grade Concentrate	(t)	111.5	2.7	1.5	0.9	0.9	1.3	1.0	0.6	0.6	0.5	0.9	0.6	0.7	0.3	0.1
PGM in High-grade Concentrate	(koz 4E)	4 286.3	91.1	44.1	23.5	25.1	33.8	29.5	17.4	18.1	13.5	24.8	20.1	28.2	13.6	2.8
PGM in Low-grade Concentrate	(koz 4E)	211.7	5.2	2.8	1.6	1.7	2.4	1.9	1.1	1.1	0.9	1.7	1.2	1.4	0.6	0.1
Ni in Concentrate	(t)	16 185.2	394.2	212.2	123.8	127.2	182.2	141.6	86.6	82.0	67.3	128.4	88.9	105.6	46.7	9.4
Cu in Concentrate	(t)	13 410.6	263.7	105.5	43.9	44.4	63.7	49.5	30.3	28.6	23.5	44.9	31.1	36.9	16.3	3.3
Chromite (Cr_2O_3) Concentrate	(kt)	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note: Values represent 100% of production and not the amount attributable to SRL.

18 Project Infrastructure

18.1 Surface Infrastructure

18.1.1 Ruighoek

Physical infrastructure at Ruighoek Pit is expected to be minimal due to its proximity to PPM. Necessary security and fencing must be supplied as well as sewerage, internal roads, a wellfield for water supply, rock dumps, haul road construction to PPM, stormwater protection including river diversion construction, and power supply. Processing will be done at PPM.

Planned electrical power requirements for the Ruighoek Pit will be as for open pit mining, mining offices and some area lighting and is estimated to be approximately 1 MVA. There is an existing substation on site, which will probably have excess capacity for these requirements. The substation is more than 20 years old and it is anticipated that more work will be required prior to project implementation. This work will include amongst others testing of existing equipment to determine whether the existing equipment can be used or replaced, and consultations with Eskom to ensure that the required NMD is agreed upon and secured.

18.1.2 PSM above 700 m below Surface

West Pit and East Pit

The mining at the West Pit is complete.

The East Pit, which commenced production in 2022, is supported by infrastructure at PPM, which includes road access, the UG2 and MR concentrators, tailings dam, dumps and stockpiles, offices, change houses, sewerage, water supply dams and reticulation, and power supply. Main road access is by sealed roads with predominantly unsealed gravel roads on site. Infrastructure also includes assorted waste and ore dumps and stockpiles, and an existing TSF. As the capital projects progress, provision has been made for additional TSFs and RWDs. Provision is made for PPM to receive reef from the East and Central Declines, initially by truck and subsequently by RopeCon® suspended conveyors, and from Magazynskraal Deep Shaft and Kruidfontein 1 Shaft by rail.

Power

SRL has an agreed NMD of 37 MVA with Eskom at its Tuschenkomst (PPM) substation, with previous records showing an average power consumption of about 33 MVA. However, the installed bulk power infrastructure at this substation has the capacity to provide a power output of 40 MVA. This substation supplied power to the existing West Pit, MF2 concentrator plant and mine support infrastructure. However, the West Pit has since come to the end of its current economic life, prompting SRL to embark on the development of the East Pit in December 2021. The installed capacity is therefore deemed sufficient to also supply future power requirements for the CRP and the TSP circuits.

PPM implemented curtailment of its operations in November 2023 due to the prevailing economic conditions, particularly the downturn in metal prices and inflationary cost pressures. SRL approached Eskom to request temporary relief on the capacity and baseload charges for both the Tuschenkomst and Sedibelo substations, and reduction in credit guarantees until such time as a return to higher usage is anticipated.

SRL indicated that although it is requesting this temporary relief, it also emphasised to Eskom that it wanted to keep the contractual agreed NMDs (37 MVA at Tuschenkomst and 66 MVA at Sedibelo substations) as they currently are. Reducing the contractual agreed NMD might lead to difficulties in securing the previously agreed NMD in future when the mine returns to full production, as Eskom is currently experiencing a power supply deficit in its system. This is mainly due to most power generation plants reaching the end of their design life, thus experiencing regular equipment failure and resulting in Eskom having to introduce different stages of loadshedding (planned supply interruptions). Inadequate maintenance in the past is also believed to be another contributing factor to equipment failures.

The mine has estimated the maximum demand to be 1 MVA in 2024, gradually increasing to maximum of 2.7 MVA in 2025 and ultimately reaching a maximum of 24.1 MVA in March 2030. However, this forecast has to be updated every six months and within 20 days of becoming aware that the consumption, over any three month or longer period, will vary by 5% or more from the current energy and load forecast. The energy consumption forecast has been estimated at 7 142 MWh in 2024, 16 968 MWh in 2025 and ultimately reaching 127 339 MWh in 2030.

Stormwater Management

The following key surface infrastructure is associated with stormwater management at PPM and the West Pit:

- Plant SWCD;
- Eskom SWCD;
- TSF SWCD;
- North SWCD; and
- South SWCD.

To ensure additional clean and dirty water separation to comply with GNR704 and protect the surface water resources, a river diversion has been constructed to divert the Wilgespruit River around the West Pit area as part of stormwater management and paddocks have been constructed around the western side of the WRD in order to capture dirty stormwater runoff emanating from the waste rock dump. Water collecting in the paddocks is left to evaporate.

Currently there are three dams associated with stormwater management that are at planning and design stage at the East Pit:

- Surge Dam;
- WRD SWCD; and
- Dewatering Pond.

Central and East Underground

Central and East Underground will be mined as separate underground operations. Each operation will have its own portal and access will be by declines. The two blocks are autonomous and there will be no underground connection between the two mining blocks. Surface trucking of ore and waste is assumed until each mining block reaches steady-state production. At thjis time, the surface Doppelmayr RopeCon® systems will be commissioned (early 2032) and will convey ore and waste across to the RoM ore tip for the PPM concentrator plant and the waste deposition points in the available pits, respectively. Once the rail system is installed in 2031, the option to transport the ore by rail will be available.

The Central and East Portals will be provided with all facilities such as power supply, water supply, change houses, lamp rooms, workshops, mining offices, stores, medical facilities, training centre, explosive magazine, compressor station and ore silos. PPM facilities will still remain available as necessary. Surface main ventilation fans will be installed on upcast ventilation holes.

Power

Power supply to Central and East Underground areas will be from the already-constructed Sedibelo 132/11 kV substation, supplied from Eskom's Spitskop substation via 132 kV overhead power lines. The Sedibelo substation has an installed capacity of 80 MVA, consisting of two 40 MVA transformers. The current agreed NMD at this substation is 66 MVA, with 32.2 MVA being the predicted load demand for the new mine. Therefore, the installed capacity and the agreed NMD is enough to supply the power requirements for the new mine.

From the Sedibelo substation, power will be distributed to the East Portal surface consumer substation, then from the East Portal substation to the Central Portal substation using dual overhead lines. Each line has been sized to carry the full load plus a spare capacity of 30%. Ring feeds have been allowed in the reticulation network, allowing redundancy for both underground and critical surface infrastructure. Emergency generator sets have been allowed for at the Central and East Portal substations to power up critical equipment in the event of grid power failures.

Due to the fall in the ZAR PGM basket price as discussed above, SRL has suspended the development of its underground assets until further funding has been secured. SRL has since approached Eskom to request temporary relief on the capacity and baseload charges for the Sedibelo substation, and reduction in credit guarantees until such time a return to higher usage is anticipated.

18.1.3 PSM and Kruidfontein below 700 m below Surface

Surface infrastructure at the Sedibelo East Magazynskraal Deep Shaft will include Blair winders for rock and men/material, a service winder, emergency generators, headgear, control room, offices, lamp and change hose, backfill plant, refrigeration plant, power supply, water supply and upcast ventilation fans. The main shaft will be

Ore will be transported to PPM by rail from early 2032 and the by rail to a new UG2 concentrator and Chromite removal module due to be commissioned at Kruidfontein Shaft 1 in late 2038.

The main vertical shaft will be 10 m finished diameter and approximately 1 170 m deep and equipped with shaft steelwork, a main pump station with settlers and with energy recovery, intermediate pump station, and rock and men handling systems. An upcast 8 m finished diameter vertical ventilation shaft equipped as a second outlet will be sunk concurrently with the main shaft. The twin shaft complex was positioned in the centre of the mining area to optimise its utilisation. Secondary access is by a cluster of three declines being developed away from the shaft infrastructure. The decline cluster will be developed up and down within reasonable proximity to the centre of gravity of the mining operations.

Underground infrastructure will include shaft loading arrangements, in-stope hydropower drilling with power packs, secondary ventilation and underground tips for trackless haulage. Shaft sinking is due to commence in July 2027.

Surface infrastructure at Kruidfontein Shaft 1 is similar to that at Sedibelo East Magazynskraal Deep Shaft except that the vertical shafts are approximately 1 761 m deep. Shaft sinking is due to commence in December 2027. Other surface infrastructure will be based on the designs for Sedibelo East Magazynskraal Deep Shaft taking into account for the increase in depth. In addition to a surface refrigeration plant and bulk air cooler, an underground plant is required for the deeper levels. The underground plant produces chilled water which is distributed directly to underground air coolers in insulated piping. Chilled water is used in the air coolers to cool the intake air. Return water from the air coolers can be used for drilling water and the remainder is pumped back to the underground refrigeration plant in a closed-circuit.

Power

Table 18-1 indicates the estimated project concept power requirements for the Western Limb properties at peak production.

Table 18-1: Estimated Power Requirements at Peak Production

Description	Absorbed Power (MVA)
PPM Merensky and UG2 Concentrator (240 ktpm and 75 ktpm)	32.5
Chrome Recovery Plant Extension	0.6
Tailings Retreatment Plant	1.5
Merensky Circuit Upgrade	7.5
Kell Processing Plant	3
East Pit	1
East and Central Blocks	32.2
East Portal UG2 Concentrator	7.5
Kruidfontein UG2 Concentrator	7.5
Magazynskraal Shaft (750 – 1000 mbs) Main Fans	2.1
Magazynskraal Shaft (750 – 1000 mbs) Surface Refrigeration	2.0
Magazynskraal Shaft (750 - 1000 mbs) Secondary Ventilation	2.9
Magazynskraal Shaft Hoist (allowance)	3.3
Magazynskraal Shaft Backfill Plant (allowance)	2.6
Magazynskraal Shaft support infrastructure (allowance)	2.0
Magazynskraal Shaft (750-1000 mbs) underground pumping (allowance)	3.6
Kruidfontein Shaft (1200 mbs) Main Fans	4.1
Kruidfontein Shaft (1200 mbs) Surface Refrigeration	8.4
Kruidfontein Shaft (1200 mbs) Secondary Ventilation	3.0
Kruidfontein Shaft Hoist (allowance)	3.3
Kruidfontein Shaft Backfill Plant (allowance)	2.6
Kruidfontein Shaft Mine Support Infrastructure (allowance)	2.0
Kruidfontein Shaft underground pumping (allowance)	3.6
Tailings Storage Facilities (3 off, each at 1.5 MVA including RWD)	4.5
Surface Rail System (diesel locomotive. Allowance for power requirements at loading and discharge stations)	2.2
Total	**145.6**

The current total installed power capacity at the Western Limb properties is 120 MVA, made up of 40 MVA and 80 MVA at the PPM substation and Sedibelo substation, respectively. It is therefore evident from **Table 18-1** that the current installed capacity of 120 MVA will not be able to supply the power requirements at peak production and that an additional 26 MVA will be required. Although SRL indicated that the incoming Eskom power line has the capacity of 160 MVA, SRL will need to install additional transformers to cater for the additional loads. It is also recommended that detailed load studies be carried out in the next phase of the project, especially for those items that have been indicated as allowances in Table 18-1, to ensure that more accurate loads are catered for.

18.1.4 Mphahlele

There is currently no infrastructure on site. Sealed roads provide access to within a few kilometres of the project area and link it directly to the towns of Polokwane and Mokopane.

All future infrastructure is planned to be located south of the UG2 subcrop, except for the Eskom substation and water reservoirs. This is to avoid impacting on potential future chromite open pit operations. The main management offices and store, training centre, mine workshops, primary crushing and Rados Plant will be located at Portal A. Satellite offices and support surface infrastructure will be located at Portal B. Both portals will have a lamp and crush room, a first aid facility/medical stabilisation room, change houses and sewage systems, fuel dispensing containers, a brake test ramp, dirty water settling dams, pollution control dams, fencing and security.

Underground infrastructure will consist of dirty water pumping systems for each portal, piped service water and compressed air.

A vertical shaft complex (the Mphahlele Deep Shaft) has been conceptually planned to access reef from hangingwall drives between 540 mbs and 880 mbs and then to connect to ramps for futher access levels down to 1 500 mbs. Snaft sinking is due to commence in April 2030.

The vertical shaft complex will be equipped with underground conveyors and material declines, a main pump station with settlers and energy recovery, and an intermediate pump station. On surface, the shaft will be equipped with a rock winder, man/material winder and a service winder, a refrigeration plant, compressor station, HT sub-station, control room, shaft offices, change house, lamp and crush room, ventilation raise bore holes and upcast ventilation fans.

Power

Power supply to the Mphahlele Project will be from Dithabaneng and Seleteng substations, using 132 kV power lines which will in turn terminate at the mine's Eskom substation, equipped with two 132/11 kV 40 MVA transformers. The total connected load has been estimated at 38.4 MVA, with an estimated running load of around 32.3 MVA. Therefore the bulk power supply network has been correctly sized for the power requirements of the site. The system also allows for redundancy so there is continuous supply via the one feeder should the other supply fail or be taken out of service for maintenance. Two emergency generator power plants, each rated at 1.5 MW, have been allowed at Portal A and Portal B to supply power to critical equipment during grid power supply interruptions. Power supply to Portal A and Portal B main switchgears also allows for redundancy.

Requests for additional payment to proceed with the budget quotation and change of scope from three 20 MVA to two 40 MVA transformers were made by Eskom in March 2014, and SRL has since accepted this request whereby additional payments were made in June 2014. SRL has however indicated that they are not putting pressure on Eskom until it has board approval to implement the Mphahlele Project. Eskom will also be engaged with regard to the re-positioning of the main incoming substation once the board has given approval for implementation of the Mphahlele Project. It is envisaged that this substation will have to move to the South of the UG2 subcrop, to reduce the impact from open pit mining by others.

The 5 MVA temporary power supply infrastructure has been built, commissioned and is kept "live" to try and avoid vandalism of the infrastructure as much as possible. In addition, it was indicated by SRL that Eskom has removed the transformer for safe keeping while the project is not yet implemented. SRL is currently paying the monthly connection fee and fixed costs for this temporary line.

Stormwater Management

In terms of infrastructure related to stormwater management, feasibility-level designs for the Stormwater Management Plan (SWMP) were developed for Mphahlele as part of the Mphahlele FS. The SWMP makes provision for the separation of clean and dirty water. Through diversion channels and/or bunds clean water will be diverted around any mine activity area and back to the natural environment both as clean water sepeartion and stormwater diversion (i.e. diversion bunds to prevent stormwater from reaching the portals). Dirty water will be collecteded, channeled and where relevant will pass through concrete silt traps before flowing into SWCDs as containment.

The following key water holding facilities are planned;

- At the TSF:
  - An RWD;
  - An SWCD;
- At the concentrator plant;\:
  - A process water dam;
  - An SWCD;
- At each portal:
  - A thickener;
  - An Erikson dam (for thickener overflow);
  - A settling dam for underground dewatering;
  - Ana SWCD;
- At each waste dump:
  - a SWCD

In terms of bulk water supply and potable water, the following key water water-related infrastructure are planned;

- Two bulk water supply reservoirs located up-gradient of the concentrator plant on the Sefalaolo Ridge. These reservoirs will store potable/service water before it is pumped to the concentrator plant for use. The combined capacity of the reservoirs will be about 10 Mℓ.
- A WTP will need to be constructed to provide the required volume of potable water from the bulk water supply.
- Tanks for potable water will be located at the concentrator plant, main office area and at each decline.
- A new STP would need to be developed for the processing of sewage.
- Provision is made in the capital expenditure to drill boreholes and extract water initially from aquifers to augment bulk water supply via wellfields. Drilling for ground water to augment the water supply is focused on the dolomites in the north and the Wonderkop Fault area to the south. It appears that a sustainable yield of 15 ℓ/sec is possible from work carried out to date. Ground water (wellfields water) will be pumped to a bulk storage reservoir with a capacity of 3 Mℓ. This reservoir will be located at the western end of the ridge north of the Concentrator Plant. Water will be fed into a reservoir, located at the Concentrator Plant. Wellfields water will be used solely by the Concentrator Plant. Should the wellfields water be insufficient to meet the demands of the Concentrator Plant, raw water will be used to top up the water usage requirement.

18.2 Tailings Storage Facilities

18.2.1 Ruighoek and East Pit

Tailings from the processing of ore mined at the Ruighoek and East Pit operations is deposited on the PPM TSF.

18.2.2 PSM and Kruidfontein

The PPM operation contains an existing 198 ha TSF and return water dam (RWD) complex that was commissioned in May 2009. The operation is located to the west of the existing process plant, immediately west of the Heritage Park Corridor that is approximately 2 km southeast of the Motlhade community.

The PPM TSF is underlain by low permeability soils consisting of Black Turf (Clay), Clayey Sands and Residual Pyroxenite, and the ground water is reported to be 22.5 m below natural ground level. The TSF site has a natural slope of approximately 1(v):90(h) that drains in a west-north-westerly direction and it is reported that there are no perennial streams in close proximity to the TSF.

Following the integration of the PPM, Magazynskraal and Sedibelo properties, two additional TSF sites were identified as a result of historic PFS and FS studies, viz. the proposed Sedibelo TSF and Magazynskraal TSF (refer Figure 2-2).

The proposed Sedibelo TSF was designed as a full containment facility using waste rock, to be sourced from either the East or West Pits and is to be constructed in a downstream manner until the capacity of the rock embankments is exceeded, at which point it will convert to an upstream self-raising facility. Planning and construction of the TSF would need to be undertaken as part of the overall mine planning, to ensure that adequate quantities of rock are available. The containment walls of the Sedibelo TSF are proposed for development of three lifts of 10 m, followed by a final lift of 5 m, equating to approximately 19.7 Mm^3 of waste rock required over a 26.5 year period. The proposed depositional footprint would be approximately 150 ha. Should sufficient waste rock not be available from the open pits, the design and construction methodology would have to be revised.

The proposed Magazynskraal TSF was designed as an up-stream self-raising facility with limited starter embankments.

Based on available information, SRK does not believe the design of the proposed Sedibelo and Magazynskraal TSFs has been done to ensure adherence to all relevant GISTM requirements. Further studies will thus be required to satisfy these requirements in order to allow for Stage-Gate approvals to be given with respect to future TSF design studies.

Geotechnical investigation of the selected TSF sites will be required to confirm the nature of the underlying strata as part of the detailed design of the facility.

Current PPM TSF Infrastructure

The PPM TSF and associated RWD complex consists of the following infrastructure:

- Operates as three separate compartments, identified as eastern, western and central;
- The eastern and western containment walls are at design elevations with geofabric linings on the inner faces;
- The decant system consists of a single gravity penstock pipeline with six sealed single intermediate inlets along the pipeline and two operational double intakes. The TSF is now being operated with a pool wall and wing walls. Access to the decant structures is via an incrementally raised wooden catwalk structure. As the pool wall is constructed using waste rock, vehicle access along the majority of the pool wall is possible;
- The western compartment is equipped with barge-mounted electrically-operated return water pumps and associated rising main into the central compartment;
- The return water complex consists of a double compartment high-density polyethylene (HDPE) lined silt trap, a single compartment HDPE lined RWD and an unlined dirty stormwater containment dam. The silt trap's overflow cascades into the RWD and then into the dirty stormwater containment dam; and
- The return water pump station complex is located within a bunded area immediately downstream of the dirty stormwater containment dam.

PPM TSF Documentation

A review of the quarterly reports for the PPM TSF during 2023 indicated the following:

- The TSF site is enclosed with a security fence, and access control is satisfactory;
- The reported freeboard of the main TSF and western paddock are within the GNR704 specified limits of >1.60 m and >1.30 m respectively;
- The storm water control dam (SWCD) is overgrown with reeds and full of stormwater. The contractor was required to construct an access platform to remove the vegetation and pump the water back to the plant before the onset of the rainy season;
- Desilting of the silt trap and RWD complexes is underway for completion by mid-2024;
- Rehabilitation of southern and northern embankments had not yet commenced;
- The access road on the western paddock bench had to be repaired before the end of January 2024;
- Erosion gulleys on the main compartment embankment had to be repaired before the end of January 2024;
- Shaping of the western paddock self-raising section had to be shaped to 1V:3H by the end of December 2023;

The above are consistent with SRK's findings from previous site inspections of the TSF in February 2020 and March 2021.

There is evidence of overflow from the lined RWD into the unlined SWCD. This is due to silt build-up in the silt traps and RWD, which reduces their capacity. The finer solids in the tailings slurry settle out of solution slowly (due to the fine grind and likely presence of colloidal solids). As such, some of the solids do not settle out on the TSF and carry over into the RWD. SRL has embarked on a process water clarification optimisation project, to ensure better separation of the solids from the tailings slurry.

Observations from a physical site inspection of the TSF, silt trap and RWD complexes conducted on 9 March 2021 included the following:

- Deposition into the combined eastern/central and independent western compartments is practised via multiple spigots. Supernatant water in the combined eastern/central compartment gravitates directly to the central penstock decants, while the western compartments supernatant water gravitates towards the barge mounted return water pumps before being returned into the central compartment's basin and gravitates to the central penstock decants;
- The majority of the TSF perimeter contains well-formed outer catchment paddocks consisting of multiple individual paddocks and/or a single larger paddock/s;
- Although the operational pool is large, the decanted water observed at the penstock pipeline outfall still contains suspended tailings solids. The decant water suspended tailings solids concentration is partly due to the fine grind and increases during periods when the concentrator plant processes DMS floats;
- Desilting of the silt trap and RWD complexes had recommenced. The 2023 quarterly reports showed this was still underway;
- The HDPE lined RWD and unlined naturally dirty stormwater dam walls visually appear in good condition and the emergency spillway is free of debris and also in good condition;
- The return water pump station bunded area was waterlogged due to a leaking return water pump/s. Although this bunded area contains an earth lined outlet into which the excess water could flow off the property, no flow was observed. However, during high rainfall events, dirty water could exit the property into neighbouring downstream environs, potentially causing pollution; The eastern and western compartments' waste rock containment walls are reported as stable and well-shaped and the central compartment self-raised tailings walls are reported and observed as stable and well-formed; however, the northern downstream side slope contains a network of minor erosion gullies;
- Seepage was observed along portions of the eastern compartments waste rock containment wall. This seepage water is being contained within the northern outer paddocks and returned into the eastern compartment via a mobile pump and rising main pipeline;
- The 2016 stability assessments reviewed, report that the current factor of safety (FoS) for the waste rock containment wall and the self-raised tailings walls vary from 2.44 to 1.49 for final elevations of 1 120 mamsl and 1 150 mamsl, respectively, which meet the recommended FoS of 1.30 and the more stringent 1.50 FoS; the RWD was significantly silted up. In addition to this, it was observed that the decant from the tailings dam was milky as it contains ultra-fines and is indicative of tailings still being present in the decant. The mine is currently in 'abnormal' operational conditions with the filling of the western and eastern paddock as there is not enough storage space in these compartments to ensure complete settlement of solids before water is decanted; and
- The pump station associated with the tailings dam was flooded and there is a risk that tails are being discharged to the natural environment. It was evident that one of the pumps was not operating efficiently as it was vibrating and emitting significant noise.

Risks Posed by Current PSM TSF

The following risks have been identified by SRK during the 2020 and 2021 site visits and on-site discussions, and determined through the review of provided reports and other pertinent documentation:

- a third-party contractor operates the TSF on behalf of the Mine without a formalised works contract being signed;

- Continued tailings overflow into the unlined dirty stormwater containment dam;
- Dirty surface water, due to leaking return water pumps, exiting the property downstream of the return water complex could attract potential reputational risk;
- Continued decanting of tailings, possibly containing colloidal silica, into and/or through the silt trap and into the return water complex increases risk to the metallurgical plant as these suspended solids could become concentrated throughout the tailings circuit with time via returned water high in suspended/colloidal solids;
- Installation of an emergency spillway to the western compartment will reduce the risk of overtopping this compartment during a major storm event/s;
- The large volumes of waste rock being deposited into the central compartment's basin, for vehicle access along the Pool Wall, may adversely affect the long-term tailings storage;
- One historical risk that the Mine faces is the WUL, issued on 10 October 2013, that only permits the Mine to dispose of 3.18 Mtpa of tailings in the TSF;
- Capacity for tailings disposal is a concern. Expansion of the current facility westwards (downstream development) is likely to be constrained by objections from the nearby Motlabi community; and
- The facility is not being operated to full compliance with the GISTM requirements.

To minimise/mitigate operational risks, the following should be considered/actioned by the Mine:

- Formalise the contract with the third-party;
- Installation of a rising spillway to the western compartment;
- As planned, fast track the study to determine the cause of high concentrations of suspended solids/colloids in the decanted/return water. Should the high concentration of suspended/colloidal solids be ascribed to the near equal proportional tailings split between the Merensky and UG2 resulting in higher levels of suspended/colloidal solids levels, this may challenge the effectiveness of a new or extended silt trap complex;
- Ensuring the disposal restriction of 3.18 Mtpa of tailings in the TSF (as per the WUL) is amended should higher annual deposition tonnages be considered;
- Appropriate selection of future tailings disposal facilities, if required, taking water crossings for pipelines and/ or conveyor belts into consideration;
- In addition to desilting the silt traps and RWD, SRL is planning to increase the size of the silt traps to allow for better solids handling capacity. Capex is included in the SIB allowances;
- In order to find a solution to the high suspended/colloidal solids in the return water dam (and subsequently in the recycled process water), SRL has embarked on a process water clarification optimisation project to improve separation of solids from the tailings slurry. Capex is included in SRL's SIB allowances; and
- A review and update of current operating procedures will need to be undertaken to ensure that all pertinent GISTM requirements are included within the management and operational undertakings of the current TSF.

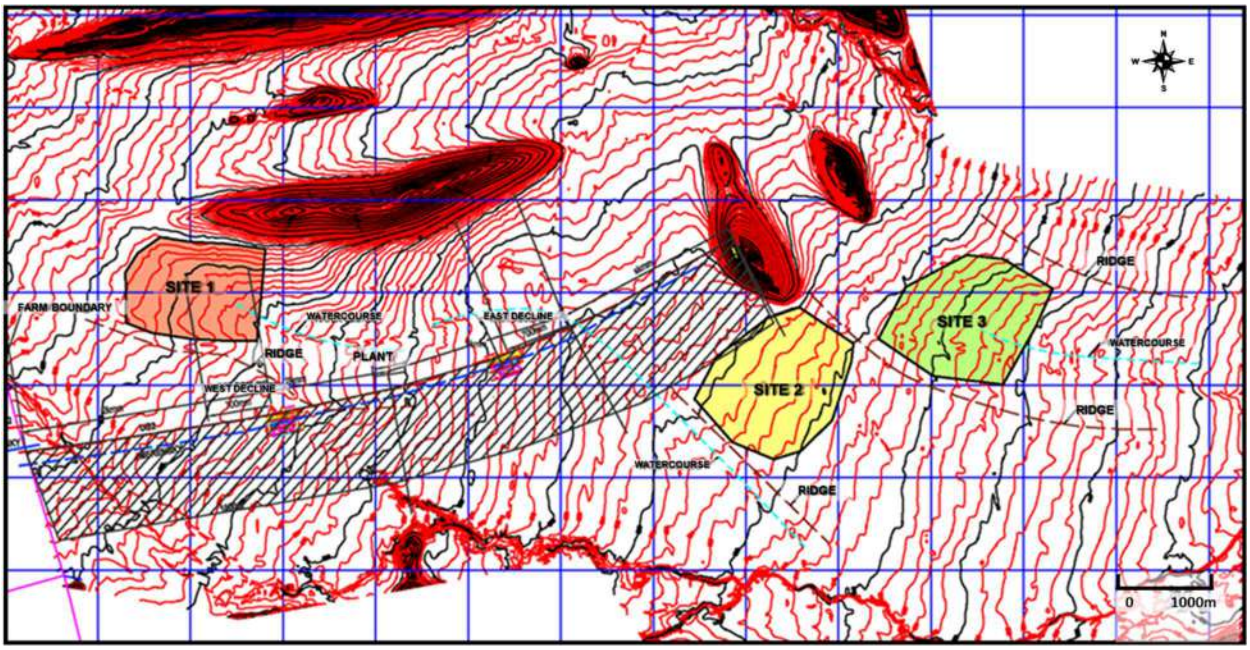
18.2.3 Mphahlele

The selection of the preferred site for the development of the TSF was based on the candidate sites identified during the 2009 FS (top of Figure 18-1). The TSF was moved from its original position (Site 1) per the 2009 FS, to be located away from any potential artisanal mining along the LG and/or MG chromitite reefs north of the UG2. While Site 2 and Site 3 are similar in many respects, Site 2 was selected as the preferred option for development as being closer to the proposed mining and processing operations (refer to Figure 18-1).

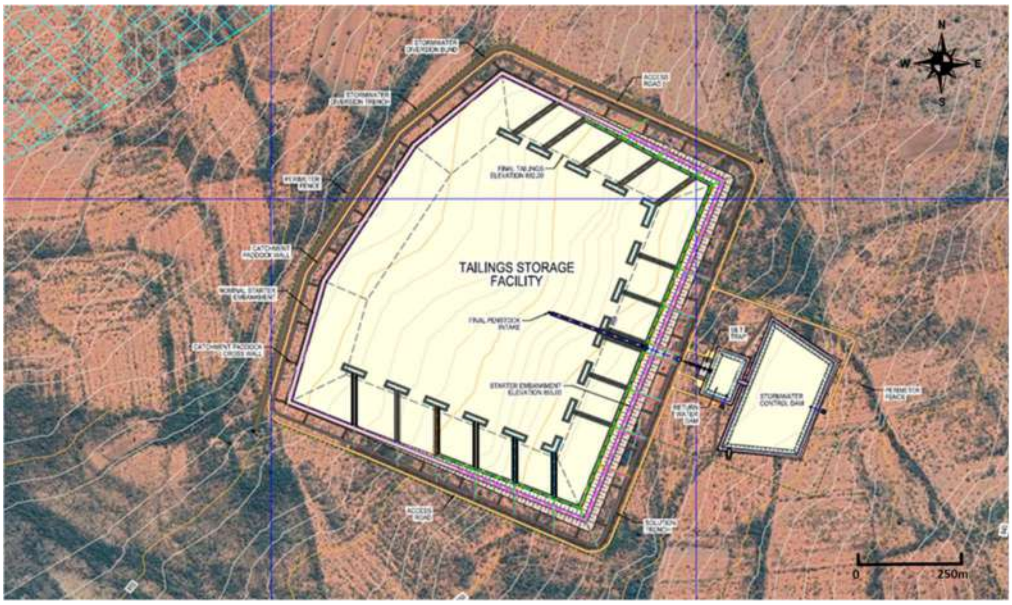
In terms of the NEM:WA regulations, the tailings would be classified as a Type 3 waste and would require disposal to a site protected by a Class C containment barrier system, comprising a geosynthetic clay liner and 1.5 mm HDPE liner on the footprint and inside slopes of the TSF, the RWD and the associated stormwater control dam. The geotechnical characteristics of the tailings are expected to be equivalent to those of similar PGM tailings products, being relatively fine with >80% by mass passing the 75 µm screen.

In terms of the 2020 FS, the TSF was designed to store 24.8 Mt of tailings over a LoM of 20 years (bottom of Figure 18-1). With the changed mine plan considered in this TR, involving production of MR and UG2 ores down to ~1 500 mbs, the footprint ot the TSF as shown will have to be enlarged. SRL advised that the Capex allowed for in the PEA is for a TSF with capacity of some 84 Mt, using the costings of the 2009 FS and escalated to the effective date of this TR.

Based on the expected zone of influence and the requirements of the SABS CoP for Mine Residue Deposits (SABS 0286:1998), the TSF has been classified as a High Hazard based on its proximity to the Chunies River to the south. Seepage from the tailings is not expected to generate Acid Mine Drainage, although it is possible that seepage and storm water runoff may contain contaminants (dissolved salts) at levels that may affect the use of the water by downstream users. All surface runoff will therefore be contained, and measures will be incorporated into the construction of the TSF to limit migration of seepage beyond the footprint of the facility.



Candidate Sites for TSF per 2009 FS



TSF Layout per 2020 FS

srk consulting	**SRL Total Asset PEA** Candidate TSF Sites per 2009 FS (top) and TSF Layout per 2020 FS (bottom) [source: SRK, 2022]	Project No. 600322

Figure 18-1: Candidate TSF Sites per 2009 FS (top) and TSF Layout per 2020 FS (bottom)

Water from the return water sump and storm water control dam will be pumped back to the plant. It is estimated that 50% of the slurry water deposited on the TSF will be returned to the plant.

Geotechnical investigation of the selected TSF site, including test pitting and drilling, will be required to confirm the nature of the underlying strata as part of the detailed design of the facility.

Based on data made available, SRK does not believe that the facility has been designed to ensure full compliance with the GISTM requirements. Further studies, such as brittle failure analyses and depositional strategies pertaining to the construction of the facility, will need to be undertaken prior to, or as part of, the FS phase of the TSF design to ensure that all GISTM requirements relevant to the design of such facilities are met.

18.2.4 Conclusions

PPM TSF

Operations of the PPM TSF are undertaken by Enviroserv, and operations are being monitored jointly by Enviroserv as well as the Mine's operators and management. Daily inspections are performed, on-going and regular surveys are conducted, and monthly and annual reporting is completed and distributed to the relevant parties and Regulating Authorities. Quarterly inspections of the whole TSF complex are conducted in terms of the operational requirements. To demonstrate competency during the previous year, an independent third-party review was also undertaken of the TSF complex.

From the above stated observations, it can be concluded that the tailings disposal operations are being conducted in a responsible manner by suitably experienced contractors and mine personnel. To improve the current operations, the risks listed above need to be considered.

Sedibelo and Magazynskraal TSFs

Further studies will be required so that the designs of the proposed TSFs are done to GISTM requirements.

Mphahlele TSF

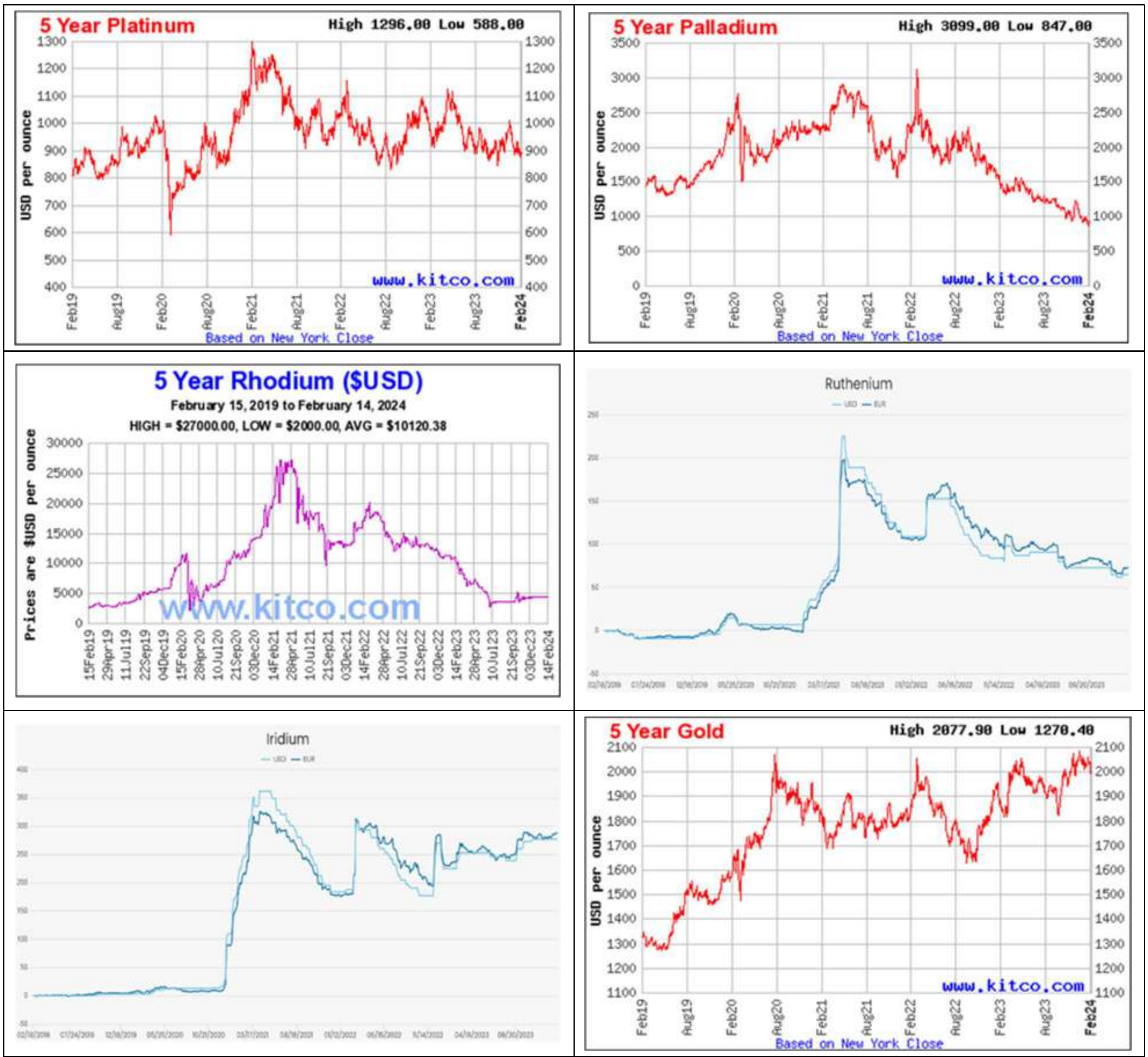
Further studies will be required so that the design of the proposed TSF is done to GISTM requirements.

Geotechnical investigation of the selected TSF site will be required to confirm the nature of the underlying strata as part of the detailed design of the facility.

19 Market Studies and Contracts

19.1 Historical Prices

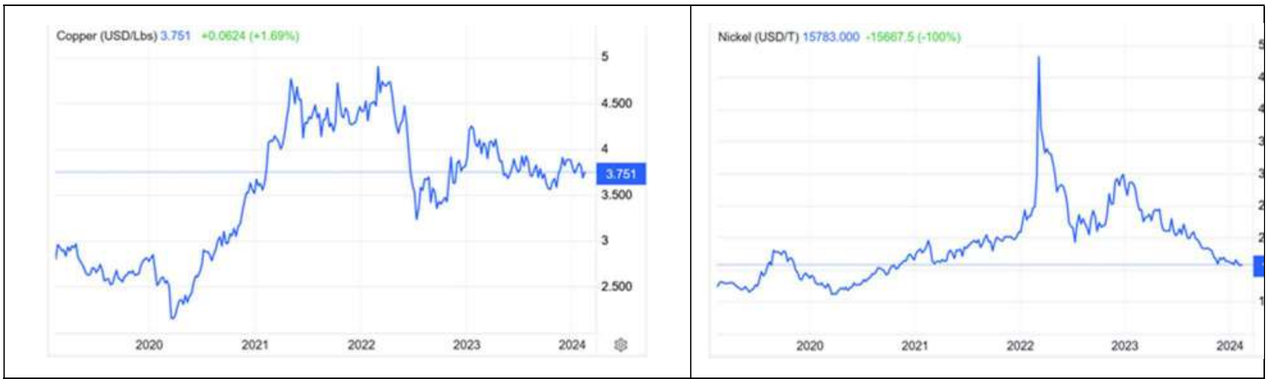
Five-year historical price graphs for the 6E PGMs and base metals (Cu and Ni) are set out in Figure 19-1 and Figure 19-2, respectively.



	SRL Total Assets PEA Five-year Historical Price Graphs for 6E PGMs [source: www.kitco.com, www.strategicmetalsinvest.com]	Project No. 600322

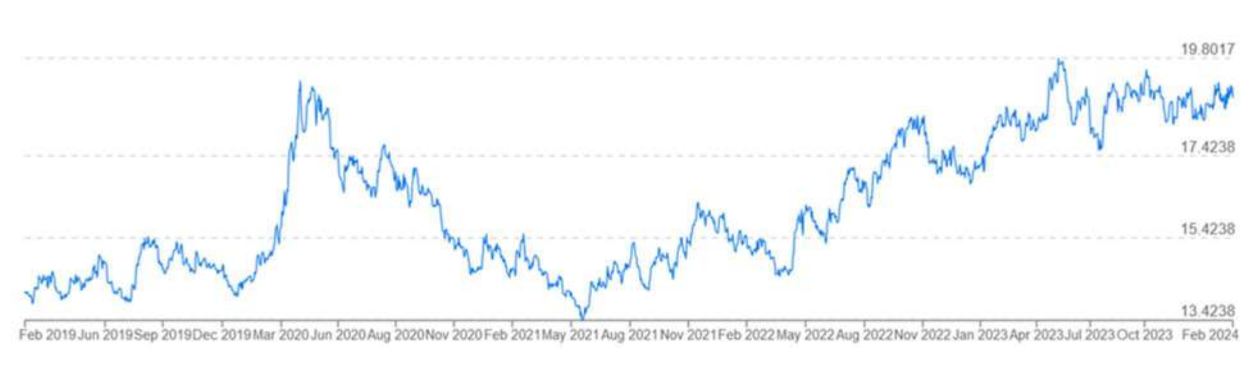
Figure 19-1: Five-year Historical Price Graphs for 6E PGMs

For the South African context, the exchange rate between the USD and South African Rand (ZAR) is important as all USD-based metal prices are converted to SA Rands at the ruling ZAR:USD exchange rate. The historical ZAR:USD exchange rate for the past five years is shown in Figure 19-3.



srk consulting	**SRL Total Assets PEA** Five-year Historical Prices for Cu (left) and Ni (right) [source: www.tradingeconomics.com]	Project No. 600322

Figure 19-2: Five-year Historical Prices for Cu and Ni



srk consulting	**SRL Total Assets PEA** Five-year Historical ZAR:USD Exchange Rate [source: www.xe.com]	Project No. 600322

Figure 19-3: Five-year Historical ZAR:USD Exchange Rate

19.2 Uses for Metals Produced

The primary uses for the PGMs and base metals that would be produced from SRL's Assets are listed below:

- Pt – catalytic converters, laboratory equipment, electrical contacts and electrodes, platinum resistance thermometers, dentistry equipment, and jewellery;
- Pd – primarily in catalytic converters, also used in jewellery, dentistry, watch making, blood sugar test strips, aircraft spark plugs, surgical instruments, and electrical contacts;
- Rh – primarily in catalytic converters for cars (80%), also used as catalysts in the chemical industry, for making nitric acid, acetic acid and hydrogenation reactions;
- Au – jewellery (78%), finances, electronics and computers, dentistry and medicine, aerospace and medals/awards;
- Ir – the most corrosion-resistant material known and used in special alloys with Pt and Os, for pen tips and compass bearings, and contacts in spark plugs, as well as growing demand in aerospace, electronics, medical sectors and sustainable energy solutions like green hydrogen production;
- Ru – chip resistors and electrical contacts (electronics industry), anodes of electrochemical cells for chlorine production (chemical industry) and in catalysts for ammonia and acetic acid production, increasing demand in solar and other green technologies as well as in next-generation electronics, such as quantum computing and advanced memory storage;
- Ni – mainly for production of ferronickel for stainless steel, rechargeable nickel-cadmium batteries and nickel metal hydride batteries, and some other uses, such as kitchen wares, mobile phones, medical equipment, transport and power generation; and

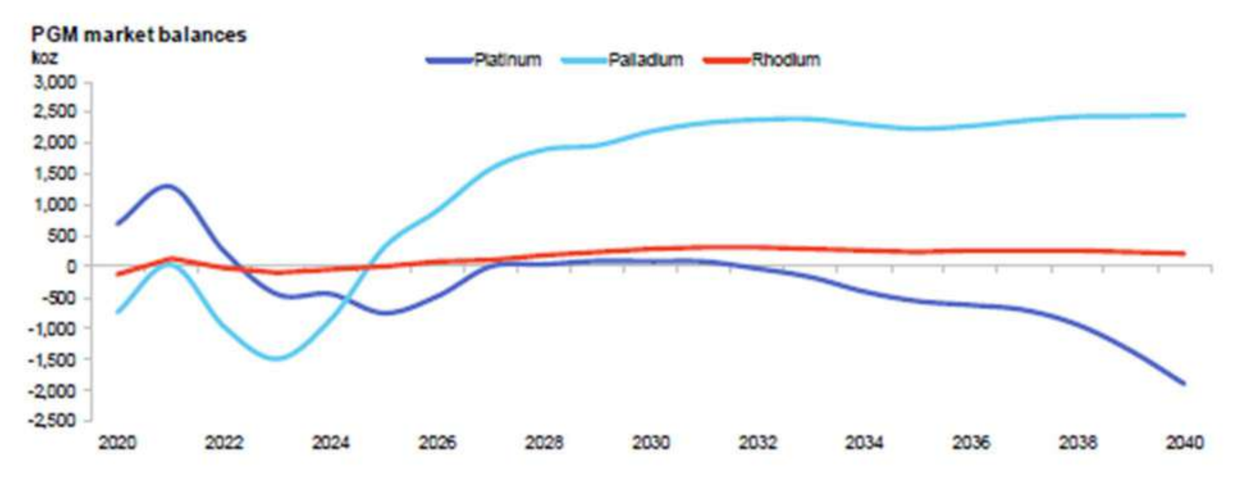
- Cu - primary applications are in electrical wiring, construction (roofing and plumbing), and industrial machinery (e.g., heat exchangers).

19.3 Market – Supply and Demand

SRL provided a market review by SFA (SFA, 2023), with key elements of SFA's views on market supply/demand dynamics summarised below.

SFA (2023) forecasts the Pt market to remain in deficit in the next few years, but shift to balanced or slight surpluses from 2027 to 2031 (Figure 19-4). SFA (2023) forecasts secondary Pt supply to level off from 2027, but automotive demand declines faster than mine depletion cuts primary supply. In the 2030s, a combination of hydrogen and industrial demand growth and mine depletion moves the market into increasingly large deficits which should lift the price and incentivise further production (although this will come with additional Pd and Rh which may not be needed).

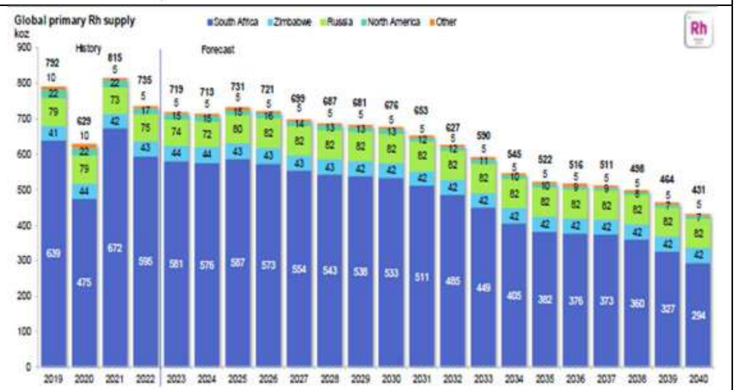
SFA (2023) forecasts that the Pd and Rh markets move into structural surplus owing to growth in secondary supply from autocatalyst recycling and a tailing off in automotive demand, as battery-electric vehicles (BEV) market share gains erode internal combustion engine (ICE) vehicle production and PGM demand (Figure 19-4).



srk consulting	**SRL Total Assets PEA** PGM Market Balance [source: SFA, 2023]	Project No. 600322

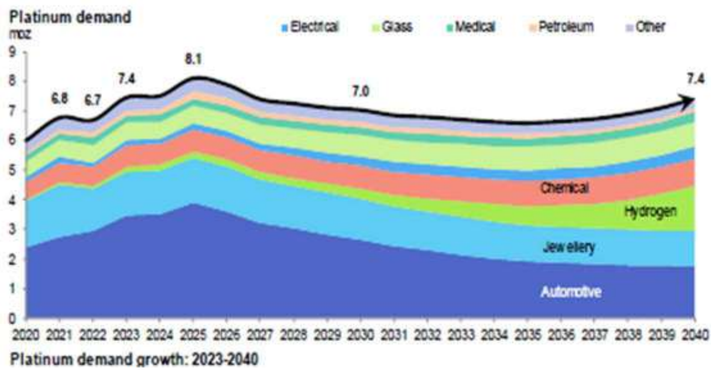
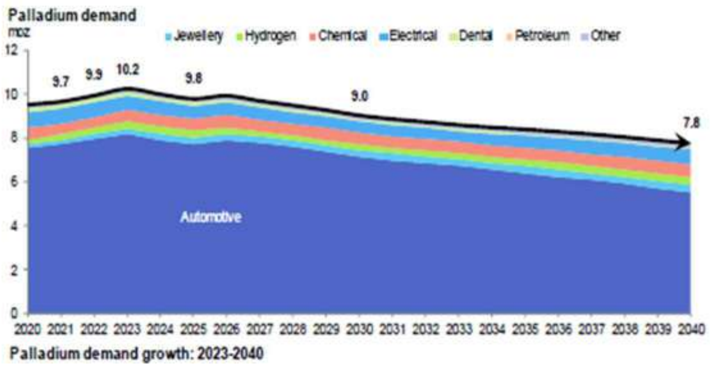
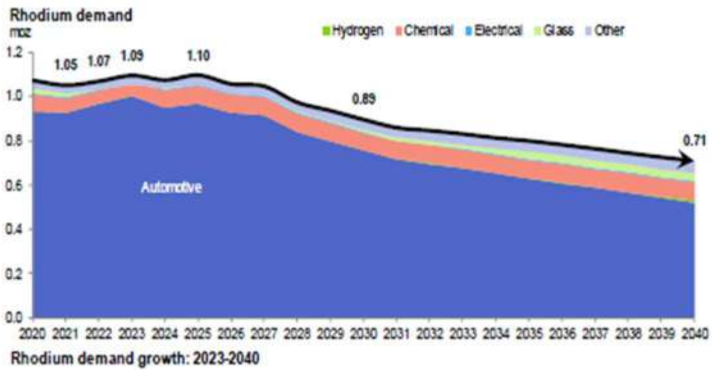
Figure 19-4: PGM Market Balance

The key contributors to SFA's views regarding supply and demand for Pt, Pd and Rh are summarised in Figure 19-5 and Figure 19-6, respectively (SFA, 2023).

