Hacra Project
Technical Report

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Geology, Mineral Exploration, and Exploration Target

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COMPETENT PERSON'S CONSENT FORM

Under Clause 9 of the JORC Code 2012 Edition (Written Consent Statement)

Report Name:

PO_87_02_Technical_Report_V9

The company releasing the Report:

Sylvania Platinum Limited

This deposit to which this Report refers:

Harriets Wish Succession and Troctolite Sequence on the farm Harriets Wish 393 LR of Hacra Mining and Exploration Company (Pty) Ltd.

Date of the Report

16 February 2024

STATEMENT

I, Gideon Petrus (Deon) du Plessis,

Confirm that I am the Competent Person for the Report and:

- I have read and understood the requirements of the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources, and Ore Reserves (JORC Code, 2012 Edition).
- I am a Competent Person as defined by the JORC Code 2012 Edition, having more than five years of experience that is relevant to the style of mineralisation and the type of deposit described in the Report, and to the activity for which I am accepting responsibility.
- I am a Member in good standing of the South African Council for Natural Scientific Professions (SACNASP) (Reg No. 400050/05) and the Geological Society of South Africa (GSSA) (Reg No. 963338), both being Recognised Professional Organisations (RPO) included in the list promulgated by JORC.
- I have partially compiled and fully reviewed the Report to which this Consent Statement applies.

I am the founder, executive CEO, and a full-time employee of

Earthlab Technical Division (Pty) Ltd, registered in South Africa (Reg No. 2012/114510/07)

and have been engaged by

Hacra Mining and Exploration Company (Pty) Ltd (hereafter "Hacra"), a subsidiary of Sylvania Platinum Ltd (hereafter "Sylvania"), incorporated in South Africa, with its main country of operation currently being South Africa (Reg No. 1999/027433/07)

to prepare the documentation for

the Harriets Wish Succession and Troctolite Sequences of the farm Harriets Wish 393 LR

on which the Report is based, for the period ended

16 February 2024

I have disclosed to the reporting company the full nature of the relationship between myself and the company, including any issue that could be perceived by investors as a conflict of interest.

I verify that the Report is based on and fairly and accurately reflects the form and context in which it appears, the information in my supporting documentation relating to the Geology, Mineral Exploration and Exploration Target.

CONSENT

I consent to the release of the Report and this Consent Statement by the directors of:

Sylvania Platinum Limited

	16 February 2024
Signature of Competent Person	Date
SACNASP	400050/05
Professional Membership (a)	Membership Number (a)
GSSA	963338
Professional Membership (b)	Membership Number (b)
	Marius Swart Olifantsfontein
Signature of Witness	Witness Name and Residence (suburb, town)

EXECUTIVE SUMMARY

Sylvania Platinum Limited ("Sylvania", "the Company", "SLP", or "the Group"), a lower-cost Platinum Group Metal (PGM) producer and developer, has announced the results of their Northern Limb Mineral Assets Optimisation Studies on 24 October 2022, which includes the Geology and Mineral Exploration Results on the farm Harriets Wish 393 LR (Harriets Wish) which is part of the Hacra Project. The Company has an approved Mining Right over the farm Harriets Wish, which constitutes the Hacra Project. The Hacra project area is transected by the east-west striking Hout River Shear Zone, which has an estimated downthrow of 400 metres to the north. Since the announcement in October 2022, an Exploration Target over ~700-metre strike length, which is a portion of the total Hacra North underground mineral resource potential (~2.7 km strike), has been completed and is reported in this technical report.

The aim of the exploration undertaken was to conduct sufficient drilling which targeted mineralisation at depth to firstly confirm that the stratigraphy and mineralisation correlate with the neighbouring PTM Waterberg Project and secondly to increase the potential mineral resource that could be reported. Beyond the current underground Exploration Target footprint, the potential of the mineralisation to occur for an additional ~2 km on strike towards the Hout River Shear Zone, exists. This upside potential could increase the Hacra North underground mineral resource potential substantially with further exploration if successful.

The diamond drill hole dataset of the Hacra North Exploration Target is limited. Drill holes from the IGS 2012 campaign were used together with the drill holes designed and supervised by Earthlab in 2021. A small selection of drill holes of the PTM Waterberg Project was included in the Access database received by Earthlab, however, the data of these drill holes only included T-Zone and F-Zone intercept depths, with no lithological, mineralogical, assay, or any other logging data.

Due to the limited data, Earthlab based the modelling and data processing approach largely on the PTM Waterberg Project's methodology outlined in the Independent Technical Report (2019), since the deposit on the northern part of Harriets Wish is recognised to be an extension of the adjacent geology encountered in the PTM Waterberg Project.

Stratigraphic intercepts used to aid wireframe modelling were limited because of certain drill holes which intersected faults, drilled beyond the sub-crop positions (where the HWS is truncated by the Waterberg Group (WG) unconformity), drill holes which were stopped short, as well as continual collapsing causing certain holes to be abandoned for safety reasons.

PTM (2019) determined the spatial nature of the mineralised zones through an intricate set of steps including Categorical Kriging of the samples above the 1.0 g/t 3E+Au cut-off grade.

Probability estimation was performed in line with PTM's methodology to mirror the resource estimation procedure as close as possible, however, the data was too limited to produce an acceptable outcome. Dynamic Anisotropy would have been required to ensure the estimations honour the undulation of the wireframes, however not enough drill holes exist to allow for Dynamic Anisotropy. Inflating the search ellipsoid to ensure samples occurring within the search neighbourhood would have been ill-advised as it would not have made geostatistical sense, nor would the result honour the wireframe undulation.

It should be noted at this point that no variography was possible either, simply due to the limited size of the dataset. However, even if PTM's variogram parameters were to be applied without verifying it with their dataset, the samples to inform the estimations would still have been too limited to produce a Mineral Resource through Kriging.

The number of 1 m composite samples with 3E+Au values within the HWS zone is 656, and 357 composite samples are in the TS.

The arithmetic mean 3E+Au grade in the HWS is 0.931 g/t in the HWS without any cut-off grade applied. Once a 1.0 g/t 3E+Au cut-off grade is applied while allowing for up to 2 m internal waste, the arithmetic mean grade in the HWS composites increases to 4.290 g/t.

In the TS the arithmetic mean 3E+Au grade in the TS composites is 0.592 g/t before applying a cut-off grade. With a 1.0 g/t 4E cut-off grade applied to the TS composites while allowing up to 2 m internal waste, the arithmetic mean 3E+Au grade in the TS composites increases to 2.449 g/t.

Since the limited data is insufficient for variogram modelling, probability estimation of the mineralised sub-units above the 1.0 g/t 3E+Au cut-off grade, and for subsequent grade estimation through an interpolation method with a search neighbourhood based on the geostatistics, a different approach to the grade and density estimation was required. The Polygonal method of estimation was used by applying the sample data to specific wireframe volumes demarcated by polygons.

Due to the limited amount of exploration data for Hacra North underground resource potential, the Competent Persons declares an Exploration Target. Continued exploration in terms of surface diamond core drilling and improved market conditions the initial targeted maiden resource could well be declared, if successful. In addition, a comprehensive RPEEE test is recommended considering various options that Sylvania has at their disposal is critical as part of a future resource definition exploration drilling campaign.

Following the definition of an Exploration Target in accordance with the JORC Code (2012 Edition), an underground Exploration Target is declared for the Hacra North Project given the current exploration data and the rationale mentioned above.

Harriets Wish North (relevant to underground mining method) Exploration Target at a 100% attributable basis:

Unit	Tonnage @ 20% geoloss (Mt)	Tonnage @ 10% geoloss (Mt)	Grade ranges						
			3E+Au (g/t)	Pt (g/t)	Pd (g/t)	Rh (g/t)	Au (g/t)	Cu (%)	Ni (%)
HWS	10.56	11.88	2.62 - 4.32	0.90 - 1.27	1.32 - 2.34	~0.01	0.39 - 0.70	0.21 - 0.28	0.08 - 0.11
TS	9.48	10.67	1.68 - 2.29	0.62 - 0.79	0.98 - 1.37	~0.03	0.05 - 0.10	0.03 - 0.05	0.09 - 0.10
Combined	20.04	22.55	2.18 - 3.32	0.77 - 1.03	1.16 - 1.86	~0.02	0.23 - 0.40	0.12 - 0.16	0.08 - 0.10

In conclusion Hacra is situated in a structural complex geological setting. Mineral resource potential upside exists provided that drill hole planning carefully navigate the structurally dense area to successfully intersect mineralisation.

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LIST OF ABBREVIATIONS

Abbreviation	Description
2E+Au	Platinum, Palladium, and Gold
3E+Au	Platinum, Palladium, Rhodium, and Gold
ARC	Archean basement
Au	Gold
BIC	Bushveld Igneous Complex
BMS	Base-Metal Sulphides
BQ	Letter name specifying the dimensions of bits, core barrels, and drill rods in the B-size and Q-group wireline diamond drilling system having a core diameter of 36.5 mm and a hole diameter of 60 mm
BTZ	Basement Transition Zone
CAPEX	Capital expenditure
CGS	The Council for Geoscience in South Africa provides a database of public geological data and information
Cm	Centimetre
Cr	Chromium
CRMs	Certified Reference Materials
Cu	Copper
PGE-Cu-Ni	Platinum-Group Elements, Copper, and Nickel
DMRE	Department of Mineral Resources and Energy
g/cm^3	Grams per centimetre cubed, density unit
g/t	Grams per tonne, grade unit for PGEs
GPS	Global Positioning System is an accurate worldwide navigational and surveying facility based on the reception of signals from an array of orbiting satellites
HARD	Half Absolute Relative Difference is a method of measuring the precision of duplicate results
HWS	Harriets Wish Succession (the equivalent of the T-Zones)
HQ	A letter name specifying the dimensions of bits, core barrels, and drill rods in the H-size and Q-group wireline diamond drilling system having a core diameter of 63.5 mm and a hole diameter of 96 mm
ID	Identity of a sample, drill hole etc.
JORC	Joint Ore Reserves Committee – The Australian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves ('the JORC Code') is a professional code of practice that sets minimum standards for Public Reporting of Minerals Exploration Results, Mineral Resources and Ore Reserves
Km	Kilometre
M	Metre
Ma	Million years on the Geological Time Scale
Mm	Millimetre
MPRDA	Minerals and Petroleum Resources Development Act of the Republic of South Africa (Act 28 of 2002)
MR	Mineral Resource
Mt	Million metric tonnes
N11	Is a National Route in South Africa, connecting the Botswana boarder at Grobler's bridge with the N3 near Ladysmith in KwaZulu Natal
Ni	Nickel
NQ	A letter name specifying the dimensions of bits, core barrels, and drill rods in the N-size and Q-group wireline diamond drilling system having a core diameter of 47.6 mm and a hole diameter of 75.7 mm

Pd	Palladium
PEA	Preliminary Economic Assessment is defined as a study that includes an economic analysis of the potential viability of a project's Mineral Resources.
PGE	Platinum Group Elements, these include Iridium-Platinum Group elements (Iridium, Osmium, Ruthenium) and Palladium-Platinum Group elements (Palladium, Platinum, Rhodium)
PGM	Platinum Group Metals, these include Iridium, Osmium, Palladium, Platinum, Rhodium, and Ruthenium
PPD	Pan Palladium South Africa (Pty) Ltd was the project owner of the Aurora Project
Pt	Platinum
QAQC	Quality Control and Quality Assurance assist in the accuracy, and precision, and assure that no contamination occurred during the sample preparation and analytical procedures. This assures that the quality of the assay data used for resource estimation and that the laboratory results were in control at the time of reporting
RC	Reverse Circulation is a drilling technique whereby chips are produced
RLS	Rustenburg Layered Suite, the largest layered ultra-mafic to mafic intrusion in the world, is located within the Limpopo Province of South Africa.
RPEEE	Reasonable prospects for eventual economic extraction
RQD	Rock Quality Designation is a measurement of the quality of the rock retrieved from a drill hole
SA	South Africa
SG	Specific Gravity is a relative density measurement as a ratio of the sample weight in the air and the weight of an equal volume of water
t	Metric tonnes
TML	Thabazimbi-Murchison Lineament
TS	Troctolite Sequence
UG	Upper Group, an igneous rock layer within the Bushveld Igneous Complex
WG	Waterberg Group
WGS	World Geodetic System is a spatial reference system of GPS satellites. It consists of a reference ellipsoid, a standard coordinate system, altitude data, and a geoid
XRF	X-Ray Fluorescence is an analytical method for geological samples elemental compositions

MEASUREMENT SYSTEM

The datum used for this project is Hartebeesthoek94 Lo 29 with WGS84 as the reference ellipsoid.

The metric system is used for all measurements. A conversion table for metric units to imperial units can be viewed below.

British English is applied with dates reported in dd/mm/yyyy format.

Metric amount	Metric unit		Conversion factor	Imperial unit
1	Millimeter	=	0.0394	Inches
	Centimetre		0.3937	Inches
	Meter		3.2808	Feet
	Kilometre		0.6214	Miles
	Square meters		10.7639	Square feet
	Square kilometre		0.3861	Square miles
	Hectare		2.4711	Acres
	Cubic meter		35.3147	Cubic feet
	Gram		0.0353	Troy ounces
	Kilogram		2.2046	Pounds
	Metric tonne		2204.62	Pounds
	Metric tonne		1.1023	Short tons
	Grams per cubic centimetre		0.0361	Pounds per cubic inch
n	Degrees Celcius	=	(n * 9/5) + 32	Degrees Fahrenheit

1 INTRODUCTION

Terms of Reference and Scope of Work

This report is designed and formulated to meet the requirements of the Joint Ore Reserves Committee (JORC) 2012 for reporting Exploration Results and Exploration Target.

Sylvania Platinum Ltd. ("Sylvania") commissioned Earthlab Technical Division (Pty) Ltd ("Earthlab") to devise an optimised exploration strategy comprising incremental steps to evaluate their mineral exploration projects and potentially upgrade the Exploration Results status to a higher level of geological confidence. As part of rolling out the exploration strategy, Earthlab managed on behalf of Hacra Mining and Exploration Company (Pty) Ltd. (Hacra), a wholly owned subsidiary of Sylvania, a JORC-compliant drilling and sampling programme during the calendar year of 2021 (for Sylvania's financial year 2021-2022 as of 30 June 2022). Earthlab is commissioned as part of this assignment to process and interpret the exploration data to produce a geological model and an Exploration Target compiled into a Technical Report.

1.1 Sources of Information

1.1.1 Previous Work

1.1.2 Council For Geoscience (CGS)

The CGS in South Africa provides a database of public geological data and information. Earthlab made use of the 1:250,000 geology map and the soil sampling geochemistry data.

1.1.3 Academic Research

To aid Earthlab's regional and local geological understanding, various published academic papers were utilised. Cited content is referenced in the Reference List section.

1.1.4 Exploration work

Earthlab managed the drilling, logging, sampling, assay, and data-capturing campaign which was used for the geological interpretation, modelling, quantification of the Exploration Target, and Technical Report writing.

2 PROJECT OUTLINE

2.1 Property Location

The Hacra Project is located on the farm Harriets Wish 393 LR, which is located within the Blouberg district municipality, Limpopo Province, in the Republic of South Africa (RSA) (Figure 1). The farm is situated approximately 100 km north of the town of Mokopane and 95 km northwest of the capital of Limpopo, Polokwane.

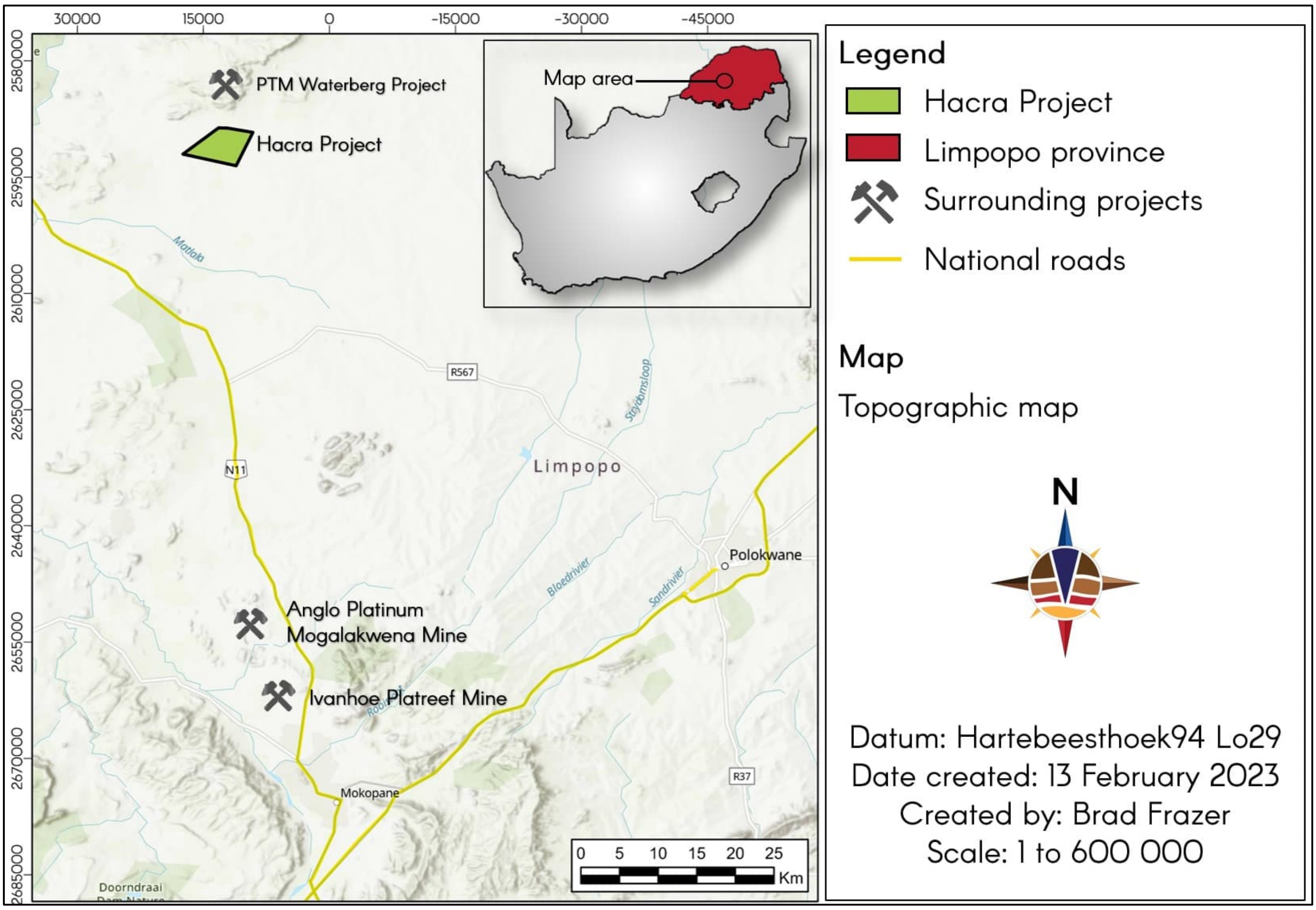


Figure 1. Regional map showing the location of the Hacra project and surrounding mining operations.

2.2 Property Description

2.2.1 Infrastructure and Accessibility

The Hacra Project is situated approximately 25 km northeast of the N11 national road and can be accessed via a series of secondary gravel roads. The access road that crosses the farm is Mahlwareng / Ga-Raweshe Road, which is largely unmaintained and requires 4x4 vehicles to traverse. The roads are locally made up of loose sand tracks which make access difficult.

On-site infrastructure is very limited, including several sparsely distributed homesteads of the communities, some of which have access to borehole water and electricity. Other infrastructure on the farm includes the Platinum Group Metals (PTMs) Ltd core yard facility, which is fenced off from local access and guarded by security. No other infrastructure is available on site.

2.2.2 Environment

Harriets Wish 393 LR is closely situated south of the Blouberg Mountain Range which forms part of the Waterberg Group (WG) sediments. The farm is cross-cut by the relatively large westerly flowing Seepabana River which flows across the Hout River Shear Zone. The Seepabana River is a non-perennial river system, which flows occasionally during the summer rainfall season. The vegetation across the farm can be considered a semi-arid savanna with sporadic grasslands. The area is relatively flat lying and on average 980 mamsl and receives summer rainfalls up to approximately 450 mm per annum.

3 LAND TENURE AND MINERAL TENEMENT

3.1 Mineral Tenement

Hacra holds the exclusive Mineral Rights to engage in mining and prospecting activities within the Harriets Wish farm through a mining right issued in terms of Section 23 of the Minerals and Petroleum Resources Development Act (MPRDA Act 28 of 2002) of the Republic of South Africa. The MPRDA was promulgated in 2002 to legislate the official policy concerning the exploitation of the country's minerals. Previously, South African Mineral Rights were owned by either the State or private sector. This dual ownership system represented an entry barrier to potential investors. The new MPRDA was introduced with the objective for all Mineral Rights to be in the custodianship of the State, with due regard to constitutional ownership rights and security of tenure.

The Mining Right, MPT No. 14/2016 held by Hacra is located on the farm Harriets Wish 393 LR.

The Mining Right was registered with the Mineral and Petroleum Titles Registration Office on 7 April 2016, as reflected in the document titled – 'Hacra Mining Right'. The minerals for which the Mining Right is granted include PGM, Copper (Cu), Nickel (Ni), Gold (Au) and Silver (Ag).

The Mining Right was authorised under the Power of Attorney granted by the Director-General of the DMRE on 18 February 2015 in terms of section 103 (1) of the Act, No. 28, and by Mr Anton Francois de Vos (representative of the Holder) as a director of Hacra, Registration number: 2008/011649/07. The duration of the Mining Right shall commence on 09 December 2015 and will continue to be in force for 30 years ending on 08 December 2045.

According to the MPRDA, the holder of a Mining Right may, at any time not later than 60 working days before the expiry of the Mining Right, apply for renewal. Suspension or cancellation of the right shall be enforced should the Holder not commence mining operation within one year of the effective starting date unless the Holder provides a written request and receives authorisation in writing from the Minister for late commencement.

3.2 Land Tenure

Rights to prospect and mine the land are granted by the State. While holders of the prospecting and Mining Rights granted by the State have statutory rights to use the land for prospecting and mining purposes, the rights holder is expected to reach a consensus with the lawful occupiers of the land before commencing prospecting or mining operations. The lawful owners of the Harriets Wish farm granted permission to Sylvania to access the land to undertake prospecting and mining activities.

Water for drilling was sourced from the Seepabana River (Figure 2). Permission to use the water was granted by the local community. A written agreement to that effect has since expired however, no issues for utilizing this water source for future activities are envisaged.

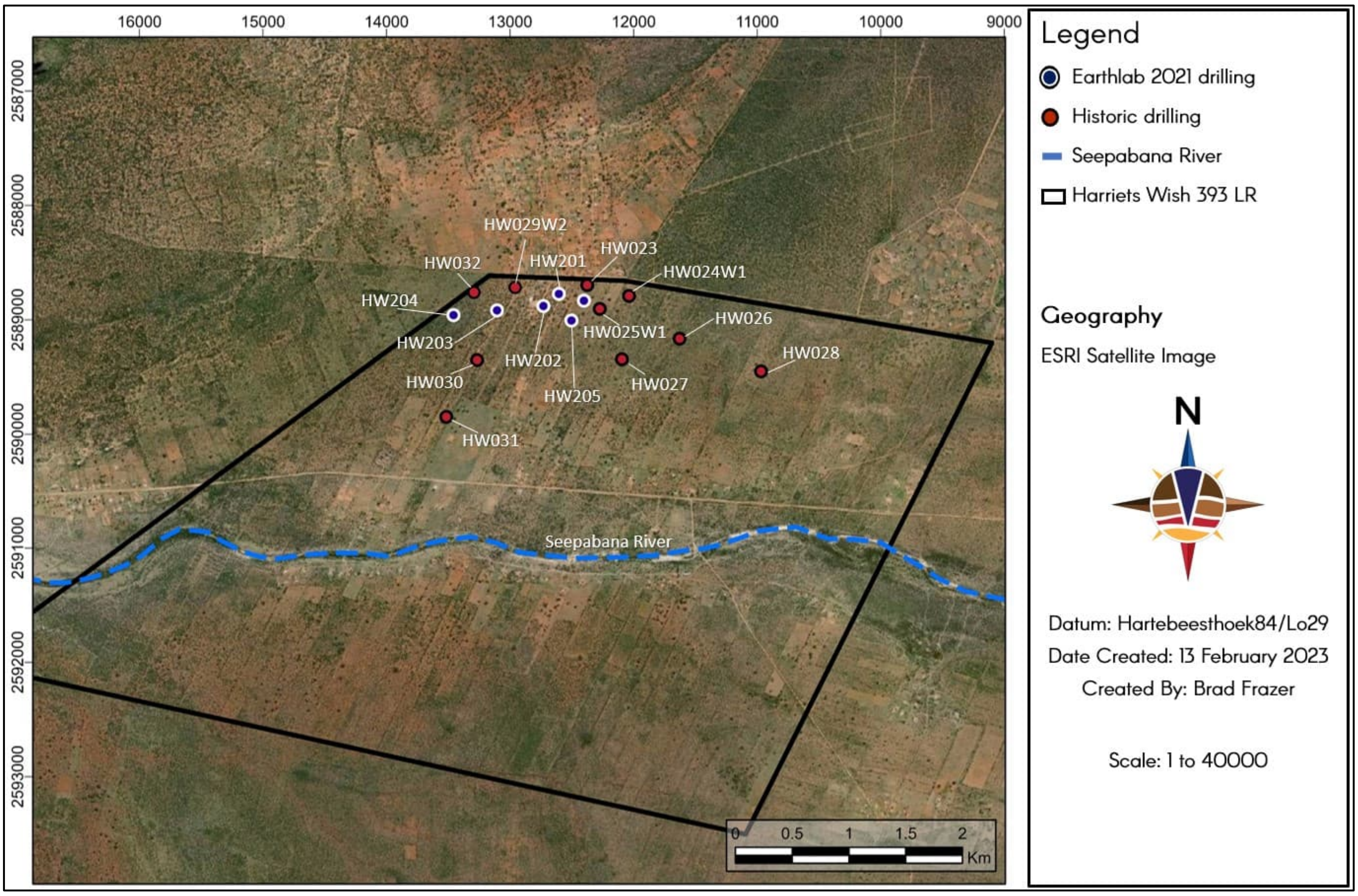


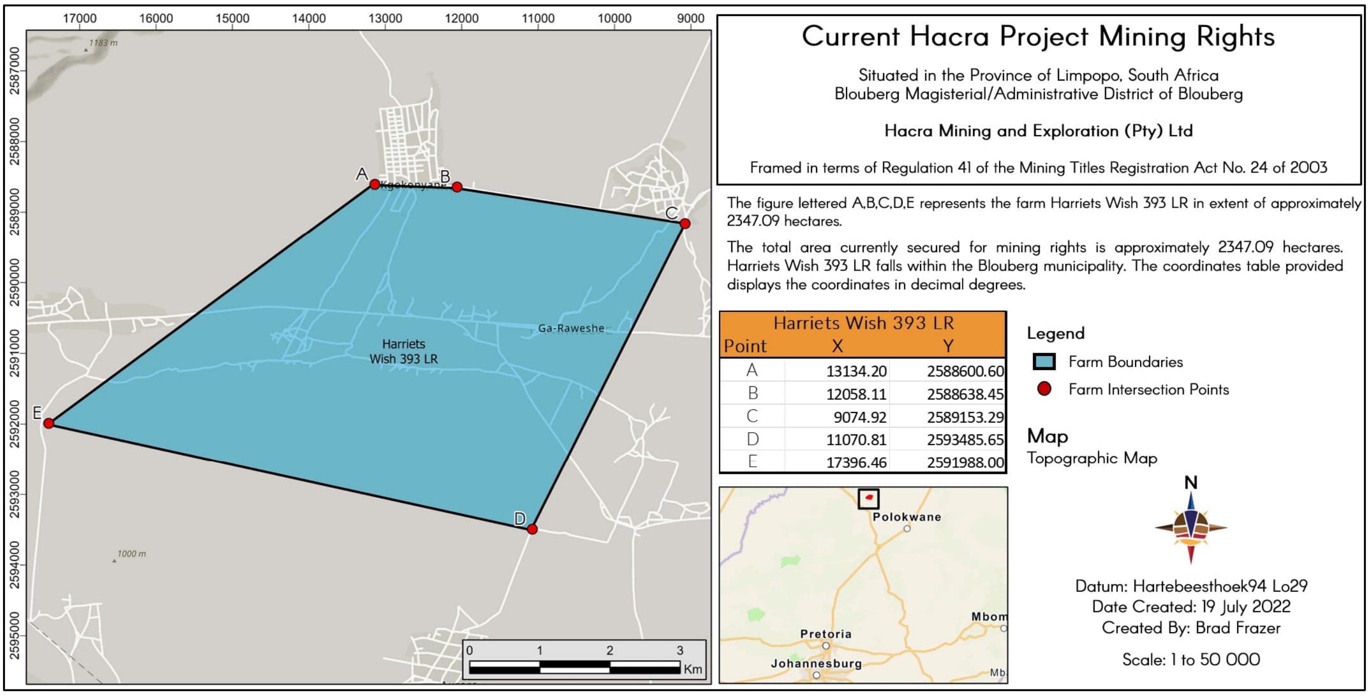
Figure 2. Satellite image showing the location of all Harriets Wish drill holes and the location of the Seepabana River.

3.3 Mineral Rights

3.3.1 Harriets Wish 393 LR (MPT No. 14/2016)

This Mining Right was granted to Hacra for PGM, Cu, Ni, Au and Ag in respect of the farm Harriets Wish 393 LR located in the Magisterial District of Blouberg (Figure 3), Limpopo Province. The Mining Right is valid for a period of 30 years with a commencement date of 9 December 2015, expiring on 8 December 2045.

As part of the Mining Right application, Hacra was requested by DMRE to complete an Environmental Management Plan (EMP) in terms of Section 39 (4) (i – iii) of the MPRDA for Harriets Wish. Under this EMP Hacra will have clearance to conduct prospecting and mining activities in accordance with the approved EMP. The EMP was approved by DMRE on 9 December 2015 and will be in force for the duration of the Mining Right.



Harriets Wish 393 LR		
Point	X	Y
A	13134.20	2588600.60
B	12058.11	2588638.45
C	9074.92	2589153.29
D	11070.81	2593485.65
E	17396.46	2591988.00

Figure 3. Mining Right over Harriets Wish 393 LR.

3.4 Surface Rights

The farm Harriets Wish is divided into 54 small-holdings (Figure 4) held by individual titles (IGS, 2012). The Ga-Raweshe community are the only (Figure 4) legal occupant of the farm Harriets Wish.

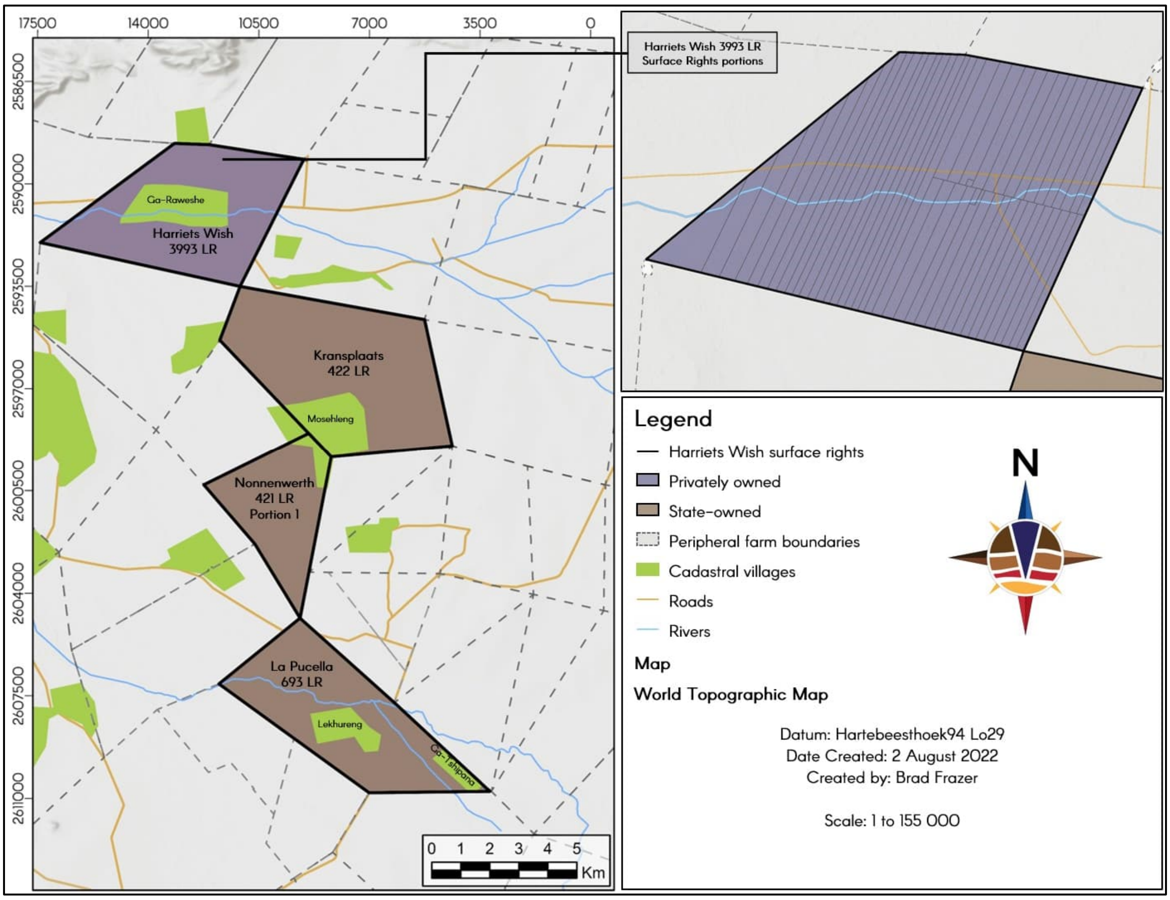


Figure 4. Surface Rights for the Hacra project with the adjacent PPD project included for spatial context.

4 PROJECT HISTORY

4.1 Ownership

Prospecting licenses over the properties comprising the Hacra project were at some stage held by Rustenburg Platinum Mines (RPM), a wholly-owned subsidiary of Anglo American Platinum Ltd., and the Black Empowerment entity Sika Bopha during 2007 – 2009 (IGS, 2012). The prospecting rights for Harriets Wish were held under two separate prospecting licenses by RPM and Sika Bopha as shown in Table 1 below.

Table 1. Historical ownership of the prospecting rights over Harriets Wish 393 LR, after (IGS, 2012).

DMRE Reference	Registered holder	Property	Landowner	Term
LP679/PR	Rustenburg Platinum Mines	Harriets Wish 393 LR (50% undivided interest)	54 title holders	15/08/2007 to 14/08/2009
LP792/PR	Sika Bopha	Harriets Wish 393 LR (50% undivided interest)	54 title holders	11/06/2007 to 10/06/2009

The first Prospecting Right LP679/PR held by RPM was initially granted for two years, expiring on 14 August 2009. A renewal application was lodged on 15 May 2009 and an extension was granted for a further three years expiring on 29 April 2013.

The second Prospecting Right LP792/PR was held by Sika Bopha Trading and expired on 10 June 2009. The renewal application was sent to DMRE on 12 March 2009. A further extension was granted for three years expiring on 29 April 2013 (Sylvania Platinum Ltd, 2011).

