Volspruit South MRE Technical Report

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Volspruit South Body

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COMPETENT PERSON'S CONSENT FORM

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

Report Name:

EARTH-PPD-PO_975-2-Technical_Report_1

The company releasing the Report:

Sylvania Platinum Limited

This deposit to which this Report refers:

Volspruit South Body

Date of the Report

30 January 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

Volspruit Mining Company (Pty) Ltd (hereafter "VMC"), a subsidiary of Sylvania Platinum Ltd (hereafter "Sylvania"), incorporated in South Africa, with its main country of operation currently being South Africa.

to prepare the documentation for

the Volspruit South deposit on the farm Volspruit 326 KR

on which the Report is based, for the period ended

30 January 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 Mineral Resources.

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

Sylvania Platinum Limited

	30 January 2024
Signature of Competent Person	Date
SACNASP	Pr.Sci.Nat. 400050/05
Professional Membership (a)	Membership Number (a)
FGSSA	963338
Professional Membership (b)	Membership Number (b)
	Marius Swart Olifantsfontein
Signature of Witness	Witness Name and Residence (suburb, town)

EXECUTIVE SUMMARY

Overview of the project and geology

Earthlab created a new geological model and Mineral Resource Estimate with platinum, palladium, gold, copper, and nickel estimated in the Mineral Resource of Volspruit South (VS). During the first part of 2023 Earthlab relogged all the available GVS drill core stored at the Volspruit core shed. The new lithological, mineralogical, and stratigraphic logging aided Earthlab in this MRE's creation.

The Volspruit Project (hereinafter "the Project," referring to both VS and VN combined, whereas VN refers to Volspruit North) is located on the farm Volspruit 326 KR as well as portion two of Zoetveld 294KR within the Mogalakwena district municipality, Limpopo Province, in the Republic of South Africa (RSA). The farm is situated approximately 15 km to the south of the town of Mokopane and 60 km south of the capital of Limpopo, Polokwane.

The Project is currently owned by the Volspruit Mining Company (Pty) Ltd. ("VMC") Iolite Trading 16 (Pty Ltd, which is a 100% Broad-based Black Economic Empowerment (BBBEE) company owns 26% of Volspruit Mining Company, while PPD owns 74%. PPD is owned 100% by Sylvania (Mauritius) Ltd which falls fully under the parent company, Sylvania Platinum Ltd ("Sylvania").

The following exploration techniques have been applied:

- Exploration geophysics (aeromagnetic and radiometric surveys)
- Soil geochemical sampling
- Surface exploration drilling (diamond and reverse circulation drilling)

The historical surface drilling and sampling database was provided to Earthlab by VMC in a Microsoft Access Database format, which has undergone a migration to a secure SABLE® database where each project is given a project definition with tailored validations and mandatory cleaning by Earthlab. This has been done to maintain data integrity as per the Joint Ore Reserves Committee (JORC) 2012 requirements.

As part of this report's MRE, Earthlab completely remodelled the stratigraphy and weathering zones based off the relogging work of the historic holes and created a completely new mineralised domain for the new estimation.

Stratigraphically the Volspruit Project area falls within the Lower Zone of the RLS below the Critical Zone, which is host to the Platreef deposit, making this particular PGM occurrence rather unique. The Lower Zone within the Northern Limb can be sub-divided into three main groups which include from the base upwards: the Volspruit Pyroxenite, the Drummondlea Harzburgite Chromitite, and the Moordrift Harzburgite Pyroxenite. The Lower Zone contains approximately 37 cyclic units which are numbered from the base upwards. These cyclic units' grade in composition and morphology upwards forming the basis of the sub-division stated above.

Cyclic units 1 through 10 in the Volspruit subzone display incomplete cycles where olivine and chrome-bearing pyroxenites at the base of these units gradually change into pyroxenite at the top. The upper portion of the cyclic unit 11 contains significant PGE-Cu-Ni concentrations and is host to the Volspruit Reef. Cyclic unit 11 consists predominantly of orthopyroxenite with varying proportions of olivine, chrome, and minor plagioclase.

The re-logging campaign of 2023 was conducted based on a new stratigraphic understanding generated by Earthlab from the work of Hulbert (1983) and Tanner et al. (2019), to better define the Volspruit Reef. In this model it was established that the Volspruit Reef is only confined within Cyclic Unit 11 Upper hosted by pyroxenites. The Volspruit Reef is a PGE grade-based domain, which displays moderate to sharp elevated PGE concentrations. The re-logging in 2023 could not establish a physical geological marker from the historical diamond drilled core related to the grade-based domain, despite the detailed mineral identification logging.

Cyclic Unit 12 Upper comprises homogeneous ortho-pyroxenites with minor chromite and no sulphides observed.

Cyclic Unit 12 Lower comprises a relatively small unit of harzburgites containing olivine which vary from poikilitic to inequigranular in texture. This unit does occasionally have sulphides but there are no significant PGMs concentrated here. This unit marks the top contact of the hanging wall in the Volspruit Reef which is confined in the Cyclic Unit 11 Upper.

The Volspruit Reef (VR) is confined within the Cyclic Unit 11 Upper. Sulphide mineralisation observed in the cyclic units surrounding Cyclic Unit 11 Upper did not show any significant Pt, Pd, and Au grades according to historic downhole assay grade profiles of 2E and Au. The unit comprises homogeneous ortho-pyroxenites with minor chromite. It can be sub-divided into several mineralised units, most prominently three units i.e., VR1, VR2 and VR3 along with internal waste zones defined as VR middling units (VRMID) which can be barren or have insignificant scattered mineralisation. These mineralised units are characterised by their base metal sulphide content.

Cyclic Unit 11 Lower forms the basal layer of Cyclic Unit 11 Upper and can be compared to Cyclic Unit 12 Lower as it consists of the olivine-bearing harzburgites which vary from poikilitic to inequigranular in texture and are sometimes strongly serpentinised at certain intervals. Serpentinisation increases with depth and poikilitic harzburgites to equigranular fine-grained dunites form the dominant lithologies. The sulphides in this cyclic unit do not have significant PGM mineralisation according to historic downhole assay grade profiles of 2E and Au.

The Volspruit Reef mineralisation is predominantly interstitial disseminated to net-textured sulphide assemblages hosted within olivine and chrome-bearing pyroxenites. The sulphide mineralisation within this horizon, in decreasing abundance, consists of pyrrhotite, pentlandite, chalcopyrite and cubanite (Hulbert, 1983). Sulphide assemblages reach their peak modal abundance at approximately 3 wt.% of the whole rock composition. Mineralisation is predominantly hosted by fine-grained equigranular ortho-pyroxenites with minor olivine and chrome occurrences.

The Volspruit Reef has provisionally been classified as a disseminated, PGE-Cu-Ni, syngenetic, ortho-magmatic deposit within the Lower Zone of the RLS by Hulbert (1983). Tanner et al. (2019) suggested that the parental magma of the Lower Zone had a separate ultramafic source. The B1 magma is modelled as a mixture of 22% solids equivalent to Lower Critical Zone pyroxenite with 78% liquid while the B1-UM magma represents chills of a basal ultramafic sequence with distinct high siderophile element chemistry from magmas in the eastern limb of the BC corresponding with results obtained by Tanner et al. (2019).

Summary of the Mineral Resource

The geological exploration dataset consisted of 46 diamond drill holes. Some drill holes were only considered during geological modelling and excluded during estimation given their location, reliability or if the mineralised zone was intersected or not, 32 holes were used in the model and 16 holes were used in the MRE. The drill hole spacing varies from 20 m to 165 m. Considering only the drill holes within the main stratigraphic model perimeter, the vast majority of assay samples had a length of 1 m. Based on literature and the geophysical interpretation, the deformation in this project was mainly brittle, horst and graben type fault blocks.

The following stratigraphic units were modelled in 3D namely:

- Soil and scree,
- CU12 as hanging wall waste,

- CU11U being the main stratigraphic unit of interest, given that practically all the mineralisation considered for the grade domain occurred with this unit, and the
- CU11L was simply modelled from the bottom contact of the CU11U down to an elevation of 736 mamsl in order to provide material beneath the potential ore unit for future mining studies.

A cut-off grade was applied to C11U to distinguish between material with economical concentrations and material below the cut-off being the lower grade portion. A 2E+Au cut-off grade of 1.2 g/t with both conservative and lenient settings in the COMPSE function in Datamine StudioRM was used, requiring a minimum mineralised interval of 2.5 m and allowing for up to 2.5 m of internal waste, was chosen as the final parameters to define the potentially economic domain within CU11U. This domain is referred to as the "Mineralised Domain." The remainder of CU11U which consisted of the samples coded as "waste" will be referred to as the "Waste Domain" but should not be confused with other portions of waste material situated within other stratigraphic units mentioned above.

Composites were coded with indicators of 1 and 0, i.e., 1 if they represented the Mineralised Domain and 0 if they represented the Waste Domain in CU11U. The indicators were analysed to determine indicator variograms for preparing for the probability estimation.

Since the existence and locations of the Mineralised Domain were too difficult to model with a wireframe in StudioRM, a technique called Probability Estimation was performed (also commonly referred to as Categorical Indicator Kriging).

Probability Estimation was done into the blocks using the indicator samples to estimate where a block has sufficient probability of being part of the Mineralised Domain, and where the probability of being part of the Waste Domain is larger.

Directional variograms were created in Snowden Supervisor v8.14 (hereafter "Supervisor") for Pt, Pd, Au, Cu, and Ni in the two respective grade estimation domain.

Kriging Neighbourhood Analysis (KNA) was first done in Supervisor to determine the starting point for the grade estimation parameters. KNA was done for Pt, Pd, Au, Cu, and Ni, in both the estimation domains. The parent block dimensions used for grade and density estimation were 80 mX by 40 mY by 2.5 mZ, rotated 73° clockwise.

The search ellipsoids' dimensions were set to the ranges of the variograms and tweaked in some cases during estimation iterations to optimise conditional bias statistics. The rotation of the search ellipsoids' major direction was to match that of the variograms in each estimation domain.

Kriging is considered to be the Best Linear Unbiased Estimator (BLUE) and minimizes the variance of estimation errors (Deutsch, et al., 2014). While Simple Kriging (SK) with a global mean tends to be the most statistically efficient unbiased linear estimator, it relies on a strong global stationarity assumption, which is often unrealistic. SK is however useful when data is limited as is the case with this MRE, and hence the use of SK for grade estimation. In the aim of reducing the reliance on a stationary global mean, the mean used during estimation was calculated locally within the search ellipsoid.

Rh and Ru were estimated in the block model by employing RANSAC Regression using the Pt, Pd, and Au values. The machine learning model that executed the regression was trained with the 2023 additional sampling which had assay results for Pt, Pd, Rh, Ru, Ir, and Au. Ir was excluded from the regression and Mineral Resources given its mostly below detection limit concentration.

The total geoloss applied in the 2022 MRE was 10%. Known geological losses faults which have been modelled with 2.5 m brackets on either side of interpreted fault planes.

The geostatistical parameters used to aid in the Mineral Resource Classification include Weight Given to the Mean (WGM), and Kriging Efficiency (KE). The final Resource Classification considered the results of the WGM and KE classification scores, and manually created zones of higher and lower confidence, which coincide to some degree with the drill hole spacing. The position of internal faults relative to the resultant KE and WGM results was also considered during classification. It should be noted that even though the portion classified as higher-level confidence Inferred meets the criteria to be considered as low-level confidence Indicated classification based on the WGM and KE, it was decided to rather classify the portion as Inferred, while identifying it as an area with a higher confidence which could be prioritised for infill drilling to potentially upgrade its classification. The reasoning for that is, following an extensive re-logging campaign and focussed mineral identification logging, a physical geological marker demarcating the Volspruit Reef could not be identified in the drill core. Due to the absence of a physical marker, no Measured or Indicated Mineral Resources have been declared for this new MRE.

The average grades of the MRE were obtained by calculating the metal content of each block or cell (grade * tonnes), taking the sum of the metal content per category (e.g. classification or weathering zone) and dividing it by the sum of the tonnes the corresponding category, resulting in an average grade across the entire category.

Grades were calculated on total tonnes. Geoloss was applied across the total tonnes of the MRE.

The table below contains the MRE grade per classification category.

Total Mineral Resource							
Category	Tonnage before geoloss (t)	Tonnage after 10% geoloss (t)	Density (t/m^3)	2E+Au (g/t)	4E+Au (g/t)	Cu (%)	Ni (%)
Inferred	11,775,475	10,597,928	2.85	2.00	2.16	0.06	0.20
Total	11,775,475	10,597,928	2.85	2.00	2.16	0.06	0.20

The table below contains the MRE metal content per classification category.

Total Mineral Resource							
Category	Tonnage before geoloss (t)	Tonnage after 10% geoloss (t)	Density (t/m^3)	2E+Au (oz)	4E+Au (g/t)	Cu (t)	Ni (t)
Inferred	11,775,475	10,597,928	2.85	681,771	735,673	6,728	21,307
Total	11,775,475	10,597,928	2.85	681,771	735,673	6,728	21,307

Key conclusions and recommendations

The VS MRE was performed at a higher cut-off grade for 2E+Au of 1.2 g/t compared to the MRE conducted by IGS in 2012, this resulted in a significant decrease in tonnage after a 10% geoloss, from 29,263,203 tonnes with a grade of 1.29 g/t for 2E+Au to 10,597,928 tonnes at a higher grade of 2.00 g/t for 2E+Au.

The increase in grade and decrease in tonnes was due to the Mineralised Domain being strictly based on a grade cut-off that was significantly higher than the one used in 2012 and the result of the relogging offering improved geological confidence that all the mineralisation was located in a single stratigraphic unit.

The Mineralised Domain was created with a cut-off grade applied on a sample level, coding the samples with binary indicators, and estimating the probability of the above-cut-off-grade domain (Mineralised Domain) existing in a location or not. The method offered a way of estimating the potential metal content that could be expected in estimated locations. Considering the size of the dataset used for the MRE, rigorous exploration and infill drilling will be required to improve the confidence in the geological interpretation and MRE.

Earthlab recommends that additional exploratory and infill drilling will always be advantageous to upgrade areas of lower confidence. Additionally, as recommended by IGS in their 2012 MRE report, Earthlab recommends further exploratory drilling to investigate the potential northward extension of the South ore body.

A geophysical survey of very high resolution could be of great benefit to identify and delineate fault structures with more confidence.

Earthlab also recommends that an SG-measurement verification campaign should be executed.

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LIST OF ABBREVIATIONS AND GENERIC TERMS

2E + Au	Platinum, Palladium, and Gold
Au	Gold
BC	Bushveld Complex
BHID	Bore hole identity
BMS	Base Metal sulphides
cm	Centimetre
Cr	Chromium
CRMs	Certified reference material
Cu	Copper
CP	Competent Person
CU11L	Cyclic Unit 11 Lower
CU11U	Cyclic Unit 11 Upper
CU12L	Cyclic Unit 12 Lower
CU12U	Cyclic Unit 12 Upper
DHID	Drill hole identity
DMRE	South African Department of Mineral Resources and Energy
DTM	Digital Terrain Model
E	East
Earthlab	Earthlab Technical Division (Pty) Ltd
ECS	Entity Component system
g/cm^3	Grams per centimetre cubed (density unit)
g/t	Grams per tonne
GVN	Grasvally Volspruit North (historic name)
GVS	Grasvally Volspruit South (historic name)
ha	Hectare
IGS	Integrated Geological Solutions (Pty) Ltd
IPD	Inverse Power of Distance
JORC	Joint Ore Reserves Committee
K	Potassium
KE	Kriging Efficiency
km	Kilometre
Km^2	Kilometre squared
km/h	Kilometres per hour
KNA	Kriging Neighbourhood Analysis
m	Metre
Ma	Million years ago
mm	Millimetre
MPRDA	Minerals and Petroleum Resources Development Act of the Republic of South Africa (Act 28 of 2002)
MRE	Mineral Resource Estimation
mX	Metres in the X-axis
mY	Metres in the Y-axis
mZ	Metres in the Z-axis
MZ	Main Zone of the Bushveld Igneous Complex
N	North
NE	North-east
Ni	Nickel

NQ	A letter name specifying 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
NW	North-west
Oz	Ounces
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 (Scoping Study).
PGE	Platinum Group Elements, these include Iridium-Platinum Group elements (Iridium, Osmium, Ruthenium); and Palladium-Platinum Group elements (Palladium, Platinum, Rhodium)
PGE-Cu-Ni	Platinum-Group Elements, Copper, and Nickel
PGM	Platinum Group Metals
Pt	Platinum
PPD	Pan Palladium (Pty) Ltd.
QAQC	Quality Assurance and Quality Control
RANSAC	Random Sample Consensus
RLS	Rustenburg Layered Suite
Rh	Rhodium
RPEEE	Reasonable Prospects for Eventual Economic Extraction
RSA	Republic of South Africa
Ru	Ruthenium
S	South
SE	South-east
SG	Specific Gravity (equivalent to density)
SHERQ	Safety Health Environment Risk & Quality
SK	Simple Kriging
SW	South-west
t	metric tonnes
Th	Thorium
TML	Thabazimbi-Murchison Lineament
t/m^3	Tonne per cubic metre
U	Uranium
VMC	Volspruit Mining Company (Pty) Ltd
VN	Volspruit North (current name)
VR	Volspruit Reef
VS	Volspruit South (current name)
W	West
WGM	Weight given to the mean
WGS	World Geodetic System
Wt.%	Percentage weight
XRF	X-Ray Fluorescence

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	Millimetre	=	0.0394	Inches
	Centimetre		0.3937	Inches
	Metre		3.2808	Feet
	Kilometre		0.6214	Miles
	Square metres		10.7639	Square feet
	Square kilometre		0.3861	Square miles
	Hectare		2.4711	Acres
	Cubic metre		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 Celsius	=	(n * 9/5) + 32	Degrees Fahrenheit

1 INTRODUCTION

This Mineral Resource Estimate (MRE) was done in fulfilment of purchase order number 975 placed on Earthlab Technical Division (Pty) Ltd ("Earthlab") by Pan Palladium South Africa (Pty) Ltd ("PPD").

Earthlab created a new geological model and Mineral Resource Estimate with platinum, palladium, gold, copper, and nickel estimated in the Mineral Resource.

Due to the overlapping of certain geological aspects and project particulars between Volspruit North (VN) and Volspruit South, some of the chapters in this report will be identical or near identical to chapters in the technical report of the Volspruit North (VN) 2023 MRE. There may also be content copied directly from the 2022 VN MRE (PO_798-07-Technical_Report_v1) where the information is related and applicable to VS.

1.1 Sources of information

1.1.1 Previous work

Earthlab received the Volspruit Project database in 2021 including a drill hole database, geophysical survey maps and report, a topographic scan, various historic reports including the 2012 MRE technical report.

1.1.2 New work

During the first part of 2023 Earthlab relogged all the available VN and VS drill core stored at the Volspruit core shed. The new lithological, mineralogical, and stratigraphic logging aided Earthlab in this MRE's creation.

1.1.3 Academic Literature

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

2 PROJECT LOCATION AND DESCRIPTION

2.1 Location

The Volspruit Project (hereinafter "the Project", referring to both VN and VS combined) is located on the farm Volspruit 326 KR as well as portion two of Zoetveld 294KR within the Mogalakwena district municipality, Limpopo Province, in the Republic of South (RSA). The farm is situated approximately 15 km to the south of the town of Mokopane and 60 km south of the capital of Limpopo, Polokwane.

Figure 1. Locality map of the Volspruit Project with respect to South Africa.

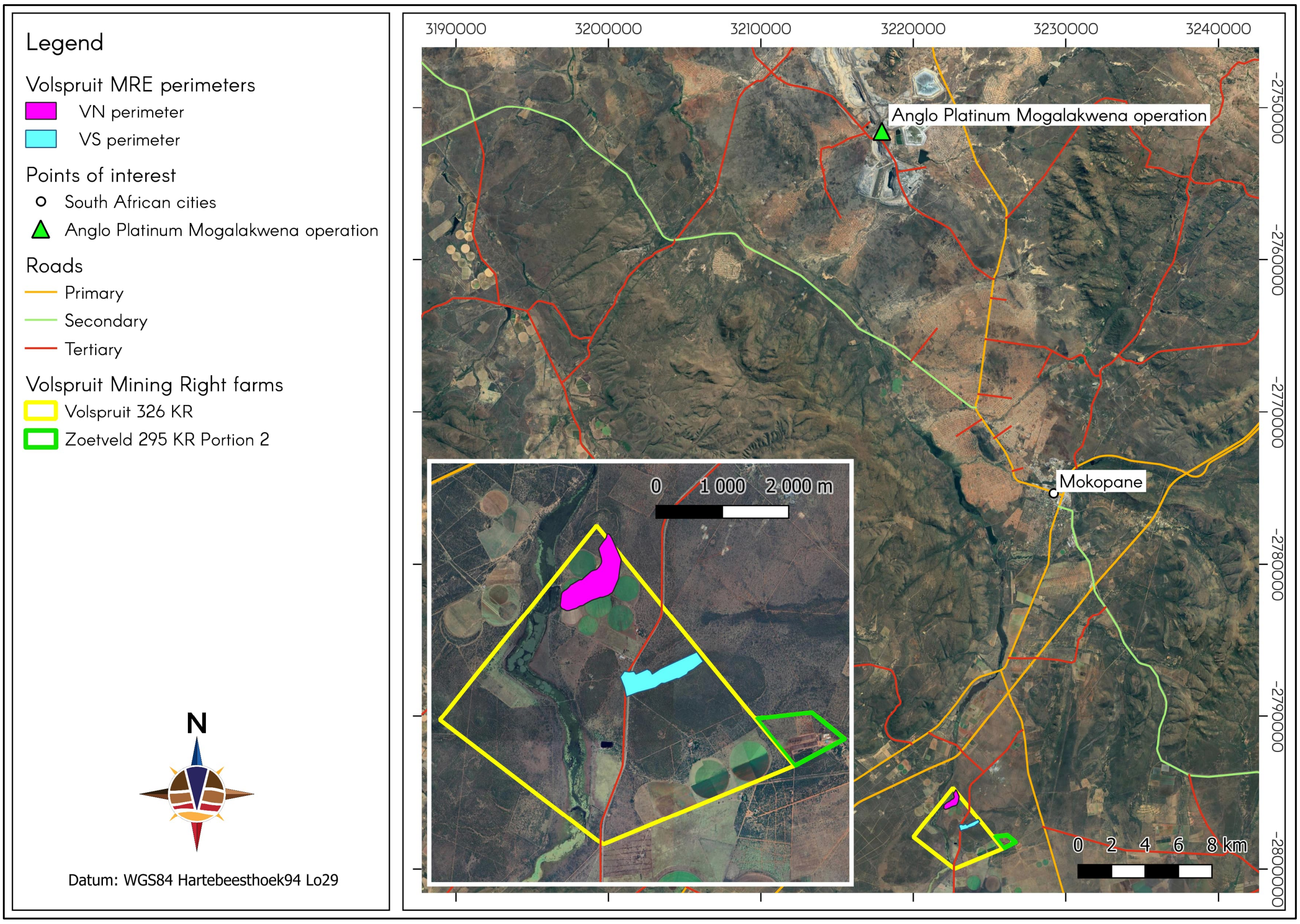

Figure 2. Location of the Volspruit Project relative to the nearest city and large-scale mining operation.

2.2 Topography

Apart from a small hill just north of VN and one south of VS, the project is situated in a relatively flat-lying area next to the Nyl River, at an elevation of approximately 1,050 to 1,100 metres above mean seal level (mamsl). The majority of the GVN domain lies between 1,060 and 1,070 mamsl, while VS lies mostly between 1,070 and 1,090 mamsl, as illustrated in Figure 3.

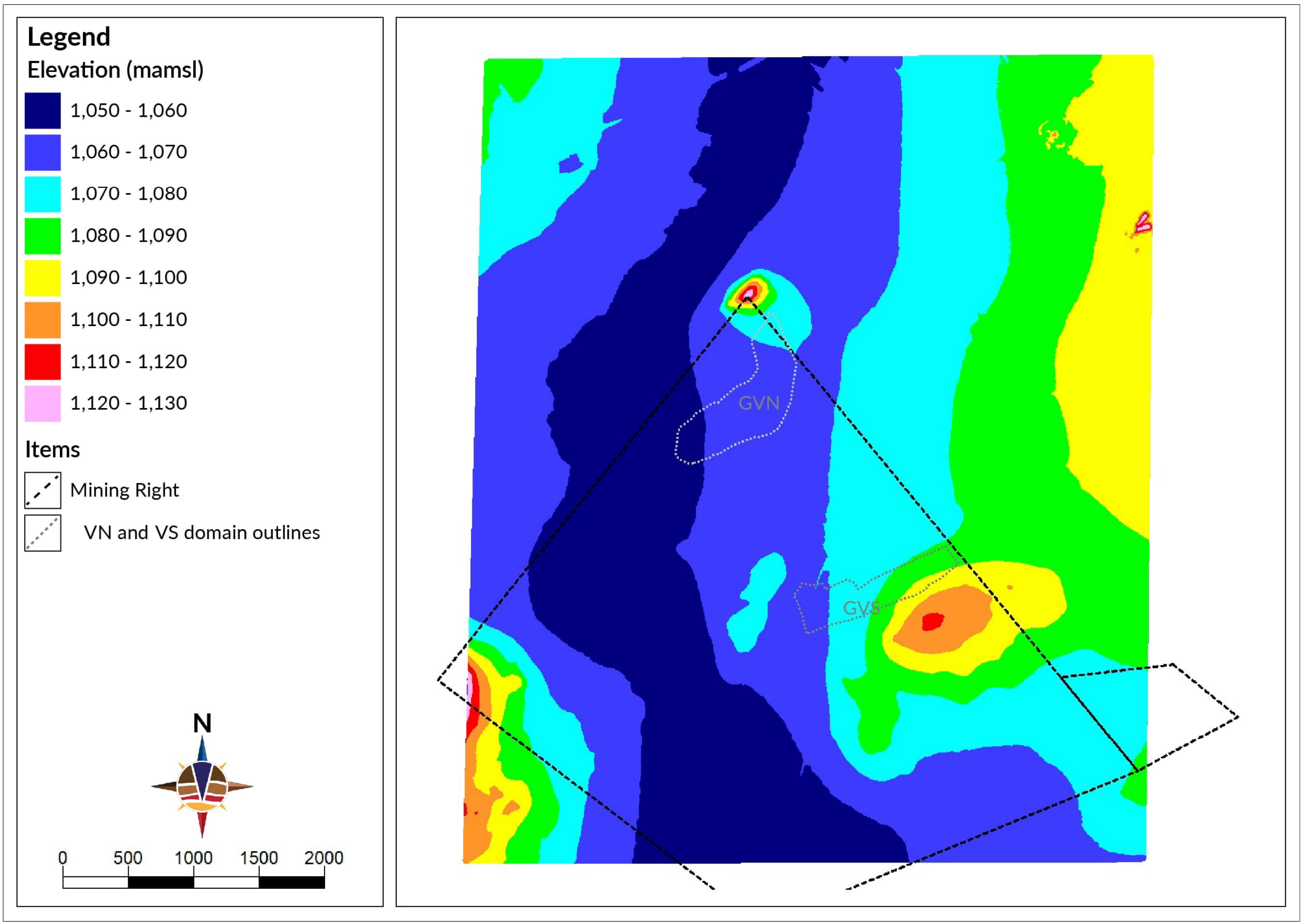

Figure 3. The topography of the project area.

2.3 Environment and Climate

The Project is situated alongside the Nyl River, which crosscuts the farm along the western boundary fence. The Nyl River forms a large flat-lying valley, which is filled with semi-marsh-like areas and shallow running outlets. The vegetation across the region is classified as Waterberg Savannah hosting a myriad of open tree plains on shallow rolling hills.

The climate is semi-arid with moderate winter temperatures, ranging from 3°C to 25°C, and warm to hot summer temperatures, ranging from 16°C to 36°C. The average annual rainfall in the area has been recorded as 350 to 400 mm, which is mostly confined to the summer months.

2.4 Land occupation

The land is partially used for farming, and apart from a few farmhouses and other infrastructure, the land does not host any communities or densely populated residential dwellings.

2.5 Infrastructure and Accessibility

The Volspruit Project is situated close to major infrastructure, including national roads, railway, and overhead power lines. The R101 national road from Mokgophong (previously Naboomspruit) to Polokwane and the north-south railway line are located on the northern side of the project area. The N11 national highway runs south-easterly to the eastern side of the project area, whereas the N1 national toll highway passes the western boundary fence of the project area.

On-site infrastructure includes water and power to the extent described in the historical Pre-feasibility Report dated December 2004.

Two small farmsteads and farming land are located on the project location, which is confined to the northern and south-eastern boundaries.

The project location can be accessed from the N11 national highway, via the Singlewood turnoff travelling toward the south. The Singlewood road is paved up to and within 5 km from the site, where access is over an all-weather gravelled section of the road. The gravel road is maintained by graders on a semi-quarterly basis but is subject to municipal delays and governance.

3 LAND TENURE AND MINERAL TENEMENT

3.1 Project ownership

The Project is currently owned by the Volspruit Mining Company (Pty) Ltd. Iolite Trading 16 (Pty) Ltd, which is a 100% Broad-based Black Economic Empowerment (BBBEE) company, owns 26% of Volspruit Mining Company, while PPD owns 74%. PPD is owned 100% by Sylvania (Mauritius) Ltd which falls fully under the parent company, Sylvania Platinum Ltd ("Sylvania").

3.2 Land tenure and surface rights

The surface rights of the area covered by the mining right in respect to portions 5 and 7 of the farm Volspruit 326 KR are held by Volspruit Mining Company, while the surface rights to portions 1, 2, and 8 are held by private individuals. The Surface Rights for Zoetveld are held by Zoetveld Properties (Pty) Ltd (Zoetveld). Zoetveld is a wholly owned subsidiary company of Sylvania and it is also the holder of a Mining Right in respect of the remaining extent and Portion 1 of the Zoetveld 294 KR.

The Surface Rights ownership over the Volspruit and Zoetveld are summarised in Table 1 below.

Table 1. Surface rights ownership breakdown.

Farm name	Portion	Owner	Contact person
Volspruit 326 KR	1	Faer Glen Properties No 55 (Pty) Ltd.	Phillipie de Klerk
Volspruit 326 KR	2	Elizabeth De Beer	Dewald De Beer
Volspruit 326 KR	5 and 7	Sylvania Properties	Lisa Watermeyer
Volspruit 326 KR	8	L P Steenkamp	Lukie / Kariena Steenkamp
Zoetveld 294 KR	RE	Zoetveld Properties (Pty) Ltd.	Lisa Watermeyer

3.3 Mining Rights

3.3.1 Volspruit 326 KR (MPT No. 11/2018)

This Mining Right was granted to Volspruit Mining Company (Pty) Ltd for Platinum Group Metals (PGMs), gold (Au), nickel (Ni), and chrome (Cr) in respect of the farms Volspruit 326 KR and Zoetveld 294 KR Portion 2, located in the Magisterial District of Mogalakwena, Limpopo Province (Figure 4). The Mining Right is valid for 30 years with the commencement date of 04 October 2017, expiring on 03 October 2047.

A Section 102 application was lodged with the DMRE to include the mineral copper (Cu) in terms of MPRDA. Section 102 was granted by the Department of Minerals and Energy on 12 January 2021 and notarially executed with the Mineral and Petroleum Titles Registration Office (MPTRO) in Pretoria.

3.3.2 Zoetveld 294 KR (MPT No. 16/2019)

This Mining Right was granted to Grasvally Chrome (Pty) Ltd. (Grasvally) for the mineral chrome (Cr) in respect of the remaining extent and Portions 4, 5 and 18 of the Grasvally 293 KR and the remaining extent and Portion 1 of the farm Zoetveld 294 KR, located in the Magisterial District of Mogalakwena. Limpopo Province. The Mining Right was granted in 2018 for a period of 30 years expiring on 04 September 2048.

A Section 102 application was lodged with the DMRE on 13 December 2019 to include the mineral rock aggregate and PGMs in terms of MPRDA. Section 102 was granted by the Department of Minerals and Energy and notarially executed with the MPTRO in Pretoria on 07 February 2020. The amendment excludes Cu and Ni.

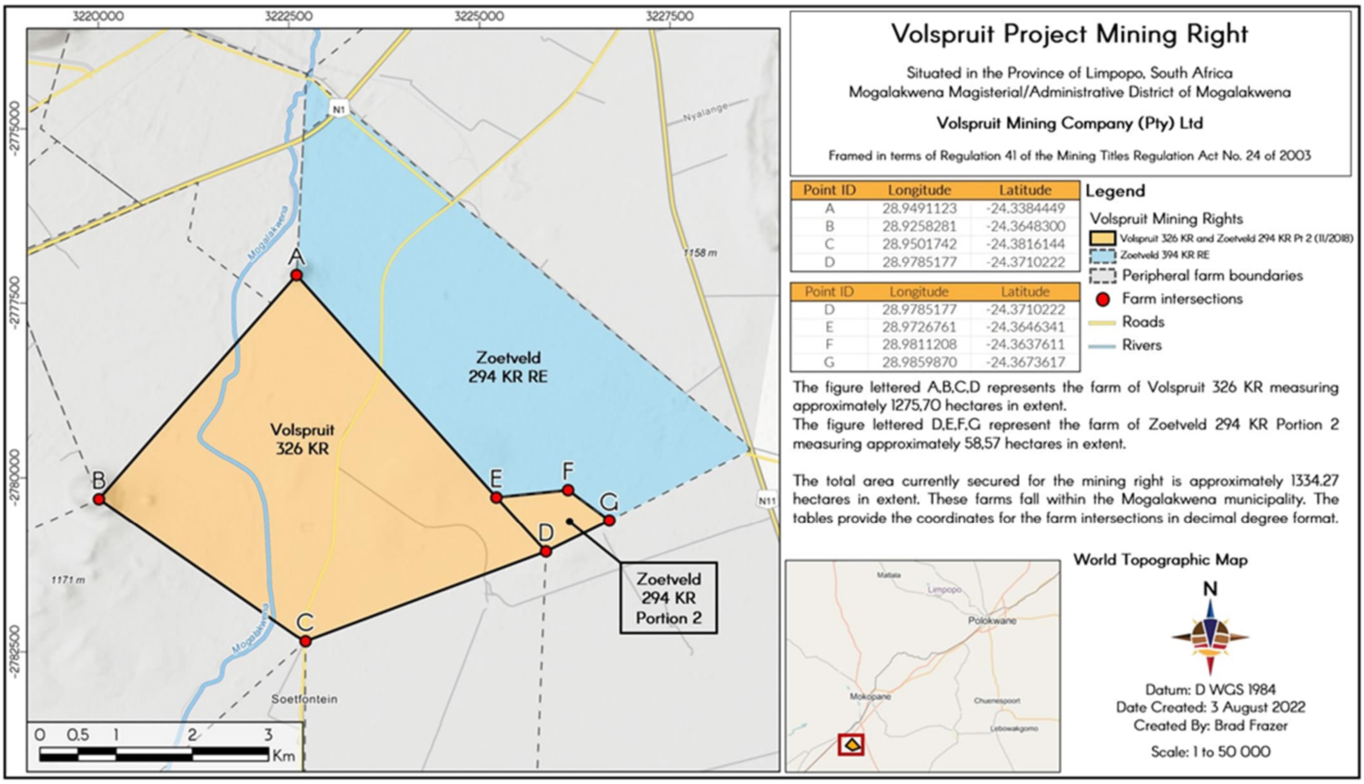

Figure 4. Map showing the location of the Volspruit Mining Right.

3.4 Royalties and agreements

A Sale of Shares and Claims Agreement (Agreement) in respect of the Grasvally has been entered into between Sylvania Resources Proprietary Limited (Sylvania Resources), Sylvania Metals Proprietary Limited (Sylvania Metals) and Forward Africa Mining Proprietary Limited (Forward Africa) on 03 November 2021. In this agreement Sylvania Resources and Sylvania Metals agreed to sell their shares and claim in Grasvally, respectively to Forward Africa. The agreement further stipulates that VMC remains the Mineral Rights holder for PGMs in respect of the Grasvally Mining Right. VMC intends to lodge a Section 102 application with the DMRE in terms of MPRDA to amend Volspruit Mining Right to include the Properties in the mining area to which the Volspruit Mining Right relates and to include the right to mine PGMs from the Grasvally Mining Right area.

According to the agreement, until such time that Section 102 has been granted and amendments to the Volspruit Mining Right have been notarially executed Grasvally and VMC shall enter into a contract mining agreement under which Grasvally will appoint VMC as contract miner, following the provisions of Section 101 of the MPRDA. Under this agreement, VMC will mine and process PGMs included in the Grasvally Mining Right and pursuant to which Grasvally will sell the PGMs so mined and processed to VMC until such time that Section 102 has been notarially executed.

4 PROJECT HISTORY

4.1 Ownership

Prospecting Licences over the properties comprising the Volspruit project were held at various stages by various mineral exploration companies. Previously, African Metals Corporation (Amcor), Anglo American Corporation (AA) and Shell held Prospecting Rights over Volspruit and conducted exploration work during the 1950s and 1960s. Rio Tinto Zinc (RTZ) was the holder of Mining Rights during the 1970s and 1980. Genmin held the Mineral Rights at some extent and drilled three metallurgical drill holes in addition to the 39 diamond drill holes over the Northern and Southern Bodies. Limited verifiable information is available from these periods (SRK , 2011).

In 2001 the rights to the property were taken over by PPD who drilled an additional 151 diamond drill holes in 2002 and 2003 over the project area that confirmed the mineralisation in the North and South Bodies and extended the North Body to the west (SRK , 2011).The Prospecting Right license was granted on 27 February 2006 for five years to the holding company of PPD.

4.2 Historic Exploration

4.2.1 Geophysics

The following section comprises a summary of the exploration geophysics completed for the Volspruit Project and references all the information below in the report titled, "Interpretation of High-Resolution Aeromagnetic and Spectrometer Survey Data over the Grasvally Project area, Potgietersrus, Northern Province, on behalf of Pan Palladium South Africa (Pty) Ltd", by Geoff Campbell, GAP Geophysics (Campbell, 2002).

During August 2002, a high resolution aeromagnetic and radiometric survey was flown by FUGRO over the Grasvally Project area on behalf of PPD. Data acquisition, processing, and interpretations were managed by GAP Geophysics, who subsequently delivered their preliminary results to PPD in October 2002. Interpretations were aimed at mapping the stratigraphy and structure of the Bushveld mafic and Basement rocks underlying the area, with a particular focus on the PGM-bearing pyroxenites occurring within the Lower Zone units.

FUGROs' survey was flown over a roughly rectangular-shaped block with dimensions of 10.5 km Northeast (NE) by 7.2 km Northwest (NW) approximately 13 km south of the town of Mokopane. The area flown falls on the eastern banks of the Nyl River and is bounded by quartzite ridges of the Pretoria Group in the NE.

Interpretation objects were outlined at generating pseudo-geological and structural maps which can better locate the following features:

- Floor contact and distribution of overlying Bushveld Marginal, Lower, and Critical Zones for possible PGM mineralisation.
- Lateral displacements and/or strike discontinuities along marker horizons, which reflect dip and strike faulting.
- Linear or curvilinear features reflecting shearing or faulting.
- Positions of intrusive dykes or veins which reflect significant mining loss-of-ground areas.

The mapping was considered qualitative in nature, although exhaustive, utilizing a conventional image processing approach incorporating multiple overlayed datasets. FUGRO flew the operations using a Bell 206 IIIB Jet Ranger at airspeeds of 120 to 160 km/h along a 130°T flight line direction at 100 m spacing, and a 220°T tie line direction at 1,000 m spacing. Navigation was managed through real-time differential GPS. The following methods, software and instrumentation were implemented for the geophysical survey.

4.2.1.1 Aeromagnetic survey

The magnetometer system used during the survey included a Two Scintrex CS3 caesium vapour system with a horizontal gradiometer sensor configuration. The sample rate was 0.1 seconds (4 m ground equivalence) at 0.01nT sensitivity.

Data was compiled by FUGRO using GEOSOFT OASIS and ECS software packages to produce a dataset following the following flight line procedures:

- Recovery of digital magnetic and GPS flight path data
- Inspection of velocity reports for speed error
- Importing of fiducials and sensor data to secure database
- Removal of magnetic spikes using fourth difference operators
- The normalisation of line magnetic data to a common datum

4.2.1.2 Radiometric survey

The radiometric system used included an Exploranium GR-280 spectrometer with a crystal volume of 1,000 cu in. The sampling rates were 1.0 seconds (40 m ground equivalence). Full ECS software spectrometer processing packages were used involving the following corrections and processes:

- Livetime/deadtime normalisation
- Energy calibration
- Cosmic correction
- Radon correction
- Noise adjusted singular value decomposition (NASVD)
- Windowing of 256 channel spectrum into K, Th, U, and Total Count
- Compton stripping of K, Th, and U channels
- Height attenuation correction
- Conversion to ground concentrations (%)
- Normalising ground concentrations to a common datum

4.2.1.3 Conclusions by GAP Geophysics

The major geological findings from the interpretations of the aeromagnetic-radiometric surveys concluded the following points (Campbell, 2002):

- PGM-bearing pyroxenites at the base of the Lower Zone do not display a unique geophysical signature which would allow for a direct airborne mapping campaign. However, the strong positive and unique magnetic signatures of the heavily serpentinised hanging wall Drummondlea Harzburgites allow for the indirect mapping of the lower PGM-bearing pyroxenites.
- The uplifted Lower Zone block to the west described by Hulbert and Von Gruenewaldt (1986) is confidently mapped through a series of N-S fault blocks along the 13 km NE to N-S striking arc of the Bushveld mafic rocks. The unit is fault-bounded and terminates to the east within the boundary of the Grasvally farm.
- The North Body Mineral Resource within the northern sectors of the Volspruit farm falls downdip from the mapped Drummondlea Harzburgites, inferring a bounding fault that throws up to the north.
- From an aerial point of view, the extensive Lower Zone outcrop is also mapped over complex dome-and-basin interference fold structures on Volspruit and southern Zoetveld, where they extend eastwards from the arc towards the basement contact. Aeromagnetic data alone cannot confidently classify these structures as domal or basinal.

- The apparent uplifting of the Pretoria Group quartzites in the southern parts of the survey may reflect late-stage faulting.
- Hulbert and Von Gruenewaldt (1986) four-phase structural interpretation appears to hold true and has been fully recognised. The various stages of faulting are attributed to the strike-slip movement associated with the Thabazimbi-Murchison Lineament (Zebediela Fault locally) immediately to the south of the area.
- The basement contact with the BC has been confidently mapped over most of the area via a combination of all the survey data above as shales and quartzites display significant and strongly unique geophysical signatures.

Figure 5 shows the interpreted geological map of the area by GAP Geophysics at the end of the project. Additional maps containing the separate geophysical survey data are contained within the original reports completed for the exploration geophysics.