Specific Comments related to Supply Outlook	Supply outlook
Platinum: **Global primary Pt production is forecast to decline by 2.5% CAGR between 2023 and 2040**, reducing at a rate of 116 koz p.a. to 3.6 Moz by 2040. Global Pt supply is predicted to peak at 5.7 Moz in 2025. Until 2030, output is expected to slip by only 0.9% CAGR (-46 koz p.a.) to 5.2 Moz as replacement and growth projects slightly offset reserve depletion in South Africa. Beyond 2030, Pt supply is predicted to reduce by 3.7% CAGR (-165 koz p.a.) out to 3.6 Moz by 2040. Significant reserve depletion on the Western Limb in South Africa takes hold from mature, deep mining operations reaching end of life, with replacement options requiring significantly higher prices to be motivated owing to the high capital cost of sinking new deep-level shafts.	
Palladium: **Global Pd production is forecast to reduce by 0.9% CAGR (-53 koz p.a.) between 2023 and 2040 to 5.4 Moz**, although with the rebound in Russian output following the smelter rebuild global palladium supply peaks in 2027. Global Pd supply is expected to decline by -1.6% CAGR (-94 koz p.a.) during the 2030s to 5.4 Moz in 2040. A production recovery at Nornickel back to historical levels above 2.8 Moz, combined with growth from the Blitz project at Stillwater, sees global Pd output grow in the near term, albeit slightly offset by the closure of Impala Canada in 2028. Beyond 2030, significant reserve depletion in South Africa, combined with depletion at Stillwater, results in a declining Pd production profile globally	
Rhodium: **Global Rh supply is forecast to decline by 3.0% CAGR (-17 koz p.a.) between 2023 and 2040 to 431 koz**, a decline of 288 koz from 2023's level. Between 2023 and 2030, output is predicted to decline by 0.9% CAGR (-6 koz p.a.), but beyond 2030 reserve depletion in South Africa hits production from mature Western Limb mines which account for a significant proportion of global supply. Consequently, Rh output is forecast to reduce by 4.4% CAGR (-25 koz p.a.) between 2030 and 2040. However, beyond 2030 new and replacement production in South Africa (Pt-rich) may be incentivised. The UG2 orebody is rich in Ru and Ir (important metals for the hydrogen economy), and it also carries the highest proportion of Rh.	

srk consulting	**SRL Total Assets PEA** SFA's Pt, Pd and Rh Supply Outlook [source: SFA, 2023]	Project No. 600322

Figure 19-5: SFA's Pt, Pd and Rh Supply Outlook

Specific Comments related to Demand Outlook	Demand outlook
Platinum: • **Global Pt demand is forecast to rise by 13% to 7.4 Moz in 2023**, supported by growth in automotive and industrial demand. In 2024, Pt demand is projected to rise by 1% to 7.7 Moz. • Pt consumption is predicted to peak in 2025 at 8.1 Moz as automotive demand peaks at 3.9 Moz. Thereafter, reverse substitution of Pd for Pt in gasoline autocatalysts is anticipated and ICE vehicles lose share to BEVs. • **Chemical demand grows by 1% p.a.** to 920 koz in 2040. • **Electrical usage more than doubles** to 395 koz in 2040. • **Glass demand rises steadily** as capacity expands, taking it to 855 koz in 2040. • **Petroleum usage trends** lower through the late 2020s and 2030s. • **Hydrogen demand is mostly driven by FCEVs** whose use is predicted to expand rapidly in the 2030s.	
Palladium: • **Global Pd demand in 2023 is forecast to rise by 3% to 10.2 Moz,** which is expected to be its high point. • **In 2023, automotive demand is forecast to climb to 8.2 Moz,** but then slip below 8.0 Moz in 2024. After 2025, reverse substitution to Pd, with Pt use in gasoline autocatalysts being reduced, is anticipated but the decline in ICE market share results in an overall declining trend in Pd use. • **Chemical palladium demand is forecast to increase in the next few years,** and then stabilise around 530 koz in the longer term. • **Dental requirements** are expected to remain in decline due to increasing price-led substitution to alternative materials. • **Electrical demand is predicted to slip further during the 2020s** but increase in the 2030s, as the price is below the gold price, leading to some higher use in plating.	
Rhodium: • **Global Rh demand is forecast to peak at 1.1 Moz in 2025** as light-vehicle production holds up and industrial demand rises modestly. • **Automotive Rh demand in 2023 is set to climb to just over 1.0 Moz** as light-vehicle production improves. • However, with ICE vehicles losing share to BEVs and little remaining upside from tightening emissions legislation, automotive demand is predicted to fall by 4% CAGR to 520 koz in 2040. • **From 2024 onwards, a gradual recovery in glass demand is expected** as the Pt-Rh price ratio nears the 4:1 adoption zone. Glass capacity is projected to continue to expand and as the Pt price rises, a return to higher Rh loadings is anticipated. • **Chemical demand for Rh is predicted to expand modestly**, reaching 84 koz in 2040.	

srk consulting	**SRL Total Assets PEA** SFA's Pt, Pd and Rh Demand Outlook [source: SFA, 2023]	Project No. 600322

Figure 19-6: SFA's Pt, Pd and Rh Demand Outlook

SFA (2023) forecasts secondary PGM supply through recycling to rise by 75% by 2030 (Figure 19-7), which will impact on primary supply.

SFA's forecast of net total cash costs including SIB per 4E oz in 2024 shows that higher cost production is loss making at current prices (SFA, 2023). Cost cutting exercises and shaft or mine closures may follow if Pd and Rh prices retreat further (Figure 19-8).

PGM recycling is forecast to increase from just over 4 Moz in 2023 to exceed 7 Moz in 2029.

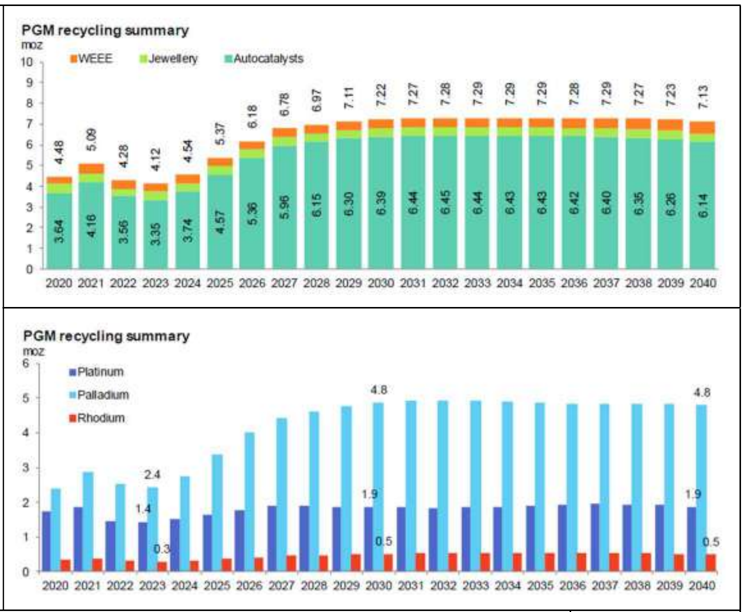
Growth in autocatalyst recycling is the main driver as more light vehicles reach the end of their lives and more of those vehicles will have higher PGM loadings on their catalytic converters.

Pd recycling is predicted to rise sharply over the next five years as a result.

The peak in Chinese light-vehicle production in 2017 followed by the rise of BEV market share means that the number of scrapped vehicles could flatten off in the 2030s.

Pt recycling is projected to remain relatively flat in the 2030s.

Recycled Rh comes almost entirely from autocatalysts which shows some growth until the early 2030s.



srk consulting	**SRL Total Assets PEA** SFA's Secondary PGM Supply (through recycling) [source: SFA, 2023]	Project No. 600322

Figure 19-7: SFA's Secondary PGM Supply (through recycling)

At current PGM prices, mines in the fourth quartile are loss-making.

High-cost producers will look to cut stay-in-business (SIB) capital spending and reduce overheads where possible.

Some high-cost areas of multi-shaft operations could now be loss-making before SIB expenditure.

Producers might implement harvesting strategies at high-cost, short-life shafts which have been kept open due to high basket prices.

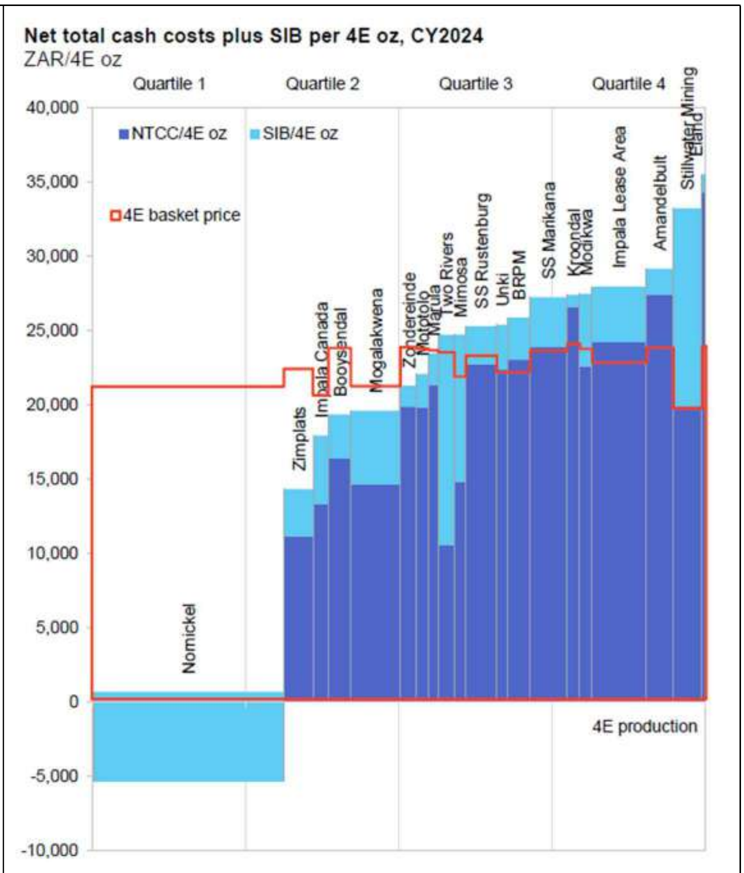
Potentially, more than 50% of the industry could be loss-making after SIB expenditure in 2024 if Pd and Rh prices fall further.

Most at risk in South Africa is likely to be Eland, followed by Amandelbult.

In North America, Stillwater's costs have been elevated following the flooding and shaft damage incidents, compounded by recruitment difficulties and general inflation. Further rationalisation of output is possible.

It is likely that closures may come very quickly at Stillwater and Impala Canada once palladium prices slip below USD1 000/oz, with little prospect of prices improving long term as automotive demand stagnates and recycling ramps up.

Platinum prices are forecast to pick up slightly in 2025, providing a boost to South African producers, but many will still be loss-making after SIB expenditure if palladium and rhodium prices continue to fall as anticipated.



srk consulting	**SRL Total Assets PEA** SFA's Forecast Net Total Cash Cost plus SIB in 2024, showing Loss-making Mines [source: SFA, 2023]	Project No. 600322

Figure 19-8: SFA's Forecast Net Total Cash Cost plus SIB in 2024, showing Loss-making Mines

19.4 Agency Relationships, Commodity Price Projections

19.4.1 Agency Relationships

SRL holds a non-exclusive licence to use the Kell process and technologies and to construct and operate plants using the Kelltechnology at SRL's mines in South Africa conducting the beneficiation of PGMs.

The finished products from the Kell process are sponge (Pt, Pd, Rh and Au) for sale to end users, an Ir/Ru bearing concentrate that requires further refining and Ni and Cu as cathodes.

19.4.2 Three-year Trailing Average and Spot Prices

The three-year trailing average and spot values at 31 December 2023 for the 6E PGMs, Cu, Ni and ZAR:USD exchange rate are given in Table 19-1.

SRK has used the three-trailing average and spot values as comparative price decks in the economic analysis discussed in Section 22.

Table 19-1: Three-year Trailing Average and Spot Values (at 31 December 2023

Item	Units	Three-Year Trailing Average	Spot
Pt	(USD/oz)	1 006	1 006
Pd	(USD/oz)	1 949	1 119
Rh	(USD/oz)	14 062	4 425
Ru	(USD/oz)	527	450
Ir	(USD/oz)	4 740	5 000
Au	(USD/oz)	1 847	2 062
Ni	(USD/t)	22 092	16 603
Cu	(USD/t)	8 869	8 559
ZAR:USD	(ZAR)	16.55	18.5826

19.4.3 SFA Price / Fx and Consensus Projections

SFA's price forecasts for Pt, Pd and Rh are premised on a number of considerations and scenario assessments, which are summarised below. From its scenarios, SFA (2023) concluded that the Pt price will need to rise in the long term to incentivise production.

The "scenario price outlook" as selected by the Company yields the forecast Pt, Pd and Rh prices in Table 19-2, which consider the following factors:

- The Pt market remains in large deficit in the 2020s which rapidly draws down available stocks. The price rises to incentivise additional production by 2030 and dampen demand. Without the help of rising Rh or Pd prices, the markets of which are both in surplus, that results in a significant increase for the Pt price.
- Demand side adjustments would occur in response to the rising Pt price which would tend to bring the market back to balance in combination with increased production – more substitution of Pt out of autocatalysts and replaced with Pd, even lower Pt jewellery demand, and thrifting or substitution in industrial end-uses.
- An escalating cost base requires a much higher Pt price to carry the basket with subdued Pd and Rh prices.
- The additional production then results in more subdued prices, but by the mid-2030s the Pt price needs to climb further to incentivise more production as the deficits widen again. Further increases in costs and only a modest contribution to the basket price from Pd and Rh mean that an even higher Pt price is needed to incentivise new production.
- An offsetting factor could be the SA Rand. The Rand is forecast to weaken, but the forecast rate of depreciation is much slower than seen historically. If the Rand were to depreciate more rapidly, that would reduce the Pt price necessary to incentivise new production.

Forecast prices for Au, Ni and Cu are taken from the consensus view of analysts' forecasts provided by the Company (SRL, 2024b). No forecasts are available for Ir and Ru. Projected Ir and Ru prices use the spot values at 31 December 2023 as base which are then factored by the relative change in the forecast Pt price.

Table 19-2: SFA Price Deck - Real Terms (SFA, 2023; SRL, 2024)

Item	Basis	Units	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Pt	SFA	(USD/oz)	1 023	1 440	1 645	1 846	2 268	2 667	3 921	2 989	2 511	2 665	2 812
Pd	SFA	(USD/oz)	1 170	960	775	692	635	533	436	436	435	435	434
Rh	SFA	(USD/oz)	4 873	4 559	4 229	3 923	3 720	3 557	3 573	3 587	3 599	3 608	3 616
Ru	Factored from Pt	(USD/oz)	492	693	791	888	1 091	1 283	1 887	1 438	1 208	1 282	1 353
Ir	Factored from Pt	(USD/oz)	4 960	6 982	7 977	8 951	10 997	12 932	19 013	14 494	12 176	12 922	13 635
Au	Consensus	(USD/oz)	1 950	1 888	1 850	1 813	1 600	1 600	1 600	1 600	1 600	1 600	1 600
Ni	Consensus	(USD/t)	18 596	19 235	19 004	19 491	17 904	17 904	17 904	17 904	17 904	17 904	17 904
Cu	Consensus	(USD/t)	8 576	9 072	9 435	9 392	8 180	8 180	8 180	8 180	8 180	8 180	8 180
ZAR:USD	SFA	(ZAR)	17.99	18.03	18.04	18.10	18.14	18.09	18.09	18.28	18.46	18.60	18.74

Item	Basis	Units	2035	2036	2037	2038	2039	2040 / LT
Pt	SFA	(USD/oz)	2 953	3 087	3 403	3 855	4 178	4 987
Pd	SFA	(USD/oz)	433	463	492	519	545	570
Rh	SFA	(USD/oz)	3 622	3 627	3 630	3 632	3 633	3 918
Ru	Factored from Pt	(USD/oz)	1 421	1 485	1 637	1 855	2 010	2 399
Ir	Factored from Pt	(USD/oz)	14 319	14 969	16 501	18 693	20 259	24 182
Au	Consensus	(USD/oz)	1 600	1 600	1 600	1 600	1 600	1 600
Ni	Consensus	(USD/t)	17 904	17 904	17 904	17 904	17 904	17 904
Cu	Consensus	(USD/t)	8 180	8 180	8 180	8 180	8 180	8 180
ZAR:USD	SFA	(ZAR)	18.89	19.04	19.18	19.33	19.49	19.65

Note:
1. SFA refers to SFA’s PGM outlook and exchange rate forecasts to 2040.
2. Consensus price forecasts at December 2023 were supplied by JP Morgan to SRL.
3. Projected values for Ir and Ru for 2024 onwards are factored by the year on year change in the Pt price, using December 2023 spot values as the base.

19.4.4 SRK

19.4.5 Comments on Projected Ir Price

The mechanistic factoring of the Ir price to year-on-year changes in the forecast Pt price results in an Ir price of USD24 182/oz in 2040, taken as the LT price. This forecast price is much higher than any of the other PGM prices, which SRK considers is optimistic. The impact of this increased price is that the payable Ir contributes some 17% of the total LoM revenue. Peaks in the Pd and Rh prices in the past have not been sustained due to product substitution and thrifting.

SRL contends that this long-term price is justifiable, based on:

- The Ir price has increased by 600% over the last 10 years. If these changes are extrapolated, a similar price is obtained by 2040;
- Proton exchange membrane (PEM) electrolysers, which produce hydrogen from water and renewable energy, rely on Ir (Rinaldi, 2022). Rinaldi (2022) cites a 2021 report by Morgan Stanley in which installed electrolyser capacities are expected to increase from 0.6 GW (in 2020) to 150 GW (by 2030) and 1 400 GW (by 2050). State-of the-art PEM electrolysers require 0.5 t of Ir per GW of installed capacity. This meant a 500 times increase in Ir demand for PEM electrolysers in just eight years, without a matching increase in supply;
- For the production of green hydrogen, PEM electrolysis is the best technology and this requires Ir, at 400 kg/GW of capacity (Richter, 2023). Richter (2023) states that PEM electrolysers are best suited to handling the large power fluctuations from renewable energy and expects 70 GW of PEM electrolysers by 2030. This equates to a demand in 2030 of 32 t of Ir, compared to the 9 t currently produced.

Nevertheless, SRK believes that the Ir price projections are too high. SRK considers that the Pt-adjusted price of USD12 932/oz in 2029 should be used as the LT Ir price for evaluation purposes. The impact of this is discussed under the sensitivities in Section 22.3.

19.4.6 Chromite Price

The contract price for Cr_2O_3 concentrate is based on a fixed price relative to an index price, which is adjusted for upside price sharing and a penalty for out of specification material.

The price used for evaluation purposes is USD76.70/t, paid on an FOT basis at the mine gate.

19.5 Material Contracts

SRL implemented curtailment of extraction and processing operations at PPM, due to prevailing economic conditions, particularly the downturn in metal prices and inflationary cost pressures. In the process, SRL has declared *force majeure* and given notice to temporarily stop most of its contracts.

The discussion below provides high-level summaries of the key contracts (offtake and refining) and a tabulation of the status of other contracts.

19.5.1 Concentrate Refining/Smelting

Kell Contracts

SRL's investment in the Kell process technology is governed by a number of contracts, as summarised below. This is not a comprehensive discussion, but covers the salient features of the primary agreements.

- **Kelltech Limited (Kelltech) Shareholders Agreement** - The agreement was signed on 16 April 2014, with amendments up to June 2020. The issued share capital in Kelltech is held 50% by Orkid s.a.r.l. (Orkid, 100% held by SRL) and 50% by Lifezone Limited (Lifezone). This agreement sets out the terms by which funding, rights issues, loan funding or share transactions are to be handled. It also defines the dividend policy.
- **Kelltechnology SA (RF) Pty Ltd (KTSA) Shareholders Agreement**– this agreement amended in October 2020 sets out issued share capital which is held 33.33% by the IDC and 66.67% by Kelltech. KTSA is required *inter alia* to:
  - Promote, develop and implement the use of Kelltechnology within the Licensed Territory;
  - Procure the building and operating by Kellplant of the integrated processing plant that will use the Kelltechnology and produce platinum metal compounds (Plant); and

  - Procure the completion of a bankable feasibility study, the detailed funding plan for the Plant and detailed engineering study and submitting same to the KTSA board for approval.

- **Kellplant Pty Ltd (Kellplant) Licence Agreement** – this agreement amended in October 2020 grants Kellplant a non-exclusive licence to use the processes and technologies and to construct and operate a plant using the Kelltechnology at the site of a SRL group mine in South Africa conducting the beneficiation of PGMs. The principles embodied in the agreement are summarised below, due to confidentiality.

  The agreement envisaged the construction of a 110ktpa capacity plant at PPM, to be funded by SRL and Lifezone on a 50:50 basis. For purposes of the PEA, the capital cost to construct the Kell plant and associated infrastructure is funded solely by SRL. This allows SRL to construct four 55 ktpa modules at PPM and Mphahlele, without approval from Kelltech. It is then only the royalty conditions in the agreements that have relevance to the economic evaluation in this PEA.

  An average recovery is shown as the agreement provides for different recoveries for the various 6E metals (PGMs) and the base metals (Ni and Cu). The rates, payabilities and treatment charges in the Kell Agreement are generally in line with industry norms in South Africa.

  The finished products from the Kell process are >99.95% pure sponge (Pt, Pd, Rh and Au) for sale to end users, an Ir/Ru sulphide precipitate and Ni and Cu as >99.8% cathode sheets.

Impala Low-Grade Concentrate Refining/Smelting

SRL has a Treatment of Low-Grade Concentrate and Sale of Metals Agreement with Impala Platinum Ltd (Impala) which will cover treatment of the low-grade PGM concentrate tonnages produced for the LoM described in this report. The agreement provides for the treatment of PGM concentrates at an agreed 6E grade, up to a set maximum grade. The rates, payabilities and charges in the Impala Agreement are generally in line with industry norms in South Africa.

If the Cr_2O_3 content of the concentrate exceeds a defined percentage, Impala will impose a penalty of a set rate per tonne contained Cr_2O_3 in excess of this limit.

Smelting and refining charges are set at a fixed rate per dry tonne of concentrate processed. An additional charge is levied for each tonne of concentrate where the Ni plus Cu tenor exceeds a defined percentage.

Payment due to SRL for the metals recovered will be made in two tranches, one relative to the date of concentrate delivery, with the balance paid later, less any deductions or adjustments that Impala may levy.

Chromite Concentrate Off-Take Agreement

SRL signed a Buyer Purchase Contract with Noble Resources International Pte. Ltd. (Noble, now called Kalon Resources Pte. Ltd.) for the supply of UG2 chrome concentrate. Since approximately 25% of the contracted total has been supplied to Noble (Kalon) at the effective date of this TR, the contract will continue until the minimum contracted quantity has been supplied. SRL advised that it will go out to tender for a new offtake agreement once the contracted total has been delivered in full.

The chrome concentrate must conform to the standard specification for UG2 chrome concentrate containing 40.5% to 42.0% Cr_2O_3. Certain penalties will apply if the SiO_2, Al_2O_3, MgO, P or S contents in the concentrate exceed specified maximums.

The provisional price for the concentrate is determined on an ex-works 42% Cr2O3 basis (place of delivery) according to a formula which comprises a fixed price, an upside trigger and an upside sharing percentage. The fixed price is linked to an indexed price which is the average of the cost, insurance, and freight (CIF) China price for the relevant month.

A provisional payment of a percentage of the value of the product is made within seven business days of the provisional certificates, with the balance dependent on the product value per the final certificates less the provisional payment made.

The contract terms in the Chromite Agreement are generally in line with industry norms in South Africa.

19.5.2 Marketing/Sales of PGMs and Base Metal Products

SRL plans to market/sell the final PGM and base metal products itself.

SRK understands that SRL intends to set up a marketing division to handle the marketing and sales. Any contract/agreement for this would have to be finalised before the Kell plant is commissioned in 2027.

19.5.3 Mining Contracts

East Pit (including Ruighoek)

The open pit mining operations were conducted on a contract basis and several contractor companies were employed (Table 19-3). The companies were responsible for drilling, blasting, loading and hauling, environmental rehabilitation as well as road maintenance operations. SRL issued notices to terminate these contracts in late 2023, in line with its curtailment of extraction and processing operations due to prevailing economic conditions.

Table 19-3: Summary of Mining Contracts

Company	Services Supplied
Trollope Mining Services (2000) (Pty) Ltd	Load and haul contract All ore and waste for East Pit
Community-based contractor Equinox Engineering Solutions (Pty) Ltd, Matsinyane Mining and Projects (Pty) Ltd)	Load and haul contract of ore and waste for East Pit
E&M Tshwarango Joint Venture (Pty) Ltd	Drilling contract for East Pit.
Sedibelo Kgabo Mining (Pty) Ltd	This is a drilling contract
Bulk Mining Explosives (Pty) ltd	Delivery of explosives, consumables and associated accessories
Pro Blast PS (Pty) Ltd	Provide blasting material and services
KGL Transport & Konstruksie	Transport of Pt concentrate

SRK expects that once operations resume, these contracts would be renewed on generally the same terms as in place previously, covering items such as:

- The required deliverables are detailed;
- The roles and responsibilities are clearly assigned;
- The contracts take cognisance of PPM's safety, occupational hygiene and environmental management policies and strategy; and
- The contracts are conducive to and support a culture of performance.

SRK believes the contracts do not present any significant risk factors to the operations of the business. The rates and charges in the mining contracts are generally in line with industry norms in South Africa.

East Underground

Worley EPCM Contract

SRL signed an Engineering, Procurement and Construction Management (EPCM) agreement with Worley RSA (Pty) Ltd (Worley) for the implementation of the Sedibelo Underground Mine project. Worley was responsible for the construction of the box cut and portal entrance, as well as the portal and surface infrastructure for the East Portal.

The contract was terminated in line with SRL's cost curtailment exercises. A similar contract will be required when work on the East Portal restarts.

Shaft Sinking Contract

UMS Shaft Sinkers (Pty) Ltd (UMS) had been working on an Early Works order until the portal was handed over for mining. The contract was terminated in line with SRL's cost curtailment exercises.

A draft contract for the development of a decline cluster and underground infrastructure for East Underground was not signed. Such a contract will be required when work on the East Decline restarts.

Box cut Excavation Contract

Trollope Mining Services completed the bulk earthworks and related services for the decline boxcut. There is a small amount of work to be done once work on east Portal restarts.

Sidewall / Higwall Stabilisation Contracts

Ancillary contracts were awarded to Almin Projects (Pty) Ltd, Rostruct Mining (Pty) Ltd and Witwatersrand Mining Supply Corporation (Pty) Ltd for the drilling, bolting and consolidation of the sidewalls and highwall of the boxcut and around the portal entrance. The contracts were completed.

Central Underground

The PEA assumes that the awarding of an EPCM contract, mining contract and ancillary contracts for Central Underground would be done in line with the phased Capex and project implementation schedules, so that the underground ore production schedules can be achieved.

No contracts for this have been awarded at this stage.

Magazynskraal Shaft and Kruidfontein Shaft

SRL only plans to commence construction and mining development of the Magazynskraal Shaft and Kruidfontein Shaft in November 2026 and December 2025 respectively, once all the environmental permitting and authorisation processes have been completed and approvals received from the respective government departments.

SRL envisages that an EPCM contractor would be appointed for the detailed design, construction and commissioning of the Magazynskraal and Kruidfontein Shafts. The PEA assumes that the shafts would be done as a blind-sink by an experienced shaft sinking contractor. The EPCM contractor would also be responsible for all the surface infrastructure. The detailed design and awarding of EPCM contracts will be done so that the underground ore production schedules can be achieved.

No contracts for this have been awarded at this stage.

Mphahlele

SRL only plans to commence construction and mining development of the Mphahlele Project in August 2026, once all the environmental permitting and authorisation processes have been completed and approvals received from the respective government departments.

SRL envisages that an EPCM contractor would be appointed to construct the portal and portal infrastructure at Portal A, including the concentrator, surface infrastructure and TSF.

SRL envisages that a mining contractor would be used to sink the primary access decline at Portal A and establish initial level development. It is intended that the contractor would start the stoping operations and in time transfer the best crews to the mine. The contractor would then move over to Portal B, sink the primary access decline and establish initial level development.

The RBH vent holes (downcast and upcast) would be drilled and grouted as required by a specialist contractor.

19.5.4 Bulk Services

PSM and Kruidfontein Power Supply

SRL advised that if the project is fully implemented as proposed in this PEA, an extra 26 MVA of power would be required from Eskom to cater for the peak production levels. SRK understands that the Eskom incoming feed line to the PPM and Magazynskraal substations has sufficient capacity to handle this additional power requirement. SRL envisages that there should not be any restrictions to the installation of an extra sub-station and increased Eskom supply.

PPM Renewable Energy Project

PPM signed a Memorandum of Understanding (MoU) on 10 March 2022 with a consortium of Sturdee Energy Southern Africa (Pty) Ltd (Sturdee) and juwi Renewable Energies Pty Ltd (juwi) to provide the mine with renewable energy. Sturdee is developing the Steenbok Solar Farm near Lephalale in the Limpopo Province. Juwi is developing the Hartebeest Wind Farm located near Moreesburg in the Western Cape Province of South Africa.

The MoU provided for the supply of 40 MW of power delivered to the mine via a wheeling agreement in terms of a proposed power purchase agreement (PPA), Phase 1, with the option to add a further 35 MW as Phase 2. A Phase 3 envisaged the construction of a 35 MW solar plant at the mine. With subsequent changes to Eskom's demand and wheeling charges, the anticipated cost benefits of this renewable energy from remote solar/wind farms would not be achievable.

SRL has entered into discussions with African Clean Energy Solutions (ACES) for the construction of a solar farm located on the mine property and linked into the mine supply behind the Eskom substation(s). This enables SRL to avoid the wheeling charges. The preferred site for this solar farm installation is east of the East Portal on Magazynskraal. ACES has been provided with the requisite information for it to compile a proposed design and proposal to meet PPM's power requirements.

SRL plans to have the renewable energy source operational by 2027.

PSM and Kruidfontein Water Supply

Based on the projected water consumption rates of 0.8 m^3/t and 0.75 m^3/t for processing and mining (hydropower) respectively, SRL forecasts that the current water allocation from the MWB will be sufficient.

Mphahlele

The Company would have to enter into electricity and water supply contracts with Eskom and Lebalelo Water Scheme respectively.

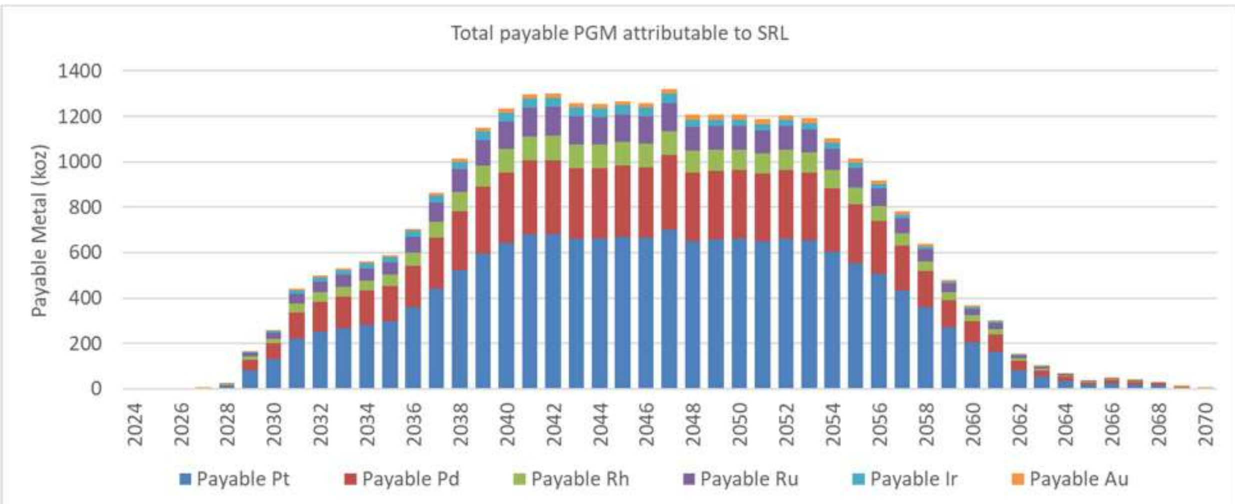
Based on the projected water consumption rate (0.2 m^3/t ore, which SRK considers as reasonable), the allocated water supply from the Lebalelo supply will be sufficient. In the event of any shortfall in supply, or increased consumption, an equipped wellfield will be able to supplement the water supply.

19.6 Payable/Refined Metal

The net payable metal after Kell and refining/smelting for the various properties and projects are summarised as follows:

- Ruighoek Pit Table 19-4;
- East Pit Table 19-5;
- West Pit (TSF Retreat) Table 19-6;
- Central Underground Table 19-7;
- East Underground Table 19-8;
- Magazynskraal Shaft Table 19-9;
- Kruidfontein Shaft Table 19-10;
- Mphahlele Decline Table 19-11; and
- Mphahlele Shaft Table 19-12.

The total payable PGMs attributable to SRL from all projects on an annual basis is shown in Figure 19-9. This includes the payable PGMs from the Mphahlele projects on a 75% attributable basis.



srk consulting	**SRL Total Asset PEA** Total payable PGMs attributable to SRL	Project No. 600322

Figure 19-9: Total payable PGMs attributable to SRL

Table 19-4: Ruighoek: Predicted Payable/Refined Metal (2048 to 2056)

Item	Units	Totals / Averages	2048	2049	2050	2051	2052	2053	2054	2055	2056
Payable refined metal – Pt	(koz)	261.4	18.1	36.2	42.5	33.4	36.5	35.5	26.6	25.7	6.8
Payable refined metal – Pd	(koz)	122.6	8.5	17.1	20.0	15.7	17.2	16.7	12.3	11.9	3.1
Payable refined metal – Rh	(koz)	31.7	2.0	4.2	5.0	3.9	4.2	4.3	3.6	3.6	0.9
Payable refined metal – Ru	(koz)	34.2	2.2	4.5	5.4	4.1	4.5	4.6	3.9	3.9	1.0
Payable refined metal – Ir	(koz)	8.7	0.6	1.1	1.4	1.0	1.1	1.2	1.0	1.0	0.3
Payable refined metal – Au	(koz)	11.2	0.8	1.7	1.9	1.5	1.7	1.5	1.0	0.9	0.2
Payable refined metal – Ni	(t)	1 684.0	127.7	256.5	261.6	222.7	253.8	239.7	152.8	132.2	37.0
Payable refined metal - Cu	(t)	677.6	51.2	103.0	105.2	89.4	101.8	96.4	61.9	53.7	15.0
Av. 4E metal recovery (refining)	(%)	95.3%	95.3%	95.3%	95.3%	95.3%	95.3%	95.3%	95.4%	95.4%	95.4%
Av. Base Metal recovery (refining)	(%)	92.4%	92.2%	92.3%	92.3%	92.2%	92.2%	92.3%	92.6%	92.7%	92.6%

Table 19-5: PSM - East Pit: Predicted Payable/Refined Metal (2048 to 2059)

Item	Units	Totals / Averages	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059
Payable refined metal – Pt	(koz)	503.9	29.1	60.6	63.2	65.1	65.8	66.5	43.7	25.9	25.4	20.4	24.9	13.2
Payable refined metal – Pd	(koz)	193.3	11.2	23.4	24.4	25.1	25.4	25.7	16.7	9.8	9.6	7.6	9.3	4.9
Payable refined metal – Rh	(koz)	58.8	3.6	7.9	8.2	8.4	8.6	8.7	5.0	2.3	2.2	1.4	1.7	0.9
Payable refined metal – Ru	(koz)	62.7	3.8	8.4	8.7	9.0	9.1	9.2	5.4	2.4	2.4	1.5	1.8	1.0
Payable refined metal – Ir	(koz)	17.9	1.1	2.4	2.5	2.6	2.6	2.6	1.5	0.7	0.7	0.4	0.5	0.3
Payable refined metal – Au	(koz)	13.9	0.7	1.3	1.3	1.4	1.4	1.4	1.2	1.1	1.1	1.1	1.3	0.7
Payable refined metal – Ni	(t)	2 825.7	144.7	247.4	254.6	251.6	248.9	247.2	247.3	245.0	245.3	242.2	294.8	156.8
Payable refined metal - Cu	(t)	977.2	44.6	84.9	87.9	86.6	86.6	88.7	90.9	89.8	89.0	79.6	96.9	51.5
Av. 4E metal recovery (refining)	(%)	95.5%	95.5%	95.5%	95.5%	95.5%	95.5%	95.5%	95.5%	95.3%	95.3%	95.2%	95.2%	95.2%
Av. Base Metal recovery (refining)	(%)	92.0%	92.3%	92.0%	92.0%	92.0%	91.9%	91.9%	91.8%	91.8%	91.8%	92.1%	92.1%	92.1%

Table 19-6: PSM - West Pit (TSF Retreatment): Predicted Payable/Refined Metal (2029 to 2042)

Item	Units	Totals / Averages	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
Payable refined metal – Pt	(koz)	187.5	-	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	10.6
Payable refined metal – Pd	(koz)	88.6	-	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	5.0
Payable refined metal – Rh	(koz)	21.0	-	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.2
Payable refined metal – Ru	(koz)	22.6	-	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.3
Payable refined metal – Ir	(koz)	5.7	-	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3
Payable refined metal – Au	(koz)	8.9	-	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.5
Payable refined metal – Ni	(t)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Payable refined metal - Cu	(t)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Av. 4E metal recovery (refining)	(%)	95.3%	-	95.3%	95.3%	95.3%	95.3%	95.3%	95.3%	95.3%	95.3%	95.3%	95.3%	95.3%	95.3%	95.3%
Av. Base Metal recovery (refining)	(%)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 19-7: PSM - Central Underground: Predicted Payable/Refined Metal (2024 to 2048)

Item	Units	Totals / Averages	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
Payable refined metal – Pt	(koz)	1 769.6	-	-	-	-	-	11.6	20.5	68.1	82.6	84.5	81.5	81.7	80.8	82.9
Payable refined metal – Pd	(koz)	779.8	-	-	-	-	-	5.1	9.0	30.0	36.4	37.2	35.9	36.0	35.6	36.5
Payable refined metal – Rh	(koz)	337.3	-	-	-	-	-	2.3	4.0	13.2	16.1	16.4	15.9	15.9	15.7	16.1
Payable refined metal – Ru	(koz)	382.2	-	-	-	-	-	2.6	4.5	15.0	18.2	18.6	18.0	18.0	17.8	18.3
Payable refined metal – Ir	(koz)	211.2	-	-	-	-	-	1.4	2.5	8.3	10.1	10.4	10.0	10.0	9.9	10.1
Payable refined metal – Au	(koz)	14.0	-	-	-	-	-	0.1	0.1	0.5	0.6	0.6	0.5	0.5	0.5	0.6
Payable refined metal – Ni	(t)	484.8	-	-	-	-	-	1.8	4.7	18.4	19.7	19.3	20.0	20.5	21.0	19.9
Payable refined metal - Cu	(t)	268.1	-	-	-	-	-	0.7	1.3	5.0	6.3	5.5	5.6	5.2	5.9	6.8
Av. 4E metal recovery (refining)	(%)	95.6%	-	-	-	-	-	95.6%	95.6%	95.6%	95.6%	95.6%	95.6%	95.6%	95.6%	95.6%
Av. Base Metal recovery (refining)	(%)	90.6%	-	-	-	-	-	91.7%	92.6%	92.6%	92.1%	92.5%	92.5%	92.7%	92.5%	92.0%

Item	Units	Totals / Averages	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
Payable refined metal – Pt	(koz)	1 769.6	88.0	107.2	112.2	113.0	123.9	116.7	108.0	116.3	124.1	130.7	35.4
Payable refined metal – Pd	(koz)	779.8	38.8	47.2	49.4	49.8	54.6	51.4	47.6	51.2	54.7	57.6	15.6
Payable refined metal – Rh	(koz)	337.3	17.0	19.9	21.0	21.4	23.4	22.3	21.0	22.1	23.5	23.4	6.6
Payable refined metal – Ru	(koz)	382.2	19.3	22.6	23.8	24.3	26.6	25.2	23.8	25.1	26.6	26.6	7.4
Payable refined metal – Ir	(koz)	211.2	10.7	12.4	13.1	13.4	14.7	14.0	13.2	13.9	14.7	14.5	4.1
Payable refined metal – Au	(koz)	14.0	0.6	1.0	1.0	0.9	1.0	0.9	0.7	0.9	1.0	1.5	0.3
Payable refined metal – Ni	(t)	484.8	25.9	55.5	42.5	31.0	35.8	24.8	6.2	16.7	23.1	65.5	12.5
Payable refined metal - Cu	(t)	268.1	10.1	30.3	29.2	19.5	22.5	17.2	8.7	16.0	20.0	44.0	8.3
Av. 4E metal recovery (refining)	(%)	95.6%	95.6%	95.6%	95.6%	95.6%	95.6%	95.6%	95.6%	95.6%	95.6%	95.6%	95.6%
Av. Base Metal recovery (refining)	(%)	90.6%	91.6%	90.6%	89.9%	90.1%	90.1%	89.8%	87.5%	88.7%	89.1%	89.9%	90.0%

Table 19-8: PSM – East Underground: Predicted Payable/Refined Metal (2024 to 2061)

Item	Units	Totals / Averages	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
Payable refined metal – Pt	(koz)	2 531.7	-	-	-	-	-	38.0	37.0	63.0	68.9	73.0	72.6	74.1	80.6	88.2
Payable refined metal – Pd	(koz)	1 095.1	-	-	-	-	-	16.7	16.3	27.7	30.3	32.1	32.0	32.7	35.6	38.8
Payable refined metal – Rh	(koz)	426.4	-	-	-	-	-	7.4	6.9	11.6	12.4	12.8	12.5	12.5	13.8	15.4
Payable refined metal – Ru	(koz)	466.6	-	-	-	-	-	7.9	7.3	12.4	13.3	13.8	13.4	13.5	14.9	16.6
Payable refined metal – Ir	(koz)	135.6	-	-	-	-	-	2.4	2.2	3.8	4.0	4.1	4.0	4.0	4.4	5.0
Payable refined metal – Au	(koz)	39.3	-	-	-	-	-	0.2	0.4	0.6	0.8	1.0	1.1	1.2	1.3	1.3
Payable refined metal – Ni	(t)	3 264.4	-	-	-	-	-	14.2	29.4	58.1	74.8	78.0	80.9	80.0	84.0	86.4
Payable refined metal - Cu	(t)	1 872.3	-	-	-	-	-	8.0	15.6	30.1	36.6	40.7	43.3	44.8	47.9	49.2
Av. 4E metal recovery (refining)	(%)	95.6%	-	-	-	-	-	95.6%	95.6%	95.6%	95.6%	95.6%	95.6%	95.5%	95.6%	95.6%
Av. Base Metal recovery (refining)	(%)	90.4%	-	-	-	-	-	90.5%	90.7%	90.8%	90.9%	90.7%	90.7%	90.5%	90.5%	90.5%

Item	Units	Totals / Averages	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051
Payable refined metal – Pt	(koz)	2 531.7	96.1	92.8	94.5	90.3	86.6	88.0	86.9	88.2	89.4	88.0	84.3	83.2	80.0	79.7
Payable refined metal – Pd	(koz)	1 095.1	41.9	40.1	40.6	38.6	37.2	37.6	37.2	37.6	38.4	37.9	36.0	35.6	34.1	34.1
Payable refined metal – Rh	(koz)	426.4	16.9	16.3	16.6	15.9	15.4	15.5	14.8	14.6	15.0	14.4	13.6	13.6	12.9	12.8
Payable refined metal – Ru	(koz)	466.6	18.5	17.9	18.4	17.7	16.9	17.1	16.4	16.3	16.4	15.8	15.2	15.0	14.4	14.3
Payable refined metal – Ir	(koz)	135.6	5.5	5.2	5.3	5.1	4.9	5.0	4.7	4.6	4.7	4.6	4.3	4.3	4.0	4.0
Payable refined metal – Au	(koz)	39.3	1.3	1.2	1.2	1.0	1.0	1.0	1.2	1.4	1.4	1.5	1.5	1.4	1.4	1.4
Payable refined metal – Ni	(t)	3 264.4	89.5	88.0	86.4	84.3	82.8	83.9	99.1	112.2	115.4	131.3	130.1	125.0	126.5	124.1
Payable refined metal - Cu	(t)	1 872.3	50.9	52.8	53.0	50.4	47.2	47.4	56.2	64.0	66.1	76.2	77.4	74.8	76.9	75.3
Av. 4E metal recovery (refining)	(%)	95.6%	95.6%	95.6%	95.6%	95.6%	95.6%	95.6%	95.6%	95.6%	95.6%	95.6%	95.5%	95.6%	95.5%	95.5%
Av. Base Metal recovery (refining)	(%)	90.4%	90.5%	90.3%	90.2%	90.3%	90.5%	90.5%	90.5%	90.5%	90.4%	90.4%	90.3%	90.3%	90.3%	90.3%

Item	Units	Totals / Averages	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061
Payable refined metal – Pt	(koz)	2 531.7	81.2	81.1	85.9	86.4	88.6	87.6	65.0	45.2	43.0	44.5
Payable refined metal – Pd	(koz)	1 095.1	34.9	34.8	37.0	37.5	38.6	38.4	28.4	19.2	18.4	19.0
Payable refined metal – Rh	(koz)	426.4	13.1	13.2	13.9	13.7	13.8	14.2	10.5	6.8	6.7	6.9
Payable refined metal – Ru	(koz)	466.6	14.5	14.4	15.2	15.0	15.2	15.4	11.3	7.3	7.2	7.5
Payable refined metal – Ir	(koz)	135.6	4.1	4.1	4.4	4.3	4.3	4.5	3.3	2.1	2.1	2.1
Payable refined metal – Au	(koz)	39.3	1.4	1.4	1.5	1.7	1.9	1.7	1.2	1.0	0.8	0.9
Payable refined metal – Ni	(t)	3 264.4	126.9	126.4	133.0	141.4	152.0	138.5	120.4	99.3	78.8	83.4
Payable refined metal - Cu	(t)	1 872.3	75.1	73.1	76.1	82.7	89.6	81.7	68.1	54.6	41.8	44.8
Av. 4E metal recovery (refining)	(%)	95.6%	95.5%	95.5%	95.5%	95.5%	95.5%	95.5%	95.5%	95.5%	95.5%	95.5%
Av. Base Metal recovery (refining)	(%)	90.4%	90.3%	90.4%	90.4%	90.4%	90.4%	90.3%	90.5%	90.6%	90.7%	90.7%

Table 19-9: Magazynskraal Shaft: Predicted Payable/Refined Metal (2027 to 2068)

Item	Units	Totals / Averages	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Payable refined metal – Pt	(koz)	4 595.5	-	-	-	-	0.0	0.4	3.4	12.7	31.2	76.3	136.2	170.9	179.9	168.1
Payable refined metal – Pd	(koz)	2 018.4	-	-	-	-	0.0	0.2	1.6	5.7	14.0	34.1	60.5	75.3	79.1	73.9
Payable refined metal – Rh	(koz)	691.6	-	-	-	-	0.0	0.1	0.7	2.4	5.8	13.7	23.0	26.6	27.4	25.6
Payable refined metal – Ru	(koz)	780.4	-	-	-	-	0.0	0.1	0.7	2.7	6.5	15.4	25.9	29.9	30.9	28.8
Payable refined metal – Ir	(koz)	215.7	-	-	-	-	0.0	0.0	0.2	0.8	1.9	4.4	7.3	8.3	8.5	8.0
Payable refined metal – Au	(koz)	96.9	-	-	-	-	0.0	0.0	0.0	0.1	0.3	0.8	2.0	3.3	3.7	3.5
Payable refined metal – Ni	(t)	9 187.0	-	-	-	-	0.0	0.5	3.4	12.5	35.0	96.4	208.4	322.8	353.5	330.0
Payable refined metal - Cu	(t)	5 031.0	-	-	-	-	0.0	0.1	0.5	1.8	8.3	31.6	89.4	167.7	190.0	177.0
Av. 4E metal recovery (refining)	(%)	95.5%	-	-	-	-	95.6%	95.6%	95.6%	95.6%	95.6%	95.6%	95.6%	95.5%	95.5%	95.5%
Av. Base Metal recovery (refining)	(%)	90.6%	-	-	-	-	93.8%	93.8%	93.8%	93.8%	92.9%	92.1%	91.3%	90.8%	90.6%	90.7%