An application to transfer the Mineral Rights from RPM and Sika Bopha to Hacra has since been submitted and approved. Following the transfer of the Mineral Rights to Hacra, an application for a Mining Right was issued to Hacra in terms of Section 23 of the MPRDA.

Sylvania has a 67% stake in the Hacra project, while the Black Empowerment entity Zemkinkomo Holdings owns 29%. The remaining 4% is held by Tario 537 (Pty) Ltd within which the interests of the Community in the project are represented by the Harriets Wish Community Company. The current corporate structure of Hacra is illustrated in Figure 5 below.

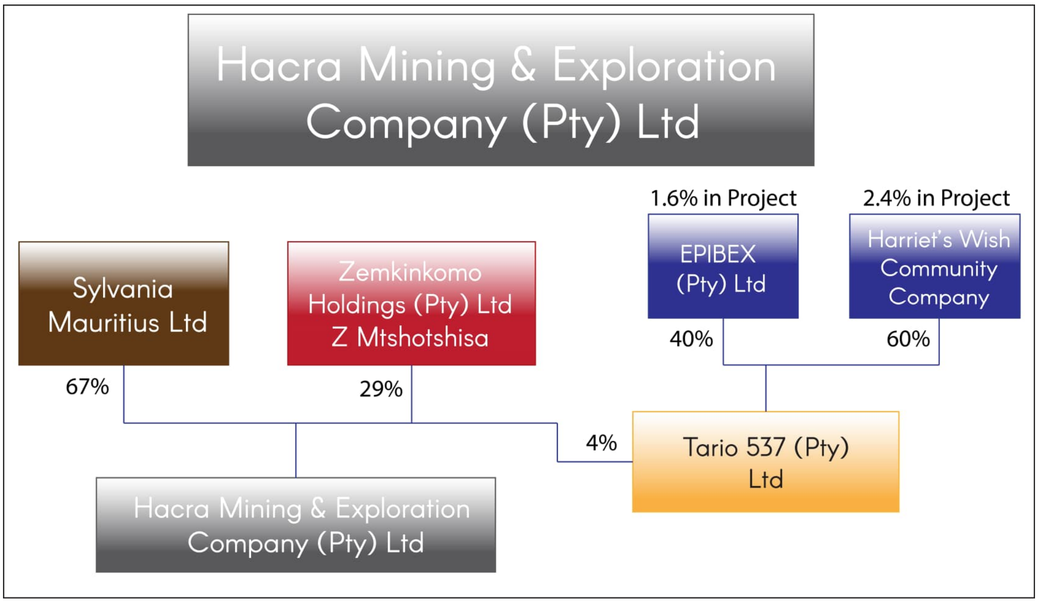


Figure 5. Corporate structure and ownership of the Hacra Mineral Rights.

4.2 Historic Exploration

The Harriets Wish farm has been explored by several mineral exploration companies including Anglo Platinum, the Great Australian Resources Limited (GAU) and Hacra. According to the current historical Access database, a total of 33 drill holes have been drilled by various companies equating to 13,709.24 metres of diamond drill core. No MRE has been defined for Harriets Wish from this historic work. The previous exploration programmes have focused on targeting Platreef-style mineralisation which is typical of the Northern Limb of the Bushveld Igneous Complex (BIC). The history of exploration drilling over Harriets Wish is summarised in Table 2 below.

Table 2. Summary of exploration development history over Harriets Wish farm.

Year	Summary of events
1970	Anglo American Platinum carried out exploration work on Harriets Wish and surrounding farms as part of the regional exploration work. In 1970 exploration activities primarily focused on soil sampling.
1973	Basic mapping of the area was undertaken by Anglo-American Platinum.
1976 – 1978	During the period 1976 to 1978 exploration efforts on Harriets Wish and adjacent farms focused on the interpretation of the Government aeromagnetic survey, followed by regional mapping and soil sampling combined with trenching.
1985	Anglo American Platinum undertook a ground magnetic survey followed by the drilling of three drill holes (HW001 to HW003) equating to 431.05 metres of drilled core.
1999	Further exploration efforts were carried out by Anglo American Platinum intermittently between 1999 and 2006. Exploration activities included desktop studies and analysis of Landsat imagery,
2004 – 2006	A soil sampling programme to refine drilling targets was undertaken by Anglo American Platinum in 2004. Reinterpretation of ground magnetometer and aeromagnetic data was undertaken in 2005, followed further by drilling in 2006 of eight drill holes (HW004 to HW011).
2008 – 2009	Between 2008 and 2009 Pan Palladium drilled six drill holes (HW012 to HW017) equating to 1,690.58 metres of diamond core.
2009	Great Australian Resources undertook an exploration drilling in 2009. A total of five drill holes (HW018 to HW022) were drilled by GAU equating to 868.15 metres.
2012	Phase I exploration drilling by Hacra in 2012 targeted the deeper northern portion of the Harriets Wish farm. A total of ten drill holes and four deflections were drilled producing 7,785.92 metres.No Mineral Resource estimate has been declared from this work.

4.3 Geophysics

Hacra utilised the services of FUGRO Airborne Surveys (Pty) Ltd. (Fugro) to undertake an airborne geophysical survey over the Hacra project and southern Aurora project area in 2003. The survey included magnetic and radiometric recording and was flown at 50 m line spacing and a ground clearance of 30 m. The geophysical data produced by Fugro were independently interpreted by GAP Geophysics.

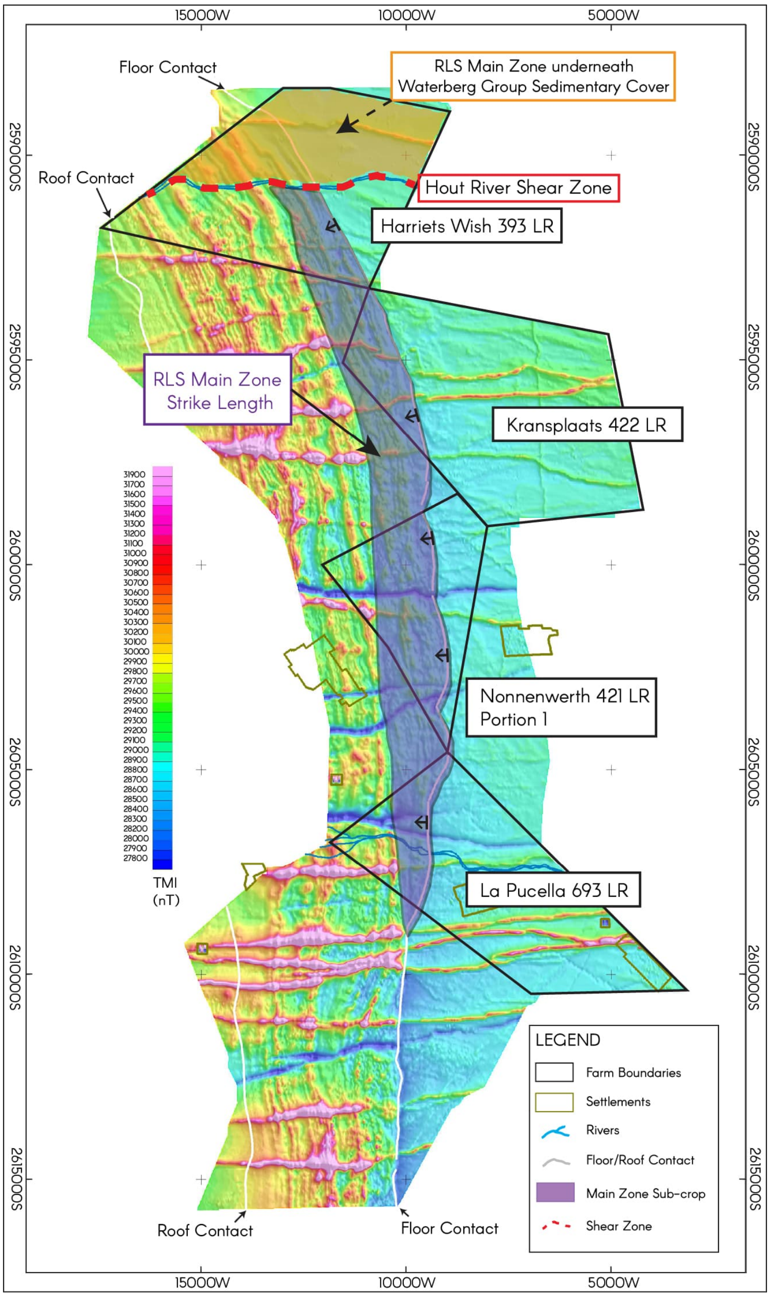


Figure 6. Total field aeromagnetics as interpreted by GAP Geophysics. North of the Hout River Shaer Zone the RLS sub-crops below the Waterberg Group approximately at 450 m depth.

The interpretation by GAP Geophysics indicated a discontinuous nature of the Main Zone characterised by east-west striking dyke intrusions that possibly result from imbricate faulting (IGS, 2010). Earthlab has relied on historical Technical Reports produced by IGS and MSA as the original Geophysical Report by GAP Geophysics was not made available.

5 GEOLOGICAL SETTING

5.1 Regional Geology

5.1.1 Bushveld Igneous Complex

The Bushveld Igneous Complex (BIC) is the largest layered intrusion on Earth and hosts the world's largest magmatic ore deposits (Lee, 1996). The BIC has emplaced 2055.91±0.26 Ma (Zeh *et al.*, 2015), and comprises several limbs; the Eastern, Western, and Northern Limbs, that cover an approximate areal extent of 90,000 km^2 (Finn *et al.*, 2015). The Northern Limb of the BIC is separated from the Eastern and Western Limbs by the approximately east-west striking Thabazimbi-Murchison Lineament (TML) (Figure 7). The connection between the latter limbs of the BIC remains under much debate amongst the geological community across the globe.

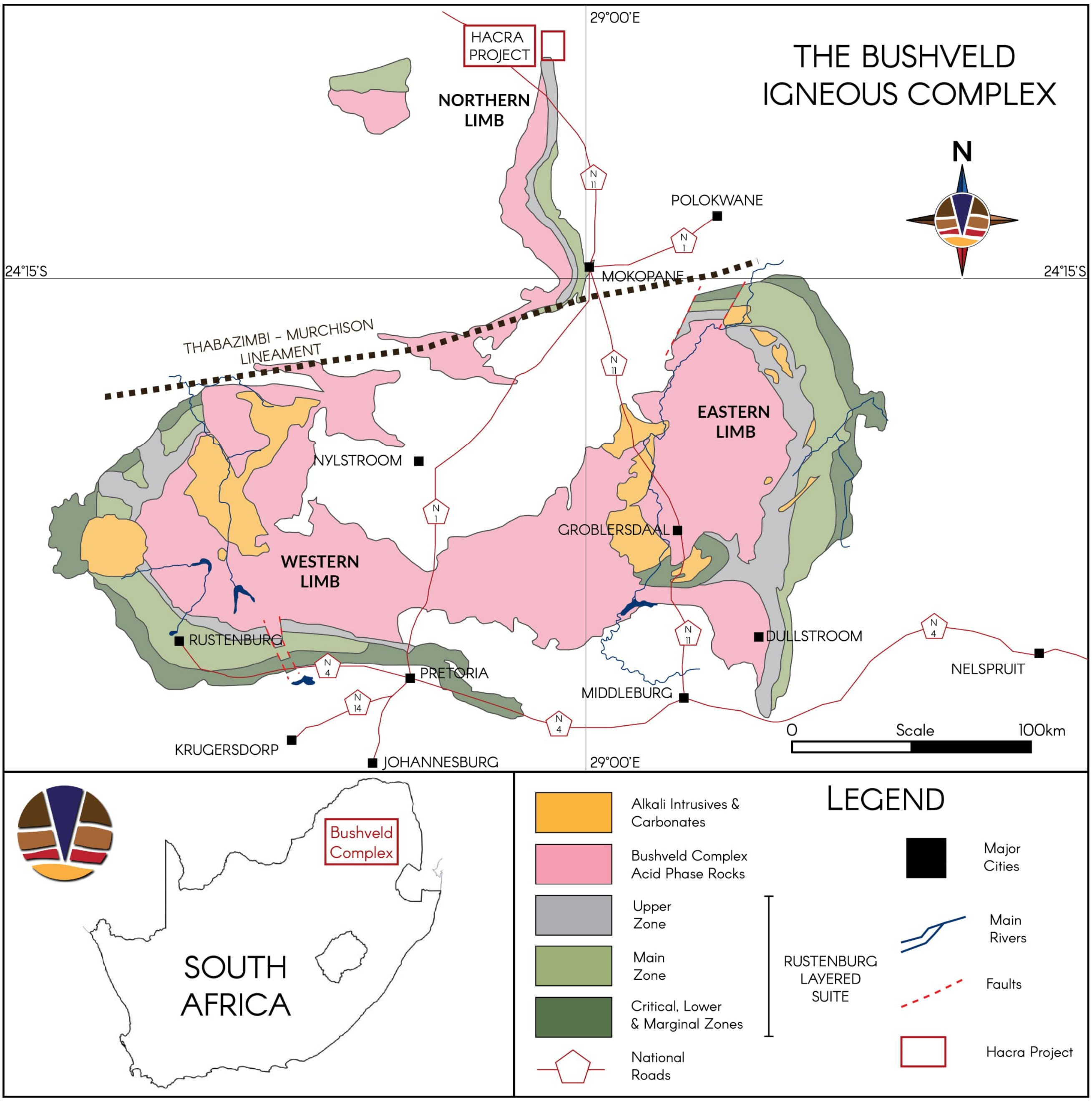


Figure 7. Bushveld Igneous Complex and its respective limbs, major towns, cities, and major road infrastructure

The BIC is sub-divided into several igneous bodies which include the Rustenburg Layer Suite (RLS), the Lebowa Granite Suite, the Rashoop Granophyre Suite, and the Rooiberg Group Volcanics (Cawthorn *et al.*, 2006). The following sections describe the occurrences of these sub-divisions, where the Lebowa Granite Suite, Rashoop Granophyre Suite and Rooiberg Group Volcanics have been left out in this report as they are not directly relevant.

5.1.1.1 Rustenburg Layered Suite

The RLS is the world's largest layered mafic intrusion, covering approximately 65,000 km^2 reaching thicknesses between 7 – 9 km (Eales and Cawthorn, 1996). The RLS is a lopolith-like intrusive body and is host to the largest PGM reserves on the planet among other significant contributions to chrome (Cr) production (Naldrett *et al.*, 2009).

The RLS was emplaced at shallow crustal levels beneath the Rooiberg Group Volcanics and the Transvaal Supergroup. The RLS comprises several main layers showing spectacular layering, which have grouped according to spatial distribution, variation in lithology, and morphology. These layers include, from the base to top, the Marginal, Lower, Critical, Main, and Upper Zones:

- The Marginal Zone is not always present and ranges in thickness from zero to hundreds of metres situated at the very base of the intrusion and is best described as a contact facies of the RLS during its earliest intrusive phases into the Transvaal Supergroup.
- The Lower Zone is limited in its distribution across the BIC and is usually confined to areas of basement lows. The best preservation of this zone is found in the northern sectors of the Eastern and Western Limbs, as well as the southern sector of the Northern Limb. The Lower Zone reaches a maximum thickness of approximately 1,300 m (Cawthorn *et al.*, 2002), and comprises four main lithological units which include a norite-pyroxenite at the base, a lower pyroxenite, harzburgite, and upper pyroxenite. The harzburgites contain cyclic layers containing dunite, harzburgite and pyroxenite.
- The Critical Zone is host to world-class Cr and PGM deposits. These deposits are found within several layers termed "reefs", but the most well-known is the Merensky Reef and the UG2 Reef. This zone is approximately 1,500 m in thickness and is further sub-divided into the lower sub-zone, comprising an ultra-mafic succession of pyroxenites, as well as the upper sub-zone which comprises a series of chromitite, harzburgite, pyroxenite, norite, and anorthosite. Ultimately there have been approximately nine magmatic cycles identified within the lower sub-zone and eight in the upper sub-zone. Interestingly the Critical Zone marks the first appearance of cumulate plagioclase throughout the RLS and its base is determined by the lowest anorthositic layer between two chromitites.
- The Main Zone forms the largest body of magma by volume within the RLS, reaching thicknesses of over 3,000 m. It comprises a succession of layered gabbronorites with infrequent pyroxenite and anorthosite, where olivine and chromite are rare occurrences. The layers within the Main Zone are associated with multiple influxes of magma, however, this layering has been attributed to the mechanical distribution of crystals throughout the Main Zone, as their compositions are not within cotectic proportions.
- The Upper Zone can be characterised as a sequence of intensely banded gabbros with layers of anorthosites and magnetite. Magnetite layers within this zone are numerous, with some twenty-five layers being identified along with the Eastern Limb of BIC (Molyneux, 1974). The Main Magnetite Layer, near the base of the Upper Zone sequence, has been recorded at 2 m thick and is mined for its highly economical vanadium (V) content.

5.1.2 Northern Limb

The Northern Limb is separated from the Eastern and Western Limbs by the Thabazimbi Murchison Lineament and has been rather neglected in the past for its economic potential. Only in recent decades have there been major efforts to reignite exploration along the Northern Limb. The stratigraphy of the Northern Limb has been split into the traditional units established for the Eastern and Western Limbs, i.e., the Lower, Critical, Main, and Upper Zones (Figure 8). The Lower Zone is predominantly harzburgites and pyroxenites. The Critical Zone contains layered ortho-pyroxene, clinopyroxene, chromite, and plagioclase cumulates. The Main Zone is dominated by gabbronorite with infrequent anorthosite and pyroxenite, with rare olivine-bearing units. The Upper Zone is mainly ferro-gabbros with variable magnetite.

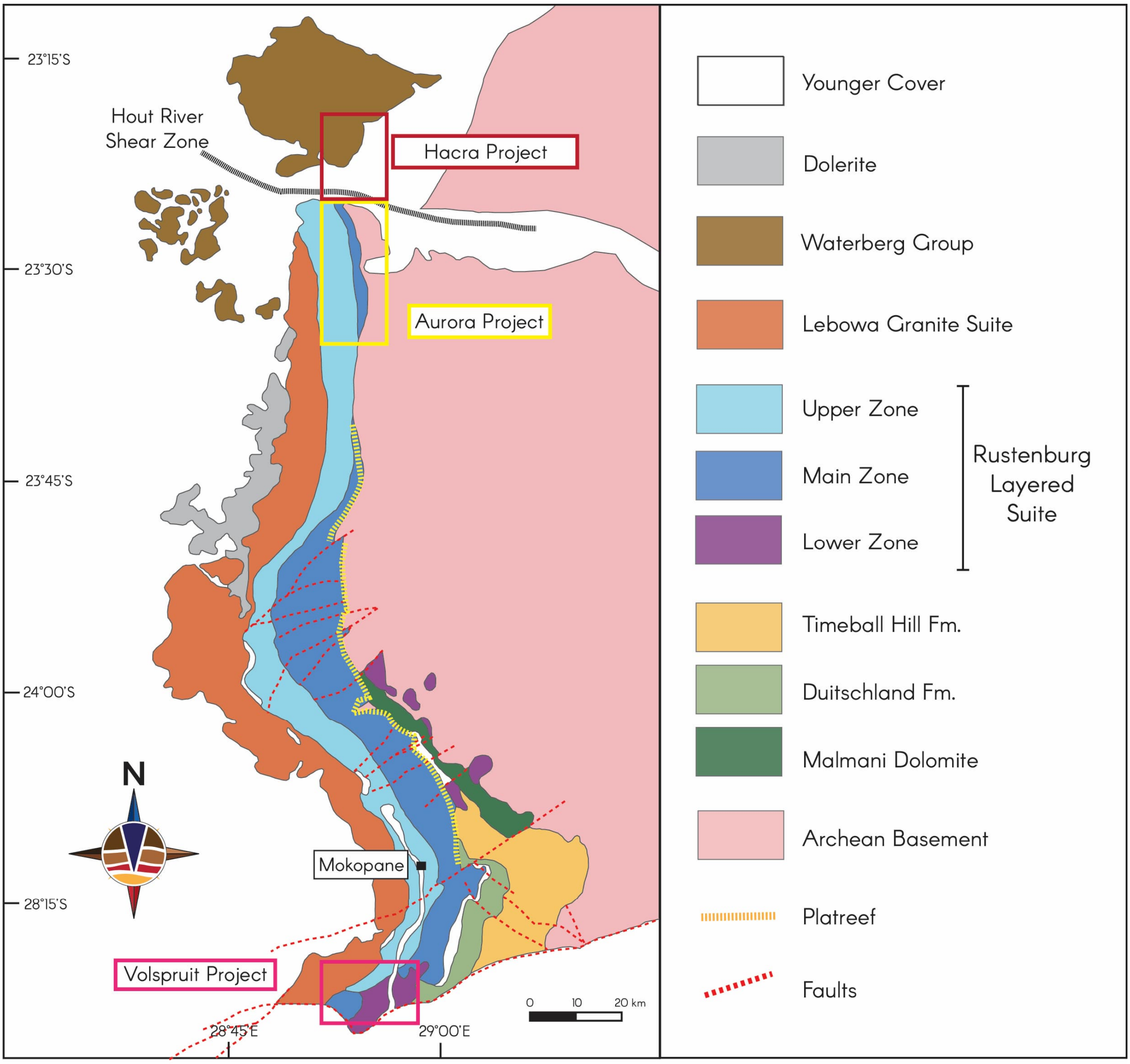


Figure 8. Simplified geological map of the Northern Limb showing the approximate locations of the Waterberg, Aurora, and Grasvally Projects. The image was modified after McCreesh et al. (2018).

The mineral deposits within the Northern Limb can be separated into several major commodities: Fluorspar, Sn, Cr, V, Cu, Ni, and PGEs. The first PGMs mined in this region come from the Platreef deposit, which is considered the Critical Zone equivalent of the Northern Limb and for the most part rest on top of the basement contact of the RLS. The Platreef has had a major impact on PGM mining across South Africa, as it is a shallow orebody, which can be mined using less costly open-cast mining methods. Thus, it has greatly bolstered the production of PGMs for the country and the rest of the world. Recently, new PGM deposits have been identified and undergoing considerable exploration to expand the PGM sector across the BIC. These deposits include the Hacra and Aurora Projects, located far to the northern sectors of the Northern Limb, as well as the Volspruit Project, which is located to the far south of the Northern Limb (Figure 8).

5.2 Local Geology

The Waterberg Project is located to the far North of the Northern Limb and is separated to the north by the Hout River Shear Zone. The RLS in this section is covered by a variably thick succession of Waterberg Group sediments, approximately 80 – 410 m in thickness. Exploration drilling by Earthlab for Hacra has been situated on Harriets Wish 393 LR, which lies directly south of PTM's Waterberg Mining Right (Figure 9). Exploration aimed to locate and extend the current T-Zone and F-Zone mineralised targets directly south of PTM's current advanced mine development project.

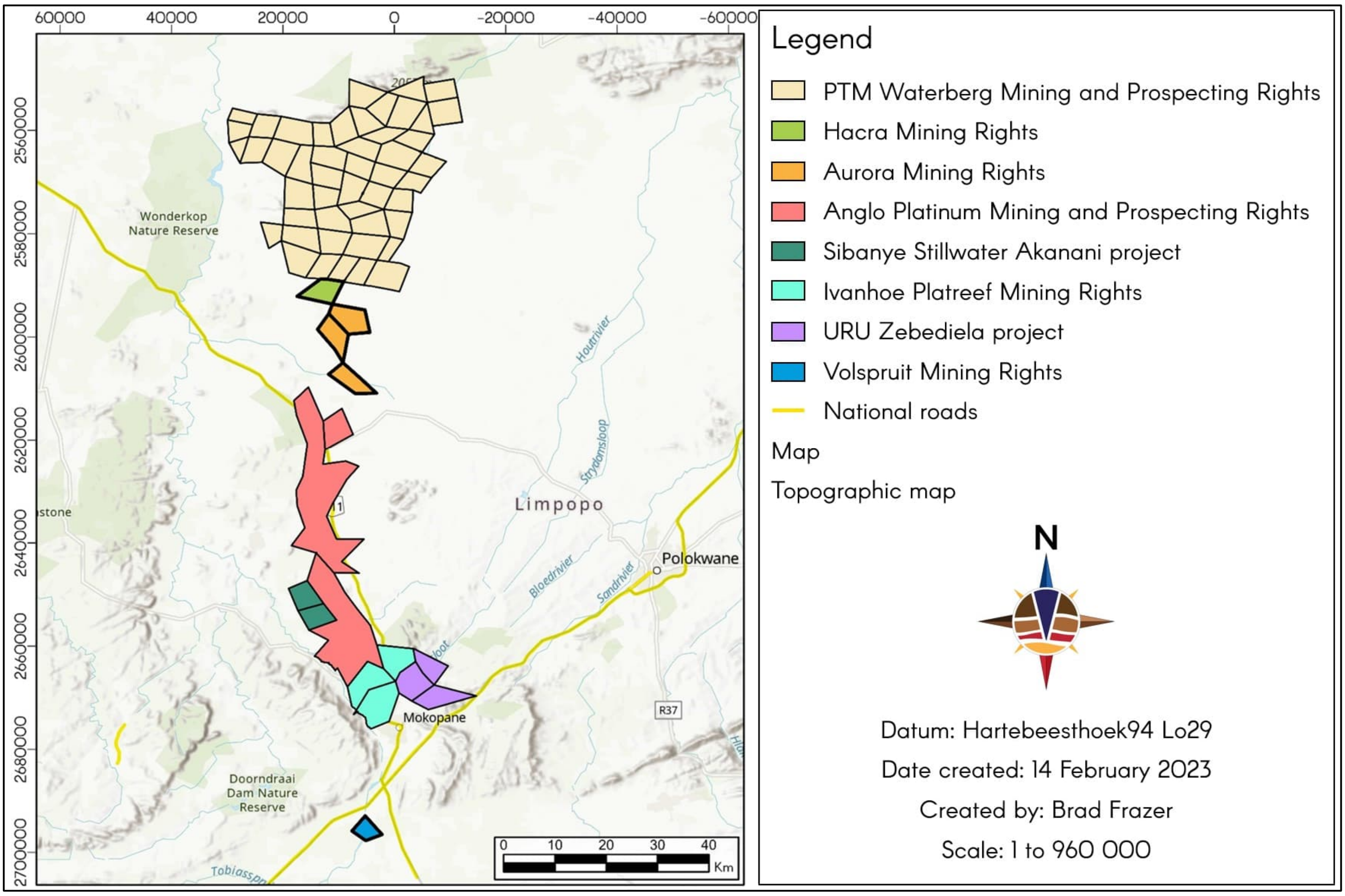


Figure 9. Map showing the location of the Hacra mining rights in relation to other Northern Limb projects.

5.2.1 Stratigraphy

Figure 10 shows the general stratigraphic units found within the Waterberg Project. The two major stratigraphic units include the Waterberg Group and the RLS, which overlies the Archaean Basement (ARC). The mineralised target zones are hosted within the Main Zone of the RLS, namely the Harriets Wish Succession (HWS) or equivalent to PTM's "T-Zone", and the Troctolite Sequence (TS) or equivalent to PTM's "F-Zone". For the sake of continuity going forward in discussing these mineralised zones, this document will refer to the Harriets Wish Succession as the T-Zone. The T-Zone stands for transition zone, which locally refers to the transitional zone between the Main and the Upper Zone.

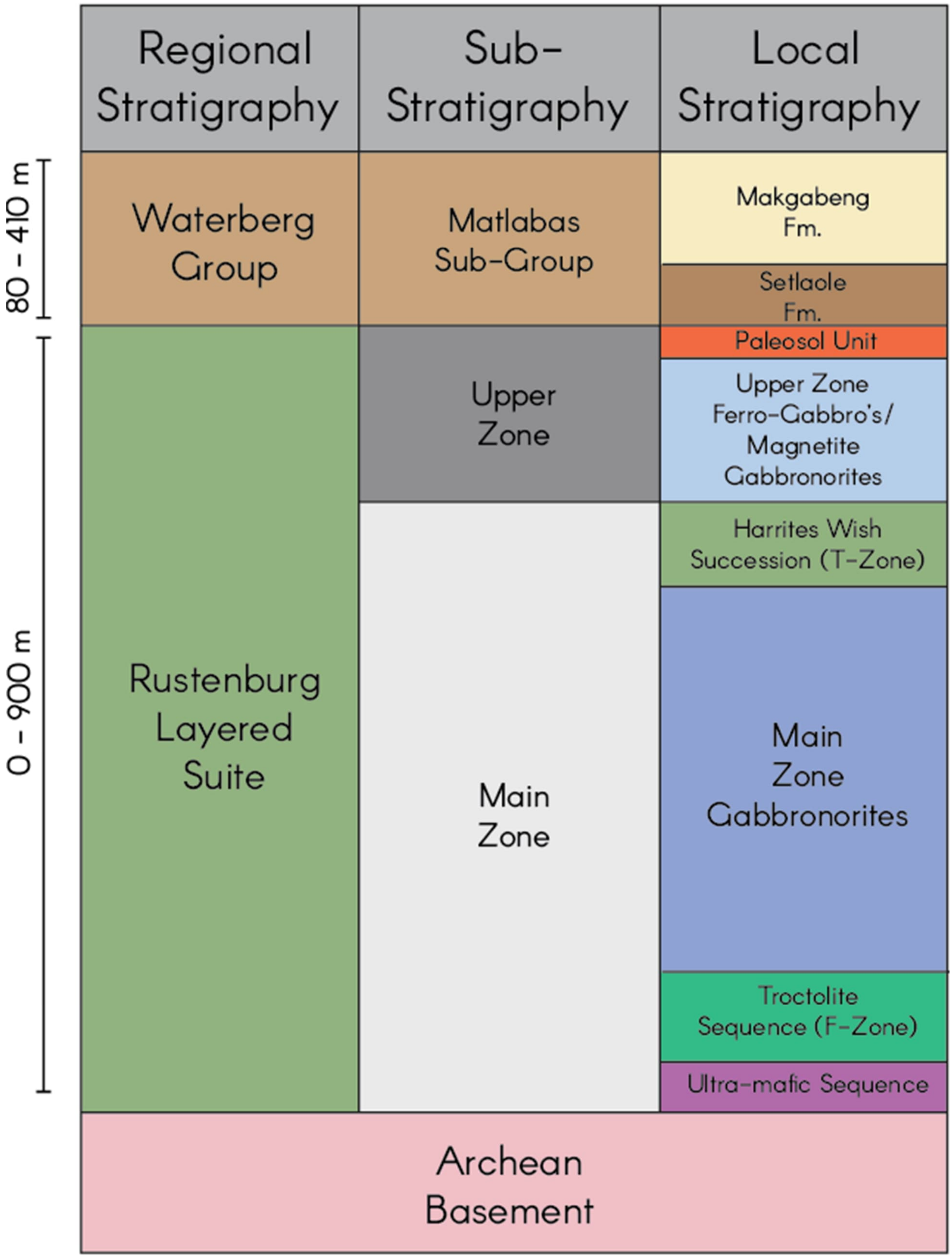


Figure 10. Generalised stratigraphic units of the Waterberg Project on Harriets Wish 393 LR.

5.2.1.1 Waterberg Group

The Waterberg Group within the project location overlies the Upper and Main Zones of the RLS The sedimentary sequence falls under the Matlabas Sub-Group which preserves two local stratigraphic units which include the Setlaole and Makgabeng Formations.

5.2.1.1.1 Makgabeng Formation

The Makgabeng Formation is dominated by a series of alternating and interbedded silt and sandstones, which grades downwards to coarser-grained clastics which are mainly arkosic. This formation contains multiple sequences which display cross-bedding, planar-bedding, and slumping structures (Figure 11). The formation is also cross-cut by several minor fine-grained dolerite sills and dykes (Figure 12). The depositional environment of these sediments has been attributed to be mainly aeolian, possibly of coastal origin (Callaghan, et al., 1991).

Figure 11. Interbedded sandstone and siltstone within the Makgabeng Formation of the Waterberg Group.

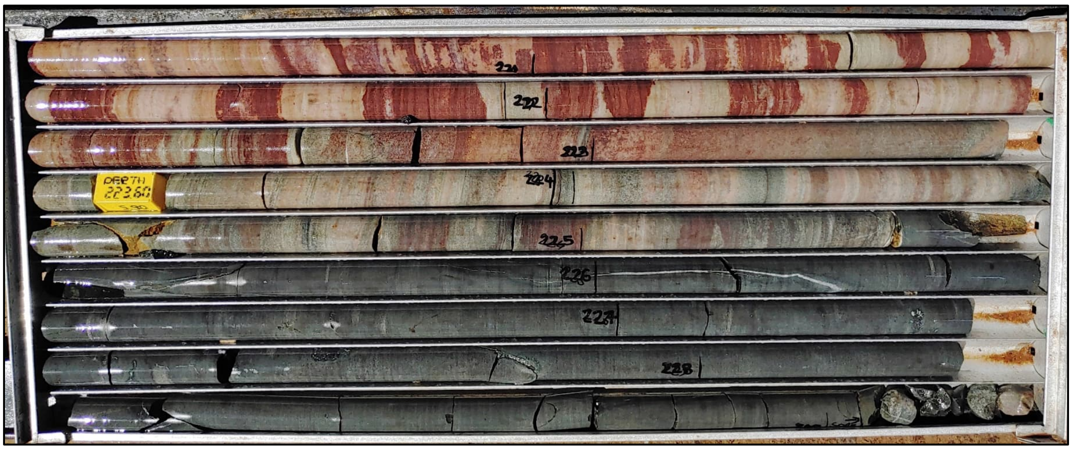


Figure 12. Fine-grained dolerite sills cross-cutting the Makgabeng Formation.

5.2.1.1.2 Setlaole Formation

The Setlaole Formation lies beneath the Makgabeng Formation and is best represented by agglomerate lithologies, which describe a thick package of coarse-grained sandstone and arkose with occasional large milky quartz clasts. The depositional environment of this formation is suggested to represent a series of narrow braidplains (Callaghan, et al., 1991). At the base of the formation lies a matrix-supported, poorly developed conglomerate horizon (Figure 13). This overlies unconformably against a paleosol unit just before the RLS magmas.

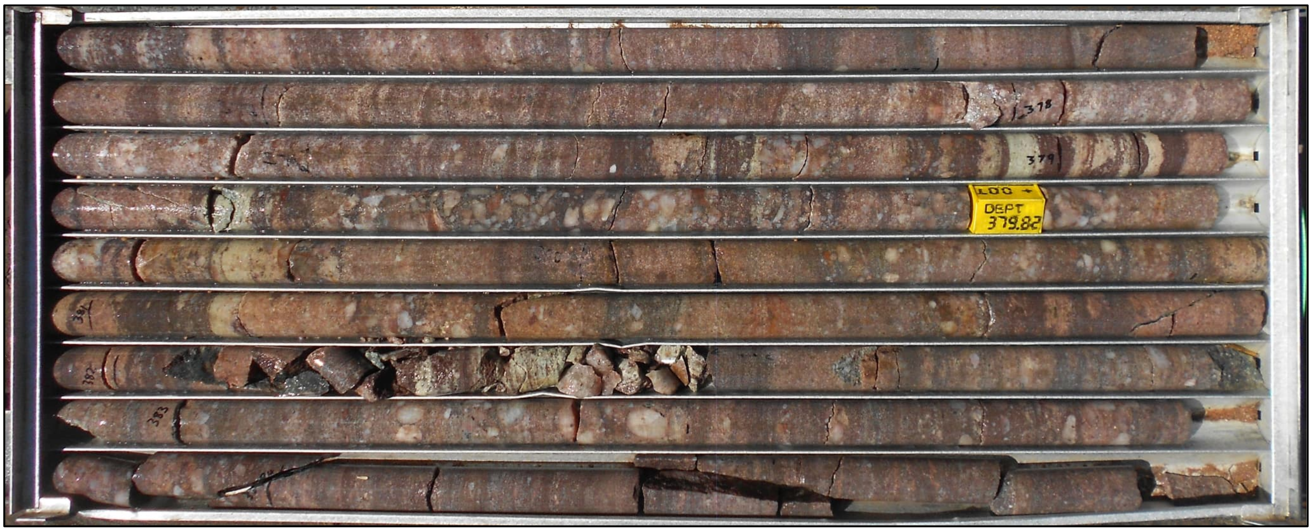


Figure 13. Poorly developed conglomerate and agglomerates of the Setlaole Formation near the base of the Waterberg Group at Harriets Wish 393 LR.