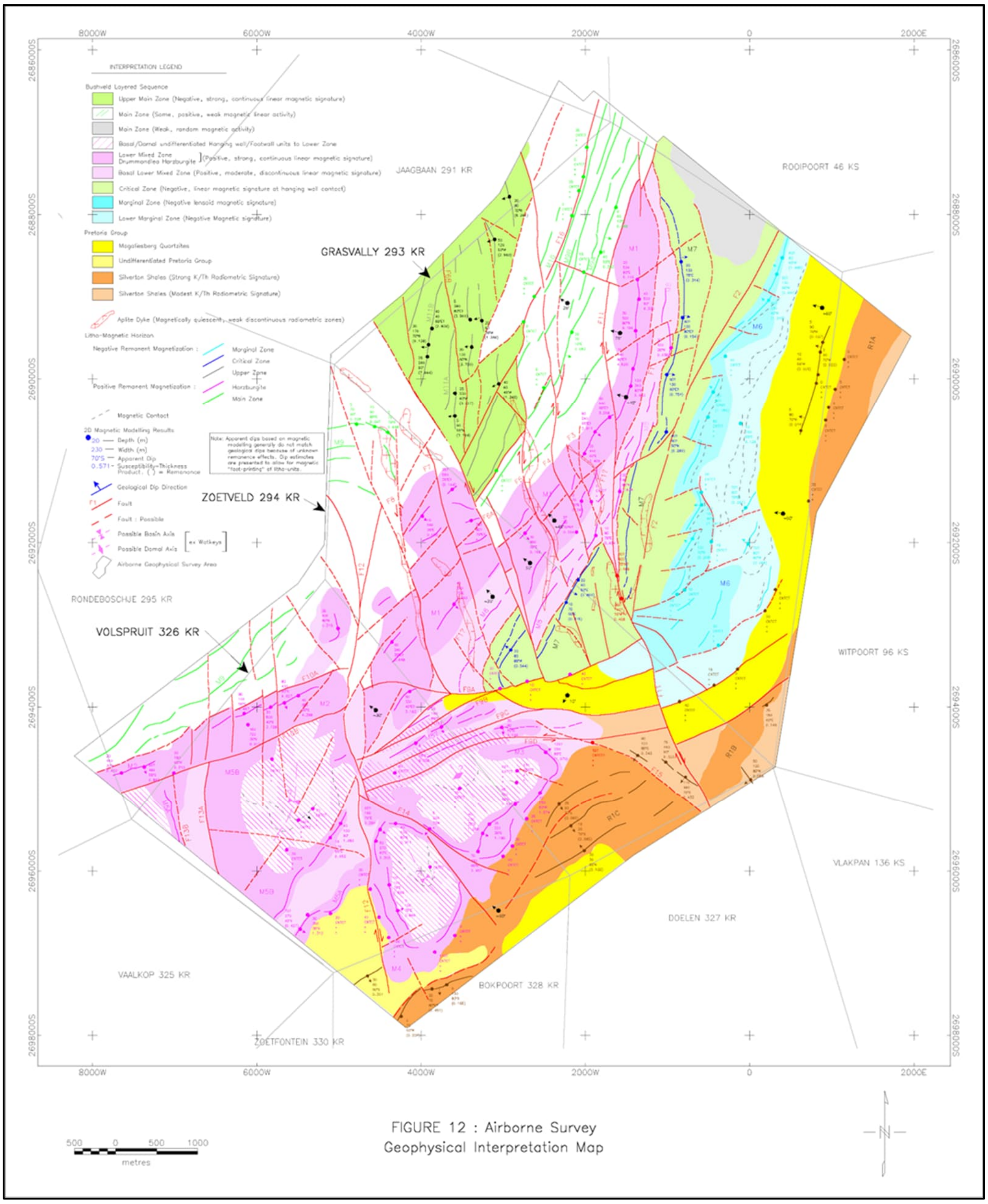

Figure 5. Interpreted geological map of the area by GAP Geophysics (Campbell, 2002).

4.2.2 Mapping

Given the subcropping nature of the deposit, field mapping has not yet been performed.

4.2.3 Soil sampling

Rio Tinto conducted a large soil sampling programme to source possible targets for PGM mineralisation. The information contained within the reports is unknown to Earthlab as no record has been provided.

Genmin continued the soil sampling programme from Rio Tinto producing a combined dataset containing a total of 3,193 samples. The samples were submitted for analysis by way of atomic absorption spectrometry for Cu, Ni and Cr. Only 45 samples and 104 analyte results are available from the database. Additionally, there is a single hand-drawn map showing the distribution of Cu (ppm) on Volspruit, which highlights the location of the North and South Body deposit relatively well (Figure 6). The source of the map is unknown and has not been verified by Earthlab.

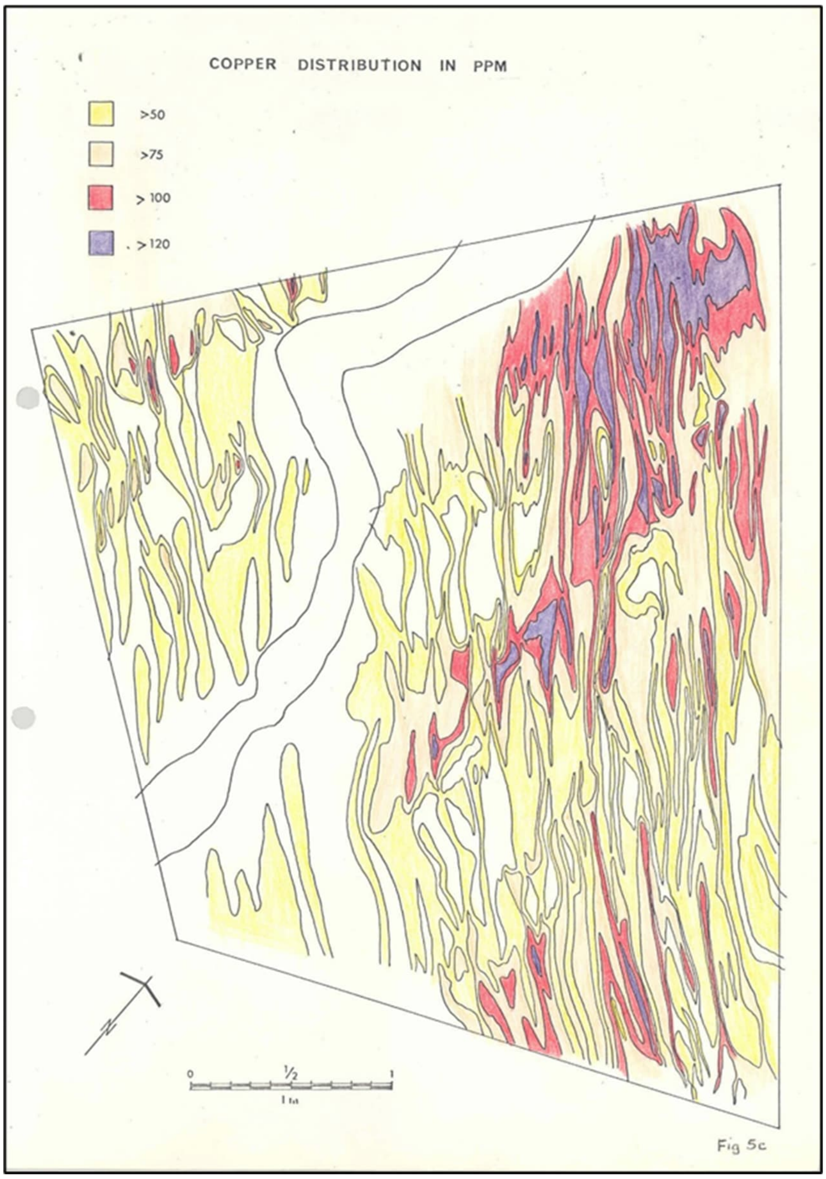

Figure 6. Relatively high Cu values identified by Genmin and Rio Tinto during their respective soil geochemistry sampling projects which coincide with the North Body location.

4.2.4 Surface drilling

The Volspruit Project contains both diamond and reverse circulation drill hole data on two separately identified ore bodies, the North Body, and the South Body. Numerous drilling campaigns have been executed on VN and VS, however, not all the historic core is available for verification and relogging. While Earthlab could source some information on historic drilling from previous reports, Earthlab did not do any verification on work related to core that are no longer available in the Volspruit Core Yard. The following is taken from the SRK report in 2011:

- Amcor drilled twenty-seven boreholes, totalling 739m, whilst prospecting for chrome in the area. No results are available. Thirteen boreholes totalling 950m were drilled by AA but again no further details are available. It is known that Shell was active in the area and whilst no details of their exploration are available, it is thought that the work involved regional stream sediment or soil sampling.
- The first significant work performed on the property was by RTZ who focused on PGE and base metal (BM) exploration. RTZ exploration involved a grid-based soil geochemistry programme that identified broad target areas for follow up percussion drilling (200 to 300 holes). No details of either the soil sampling or percussion drilling programmes are currently available. This was followed up by a core drilling program, with twenty-four holes drilled into the Northern ore body, and twenty-seven into the Southern ore body.
- Genmin drilled three metallurgical drillholes, and an additional thirty-nine core holes into the northern ore body and ten into the Southern ore body.
- In 2001 the rights to the property were taken over by Pan Palladium who drilled an additional 151 diamond holes in 2002 and 2003 over the project area that confirmed the mineralisation in the Northern and Southern Bodies and extended the Northern Body to the west.
- In 2004 a Pre-Feasibility study was done for Pan Palladium, and the Resource used in this study was an estimate done by RSG Global in 2004. The Mineral Resources were estimated for both the Northern and Southern Ore bodies, although very little detail on the estimates was presented in the Study.
- In early 2010 Pan Palladium undertook additional exploration on the Northern ore body, totalling forty-two holes. Following this was a revised Resource estimate on the Northern ore body by Integrated Geological Solutions (Pty) Ltd (IGS) in 2010. The IGS estimate used results from 193 drillholes, all drilled by Pan Palladium, and all previous data were excluded by IGS based on the inability to verify analytical data (no drill core or assay certificates) and the lack of electronic geological logs.

4.3 Historic Mineral Resources and Ore Reserves

4.3.1 Mineral Resources by IGS, 2012

Earthlab was provided with the Technical Report compiled by IGS in May 2012 along with a selection of SURPAC Vision exported data files. The stratigraphic boundaries of Cyclic unit 11 were modelled within 5 fault defined bounding blocks. It should be noted that the fault bonded blocks were projected a maximum of 50 m away from a borehole and not through any fault positions predicted by the geophysical interpretation. Weathering zones were modelled as DTM surfaces using the logged zone intervals obtained from the borehole database.

The stratigraphic model was adjusted to a 0.34ppm 3E grade cut-off supplied by PPD. Integrated Geological Solutions (Pty) Ltd (IGS) reported an MRE in 2012, summarised in Table 2. The numbers in Table 2 were not verified by Earthlab and were taken as is from the IGS report of 2012.

Table 2. The VS MRE reported by IGS in 2012.

Resource Classification	Block	Oxidation	Volume (cm^3)	Tonnes (t)	Tonnes After Loss (-10%) (t)	2E and Au (ppm)	Cu (ppm)	Ni (ppm)	Density (g/cm^3)
Indicated	Block 2	Fresh	1,497,891.00	4,570,582.00	4,113,524.00	0.94	367.00	1,800.00	3.06
		Transition	535,995.00	1,473,529.00	1,326,176.00	1.07	340.00	1,843.00	2.77
		Oxide	434,766.00	956,484.00	860,836.00	1.61	514.00	2,322.00	2.20
	Sub Total		2,468,652.00	7,000,595.00	6,300,536.00	1.06	381.00	1,881.00	2.88
	Block 4	Fresh	1,488,596.00	4,497,357.00	4,047,621.00	2.18	816.00	2,151.00	3.02
		Transition	467,117.00	1,398,202.00	1,258,382.00	1.87	657.00	2,114.00	3.00
		Oxide	565,421.00	1,243,925.00	1,119,533.00	1.33	497.00	1,867.00	2.20
	Sub Total		2,521,133.00	7,139,484.00	6,425,536.00	1.97	730.00	2,094.00	2.80
Sub Total			4,989,786.00	14,140,079.00	12,726,071.00	1.52	557.00	1,988.00	2.88
Inferred	Block 1	Transition	67,020.00	180,542.00	162,488.00	0.63	275.00	1,681.00	2.70
		Oxide	151,154.00	332,538.00	299,284.00	0.86	302.00	1,250.00	2.20
	Sub Total		218,173.00	513,080.00	461,772.00	0.87	293.00	1,402.00	2.37
	Block 2	Fresh	99,335.00	265,556.00	239,000.00	0.63	300.00	2,584.00	2.67
		Transition	118,347.00	382,754.00	344,479.00	1.06	385.00	2,146.00	3.23
		Oxide	37,604.00	82,728.00	74,455.00	0.38	218.00	1,752.00	2.20
	Sub Total		255,286.00	731,038.00	657,934.00	0.82	335.00	2,261.00	2.91
	Block 3	Fresh	5,385,834.00	16,655,613.00	14,990,052.00	1.11	441.00	1,632.00	3.10
	Sub Total		5,385,834.00	16,655,613.00	14,990,052.00	1.11	441.00	1,632.00	3.10
	Block 4	Fresh	64,334.00	196,942.00	177,248.00	3.17	68.00	2,396.00	3.06
		Transition	2,411.00	7,187.00	6,468.00	2.03	710.00	2,372.00	2.98
	Sub Total		66,745.00	204,129.00	183,716.00	3.13	55.00	2,395.00	3.06
	Block 6	Fresh	83,798.00	270,731.00	243,658.00	0.57	323.00	1,483.00	3.23
	Sub Total		83,798.00	270,731.00	243,658.00	0.57	232.00	1,483.00	3.23
Sub Total			6,009,836.00	18,374,590.00	1,657,131.00	1.11	438.00	1,657.00	3.07
GRAND TOTAL			10,999,622.00	32,541,670.00	29,263,203.00	1.29	490.00	1,801.00	2.99

5 EXPLORATION AND SAMPLING

5.1 Safety

The following relates to the relogging campaign Earthlab undertook at the Volspruit Core Yard during 2022 and 2023.

5.1.1 Legal appointments

Chief Safety Officer: Johann Esterhuyse

Safety Officer: Theunis Cornelius Botha

Subordinate Manager: Walter Pretorius

5.1.2 Risk management and SHERQ compliance

The team executed their work in line with the Standard Operating Procedure (SOP), ensuring a safe work environment by adhering to the Baseline Risk Assessment and completing the Hazard Identification and Risk Assessment (HIRA) checklist on a daily basis. The team achieved a perfect safety record with zero incidents.

5.1.3 Safety record

No incidents were reported during the entirety of the relogging campaign.

5.2 Geophysics / Remote sensing

No new geophysics or remote sensing has been done.

5.3 Mapping

No new mapping has been performed.

5.4 Drilling program

No new drilling related directly to this MRE's purchase order has been conducted.

5.5 VS Relogging Results

The re-logging entailed detailed lithological logging, mineralogical logging, and stratigraphic logging in line with the newly defined stratigraphic units (Figure 7). The re-logging started in September 2022 and was completed in December 2022. A total of 9057.29 m of core was re-logged.

This was performed due to the historical stratigraphic logging that has been done using multiple naming conventions as well as being based on the larger-scaled cyclic units 10, 11, and 12 within the Volspruit pyroxenite stratigraphic unit. However, this method produces a much longer unit which does not capture the resolution of the deposit within these cyclic units. Earthlab proposed a modified stratigraphic naming convention with new minor-sub and horizon-level stratigraphy fields in which the resolution of the deposit was captured.

Figure 14 shows the proposed stratigraphic interpretation that was used to re-log the Volspruit South deposit. The stratigraphic convention was supported by literature published by Hulbert (1983) and Tanner et al (2019). Additionally, these new stratigraphic units were able to delineate specific hanging wall units. When estimates were made for the entire hanging wall domain, it resulted in dilution of the grades nearer to the reef interval. The re-logging campaign of 2022 was conducted based on this new stratigraphic understanding (Figure 7).

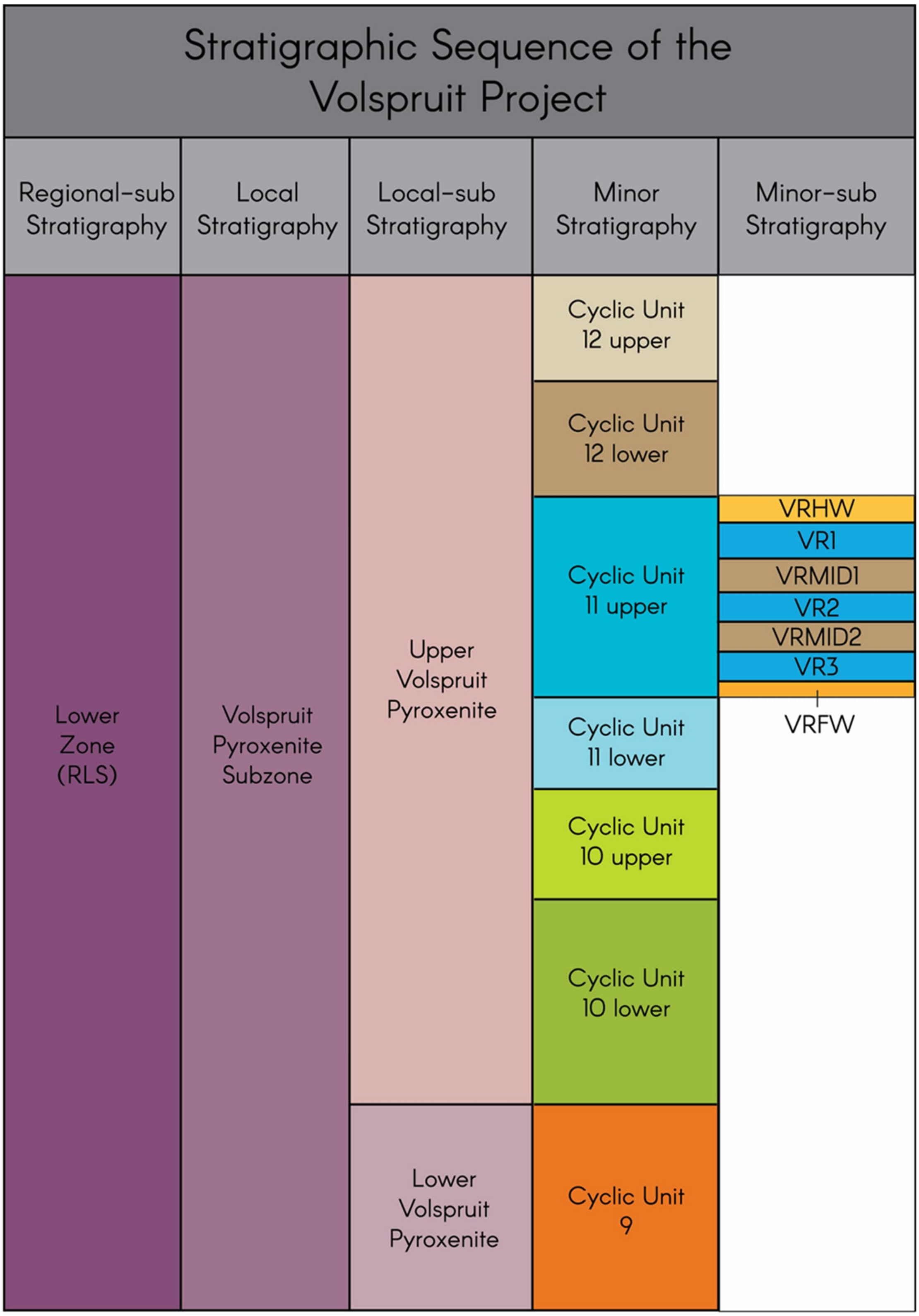

Figure 7. Redefined stratigraphy used by Earthlab for the re-logging of VS drill holes in 2023.

Cyclic Unit 12 Upper comprises homogeneous ortho-pyroxenites with minor chromite and no sulphides observed.

Cyclic Unit 12 Lower comprises a relatively small unit of harzburgites containing olivine which vary from poikilitic to inequigranular in texture. This unit does on occasionally have sulphides but there is no significant PGMs concentrated here. This unit marks the top contact of the hanging wall in the Volspruit Reef which is confined in the Cyclic Unit 11 Upper.

The Volspruit Reef (VR) is confined to the Cyclic Unit 11 Upper. Sulphide mineralisation observed in the cyclic units surrounding Cyclic Unit 11 Upper did not show any significant PGM (Pt and Pd) and Au grades according to historic downhole assay grade profiles of 2E and Au. The unit comprises homogeneous ortho-pyroxenites with minor chromite. It can be sub-divided into several mineralised units, most prominently three units i.e., VR1, VR2 and VR3 along with internal waste zones defined as VR middling units (VRMID) which can be barren or have insignificant scattered mineralisation. These mineralised units are characterised by their base metal sulphide content.

Cyclic Unit 11 Lower forms the basal layer of Cyclic Unit 11 Upper and can be compared to Cyclic Unit 12 Lower as it consists of the olivine-bearing harzburgites which vary from poikilitic to inequigranular in texture and are sometimes strongly serpentinised at certain intervals. Serpentinisation increases with depth and poikilitic harzburgites to equigranular fine-grained dunites form the dominant lithologies. The sulphides in this cyclic unit do not have significant PGM mineralisation according to historic downhole assay grade profiles of 2E and Au.

5.6 Sampling methods and protocols

The details outlining the sampling of the historic drill core for 6E analysis is described in detail within the following report, EARTH-PPD-PO_940-1-Report_1 (DRAFT).

5.7 Assay / Analytical methods

Please refer to section 5.6

5.8 Rehabilitation

Please refer to section 5.4

6 DATA INTEGRITY AND VERIFICATION

6.1 Database storage and management

The historical database was provided to Earthlab by VMC in a Microsoft Access Database format, which has subsequently undergone a migration to a secure SABLE® database where each project is given a project definition with tailored validations and mandatory cleaning by Earthlab. This has been done to maintain data integrity as per the Joint Ore Reserves Committee (JORC) 2012 requirements.

6.2 Quality assurance

The re-logging of the Grasvally South drill holes was completed in accordance with the standardised method for classifying the stratigraphy, lithology and mineralisation as described in Section 9.2.

All the data was captured into SABLE® upon completion of the re-logging. The data was then validated and signed off by the Database Manager if all was in order.

6.3 Verification of drilling data

Earthlab did not verify historic drilling data as part of this report.

6.4 Verification of sampling and assay data

Earthlab accepted the historic assay data as is and only performed assay quality verification on it in the same way that assay quality control would typically be done.

Sampling of historic drill holes for regression of Rh and Ru was subject to standard quality control procedures before being utilised for regression. The results for the quality control of the assay results obtained for this sampling are detailed in the report EARTH-PPD-PO_940-1-Report_1 (DRAFT).

6.5 Verification of geological models and Mineral Resource models

As part of this report's MRE, Earthlab completely remodelled the stratigraphy and weathering zones based on the relogging work of the historic holes and created a completely new mineralised domain for a new estimate. Therefore, no verification was done on previous models.

In terms of verification of the new model and MRE, Earthlab performed various checks between the model and the data and is discussed in later chapters.

7 ASSAY QUALITY CONTROL

7.1 Procedure

Each project defined within the South Body has 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 and, in some instances, non-certified reference materials. Blank samples that fall above 10x the detection limit and certified reference samples that fall outside the third standard deviation upper and lower limits of statistical control are flagged and labelled as failed samples per element.

7.2 Summary of Accuracy Analysis

7.2.1 Volspruit South re-sampled 6E assay results

A total of 47 control samples were used in this sampling campaign and the results have been separated into their respective analytes and displayed in Table 3 below. The overall results show good accuracy across Pt, Pd, Au and Rh. Pd and Au displayed perfect accuracy with 100% of the samples falling within tolerance limits. Pt and Rh also show great accuracy with 93.62% and 97.87% of samples falling within tolerance limits respectively. Ru displayed less accurate results with only 85.11% of the samples falling within tolerance limits. The poorer performance of the Ru results may be due to multiple reasons: the CRM's material used may not accurately resemble the material found in this sapling campaign; the low number of samples may have exaggerated the number of failures one would expect to see in a larger sample population; the upper and lower standard deviations relating to the accepted value for Ru in the CRMs used are very restrictive due to the acceptance value being so small (near detection limit of the analysis hardware).

The results show no contamination in any of the analytes, meaning that contamination did not play a role in the failure of any of the samples.

Table 3 Summary of GVS project's control samples analyses for accuracy analysis indicating the total percentage of failed samples per element.

CRM		Pt			Pd			Au			Rh			Ru		
		N	Outliers		n	Outliers		n	Outliers		n	Outliers		n	Outliers	
			n	%		n	%		n	%		n	%		n	%
Standards	AMIS0486	4.00	2.00	50.00	4.00	0.00	0.00	4.00	0.00	0.00	4.00	0.00	0.00	4.00	0.00	0.00
	AMIS0498	8.00	0.00	0.00	8.00	0.00	0.00	8.00	0.00	0.00	8.00	0.00	0.00	8.00	3.00	37.50
	AMIS0499	10.00	1.00	10.00	10.00	0.00	0.00	10.00	0.00	0.00	10.00	1.00	10.00	10.00	4.00	40.00
BLANK		25.00	0.00	0.00	25.00	0.00	0.00	25.00	0.00	0.00	25.00	0.00	0.00	25.00	0.00	0.00
TOTAL		47.00	3.00	6.38	47.00	0.00	0.00	47.00	0.00	0.00	47.00	1.00	2.13	47.00	7.00	14.89

For a full description of the re-sampled 6E assay results and their related figures, refer to the following report conducted by Earthlab EARTH-PPD-PO_940-1-Report_1 (DRAFT).

7.2.2 Volspruit South historic assay results

Accuracy testing for these standards has been split into two sets of analyses. The first incorporates monitoring each samples concentration per analyte relative to the corresponding standard certificate accepted value and standard deviations. Samples which fall outside the third standard deviation are flagged as out of statistical control and are labelled as failures. In terms of the platinum group elements, platinum and palladium in this case, it is generally accepted that 90% of samples passing this criterion is considered a great indication of good accuracy.

The results for the accuracy analysis are summarised in the tables below. A total of 727 samples were analysed and have been separated into their respective projects and analytes. The Volspruit South Body has undergone 3 historic sampling programmes: Grasvally South, South Definition and South infill and their results are represented in their respective tables. Platinum and palladium control results show good accuracy throughout the 3 projects undertaken over the South Body, however the accuracy results of gold, copper, and nickel, were less convincing with higher proportions of samples falling outside the tolerance limits. For a full description of the historical assay results and their related figures, refer to the QAQC report conducted by Earthlab (EARTH-PPD-PO_975-3-Report_2_(QAQC_Report)).

Table 4. Summary of GVS project's control samples analyses for accuracy analysis indicating the total percentage of failed samples per element.

CRM		Pt			Pd			Au			Cu			Ni		
		n	Outliers		n	Outliers		n	Outliers		n	Outliers		n	Outliers	
			n	%		n	%		n	%		n	%		n	%
Standards	QC93	75.00	12.00	16.00	75.00	3.00	4.00	74.00	16.00	21.62	103.00	3.00	2.91	103.00	3.00	2.91
	SARM7	180.00	17.00	9.44	180.00	28.00	15.55	180.00	70.00	38.89	194.00	95.00	48.97	196.00	72.00	36.73
BLANK		130.00	2.00	1.54	121.00	3.00	2.48	101.00	0.00	0.00	247.00	103.00	41.70	268.00	161.00	60.07
TOTAL		385.00	31.00	8.05	376.00	34.00	9.04	355.00	86.00	24.23	544.00	201.00	36.95	567.00	135.00	24.16

Table 5. Summary of South Definition project's control samples analyses for accuracy analysis indicating the total percentage of failed samples per element.

CRM		Pt			Pd			Au			Cu			Ni		
		n	Outliers		n	Outliers		n	Outliers		n	Outliers		n	Outliers	
			n	%		n	%		n	%		n	%		n	%
Standards	AMIS0067	6.00	0.00	0.00	6.00	0.00	0.00	6.00	0.00	0.00	5.00	1.00	20.00	5.00	0.00	0.00
	AMIS0099	10.00	0.00	0.00	10.00	0.00	0.00	10.00	2.00	20.00	10.00	0.00	0.00	10.00	0.00	0.00
	AMIS0170	25.00	0.00	0.00	25.00	2.00	8.00	25.00	4.00	16.00	26.00	0.00	0.00	26.00	0.00	0.00
BLANK		25.00	1.00	4.00	25.00	1.00	4.00	25.00	0.00	0.00	25.00	1.00	4.00	25.00	3.00	12.00
TOTAL		66.00	1.00	1.51	66.00	3.00	4.54	66.00	6.00	9.09	66.00	2.00	3.03	66.00	3.00	4.54

Table 6. Summary of South Infill project's control samples analyses for accuracy analysis indicating the total percentage of failed samples per element.

CRM		Pt			Pd			Au			Cu			Ni		
		n	Outliers		n	Outliers		n	Outliers		n	Outliers		n	Outliers	
			n	%		n	%		n	%		n	%		n	%
Standards	AMIS0067	18.00	1.00	5.55	18.00	1.00	5.55	18.00	1.00	5.55	20.00	10.00	50.00	20.00	0.00	0.00

	AMIS0099	22.00	0.00	0.00	22.00	0.00	0.00	22.00	0.00	0.00	21.00	0.00	0.00	21.00	0.00	0.00
	AMIS0170	38.00	3.00	7.89	38.00	14.00	36.84	38.00	5.00	13.18	40.00	7.00	17.50	40.00	3.00	7.50
BLANK		12.00	1.00	8.33	12.00	1.00	8.33	12.00	0.00	0.00	13.00	2.00	15.38	13.00	4.00	30.77
TOTAL		90.00	5.00	5.55	90.00	16.00	17.78	90.00	6.00	6.67	94.00	19.00	20.21	94.00	7.00	7.45

The second analysis for testing accuracy incorporates comparing population statistics between the submitted standards concentration and the population statistics of the certified reference materials. This is done by comparing the means for each CRM provided by the lab and the means obtained for the CRMs for each project per analyte. A project CRM is deemed to be accurate if it falls within 5% of the 1st standard deviation of the certified lab CRM mean value (Table 7).

Table 7. Table summarising the statistics of the comparison between CRMs from each project at that provided by the lab certificates.

Project	CRM	Analyte	Lab Mean	Lab 2SD	Count of Assays	CRM Mean	Upper Threshold	Lower Threshold	Difference	% Difference
Grasvally GVS	SARM7	Au	0.30	0.15	166	0.31	0.33	0.29	-0.007	-2.400
South Infill	AMIS0099	Au	0.09	0.01	3	0.09	0.10	0.08	0.003	2.996
South Infill	AMIS0170	Au	0.10	0.01	9	0.09	0.10	0.08	0.012	13.210
South Infill	AMIS0067	Au	0.14	0.10	8	0.15	0.16	0.14	-0.010	-6.833
South Definition	AMIS0099	Au	0.09	0.03	10	0.09	0.10	0.08	0.003	2.809
South Definition	AMIS0170	Au	0.10	0.01	25	0.09	0.10	0.08	0.010	10.978
South Definition	AMIS0067	Au	0.16	0.01	6	0.15	0.16	0.14	0.005	3.556
Grasvally GVS	SARM7	Cu	827.78	336.76	180	1000.00	1050.00	950.00	-172.222	-17.222
South Infill	AMIS0099	Cu	241.67	30.09	3	256.00	265.00	247.00	-14.333	-5.599
South Infill	AMIS0170	Cu	734.80	33.02	10	709.00	731.50	686.50	25.800	3.639
South Infill	AMIS0067	Cu	946.20	90.87	10	895.00	917.00	873.00	51.200	5.721
South Definition	AMIS0099	Cu	254.40	16.87	10	256.00	265.00	247.00	-1.600	-0.625
South Definition	AMIS0170	Cu	739.96	45.14	26	709.00	731.50	686.50	30.962	4.367
South Definition	AMIS0067	Cu	931.00	78.09	5	895.00	917.00	873.00	36.000	4.022
Grasvally GVS	SARM7	Ni	1991.28	863.93	182	2000.00	2100.00	1900.00	-8.720	-0.436
South Infill	AMIS0099	Ni	403.67	39.26	3	443.00	467.00	419.00	-39.333	-8.879
South Infill	AMIS0170	Ni	1079.00	52.03	10	1071.00	1114.50	1027.50	8.000	0.747
South Infill	AMIS0067	Ni	1737.50	178.78	10	1728.00	1819.00	1637.00	9.500	0.550
South Definition	AMIS0099	Ni	440.00	34.36	10	443.00	467.00	419.00	-3.000	-0.677
South Definition	AMIS0170	Ni	1096.35	66.37	26	1071.00	1114.50	1027.50	25.346	2.367
South Definition	AMIS0067	Ni	1724.00	84.38	5	1728.00	1819.00	1637.00	-4.000	-0.231
Grasvally GVS	SARM7	Pd	1.54	0.57	168	1.53	1.61	1.45	0.007	0.432
South Infill	AMIS0099	Pd	0.22	0.01	3	0.23	0.24	0.21	-0.003	-1.481
South Infill	AMIS0170	Pd	0.86	0.08	9	0.81	0.83	0.79	0.051	6.296
South Infill	AMIS0067	Pd	0.92	0.62	8	0.98	1.02	0.94	-0.058	-5.893
South Definition	AMIS0099	Pd	0.22	0.04	10	0.23	0.24	0.21	-0.005	-2.267
South Definition	AMIS0170	Pd	0.84	0.05	25	0.81	0.83	0.79	0.029	3.526
South Definition	AMIS0067	Pd	1.00	0.05	6	0.98	1.02	0.94	0.022	2.245
Grasvally GVS	SARM7	Pt	3.72	1.34	168	3.74	3.93	3.55	-0.024	-0.635

South Infill	AMIS0099	Pt	0.57	0.05	3	0.59	0.63	0.55	-0.016	-2.712
South Infill	AMIS0170	Pt	0.75	0.07	9	0.72	0.75	0.69	0.030	4.151
South Infill	AMIS0067	Pt	1.77	1.42	8	1.95	2.03	1.87	-0.176	-9.026
South Definition	AMIS0099	Pt	0.60	0.12	10	0.59	0.63	0.55	0.007	1.119
South Definition	AMIS0170	Pt	0.74	0.05	25	0.72	0.75	0.69	0.022	3.050
South Definition	AMIS0067	Pt	2.02	0.06	6	1.95	2.03	1.87	0.074	3.803

The above results display a good level of accuracy regarding the PGEs, with all the results above 25 analyses per CRM falling within the 5% difference tolerance. The results demonstrate a robust and reliable analytical process, with mean differences and biases well within the specified tolerances. CRMs below 10 analyses show less accuracy as their mean values are heavily influenced by any outliers caused by CRM preparation, human error, capturing, or analysis. This is a general trend seen for small population sizes and has negligible effects on the accuracy of the larger data set.

It should be noted that Cu did not perform as well as the rest of the analytes and clearly shows a negative bias, especially looking at the SARM7 results for this analyte. The results depict more outliers than expected, however these should be attributed to SARM7 not being certified for Cu without ruling out the possibility of capturing errors during the inception of the historical Access Database. However, these outliers do not impact the accuracy of the laboratory results as they fall outside the domain of analysing the elemental concentrations of the samples.

QC93 is not certified and was constructed by Setpoint Labs using left over Volspruit material after drill core logging and sampling. Analysis cannot be performed as above therefore the performance of the laboratory results has been illustrated using single population statistics which assess the distribution and central tendencies of each analyte (Figures 8 and 9).

The QC93 CRM results are displayed in a box plot for each analyte in Figure 8 and 9. The analytes show good control over accuracy by the laboratory with relatively low variability in the results which can be observed in the box graph where Q1 and Q3 are close to the median value. Ni displays a slight negative bias while Cu, Pt, Pd and Au show a positive bias. All the analytes have outliers most noticeably Cu and Ni which may have been a result of mislabelled CRMs or further human error during the sampling chain.

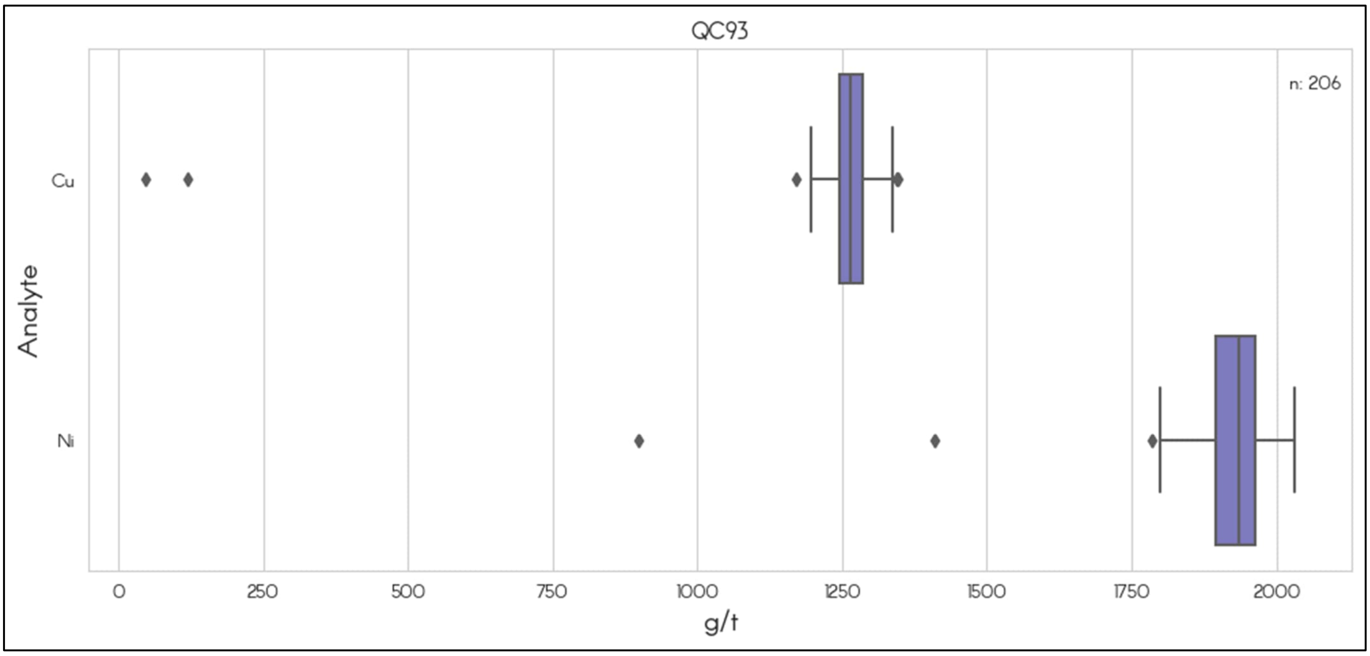

Figure 8. A box plot showing the statistical distribution of the population of QC93 for Cu and Ni.

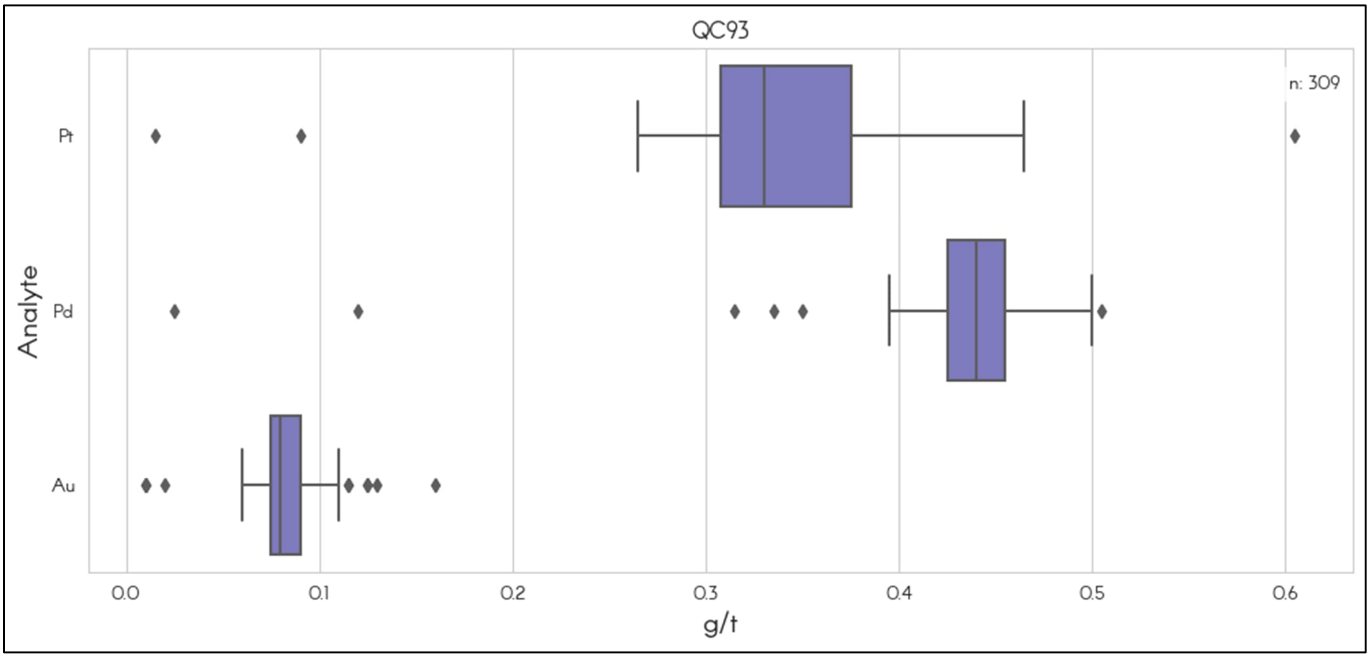

Figure 9. A box plot showing the statistical distribution of the population of QC93 for Pt, Pd and Au.

7.3 Summary of Precision Analysis

7.3.1 Volspruit South re-sampled 6E assay results

A total of 20 duplicate samples were used in the precision analysis and the results for each analyte are represented in Table 8 below. The results show good repeatability overall with Pt, Pd, Au and Rh having 90%-95% of their samples falling within 15% absolute difference. Ru sits on the acceptance limit with only 85% of the samples falling within 15% absolute difference. The reason for the poor results seen for Ru may be due to the variable nature of the material as potentially due to inherent error that can easily occur when working with such low grades which approach the detection limit of the analysis hardware.

Table 8. Summary of South Body twinstream results using Half Absolute Relative Difference outlier method.

Project		Element	No. of Samples	Mean Original	Mean Duplicate	|Mean Difference|	Within 15% HARD	No. of Outliers	Outliers (%)
Volspruit South	Pulp Duplicates	Pt	20	1.37	1.37	0.01	95.00	1.00	5.00
		Pd	20	1.61	1.62	0.01	95.00	1.00	5.00
		Au	20	0.08	0.08	0.01	95.00	1.00	5.00
		Rh	20	0.23	0.23	0.00	90.00	2.00	10.00
		Ru	20	0.09	0.09	0.00	85.00	3.00	15.00
	>90%								
	>85%								
	<85%								

For a full description of the re-sampled 6E assay results and their related figures, refer to the following report conducted by Earthlab EARTH-PPD-PO_940-1-Report_1 (DRAFT).

7.3.2 Volspruit South historic assay results

The historic database used for this analysis contains two sets of duplicate sample data. One set consists of field duplicates that were physically taken during the sampling phase of the South Infill project. The other set includes pulp duplicates and were generated internally by the laboratory's twinstream process as part of their QAQC protocols. Twinstream results have been analysed using the Half Absolute Relative Difference method. Analyses have been separated into their respective elements including Gold (Au), Copper (Cu), Nickel (Ni), Platinum (Pt), and Palladium (Pd).

Overall, the results analysed show that the repeatability and precision of the pulp duplicate assay results are relatively good for Cu, Ni, Pd and Pt while Au consistently shows poorer results, falling outside of the tolerance limits. For a full description of the results and their related figures, refer to the QAQC report conducted by Earthlab (EARTH-PPD-PO_975-3-Report_2_(QAQC_Report)).

Table 9. Summary of South Body twinstream results using Half Absolute Relative Difference outlier method.

Project		Element	No. of Samples	Mean Original	Mean Duplicate	|Mean Difference|	Within 15% HARD	No. of Outliers	Outliers (%)
South Infill	RC Hole Field Dups	Au	26	0.06	0.06	0.00	76.92	6.00	23.08
		Cu	26	864.65	752.19	112.46	92.31	2.00	7.69
		Ni	26	2540.58	2377.65	162.92	92.31	2.00	7.69
		Pd	26	1.42	1.35	0.06	88.46	3.00	11.54
		Pt	26	1.37	1.21	0.16	84.62	4.00	15.38

Green	>90%
Yellow	>85%
Red	<85%

Table 10. Summary of South Body twinstream results using Half Absolute Relative Difference outlier method for Field Duplicates.