Item	Units	Totals / Averages	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054
Payable refined metal – Pt	(koz)	4 595.5	172.8	169.0	174.8	184.4	188.5	186.5	194.6	190.6	193.2	194.9	188.2	195.8	192.6	190.6
Payable refined metal – Pd	(koz)	2 018.4	76.1	74.4	77.0	81.0	82.9	82.1	85.5	83.7	84.8	85.5	82.7	86.0	84.5	83.7
Payable refined metal – Rh	(koz)	691.6	26.7	26.0	27.0	27.8	28.8	28.5	29.2	28.7	28.9	29.0	28.4	29.4	28.7	28.6
Payable refined metal – Ru	(koz)	780.4	30.1	29.4	30.5	31.4	32.4	32.2	33.0	32.4	32.6	32.7	32.1	33.2	32.4	32.3
Payable refined metal – Ir	(koz)	215.7	8.4	8.2	8.5	8.7	9.0	8.9	9.1	9.0	9.0	9.0	8.9	9.2	8.9	8.9
Payable refined metal – Au	(koz)	96.9	3.4	3.3	3.4	3.9	3.8	3.8	4.1	4.0	4.1	4.2	3.9	4.2	4.2	4.0
Payable refined metal – Ni	(t)	9 187.0	328.7	321.8	325.8	365.8	361.9	357.5	388.6	377.1	392.1	397.1	371.3	391.3	389.2	383.0
Payable refined metal - Cu	(t)	5 031.0	173.0	170.0	171.4	201.0	195.6	194.2	215.1	206.8	217.4	220.4	202.6	215.7	216.1	210.6
Av. 4E metal recovery (refining)	(%)	95.5%	95.5%	95.5%	95.5%	95.5%	95.5%	95.5%	95.5%	95.5%	95.5%	95.5%	95.5%	95.5%	95.5%	95.5%
Av. Base Metal recovery (refining)	(%)	90.6%	90.7%	90.7%	90.7%	90.6%	90.6%	90.6%	90.6%	90.6%	90.5%	90.5%	90.6%	90.6%	90.5%	90.6%

Item	Units	Totals / Averages	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068
Payable refined metal – Pt	(koz)	4 595.5	185.4	177.8	166.4	151.8	142.8	121.5	88.6	56.0	40.7	27.3	11.9	14.4	12.6	2.4
Payable refined metal – Pd	(koz)	2 018.4	81.4	77.9	72.7	66.2	62.2	52.6	38.4	24.5	18.0	12.1	5.3	6.3	5.5	1.0
Payable refined metal – Rh	(koz)	691.6	27.6	26.1	23.4	21.2	19.6	15.4	11.6	8.0	6.6	4.5	2.2	2.3	1.8	0.3
Payable refined metal – Ru	(koz)	780.4	31.1	29.5	26.5	24.0	22.2	17.5	13.1	9.1	7.4	5.0	2.5	2.6	2.0	0.3
Payable refined metal – Ir	(koz)	215.7	8.6	8.1	7.2	6.5	6.0	4.6	3.5	2.5	2.1	1.4	0.7	0.7	0.6	0.1
Payable refined metal – Au	(koz)	96.9	4.0	4.0	4.1	3.8	3.7	3.6	2.5	1.3	0.7	0.4	0.1	0.3	0.3	0.1
Payable refined metal – Ni	(t)	9 187.0	378.4	376.0	378.9	348.8	341.2	320.8	223.9	121.9	68.4	43.3	13.0	24.5	27.2	6.7
Payable refined metal - Cu	(t)	5 031.0	210.8	212.8	222.2	205.7	204.4	201.4	138.2	70.2	33.3	20.2	3.5	12.2	15.6	4.3
Av. 4E metal recovery (refining)	(%)	95.5%	95.5%	95.5%	95.5%	95.5%	95.5%	95.4%	95.4%	95.5%	95.5%	95.5%	95.6%	95.5%	95.5%	95.4%
Av. Base Metal recovery (refining)	(%)	90.6%	90.5%	90.5%	90.4%	90.3%	90.3%	90.1%	90.2%	90.4%	91.0%	91.1%	92.6%	90.9%	90.4%	90.1%

Table 19-10: Kruidfontein Shaft: Predicted Payable/Refined Metal (2024 to 2063)

Item	Units	Totals / Averages	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
Payable refined metal – Pt	(koz)	3 265.7	-	-	-	-	-	-	-	-	-	-	0.0	0.0	0.6	6.1
Payable refined metal – Pd	(koz)	1 345.3	-	-	-	-	-	-	-	-	-	-	0.0	0.0	0.3	2.5
Payable refined metal – Rh	(koz)	440.2	-	-	-	-	-	-	-	-	-	-	0.0	0.0	0.1	1.1
Payable refined metal – Ru	(koz)	486.5	-	-	-	-	-	-	-	-	-	-	0.0	0.0	0.1	1.3
Payable refined metal – Ir	(koz)	123.4	-	-	-	-	-	-	-	-	-	-	0.0	0.0	0.0	0.3
Payable refined metal – Au	(koz)	96.7	-	-	-	-	-	-	-	-	-	-	0.0	0.0	0.0	0.1
Payable refined metal – Ni	(t)	12 431.5	-	-	-	-	-	-	-	-	-	-	0.1	0.3	2.7	23.4
Payable refined metal - Cu	(t)	4 842.2	-	-	-	-	-	-	-	-	-	-	0.0	0.0	0.1	0.6
Av. 4E metal recovery (refining)	(%)	95.4%	-	-	-	-	-	-	-	-	-	-	95.6%	95.6%	95.6%	95.6%
Av. Base Metal recovery (refining)	(%)	91.6%	-	-	-	-	-	-	-	-	-	-	95.4%	95.4%	95.4%	95.4%

Item	Units	Totals / Averages	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051
Payable refined metal – Pt	(koz)	3 265.7	27.4	73.5	119.9	163.0	164.0	168.7	164.7	166.8	160.7	180.7	184.8	183.1	182.4	185.1
Payable refined metal – Pd	(koz)	1 345.3	11.2	30.0	49.0	66.8	67.3	69.2	67.6	68.4	65.9	74.3	76.1	75.5	75.3	76.4
Payable refined metal – Rh	(koz)	440.2	5.1	12.8	20.8	25.6	25.7	26.5	25.8	26.2	25.0	25.6	24.8	24.2	23.2	23.3
Payable refined metal – Ru	(koz)	486.5	5.6	14.1	22.9	28.2	28.4	29.3	28.5	28.9	27.6	28.3	27.4	26.7	25.6	25.8
Payable refined metal – Ir	(koz)	123.4	1.5	3.8	6.2	7.5	7.5	7.8	7.5	7.7	7.3	7.3	6.9	6.7	6.4	6.4
Payable refined metal – Au	(koz)	96.7	0.5	1.5	2.5	4.0	4.0	4.1	4.0	4.1	4.0	5.1	5.5	5.5	5.7	5.9
Payable refined metal – Ni	(t)	12 431.5	94.0	258.9	421.0	588.9	588.7	604.6	592.3	596.3	583.0	675.9	702.8	704.2	709.9	721.6
Payable refined metal - Cu	(t)	4 842.2	4.0	32.6	58.6	146.6	145.5	147.2	147.5	145.7	151.4	234.1	275.7	286.7	309.3	319.5
Av. 4E metal recovery (refining)	(%)	95.4%	95.6%	95.5%	95.5%	95.5%	95.5%	95.5%	95.5%	95.5%	95.5%	95.5%	95.4%	95.4%	95.4%	95.4%
Av. Base Metal recovery (refining)	(%)	91.6%	95.2%	94.1%	93.9%	92.8%	92.8%	92.8%	92.8%	92.8%	92.7%	92.0%	91.6%	91.5%	91.3%	91.2%

Item	Units	Totals / Averages	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063
Payable refined metal – Pt	(koz)	3 265.7	183.1	177.7	165.9	146.1	139.2	119.0	96.1	61.0	27.1	11.1	7.3	0.6
Payable refined metal – Pd	(koz)	1 345.3	75.6	73.3	68.6	60.4	57.7	49.4	40.0	25.4	11.3	4.6	3.0	0.3
Payable refined metal – Rh	(koz)	440.2	22.9	22.3	19.8	16.4	14.9	11.1	8.1	5.0	2.2	0.9	0.6	0.1
Payable refined metal – Ru	(koz)	486.5	25.4	24.7	21.9	18.2	16.5	12.4	9.1	5.6	2.5	1.0	0.7	0.1
Payable refined metal – Ir	(koz)	123.4	6.3	6.1	5.3	4.3	3.8	2.7	1.9	1.1	0.5	0.2	0.1	0.0
Payable refined metal – Au	(koz)	96.7	5.8	5.6	5.5	5.1	5.0	4.7	4.0	2.6	1.1	0.5	0.3	0.0
Payable refined metal – Ni	(t)	12 431.5	712.8	691.8	655.2	586.8	565.9	493.6	404.6	257.6	115.0	46.6	30.5	2.6
Payable refined metal - Cu	(t)	4 842.2	318.7	308.1	315.6	304.8	311.4	305.3	268.0	173.8	77.6	31.4	20.6	1.7
Av. 4E metal recovery (refining)	(%)	95.4%	95.4%	95.4%	95.4%	95.4%	95.4%	95.3%	95.3%	95.3%	95.3%	95.3%	95.3%	95.3%
Av. Base Metal recovery (refining)	(%)	91.6%	91.2%	91.2%	91.0%	90.8%	90.6%	90.2%	90.0%	89.9%	89.9%	89.9%	89.9%	89.9%

Table 19-11: Mphahlele Decline: Predicted Payable/Refined Metal (2024 to 2064) (100% basis)

Item	Units	Totals / Averages	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
Payable refined metal – Pt	(koz)	1 712.8	-	-	-	3.1	13.4	43.9	77.3	100.6	113.5	121.9	135.1	128.4	133.3	132.3
Payable refined metal – Pd	(koz)	1 154.3	-	-	-	2.1	9.2	29.9	52.4	68.4	76.4	82.2	90.8	85.9	89.0	88.5
Payable refined metal – Rh	(koz)	233.2	-	-	-	0.5	2.0	6.4	10.9	14.4	15.3	16.7	18.0	16.7	17.1	17.1
Payable refined metal – Ru	(koz)	322.2	-	-	-	0.7	2.7	8.8	15.0	19.8	21.2	23.0	25.0	23.2	23.8	23.8
Payable refined metal – Ir	(koz)	85.8	-	-	-	0.2	0.7	2.4	4.0	5.3	5.6	6.1	6.6	6.1	6.3	6.3
Payable refined metal – Au	(koz)	110.8	-	-	-	0.1	0.7	2.5	4.6	5.9	7.4	7.8	9.1	9.0	9.5	9.3
Payable refined metal – Ni	(t)	12 060.7	-	-	-	41.0	144.2	371.6	603.3	708.5	799.4	824.6	912.3	877.1	923.0	915.3
Payable refined metal - Cu	(t)	8 221.7	-	-	-	27.2	97.3	240.0	391.9	454.5	551.1	569.7	641.8	643.9	685.0	673.6
Av. 4E metal recovery (refining)	(%)	95.1%	-	-	-	95.2%	95.2%	95.1%	95.1%	95.1%	95.1%	95.1%	95.1%	95.0%	95.0%	95.0%
Av. Base Metal recovery (refining)	(%)	89.9%	-	-	-	90.0%	89.9%	90.1%	90.0%	90.1%	89.8%	89.8%	89.8%	89.6%	89.6%	89.6%

Item	Units	Totals / Averages	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051
Payable refined metal – Pt	(koz)	1 712.8	132.1	118.1	97.3	77.6	69.1	41.7	36.5	26.4	15.2	18.4	16.5	5.2	5.7	2.7
Payable refined metal – Pd	(koz)	1 154.3	88.5	79.5	65.1	51.7	46.0	27.8	24.7	18.0	10.6	13.0	11.6	3.7	4.0	1.9
Payable refined metal – Rh	(koz)	233.2	17.3	15.9	12.7	9.8	8.8	5.3	5.1	3.9	2.5	3.2	2.9	0.9	1.0	0.5
Payable refined metal – Ru	(koz)	322.2	24.0	22.0	17.6	13.7	12.2	7.3	7.0	5.3	3.4	4.4	3.9	1.2	1.4	0.6
Payable refined metal – Ir	(koz)	85.8	6.3	5.9	4.7	3.6	3.2	1.9	1.9	1.4	0.9	1.2	1.1	0.3	0.4	0.2
Payable refined metal – Au	(koz)	110.8	9.2	7.8	6.8	5.7	5.1	3.1	2.3	1.5	0.6	0.6	0.5	0.2	0.2	0.1
Payable refined metal – Ni	(t)	12 060.7	922.8	831.2	693.2	535.3	482.9	295.3	234.8	169.8	99.0	119.9	116.6	37.7	36.1	13.8
Payable refined metal - Cu	(t)	8 221.7	665.4	582.6	508.1	416.1	368.9	218.0	151.1	93.4	39.0	36.0	35.0	11.3	10.9	4.2
Av. 4E metal recovery (refining)	(%)	95.1%	95.0%	95.1%	95.0%	95.0%	95.0%	95.0%	95.1%	95.1%	95.3%	95.3%	95.3%	95.3%	95.3%	95.3%
Av. Base Metal recovery (refining)	(%)	89.9%	89.7%	89.8%	89.6%	89.4%	89.5%	89.6%	90.1%	90.6%	91.6%	92.3%	92.3%	92.3%	92.3%	92.3%

Item	Units	Totals / Averages	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064
Payable refined metal – Pt	(koz)	1 712.8	0.4	3.6	1.1	0.7	1.0	6.1	5.1	0.5	4.4	8.7	8.9	6.4	0.7
Payable refined metal – Pd	(koz)	1 154.3	0.3	2.5	0.8	0.5	0.7	4.3	3.6	0.4	3.1	6.1	6.3	4.5	0.5
Payable refined metal – Rh	(koz)	233.2	0.1	0.6	0.2	0.1	0.2	1.1	0.9	0.1	0.8	1.5	1.5	1.1	0.1
Payable refined metal – Ru	(koz)	322.2	0.1	0.8	0.3	0.2	0.2	1.4	1.2	0.1	1.0	2.1	2.1	1.5	0.2
Payable refined metal – Ir	(koz)	85.8	0.0	0.2	0.1	0.0	0.1	0.4	0.3	0.0	0.3	0.6	0.6	0.4	0.0
Payable refined metal – Au	(koz)	110.8	0.0	0.1	0.0	0.0	0.0	0.2	0.2	0.0	0.1	0.3	0.3	0.2	0.0
Payable refined metal – Ni	(t)	12 060.7	2.8	19.0	9.5	8.1	6.0	46.0	27.0	7.4	46.7	69.7	68.3	37.8	3.8
Payable refined metal - Cu	(t)	8 221.7	0.9	5.7	2.9	2.4	1.8	13.8	8.1	2.2	14.0	20.9	20.5	11.3	1.2
Av. 4E metal recovery (refining)	(%)	95.1%	95.3%	95.3%	95.3%	95.3%	95.3%	95.3%	95.3%	95.3%	95.3%	95.3%	95.3%	95.3%	95.3%
Av. Base Metal recovery (refining)	(%)	89.9%	92.3%	92.3%	92.3%	92.3%	92.3%	92.3%	92.3%	92.3%	92.3%	92.3%	92.3%	92.3%	92.3%

Note:

2. Values represent 100% of payable refined metal and not the amount attributable to SRL.

Table 19-12: Mphahlele Shaft: Predicted Payable/Refined Metal (2029 to 2070) (100% basis)

Item	Units	Totals / Averages	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
Payable refined metal – Pt	(koz)	2 287.2	-	-	-	-	-	-	0.7	8.2	20.2	36.8	55.2	80.3	92.6	103.1
Payable refined metal – Pd	(koz)	1 529.8	-	-	-	-	-	-	0.5	5.8	14.1	25.3	37.6	54.7	62.4	68.7
Payable refined metal – Rh	(koz)	297.2	-	-	-	-	-	-	0.1	1.4	3.4	5.7	7.9	11.7	12.6	13.1
Payable refined metal – Ru	(koz)	412.0	-	-	-	-	-	-	0.2	1.9	4.6	7.8	10.9	16.0	17.4	18.2
Payable refined metal – Ir	(koz)	109.0	-	-	-	-	-	-	0.0	0.5	1.3	2.1	2.9	4.3	4.6	4.8
Payable refined metal – Au	(koz)	160.7	-	-	-	-	-	-	0.0	0.3	0.7	1.7	3.2	4.5	6.0	7.5
Payable refined metal – Ni	(t)	15 505.4	-	-	-	-	-	-	6.7	55.6	130.0	245.9	372.5	527.0	627.0	692.2
Payable refined metal - Cu	(t)	11 050.3	-	-	-	-	-	-	2.0	16.7	57.7	141.8	258.0	347.1	456.5	547.9
Av. 4E metal recovery (refining)	(%)	95.0%	-	-	-	-	-	-	95.3%	95.3%	95.3%	95.2%	95.1%	95.1%	95.1%	95.0%
Av. Base Metal recovery (refining)	(%)	89.7%	-	-	-	-	-	-	92.3%	92.3%	91.2%	90.4%	89.8%	90.0%	89.7%	89.4%

Item	Units	Totals / Averages	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056
Payable refined metal – Pt	(koz)	2 287.2	109.6	119.4	119.2	122.8	125.0	128.0	129.6	124.3	127.5	129.9	128.9	120.3	111.6	88.9
Payable refined metal – Pd	(koz)	1 529.8	72.9	79.0	79.0	81.3	83.0	85.0	86.1	82.2	84.6	85.6	84.9	79.6	74.7	60.1
Payable refined metal – Rh	(koz)	297.2	13.7	14.5	14.6	14.9	15.5	15.9	16.0	15.1	15.7	15.3	15.1	14.6	14.5	12.3
Payable refined metal – Ru	(koz)	412.0	19.0	20.3	20.3	20.8	21.5	22.1	22.3	21.0	21.9	21.3	21.1	20.3	20.1	17.0
Payable refined metal – Ir	(koz)	109.0	5.0	5.3	5.3	5.4	5.7	5.8	5.9	5.5	5.7	5.6	5.5	5.3	5.3	4.5
Payable refined metal – Au	(koz)	160.7	8.2	9.3	9.2	9.6	9.5	9.7	9.8	9.7	9.7	10.6	10.5	9.4	7.8	5.6
Payable refined metal – Ni	(t)	15 505.4	735.9	783.6	783.2	803.1	796.6	830.7	823.7	816.9	836.5	849.9	851.7	822.7	769.6	623.9
Payable refined metal - Cu	(t)	11 050.3	591.7	643.3	630.9	648.8	621.1	633.8	630.5	644.7	640.8	686.7	683.5	614.8	521.1	383.6
Av. 4E metal recovery (refining)	(%)	95.0%	95.0%	95.0%	95.0%	95.0%	95.0%	95.0%	95.0%	95.0%	95.0%	95.0%	95.0%	95.0%	95.0%	95.1%
Av. Base Metal recovery (refining)	(%)	89.7%	89.3%	89.3%	89.3%	89.3%	89.4%	89.5%	89.5%	89.4%	89.5%	89.3%	89.3%	89.6%	89.9%	90.2%

Item	Units	Totals / Averages	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070
Payable refined metal – Pt	(koz)	2 287.2	48.8	23.6	12.6	13.4	18.1	15.6	9.2	9.6	7.2	13.2	10.6	14.8	7.1	1.5
Payable refined metal – Pd	(koz)	1 529.8	33.0	16.3	8.8	9.4	12.7	11.0	6.5	6.7	5.1	9.3	7.5	10.4	5.0	1.0
Payable refined metal – Rh	(koz)	297.2	6.8	3.7	2.2	2.3	3.1	2.7	1.6	1.7	1.2	2.3	1.8	2.6	1.2	0.3
Payable refined metal – Ru	(koz)	412.0	9.4	5.1	3.0	3.2	4.3	3.7	2.2	2.3	1.7	3.1	2.5	3.5	1.7	0.3
Payable refined metal – Ir	(koz)	109.0	2.5	1.4	0.8	0.9	1.2	1.0	0.6	0.6	0.5	0.9	0.7	1.0	0.5	0.1
Payable refined metal – Au	(koz)	160.7	3.0	1.1	0.4	0.4	0.6	0.5	0.3	0.3	0.2	0.4	0.3	0.5	0.2	0.0
Payable refined metal – Ni	(t)	15 505.4	377.6	203.3	118.6	121.8	174.5	135.6	83.0	78.5	64.5	123.0	85.2	101.1	44.7	9.0
Payable refined metal - Cu	(t)	11 050.3	217.3	86.9	36.2	36.6	52.5	40.8	24.9	23.6	19.4	37.0	25.6	30.4	13.4	2.7
Av. 4E metal recovery (refining)	(%)	95.0%	95.1%	95.2%	95.3%	95.3%	95.3%	95.3%	95.3%	95.3%	95.3%	95.3%	95.3%	95.3%	95.3%	95.3%
Av. Base Metal recovery (refining)	(%)	89.7%	90.4%	91.4%	92.3%	92.3%	92.3%	92.3%	92.3%	92.3%	92.3%	92.3%	92.3%	92.3%	92.3%	92.3%

Note:

2. Values represent 100% of production and not the amount attributable to SRL.

20 Environmental Studies, Permitting, and Social/Community Impact

20.1 Results of Environmental Studies

20.1.1 Ruighoek, PSM and Kruidfontein

Ruighoek, PSM and Kruidfontein are located west and north of the Pilanesberg National Park respectively in an area which is sensitive from a conservation point of view. The Pilanesberg National Park is a transition zone between the arid savanna and the moist savanna biomes, providing a wide variety of landscapes and habitats for both fauna and flora.The PSM Project is within the proposed Heritage Park Corridor that will eventually join the Pilanesberg National Park and the Madikwe Game Reserve to the northwest. Mining could co-exist in this park in the Phase 1 area of the corridor, which will exclude dangerous animals. Apart from the proposed conservation initiatives, the area is characterised by farming and mining activities. The proposed mining activities and infrastructure will need to be carefully considered and managed to avoid conflicts. There is high reliance on groundwater, which is used for domestic, stock watering and irrigation (gardens and smallholdings) purposes.

The PSM farms are largely on land that is owned by the state in trust for the BBKT. The BBKT is administered by a traditional council, which includes a chief. Within a 50 km radius of PSM there are several other platinum mines, with high levels of expectation and agitation in the mining sector. There have been several disruptions between 2009 and 2016, highlighting the importance of good stakeholder relations. In addition, ongoing internal tensions within the BBKT with regard to legitimacy of leadership has manifested in activism and tensions in the area. On 8 June 2020, an agreement was signed between SRL and the LLC, which represents descendents of the 13 clans that acquired the Wilgespruit property 100 years ago. The settlement commits SRL to invest in a community development trust and ring fence employment and procurement opportunities.

The environmental and relevant specialist studies for Ruighoek and PSM permits will need to reflect any changes to the project description, which will require environmental authorisation prior to project implementation. SRL intends to place surface infrastructure within the footprints of previously approved EIAs/EMPrs to limit the need for additional environmental permits and licences. Available water monitoring reports indicate no negative impact on the water quality of either the Wilgespruit or the Manyedime Rivers from mining activities. Investigations are recommended to determine the cause of the elevated sulphates and nitrates that appear in groundwater monitoring boreholes near the West Pit WRD.

The Kruidfontein Project plans to extract the UG2 or MR ores via underground mining operations. Access to underground resources will be by vertical shafts to enable mining from a depth of approximately 1 100 mbs to 2 200 mbs. Prior to the execution of the project, SRL will have to acquire the necessary permits, authorisations and licences to commence construction and operation of the proposed mine. Recently, the DMRE rejected the Scoping Report for this process, which is being appealed. Once the appeal has been resolved, various specialist studies (biophysical, technical and social) will need to be undertaken to inform the EIA/EMPr and other permitting processes (such as a WUL) as part of the Section 102 and MRA approval process.

20.1.2 Mphahlele

Mphahlele is located within a large open valley, mainly on the farm Locatie van M'Phatlele 457KS in the Limpopo Province, bordered by a number of ridges. Several non-perennial ephemeral drainage lines are found on the site. A small section of the mine access road will be located on the remaining extent of the farm Voorspoed 458KS. Baseline groundwater quality is generally poor. The project is located on the northern part of the Eastern Limb in an area characterised by extensive mining and fairly dense human settlement. Economic opportunities for the communities of this area are limited, and hence there is high expectation for local employment and procurement. The project is located within the tribal authority jurisdiction of the Bakagaga Ba Mphahlele Tribal Authority and there are a number of formal and informal villages in the surrounding area, including Mamaolo, Makurung and Dithabaneng. The key livelihood activities are agriculture and livestock rearing. All these villages are supplied with water from Lepelle Northern Water but have private and community supply boreholes as backup. Land on the project site is registered to the State (administered by the Department of Land Affairs) for the Bakgaga Ba Mphahlele. The mining area is located within cultivated land.

Baseline studies were conducted for the 2008 EIA/EMPr. Given the changed project layout/scope incorporated into the 2020 FS, a new EIA process and a full suite of specialist studies will be required. In addition, studies will be required for infrastructure footprints not previously considered in the 2008 EIA/EMPr, notably the concentrator and TSF and the third-party chromitite mining activities. Specialist hydrology and hydrogeology studies related to the new scope were completed as part of the 2020 FS.

20.2 Requirements and Plans for Waste and Tailings Disposal and Water Management

Aspects related to tailings disposal are discussed in Section 18.2.

20.2.1 Water Management

West Pit

A SSWMP for the current PPM operation (including the West Pit, plant, TSF, WRD, etc.) was last updated in 2021. The stormwater management infrastructure on site includes clean water diversions around the pit and plant, as well as dirty water channels leading to several pollution control dams (PCDs):

- Clean stormwater runoff is runoff generated upstream of potentially contaminating infrastructure; and
- Dirty stormwater runoff is runoff generated near potentially contaminating infrastructure, and may include dirty water generated from wash-down areas, leaks, accidental spillages and contaminated groundwater seepage.

Stormwater runoff in contaminated areas is contained and reused in the process. Stormwater from clean areas is diverted around or away from mine activity (dirty) areas and is allowed to enter the natural environment in accordance with GNR704. In general, stormwater is well-managed for the PPM operation; however, several non-compliances to GNR704 were highlighted in the last audit of 2021 (March 2022 SWMP & GNR704 audit report):

- The encroachment of the WRD on the un-named tributary of the Mothlabe River necessitates the construction of a river diversion. Authorisation for the diversion still needs to be obtained;
- The culverts carrying clean stormwater under the haul road and downstream to the un-named tributary of the Mothlabe River are undersized, which causes damming of clean water flows upstream of the road. A new culvert design has been developed and implementation is pending;
- Dirty water channels are needed to contain dirty water draining from the DMS stockpile and drain this back to the Plant SWCD. Routing and sizing of these channels has been undertaken conceptually;
- waste management area (solid waste) within the plant is within a fenced, concreted, and bunded area; however, several waste materials were found disposed outside the designated area. Procedures should be revised such that waste is disposed of correctly;
- The Eskom SWCD receives clean water runoff, and occasionally excess dirty water. This is a non-compliance to GNR704 (mixing of clean and dirty water). A clean water diversion has been recommended in the SWMP, to prevent clean water entering the Eskom SWCD; and

As a result of the inability to extend the open pit operations due to protracted negotiations with adjacent community groups, SRL has not been able to develop the open pit water storage capacity that is required for closure planning. This, combined with higher than usual rainfall, has resulted in spillage of water from several SWCDs into the environment. SRL negotiated authorisation for emergency releases with the DWS. It is clear that there is insufficient water storage capacity in the mine water system. Additional water management measures and storage facilities have been proposed which can be addressed under future planned operations post curtailment.

The following key water-management related issues have been identified at PPM and the West Pit:

- Groundwater studies, monitoring and numerical modelling have shown that the TSF and WRD are the major sources of contamination to groundwater, with three SWCDs and the RWD as likely sources of secondary contamination due to possible spillages/leakages;
- The current groundwater monitoring network is not adequate to identify and apportion the contribution of individual facilities, contaminant sources and leakages from the varous facilities;
- Elevated nitrate concentrations are detected in community borehole AGES4 when there is a substantial increase in abstraction, indicating the possibility that the contaminant plume from the WRD and North SWCD (unlined) has reached the borehole. PPM has advised the community on the maximum rate of abstraction, based on pumping test data. The community is earmarked to be relocated due to mine expansion, and the borehole will no longer be used for community water supply; and
- There is insufficient storage capacity in the water system during periods of higher than average rainfall, which leads to spillage of excess mine water into the environment.

In terms of water impact management and mitigation at PPM and the West Pit, the following work has been done or was in the process of being undertaken at the onset of curtailment (December 2023):

- Good progress has been made to further manage water on site by preparing a Goldsim® monthly water balance model for the site. The model simulates the impacts of changes to tonnages, slurry densities and climatic changes on water use at the mine. The water balance is based on a block flow diagram that has been approved by the mine, to ensure that the flows in the water balance match the flows in the mine. However the water balance will require edits and changes to ensure it is effective in replicating water reticulation and informing water management under the curtailment phase of the mine (since December 2023).
- The latest stormwater plan has addressed some of the GNR704 non-compliances by:
    - the construction of a geocell-lined clean water diversion canal upstream of the plant;
    - an upgrade of the dirty water diversion canals through the plant;
    - the construction of a large silt trap in the plant area;
    - the construction of a diversion canal associated with the Eskom SWCD;
    - SRL has continued to update the SWMP, with the 2021 update being the latest (March 2022 report).
- has completed the conceptual design of the clean water diversion at the Eskom SWCD and nearby training centre.

PSM above 700 m below Surface

SRL plans to operate the PSM Project with no point source discharge and to re-use contaminated water as far as possible. A feasibility-level SWMP for the PSM Project was compiled during the 2020 FS. The design basis of the stormwater management infrastructure for Sedibelo and Magazynskraal follows the main principles of GNR704 (separation of clean and dirty water). The Sedibelo SWMP which is based on the 2020 FS designs, was compiled in 2021. The recommendations in the SWMP will need to be implemented to achive compliance with GNR704.

- The area to the north of the Central Portal, north of the salvage yard and the planned parking areas, as well as the area south of the East Pit are designated clean water areas. Clean water diversion channels were designed to prevent clean stormwater from reaching the pit and the portal (and to discharge it into the natural environment).
- The function of the diversion channels is two-fold: to maintain clean and dirty water separation; and to prevent stormwater runoff from reaching the pit and the portals. A trapezoidal channel was designed for stormwater.
- All dirty water will be channelled via dirty water drains and/or collected in PCDs after passing through concrete silt traps.
- Liners for stormwater dams have been included in the Capex and Opex estimates, to limit seepage from these dams.
- The current diversion channels in the Sedibelo are insufficiently sized and cannot handle a 1:50 year flood event. The recommendation in the Sedibelo SWMP is to increase the capacity of the channels.

PSM below 700 m below Surface and Kruidfontein

No stormwater infrastructure planning has yet been undertaken for the Magazynskraal Shaft and Kruidfontein Shaft areas. The design basis of the stormwater management infrastructure for these areas would need to meet the principles of GNR704, key of these being;

- Diversion of clean water around mine and plant activities, for discharge back to the natural environment;
- Channeling and containment of dirty water runoff for diversion to PCDs; and
- GNR704 requires stormwater management facilities to be designed to be capable of handling 1:50-year flood events on top of their mean operating levels.

Mphahlele

The feasibility-level stormwater infrastructure and SWMP for Mphahlele was designed to comply with the requirements of GNR704 (SRK, 2022c).

Environmental contamination through effluent release will be minimized by bunding all dirty water collected in runoff drains in and around the infrastructure area and/or collecting and containing it in PCDs. The area to the north of Portal A and the plant above the infrastructure area, as well as the area to the north of Portal B, above the parking area, were designated as clean water areas per the FS design. Clean water areas are provided with diversion bunds to prevent stormwater from reaching the portals, with diversion channels to separate clean and dirty water and to divert clean water into the surrounding environment. The diversion channels also prevent stormwater runoffrunoff from reaching the portals and the plant.

A trapezoidal channel is provided for stormwater diversion, that will decant into the environment through concrete dissipator structures. The areas will be terraced and landscaped to allow for runoff towards the channel. A paddock system offset 25 m from the edge of each of the portals is designed to capture and contain any contaminated water discharged or collected in and around the portal to allow for evaporation.

The stormwater management facilities were sized to be capable of handling the 1:50-year flood events, over and above their mean operating levels.

20.3 Project Permitting Requirements and Reclamation Bonds

20.3.1 Environmental Permitting

Ruighoek, PSM and Kruidfontein

Ruighoek is included as part of an EMP that was approved by the DMRE, New Order Mining Right (NOMR) NW30/5/1/2/2/320MR awarded during 2008. A summary of the existing approved authorisations, licences and permits in terms of NEMA, NEM:WA and NWA for the PSM Project is given in Table 20-1. From 8 December 2014, a One Environmental System came into effect with mining EIA/EMPrs falling under NEMA, and authorisations being issued by DMRE. PSM operates under an approved EMPr issued in 2008 by the DMRE. The mine expansion will operate under a separate EMPr, which was submitted by IBMR and approved in 2008 by the DMRE. Amendments have been made to the original EMPr to incorporate and obtain approval for further mining-related development and infrastructure. All approved EMPrs and subsequent amendments are included in Table 20-1 (PPM) and Table 20-2 (SRL).

Table 20-1: All Approved EMPrs and Subsequent Amendments for PPM

EA and EMPr Report	Purpose (as per EMPr Report and as relevant at time of submission)	Date of Approval
PPM EMPr for proposed Platinum Mine April 2007	The existing approved EMPr, dated 2007 is applicable to the current operations undertaken at the the West Pit and related activities. This includes, amongst others, open pit mining methods, waste rock disposal at the existing WRD area, the use of haul roads, water management measures, topsoil stockpiles, plant operation, and support services (such as workshops and engineering services).	14 February 2008
PPM EMPr Amendment for the proposed closure of a Provincial Road and changes to surface structure – April 2009	An EMPr Addendum for the proposed closure of a provincial road and changes to certain components of its surface infrastructure. The EMPr authorised repositioning of the ROM stockpile, low grade stockpile, rerouting of the Magalies Water supply line, repositioning of the Tuschenkomst WRD, expansion of the DMS stockpile and repositioning of the sewage plant, internal haul roads, closure of road Z536 and a new road connecting Ngweding to road D511, diesel generator and tank farm, construction of two SWCDs, road crossings at the Manyedime, Wilgespruit and Bofule Rivers, explosive magazine, firebreak and additional topsoil stockpiles.	8 November 2011
PPM EMPr Amendment to Extend the Tuschenkomst Open Pit – November 2011	An EMPr Amendment for the expansion of the West Pit to the farms Wilgespruit 2JQ and Portion 1 of Rooderand 46JQ (onto the abandonment area located to the east of the Tuschenkomst mining area) was compiled in November 2011 and subsequently approved by the DMRE in April 2012. This EMPr also covered the expansion of the footprint of the existing WRD on Tuschenkomst 136JP further to the west, the construction of a haul road network, a telecommunications tower, topsoil stockpiles, a portion of the storm water infrastructure, an SWCD and bridges over the Wilgespruit River within the proposed project site.	16 April 2012
EMPr PPM Chrome Project – July 2012	Mining activities have not yet commenced; therefore, the commitments were not included in this report. The EMPr provides for the access and mining of chrome seams, specifically the PG2 and PG6 seams, by establishing an additional open pit, topsoil stockpiles, a WRD, crushing and screening plan, a mining contractor's camp and SWCDs within the existing mining right area on Witkleifontein 136JP and Tuschenkomst 135JP. Within the proposed chrome pit areas, there will be a number of separate chrome pits that will cover an area of approximately 85 ha. The crushed chrome will be sold to a third party for further processing. Concurrent rehabilitation of the open pit areas will be undertaken on Witkleifontein 136JP. The area where the Chrome Pit is located on the farm Tuschenkomst 135JP is demarcated as a mine residue deposit for the PPM operations. Once the pit has been backfilled, the waste rock from the platinum operation will be disposed of on top of this area.	According to PPM, the EMPr was approved; the final stamped document was received from DMRE dated October 2017.
EMPr Amendment Amending PPM Closure Objectives – February 2012	With the EMPr Amendment approval, the closure objectives of PPM were amended to provide for partial backfilling of the West Pit , thereafter the flooding the pit with the rediversion of the Wilgespruit River back into the pit. Part of the amendment and in conjunction with the partial backfilling and flooding of the pit, PPM also intends to divert potable water from boreholes and water from the flooded pit to nearby communities for domestic and agricultural purposes. Although partial backfilling has commenced, the activities were done in accordance with the commitments provided for in the approved PPM EMPr Amendment to extend the West Pit – November 2011 (approved 16 April 2012). The conceptual closure project phases as set out below will be phased in over a period of ten years. Five years prior to closure of the pit, PPM needs to develop a Closure Plan for approval by the DMRE. PPM has commenced with the compilation of a Conceptual Closure Plan, which will be submitted to DMRE for approval.	16 April 2012
EMPRs for the expansion of the processing facilities at PPM	EMPr approved for the expansion of the processing facilities at PPM in terms of GN 544 of the Environmental Impact Assessment Regulations of 18 June 2010 for the following activities: <u>In terms of GN 544:</u> The construction of facilities or infrastructure for the storage, or for the storage and handling, of a dangerous goods, where such storage occurs in containers with a combined capacity of 80 m^3 but not exceeding 500 m^3 (listed activity 13); and The expansion of existing facilities for any process or activity where such expansion will result in the need for a new, or for an amendment of, an existing permit or licence in terms of national or provincial legislation governing the release of emissions or pollution, excluding where the facility, process or activity is included in the list of waste management activities published in terms of Section 19 of NEM:WA in which case that Act will apply. (listed activity 28). <u>In terms of GN 545:</u> The construction of facilities or infrastructure for the storage, or for the storage and handling, of a dangerous goods, where such storage occurs in containers with a combined capacity of more than 500 m^3 (listed activity 3); and The commencing of an activity, which requires an atmospheric emission licence in terms of Section 21 of the NEM:AQA, except where such commencement requires basic assessment in terms of Notice No. R544 of 2010. <u>In terms of GN 546:</u> The construction of facilities or infrastructure for the storage, or for the storage and handling, of a dangerous goods, where such storage occurs in containers with a combined capacity of 30 m^3 but not exceeding 80 m^3; and Outside urban areas, i.e., areas within 10 km from national parks or world heritage sites or five kilometres from any other protected area identified in terms of NEM:PAA or from the core area of a biosphere reserve. (listed activity 10(i)(gg)).	21 July 2020

Note:
1. The Tuschenkomst Pit is now known as the West Pit.

Table 20-2: All Approved EMPrs and Subsequent Amendments for SRL

EA and EMPr Report	Purpose (as per EMPr Report and as relevant at time of submission)	Date of Approval
Sedibelo Platinum Project EMPr – October 2007	Pre-construction and construction phase: The following activities commenced, but mining activities temporarily ceased in 2014: • Fence around Sedibelo mining area; • Mℓ concrete reservoir; • Clearance of topsoil stockpile area; • Clearance and widening of current access road for the main haul road; • Eskom substation; • Open pit area and removal of topsoil to some extent; and • Clearance of area for waste rock disposal.	20 June 2008
Sedibelo Amended EMPr – Changes to Surface Infrastructure at Sedibelo Platinum Mine – April 2015	Changes to infrastructure at the then-named Sedibelo Mine which include: Enlarging of the open pit; repositioning/redesigning of approved surface infrastructure; repositioning of the concentrator plant and shafts; and the redesign of the TSF and WRD to cater for additional mineralised waste; proposed additional surface infrastructure: including a shaft complex, WRDs, ventilation shafts, storm water management infrastructure including SWCDs, channels and berms, sewage pump stations, a helipad and a telecommunications mast; increase in capacity of the approved sewage treatment plant; and the exclusion of a portion of the IBMR MR area (referred to as the “Mineral Rights Abandonment Area”).	Not yet approved by DMRE

Other licences have been obtained by PPM, namely:

- WUL issued on 14 October 2020 (WUL 03/A24D/ACGU/2037 and File 16/2/7/A240/C161) (which supersedes the previous WUL under the same name issued in 2013);
- WUL issued on 16 August 2015 (WUL 03/A24D/ABCGIJ/2615 and File 27/2/2/A424/4/1) to IBMR, under PPM operations 5 for the Sedibelo Project by the Department of Water Affairs;
- Waste Management Licence, WML 12/96/11/L750/7 dated 14 February 2017, issued to PPM for extension of the (then named) Tuschenkomst Open Pit and Tuschenkomst Waste Rock Dump; establishment of three further WRDs and TSF on Wilgespruit 2JQ, Tuschenkomst 135JP and portions 1 and 2 of Rooderand 46JQ; and
- An AEL was issued on 1 August 2021 (BPDM/PAEL/4.17/July 2021).

Kruidfontein has an approved EMP for prospecting rights. The DMRE conditions provided in terms of Section 39(4) of the MPRDA include that “all mining activities must take place in accordance with the approved EMP”. Performance assessment reports were submitted to the DMRE between 2011 and 2013, indicating the extent of compliance with the approved EMP, the rehabilitation to be completed and the estimated cost thereof.

The renewed NOPR was valid until 10 August 2017. The Kruidfontein NOPR was part of a Section 102 application submitted on 9 May 2017 to be incorporated into the Sedibelo NOMR NW30/5/1/2/2/333MR. A MRA accepted by the DMRE in July 2017 was part of the Section 102 application to consolidate the three separate mineral rights (Sedibelo, Magazynskraal and Kruidfontein) into a single mining right under IBMR. The mineral rights that were awarded over Kruidfontein to C&L Mining and subsequently transferred to PPM, are summarised in Section 4.4.

An EIA process was initiated by SLR Consulting late in 2020 as part of the Section 102 application. The intent is to exploit the Kruidfontein mineral resources by using the existing PPM facilities and the approved footprint on Wilgespruit 2JQ, so that only shaft infrastructure to support mining on Kruidfontein will be required. The MRA will remain pending until the results of the EIA process, together with an EMPr in respect of the Section 102 consolidation application, have been submitted and authorisation is granted. The scoping report prepared as part of this process was rejected by DMRE on 26 September 2023, and an appeal was submitted to DFFE on 16 October 2023. An updated SLP in terms of the MPRDA Regulation 46 (a – f) was submitted to the DMRE in support of the Kruidfontein MRA and the Section 102 application.

Once the Section 102 consolidation is approved, the other permits, authorisations and licences, including a WUL and SLP, would have to be amended to reflect the consolidated project.

Mphahlele

A NOMR for the Mphahlele Project was granted based on a valid and approved EIA/EMPr. The proposed changes to the approved EIA/EMPr will need to reflect the changed project description and specialist investigations and environmental authorisation will be required prior to construction commencing. A WUL will need to be applied for and relevant specialist studies updated.

20.3.2 Social Aspects

Ruighoek, PSM and Kruidfontein

The mine is in possession of a valid SLP for the 2020 - 2024 five-year period, which includes the East Pit and Central and East Underground. In addition to commitments made in the 2020 - 2024 SLP, the settlement reached with the LLC in June 2020 also includes the establishment of a Community Development Trust for LLC to which PPM will contribute ZAR15m. A total of 50% of employment and 60% of preferential procurement opportunities will be reserved for Lesethleng community members. In addition, ZAR9m for development projects and 50% of bursaries, internships and learnerships will be reserved in the SLP.

An updated SLP in terms of the MPRDA Regulation 46 (a – f) was submitted to the DMRE in support of the Kruidfontein MRA and the Section 102 application. Once the appeal has been resolved, it will be necessary for the SLP to be revised to reflect the consolidated project.

Mphahlele

The project has an SLP for the period 2008 - 2012, which was reportedly approved by the DMRE. The SLP has not been implemented as this is dependent on the implementation of the NOMR. An overview of social compliance requirements associated with the mining activities planned for the project was undertaken as part of the 2020 FS and notes the need to revise the SLP.

As a result of the proximity of mining activity and established semi-urban areas and villages, the range of social issues to be addressed is more extensive than would be the case at a more remote mining site. To secure and retain the necessary social licence to operate, SRL will need to address the following challenges and risks:

- Levels of community expectations regarding benefits derived from mining;
- Legacy of past mining experiences on trust relationships;
- A variety of local governance structures; and
- A local history of community activism and protest related to high expectations for employment and procurement opportunities.

20.4 Agreements with Local Communities

Ruighoek, PSM and Kruidfontein

Formal access rights have been secured by SRL for access to the following:

- A portion of Portion 1 of the farm Rooderand 46JQ – owned by the State;
- A portion of the farm Legkraal 45JQ – owned by Bakgatla Bakgafela Communal Property Association; and
- A portion of the farm Koedoesfontein 2JQ – owned by Tchinangoe Pilane (1/6th), Tilimane Samuel Pilane (1/6th), Noel Pilane (1/6th) and the BBKT (1/2).

These agreements comprise:

- A notarial deed of lease entered into between IBMR, the BBKT and the Minister of Rural Development and Land Reform on 17 April 2012;
- A sub-lease agreement (the Sedibelo West lease agreement) entered into between IBMR, PPM and Sedibelo on or about 24 April 2012, in terms of which IBMR sub-leases certain of the properties to PPM; and
- A settlement agreement between PPM, IBMR and the LLC pursuant to which the LLC agreed to grant IBMR and PPM full and unhindered access to the farm Wilgespruit 2JQ.

At present there are no community agreements relevant to the Kruidfontein Project.

Mphahlele

At present there are no community agreements relevant to the Mphahlele Project.

20.5 Mine Closure Plans and Associated Costs

The LoM closure cost provisions included in the PEA assessment are given in Section 4.6.

SRK understands that the total figure of ZAR8 206m is based on SRL's interpretation of the closure obligations that arise from the authorisation documentation and legislation. Formal closure plans have not yet been developed for the various projects.

20.6 Adequacy of Plans to Address Compliance and Permitting

At a corporate level, SRL has commissioned the Isometrix Lumina System to record all Environmental, Social and Governance (ESG) data and enable seamless reporting across international ESG measurement indices.

20.6.1 PSM above 700 m below Surface

An Environmental Management System has been developed and is ISO 14001 certified. The following measures have been identified to address potential environmental and social risks and impacts:

- An Air Quality Management Plan has been developed and is being maintained;
- Scope 1 and 2 emissions are being reported on and there is a commitment to develop the Kell processing technology to reduce carbon emissions;
- Renewable energy projects (wind and solar) have been identified to reduce mining-related carbon emissions by about 50%;
- Water recycling measures have been put in place to achieve 35% of the mines' water needs;
- A waste management hierarchy is being implemented to prevent waste generation where possible, minimise waste and then either recycle or treat waste on-site. Landfill is considered to be the last option;
- A Heritage Management Plan and Chance Find Procedure to implement International Finance Corporation Performance Standard 8 requirements has been developed;
- A cooperation arrangement has been set up with the Bakgatla-Ba-Kgafela Tribal Authority (BBKTA), as an unencumbered 25.7% shareholder in SRL, which is entitled to seats on the Board. The BBKTA is the custodian of the communal land on which the mining rights are located;
- In alignment with SRL 's preferential procurement policy, the average spend on the local and district municipal areas over recent years has been 25%;
- Biodiversity monitoring and assessment tools were developed to integrate all commitments made in the approved EMPs;
- Surface water quality in general is regarded as a low risk but subject to uncertainty in some cases. This may extend to a requirement for post-closure water treatment. Surface water risks are being managed as follows:
  - Tailings slurry is being addressed through a water clarification optimisation project to minimise the suspended/colloidal solids in the process water;
  - Excess water in the pit is being addressed through a water management strategy;
  - All potential surface water impacts will be mitigated if the design of the FS-level SWMP is implemented;
- Dust nuisance will need to be actively managed to avoid complaints from nearby communities and other sensitive receptors;
- South Dam will provide water for communities and wildlife in the proposed Heritage Park Corridor and measures proposed in the groundwater and biodiversity studies will need to be implemented to ensure that water quality is maintained;
- Partial flooding of the West Pit on Tuschenkomst 135JP is a rehabilitation condition of the approved EMP, and should implement mitigation measures to minimise potential biodiversity impacts;
- Further studies are recommended to inform the proposed rediversion of the Wilgespruit River to ascertain a reserve determination of the Beerspruit catchment, which includes the Wilgespruit River;
- Further work is required to understand impacts on the biodiversity, which is potentially significant in the light of the proposed Heritage Park Corridor. PPM has updated the Biodiversity Action Plan (BAP) to mitigate biophysical impacts on the surrounding areas; and
- A Topsoil Management Plan at the new West Pit extension was developed and is being implemented.

Compliance audits are conducted in fulfilment of licence conditions and provide insights about the mine's environmental and social performance. Based on the review of available information, it appears that issues are generally well understood and can be managed. The 2020 FS concluded that there are no residual risks after mitigation. SRL continues to liaise with the authorities responsible for the Heritage Park Corridor area regarding the fencing during the operational phase and their removal upon closure. Heritage sites have been identified in the area and the EMP requires that any new sites are reported. This may constrain the development of the TSF.

Several improvements have been implemented since 2020, including:

- Waste management has improved on site through implementation of a dedicated plan and procedures;
- Informed by archaeological assessments, the mine intends to implement a Cultural Heritage Management Plan;
- Biomonitoring of alien invasive species is conducted in accordance with the BAP, which is regularly updated;
- Air Quality Management Plan will be updated to include the recommended GHG Management Plan; and
- A web-based compliance management system has been developed to track and manage regulatory compliance;

To retain the necessary social licence to operate, SRL must address challenges and risks on an ongoing basis throughout the LoM, as follows:

- Manage community expectations through integrated stakeholder engagement and grievance management;
- Fulfil SLP commitments;
- Ensure monitoring and close out of any outstanding issues relating to resettlement and compensation associated with East Pit and East Portal; and
- Develop and implement a stakeholder engagement plan.

20.6.2 PSM and Kruidfontein below 700 m below Surface

Prospecting activities were carried out next to existing roads wherever possible, limiting the disturbance to vegetation and topsoil. Areas disturbed prior to 2011 were rehabilitated and monitoring was conducted to determine risks to rehabilitated areas. Although progress reports were submitted to the DMRE in subsequent years, these documents were not available for review and the level of compliance with EMP conditions, especially relating to rehabilitation, could not be ascertained. It was noted during a site inspection that much of the area had been ploughed.