5.2.1.1.3 Paleosol Unit

The paleosol unit is found at the contact between the Waterberg Group and the RLS. This unit is characteristically brick red, fine-grained, iron-rich, and intensely laminated (Figure 14). The unit typically reaches approximately 3 – 4 m in thickness. The bottom contact is heavily fractured and obscured in many intersections. The unit is geotechnically weak and is extremely friable and susceptible to water destabilisation.

Figure 14 Highly fractured brick-red paleosol unit overlying the RLS. Setlaole Formation lies unconformably above.

5.2.1.2 Rustenburg Layered Suite

5.2.1.2.1 Upper Zone

Due to the RLS underlying the Waterberg Group at dips of approximately 30° - 45° towards the west, the Upper Zone intersections are confined to the western side of Harriets Wish 393 LR. The Upper Zone comprises predominantly ferro-gabbros, magnetite anorthosites, and magnetite gabbronorites. Leucocratic and mesocratic varieties of these lithologies are all present in varying proportions. Magnetite content within the Upper Zone decreases downward and grades from cumulus grains to irregular fine interstitial grains. Gabbro is generally confined to the upper portions of the zone and is often heavily banded (Figure 15). Orthopyroxene content increases in modal percentage towards the base of the Upper Zone, which ultimately forms a gradational transition from gabbro to gabbronorites. Hydrothermal assemblages and alteration are common within this unit, forming zones of intense chloritisation, serpentinisation and potassic replacements (Figure 16).

Figure 15. Banded ferro-gabbro situated within the Upper Zone on Harriets Wish 393 LR.

Figure 16. Hydrothermal alteration assemblages along cross-cutting structures. This forms a zone of chloritisation (light-dark greens) and potassic replacement (pink-brick reds).

5.2.1.2.2 Main Zone

The Main Zone is dominated by gabbronorite, which varies significantly in grain size, textures, as well as plagioclase content. Other lithologies observed within the Main Zone include anorthosite, harzburgite, olivine-gabbronorites, troctolite, as well as feldspathic pyroxenite. Poorly developed cyclic units are common throughout this zone, forming 'cryptic layering', where in general, the base of each unit contains a greater mafic content and grades into more leucocratic assemblages at the top. The entire Main Zone exhibits this same general behaviour, which forms the basis of the Main Zone sub-divisions in the local stratigraphy shown above in Figure 10. The T-Zone and Troctolite Sequence are both hosted within the Main Zone along the upper contact with the Upper Zone and near the basal contact respectively. Both of these will be described and discussed in the following sections.

The base of the Main Zone forms a sequence of ultramafic lithologies which include primarily medium- to coarse-grained pyroxenites, fine- to medium-grained mela-gabbronorites, harzburgite and rare peridotites. This succession rests on top of the irregularly shaped Archean Basement. The Main Zone gradually grades from these mafic lithologies into leucocratic and anorthositic lithologies. This characteristic is in unison with Bowen's Reaction Series, detailing the crystallisation sequence for common magmas (Bowen, 1928).

5.3 Deposit Type

5.3.1 T-Zone

The following paragraph is a brief synthesis derived from research conducted on both the Aurora and Waterberg Projects in the past i.e. (Kinnaird & McDonald, 2005; McDonald *et al.*, 2017; Kinnaird *et al.*, 2017; McCreesh *et al.*, 2018; McFall *et al.*, 2019).

The T-Zone is a magmatically derived ore body stratigraphically located in the upper Main Zone, which has formed as a result of fractional crystallization of the Main Zone along the Northern Limb. Sulphur saturation and enrichment in incompatible elements such as PGMs, Cu, Ni, and Au, are reached at the apical portions of the Main Zone as a result of residual magma generation. This forms an irregular-shaped mineralised deposit approximately tracing the boundary between the Main Zone and the overlying Upper Zone. This suggests that the Main Zone within the Northern Limb contains its own precious metal budget, which has not been scavenged by the underlying Critical Zone, which is the case for the Western and Eastern Limbs and the formation of the Merensky and UG2 Reefs.

As mentioned, the T-Zone is primarily located along the contact between the Upper and Main Zones containing significant mineralised intervals. Mineralisation is hosted within a variety of lithologies, however most commonly within leuco-gabbronorites to anorthosite. Some intersections show evidence of recrystallisation and hydrothermal alteration (Figure 17). Other host lithologies include gabbronorite, pegmatoidal feldspathic pyroxenite, harzburgite, troctolite, and rare occurrences of fine-grained mela-gabbronorite (Figure 18). Sulphide mineralisation occurs within a broad zone and across multiple lithological contacts, rather than concentrated along a single horizon. Xenoliths of calc-silicates and pyroxenite are present, however, they are sporadic and highly variable. The T-Zone is made up of different, fractionated lithologies that can be separated into layers.

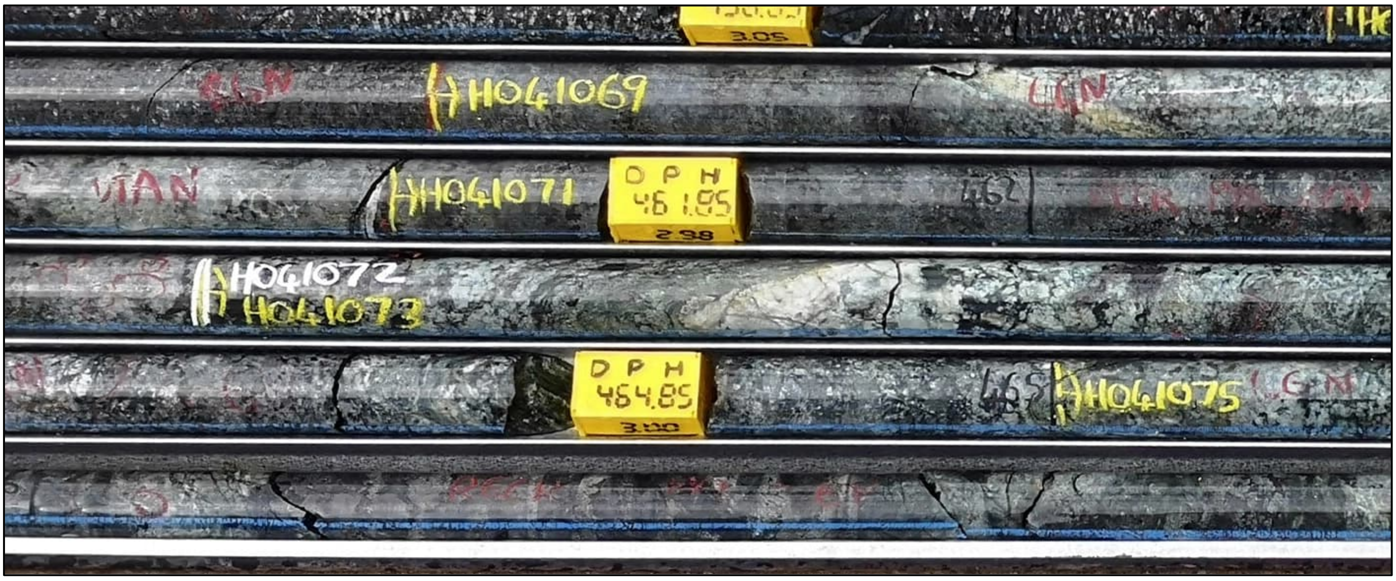


Figure 17. Re-crystallized and hydrothermally altered leuco-gabbronorites within the T-Zone.

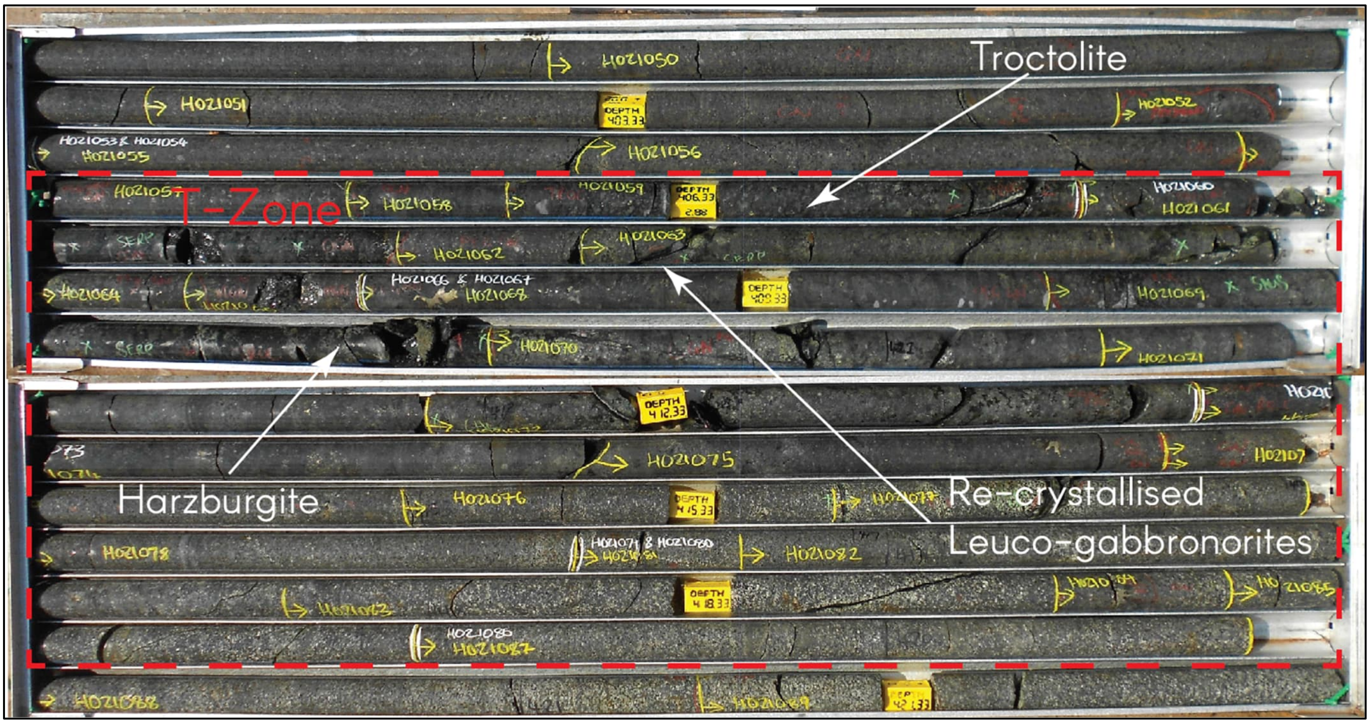


Figure 18. The intersection of the T-Zone containing olivine-rich lithologies surrounded by leucocratic host rocks.

5.3.2 Troctolite Sequence/F-Zone

Intersections and information from the current exploration programme on Harriets Wish are very limited. The following information has been synthesised using literature from (McCreesh, et al., 2018).

The Ultramafic Sequence comprises pyroxenite, feldspathic pyroxenite and olivine ultramafic lithologies (Figure 19). The Troctolite Sequence/F-Zone contains sparse to no visible sulphides. This zone is widely serpentinised containing large amounts of jointing, veining, and faulting, which has resulted in sulphide and chromite remobilisation. The succession is confined to the basal contact layers of the Main Zone and can be linked to the Platreef style of mineralisation. The morphology of the mineralised intervals is chonolithic in nature, meaning they form irregular bodies which are defined by an atypical basement topography.

Figure 19. Spotted troctolite intersection through the Troctolite Sequence

5.4 Style of Mineralisation

The style of mineralisation of the T-Zone is different from the known PGM deposits in the BIC since it is not associated with any chromite, which is considered an indicator mineral for PGM mineralisation in the Lower and Critical Zones (Lee, 1996).

The textures of the sulphide mineralisation observed in this area are also different from those observed in other known PGM deposits in the BIC. The sulphide assemblages within the T-Zone comprise chalcopyrite$_{30\text{-}50}$, pyrrhotite$_{30\text{-}50}$, pentlandite$_{<10}$, and minor pyrite$_{<2}$. The majority of sulphides mainly occur as disseminated interstitial grains hosted by lithologies such as troctolites, anorthosites and leuco-gabbronorites, with grain sizes varying from 1 mm to 3 cm (Figure 20). With depth, sulphide mineralisation occurs within lithologies such as gabbronorites and norites which sometimes grade into pyroxenite, pegmatoidal feldspathic pyroxenite and/or harzburgite. The sulphide textures observable in these lithologies vary from interstitial, net-textured to patchy assemblages reaching up to ~ 15 cm in diameter (Figure 21).

Sulphides within this zone are strongly associated with magnetite, which is found throughout the Upper Zone and continues through the T-Zone into the upper portion of the Main Zone.

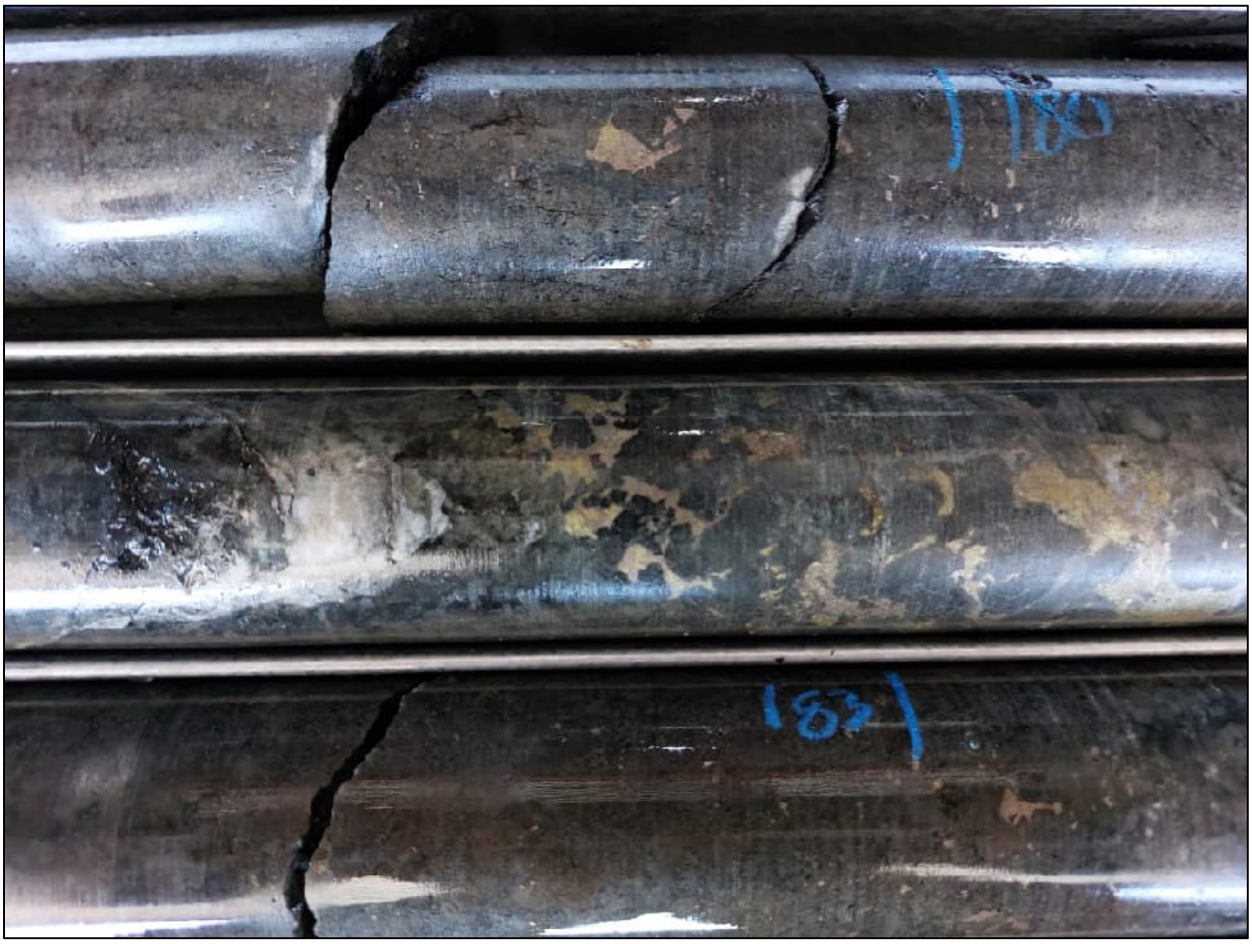


Figure 20. Irregular dissemination of BMS within the T-Zone

Figure 21. Net-textured BMS within the T-Zone

6 EXPLORATION

6.1 Drilling Technique

Surface diamond core drilling is an exploratory sampling process of extracting physical material from the sub-surface. Different drilling techniques and processes exist to recover sub-surface material from the earth. The two most common techniques applied in the mineral exploration industry include:

- Core drilling
- Reverse circulation drilling

Core drilling is also known as diamond drilling, and is a technique where a complete, intact, uninterrupted, whole rock core is recovered. The drilling itself is conducted with a diamond drill bit that rotates at high speed and is cooled down with water. The rotational drill bit cuts the drill medium and the inner portion that is being cut is collected into a core barrel. The core barrel is inserted at the point of drilling which then recovers the entire drilled core sample. Diamond drilling is considered the most accurate representation of rock conditions at depth and allows for the greatest amount of geological information to be collected. Examples of this information include rock mass conditions and the exact measurements of mineralised intervals.

For the 2020 – 2021 financial year exploration drilling of Sylvania, Earthlab opted for the diamond core drilling technique as a first preference. All the drill holes in this programme were drilled at -90° from the surface. The majority of the drill holes drilled were BQ core size, however, HW202, including its wedges, were drilled at NQ size. The core was retrieved with a wireline latching onto a standard inner tube core barrel which is pulled on a winch drum to the surface. No orientated core drilling was conducted during the exploration drilling programme.

6.2 Drilling Project Overview

6.2.1 Planning

Due to the limited amount of existing historical data that could be used for formal preliminary MRE, planning, and plotting of new holes based on simulation work with imitation holes could not be performed. The position and spacing of drill holes have accordingly been considered based on a combination of components:

- Spacing and continuity of adjacent PTM Waterberg Project,
- IGS spacing proposal,
- Estimated cost,
- Sensible geological interpretation.

The drilling of HW205_D1 and HW205_D2 at Harriets Wish was unsuccessful due to challenging geological conditions. The drilling was stopped as the hole became sterilized due to the failure of a wedge tool. Additionally, further cave-ins were encountered on HW201_D0, causing delays and damage to the drilling equipment. Despite efforts to fix the issue by re-drilling and cementing the hole, the cavities could not be closed, and the hole was ultimately abandoned within the Troctolite Sequence

An additional HW206 was added to the initial five holes, due to HW201 and HW205 being abandoned making a budget available for an additional hole. HW206 was planned to intersect Troctolite Sequence, unfortunately, the hole failed due to bad geological formation resulting in multiple rods stuck within the hole.

A total of six drill holes were drilled to intersect both Harriets Wish Succession and Troctolite Sequence. These stratigraphic units were re-defined and described by Earthlab's geologists utilising first principles, as well as ongoing and recent academic research of the area. Figure *22* below shows all the 2021 holes including historical holes.

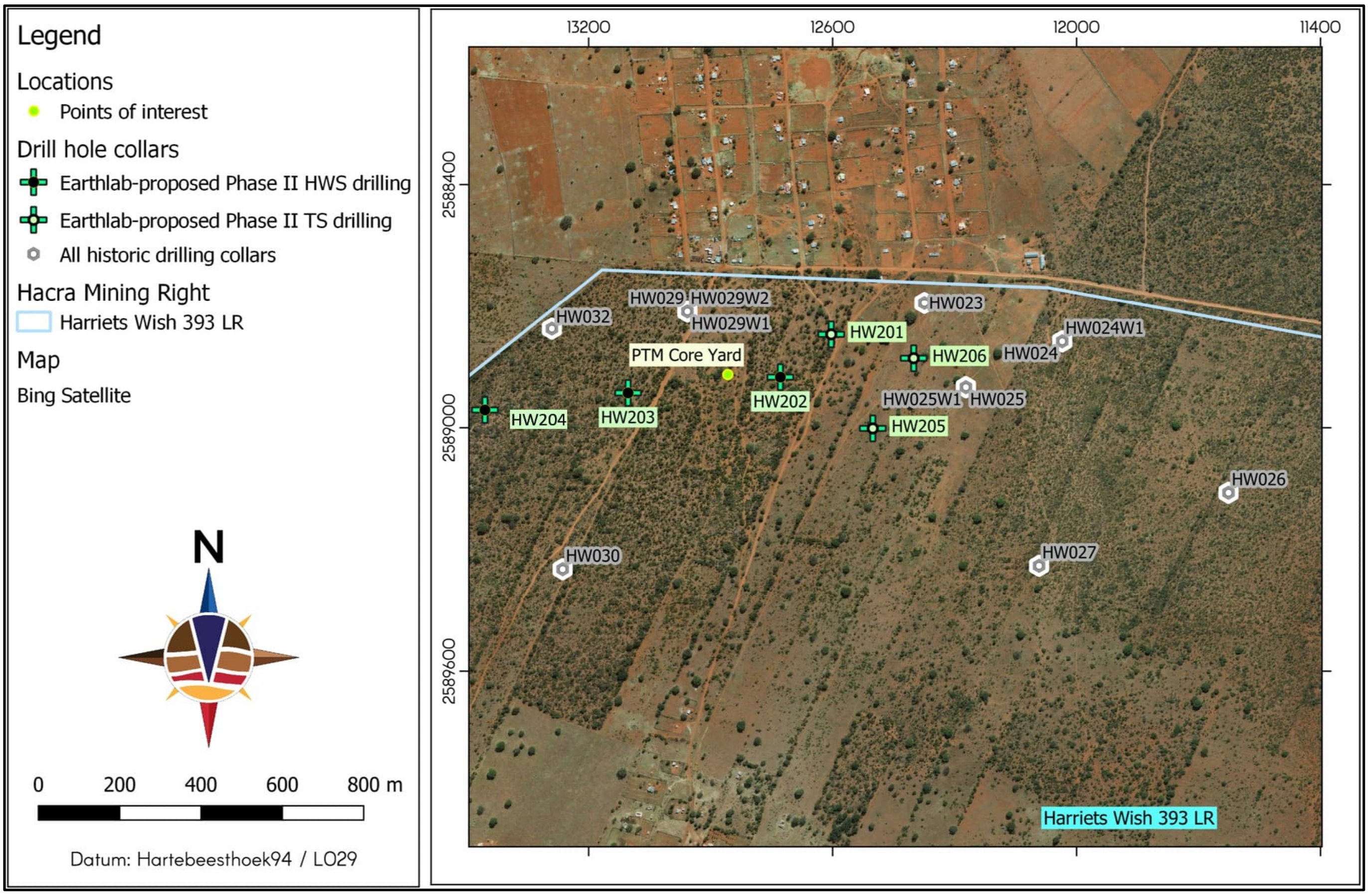


Figure 22. Harriets Wish list of holes with historical holes.

6.2.2 Drilling Time Frame

Site establishment commenced on 14 April 2021 at Harriets Wish, and drilling finished on 30 November 2021.

Drill site rehabilitation was conducted from 1 December 2021 to 9 December 2021. All drill sites were inspected by Earthlab and were signed off for compliance purposes.

6.3 Drill Hole Information

6.3.1 Drill Holes

Drill holes for the 2020 – 2021 exploration drilling programme on Harriets Wish 393 LR were drilled to increase the extent and delineate the occurrence of the T-Zone south of PTMs Mining Rights. The total metres drilled on Harriets Wish accumulated to 6,492.76 m. The deepest hole recorded a maximum of 784.22 m and the minimum hole length was 436.7m.

The drillers ensured that the correct stick measurements, core recoveries, and depth marks for each hole were correctly indicated on core blocks. These measurements were checked and validated by the geologists at the core yard upon the exchange of custody of the core.

All relevant drill hole information was recorded into a secure database and validated by the geological database manager to ensure good quality data has been used during the development of a resource for the area.

Table 3 below lists the drill rigs used for each drill hole. Table 4 summarises the drill hole information for the 2020-2021 infill drilling programme and indicates the depth of intersection for the targeted Troctolite Sequence and Harriets Wish Succession, the final depth of the hole, dip, and azimuth of the hole. Table 4 indicates that only HW202 (motherhole and deflections) was drilled with NQ-sized drill bits and rods, while the rest of the drill holes were all drilled to retrieve the BQ-sized core. While the original planning of the exploration programme entailed only BQ drilling, a drill rig that was assigned to a different project site became available due to a delay at the other site and was deployed to this project to save time. Due to a shortage of BQ rods, the third drill rig used NQ rods on HW202 which was the shallowest hole. A summary of the historical drilled holes is presented in Table 5.

Table 3. Drill holes and the rigs

Hole-ID	Rig no.
HW201	Power 6000
HW202	LY44 Trailer mounted rig
HW203	LY44 truck-mounted rig
HW204	XY 44 trailer-mounted yellow
HW205	Power 6000 rig
HW206	LY44 Trailer mounted rig

Table 4. 2021 exploration drill holes on Harriets Wish.

Drill Hole ID	Final depth (m)	Dip (°)	Azimuth (°)	Casing length (m)	Intercept Depth From (m)	Intercept Depth To (m)	Core size	Rehabilitation
HW201_D0	784.22	-90	0	30	751.61	784.22	BQ	YES
HW202_D0	499.70	-90	0	21	403.71	415.27	NQ	YES
HW202_D1	430.03	-90	0	21	403.88	418.83	NQ	YES
HW202_D2	436.70	-90	0	21	403.71	415.27	NQ	YES
HW203_D0	770.67	-90	0	60	620.71	672.94	BQ	YES
HW203_D1	688.67	-90	0	60	608.23	687.00	BQ	YES
HW204_D0	553.48	-90	0	60	444.64	484.70	BQ	YES
HW204_D1	503.93	-90	0	60	444.70	468.22	BQ	YES
HW204_D2	491.85	-90	0	60	442.46	480.90	BQ	YES
HW205_D0	696.14	-90	0	24	581.17	669.80	BQ	YES
HW206_D0	637.37	-90	0	54	614.68	637.37	BQ	YES

Table 5. Historical Harriets Wish diamond drill holes.

Drill Hole ID	Final depth (m)	Dip (°)	Azimuth (°)	Ore-body	Interception Depth From (m)	Intercept Depth To (m)	Core size	Rehabilitation
HW023	582.50	-90	0	-	-	-	BQ	YES
HW024	450.12	-90	0	TS	346.25	367.63	BQ	YES
HW024W1	390.00	-90	0	TS	337.80	368.40	BQ	YES
HW025	607.53	-90	0	TS	538.03	573.00	BQ	YES
HW025W1	552.80	-90	0	TS	536.60	539.52	BQ	YES
HW026	367.20	-90	0	-	-	-	BQ	YES
HW027	430.16	-90	0	-	-	-	BQ	YES
HW028	6.00	-90	0	-	-	-	BQ	YES
HW029	724.6	-90	0	HWS	591.96	639.71	BQ	YES
HW029W1	655.20	-90	0	HWS	591.25	638.34	BQ	YES
HW029W2	655.20	-90	0	HWS	591.85	638.55	BQ	YES
HW030	907.13	-90	0	-	-	-	BQ	YES
HW031	654.80	-90	0	-	-	-	BQ	YES
HW032	802.38	-90	0	HWS	701.00	729.25	BQ	YES

6.3.2 Challenges

It is almost certain that problems will occur during the drilling phase of a programme, even in very carefully planned holes. For example, in areas in which similar drilling practices are used, hole problems may have been reported where no such problems existed previously because formations are non-homogeneous. Challenges that arose during the drilling program are tabulated in Table 6.

Table 6. Challenges at each rig

Drill-site	Challenges
HW201	Water loss and rods getting stuck down the holes was a common occurrence after 500 m. Rod fishing delays were experienced during the drilling. The loss of the survey tool almost occurred due to rods that were stuck at depth because of mud accumulation.
HW202	No major drilling challenges were experienced during the drilling of the mother hole and all the wedges. No major drilling challenges were experienced during the drilling of the mother hole and all the wedges.
HW203	Broken and friable zones were the major challenges experienced during drilling. Other challenges include multiple breakdowns on the rig. The challenges on this rig were mostly related to gearbox failure.
HW204	Broken and friable zones were the major challenges experienced during drilling. All the wedges and the mother hole were successfully drilled.

Drill-site	Challenges
HW205	The drill hole had to be abandoned due to the unstable clay-filled paleosol layer, which absorbed excess water during drilling. The hole was eventually abandoned within the Troctolite Sequence.
HW206	The hole was abandoned due to another collapse of the paleosol layer. It was abandoned at 637.37m within the Troctolite sequence.

Figure 23. Rig 5 during gearbox repairs.

6.3.3 Collar Surveys

All boreholes drilled, in the area, have been collar surveyed by a competent surveyor. Collar surveys were conducted by Rasema Geomatics contracting team.

Each drill hole's exact collar position was measured, and local survey beacons were used to find the exact positioning of each drill hole. Directional surveys were not conducted as all the drill holes have been drilled vertically, meaning there would be minimal deflection during the drilling of a vertical hole.

6.3.3.1 Methods and equipment

A Trimble R-4 GPS was used for collar surveying. The placement of a 12 mm round iron peg on site was established and used as a benchmark control point.

The borehole positions were surveyed using a static method, and the centre of each end cap was used as the centre of survey observation. A cross was marked on the end cap using a permanent marker. An RTK method was used to survey boreholes from each GPS base station. The base swap was done every time and each benchmark was resurveyed as a check. All collar positions can be seen in Table 7.

The projected coordinate system used to display these collar positions on maps is in Hartebeesthoek94_Lo29.

Table 7. 2021 drill holes collar surveys.

Name	X-coordinate	Y-coordinate	Elevation
HW201	-12616.381	-2588773.452	988.351
HW202	-12729.780	-2588871.334	988.113
HW203	-13098.572	-2588919.219	984.682
HW204	-13454.158	-2588954.546	981.439
HW205	-12502.648	-2588999.582	986.807
HW206	-12402.586	-2588830.280	988.732

6.3.4 Downhole Surveys

It is important to know both the thickness and the volume of the resource. To achieve this the true thickness and volume of the orebody must be known. This is one of the reasons why a downhole survey is conducted, to allow for an accurate borehole path to be known. From the borehole path, the true thickness and volume of the Exploration Target can be determined.

6.3.4.1 Methods and equipment

A Reflex EZ-TRAC survey tool was used for downhole surveys during the drilling program. The Reflex survey tool is a downhole surveying device that utilizes magnetometer and accelerometer technology to track the path of a targeted drill hole below the surface. The device initially measures the direction and strength of the Earth's magnetic field (Magnetic North) at the project location and then records the subtle deviations in strength and direction as it moves down the drill hole. The tool will only be able to make recordings from 98° to 70° dip angle. The device then records the dip and azimuth readings for a specified depth interval every seven seconds and must be manually controlled to take a reading. The tool is inherently susceptible to magnetic interference, which may include the rock types along the sidewalls. The tool comprises several components, starting from top to bottom: the landing collar, three 1.5 m aluminium rods (non-magnetic) survey tool containing the accelerometer and a magnetometer.

6.3.4.2 Quality control

The mother-holes of this project were surveyed once completed, and during the surveying of the deflections, the mother-hole portion above the respective wedge was effectively surveyed again as the tool was brought to the surface. The discrepancies between the original mother-hole survey and the repeats from the deflection surveys ranged between approximately 0 and 1 m with a maximum of ~2 m.

The 2012 campaign's drilling only captured a first orientation reading of the wedges where present. The database did not contain full-length downhole survey data for the deflections – only for the mother-holes and one reading at the wedge. The deflections of the 2012 drilling were therefore desurveyed with that single reading applied throughout the deflection.

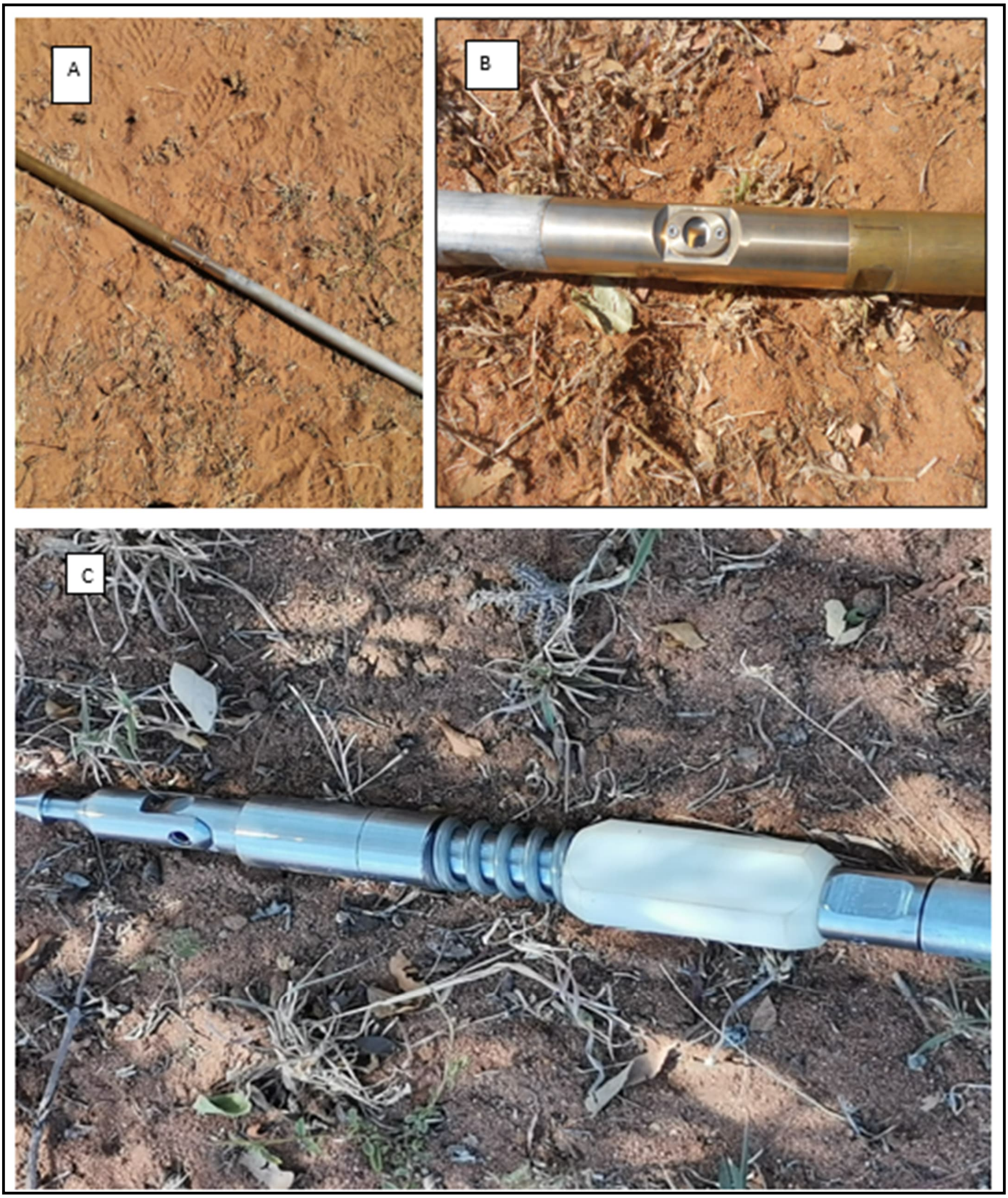


Figure 24. Photographs of the Reflex Multi/Single shot survey tool. (a) 6m long tool with 4.5m aluminium rods in between. (b) The initializer is used for the survey tool. (c) Landing collar. mounted inside the core barrel at the top.