Project		Element	No. of Samples	Mean Original	Mean Duplicate	|Mean Difference|	Within 15% HARD	No. of Outliers	Outliers (%)
South Definition Pulp Dups		Au	34	0.02	0.02	0.00	77.78	4	22.22
		Cu	23	315.78	320.83	5.04	100.00	0	0.00
		Ni	23	1717.52	1725.96	8.43	100.00	0	0.00
		Pd	34	0.35	0.35	0.00	100.00	0	0.00
		Pt	34	0.33	0.33	0.00	100.00	0	0.00
South Infill	Diamond Hole Pulp Dups	Au	88	0.02	0.02	0.00	75.96	12	23.08
		Cu	79	332.51	330.8	1.70	96.20	3	3.80
		Ni	79	1713.76	1705.32	8.44	97.47	2	2.53
		Pd	88	0.30	0.29	0.00	95.83	3	3.57
		Pt	88	0.27	0.27	0.01	85.12	11	13.10

	RC Hole Pulp Dups	Au	34	0.06	0.06	0.00	82.35	5	14.71
		Cu	35	896.69	823.14	73.54	100.00	0	0.00
		Ni	35	2425.14	2258.14	167.00	97.14	1	2.86
		Pd	34	1.30	1.43	0.13	97.06	1	2.94
		Pt	34	1.24	1.35	0.11	100.00	0	0.00
	>90%								
	>85%								
	<85%								

It was decided to not exclude samples during grade estimation based on the outcome of the accuracy and precision analysis. The theory was that given the short-range variability in the deposit, excluding samples from grade estimation and forcing the estimation to use samples further away than necessary would result in a higher error variance than using a closer sample which has an inherent error smaller than the difference between the true grade and the grade of a sample which is further away which would be used if the closer sample were to be excluded. The quality analysis results were still thoroughly reported for the convenience of the reader, should the reader apply his/her own adjustment to the estimate based on the quality analysis outcome.

The results of the accuracy and precision analysis are in line with the Inferred Mineral Resources being reported for the new MRE.

8 SAMPLE SECURITY

8.1 Storage security

To Earthlab's knowledge the historic pulp samples are stored in metal shipping containers at the Volspruit core yard facility. This has not been confirmed.

8.2 Chain of custody

No new drilling related directly to this MRE's purchase order has been conducted. No chain of custody was required.

9 GEOLOGICAL INTERPRETATION

9.1 Regional geology

9.1.1 Bushveld Igneous Complex

The Bushveld Complex (BC) is the largest layered intrusion on Earth and hosts the world's largest magmatic ore deposits (Lee, 1996). The BC was 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 BC is separated from the Eastern and Western Limbs by the approximately east-west striking Thabazimbi-Murchison Lineament (TML) (Figure 10). The connection between the latter limbs of the BC remains under much debate amongst the geological community across the globe.

The BC is sub-divided into several igneous bodies which include the Rustenburg Layered 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.

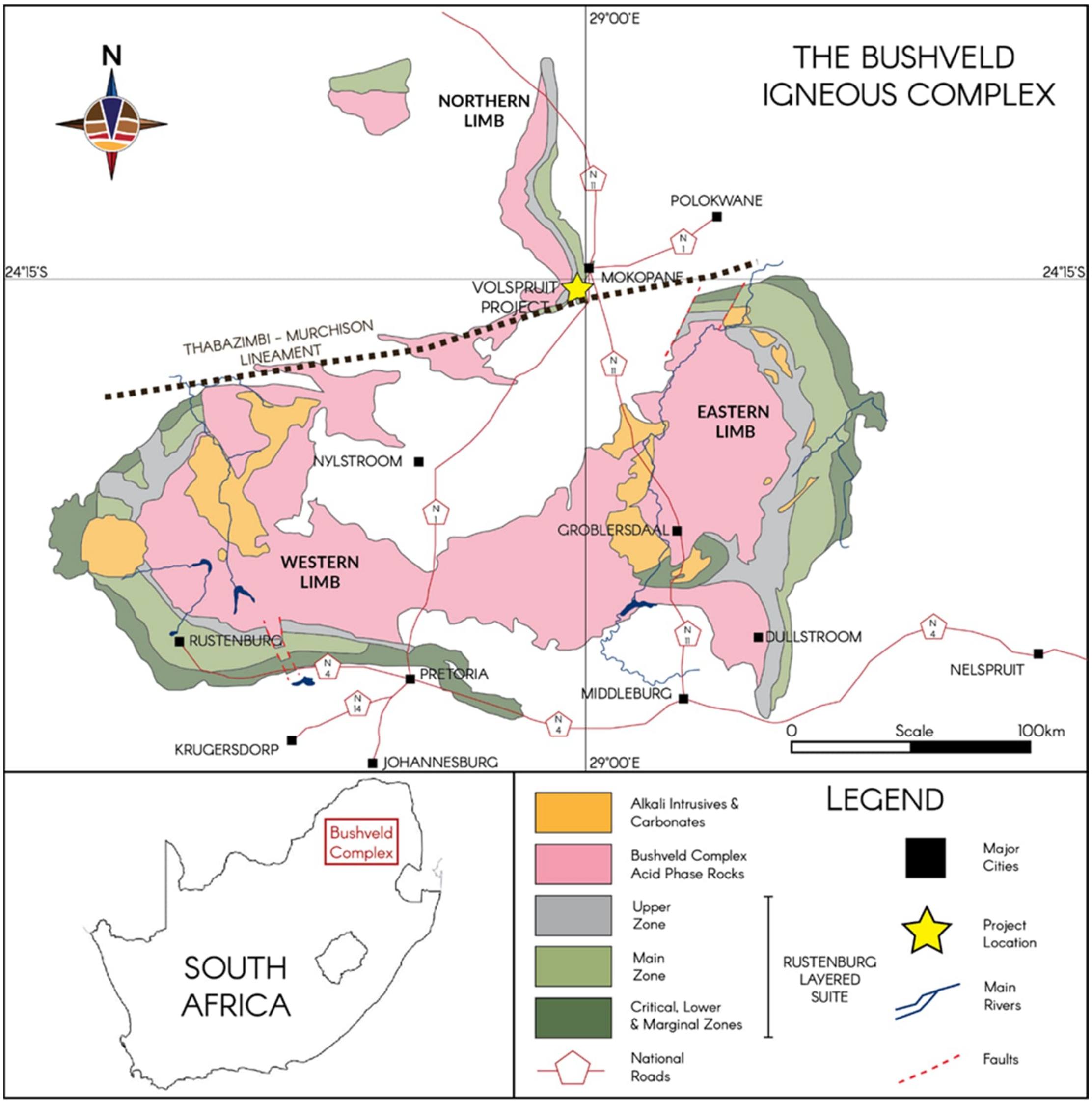

Figure 10. The Bushveld Igneous Complex and its respective limbs.

9.1.2 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 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 been 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 BC 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 chromite and PGM deposits. These deposits are found within several layers termed "reefs", and the most well-known are 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 characterized as a sequence of intensely banded gabbro 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 BC (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 content.

9.1.3 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. 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-gabbro with variable magnetite.

The mineral deposits within the Northern Limb can be separated into four major commodities: tin (Sn), chromium (Cr), vanadium (V), and PGMs. 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 in South Africa, as in its shallow occurrence it can be mined using less costly open cast mining methods such as the Anglo Platinum Mogalakwena mine. However, Ivanplats Ltd is developing an underground mine at its Platreef Project roughly halfway between Mokopane and the Mogalakwena mine. Other PGM deposits not interpreted as Platreef have been identified in the Northern Limb. Some of these deposits include the Waterberg and Aurora Projects, located in the far northern sectors of the Northern Limb, as well as the Volspruit Project, which is located to the far south of the Northern Limb (Figure 11).

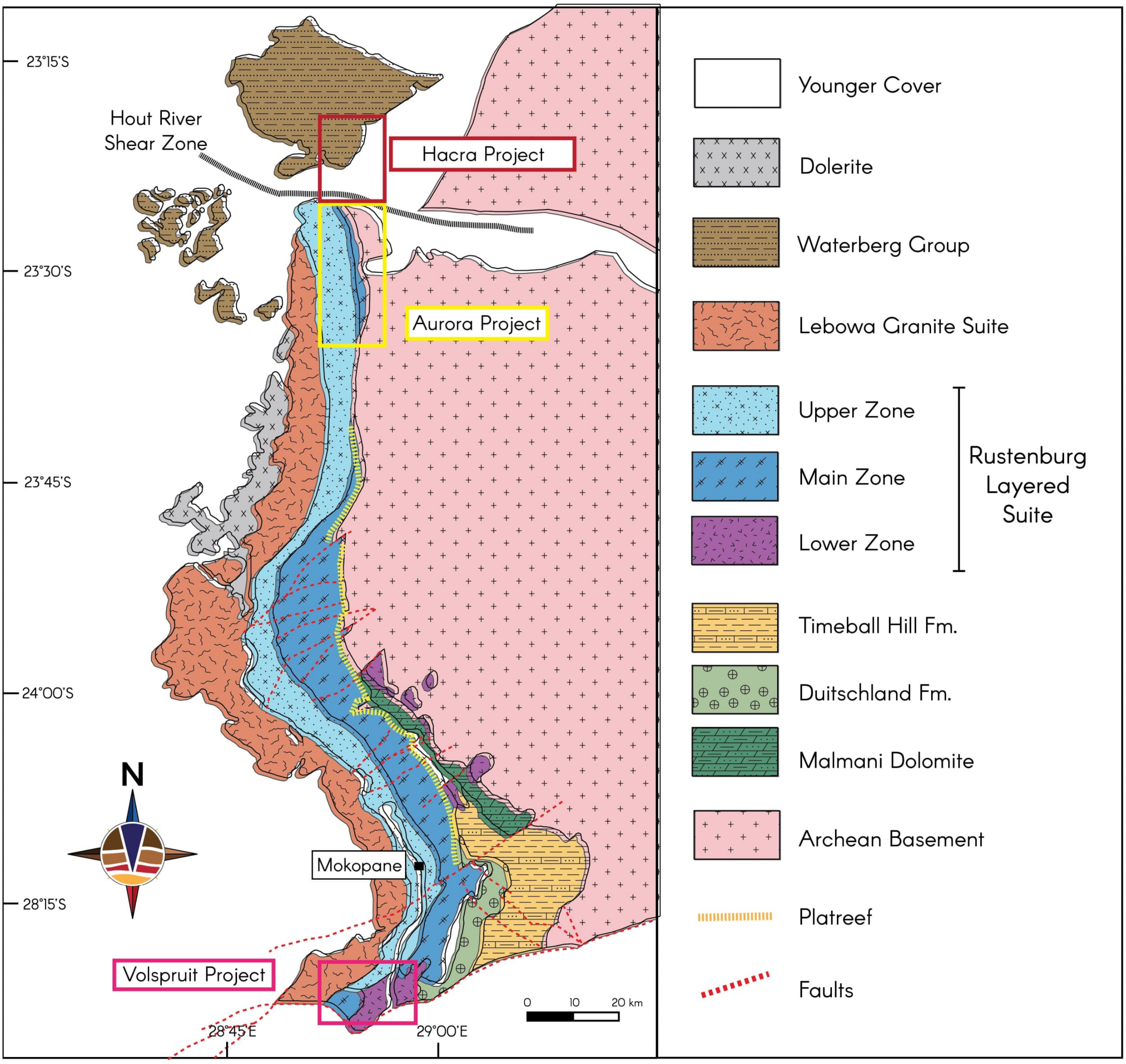

Figure 11. Simplified geological map of the Northern Limb showing the approximate locations of the Waterberg, Aurora, and Volspruit Projects. Image modified after McCreesh et al. (2018).

9.2 Local geology

The local geology for the Volspruit Project is described based on historic interpretations and descriptions by VMC as well as information ascertained from literature by Hulbert (1983) No attempt was made by Earthlab to reinterpret the current understanding of geological information. The following paragraphs summarise the local geological setting for the project.

No surface geological mapping within the project area has been undertaken as the outcrop is extremely poor. Hulbert (1983) managed to construct the only geological map of the area using the drill core that was available at the time (Figure 12).

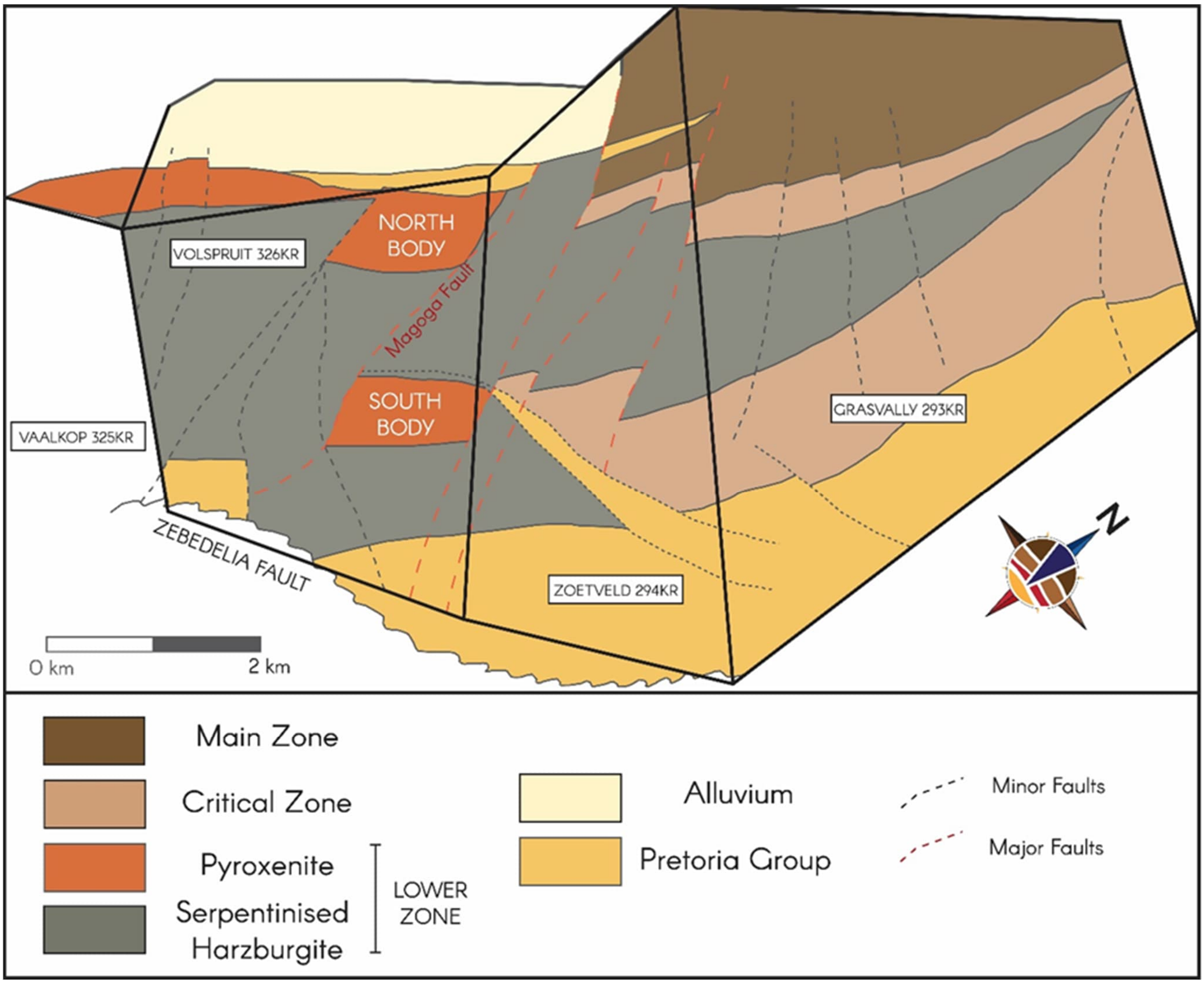

Figure 12. Local geology map of the Volspruit Project. Image modified after Hulbert (1983).

The schematic cross-section in Figure 13 has been largely confirmed by airborne geophysical data collected by PPD from 2001 to 2002. Hulbert's (1983) map reveals a structurally complex region, which is dominated by a series of horst blocks and graben structures with several generations of deformation. Neither the current academic literature, nor the geophysics report of 2002 offer specific ages of these deformation events, apart from the fourth episode related to Karoo Supergroup basalt intrusion, circa 182 Ma. The deformation events consist of:

- The first is described by (Hulbert, 1983) as an episode of north-south trending reverse faulting, which resulted in the horst block of the Lower Zone being vertically displaced by almost 800 m into the Critical Zone. This north-south trending fault system was later intruded by a granitic dyke swarm which likely represents the formation of the Lebowa Granite Suite which directly overlies the RLS.

- Second-generation faulting is a WNW to ESE reverse block faulting, which has resulted in a step-like displacement of the RLS towards the west (Hulbert, 1983). This faulting event has exposed parts of the Lower Zone from deeper stratigraphic horizons in the Volspruit, Zoetveld, and Vaalkop farms.

- The third generational faults strike NE-SW and caused upfaulting slices of Pretoria Group quartzites into the RLS. It is assumed to be post-Waterberg Group of which the age is estimated to be 1,900 – 1,700 Ma old (Callaghan, et al., 1991).

- The final generation of faults occurred post-Karoo Supergroup when basalts from the Karoo Supergroup came into contact the Lower Zone lithologies along the Zebediela fault (Hulbert, 1983).

Stratigraphically the Volspruit Project area falls within the Lower Zone of the RLS below the Critical Zone, which is host to the Platreef deposit, making this PGM occurrence rather unique. The Lower Zone within the Northern Limb can be sub-divided into three main groups which include from the base upwards: the Volspruit Pyroxenite, the Drummondlea Harzburgite Chromitite, and the Moordrift Harzburgite Pyroxenite (Figure 14). The Lower Zone contains approximately 37 cyclic units which are numbered from the base upwards. These cyclic units grade in composition and morphology upwards forming the basis of the sub-division stated above.

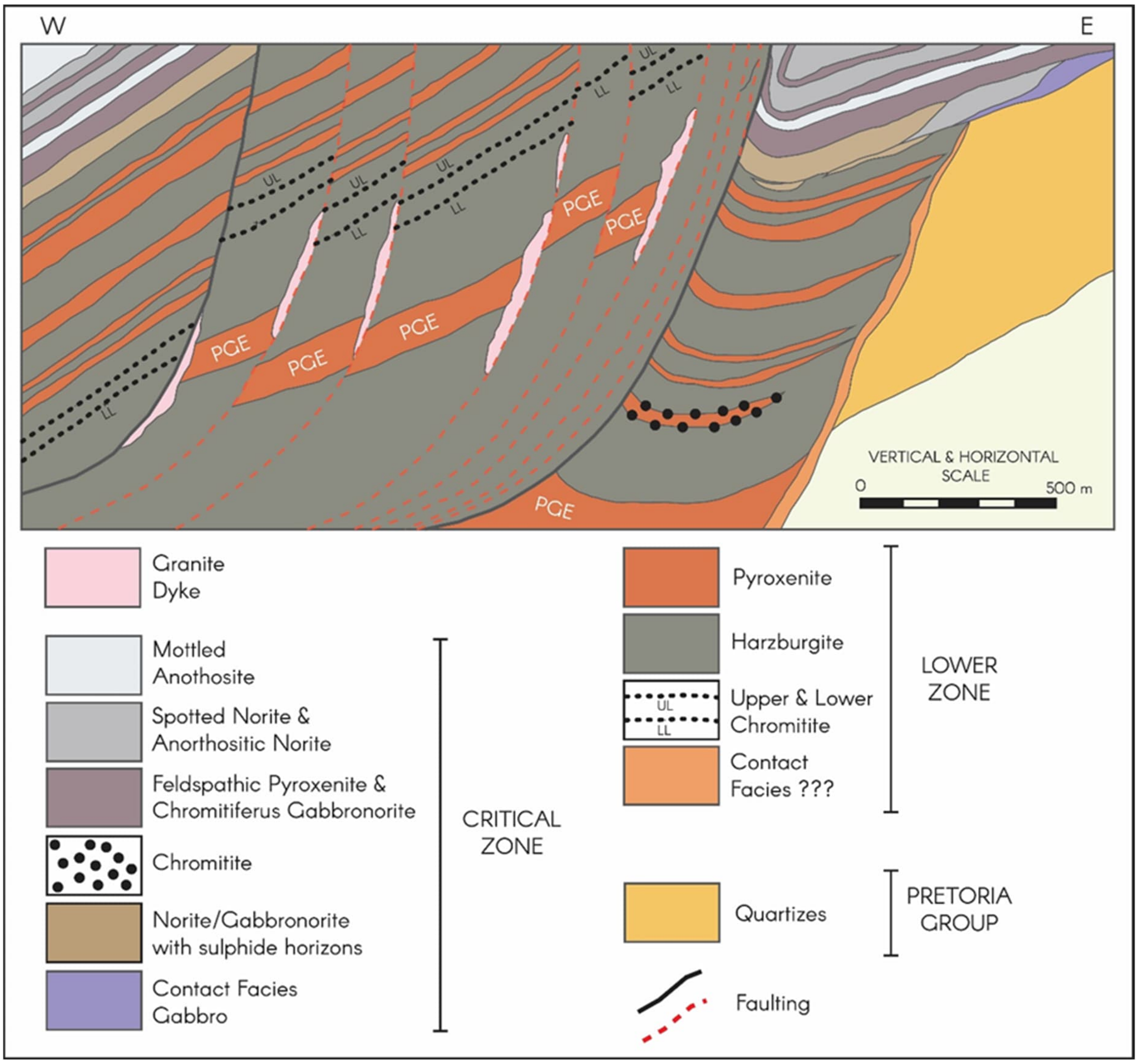

Figure 13. Schematic vertical cross-section of the local geology of the Volspruit Project. Image modified after Hulbert (1983).

Cyclic units 1 through 10 in the Volspruit subzone display incomplete cycles where olivine and chrome-bearing pyroxenites at the base of these units grade into pyroxenite at the top. The upper portion of the cyclic unit 11 contains significant PGE-Cu-Ni concentrations and is host to the Volspruit Reef. Cyclic unit 11 consists predominantly of orthopyroxenite with varying proportions of olivine, chrome, and minor plagioclase. The textures of the unit vary from massive equigranular, streaky to poikilitic pyroxenites.

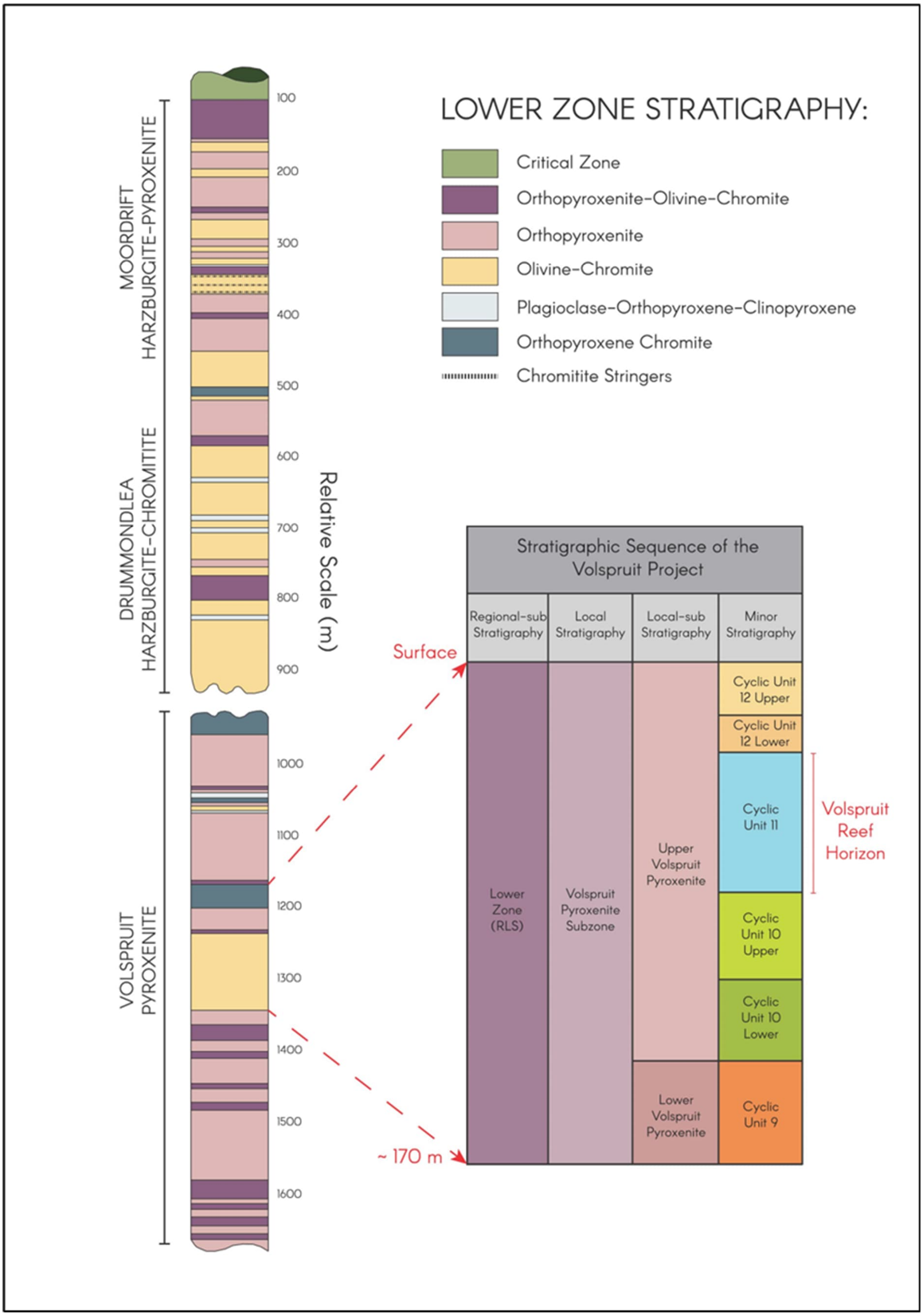

Figure 14. Lower Zone stratigraphy representing the Volspruit Project Area. Image modified after Hulbert (1983).

9.3 Mineralisation

The Volspruit Reef mineralisation is predominantly interstitial disseminated to net-textured sulphide assemblages hosted within olivine and chrome-bearing pyroxenites. The sulphide mineralisation within this horizon, in decreasing abundance, consists of pyrrhotite, pentlandite, chalcopyrite and cubanite (Hulbert, 1983). Sulphide assemblages reach their peak modal abundance at approximately 3 wt.% of the whole rock composition. Mineralisation is predominantly hosted by fine-grained equigranular ortho-pyroxenites with minor olivine and chrome occurrences.

According to Tanner, et al., (2019) the PGMs were directly observed within chromite-hosted sulphide inclusions. Their studies show it was unlikely that the late-magmatic fluids which migrated through the crystal pile played any significant role in enriching the PGMs of the Volspruit Sulphide Zone. Instead, the texture and high tenor of base metal sulphides in the Volspruit Sulphide Zone indicate that PGMs were partitioned into an immiscible sulphide liquid, which scavenged PGMs from a larger body of silicate magma.

The Volspruit Reef has provisionally been classified as a disseminated, PGE-Cu-Ni, syn-genetic, ortho-magmatic deposit within the Lower Zone of the RLS by Hulbert (1983). Tanner et al. (2019) suggested that the parental magma of the Lower Zone had a separate ultramafic source. The B1 magma is modelled as a mixture of 22% solids equivalent to Lower Critical Zone pyroxenite with 78% liquid while the B1-UM magma represents chills of a basal ultramafic sequence with distinct high siderophile element chemistry from magmas in the eastern limb of the BC corresponding with results obtained by Tanner et al. (2019), views the deposit as primitive, ultramafic magmas which intruded along sedimentary contacts beneath the main Grasvally magma chamber. Their research indicates that the Malmani Dolomites may be the location of the sub-Grasvally staging chamber. Carbonates with a minor contribution from surrounding sediments locally increased the oxygen fugacity (fO_2) of the ultramafic magmas leading to chromite saturation and crystallisation evident from exotic chromite inclusions. The chromite crystallisation leading to a decrease iron along with an external influx of sulphur from sedimentary contamination led to lowered levels of required to achieve the sulphur saturation and crystallisation of the sulphide minerals. Turbulent pulses or sudden faults moved the magma slurries with crystals to the main Grasvally magma chamber. As the cumulates cooled, interstitial sulphide droplets fractionated, exsolving a copper rich liquid which crystallised Fe-Ni rich base metal sulphides and precious metal mineral assemblages of the Volspruit Reef Zone.

The metamorphic aureole surrounding the northern limb of the BC records two stages of metamorphism. The first the emplacement of the Lower Zone (Grasvally chamber) and the second the emplacement of the overlying layered rocks. The second phase altered and serpentinite the Lower Zone rocks with low-grade regional metamorphism and associated gentle folding and four episodes of faulting (Tanner et al., 2019)

Earthlab has not yet found clear evidence of structurally controlled epigenetic mineralisation and has for this MRE accepted the assumption that the mineralisation was syn-genetic as explained above.

9.4 Structural geology

Relogging of structural elements was not part of the recent relogging campaign of Earthlab as the lithological, mineralogical, and stratigraphic relogging was of priority.

The historical logging contained comments of both brittle and ductile deformation. For this MRE's model, the assumption was made that while ductile deformation was possible, the slight undulatory shape of the main stratigraphic unit of interest (CU11U) could have just as easily been explained by the emplacement environment and subsequent emplacements and fractionation of magma, as well as brittle deformation as proposed by Hulbert (1983) as well as Campbell (2002). The brittle faults interpreted in the model were based on stratigraphic elevation differences, and while unable to prove the exact orientation, it was inserted as vertical structures for the time being with 2.5 m brackets on either side in an aim to quantify the potential geoloss.

9.5 Alteration

During historic logging as well as during Earthlab's relogging, three weathering zones were distinguished, namely Fresh, Transitional, and Oxidised. The zone boundaries are generally in a horizontal orientation, as one would expect of zones of alteration caused by surface water. The Transitional and Oxidised zones typically also have lower densities than the Fresh zone.

Minerals such as chlorite, serpentine, tremolite, and magnesite are typically found in and surrounding structures such as shears, fractures, and large networks of anastomosing veins. Figure 15 shows how hydrothermal alteration increases towards a structure such as a fault zone, causing total replacement of primary mineralisation of the immediately surrounding rock. Alteration intensity decreases away from structurally dense areas where there is only partial replacement alteration of the primary minerals taking place due to the decrease of structures and thus the lower supply of hydrothermal fluids. These alteration minerals identified are presumed to be alteration products of the mafic minerals such as olivine and pyroxene.

The sulphide with which the PGEs and base metals are associated with oxidisation leaving behind iron oxide "rust" as evidence along with depressions in the surface of the oxidised surface due to the sulphide material being easily weathered in comparison to the surrounding host rock. The weathered sulphides are fine to medium-grained, irregular brick-red grains that easily break apart under force.

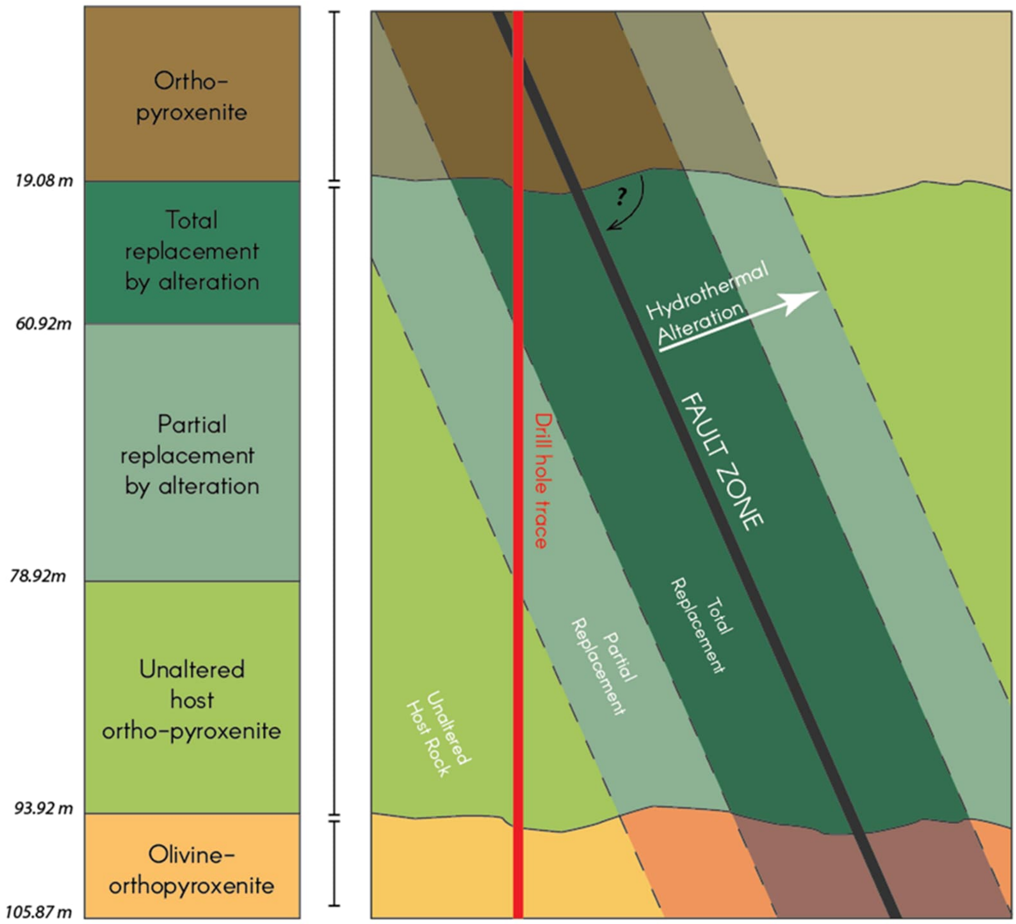

Figure 15. Diagram showing the intensity of alteration with proximity to a Fault Zone.

10 GEOLOGICAL MODEL

10.1 Data description

10.1.1 Data Used

VMC provided Earthlab with the geophysics of 2002 (as discussed in section 4.2.1) as image files which Earthlab then georeferenced into Datamine. Earthlab also received a topographic scan file which was used in this MRE.

Three drill hole data sets exist within the historic Access database of the Volspruit South Body, provided to Earthlab by VMC.

- VS diamond drill hole data
- GVS reverse circulation (RC) drill hole data
- GVS diamond drill hole data

The dataset officially used by Earthlab for the resource modelling and the MRE of the Volspruit South Body only included the prefixed "GVS" diamond drill hole data, relogged by Earthlab during the 2022-2023 re-logging campaign together with the assay and SG data contained within the provided Access database. The re-logging was performed only on the existing GVS diamond drill core that could be located within the Volspruit core yard facility.

The prefixed "VS" diamond drill hole and prefixed "GVS" RC drill hole datasets were excluded from being used in the resource modelling and the MRE. These historic drill holes were viewed in 3D to see if it could aid in defining the perimeter to which the extents of the model will be limited. This decision on excluding the "VS" diamond drill hole and prefixed "GVS" RC drill hole datasets was based on uncertainties in position of drill hole collars, lacking detailed lithological, mineralisation, alteration, and stratigraphic geological logs, and to Earthlab's knowledge no reference core exists or the whereabouts thereof is unknown.

A summary of the GVS diamond drill hole data set used in the stratigrphic wireframe modelling and MRE is described in Table 11. Some drill holes were only considered during stratigraphic wireframe modelling and excluded during estimation given their location, reliability or if the mineralised zone was intersected (Figure 16). Appendix A gives a detailed summary of how the drill holes were used for the resource model and MRE.

Table 11. Summary of the GVS diamond drill hole data set.

Line #	Description	Number of drill holes
1	GVS drill holes identified in the database to be relogged	54
2	Drill holes not relogged due to the following reasons: no drill core available; and mixed drill core within core boxes.	8
3	GVS drill holes relogged	46
4	Drill holes located outside of target stratigraphic sequence and modelling perimeter	7
5	Drill holes located within the modelling perimeter, but too altered to be used reliably in the stratigraphic wireframe modelling	7
6	Relogged drill holes that were excluded from wireframe modelling and grade estimation (sum of line 4 and line 5 above)	14
7	Drill holes used in stratigraphic wireframe modelling	32
8	Drill holes used for delineation of the ore and waste domains through probability estimation	32

9	Drill holes used in grade estimation of the Mineralised Domain and the Waste Domain	32
10	Drill holes that intersected the Mineralised Domain	16

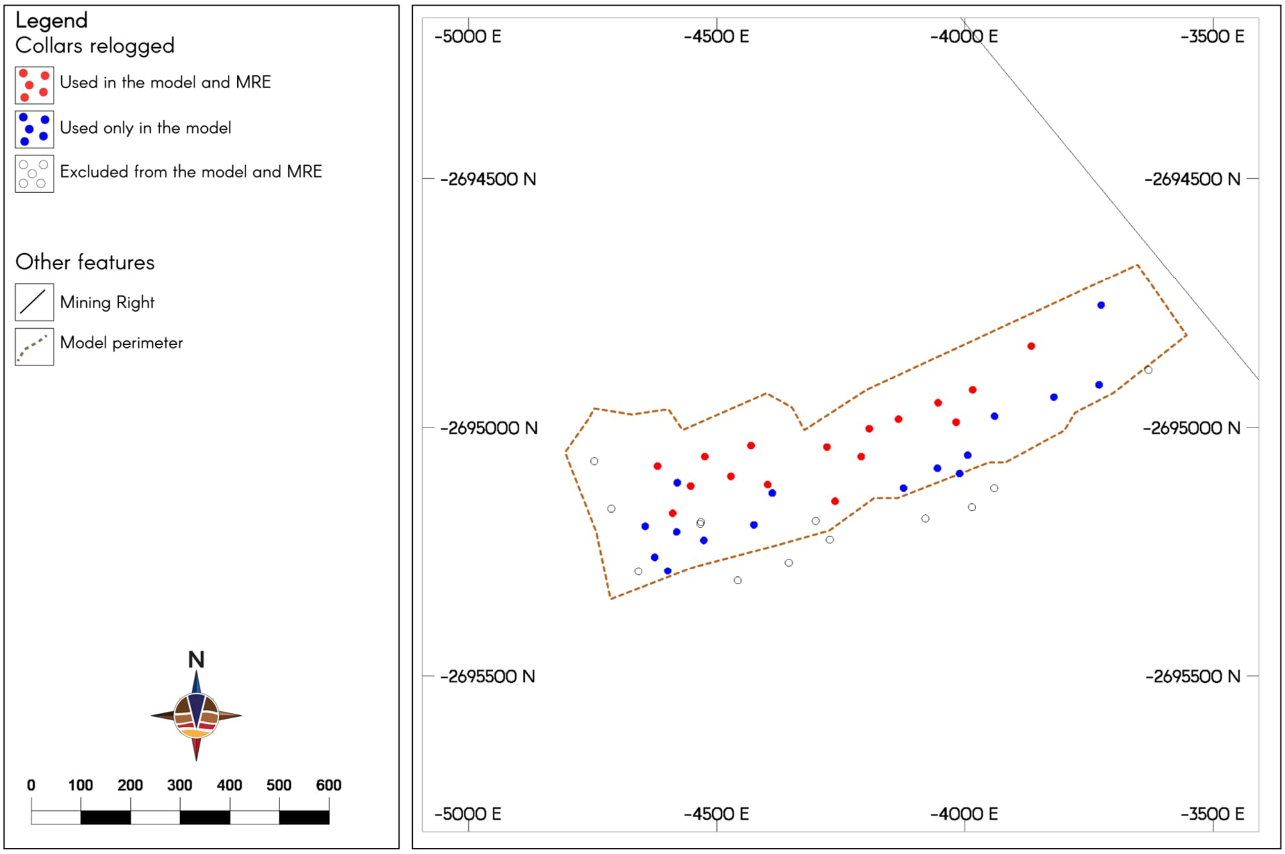

Figure 16. Collars of relogged drill holes for this MRE.

10.1.2 Aggregation and adjustments to data

10.1.2.1 Downhole surveys

Of the 32 drill holes used in the resource model, only 19 holes had actual downhole survey measurements in the database. 13 out of the 32 drill holes only had a single reading indicating that they were vertical holes, and therefore a dip of −90° and azimuth of 0° were assigned to those 13 holes.

10.1.2.2 Top capping

Taking into consideration the structural density and intensity of alteration within the main stratigraphic model perimeter no SG values were considered to be too low and were kept in the dataset with the lowest value being 1.066. A top cap of 3.40 was applied and this resulted in 24 values (ranging between 3.43 to 8.08) being excluded.

Due to the small size of the dataset being used in the MRE, no topcapping was applied in terms of grade.

10.1.3 Data spacing and appropriateness.

10.1.3.1 Drill hole spacing

The drill hole spacing between the relogged GVS diamond drill holes is highly irregular due to the following reasons:

- Limited number of GVS diamond drill holes drilled.
- Historic drill core availability (missing drill core identified as having been sampled to its entirety by previous third parties, historic core shelving failure caused by Volspruit farm staff activities within the storage facility, or core boxes which could not be located within the storage facility located on Volspruit farm).

The drill hole spacing varies from 20 m to 165 m, with this large variation it is unreasonable to calculate an average drill hole spacing which describes the drill hole spacing within the main stratigraphic model perimeter. As previously mentioned, the data set is too small and the drill hole spacing is too irregular to define or split the drill hole data into separate domains for the estimation based on drill hole spacing.

10.1.3.2 Sample spacing

Considering only the drill holes within the main stratigraphic model perimeter, most assay samples had a length of 1 m. Figure 17 shows the assay sample length distribution of all the stratigraphy's,

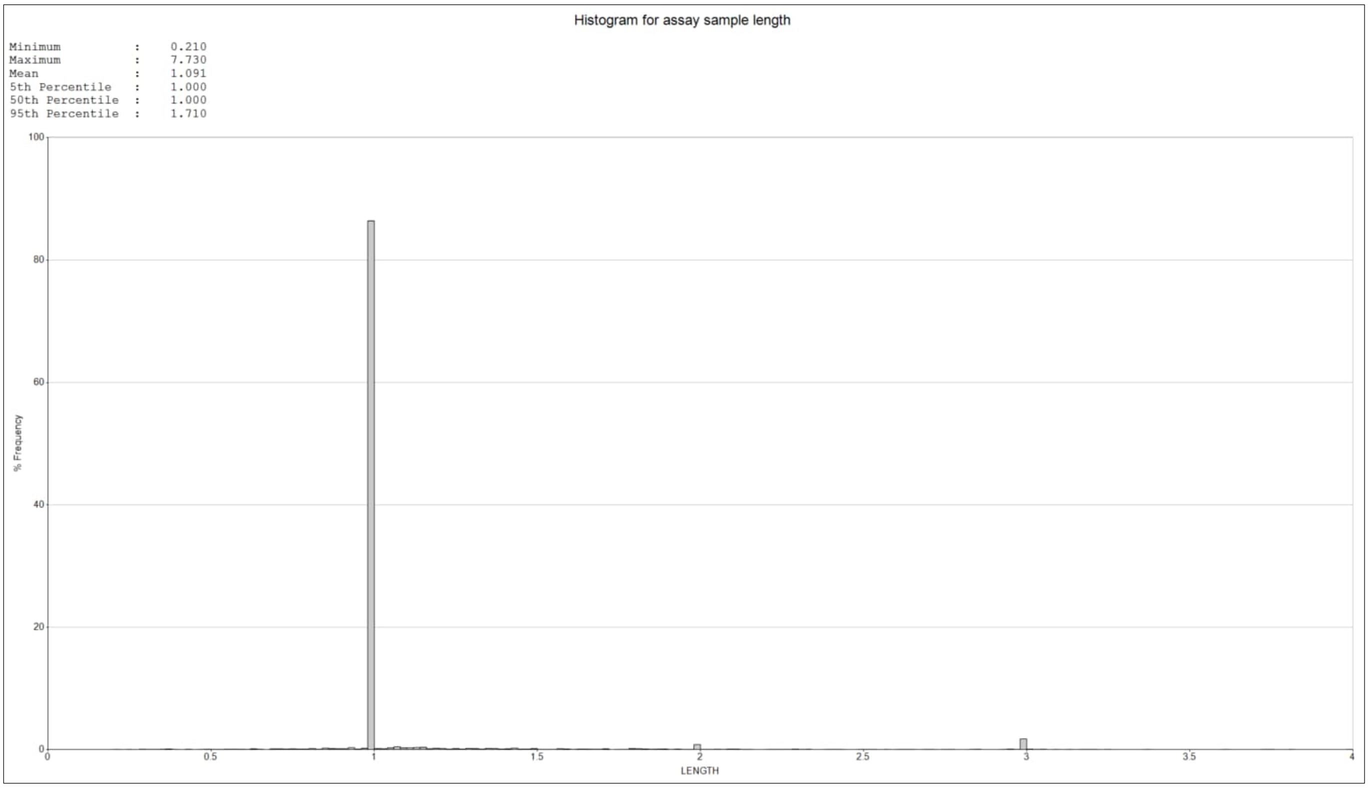

Figure 17. Assay sample length distribution of all the stratigraphy's.