The Section 102 application for the incorporation of the Kruidfontein NOPR into the IBMR NOMR has not yet been approved. As part of the MRA process, the requisite environmental authorisations and permits will need to be obtained in line with environmental legislation.

20.6.3 Mphahlele

Mphahale is located in a water-stressed area, and water supply could pose a risk. It is anticipated that water will be sourced from the Lebalelo Water Scheme and a wellfield. The Lebalelo Water Scheme allocation is limited, and there may not be sufficient raw water for the project. The licensing process would need to be expedited to secure water supply. Supplementary supply from the wellfield may result in a reduction in groundwater levels/availability.

Sound environmental management systems should be established from the outset to manage impacts related to surface subsidence and disturbance of 450 ha of land, which supports local livelihoods. In addition, the following social issues will require further attention from SRL:

- The update of the Stakeholder Engagement Strategy developed by MTS in October 2020;
- Develop a Stakeholder Engagement Plan, including a formal grievance mechanism, informed by an updated stakeholder needs analysis; and
- Build capacity in the SRL stakeholder engagement function, with dedicated resources to the Mphahalele Project.

20.7 Commitments for Local Procurement and Hiring

20.7.1 PSM and Kruidfontein

West Pit and East Pit

SRL has a Preferential Procurement Policy in place to maximise opportunities for HDSAs to supply goods and services. It is committed to meeting the procurement targets as set out by the Mining Charter Scorecard: i.e., 70% procurement of South African manufactured mining goods (capital and consumables combined; 80% of services to be sourced from South African-based companies; research and development (70%) and sample analysis (100%).

To this end, SRL has committed to the preferential procurement targets set out in Table 20-3, which also presents the actual percentage and procurement spend for the period January to December 2020.

SRL reports good progress in achieving procurement targets especially against the categories of mining goods and consumables. Although the achievement of preferential procurement against services fluctuates over the five-year period, the mine endeavours to procure its goods and services from HDSA companies especially those that are situated locally and within surrounding areas.

SRL has a strong focus on local recruitment as a mechanism to decrease the negative impact it may have on the local community. The target is to employ 30% of its workforce from the local community, 25% from the District Municipality and a further 25% of its workforce from the North West Province. Entry-level positions will be filled from the local community with only positions that cannot be filled locally advertised and filled from outside the local community. Highly skilled labour will be sought from other areas within South Africa, if not available in the local community. SRL's skills development programmes have been aligned to enable unskilled employees (especially from the local communities) to gain access to skills and career development opportunities offered by the company.

Table 20-3: Preferential Procurement Targets at SRL (January to December 2020)

Element	Target Group	Target (%)	Actual Score (%)	Procurement Value (ZARm)
Percentage of Mining goods procurement to be on South African manufactured goods (Capital and Consumables combined).	HDP	21	28.44	101.9
	Women-owned/ Youth-owned	5	2.17	7.8
	BEE	44	69.39	248.6
Percentage of Services to be sourced from a South African-based Company	HDP	21	34.74	518.0
	Women-owned	15	8.16	121.7
	Youth-owned	5	0.14	2.2
	BEE	10	56.9	849.0
Research and Development	Research and Development budget to be spend on SA-based entities	70	100	0.9
Sample Analysis	SA-based companies to be used for mineral samples across the value chain	100	100	5.0
Total				**1 855.1**

Note:
1. HDP Historically Disadvantaged Persons

Central Underground and East Underground

SRL has implemented a preferential procurement policy and will maintain this policy as a standard operating procedure. The objective of the preferential procurement policy is to maximise opportunities for HDSAs to supply goods and services to the operations. This will contribute to the development of sustainable HDSA business enterprises, and to the purchasing and procurement requirements of the MPRDA and Mining Charter III. SRL is committed to procuring goods and services from the local communities wherever possible, as well as HDSA suppliers, and will report on the progress thereof through an Annual SLP Report.

SRL has a strong focus on local recruitment as a mechanism to decrease the negative impact it may have on the local community. The target is to employ 30% of its workforce from the local community, 25% from the District Municipality and a further 25% of its workforce from the North West Province. Entry-level positions will be filled from the local community, with only positions that cannot be filled locally, advertised and filled from outside the local community. Highly skilled labour will be sought from other areas within South Africa, if not available in the local community. SRL's skills development programmes have been aligned to enable unskilled employees (especially from the local communities) to gain access to skills and career development opportunities offered by the Company.

20.7.2 Mphahlele

SRL has implemented a preferential procurement policy and will maintain this policy as a standard operating procedure. The objective of the preferential procurement policy is to maximise opportunities for HDSAs to supply goods and services to the SRL operations. This will contribute to the development of sustainable HDSA business enterprises, and to the purchasing and procurement requirements of the MPRDA and Mining Charter III. SRL is committed to procuring goods and services from the local communities wherever possible, as well as HDSA suppliers, and will report on the progress thereof through an Annual SLP Report.

SRL has a strong focus on local recruitment as a mechanism to decrease the negative impact it may have on the local community. The target is to employ 30% of its workforce from the local community, 25% from the District Municipality and a further 25% of its workforce from the Limpopo Province. Entry-level positions will be filled from the local community with only positions that cannot be filled locally advertised and filled from outside the local community. Highly skilled labour will be sought from other areas within South Africa, if not available in the local community. SRL’s skills development programmes have been aligned to enable unskilled employees (especially from the local communities) to gain access to skills and career development opportunities offered by company.

21 Capital and Operating Costs

21.1 Capital Costs

The Capex cost summary and Capex contingencies for the various projects discussed in this PEA is shown in Table 21-1.

The total Capex and contingencies for the Western Limb and the Eastern Limb projects are shown in Table 21-2.

Table 21-1: Capex and Contingencies for the Western Limb and Eastern Limb Assets

Item	Unit	Open Pit Operations			Underground Operations					
		West Pit Ruig-hoek	East Pit	PSM above 700 mbs	PSM below 700 mbs and Kruidfontein				Mphahlele	
					Central Decline	East Decline	Magazyns-kraal Shaft	Kruidfon-tein Shaft	Mphahlele Decline	Mphahlele Shaft
Exploration capex	(ZARm)	-	24	-	43	79	435	676	110	435
Pre-implementation	(ZARm)	-	58	-	581	1 006	257	358	600	257
Mining and infrastructure	(ZARm)	-	911	-	6 433	6 243	11 543	12 117	11 881	11 282
Surface Infrastructure	(ZARm)	-	248	-	2 623	3 005	4 127	4 491	543	2 722
Surface Services	(ZARm)	-	212	-	-	206	372	372	1 106	-
Metallurgical Processing	(ZARm)	421	-	-	2 090	3 153	2 294	2 021	5 453	2 600
Closure liability	(ZARm)	565	2 793	2 870	95	239	414	448	356	298
Contingency	(ZARm)	133	498	144	1 068	1 346	5 105	5 235	4 997	4 002
Total Capex	**(ZARm)**	**1 119**	**4 744**	**3 014**	**12 932**	**15 277**	**24 546**	**25 718**	**25 046**	**21 596**
Contingency	(%)	13.5%	11.7%	5.0%	9.0%	9.7%	26.3%	25.6%	24.9%	22.7%

Table 21-2: Total SRL Capex

Item	Units	Western Limb Projects	Eastern Limb Projects	SRL Total
Capex	(ZARm)	87 350	46 642	133 991
Contingency	(%)	23.5%	23.9%	23.8%

In Table 21-1, capex for the Kell Plants are included in Metallurgical Processing Capex and capex for the ore transport rail system is distributed between the relevant operations. The Tailings Retreatment Plant Capex and contingemcy is allocated to the West Pit. Contingencies for the Kell plants, the ore transport and the Tailings Retreatment Plant capex are each estimated at 25%.

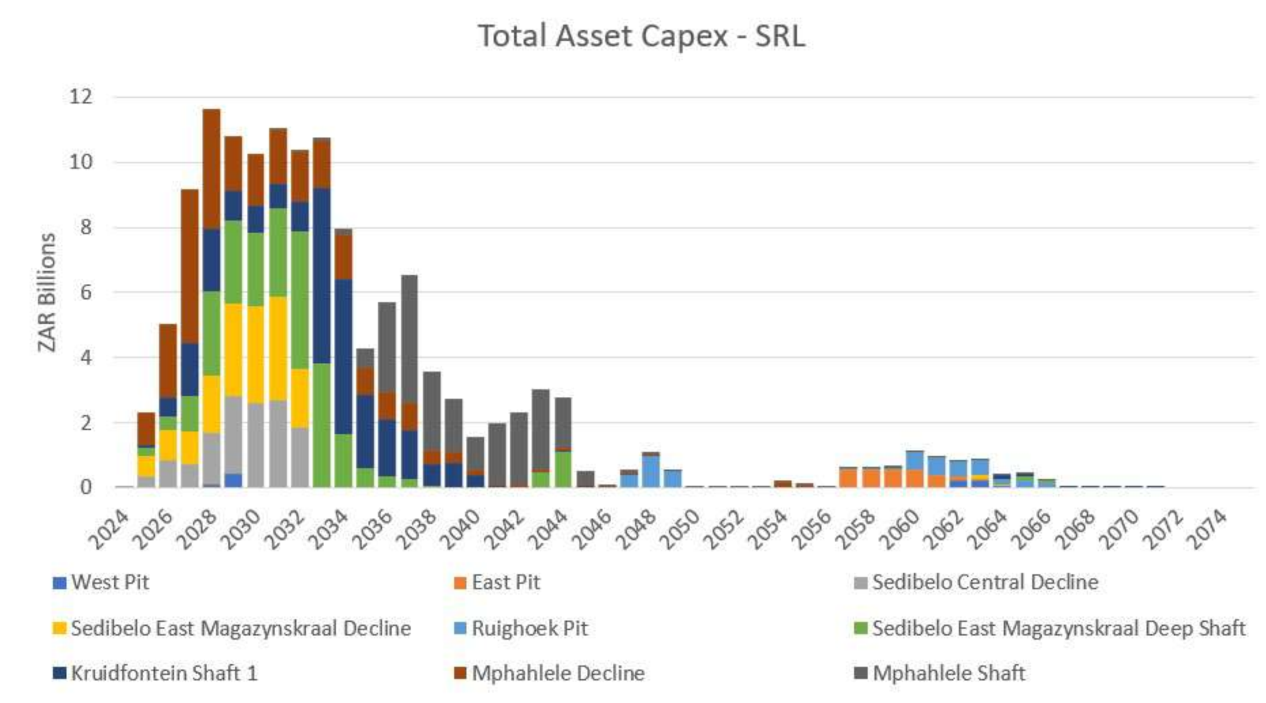
The Capex for PSM above 700 mbs and Mphahlele Decline projects were derived from first principles and zero-based budgeting exercises as part of feasibility studies completed in 2020 and recosted to an effective date of 31 December 2021. These have been escalated to the effective date of this TR. The vertical shaft projects were based on conceptual designs with benchmarked and escalated shaft costs.

Capex for PSM above 700 mbs and the Mphahlele Decline project are seen to have an accuracy of ±25%. The vertical shaft projects are each seen to have an accuracy of ±50%.

The contingencies applied were 5% (East Pit), 13.5% (West Pit TRR), and 9% and 9.7% for Central and East Underground, respectively. Mphahlele Decline (24.9%), Mphahlele Shaft (22.7%), Magazynskraal Shaft (26.3%) and Kruidfontein Shaft 1 (25.6%) are seen as reasonable for the level of confidence in the respective cost estimates. The contingency applied to the Western Limb is 18.3% and the Eastern Limb is 23.9%. SRL overall capital contingency is 20.2%. In the opinion of SRK, considering the above, the contingencies applied are considered adequate such that the estimates are unlikely to be materially wrong at the effective date.

21.1.1 Phased Capex

The phasing of the total Capex for the various projects over the LoM is shown graphically in Figure 21-1.

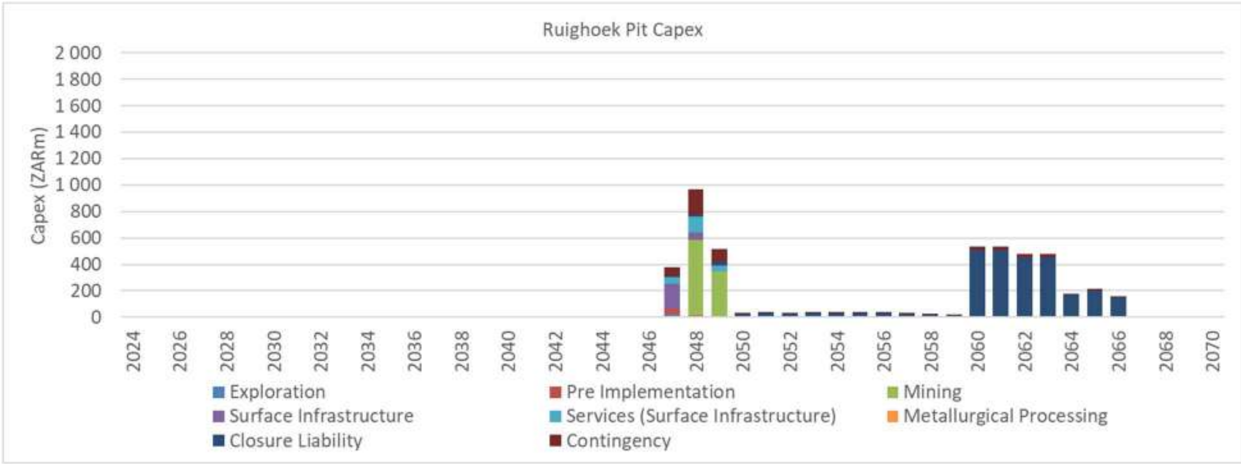


srk consulting	**SRL Total Asset PEA** Annual Phased Capital for Various Projects over LoM	Project No. 600322

Figure 21-1: Annual Phased Capital for Various Projects over LoM

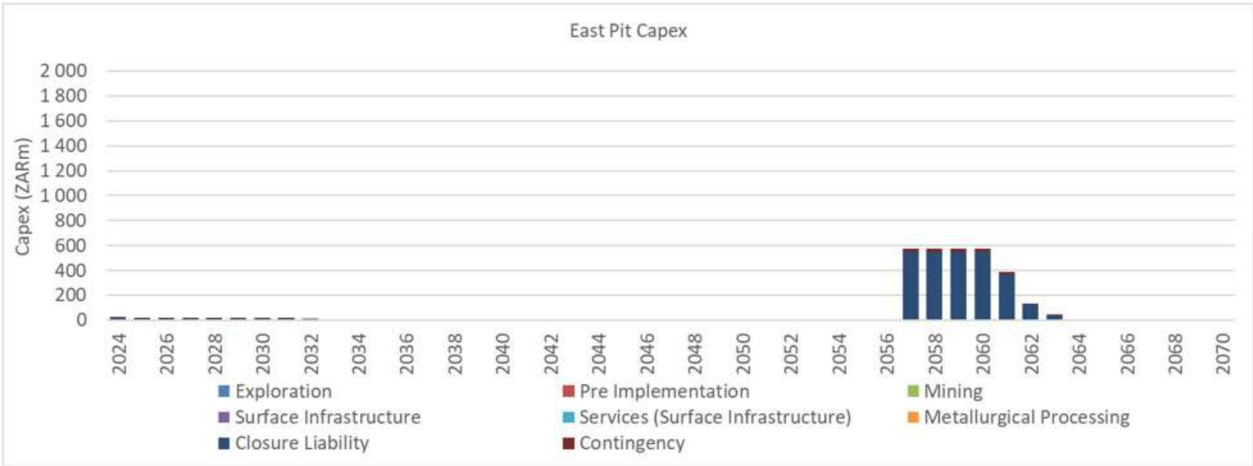
The phased Capex for the various properties and projects over the LoM are illustrated graphically as follows:

- Ruighoek Pit Figure 21-2;
- East Pit Figure 21-3;
- West Pit (TRR) Figure 21-4;
- Central Underground Figure 21-5;
- East Underground Figure 21-6;
- Magazynskraal Shaft Figure 21-7Table 17-8;
- Kruidfontein Shaft Figure 21-8;
- Mphahlele Decline Figure 21-9; and
- Mphahlele Shaft Figure 21-10.



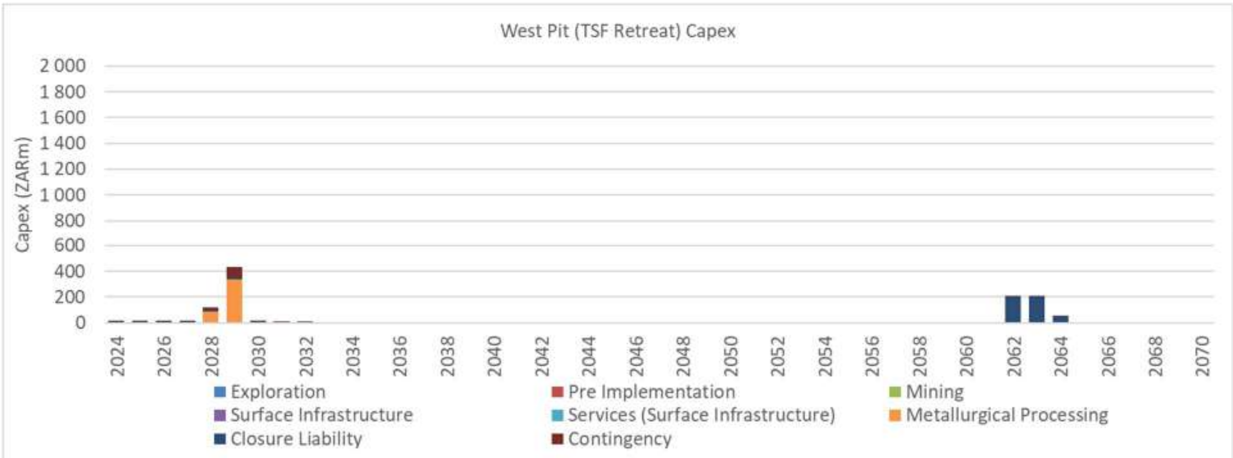
srk consulting	**SRL Total Asset PEA** Ruighoek Phased Capex over LoM	Project No. 600322

Figure 21-2: Ruighoek Phased Capex over LoM



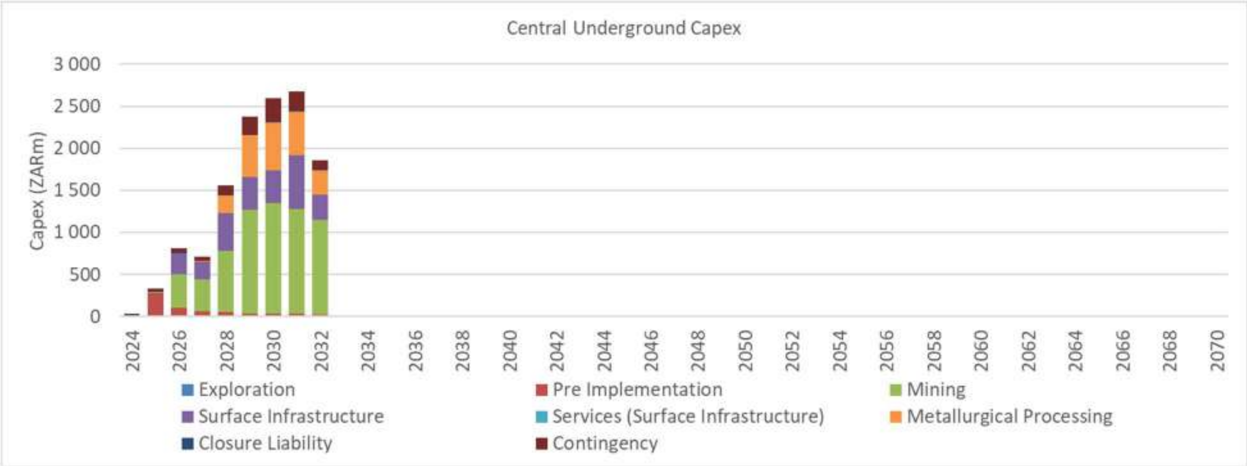
srk consulting	**SRL Total Asset PEA** East Pit Phased Capex over LoM	Project No. 600322

Figure 21-3: East Pit Phased Capex over LoM



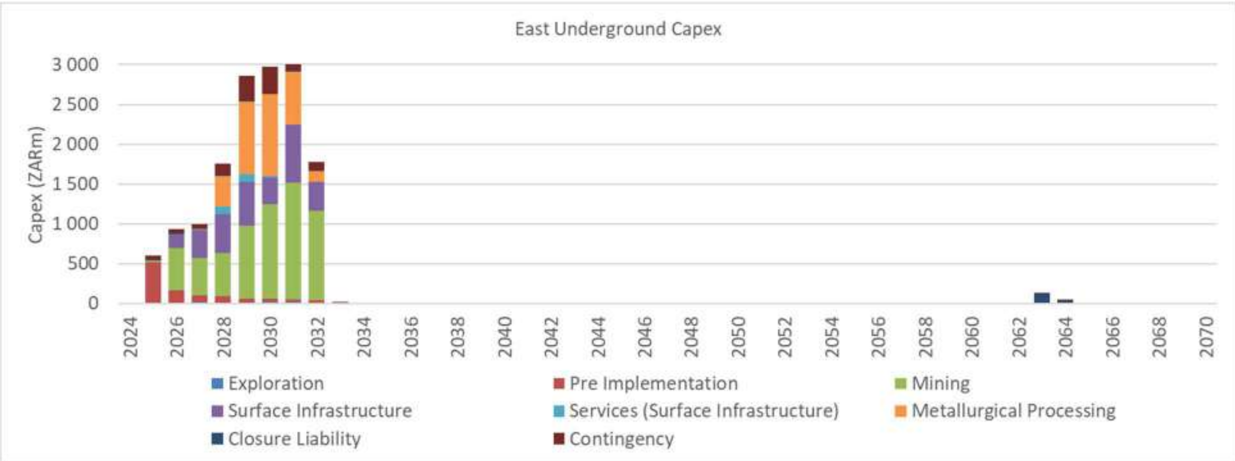
srk consulting	**SRL Total Asset PEA** West Pit TRR: Phased Capex over LoM	Project No. 600322

Figure 21-4: West Pit TRR: Phased Capex over LoM



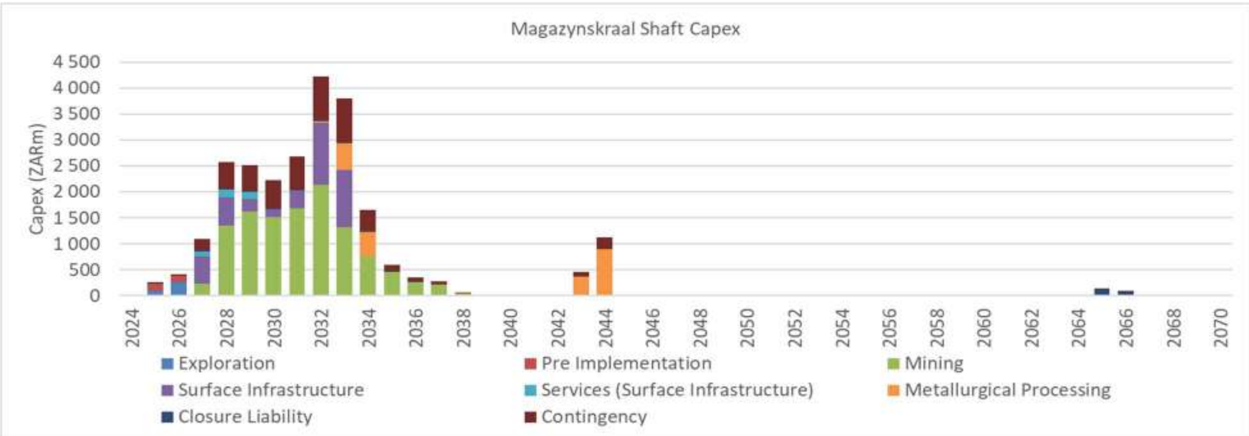
srk consulting	**SRL Total Asset PEA** Central Underground Phased Capex over LoM	Project No. 600322

Figure 21-5: Central Underground Phased Capex over LoM



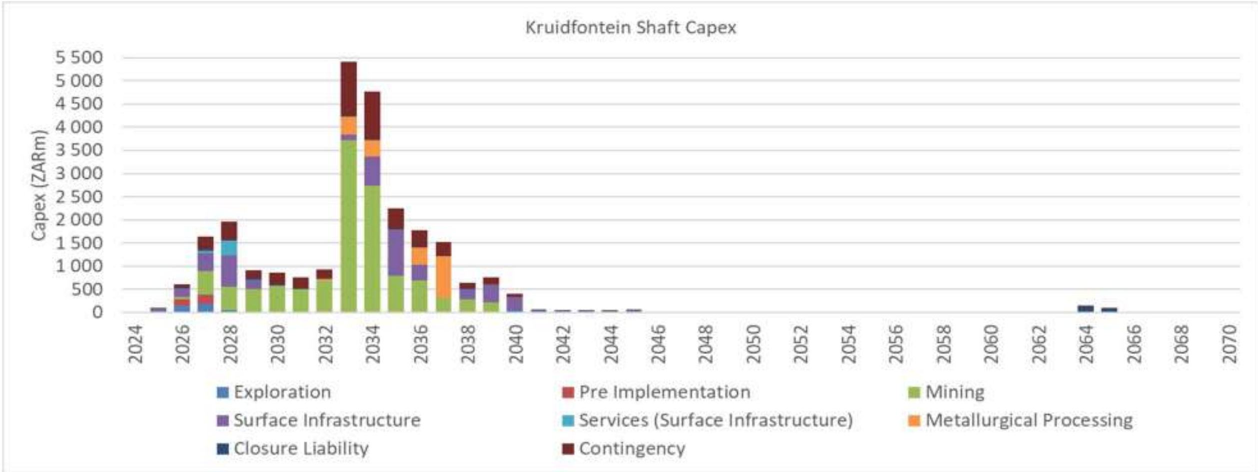
srk consulting	**SRL Total Asset PEA** East Underground Phased Capex over LoM	Project No. 600322

Figure 21-6: East Underground Phased Capex over LoM



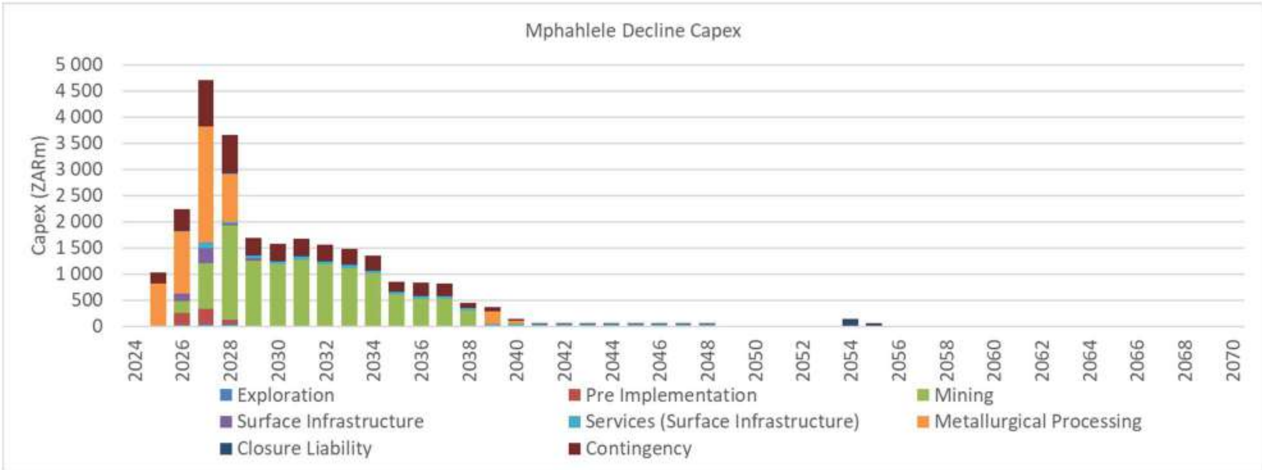
srk consulting	**SRL Total Asset PEA** Magazynskraal Shaft Phased Capex over LoM	Project No. 600322

Figure 21-7: Magazynskraal Shaft Phased Capex over LoM



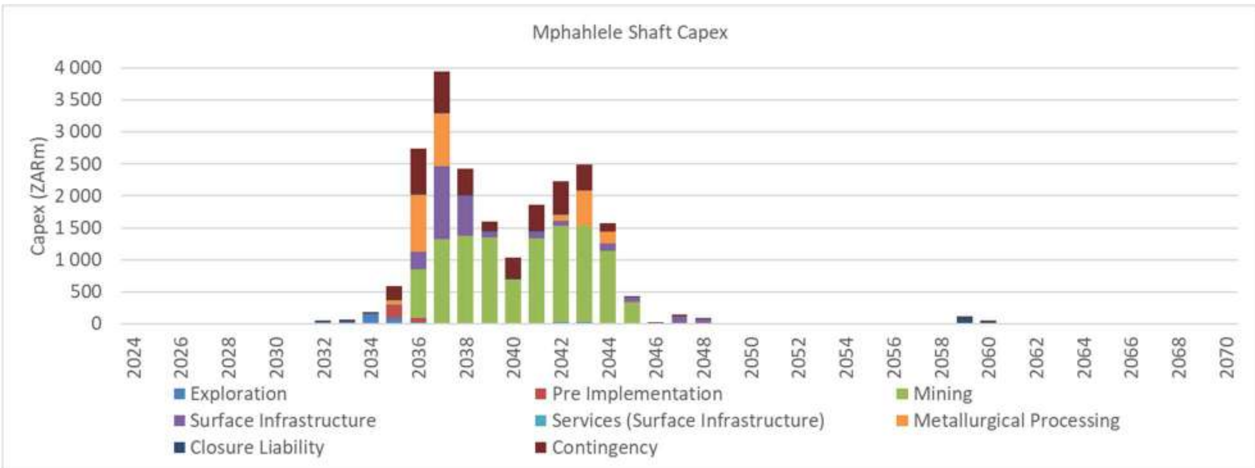
srk consulting	**SRL Total Asset PEA** Kruidfontein Shaft Phased Capex over LoM	Project No. 600322

Figure 21-8: Kruidfontein Shaft Phased Capex over LoM



srk consulting	**SRL Total Asset PEA** Mphahlele Decline Phased Capex over LoM	Project No. 600322

Figure 21-9: Mphahlele Decline Phased Capex over LoM



srk consulting	**SRL Total Asset PEA** Mphahlele Shaft Phased Capex over LoM	Project No. 600322

Figure 21-10: Mphahlele Shaft Phased Capex over LoM

21.2 Operating Costs

21.2.1 Mining Opex

The mining Opex for the various project components at steady state are illustrated in Table 21-3; the selected years for the steady-state mining costs for the different components are included.

The mining Opex for the East Pit reflect the actual costs as set out in the mining contracts for the East Pit, with a 5% general contingency applied.

The same contractor rates for East Pit are applied to mining at the Ruighoek Pit, except for the higher ore transport costs. The overall contingency applied to the Ruighoek mining costs is 36%.

The mining Opex for the hydro-monitoring of the tailings in the PPM TSF uses typical industry rates, to which a 25% contingency has been added.

The underground mining Opex for the PSM above 700 mbs (Central and East Underground) derived from first principles and zero-based budgeting exercises as part of feasibility study completed in 2020, which have been escalated to the effective date of this TR. The zero-based budgeting process involved use of the mine design criteria, quotes or OEM suppliers' costs for specific activities, benchmarked labour costs, priced bills of quantity and experience of the PGM industry. The Opex for these two projects is seen to have an accuracy of ±25%, with a 5% general contingency included.

The mining Opex for the Mphahlele Decline has been escalated from the feasibility study completed in 2009 to the effective date of this TR, with a 32% contingency added.

The mining Opex for the PSM components Magazynskraal Shaft, Kruidfontein Shaft and Mphahlele Shaft of this TR were compiled using typical industry costs and benchmarked costs from similar operations in South Africa. The Opex for these three projects is seen to have an accuracy of ±50%, with general contingencies included of respectively, 33%, 32% and 28%.

21.2.2 Processing Plant Opex

Concentrators

Steady-state processing (concentrator) costs for the various components in selected years are illustrated in Table 21-4 The costs are based on the actual costs at PPM's silicate and UG2 concentrators for 2023 and factored to match the respective plant capacities.

Variable contingencies of 5.2% (East Pit), 5.8% (Central and East Underground), 25% (Mphahlele) and 31% (Magazynskraal and Kruidfontein) are included, on a similar basis as for the mining Opex.

CRP

Steady-state CRP costs for the various project components in selected years are illustrated in Table 21-5. The CRP costs apply only to the UG2 plant feed. The CRP Opex are based on the actual costs at PPM's CRP plant for 2023 and adjusted to match the respective plant capacities.

There is no CRP installed at Mphahlele, hence the zero costs. There is no CRP cost for the Ruighoek ore since SRL does not hold the chrome rights for this property.

Contingencies of 5% are applied for the East Pit and Central and East Underground, with 25% contingencies applied for the other projects.

TSP

Steady-state TSP costs for the various project components in selected years are illustrated in Table 21-6. The TSP Opex are based on the actual costs at PPM's TSP for 2023 and adjusted to match the respective plant capacities.

Contingencies of 5% are applied for the East Pit, Central and East Underground, with 25% contingencies applied for the other projects.

The TRP costs are similar to the TSP costs, but apply only to the retreating of the tailings from the PPM TSF.

Rados (Mphahlele only)

The Rados operating cost is based on a proof of concept plant that was operated at PPM and is applied as a cost per tonne of plant feed.

This only applies to the UG2 ore mined at the Mphahlele project components.

Laboratory

The laboratory cost is based on the actual costs at PPM in 2023 and treated as a fixed cost, and factored to match the production rates at the various projects.

21.2.3 Kell and Refining Opex

Kell

The aggregate of the Kell treatment costs, recovery and royalties payable to KTSA in terms of the Kellplant Licence Agreement at steady-state production levels for the various project components are shown inTable 21-7. An average payability is shown as the agreement provides for different recoveries/payabilities for the various 6E metals (PGMs) and the base metals (Ni and Cu). The contingency applied to the Kell costs is 25%.

Smelting and Refining

The aggregate of the smelting and refining cost per the Impala Refining Services (IRS) agreement, net of penalties for high chromite content, at steady-state production levels for the various project components are shown in Table 21-7. An average payability for the various 6E metals (PGMs) and the base metals (Ni and Cu) for each of the project components at steady-state is given. Contingencies of 5% are applied for the East Pit, Central and East Underground, with 25% contingencies applied for the other projects.

21.2.4 General and Administration Opex

The general and administration (G&A) Opex for the various project components are based on the actual annual admin costs for PPM in 2023, as shown in Table 21-8.

Table 21-8: G&A Opex Summary

Contingencies of 5% are applied for the East Pit, Central Underground and East Underground, with 25% contingencies applied for the other projects.

The SHEQ Opex includes environmental Opex of ZAR18.4m per year to cover annual rehabilitation guarantee fees, environmental services (monitoring) and other environmental charges.

An annual provision of ZAR108m is included to cater for corporate overheads (off-mine G&A costs). The SRL corporate cost centre includes budget provisions for the additional costs associated with being a listed entity and related extra reporting obligations.

Table 21-3: Mining Opex Summary

Item	Units	Open Pit Operations			Underground Operations					
					PSM above 700 mbs		PSM below 700 mbs and Kruidfontein		Mphahlele	
		West Pit (Retreat TSF) (Year 2039)	Ruighoek Pit (Year 2051)	East Pit (Year 2049)	Central Decline (Year 2039)	East Decline (Year 2039)	Magazynskraal Shaft (Year 2043)	Kruidfontein Shaft (Year 2043)	Mphahlele Decline (Year 2036)	Mphahlele Shaft (Year 2050)
RoM Ore Mined	(Mt)	3.60	0.65	2.12	1.29	1.33	2.27	1.96	2.51	2.71
Fixed Costs										
Labour	(ZARm)	-	9.4	36.6	526.5	621.3	1 461.5	1 357.9	1 004.9	1 852.8
Contractor P&Gs	(ZARm)	-	16.6	64.8	-	-	-	-	-	-
Cover Drilling / *Mining Overheads*	(ZARm)	-	25.7	100.0	7.9	9.3	21.9	20.3	15.0	27.7
Variable Costs										
Haulages / *Drilling*	(ZARm)	-	101.1	393.5	101.6	119.9	281.9	261.9	193.8	357.4
Panels/edges / *Blasting*	(ZARm)	-	70.4	274.0	240.9	284.3	668.7	621.3	459.7	847.7
Ore Passes / *Waste Mining*	(ZARm)	-	370.3	1 442.0	205.4	242.4	570.1	529.7	392.0	722.7
Ventilation / *Ore Mining*	(ZARm)	82.5	47.4	184.4	0.2	0.2	0.6	0.5	0.4	0.7
Refrigeration	(ZARm)	-	-	-	-	-	50.0	82.0	-	89.8
Backfill / *Overhaul*	(ZARm)	-	20.4	79.3	-	-	128.4	110.8	-	-
Other Development / *Diesel Rebate*	(ZARm)	-	(27.1)	(105.5)	38.6	45.5	107.1	99.5	73.6	135.7
Total Mining Costs	(ZARm)	82.5	634.1	2 469.3	1 121.0	1 322.9	3 290.0	3 083.9	2 139.5	4 034.7
Ore Transport Costs	(ZARm)	-	21.8	-	17.8	23.0	17.0	14.2	-	-
Contingency	(ZARm)	20.6	239.1	123.5	56.9	67.3	1 089.2	1 001.0	689.2	1 123.3
Total Mining Cost (to plant)	**(ZARm)**	**103.2**	**895.0**	**2 592.7**	**1 195.7**	**1 413.2**	**4 396.2**	**4 099.1**	**2 828.6**	**5 158.0**
Unit Costs:										
Unit Mining Cost	(ZAR/t RoM)	23	978	1 163	866	994	1 448	1 573	853	1 487
Unit Cost (delivered to plant)	(ZAR/t RoM)	29	1 381	1 221	923	1 062	1 934	2 090	1 128	1 901

Note:
1. Cover Drilling / *Mining Overheads* – text in normal font relates to UG mining; *text in italics relates to open pit operations.*
2. Opex for Mphahlele represent 100% of the costs for the operation.

Table 21-4: Concentrator Plant Opex Summary

Item	Units	Open Pit Operations			Underground Operations					
		West Pit (Retreat TSF) (Year 2039)	Ruighoek Pit (Year 2051)	East Pit (Year 2049)	PSM above 700 mbs		PSM below 700 mbs and Kruidfontein		Mphahlele	
					Central Decline (Year 2039)	East Decline (Year 2039)	Magazynskraal Shaft (Year 2043)	Kruidfontein Shaft (Year 2043)	Mphahlele Decline (Year 2036)	Mphahlele Shaft (Year 2050)
Mill feed	(Mt)	-	0.65	2.12	1.29	1.33	2.27	1.96	1.83	1.98
Fixed Costs										
Labour	(ZARm)	-	40.73	146.32	80.9	84.5	142.8	123.2	95.2	103.0
Utilities – Power	(ZARm)	-	3.87	13.91	7.7	8.0	13.6	11.7	9.1	9.8
Engineering Maintenance	(ZARm)	-	14.19	50.96	28.2	29.4	49.7	42.9	33.2	35.9
Process Maintenance	(ZARm)	-	5.63	20.21	11.2	11.7	19.7	17.0	13.2	14.2
Planning	(ZARm)	-	0.24	0.86	0.5	0.5	0.8	0.7	0.6	0.6
Laboratory	(ZARm)	-	8.25	29.65	16.4	17.1	28.9	25.0	19.3	20.9
Variable Costs										
Rados Cost	(ZARm)	-	-	-	-	-	-	-	56.3	60.9
Utilities - Power	(ZARm)	-	57.24	205.64	113.7	118.7	200.7	173.2	133.8	144.8
Utilities – Water	(ZARm)	-	2.37	8.51	4.7	4.9	8.3	7.2	5.5	6.0
Engineering Maintenance	(ZARm)	-	12.79	45.95	25.4	26.5	44.9	38.7	29.9	32.4
Grinding Media	(ZARm)	-	19.21	69.02	38.2	39.8	67.4	58.1	44.9	48.6
Reagents	(ZARm)	-	27.76	99.74	55.2	57.6	97.4	84.0	64.9	70.2
Process Maintenance	(ZARm)	-	5.07	18.22	10.1	10.5	17.8	15.3	11.9	12.8
Contingency	(ZARm)	-	54.6	37.1	22.8	23.8	217.1	187.3	132.6	140.3
Total Processing Cost	**(ZARm)**	**-**	252.0	746.1	415.0	433.1	909.2	784.4	594.0	639.5
Unit Cost to Plant	(ZAR/t mill feed)	-	388.8	351.3	320.5	325.3	400.1	400.0	324.4	322.8

Table 21-5: CRP Opex Summary

Item	Units	Open Pit Operations			Underground Operations					
		West Pit (Retreat TSF) (Year 2039)	Ruighoek Pit (Year 2051)	East Pit (Year 2049)	PSM above 700 mbs		PSM below 700 mbs and Kruidfontein		Mphahlele	
					Central Decline (Year 2039)	East Decline (Year 2039)	Magazynskraal Shaft (Year 2043)	Kruidfontein Shaft (Year 2043)	Mphahlele Decline (Year 2036)	Mphahlele Shaft (Year 2050)
UG2 Milled	(Mt)	-	-	2.12	1.29	1.33	2.27	1.96	-	-
Fixed Costs										
Labour	(ZARm)	-	-	9.7	5.9	6.1	28.9	24.9	-	-
Utilities – Power	(ZARm)	-	-	0.8	0.5	0.5	2.3	2.0	-	-
Engineering Maintenance	(ZARm)	-	-	6.3	3.9	4.0	18.9	16.3	-	-
Variable Costs										
Utilities - Power	(ZARm)	-	-	11.4	7.0	7.1	34.0	29.3	-	-
Engineering Maintenance	(ZARm)	-	-	6.3	3.9	4.0	18.9	16.3	-	-
Reagents	(ZARm)	-	-	-	-	-	-	-	-	-
Contingency	(ZARm)	-	-	1.7	1.1	1.1	25.8	22.2	-	-
Total CRP Cost	**(ZARm)**	**-**	**-**	36.3	22.1	22.7	128.8	110.9	**-**	**-**
Unit Cost for CRP	(ZAR/t UG2 feed)	-	-	17	17	17	57	57	-	-

Table 21-6: TSP/TRP Opex Summary

Item	Units	Open Pit Operations			Underground Operations					
		West Pit (Retreat TSF) (Year 2039)	Ruighoek Pit (Year 2051)	East Pit (Year 2049)	Central Decline (Year 2039)	East Decline (Year 2039)	Magazynskraal Shaft (Year 2043)	Kruidfontein Shaft (Year 2043)	Mphahlele Decline (Year 2036)	Mphahlele Shaft (Year 2050)
					PSM above 700 mbs		PSM below 700 mbs and Kruidfontein		Mphahlele	
Tailings feed	(Mt)	3.60	0.64	2.10	1.27	1.31	2.23	1.92	2.11	1.87
Fixed Costs										
Labour	(ZARm)	25.4	3.4	11.2	7.0	7.3	12.0	10.3	11.2	10.0
Utilities – Power	(ZARm)	1.3	0.2	0.6	0.4	0.4	0.6	0.5	0.6	0.5
Engineering Maintenance	(ZARm)	17.2	2.3	7.6	4.8	4.9	8.1	7.0	7.6	6.8
Variable Costs										
Utilities - Power	(ZARm)	19.4	2.6	8.6	5.4	5.6	9.1	7.9	8.5	7.7
Engineering Maintenance	(ZARm)	17.2	2.3	7.6	4.8	4.9	8.1	7.0	7.6	6.8
Reagents	(ZARm)	75.8	10.2	33.5	21.0	21.8	35.7	30.7	33.4	29.9
Contingency	(ZARm)	7.8	5.3	3.4	2.2	2.2	18.4	15.8	17.2	15.4
Total TSP Cost	**(ZARm)**	164.1	26.3	72.4	45.5	47.1	91.9	79.2	86.0	77.2
Unit cost for TSP	(ZAR/t tails feed)	46	41	34	36	36	41	41	41	41

Note:
1. The TRP applies only to the retreatment of the tails in the PPM TSF.
2. Opex for Mphahlele represent 100% of the costs for the operation

Table 21-7: Kell and Refining Opex Summary

Item	Units	Open Pit Operations			Underground Operations					
		West Pit (Retreat TSF) (Year 2039)	Ruighoek Pit (Year 2051)	East Pit (Year 2049)	PSM above 700 mbs		PSM below 700 mbs and Kruidfontein		Mphahlele	
					Central Decline (Year 2039)	East Decline (Year 2039)	Magazynskraal Shaft (Year 2043)	Kruidfontein Shaft (Year 2043)	Mphahlele Decline (Year 2036)	Mphahlele Shaft (Year 2050)
Kelll										
Concentrate Feed	(kt)	-	10.5	22.1	23.4	22.0	46.2	43.2	30.6	13.5
Concentrate Transport Cost	(ZARm)	-	1.4	2.6	2.6	2.6	6.6	6.4	4.1	1.8
Refining Cost (net of royalties)	(ZARm)	-	90.6	157.1	211.0	177.1	396.5	371.3	263.1	115.7
Contingency	(ZARm)	-	23.0	39.9	53.4	44.9	100.8	94.4	66.8	19.4
Total Kell Cost	(ZARm)	-	115.0	199.6	267.0	224.6	503.9	472.1	334.0	136.9
Net Payability	(%)	-	94.7%	89.7%	88.7%	89.3%	89.5%	89.6%	89.3%	89.3%
Refining and Smelting (IRS)										
Concentrate Feed	(kt)	13	2.0	4.8	4.4	4.3	7.0	6.0	6.0	2.7
Concentrate Transport Cost	(ZARm)	1.5	0.2	0.6	0.5	0.5	0.8	0.7	3.3	1.5
Refining Cost (net of Cr_2O^3 penalties)	(ZARm)	51.9	8.3	20.3	18.5	18.0	28.9	24.9	24.7	11.1
Contingency	(ZARm)	13.3	2.1	1.0	0.9	0.9	7.4	6.4	7.0	3.1
Total Smelting and Refining Cost	(ZARm)	66.7	10.6	22.0	19.9	19.5	37.1	32.0	35.0	15.7
Net Payability	(%)	85.0%	86.3%	85.0%	83.0%	83.2%	83.4%	83.8%	82.3%	82.3%

Note:
1. Opex for Mphahlele represent 100% of the costs for the operation.
2. IRS Impala Refining Services.

Table 21-8: G&A Opex Summary

Item	Units	OPEN PIT OPERATIONS			UNDERGROUND OPERATIONS					
		West Pit (Retreat TSF) (Year 2039)	Ruighoek Pit (Year 2051)	East Pit (Year 2049)	PSM above 700 mbs		PSM below 700 mbs and Kruidfontein		Mphahlele	
					Central Decline (Year 2039)	East Decline (year 2039)	Magazynskraal Shaft (Year 2043)	Kruidfontein Shaft (Year 2043)	Mphahlele Decline (Year 2036)	Mphahlele Shaft (Year 2050)
Human Resources	(ZARm)	0.1	50.1	92.6	82.1	83.3	175.6	151.5	93.8	101.5
Finance	(ZARm)	0.1	34.8	64.3	57.0	57.8	121.9	105.2	65.2	70.5
Auxiliary Services and Security	(ZARm)	0.0	16.3	30.1	26.7	27.1	57.1	49.3	30.5	33.0
SHEQ	(ZARm)	0.0	19.1	35.2	31.2	31.7	66.8	57.6	35.7	38.6
IT	(ZARm)	0.0	6.1	11.2	9.9	10.1	21.3	18.4	11.4	12.3
Stores	(ZARm)	0.0	0.8	1.4	1.2	1.3	2.7	2.3	1.4	1.5
Community Relations	(ZARm)	0.0	2.8	5.3	4.7	4.7	10.0	8.6	5.3	5.8
MRM	(ZARm)	0.2	149.5	276.5	245.2	248.7	524.3	452.4	280.1	303.1
Labour / other	(ZARm)	0.0	20.0	37.0	32.8	33.2	70.1	60.5	37.4	40.5
Contingency	(ZARm)	0.1	74.8	27.7	24.5	24.9	262.4	226.4	140.2	151.7
Total G&A Cost	(ZARm)	0.6	374.2	581.3	515.5	522.8	1312.1	1132.2	701.1	758.7

Note:

1. Opex for Mphahlele represent 100% of the costs for the operation

21.3 Risks with Engineering Estimation Methods

21.3.1 Capital Costs Risks

PSM - Central Underground and East Underground and Mphahlele Decline

The Capex for PSM above 700 mbs and the Mphahlele Decline project were derived from first principles and zero-based budgeting exercises as part of feasibility studies completed in 2020 and recosted to an effective date of 31 December 2021. These have been escalated to the effective date of this TR together with some conceptual level modifications. Capex for PSM above 700 mbs and the Mphahlele Decline project are seen to have an accuracy of ±25%.

Magazynskraal Shaft, Kruidfontein Shaft and Mphahlele Shaft

The vertical shaft projects were based on conceptual designs with benchmarked and escalated shaft costs.The vertical shaft projects are each seen to have an accuracy of ±50%.

Estimation of capital and operating costs is inherently a forward-looking exercise. The estimates reported in this TR rely upon a range of assumptions and forecasts that are subject to change depending upon macro-economic conditions, operating strategy and new data collected through future operations. For this TR, capital costs are considered to be at a PEA level, with an expected accuracy of ±25 to 50% depending on the project. However, this accuracy level is only applicable to the base case operating scenario and forward-looking assumptions outlined in this report. Therefore, changes in these forward-looking assumptions can result in capital and operating costs that deviate more than 50% from the costs forecast herein. In the opinion of SRK, considering the above, the contingencies applied are adequate such that the estimates are unlikely to be materially wrong. The contingencies applied were 5% (East Pit), 13.5% (West Pit TRR), and 9% and 9.7% for Central and East Underground, respectively. Mphahlele Decline (24.9%), Mphahlele Shaft (22.7%) Magazynskraal Shaft (26.3%) and Kruidfontein Shaft 1 (25.6%), are seen as reasonable for the level of confidence in the respective cost estimates.