6.4 Geological Logging

For this project, all holes were logged from beginning depth to end depth. Given the high complexity of the mineralised body, the core was logged at a centimetre scale as some lithological and alteration features occur on such scales and may play an important role in the controls on grade concentrations. Lithology, alteration, structures, and mineralisation were all included in the logging of the core and are captured into their relevant books by the responsible geologists. No detailed geotechnical logging was completed on the recent drill holes however basic core recovery and RQD measurements were taken on a core block-to-core block interval and captured for permanent record.

6.4.1 Core Recovery and RQD

6.4.1.1 Core Recovery

Core recovery was the first step to be taken when handling the diamond drill core. It was essential to ascertain that the core received from the drillers correlated to the metres drilled and that the core was correctly assembled in the core box. The first step was to take the last piece of core from the previous run and fit it with the first piece of the next run. This ensured that the core run was the correct way up. All the core in the core tray was fully assembled and fractures fitted together. If there were sections out of place, the drillers were informed and their procedures for core handling were checked. The geologist or geological technician fixed any problems that may be apparent, i.e., a piece of core in the box the wrong way around. Each run of core between the stickup core blocks was measured and filled into the core recovery register.

6.4.1.2 RQD

RQD is a measure of the overall competence the rock possesses. It is a function of the sum of the core longer than 100mm divided by the total length of the core run and represented as a percentage.

RQD = (SUM (length of core >10cm)/Total core run length) x100

RQD was used in the evaluation of rock quality which allows for delineating zones of weakness and fracturing which could adversely affect any engineering structures or mining operation.

6.4.2 Logging Data

During the logging process, both a qualitative and quantitative approach was adopted. The logging included visual (qualitative) descriptions of the core, noting lithological changes, grain size changes, textural changes and degree/intensity, and types of alteration and mineralisation. This information was coupled with a quantitative approach where features relating to structures (joints/shears/faults) were measured such as angles of structure and their infill thicknesses. Additionally, mineralisation was estimated for modal abundance where a percentage value was given for the mineralisation between the from and to depth specified for each logged entry.

6.4.3 Logging Procedure

The geologist logging the core marked out lithological contacts with a red china marker and wrote the lithology down on the core for reference when capturing the entries into the logging books. The lithological names assigned to the rocks were derived from the geological standard provided by the database manager. Dip angles of contacts and structures as well as infill thicknesses were measured with clino-rulers.

6.4.4 Core Photography

Core photography occurred just before cutting the core samples and a photograph was taken of each individual core tray that has been placed on a stand that holds both the tray and the tray's details on an ID board. This ID board showed the drill hole to which the tray belongs, the tray's from and to depth, and the core tray's unique ID code (Figure 25). The core trays were photographed with a phone camera with a high-resolution output. Each core try has a photo taken in a dry and wet condition so that these images can be referred to, should there be a need. A wet core photo was taken as it helps with the identification of various features within the rock.

Figure 25. Core photography for the Hacra Project.

6.5 Exploration Sampling

Once geological logging was completed; primary sample lengths were measured out on the BQ or NQ-sized (HW202) diamond drill core, and their sample IDs were written on the core surface. The sampling process accounts for several steps (discussed further in section 7.5.1) after which they were sent to a lab where they were pulverised to produce a powdered sample for fire assay. During the sampling process, the only measuring instrument used was a scale to measure the weight of each sample in air and when submerged in water to calculate a specific gravity value for each sample. No other handheld instruments such as XRF were performed during the core sampling process. As the project has been developed at a concept level, all drill core was sampled to the end of the hole. This provided means of building a better understanding of the mineral deposits and host rocks on a geochemical level.

6.5.1 Sub-sampling Techniques and Sample Preparation

6.5.1.1 Sample Marking

Sample marking was performed using china markers as a temporary method until after the cutting of the samples has occurred. Different colour markers were used to differentiate between the various markings on the core (Table 8).

Table 8. Core marking colour chart

Colour	Meaning
Red	Lithological contacts
Yellow	Primary samples
Blue	Centre Line
White	QAQC samples
Black	Depth marks

The core was sampled to lithological boundaries where possible, with a minimum length of 25 cm and a maximum length of 1.5 m to remain within the minimum and maximum sample weight limits outlined by SGS labs which are 300 g and 4000 g, respectively (the maximum weight was later increased from 3000 g to 4000 g due to budget considerations). Sampling with respect to lithological contacts was conducted to obtain samples that provide assay results representative of the lithologies to better understand where mineralisation and elevated grades are concentrated. For every 10 primary samples marked out, a field blank, field standard and pulp duplicate were added. The field blanks and field standards comprise certified reference materials and were included for quality control purposes. Field standards contain certified PGM content and were inserted randomly into a consignment to test the accuracy of assay results received from the primary laboratory. Blanks contain negligible PGM content and were used to detect contamination of samples during laboratory preparation and analysis. Once the core sample IDs have been written on the core and checked for numbering mistakes, the samples' from and to depths were captured into an assay sample register along with the type of sample (primary/blank/standard/pulp duplicate) and their respective IDs. Following the sample capturing, the core trays were taken for photography.

6.5.1.2 Cutting and Specific Gravity (SG) measurements

The samples were cut longitudinally in half by the core cutters using an electric saw with diamond-tipped blades. These blades were replaced when the blade become too worn to cut all the way through the core. Samples containing extremely broken and fractured material were taped together with masking tape to aid the cutting of these sections. Once the samples in each core tray have been cut, the sampler would transfer the metre marks and sample ID onto the freshly cut surface of the half core which remained behind to be stored in the core shed facility. The other half of the core was prepared for SG measurements.

The SG measurements were measured in air and then submerged in water, adopting the use of the Archimedes Principle. The weight values were captured in the relevant logbook by the person performing the measurements. For quality control purposes, three primary samples from each sub-batch were chosen at random and re-weighed by the geologist on-site. Each sample was then dried and placed into separate bags, each of which was given two tags with the sample ID. The samples were then grouped into sub-batches and placed into larger bags each containing 30 samples. Each sub-batch bag included a list of all the samples inside and was sealed with a tag which has the sub-batch ID. These sub-batch IDs were captured into the assay sample and sample security registers for QC and chain of custody reasons.

6.5.1.3 Laboratory Sample Preparation Procedure

This comprises steps followed by SGS in their laboratory to ensure that samples were in a format that would allow for reliable data analysis (Figure 26). Sample splitting was performed to reduce the sample size to form a homogeneous sub-sample, representative of the material submitted to the laboratory. Quality control procedures were followed in this regard. Furthermore, SGS used industry standard procedures along with their technical expertise in the preparation of all the samples.

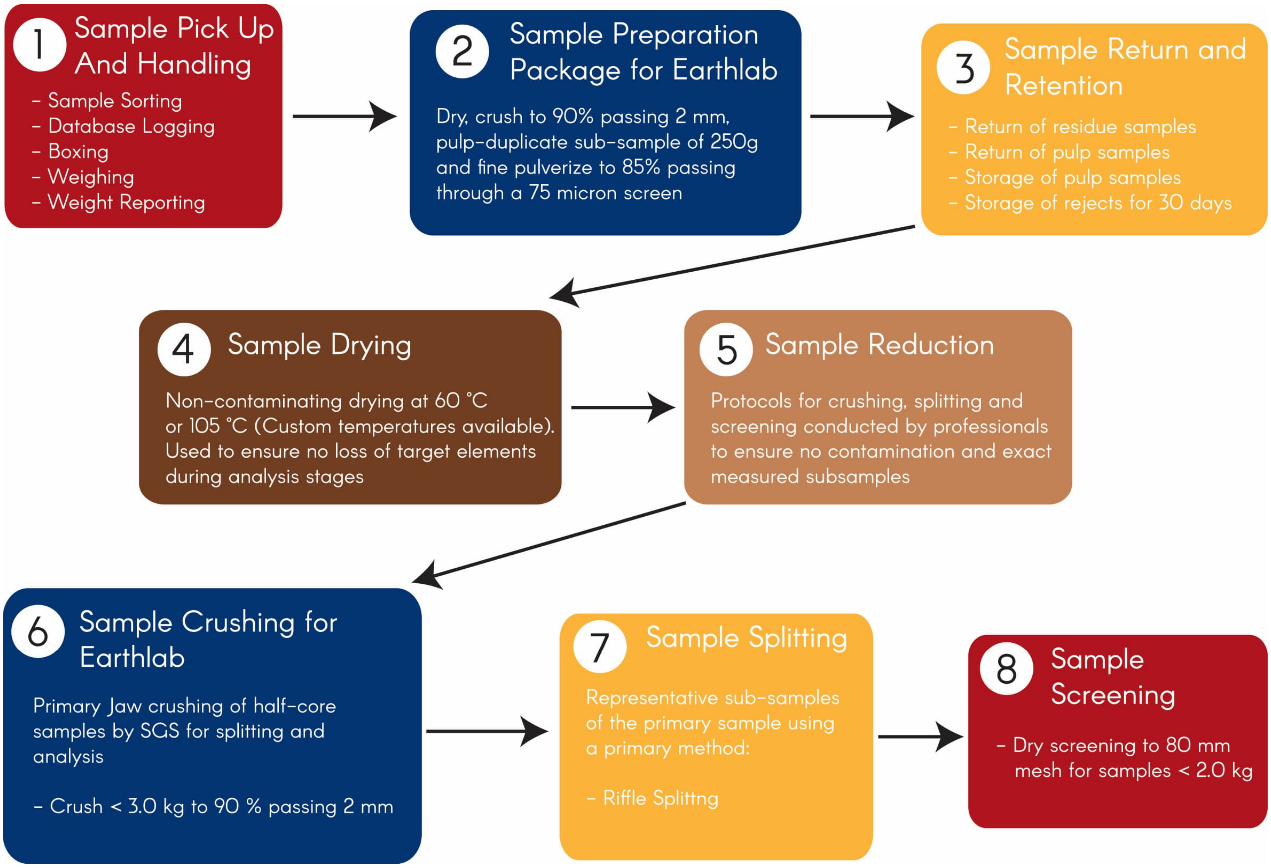


Figure 26. Flow chart for SGS sample preparation before conducting elemental determination methods.

6.5.1.4 Determination of Gold, Platinum, Palladium and Rhodium by lead fusion:

The Lead Fusion Method was used to determine the contents of Au, Pt, Pd, and Rh. The sample size required to determine the content is typically 30 g per sample (SGS may use lower quantities for material that has higher chromite/sulphur contents). The method for the analysis of samples was the ICP-OES method, which can be applied to different sample types such as tailings, soils and hard rock samples. The data reduction procedure followed by SGS involves using a desktop computer connected to cloud storage and an external server. The data was then fed into their laboratory information management system with a secure audit trail.

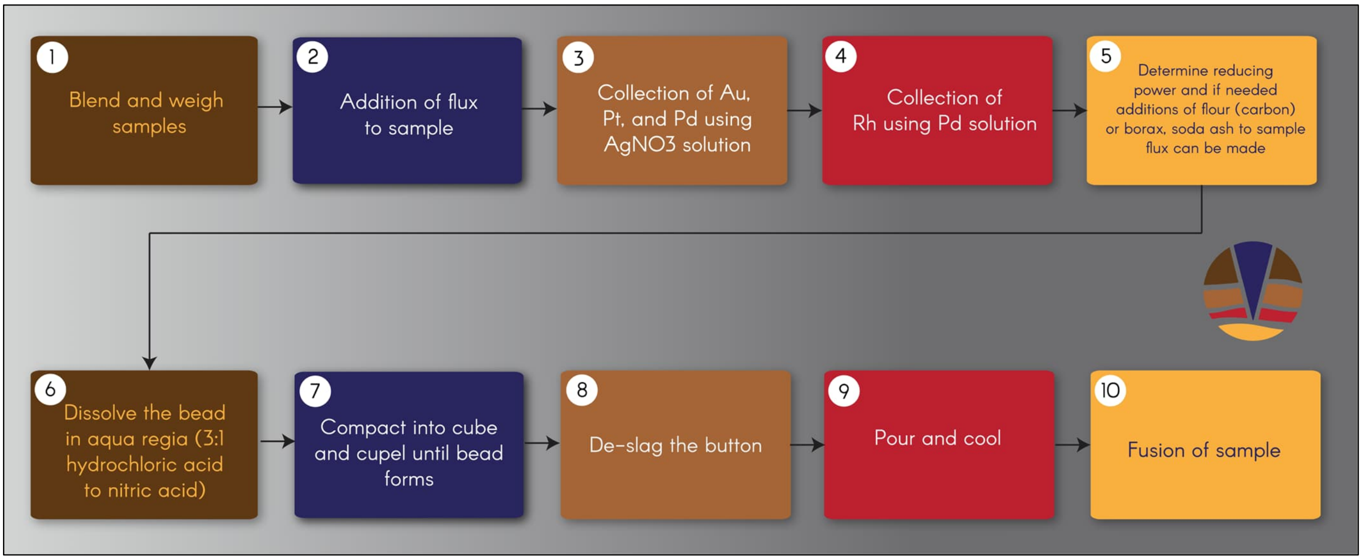


Figure 27. Flow chart for SGS sample preparations before conducting elemental determination methods.

The quality control of Au, Pt, and Pd was conducted using a duplicate, standard reference material (CRM) and a blank for every batch of 25 samples that were used.

The quality control of Rh: the reef type determines the type of CRM to be used, 25% replicates on samples selected for Rh, and the number of blanks and CRMs were dependent on the number of samples that were profiled for Rh analyses to keep up with SGS Global QA/QC protocol of 2 blanks and 4 CRMs per sample.

Precision:
As per the following formula based on the method capability in the laboratory:

$$\text{Tolerance } (\%) = \frac{(100 * \mathrm{SDL})}{\mathrm{LR}} + \mathrm{EV}$$

Where:
SDL = Statistical Detection Limit (by default = 2.5 x Detection Limit)
LR = Limit of Repeatability of the Method
EV = Expected Value Concentration/average of data pair

6.5.1.5 Sample Security

Samples that were being sent for lab analysis, were transported from the core yard near Mokopane to the SGS laboratory in Rustenburg by a senior geologist. The samples were checked into the facility and signed for in the sample security register by a facility representative. It was the responsibility of the person delivering the samples, to ensure that the facility representative or their assistants sign on the receipt of the samples and check to see all sub-batch bags were present and accounted for. The remaining half core was stored in a locked core shed for any future re-logging, or sampling requirements should they arise.

6.5.1.6 Sample Preparation

Table 9. SGS Laboratory sample preparation

SGS Scheme Code	Method Description	Elements and Detection Limits
WGH79	Sample weight on receipt	-
DRY10	Sample Drying at 105°C, (<3kg)	-
CRU21	Sample Crushing (75% passing 2mm), <3kg	-
SPL26	Riffle Splitting, <3kg	-

SGS Scheme Code	Method Description	Elements and Detection Limits			
PUL52	Sample milling (90% passing 75µm), <1.5kg	-			
SCR32	Dry Screening, 85% passing 75µm on pulps (1 in 20 samples)	-			
FAI313	Fire Assay, ICP-OES finish (reporting limit 0.02g/t)	Au	0.02 g/t	Pt	0.02 g/t
		Pd	0.02 g/t		
FAI353	Fire Assay, ICP-OES finish (reporting limit 0.02g/t)	Rh	0.02 g/t		
ICP90A	Multi-element analysis by ICP-OES after using a sodium peroxide fusion	Al	0.01 – 25 %	Ba	10 - 10,000 ppm
		Cr	10 - 10 000 ppm	Cu	10 – 10,000 ppm
		Mg	0.01 – 30 %	Mn	10 – 10,000 ppm
		Si	0.1 - 0.25 %	Ti	0.01 – 25 %
		Ca	0.1 – 35 %	Co	10 – 10,000 ppm
		Fe	0.01 – 30 %	K	0.01 – 25 %
		Ni	10 - 10,000 ppm	S	0.01 – 25 %
		V	10 – 50,000 ppm		

6.5.2 Quality Assurance

6.5.2.1 Sampling

Earthlab conducted an extensive quality assurance programme on all samples that were submitted during the 2021 exploration infill drilling campaign. This involved producing and inserting 10% CRMs, 10% blank samples, as well as 10% pulp duplicate samples as part of the sampling campaign. In total seven different CRMs were used, and one blank sample was used for the accuracy analysis of the assay data.

Table 10. Summary of CRMs used for quality assurance during sampling

Certified Reference Material	Description
AMIS0442	Platinum (PGM) Platreef Ore Bushveld Complex, South Africa
AMIS0448	Platinum (PGM) Platreef Ore Bushveld Complex, South Africa
AMIS0450	Platinum (PGM) Merensky Ore Bushveld Complex, South Africa
AMIS0459	Platinum (PGM) Pulps Bushveld Complex, South Africa
AMIS0486	Platinum (PGM), Merensky Bushveld Complex, South Africa
AMIS0498	Platinum (PGM) Platreef Ore Bushveld Complex, South Africa
AMIS0499	Platinum (PGM) Platreef Ore Bushveld Complex, South Africa
AMIS0577	Blank silica powder

6.5.3 Database Storage and Database Management

The physical hardcopy logs and sampling books are stored at the Volspruit core yard facility. These were used as a reference for any data quality queries. Additionally, it provides a physical backup of the data.

All data was captured onto a dedicated electronic SABLE®7.0 database which runs on an SQLite server where security and access to the database were managed.

The databases were managed by a dedicated geologist (geological database manager) to ensure data quality, integrity, and security. Various data logs exist on the database. The drill hole databases include the stratigraphy, lithology, alteration, mineralisation, structural, sampling, assay results, collar, downhole survey, and material recovery logs. Each drill hole has a collar, lithology, stratigraphy, sampling, and downhole survey log as a minimum requirement. The remaining logs were populated where required. The dataset includes 'From' and 'To' metre fields, rock types, stratigraphic nomenclature used on the project area, mineralisation, alteration, and additional comments where applicable. Quality control data, such as inserted CRMs and twin stream data was housed in the database in the sampling log and assay results tables. The sampling dataset includes the methods used for sampling, the laboratory used for the analysis and units of measure. The assay result datasets include all the grade values available for each sample. All additional information was populated in the 'Comments' field of the associated data log. The deflection was signed-off the by the responsible geologist indicating that the deflection was ready for validation by the database manager.

6.5.4 Database Integrity

The SABLE®7.0 database contains a series of built-in customised as well as default active validations which were run concurrent to the time of data capture. This ensured the quality of the data being captured by preventing faulty data entries from being captured through security and appending rules specified by the database manager. The database manager produced a final system validation print out which flags any erroneous or suspect data entries, which were then subsequently queried and resolved accordingly.

Manual validations undertaken by the database manager include the following checks:

- All required logs and fields within the logs have been populated
- The appropriate lithological and stratigraphic coding has been used and was in sequence
- There were no overlaps, gaps or zero lengths in the lithological and sampling logs
- All the relevant fields within the sampling log have been populated correctly
- Quality assurance of the inserted certified reference materials has been correctly populated
- Check that the grade content was aligned with the stratigraphy
- Once validations were completed and issues had been attended to by the geological database manager, the data was signed off to be analysed for assay quality control and extracted for geological modelling and MRE.

7 ASSAY QUALITY CONTROL

The following sections briefly outline the assay quality control analyses that were conducted for the current project. A detailed report (PO-766-43_QAQC_Report_v1) encompassing the entire quality control process has been issued alongside this report. The reader is encouraged to consult the detailed report for further information on how the results tabulated below were generated and analysed.

7.1 Sample Submission Acceptance

When laboratory submissions have been imported into the database, the initial quality control procedures were embarked upon using the built-in SAT/QC (Statistical Analytics Tool for Quality Control) within the

SABLE®7.0 database. This initial process suffices to assess the general quality of each laboratory batch reported by the laboratory. The following flow chart outlines the process for laboratory submission acceptance when the SAT/QC run has been conducted (Figure 28).

Results from the SAT/QC reports are summarised and tabulated using Microsoft Excel to provide an electronic record for verification purposes. These will be made available on request with a demonstration if required.

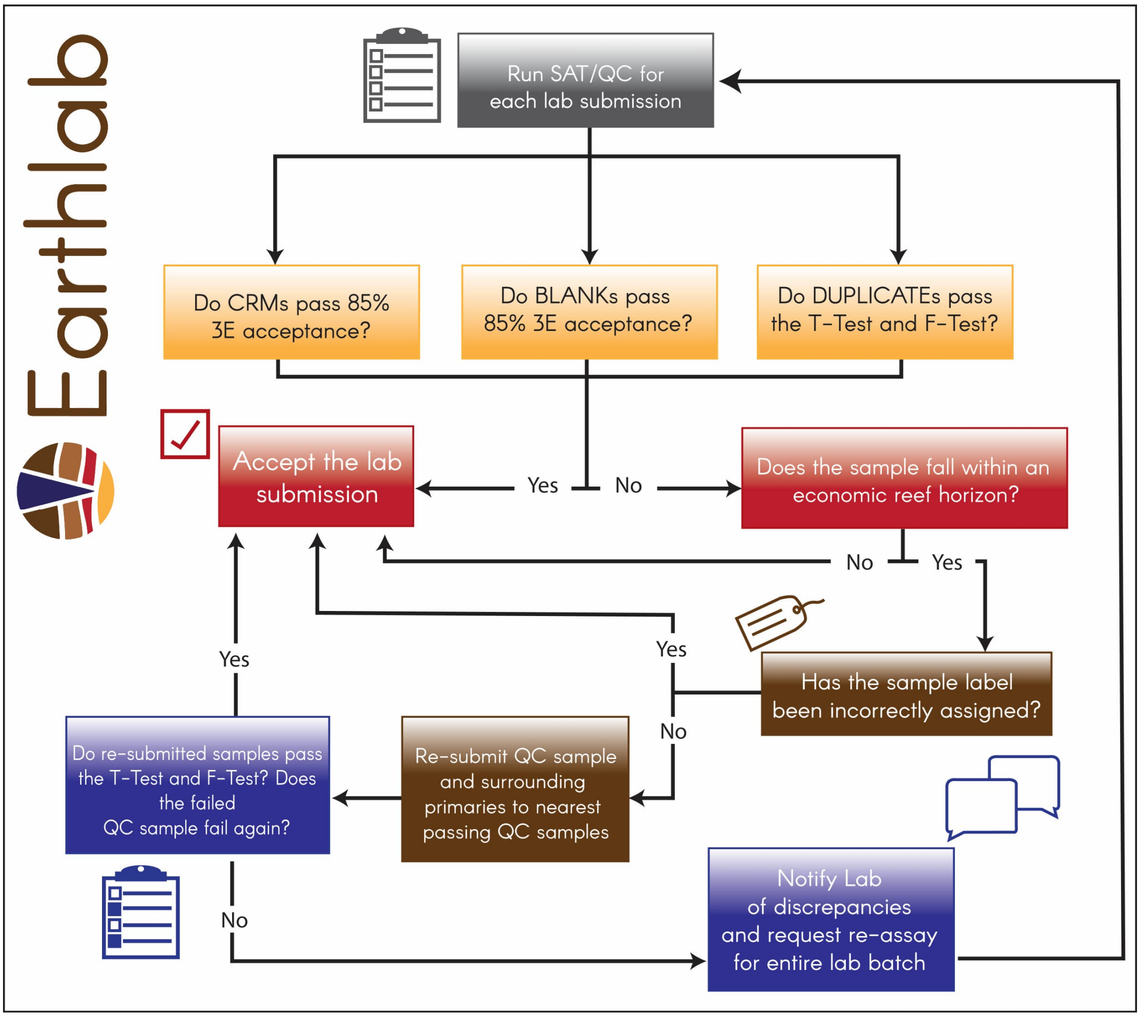


Figure 28. Sample submission acceptance flow chart using SAT/QC.

7.2 Accuracy Analysis

Both the 2021 Exploration Drilling and the Historic Harriets Wish Drilling projects have been subjected to quality control standards by assessing the accuracy of the control samples submitted to the laboratories. This includes blanks and certified reference materials. The assessments have been broken down into their respective elements, comprising Platinum (Pt), Palladium (Pd), Gold (Au), Copper (Cu), and Nickel (Ni). Copper and Nickel were not quality control assessed for resource estimation during the 2021 Exploration Drilling programme as the method used for their evaluation is not accredited. This method comprises a suite of multi-element concentrations and was used to aid the definition of geochemical signatures in respect of correlating mineralisation between drill holes and concurrently enhance the understanding of the geology and stratigraphy of the project area. Details of the geochemical assessment are contained in the main technical report. The following sections tabulate the performance of the laboratory's accuracy concerning the certified values provided by the CRM manufacturers. Each phase of the project has been evaluated separately.

7.2.1 2021 Exploration Infill Drilling

The 2021 Exploration Drilling quality control programme contained seven CRMs and one Blank to assess the accuracy of the assay results reported by the laboratory. Table 11 summarises the accuracy results reported by SGS during this sampling campaign. Overall, the laboratory's accuracy for the PGEs can be considered good, falling within the desired 90% accuracy. The performance of each CRM individually was somewhat variable, with Platreef and Waterberg platinum ores providing the best performance overall, whereas the Merensky and UG2 Reef ores provided undesirable results i.e. AMIS0450 and AMIS0459. This can be considered a function of the matrices of the CRMs being vastly different to the current ore body, where they contain a significantly large concentration of chrome and mafic minerals. Further quality control campaigns will strive to reduce the number of CRMs used as well as remove any CRMs that are not Platreef or Waterberg derived.

Table 11. Summary of the accuracy results for the 2021 Exploration Drilling on Harriets Wish.

CRM		Pt			Pd			Au		
		n	Outliers		n	Outliers		n	Outliers	
			n	%		n	%		n	%
Standards	AMIS0442	30	0	0.00	30	1	3.33	30	3	10.00
	AMIS0448	26	0	0.00	26	3	11.54	26	0	0.00
	AMIS0450	30	2	6.67	30	8	26.67	30	8	26.67
	AMIS0459	29	3	10.34	29	11	37.93	29	9	31.03
	AMIS0486	30	4	13.33	30	1	3.33	30	1	3.33
	AMIS0498	34	1	2.94	34	2	5.88	34	2	5.88
	AMIS0499	31	2	6.45	31	3	9.68	31	3	9.68
Blanks	AMIS0577	222	2	0.90	222	2.0	0.90	222	2	0.90
Total		432	14	3.24	432	31	7.18	432	28	6.48

7.2.2 2012 Historic Hacra Drilling

The Historic drilling north of the Hout River Shear Zone contained three inserted reference materials, two of which were CRMs and one Blank. The accuracy of the assay data reported by the laboratory at the time can be considered excellent, with all analytes falling within the 90% accurate range (Table 12).

Table 12. Summary of the accuracy results for the Historic Harriets Wish Drilling programmes.

CRM		Pt			Pd			Au			Cu			Ni		
		n	Outliers		n	Outliers		n	Outliers		n	Outliers		n	Outliers	
			n	%		n	%		n	%		n	%		n	%
Standards	AMIS0170	78	2	2.56	78	9	11.54	78	6	7.69	75	5	6.67	75	0	0.00
	AMIS0278	69	8	11.59	69	7	10.14	69	3	4.35	71	3	4.23	71	1	1.41
Blanks	AMIS0305	74	0	0.00	74	1	1.35	74	2	2.70	80	3	3.75	80	2	2.50
Totals		221	10	4.52	221	17	7.69	221	11	4.98	226	11	4.87	226	3	1.33

7.3 Precision Analysis

Twinstream results were analysed using the Half Absolute Relative Difference (HARD) method, statistical Student T-Test for comparison between means, and F-Test for comparison between variations. Analyses have been separated into their respective elements including Platinum (Pt), Palladium (Pd), Gold (Au), as well as Copper (Cu) and Nickel (Ni). The twinstream results have been summarised in the following sections.

7.3.1 2021 Exploration Infill Drilling

Overall, the precision and repeatability of the laboratory analyses are considered good and well within acceptable limits for Pt and Pd showing excellent results (Table 13). Due to a potential nugget effect on CRM homogenization, Au shows a slightly higher variance causing less confidence in the two statistical populations. However, the results obtained for Au are still considered acceptable.

Table 13. Summary of precision results for the 2021 Exploration Drilling at Harriets Wish

Element	n	Mean Original	Mean Duplicate	|Mean Difference|	Std Dev Original	Std Dev Duplicate	Percentage Within 15% HARD	No. of HARD Outliers	HARD Outlier (%)	T-Test Outcome	F-Test Outcome
Pt	82	0.33	0.33	0.00	0.82	0.82	87.80	10	12.20	Passed	Passed
Pd	77	0.51	0.50	0.01	1.15	1.12	89.61	8	10.39	Passed	Passed
Au	20	0.49	0.44	0.05	0.41	0.30	85.00	3	15.00	Passed	Suspect

7.3.2 Historic Hacra Drilling

The twinstream data analysed for the Historic drilling on Harriets Wish includes lab duplicate data which were captured into the historic database with the same sample IDs as the original primary samples duplicated. The analysis was conducted on Pt, Pd, Au, as well as Cu, and Ni. The results concluded that the laboratories precision was within an acceptable tolerance. The results are summarised below (Table 14).

Table 14. Summary of precision results for the Historic Harriets Wish Drilling programme

Element	n	Mean Original	Mean Duplicate	|Mean Difference|	Std Dev Original	Std Dev Duplicate	Percentage Within 10% HARD	No. of HARD Outliers	HARD Outlier (%)	T-Test Outcome	F-Test Outcome
Pt	1647	0.17	0.17	0.00	0.92	0.92	86.76	218	13.24	Passed	Passed
Pd	1647	0.17	0.16	0.01	0.89	0.92	89.19	177	10.75	Passed	Passed
Au	1647	0.03	0.03	0.00	0.10	0.10	92.23	128	7.77	Passed	Passed
Cu	183	471.36	453.11	18.26	816.56	844.11	97.54	4	2.19	Passed	Passed
Ni	182	512.00	511.33	0.68	670.36	674.77	98.08	3	1.65	Passed	Passed

8 GEOLOGICAL INTERPRETATION

The geological interpretation in terms of geological setting (Section 5), modelling and estimation (Section 10) were largely based on and in line with the neighbouring PTM Waterberg Project, supported by additional literature and active work. The difference in nomenclature between the two projects largely remained in the stratigraphic logging of the Harriets Wish Succession (HWS) which represents the T-Zone, including the T0, T1, and T2 Units, as well as the Troctolite Sequence (TS) which represents the F-Zone, with less resolution in the defining of the mineralised zones. This can be aligned during future work. For continuity with the historic data produced by IGS, as well as not having re-logged the historic core, the stratigraphic nomenclature used remains HWS and TS respectively.

Although there is a high degree of certainty in the continuity of the HWS and TS stratigraphic zones in terms of presence within a specific area, and that zones of PGE-Cu-Ni enrichment exist in these stratigraphic zones, there remains a high degree of uncertainty in the exact spatial positions (thickness and depth down-dip) of these zones between the drill holes as well as the uncertainty in the structural features of the area such as faulting and shearing. This uncertainty can be mitigated with further exploration drilling.

It is highly likely that the structural model will change with additional drilling data, however, it would probably be mostly related to positions of faults and related displacement, and not dramatically different interpretations such as large-scale folding. The relative shape and orientation of the HWS and TS units are quite certain, and changes will be on a more local scale. The geological interpretation classifying this project's geology as a continuation of the PTM Waterberg Project is unlikely to change.

Once sufficient data is available to perform best practice grade and density estimations through interpolation methods such as Kriging, the Resource Model figures will undoubtedly change. It is assumed however that grade continuity will exist between most of the drill holes that have already intersected mineralisation.

9 SAFETY AND ENVIRONMENTAL

9.1 Safety

9.1.1 Introduction

Safety was always of paramount importance in this exploration environment. Mining Health and Safety Act and the Occupational Health and Safety Act were the required laws that were always complied with. The Act required work to be performed with care and safety needed.

9.1.2 Legal Appointments

Legal appointments for the project are as follows

- Rob Steen (Sylvania) was appointed as the 3.1
- Richard Willemse (Earthlab) was appointed as the 2.17.1
- Pitsi Samuel Mashao (Earthlab) was appointed as the subordinate manager.

9.1.3 Risk Management, SHERQ Compliance

Site-specific induction was given to all employees before work could commence. All employees had valid medical certificates as it's a requirement by safety laws. Ibhubesi Drilling established a safety file for the entire duration of the project. In the file, there were all the relevant procedures, documentation, risk assessments and legal appointments that were required. Later stage our Chief Safety Officer, Mr Richard Willemse audited the file for compliance.

The drilling project was executed successfully without incidents. A total of 20 employees were on the drilling operation.

9.2 Environmental

9.2.1 Introduction

During exploration and mining, the environment always gets negatively impacted, and mitigation against this impact was very crucial to minimise. All companies were required by law to comply with all environmental laws.

Earthlab and Ibhubesi developed standards which describe how to minimise the impacts and remedial actions thereof.

9.2.2 Site Inspections and Rehabilitation

Earthlab and Ibhubesi had to ensure that all the drill sites were rehabilitated and up to the right standard environmentally. All the contaminated soil was removed and treated. All the drill sites, including the campsite, were inspected and found to be up to the right standard environmentally. All photographs of the before and after site rehabilitation were captured and stored for all the drill sites for future reference.

9.2.3 Incidents

There were no incidents reported during the project.

10 EXPLORATION TARGET ESTIMATION

The dataset of this project was limited. Drill holes from the IGS 2012 campaign were used together with the drill holes designed and supervised by Earthlab in 2021. A small selection of drill holes of the PTM Waterberg project was included in the Access database received by Earthlab, however, the data of these drill holes only included T-Zone and F-Zone intercept depths, with no lithological, mineralogical, assay, or any other logging data.

Given the limited data, Earthlab based the modelling and processing approach largely on the PTM Waterberg Project's methodology outlined in the Independent Technical Report (2019), since the deposit on the northern part of Harriets Wish is assumed to form part of the adjacent geology encountered in the PTM Waterberg Project. However, Earthlab still logged the stratigraphical intervals as HWS and TS as opposed to their PTM counterparts namely T-Zone and F-Zone, since sufficient intercepts were not available to confidently identify TZ, TO, and T in line with neighbouring PTM's interpretation.

10.1 Geological modelling

The drill holes used in this model are listed in Table 15. Stratigraphic intercepts to aid wireframe modelling were limited. HWS intercepts inside the Harriets Wish boundaries were present in six out of sixteen drill holes on the northern part of the property relevant to this project. TS intercepts inside Harriets Wish were present in five out of sixteen drill holes. The absence of intercepts was due to drill holes which have been drilled beyond the RLS extent, where the HWS is truncated by the Waterberg Group (WG) unconformity or where the drill hole was not drilled deep enough to possibly intersect the TS. The limited stratigraphic intercepts are therefore not due to poor continuity between drill holes, but rather due to many holes drilled outside of the target geology's extent or simply not aimed at the deeper stratigraphy. Apart from HW030 and HW031 being challenging to interpret. most holes within the target geology's extent show decent stratigraphic continuity in terms of the presence and or existence of stratigraphic units. The relative elevations of the units are less predictable, however, which is assumed to be because of structural displacement by faulting and possibly shearing.