10.2 Structural interpretation

As mentioned earlier in the report, based on literature and the geophysical report, it was accepted that the deformation in this project was mainly brittle, horst and graben type fault blocks. The positional interpretation of the multiple internal faults present within the South Body were based on observations made in the elevation differences noted during wireframing of stratigraphic units as well as the geophysical data gathered during the exploration geophysics completed for the Volspruit Project in 2002 presented in the report titled. "Interpretation of High-Resolution Aeromagnetic and Spectrometer Survey Data over the Grasvally Project area, Potgietersrus, Northern Province, on behalf of Pan Palladium South Africa (Pty) Ltd". By Geoff Campbell, GAP Geophysics (Campbell, 2002)

The internal faults modelled in the resource model did not differ significantly from the positions interpreted by the exploration geophysics. Changes in fault position and the addition of faults were based on differences noted in elevation when visually comparing the logged intervals within the desurveyed drill holes and wireframe solid contacts of the hanging wall and foot wall, and hard geological contacts of the minor stratigraphic unit CU11U.

These interpretations were further supported by abrupt changes in the magnetic vertical gradient, noted on the Magnetic Vertical Gradient Image obtained from the exploration geophysics report. No fault plane orientation could be established with the available dataset. No lateral displacement was applied, with only a vertical throw applied due to the lack of sufficient information. The fault planes were modelled as vertical planes to allow for the software to truncate the implicit models on either side of the digital fault planes.

It was assumed that the mineralisation took place pre-faulting (see section 9.3) and therefore in order to consider the drill holes on either side of faults as part of the same estimation domain without negatively affecting the geostatistics, the fault blocks were "unfaulted" to restore to approximate positions relative to one another as they would have been during emplacement and mineralisation.

10.3 Modelling procedure

Modelling and estimation were undertaken in Datamine Studio RM v1.13.202.0. software.

The drill hole data underwent some processing in Microsoft Excel, after which it was imported into Datamine StudioRM. Interrogation was performed on the drill holes by observing multiple attributes such as Pt, Pd, Au, Cu, and Ni grades, lithological logs, stratigraphical logs, and weathering zones.

The perimeter within which the lateral extent of the stratigraphic units and domain is confined, was created based on several factors:

- Geophysical results suggesting large faults.
- Sharp changes in the aeromagnetic results which suggested there could be changes in the geology that might be relevant to the model.
- Little to no changes in the aeromagnetic results suggesting that the geology might be relatively continuous.
- A loosely fit maximum distance from the outer drill hole(s) of ~100 m depending on the location and other factors such as geophysics and expected geological continuity.
- The absence of PGE-Cu-Ni mineralisation in multiple holes' CU11U units.

The faults serve as the confining boundary of the extent of the mineralised zone in all directions except in the ENE direction where it is open ended.

10.3.1 Weathering zones

The weathering zones (Fresh, Transitional, and Oxidised) were modelled as more or less horizontally orientated planes based on the weathering intervals determined during the relogging campaign (Figure 18). The contact surface between Oxidised and Transitional as well as between Transitional and Fresh were modelled to honour the contacts as logged, and thereafter additional dummy samples were added to aid in the modelling of the thickness continuity of the weathering zones in areas of the perimeter lacking sufficient data.

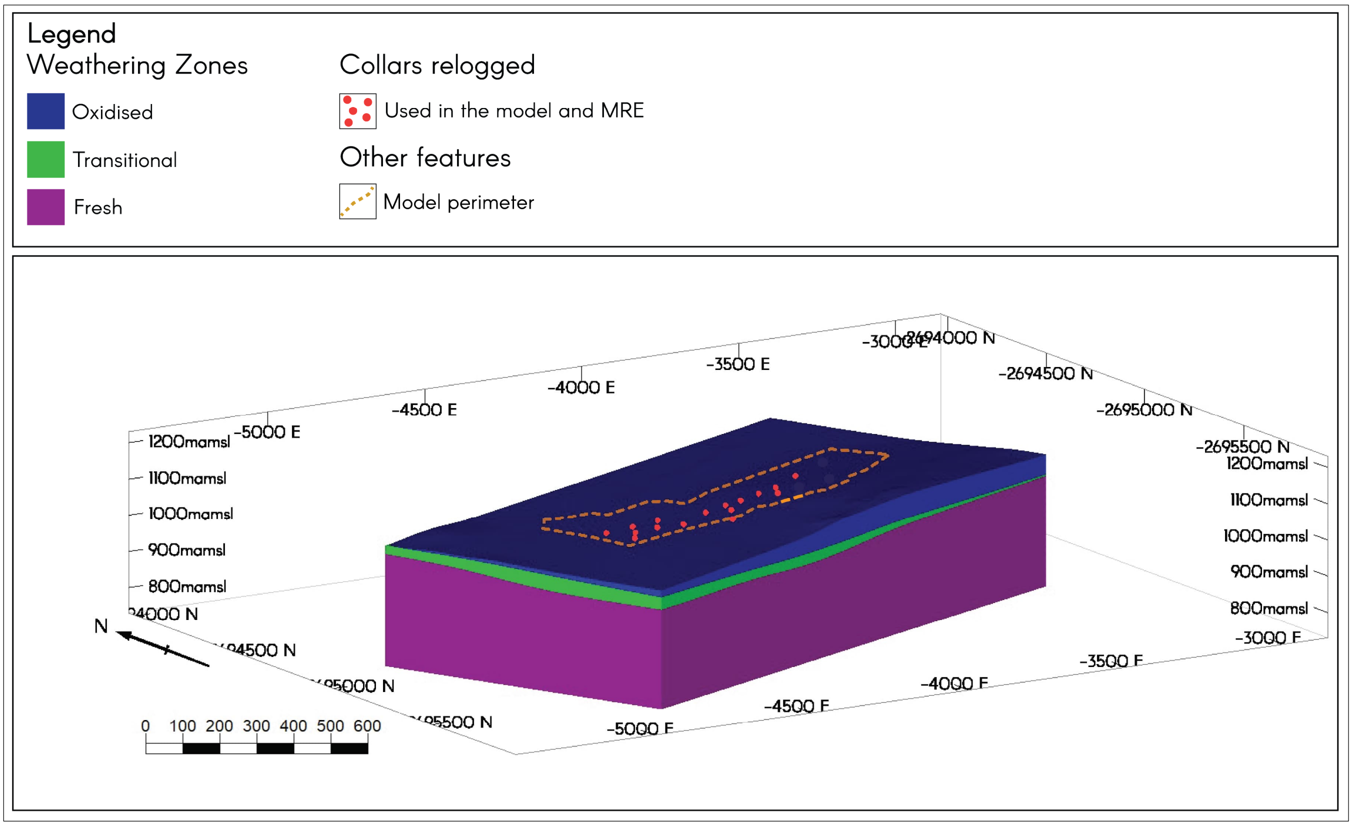

Figure 18. Oblique view of the weathering zones wireframes.

10.3.2 Stratigraphic units

10.3.2.1 Soil & Scree

The contact surface was modelled and directed with dummy samples on the outskirts to prevent it from crosscutting the topography.

The unit however did not have density measurements available and should a mining contractor quote on mining costs based on tonnes instead of volume, the density should be determined and assigned to the model.

10.3.2.2 CU12

The Minor Stratigraphy distinguished between the CU12U and CU12L, however, given the fact that the two units were both considered as waste, and being similar enough for the purpose of the model, they were modelled as one unit on top of CU11U and below the Soil unit.

10.3.2.3 CU11U

CU11U confines the domains within which the mineralised zone, hanging wall waste, internal waste and footwall waste occurs. The unit was modelled with StudioRM's implicit *Vein* tool, considering the vertically modelled fault planes. In several of the drill holes, the contact was either slightly changed by the Resource Geologist or it had to be "switched off" in the software in order for the software to ignore it during modelling. This was due to one or more of the following reasons:

- Since it was possible that the various logging geologists could've subjectively interpreted the stratigraphic contact in different places given the variable amounts of minerals such as olivine and the cyclical and repetitive intervals of olivine-rich and olivine-poor lithological units at the transitions

between the Minor Stratigraphic cyclic units, the Resource Geologist applied some slight adjustments at his discretion based on relative contact depth correlations between adjacent drill holes.
- Where adjustments were made, the lithology, grade, and both the hanging wall and footwall contacts were considered to have comfort that the adjustment was fair, and that it should not have perhaps been a fault in the vicinity.
- In cases where core was missing, there was no way to be certain where the contact would've lain, in which case the hanging wall and/or footwall contact(s) were ignored during modelling.
- Where the drill hole ended within CU1IU before intersecting CU1IL, the footwall contact was naturally switched off.

The number of drill holes manipulated in this way and the extent to which they were, was considered to be acceptable in order to produce a useful model in a practical timeframe. Given the difficulty in pinpointing the exact position of the contacts given the cyclical or gradual nature of the fractionation contacts, the possibility of thermal erosion, magma mixing, emplacement chamber footwall and hanging wall undulation, and later-stage faulting and intrusion, it could very well be that the contacts as modelled could be considered to lie slightly higher or lower, however, in the aim of producing a realistic and, most importantly, a useful model in the limited timeframe, the model was deemed acceptable.

The desurveyed drill hole traces coloured by the Minor Strat code is illustrated in Figure 19.

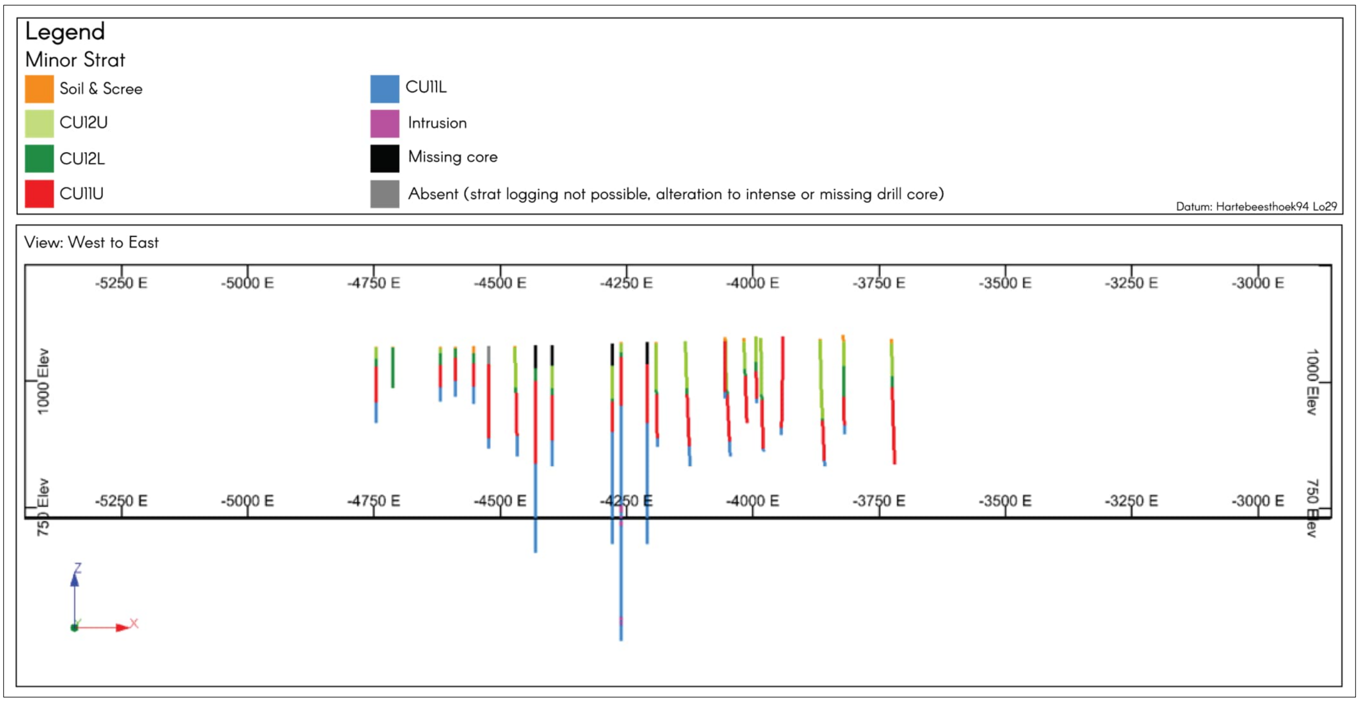

Figure 19. Drill holes viewed in vertical section from West to East looking North, coloured by the Minor Strat.

The main stratigraphic wireframes (excluding the Soil unit) along with the drill hole collars and the vertical fault surfaces can be seen in Figure 20 and Figure 21. The black dots represent the collar positions on surface.

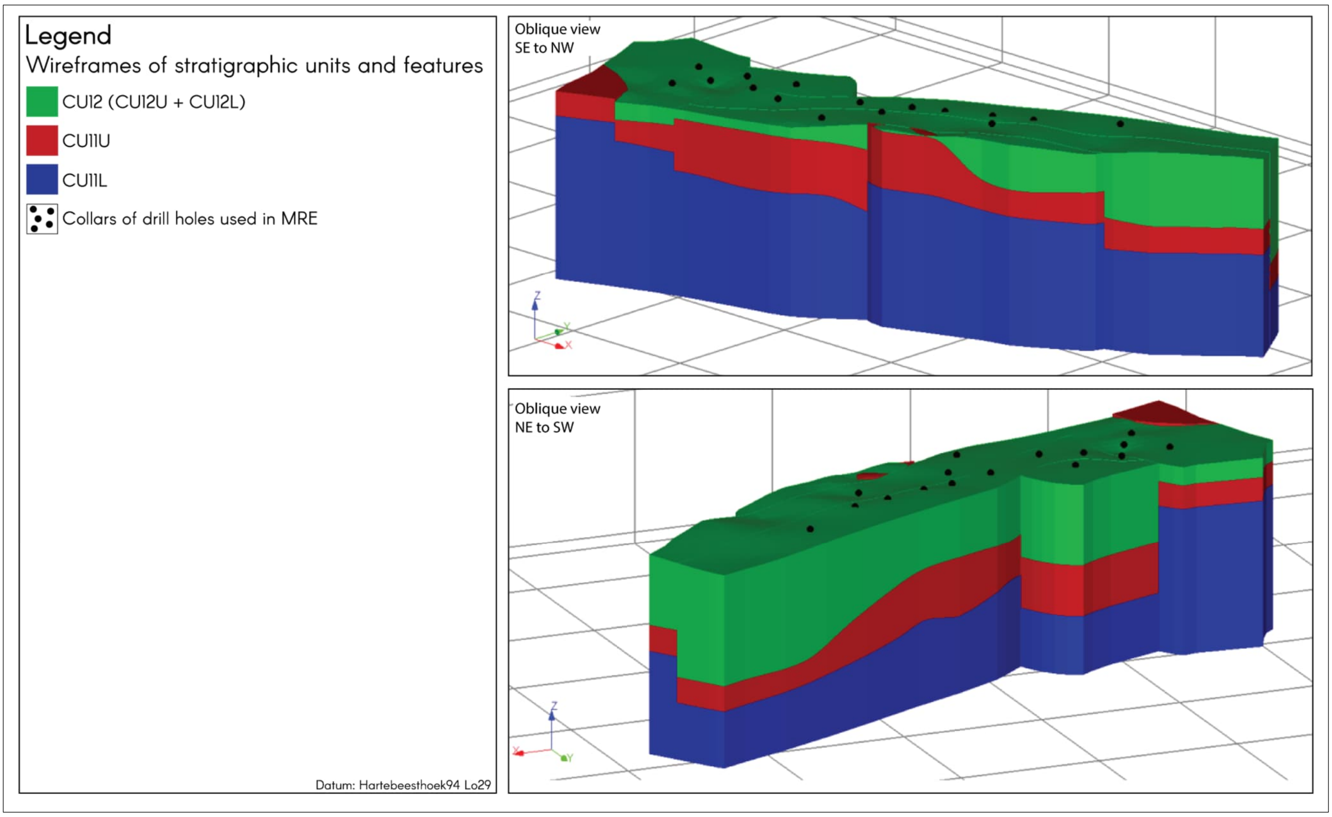

Figure 20. Oblique views of the main stratigraphic wireframes (excluding the Soil unit).

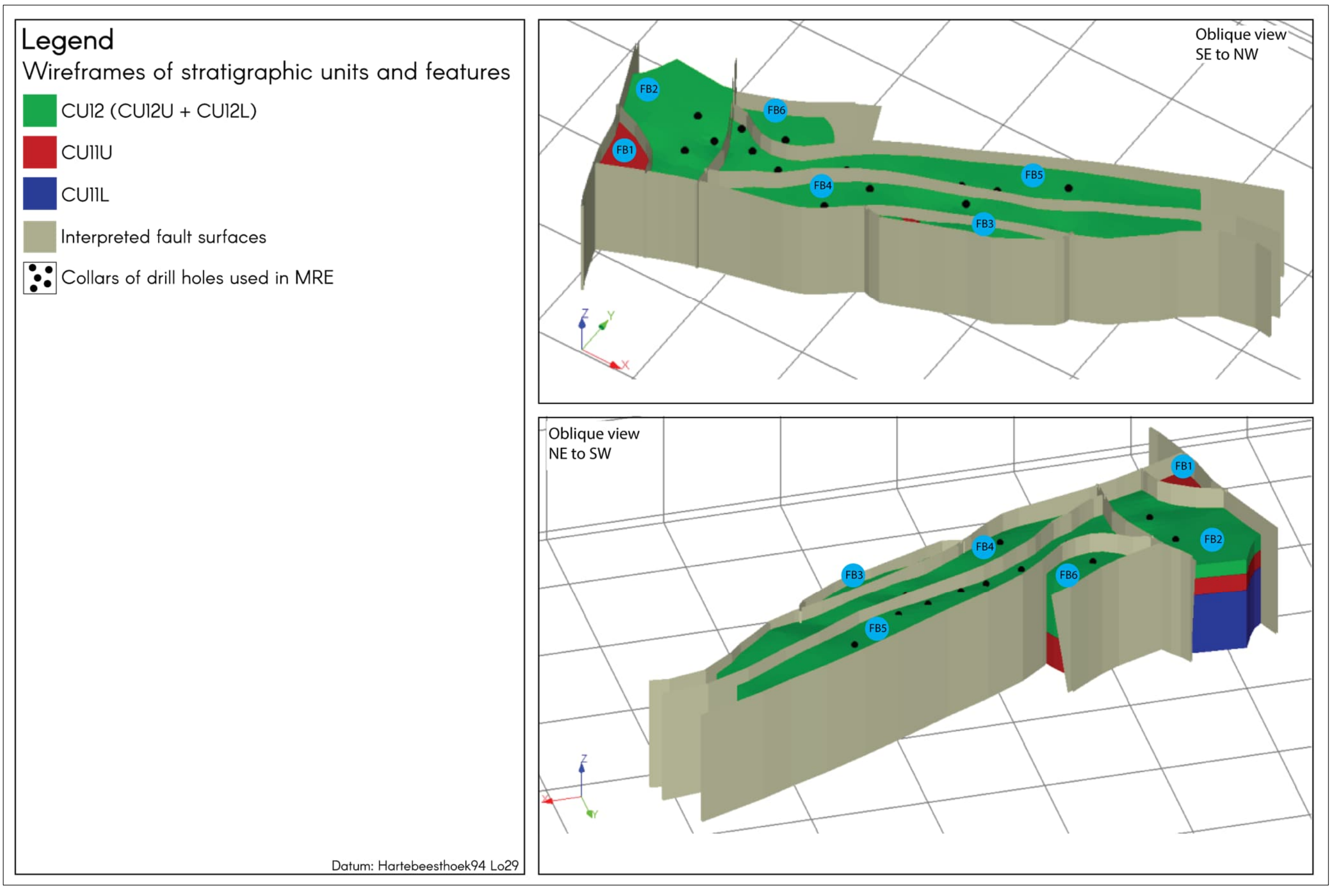

Figure 21. Oblique views of the interpreted fault surfaces and main stratigraphic wireframes (excluding the Soil unit).

10.3.2.4 CU11L

The Minor Stratigraphic unit CU11L is the foot wall to CU11U, the unit was modelled below CU11U down to an elevation of 736 mamsl in order to provide material beneath the potential ore unit for future mining studies.

10.3.2.5 Intrusions

No late-stage granitic intrusions were relogged within the CU11U, thus no attempt was made to model the late-stage granitic intrusions which only occurs within the waste foot wall unit of CU11L.

10.3.2.6 VR1, VR2, VR3, VRMID1 and VRMID2

As mentioned in section **Error! Reference source not found.** the geologists logged a minor-substratigraphy level, namely the VR1, VR2, VR3, VRMID1, and VRMID2 units based on the visual sulphide mineral content. The purpose of this was to delineate the economic zones based on visual identification which would give comfort that in-pit grade control during mining could potentially be possible with the naked eye. The VR1 – VR3 units had a higher mean PGE grade than the encompassing CU11U unit, indicating progress in being able to visually identify the mineralised zone. However, the VR1 – VR3's mean PGE grade remained sub-economical and would have still required a grade-based subdomain within them. In this deposit's case, given the need for and methodology of creating a grade-based subdomain, it was decided to model the minor stratigraphic units and proceed directly to creating the grade-based subdomain instead of modelling wireframes for the minor substratigraphic units as well.

10.4 Model confidence and alternative interpretations

The confidence in the current stratigraphic model of this MRE was acceptable for the purpose of estimating for visualization, and geological understanding, however, it requires significant improvement with additional data. There remains significant uncertainty in the exact locations and orientations of the faults and the stratigraphic modelling required a significant number of dummy samples to have the vertical thicknesses on either side of the faults make geological sense. In many areas, fault blocks were based on single drill hole intersections, which was not ideal.

Alternative interpretations will most likely be possible especially considering the small dataset used for this resource model and MRE. Earthlab foresee that a viable alternative stratigraphic and internal fault interpretation is possible, especially with the addition of new closer spaced data to the dataset. Different resource geologists may interpret the perimeter at different extents, or interpret the fault planes at different positions, which can result in a different model. Further drilling will improve the short scale interpretation of the geological units as well as that of the internal faults. The step-wise faulted structure of this model was already a significant change from the original model created by RSG which encompassed a steeply dipping structure.

11 DOMAINING

11.1 Cut-off grade

The theoretical economic mineralisation is limited to the CU11U unit; however, it would not be economic to mine the unit as a whole due to the large portions with low to trace levels of mineralisation of the PGEs and base metals bringing down the average grades to sub-economic levels.

It was therefore necessary to apply a cut-off grade on a sample-level to define a sub-domain within CU11U which could potentially pass RPEEE requirements.

It should be noted that JORC Appendix 1 suggests generalised meaning to terms such a "cut-off grade" and "ore" which should not be confused with the context in which it is used here temporarily.

The 'cut-off grade' applied on the sample-level was not based on a minimum grade which would be economic to mine and process, but rather a grade which (when applied as a cut-off grade in Datamine StudioRM's COMPSE function) would produce a set of samples that would meet the following criteria:

- Have an average grade which could potentially be economic to mine.
- Consist as far as possible of a single grade population, or at least have minimal samples that would appear to be part of a separate statistical population when viewed on a probability plot.
- Display a relatively realistic log-normal histogram without significant gaps in grade intervals.

The COMPSE function in Datamine StudioRM is a complex procedure to classify samples as "ore" or "waste" depending on their grade, length, and position relative to other samples, which is a preferable method of applying a cut-off grade as opposed to a simple flagging of samples above and below a specified grade. Apart from the minimum grade and minimum minable thickness, the parameters also allow for tweaking the level of conservatism vs aggressiveness in the way in which samples below the cut-off grade could be included in intervals classified as "ore" which effectively reduces the average grade, but allows for longer, more continuous intervals. (Note the usage of "ore" and "waste" here are not in line with JORC's intended use, but simply the terms used by the software to distinguish between the two respective domains.)

A set of iterations were run to test different cut-off grades, using 2E+Au as the variable to be applied. 2E+Au cut-off grades ranging from 1.0 g/t to 1.5 g/t were tested, with both conservative and lenient settings.

A 2E+Au cut-off grade of 1.2 g/t with conservative settings was chosen as the final parameters to define the potentially economic domain within CU11U. A 2E+Au cut-off grade of 1.2 g/t, requiring a minimum mineralised interval of 2.5 m and allowing for up to 2.5 m of internal waste, was chosen as the final set parameters to define the potentially economic domain within CU11U (Figure 22 and Figure 23). The output was however further adjusted by manually coding "waste" samples as "ore" to include more internal waste and lower grade samples. This improved the shape of the grade distribution histogram and probability plot giving a slightly more realistic distribution, but with the downside of reducing the average grade.

This domain will henceforth be referred to as the "Mineralised Domain". The remainder of CU11U which consisted of the samples coded as "waste" will be referred to as the "Waste Domain" but should not be confused with other portions of waste material situated within other stratigraphic units.

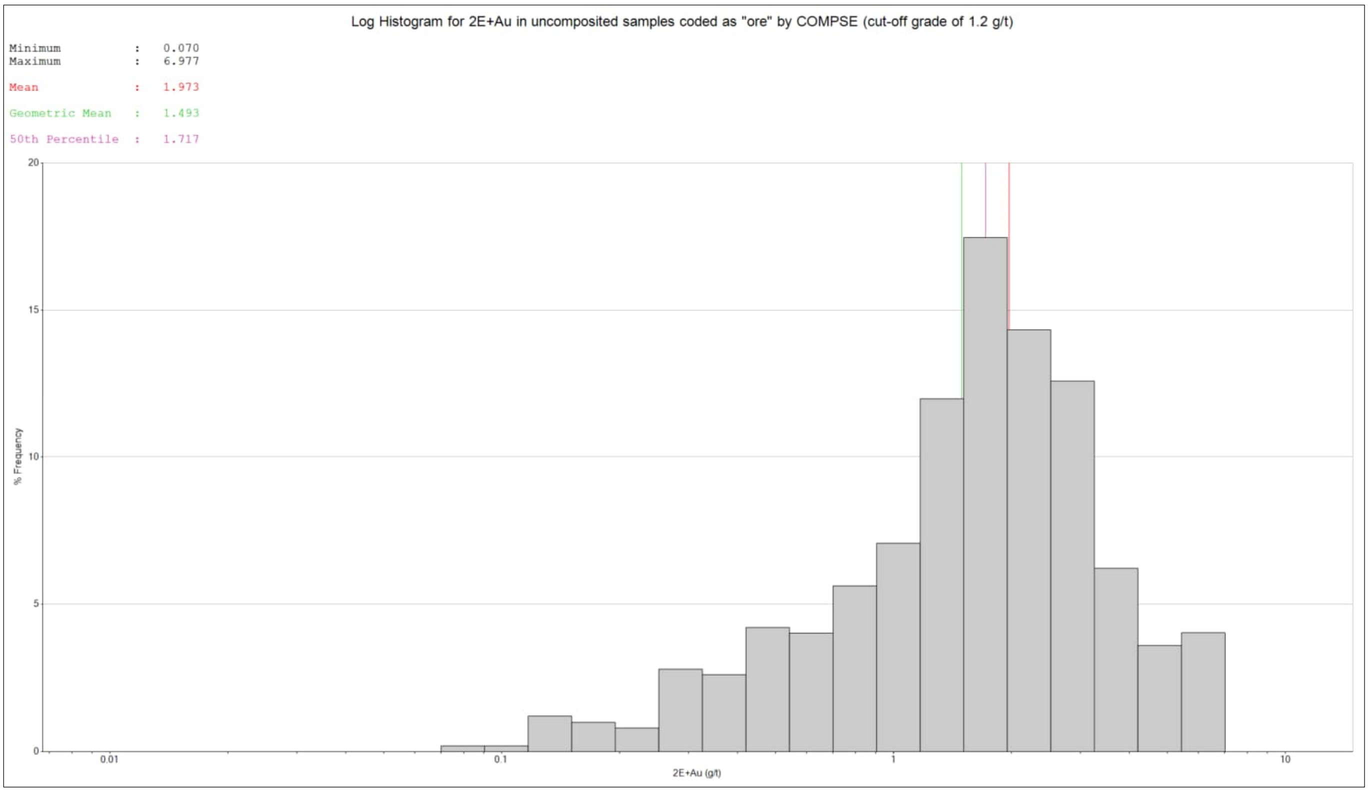

Figure 22. Log histogram of 2E+Au in uncomposited samples coded as "ore" by the COMPSE process, representing the samples in Mineralised Domain.

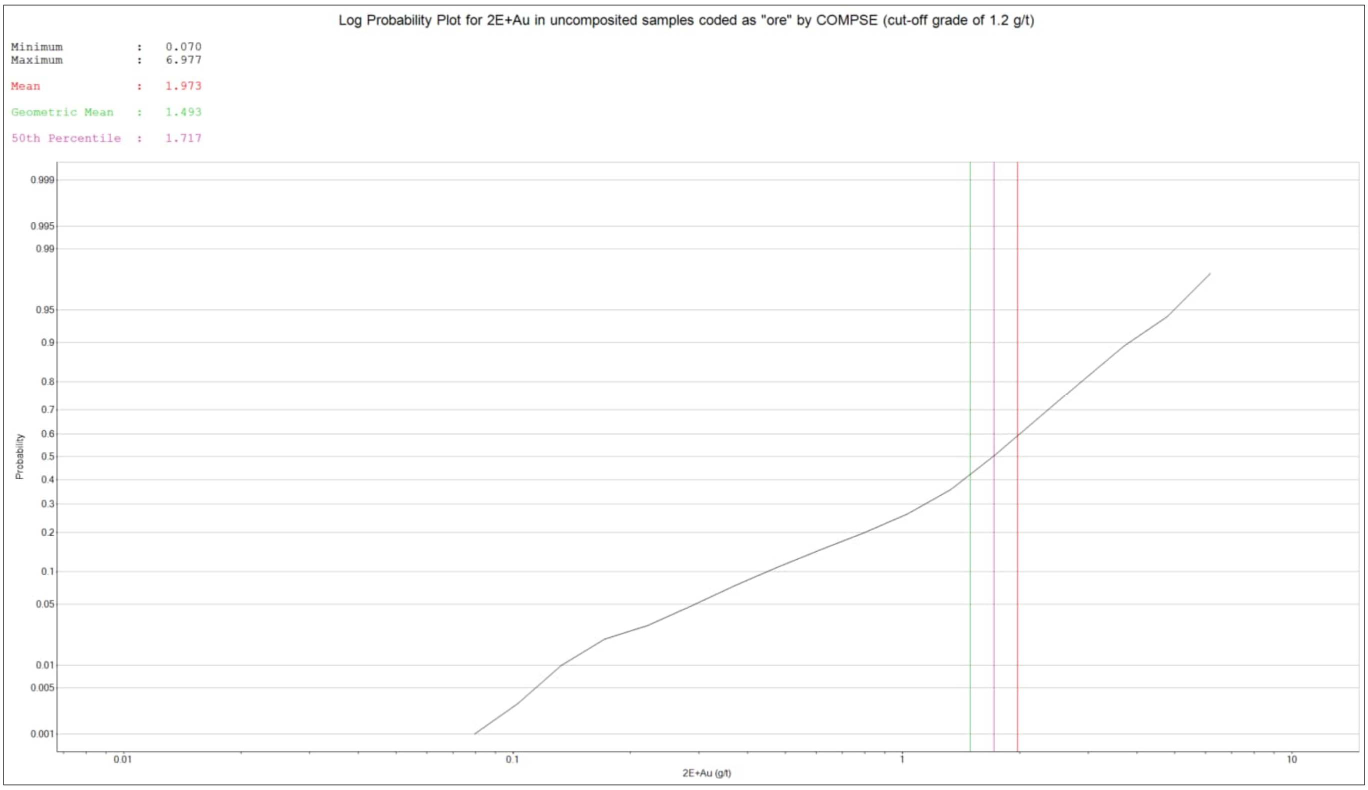

Figure 23. Log probability plot of 2E+Au in uncomposited samples coded as "ore" by the COMPSE process, representing the samples in Mineralised Domain.

11.2 Compositing

It was important to go through the typical step of compositing since it was expected that variography and kriging would be incorporated. The choice of length for the composites was 1 m, and composites were terminated at stratigraphic unit and boundaries. The compositing method aimed to minimize residuals and therefore allowed for slight deviation from the intended composite length.

The statistics reported hereafter are based on the composited samples.

The composite length distribution is illustrated in Figure 24. The setting to prevent residuals can cause a slight deviation from the preferred composite length, but as the histogram illustrates, the vast majority of composites lie within very close proximity to 1.0 m.

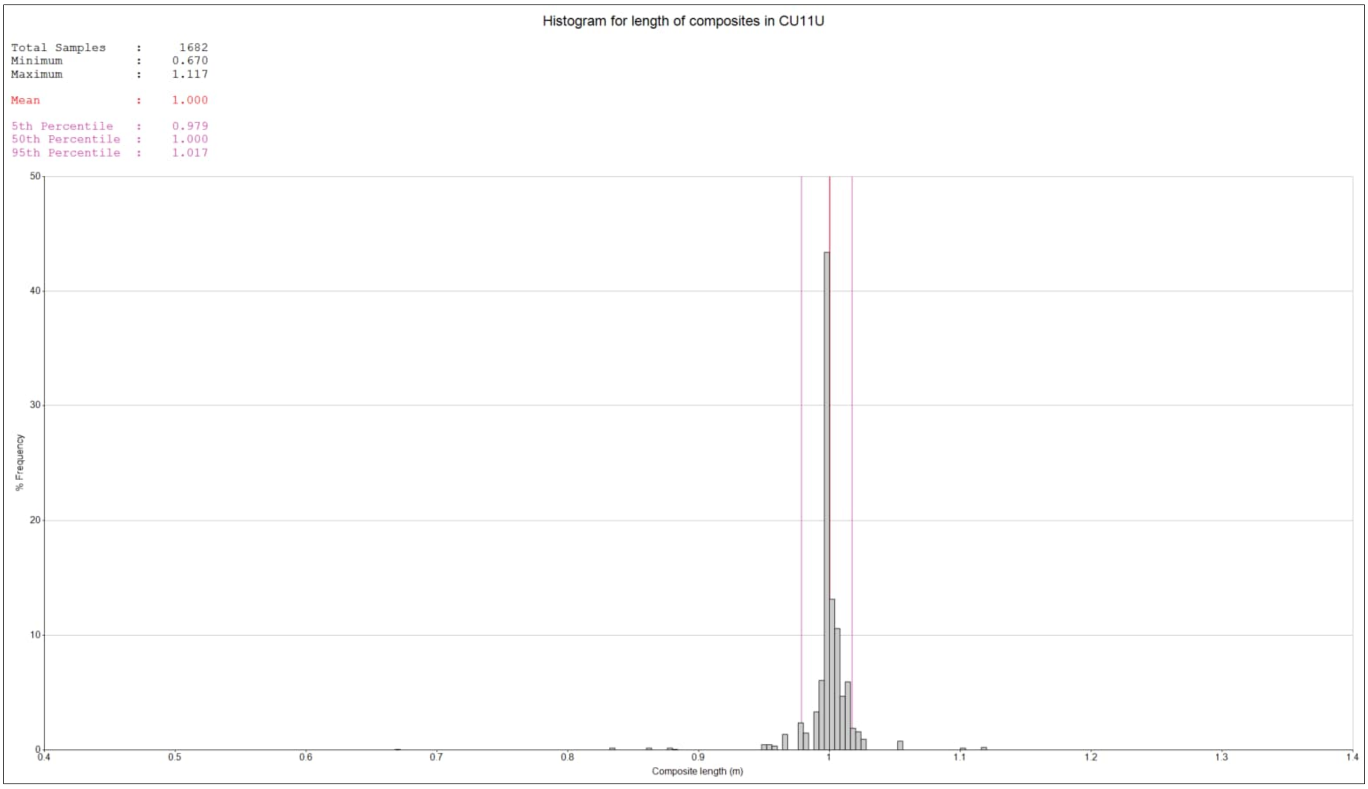

Figure 24. CU11U composite length.

11.3 Unfaulting

Based on the assumption that the mineralisation occurred pre-faulting and assumed not to be significantly affected by the faulting, the fault blocks were "unfaulted" to restore them to their pre-faulting positions relative to one another. The drill holes were unfaulted in the same way depending on the fault block that they were situated in.

11.4 Indicator variograms

The composites were coded with indicators of 1 and 0, i.e., 1 if they represented the Mineralised Domain and 0 if they represented the Waste Domain in CU11U.

Variograms were modelled for the indicators in CU11U to determine continuity directions and extents, however given the spread of the data it was pre-empted that the variograms would in anyways follow the layout of the drill hole data.

11.5 Probability Estimation

Multiple attempts to model the Mineralised Domain with a wireframing tool were made, albeit unsuccessful in honouring the drill hole data sufficiently. It was therefore decided to apply a technique called Probability Estimation, which is also commonly referred to as Categorical Indicator Kriging.

The CU1U wireframe was filled with blocks with parent block dimensions of 5 mX by 5 mY by 2.5 mZ, while also allowing for subcelling to honour the wireframe's shape.

Probability Estimation was done into the blocks using the indicator samples to estimate where a block had sufficient probability of being part of the Mineralised Domain, and where the probability of being part of the Waste Domain was larger.

Using Kriging with the indicator variograms caused too much smoothing, not honouring the drill holes with nearby blocks effectively enough. Inverse Power of Distance (IPD) to the power of 2 offered a better result and was used to estimate the probabilities.

Given the limited data and the relatively regular shaped stratigraphic unit, Dynamic Anisotropy was not used during estimation.

Table 12. Search and estimation parameters used for the Probability Estimation of the Mineralised and Waste Domains in CU1U.

Parameter	Setting
Interpolation method	IPD^2
Search volume dimensions	50 mX by 150 mY by 5 mZ
Rotation around the Z-axis	60°
Minimum samples	3
Maximum samples	10
Maximum samples per drill hole	3
Use of octants	No

After estimating numbers ranging from 0 to 1 into the blocks, a threshold between 0 and 1 had to be determined to code blocks below the threshold as the Waste Domain and blocks above the threshold as the Mineralised Domain.

Since all the drill holes, except for GVS032, intersected CU1U fully, the dataset could be considered as representative of CU1U, at least to the limited extent of this exercise. If too many holes stopped short of the CU1U footwall, the representativeness would not have been as good. In the aim of honouring the data and then being slightly more conservative, the threshold was determined in a way to honour the ratio of Mineralised Domain to Waste Domain in the samples in the volume of blocks coded as each. The initial ratio in the samples 29.72% ore and 70.28% waste (Figure 25). To honour that ratio, a threshold probability of 0.518 was chosen to code the blocks as either Mineralised Domain or Waste Domain (Figure 27).

Further manual cleaning was also done on the block model to change some of the Mineralised Domain blocks to the Waste Domain to remove artifact blocks and certainty was interpreted to have been over-estimated. The final model therefore has a fair amount of conservatism built into it.

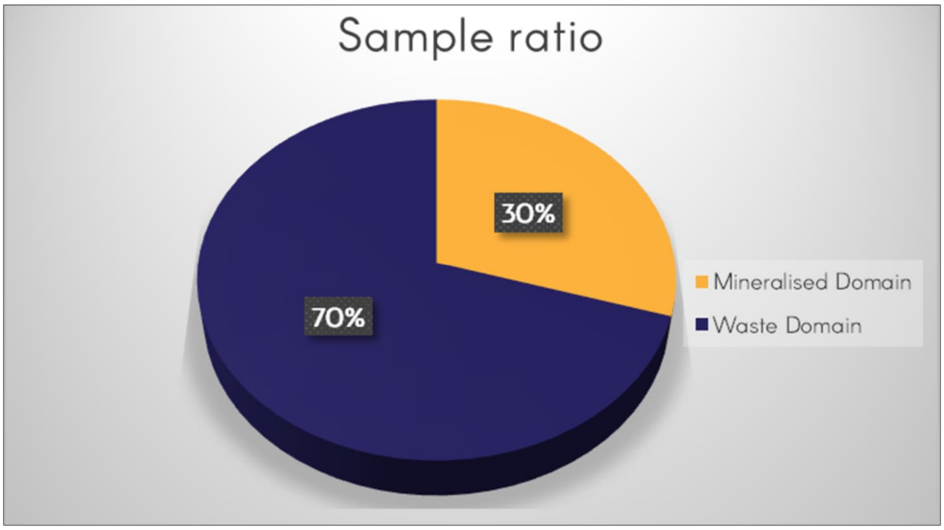

Figure 25. Sample ratio of Mineralised Domain vs Waste Domain.

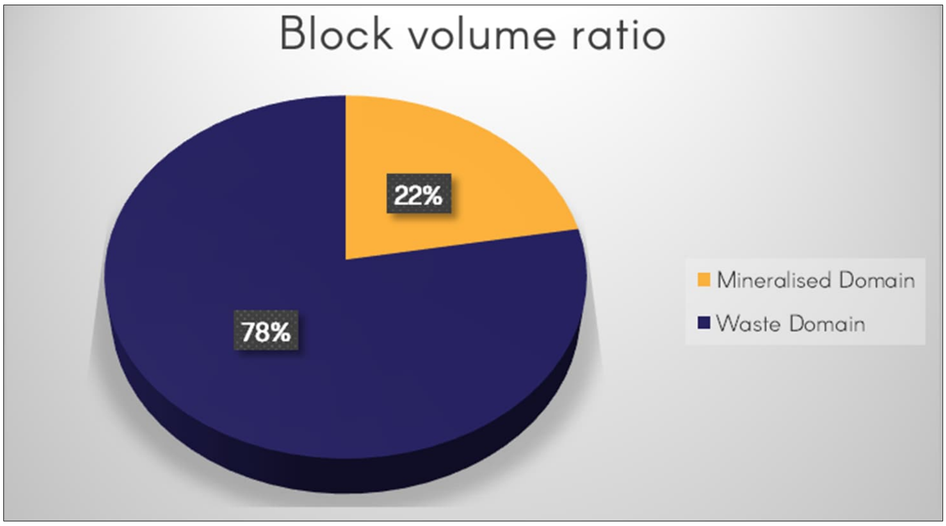

Figure 26. Block volume ratio of Mineralised Domain vs Waste Domain.