21.3.2 Operating Costs Risks

All Opex are deemed to be correct at the Effective Date of this PEA.

Mining Opex

The basis for the mining Opex varies from zero-based budgets as part of FSs of different vintages, current open pit contracts at the time of cost curtailment of operations to typical industry costs and benchmarking.

The range of contingencies applied, from 5% (East Pit, East and Central Underground) to 28% to 32% for Mphahlele, Magazynskraal and Kruidfontein, are seen as reasonable for the level of confidence in the respective cost estimates.

The risk that the derived mining costs, with inclusion of the contingencies, are materially too low is considered to be low.

Processing Opex

The processing plant Opex are based on the actual costs at PPM’s silicate and UG2 concentrators for 2023, factored to match the respective plant capacities.

Variable contingencies of 5.2% (East Pit), 5.8% (Central and East Underground), 25% (Mphahlele) and 31% (Magazynskraal and Kruidfontein) are applied to the concentrator costs.

Contingencies of 5% are applied for the TSP and CRP plants for the the East Pit and Central and East Underground projects, with 25% contingencies applied for the other projects. CRP costs do not apply to Ruighoek or Mphahlele.

The risk that the derived processing costs, with inclusion of the contingencies, are materially too low is considered to be low.

Kell and Refining Opex

The Kell Opex is based on the rates set out in the FS, escalated to the Effective Date.

The refining Opex is based on the rates set out in the IRS agreement.

Contingencies of 5% are applied to the costs for East Pit and Central and East Underground, with 25% contingencies applied to the other projects.

The risk that the derived Kell and refining costs, with inclusion of the contingencies, are materially too low is considered to be low.

G&A Opex

The G&A costs are based on the actual costs at PPM in 2023, factored to match the expected requirements for each project.

Contingencies of 5% are applied for the East Pit and Central and East Underground, with 25% contingencies applied for the other projects.

The risk that the derived G&A costs, with inclusion of the contingencies, are materially too low is considered to be low.

22 Economic Analysis

The economic analysis is inherently a forward-looking exercise to assess the potential viability of Mineral Resources. The estimates in this PEA rely upon a range of assumptions and forecasts that are subject to change depending upon macro-economic conditions, operating strategy and new data collected through future operations. The economic assessment described here is premised on a preliminary economic assessment with LoM plans that exploit both Mineral Reserves and Mineral Resources.

The Mineral Reserves are derived from the FS done for the PSM and Mphahlele Projects in 2020 as reported by SRK (2022a) and SRK (2022b), respectively.

This PEA includes Inferred Mineral Resources in the LoM plans that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as Mineral Reserves. There is no certainty that this economic assessment will be realised.

This PEA assumes that there is no restriction on the availability of capital or funding needed to implement the various projects.

The impact of this PEA on the results of previous feasibility studies is considered in section 25.10.4.

22.1 Key Assumptions, Parameters and Factors

The discussion in this section relates to the TEM compiled by SRL (2024) for this PEA in an MS Workbook *PEA Model rev170 - 20240409 - 8.08.xlsb*.

SRK has reviewed this TEM and confirms that the calculation processes from input TEPs to final economic results are correct.

22.1.1 Production Schedules

The mining production schedules for the various projects are set out in Table 16-25 to Table 16-33 and not repeated here.

The values for the Mphahlele Decline and Shaft projects are presented on a 100% basis, and not what is attributable to SRL.

22.1.2 Plant Feed

The processing production schedules, including TSP/TRP and CRP production, for the various projects are set out in Table 17-3: Ruighoek: Predicted Plant Performance (2048 to 2056) to Table 17-11, and not repeated here. The consolidated plant feed is shown in Figure 17-.

The volumes of high-grade and low-grade PGM concentrates from the concentrators and TSP/TRP circuits for the various projects are included in these tables. The volumes of chromite concentrate produced from the CRP circuits for the various projects are also included in these tables.

The values for the Mphahlele Decline and Shaft projects are presented on a 100% basis, and not what is attributable to SRL.

22.1.3 Payable Metal Schedules

The payable metal schedules after Kell processing and refining/smelting for the various projects are set out in Table 19-4 to Table 19-12, and not repeated here. The average 4E and base metal recoveries/payabilities of metals after refining are presented.

The values for the Mphahlele Decline and Shaft projects are presented on a 100% basis, and not what is attributable to SRL.

22.1.4 Environmental Closure and Monitoring

Environmental closure costs include contributions to insurance guarantees and the expected amounts to undertake the physical closure process in terms of EMP obligations.

Environmental monitoring costs are provided for at least five years after the end of LoM.

22.1.5 Separation Benefit

No specific separation benefit at end of LoM is provided. However, the amounts provided in closure liabilities for the various project components are seen to be sufficient to cover any separation benefit or retraining of mine personnel.

22.1.6 Commodity Prices and Exchange Rates

The SFA/Consensus price deck as set out in Table 19-2 is used as the base case for evaluation purposes.

The financial results using the three-year trailing average and spot values at 31 December 2023 (Table 19-1) are provided for comparison.

22.1.7 Taxation and Royalties

The company tax rate is 27% of taxable income. With the implementation of the reduced tax rate, the amount of assessed loss that can be used in any year was also reduced to only 80% of such loss.

Capex in any year is deductible in full against operating profit in any given year. Operating losses or Capex not redeemed in full in any year can be carried forward into subsequent years.

The Unredeemed Capex and Assessed Losses for the Western and Eastern Limb assets at 31 December 2023, which provide tax shields in the calculation of cash flows in the TEM are shown in Table 22-1.

Table 22-1: Unredeemed Capex and Associated Losses

Asset	Unredeemed Capex (ZARm)	Assessed Loss (ZARm)
Western Limb (PPM)	7 453.6	1 924.8
Eastern Limb (Tameng)	376.4	2.5

The MPRDA Royalty on the PGM and base metal revenue is calculated according to the refined formula as set out in Section 4.3.5, with a maximum royalty of 5% of gross revenue. For the revenue from the chromite concentrate, deemed an unrefined product, the maximum royalty is 7% of gross revenue.

To satisfy the requirements of the Mining Charter III and the various SLPs, the Company has included the following provisions in the Opex for each project component:

- Housing Compliance 1% of Annual Labour Cost;
- Human Resource Development 5% of Annual Labour Cost;
- Enterprise/Supplier Development 3% of Net Profit After Tax (NPAT); and
- Local Economic Development projects 1% of NPAT.

22.1.8 Revenue / Opex Schedules

Summary revenue and Opex schedules for the various projects are set out as follows:

- Ruighoek Pit Table 22-2;
- East Pit Table 22-3;
- West Pit TRR Table 22-4;
- Central Underground Table 22-5;
- East Underground Table 22-6;
- Magazynskraal Shaft Table 22-7;
- Kruidfontein Shaft Table 22-8;
- Mphahlele Decline Table 22-9; and
- Mphahlele Shaft Table 22-10.

Table 22-2: Ruighoek - Predicted Revenue/Opex (2048 to 2056)

Item	Units	Totals / Averages	2048	2049	2050	2051	2052	2053	2054	2055	2056
Revenue	**(ZARm)**	37 115	2 537	5 099	5 992	4 693	5 143	5 040	3 861	3 757	993
Revenue (6E PGM)	(ZARm)	36 402	2 483	4 990	5 881	4 599	5 036	4 939	3 796	3 701	977
Revenue (Cu/Ni)	(ZARm)	713	54	108	111	94	107	101	65	56	16
Revenue (Cr2O3)	(ZARm)	0	0	0	0	0	0	0	0	0	0
Operating Cost	**(ZARm)**	12 783	922	1 881	1 969	1 613	1 812	1 794	1 296	1 178	317
Mining / Ore Transport Cost	(ZARm)	5 206	376	766	802	657	738	731	528	480	129
Concentrator / Milling	(ZARm)	1 564	113	230	241	197	222	220	159	144	39
CRP	(ZARm)	0	0	0	0	0	0	0	0	0	0
TSP	(ZARm)	167	12	25	26	21	24	23	17	15	4
Kell / Refining	(ZARm)	909	66	134	140	115	129	128	92	83	22
SIB	(ZARm)	233	17	34	36	29	33	33	24	21	6
General & Admin	(ZARm)	2 377	171	350	366	300	337	334	241	219	59
Contingency	(ZARm)	2 328	168	343	359	294	330	327	236	215	58
Operating Profit	**(ZARm)**	24 332	1 615	3 218	4 023	3 080	3 331	3 246	2 565	2 579	676
Unit Cost	(ZAR/t RoM)	2 489	2 489	2 489	2 489	2 489	2 489	2 489	2 488	2 487	2 488
	(ZAR/4E oz)	29 495	30 711	31 293	27 938	29 117	29 831	30 444	29 464	27 753	28 180

Table 22-3: PSM – East Pit: Predicted Revenue/Opex (2048 to 2059)

Item	Units	Totals / Averages	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059
Revenue	**(ZARm)**	70 312	4 128	8 713	9 071	9 340	9 440	9 540	6 118	3 521	3 421	2 451	2 983	1 586
Revenue (6E PGM)	(ZARm)	65 741	3 869	8 167	8 499	8 770	8 870	8 971	5 680	3 147	3 072	2 337	2 845	1 513
Revenue (Cu/Ni)	(ZARm)	1 340	67	117	121	119	118	118	119	118	118	113	138	73
Revenue (Cr2O3)	(ZARm)	3 231	192	430	451	451	452	450	318	256	231	0	0	0
Operating Cost	**(ZARm)**	22 899	2 376	4 286	4 012	2 778	2 438	2 266	1 056	952	924	629	765	416
Mining / Ore Transport Cost	(ZARm)	9 696	1 386	2 469	2 192	1 475	1 155	993	25	0	0	0	0	0
Concentrator / Milling	(ZARm)	7 009	380	709	719	719	720	719	658	629	609	399	485	266
CRP	(ZARm)	325	18	35	35	35	35	35	27	21	21	22	26	14
TSP	(ZARm)	720	36	69	70	70	70	70	69	70	68	44	54	29
Kell / Refining	(ZARm)	1 919	101	200	209	214	215	218	176	142	139	107	130	69
SIB	(ZARm)	856	64	118	114	99	92	89	62	58	56	36	44	24
General & Admin	(ZARm)	1 603	318	553	553	58	58	58	5	0	0	0	0	0
Contingency	(ZARm)	770	73	133	120	108	92	84	35	32	31	21	25	14
Operating Profit	**(ZARm)**	47 412	1 752	4 427	5 059	6 562	7 002	7 274	5 062	2 568	2 497	1 821	2 218	1 170
Unit Cost	(ZAR/t RoM)	1 040	1 148	1 006	982	700	634	606	16 882	0	0	0	0	0
	(ZAR/4E oz)	28 394	50 860	43 937	39 475	26 528	23 043	21 171	15 102	23 204	22 958	19 636	19 607	20 062

Table 22-4: PSM – West Pit TRR: Predicted Revenue/Opex (2029 to 2042)

Item	Units	Totals / Averages	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
Revenue	**(ZARm)**	19 612		1 560	1 248	1 091	1 155	1 217	1 278	1 341	1 472	1 657	1 795	2 130	2 130	1 539
Revenue (6E PGM)	(ZARm)	19 612		1 560	1 248	1 091	1 155	1 217	1 278	1 341	1 472	1 657	1 795	2 130	2 130	1 539
Revenue (Cu/Ni)	(ZARm)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Revenue (Cr2O3)	(ZARm)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Operating Cost	**(ZARm)**	4 277		338	337	337	336	336	336	336	336	336	336	336	336	243
Mining / Ore Transport Cost	(ZARm)	1 050		83	83	83	83	83	83	83	83	83	83	83	83	60
Concentrator / Milling	(ZARm)	0		0	0	0	0	0	0	0	0	0	0	0	0	0
TSP	(ZARm)	1 988		156	156	156	156	156	156	156	156	156	156	156	156	113
Kell / Refining	(ZARm)	660		52	52	52	52	52	52	52	52	52	52	52	52	37
SIB	(ZARm)	0		0	0	0	0	0	0	0	0	0	0	0	0	0
General & Admin	(ZARm)	31		5	3	3	2	2	2	2	2	2	2	2	2	2
Contingency	(ZARm)	548		43	43	43	43	43	43	43	43	43	43	43	43	31
Operating Profit	**(ZARm)**	15 334		1 222	911	754	819	881	942	1 006	1 136	1 321	1 459	1 794	1 794	1 296
Unit Cost	(ZAR/t RoM)	93		94	94	93	93	93	93	93	93	93	93	93	93	93
	(ZAR/4E oz)	13 313		13 392	13 345	13 325	13 296	13 296	13 296	13 296	13 296	13 296	13 296	13 296	13 296	13 325

Table 22-5: PSM – Central Underground: Predicted Revenue/Opex (2024 to 2051)

Item	Units	Totals / Averages	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
Revenue	**(ZARm)**	248 484	-	-	-	-	-	1 069	2 552	6 845	7 311	7 880	8 003	8 399	8 696	9 757
Revenue (6E PGM)	(ZARm)	239 797	-	-	-	-	-	1 002	2 435	6 493	6 903	7 469	7 589	7 982	8 276	9 315
Revenue (Cu/Ni)	(ZARm)	263	-	-	-	-	-	1	2	8	9	8	9	9	9	9
Revenue (Cr2O3)	(ZARm)	8 424	-	-	-	-	-	66	116	345	399	403	405	408	412	433
Operating Cost	**(ZARm)**	44 786	7	412	363	703	1 279	1 358	1 319	1 631	2 103	2 020	2 023	2 021	2 083	2 181
Mining / Ore Transport Cost	(ZARm)	21 452	-	254	227	545	1 079	1 121	987	995	1 046	978	980	966	1 021	1 071
Concentrator / Milling	(ZARm)	6 111	-	-	-	-	-	0	0	83	335	335	334	334	329	332
CRP	(ZARm)	317	-	-	-	-	-	0	0	4	16	16	16	16	16	17
TSP	(ZARm)	661	-	-	-	-	-	0	0	9	35	35	35	35	34	35
Kell / Refining	(ZARm)	4 374	-	-	-	-	-	25	50	145	167	174	171	175	176	187
SIB	(ZARm)	1 854	-	-	-	-	-	0	0	25	113	107	107	106	110	115
General & Admin	(ZARm)	8 997	6	148	127	133	148	158	236	322	338	322	328	339	344	370
Contingency	(ZARm)	1 021	1	10	9	25	51	54	47	48	55	52	52	51	53	54
Operating Profit	**(ZARm)**	203 697	-7	-412	-363	-703	-1 279	-289	1 233	5 214	5 208	5 861	5 980	6 378	6 613	7 576
Unit Cost	(ZAR/t RoM)	2 181	0	0	0	9 171	5 585	2 249	1 346	1 659	2 133	2 054	2 058	2 055	1 925	1 765
	(ZAR/4E oz)	14 764	0	0	0	0	0	68 357	37 535	13 958	14 823	13 919	14 459	14 411	15 024	15 314

Item	Units	Totals / Averages	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051
Revenue	**(ZARm)**	248 484	11 559	14 921	18 486	18 680	20 413	19 324	18 072	19 242	20 440	21 051	5 782	-	-	-
Revenue (6E PGM)	(ZARm)	239 797	11 075	14 378	17 923	18 123	19 861	18 766	17 499	18 681	19 884	20 518	5 626	-	-	-
Revenue (Cu/Ni)	(ZARm)	263	13	30	25	18	21	15	5	11	15	39	7	-	-	-
Revenue (Cr2O3)	(ZARm)	8 424	471	514	538	540	531	543	568	549	541	495	149	-	-	-
Operating Cost	**(ZARm)**	44 786	2 431	2 534	2 645	2 571	2 612	2 514	2 323	2 356	2 332	2 175	645	11	11	11
Mining / Ore Transport Cost	(ZARm)	21 452	1 213	1 139	1 129	1 067	1 066	1 004	872	868	817	672	203	10	10	10
Concentrator / Milling	(ZARm)	6 111	351	392	397	396	396	395	397	395	396	396	117	-	-	-
CRP	(ZARm)	317	18	21	21	21	21	21	21	21	21	21	6	-	-	-
TSP	(ZARm)	661	38	43	44	44	44	44	44	44	44	44	13	-	-	-
Kell / Refining	(ZARm)	4 374	208	267	301	302	332	311	285	310	333	358	96	-	-	-
SIB	(ZARm)	1 854	128	125	125	120	120	115	105	104	101	89	27	1	1	1
General & Admin	(ZARm)	8 997	414	491	577	573	586	578	560	575	585	567	174	-	-	-
Contingency	(ZARm)	1 021	60	55	51	48	47	44	39	38	35	28	8	1	1	1
Operating Profit	**(ZARm)**	203 697	9 128	12 387	15 842	16 109	17 801	16 810	15 749	16 886	18 109	18 876	5 138	-11	-11	-11
Unit Cost	(ZAR/t RoM)	2 181	1 810	1 886	1 988	1 914	1 949	1 874	1 743	1 929	2 873	0	0	-	-	-
	(ZAR/4E oz)	14 764	16 094	13 819	13 767	13 281	12 299	12 566	12 532	11 822	10 964	9 752	10 649	-	-	-

Notes:

1. Totals extend to 2061, although entries up to 2051 only shown.
2. Concentrator/Milling, CRP and TSP Opex for 2029 and 2030 are zero, as these were capitalised in the 2020 FS in terms of SRL's policy.

Table 22-6: PSM – East Underground: Predicted Revenue/Opex (2024 to 2065)

Item	Units	Totals / Averages	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
Revenue	**(ZARm)**	356 089	-	-	-	-	-	3 488	4 465	6 140	5 863	6 485	6 739	7 161	8 189	9 855
Revenue (6E PGM)	(ZARm)	341 330	-	-	-	-	-	3 236	4 257	5 796	5 501	6 117	6 365	6 785	7 772	9 385
Revenue (Cu/Ni)	(ZARm)	1 798	-	-	-	-	-	7	15	29	37	40	42	42	45	47
Revenue (Cr2O3)	(ZARm)	12 961	-	-	-	-	-	245	193	315	324	329	332	334	371	424
Operating Cost	**(ZARm)**	86 459	25	543	526	625	978	1 324	1 576	1 759	2 325	2 507	2 469	2 498	2 515	2 565
Mining / Ore Transport Cost	(ZARm)	42 645	18	396	336	426	774	1 038	1 116	1 110	1 262	1 419	1 376	1 386	1 340	1 298
Concentrator / Milling	(ZARm)	11 748	-	-	-	-	-	-	-	84	334	335	335	335	357	385
CRP	(ZARm)	585	-	-	-	-	-	-	-	4	16	16	16	16	17	19
TSP	(ZARm)	1 232	-	-	-	-	-	-	-	9	35	35	35	35	37	41
Kell / Refining	(ZARm)	6 476	-	-	-	-	-	76	85	133	144	158	163	170	186	205
SIB	(ZARm)	4 062	-	-	-	-	-	0	0	28	130	142	139	139	138	137
General & Admin	(ZARm)	17 734	6	130	176	180	168	161	321	337	340	328	334	344	370	413
Contingency	(ZARm)	1 976	1	17	14	19	36	49	53	54	65	74	71	71	69	66
Operating Profit	**(ZARm)**	269 631	-25	-543	-526	-625	-978	2 164	2 889	4 382	3 537	3 979	4 270	4 663	5 673	7 290
Unit Cost	(ZAR/t RoM)	2 261	0	0	76 394	12 099	4 254	3 916	2 859	1 931	2 378	2 549	2 511	2 540	2 359	2 168
	(ZAR/4E oz)	20 188	0	0	0	0	0	20 320	24 907	16 342	19 767	20 150	19 943	19 796	18 309	17 067

Item	Units	Totals / Averages	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051
Revenue	**(ZARm)**	356 089	12 075	12 578	15 095	14 449	13 917	14 082	13 771	13 804	14 031	13 718	13 107	12 971	12 442	12 412
Revenue (6E PGM)	(ZARm)	341 330	11 539	12 034	14 546	13 903	13 372	13 537	13 234	13 269	13 494	13 189	12 585	12 454	11 923	11 895
Revenue (Cu/Ni)	(ZARm)	1 798	49	49	49	48	46	46	55	62	64	73	73	71	72	70
Revenue (Cr2O3)	(ZARm)	12 961	486	494	500	498	499	499	483	473	473	456	448	447	447	447
Operating Cost	**(ZARm)**	86 459	2 742	2 754	2 844	2 835	2 864	2 853	2 816	2 708	2 784	2 734	2 718	2 763	2 735	2 940
Mining / Ore Transport Cost	(ZARm)	42 645	1 353	1 346	1 347	1 355	1 373	1 373	1 353	1 234	1 277	1 203	1 208	1 224	1 202	1 354
Concentrator / Milling	(ZARm)	11 748	415	409	409	409	409	409	409	409	408	408	424	410	410	410
CRP	(ZARm)	585	22	22	22	22	22	22	22	22	22	22	22	22	22	22
TSP	(ZARm)	1 232	45	45	45	45	45	45	45	45	45	45	45	43	43	43
Kell / Refining	(ZARm)	6 476	227	225	243	231	221	225	227	235	238	238	228	224	217	216
SIB	(ZARm)	4 062	144	143	143	144	145	145	144	134	138	132	137	139	137	149
General & Admin	(ZARm)	17 734	467	498	572	566	587	570	553	572	599	634	600	649	654	690
Contingency	(ZARm)	1 976	68	66	63	63	63	64	64	57	58	52	55	52	51	57
Operating Profit	**(ZARm)**	269 631	9 332	9 824	12 251	11 614	11 053	11 229	10 955	11 096	11 247	10 984	10 388	10 208	9 707	9 472
Unit Cost	(ZAR/t RoM)	2 261	2 074	2 069	2 131	2 130	2 151	2 142	2 110	2 035	2 091	2 054	2 037	2 076	2 054	2 209
	(ZAR/4E oz)	20 188	16 779	17 504	17 780	18 577	19 526	19 187	19 197	18 256	18 465	18 422	19 188	19 736	20 353	21 944

Item	Units	Totals / Averages	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065
Revenue	**(ZARm)**	356 089	12 649	12 624	13 328	13 350	13 599	13 624	10 077	6 761	6 516	6 726	0	0	0	0
Revenue (6E PGM)	(ZARm)	341 330	12 129	12 107	12 807	12 841	13 091	13 129	9 714	6 526	6 298	6 501	0	0	0	0
Revenue (Cu/Ni)	(ZARm)	1 798	71	70	74	79	85	78	67	54	43	45	0	0	0	0
Revenue (Cr2O3)	(ZARm)	12 961	448	447	447	430	422	417	296	181	176	180	0	0	0	0
Operating Cost	**(ZARm)**	86 459	2 935	2 800	2 826	2 789	2 837	2 745	2 475	2 255	2 029	1 593	0	6	-117	-37
Mining / Ore Transport Cost	(ZARm)	42 645	1 329	1 201	1 198	1 211	1 241	1 193	1 173	1 127	894	582	0	0	0	0
Concentrator / Milling	(ZARm)	11 748	410	410	410	410	410	406	319	321	394	349	0	0	0	0
CRP	(ZARm)	585	22	22	22	22	22	21	17	11	10	10	0	0	0	0
TSP	(ZARm)	1 232	43	43	43	43	43	44	35	29	30	28	0	0	0	0
Kell / Refining	(ZARm)	6 476	220	220	235	239	248	240	179	130	123	126	0	0	0	0
SIB	(ZARm)	4 062	147	137	134	131	134	131	122	117	104	76	0	0	0	0
General & Admin	(ZARm)	17 734	709	720	739	683	687	659	581	470	428	392	0	6	-123	-39
Contingency	(ZARm)	1 976	55	48	47	50	51	50	48	51	45	29	0	0	6	2
Operating Profit	**(ZARm)**	269 631	9 713	9 825	10 502	10 560	10 762	10 879	7 603	4 506	4 488	5 133	0	-6	117	37
Unit Cost	(ZAR/t RoM)	2 261	2 199	2 103	2 123	2 096	2 126	2 085	2 405	3 243	3 430	2 335	0	43	-17 280	0
	(ZAR/4E oz)	20 188	21 466	20 507	19 526	19 123	18 973	18 484	22 481	29 881	28 108	21 376	0	0	0	0

Notes:
1. Totals include costs up to 2070.
2. Concentrator/Milling, CRP and TSP Opex for 2029 and 2030 are zero, as these were capitalised in the 2020 FS in terms of SRL's policy.

Table 22-7: Magazynskraal Shaft: Predicted Reveune/Opex (2025 to 2066)

Item	Units	Totals / Averages	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
Revenue	**(ZARm)**	664 769	-	-	-	-	-	-	3	32	313	1 214	3 095	7 809	14 870	20 269
Revenue (6E PGM)	(ZARm)	649 702	-	-	-	-	-	-	2	30	298	1 161	2 967	7 510	14 366	19 683
Revenue (Cu/Ni)	(ZARm)	4 130	-	-	-	-	-	-	0	0	1	5	13	39	88	142
Revenue (Cr2O3)	(ZARm)	10 937	-	-	-	-	-	-	0	2	13	48	116	260	417	444
Operating Cost	**(ZARm)**	196 348	-	-	-	-	-	-	2	27	181	671	1 632	3 787	6 456	7 634
Mining / Ore Transport Cost	(ZARm)	86 299	-	-	-	-	-	-	1	12	80	295	717	1 663	2 835	3 353
Concentrator / Milling	(ZARm)	17 907	-	-	-	-	-	-	0	3	18	65	157	361	607	703
CRP	(ZARm)	2 571	-	-	-	-	-	-	0	0	3	12	28	63	100	106
TSP	(ZARm)	1 900	-	-	-	-	-	-	0	0	2	7	17	39	65	75
Kell / Refining	(ZARm)	13 749	-	-	-	-	-	-	0	1	8	30	78	194	370	504
SIB	(ZARm)	12 739	-	-	-	-	-	-	0	2	12	45	108	251	425	497
General & Admin	(ZARm)	27 210	-	-	-	-	-	-	0	4	27	99	238	549	923	1 069
Contingency	(ZARm)	33 972	-	-	-	-	-	-	0	5	32	119	289	668	1 132	1 326
Operating Profit	**(ZARm)**	468 421	-	-	-	-	-	-	0	5	131	543	1 463	4 022	8 414	12 635
Unit Cost	(ZAR/t RoM)	3 339	-	-	-	-	-	-	3 152	3 152	3 152	3 152	3 170	3 194	3 238	3 306
	(ZAR/4E oz)	25 332	-	-	-	-	-	-	51 417	42 244	30 540	30 631	30 439	28 967	27 827	26 411

Item	Units	Totals / Averages	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052
Revenue	**(ZARm)**	664 769	22 877	25 288	26 125	25 532	26 424	27 637	28 358	28 078	29 121	28 555	28 872	29 086	28 227	29 305
Revenue (6E PGM)	(ZARm)	649 702	22 275	24 719	25 535	24 959	25 839	27 039	27 744	27 478	28 498	27 936	28 246	28 454	27 611	28 670
Revenue (Cu/Ni)	(ZARm)	4 130	157	148	147	144	146	165	163	161	175	170	177	179	167	176
Revenue (Cr2O3)	(ZARm)	10 937	444	421	443	430	440	432	451	439	448	449	449	453	449	458
Operating Cost	**(ZARm)**	196 348	7 842	7 352	7 592	7 383	7 528	7 763	7 940	7 771	8 117	8 041	8 162	8 246	7 998	8 251
Mining / Ore Transport Cost	(ZARm)	86 299	3 446	3 230	3 335	3 243	3 307	3 411	3 488	3 414	3 567	3 534	3 587	3 624	3 515	3 626
Concentrator / Milling	(ZARm)	17 907	718	674	698	678	692	708	726	710	739	733	743	750	730	752
CRP	(ZARm)	2 571	105	99	104	101	103	101	106	103	105	105	105	106	105	107
TSP	(ZARm)	1 900	76	72	74	72	74	75	77	75	78	78	79	80	77	80
Kell / Refining	(ZARm)	13 749	537	503	508	496	504	546	548	539	576	564	581	587	558	582
SIB	(ZARm)	12 739	510	478	494	480	490	504	516	505	526	522	529	534	519	535
General & Admin	(ZARm)	27 210	1 091	1 024	1 061	1 031	1 052	1 076	1 104	1 079	1 123	1 114	1 128	1 140	1 109	1 142
Contingency	(ZARm)	33 972	1 359	1 274	1 318	1 281	1 307	1 343	1 375	1 346	1 403	1 391	1 411	1 425	1 384	1 427
Operating Profit	**(ZARm)**	468 421	15 034	17 937	18 533	18 149	18 896	19 873	20 418	20 306	21 004	20 515	20 710	20 840	20 229	21 053
Unit Cost	(ZAR/t RoM)	3 339	3 325	3 324	3 313	3 315	3 313	3 340	3 329	3 332	3 345	3 339	3 347	3 348	3 336	3 343
	(ZAR/4E oz)	25 332	25 827	25 903	25 998	25 849	25 481	24 955	24 941	24 668	24 729	25 012	25 066	25 108	25 191	24 987

Item	Units	Totals / Averages	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066
Revenue	**(ZARm)**	664 769	28 743	28 530	27 665	26 418	24 397	22 204	20 767	17 245	12 686	8 256	6 243	4 214	1 919	2 196
Revenue (6E PGM)	(ZARm)	649 702	28 123	27 906	27 068	25 848	23 878	21 733	20 329	16 899	12 428	8 079	6 101	4 118	1 873	2 147
Revenue (Cu/Ni)	(ZARm)	4 130	176	173	171	171	173	160	157	149	104	56	30	19	5	11
Revenue (Cr2O3)	(ZARm)	10 937	443	451	426	400	346	311	281	197	155	121	112	78	42	38
Operating Cost	**(ZARm)**	196 348	8 075	8 114	7 797	7 480	6 903	6 266	5 869	4 763	3 522	2 334	1 806	1 220	573	629
Mining / Ore Transport Cost	(ZARm)	86 299	3 549	3 566	3 427	3 288	3 036	2 757	2 583	2 098	1 551	1 028	795	537	252	277
Concentrator / Milling	(ZARm)	17 907	734	739	709	677	618	560	522	415	309	210	167	114	55	58
CRP	(ZARm)	2 571	104	106	100	94	81	73	66	46	36	28	26	18	10	9
TSP	(ZARm)	1 900	78	78	75	72	65	59	55	44	33	22	18	12	6	6
Kell / Refining	(ZARm)	13 749	576	571	558	547	533	488	470	420	299	175	112	73	28	40
SIB	(ZARm)	12 739	523	526	505	484	444	403	377	303	225	151	118	80	38	41
General & Admin	(ZARm)	27 210	1 116	1 124	1 077	1 029	940	851	793	630	470	319	254	173	83	88
Contingency	(ZARm)	33 972	1 395	1 403	1 347	1 290	1 185	1 075	1 005	808	600	402	315	213	101	110
Operating Profit	**(ZARm)**	468 421	20 668	20 416	19 868	18 938	17 494	15 937	14 897	12 482	9 165	5 922	4 438	2 994	1 346	1 567
Unit Cost	(ZAR/t RoM)	3 339	3 348	3 341	3 351	3 364	3 399	3 406	3 427	3 498	3 469	3 388	3 288	3 272	3 189	3 296
	(ZAR/4E oz)	25 332	24 877	25 243	24 953	24 987	24 721	24 613	24 539	23 540	23 819	24 808	26 147	26 315	28 045	25 834

Note:

1. Totals include costs to 2068.

Table 22-8: Kruidfontein Shaft: Predicted Revenue/Opex (2024 to 2063)

Item	Units	Totals / Averages	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
Revenue	**(ZARm)**	462 674	-	-	-	-	-	-	-	-	-	-	1	5	65	687
Revenue (6E PGM)	(ZARm)	452 266	-	-	-	-	-	-	-	-	-	-	1	5	61	657
Revenue (Cu/Ni)	(ZARm)	5 254	-	-	-	-	-	-	-	-	-	-	0	0	1	8
Revenue (Cr2O3)	(ZARm)	5 154	-	-	-	-	-	-	-	-	-	-	0	0	2	21
Operating Cost	**(ZARm)**	126 180	-	-	-	-	-	-	-	-	-	-	1	4	36	307
Mining / Ore Transport Cost	(ZARm)	57 111	-	-	-	-	-	-	-	-	-	-	1	2	16	138
Concentrator / Milling	(ZARm)	10 496	-	-	-	-	-	-	-	-	-	-	0	0	3	28
CRP	(ZARm)	1 208	-	-	-	-	-	-	-	-	-	-	0	0	1	5
TSP	(ZARm)	1 105	-	-	-	-	-	-	-	-	-	-	0	0	0	3
Kell / Refining	(ZARm)	10 793	-	-	-	-	-	-	-	-	-	-	0	0	2	15
SIB	(ZARm)	8 050	-	-	-	-	-	-	-	-	-	-	0	0	2	20
General & Admin	(ZARm)	15 949	-	-	-	-	-	-	-	-	-	-	0	1	5	43
Contingency	(ZARm)	21 467	-	-	-	-	-	-	-	-	-	-	0	1	6	54
Operating Profit	**(ZARm)**	336 494	-	-	-	-	-	-	-	-	-	-	0	0	29	379
Unit Cost	(ZAR/t RoM)	3 661	-	-	-	-	-	-	-	-	-	-	3 334	3 334	3 330	3 330
	(ZAR/4E oz)	23 394	-	-	-	-	-	-	-	-	-	-	55 135	55 120	34 309	29 911

Item	Units	Totals / Averages	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051
Revenue	**(ZARm)**	462 674	3 418	9 690	18 620	24 424	24 579	25 308	24 676	25 003	24 008	26 190	26 313	25 948	25 554	25 852
Revenue (6E PGM)	(ZARm)	452 266	3 300	9 388	18 133	23 825	23 979	24 689	24 074	24 393	23 423	25 586	25 726	25 373	25 001	25 296
Revenue (Cu/Ni)	(ZARm)	5 254	34	97	160	235	234	240	236	237	233	281	297	300	306	312
Revenue (Cr2O3)	(ZARm)	5 154	85	204	327	364	366	379	366	373	352	323	289	274	247	244
Operating Cost	**(ZARm)**	126 180	1 222	3 188	5 139	6 657	6 665	6 861	6 696	6 764	6 540	7 100	7 117	7 045	6 936	7 009
Mining / Ore Transport Cost	(ZARm)	57 111	550	1 437	2 317	3 006	3 010	3 098	3 024	3 054	2 954	3 211	3 222	3 190	3 142	3 175
Concentrator / Milling	(ZARm)	10 496	111	286	459	579	579	597	582	589	567	599	592	582	567	572
CRP	(ZARm)	1 208	20	48	77	85	86	89	86	87	82	76	68	64	58	57
TSP	(ZARm)	1 105	12	30	49	61	61	63	62	62	60	63	62	61	60	60
Kell / Refining	(ZARm)	10 793	62	184	303	462	461	472	464	466	461	569	611	618	636	649
SIB	(ZARm)	8 050	81	210	337	432	433	446	435	439	424	456	454	448	440	444
General & Admin	(ZARm)	15 949	169	434	697	879	881	907	884	894	861	911	899	885	862	869
Contingency	(ZARm)	21 467	216	559	900	1 153	1 154	1 189	1 159	1 172	1 131	1 215	1 210	1 196	1 172	1 183
Operating Profit	**(ZARm)**	336 494	2 197	6 502	13 481	17 766	17 914	18 446	17 981	18 239	17 468	19 090	19 195	18 902	18 618	18 843
Unit Cost	(ZAR/t RoM)	3 661	3 341	3 400	3 410	3 504	3 502	3 499	3 504	3 500	3 515	3 607	3 664	3 684	3 724	3 734
	(ZAR/4E oz)	23 394	26 471	25 846	25 549	24 514	24 385	24 403	24 390	24 335	24 440	23 722	23 328	23 323	23 094	23 013

Item	Units	Totals / Averages	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063
Revenue	**(ZARm)**	462 674	25 534	24 796	22 815	19 757	18 572	15 345	12 111	7 635	3 397	1 388	909	77
Revenue (6E PGM)	(ZARm)	452 266	24 989	24 265	22 343	19 362	18 214	15 076	11 914	7 513	3 343	1 366	895	76
Revenue (Cu/Ni)	(ZARm)	5 254	308	299	287	261	255	228	190	122	54	22	14	1
Revenue (Cr2O3)	(ZARm)	5 154	237	231	185	133	103	41	7	0	0	0	0	0
Operating Cost	**(ZARm)**	126 180	6 899	6 705	6 155	5 330	4 997	4 080	3 198	2 010	897	363	238	20
Mining / Ore Transport Cost	(ZARm)	57 111	3 126	3 038	2 791	2 419	2 269	1 856	1 457	916	409	166	108	9
Concentrator / Milling	(ZARm)	10 496	562	546	494	421	388	305	233	145	65	26	17	1
CRP	(ZARm)	1 208	55	54	43	31	24	9	2	0	0	0	0	0
TSP	(ZARm)	1 105	59	57	52	44	40	32	24	15	7	3	2	0
Kell / Refining	(ZARm)	10 793	643	623	605	555	546	496	418	268	120	48	32	3
SIB	(ZARm)	8 050	436	424	387	333	311	250	194	122	54	22	14	1
General & Admin	(ZARm)	15 949	854	830	751	639	590	464	354	220	98	40	26	2
Contingency	(ZARm)	21 467	1 164	1 131	1 033	888	828	667	517	324	145	59	38	3
Operating Profit	**(ZARm)**	336 494	18 634	18 091	16 660	14 427	13 575	11 265	8 913	5 625	2 500	1 024	671	57
Unit Cost	(ZAR/t RoM)	3 661	3 741	3 738	3 795	3 859	3 918	4 068	4 183	4 219	4 219	4 219	4 219	4 219
	(ZAR/4E oz)	23 394	22 899	22 934	22 600	22 293	21 981	21 119	20 574	20 399	20 462	20 287	20 287	20 287

Table 22-9: Mpahahlele Decline: Predicted Revenue/Opex (2024 to 2064) (100% basis)

Item	Units	Totals / Averages	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
Revenue	**(ZARm)**	198 334	-	-	-	229	1 082	3 830	8 970	9 457	9 254	10 509	12 167	12 034	13 060	14 205
Revenue (6E PGM)	(ZARm)	192 789	-	-	-	212	1 019	3 670	8 709	9 149	8 896	10 137	11 751	11 626	12 626	13 773
Revenue (Cu/Ni)	(ZARm)	5 546	-	-	-	18	63	160	261	308	358	372	417	408	434	432
Revenue (Cr2O3)	(ZARm)	-	-	-	-	0	0	0	0	0	0	0	0	0	0	0
Operating Cost	**(ZARm)**	68 996	-	-	-	233	823	2 103	3 418	4 004	4 584	4 730	5 253	5 096	5 376	5 321
Mining / Ore Transport Cost	(ZARm)	27 412	-	-	-	93	327	835	1 357	1 589	1 821	1 880	2 088	2 028	2 139	2 117
Concentrator / Milling	(ZARm)	5 912	-	-	-	20	71	180	293	343	393	405	450	437	461	457
Rados	(ZARm)	721	-	-	-	2	9	22	36	42	48	49	55	53	56	56
TSP	(ZARm)	899	-	-	-	3	11	28	45	53	60	61	68	65	69	68
Kell / Refining	(ZARm)	4 848	-	-	-	16	58	149	243	285	321	331	367	352	371	368
SIB	(ZARm)	4 357	-	-	-	15	52	133	216	253	289	299	332	322	340	336
General & Admin	(ZARm)	14 316	-	-	-	48	171	436	709	830	951	982	1 091	1 059	1 117	1 106
Contingency	(ZARm)	10 533	-	-	-	36	126	321	521	611	700	722	802	779	822	813
Operating Profit	**(ZARm)**	129 338	-	-	-	-4	259	1 727	5 551	5 453	4 670	5 779	6 914	6 938	7 684	8 884
Unit Cost	(ZAR/t RoM)	1 721	-	-	-	1 711	1 717	1 702	1 704	1 700	1 725	1 726	1 732	1 748	1 753	1 749
	(ZAR/4E oz)	15 340	-	-	-	37 891	31 020	24 192	22 393	20 135	20 495	19 669	19 737	20 186	20 519	20 454

Item	Units	Totals / Averages	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051
Revenue	**(ZARm)**	198 334	15 931	15 515	14 949	11 826	10 529	6 348	5 696	4 184	2 488	3 073	2 752	869	958	447
Revenue (6E PGM)	(ZARm)	192 789	15 494	15 121	14 614	11 563	10 293	6 205	5 586	4 108	2 446	3 024	2 704	853	943	441
Revenue (Cu/Ni)	(ZARm)	5 546	437	394	335	263	236	143	110	77	42	49	48	15	15	6
Revenue (Cr2O3)	(ZARm)	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Operating Cost	**(ZARm)**	68 996	5 341	4 782	4 026	3 150	2 830	1 718	1 328	933	518	608	591	191	183	70
Mining / Ore Transport Cost	(ZARm)	27 412	2 124	1 901	1 602	1 255	1 127	684	527	369	204	238	232	75	72	28
Concentrator / Milling	(ZARm)	5 912	458	410	345	271	243	147	114	80	44	51	50	16	15	6
Rados	(ZARm)	721	56	50	42	33	30	18	14	10	5	6	6	2	2	1
TSP	(ZARm)	899	69	62	52	40	36	22	18	13	7	9	9	3	3	1
Kell / Refining	(ZARm)	4 848	371	334	279	215	194	119	94	68	40	48	47	15	15	6
SIB	(ZARm)	4 357	338	302	255	199	179	109	84	59	32	38	37	12	11	4
General & Admin	(ZARm)	14 316	1 109	993	837	655	589	357	275	193	106	125	121	39	38	14
Contingency	(ZARm)	10 533	816	730	615	482	433	263	203	142	78	92	89	29	28	11
Operating Profit	**(ZARm)**	129 338	10 590	10 733	10 923	8 676	7 698	4 630	4 368	3 251	1 971	2 465	2 161	678	775	377
Unit Cost	(ZAR/t RoM)	1 721	1 742	1 731	1 748	1 771	1 764	1 750	1 701	1 652	1 571	1 522	1 522	1 522	1 522	1 522
	(ZAR/4E oz)	15 340	20 551	20 552	21 032	20 665	20 856	20 994	18 421	17 830	17 116	16 478	17 919	18 379	15 907	13 022

Item	Units	Totals / Averages	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064
Revenue	**(ZARm)**	198 334	71	597	190	116	163	1 023	846	92	746	1 457	1 487	1 063	118
Revenue (6E PGM)	(ZARm)	192 789	70	589	186	113	161	1 005	835	89	727	1 429	1 459	1 047	117
Revenue (Cu/Ni)	(ZARm)	5 546	1	8	4	3	2	19	11	3	19	29	28	15	2
Revenue (Cr2O3)	(ZARm)	-	0	0	0	0	0	0	0	0	0	0	0	0	0
Operating Cost	**(ZARm)**	68 996	14	96	48	41	30	233	137	37	237	353	346	191	19
Mining / Ore Transport Cost	(ZARm)	27 412	6	38	19	16	12	91	54	15	93	139	136	75	8
Concentrator / Milling	(ZARm)	5 912	1	8	4	3	3	20	12	3	20	30	29	16	2
rados	(ZARm)	721	0	1	0	0	0	2	1	0	2	4	4	2	0
TSP	(ZARm)	899	0	1	1	1	0	3	2	1	3	5	5	3	0
Kell / Refining	(ZARm)	4 848	1	8	4	3	2	19	11	3	19	28	27	15	2
SIB	(ZARm)	4 357	1	6	3	3	2	15	9	2	15	22	22	12	1
General & Admin	(ZARm)	14 316	3	20	10	8	6	48	28	8	48	72	71	39	4
Contingency	(ZARm)	10 533	2	15	7	6	5	35	21	6	36	53	52	29	3
Operating Profit	**(ZARm)**	129 338	57	501	142	75	133	790	710	54	510	1 104	1 141	871	99
Unit Cost	(ZAR/t RoM)	1 721	1 522	1 522	1 522	1 522	1 522	1 522	1 522	1 522	1 522	1 522	1 522	1 522	1 522
	(ZAR/4E oz)	15 340	16 740	13 406	21 199	29 798	15 434	19 039	13 398	34 860	26 746	20 285	19 458	14 972	13 637

Note:

1. Values represent 100% of values and not the amount attributable to SRL.

Table 22-10: Mphahlele Shaft :Predicted Revenue/Opex (2029 to 2070) (100% basis)

Item	Units	Totals / Averages	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
Revenue	**(ZARm)**	346 358	-	-	-	-	-	-	74	878	2 328	4 646	7 377	12 693	14 362	15 713
Revenue (6E PGM)	(ZARm)	338 919	-	-	-	-	-	-	71	856	2 273	4 535	7 201	12 445	14 059	15 371
Revenue (Cu/Ni)	(ZARm)	7 440	-	-	-	-	-	-	3	22	55	111	176	248	303	342
Revenue (Cr2O3)	(ZARm)	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0
Operating Cost	**(ZARm)**	150 079	-	-	-	-	-	-	65	539	1 260	2 382	3 606	5 102	6 069	6 697
Mining / Ore Transport Cost	(ZARm)	74 808	-	-	-	-	-	-	32	269	628	1 187	1 797	2 543	3 025	3 338
Concentrator / Milling	(ZARm)	9 480	-	-	-	-	-	-	4	34	80	150	228	322	383	423
rados	(ZARm)	1 156	-	-	-	-	-	-	0	4	10	18	28	39	47	52
TSP	(ZARm)	1 173	-	-	-	-	-	-	1	4	10	19	28	40	47	52
Kell / Refining	(ZARm)	6 112	-	-	-	-	-	-	3	22	51	97	147	208	247	273
SIB	(ZARm)	9 858	-	-	-	-	-	-	4	35	83	156	237	335	399	440
General & Admin	(ZARm)	22 957	-	-	-	-	-	-	10	82	193	364	552	780	928	1 024
Contingency	(ZARm)	24 535	-	-	-	-	-	-	11	88	206	389	589	834	992	1 095
Operating Profit	**(ZARm)**	196 279	-	-	-	-	-	-	10	339	1 068	2 264	3 771	7 590	8 293	9 016
Unit Cost	(ZAR/t RoM)	2 912	-	-	-	-	-	-	2 912	2 912	2 912	2 912	2 912	2 912	2 912	2 912
	(ZAR/4E oz)	33 366	-	-	-	-	-	-	44 801	32 696	31 225	32 601	33 015	32 086	33 257	33 076

Item	Units	Totals / Averages	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056
Revenue	**(ZARm)**	346 358	16 629	17 976	17 969	18 478	18 885	19 349	19 580	18 685	19 252	19 385	19 224	18 103	17 117	13 877
Revenue (6E PGM)	(ZARm)	338 919	16 264	17 585	17 580	18 080	18 494	18 943	19 177	18 282	18 843	18 963	18 802	17 703	16 752	13 588
Revenue (Cu/Ni)	(ZARm)	7 440	365	391	388	399	392	406	403	403	409	422	422	400	365	289
Revenue (Cr2O3)	(ZARm)	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Operating Cost	**(ZARm)**	150 079	7 120	7 580	7 577	7 769	7 707	8 038	7 971	7 904	8 094	8 222	8 240	7 962	7 451	6 042
Mining / Ore Transport Cost	(ZARm)	74 808	3 549	3 778	3 777	3 873	3 842	4 007	3 973	3 940	4 035	4 098	4 107	3 969	3 714	3 012
Concentrator / Milling	(ZARm)	9 480	450	479	479	491	487	508	503	499	511	519	520	503	471	382
rados	(ZARm)	1 156	55	58	58	60	59	62	61	61	62	63	63	61	57	47
TSP	(ZARm)	1 173	56	59	59	61	60	63	62	62	63	64	64	62	58	47
Kell / Refining	(ZARm)	6 112	290	309	309	316	314	327	325	322	330	335	336	324	303	246
SIB	(ZARm)	9 858	468	498	498	510	506	528	524	519	532	540	541	523	489	397
General & Admin	(ZARm)	22 957	1 089	1 159	1 159	1 188	1 179	1 230	1 219	1 209	1 238	1 258	1 260	1 218	1 140	924
Contingency	(ZARm)	24 535	1 164	1 239	1 239	1 270	1 260	1 314	1 303	1 292	1 323	1 344	1 347	1 302	1 218	988
Operating Profit	**(ZARm)**	196 279	9 509	10 396	10 391	10 709	11 178	11 311	11 610	10 781	11 158	11 163	10 985	10 142	9 666	7 835
Unit Cost	(ZAR/t RoM)	2 912	2 912	2 912	2 912	2 912	2 912	2 912	2 912	2 912	2 912	2 912	2 912	2 912	2 912	2 912
	(ZAR/4E oz)	33 366	33 094	32 406	32 423	32 288	31 442	32 014	31 346	32 463	32 380	32 353	32 681	33 788	33 938	34 423

Item	Units	Totals / Averages	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070
Revenue	**(ZARm)**	346 358	7 649	3 835	2 111	2 251	3 044	2 626	1 553	1 606	1 209	2 222	1 780	2 470	1 181	242
Revenue (6E PGM)	(ZARm)	338 919	7 477	3 747	2 062	2 201	2 973	2 571	1 519	1 573	1 183	2 171	1 745	2 428	1 162	238
Revenue (Cu/Ni)	(ZARm)	7 440	173	88	49	50	72	56	34	32	26	50	35	41	18	4
Revenue (Cr2O3)	(ZARm)	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Operating Cost	**(ZARm)**	150 079	3 658	1 971	1 151	1 182	1 693	1 316	805	762	625	1 193	826	981	434	87
Mining / Ore Transport Cost	(ZARm)	74 808	1 823	982	573	589	844	656	401	380	312	595	412	489	216	44
Concentrator / Milling	(ZARm)	9 480	231	124	73	75	107	83	51	48	39	75	52	62	27	6
rados	(ZARm)	1 156	28	15	9	9	13	10	6	6	5	9	6	8	3	1
TSP	(ZARm)	1 173	29	15	9	9	13	10	6	6	5	9	6	8	3	1
Kell / Refining	(ZARm)	6 112	149	80	47	48	69	54	33	31	25	49	34	40	18	4
SIB	(ZARm)	9 858	240	129	76	78	111	86	53	50	41	78	54	64	28	6
General & Admin	(ZARm)	22 957	559	301	176	181	259	201	123	116	96	182	126	150	66	13
Contingency	(ZARm)	24 535	598	322	188	193	277	215	132	124	102	195	135	160	71	14
Operating Profit	**(ZARm)**	196 279	3 991	1 864	960	1 069	1 351	1 311	748	844	584	1 029	954	1 489	747	154
Unit Cost	(ZAR/t RoM)	2 912	2 912	2 912	2 912	2 912	2 912	2 912	2 912	2 912	2 912	2 912	2 912	2 912	2 912	2 912
	(ZAR/4E oz)	33 366	37 985	42 052	45 773	44 088	46 782	42 012	43 527	39 719	43 392	45 116	38 838	33 122	30 582	30 052

Note:
1. Values represent 100% of values and not the amount attributable to SRL.