Table 15. A Summary of the drill holes available for this project's modelling and Resource Estimation.

Owner	Campaign	Drill hole ID	Intersect HWS	Intersect TS	Notes
Hacra	IGS 2012	HW023	no	no	Stopped short due to hole caving, assuming a fault zone.
		HW024	no	yes	Beyond the HWS extent.
		HW024W1	no	yes	Beyond the HWS extent.
		HW025	no	yes	Beyond the HWS extent.
		HW025W1	no	yes	Beyond the HWS extent.
		HW026	no	no	Beyond RLS extent.
		HW027	no	no	Beyond RLS extent.
		HW028	no	no	Beyond RLS extent.
		HW029	yes	no	Stopped before it could potentially intersect TS at a very deep level.
		HW029W1	yes	no	Stopped before it could potentially intersect TS at a very deep level.
		HW029W2	yes	no	Stopped before it could potentially intersect TS at a very deep level.
		HW030	no	no	Presumably, fault displacement caused Main Zone to be at a much deeper level. Only Upper Zone intersected below the Waterberg Group.
		HW031	no	no	Presumably, fault displacement caused Main Zone to be at a much deeper level. Only Upper Zone intersected below the Waterberg Group.
		HW032	yes	no	Stopped before it could potentially intersect TS at a very deep level.
	Earthlab 2021	HW201	yes	yes	Stopped before reaching TS footwall due to hole caving. Meaningful mineralisation could potentially exist just below the current drill hole bottom.
		HW202_D0	yes	no	The drill hole was only planned for HWS interception, and not aimed at going as deep as the TS.
		HW202_D1	yes	no	The drill hole was only planned for HWS interception, and not aimed at going as deep as the TS.
		HW202_D2	yes	no	The drill hole was only planned for HWS interception, and not aimed at going as deep as the TS.
		HW203_D0	yes	no	The drill hole was only planned for HWS interception, and not aimed at going as deep as the TS.
		HW203_D1	yes	no	The drill hole was only planned for HWS interception, and not aimed at going as deep as the TS.
		HW204_D0	yes	no	The drill hole was only planned for HWS interception, and not aimed at going as deep as the TS. HWS at higher elevation due to suspected faulting. Significantly lower grades could be due to the nearby fault plane.

Owner	Campaign	Drill hole ID	Intersect HWS	Intersect TS	Notes
		HW204_D1	yes	no	The drill hole was only planned for HWS interception, and not aimed at going as deep as the TS. HWS at higher elevation due to suspected faulting. Significantly lower grades could be due to the nearby fault plane.
		HW204_D2	yes	no	The drill hole was only planned for HWS interception, and not aimed at going as deep as the TS. HWS at higher elevation due to suspected faulting. Significantly lower grades could be due to the nearby fault plane.
		HW205	no	yes	Beyond the HWS extent.
		HW206	no	yes	Beyond the HWS extent. Stopped before reaching TS footwall due to hole caving. Proper mineralisation could potentially exist just below the current drill hole bottom.
PTM	na	WB003, WB004, WB005, WB008, WB009,	yes	no	Only PTM's T-Zone intercepts depths. No assay data.
PTM	na	WB005, WB009	no	yes	Only PTM's F-Zone intercept depth. No assay data.

The mother holes of this project were all vertically orientated. The deflection holes' IDs are highlighted in grey in Table 15.

Wireframes for WG, HWS, TS, RLS, and ARC were modelled. Given the stage at which this project and its Exploration Target find itself it was deemed unnecessary to model the Upper Zone (UZ) separately from the Main Zone (MZ) even though it was distinguished in the logging. This was in part also due to the difficulty in interpreting the structural setting in some areas such as in HW030 and HW031. Wireframes of the HWS, TS, and WG are shown in Figure 31.

Wireframes were limited to a maximum depth of ~800 m below the surface and a lateral extent to the boundaries of the Mining Right covering Harriets Wish farm.

In the absence of a surface topographical scan, the surface topography was modelled from the final surveyed collar coordinates.

10.2 Structural interpretation

The 2010 aeromagnetic survey's heatmap included in the historic report of the Aurora Project (MSA, 2010) was georeferenced in Datamine Studio RM and used to aid in fault and dyke interpretation. The interpreted faults indicated in the historic report of the Harriets Wish Project (IGS, 2012) were considered inaccurate based on the additional drilling data produced by the 2021 campaign. Earthlab georeferenced Figure 7-7 of PTM's Waterberg Project Definitive Feasibility Study and Mineral Resource Update (Oct 2019) and traced the interpreted faults as another aid in fault interpretation. Lastly, significant stratigraphic elevation and existence discrepancies were also used as part of the fault interpretation. A set of possible faults (Figure 29) were modelled after the interpretation, all modelled as vertical planes due to the uncertainty of their true spatial orientation.

The presence of shearing was logged in multiple drill holes and an attempt was made to model the shear zone plane. The oblique plane of possible shearing was not applied to the rest of the wireframe modelling nor did it affect any of the estimations. The data was too limited to utilize the plane effectively, however, it could be considered in a future campaign when infill data is produced.

It should be noted that there is low confidence in the current fault interpretation, even though the previous interpretation could be disproved, the data remains too limited to establish certainty in the structural interpretation.

10.3 Weathering Zones

No weathering zones were modelled in this project, as it was not deemed relevant at this stage for this underground mineable deposit.

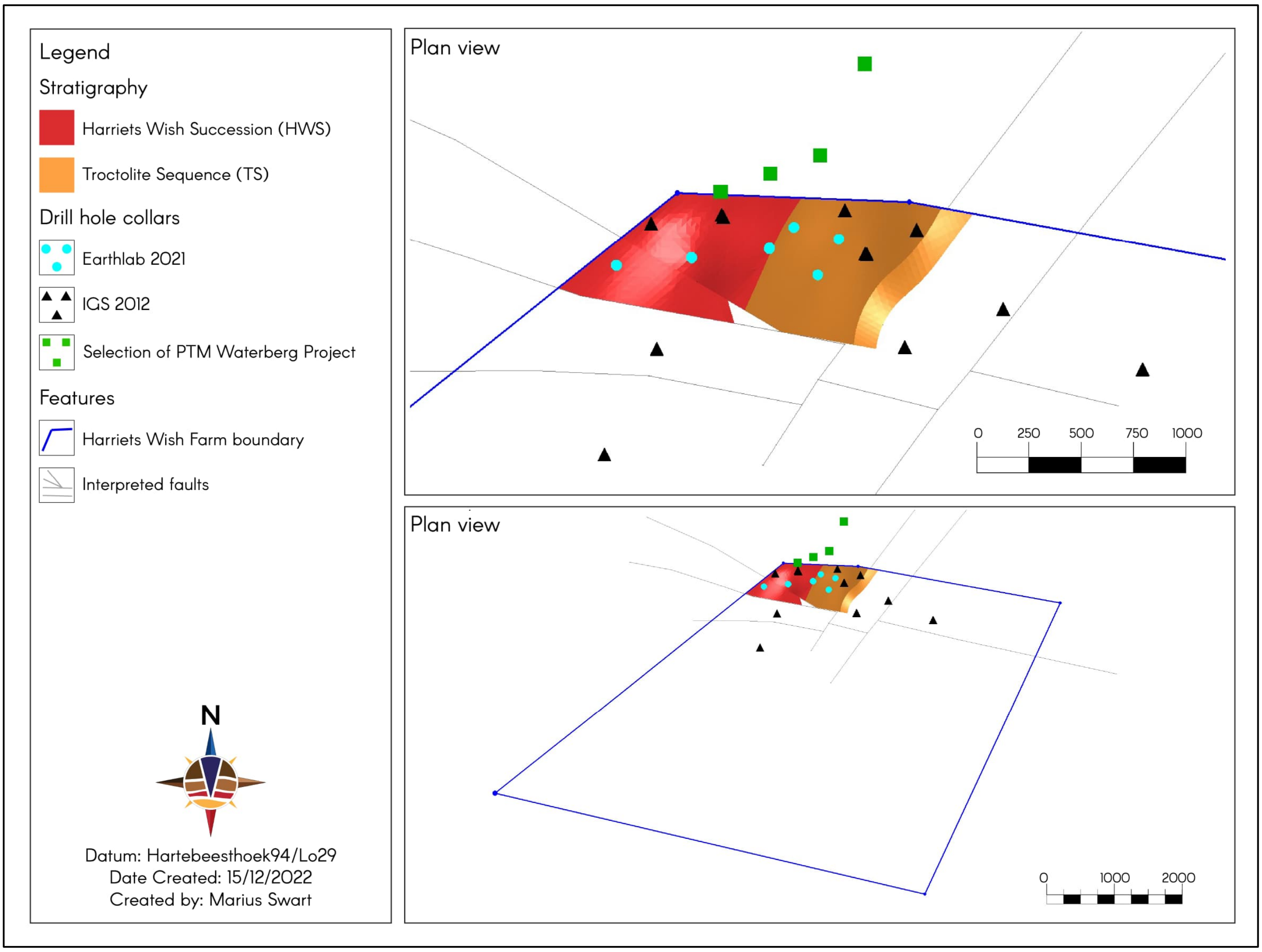


Figure 29. Plan views of the HWS (red) and TS (orange) wireframes modelled relative to the Mining Right boundaries, the drill hole collars, and the interpreted faults. Slightly different colour gradients are a result of the 3D view, and should not be confused with separate stratigraphic units.

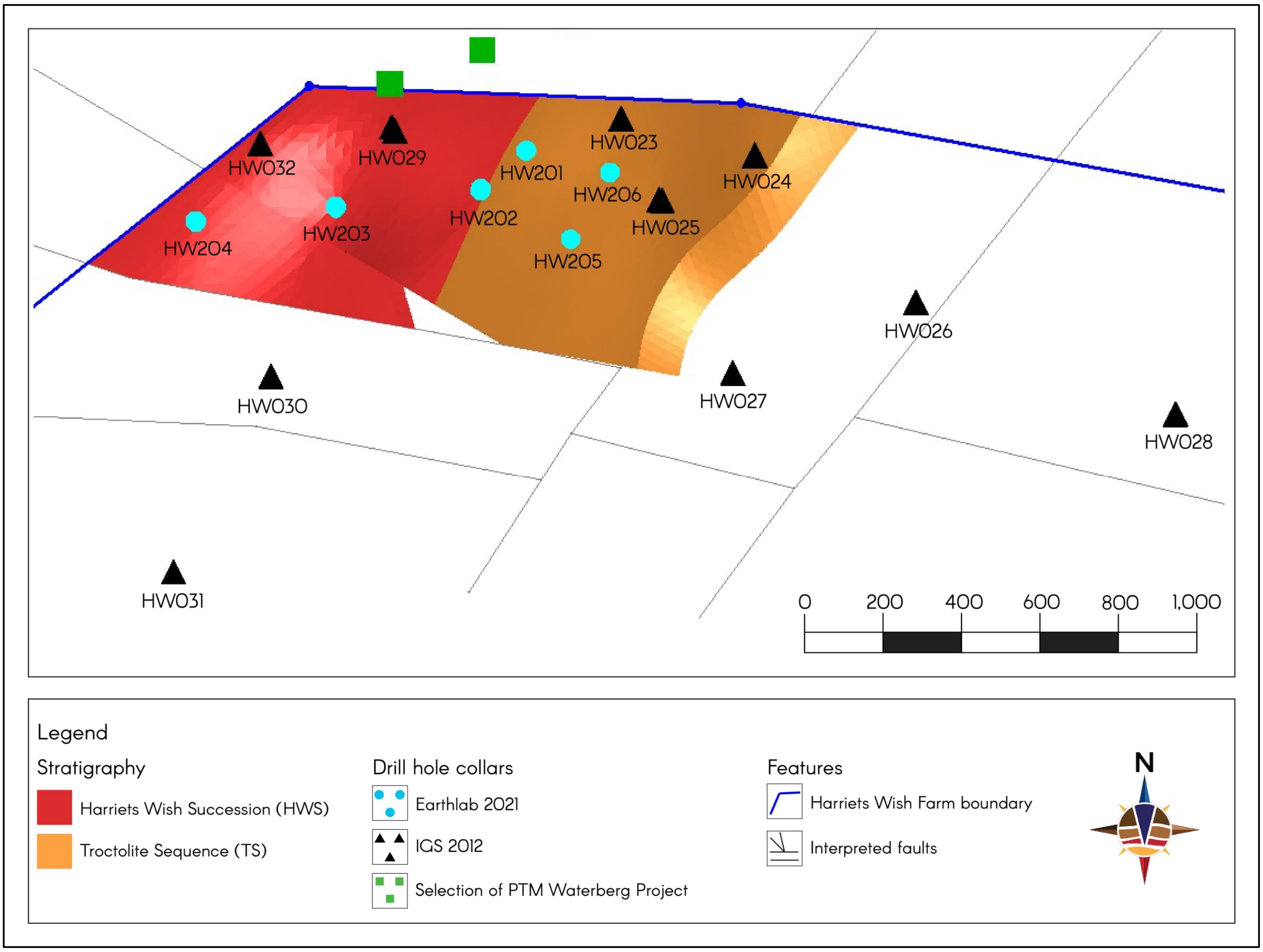


Figure 30. Plan view of the HWS (red) and TS (orange) wireframes modelled relative to the Mining Right boundaries, the drill hole collars, and the interpreted faults, with the drill hole IDs displayed. Slightly different colour gradients are a result of the 3D view, and should not be confused with separate stratigraphic units.

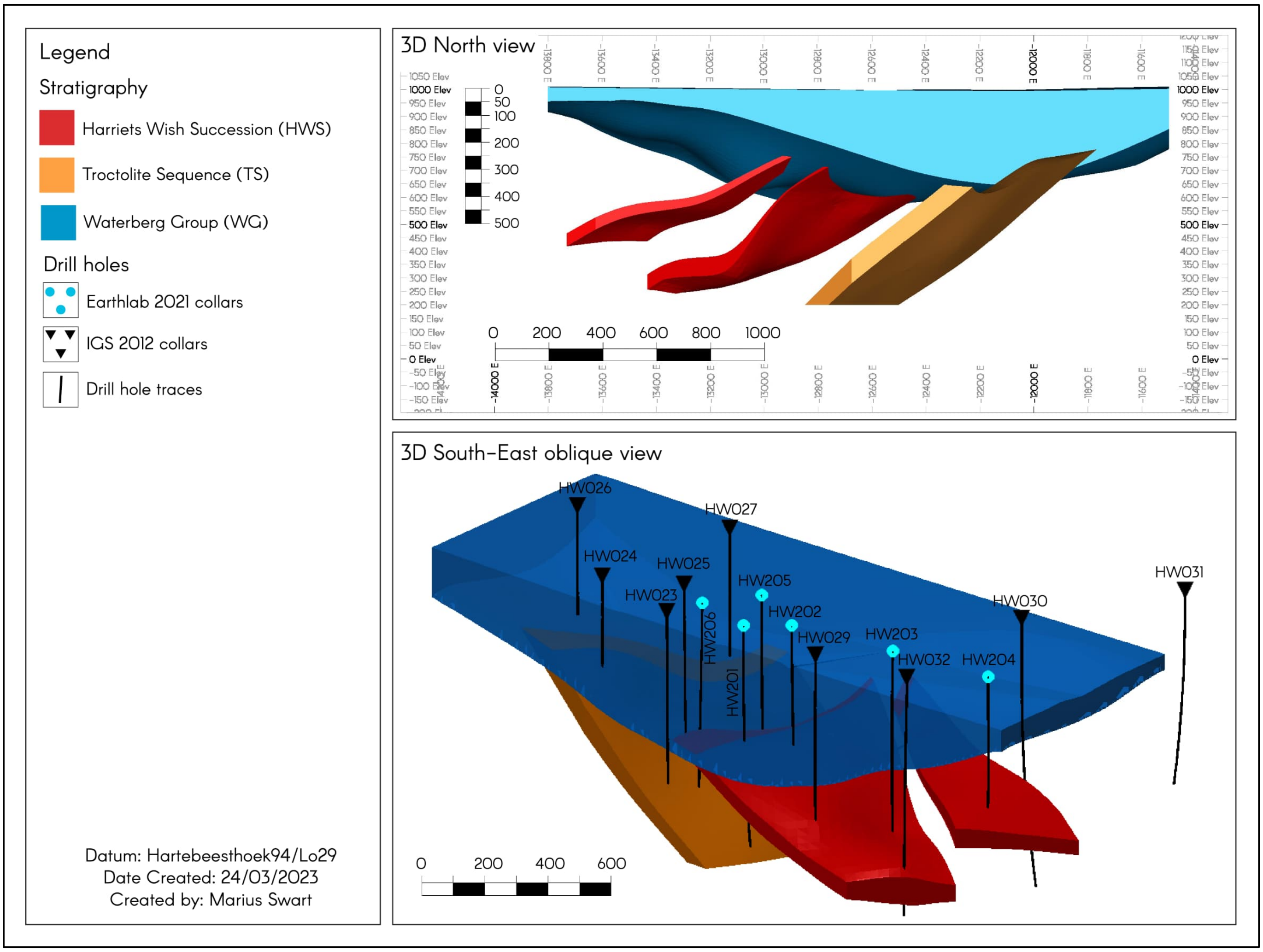


Figure 31. A 3D north view and a 3D oblique view looking south-east and downwards showing the HWS (red), TS (orange), and WG (blue) wireframes to illustrate the dipping orientation of the HWS and TS as well as the truncation of these units against the WG. The drill hole traces of the motherholes are illustrated, while the deflections cannot be practically visualised in these particular views. Slightly different colour gradients are a result of the 3D view, and should not be confused with separate stratigraphic units.

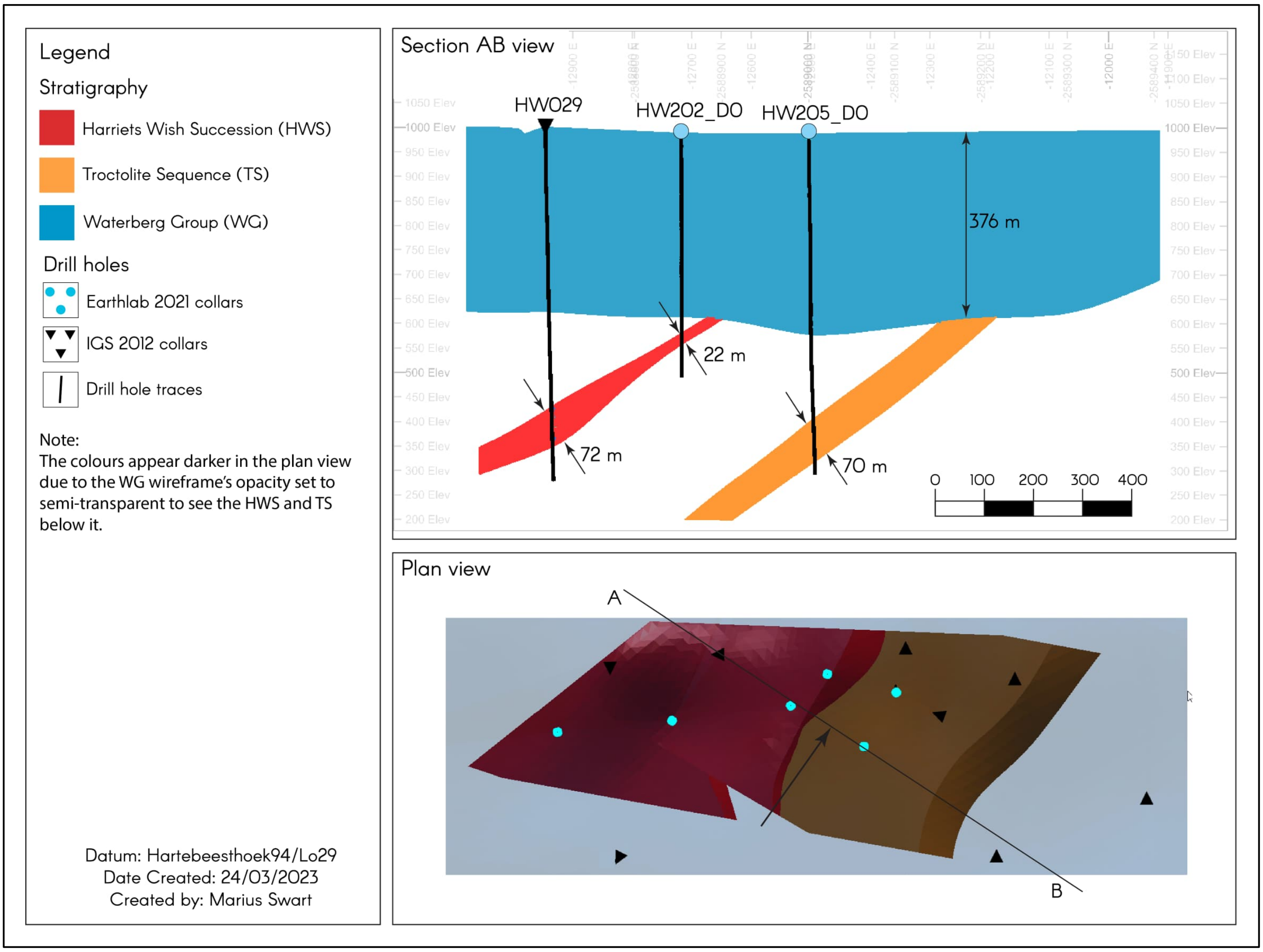


Figure 32. Section view of the major relevant stratigraphical wireframes.

10.4 Mineral sub-units

PTM (2019) determined the spatial nature of the mineralised zones through an intricate set of steps including Categorical Kriging of the samples flagged as "mineralised". The "mineralised" and "waste" intervals were presumably created with the Datamine StudioRM COMPSE function. A cut-off grade of 1.0 g/t 4E was applied, with a minimum of 2.5 m of the mineralised length required to qualify and be flagged as mineralised, and a maximum of 2 m internal "waste" allowed inside the mineralised intervals that could carry the internal waste while remaining above the cut-off grade.

Earthlab replicated the cut-off grade with associated minimum and maximum interval parameters. Some drill holes did not deliver mineralised intervals that met the minimum mineralised length and cut-off grade requirements. Of all the drill holes that intersected the HWS, HW203_D1, HW204_D0, HW204_D1, and HW204_D2 did not automatically deliver samples flagged as "mineralised" through the COMPSE function. Of the drill holes that intersected (at least partially) the TS, HW201, HW206, HW025, and HW025W1 did not automatically produce samples flagged as "mineralised" through the COMPSE function. In these drill holes (both HWS and TS) the resource geologist manually flagged continuous sample intervals with a significantly higher grade than the rest of the samples. This was based on the argument that the deposit's mineralisation is highly variable, and what seems to be "low grade" could still belong to a different statistical mineralisation population than the typical "waste", or that the grade was negatively affected by potential remobilisation and leaching due to nearby faulting and shearing. Even though these lower-grade intervals were included in the "mineralised" component of the calculations, the volumes represented by them were eventually excluded from the Exploration Target. The only exception was in the case of HW203_D0 and HW203_D1 where the motherhole and the deflection's flagged intervals differed and the weighted average of the two was used and included, attributing the difference to the high variability, although still noted. PTM (DFS, 2019, page 186) suggested that to truly capture the high degree of variability of the deposit one would have to drill at 5 m spacing, which would be impractical.

Probability estimation was performed in line with PTM's methodology to mirror the Resource Estimation procedure as close as possible, however, the data was too limited to produce an acceptable outcome. Dynamic Anisotropy would have been required to ensure the estimations honour the undulation of the wireframes, however not enough drill holes existed to allow for Dynamic Anisotropy. Inflating the search ellipsoid to ensure samples occurring within the search neighbourhood would have been ill-advised as it would not have made geostatistical sense, nor would the result honour the wireframe undulation.

It should be noted at this point that no variography was possible either, simply due to the limited size of the dataset. But even if PTM's variogram parameters were to be applied without verifying it with this project's data, the samples to inform the estimations would still have been too limited to produce an Exploration Target through Kriging.

Figure 33 to Figure 41 contain a selection of section views to show the downhole 4E grade of the 1 m composites after the 1.0 g/t 4E cut-off grade has been applied.

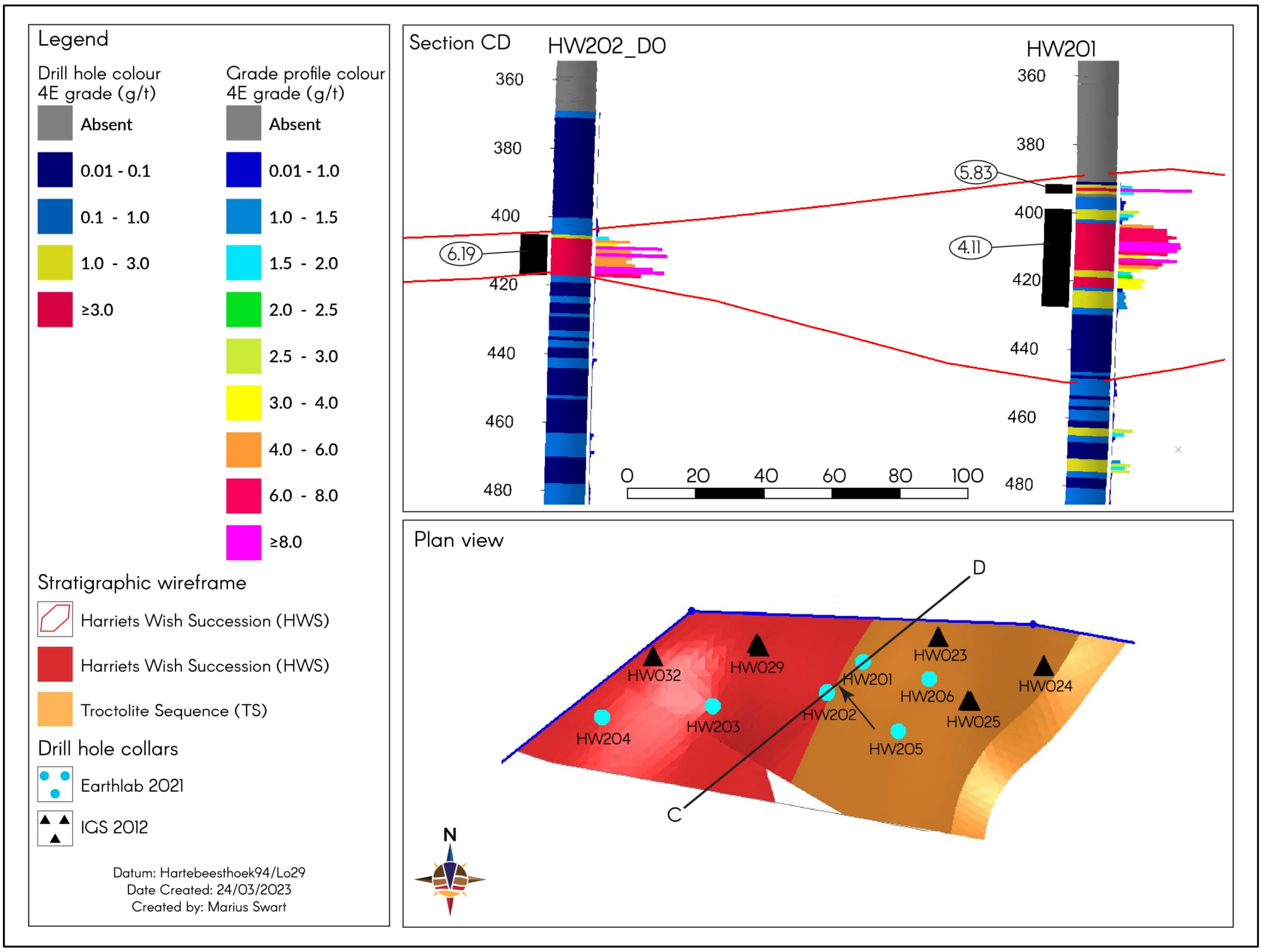


Figure 33. Section CD illustrating the 4E grade of the composites in HW201 and HW202_D0 after the 1.0 g/t 4E cut-off grade has been applied. The drill holes and grade profiles are coloured to different 4E legends as indicated. The black bars illustrate the mineralised interval with its average 4E grade indicated. The drill hole width is not to scale. Depth markers are indicated at 20 m intervals.

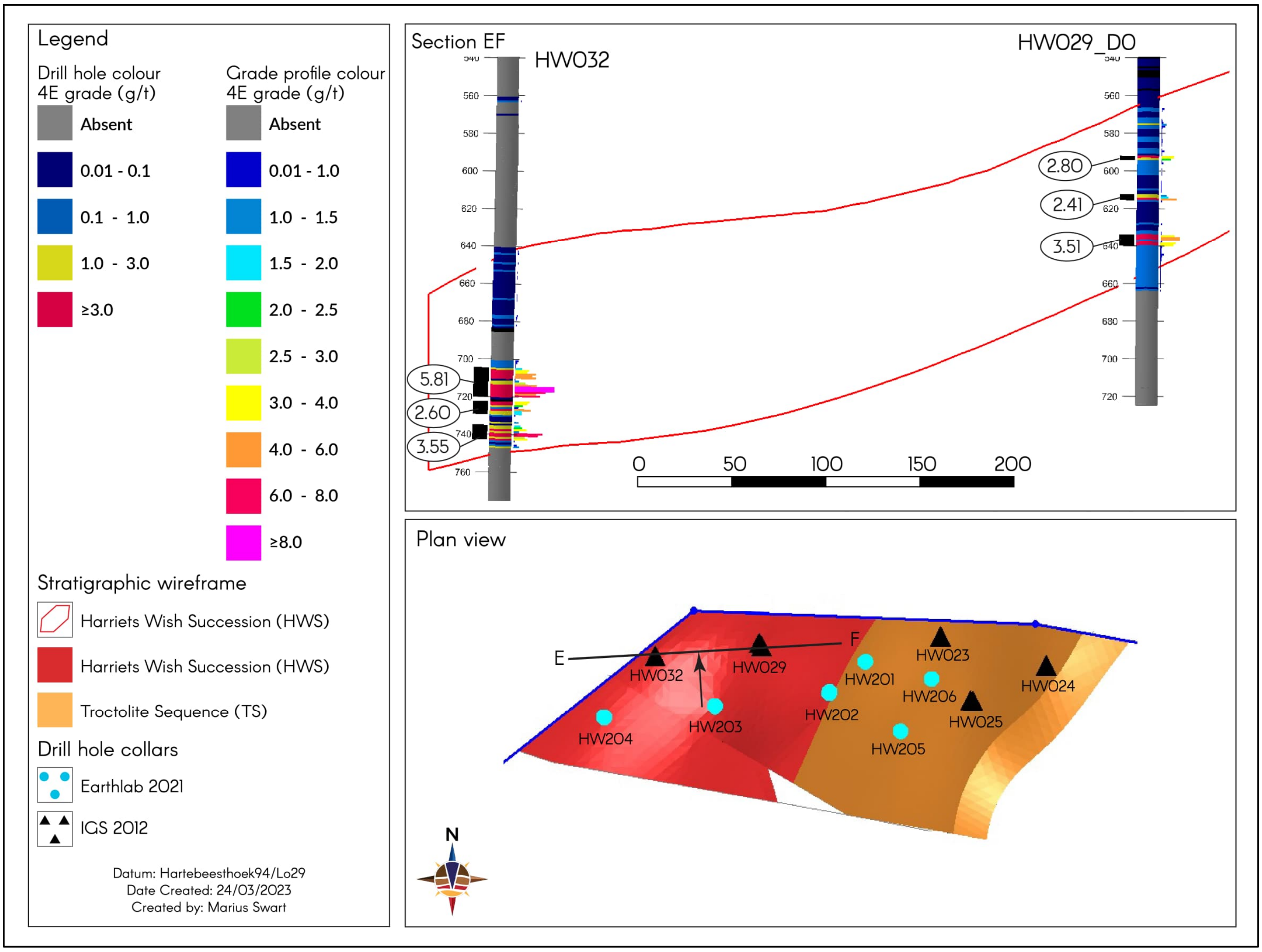


Figure 34. Section EF illustrating the 4E grade of the composites in HW032 and HW029_DO after the 1.0 g/t 4E cut-off grade has been applied. The drill holes and grade profiles are coloured to different 4E legends as indicated. The black bars illustrate the mineralised interval with its average 4E grade indicated. The drill hole width is not to scale. Depth markers are indicated at 20 m intervals.

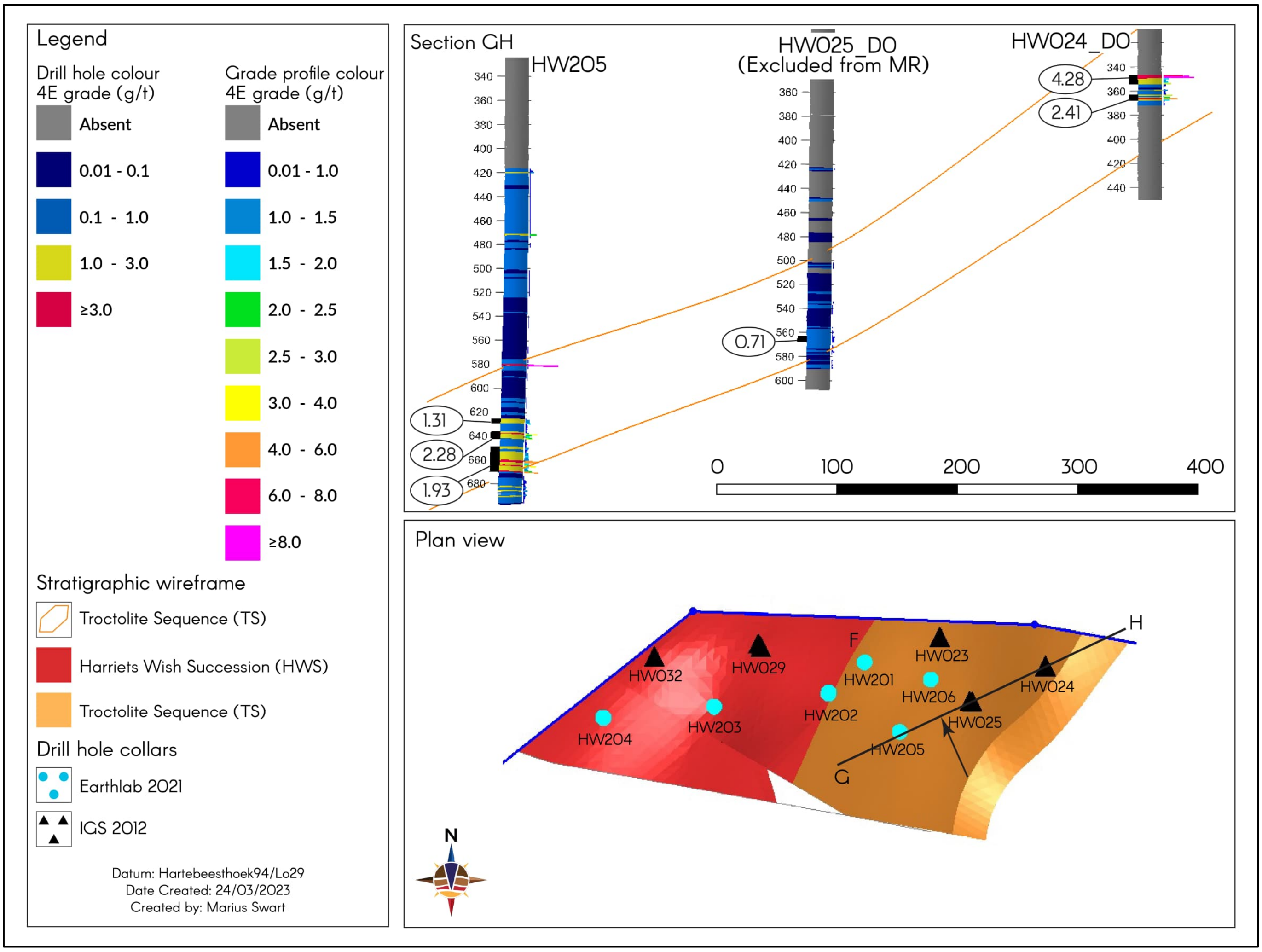


Figure 35. Section GH illustrating the 4E grade of the composites in HW025_DO and HW024_DO after the 1.0 g/t 4E cut-off grade has been applied. The drill holes and grade profiles are coloured to different 4E legends as indicated. The black bars illustrate the mineralised interval with its average 4E grade indicated. The drill hole width is not to scale. Depth markers are indicated at 20 m intervals.