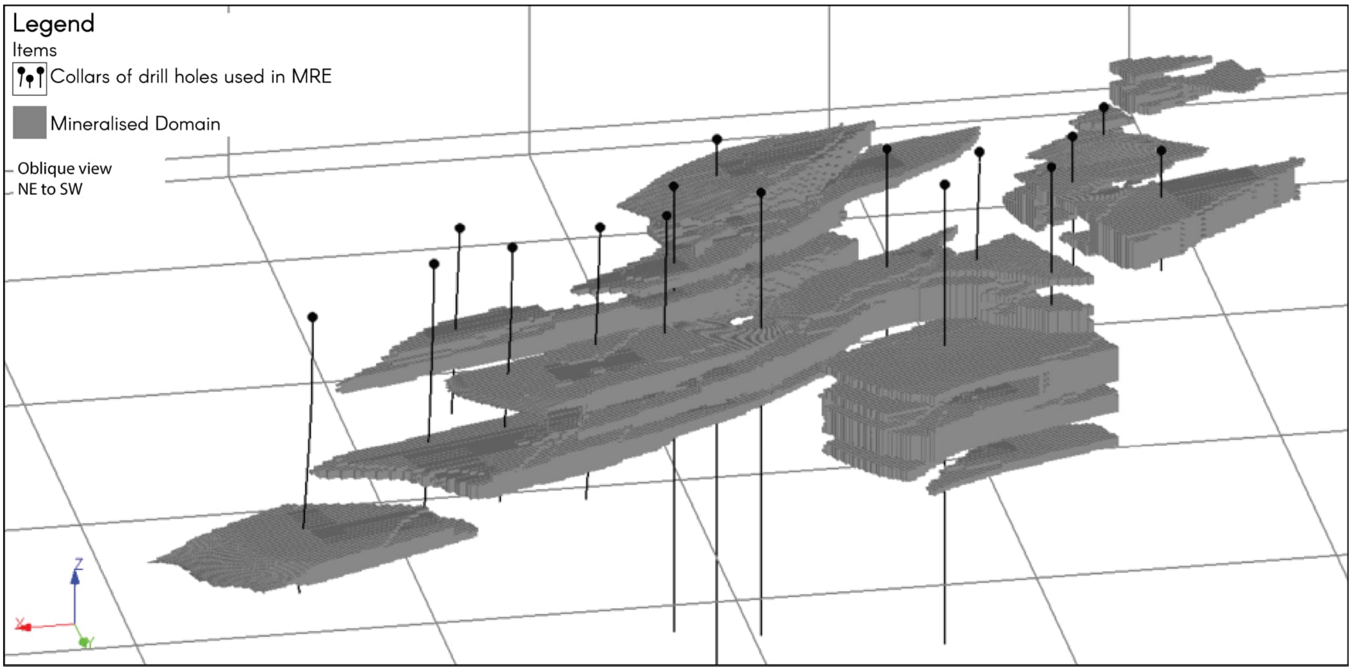

Figure 27. The entire Mineralised Domain not limited to the pit shell, produced by the Probability Estimation and a threshold of 0.518 and manual cleaning of uncertain blocks.

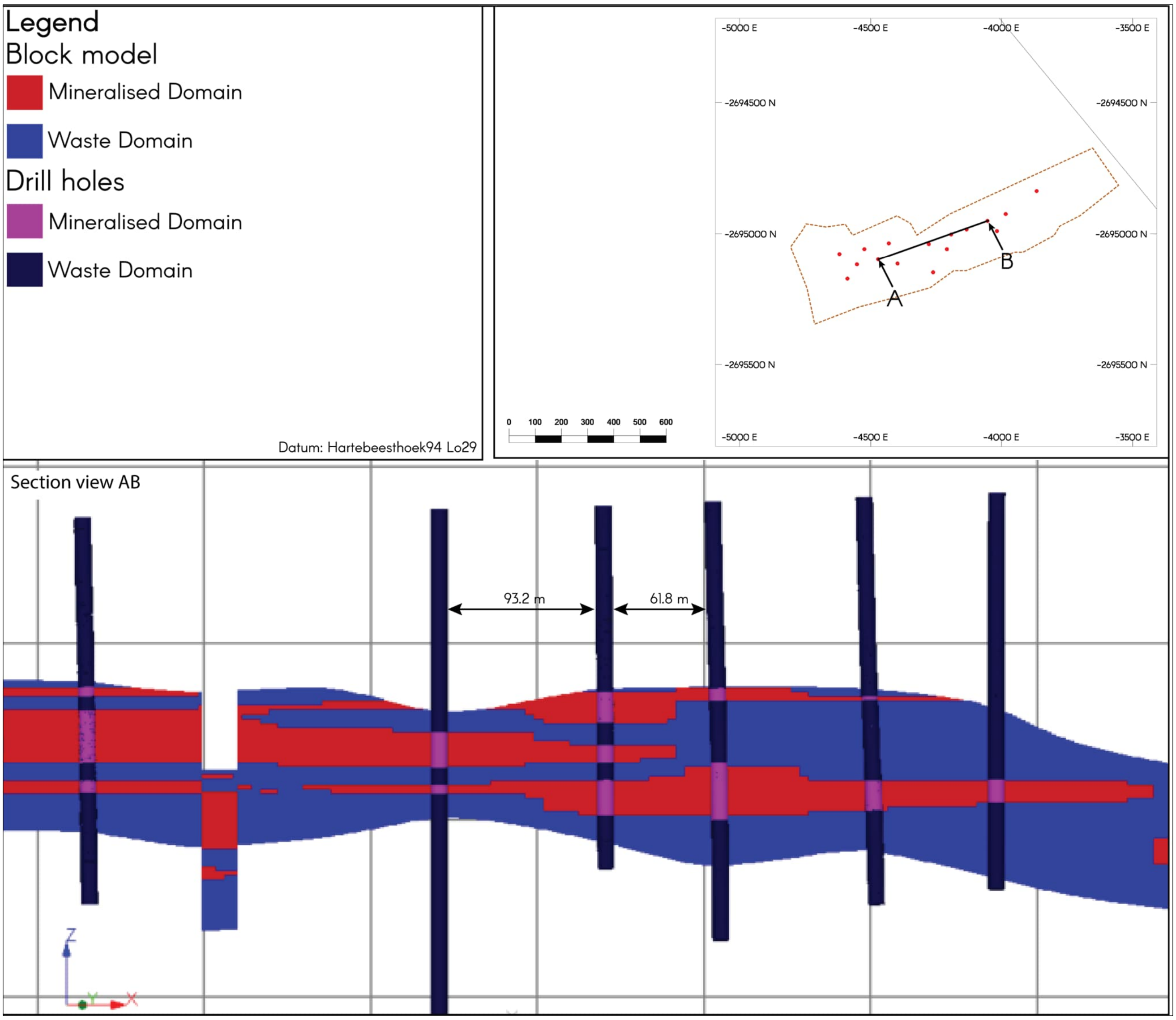

Figure 28. The Mineralised Domain (red) and Waste Domain (blue) inside CU11U on section AB. Drill holes not illustrated to scale.

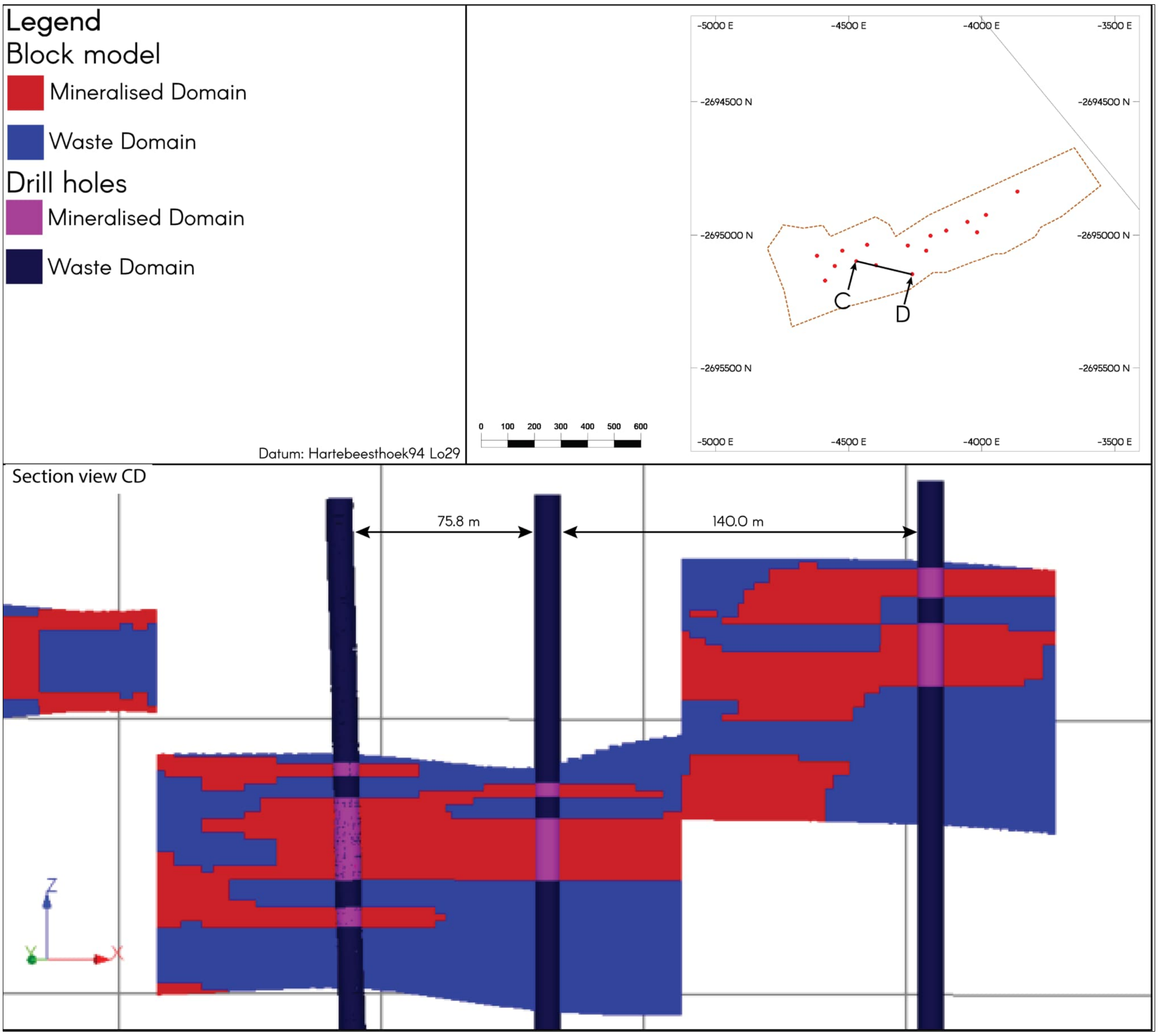

Figure 29. The Mineralised Domain (red) and Waste Domain (blue) inside CU11U on section CD. Drill holes not illustrated to scale.

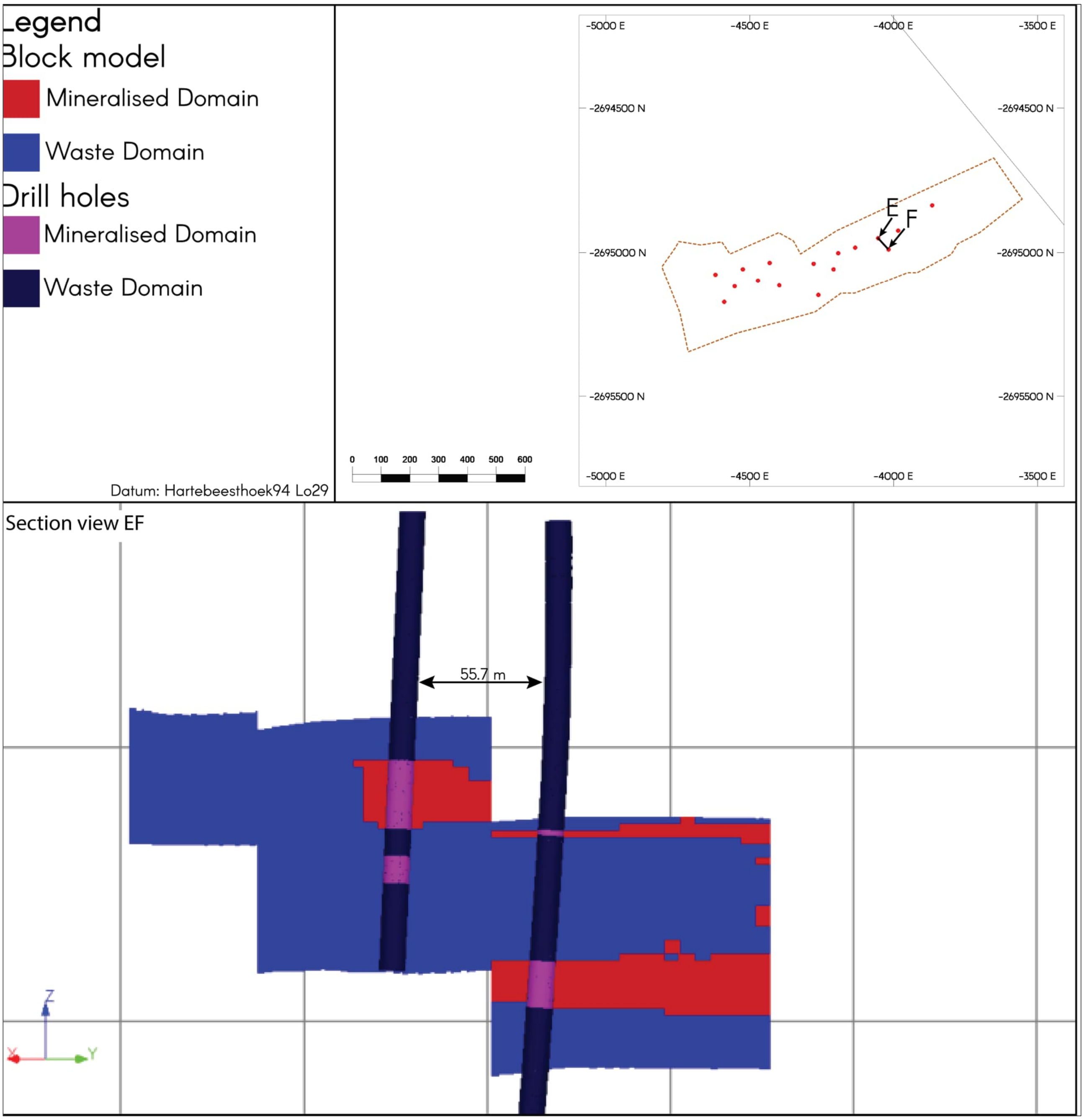

Figure 30. The Mineralised Domain (red) and Waste Domain (blue) inside CU11U on section EF. Drill holes not illustrated to scale.

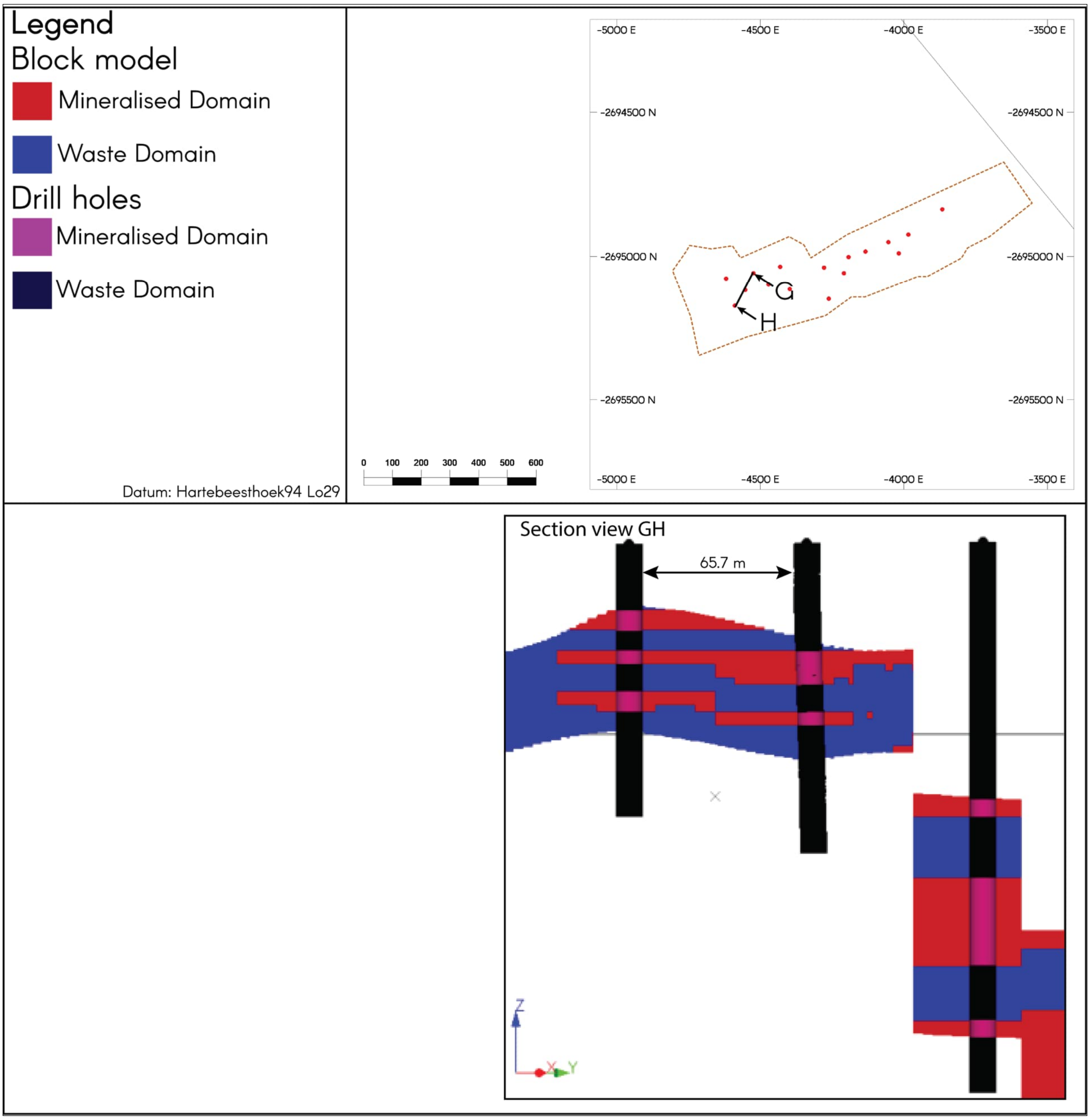

Figure 31. The Mineralised Domain (red) and Waste Domain (blue) inside CU1U on section GH. Drill holes not illustrated to scale.

12 COMPOSITE STATISTICS

The Mineralised Domain's composites statistics are reported in this chapter. Declustering was not applied.

The grade distributions for Au, Pt, Pd, Cu and Ni in the Mineralised Domain display near-log-normal distributions. The slight tails present in the log histograms could be attributed to the dataset being limited. Useful statistics are displayed in each figure and the reader could consider both the arithmetic mean as well as the geometric mean. The coefficient of variation (CV) for each element was below 1.

The density distribution histograms for each of the weathering zone categories do not display log normal distributions and some histograms hint at more than one statistical population and can be partly due to the limited size of the dataset, but in the case of the Entire Fresh Zone it was likely caused by multiple lithologies with different density ranges grouped into a single category, and although not being preferable, was done due to the dataset being limited. The density CV values of the Fresh category was below 0.11, while the Transitional category was below 0.14 and the Oxidised category was below 0.234, which are still low CV values and would result in low error variances in estimations.

The correlation scatter plots indicated positive correlations between all the elements, although not equally as strong. Pt and Pd indicated the best correlation, while Ni showed the worst correlation with the respective elements. The Au histogram and scatterplots indicate that a large number of samples reported below the detection limit during analysis, however, different campaigns (and laboratories) presumably had different detection limits, hence the multiple samples reporting specific low-grade values which do not show good correlation with the other elements.

12.1 Mineralised Domain composites

12.1.1 Au

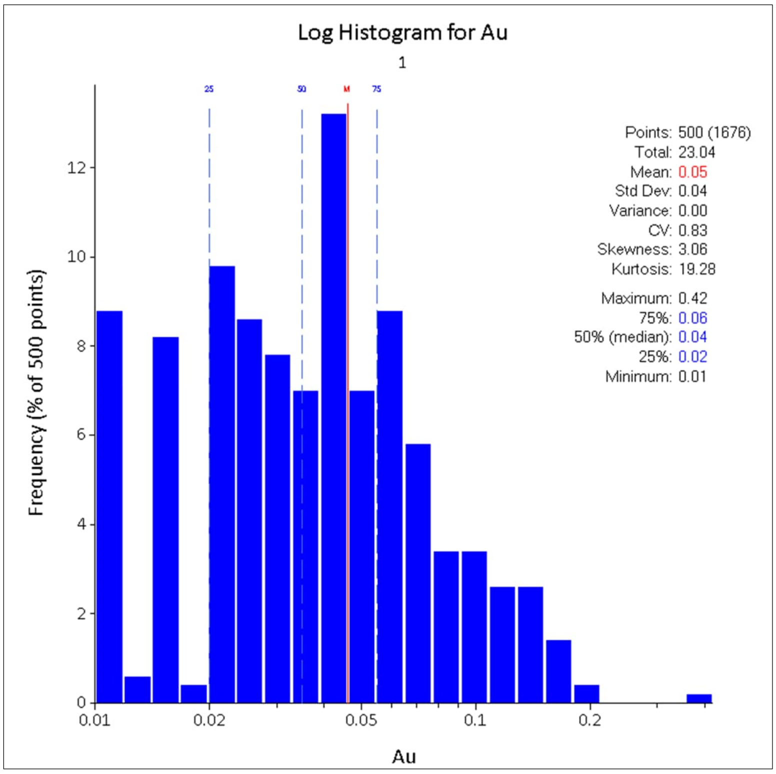

Figure 32. Mineralised Domain composites Au distribution.

12.1.2 Pt

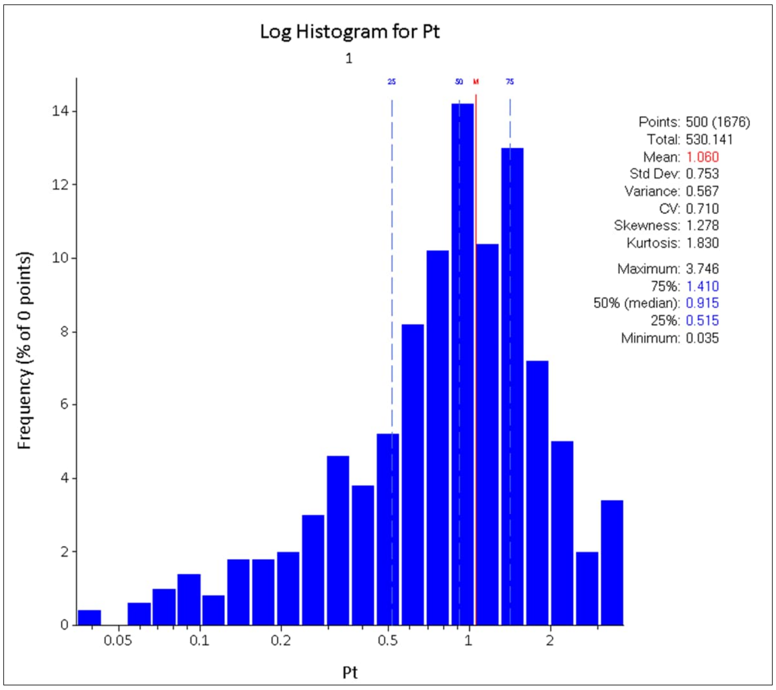

Figure 33. Mineralised Domain composites Pt distribution.

12.1.3 Pd

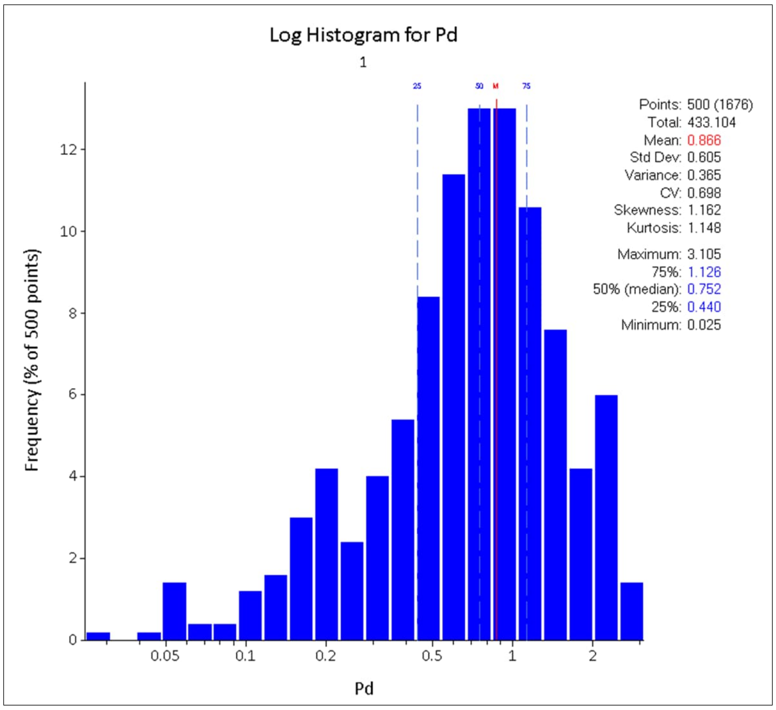

Figure 34. Mineralised Domain composites Pd distribution.

12.1.4 Cu

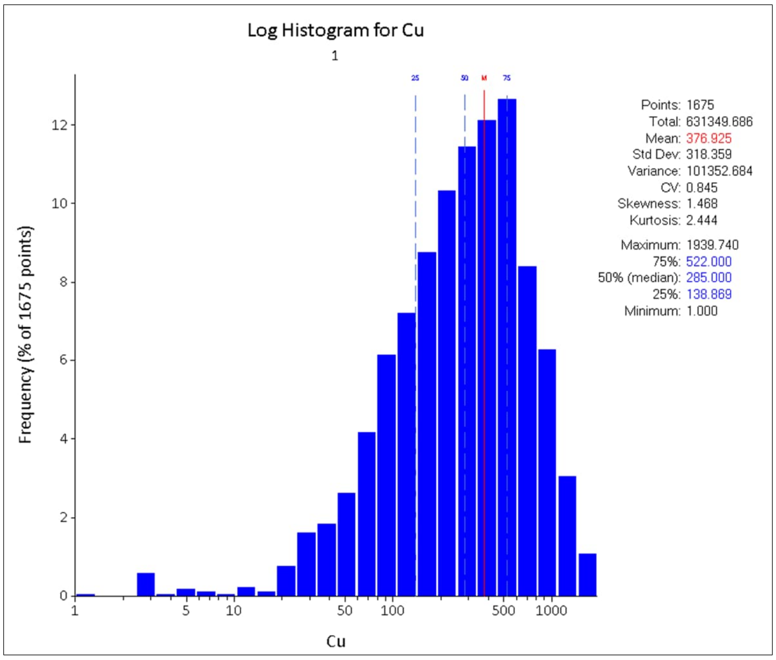

Figure 35. Mineralised Domain composites Cu distribution.

12.1.5 Ni

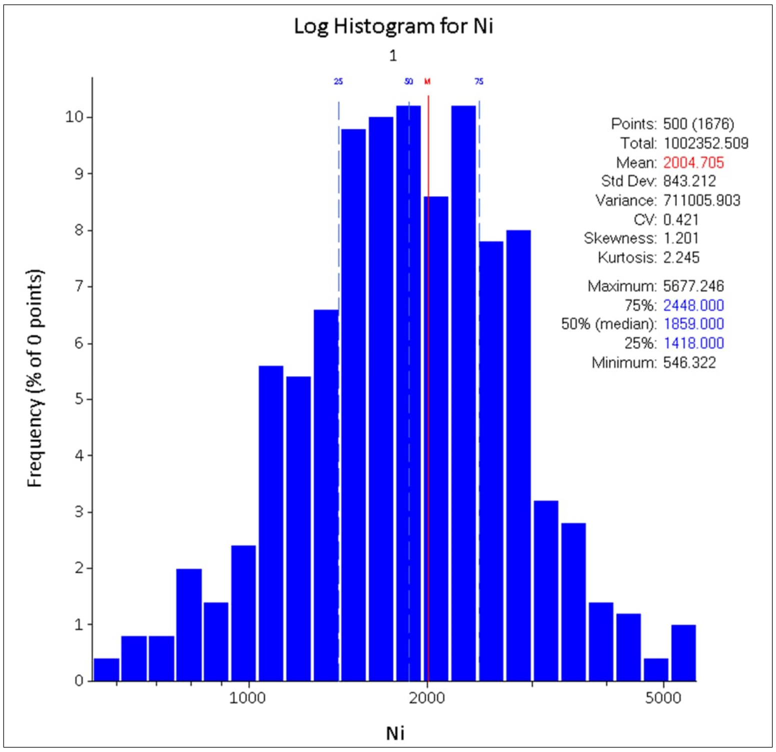

Figure 36. Mineralised Domain composites Ni distribution.

12.2 Density statistics

12.2.1 Entire Fresh Zone

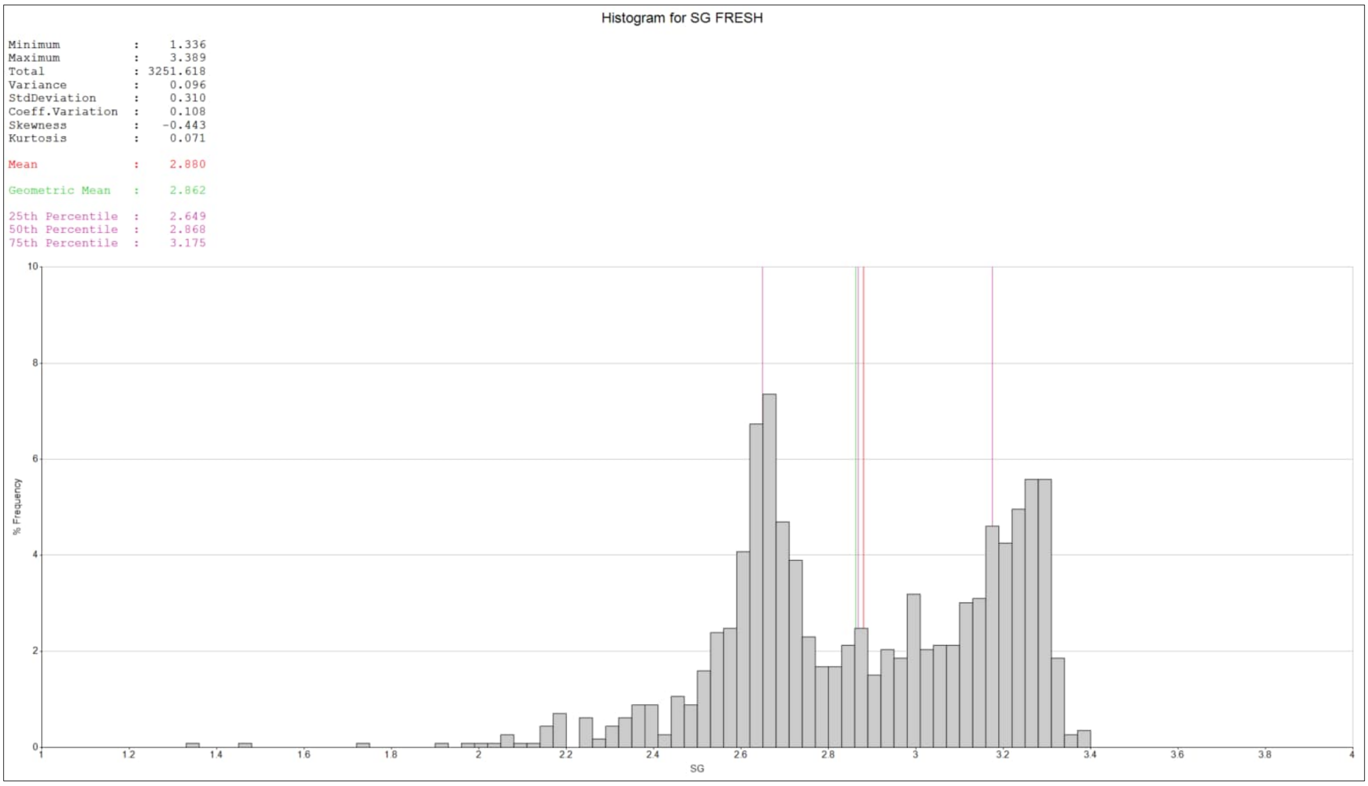

Figure 37. Density distribution of the entire Fresh Zone.

12.2.2 Entire Transitional Zone

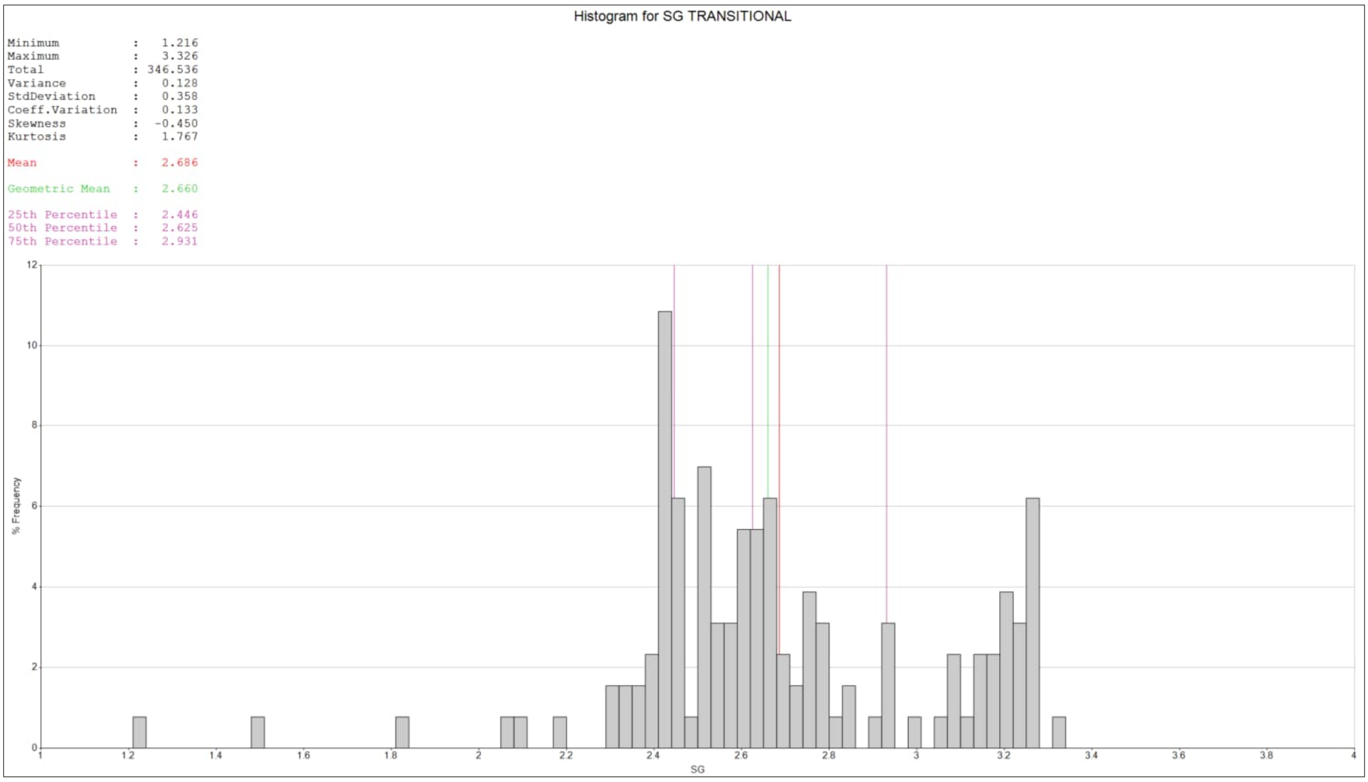

Figure 38. Density distribution of the entire Transitional Zone.

12.2.3 Entire Oxide Zone

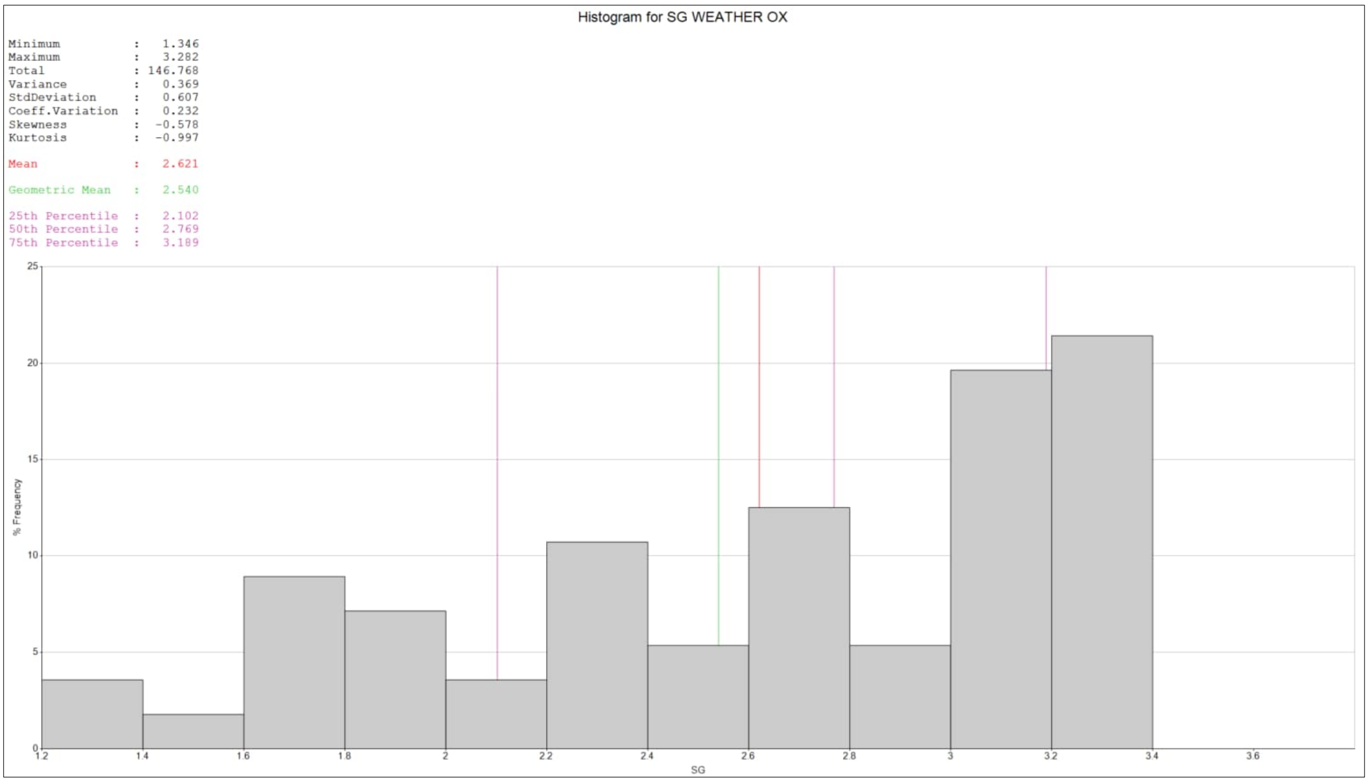

Figure 39. Density distribution of the entire Oxide Zone

12.3 Correlations

Scatter plots for all the elements have been log-transformed given their positively skewed distributions. A Least Squares regression line is also illustrated with a green line.

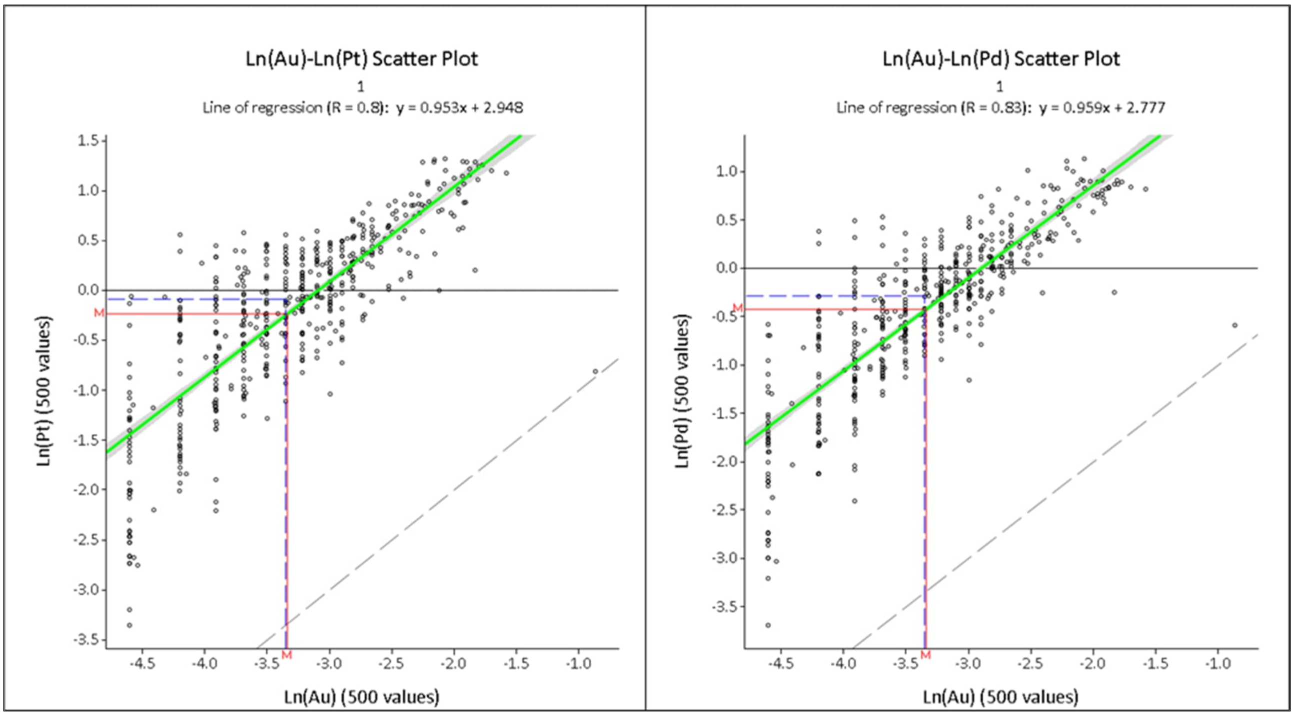

Figure 40. Mineralised Domain composites' scatter plots (log-transformed). Au-Pt ; Au-Pd.

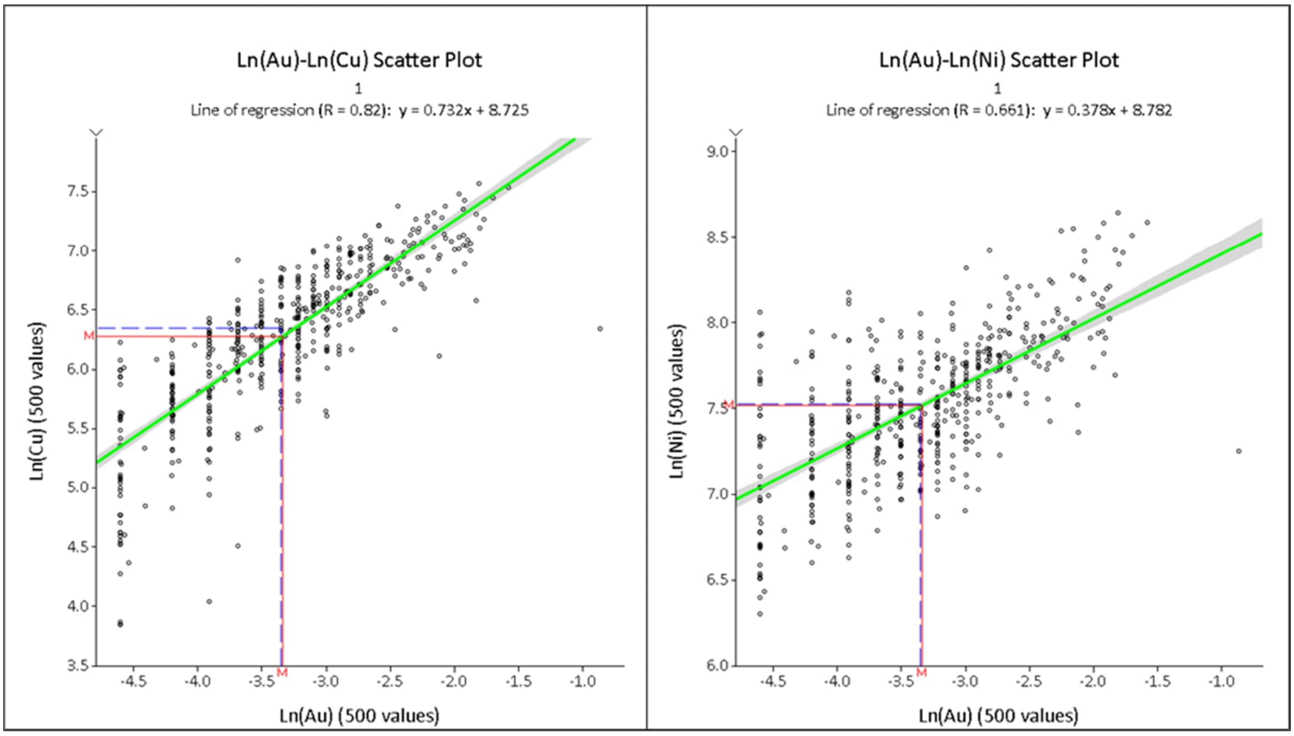

Figure 41. Mineralised Domain composites scatter plots (log transformed). Au-Cu ; Au-Ni.