22.2 Economic Analysis

Summary cash flow analyses have been compiled for the Western Limb (combining Ruighoek, East Pit, West Pit (TSF retreat), Central and East Underground, Magazynskraal Shaft and Kruidfontein Shaft projects) and Eastern Limb (Mphahlele Decline and Mphahlele Shaft projects). These cash flow analyses are presented as follows:

- Western Limb Table 22-11; and
- Eastern Limb Table 22-12.

The cash flow analyses are done in SA Rands. The post-tax pre-finance cash flows are reported in SA Rands and converted to US Dollars using the projected ZAR:USD exchange rates of Table 19-2.

The Eastern Limb results are presented on a 100% basis, i.e. gross values and not what is attributable to SRL.

Table 22-11: Western Limb: Predicted Cash Flow Analysis (2024 – 2069) (100% basis)

Item	Units	Totals / Averages	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
Revenue	**(ZARbn)**	1 859.1	-	-	-	-	-	4.6	8.6	14.2	14.3	15.8	17.2	19.9	26.1	36.6
Operating Cost	**(ZARbn)**	493.7	0.0	1.0	0.9	1.3	2.3	2.7	3.2	3.7	4.8	5.0	5.5	6.5	8.8	11.8
Capital Costs	**(ZARbn)**	87.3	0.1	1.3	2.8	4.5	8.0	9.1	8.7	9.3	8.8	9.2	6.4	2.8	2.1	1.8
Exploration	(ZARbn)	1.3	-	0.1	0.4	0.2	0.1	0.0	0.0	0.0	0.0	0.0	-	-	-	-
Pre Implementation	(ZARbn)	2.3	-	1.0	0.5	0.3	0.1	0.1	0.1	0.1	0.1	0.0	-	-	-	-
Mining	(ZARbn)	37.2	-	0.0	1.0	1.6	3.1	4.3	4.6	4.9	5.1	5.0	3.5	1.3	0.9	0.5
Surface Infrastructure	(ZARbn)	14.5	-	0.0	0.6	1.5	2.2	1.4	0.9	1.7	1.9	1.2	0.6	1.0	0.4	-
Services (Surface Infrastructure)	(ZARbn)	1.2	-	-	0.0	0.1	0.6	0.2	0.0	-	-	-	-	-	-	-
Metallurgical Processing	(ZARbn)	10.0	-	-	0.0	0.0	0.7	1.8	1.6	1.2	0.5	0.9	0.8	-	0.4	0.9
Closure Liability	(ZARbn)	7.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0
Contingency	(ZARbn)	13.5	0.0	0.1	0.2	0.6	1.2	1.3	1.4	1.4	1.2	2.0	1.4	0.6	0.4	0.4
Cash Flow																
Operating Profit	(ZARbn)	1 365.3	0.0	-1.0	-0.9	-1.3	-2.3	1.9	5.3	10.5	9.5	10.8	11.7	13.4	17.3	24.8
Capital Expenditure	(ZARbn)	87.3	0.1	1.3	2.8	4.5	8.0	9.1	8.7	9.3	8.8	9.2	6.4	2.8	2.1	1.8
MPRDA Royalties	(ZARbn)	90.3	-	-	-	-	-	0.0	0.0	0.1	0.1	0.2	0.5	1.0	1.3	1.8
Change in working capital	(ZARbn)	0.0		0.1	0.0	0.0	0.1	-0.3	-0.3	-0.4	0.1	-0.1	-0.1	-0.1	-0.3	-0.6
Taxable Income	(ZARbn)	1 187.7	-0.1	-2.2	-3.7	-5.8	-10.2	-7.6	-3.7	0.6	0.6	1.2	4.6	9.5	13.6	20.6
Company tax payable	(ZARbn)	318.1	-	-	-	-	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2
Post-tax pre-finance cash flow	**(ZARbn)**	869.6	-0.1	-2.2	-3.7	-5.8	-10.2	-7.6	-3.7	0.6	0.6	1.2	4.6	9.5	13.6	18.3
	(USDbn)	44.2	0.0	-0.1	-0.2	-0.3	-0.6	-0.4	-0.2	0.0	0.0	0.1	0.2	0.5	0.7	1.0

Item	Units	Totals / Averages	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051
Revenue	**(ZARbn)**	1 859.1	49.0	61.9	79.6	85.8	86.0	85.1	84.2	86.4	86.6	90.1	80.4	81.6	82.1	80.5
Operating Cost	**(ZARbn)**	493.7	14.4	16.7	18.3	20.0	19.8	19.8	19.6	19.8	19.4	20.1	21.8	24.1	23.9	22.3
Capital Costs	**(ZARbn)**	87.3	0.7	0.8	0.4	0.1	0.0	0.5	1.2	0.0	0.0	0.4	1.0	0.5	0.0	0.0
Exploration	(ZARbn)	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-
Pre Implementation	(ZARbn)	2.3	0.0	0.0	-	-	-	-	-	-	-	-	0.0	0.0	-	-
Mining	(ZARbn)	37.2	0.3	0.2	-	-	-	-	-	-	-	-	0.6	0.3	-	-
Surface Infrastructure	(ZARbn)	14.5	0.2	0.4	0.3	-	-	-	-	-	-	0.2	0.1	-	-	-
Services (Surface Infrastructure)	(ZARbn)	1.2	-	-	-	-	-	-	-	-	-	0.0	0.1	0.0	-	-
Metallurgical Processing	(ZARbn)	10.0	-	-	-	-	-	0.4	0.9	-	-	-	-	-	-	-
Closure Liability	(ZARbn)	7.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Contingency	(ZARbn)	13.5	0.1	0.2	0.1	0.0	0.0	0.1	0.2	0.0	0.0	0.1	0.2	0.1	0.0	0.0
Cash Flow																
Operating Profit	(ZARbn)	1 365.3	34.6	45.2	61.3	65.8	66.2	65.4	64.6	66.6	67.1	70.0	58.6	57.5	58.2	58.2
Capital Expenditure	(ZARbn)	87.3	0.7	0.8	0.4	0.1	0.0	0.5	1.2	0.0	0.0	0.4	1.0	0.5	0.0	0.0
MPRDA Royalties	(ZARbn)	90.3	2.4	3.1	4.0	4.3	4.3	4.3	4.2	4.3	4.3	4.5	4.0	4.1	4.1	4.0
Change in working capital	(ZARbn)	0.0	-0.8	-0.9	-1.3	-0.4	0.0	0.1	0.1	-0.2	0.0	-0.2	0.9	0.1	-0.1	0.0
Taxable Income	(ZARbn)	1 187.7	30.6	40.5	55.6	61.1	61.8	60.7	59.3	62.1	62.8	64.8	54.6	53.0	54.0	54.1
Company tax payable	(ZARbn)	318.1	8.3	10.9	15.0	16.5	16.7	16.4	16.0	16.8	16.9	17.5	14.7	14.3	14.6	14.6
Post-tax pre-finance cash flow	**(ZARbn)**	869.6	22.4	29.5	40.6	44.6	45.1	44.3	43.3	45.3	45.8	47.3	39.8	38.7	39.4	39.5
	(USDbn)	44.2	1.2	1.5	2.1	2.3	2.3	2.3	2.2	2.3	2.3	2.4	2.0	2.0	2.0	2.0

Item	Units	Totals / Averages	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065
Revenue	**(ZARbn)**	1 859.1	82.1	80.7	74.7	68.0	63.0	55.8	47.4	36.7	27.2	20.8	9.2	6.3	4.2	1.9
Operating Cost	**(ZARbn)**	493.7	**22.3**	**21.7**	**19.5**	**18.1**	**16.6**	**14.4**	**12.7**	**10.6**	**7.7**	**5.5**	**2.6**	**1.8**	**1.1**	**0.5**
Capital Costs	**(ZARbn)**	87.3	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.6**	**0.6**	**0.6**	**1.1**	**0.9**	**0.8**	**0.9**	**0.4**	**0.4**
Exploration	(ZARbn)	1.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pre Implementation	(ZARbn)	2.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mining	(ZARbn)	37.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Surface Infrastructure	(ZARbn)	14.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Services (Surface Infrastructure)	(ZARbn)	1.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Metallurgical Processing	(ZARbn)	10.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Closure Liability	(ZARbn)	7.4	0.0	0.0	0.0	0.0	0.0	0.6	0.6	0.6	1.1	0.9	0.8	0.8	0.4	0.4
Contingency	(ZARbn)	13.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Cash Flow																
Operating Profit	(ZARbn)	1 365.3	59.7	59.1	55.2	50.0	46.4	41.4	34.7	26.2	19.5	15.3	6.6	4.5	3.1	1.4
Capital Expenditure	(ZARbn)	87.3	0.0	0.0	0.0	0.0	0.0	0.6	0.6	0.6	1.1	0.9	0.8	0.9	0.4	0.4
MPRDA Royalties	(ZARbn)	90.3	4.1	4.0	3.7	3.4	3.2	2.8	2.4	1.8	1.4	1.0	0.5	0.3	0.2	0.1
Change in working capital	(ZARbn)	0.0	-0.1	0.1	0.3	0.4	0.3	0.4	0.6	0.7	0.6	0.3	0.7	0.2	0.1	0.1
Taxable Income	(ZARbn)	1 187.7	55.5	55.1	51.8	47.0	43.5	38.5	32.3	24.5	17.5	13.7	6.0	3.5	2.6	1.0
Company tax payable	(ZARbn)	318.1	15.0	14.9	14.0	12.7	11.8	10.4	8.7	6.6	4.7	3.7	1.6	0.9	0.7	0.3
Post-tax pre-finance cash flow	**(ZARbn)**	869.6	40.5	40.2	37.8	34.3	31.8	28.1	23.5	17.9	12.8	10.0	4.4	2.5	1.9	0.7
	(USDbn)	44.2	2.1	2.0	1.9	1.7	1.6	1.4	1.2	0.9	0.7	0.5	0.2	0.1	0.1	0.0

Item	Units	Totals / Averages	2066	2067	2068	2069
Revenue	**(ZARbn)**	1 859.1	2.2	1.9	0.3	0.0
Operating Cost	**(ZARbn)**	493.7	0.6	0.5	0.1	0.0
Capital Costs	**(ZARbn)**	87.3	0.2	0.0	0.0	0.0
Exploration	(ZARbn)	1.3	-	-	-	-
Pre Implementation	(ZARbn)	2.3	-	-	-	-
Mining	(ZARbn)	37.2	-	-	-	-
Surface Infrastructure	(ZARbn)	14.5	-	-	-	-
Services (Surface Infrastructure)	(ZARbn)	1.2	-	-	-	-
Metallurgical Processing	(ZARbn)	10.0	-	-	-	-
Closure Liability	(ZARbn)	7.4	0.2	0.0	0.0	0.0
Contingency	(ZARbn)	13.5	0.0	0.0	0.0	0.0
Cash Flow						
Operating Profit	(ZARbn)	1 365.3	1.6	1.3	0.2	0.0
Capital Expenditure	(ZARbn)	87.3	0.2	0.0	0.0	0.0
MPRDA Royalties	(ZARbn)	90.3	0.1	0.1	0.0	0.0
Change in working capital	(ZARbn)	0.0	0.0	0.0	0.1	0.0
Taxable Income	(ZARbn)	1 187.7	1.2	1.3	0.3	0.0
Company tax payable	(ZARbn)	318.1	0.3	0.3	0.1	0.0
Post-tax pre-finance cash flow	**(ZARbn)**	869.6	0.9	0.9	0.2	0.0
	(USDbn)	44.2	0.0	0.0	0.0	0.0

Table 22-12: Eastern Limb: Predicted Cash Flow Analysis (2024 to 2070) (100% basis)

Item	Units	Totals / Averages	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
Revenue	**(ZARbn)**	**544.7**	**-**	**0.0**	**0.0**	**0.2**	**1.1**	**3.8**	**9.0**	**9.5**	**9.3**	**10.5**	**12.2**	**12.1**	**13.9**	**16.5**
Operating Cost	**(ZARbn)**	**219.1**	**-**	**0.0**	**0.0**	**0.2**	**0.8**	**2.1**	**3.4**	**4.0**	**4.6**	**4.7**	**5.3**	**5.2**	**5.9**	**6.6**
Capital Costs	**(ZARbn)**	**46.6**	**-**	**1.0**	**2.2**	**4.7**	**3.6**	**1.7**	**1.6**	**1.7**	**1.6**	**1.5**	**1.5**	**1.4**	**3.6**	**4.8**
Exploration	(ZARbn)	0.5	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.0
Pre Implementation	(ZARbn)	0.9	-	0.0	0.2	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.0
Mining	(ZARbn)	23.2	-	0.0	0.2	0.9	1.8	1.3	1.2	1.3	1.2	1.1	1.0	0.6	1.3	1.8
Surface Infrastructure	(ZARbn)	3.3	-	0.0	0.2	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.1
Services (Surface Infrastructure)	(ZARbn)	1.1	-	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Metallurgical Processing	(ZARbn)	8.1	-	0.8	1.2	2.2	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.9	0.8
Closure Liability	(ZARbn)	0.7	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Contingency	(ZARbn)	9.0	-	0.2	0.4	0.9	0.7	0.3	0.3	0.3	0.3	0.3	0.3	0.4	1.0	0.9
Cash Flow																
Operating Profit	(ZARbn)	325.6	-	0.0	0.0	0.0	0.3	1.7	5.6	5.5	4.7	5.8	6.9	6.9	8.0	10.0
Capital Expenditure	(ZARbn)	46.6	-	1.0	2.2	4.7	3.6	1.7	1.6	1.7	1.6	1.5	1.5	1.4	3.6	4.8
MPRDA Royalties	(ZARbn)	25.5	-	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.3	0.4	0.5	0.5	0.4	0.5
Change in working capital	(ZARbn)	0.0	-	0.0	0.0	0.0	0.0	-0.1	-0.3	0.0	0.1	-0.1	-0.1	0.0	-0.1	-0.2
Taxable Income	(ZARbn)	253.5	-	-1.0	-2.2	-4.7	-3.4	-0.1	3.3	3.4	2.8	3.8	4.8	5.0	3.9	4.5
Company tax payable	(ZARbn)	68.3	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	1.3	1.3	1.1	1.2
Post-tax pre-finance cash flow	**(ZARbn)**	**185.2**	**-**	**-1.0**	**-2.2**	**-4.7**	**-3.4**	**-0.1**	**3.3**	**3.4**	**2.8**	**3.4**	**3.5**	**3.6**	**2.9**	**3.3**
	(USDbn)	**9.5**	**-**	**-0.1**	**-0.1**	**-0.3**	**-0.2**	**0.0**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**

Note:
1. Values represent 100% of post-tax cash flow and not the amount attributable to SRL.

Item	Units	Totals / Averages	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051
Revenue	**(ZARbn)**	**544.7**	**20.6**	**22.9**	**27.6**	**26.2**	**26.2**	**23.0**	**23.7**	**22.2**	**21.0**	**22.0**	**22.1**	**20.4**	**19.6**	**19.7**
Operating Cost	**(ZARbn)**	**219.1**	**7.7**	**8.4**	**9.1**	**9.2**	**9.5**	**8.8**	**8.9**	**8.5**	**8.3**	**8.3**	**8.6**	**8.2**	**8.1**	**8.2**
Capital Costs	**(ZARbn)**	**46.6**	**2.9**	**2.0**	**1.2**	**1.9**	**2.3**	**2.5**	**1.6**	**0.5**	**0.1**	**0.2**	**0.1**	**0.0**	**0.0**	**0.0**
Exploration	(ZARbn)	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pre Implementation	(ZARbn)	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mining	(ZARbn)	23.2	1.7	1.4	0.7	1.3	1.5	1.5	1.1	0.3	0.0	0.0	0.0	0.0	0.0	0.0
Surface Infrastructure	(ZARbn)	3.3	0.6	0.1	0.0	0.1	0.1	0.0	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0
Services (Surface Infrastructure)	(ZARbn)	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Metallurgical Processing	(ZARbn)	8.1	0.0	0.2	0.1	0.0	0.1	0.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Closure Liability	(ZARbn)	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Contingency	(ZARbn)	9.0	0.5	0.2	0.4	0.4	0.5	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cash Flow																
Operating Profit	(ZARbn)	325.6	12.9	14.5	18.5	17.0	16.7	14.1	14.8	13.6	12.7	13.6	13.5	12.3	11.6	11.5
Capital Expenditure	(ZARbn)	46.6	2.9	2.0	1.2	1.9	2.3	2.5	1.6	0.5	0.1	0.2	0.1	0.0	0.0	0.0
MPRDA Royalties	(ZARbn)	25.5	0.9	1.1	1.4	1.3	1.3	1.1	1.2	1.1	1.0	1.1	1.1	1.0	1.0	1.0
Change in working capital	(ZARbn)	0.0	-0.2	-0.1	-0.3	0.1	0.0	0.2	-0.1	0.1	0.1	-0.1	0.0	0.1	0.1	0.0
Taxable Income	(ZARbn)	253.5	8.8	11.3	15.6	13.9	13.1	10.8	11.9	12.2	11.6	12.3	12.2	11.4	10.6	10.6
Company tax payable	(ZARbn)	68.3	2.4	3.0	4.2	3.7	3.5	2.9	3.2	3.3	3.1	3.3	3.3	3.1	2.9	2.8
Post-tax pre-finance cash flow	**(ZARbn)**	**185.2**	**6.4**	**8.2**	**11.4**	**10.1**	**9.6**	**7.8**	**8.7**	**8.9**	**8.5**	**9.0**	**8.9**	**8.3**	**7.8**	**7.7**
	(USDbn)	**9.5**	**0.3**	**0.4**	**0.6**	**0.5**	**0.5**	**0.4**	**0.4**	**0.5**	**0.4**	**0.5**	**0.5**	**0.4**	**0.4**	**0.4**

Note:
1. Values represent 100% of post-tax cash flow and not the amount attributable to SRL.

Item	Units	Totals / Averages	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065
Revenue	**(ZARbn)**	**544.7**	**19.5**	**19.8**	**18.3**	**17.2**	**14.0**	**8.7**	**4.7**	**2.2**	**3.0**	**4.5**	**4.1**	**2.6**	**1.7**	**1.2**
Operating Cost	**(ZARbn)**	**219.1**	**8.2**	**8.3**	**8.0**	**7.5**	**6.1**	**3.9**	**2.1**	**1.2**	**1.4**	**2.0**	**1.7**	**1.0**	**0.8**	**0.6**
Capital Costs	**(ZARbn)**	**46.6**	**0.0**	**0.0**	**0.1**	**0.0**	**0.0**	**0.0**	**0.0**	**0.1**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Exploration	(ZARbn)	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pre Implementation	(ZARbn)	0.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mining	(ZARbn)	23.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Surface Infrastructure	(ZARbn)	3.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Services (Surface Infrastructure)	(ZARbn)	1.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Metallurgical Processing	(ZARbn)	8.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Closure Liability	(ZARbn)	0.7	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Contingency	(ZARbn)	9.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cash Flow																
Operating Profit	(ZARbn)	325.6	11.2	11.5	10.3	9.7	8.0	4.8	2.6	1.0	1.6	2.5	2.5	1.6	0.9	0.6
Capital Expenditure	(ZARbn)	46.6	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
MPRDA Royalties	(ZARbn)	25.5	1.0	1.0	0.9	0.9	0.7	0.4	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0.1
Change in working capital	(ZARbn)	0.0	0.0	0.0	0.1	0.0	0.1	0.3	0.2	0.1	0.0	-0.1	0.0	0.1	0.1	0.0
Taxable Income	(ZARbn)	253.5	10.3	10.5	9.3	8.9	7.4	4.6	2.5	1.0	1.3	2.2	2.2	1.6	0.9	0.6
Company tax payable	(ZARbn)	68.3	2.8	2.8	2.5	2.4	2.0	1.2	0.7	0.3	0.4	0.6	0.6	0.4	0.2	0.2
Post-tax pre-finance cash flow	**(ZARbn)**	**185.2**	**7.5**	**7.6**	**6.8**	**6.5**	**5.4**	**3.4**	**1.8**	**0.7**	**1.0**	**1.6**	**1.6**	**1.1**	**0.7**	**0.4**
	(USDbn)	**9.5**	**0.4**	**0.4**	**0.3**	**0.3**	**0.3**	**0.2**	**0.1**	**0.0**	**0.1**	**0.1**	**0.1**	**0.1**	**0.0**	**0.0**

Note:

1. Values represent 100% of post-tax cash flow and not the amount attributable to SRL.

Item	Units	Totals / Averages	2066	2067	2068	2069	2070
Revenue	**(ZARbn)**	**544.7**	**2.2**	**1.8**	**2.5**	**1.2**	**0.2**
Operating Cost	**(ZARbn)**	**219.1**	**1.2**	**0.8**	**1.0**	**0.4**	**0.1**
Capital Costs	**(ZARbn)**	**46.6**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Exploration	(ZARbn)	0.5	-	-	-	-	-
Pre Implementation	(ZARbn)	0.9	-	-	-	-	-
Mining	(ZARbn)	23.2	-	-	-	-	-
Surface Infrastructure	(ZARbn)	3.3	-	-	-	-	-
Services (Surface Infrastructure)	(ZARbn)	1.1	-	-	-	-	-
Metallurgical Processing	(ZARbn)	8.1	-	-	-	-	-
Closure Liability	(ZARbn)	0.7	0.0	0.0	0.0	0.0	0.0
Contingency	(ZARbn)	9.0	0.0	0.0	0.0	0.0	0.0
Cash Flow							
Operating Profit	(ZARbn)	325.6	1.0	1.0	1.5	0.7	0.2
Capital Expenditure	(ZARbn)	46.6	0.0	0.0	0.0	0.0	0.0
MPRDA Royalties	(ZARbn)	25.5	0.1	0.1	0.1	0.1	0.0
Change in working capital	(ZARbn)	0.0	0.0	0.0	0.0	0.1	0.0
Taxable Income	(ZARbn)	253.5	0.9	0.9	1.3	0.7	0.2
Company tax payable	(ZARbn)	68.3	0.2	0.2	0.4	0.2	0.1
Post-tax pre-finance cash flow	**(ZARbn)**	**185.2**	**0.7**	**0.6**	**1.0**	**0.5**	**0.1**
	(USDbn)	**9.5**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Note:

1. Values represent 100% of post-tax cash flow and not the amount attributable to SRL.

22.3 Financial Results and Sensitivity Analysis

22.3.1 Financial Results

The key results from the cash flow analysis for the Western Limb and Eastern Limb projects are set out in Table 22-13 and Table 22-14, respectively. The results are presented for the Base Case (using the SFA price deck of Table 19-2), with comparative results from use of the three-year trailing average and spot values at 31 December 2023.

NPVs at different discount rates are presented for each of the three price decks. The IRR, peak funding requirement and payback period in years from start of project for each price deck are provided as well.

The Eastern Limb results are presented on a 100% basis, i.e. gross values and not what is attributable to SRL.

Table 22-13: Western Limb: Summary Financial Results

Item	Units	NPV Different Price Decks (ZARbn)			NPV Different Price Decks (USDbn)		
		SFA	3-Year	Spot	SFA	3-Year	Spot
NPV (discount rates)			:				
0%		869.6	260.9	634.7	44.2	15.8	34.2
5%		270.7	75.2	193.0	13.7	4.5	10.4
6%		216.8	58.1	153.3	11.0	3.5	8.3
7%		174.0	44.5	121.9	8.8	2.7	6.6
8%		139.9	33.5	96.9	7.1	2.0	5.2
9%		112.6	24.8	76.9	5.7	1.5	4.1
10%		90.6	17.7	60.8	4.5	1.1	3.3
11%		72.8	12.0	47.9	3.6	0.7	2.6
12%		58.4	7.4	37.3	2.9	0.4	2.0
13%		46.6	3.6	28.8	2.3	0.2	1.5
14%		37.0	0.6	21.8	1.8	0.0	1.2
IRR	(%)	23%	14%	20%			
Peak funding	(ZARbn)	33.2	37.4	34.4			
Payback period	(years)	13	14	13			

Table 22-14: Eastern Limb: Summary Financial Results (100% basis)

Item	Units	NPV DifferentPprice Decks (ZARbn)			NPV Different Price Decks (USDbn)		
		SFA	3-Year	Spot	SFA	3-Year	Spot
NPV (discount rates)							
0%		185.2	29.8	127.6	9.5	1.8	6.9
5%		62.7	8.9	43.2	3.2	0.5	2.3
6%		51.2	6.7	35.1	2.6	0.4	1.9
7%		41.9	5.0	28.6	2.1	0.3	1.5
8%		34.4	3.5	23.3	1.7	0.2	1.3
9%		28.2	2.3	19.0	1.4	0.1	1.0
10%		23.2	1.3	15.4	1.2	0.1	0.8
11%		19.0	0.5	12.5	1.0	0.0	0.7
12%		**15.6**	**-0.2**	**10.1**	**0.8**	**0.0**	**0.5**
13%		12.7	-0.8	8.0	0.6	0.0	0.4
14%		10.4	-1.3	6.3	0.5	-0.1	0.3
IRR	(%)	23%	12%	21%			
Peak funding	(ZARbn)	11.5	11.6	11.5			
Payback period	(years)	8	9	8			

22.3.2 Sensitivities

Western Limb

The sensitivity of the NPV @ 12% discount of the post-tax cash flows for the Western Limb projects on a combined basis (combining Ruighoek, East Pit, West Pit TRR, Central Underground and East Underground, Magazynskraal Shaft and Kruidfontein Shaft projects) are examined as follows:

- Twin sensitivity of revenue vs Opex Table 22-15; and
- Twin sensitivity of Capex vs Opex Table 22-16.

Table 22-15: Western Limb: Twin Sensitivity of NPV @ 12% to Change in Revenue and Opex

NPV @ 12% (ZARbn)		Revenue Sensitivity				
		-20%	-10%	0%	10%	20%
Opex Sensitivity	-20%	39.1	53.0	66.7	80.4	94.1
	-10%	34.9	48.8	62.5	76.3	89.9
	0%	30.7	44.6	58.4	72.1	85.8
	10%	26.5	40.4	54.2	68.0	81.7
	20%	22.3	36.2	50.1	63.8	77.6

Table 22-16: Western Limb: Twin Sensitivity of NPV @ 12% to Changes in Capex and Opex

NPV @ 12% (ZARbn)		Capex Sensitivity				
		-20%	-10%	0%	10%	20%
Opex Sensitivity	-20%	73.0	69.9	66.7	63.5	60.3
	-10%	68.9	65.8	62.5	59.3	56.1
	0%	64.8	61.6	58.4	55.2	51.9
	10%	60.7	57.4	54.2	51.0	47.7
	20%	56.5	53.3	50.1	46.8	43.5

Eastern Limb (Mphahlele Decline and Mphahlele Shaft Projects)

The sensitivity of the NPV @ 12% discount of the post-tax cash flows for the Mphahlele Decline and Mphahlele Shaft projects on a combined 100% basis are examined as follows:

- Twin sensitivity of revenue vs Opex Table 22-17; and
- Twin sensitivity of Capex vs Opex Table 22-18.

Table 22-17: Eastern Limb: Twin Sensitivity of NPV @ 12% to Changes in Revenue and Opex (100% basis)

NPV @ 12% (ZARbn)		Revenue Sensitivity				
		-20%	-10%	0%	10%	20%
Opex Sensitivity	-20%	9.2	14.6	20.0	25.4	30.7
	-10%	7.0	12.4	17.8	23.2	28.5
	0%	4.7	10.2	15.6	21.0	26.3
	10%	2.4	7.9	13.4	18.8	24.1
	20%	0.0	5.7	11.2	16.6	21.9

Table 22-18: Eastern Limb – Twin Sensitivity of NPV @ 12% to Changes in Capex and Opex

NPV @ 12% (ZARbn)		Capex Sensitivity				
		-20%	-10%	0%	10%	20%
Opex Sensitivity	-20%	22.8	21.4	20.0	18.6	17.2
	-10%	20.6	19.2	17.8	16.4	15.0
	0%	18.4	17.0	15.6	14.2	12.8
	10%	16.2	14.8	13.4	12.0	10.6
	20%	14.0	12.6	11.2	9.7	8.3

Impact of LT Ir Price

SRK expressed concern that the factored LT Ir price of USD24 182/oz in 2040 was too high.

SRK evaluated the impact by setting the factored price for Ir of USD12 932/oz in 2029 as the LT price. The net effect on the NPV @ 12% discount for the Western Limb and Eastern Limb projects is shown in Table 22-19.

Table 22-19: Comparison of Impact on NPVs of LT Ir price

Item	NPV @ 12% discount (ZARbn)		Reduction
	LT Ir Price (USD24 182/oz)	LT Ir Price (USD12 932/oz)	
Western Limb	58.4	47.5	19%
Eastern Limb (100%, not attributable to SRL)	15.6	12.2	22%

The reduction in the NPV @ 12% discount for the Western Limb and Eastern Limb projects due to a lower LT Ir price is shown to be 19% and 22% respectively.

With the reduced LT price, Ir contributes some 11% of the total LoM revenue.

Attributablke Share of Eastern Limb (Mphahlele Decline and Mphahlele Shaft Projects)

LIMDEV holds the other 25% interest in the Mphahlele Project, whilst the community has a 5% free-carry. As such, LIMDEV is responsible to provide 25% of the project Capex. This is unlikely to happen, so that SRL will have to fund 100% of the Capex and recoup LIMDEV's share of the project Capex through future dividend flows. This is a common practice to finance BEE partners' investments in the South African mining industry.

Typically, a portion of the 25% dividend flow to LIMDEV (nominally 10%) would be paid as a trickle dividend until LIMDEV's share of the Capex is repaid. The 5% free-carry to the community is paid proportionately by SRL and LIMDEV from their respective dividend flows. The remaining 85% part of the LIMDEV dividend is retained by SRL in lieu of LIMDEV's contribution to the project Capex.

Applying this logic to the post-tax cash flows in Table 22-20, it is noted that by the end of the LoM there is still a small residual balance of project Capex that would not have been recouped from LIMDEV. The NPVs of the two sets of cash flows (100% basis and attributable to SRL) are compared in Table 22-20.

Table 22-20: Eastern Limb: Comparison of NPVs at 100% and Attributable to SRL

Discount Rates	NPV (ZARbn) using SFA Price Deck	
	100% Basis	Attributable to SRL
0%	185.2	170.7
5%	62.7	57.4
6%	51.2	46.7
7%	41.9	38.1
8%	34.4	31.1
9%	28.2	25.5
10%	23.2	20.8
11%	19.0	17.0
12%	**15.6**	**13.8**
13%	12.7	11.2
14%	10.4	9.0

22.4 Economic Analysis in a PEA

The economic analysis of SRL's Assets has been done at the effective level of a preliminary economic assessment, even though some of the TEPs in the analysis are supported by feasibility studies. The economic analysis is inherently a forward-looking exercise to assess the potential viability of LoM plans that exploit both Mineral Reserves and Mineral Resources.

This PEA includes Inferred Mineral Resources in the LoM plans that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as Mineral Reserves. There is no certainty that the production schedules presented in this PEA will be realized.

Much of the engineering designs covering the Inferred Mineral Resources have been done at a concept study level, which has a very low level of confidence.

This PEA assumes that there is no restriction on the availability of capital or funding needed to implement the various projects.

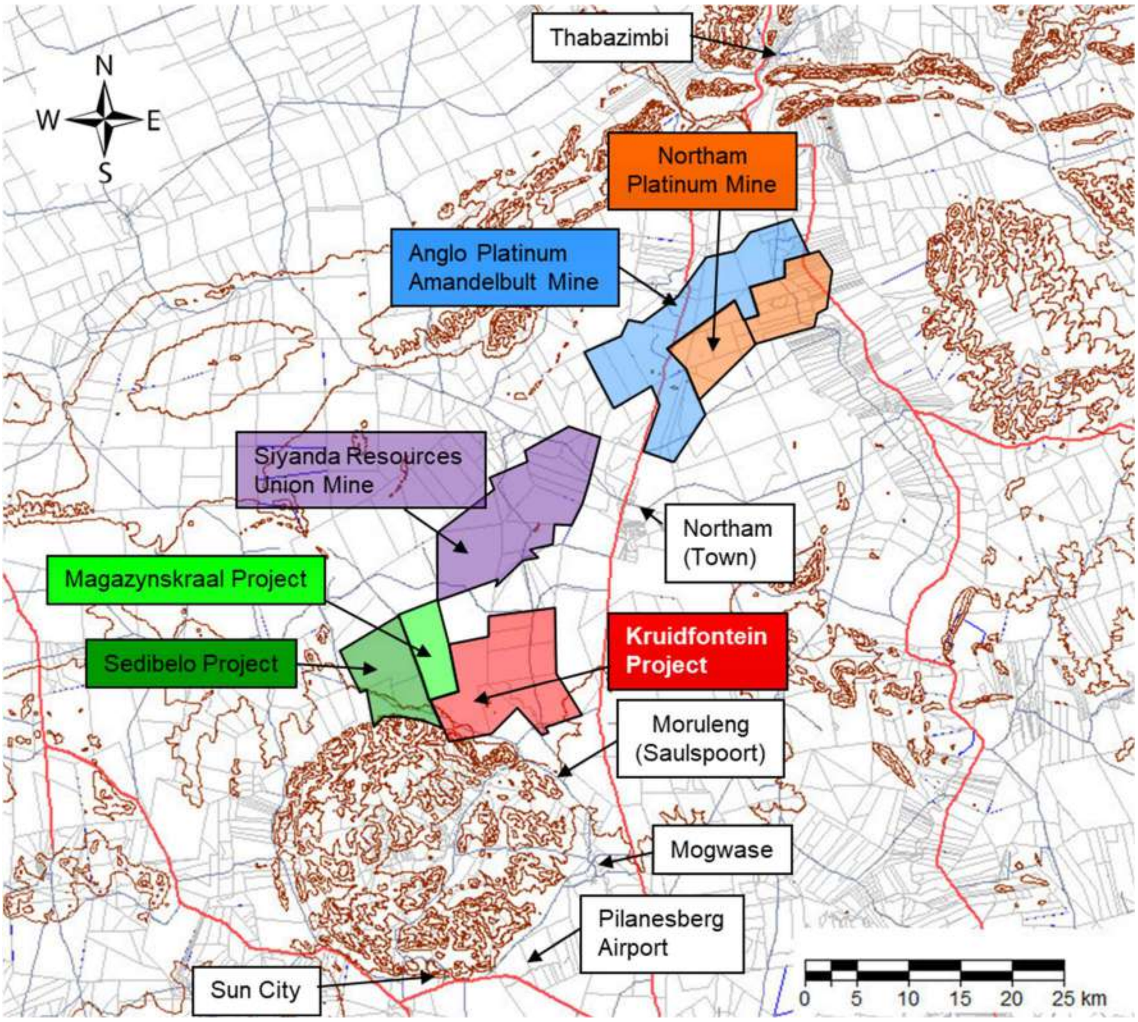
This PEA assumes that all capital or funding needed to implement the various projects will be available in the sums and timing required according to the proposed implementation schedules.

23 Adjacent Properties

23.1 Public Disclosure of Adjacent Property

23.1.1 PSM and Kruidfontein Projects

Adjacent properties to the PSM (Sedibelo and Magazynskraal) and Kruidfontein Projects include the Union Mine of Siyanda Resources Ltd, the Amandelbult Mine of Anglo American Platinum Ltd (AAP) and the Northam Platinum Ltd's (Northam) Northam mine (Figure 23-1).



srk consulting	**Kruidfontein PGM Project** Location Map of Properties Adjacent to thw PSM (Sedibelo & Magazynskraal) and Kruidfontein Projects [source: Mitchell *et al*, 2010]	Project No. 600322

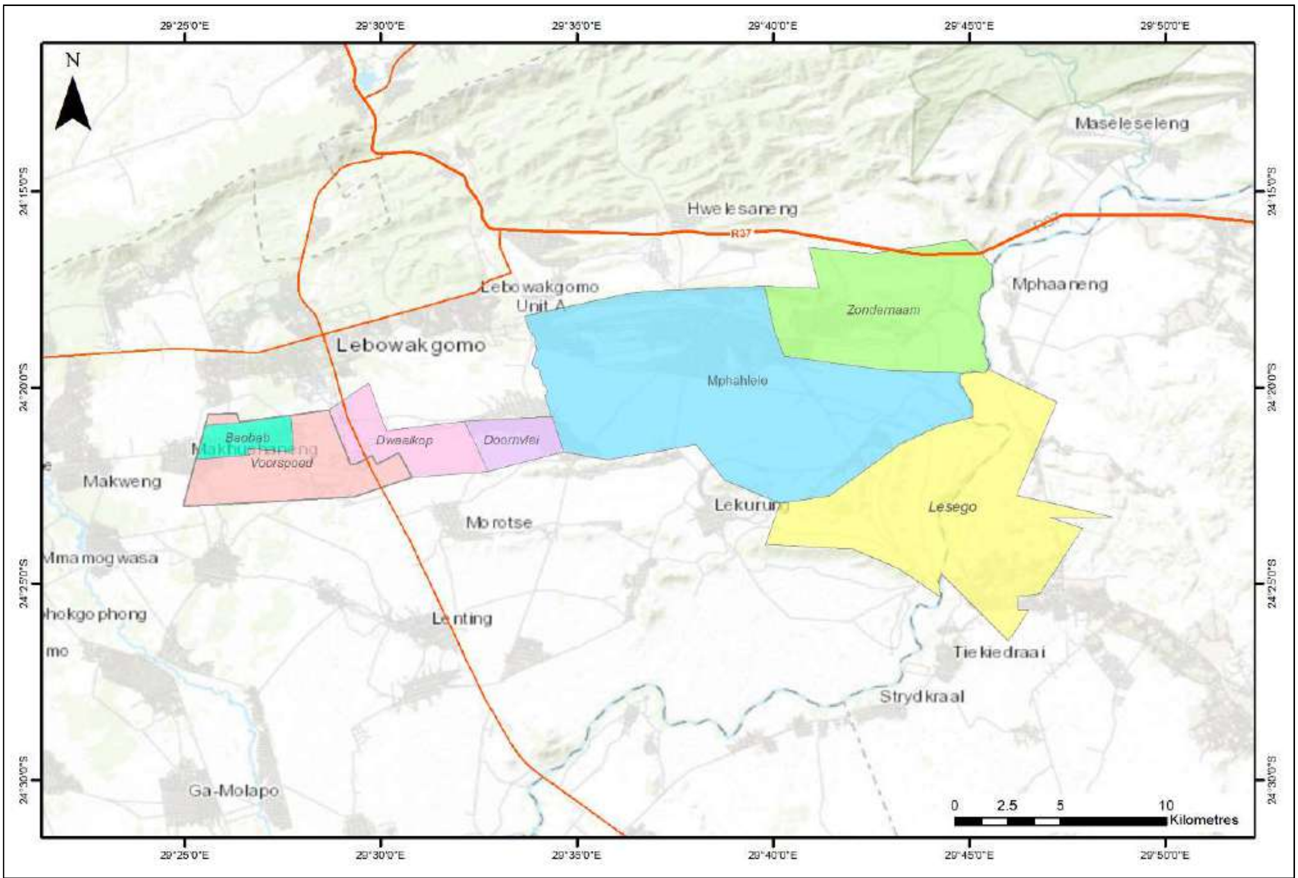
Figure 23-1: Location Map of Properties Adjacent to the PSM (Sedibelo & Magazynskraal) and Kruidfontein Projects

23.1.2 Mphahlele Project

Adjacent properties to the Mphahlele Project include Sibanye-Stillwater's Zondernaam Project to the north-east, the Voorspoed, Dwaalkop and Doornvlei Project areas and the Baobab Mine (under care and maintenance) of Sibanye-Stillwater and JV Partners (the Limpopo Project) to the west and Lesego Platinum Project to the south east (Figure 23-2).

Each of these projects has declared Mineral Resources but no Mineral Reserves.

Information on the adjacent properties to Mphahlele is available on the respective companies' web sites.



srk consulting	**SRL Total Assets PEA** Location Map of Properties Adjacent to Mphahlele	Project No. 600322

Figure 23-2: Location Map of Properties Adjacent to Mphahlele

23.2 Source of Information

23.2.1 PSM and Kruidfontein Projects

There is no information on the Union Mine on the Siyanda Resources website. Since AAP sold its interest in the Union Mine to Siyanda in January 2018, reference has been made to the Ore Reserves and Mineral Resources Report (ORMR) for 2017, which is publicly available on the AAC website.

The information related to the Amandelbult Mine and Northam Platinum Mine presented in this section is extracted from the ORMRs for 2022 and 2023 respectively, which are publicly available on the respective websites of AAP and Northam.

23.2.2 Mphahlele Project

The Limpopo Project information is sourced from the Sibanye-Stillwater 2022 Mineral Resource and Mineral Reserve Report (MRMR), which is publicly available on the Sibanye-Stillwater website. The information for the Zondernaam Project is taken from the Sibanye-Stillwater 2020 MRMR.

The Lesego Project information is sourced from the Lesego Platinum web site.

23.3 Non-verified Information

The information contained in an ORMR or MRMR is prepared by or under the supervision of Competent Persons as defined by the SAMREC Code (2016 Edition). These Competent Persons are industry professionals with more than five years' of relevant experience in the type of mineralisation and type of activity, and thereby satisfy the requirements of Qualified Persons in terms of NI43-101.

The ORMRs and MRMRs include a statement by the Competent Persons that they "consent to the inclusion in this report of the information in the form and context in which it appears". As such, they take responsibility for the correctness of the disclosure and would be subject to disciplinary action from their Recognised Professional Organization in the event of material misinformation or errors.

The information contained in the Lesego website was prepared by or under the supervision of the directors of the company, who have a fiduciary responsibility to the shareholders. SRK independently undertook the Mineral Resource estimation for the Lesego Platinum Project.

Although the mineralisation on the adjacent properties is hosted in the same stratigraphic units as interpreted on SRL's PGM assets, the mineralisation on the adjacent properties is not necessarily indicative of the mineralisation on SRL's assets. In particular, specific aspects such as the unit thickness, metal prill splits, and composition and facies of the reefs may be different on the adjacent properties.

SRK has been unable to verify the information in the ORMR and MRMR reports and that the information presented here is not necessarily indicative of the mineralisation on the respective properties.

23.4 Adjacent Property Information

23.4.1 PSM and Kruidfontein Projects

Union Mine

The Union Mine was acquired by Siyanda Bakgatla Platinum Mine (Pty) Ltd, a joint venture between Siyanda Resources Ltd and the Bakgatla-Ba-Kgafela, from AAP effective 1 February 2018. The only information regarding Union Mine on the Siyanda Resources website is that it is a platinum producing mine that also produces palladium, rhodium, gold and chrome as by-products.

Access is via a number of vertical shafts and decline systems. Mining runs from surface to 1 500 m below surface using conventional breast mining with strike pillars. Hybrid mining occurs in the declines. Mining extracts mainly UG2 ore, with limited amounts of Merensky Reef ore.

The summarised ORMR for Union Mine at December 2017 is set out in Table 23-1 (AAC, 2017). Mineral Resources are reported as additional to Ore Reserves.

Table 23-1: Union Mine: Summary Ore Reserves and Mineral Resources at December 2017 (AAC, 2017)

Mineral Resources	Tonnes (Mt)	Grade (4E g/t)	4E Metal (Moz)
Merensky			
Measured	27.0	6.38	5.5
Indicated	39.2	5.98	7.5
Total M&I Merensky	**66.2**	**6.14**	**13.1**
UG2			
Measured	47.2	5.10	7.7
Indicated	43.5	5.51	7.7
Total M&I UG2	**90.7**	**5.30**	**15.4**
Tailings			
Measured			
Indicated	n/s		
Total M&I Tailings	**n/s**		
Inferred			
Merensky	20.8	5.76	3.9
UG2	39.9	5.44	7.0

Ore Reserves	Tonnes (Mt)	Grade (4E g/t)	4E Metal (Moz)
Merensky			
Proved	1.4	4.68	0.2
Probable	1.1	5.67	0.2
Total Merensky	**2.5**	**5.13**	**0.4**
UG2			
Proved	34.2	4.39	3.8
Probable	6.1	3.79	0.7
Total UG2	**40.2**	**4.30**	**5.6**
Tailings			
Proved			
Probable	0.8	1.24	0
Total Tailings	**0.8**	**1.24**	**0**

Note:
1 Mineral Resources are reported as additional to Ore Reserves.
2 M&I Measured and Indicated.

Amandelbult Mine

Amandelbult Mine consists of two mines, Tumela and Dishaba, with three concentrators and a chrome plant located between the towns of Northam and Thabazimbi in Limpopo Province, South Africa. The mines exploit both the Merensky and UG2 Reefs. Mining has been underway since 1973. The NOMR is valid to July 2040 (AAP, 2022).

Access is via five vertical shafts and seven decline systems. Mining runs from surface to 1.3 km below surface using conventional breast mining with recent implementation of extra-low profile mechanised mining (AAP, 2022). Short-life, high-value open-pit mining at Dishaba supplements underground production.

The summarised ORMR for Amandelbult Mine at December 2022 is set out in Table 23-2 (AAP, 2022). Mineral Resources are reported as exclusive of the Ore Reserves.

Table 23-2: Amandelbult Mine: Summary Ore Reserves and Mineral Resources at December 2022 (AAP, 2022)

Mineral Resources	Tonnes (Mt)	Grade (4E g/t)	4E Metal (Moz)
Merensky			
Measured	32.8	6.77	7.1
Indicated	58.3	6.97	13.1
Total M&I Merensky	**91.1**	**6.90**	**20.2**
UG2			
Measured	98.8	5.33	17.0
Indicated	95.8	5.57	17.1
Total M&I UG2	**194.7**	**5.45**	**34.1**
Inferred			
Merensky	57.5	6.80	12.5
UG2	56.5	5.72	10.4

Ore Reserves	Tonnes (Mt)	Grade (4E g/t)	4E Metal (Moz)
Merensky			
Proved	2.0	4.32	0.3
Probable	4.3	5.70	0.8
Total Merensky	**6.3**	**5.26**	**1.0**
UG2			
Proved	76.9	4.47	11.0
Probable	6.2	4.55	0.9
Total UG2	**83.1**	**4.48**	**12.0**

Note:
1. Mineral Resources are reported as exclusive of the Ore Reserves.
2. M&I Measured and Indicated.

Northam Platinum Mine

Northam's Zondereinde Mine (including Middeldrift and Western sections) lies southeast of AAP's Amandelbult Mine located between the towns of Northam and Thabazimbi in Limpopo Province, South Africa.

The Merensky and UG2 Reefs are accessed via a twin vertical shaft system, where mining occurs between depths of 1 100 m and 2 000 m below surface, with deeper access via a decline system to a depth of 2 400 m. Mine development started in 1986, with ore production commencing in the early 1990s. The NOMR is valid until July 2041.

The mining layout is a breast configuration on both the Merensky and UG2 Reefs. Surface infrastructure comprises two concentrator plants for Merensky and UG2 ore, a recently expanded smelter which houses two furnaces and a base metals removal plant (Northam, 2023).

The summarised MRMR for Zondereinde Mine at June 2023 is set out in Table 23-3 (Northam, 2023). Mineral Resources are reported inclusive of Mineral Reserves.

Table 23-3: Zondereinde Mine (Northam Mine): Summary Mineral Resources and Mineral Reserves at June 2023 (Northam, 2023)

Mineral Resources	Tonnes (Mt)	Grade (4E g/t)	4E Metal (Moz)
Merensky			
Measured	4.34	7.17	1.00
Indicated	26.37	6.95	5.89
Total M&I Merensky	**30.71**	**6.98**	**6.89**
UG2			
Measured	8.75	4.98	1.40
Indicated	63.98	5.11	10.51
Total M&I UG2	**72.73**	**5.09**	**11.91**
Inferred			
Merensky	140.61	7.38	33.38
UG2	158.06	5.26	26.73

Mineral Reserves	Tonnes (Mt)	Grade (4E g/t)	4E Metal (Moz)
Merensky			
Proved	3.07	5.97	0.59
Probable	30.15	5.57	5.40
Total Merensky	**33.22**	**5.60**	**5.99**
UG2			
Proved	6.66	4.15	0.89
Probable	55.13	4.48	7.94
Total UG2	**61.79**	**4.44**	**8.83**

Note:
1 Mineral Resources are reported inclusive of Mineral Reserves.
2 M&I Measured and Indicated.

23.4.2 Mphahlele

Limpopo Project

The Limpopo Project consists of three contiguous mineral titles areas, Voorspoed, Dwaalkop and Doornvlei, centred around the Baobab operation situated on the Voorspoed Mining Right.