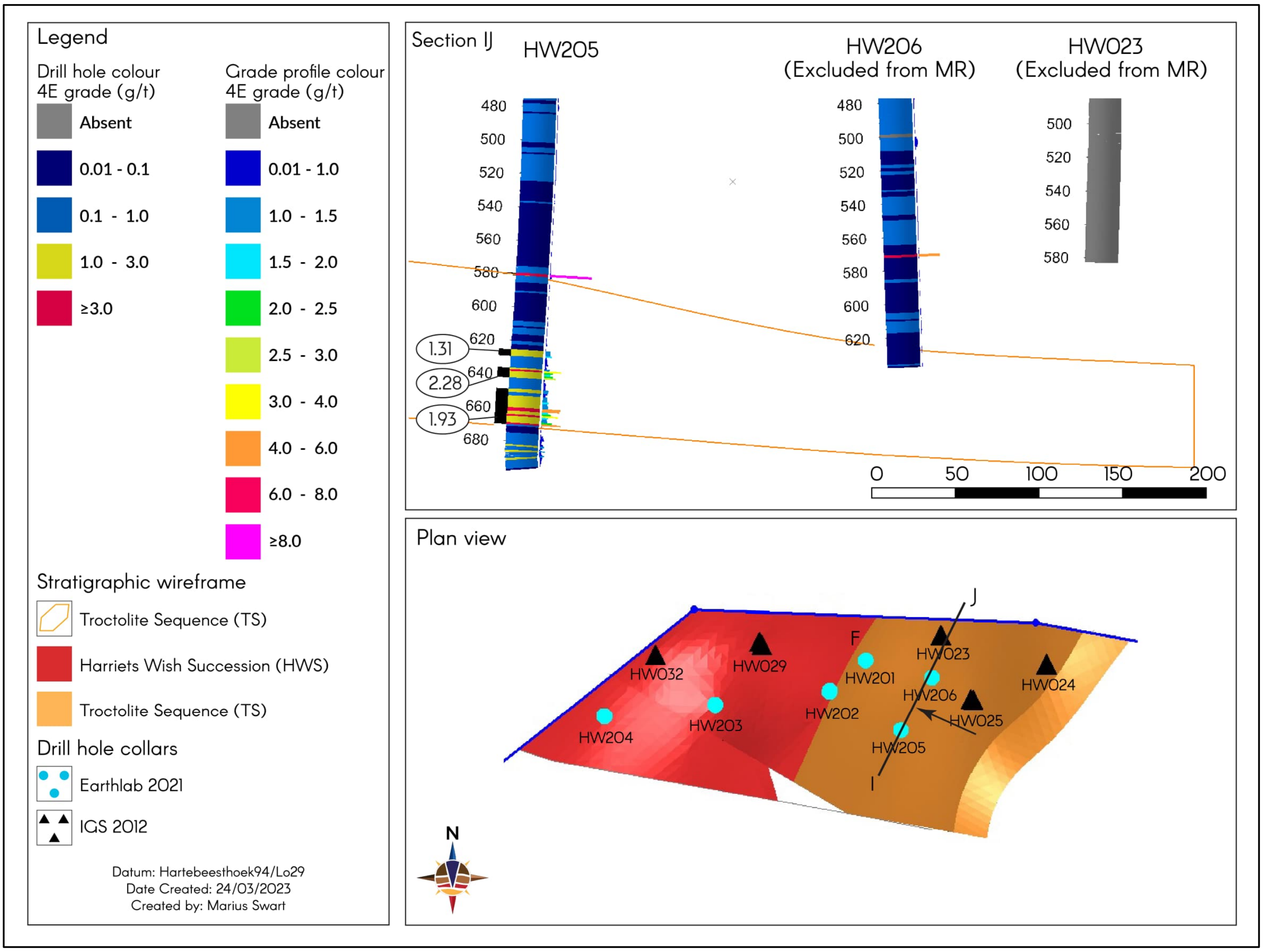


Figure 36. Section IJ illustrating the 4E grade of the composites in HW205 and HW206 after the 1.0 g/t 4E cut-off grade has been applied. The drill holes and grade profiles are coloured to different 4E legends as indicated. The black bars illustrate the mineralised interval with its average 4E grade indicated. The drill hole width is not to scale. Depth markers are indicated at 20 m intervals.

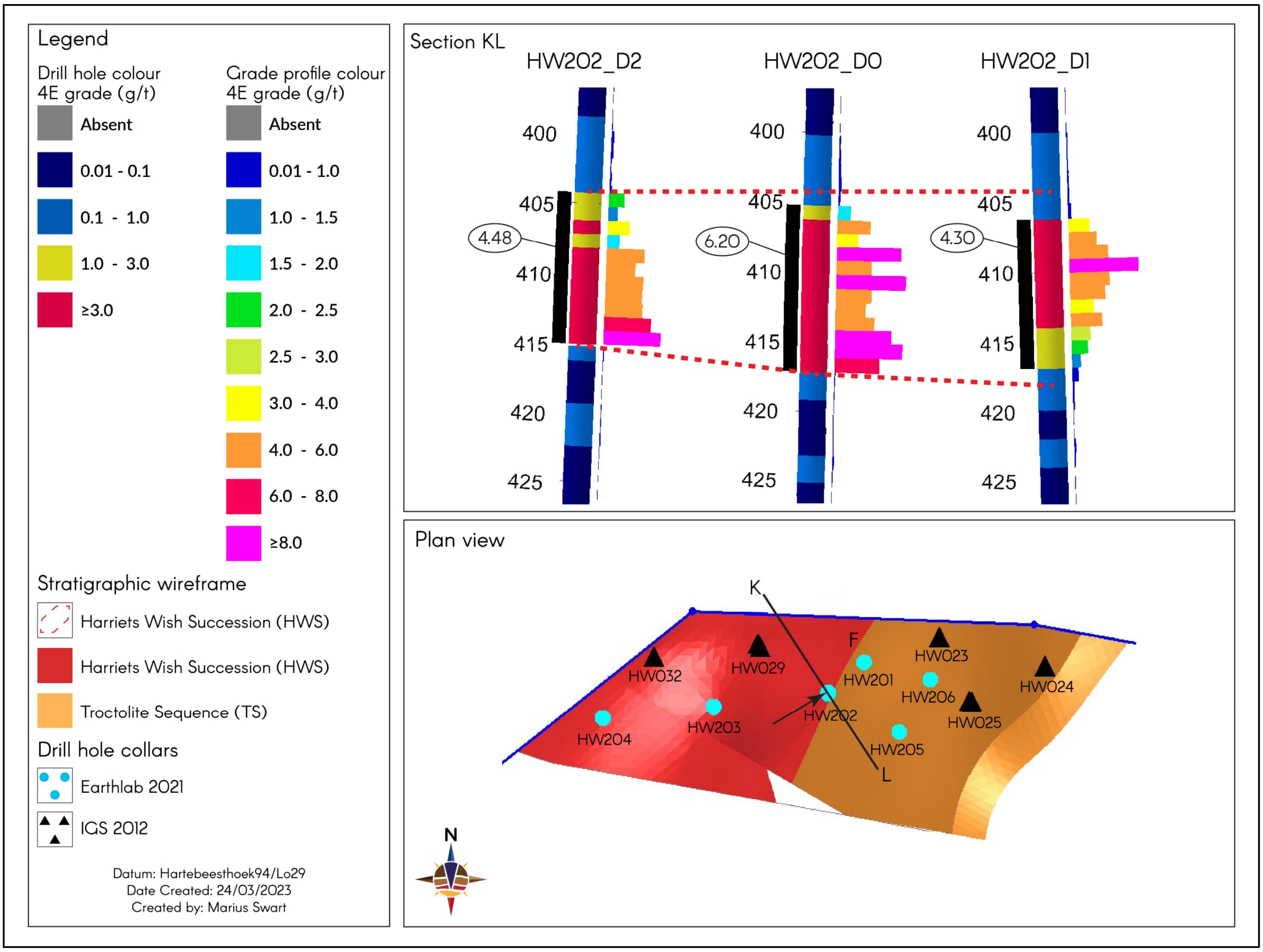


Figure 37. Section KL illustrating the 4E grade of the composites in HW202_D0, HW202_D1, and HW202_D2 after the 1.0 g/t 4E cut-off grade has been applied. The drill holes and grade profiles are coloured to different 4E legends as indicated. The black bars illustrate the mineralised interval with its average 4E grade indicated. Neither the drill hole width nor the spacing between the drill holes is illustrated to scale. The distance between the motherhole and deflections in the HWS interval range between 1 and 2 m. Depth markers are indicated at 5 m intervals.

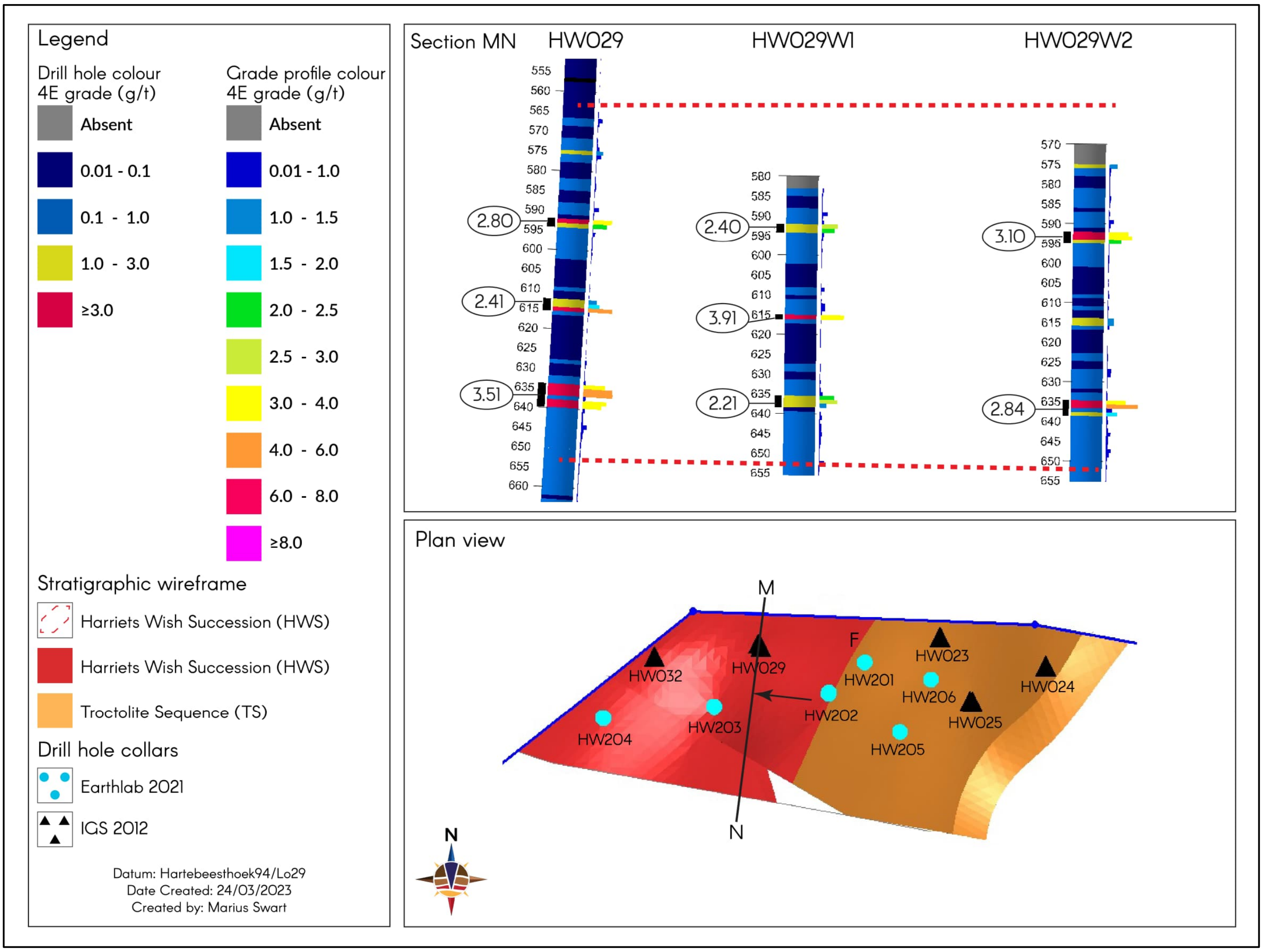


Figure 38. Section MN illustrating the 4E grade of the composites in HW029, HW029W1, and HW029W2 after the 1.0 g/t 4E cut-off grade has been applied. The drill holes and grade profiles are coloured to different 4E legends as indicated. The black bars illustrate the mineralised interval with its average 4E grade indicated. Neither the drill hole width nor the spacing between the drill holes is illustrated to scale. The distance between the motherhole and deflections in the HWS interval range between 0 and 3.6 m. Depth markers are indicated at 5 m intervals.

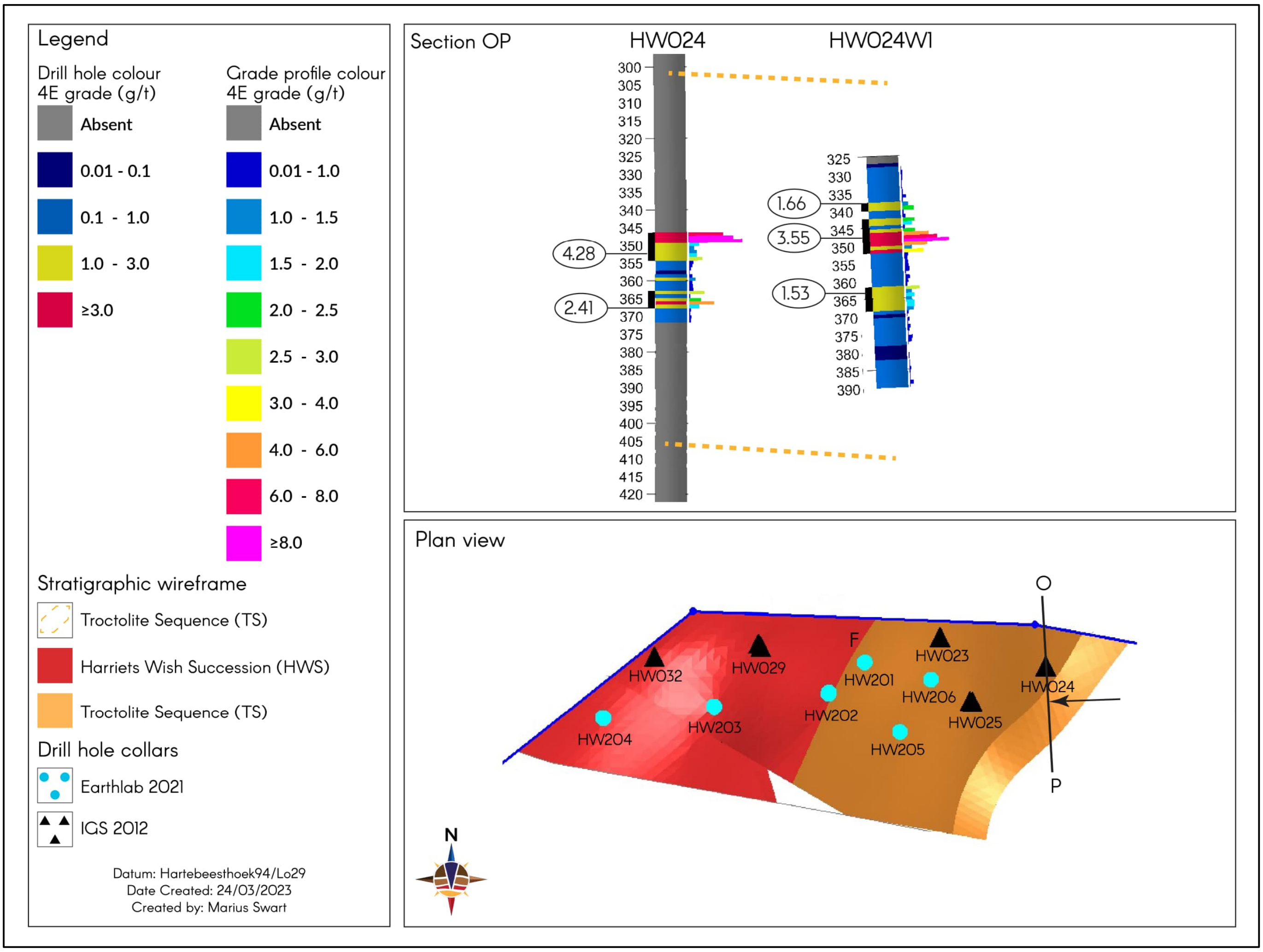


Figure 39. Section OP illustrating the 4E grade of the composites in HW024 and HW024W1 after the 1.0 g/t 4E cut-off grade has been applied. The drill holes and grade profiles are coloured to different 4E legends as indicated. The black bars illustrate the mineralised interval with its average 4E grade indicated. Neither the drill hole width nor the spacing between the drill holes is illustrated to scale. The distance between the motherhole and deflections in the TS interval range between 0 and 2.6 m. Depth markers are indicated at 5 m intervals.

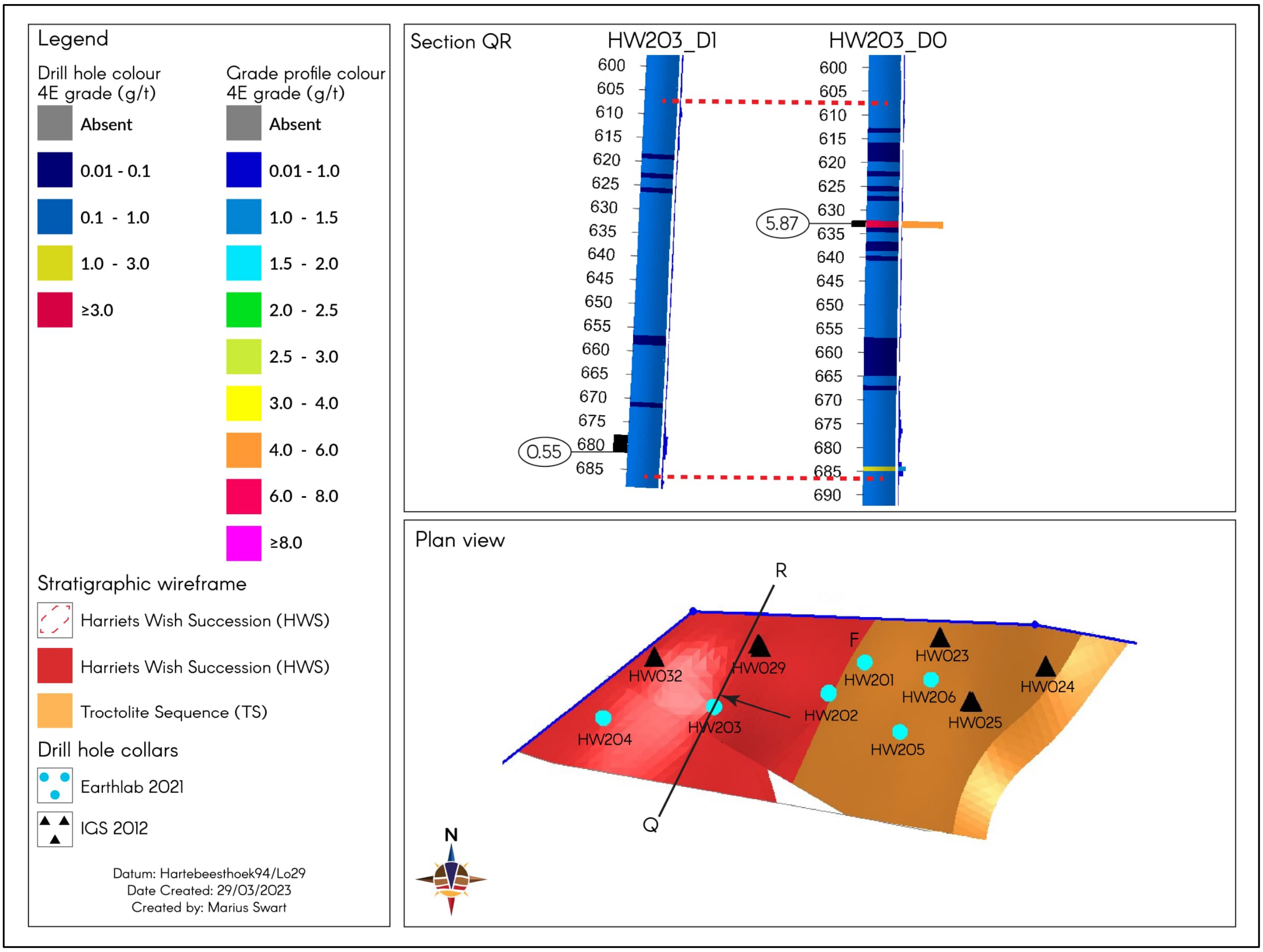


Figure 40. Section QR illustrating the 4E grade of the composites in HW203_D0 and HW203_D1 after the 1.0 g/t 4E cut-off grade has been applied. The drill holes and grade profiles are coloured to different 4E legends as indicated. The black bars illustrate the mineralised interval with its average 4E grade indicated. Neither the drill hole width nor the spacing between the drill holes is illustrated to scale. The distance between the motherhole and deflections in the HWS interval range between 0.6 and 3.2 m. Depth markers are indicated at 5 m intervals.

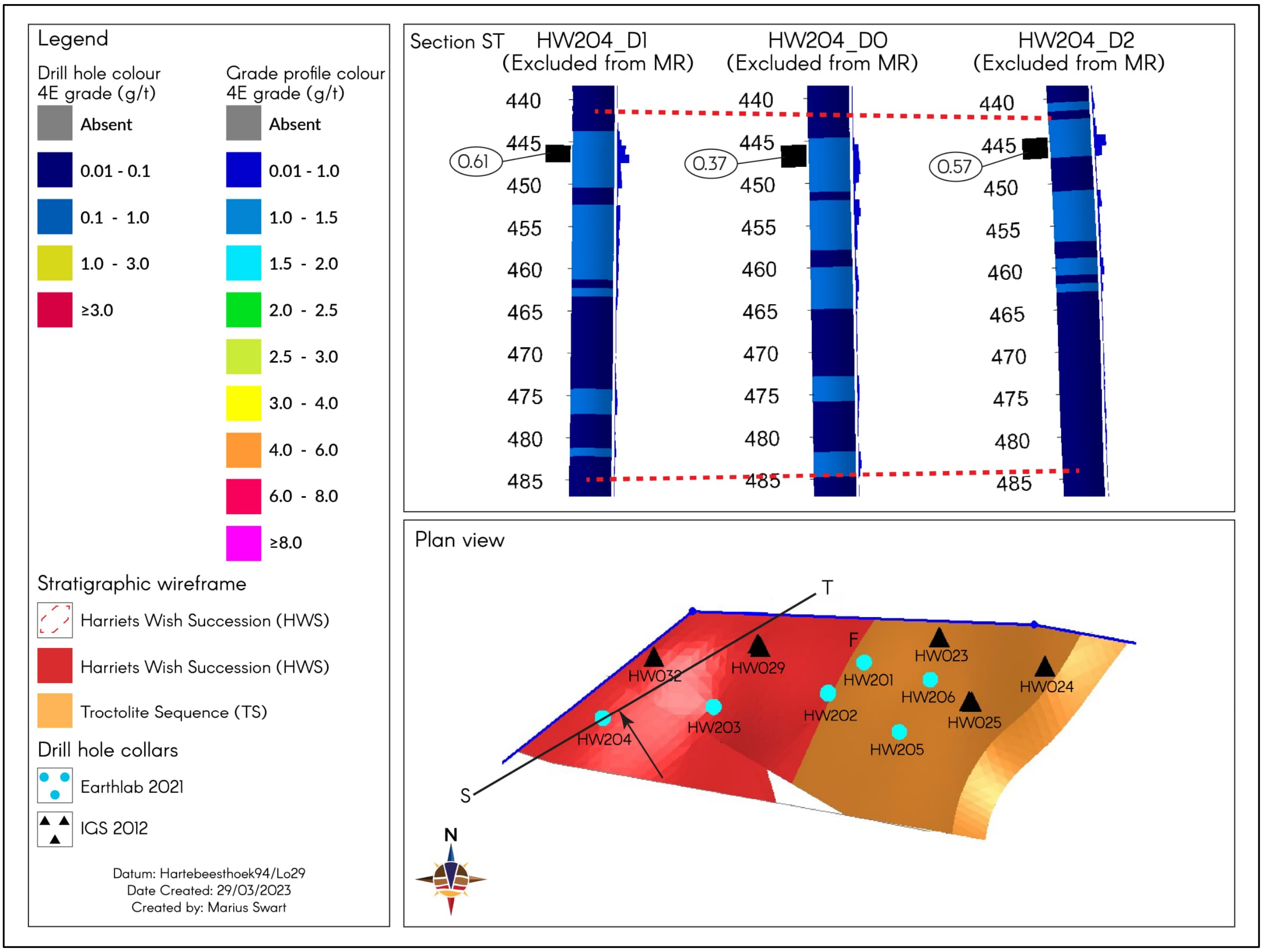


Figure 41. Section ST illustrating the 4E grade of the composites in HW204_D0, HW204_D1 and HW204_D2 after the 1.0 g/t 4E cut-off grade has been applied. The drill holes and grade profiles are coloured to different 4E legends as indicated. The black bars illustrate the mineralised interval with its average 4E grade indicated. Neither the drill hole width nor the spacing between the drill holes is illustrated to scale. The distance between the motherhole and deflections in the HWS interval range between 0.8 and 2.6 m. Depth markers are indicated at 5 m intervals.

10.5 Statistics

10.5.1 4E

The number of 1 m composite samples with 4E values within the HWS zone was 656, and 357 composite samples were in the TS.

The average 4E grade was 0.931 g/t in the HWS without any cut-off grade applied, as seen in the log histogram illustrated in Figure 42

Once a 1.0 g/t 4E cut-off grade was applied while allowing for up to 2 m internal waste, the average grade in the HWS composites increased to 4.290 g/t, as seen in Figure 43.

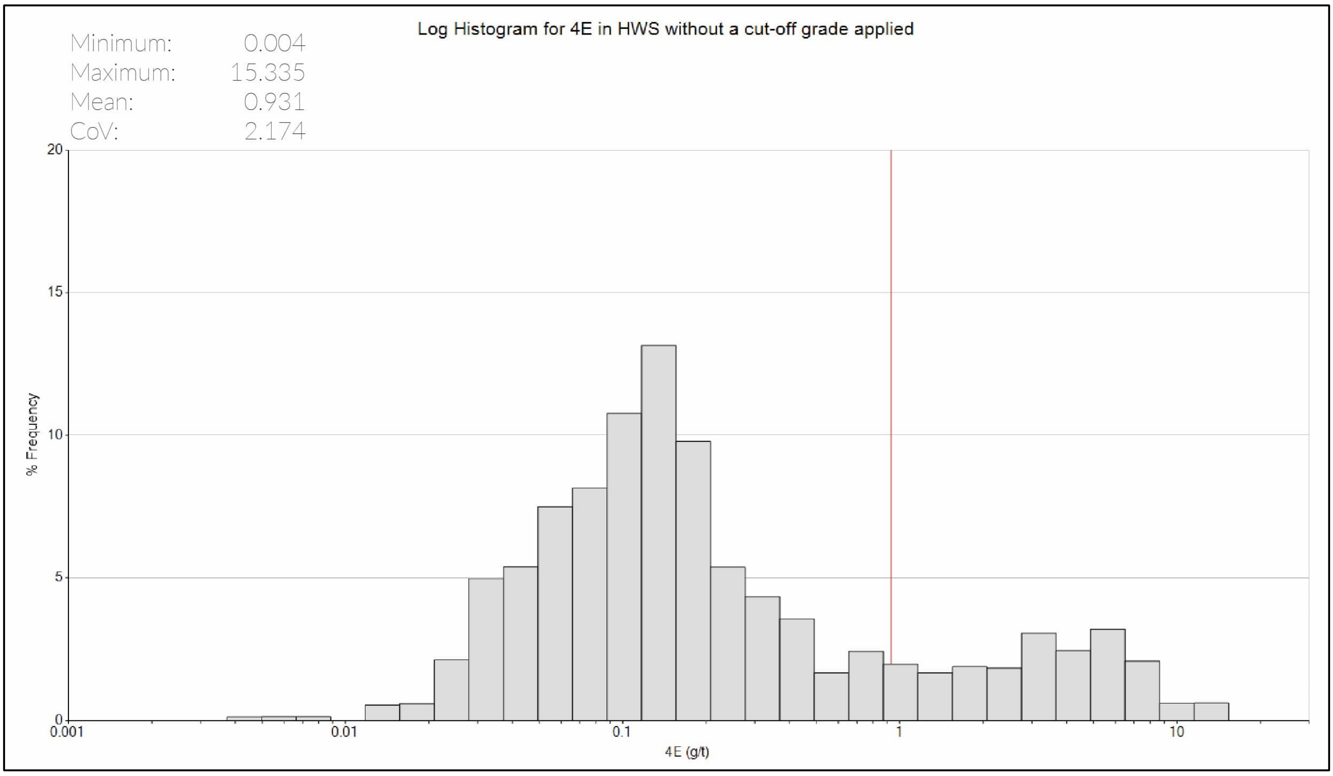


Figure 42. Log histogram of 4E in HWS composites without a cut-off grade applied.

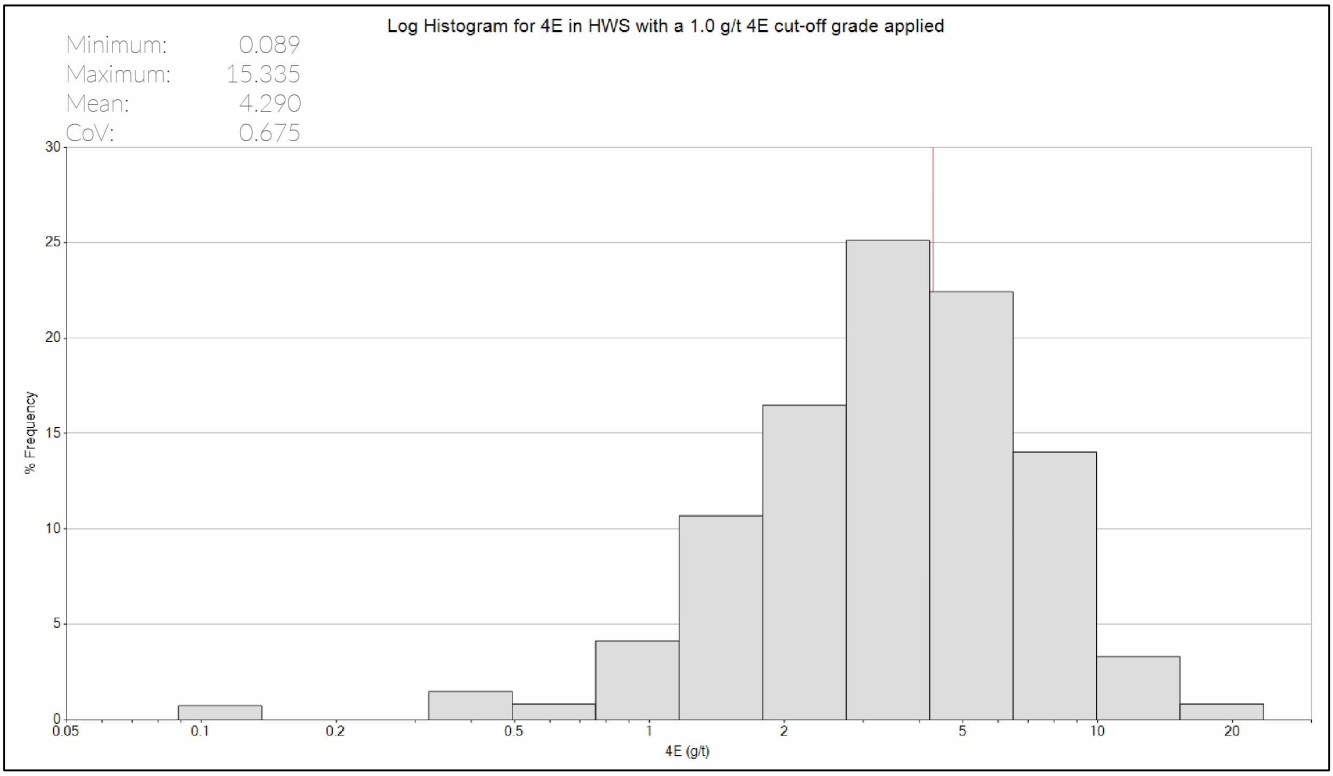


Figure 43. Log histogram of 4E in HWS composites with a 1.0 g/t 4E cut-off grade applied.

In the TS the average 4E grade in the TS composites was 0.592 g/t before applying a cut-off grade (Figure 44).