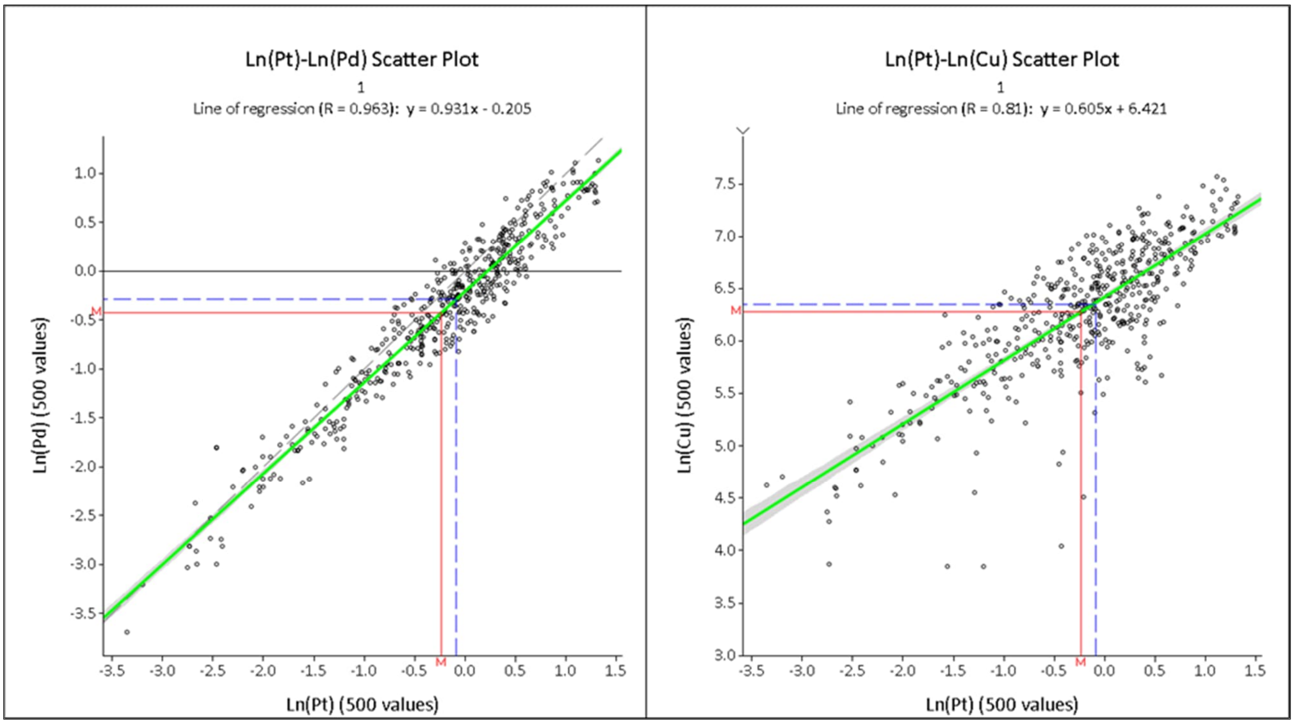

Figure 42. Mineralised Domain composites scatter plots (log transformed). Pt-Pd; Pt-Cu.

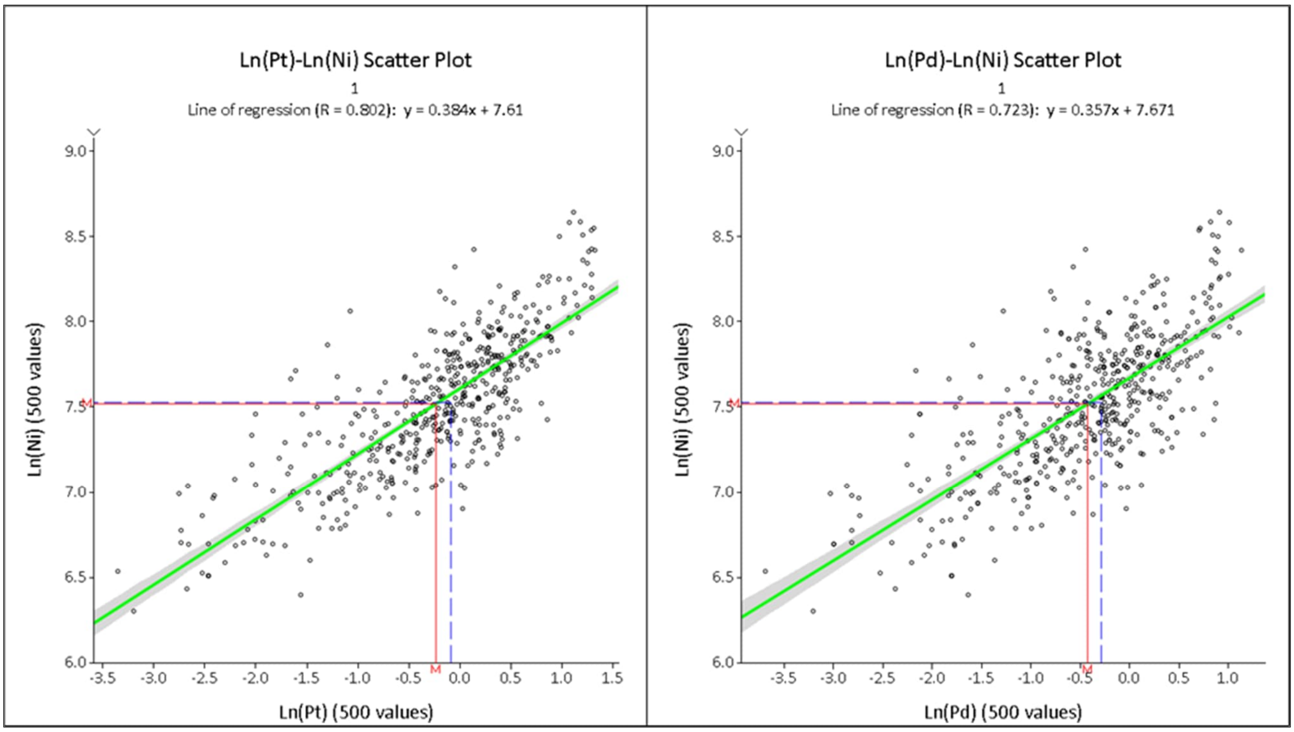

Figure 43. Mineralised Domain composites scatter plots (log transformed). Pt-Ni; Pd-Cu.

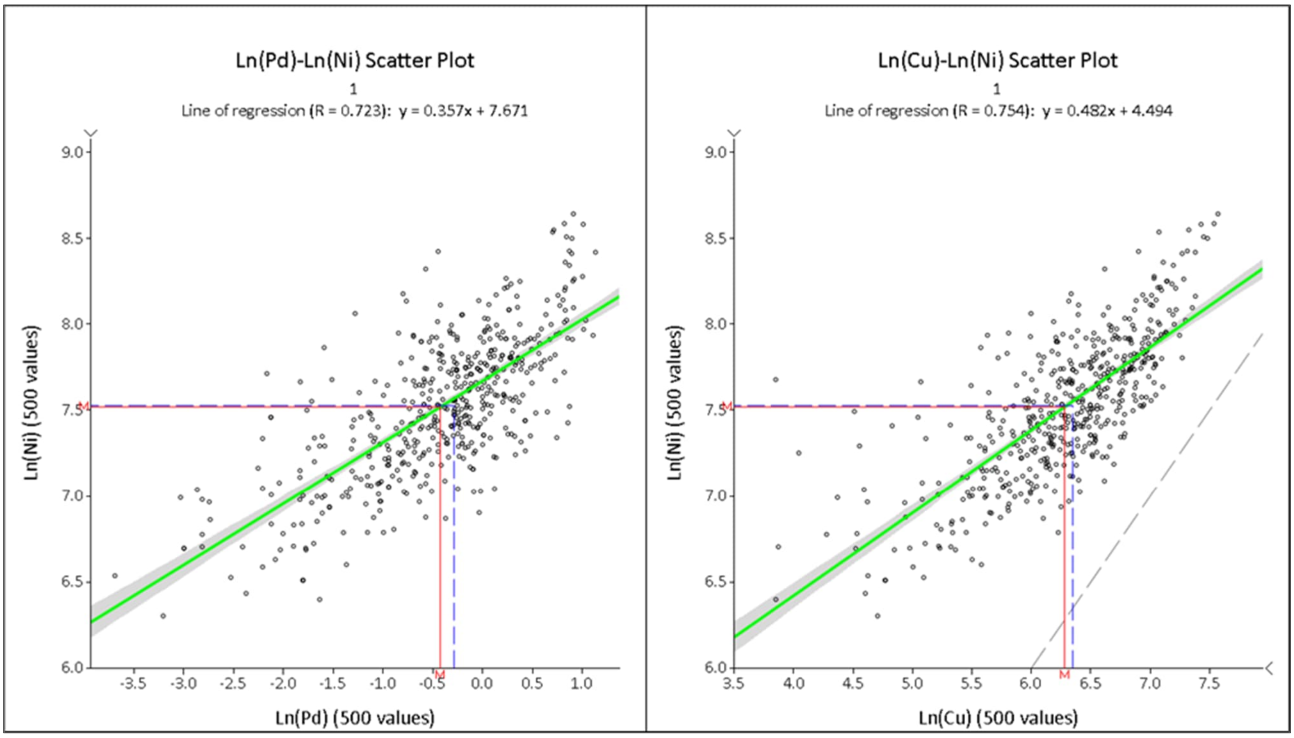

Figure 44. Mineralised Domain composites scatter plots (log transformed). Pd-Ni ; Cu-Ni.

13 GEOSTATISTICS

13.1 Domains

When taking into consideration the small size of the dataset, it was decided to consider the dataset as one domain.

13.2 Data processing

When taking into consideration the small size of the dataset, it was decided no delustering and no top capping was applied to the final dataset used in the estimation.

13.3 Variography

13.3.1 Directional variography Mineralised domain

Directional variograms were created for Pt, Pd, Au, Cu, and Ni within the grade estimation domain. All experimental variograms were created by applying a normal score transformation and the models back-transformed again.

Although clustered drill holes exist in this project, declustering was not applied to experimental variogram calculation, as the sill should be based on the naïve equally weighted variance (Rossi & Deutsh, 2014).

The major direction for the directional variograms of Pt, Pd, Au, Cu, and Ni were all modelled in the same major direction. Multiple structures were used to model the best fit variogram to the experimental variogram in the major and minor directions, but due to the scarcity of data and lack of data distribution in the semi-major direcation the structures were positioned on the same range to model the best fit variogram in the semi-major direction.

The nuggets were determined from the downhole experimental variograms.

Although one should avoid relying on experimental variogram results beyond half the dimensions of the domain in each direction, the ranges in some of the variograms do extend beyond those limits. In those cases, the slope of the variogram model was based on the more reliable experimental variogram points within the limits.

Typically, one should expect near-identical variograms for elements that have high correlation coefficients, e.g., above 0.9. The main directions for continuity seemed to be approximately similar for the elements within the domain, however the ranges and variance components of the individual structures were not necessarily as identical. Nevertheless, it was decided to model the variograms to the actual experimental variogram results, instead of aiming to model them identically. It was noted that this would have influenced the post-estimation correlation between element pairs.

The experimental variograms along with the variogram models are shown in Figure 45 to Figure 49.

All variograms were standardized to have a sill of 1.

13.3.1.1 Au

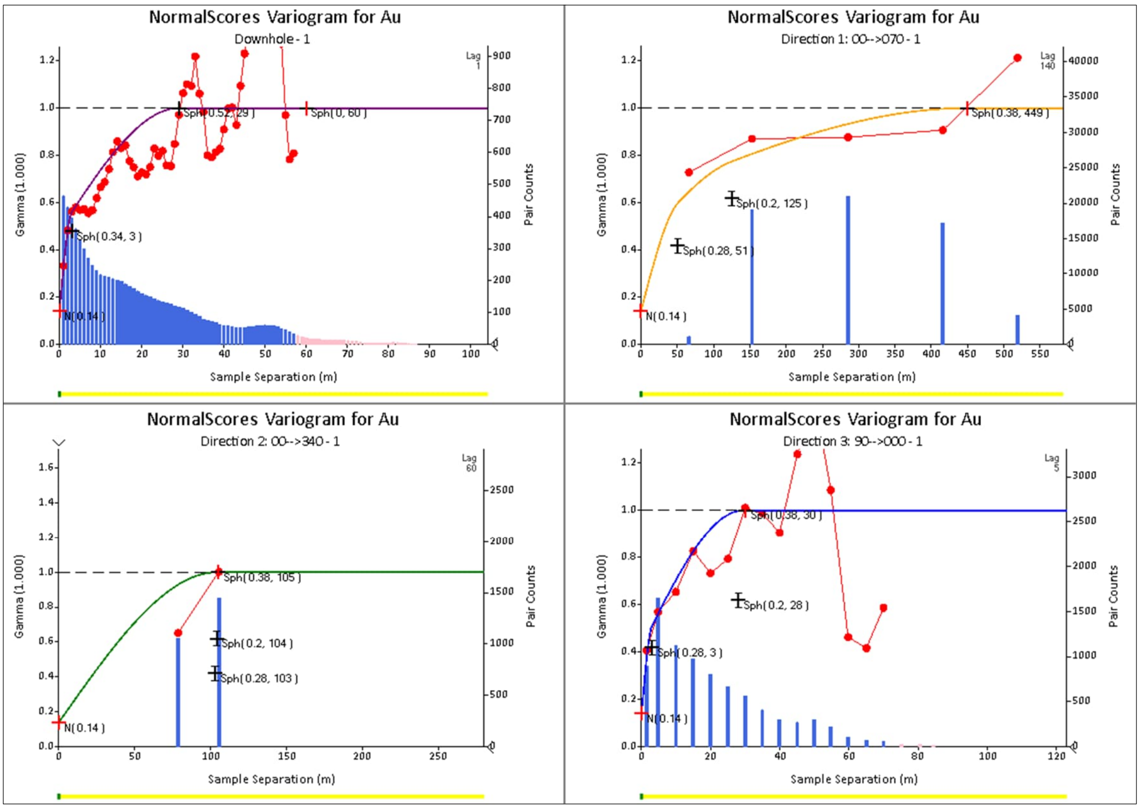

Figure 45. Normal score transformed variograms for Au in Domain.

13.3.1.2 Pt

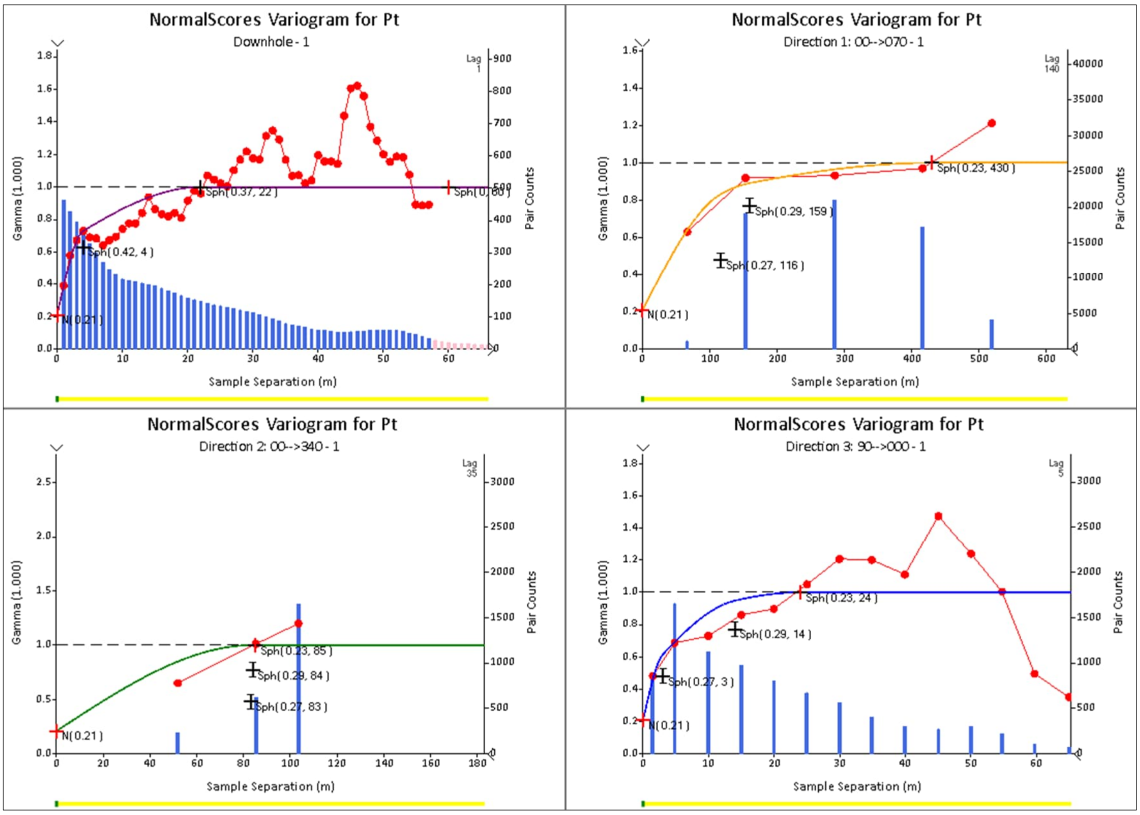

Figure 46. Normal score transformed variograms for Pt in Domain.

13.3.1.3 Pd

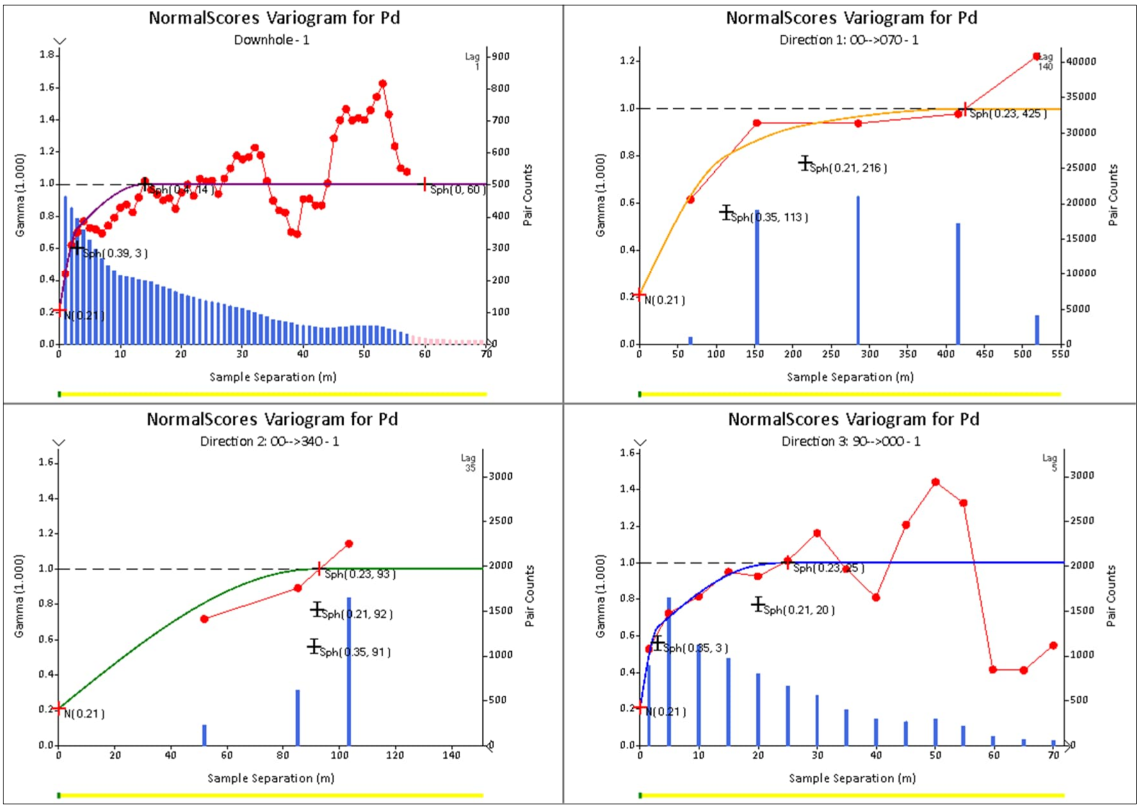

Figure 47. Normal score transformed variograms for Pd in Domain.

13.3.1.4 Cu

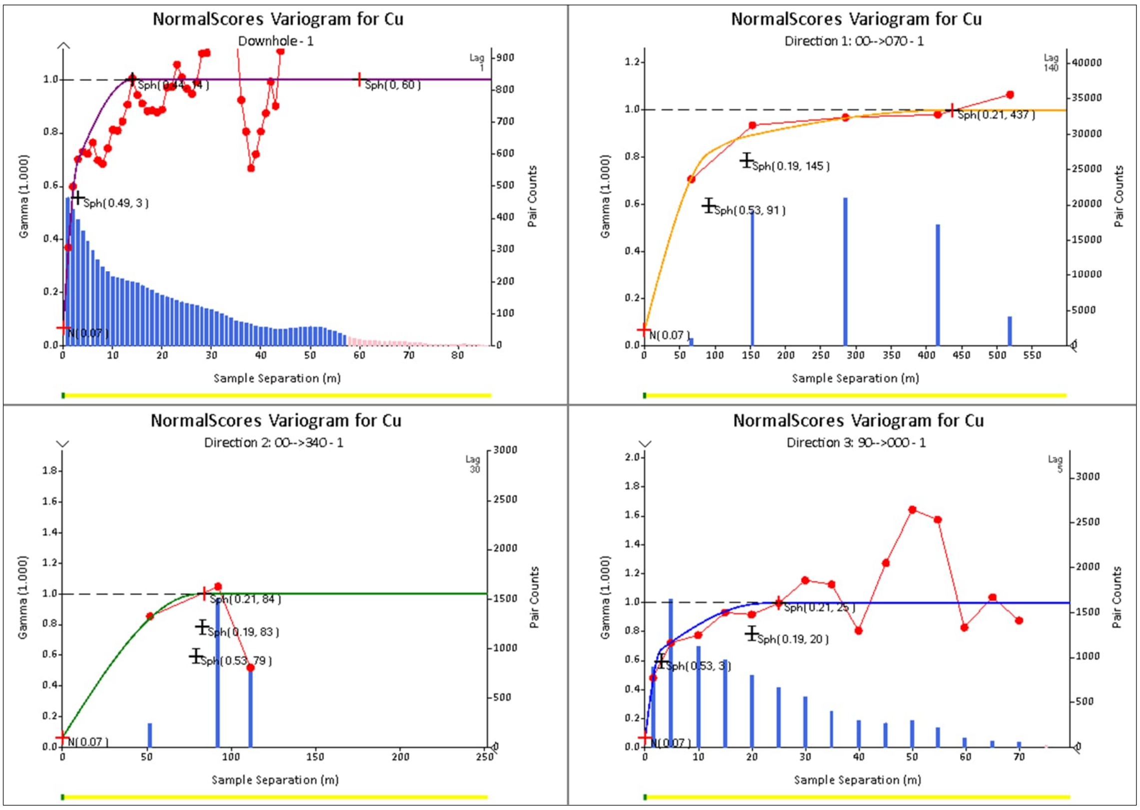

Figure 48. Normal score transformed variograms for Cu in Domain.

13.3.1.5 Ni

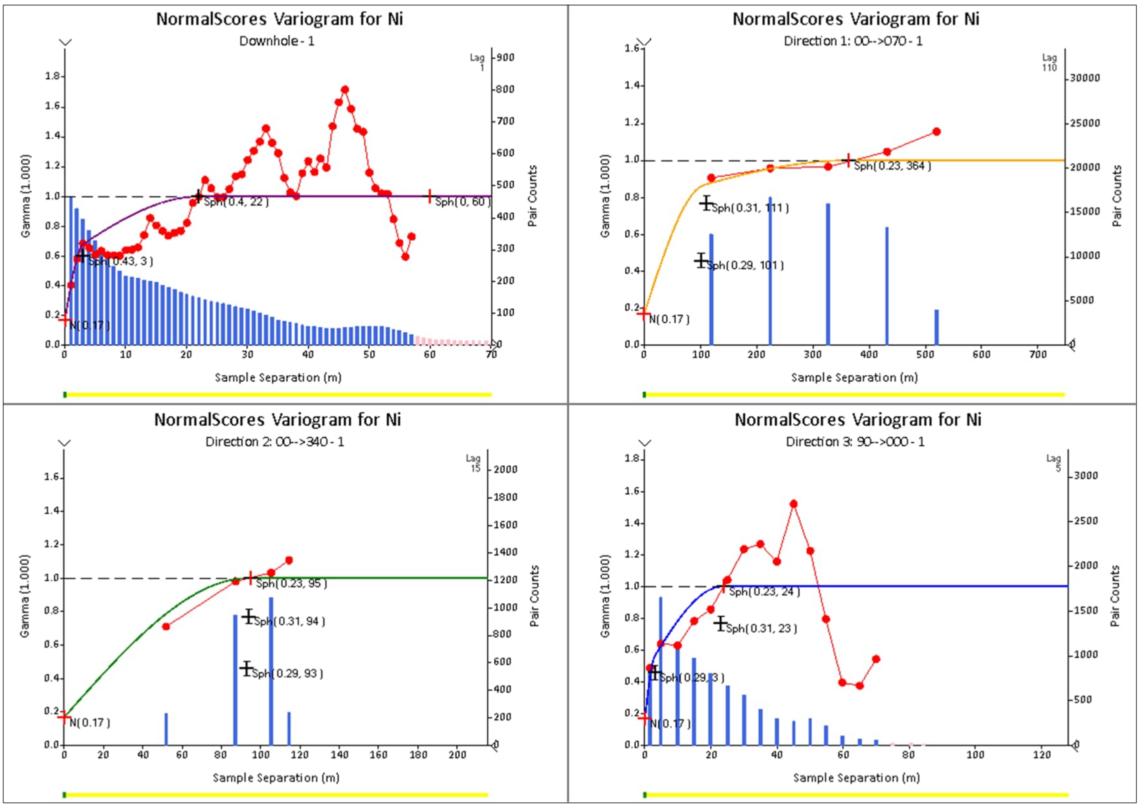

Figure 49. Normal score transformed variograms for Ni in Domain.

13.3.1.6 Back transform continuity models

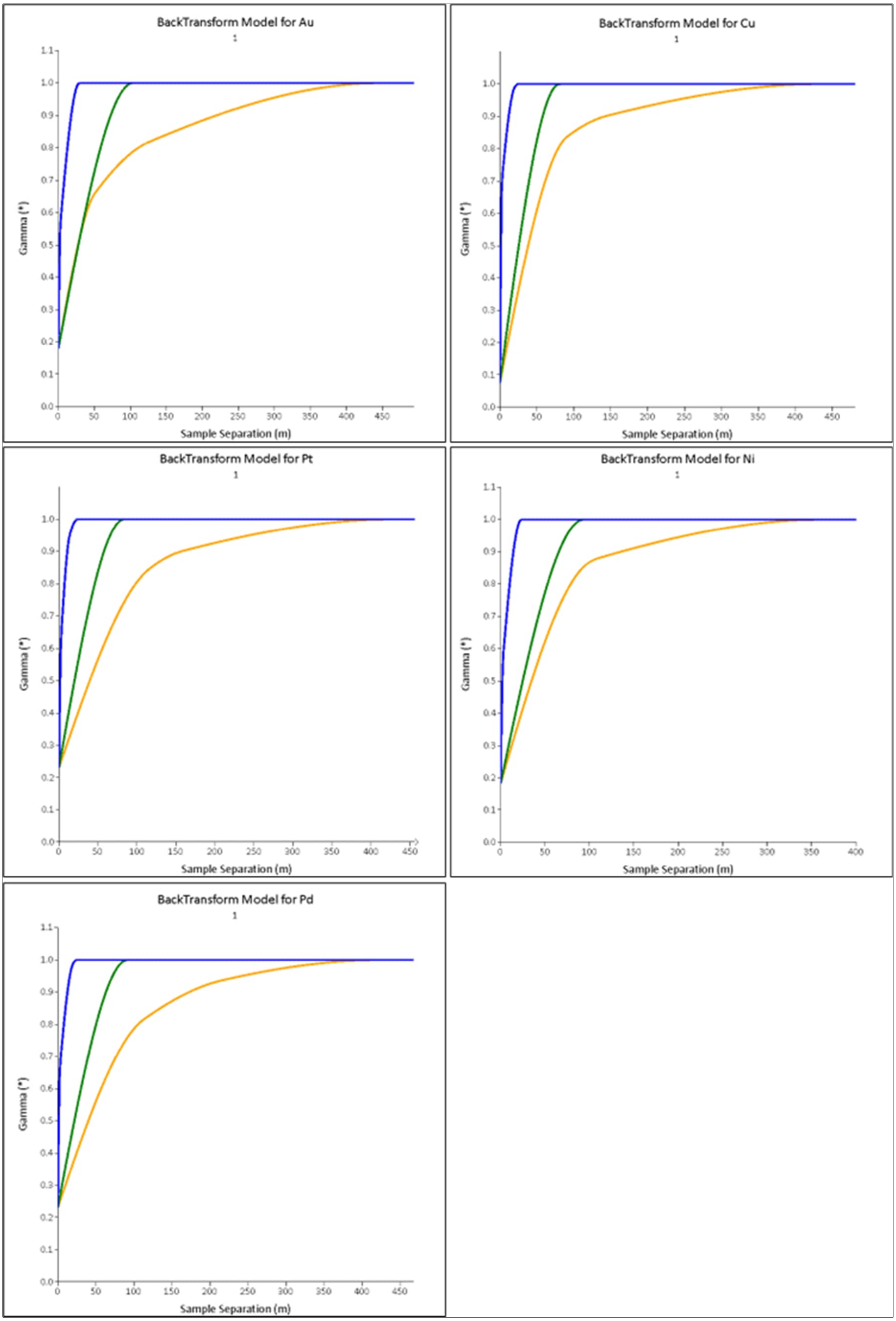

Figure 50. Back transform continuity models for Au, Pt, Pd, Cu, and NI in Mineralised Domain.

13.3.2 Semi-directional variography Waste Domain

Semi-directional variograms were created for Pt, Pd, Au, Cu, and Ni within the waste estimation domain. All experimental variograms were created by applying a normal score transformation and the models back-transformed again. The semi-directional variograms had the same range and lags for the major and semi-major direction.

Although clustered drill holes exist in this project, declustering was not applied to the experimental variogram calculation, as the sill should be based on the naïve equally weighted variance (Rossi & Deutsh, 2014).

The nuggets were determined from the downhole experimental variograms.

Whenever the experimental variogram indicated that the sill was never reached, i.e., zonal anisotropy, the variogram was modelled to the first reliable points with the last structure placed at 1,000 m.

The experimental variograms along with the variogram models are shown in Figure 51 Figure 55.

All variograms were standardized to have a sill of 1.

13.3.2.1 Au

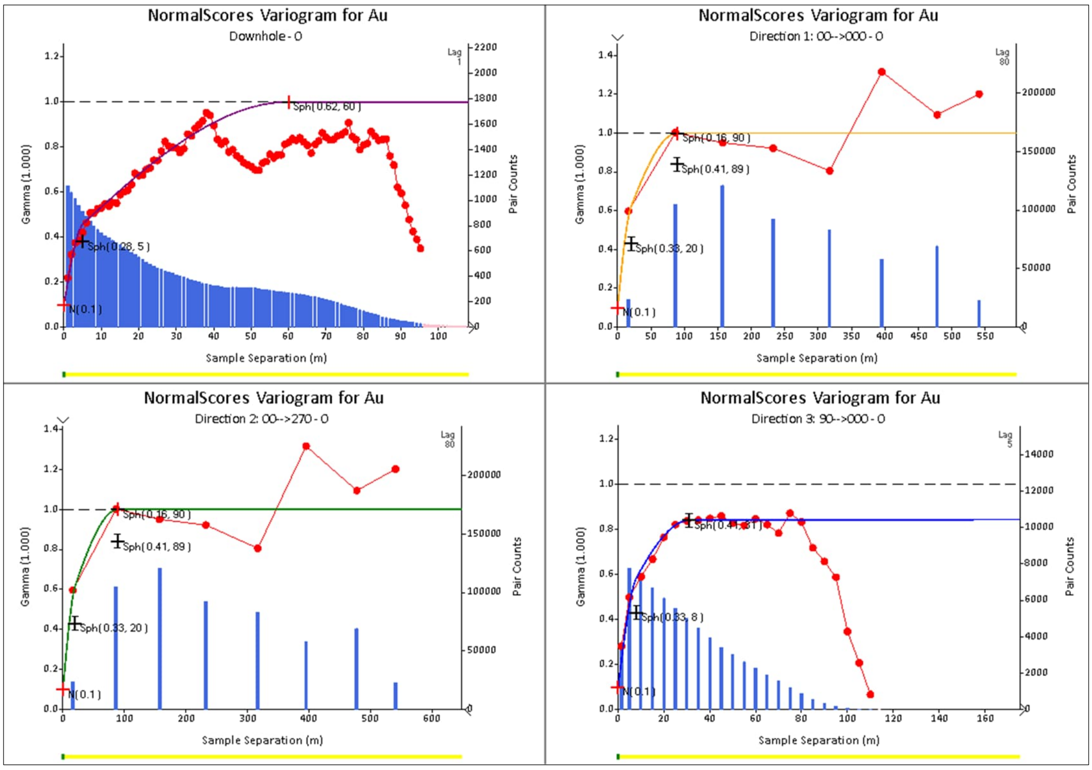

Figure 51. Au variograms in the Waste Domain.

13.3.2.2 Pt

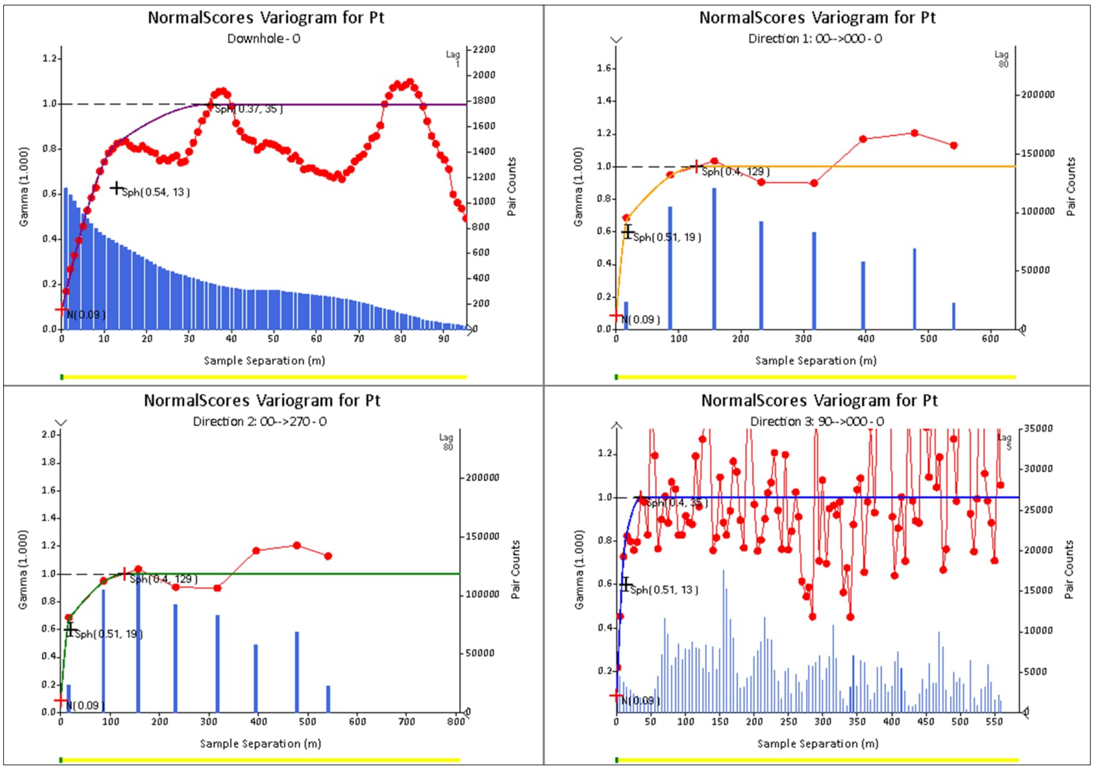

Figure 52. Pt variograms in the Waste Domain.

13.3.2.3 Pd

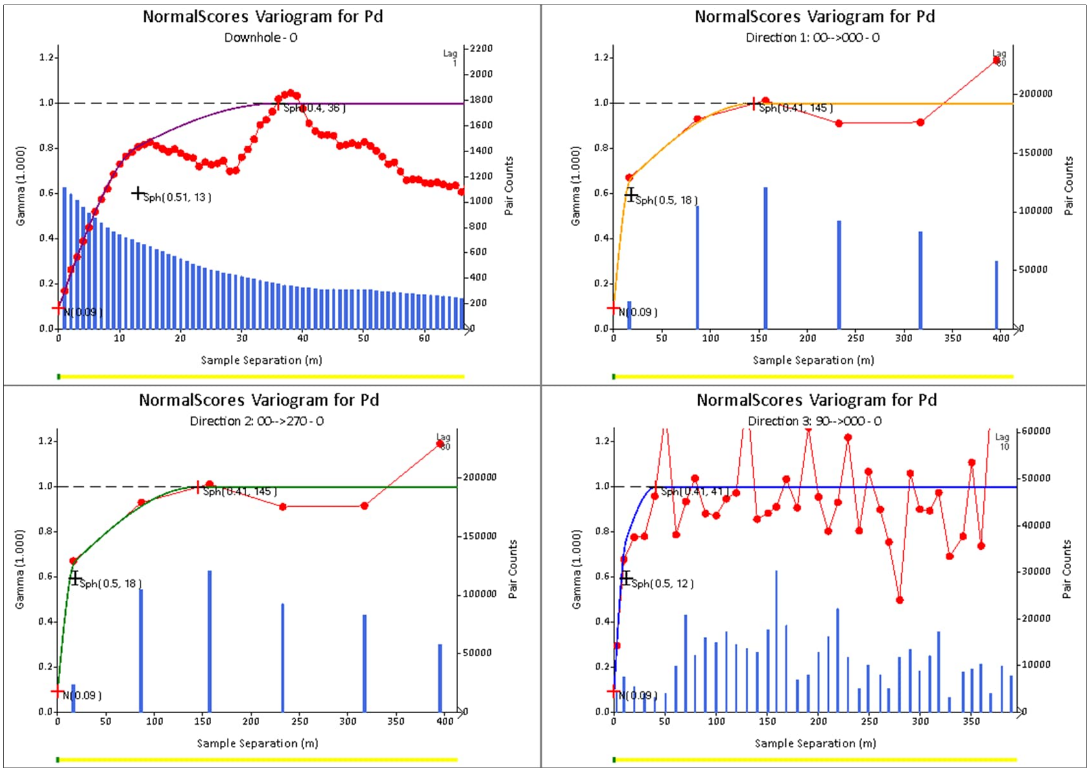

Figure 53. Pd variograms in the Waste Domain.

13.3.2.4 Cu

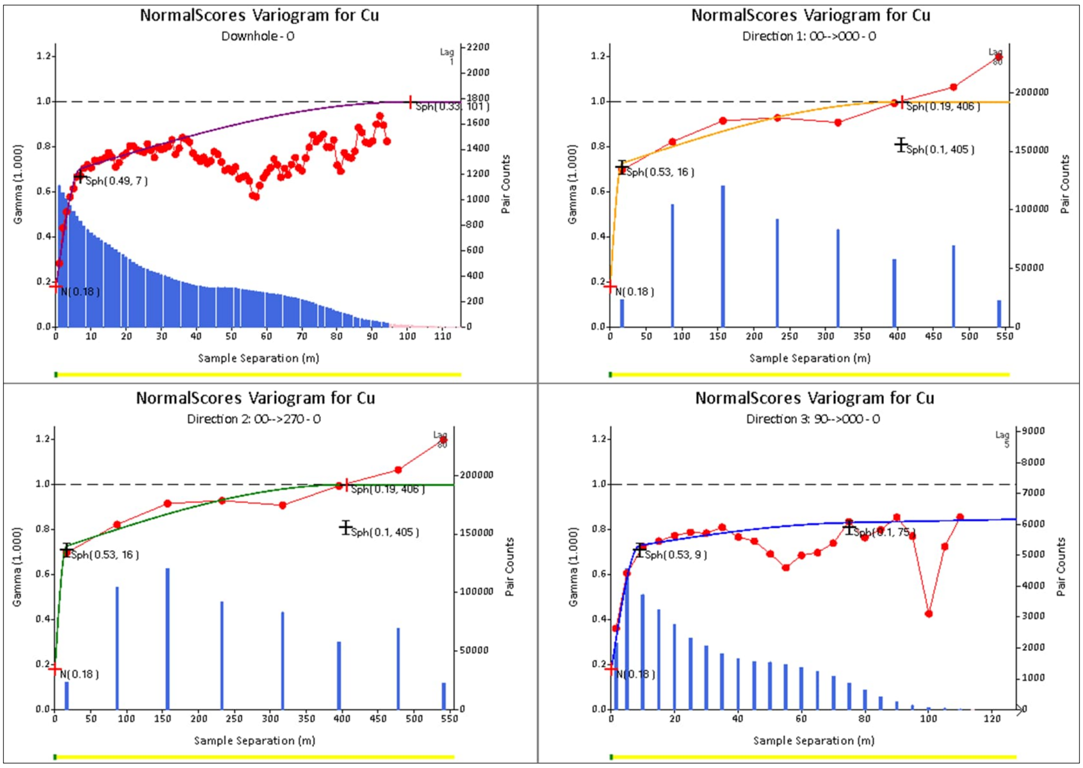

Figure 54. Cu variograms in the Waste Domain.