The Baobab operation has the full surface and underground infrastructure, concentrator and TSF to support the designed mining rate of 90 ktpm. It has a vertical shaft to a depth of 450 m. Concentrate was historically processed at Sibanye-Stillwater's (formerly Lonmin's) smelting and refining operations. The Limpopo Baobab operation reached a maximum extraction rate of 75 ktpm, before being placed under care and maintenance in early 2009. The mining methods applied during operations were conventional down-dip stoping, conventional apparent dip raise, long-hole stoping and mechanized, long-hole stoping. The concentrator plant is currently being leased to Anglo American Platinum.

The Mineral Resources are summarised in Table 23-4 (Sibanye-Stillwater 2022).

Table 23-4: Mineral Resource Statement for Sibanye-Stillwater's Limpopo Project at 31 December 2022

Classification	Underground	Tonnes (Mt)	Grade (g/t)	4E PGM (Moz)
Measured		1.8	4.2	0.2
Indicated		80.0	4.1	10.5
Measured + Indicated		**81.7**	**4.1**	**10.7**
Inferred		70.9	4.0	9.2
Total	**Underground**	**152.6**	**4.1**	**19.9**

SRK notes that no Mineral Resources are reported for the Zondernaam Mineral Resources at December 2022, as Sibanye-Stillwater decided not to proceed with a prospecting right renewal.

Lesego Platinum Project

The Lesego deposit is a shallow, high grade resource of some 47 Moz at an average 4E grade of over 5.6 g/t. The Lesego Platinum Project is currently being investigated through a Feasibility Study with a Phase 1 aiming to extract the shallow sub-vertical portion of the orebody, with later phases to access the deeper portions of the orebody, which flattens to a shallow dip below a depth of approximately 1 200 m.

The Mineral Resources at August 2018 are summarised in Table 23-5Table 23-5 (Lesego, 2018).

Table 23-5: Mineral Resource Statement for the Lesego Platinum Project at August 2018

Reef	Category	Quantity (Mt)	PGM Grade (4E g/t)	Contained PGMs (4E Moz)[4]	Cu Grade (%)	Ni Grade (%)	Contained Cu (kt)	Contained Ni (kt)
MR	Measured	7.99	5.11	1.31	0.11	0.25	9.2	20.3
	Indicated	51.71	5.52	9.17	0.12	0.25	63.0	129.2
	Subtotal (M&I)	**59.70**	**5.46**	**10.49**	**0.12**	**0.25**	**72.2**	**149.5**
	Inferred	37.97	5.36	6.55	0.12	0.25	45.1	93.1
UG2	Measured	25.29	4.88	3.97	0.05	0.16	13.3	41.5
	Indicated	66.03	5.82	12.37	0.06	0.17	37.0	109.7
	Subtotal (M&I)	**91.32**	**5.56**	**16.33**	**0.06**	**0.17**	**50.3**	**151.2**
	Inferred	69.42	6.08	13.56	0.06	0.17	41.2	120.8
Total	Total Measured	33.28	4.93	5.28	0.07	0.19	22.5	61.8
	Total Indicated	117.74	5.69	21.54	0.08	0.20	100.0	238.9
	Total (M & I)	**151.02**	**5.52**	**26.82**	**0.08**	**0.20**	**122.5**	**300.7**
	Total Inferred	107.39	5.82	20.11	0.08	0.20	86.3	213.9
Total (M&I&I)		**258.41**	**5.65**	**46.92**	**0.08**	**0.20**	**208.7**	**514.7**

Note:

1. M&I Measured and Indicated
2. M&I&I Measured, Indicated and Inferred

24 Other Relevant Data and Information

24.1 Project Implementation

SRL's implementation model for all their projects is based on appointing Engineering, Procurement, and Construction Management (EPCM) contractors per project to design, procure and manage the construction and assist with commissioning including management of subcontractors. The EPCM contractor will set up his own systems of control as approved by

Key dates regarding the proposed implementation of the various projects are summarised in Table 24-1.

Table 24-1: Implementation Timeline: Key Dates

Area	Start of Exploration Capex	Start of Pre-Implementation Capex	Start of Implementation Capex	Start of First Waste	Start of First Reef	Operational Period	
						Start	End
Ruighoek Pit	Jul-47	Jul-47	Jul-47	Apr-48	Apr-48	Jul-47	Mar-56
Central Decline	Jan-25	Jan-25	Jan-25	Jan-25	Jan-29	Jan-25	Jun-48
East Decline	Jan-26	Jan-25	Jan-25	Jan-25	Jun-27	Jan-26	Jul-65
Magazynskraal Shaft	Jan-25	Jan-25	Nov-26	Jul-27	Oct-31	Jan-25	Apr-68
Kruidfontein Shaft	Jan-25	Nov-25	Dec-25	Dec-26	Sep-34	Jan-25	Sep-67
Mphahlele Decline	Jan-26	Jan-26	Aug-26	Oct-26	Feb-27	Jan-26	Jul-43
Mphahlele Shaft	Apr-31	May-34	Apr-34	Jan-35	Sep-35	Apr-31	Feb-54

Safety and Occupational Health

South African mines are governed by the MHSA.

The TR evaluated the effectiveness of risk control measures, with emphasis on workplace safety and occupational health. These are aimed at minimising injuries and personnel exposure to occupational health hazards.

The safety management workplan should include the following:

- Policy, Leadership and Commitment;
- ISO 45001 (Occupational Health and Safety Management System) certification;
- Risk and Change Management;
- Legal and Other Requirements;
- Objectives, Targets and Performance Management;
- Training, Awareness and Competence;
- Communication, Consulting, and Involvement;
- Documentation and Control of Documents;
- Operational Control;
- Emergency Preparedness and Response;
- Contractor and Business Partner Management;
- Incident Reporting and Investigation; and
- Monitoring, Audits and Reviews.

Occupational health is aimed at minimising all occupational health hazard exposures to below the OELs as contemplated in all mandatory CoPs and Regulation 9.2 of the MHSA. The occupational health management system should have the following in place:

- Health hazards to which employees may be exposed must be identified and recorded;
- Health risks must be identified and assessed;
- A person qualified in occupational hygiene techniques is required to measure the exposure to health hazards at a mine;
- Control measures are required to eliminate or control any recorded risks at source;
- In so far as the risk remains, the following should be in place:
  - Where possible personal protection equipment must be provided; and
  - A programme to monitor the risk to which employees may be exposed must be instituted; and

- A system of medical surveillance of employees exposed to health hazards is required. The programme should diagnose early signs of ill health, which must be treated and investigated. Annual medical reports must be compiled by Occupational Medical Practitioners.

24.1.1 Safety

Ruighoek, PSM - West and East Pits and Metallurgical Plant

The mine has a good safety management system which complies with the MHSA and ISO 45001 requirements. The Health and Safety Policy concerning the protection of personnel health and safety at work was updated in 2022. The policy will be updated again in 2024 and will include underground mining.

In terms of safety performance, a commendable 7.58 million progressive fatality free shifts were recorded at the end of December 2023. There were no fatalities from 2011 to the end of 2023. The number of lost time injuries reduced from six in 2019 to two in 2022 and zero in 2023 and the lost time injury frequency rate (LTIFR) per million man-hours reduced from 1.3 in 2019 to 0.5 in 2022 and zero in 2023, an admirable improvement. The principle causes of lost time injuries from 2019 to 2022 were slip-and-fall accidents and the nipping/pinching of fingers.

Strategic actions have been defined for 2024 to ensure that the safety targets are achieved; these actions will drive the themes required to transform and maintain PPM into a behavioral-based business.

PSM, Kruidfontein and Mphahlele

As these are presently at pre-project implementation stage, there are no safety performance records yet. SRK expects that the safety management plan for these projects will be identical to those at the West and East Pits.

24.1.2 Occupational Health

Ruighoek, PSM - West and East Pits and Metallurgical Plant

The company has all the legally required occupational health systems in place and is ISO 45001 certified.

The working environment is similar to all open pit PGM operations and the identified occupational health risks are also similar. Identified occupational health risks include airborne pollutants (dust), noise induced hearing loss (NIHL) and heat-related illnesses.

The results of the occupational health measurements are as follows:

- Platinum dust is one of the main airborne pollutants in PGM mines and if not controlled, can cause upper respiratory diseases and chronic obstructive airway disease. The silica content in platinum dust is less than one percent; the employees should not be at risk of contracting silicosis. The main sources of dust and platinum dust at open pit operations are the removal of overburden, drilling, blasting, transport of ore via roadways and crushing. SRL has a good dust management plan in place. In terms of the dust measurement results, 3.5% of platinum dust samples exceeded the OEL in 2020, 0% in 2021 and 2022 and 1.5% in 2023. Crystalline silica results are well below the OEL limit. Between 2018 and 2023, the annual medical surveillance results indicated there were no diagnosed dust-related respiratory diseases;
- Metallic lead in the form of a fine dust poses a high health risk at the assay laboratory. However, with controls in place and according to the occupational medical surveillance results, no employees had blood lead levels above the biological exposure index level;
- NIHL has displaced tuberculosis and silicosis as the top priority health threat in the South African mining industry. The other diseases have decreased significantly, while NIHL has not decreased as much in the same period. The Company routinely monitors noise exposure at the open pit operations. Most of the open pit and plant employees are exposed to noise levels in excess of 85 dB(A) over an eight-hour time-weighted average. The mine will extend the routine noise exposure measurements to the proposed underground working areas and report these in the monthly management reports.

  In terms of the annual medical surveillance results, the diagnosed NIHL cases increased from four in 2022 to 61 in 2023. The high increase can be ascribed to the following:

  - A newly introduced medical surveillance clinic with improved accuracy of NIHL testing;
  - An increase in personnel with the introduction of the underground section; and
  - NIHL has a long latency period (>10 years) before there are any symptoms;

    The following controls are in place to prevent employees from suffering NIHL:

    - All areas with noise levels in excess of 85 dB(A), have been demarcated as noise zones;
    - Employees must wear hearing protection devices (HPD) in noise zones. The HPDs can reduce noise levels from a maximum of 103 dB(A) to below 85 dB(A);
  - All mining equipment noise levels will not exceed the DMRE milestone limit of 107 dB(A);
  - The mine will extend the routine noise exposure measurements to the proposed underground working areas and report these in the monthly management reports;
- Mid-summer temperatures can exceed 40˚C which can cause heat disorders and fatigue. Control measures include equipping driver cabins of trucks and drill rigs with air conditioners, rest periods and provision of additional drinking water for personnel. Mid-winter temperatures in the area can decrease to as low as -4°C, which can cause cold stress conditions. Control measures include provision of thermal clothing when temperatures approach minimum action levels; and
- The annual medical surveillance statistics indicate that the only diagnosed occupational health disease was NIHL.

Ruighoek, PSM, Kruidfontein and Mphahlele

As these are presently at pre-project implementation stage, there is no occupational health management system.

SRK expects that the occupational health management system for these projects will be identical to those at the West and East Pits.

24.2 Risk Assessment

24.2.1 Introduction

The following section presents the key findings from the risk assessment for the Assets and is generally limited to a *qualitative* assessment only, so no direct financial impact is considered.

It is possible that several of the identified risks and/or opportunities will have an impact on the cash flows. SRK has provided twin-parameter sensitivity tables, which cover the anticipated range of accuracy in respect of commodity prices, Opex and Capex. SRK is of the view that the general risks and opportunities are adequately covered by these sensitivity tables, as these address fluctuations in Opex and commodity prices.

In addition to the risks identified hereinunder, the Asset is subject to specific risks and opportunities, which independently may not have a material impact but in combination may do so.

24.2.2 Development of Understanding of Risk Profile

The Company has consistently worked to identify potential risks and understand their impact during the development of the project components. Table 24-2 shows the consideration of risk carried out over time by the Company, toward development of understanding of risk profile.

Table 24-2: Historical Risk Assessments to Develop Understanding of the Risk Profile

Project	2008	2009	2011	2013	2016	2019	2020	2022
PSM	•		•	•	•	•	•	•
Kruidfontein								•
Mphahlele		•				•	•	•

24.2.3 Risk Assessment Approach

The risk assessment followed a 'likelihood and consequence' approach, where:

- **Likelihood** is considered a qualitative measure of the chance of a risk occurring; and the relevant descriptions are provided in Table 24-3; and
- **Consequence** was considered in terms of the degree or magnitude of consequences/impacts that are associated with the risk; and the relevant descriptions are shown in Table 24-4.

The correlation of likelihood and consequence produces a **risk rating** – through the combination of Table 24-3 and Table 24-4 to produce the risk rating matrix shown in Table 24-5. The matrix indicates the significance of each risk the PSM Project is faced with.

- Using the risk rating matrix, the first pass produced the **inherent** risk rating (i.e., the risk considered *without* any mitigation). The resultant ratings of risks as ‘very low’, ‘low’, ‘tolerable’, ‘high’ or ‘very high’ were then considered in context of the Company’s risk appetite and tolerance:
  - Risks that produced ‘very low’, ‘low’ and ‘tolerable’ ratings did not undergo further rigorous evaluation given that their inherent rating was acceptable to the risk appetite of the Company.;
  - Prioritisation was made of those risks with highest exposures (i.e., ‘high’ and ‘very high’ risk ratings) by identifying potential mitigatory actions. The mitigation aimed to reduce the likelihood, reduce the consequence, or reduce both the likelihood and consequence in order lower the risk rating.;
- The second pass produced the **residual** risk rating (i.e., the risk considered *with* mitigation); and
- It is noted that classification of a risk as ‘very high’ or ‘high’ does not necessarily constitute a scenario which leads to project failure.

Table 24-3: Likelihood of Events Occurring

Description	Chance	Frequency	Probability
Rare	May occur only in exceptional circumstances	Has occurred or can reasonably be considered to occur once in 30-50 years	10% (0% - 20%)
Unlikely	Could occur at some time	Has occurred or can reasonably be considered to occur once in 10-30 years	30% (21% - 40%)
Possible	Might occur at some time	Has occurred or can reasonably be considered to occur once in 1 - 10 years	50% (41% - 60%)
Likely	Will probably occur in most cases	Has occurred or can reasonably be considered to occur once in 6 months - 1 year	70% (61% - 80%)
Almost certain	Is expected to occur in most circumstances	Has occurred or can reasonably be considered to occur once in 6 months or less	90% (81% - 100%)

Table 24-4: Severity/Consequences of the Risk

Rating	Financial / Economic	Operational / Business Interruption	Health and safety	Skills	Natural environment	Social	Corporate Image / Reputation	Legal
Minor	1% of Net Asset Value (0% - 1%)	2.5% of project schedule overrun	Medical treatment case, dressing station, no impairment	5% unavailability of critical skills	Natural processes are affected but with impacts being reversible immediately	Issue of no political and community concern	Issue of no public concern	Low-level legal issue
Moderate	10% of Net Asset Value (1% - 20%)	5% of project schedule overrun	Reversible impairment or Lost Time Injury	10% unavailability of critical skills	Natural processes are affected, but continued in a modified way with impacts being reversible within lifetime of operation	Local concern consisting of repeated complaints	Local press interest and Local political concerns	Non-compliance and breach of regulations
Major	30% of Net Asset Value (20% - 40%)	10% of project schedule overrun	Lost Time Injury - Reportable	30% unavailability of critical skills	Natural processes are notably altered but continued in a modified way with impacts being reversible within lifetime of operation.	Declared Provincial Concerns and serious inflow of community complaints.	Limited damage to reputation Extended local press interest/ Provincial press interest.	Breach of regulation. Investigation or report to authority with prosecution and/or moderate fine possible.
Severe	50% of Net Asset Value (40% - 70%)	20% of project schedule overrun	Single fatality Multiple Injuries Permanent Disability	50% unavailability of critical skills	Natural processes are disrupted for the duration of the activity but resume functioning after the operation has been terminated.	Loss of credibility and confidence. Criticism by National Government	National press coverage. Independent External Enquiry.	Breach of regulation. Severe litigation.
Catastrophic	>70% of Net Asset Value (70% - 100%)	.>30% of project schedule overrun	Multiple fatalities or health impact of similar nature affecting multiple persons	>70% unavailability of critical skills	Natural processes are permanently disrupted to the extent that these processes could permanently cease.	Widespread social riots & work blockages, Declared National Political Concerns and Investigations.	Declared National political concerns, International and Local Media Coverage.	Prosecution and fines. Litigation including class actions.

Table 24-5: Risk Ratings

		Likelihood				
		Rare	Unlikely	Possible	Likely	Almost Certain
Consequence	Catastrophic	Tolerable	High	High	Very High	Very High
	Severe	Tolerable	Tolerable	High	High	Very High
	Major	Low	Tolerable	Tolerable	High	High
	Moderate	Low	Low	Tolerable	Tolerable	High
	Minor	Very Low	Low	Low	Tolerable	Tolerable

24.2.4 Overview of Specific Risk Elements

Social issues appear to have the greatest potential impact at this time in the assessment life cycle at PSM, Kruidfontein, and Mphahlele. The scope of potential social issues include:

- Potential disruption of projects and challenges in maintaining strong stakeholder relations may result from internal tensions within the BBKT leadership and reported dissatisfaction about royalty benefits amongst some sectors of the community not aligned with the current leadership; and
- General high expectations of employment, procurement and development benefits remain in the communities within SRL's zone of influence and stakeholder relations should be managed with care.

The following risks are generally common at Ruighoek, PSM, Kruidfontein, and Mphlahle:

- **Environmental issues** e.g., environmental constraints may be realised if approval of environmental authorisations is not granted; water quality issues in general are regarded as a low risk but subject to a fair degree of uncertainty. This may extend to a requirement for post-closure water treatment;
- **Closure issues** i.e., the closure cost excludes provision for post-closure water treatment, based on the assumption that mitigation measures put in place during the operational phase will be adequate. While mitigation during the operational phase could take the form of ensuring that all standard measures are taken to prevent water quality deterioration, water treatment, if it is required, would involve either passive or active systems. In the event that active treatment is required this could represent a material liability, but this is considered a low risk. Modelling undertaken indicates that decant of water from the West Pit in the post-closure scenario is unlikely and that any contaminated plume from the tailings dam and WRD will flow beneath the Wilgespruit, making it unlikely to decant;
- **Human resources issues** i.e., escalating wage demands above inflation not linked to productivity; there is a lack of suitable accommodation in the area; and there appears to be a lack of existing skills in nearby communities;
- **Logistics** i.e., the selected ore transport method is not optimal;
- **Mining** i.e., community-based contractors have poor understanding of mining; community-based contractors' fleet not sufficient for the waste stripping required, and underground mining productivity factors and production rates too optimistic;
- **Metallurgical** i.e., the forecast recovery is overstated;
- **Rock engineering** i.e., falls of ground occur, highwall failure occurs;
- **Safety and health** i.e., conveyor belt fires, diesel emissions (more pertinent to the underground operations and ventilation;
- **Water management** i.e., impact on local drill holes; and
- **Water-related issues** i.e., solids from the tailings slurry do not settle out during its residence time on the operational pool of the TSF. It is noted that this presents a water management risk as well as a water resources contamination risk.

It is noted that technical matters regarding Kruidfontein have only been evaluated at a conceptual level.

Risk items assessed for PSM also included:

- **Economic performance** i.e., treatment capacity for surplus concentrates not available, Kell process does not achieve expected performance, loss of toll treatment allocation, and/or forecast commodity prices too optimistic;
- **Environmental** i.e., blasting vibration impacts on local communities and livestock;
- **Geology** i.e., in the West and East Pits: the amount of weathering associated with faulting and fracture greater than expected, and/or the head grade achieved is lower than the declared reserve grade; and in the underground operations: the effect of geological structures on the underground operations is underestimated;
- **Tailings** i.e., “ratholing” and seepage occur along the western and eastern waste rock containment walls, respectively;
- **Rock engineering** e.g., poor hangingwall conditions on the UG2 for the underground operations; and
- **Water management** i.e., discharge of excess mine water into the environment.

At Mphlahlele, the additional consideration of cross-cutting risks is relevant; *viz*., artisanal mining and proximity of operations. There may be an increased liability to cater for the adjacent, artisanal mining; and/or potential project changes required as a result of the influence of the artisanal operations.

24.2.5 Risk Assessment Summary

The risk assessment summary for PSM (including Ruighoek), Kruidfontein, and Mphahlele is shown below in Table 24-6, Table 24-7, and Table 24-8, respectively.

It is noted that during the risk assessment, those risks that produced ‘very low’, ‘low’ and ‘tolerable’ inherent ratings did not undergo further rigorous evaluation (given that their inherent rating was acceptable to the risk appetite of the Company). Therefore, Table 24-6, Table 24-7, and Table 24-8 only show the assessment summary of those risks that had a ‘high’ or ‘very high’ inherent rating, prompting for the identification and planning of mitigation measures toward their residual rating. It is observed that the residual rating for each risk was reduced through the consideration of mitigation measures.

Table 24-6: PSM (including Ruighoek): Assessment Summary of Selected Risks (before and after mitigation, as appropriate)

Hazard/Risk	Likelihood	Consequence	Overall Inherent Risk	Residual Risk
Environmental				
Increased environmental constraints	Likely	Major	High	Tolerable
Increased environmental complaints	Likely	Major	High	Low
Blasting vibration impacts on local communities and livestock	Likely	Major	High	Low
Human Resources				
Escalating wage demands above inflation not linked to productivity	Likely	Major	High	Tolerable
Lack of suitable accommodation in the area	Likely	Severe	High	Tolerable
Mining				
Community-based Contractors have poor understanding of mining	Certain	Major	High	Tolerable
Community-based Contractors’ fleet not sufficient for waste stripping	Certain	Major	High	Low
Falls of Ground	Possible	Catastrophic	High	Tolerable
High Wall Failure	Unlikely	Catastrophic	High	Tolerable
Safety And Health				
Conveyor belt fires	Possible	Catastrophic	Very High	Tolerable
Ore transport on public roads (Ruighoek)	Likely	Major	High	Tolerable
Diesel emissions (underground)	Likely	Major	High	Tolerable
Social				
Disruption of the project due to power struggle within project communities	Almost certain	Severe	Very High	High
Social Expectations not met (loss of social licence to operate)	Almost certain	Severe	Very High	High
Tailings				
“Ratholing” and seepage occur on Western and Eastern waste rock containment walls, respectively	Certain	Moderate	High	Tolerable
Dirty water exits the mine property	Certain	Severe	High	Low
Returned water carries high load of suspended solids to the Plant	Certain	Moderate	High	Tolerable
Legal freeboard requirements, if utilised, non-compliant	Likely	Moderate	High	Low
Design not to GISTM Standards	Likely	Moderate	High	Low
Water Management				
Impact on local bore holes	Likely	Major	High	

Table 24-7: PSM - Magazynskraal and Kruidfontein Shafts: Assessment Summary of Selected Risks (before and after mitigation, as appropriate)

Hazard / Risk	Likelihood	Consequence	Overall Inherent Risk	Residual Risk
Economic Performance				
Unreliable power supply	Likely	Major	High	Tolerable
Power cost increases exceed inflation	Likely	Major	Major	Tolerable
Environmental				
Increased environmental constraints	Likely	Major	High	Tolerable
Increased environmental complaints	Likely	Major	High	Low
Blasting vibration impacts on adjacent communities and livestock	Likely	Major	High	Low
Human Resources				
Escalating wage demands above inflation not linked to productivity	Likely	Major	High	Tolerable
Lack of suitable accommodation in the area	Likely	Severe	High	Tolerable
Mining				
Falls of Ground	Possible	Catastrophic	High	Tolerable
LoM plan based on inferred mineral resources	Certain	Major	High	Tolerable
Safety And Health				
Conveyor belt fires	Possible	Catastrophic	Very High	Tolerable
Diesel emissions (underground)	Likely	Major	High	Tolerable
Social				
Disruption of the project due to power struggle within project communities	Almost certain	Severe	Very High	High
Access to the surface delays project implementation	Almost Certain	Severe	Very High	High
Social expectations not met (loss of social licence to operate)	Almost certain	Severe	Very High	High
Tailings				
Design not to GISTM Standards	Likely	Moderate	High	Low
Dirty water exits the mine property	Certain	Severe	High	Low
Water Management				
High influx of water on WNW-ESE, NW-SE, NNW-SSE structures	Possible	Major	High	Tolerable
Water influx from the surface aquifer	Almost Certain	Moderate	High	Low

Table 24-8: Mphahlele: Assessment Summary of Selected Risks (before and after mitigation, as appropriate)

Hazard / Risk	Likelihood	Consequence Rating	Overall Inherent Risk	Residual Risk
Environmental				
Increased environmental constraints (especially water and biophysical)	Likely	Major	High	Tolerable
Increased environmental complaints	Likely	Major	High	Low
Human Resources				
Escalating wage demands above inflation not linked to productivity	Likely	Major	High	Tolerable
Lack of suitable accommodation in the area	Likely	Severe	High	Tolerable
Power Supply Interruption				
The Eskom Substation is remote from the proposed mphahlele operations with whe concomitant risk of cable theft and/or sabotage.	Likely	Major	High	Tolerable
Safety And Health				
Diesel emissions (underground)	Likely	Major	High	Tolerable
Social				
Disruption of the project due to power struggle within project communities	Almost certain	Severe	Very High	High
Access to the surface delays project implementation	Almost Certain	Severe	Very High	High
Social Expectations not met (loss of social licence to operate)	Almost certain	Severe	Very High	High
Tailings				
Design not to GISTM Standards	Likely	Moderate	High	Low
Water Management				
Impact on local boreholes	Likely	Major	High	Low

24.2.6 Opportunities

PSM

Self-generation of Renewable Energy

South Africa's Electricity Regulation Act was amended on 13 August 2021 (ESI Africa, 2021), allowing the self-generation of 100 MW of power from embedded renewable energy technologies without the need for a generation licence. This is an opportunity to manage the risk of cost increases as a result of increases in power costs, as well as potential carbon taxes, which may also increase.

PPM signed a MoU with a consortium of Sturdee and juwi to provide the mine with 40 MW renewable energy via a wheeling agreement (cf. section 19.5.4). With subsequent changes to Eskom's demand and wheeling charges, the anticipated cost benefits of this renewable energy from remote solar/wind farms would not be achievable.

SRL has entered into discussions with ACES for the construction of a solar farm linked into the mine supply behind the Eskom substation(s). This would enable SRL to avoid the wheeling charges. The requisite information has been shared with ACES to be able to compile a proposal and design for PPM's power requirements.

SRL intends to have the renewable energy source operational by 2027.

Mphahlele

The 2020 FS for Mphahlele identified three significant opportunities with respect to the chromite mineral rights on the property:

Mphahlele Chromite Recovery Pool-and-share Opportunity

SRL does not hold the chromite rights over Mphahlele. Any chromite that is mined incidentally from the UG2 ores or that ends up in the tailings belongs to the MCDT.

SRL has identified that it would beneficial to install a CRP in the MF2 concentrator to produce a chrome concentrate of 40% - 42% Cr_2O_3. At the current price of around USD76/t, this is too valuable to allow the chromite to end up on the TSF. SRL envisages that a pool-and-share agreement (PSA) with the MCDT could be implemented, which would be of mutual benefit.

Mphahlele Open Pit Chrome Mining Technical Support

A small open pit mine was established around 2017 on the chromitite seams that subcrop immediately north of the UG2. The mine appears to be relatively informal in nature and mining activities have since ceased.

SRL anticipates that it could provide technical and commercial support to the community and/or MCDT in terms of mine design, mining operations and product sales for any future the open pit mining activities .

Mphahlele Mining Charter III Requirements Offsets

Preliminary assessments by the Company suggest that the benefit from the PSA over the duration of the current LoM plan could exceed the monetary requirements of the Mining Charter III. It may then be possible for SRL to negotiate with the DMRE that part of the Mining Charter III monetary commitments is replaced by the PSA.

25 Interpretation and Conclusions

25.1 Mineral Rights

Certain of the mineral rights purported to be held by SRL through its subsidiaries are still subject to various approvals being granted by the DMRE. While it is unlikely based on experience that these approvals will not be granted, the legislated time periods set out in the MPRDA are not always adhered to. This has implications for potential delays to the implementation of the projects as envisaged in this TR.

25.2 Mineral Processing and Metallurgical Testing

The Merensky and UG2 concentrators at PPM have been operating since 2008 and have accumulated a significant body of metallurgical data. The ore at all projects on the western Limb is of the Swartklip facies, so that the metallurgical performance at PPM should be applicable to all these ores. All metallurgical testwork was supported with sufficient samples to ensure representivity of the various ore types and ore distribution through the orebodies.

The majority of the mineralogy and metallurgical testwork was conducted at Mintek, which is accredited with ISO 17025 and has a laboratory specializing in the analysis of PGM+Au samples from the BC. Standard metallurgical test procedures were utilised in characterizing the ores. All aspects around milling, flotation, solid-liquid separation and upgrading of the ores were considered.

Testwork for the Kell process was conducted at the Simulus Laboratories in Perth, Australia. Extensive testwork regarding the Kell process has been done on various orebodies and a significant database of information was generated.

25.3 Mineral Resources

25.3.1 PSM and Kruidfontein

The following are noteworthy:

- Validation of drill hole collar positions indicates good correspondence to what is captured in the electronic data base;
- SRK's review of geological records of randomly selected drill core at the core yard relative to what is captured in the electronic database does reflect a good correspondence;
- For the PSM projects the protocols governing the chain of custody of samples from the site to the assay laboratories is adequate and ensures accountability of samples despatched. This contributes to the reliability of the assay data for grade estimation;
- For Kruidfontein, based on the CRM results it can be concluded that there is no consistent bias in the assay dataset used for resource estimation. Although SRK has not been able to independently assess the repeatability of the assay results based on the Repeat samples, it is clear from the information provided by SRL that the grade correspondence between the Primary and Repeat samples is good and thus one can conclude that the assay results are reliable for grade estimation;
- The varying degree of assay QA/QC results observed is reflected in the Mineral Resource categories imposed across the different projects and mining operations. Lack of chrome assay QA/QC data is pronounced on the Sedibelo property and contributes significantly to the assignment on Inferred Mineral Resource category largely across this property;
- Chrome, Ir and Ru assay data are non-existent on a large portion of the Sedibelo property. However, the regressed equation used as inference for Ir and Ru at West Pit, East Pit and Central Underground is robust and hence does not result in a downgrade of the Mineral Resource estimates for these two PGM elements. On the contrary, the regressed equation used to infer chrome data (for East Pit, Central Underground and part of East Underground) is not relatively robust and thus contributes to the chrome estimate within this footprint being downgraded to Inferred Mineral Resource;
- At Kruidfontein, there is some element of uncertainty in the reef picks especially when there is mineralization in the footwall. The guidelines are not adequately robust. Irrespective of this, SRK has been able to reasonably validate the composites used for grade estimation;
- The Kruidfontein composite PGM grade values are only weighted on length and do not consider the available density determinations of the samples used in compiling the full width composites;

- Where the PSM grade estimates have been kriged, SRK notes that the quantity of 4E data (i.e., Pt, Pd, Rh and Au) adequately demonstrates grade continuity. SRK deems the estimation technique thus appropriate. The classification criteria adopted for the respective assets are sound and yield appropriate classification footprints; and
- At Kruidfontein SRK deems the downgrade of the Indicated Mineral Resources into the Inferred category appropriate considering:
  - The inability to independently validate the correspondence in grade of the repeat assays;
  - the composites not weighted for density; and
  - the estimation techniques employed which result generally in global estimates.

25.3.2 Mphahlele

SRK considers that the geological logging and sampling are of sufficient quality for use in Mineral Resource estimates.

SRK has assessed the quality of the assay data and considers that the comparison between the primary laboratory (SGS Johannesburg) results and those from the 954 pulp repeats from Genalysis in Australia gives sufficient confidence in the quality of the analytical results from SGS for use in Mineral Resource estimates.

The drillhole intersections generally show consistency in the intersection position of the two orebodies. The geological wireframe models generated by SRK honour the drilling information supplied by SRL. The validations undertaken on the Mineral Resources indicate an acceptable agreement between the composite data and the estimates. The classification applied to the Mineral Resources considers the data quality and consistency, and the well-established continuity of the BC mineralization. Geological discounts applied are considered appropriate given the density of information and are higher for the lower confidence classification categories. The drill hole spacing is the primary determinant of the classification confidence.

25.4 Mineral Reserves

The Mineral Reserve estimates contained in this TR should not be interpreted as assurances of economic life of the Projects. As Mineral Reserves are only estimates based on the factors and assumptions described herein, future Mineral Reserve estimates may need to be revised.

It should be noted that Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.

25.4.1 PSM above 700 m below Surface

The Mineral Reserves for the Central and East Underground are derived from the 2020 FS (SRK 2020b). The small change in Mineral Reserves as reported in this TR is due to use of the down-dip mining method vs. the breast mining method on which the 2020 FS was based, and a different set of metal price and exchange rate forecasts.

25.4.2 Mphahlele

Only Mineral Reserves for the UG2 are declared for the Mphahlele Decline Project. These are based on the 2020 FS (SRK 2020c).

The 2009 FS envisaged a much larger project (240 ktpm) exploiting both MR and UG2, as used in this TR.

25.5 Mining Methods

Central and East Underground

Down-dip mining should be assessed for each block during the short term planning stage. Rules and/or policies to guide this decision need to be compiled.

Kruidfontein

The LoM plan exploits Inferred Mineral Resources that are of insufficient confidence to provide certainty that the conclusions presented in the TR will be realised. There is no guarantee that further engineering studies will show that the Mineral Resources can be economically extracted thus allowing Mineral Reserves to be declared.

The middling between the MR and UG2 is <10 m in the northeastern part of the deposit, which precludes combined exploitation of the two reefs in that area. In the southwestern part of the deposit, the middling is generally >12 m. The possibility would exist for both reefs to be exploited in this area subject to strict geotechnical controls, sequencing of mining and the use of additional support, such as backfill.

Footwall development is common practice in deep-level PGM mines in South Africa. Footwall development allows for structures to be identified before stoping starts, so that stoping plans can be adapted to suit.

25.5.1 Ventilation

On 12 June 2012, the WHO classified diesel exhaust emissions as a Class 1 carcinogen (cancer forming). To maintainsuitable DPM levels in the atmosphere below the OEL limit of 0.16 mg/m³, the ventilation designs for mining the SRL underground mines were based on an international best practice design rate of 0.06 m³/s per kW.

In terms of the designs, all the underground projects have sufficient ventilation quantities for the LoM. Although the PSM mines have designed sufficient ventilation quantities, other industry mines practicing the down-dipdown-dip mining method experienced the following challenges:

- Accumulation of blasting fumes (gases) in the corners of the stope panels. To mitigate the risk, air-jet fans will be installed in the stopes; and
- As a result of high leakage in raise ventilation columns, in many cases raises ventilated with Ø406 mm fans and columns did not meet the minimum ventilation requirement at the raise faces. The consequences were gassing incidents because of an accumulation of gases in the raises. The design at SRL is for Ø406 mm fans and columns. To mitigate the risk, SRL should consider increasing the raise dimensions and install larger 570 mm fans and columns. Other industry mines have adopted this approach.

For the mines mining above 700 mbs, no additional cooling (refrigeration) is required. Mines mining below 700 mbs, will require additional cooling. In terms of computer simulations, wet bulb temperatures should not exceed the recommended maximum of 29.0°C.

25.6 Recovery Methods

The concentrator, CRP and TSP plants at PPM have operated for many years which provide reliable data for predicting recovery performance at the various projects on the Western Limb. The processing plants use tried and tested technology which has been in used in the South African PGM industry for decades. There is therefore very little risk in applying the process route in the extraction of the PGMs and base metals.

The proposed concentrator for Mphahlele is based on thorough metallurgical testwork, with a similar configuration to the plant that operated successfully at the adjoining Baobab mine. The 60%:40% UG2:Merensky blend of ore in the plant feed will have to be carefully managed to ensure consistent plant performance.

The Kell process is novel in that it applies well-recognized technologies in the processing of the flotation concentrate without the need of a smelter step. Should the Kell Process not deliver the expected results, SRL can revert to the conventional smelting and refining process. There is thus no risk that would prevent the declaration of the Mineral Reserves presented in this report.

25.7 Project Infrastructure

25.7.1 Electrical Infrastructure

The decision by SRL to approach Eskom to ask for a relief in fixed costs at PPM will result in electricity costs being significantly reduced during the cost curtailment period, should the request be approved. The decision to keep the contractual agreed NMD at PPM and Sedibelo substations while requesting for this relief will also ensure that return to full production is not delayed when the markets become favourable to the PGM price as the required capacity will be readily available for the full production power demand.

Allowance for redundancy and emergency power supply in the design at both PSM and Mphahlele will ensure minimum power supply interruptions to different areas of the mine and continuous power supply to critical equipment in the event of grid power failure, respectively.

Power requirements at the Western Limb at peak production will be in the region of 145.6 MVA, rendering the current installed capacity of 120 MVA insufficient to supply the total power requirements. Although SRL indicated that the incoming Eskom line has an installed capacity of about 160 MVA, additional transformers will be required at the PPM or Sedibelo substation to cater for additional power requirements of 26 MVA.

The removal of the temporary power supply transformer by Eskom at Mphahlele has ensured that the transformer is protected against vandalism and theft, making it readily available by the time the construction power is required.

25.7.2 TSF

PPM TSF

Operations of the PPM TSF are undertaken by Enviroserv, and operations are being monitored jointly by Enviroserv as well as PPM's operators and management.

From observations and reviewed documentation, it can be concluded that the tailings disposal operations are being conducted in a responsible manner by suitably experienced contractors and mine personnel. To improve the current operations, the risks listed above need to be considered.

Sedibelo and Magazynskraal TSFs

Further studies will be required so that the designs of the proposed TSFs are done to GISTM requirements.

Mphahlele TSF

Further studies will be required so that the design of the proposed TSF is done to GISTM requirements.

Geotechnical investigation of the selected TSF site will be required to confirm the nature of the underlying strata as part of the detailed design of the facility. In terms of the NEM:WA regulations, the tailings would be classified as a Type 3 waste and would require disposal to a site protected by a Class C containment barrier system, comprising a geosynthetic clay liner and 1.5 mm thick HDPE liner on the footprint and inside slopes of the TSF, the RWD and the associated stormwater control dam.

In terms of the 2020 FS, the TSF was designed to store 24.8 Mt of tailings over a LoM of 20 years (bottom of Figure 18-1). With the changed mine plan considered in this TR, involving production of MR and UG2 ores down to ~1 500 mbs, the footprint ot the TSF as shown will have to be enlarged. SRL advised that the Capex allowed for in the PEA is for a TSF with capacity of some 84 Mt, using the costings of the 2009 FS and escalated to the effective date of this TR.

25.8 Environmental and Social

Prior to the further development of the PSM Project, SRL will have to acquire the necessary permits and licences to commence production, such as AELs, EMPr, WULs and WMLs (if required). In addition, the relevant specialists studies should be updated. SRL's social licence to operate could be affected by increased awareness of the rights of mining-affected communities in its area of influence. Challenges to fairly distribute mine-related opportunities amongst all affected communities may occur due to additional benefits allocated to the Lesethleng community.

Mining has not been undertaken at the Kruidfontein property as no environmental permits or authorisations are currently in place. Specialist studies still need to be undertaken for the project. The Kruidfontein Project will in future need to secure and retain the necessary social licence to operate, through maintaining good stakeholder relations and honouring its SLP and other commitments to stakeholders. SRL, as the developer of the proposed mine, will have to address the same challenges and risks associated with the level of community expectations, legacy issues and a complex local governance arrangement experienced at the PSM operations.

The proposed changes to the approved Mphahlele EIA/EMPr will need to reflect the changed project description, which will require environmental authorisation prior to construction commencing. A WUL will need to be applied for and relevant specialist studies updated. The project will need to secure and retain the necessary social licence to operate, through maintaining good stakeholder relations and honouring its SLP and other commitments to stakeholders.

25.9 Capital and Operating Costs

Estimation of Capex and Opex is inherently a forward-looking exercise. The estimates reported in this TR rely upon a range of assumptions and forecasts that are subject to change. For this TR, Capex are considered to be at a PEA level, with an expected accuracy of ±25 to 50% depending on the project. Components of the Opex are based on actual costs at PPM, whilst others are at concept level which have been benchmarked from similar operations. However, these accuracy levels are only applicable to the base case operating scenario and forward-looking assumptions outlined in this report. Therefore, changes in these forward-looking assumptions may result in Capex and Opex that deviate more than 50% from the costs forecast herein. In the SRK's opinion, the contingencies applied are adequate such that the Capex and Opex are unlikely to be materially wrong.

25.9.1 PSM above 700 mbs and Mphahlele Decline

The Capex for PSM above 700 mbs and the Mphahlele Decline project were derived from first principles and zero-based budgeting exercises as part of feasibility studies and are seen to have an accuracy of ±25% at the effective date of this TR.

The contingencies applied were 5% (East Pit), 13.5% (West Pit TRR), and 9% and 9.7% for Central and East Underground respectively. A 24.9% contingency is applied for the Mphahlele Decline, which reflects the lower confidence in the project concept combined from two different studies.

The contingencies applied to the Opex are around 5% - 6%, where the costs are based on actual operating results or feasibility-level studies, and 25% to 32% where the Opex is at a concept level.

These are seen as reasonable for the level of confidence in the respective Capex and Opex estimates.

25.9.2 Magazynskraal Shaft, Kruidfontein Shaft and Mphahlele Shaft

The vertical shaft projects were based on conceptual designs with benchmarked and escalated shaft costs.The vertical shaft projects are each seen to have an accuracy of ±50%.

Contingencies of 22.7% (Mphahlele Shaft), 26.3% (Magazynskraal Shaft) and 25.6% (Kruidfontein Shaft) 1 are applied to the various Capex estimates.

The contingencies applied to the Opex vary from 25% to 32%

These are seen as reasonable for the level of confidence in the respective Capex and Opex estimates.

25.10 Economic Analysis

The economic analysis of SRL's Assets has been done at the effective level of a preliminary economic assessment, even though some of the TEPs in the analysis are supported by feasibility studies. The economic analysis is inherently a forward-looking exercise to assess the potential viability of Mineral Resources. The estimates in this PEA rely upon a range of assumptions and forecasts that are subject to change depending upon macro-economic conditions, operating strategy and new data collected through future operations. The achievability of the projections, LoM plans, budgets and forecast TEPs as included in the TR is neither warranted nor guaranteed by SRK. There is no certainty that the production schedules presented in this PEA will be realized. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.

This PEA includes Inferred Mineral Resources in the LoM plans that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as Mineral Reserves. There is no certainty that this preliminary economic assessment will be realised.

Much of the engineering designs covering the Inferred Mineral Resources have been done at a concept study level, which has a very low level of confidence.

This PEA assumes that all capital or funding needed to implement the various projects will be available in the sums and timing required according to the proposed implementation schedules. If such capital or funding is not available as envisaged in this TR, alternative strategies for the development of the projects would have to be considered. This could involve postponing the implementation of certain projects, right-sizing/re-evaluation of projects or various forms of joint-ventures.

This TR is not a Valuation Report and SRK does not express an opinion as to the value of Assets.

25.10.1 NPVs at Different Price Decks

The comparative NPVs at 12% discount using the different price decks (SFA, three-year trailing average and spot) for the Western and Eastern Limb projects are presented in Table 25-1.

Table 25-1: Comparative NPVs at different price decks – Western Limb and Eastern Limb (100% basis)

Item	NPV @ 12% Different Price Decks (ZARbn)			NPV @ 12% Different Price Decks (USDbn)		
	SFA	3-Year	Spot	SFA	3-Year	Spot
Western Limb	58.4	7.4	37.3	2.9	0.4	2.0
Eastern Limb (100%)	15.6	-0.2	10.1	0.8	0.0	0.5

25.10.2 Impact of LT Ir Price

Setting the Ir price of USD12 932/oz in 2029 as the LT price reduces the NPV @ 12% discount for the Western Limb and Eastern Limb (on 100% basis) projects by 19% and 22% respectively.

25.10.3 Attributable share of Eastern Limb (Mphahlele Decline and Mphahlele Shaft Projects)

After deduction of the 5% free-carry dividend to the community and a nominal 10% trickle dividend to LIMDEV, the BEE partner, and retaining the 85% of the 25% dividend flow due to LIMDEV for Capex redemption, the NPV at 12% discount for the Mphahlele Projects is ZAR13.8bn. This represents the amount attributable to SRL.

25.10.4 Impact on Previous Feasibility Studies

PSM above 700 m below Surface

The Probable Mineral Reserves for Central and East Underground are derived from the 2020 FS (SRK, 2022a). The small change in Mineral Reserves as reported in this TR is due to the use of the down-dip mining method vs. the breast mining method on which the 2020 FS was based, and a different set of metal price and exchange rate forecasts.

The processing strategy for Merensky and UG2 ores considered in this TR includes additional UG2 processing capacity, rather than reconfiguring the two concentrators at PPM. The impact is an increase in the metallurgical Capex, which can be offset by avoiding non-production time while the reconfiguration of the plants is done.

SRK is satisfied that the results of the 2020 FS are not materially affected by this PEA.

Mphahlele Decline

The Probable Mineral Reserves for the UG2 reef for the Mphahlele Decline Project are based on the 2020 FS (SRK 2020b). The 2009 FS envisaged a much larger project (240 ktpm) exploiting both Merensky and UG2, as used in this TR. The production schedule used in this PEA honours that for the UG2 per the 2020 FS, but adds production from the Merensky.

The GA plan presented in this TR follows that of the 2020 FS, where all infrastructure was moved south of the UG2 subcrop, to account for potential third-party mining on the chrome seams to the north. While the plant footprint of the 2020 FS matches that of the 2009 FS, the footprint for the TSF on the GA is considerably smaller (see Figure 2-3: Mphahlele Project Concept). Most of the Capex per the 2009 FS has been escalated to the Effective Date of this PEA, as presented in this PEA. Thus sufficient Capex for a larger TSF to handle the increased throughput and production at Mphahlele is provided.

The 2020 FS used the Rados pre-concentration step for the UG2 ore, which was not considered in the 2009 FS.

SRK is satisfied that the declaration of Probable Mineral Reserves for the UG2 reef at Mphahlele is still valid. However, the project concept for Mphahlele should be properly defined and the technical and economic merits of that concept evaluated by a feasibility study.

25.11 Safety and Occupational Health

The PPM surface operations have a good safety management system in place that complies with ISO 45001 requirements.

There were no fatalities at the PPM surface operations between 2011 and the end of December 2023. The LTIFR per million manhours reduced from 1.3 in 2019 to 0.5 in 2022 and zero in December 2023, a commendable improvement. The principle causes of lost time injuries from 2019 to 2023 were slip and fall accidents and the nipping/pinching of fingers.

To ensure that the safety targets are achieved, strategic actions have been defined for 2024 to drive the themes required to transform and maintain PPM into a behavioral-based business.

The company has all the legally required occupational health systems in place and is ISO 45001 certified. The working environment for the open pit mines is similar to all open pit PGM operations, as are the identified occupational health risks; e.g., airborne pollutants (dust), NIHL and heat-related illnesses.

The occupational health measurement results for SRL are:

- The mine has a good airborne pollutant management plan in place, which includes dust management. The annual medical surveillance results, between 2018 and 2023, revealed no diagnosed airborne pollutant-related diseases; and
- NIHL has displaced tuberculosis and silicosis as the top priority health threat in the South African mining industry. The other diseases have decreased significantly, while NIHL has not decreased as much in the same period. The annual medical surveillance results show that diagnosed NIHL cases increased

significantly from four in 2022 to 61 in 2023. The high increase can be ascribed to a newly introduced medical surveillance clinic with improved accuracy of NIHL testing and an increase in personnel with the introduction of underground mining.

25.12 Risk Assessment

Collectlively, social issues appear to have the greatest potential impact at this time in the assessment lifecycle at Ruighoek, PSM, Kruidfontein, and Mphahlele. These include:

- Access to land;
- Potential disruptions to and challenges in maintaining strong stakeholder relations; and
- High expectations held by the community regarding various socioeconomic benefits.

Environmental constraints may be presented due to:

- Water scarcity and biophysical sensitivities;
- Delays in obtaining environmental approvals; and
- Artisanal mining in close proximity could present challenges.

25.13 Opportunities

Various potential opportunities have been identified, including:

- Self-generation of Renewable Energy: the self-generation of 100 MW of power from embedded renewable energy technologies without the need for a generation licence is allowed. This offers the Company the opportunity to manage the risk of cost increases as a result of increases in power costs, as well as potential carbon taxes, which may also increase. The Company has signed an MoU with a consortium. The requisite information has been provided to a service provider to compile a proposal and design for PPM's power requirements;
- Three significant opportunities have been idenfied at Mphahlele with respect to the chromite mineral rights on the property held by the MCDT, i.e.:
    - Mphahlele chromite recovery PSA;
    - Mphahlele Open Pit Chrome Mining Technical Support;
    - Mphahlele Mining Charter III requirements offsets.

26 Recommendations

26.1 Exploration Programme

26.1.1 Ruighoek

Planned exploration at Ruighoek is earmarked to increase confidence in the robustness of geological structures and to potential undefined mineralisation further south. Seventeen drill holes are planned in 2026 and 2027 (Table 26-1).

Table 26-1: Ruighoek: Summary of Exploration Budget for 2024-2029 (all amounts in ZARm)

Description	Total Amount (ZARm)	2024	2025	2026	2027	2028	2029
Diamond Drilling	4.8	-	-	2.4	2.4	-	-
Geotechnical Logging	-	-	-	-	-	-	-
Assays	1.1	-	-	0.6	0.5	-	-
Total	**5.9**	**-**	**-**	**3.0**	**2.9**	**-**	**-**

26.1.2 PSM

SRL's consolidated exploration budget for 2024 to 2028 for the PSM Project is as presented in Table 26-2. This cost includes drilling, site establishment, inter-hole movement, downhole directional surveys, rehabilitation, core boxes, transport, water and casing. SRL's total LoM exploration budget of ZAR342.1 m per Table 26-2 is catered for in the LoM cash flow evaluation. SRK has reviewed the exploration budget and considers it reasonable for the planned activities set out in the exploration programme. Figure 26-1 highlights the close-spaced drilling (black dots) in the shallower areas and the sparsely drilled deeper areas. The planned drill holes mostly cover the deeper areas (green dots).