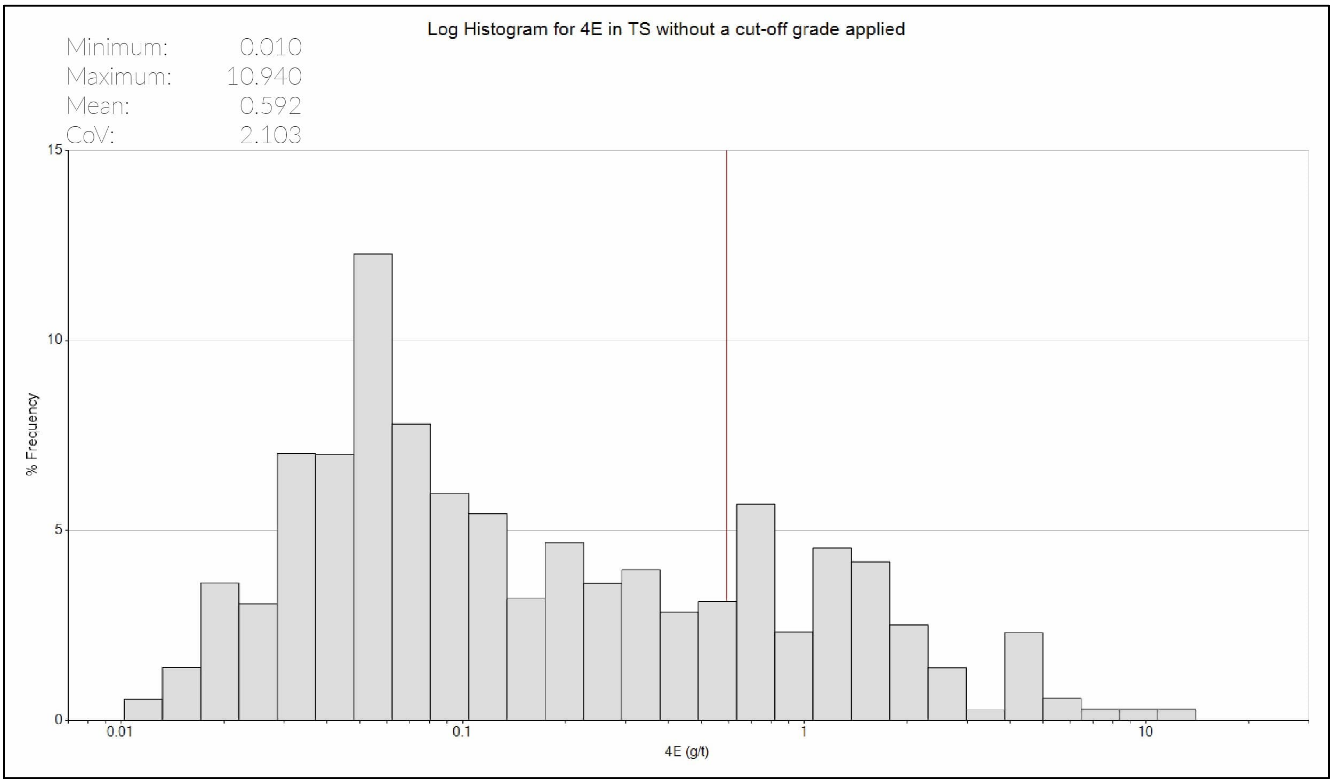


Figure 44. Log histogram of 4E in TS composites without a cut-off grade applied.

With a 1.0 g/t 4E cut-off grade applied to the TS composites while allowing up to 2 m internal waste, the average 4E grade in the TS composites increased to 2.449 g/t, shown in Figure 45.

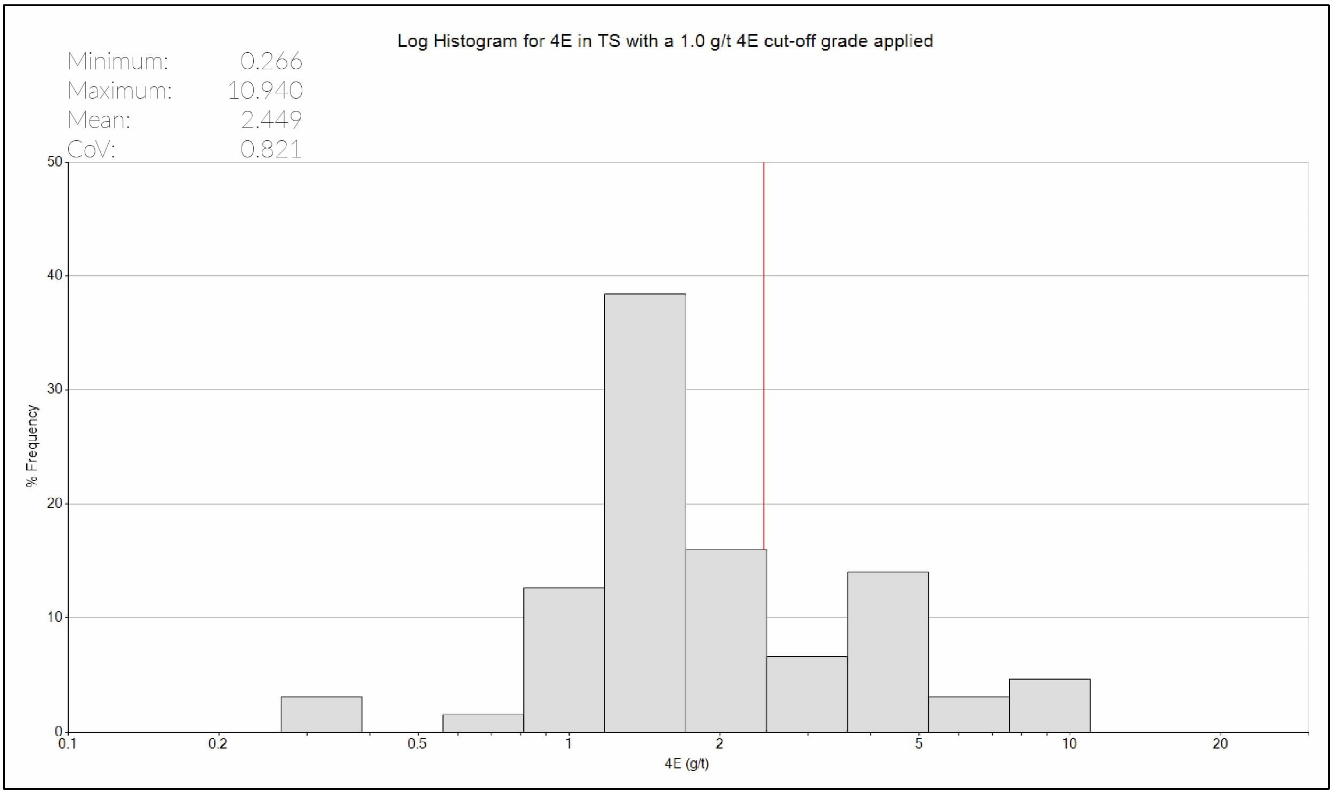


Figure 45. Log histogram of 4E in TS composites without a cut-off grade applied.

10.5.2 Cu & Ni

Based on the electron microprobe work Mr M.S. Reynders (Exploration Geologist and Permanent Employee of Earthlab) performed on a selection of samples for his M.Sc research on the Aurora Project on the farm named La Pucella, it was decided to discount Ni values on samples in the T1 and T2 Units on La Pucella where the lithology was logged as OGN (olivine-gabbronorite), OLGN (olivine-leuco-gabbronorite), and TROC (troctolite) given these lithologies' olivine content which showed cases of high Ni values. Seeing as Ni in olivine minerals cannot be economically extracted in a typical PGE-Ni-Cu processing plant, the OGN, OLGN, and TROC samples were discounted. The same method of discounting used in the La Pucella Mineral Resource was applied to the Hacra Project given the similarities in the geology and high Ni values seen in olivine-bearing lithologies.

Ni values of samples in the HWS and TS units were discounted based on their lithologies and Ni assay values. Only OGN (olivine-gabbronorite), OLGN (olivine-leuco-gabbronorite), and TROC (troctolite) samples were discounted given these lithologies' olivine content which showed cases of high Ni values in the electron microprobe work performed by M.S. Reynders. The discounting was based on the Ni content attributed to olivine in a selection of samples analysed by Reynders.

OGN and OLGN:

- If Ni ≥ 740 ppm, then the Ni values were reduced by 370 ppm
- If Ni < 740 ppm, then the Ni value was halved.

TROC:

- If Ni ≥ 1040 ppm, then the Ni values were reduced by 520 ppm
- If Ni < 1040 ppm, then the Ni value was halved.

After applying a 1.0 g/t 4E cut-off grade to the 1 m composites, 121 samples with Cu and Ni values were available in the HWS and 63 samples with Cu and Ni values in the TS. The Cu and Ni statistics of the composites after applying the 4E cut-off grade are illustrated in Figure 46 to Figure 49.

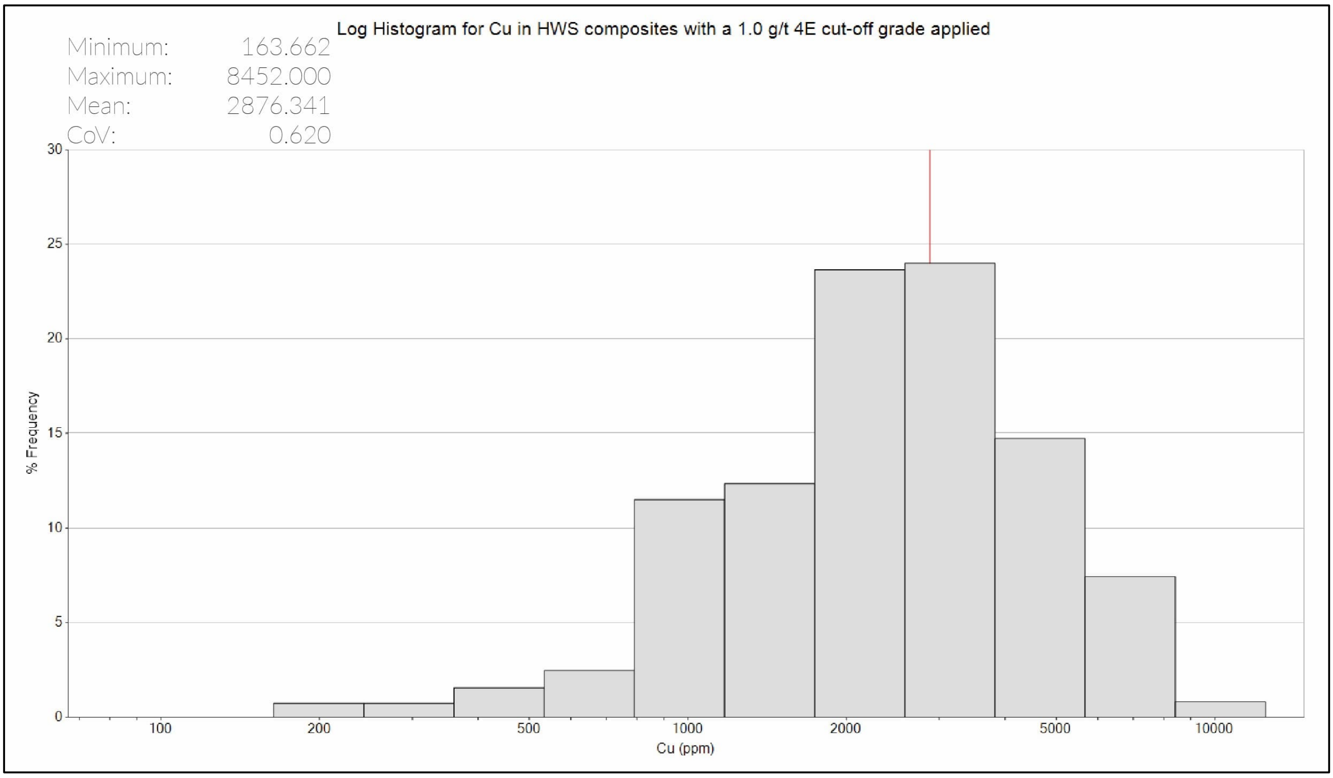


Figure 46. Log histogram of Cu in HWS composites with a 1.0 g/t 4E cut-off grade applied.

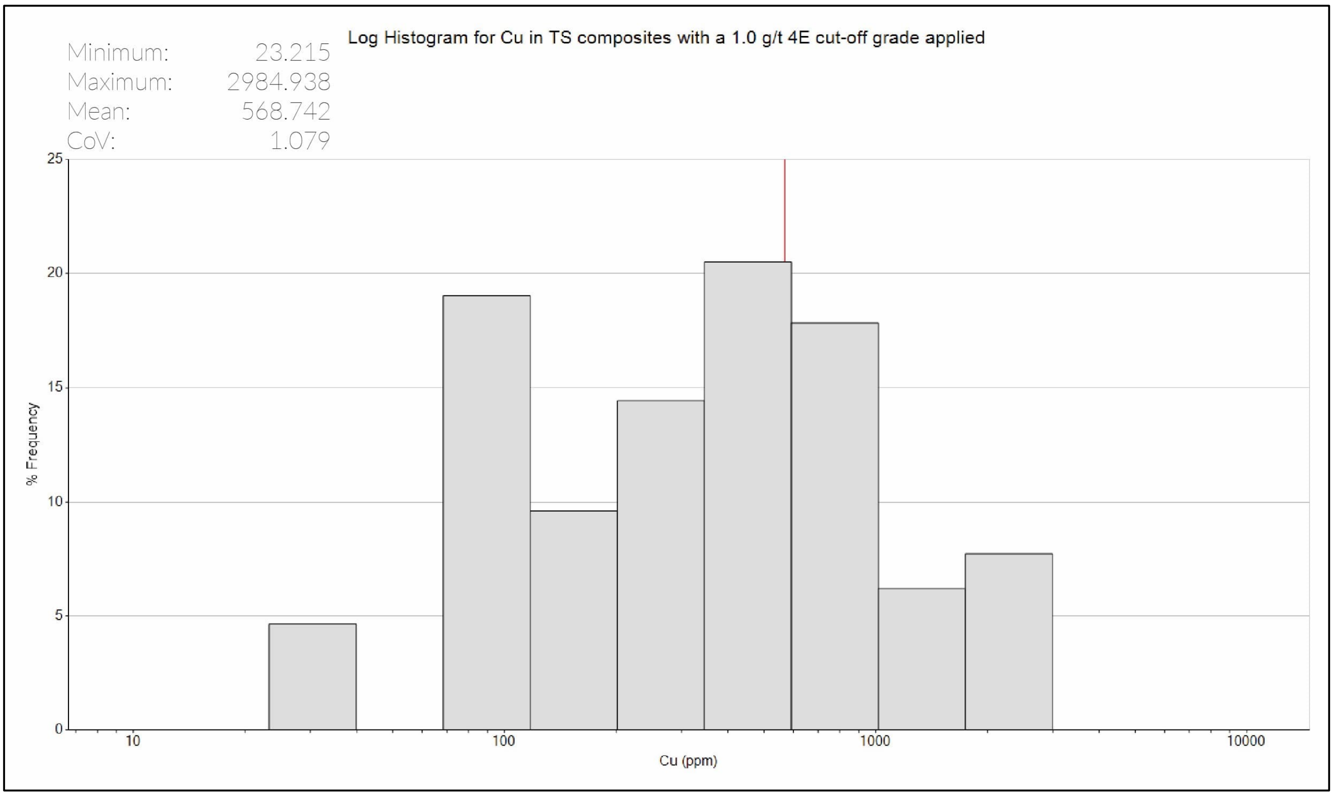


Figure 47. Log histogram of Ni in TS composites with a 1.0 g/t 4E cut-off grade applied.

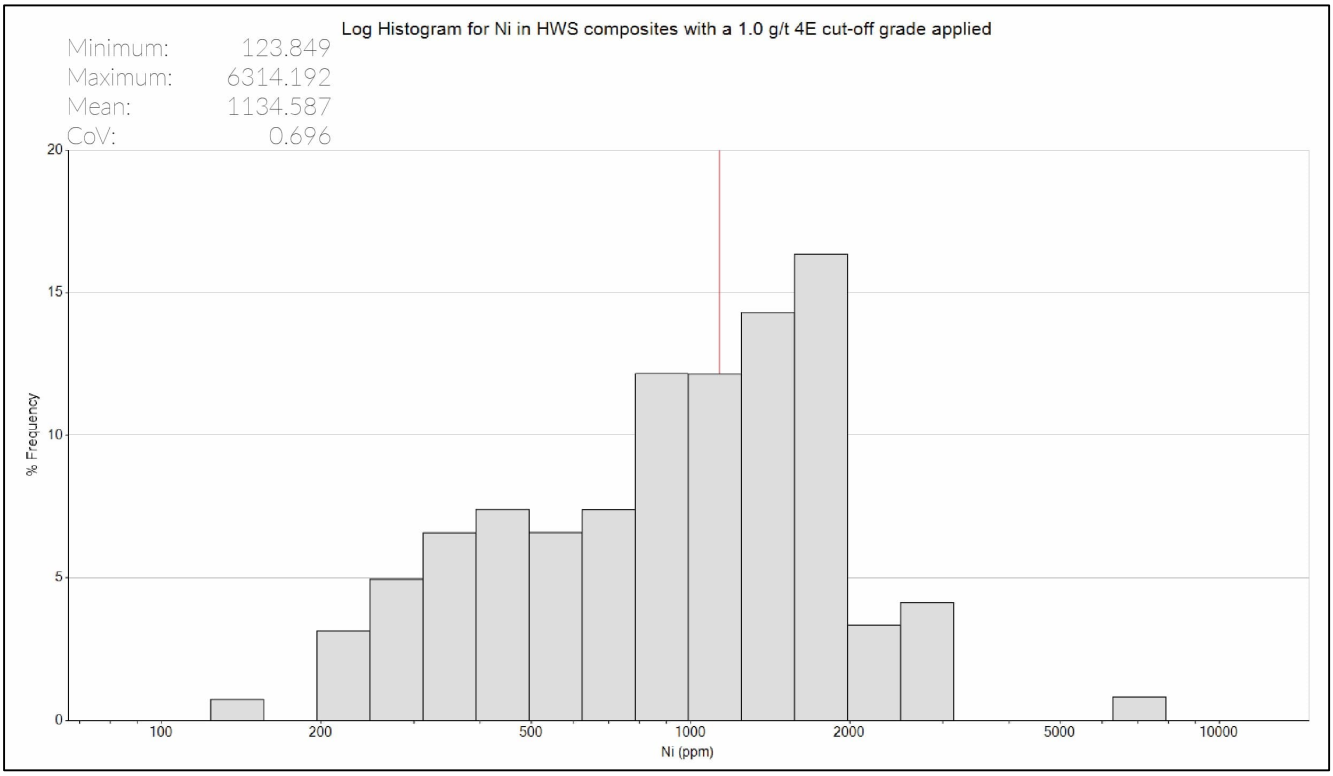


Figure 48. Log histogram of Ni in HWS composites with a 1.0 g/t 4E cut-off grade applied.

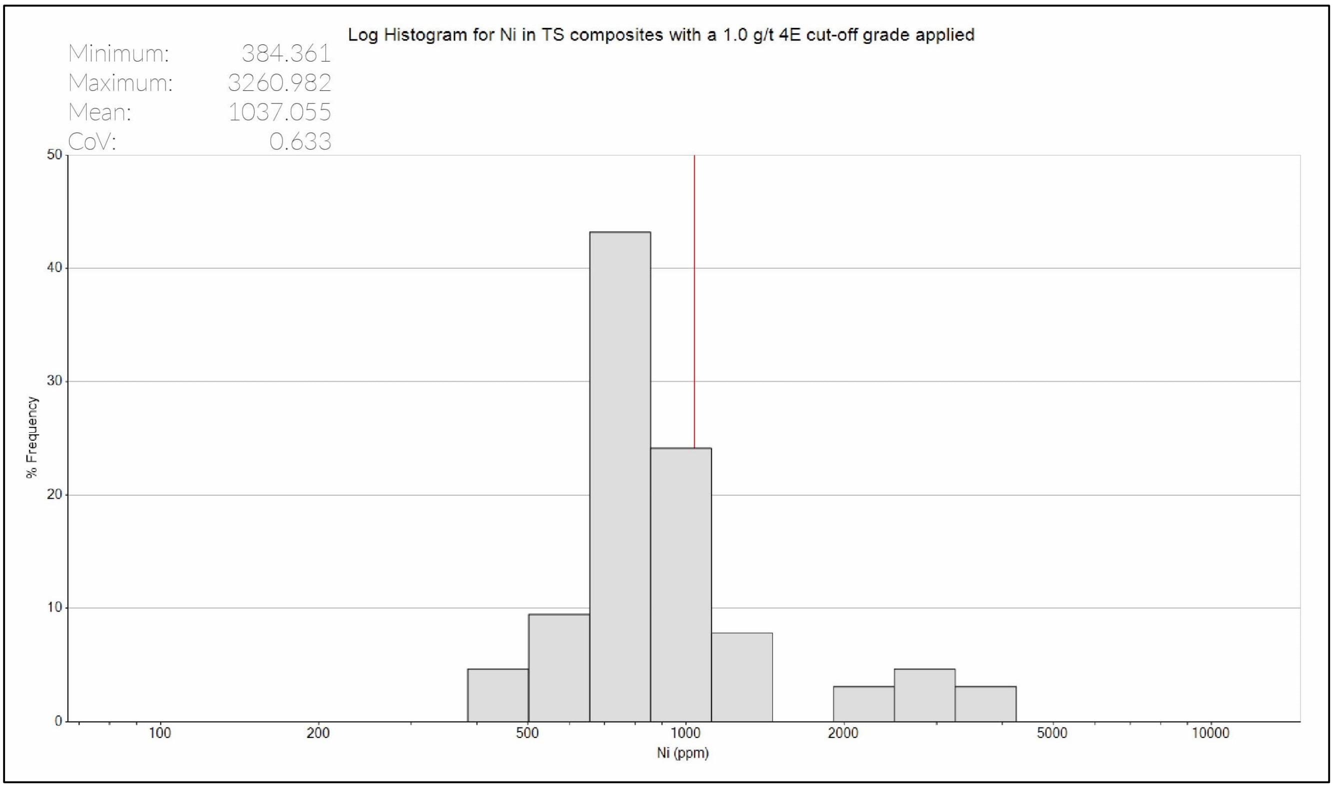


Figure 49. Log histogram of Ni in TS composites with a 1.0 g/t 4E cut-off grade applied.

10.6 Grade and density estimation

Since the data was insufficient for variogram modelling, probability estimation of the mineralised sub-units above the 1.0 g/t 4E cut-off grade, and for subsequent grade estimation through an interpolation method with a search neighbourhood based on the geostatistics, a different approach to the grade and density estimation was required.

Due to the limited amount of exploration data for Hacra North underground resource potential, the Competent Persons declares an Exploration Target. Continued exploration in terms of surface diamond core drilling and improved market conditions the initial targeted maiden resource could we be declared, if successful. In addition, a comprehensive RPEEE test is recommended taking cognicance of various options that Sylvania has at their disposal is critical as part of a future resource definition exploration drilling campaign. Following the definitions of the JORC Code (2012 Edition), an Exploration Target is declared for the Hacra North Project given the current exploration data.

Even though best practice would have required the grade and density estimation to be done by an acceptable interpolation method such as Kriging or Inverse Power of Distance, it was deemed acceptable to report an Exploration Target for this project.

Grade and density estimation in this project were therefore not based on the interpolation method, but rather a method of applying the sample data to specific volumes directly, ie. through the polygonal estimation method. The method used is explained below.

1. In the plan view, divide the HWS and TS wireframes into areas represented by each drill hole intersecting them but locating the midpoint between each pair and drawing a perpendicular line at this midpoint up to where it intersects another pair's midpoint's perpendicular line. The result is polygons in two dimensions which could be used to extract the three-dimensional volume of the wireframe within the lateral extent of each polygon and associated with each drill hole. The grades from the respective drill holes could be assigned to the volumes within each polygon by means of the polygonal estimation method.

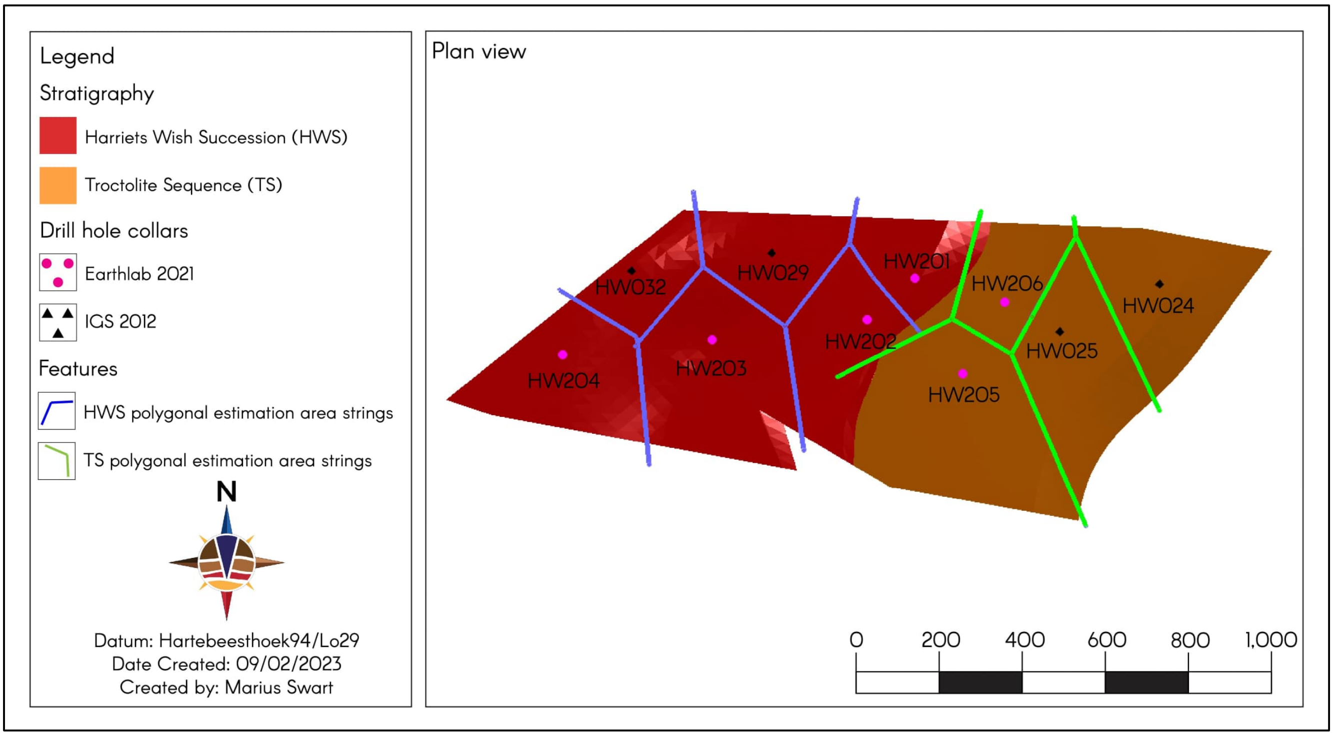


Figure 50. The strings drawn in plan view that was used to delineate the area and subsequent volume represented by each drill hole. Slightly different colour gradients are a result of the 3D view, and should not be confused with separate stratigraphic units.

2. For each drill hole, the proportion of the sum of sample lengths above the cut-off grade relative to the total sampled length in the respective domain was calculated to determine the estimated volume above the cut-off grade. At this stage of the Exploration Target investigation practical mining units were not considered, and all the intervals were used to report what is in-situ.
3. For each drill hole, the density-weighted average grade of Pt, Pd, Rh, Au, Cu, and Ni was calculated for the composite samples above the 4E cut-off grade. Where the SG value was absent, the nearest SG value within the same domain was used.
4. The average density per domain per drill hole was calculated from the composites above the 4E cut-off grade.
5. Each volume represented by a drill hole with samples above the cut-off grade was listed in a table with that volume/drill hole's respectively calculated proportion above the cut-off grade, density-weighted average grades, and average density. The tonnage and metal content could be calculated accordingly.

In the HWS the only drill holes that contained samples above the 4E cut-off grade were HW029, HW032, HW201, HW202, and HW203. In the TS, only HW024 and HW205 contained samples above the cut-off grade. It should be noted, however, that the absence of samples above the cut-off grade in drill holes such as HW201, HW206, and HW025 could have potentially been due to the holes not being drilled deep enough the reach the mineralised zones within the TS. This theory can unfortunately only be proven by additional drilling that clears the TS into the footwall or preferably even the basement. The number of mineralisation intersections is very low and therefore Exploration Target is reported and not an Inferred Mineral Resource.

It was suspected that possible faulting could have potentially stripped certain vicinities of higher grades, such as in the case of HW203 and HW204. Additional drilling should be able to provide an improved resolution on the faults' locations and orientations and where grade trends.

The tonnage-weighted averages of the grades were calculated for the total HWS and TS respectively, weighting by the tonnes of each portion represented by a drill hole with samples above the cut-off grade. The tonnages of the separate portions were simply summed to obtain the total tonnage of each HWS and TS.

Rh assay data was mostly limited to the 2021 drilling and sampling campaign's data, and therefore the Rh grades of the tonnes represented by the older drill holes lacking Rh data were based on the other drill holes' Rh data, weighted by the tonnes they each represented.

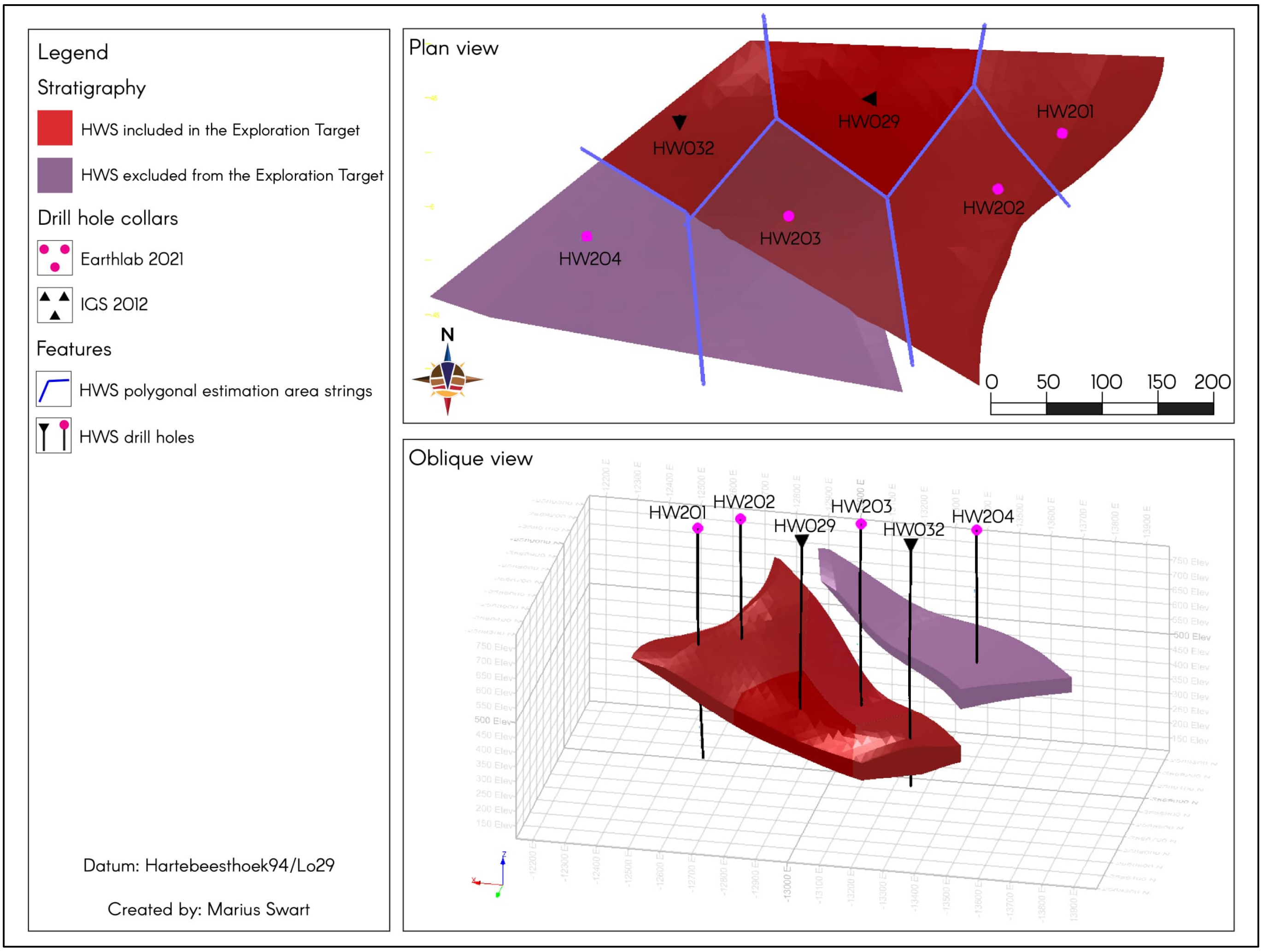


Figure 51. The HWS wireframe tonnes included in the Exploration Target are shown in red. The HWS wireframe tonnes represented by drill holes that lacked samples above the 4E cut-off grade and consequently excluded from the Exploration Target are shown in purple. Slightly different colour gradients are a result of the 3D view, and should not be confused with separate stratigraphic or economic units.

Figure 52 illustrates the wireframes that were included in and excluded from the Exploration Target respectively in two different colours. To remain conservative, the extent to which the wireframe (therefore the tonnes) represented by HW205 was extrapolated was limited to a radius of 200 m. This was done due to the uncertainty in the extent of the continuity towards the south, as opposed to the confidence in continuity towards the north of the Hacra Project which is the PTM Waterberg Mineral Resource. The initial wireframe extended beyond the 200 m limit to the nearest interpreted fault plane. Only the orange portions in Figure 52 were included in the TS part of the Exploration Target, further processed of course based on the ratio of the mineralised intervals compared to the full stratigraphic interval length.

While the HWS shows much better mineralisation continuity (as seen in Figure 51) compared to the TS, and one would not typically declare a mineral resource with seemingly discontinuous mineralisation as Figure 52 would have it appear, more factors should be taken into account. The stratigraphy (TS) shows good continuity across the drill holes and is interpreted to be a continuation of the stratigraphy of the adjacent PTM project –

the same stratigraphy that hosts part of its Mineral Resource. The geology's mineralisation is known to have high variability, so the slightly elevated grade in HW025 (which was eventually excluded from the MR) could have simply been a low-grade zone. The interval in HW025 with the slightly elevated grade has an average 4E grade of 0.71 g/t which is at the 78th percentile of the total TS grade distribution without a cut-off grade applied. After the 1.0 g/t 4E cut-off grade has been applied, it lies at the 94th percentile of the "waste" samples' distribution, and the 5th percentile of the mineralised samples' distribution. It is possible that HW025 contains the same mineralisation as HW024 and HW205, albeit much lower. Since HW201 and HW206 did not clear the entire TS into the footwall, it cannot be known whether the economic mineralisation is just beyond the deepest part of the drill holes (which had to be abandoned due to constant hole collapses).

Infill drilling clearing the TS into its footwall would provide additional data which could be used to establish whether the mineralisation continuity present in the adjacent project is present in the Hacra Project as well, or the contrary is true. For now, it is assumed the mineralisation continuity is similar to up north, given the continuity in the stratigraphy, however, the portions below the cut-off grade were excluded from the Exploration Target to remain conservative.