13.3.2.5 Ni

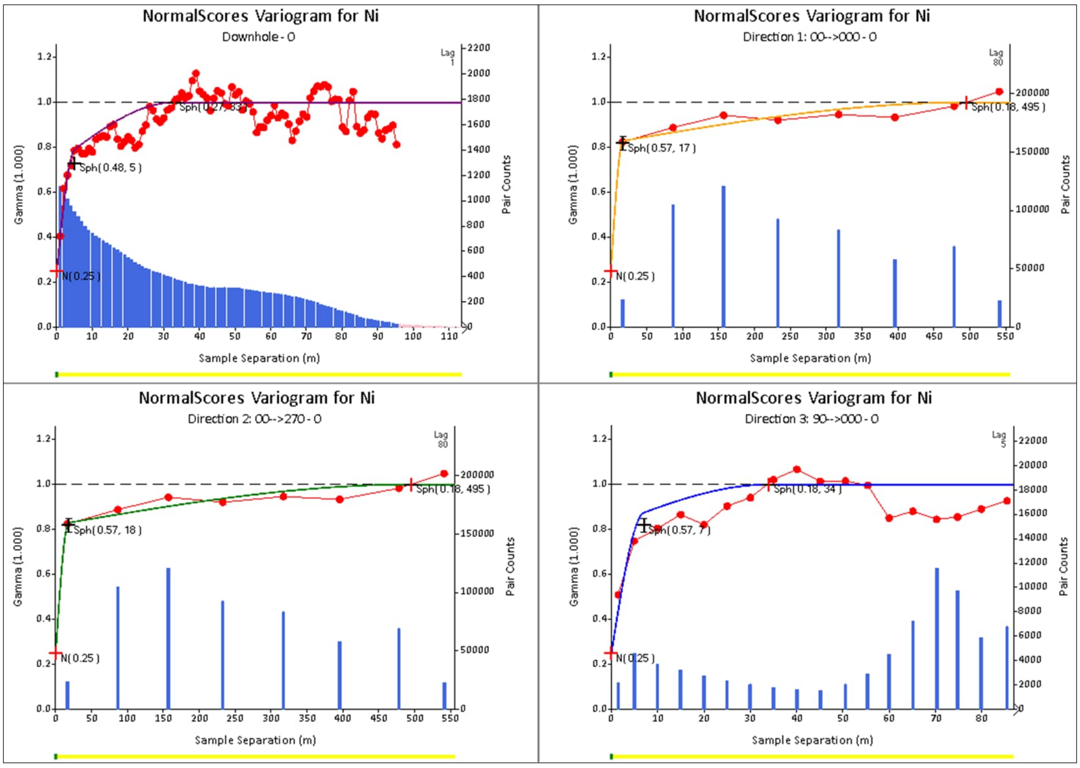

Figure 55. Ni variograms in the Waste Domain.

13.3.2.6 Back transform continuity models

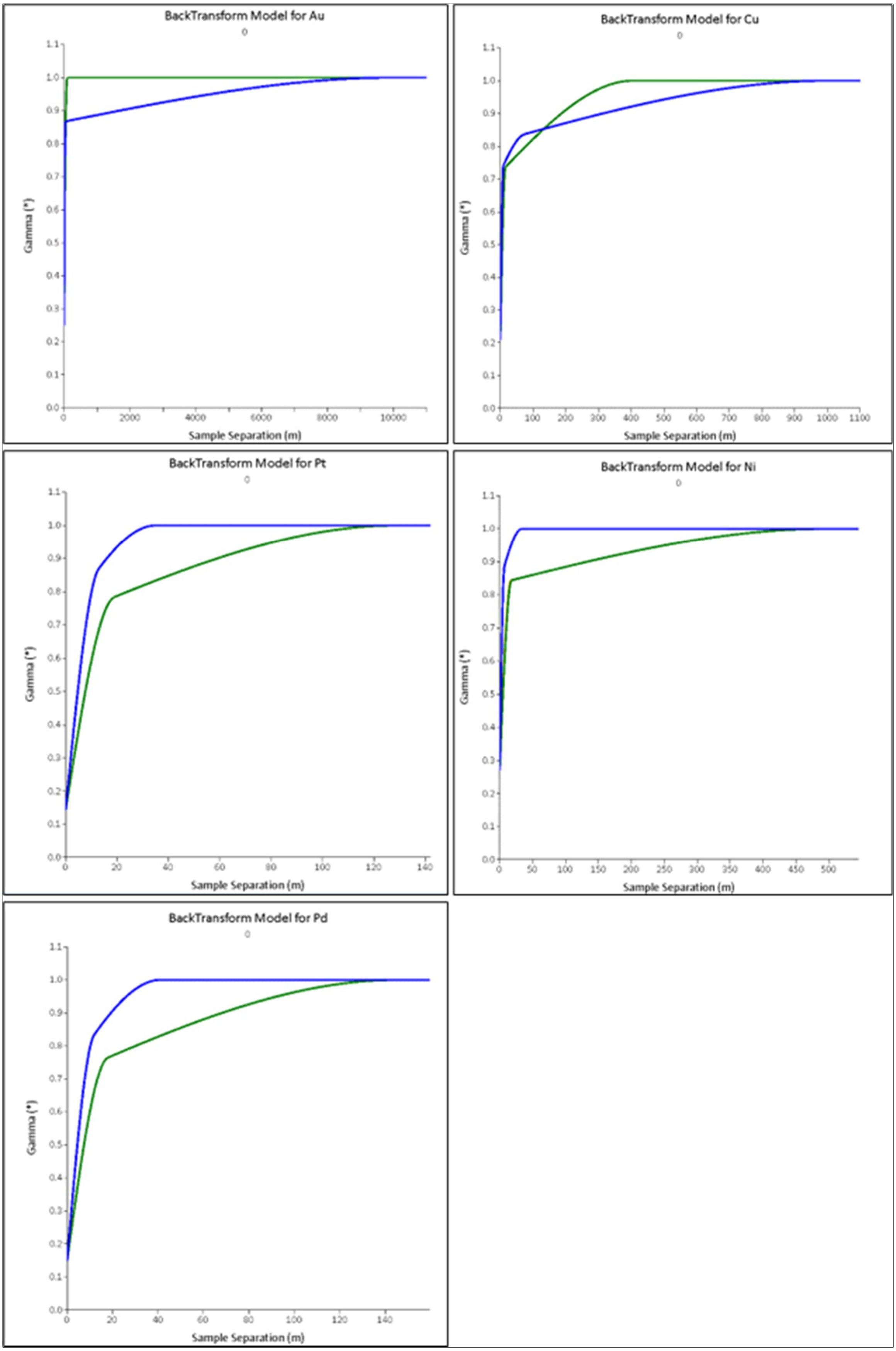

Figure 56. Back transform continuity models for Au, Pt, Pd, Cu, and NI in Waste Domain.

14 MINERAL RESOURCE ESTIMATION

14.1 KNA iterations

Kriging Neighbourhood Analysis (KNA) was first done in Supervisor to determine the starting point for the grade estimation parameters. KNA was done for Pt, Pd, Au, Cu, and Ni, in the estimation domain. To remain pragmatic given the timeframe, a single set of parent block dimensions were chosen for all the elements to be estimated in the domain.

Based on the KNA results in Supervisor, the best performing parent block dimensions were different between elements, but in general the 80 mX by 40 mY (by 2.5 mZ) performed on average the best between the elements within the domain.

14.2 Block model dimensions

The parent block dimensions used for grade and density estimation were 80 mX by 40 mY by 2.5 mZ, rotated 73° clockwise.

14.3 Estimation parameters

14.3.1 Search volumes

The search ellipsoids' dimensions were guided by the ranges of the variograms and tweaked in some cases during estimation iterations to optimise conditional bias statistics. The rotation of the search ellipsoids' major direction was to match that of the variograms in each estimation domain.

14.3.1.1 Mineralised Domain

Table 13. Search volume parameters for the Mineralised Domain.

	Shape and axis lengths				Shape rotation			Primary search volume		Second search volume			Octants	Sample key field	
	Shape	X axis	Y axis	Z axis	Z	X	Z	Min samples	Max samples	Expansion factor	Min samples	Max samples	Use octants	Key field	Max samples
Au	Ellipsoidal	600	150	30	-20	0	0	8	100	2	8	100	No	BHID	4
Pt	Ellipsoidal	600	150	24	-20	0	0	8	100	2	8	100	No	BHID	4
Pd	Ellipsoidal	600	150	25	-20	0	0	8	100	2	8	100	No	BHID	4
Cu	Ellipsoidal	600	150	25	-20	0	0	8	100	2	8	100	No	BHID	4
Ni	Ellipsoidal	600	150	24	-20	0	0	8	100	2	8	100	No	BHID	4

14.3.1.2 Waste Domain

Table 14. Search volume parameters for the Waste Domain.

	Shape and axis lengths				Shape rotation			Primary search volume		Second search volume			Third search volume		
	Shape	X axis	Y axis	Z axis	Z	X	Z	Min samples	Max samples	Expansion factor	Min samples	Max samples	Expansion factor	Min samples	Max samples
Au	Ellipsoidal	89	89	-20	0	0	0	8	100	2	8	100	4	8	100
Pt	Ellipsoidal	129	129	-20	0	0	0	25	100	2	25	100	4	25	100
Pd	Ellipsoidal	145	145	-20	0	0	0	25	100	2	25	100	4	25	100
Cu	Ellipsoidal	405	405	-20	0	0	0	8	100	2	8	100	4	8	100
Ni	Ellipsoidal	495	495	-20	0	0	0	15	100	2	15	100	4	15	100

	Octants	Sample key field	
	Use octants	Key field	Max samples
Au	No	BHID	4
Pt	No	BHID	4
Pd	No	BHID	4
Cu	No	BHID	4
Ni	No	BHID	4

14.3.1.3 SG estimation in weathering zones

Table 15. Search volume parameters for SG estimation within the Weathering Zones.

Weathering zone	Shape and axis lengths				Shape rotation			Primary search volume		Second search volume			Octants	Sample key field	
	Shape	X axis	Y axis	Z axis	Z	X	Z	Min samples	Max samples	Expansion factor	Min samples	Max samples	Use octants	Key field	Max samples
Fresh	Ellipsoidal	500	500	500	0	0	0	10	100	2	10	100	No	BHID	4
Transitional	Ellipsoidal	500	500	500	0	0	0	10	100	2	10	100	No	BHID	4
Oxide	Ellipsoidal	500	500	500	0	0	0	10	100	2	10	100	No	BHID	4

14.3.2 Interpolation method

Kriging is considered to be the Best Linear Unbiased Estimator (BLUE) and minimizes the variance of estimation errors (Deutsch, et al., 2014). While Simple Kriging (SK) with a global mean tends to be the most statistically efficient unbiased linear estimator, it relies on a strong global stationarity assumption, which is often unrealistic. SK is however useful when data is limited as is the case with this MRE, and hence the use of SK for grade estimation. In the aim of reducing the reliance on a stationary global mean, the mean used during estimation was calculated locally within the search ellipsoid.

14.3.2.1 Mineralised Domain grade estimation

Table 16. Summary of the interpolation methods used in the Mineralised Domain estimation.

Element	Interpolation method	Mean calculation	Negative weights	Parent cell estimation	Cell discretization		
					Number of points in X	Number of points in Y	Number of points in Z
Au Pt Pd Cu Ni	Simple Kriging	Calculate local mean value	Reset negative weights to zero	Parent cell estimation using a full 3D matrix of points	3	3	3

14.3.2.2 Waste Domain grade estimation

Table 17. Summary of the interpolation methods used in the Waste Domain estimation.

Element	Interpolation method	Mean calculation	Negative weights	Parent cell estimation	Cell discretization		
					Number of points in X	Number of points in Y	Number of points in Z
Au Pt Pd Cu Ni	Simple Kriging	Calculate local mean value	Reset negative weights to zero	Parent cell estimation using a full 3D matrix of points	3	3	3

14.3.2.3 SG estimation

Table 18. Summary of the interpolation methods used in the SG estimation.

Weathering Zone	Interpolation method	Parent cell estimation	cell discretization		
			Number of points in X	Number of points in Y	Number of points in Z
Fresh Transitional Oxide	Inverse Power of distance (IPD^2)	Parent cell estimation using a full 3D matrix of points	3	3	3

14.4 Post-processing

No change of support or other post-processing methods were done on the block model.

14.5 Rh and Ru regression

Rh and Ru were estimated in the block model by employing Random Sample Consensus (RANSAC) Regression using the Pt, Pd, and Au values. The machine learning model that executed the regression was trained with the 2023 Volspruit South historic re-sampled assay results for Pt, Pd, Rh, Ru, Ir, and Au. Ir was excluded from the regression and Mineral Resources given its mostly below detection limit concentration.

The regression application conducted on Rh and Ru utilising Pt, Pd, and Au as input variables has yielded highly successful results. The details regarding the performance and application of the regression method used for the Volspruit Sout re-sampled drill core is detailed in the following report EARTH-PPD-PO_940-1-Report_1 (DRAFT).

Both regression models for Rh and Ru demonstrated exceptional performance, with Mean Absolute Errors (MAE) well below the laboratory's detection limit of 0.02 ppm. Specifically, the Rhodium model achieved a remarkable MAE of 0.0168 ppm, while the Ruthenium model exhibited an even lower MAE of 0.0079 ppm.

14.6 RPEEE test

A comprehensive RPEEE test could not be undertaken as recommended by Earthlab in a separate commercial proposal as part of an Optimisation Mining Study. As a result, due to the limited scope and costs approved by Sylvania, only a basic test was performed.

Various wireframes resembling rudimentary pit shells with ~50° pit slopes excluding different portions of the Mineralised Domain were used to approximate strip ratios for RPEEE testing. Pit shell 1234 includes the entire estimated Mineralised Domain within the wireframe solid defined stratigraphic CU11U. The pit shell 234 excludes a portion of the Mineralised Domain, which is composed of relatively lower grade at greater depth below surface. Including this portion of the estimated Mineralised Domain within the pit shell as done in pit shell 1234, the strip ratio was significantly increased and lowered the 2E+Au grade. Thus, pit shell 234 was chosen for the MRE and had strip ratios as listed in Table 19. Figure 57 displays the Mineralised Domain within pit shell 234.

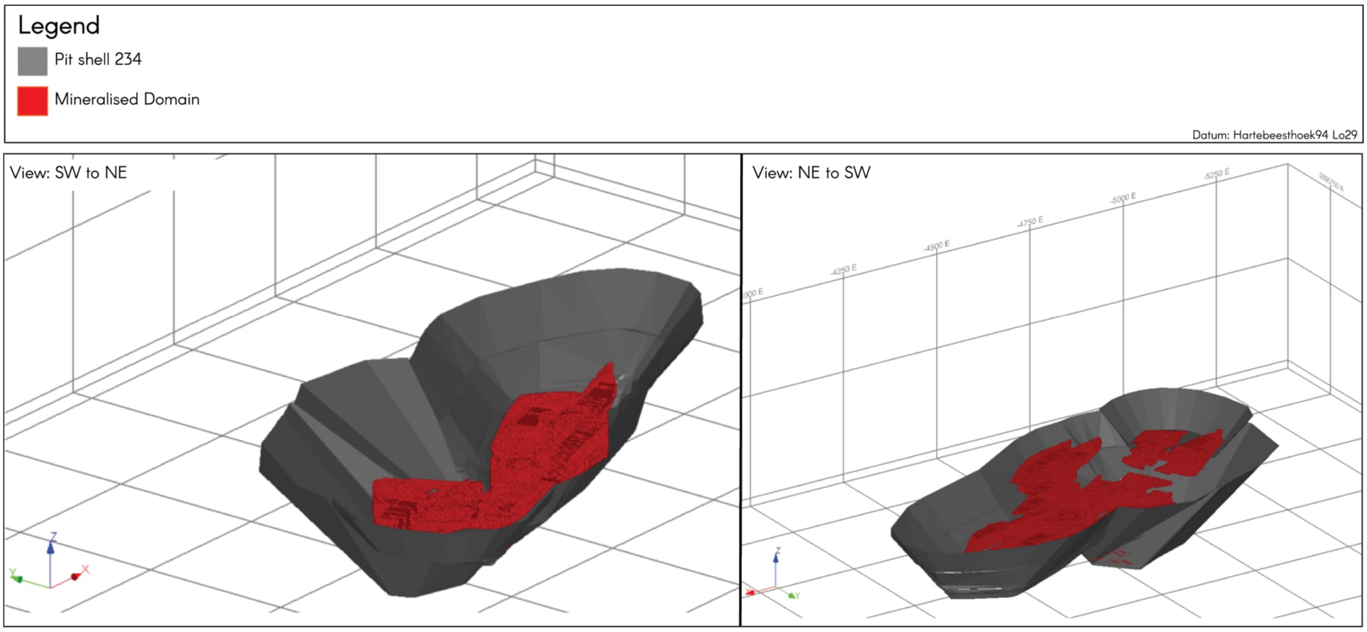

Figure 57. The Mineralised Domain within pit shell 234.

Table 19. Comparison of pit shells.

	Pit shell 234	Pit shell 1234
WASTE_TONNES	126,872,120	163,259,229
WASTE_CUBES	45,362,748	58,275,378
ORE_TONNES	10,597,928	11,524,871
TONNE_TO_TONNE_RATIO	11.97	14.17
CUBE_TO_TONNE_RATIO	4.28	5.06
2E+AU_GRADE	2.001	1.97

14.7 Mineral Resource Classification

14.7.1 Classification criteria

After using the scorecard in Table 20 to classify each block based on the three parameters, the results were each viewed respectively by the Competent Person (CP) in order to identify areas of lower and higher confidence.

Table 20. Mineral Resource Classification scorecard.

Parameter	Score range	Classification
Kriging Efficiency (KE)	0.4 – 1.0	Indicated
	< 0.4	Inferred
Weight Given to the mean (WGM)	< 0.4	Indicated
	0.4 - 1.0	Inferred

The estimated KE is shown in Figure 58 and WGM in Figure 59 within the Mineralised Domain within the pit shell parameter.

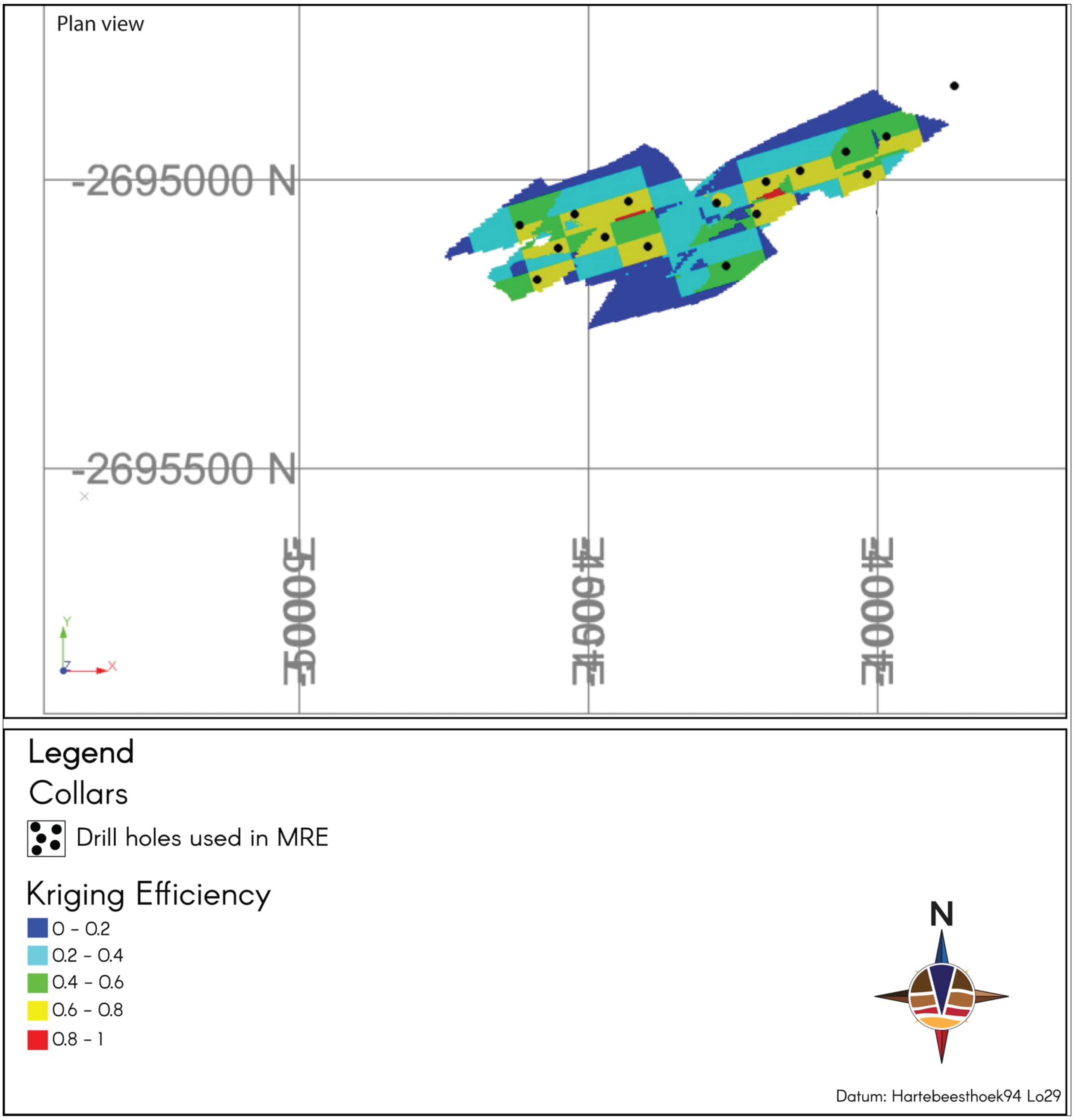

Figure 58. MRE block model coloured by KE and collar position of drill hole used in MRE.

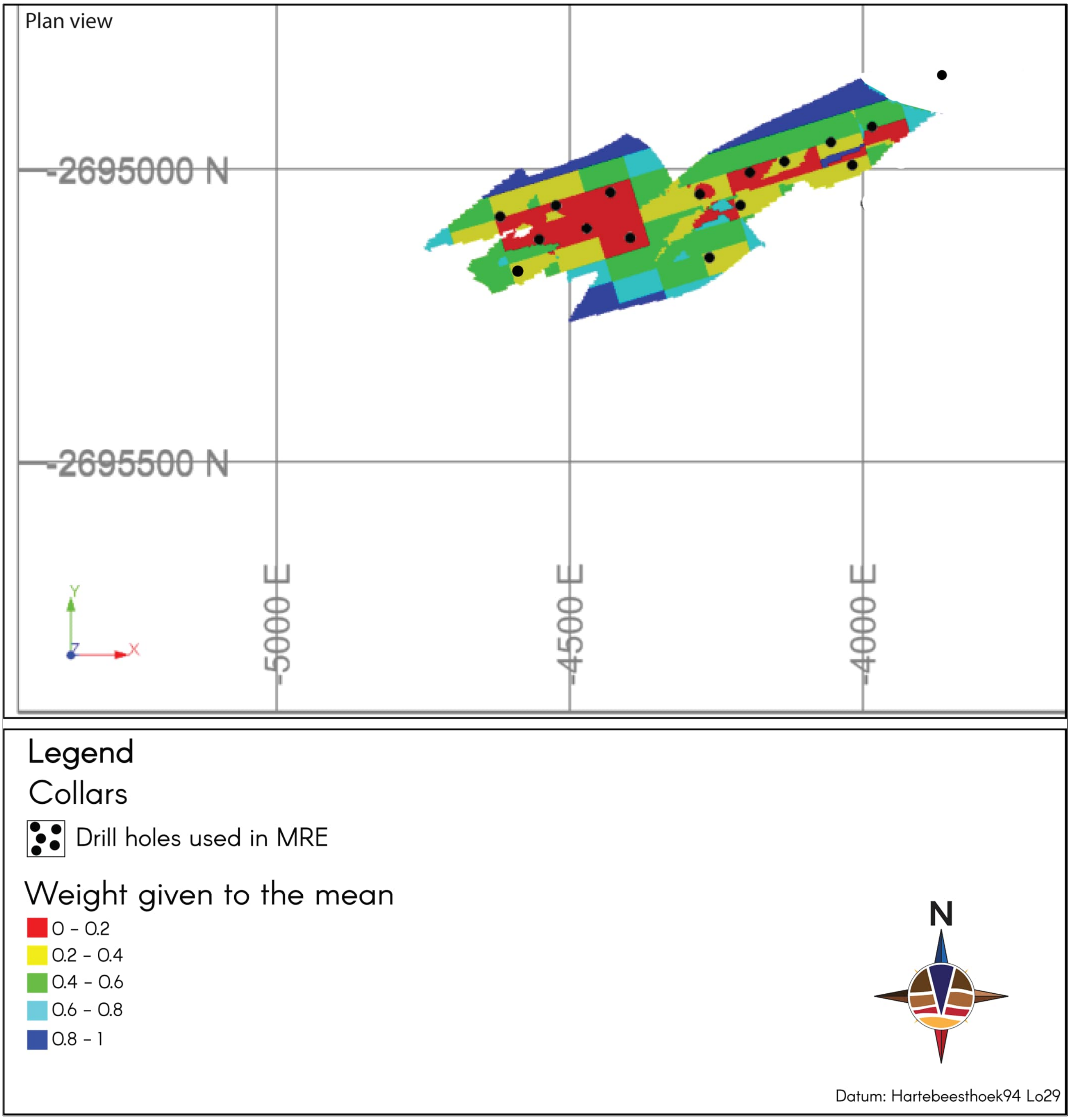

Figure 59. MRE block model coloured by WGM, and collar position of drill hole used in MRE.

14.7.2 Manual classification

The CP considered and interpreted the KE and WGM classification scores, and manually created zones of higher and lower confidence. The position of internal faults relative to the resultant KE and WGM was also considered during classification. The classification based on KE and WGM is shown in Figure 60.

It should be noted that even though the portion classified as higher-level confidence Inferred meets the criteria to be considered as low-level confidence Indicated classification based on the WGM and KE, it was decided to rather classify the portion as Inferred, while identifying it as an area with a higher confidence which could be prioritised for infill drilling to potentially upgrade its classification. The reasoning for that is, following an extensive re-logging campaign and focussed mineral identification logging, a physical geological marker demarcating the Volspruit Reef could not be identified in the drill core. Due to the absence of a physical marker, no Measured or Indicated Mineral Resources have been declared for this new MRE.

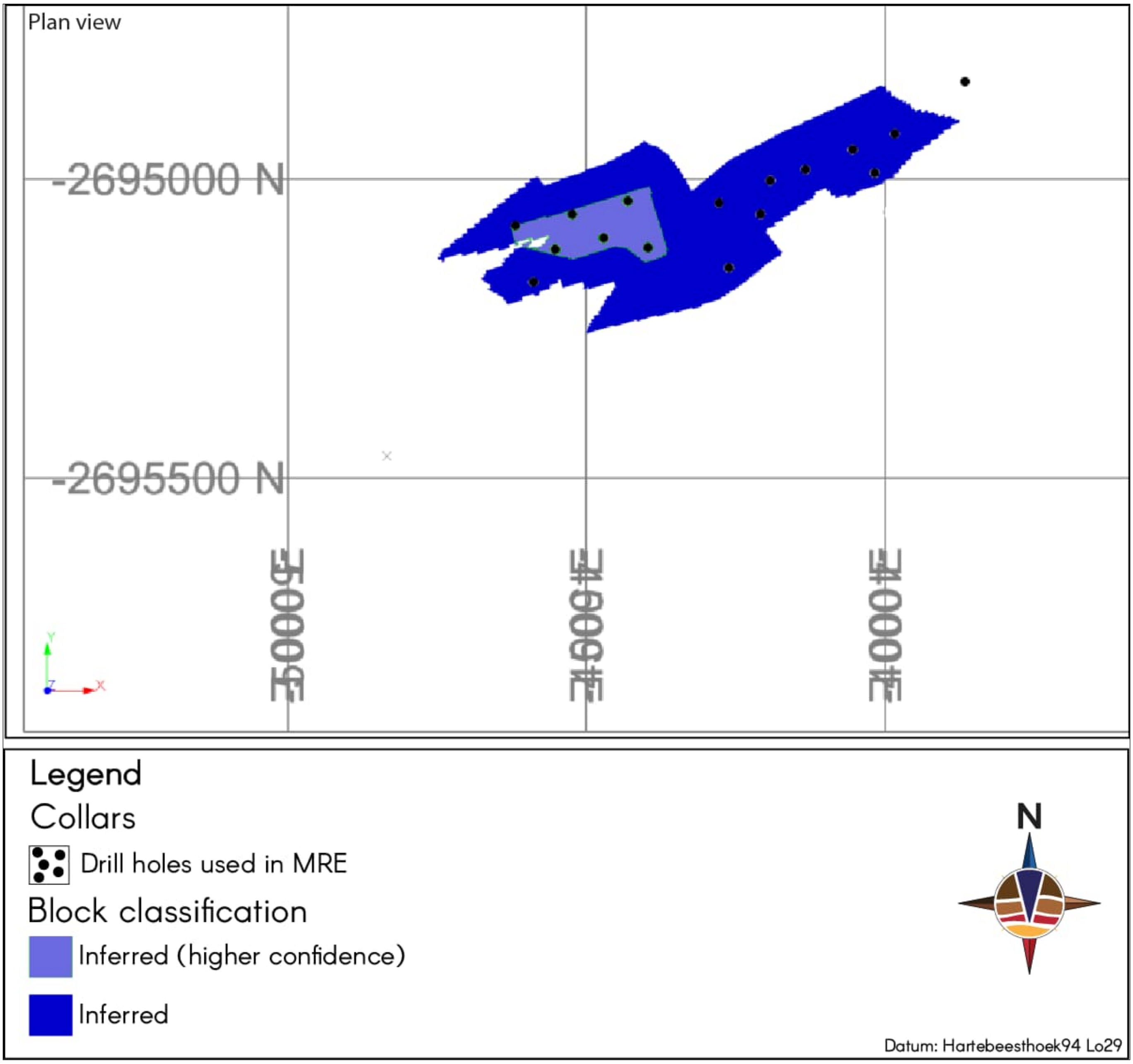

Figure 60. Final Mineral Resource Classification as done by the Competent Person.

14.8 Mineral Resource Estimate

14.8.1 Cut-off parameters

A cut-off grade of 1.2 g/t 2E+Au was applied on a sample level to create a grade-based domain, which is discussed in detail in section 11.1.

No cut-off grade was applied on a block model level at the time of reporting.

14.8.2 Mineral Resource cross sections

A selection of cross sections of the block model (limited to only CU11U) and drill holes coloured to the same 2E+Au colour legend is displayed in Figure 61 to Figure 63. The drill holes are not illustrated to scale. On the left side of each drill hole is a two-colour bar, displaying black where samples were coded as part of the Waste Domain, and cerise-pink where samples were coded as part of the Mineralised Domain. The Waste Domain can clearly be seen as the blue (very low grade) blocks. As expected with large Mineral Resource blocks, the smoothing in the blocks can be seen vertically and laterally compared to the 1 m long composites. It should be noted that the cross sections displayed represent the entire estimated block model for the Mineralised Domain and Waste Domain and is not confined to the pit shell perimeter.

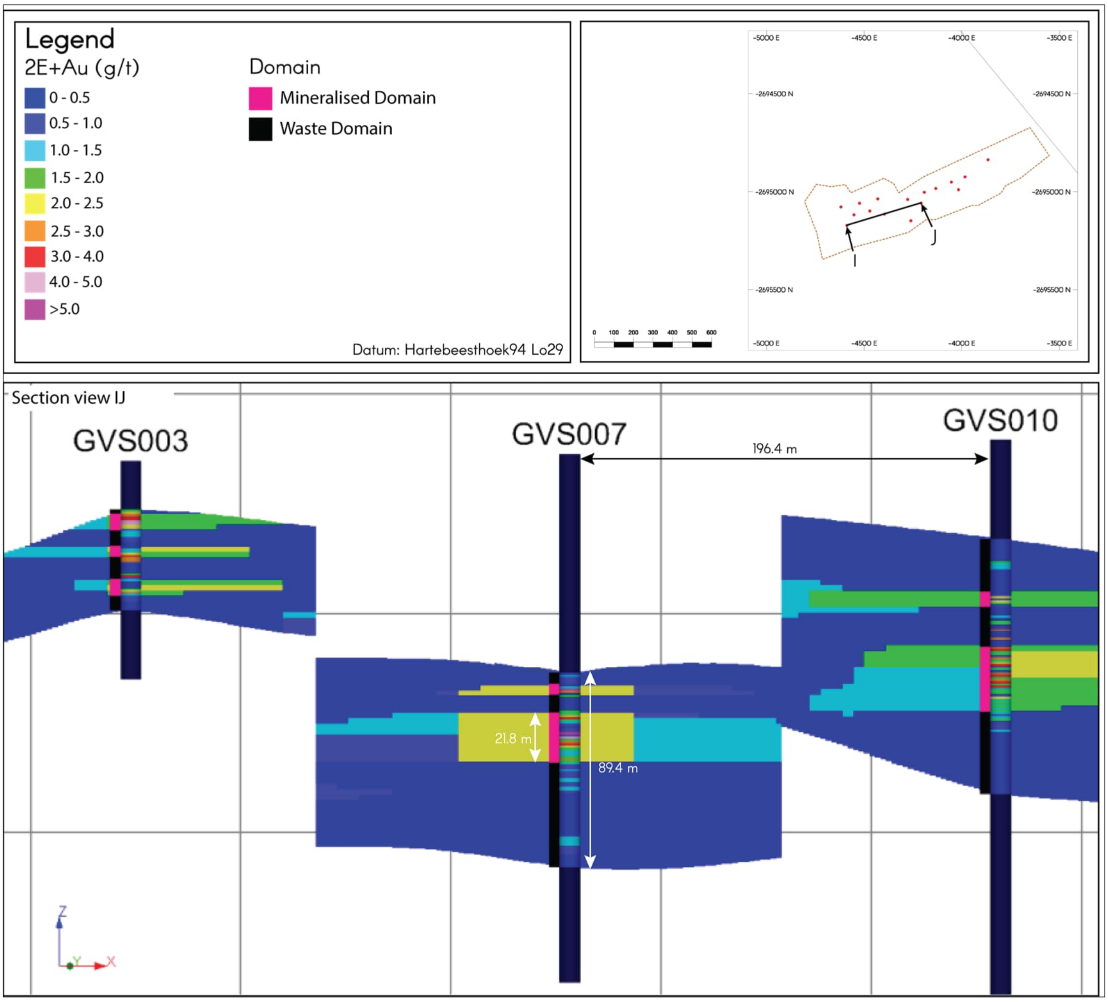

Figure 61. MRE block model and drill holes on section IJ coloured by 2E+Au grade.

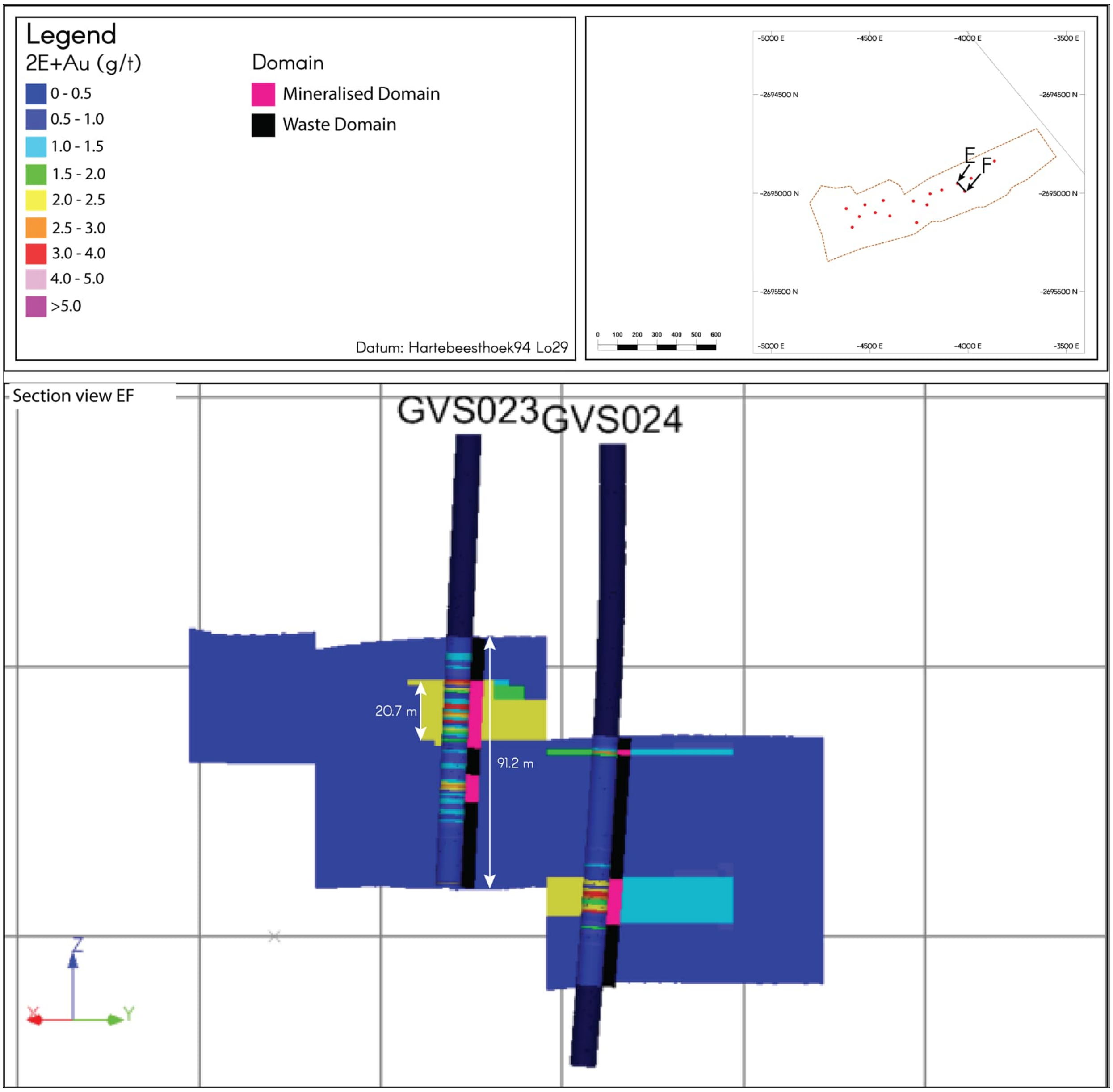

Figure 62. MRE block model and drill holes on section EF coloured by 2E+Au grade.

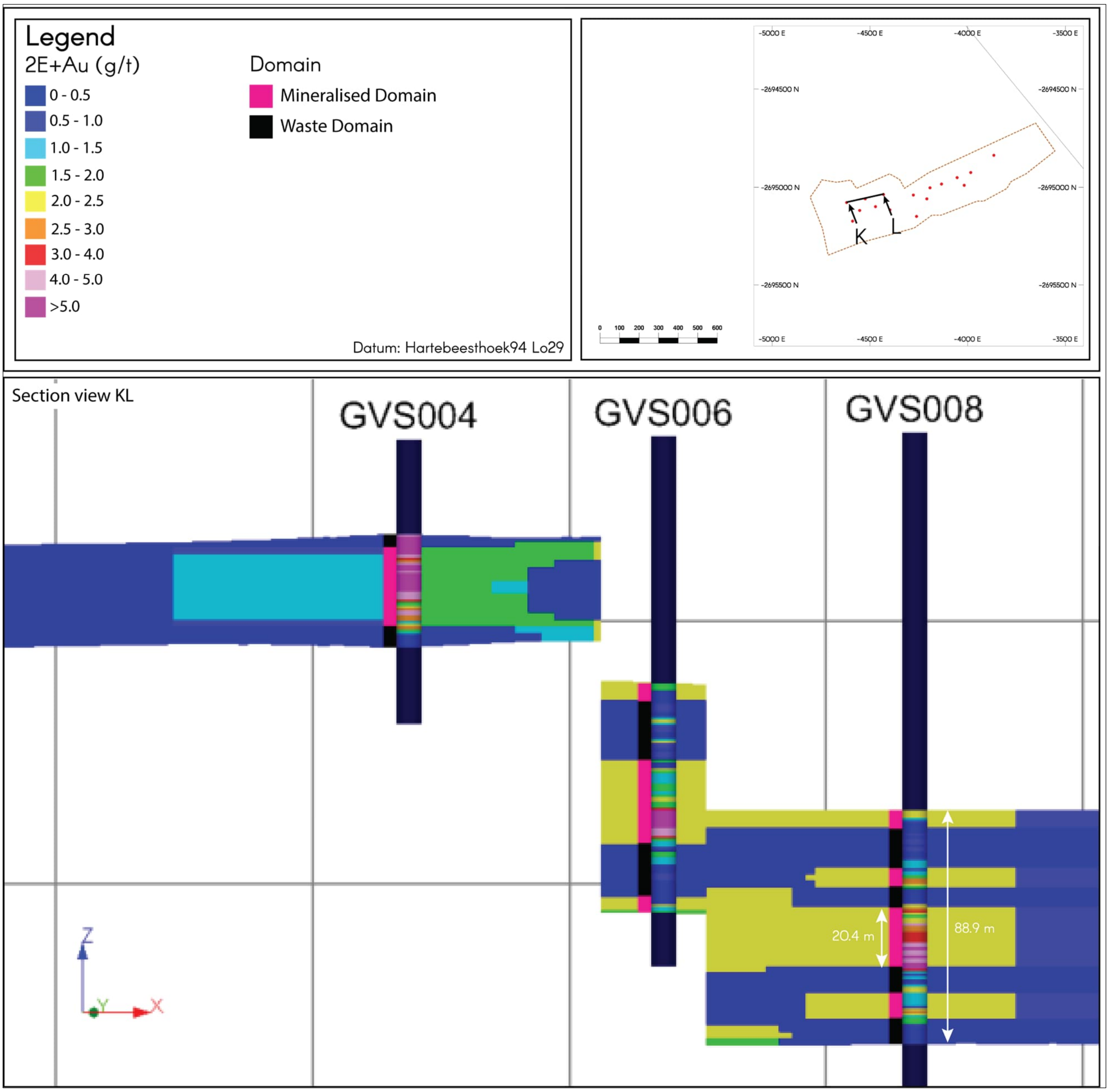

Figure 63. MRE block model and drill holes on section KL coloured by 2E+Au grade.

14.8.3 Grade distributions

The grade distribution histograms displayed are that of the entire Mineralised Domain within the chosen pit shell and regardless of classification and weathering zone. The frequency of the distribution as well as other statistics such as the means were weighted by tonnes.

The final Mineral Resource Estimate's average grades were produced by calculating the amount of metal in each cell in the block model (grade * tonnes) and dividing the category's sum of metal by the category's sum of tonnes, giving an average grade across the entire category (e.g. Mineral Resource Class, Weathering Zone, etc.).

14.8.3.1 2E+Au distribution

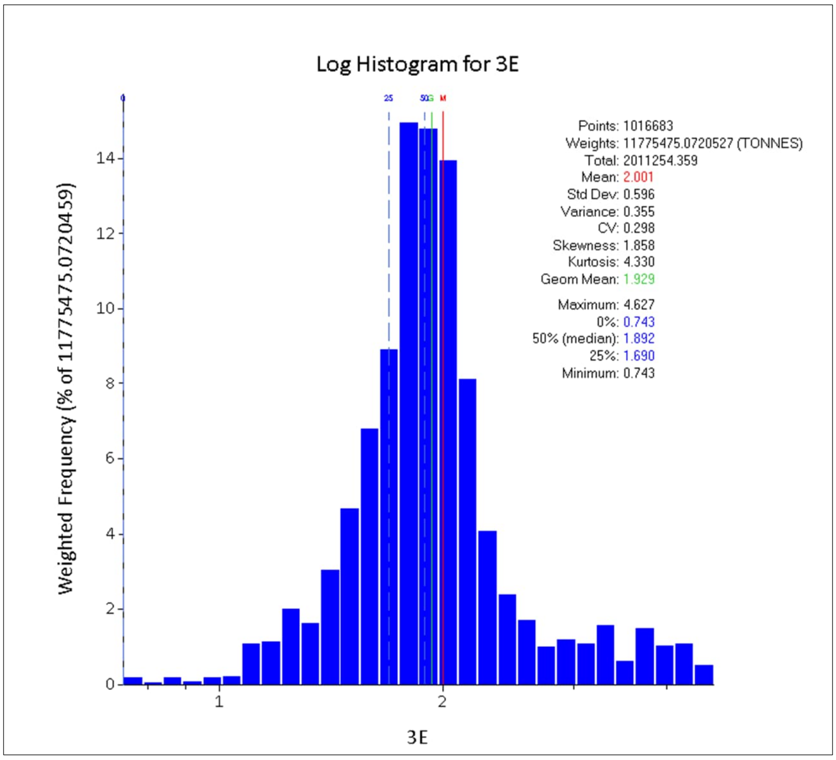

Figure 64. Log histogram for 2E+Au distribution in the Mineralised Domain block model within the chosen pit shell (weighted by tonnes).