Table 26-2: PSM: Summary of Exploration Budget (all amounts in ZARm)

Description	Total Amount (ZARm)	2024	2025	2026	2027	2028
Central Underground						
Diamond Drilling	98.8	98.8	-	-	-	-
Geotechnical Studies	4.0	4.0	-	-	-	-
Assays	12.3	12.3	-	-	-	-
Central Underground Total	**115.1**	**115.1**	**0.0**	**0.0**	**0.0**	**0.0**
East Underground						
Diamond Drilling	84.1	-	10.1	30.0	25.0	19.0
Geotechnical Studies	2.5	-	2.5	-	-	-
Assays	5.3	-	0.3	2.0	1.7	1.3
East Underground Total	**91.9**	**0.0**	**12.9**	**32.0**	**26.7**	**20.3**
Magazynskraal Underground						
Diamond Drilling	124.0	-	30.0	40.0	35.0	19.0
Geotechnical Studies	2.5	-	-	2.5	-	-
Assays	8.6	-	2.0	3.0	2.3	1.3
Magazynskraal Underground Total	**135.1**	**-**	**32.0**	**45.5**	**37.3**	**20.3**
Grand Total	**342.1**	**115.1**	**44.9**	**77.5**	**64.0**	**40.6**

Details of SRL's exploration programmes split into East and Central Underground is described below.

East Underground

Sedibelo East

Five geotechnical holes are planned for 2026 along the shaft line. A further 25 holes are scheduled over the next three years after, to increase the resource confidence as well as targeting the potential silicate reef resource.

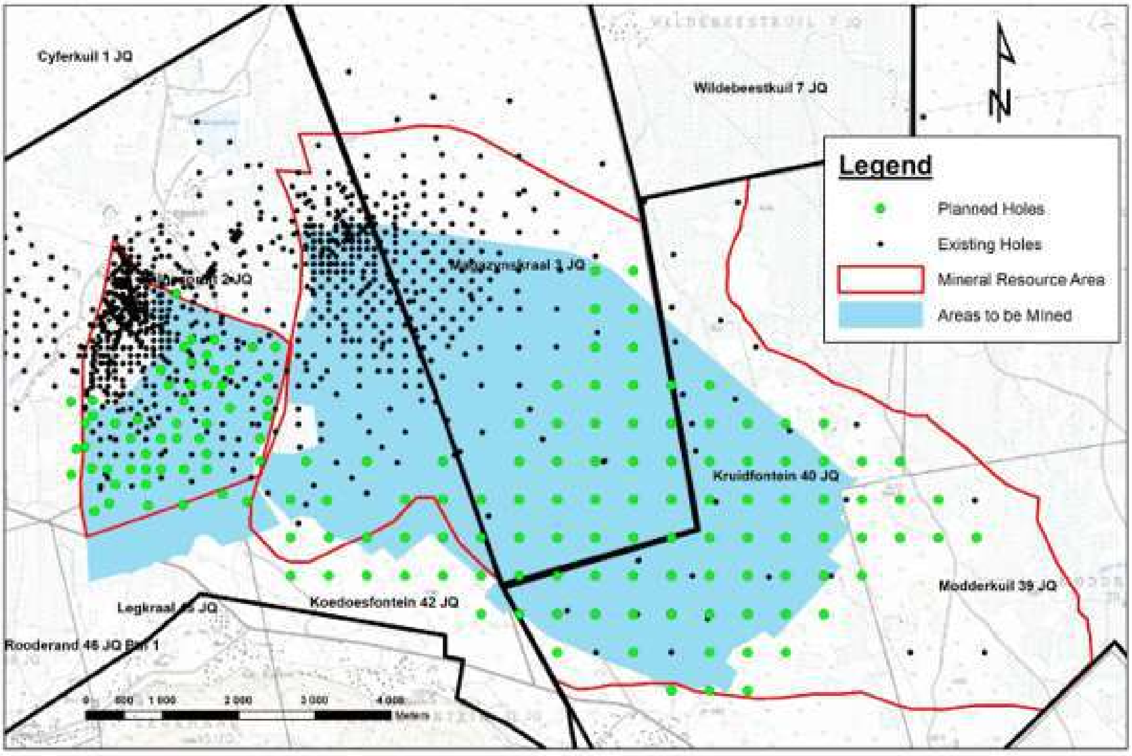
Magazynskraal

Thirty-three diamond drill holes for including geotechnical investigations are planned for the next five years; Most of the planned holes are located within the planned LoM areas.

Central Underground

Drilling of diamond drill holes across the property, with fifty-four holes (in 2024) in four phases;

- Phase 1: Resource Definition – Increase of covered area – 9 holes;
- Phase 2: Areal Dip and Decline Confirmation – 14 holes;
- Phase 3: Resource Definition – Inferred to Indicated – 19 holes; and
- Phase 4: Structural Definition & Confidence – 12 holes.



srk consulting	**SRL Total Assets PEA** Central and East Underground - Historical and Planned Drill Hole Collars	Project No. 600322

Figure 26-1: Central and East Underground - Historical and Planned Drill Hole Collars

26.1.3 Kruidfontein

SRL's exploration budget for Kruidfontein from 2028 to 2050 in constant money terms is summarised in Table 26-3; no exploration is planned prior to 2028. The collar plan of the historical and planned drill holes is shown in Figure 26-1.

Table 26-3: Kruidfontein: Summary of Exploration Budget for 2028 - 2050 (all amounts in ZARm)

Description	Total Amount (ZARm)	2028	2031	2032	2033	2045	2046	2047	2048	2049	2050
Drilling	326.04	32.24	36.4	61.23	28.21	28.21	32.5	24.05	25.87	25.87	31.46
Assay	16.12	1.43	1.69	2.86	1.3	1.43	1.69	1.3	1.43	1.43	1.56
Salaries, Field expenses	43.81	4.55	5.07	8.45	3.9	3.9	4.29	3.25	3.25	3.25	3.9
Other (geophysical, geotechnical, metallurgical studies)	5.07	0.39	0.39	0.65	0.52	0.52	0.52	0.52	0.52	0.52	0.52
Contingency	18.46	1.95	2.21	3.64	1.69	1.56	1.69	1.3	1.43	1.43	1.56
3D Seismic Survey	179.4		89.7	89.7							
Total	**588.9**	**40.56**	**135.46**	**166.53**	**35.62**	**35.62**	**40.69**	**30.42**	**32.5**	**32.5**	**39**

The timing of the exploration programme and budget addresses the phased development of Kruidfontein per the consolidated mine design for East and Central Underground and Kruidfontein as envisaged in the Section 102 application where steady-state ore production from Kruidfontein would occur in year 25. The planned exploration activities for Kruidfontein are as follows:

- At least 50 drill holes to achieve 500 m drillhole spacing and thereby upgrade the Mineral Resource from the Inferred to the Indicated category, as well as for structural geology;
- Four deflections per borehole to intersect all reefs; and
- Three intersections sampled for assay. The remaining two intersections available for metallurgical, mineralogical work and geotechnical logging.

SRK has reviewed SRL's exploration budget and considers it reasonable for the planned activities set out in the exploration programme.

26.1.4 Mphahlele

The planned exploration on Mphahlele comprises mostly diamond drilling (NQ size). Drilling-related costs also include core logging, sampling, assay, QA/QC and downhole geophysics . Because the reef dips at an angle of approximately 50°, the holes will be drilled at an incline of 60° to 70°.

The purpose of the drilling programme is to obtain additional information regarding geological structures (faulting and alteration) and for Mineral Resource estimation. The geological structures are generally aligned in a NW-SE direction. The drilling will provide information on the impact of the geological structures on the reef and is required to re-evaluate the Mineral Resource boundaries. It will also provide geotechnical information about the hangingwall conditions and the magnitude (displacement) of faulting. Drilling will extend 30 m to 40 m into the footwall to obtain geotechnical information for footwall mine development. The information obtained from the drill holes is required for resource estimation, rock engineering, mine design and groundwater testing.

Seventy-one diamond drill holes down to 700 m are planned within the Indicated Mineral Resource area. The holes vary from 70 m to 700 m depth at a resource drill spacing of 400 m. The drilling comprises geotechnical holes along the line of the decline/declines and infill drilling to improve the confidence in the resource and structure.

In the Inferred Mineral Resource area, around 52 drill holes are planned to upgrade the area to an Indicated Mineral Resource. SRK considers that this will be sufficient for the stated objectives to support the project execution phase and the development phase with upgrading of the Inferred Mineral Resources to Indicated Mineral Resources.

SRL's exploration budget for Mphahlele is summarized in Table 26-4.

Table 26-4: Mphahlele: Summary of Exploration Budget for 2025 - 2029 (all amounts in ZARm)

Description	Total Amount (ZARm)	2025	2026	2027	2028	2029
Diamond Drilling	374.5	60.7	57.8	72.7	88.0	95.3
Geotechnical Studies	9.3	1.5	1.4	1.8	2.2	2.4
Assays	17.5	3.0	3.3	3.0	3.6	4.6
Total	**401.3**	**65.2**	**62.5**	**77.5**	**93.8**	**102.3**

The above exploration programmes include the following:

- NQ/BQ diamond drilling (to approximately 40 m past the UG2);
- Four deflections per drill hole (three intersections for assay, other for geotechnical and mineralogical studies);
- Assays;
- Geotechnical logging and testwork;
- Downhole geophysics on 25% of the drill holes; and
- Mineralogical and metallurgical testwork.

SRK has reviewed SRL's exploration budget and considers it reasonable for the planned activities set out in the exploration programme.

26.1.5 SRK Comments

SRK is satified with the layout of the planned holes and what they are earmarked to achieve as outlined above for the various projects. The proposed budget over the planned duraration is also reasonable.

SRK notes that the previous exploration programme with respect to the East Pit, which targeted the drilling of the shallower Inferred Silicate Mineral Resources, was implemented successfully. The previous exploration programmes for the respective projects were not implemented primarily because of the cost curtailment effort that became necessary (due to unexpected changes in economic factors) to move the open pits into a cashflow-positive scenario.

26.2 Mining Methods

Central and East Underground

The planned exploration drilling and down-hole and ground magnetic surveys may assist in delineating any additional structural features.

The geological models should be updated with this additional data and the mine design re-evaluated against the updated geological and structural information.

Infill drilling may enable the extent of the PUP in Mineral Reserves to be increased.

Short-term planning protocols and production controls required to manage the down-dipdown-dip mining cycles need to be documented.

26.2.1 Ventilation

- To mitigate the risk of insufficient ventilation in the development raises, consider increasing the raise dimensions and replace the 406 mm fans and columns with larger 570 mm fans and columns. Other industry mines have adopted this approach; and
- The ventilation and cooling designs for the SRL mines deeper than 700 mbs were done at a concept study level. The designs should be reviewed when designing at a feasibility study level.

26.3 Recovery Methods

The Merensky and UG2 concentrators at PPM are of conventional MF2 design and have operated successfully since 2009.

Similar concentrators are planned for East Portal to handle the UG2 ore from Magazynskraal Shaft area, and at Kruidfontein Shaft for UG2 ore mine there.

The concentrator at Mphahlele will be a similar MF2 concentrator, designed to treat a blend of 40:60 Merensky:UG2 ore.

The Kell process employs standard hydrometallurgical processes in an innovative way, to replace the conventional refining and smelting step required to recovery final metal from the PGM concentyrates.

26.4 Environmental and Social

SRL must ensure that the necessary permits and licences for the PSM Project are in place prior to commencing production. Additionally, the relevant specialist studies should be updated. A budget of ZAR4.8m has been included in the project Capex to enable SRL to acquire the required environmental authorisations, licences and permits. SRL needs to adopt an integrated and holistic approach supported by an adequately resourced social team to effectively manage the social risks associated with the high level of community expectations, legacy issues and local governance dynamics.

As part of the MRA process for the Kruidfontein Project, the requisite environmental authorisations and permits will need to be obtained in line with the relevant environmental legislation. The relevant specialist investigations will have to be undertaken for the project. SRL will need to adopt an integrated and holistic approach to managing the social challenges and risks associated with community expectations, legacy issues and the complex local governance dynamics. SRL advised that the EIA/EMPr consolidation process that commenced in 2020 is accounted for in the Capex budget for the PSM Project.

SRL will need to update the environmental authorisation to reflect the proposed changes to the Mphahlele EIA/EMPr, apply for a WUL (and other permits) and update the relevant specialist studies. Certain of the environmental management and monitoring programmes for the project will incur initial costs associated with the setting up of monitoring stations and the purchase of equipment, which must be taken into account. Ongoing environmental management, monitoring and reporting will also need to be budgeted for as part of the operational costs. SRL needs to adopt an integrated and holistic approach to managing the social challenges and risks associated with community expectations, legacy issues, artisanal mining and the complex community leadership dynamics.

26.5 Economic Analysis

The economic analysis presented in this TR has been done at the level of a preliminary economic assessment.

26.5.1 Impact on Previous Feasibility Study

The project concept for the Mphahlele Decline in this TR is a combination of the following:

- Surface layout (GA plan), decline access design and mining of UG2 only with Rados pre-concentration as per the 2020 FS;
- Addition of mining of MR, using the underground infrastructure of the 2020 FS; and
- Concentrator (240 ktpm) and escalated Capex from 2009 FS.

There is a potential mismatch from this combination of different design concepts, which raises questions about the technical and economic feasibility of the Mphahlele Decline Project. SRK recommends that the project concept for this project should be properly defined and and the technical and economic merits of that concept be re-evaluated by a feasibility study.

26.6 Project Implementation

The project implementation plans assume that subsequent upgrading studies will be carried out successfully as required and funding will be made available when required.

26.6.1 Safety and Occupational Health

As both the PSM (below 700 m below surface mines) and Mphahlele Projects are presently at pre-project implementation stage, SRK recommends that the safety and health management plan for the SRL surface projects should be implemented with adaptations for the future underground projects.

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28 Date, Signatures and QP Certificates

This TR documents the Mineral Resource statement and results of the PEA for SRL's PGM Assets located in the Republic of South Africa as prepared by SRK in accordance with the requirements of NI43-101, the Form 1and the SAMREC Code (2016).

The opinions expressed in this TR are correct at the Effective Date of 31 December 2023.

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(Report Date: 16 April 2024)
(Effective Date: 31 December 2023)

CERTIFICATE OF QUALIFIED PERSON

To accompany the Technical Report dated April 2024 and entitled “SEDIBELO’S PGM ASSETS IN SOUTH AFRICA, NI43-101 TECHNICAL REPORT, PRELIMINARY ECONOMIC ASSESSMENT”

I, Andrew John McDonald, hereby certify that:

1) I am a Principal Engineer with the firm SRK Consulting (South Africa) (Pty) Limited (“SRK”) with an office at SRK House, 265 Oxford Road, Illovo, Johannesburg 2196, South Africa;
2) I am a graduate of the University of Witwatersrand with a BSc in Applied Mathematics in 1973. I obtained BSc(Hons) and MSc (cum laude) degrees in Geophysics from the University of Witwatersrand in 1974 and 1982 respectively. In 1987, I was awarded the MBL degree from the University of South Africa. I have practised my profession continuously since 1974. During the past 25 years, I have undertaken regulatory reporting for mining and exploration related projects for the major stock exchanges;
3) I am registered as a Chartered Engineer with the Engineering Council of the United Kingdom (Registration No 334987). I am a Fellow of the Southern African Institute of Mining and Metallurgy and a Member of the Institution of Materials, Minerals and Mining in the UK;
4) I personally inspected the PSM Project area on 19/20 February 2020, 9 March 2021 and 20 September 2022 and the Mphahlele property on 22 October 2013. My co-authors have visited these properties at various times and have provided detailed feedback on their observations of site conditions. Based on this, coupled to my continuous interaction with Sedibelo Resources Limited staff, I consider these personal inspections to still be valid;
5) I have read the definition of “qualified person” set out in National Instrument 43-101 and certify that by virtue of my education, affiliation to a professional association and past relevant work experience, I fulfil the requirements to be a “qualified person” for the purposes of National Instrument 43-101;
6) I am the co-author of the technical report with effective date of 31 December 2023 entitled “*Sedibelo’s PGM Assets in South Africa, NI43-101 Technical Report, Preliminary Economic Assessment*” and responsible for Sections 1 to 6, 13, and 17 to 27, and accept professional responsibility for these sections of this technical report;
7) I, as a qualified person, am independent of the issuer as defined in Section 1.5 of National Instrument 43-101;
8) I was involved in the compilation of the feasibility studies for PPM (2007) and Mphahlele (2008/2011). I was responsible for the compilation of the updated feasibility studies for the PSM Project (2020) and Mphahlele Project (2020). I was responsible for the NI43-101 TRs for the PSM, Mphahlele and Kruidfontein Projects that were filed on SEDAR in May 2022. I have conducted numerous reviews of Sedibelo Resources Limited Assets during the past ten years;
9) I have read National Instrument 43-101 and the technical report and confirm that this technical report has been prepared in compliance therewith;
10) As of the effective date of the technical report, to the best of my knowledge, information and belief, the technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading;
11) I consent to the public filing by Sedibelo Resources Limited of the Technical Report with effective date of 31 December 2023 entitled “Sedibelo’s PGM Assets in South Africa, NI43-101 Technical Report, Preliminary Economic Assessment” on SEDAR in support of SRL’s applicable Canadian continuous disclosure obligations.

Johannesburg, South Africa
16 April 2024

Andrew McDonald CEng MIMMM FSAIMM
Principal Engineer
SRK Consulting

CERTIFICATE OF QUALIFIED PERSON

To accompany the Technical Report dated April 2024 and entitled "SEDIBELO'S PGM ASSETS IN SOUTH AFRICA, NI43-101 TECHNICAL REPORT, PRELIMINARY ECONOMIC ASSESSMENT"

I, Mark Wanless, hereby certify that:

1) I am a Principal Geologist with the firm SRK Consulting (South Africa) (Pty) Limited (SRK) with an office at SRK House, 265 Oxford Road, Illovo, Johannesburg 2196, South Africa;
2) I am a graduate of the University of Cape Town with a BSc (Hons) in Geology in 1995. I have practised my profession continuously since 1996. During the past 28 years, I have undertaken numerous Mineral Resource estimations and audits for PGM projects and operating mines in Southern Africa and internationally;
3) I am registered as a Geologist with the South African Council for Natural Scientific Professionals (Registration No 400178/05). I am a Fellow of the Geological Society of South African and a Member of the Geostatistical Association of South Africa and a Member of the South African Institute of Mining and Metallurgy;
4) I personally inspected the Mphahlele Project area on 13 March 2008 and 10 March 2023, the PSM operations on 24 February 2022, and the Ruighoek Project on 12 January 2007. Based on my continuous interaction with Sedibelo Resources Limited staff, I consider these personal inspections to still be valid;
5) I have read the definition of "qualified person" set out in National Instrument 43-101 and certify that by virtue of my education, affiliation to a professional association and past relevant work experience, I fulfil the requirements to be a "qualified person" for the purposes of National Instrument 43-101;
6) I am the co-author of the technical report with effective date of 31 December 2023 entitled "*Sedibelo's PGM Assets in South Africa, NI43-101 Technical Report, Preliminary Economic Assessment*" and responsible for Sections 7 to 12 and 14 as these pertain to Ruighoek, Central Underground and Mphahlele Projects, and accept professional responsibility for these sections of this technical report;
7) I, as a qualified person, am independent of the issuer as defined in Section 1.5 of National Instrument 43-101;
8) I was involved in the compilation of the feasibility studies for PPM (2007) and Mphahlele (2008/2011). I was involved in the compilation of the updated feasibility studies for the PSM Project (2020) and Mphahlele Project (2020). I have conducted numerous reviews of Sedibelo Resources Limited Assets during the past fifteen years;
9) I have read National Instrument 43-101 and the technical report and confirm that this technical report has been prepared in compliance therewith;
10) As of the effective date of the technical report, to the best of my knowledge, information and belief, the technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading;
11) I consent to the public filing by Sedibelo Resources Limited of the Technical Report with effective date of 31 December 2023 entitled "Sedibelo's PGM Assets in South Africa, NI43-101 Technical Report, Preliminary Economic Assessment" on SEDAR in support of SRL's applicable Canadian continuous disclosure obligations.

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Johannesburg, South Africa
16 April 2024

Mark Wanless PrSciNat FGSSA MGASA
Principal Geologist
SRK Consulting

CERTIFICATE OF QUALIFIED PERSON

To accompany the Technical Report dated April 2024 and entitled "SEDIBELO'S PGM ASSETS IN SOUTH AFRICA, NI43-101 TECHNICAL REPORT, PRELIMINARY ECONOMIC ASSESSMENT"

I, Ivan Doku, hereby certify that:

1) I am a Principal Geologist with the firm SRK Consulting (South Africa) (Pty) Limited ("SRK") with an office at SRK House, 265 Oxford Road, Illovo, Johannesburg 2196, South Africa;
2) I am a graduate of the Kwame Nkrumah University of Science Technology (Ghana) with a BSc in Engineering (Geological) degree in 2000 and a Graduate Diploma in Engineering (2010) and MSc in Civil Engineering (2007) from the University of Witwatersrand. I have practised my profession since 2000. During the past 17 years, I have undertaken Mineral Resource estimations and audits for PGM projects and operating mines in Southern Africa and internationally;
3) I am registered as a Geologist with the South African Council for Natural Scientific Professionals (Registration No 400513/14). I am a Member of the Geological Society of South African and a Member of the Southern African Institute of Mining and Metallurgy;
4) I personally inspected the PSM Project area on 19/20 February 2020, 9 March 2021, 24 February 2022 and 20 September 2022, and the Kruidfontein property on 14 April 2014 and 31 March 2022. My co-authors have visited these properties at various times since then and have provided detailed feedback on their observations of site conditions. Based on this, coupled to my continuous interaction with Sedibelo Resources Limited staff, I consider these personal inspections to still be valid;
5) I have read the definition of "qualified person" set out in National Instrument 43-101 and certify that by virtue of my education, affiliation to a professional association and past relevant work experience, I fulfil the requirements to be a "qualified person" for the purposes of National Instrument 43-101;
6) I am the co-author of the technical report with effective date of 31 December 2023 entitled "*Sedibelo's PGM Assets in South Africa, NI43-101 Technical Report, Preliminary Economic Assessment*" and responsible for Sections 7 to 12 and 14 as these pertain to the East Pit, East Underground and Kruidfontein projects, and accept professional responsibility for these sections of this technical report;
7) I, as a qualified person, am independent of the issuer as defined in Section 1.5 of National Instrument 43-101;
8) I was involved with the compilation of the updated feasibility study for the PSM Project (2020). I have conducted numerous reviews of Sedibelo Resources Limited Assets during the past ten years;
9) I have read National Instrument 43-101 and the technical report and confirm that this technical report has been prepared in compliance therewith;
10) As of the effective date of the technical report, to the best of my knowledge, information and belief, the technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading;
11) I consent to the public filing by Sedibelo Resources Limited of the Technical Report with effective date of 31 December 2023 entitled "Sedibelo's PGM Assets in South Africa, NI43-101 Technical Report, Preliminary Economic Assessment" on SEDAR in support of SRL's applicable Canadian continuous disclosure obligations.

Johannesburg, South Africa
16 April 2024

Ivan Doku PrSciNat MGSSA MSAIMM
Principal Geologist
SRK Consulting

CERTIFICATE OF QUALIFIED PERSON

To accompany the Technical Report dated April 2024 and entitled "SEDIBELO'S PGM ASSETS IN SOUTH AFRICA, NI43-101 TECHNICAL REPORT, PRELIMINARY ECONOMIC ASSESSMENT"

I, Peter le Roux, hereby certify that:

1) I am a Principal Geologist with the firm SRK Consulting (South Africa) (Pty) Limited ("SRK") with an office at SRK House, 265 Oxford Road, Illovo, Johannesburg 2196, South Africa;
2) I am a graduate of the University of Witwatersrand with an MSc in Economic Geology degree in 2020. I have practised my profession since 2001 with 23 years' experience in the mining industry. I have undertaken Mineral Resource estimations and audits for PGM projects and operating mines in Southern Africa during the past 10 years;
3) I am registered as a Geologist with the South African Council for Natural Scientific Professionals (Registration No 400297/13). I am a Member of the Geological Society of South Africa;
4) I have not personally inspected the PPM TSF. I have placed reliance on my co-authors who have visited the mine and provided feedback on their observations.
5) I have read the definition of "qualified person" set out in National Instrument 43-101 and certify that by virtue of my education, affiliation to a professional association and past relevant work experience, I fulfil the requirements to be a "qualified person" for the purposes of National Instrument 43-101;
6) I am the co-author of the technical report with effective date of 31 December 2023 entitled "*Sedibelo's PGM Assets in South Africa, NI43-101 Technical Report, Preliminary Economic Assessment*" and responsible for Sections 7 to 12 and 14 as these pertain to the West Pit Tailings Reclamation and Retreatment project, and accept professional responsibility for these sections of this technical report;
7) I, as a qualified person, am independent of the issuer as defined in Section 1.5 of National Instrument 43-101;
8) I have read National Instrument 43-101 and the technical report and confirm that this technical report has been prepared in compliance therewith;
9) As of the effective date of the technical report, to the best of my knowledge, information and belief, the technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading;
10) I consent to the public filing by Sedibelo Resources Limited of the Technical Report with effective date of 31 December 2023 entitled "Sedibelo's PGM Assets in South Africa, NI43-101 Technical Report, Preliminary Economic Assessment" on SEDAR in support of SRL's applicable Canadian continuous disclosure obligations.

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Johannesburg, South Africa
16 April 2024

Peter le Roux PrSciNat MGSSA
Principal Geologist
SRK Consulting

CERTIFICATE OF QUALIFIED PERSON

To accompany the Technical Report dated April 2024 and entitled “SEDIBELO’S PGM ASSETS IN SOUTH AFRICA, NI43-101 TECHNICAL REPORT, PRELIMINARY ECONOMIC ASSESSMENT”

I, Joseph Mainama, hereby certify that:

1) I am a Principal Mining Engineer with the firm SRK Consulting (South Africa) (Pty) Limited (“SRK”) with an office at SRK House, 265 Oxford Road, Illovo, Johannesburg 2196, South Africa;
2) I am a graduate of the University of Witwatersrand with a BSc in Mining Engineering in 1996. I obtained a Post Graduate Diploma and a Masters Degree in Business Leadership from the University of South Africa in 2003 and 2008, respectively. I have practised my profession since 1996. I have undertaken studies of PGM projects and operating mines in Southern Africa during the past 11 years;
3) I am registered as a Professional Engineer with the Engineering Council of South Africa (Registration No 20080413). I am a Member of the Southern African Institute of Mining and Metallurgy and a Member of the Association of Mine Managers of South Africa;
4) I personally inspected the PSM Project area on 24 February 2022 and 20 September 2022. Based on my continuous interaction with Sedibelo Resources Limited staff, I consider these personal inspections to still be valid;
5) I have read the definition of “qualified person” set out in National Instrument 43-101 and certify that by virtue of my education, affiliation to a professional association and past relevant work experience, I fulfil the requirements to be a “qualified person” for the purposes of National Instrument 43-101;
6) I am the co-author of the technical report with effective date of 31 December 2023 entitled “*Sedibelo’s PGM Assets in South Africa, NI43-101 Technical Report, Preliminary Economic Assessment*” and responsible for Sections 15 and 16, and accept professional responsibility for these sections of this technical report;
7) I, as a qualified person, am independent of the issuer as defined in Section 1.5 of National Instrument 43-101;
8) I was involved in the compilation of the updated feasibility study for the PSM Project (2020). I have conducted numerous reviews of Sedibelo Resources Limited Assets during the past five years;
9) I have read National Instrument 43-101 and the technical report and confirm that this technical report has been prepared in compliance therewith;
10) As of the effective date of the technical report, to the best of my knowledge, information and belief, the technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading;
11) I consent to the public filing by Sedibelo Resources Limited of the Technical Report with effective date of 31 December 2023 entitled “Sedibelo’s PGM Assets in South Africa, NI43-101 Technical Report, Preliminary Economic Assessment” on SEDAR in support of SRL’s applicable Canadian continuous disclosure obligations.

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Johannesburg, South Africa
16 April 2024

Joseph Mainama PrEng MSAIMM MAMMSA
Principal Mining Engineer
SRK Consulting

GLOSSARY OF TERMS, ABBREVIATIONS, UNITS

TERMS

Term	Description
alluvial	derived from alluvium
alluvial fan	an accumulation of sediments shaped like a section of a shallow cone with its apex at a point source of sediments, such as a narrow canyon emerging from an escarpment
alluvium	loose clay, silt, sand, or gravel that has been deposited by running water
anorthosite	an intrusive igneous rock composed mainly of calcium-rich plagioclase feldspar
anticline	rock strata folded to give a convex upward structure
apophysis(es)	a tapering offshoot(s) from a larger igneous intrusive mass
artisanal	a term describing an informal miner using unsophisticated recovery methods
assay	the chemical analysis of ore samples to determine their metal content.
basalt	an extrusive igneous rock formed from the rapid cooling of low-viscosity lava rich in magnesium and iron (mafic lava) exposed at or very near the surface; more than 90% of all volcanic rock on Earth is basalt
Bushveld Complex	The BC is a magmatic layered mafic intrusion. As one of the largest known differentiated igneous bodies, it hosts world class deposits of PGMs, nickel, copper, chrome and vanadium.
chalcopyrite	an important copper mineral commonly called 'fool's gold' – $Cu_2S.Fe_2S_2$
chalcopyrite	a copper iron sulfide mineral with the chemical formula $CuFeS_2$
chromitite	an oxide mineral composed primarily of iron(II) oxide and chromium(III) oxide compounds with the chemical formula of $FeCr_2O_4$
dip	the angle of inclination from the horizontal of a geological feature.
dunite	an igneous, plutonic rock, of ultramafic composition, with coarse-grained or phaneritic texture. The mineral assemblage is greater than 90% olivine, with minor amounts of other minerals such as pyroxene, chromite, magnetite, and pyrope
fault	a break in the continuity of a body of rock, usually accompanied by movement on one side of the break or the other so that what were once parts of one continuous rock stratum or vein are now separated
felsic	an adjective describing igneous rocks that are relatively rich in elements that form feldspar and quartz
footwall	the underlying side of a fault, orebody, or mine working
granite	a coarse-grained intrusive igneous rock composed mostly of quartz, alkali feldspar, and plagioclase
granitoid	a generic term for a diverse category of coarse-grained igneous rocks that consist predominantly of quartz, plagioclase, and alkali feldspar
hangingwall	the overlying side of an orebody, fault, or mine working,
harzburgite	an ultramafic, igneous rock consisting mostly of olivine and low-calcium pyroxene
Holocene	the current geological epoch, which began after the last glacial period (approximately 11 650 years before present)
Indicated Mineral Resource	that part of a Mineral Resource for which quantity, grade or quality, densities, shape and physical characteristics are estimated with sufficient confidence to allow the application of Modifying Factors in sufficient detail to support mine planning and evaluation of the economic viability of the deposit. Geological evidence is derived from adequately detailed and reliable exploration, sampling and testing which is sufficient to assume geological and grade or quality continuity between points of observation.
Inferred Mineral Resource	that part of a Mineral Resource for which quantity and grade or quality are estimated on the basis of limited geological evidence and sampling. Geological evidence is sufficient to imply but not verify geological and grade or quality continuity. An Inferred Mineral Resource has a lower level of confidence than that applying to an Indicated Mineral Resource and must not be converted to a Mineral Reserve.
Iron-rich ultramafic pegmatoid	resulting from metasomatism by iron-rich fluids. The replacement pegmatoid is usually coarse-grained to pegmatoidal but is of variable texture
Karoo Supergroup	a sequence of mostly nonmarine units, deposited between the Late Carboniferous and Early Jurassic periods
Kriging	an interpolation method that minimizes the estimation error in the determination of a mineral resource.
layered intrusion	a large sill-like body of igneous rock which exhibits vertical layering or differences in composition and texture
lopolith	a large igneous intrusion which is lenticular in shape with a depressed central region. Lopoliths are generally concordant with the intruded strata with dike or funnel-shaped feeder bodies below the body. The
mafic	a silicate mineral or igneous rock rich in magnesium and iron
magma	the molten or semi-molten natural material from which all igneous rocks are formed
Measured Mineral Resource	that part of a Mineral Resource for which quantity, grade or quality, densities, shape and physical characteristics are estimated with confidence sufficient to allow the application of Modifying Factors to support detailed mine planning and final evaluation of the economic viability of the deposit. Geological evidence is derived from detailed and reliable exploration, sampling and testing which is sufficient to confirm geological and grade or quality continuity between points of observation. A Measured Mineral Resource has a higher level of confidence than that applying to either an Indicated Mineral Resource or an Inferred Mineral Resource. It may be converted to a Proved Mineral Reserve or a Probable Mineral Reserve.
metasedimentary	originally a sedimentary rock which has undergone a degree of metamorphism but the physical characteristics of the original material is not destroyed
Mineral Reserve	the economically mineable part of a Measured and/or Indicated Mineral Resource. It includes diluting materials and allowances for losses, which may occur when the material is mined or extracted and is defined by studies at Pre-Feasibility or Feasibility

Term	Description
	level as appropriate that include applications of Modifying Factors. Such studies demonstrate that, at the time of reporting, extraction could reasonably be justified. The reference point at which Mineral Reserves are defined, usually the point where the ore is delivered to the processing plant, must be stated. It is important that, in all situations where the reference point is different, such as for saleable product, a clarifying statement is included to ensure that the reader is fully informed as to what is being reported.
Mineral Resource	a concentration or occurrence of solid material of economic interest in or on the Earth's crust in such a form, grade or quality, and quantity that there are reasonable prospects for eventual economic extraction. The location, quantity, grade, continuity and other geological characteristics of a Mineral Resource are known, estimated or interpreted from specific geological evidence and knowledge, including sampling.
norite	a mafic intrusive igneous rock composed largely of the calcium-rich plagioclase labradorite, orthopyroxene, and olivine
oikocrysts	in poikilitic fabric, the enclosing crystal
olivine	the name of a group of rock-forming minerals that are typically found in mafic and ultramafic igneous rocks such as basalt, gabbro, dunite, diabase, and peridotite
outcrop	a visible exposure of bedrock or ancient superficial deposits on the surface of the Earth
overburden	material, usually barren rock overlying a useful mineral deposit.
pegmatite	a coarsely crystalline igneous rock with crystals several centimetres in length
pegmatoid	a rock resembling or similar in structure to pegmatite, but usually lacking a graphic appearance
pentlandite	an iron–nickel sulfide with the chemical formula $(Fe,Ni)_9S_8$
plagioclase feldspar	a group of feldspar minerals that form a solid solution series ranging from pure albite, $Na(AlSi_3O_8)$, to pure anorthite, $Ca(Al_2Si_2O_8)$.
poikilitic	a texture of igneous rocks in which numerous smaller grains of various minerals in random orientation are completely enclosed within a large, optically continuous crystal of different composition
pothole	circular to oval-shaped depressions within the Merensky Reef and UG2 Reef. Within the depression, the reef unit may crosscut the footwall stratigraphy at a high angle and ultimately lie at a lower stratigraphic elevation than the typical reef. Within the pothole, anomalous hangingwall, footwall and reef stratigraphy may be developed. In some instances, the reef within a pothole may have higher than average grades; in others it may be uneconomic. In extreme cases, reef is not recognisable within the pothole.
Probable Mineral Reserve	the economically mineable part of an Indicated, and in some circumstances, a Measured Mineral Resource. The confidence in the Modifying Factors applying to a Probable Mineral Reserve is lower than that applying to a Proved Mineral Reserve.
Proterozoic	of or relating to the later of the two divisions of Precambrian time, from approximately 2.5 billion to 570 million years ago, marked by the build-up of oxygen and the appearance of the first multicellular eukaryotic life forms
Proved Mineral Reserve	the economically mineable part of a Measured Mineral Resource. A Proved Mineral Reserve implies a high degree of confidence in the Modifying Factors.
pyrite	an iron sulfide mineral with the chemical formula FeS2 (iron (II) disulfide); pyrite is the most abundant sulfide mineral
pyroxenite	an ultramafic igneous rock consisting essentially of minerals of the pyroxene group
pyrrhotite	an iron sulfide mineral with the formula Fe(1-x)S (x = 0 to 0.2)
reef	a thin, continuous layer of ore-bearing rock
RoM	Run-of-Mine – usually ore produced from the mine for delivery to the process plant.
SAMESG Guidelines	The South African Guideline for the Reporting of Environmental, Social and Governance Parameters within the Solid Minerals and Oils and Gas Industries (The SAMESG Guideline, 2017) prepared by the South African Environmental, Social and Governance (SAMESG) Committee under the joint auspices of the Southern African Institute of Mining and Metallurgy (SAIMM) and the Geological Society of South Africa (GSSA).
SAMREC Code	The South African Code for the Reporting of Exploration Results, Mineral Resources and Mineral Reserves (The SAMREC Code), 2016 Edition, compiled by the Working Group of the SSC Committee under the joint auspices of the Southern African Institute of Mining and Metallurgy (SAIMM) and the Geological Society of South Africa (GSSA).
Serpentine	a name used for a large group of minerals that fit the generalized formula $(Mg,Fe,Ni, Mn,Zn)_{2\text{-}3}(Si,Al,Fe)_2O_5(OH)_4$
serpentinize	to convert into serpentine
stratigraphic column	a grouping of sequences of strata onto systems
Stripping ratio	ratio of waste rock to ore in an open pit mining operation
sulfide	an inorganic anion of sulfur with the chemical formula S^{2-} or a compound containing one or more S^{2-} ions
tailings	refuse or dross remaining after the mineral has been removed from the ore - metallurgical plant waste product
ultramafic	igneous and meta-igneous rocks with a very low silica content (<45%), generally >18% MgO, high FeO, low potassium, and are composed of usually >90% mafic minerals (dark coloured minerals with high magnesium and iron content)
variogram	a measure of the average variance between sample locations as a function of sample separation
volcanics	rocks formed from lava erupted from a volcano
Waterberg Group	a clastic sedimentary succession of coarse siliclastic rocks preserved across the northern part of the Kaapvaal Craton

ABBREVIATIONS

Acronym	Definition
2D	two dimensional
3D	three dimensional
4E	shorthand for Pt + Pd + Rh + Au
6E	shorthand for 4E + Ir + Ru
AAS	Atomic Absorption Spectrometry
ACES	African Clean Energy Solutions
Afarak	Afarak Platinum Holdings (Pty) Ltd
AG	autogenous grinding
AMD	Acid Mine Drainage
AMIS	African Mineral Standards
AngloPlats	Anglo Platinum Limited
ASG	advance strike gully
BAC	bulk air coller
BAP	Biodiversity Action Plan
BBKT	Bakgatla Ba-Kgafela Tribe
BBKTA	Bakgatla-Ba-Kgafela Tribal Authority
BEE	black economic empowerment
B-BBEE	Broad-Based Black Economic Empowerment
BC	Bushveld Complex
BEE	Black Economic Empowerment
BEV	battery-electric vehicles
BOCO	base of complete oxididation
BOQ	Bills of Quantities
Boynton	Boynton Investments (Pty) Ltd
C&L Mining	C&L Mining (Pty) Ltd
Capex	Capital expenditure
CGS	Council for Geoscience
Charter I	Mining Charter, 1 May 2004
Charter II	Amended Mining Charter, 2010
Charter III	Amended Mining Charter, June 2017, now withdrawn
CIM	Council of the Canadian Institute of Mining, Metallurgy and Petroleum
CoG	cut-off grade
CoP	Code of Practice
COO	Chief Operating Officer
CPI	consumer price indices
CRM	certified reference material
CRP	chromite recovery plant
CRU	CRU International Ltd
CSA	Canadian Securities Administrators
CV	coefficient of variation
DEA	Department of Environmental Affairs
DFFE	Department of Forestry, Fisheries and the Environment
DGPS	differential global positioning system
DMRE	Department of Mineral Resources and Energy
DMS	Dense Media Separation
DPM	diesel particulate matter
E	Young's modulus
DWS	Department of Water and Sanitation
EA	Environmental Authorisation
EBIT	earnings before interest and taxes
ECA	Environmental Conservation Act (Act 73 of 1989)
ED	Enterprise Development
EIA	Environmental Impact Assessment
EMI	Environmental Management Inspectors
EMP	Environmental Management Programme
EMPr	Environmental Management Programme Report
EPCM	Engineering, Procurement and Construction Management
ESG	Environmental, Social and Governance
FAR	fresh air raise
FoS	factor of safety

Acronym	Definition
FOT	free on truck
FS	Feasibility Study
FW	footwall
G&A	general and administration
GA	General Arrangement
Genanalysis	Genalysis Laboratory Services (Pty) Ltd
Gencor	General Mining Corporation
GHG	Green House Gas
GISTM	Global Industry Standard on Tailings Management
GNR	Government Notice Regulation
GPS	global positioning system
HARD	Half Absolute Relative Difference
HDPE	high-density polyethylene
HDSA	Historically Disadvantaged South Africans
HLS	heavy liquid separation
HPD	hearing protection devices
HR	Human resources
HRD	Human Resources Development
HW	hangingwall
IBMR	Itereleng Bakgatla Mineral Resources (Pty) Ltd
ICE	internal combustion engine
ICP-MS	Inductively Coupled Plasma - Mass Spectroscopy
ICP-OES	Inductively Coupled Plasma - Optical Emission Spectroscopy
ID^2	Inverse Distance Squared
IDC	Industrial Development Corporation of South Africa
Impala	Impala Platinum Ltd
IRS	Impala Refining Services
IRUP	Iron-Rich Ultramafic Pegmatoids
JCI	Johannesburg Consolidated Investments
JSE	JSE Limited
juwi	juwi Renewable Energies Pty Ltd
Kellplant	Kellplant Pty Ltd
Kelltech	Kelltech Limited (Kelltech)
Kruidfontein	Kruidfontein Project
KTSA	Kelltechnology SA (RF) Pty Ltd
Lakefield	Lakefield laboratory
LED	local economic development
LG	Lower Group
LG6	Lower Group 6 Reef
LGS	Lebowa Granite Suite
LHD	load-haul-dump
LHOS	long hole open stoping
LIMDEV	Limpopo Development Corporation
LLC	Lesethleng Land Community
LoM	Life-of-mine
LPR	Lower Pseudo Reef
LT	long term
LTIFR	lost time injury frequency rate
LWUA	Lebalelo Water Users Association
M&I	Measured and Indicated (Measured and Indicated Mineral Resources)
MCDT	Mphahlele Community Development Trust
MF2	mill-float - mill-float
MG	Middle Group
MHSA	Mine Health and Safety Act (Act No. 29 of 1996)
Minerals Council	Minerals Council of South Africa
Moepi	Moepi Capital (Pty) Ltd
Mphahlele	Mphahlele Project
MPR	Merensky Primary RoM
MR	Merensky Reef
MRA	Mining Right Application
MRC	Contact Merensky Reef
MPRDA	Mineral and Petroleum Resources Development ACT No. 28 of 2002

Acronym	Definition
MPTRO	Mineral and Petroleum Titles Registration Office
MRMR	Mining Rock Mass Rating (Laubscher's System)
MRT	Molecular Recognition Technology
MTS	Managing Transformation Systems
MWB	Magalies Water Board
MWP	Mine Works Programme
N'	Stability Number
NCCRP	National Climate Change Response Policy
NDC	National Determined Contribution
NDP	National Development Plan
NEM:AQA	National Environmental Management: Air Quality Act (Act 39 of 2004)
NEM:BA	National Environmental Management: Biodiversity Act (10 of 2004)
NEM:PAA	National Environmental Management: Protected Areas Act (57 of 2003)
NEM:WA	National Environmental Management: Waste Act (Act 59 of 2008)
NEMA	National Environmental Management Act (Act 107 of 1998)
NERSA	National Energy Regulator of South Africa
NFA	National Forests Act (Act 84 of 1998)
NGER	National Greenhouse Gas Emission Reporting Regulations
NHRA	National Heritage Resources Act (Act 25 of 1999)
NI43-101	National Instrument 43-101 Standards of Disclosure for Mineral Projects
NIHL	noise induced hearing loss
NMD	Notified Maximum Demand
NOMR	New order mining right
NOPR	New order prospecting right
NPAT	net profit after tax
NPV	Net Present Value
NWA	National Water Act (Act 36 of 1998)
NWREAD	Rural Environment and Agricultural North West Provincial Department
OEL	occupational exposure limit
OK	Ordinary Kriging
Opex	Operating expenditure
ORJWF	Olifants River Joint Water Forum
ORMR	Ore Reserves and Mineral Resources Report
ORWRDP	Oliphant's River Water Resources Development Project
PCD	Pollution Control Dam
PEA	Preliminary Economic Assessment
PEM	proton exchange membrane (electrolysers)
PFP	Pegmatoidal Feldspathic Pyroxenite
PFS	Prefeasibility Study
PGE	Platinum Group Element
PGM	platinum group metal
Pilanesberg	Pilanesberg Alkaline Complex
Platmin	Platmin Limited
PMR	Precious metal refinery
PoC	proof of concept
POOP	pegmatoidal olivine pyroxenite
POX	pressure oxidation
PPM	Pilanesberg Platinum Mine
PPX	pegmatoidal pyroxenite
PRHZB	Pseudo Reef Harzburgite
PSA	pool-and-share agreement
PSM	PPM-Sedibelo-Magazynskraal Project
PUP	Potholed Upper Pseudo Reef Facies of the Merensky Reef
Q	Barton's Q Rock Mass Rating System
QA/QC	Quality Assurance/Quality Control
QC	Quality Control
QKNA	Quantitative Kriging Neighbourhood Analysis
QP	Qualified Person
QS	Quantity Surveyor
RAR	return air raises
RAW	return airway
RBH	raise borehole

Acronym	Definition
RC	Reverse Circulation
RG	Rooiberg Group
RLS	Rustenburg Layered Suite
RoM	Run of Mine
Royalty Act	The Mineral and Petroleum Resources Royalty ACT No. 28 of 2008
RPEE	Reasonable Prospects of Economic Extraction
RPM	Rustenburg Platinum Mines Ltd
RQD	Rock Quality Designation
RS	Regression Slope
RWD	return water dam
S&EIA	scoping and environmental impact assessment
SAHRA	South African Heritage Resources Agency
SARM	South African Reference Material
SARS	South African Revenue Services
SD	Supplier Development
SFA	SFA Oxford Limited
SGS	SGS Lakefield Research Africa (Pty) Ltd
SHEQ	safety, health, environment and quality
SLP	Social and Labour Plan
SMS	Sound Mining Solutions (Pty) Ltd
SPD	stope preparation drives
SPM	Sedibelo Platinum Mines Ltd
SRK	SRK Consulting (South Africa) (Pty) Ltd
SRL	Sedibelo Resources Limited
Sturdee	Sturdee Energy Southern Africa (Pty) Ltd
SWCD	stormwater control dam
SWMP	Stormwater Management Plan
Tameng	Tameng Mining & Exploration Holdings (Pty) Ltd
TCR	Total Core Recovery
TEM	Technical-economic model
TEP	Technical-economic parameter
TMM	trackless mining machinery
TOFR	top of fresh rock
TR	Technical Report
TRP	tailings retreatment plant
TSF	tailings storage facility
TSP	tailings scavenging circuit
U2	UG2 sub-unit
U2L	UG2 Leader
U2P	UG2 Parting; internal barren material
U2PEG	UG2 Footwall Pegmatoid
U/G	underground
UBS	UBS AG Investment Bank
UCS	Uniaxial Compressive Strength
UG	Upper Group
UG2	UG2 Reef
UG2FW	UG2 footwall
UPR	Upper Pseudo Reef
UV	utility vehicle
v	Poisson’s ratio
WACC	weighted average cost of capital
West Pit TRR	West Pit Tailings Reclamation and Retreatment
WHO	World Health Organization
Wi_{BM}	Bond Ball Mill Work Index
Wi_{RM}	Bond Rod Mill Work Index
WRD	waste rock dump
WTB	Water Treatment Plant
WUL	Water Use Licence
WULA	Water Use Licence Application
Y%	mineral royalty percentage rates

CHEMICAL ELEMENTS

Symbol	Element
Au	gold
Co	cobalt
Cr	chromium
Cr_2O_3	chromite
Cu	copper
HCl	hydrogen chloride
Ir	iridium
Ni	nickel
Pd	palladium
Pt	platinum
Rh	rhodium
Ru	ruthenium
S	sulfur
V	vanadium

UNITS

Acronym	Definition
A	ampere
cm	a centimetre
dB(A)	decibel
g	grammes
g/t	grammes per metric tonne – metal concentration
ha	a hectare
kg	one thousand grammes
km	a kilometre
kt	a thousand metric tonnes
ktpa	a thousand tonnes per annum
ktpm	a thousand tonnes per month
kV	one thousand volts
kVA	one thousand volt-amperes
kW	kilowatt
kWh	kilowatt hours
m	a metre
m^3	a cubic metre
m^3/s	a cubic metre per second
mamsl	metres above mean sea level
mbs	metres below surface
mm	a millimetre
Ma	a million years before present
MPa	a million pascals (a megapascal)
Mt	a million metric tonnes
Mtpa	a million tonnes per annum
MVA	a million volt-amperes
MW	a million watts (a megawatt)
oz	ounce
t	a metric tonne
t/m^3 / tm^{-3}	density measured as metric tonnes per cubic metre
tpa	tonnes per annum
USD	United States Dollar
USD/oz	US Dollars per ounce
USDbn	a billion United Sates Dollars
USDm	a million United States Dollars
V	volt
ZAR	South African Rand
ZARbn	a billion South African Rands
ZARm	a million South African Rands
ZAR/oz	South African Rand per ounce
ZAR/t	South African Rand per tonne
°	degrees

Acronym	Definition
°C	degrees Celsius
‘	minutes
%	percentage