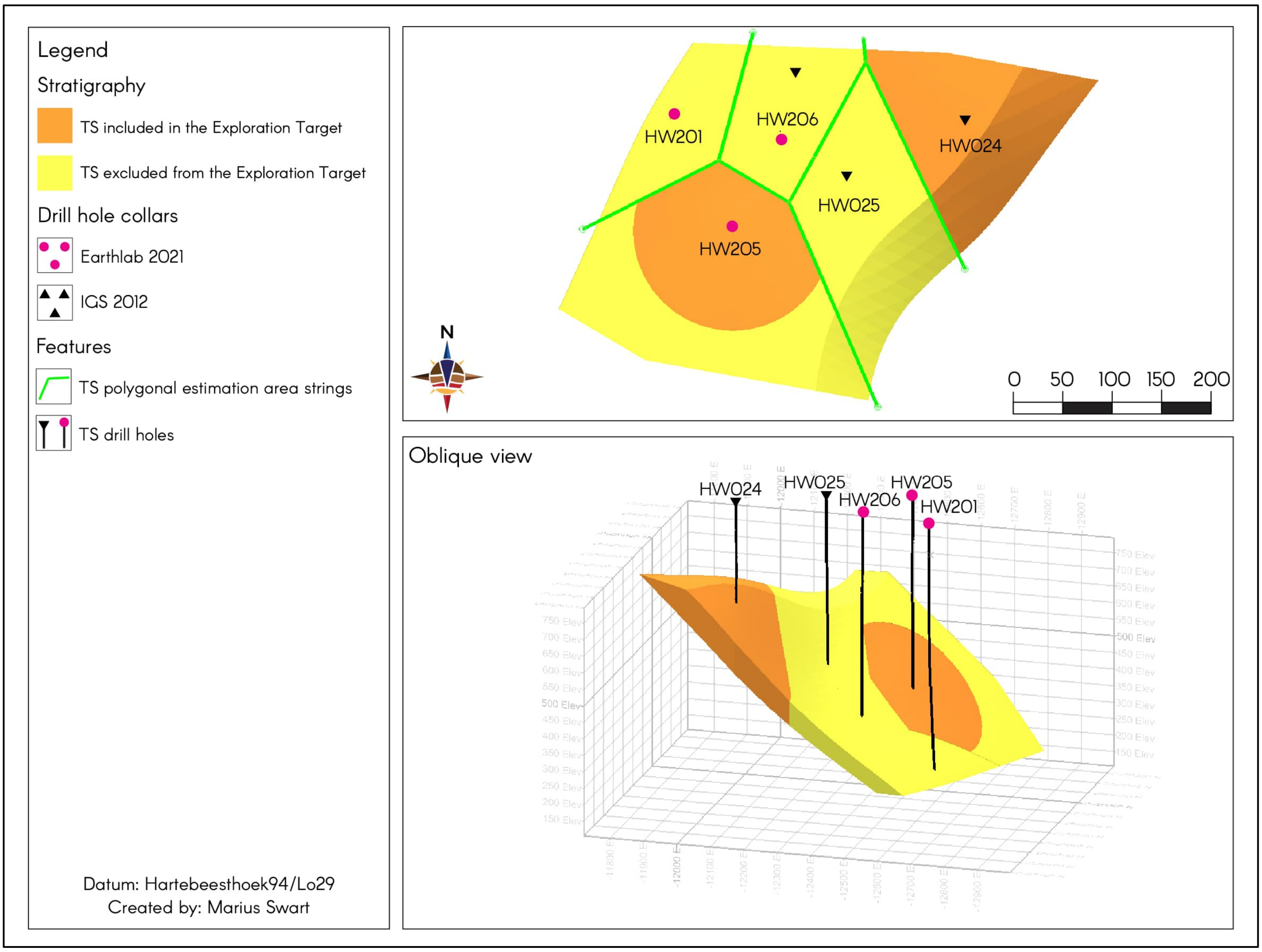


Figure 52. The TS wireframe tonnes included in the Exploration Target are shown in orange. The TS wireframe tonnes represented by drill holes that lacked samples above the 4E cut-off grade or were too far away from a drill hole and consequently excluded from the Exploration Target are shown in yellow. Slightly different colour gradients are a result of the 3D view, and should not be confused with separate stratigraphic or economic units.

10.7 Tonnage and grade ranges calculation

As part of declaring an Exploration Target with a range in tonnage and grade, it was decided to calculate the range in tonnage using two different geoloss percentages while still using the same proportional volume above the cut-off grade. A geoloss percentage of 20% was applied to calculate the lower end of the tonnage range, while a geoloss percentage of 10% was applied to calculate the higher end of the tonnage range. The density used to calculate tonnes were not calculated as ranges

The top end of the grade range was calculated as reported in Section 10.6 which offered grades that were weighted by the polygonal influence of each drill hole. After applying the cut-off grade as well as the manual flagging of samples, the global HWS and TS geometric means were respectively taken as the bottom end of the grade ranges. The combined grades were tonnage-weighted with respect to HWS and TS tonnages.

It was not possible to provide a range for Rh given the limited data and low Rh concentrations, leading to reporting only a single approximation of Rh for each zone.

Table 16. The volumes, tonnage ranges (from 20% geoloss to 10% geoloss) and calculated (maximum) grades of each drill hole's polygon. Where no samples above the 1.0 g/t 4E cut-off grade existed, manual flagging of "outlier" samples was done. The symbol on the left indicates whether the related volume was included in the Exploration Target. Representing drill hole column colours: Red: HWS. Orange: TS.

Status	Representing drill hole	Proportion above the cut-off grade	Volume above cut-off grade ('000 m^3)	Density (t/m^3)	Tonnage (Mt)	Tonnage @ 20% geoloss (Mt)	Tonnage @ 10% geoloss (Mt)	Grade						
								4E (g/t)	Pt (g/t)	Pd (g/t)	Rh (g/t)	Au (g/t)	Cu (%)	Ni (%)
✗	HW204	6.99%	282	2.81	0.79	0.63	0.71	0.50	0.19	0.27	0.02	0.03	0.13	0.02
✗	HW203 + HW204	5.29%	88	2.86	0.25	0.20	0.23	0.97	0.33	0.61	0.01	0.02	0.08	0.02
✓	HW032	28.56%	1,206	2.88	3.47	2.78	3.13	4.54	1.79	2.50	NA	0.25	0.23	0.06
✓	HW029	10.13%	504	2.97	1.50	1.20	1.35	2.92	0.70	0.79	NA	1.43	0.34	0.13
✓	HW201	51.27%	1,109	2.99	3.32	2.65	2.99	4.21	1.14	2.25	0.02	0.81	0.24	0.10
✓	HW202	87.32%	1,476	2.97	4.38	3.50	3.94	5.02	1.23	2.97	0.02	0.81	0.35	0.16
✓	HW203	3.96%	182	2.92	0.53	0.43	0.48	1.59	0.50	1.06	0.01	0.02	0.02	0.02
✗	HW201	12.12%	266	2.85	0.76	0.61	0.68	0.10	0.03	0.05	0.01	0.01	0.01	0.04
✓	HW205	35.03%	2,789	2.77	7.73	6.18	6.95	1.93	0.69	1.14	0.04	0.06	0.03	0.08
✗	HW206	17.39%	673	2.85	1.92	1.54	1.73	0.10	0.03	0.04	0.01	0.01	0.01	0.09
✓	HW024	18.72%	1,386	2.98	4.13	3.30	3.72	2.98	0.99	1.80	NA	0.18	0.09	0.13
✗	HW025	6.41%	488	2.94	1.44	1.15	1.29	0.71	0.32	0.38	NA	0.01	0.01	0.06

Table 17. The Exploration Target's grade summary.

Unit	Proportion above the cut-off grade	Density (t/m^3)	Tonnage @ 20% geoloss (Mt)	Tonnage @ 10% geoloss (Mt)	Grade ranges						
					3E+Au (g/t)	Pt (g/t)	Pd (g/t)	Rh (g/t)	Au (g/t)	Cu (%)	Ni (%)
HWS	25.4%	2.95	10.56	11.88	2.62 - 4.32	0.90 - 1.27	1.32 - 2.34	~0.01	0.39 - 0.70	0.21 - 0.28	0.08 - 0.11
TS	27.2%	2.82	9.48	10.67	1.68 - 2.29	0.62 - 0.79	0.98 - 1.37	~0.03	0.05 - 0.10	0.03 - 0.05	0.09 - 0.10
Combined	26.2%	2.87	20.04	22.55	2.18 - 3.32	0.77 - 1.03	1.16 - 1.86	~0.02	0.23 - 0.40	0.12 - 0.16	0.08 - 0.10

*Rounding of numbers may lead to computational discrepancies
**3E+Au: Pt + Pd + Rh + Au
***Conversion factor used for g to oz = 31.1034768

11 CONCLUSIONS AND RECOMMENDATIONS

Even though there is limited exploration data for Hacra North, geological and grade continuity have been established from the surface exploration conducted historically and during the 2021 campaign. The correlation between Hacra North and the contiguous PTM Waterberg Project in terms of geological and grade continuity has also been established. These correlations resulting from sound geological interpretation suffice for the declaration of an Exploration Target of Hacra North. The likelihood exists that with further exploration (infill and step-out drilling) and by increasing the dataset representing the HWS and TS higher geological confidence will be achieved.

Carefully planned and successfully executed exploration drilling will increase the geological and grade confidence achieved to date. Further exploration by the Company is highly recommended due to the attractive grades specifically of the HWS mineralisation.

Earthlab recommends a higher-resolution geophysical survey such as a magnetic survey with a 50 m line spacing over an area of approximately 3 km^2 to potentially gain more insight into the structural features present in the project area. This could reasonably be done withing 3 – 4 weeks.

Considering a hypothetical scenario where Reasonable Prospects for Economic Extraction would automatically be met for this deposit, to have a good certainty in being able to model, estimate, and declare a Mineral Resource based on sample spacing alone, Earthlab proposes a drilling campaign of 50 vertical diamond drill holes targeting both the HWS and TS. The holes are planned with a collar spacing of between approximately 50 and 150 m and will provide a good amount of data for geological modelling and possible geostatistical grade estimation. The closer spaced drill holes along with the 50 m line spacing magnetic survey will also aid in potentially modelling the brittle and/or ductile deformation with greater accuracy. The campaign of 50 drill holes entails a total of 32,196 m, allowing for 5 m over-drilling through the current existing HWS and TS wireframes, except for 10 holes within the southern fault block in HWS which allowed for additional metres due to the fault block's uncertainty. Based on the current wireframes, a total of 1,707 HWS samples and 2,008 samples will need to be budgeted for if sampling at 1 m intervals. It would be wise to budget for at least 20 % more samples as a contingency due to the uncertainty in the current wireframes, therefore adding up to 4,458 samples in total. Downhole geophysics should also be considered as part on the geotechnical investigation. At a conservative average drilling rate of 20 m per shift per drill rig (faster rates during shallow drilling and slower rates during deeper drilling), the 50 holes could potentially be completed within a year if at least seven to eight drill rigs are deployed, accounting for slower progress and downtime in this highly fractured geological setting which could hamper drilling progress. This will require a large team of geologists to process the vast amount of core generated, and therefore only drilling with four drill rigs over the course of two years could allow for a smaller team of geologists to manage the workload. An additional four to five months post-drilling could be sufficient to complete the logging, sampling, assay work, geological modelling, grade and density estimation, and completing the technical report. Given the depth and therefore mining method, the fractured nature of the geology, the unknown stability of the paleosol unit directly above the HWS, the grade variability, and size of the deposit, another two to three months should be given to investigate the Reasonable Prospects for Economic Extraction.

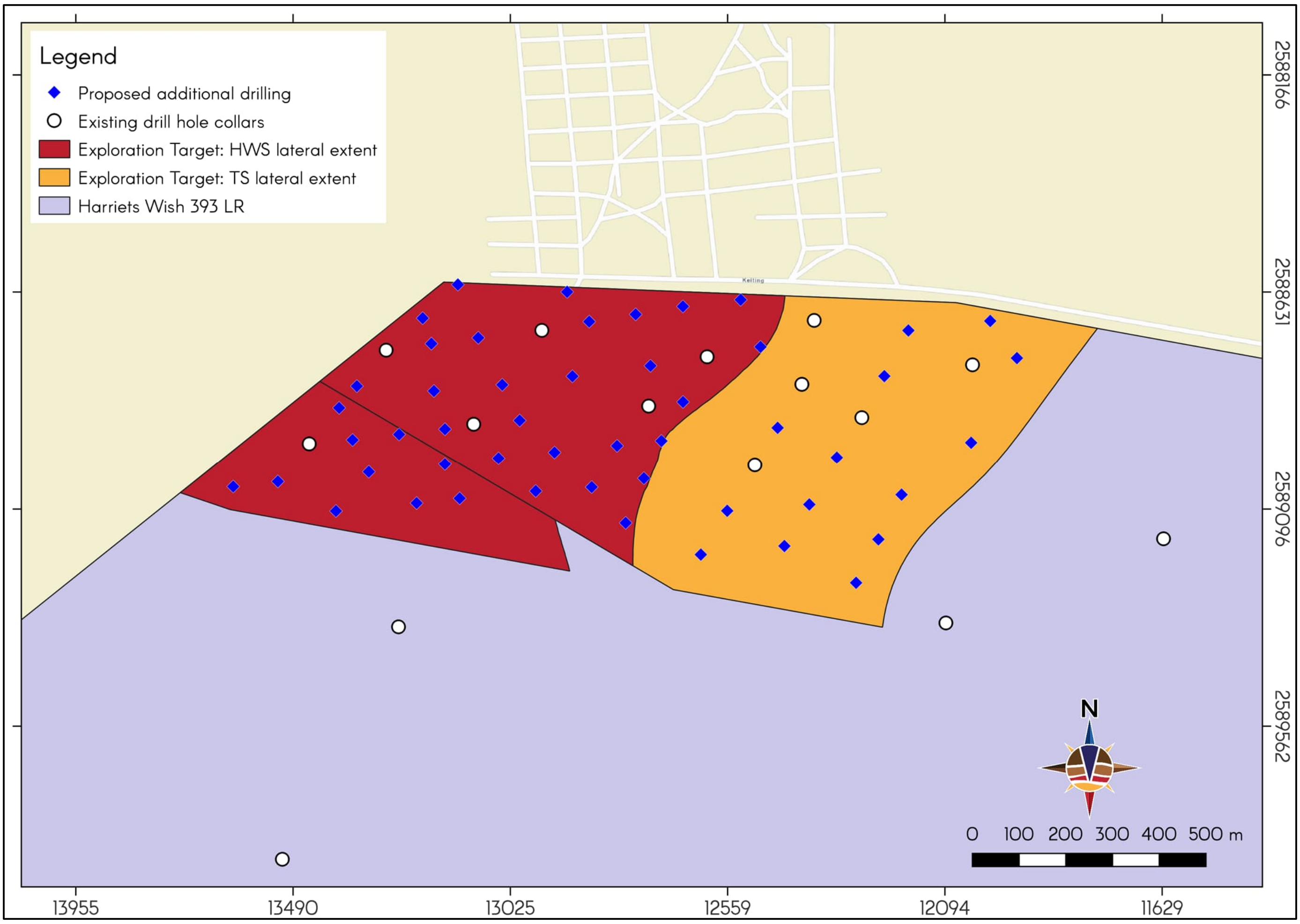


Figure 53. Phase 3 proposed exploration drilling consisting of 50 vertical diamond drill holes.

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13 APPENDIX A

Criteria: JORC Table 1 - Section 1: Sampling Techniques and Data	
Explanation	**Answer**
Sampling Techniques	
• Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry-standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, handheld XRF instruments, etc). These should not be taken as limiting the broad meaning of sampling. • Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurements or systems used. • Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done, this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant the disclosure of detailed information.	• Primary samples are created from diamond drill core and their sample IDs are written on the core surface. • The core was sample marked to lithological boundaries where possible, remaining within the minimum and maximum sample weight limits of 300 g and 4 000 g outlined by the SGS South Africa (Pty) Ltd (SGS) laboratory who was used for sample analysis. • Sampling representing lithological contacts is done to obtain samples that provide assay results representative of individual lithologies. • All sample analysis is done by SGS. Samples are dried and pulverised to produce a 30 g powdered sample where Au, Pt, Pd and Rh content is analysed using lead fusion. A subset of the pulverised material is further analysed for major elements using the ICP-OES method.
Drilling Techniques	
• Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other types, whether the core is oriented and if so, by what method, etc).	• Diamond core drilling was undertaken. • Two drill rigs capable of drilling BQ-size core were used to complete the drilling programme. Only HW202 was drilled NQ-size. • The BQ bit produced a 60 mm hole diameter and recovered a 36.4 mm core diameter. The NQ bit produced a 75.7 mm hole diameter and recovered a 47.6 mm core diameter. • Core was not orientated.

Drill Sample Recovery	
• Method of recording and assessing core and chip sample recoveries and results assessed. • Measures taken to maximise sample recovery and ensure the representative nature of the samples. • Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	• Sample recovery was done by core drilling. • Core stick-ups reflecting the depth of the drill hole are recorded at the rig at the end of each run with regular depth checks to ascertain the accurate depth of the drill hole. • Core recovery was assessed by collecting basic run-based geotechnical parameters (recoveries, RQD, etc) to assess the performance of drilling recoveries. Core recovery over 6 drill holes averages approximately 97%. The core loss was most prevalent within the top 15 metres of drill holes within the fractured and weathered zone averaging a 41% overall recovery rate. • The good average core recoveries especially within the mineralised zones preclude any bias on grade.
Logging	
• Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies. • Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography. • The total length and percentage of the relevant intersections logged.	• All drilled core was logged by qualified geologists under the guidance and supervision of a Senior Exploration Geologist. • All logging was done on full core and was conducted on a centimetre scale which included lithological, alteration, mineralisation and structural information. • No geotechnical logging was included in this study but core recovery and RQD measurements were taken and recorded on a core block-to-core block interval. • Geological logging is mostly qualitative in nature and done in such high detail that it can be used to support an Exploration Target and any further exploration studies. • Core was photographed one tray at a time in both dry and wet conditions. • All recovered core was logged.
Sub-Sampling Techniques and Sample Preparation	
• If core, whether cut or sawn and whether quarter, half or all core taken. • If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	• Primary sampling was done on diamond drill core that has been longitudinally split into half core with two core saws. • The samples were neatly and strictly packaged according to the sample guidelines set for the project. Real samples were submitted alongside

• For all sample types, the nature, quality and appropriateness of the sample preparation technique. • Quality control procedures adopted for all sub-sampling stages to maximise the representivity of samples. • Measures taken to ensure that the sampling is representative of the in-situ material collected, including for instance results for field duplicate/second-half sampling. • Whether sample sizes are appropriate to the grain size of the material being sampled.	blanks, CRMs, and duplicates to assess the quality of the laboratory sub-sampling stages. • Sample preparation techniques were completed by SGS Laboratories at both Rustenburg and Randfontein. • All samples have their Relative Density (RD) measured using Archimedes Principle where the sample's weight is measured in air and again when submerged in water. For every 10 samples measured, 1 sample will be remeasured by the supervising geologist to ensure correct measurements are being taken. • For every 10 primary samples marked out, a Field Blank, Field Standard and a Pulp Duplicate are added to the sample consignment. • Blank samples and CRMs are bagged into envelopes under the supervision of a qualified geologist where each envelope consists of 100 g of the respective material being bagged. Each envelope is weighed before being sealed and special care is taken to ensure no contamination occurs between all material being bagged. • Field blanks and field standards (included for quality control purposes) comprise certified reference materials, the latter of which are inserted randomly. • Sample sizes were dictated by the length of lithological units present down the length of the drill holes. Samples had a minimum length of 25 cm and a maximum of 1.5 m. The sample sizes are considered suitable for the material collected (Drill core).
Quality of Assay Data and Laboratory Tests	
• The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. • For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc. • Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.	• All samples were analysed by SGS using three methods across two laboratory facilities. The methods used to analyse the samples are Lead Fusion by Ag collection for Pt, Pd, and Au followed by Lead Fusion using Pd collection for Rh. Lead Fusion analyses were conducted at SGS Rustenburg Laboratory, where both methods are accredited. The ICP-OES method was used to analyse a multi-element suite which included but is not limited to analyses for Cu, Ni, Cr, and Co. This method is not accredited and was analysed at SGSs Randfontein Laboratory.

	• No handheld tools were used during the sampling of the drill hole as the entire length of the drill holes was sampled. • Quality control procedures adopted for the project included inserting a consignment of CRMs, Blanks, and Pulp Duplicates at a rate of one of each control sample per every ten primary samples. Quality control material was inserted at a frequency of 30%. • Acceptable levels of accuracy and precision have been established for the project. A separate quality control analysis report has been issued before the presentation of this report. • No umpire laboratory checks have been completed for the 2021 sampling programme.
Verification of Sampling and Assaying	
• The verification of significant intersections by either independent or alternative company personnel. • The use of twinned holes. • Documentation of primary data, data entry procedures, data verification, and data storage (physical and electronic) protocols. • Discuss any adjustments to assay data.	• No twin holes have been drilled. • Historical data was migrated from an Access Database to a secure and validated SABLE®7.0 Database. The recent infill drilling sampling and geological logs were recorded onto the relevant logging sheets by the responsible geologists at the core yard. This data is captured using a secure and actively validated SQLite SABLE®7.0 Database. Survey and assay data were received in CSV format from the relevant sources and directly imported into the database by the geological database manager. • Manual validation and built-in data validations are managed by the geological database manager. Any errors in data capture are flagged and cross-checked with paper logs to be rectified. • Based on the electron microprobe work Mr M.S. Reynders performed on a selection of samples for his M.Sc research on the Aurora Project on the farm named La Pucella, it was decided to discount Ni values on samples in the T1 and T2 Units on La Pucella where the lithology was logged as OGN (olivine-gabbronorite), OLGN (olivine-leuco-gabbronorite), and TROC (troctolite) given these lithologies' olivine content which showed cases of high Ni values. Seeing as Ni in olivine minerals cannot be economically extracted in a typical PGE-Ni-Cu processing plant, the OGN, OLGN, and TROC samples were discounted. The same method of discounting used in the La

	Pucella Mineral Resource was applied to the Hacra project given the similarities in the geology and high Ni values seen in olivine-bearing lithologies. Ni values of samples in the HWS and TS units were discounted based on their lithologies and Ni assay values. Only OGN (olivine-gabbronorite), OLGN (olivine-leuco-gabbronorite), and TROC (troctolite) samples were discounted given these lithologies' olivine content which showed cases of high Ni values in the electron microprobe work performed by M.S. Reynders. The discounting was based on the Ni content attributed to olivine in a selection of samples analysed by Reynders. OGN and OLGN: • If Ni ≥ 740 ppm, then the Ni values were reduced by 370 ppm • If Ni < 740 ppm, then the Ni value was halved. TROC: • If Ni ≥ 1040 ppm, then the Ni values were reduced by 520 ppm • If Ni < 1040 ppm, then the Ni value was halved.
Location of Data Points	
• Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation. • Specification of the grid system used. • Quality and adequacy of topographic control.	• Hand-held GPS was used in taking the collars before the drilling could commence. Later after all the holes were completed Rasema Geomatics surveyed all the borehole collars. • All Boreholes are capped and named. • The projected coordinate system used to display these collar positions on the map is Hartebeesthoek94_Lo29. • A Reflex EZ-TRAC survey tool was used for downhole surveys.
Data Spacing and Distribution	
• Data spacing for reporting of Exploration Results. • Whether the data spacing and distribution are sufficient to establish the degree of geological and grade continuity appropriate for the	• A total of six drill holes were collared to intersect both the Harriets Wish Succession (equivalent T-Zone) and the Troctolite Sequence (equivalent F-Zone). The hole positions were positioned during the planning process to take cognisance of the adjoining

Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied. • Whether sample compositing has been applied.	Waterberg PGM project deposit strike and dip, the local geological structure, and the geological succession of the stratigraphic sequence. Step-out drilling along the strike achieved certain successful intersections from the targeted T-Zone and F-Zone. Exploration Results reported for the Harca project contain the relevant details of the successful intersections and the unsuccessful drill holes. Sample compositing has been applied.
Orientation of Data in Relation to Geological Structure	
• Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. • If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	• The underlying T-Zone or Harriets Wish Succession target is largely steeply dipping at approximately 30° to 40° from the surface and truncates below the Waterberg Group sedimentary rocks. All the drill holes were drilled at -90°. All intersections are not perpendicular to the orebody and are logged and sampled along an apparent length of intersection.
Sample Security	
• The measures taken to ensure sample security.	• All samples are individually placed into their thick plastic bags, labelled, and sealed. Each is then placed into a larger plastic bag containing 30 samples called a sub-batch. Each sub-batch is checked and sealed. Before leaving the core yard, a sample security register is taken which lists all sub-batches being sent for analysis. The samples are checked into the laboratory facility by a senior geologist or responsible assistant and signed for in the sample security register by a facility representative and by the senior geologist delivering the samples. On delivery, both a senior geologist/responsible assistant and facility representative check all sub-batch bags are present. • All remaining half core and returned pulp duplicates are stored in the Volspruit core shed in locked storage facilities
Audits or Reviews	

• The results of any audits or reviews of sampling techniques and data.	• No external audits have been completed on the sampling techniques and data. • Data reviews and validations have been completed internally. Quality control data has been reviewed internally by Earthlab Technical Division (Pty) Ltd. No significant issues were identified regarding the data quality.
Mineral Tenement and land Tenure Status	
• Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national parks and environmental settings. • The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	RPM and Sika Bopha • RPM and Sika Bopha held the three farms Hacra, Cracouw and Harriets Wish under prospecting rights and have since transferred the rights to Hacra. • Prospecting rights in respect of the farms Cracouw and Hacra have been relinquished by Hacra. HACRA • The Harriets Wish farm comprises 2,346.98 ha and is covered by mining right MPT No. 14/2016 held by Hacra. • The mining right was granted for 30 years, expiring on 8 December 2045 renewable 60 days before the expiry date. • The Mining Right was issued by DMRE to Hacra for PGM, copper, nickel, gold and silver. • Sylvania has a 67% stake in Hacra, while the BEE entity holds 29% and the remaining 4% is owned by Tario 537 (Pty) Ltd. • The interests of the immediate communities within the Mining Right area are represented through the Harriets Wish Community Company. • Permissions to access the land were granted by the lawful occupiers of Harriets Wish farm.

Criteria: JORC Table 1 - Section 2: Reporting of Exploration Results	
Explanation	Answer
Exploration Done by Other Parties	

• Acknowledgement and appraisal of exploration by other parties.	• Historical exploration work on the Hacra project has been undertaken by several mineral exploration companies including Anglo American Platinum from 1970 to 2006. Exploration efforts included basic geological mapping; soil sampling; ground magnetic survey interpretations and diamond core drilling. • Further exploration drilling was undertaken by PPD and Great Australian Resources during 2008 and 2009 before the project was acquired by Hacra. • In 2012, Hacra undertook further exploration drilling targeting the deeper northern portion of the farm Harriets Wish following the publically report discovery of PTM's Waterberg deposit on the neighbouring farm. • The exploration data generated over the years was of high-quality industry standard, however, to date no Mineral Resource has been declared over the project.
Geology	
• Deposit type, geological setting and style of mineralisation.	• The T-Zone is a hydrothermally altered, syngenetic, ortho-magmatic PGE-Cu-Ni deposit, within the uppermost portion of the Main Zone, Rustenburg Layered Suite (RLS), Northern Limb of the Bushveld Igneous Complex. • The local geology of the area is divided into the overlying Waterberg Group followed by the Upper and Main Zones of the RLS and Archean Basement. The RLS is subdivided into the following units from the top of the sequence downwards: the Upper Zone Magnetite Gabbronorites, T-Zone, Main Zone Gabbronorites, Main Zone Ultra-mafic Sequence, Basement Transition Zone, and Archean Basement. • Mineralisation is present throughout the T-Zone as mostly disseminated to net-textured base-metal sulphides which are interstitially hosted by anorthosites, olivine gabbronorites, and gabbronorites. Mineralisation is associated with recrystallisation and hydrothermal metasomatism in the form of mainly sericitisation and chloritisation. Sulphides include chalcopyrite30-50, pyrrhotite30-50, pentlandite<10, and minor pyrite<2.

Drill Hole Information	
• A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: ○ easting and northing of the drill hole collar ○ elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar ○ dip and azimuth of the hole ○ down hole length and interception depth ○ hole length. • If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.	• Eleven (11) holes were drilled during the programme, including multiple deflections on some of the boreholes. All of the diamond holes were drilled -90˚ from the surface. • Final drill hole depths ranged from a maximum depth of 784.22 m and a minimum depth of 430.03 m. • All relevant drill hole information was recorded into a secure database and validated by the geological database manager to ensure good quality data has been used during the development of a resource for the area. • A detailed tabulation of the holes drilled is present in the EARTH-HACRA-21-01 Technical Report. • Rasema Geomatics conducted the collar surveys. Downhole surveys were carried out by Earthlab Technical Division using an EZ-TRAC tool from Reflex.
Data Aggregation Methods	
• In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated. • Where aggregate intercepts incorporate short lengths of high-grade results and longer lengths of low-grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail. • The assumptions used for any reporting of metal equivalent values should be clearly stated.	• A 4E cut-off grade of 1.0 g/t was applied to samples, with a 2 m waste interval allowed, to flag the mineralised zones in the HWS and TS, in which the 1 m compositing without residuals was done. • Ni grades in lithologies logged as OGN, OLGN, and TROC were discounted based on M.Sc research which included electron microprobe work on several samples to determine the average Ni content of the olivines. No other top-capping was done.
Relationship Between Mineralisation Widths and Intercept Lengths	
• These relationships are particularly important in the reporting of Exploration Results.	• While the true thickness of the stratigraphic wireframe models can be calculated, the mineralisation's true thickness is unknown.

• If the geometry of the mineralisation concerning the drill hole angle is known, its nature should be reported. • If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').	• The average down-hole length of sample intervals above the 4E cut-off grade is 6.69 m in the TS and 10.04 m in the HWS.
Diagrams	
• Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.	• Appropriate diagrams are included throughout the Technical Report stating the Exploration Results for the Hacra Mining Right.
Other Substantive Exploration Data	
• Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples —size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	• GAP Geophysics (PTY) Ltd. previously did an aeromagnetic survey across the Hacra and Aurora project area after which an aeromagnetic map was produced to assist with any large-scale geological and structural interpretations.
Further Work	
• The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling). • Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	• Re-logging of the existing exploration core south of the Hout River Shear Zone (Shallow T-Zone) on the farm Harriets Wish. • In-fill diamond core drilling with planning based on the re-logging of the stratigraphy. Logging, sampling and database capturing. • Geological modelling and resource estimation once additional drilling has been performed.

Criteria: JORC Table 1 - Section 3: Estimation and Reporting of Mineral Resources	
Explanation	Answer
Database Integrity	
• Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes. • Data validation procedures used.	• Data capturing from the logbooks is done by each responsible geologist per drill hole. Capturing of data is managed through the active validation systems of a SABLE®7.0 Database. This prevents any critical data to be entered into the database other than specified lookup codes that form part of the Geological Standard of the project. This also prevents data from being left out if a critical field has been entered without the subsequent information e.g. if the sample type is given as a field standard, SABLE will prevent the user from saving or moving on to the next entry without specifying the name of the standard in another column. • Both active and manual validations were adopted for the project. Manual validations of the data include: All required logs and fields within the logs have been populated; appropriate lithological and stratigraphic coding has been used and is in sequence; no overlaps, gaps, or zero lengths in the lithological and sampling logs; all the relevant fields within the sampling log have been populated correctly; quality assurance of the inserted certified reference materials has been correctly populated; check that the grade content is aligned to the stratigraphy.
Site Visits	
• Comment on any site visits undertaken by the Competent Person and the outcome of those visits. • If no site visits have been undertaken indicate why this is the case.	• The Mining Rights areas where Earthlab has undertaken and supervised the exploration drilling have been visited by the Competent Person as well as the Exploration Core Yard Facility, which is situated on the farm of Volspruit where the Company holds Surface Rights and Mining Rights. Earthlab's exploration geology team has been deployed to these operations on a semi-permanent basis with weekly reports and feedback provided to the Competent Person for the duration of the exploration programme.

Geological Interpretation	
• Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit. • Nature of the data used and of any assumptions made. • The effect, if any, of alternative interpretations on Mineral Resource estimation. The use of geology in guiding and controlling Mineral Resource estimation. • The factors affecting continuity both of grade and geology.	• Although there is a high degree of certainty in the continuity of the HWS and TS stratigraphic zones in terms of presence within a specific area, and that zones of PGE-Cu-Ni enrichment exist in these stratigraphic zones, there remains a high degree of uncertainty in the exact spatial positions of these zones between the drill holes as well as the uncertainty in the structural features of the area such as faulting and shearing. • It is highly likely that the structural model will change with additional drilling data, however, it would probably be mostly related to positions of faults and related displacement, and not dramatically different interpretations such as folding. • Once sufficient data is available to perform best practice grade and density estimations through interpolation methods such as Kriging, the Resource Model figures will undoubtedly change. • It is assumed however that grade continuity will exist between most of the drill holes that have already intersected mineralisation.
Dimensions	
• The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.	• The HWS and TS zones lie underneath the Waterberg Group sedimentary lithologies starting at varying depths between approximately 250 to 400 m, and continuing down-dip to unknown depths, but were limited in this project to 800 m below the surface. • The TS zone's model down to 800 m below the surface has an approximate slope length of 750m, dipping at approximately 39 degrees. Its average true thickness is 67 m. • The HWS model has an approximate slope length of between 600 and 750 m depending on how one measures it. The mean is 38° while the median is 31°. The true thickness mean is 47 m and the median is 35 m.
Estimation and Modelling Techniques	
• The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme	• Block model estimation was not possible due to the limited dataset. • Since the PTM Waterberg Project is immediately adjacent to this project and

grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer-assisted estimation method was chosen include a description of the computer software and parameters used. • The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data. • The assumptions made regarding recovery of by-products. • Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation). • In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed. • Any assumptions behind the modelling of selective mining units. • Any assumptions about the correlation between variables. • Description of how the geological interpretation was used to control the resource estimates. • Discussion of the basis for using or not using grade cutting or capping. • The process of validation, the checking process used, the comparison of model data to drill hole data, and the use of reconciliation data if available.	assumed to be of the same geology, the Competent Person felt comfortable reporting an Exploration Target based on the following calculations: o Wireframe models of HWS and TS stratigraphic zones were modelled and volumes were calculated. The tonnage range was calculated as 20% geoloss to 10% geoloss of the modelled wireframes. o A cut-off grade of 1.0 g/t 4E was applied to the samples, with 2 m internal waste allowed. 1m composites created. o The ratio of samples above the cut-off grade relative to the total stratigraphic interval (in terms of length) was calculated to determine the ratio of the volume above the cut-off grade relative to the total model's volume. o The volume of the wireframes around each drill hole extending halfway to the neighbouring drill holes was calculated from polygons drawn in plan view to identify the areas (and subsequent volumes) represented by each drill hole. o Each drill hole's related volume was assigned its respective average density and density-weighted grade calculated from the samples above the 4E cut-off grade to obtain the top end of the grade range. The global geometric mean of the HWS and TS respectively (after applying the cut-off grade) was taken as the bottom end of the grade range.
Moisture	
• Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	• Tonnages were based on volume multiplied by SG measurements performed on raw core samples which might or might not have contained moisture. Moisture content was not measured.
Cut-Off Parameters	
• The basis of the adopted cut-off grade(s) or quality parameters applied.	• The 1.0 g/t 4E cut-off grade was based on the sample cut-off grade used in the PTM Waterberg Project (2019).

Mining Factors or Assumptions	
• Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.	• It is assumed that if this deposit were to ever be mined in the near future it would have to be extracted through underground mining and maybe as part of an extension of the PTM Waterberg Project situated immediately north of this project. Continued exploration in terms of surface diamond core drilling and improved market conditions the initial targeted maiden resource could well be declared, if successful. In addition, a comprehensive RPEEE test is recommended taking cognisance of various options that Sylvania has at their disposal is critical as part of a future resource definition exploration drilling campaign.
Metallurgical Factors or Assumptions	
• The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.	• No metallurgical assumptions were made other than the assumption that once this project reaches the stage at which modifying factors such as metallurgical factors have to be applied, a similar approach as that of PTM Waterberg would be the starting point since it would have to be considered as a part of that orebody.
Environmental Factors or Assumptions	
• Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported.	• N/A

Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.	
Bulk Density	
• Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, and the nature, size and representativeness of the samples. • The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit. • Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.	• N/A
Audits or Reviews	
• The results of any audits or reviews of Mineral Resource estimates.	• N/A
Classification	
• The basis for the classification of the Mineral Resources into varying confidence categories. • Whether the appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data). • Whether the result appropriately reflects the Competent Person's view of the deposit.	• Since the dataset was too limited to perform block model estimation through a best practice interpolation method such as Kriging, and uncertainty in the structural model remains, the deposit could not have been any better than an Exploration Target.
Discussion of Relative Accuracy / Confidence	

• Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate. • The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used. • These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	• N/A