14.8.3.2 Au distribution

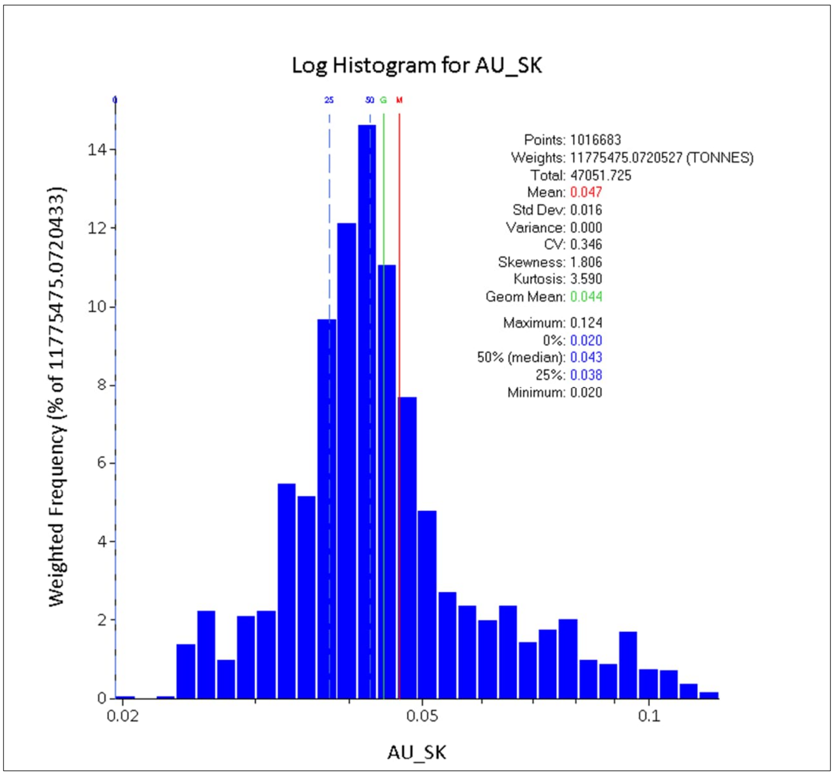

Figure 65. Log histogram for Au distribution in the Mineralised Domain block model within the chosen pit shell (weighted by tonnes).

14.8.3.3 Pt distribution

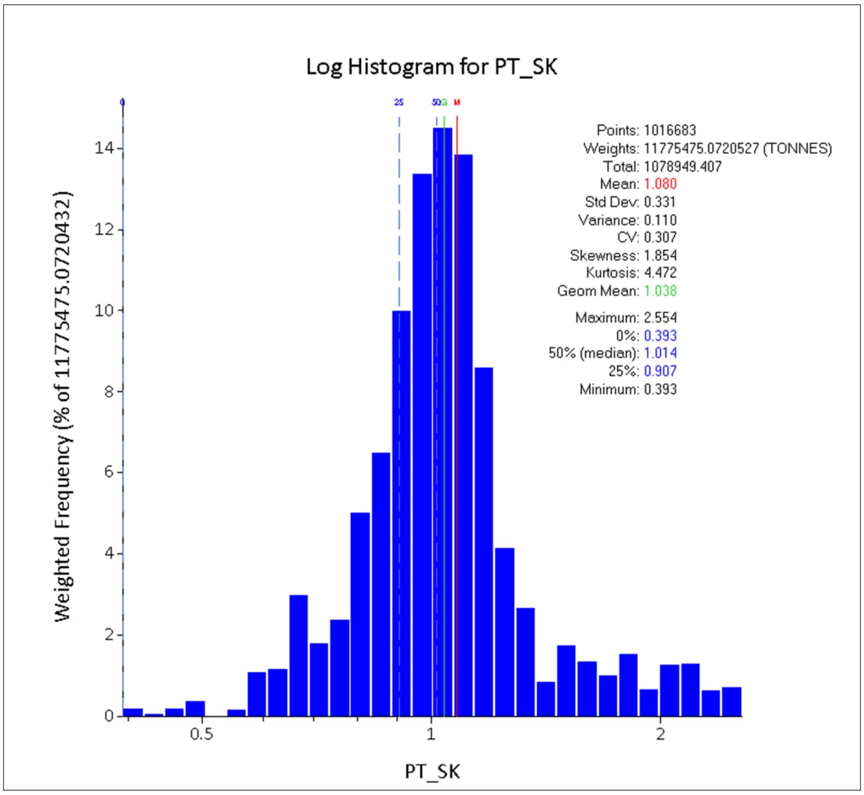

Figure 66. Log histogram for Pt distribution in the Mineralised Domain block model within the chosen pit shell (weighted by tonnes).

14.8.3.4 Pd distribution

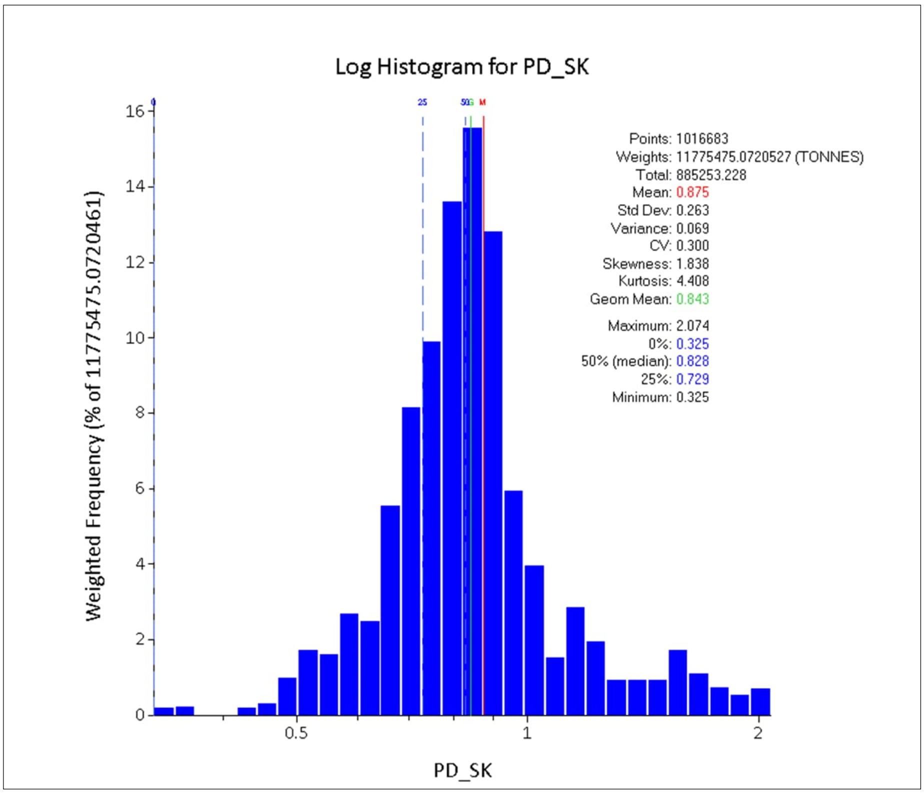

Figure 67. Log histogram for Pd distribution in the Mineralised Domain block model within the chosen pit shell (weighted by tonnes).

14.8.3.5 Cu distribution

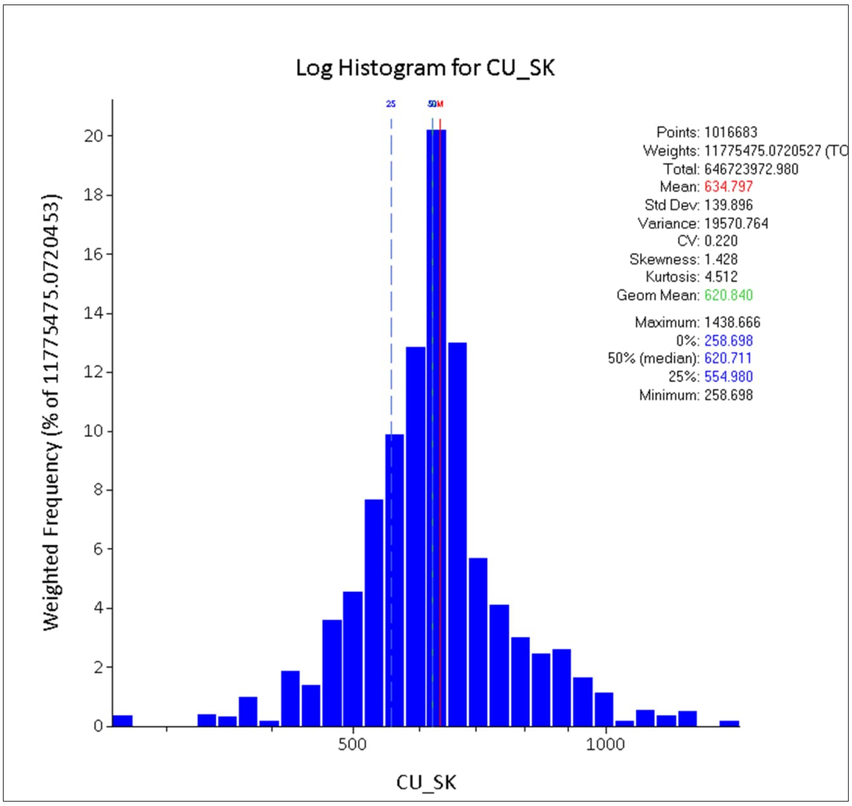

Figure 68. Log histogram for Cu distribution in the Mineralised Domain block model within the chosen pit shell (weighted by tonnes).

14.8.3.6 NI distribution

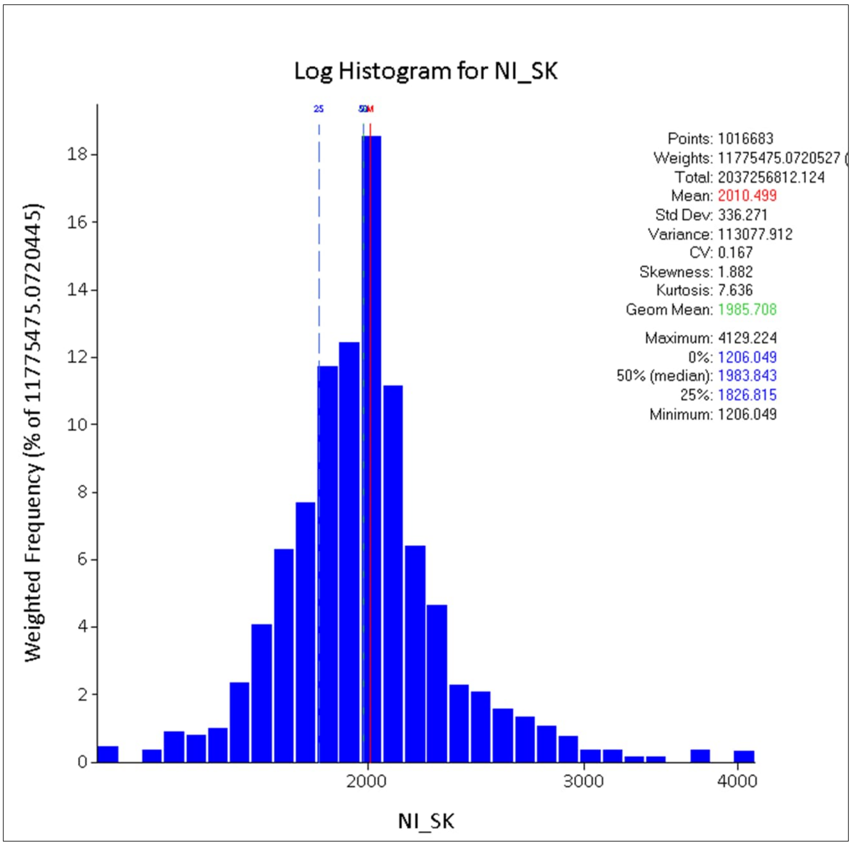

Figure 69. Log histogram for Ni distribution in the Mineralised Domain block model within the chosen pit shell (weighted by tonnes).

14.8.3.7 Rh distribution

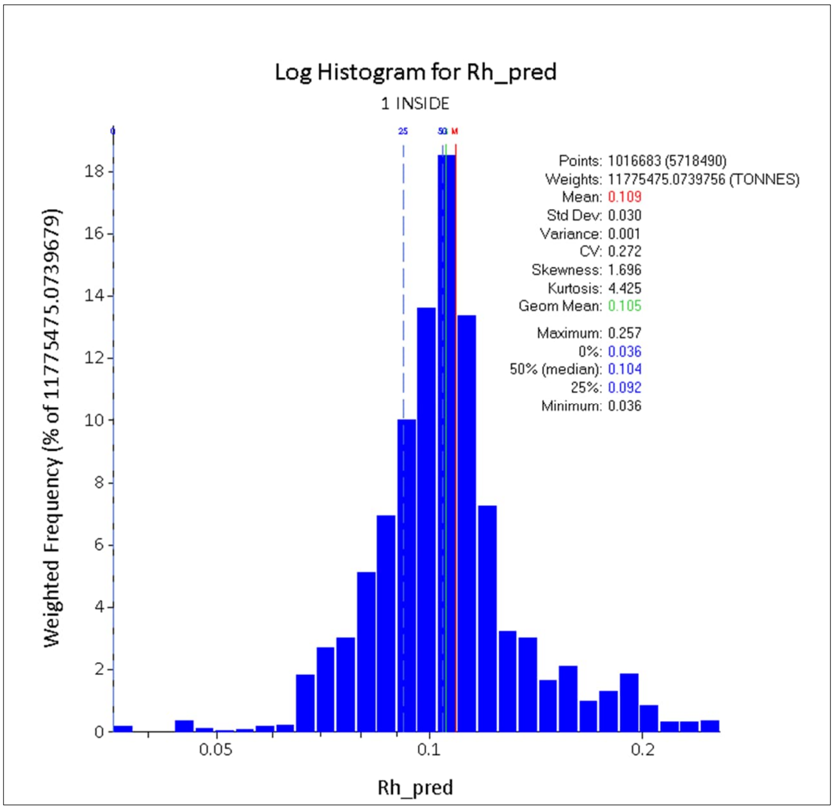

Figure 70. Log histogram for Rh distribution in the Mineralised Domain block model within the chosen pit shell (weighted by tonnes).

14.8.3.8 Ru distribution

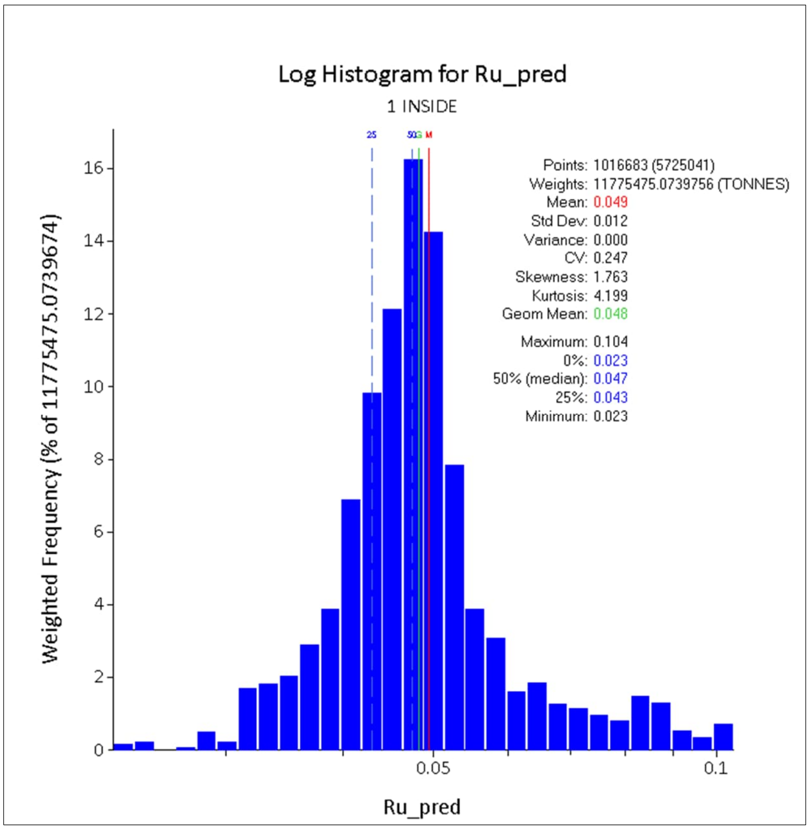

Figure 71. Log histogram for Ru distribution in the Mineralised Domain block model within the chosen pit shell (weighted by tonnes).

14.8.4 Swath plots

The swath plots in Figure 72 to Figure 76, were created with 100 m wide sections in the rotated (-17° around the Z-axis) space, in the X-direction. Model grades were tonnes-weighted.

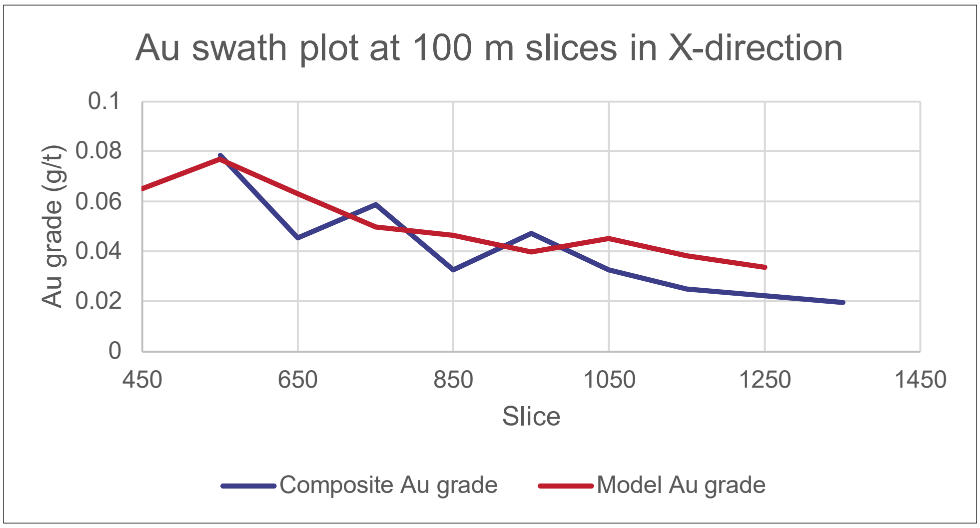

Figure 72. Au swath plot in X-direction.

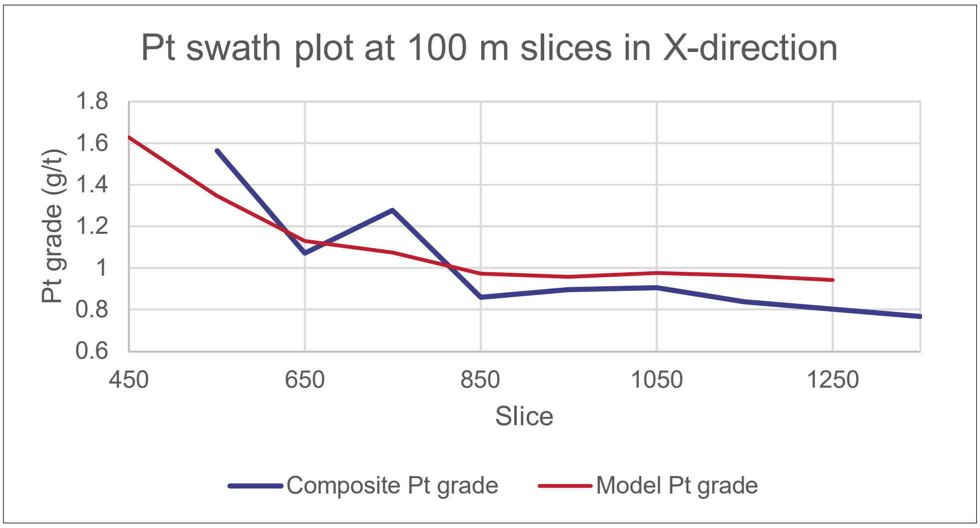

Figure 73. Pt swath plot in X-direction.

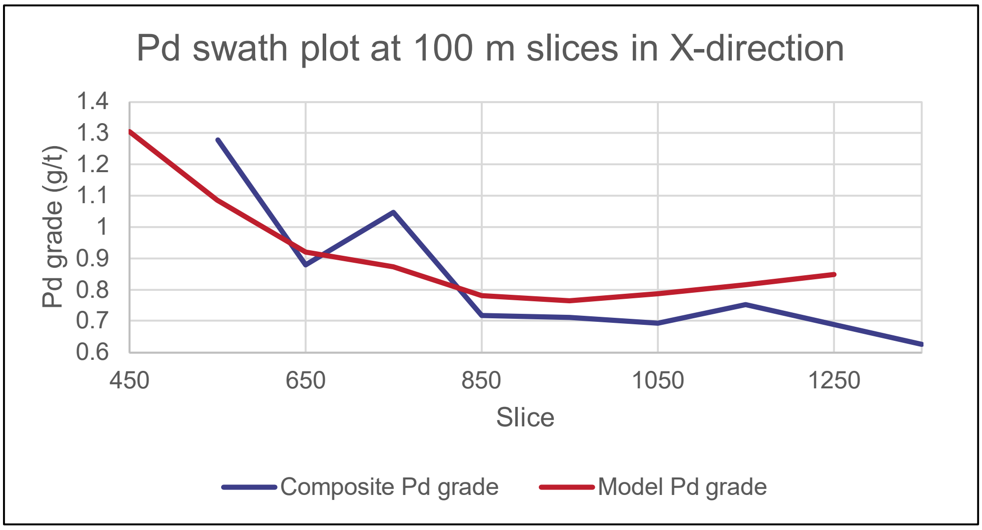

Figure 74. Pd swath plot in X-direction.

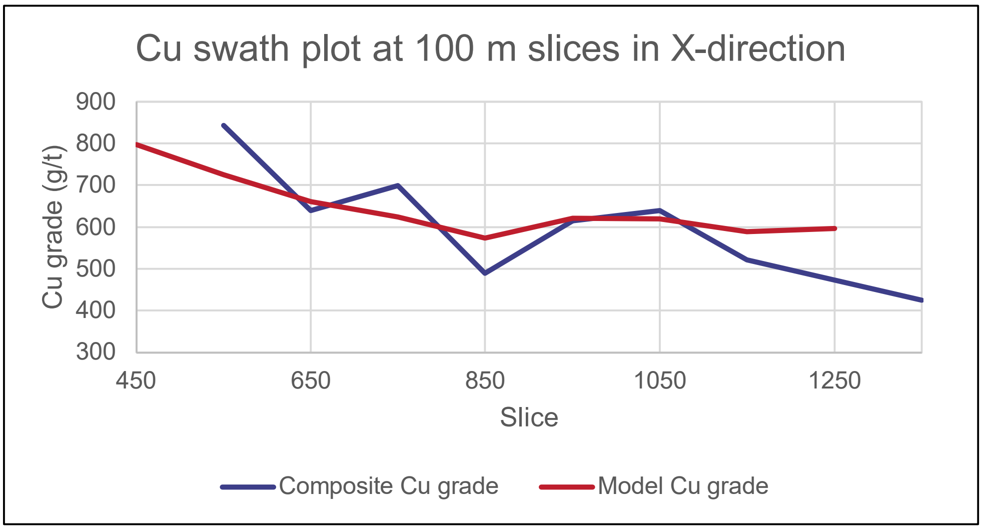

Figure 75. Cu swath plot in X-direction.

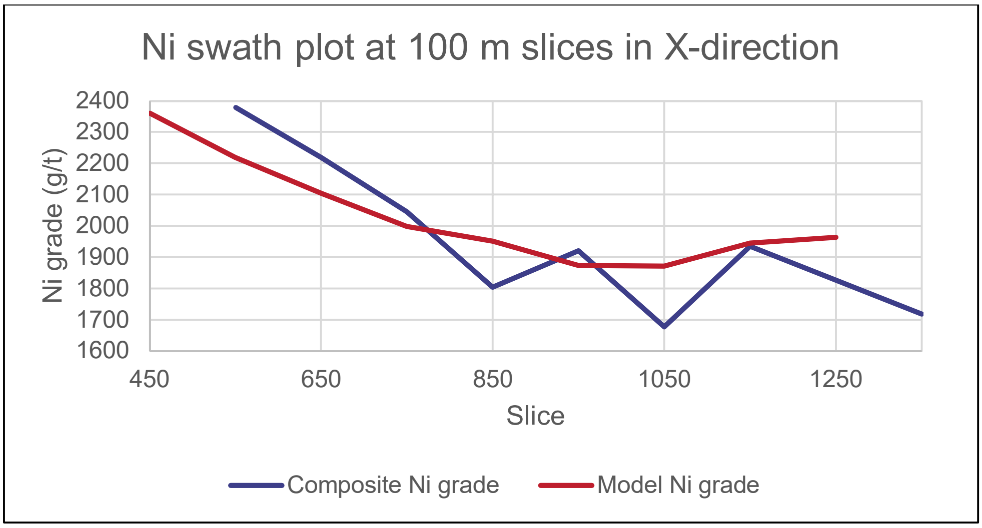

Figure 76. Ni swath plot in X-direction.

14.8.5 Tabulated numbers

The average grades of the MRE reported in Table 21 were obtained by calculating the metal content of each block or cell (grade * tonnes), taking the sum of the metal content per category (e.g. classification or weathering zone) and dividing it by the sum of the tonnes the corresponding category, resulting in an average grade across the entire category.

Only the blocks "inside" the pit shell 234 was included in this MRE.

Grades were calculated on total tonnes. Geoloss, was applied across the total tonnes of the MRE,

Metal content was calculated with 1 oz equal to 31.1034768 g.

Due to the rounding of decimals, some numbers in the tables might not add up precisely.

Table 21. MRE grade and metal content per classification category or weathering zone.

Total Mineral Resource

Category	Tonnage before geoloss (t)	Tonnage after 10% geoloss (t)	Density (t/m^3)	Pt (g/t)	Pd (g/t)	Au (g/t)	2E+Au (g/t)	Rh (g/t)	Ru (g/t)	4E+Au (g/t)	Cu (%)	Ni (%)
Inferred	11,775,475	10,597,928	2.85	1.08	0.87	0.05	2.00	0.11	0.05	2.16	0.06	0.20
Total	11,775,475	10,597,928	2.85	1.08	0.87	0.05	2.00	0.11	0.05	2.16	0.06	0.20

Total Mineral Resource

Category	Tonnage before geoloss (t)	Tonnage after 10% geoloss (t)	Density (t/m^3)	Pt (oz)	Pd (oz)	Au (oz)	2E+Au (oz)	Rh (oz)	Ru (oz)	4E+Au (g/t)	Cu (t)	Ni (t)
Inferred	11,775,475	10,597,928	2.85	367,832	298,062	15,876	681,771	37,052	16,851	735,673	6,728	21,307
Total	11,775,475	10,597,928	2.85	367,832	298,062	15,876	681,771	37,052	16,851	735,673	6,728	21,307

Total Mineral Resource

Category	Tonnage before geoloss (t)	Tonnage after 10% geoloss (t)	Density (t/m^3)	Pt (g/t)	Pd (g/t)	Au (g/t)	2E+Au (g/t)	Rh (g/t)	Ru (g/t)	4E+Au (g/t)	Cu (%)	Ni (%)
Fresh	11,396,559	10,256,903	2.85	1.08	0.87	0.05	2.00	0.11	0.05	2.15	0.06	0.20
Transitional	351,021	315,919	2.78	1.09	0.91	0.05	2.05	0.11	0.05	2.21	0.06	0.20
Oxidised	27,895	25,106	2.76	1.48	1.42	0.06	2.96	0.18	0.07	3.22	0.08	0.22
Total	11,775,475	10,597,928	2.85	1.08	0.87	0.05	2.00	0.11	0.05	2.16	0.06	0.20

Total Mineral Resource

Category	Tonnage before geoloss (t)	Tonnage after 10% geoloss (t)	Density (t/m^3)	Pt (oz)	Pd (oz)	Au (oz)	2E+Au (oz)	Rh (oz)	Ru (oz)	4E+Au (g/t)	Cu (t)	Ni (t)
Fresh	11,396,559	10,256,903	2.85	355,526	287,699	15,363	658,587	35,746	16,272	710,605	6,519	20,605
Transitional	351,021	315,919	2.78	11,112	9,215	464	20,791	1,160	519	22,470	189	646
Oxidised	27,895	25,106	2.76	1,195	1,148	49	2,392	146	60	2,598	19	56
Total	11,775,475	10,597,928	2.85	367,832	298,062	15,876	681,771	37,052	16,851	735,673	6,728	21,307

14.8.6 Grade-tonnage curves

Since smoothing is inevitable in a block model when aiming to minimize the conditional bias, it should be kept in mind that a smoothed model presents its own inaccuracies when considering its grade-tonnage curve. Nevertheless, a grade-tonnage curve of 2E+Au at 10% geoloss is illustrated in Figure 77 and 4E+Au at 10% geoloss in Figure 78. Given the smoothing in the model due to the small size of the dataset, the grade-tonnage curve in Figure 77 shows no drop in tonnage up to a cut-off grade of 0.7 g/t 2E+Au since the block model's minimum 2E+Au value is 0.743 g/t (Figure 64) and the similar effect is seen in Figure 78. Earthlab recommends that an MRE with more drilling data is done before the grade-tonnage curve could be regarded as reliable.

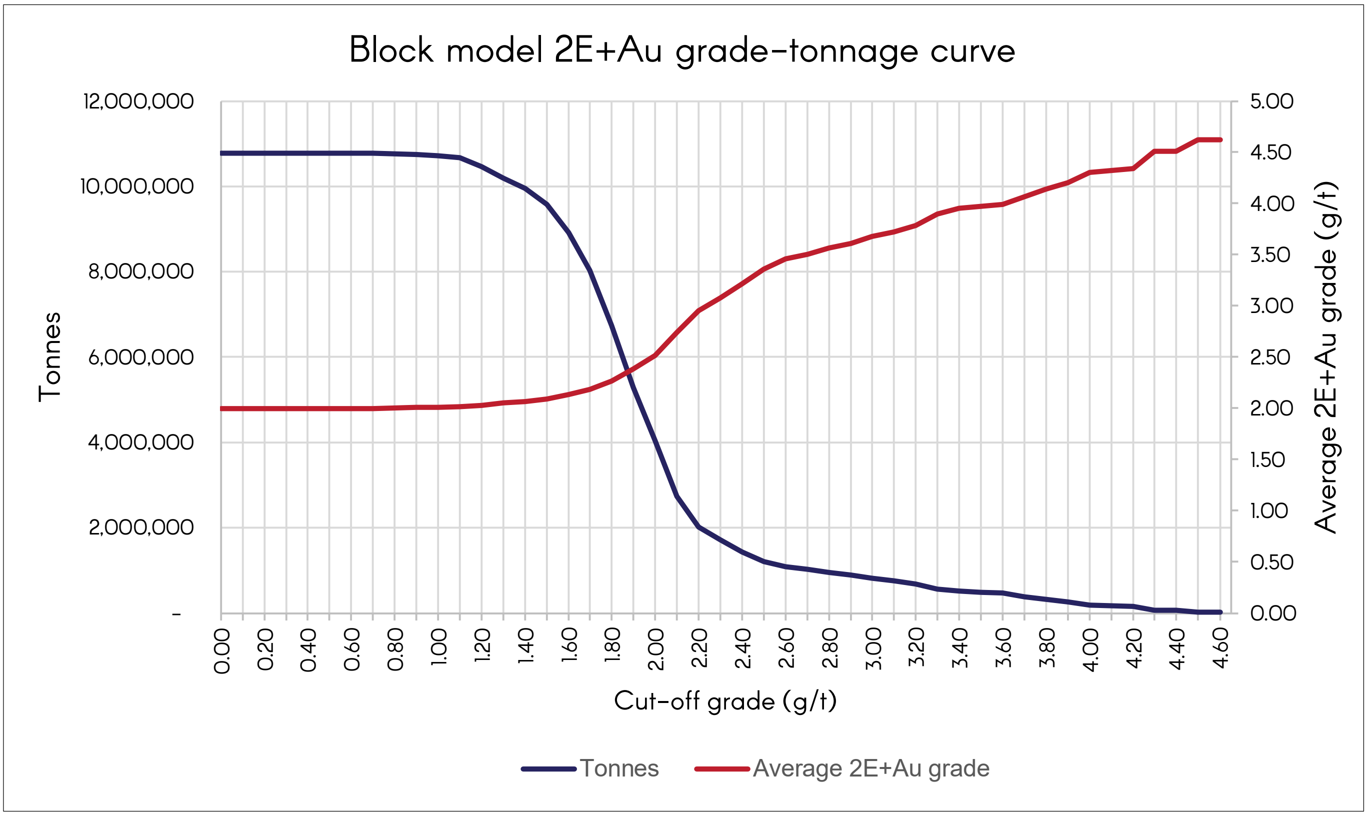

Figure 77. Block model 2E+Au grade-tonnage curve.

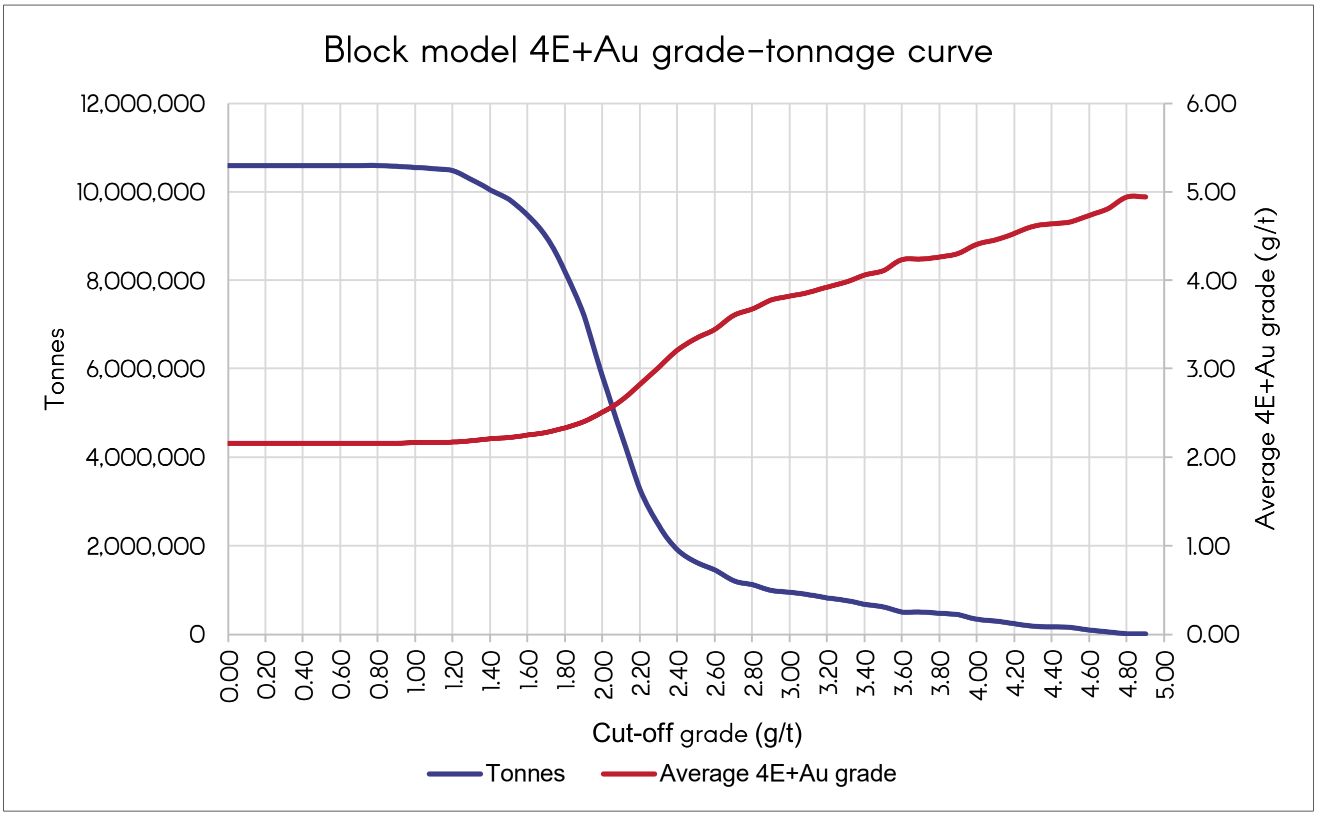

Figure 78. Block model 4E+Au grade-tonnage curve.

15 CONCLUSION

15.1 Summary of findings

The VS MRE was performed at a higher cut-off grade for 2E+Au of 1.2 g/t compared to the MRE conducted by IGS in 2012, this resulted in a significant decrease in tonnage after a 10% geoloss, from 29,263,203 tonnes with a grade of 1.29 g/t for 2E+Au to 10,597,928 tonnes at a higher grade of 2.00 g/t for 2E+Au.

The increase in grade and decrease in tonnes was due to the Mineralised Domain being strictly based on a grade cut-off that was significantly higher than the one used in 2012 and the result of the relogging offering improved geological confidence that all the mineralisation was located in a single stratigraphic unit.

The Mineralised Domain was created with a cut-off grade applied on a sample level, coding the samples with binary indicators, and estimating the probability of the above-cut-off-grade domain (Mineralised Domain) existing in a location or not. The method offered a way of estimating the potential metal content that could be expected in estimated locations. Considering the size of the dataset used for the MRE, rigorous exploration and infill drilling will be required to improve the confidence in the geological interpretation and MRE.

15.2 Future work recommendations

As mentioned in section 15.1, Earthlab recommends that additional exploratory and infill drilling will always be advantageous to upgrade areas of lower confidence. Additionally, as recommended by IGS in their 2012 MRE report, Earthlab recommends further exploratory drilling to investigate the potential northward extension of the South ore body.

A geophysical survey of very high resolution could be of great benefit to identify and delineate fault structures with more confidence.

Earthlab also recommends that a density measurement verification campaign should be executed to determine the dry bulk in-situ density with confidence.

16 BIBLIOGRAPHY

Callaghan C.C., E. P. &. S. C., 1991. The sdimentology of the Watergberg Group in the Transvaal, Sout Africa: an overwiev. *Jounral of African Earth Scineces,* 13(1), pp. 121-139.

Campbell, G., 2002. *Interpretation of High Resolution Aeromagnetic and Spectrometer Survey Data over the Grasvally Project Area, Potgietersrus, Northern Provinnce, on behalf of Pan Palladium South Africa (Pty) Ltd,* Johannesburg: GAP Geophysics .

Cawthorn, R.G., Eales, H.V., Walraven, F., Uken, R. and Watkey, M.R., 2006. The Bushveld Complex. In: *The Geology of South Africa..* s.l.:Council for Geoscience, pp. 261-282.

Cawthorn, R. et al., 2006. The Bushveld Complex. In: *The Geology of South Africa..* s.l.:Council for Geoscience, pp. 261-282.

Cawthorn, R., Merkle, R. & Viljoen, M., 2002. Platinum-Group element deposits in the Bushveld Complex, South Africa. In: *The Geolog, Geochemistry, Mineralogy and Mineral Benefication of Platinum-Group elements..* s.l.:Canadian Institute of Mining, Metallurgy and Petroleum, p. Special Volume 54.

Cawthorn, R., Merkle, R. & Viljoen, M., 2002. Platinum-Group element deposits in the Bushveld Complex, South Africa. In: *The Geolog, Geochemistry, Mineralogy and Mineral Benefication of Platinum-Group elements..* s.l.:Canadian Institute of Mining, Metallurgy and Petroleum, p. Special Volume 54.

Deutsch, J. L., Szymanski, J. & Deutsch, C. V., 2014. *Checks and measures of performance for kriging estimates,* s.l.: The Journal of the Southern African Institute of Mining and Metallurgy.

Eales, H. & Cawthorn, R., 1996. The Bushveld Complex. *Petrol,* pp. pp. 181-229.

Finn, C. et al., 2015. Mapping the 3D extent of the Northern Lobe of the Bushveld layered mafic intrusion from geophysical data.. *Precambrian Research,* pp. 279-294.

Hulbert, L., 1983. *A petrological investigation of the Rustenberg Layered Suite and associated mineralization south of Potgietersrus,* s.l.: University of Pretoria. PhD.

Hulbert, L. & Von Gruenewaldt, G., 1986. The structure and petrology of the upper and lower chromitite layers on the Farms Grasvally and Zoetveld, South of Potgietersrus. In: *Mineral deposits of Southern Africa.* Johannesburg: Geol. Society South Africa, pp. 1237-1249.

Lee, C., 1996. A review of mineralisation in the Bushveld Complex and some other layered mafic intrusions. In: Cawthorn RG (Eds), Layered Intrusions.. *Elsevier Science,* pp. 103-146.

McCreesh, M., Yudovskaya, M., Kinnaird, J. & Reinke, C., 2018. Platinum-group minerals of the F and T zones, Waterberg Project, Far Northern Bushveld Complex: implication for the formation of the PGE mineralisation. *Mineralogical Magazine,* pp. pp. 1-61.

Molyneux, T. G., 1974. A Geological investigation of the Bushveld Complex in Sekhukhuneland and part of the Steelport Valley. *Transactions of the Geological Society of South Africa,* pp. 329-338.

Naldrett, A. et al., 2009. Chromite composition and PGE content of Bushveld chromi-tites: Part1– the lower and middle groups.. *Applied Earth Sciences,* pp. 131-161.

Rossi, M. E. & Deutsch, C. V., 2014. *Mineral Resource Estimation.* Dordrecht: Springer.

SRK , 2011. *Data review and scope of work for a feasibility study for the Volspruit Project, Limpopo Province, South Africa,* Johannesburg: s.n.

Tanner, D. et al., 2019. A record of assimilation preserved by exotic minerals in the lowermost platinum-group element deposit of the Bushveld Complex: The Volspruit Sulphide Zone. *Lithos,* Volume 324-325, pp. 584-608.

Zeh, O., Wilson, M., A.H. & Schaltegger, U., 2015. The Bushveld Complex was emplaced and cooled in less than one million years – results of zirconology and geotectonic implications.. *Earth and Planetary Science Letters,* pp. 103-114.

17 APPENDIX A: DRILL HOLE SUMMARY

DHID	X-coordinate	Y-coordinate	Z-coordinate	Hole length	Dip	Used in model wireframing of CU11U	Used in Mineralised Domain estimation	Classified as Mineralised Domain	Mineralised Domain total intercept length	Comments
GVS001	-4712.12	-2695163.65	1068.06	80.80	90.00	No	No	No	-	No CU11U intersection
GVS002	-4745.77	-2695068.65	1068.20	149.80	90.00	No	No	No	-	Switched of CU11U hanging wall and footwall contacts, not confident in logging
GVS003	-4588.40	-2695173.03	1069.31	100.00	90.00	Yes	Yes	Yes	20.36	CU11U intersection, ore domain classification
GVS004	-4618.64	-2695078.44	1067.80	108.33	90.00	Yes	Yes	Yes	30.30	CU11U intersection, ore domain classification
GVS006	-4523.51	-2695059.53	1070.01	202.20	90.00	Yes	Yes	Yes	45.23	CU11U intersection, ore domain classification
GVS007	-4396.94	-2695115.44	1072.15	240.86	90.00	Yes	Yes	Yes	27.72	CU11U intersection, ore domain classification
GVS008	-4430.45	-2695037.27	1071.40	411.56	90.00	Yes	Yes	Yes	46.26	CU11U intersection, ore domain classification
GVS009	-4277.98	-2695040.33	1075.38	396.98	90.00	Yes	Yes	Yes	25.38	CU11U intersection, ore domain classification
GVS010	-4208.73	-2695059.14	1078.47	400.18	90.00	Yes	Yes	Yes	36.99	CU11U intersection, ore domain classification
GVS019	-4261.54	-2695148.98	1076.23	590.69	90.00	Yes	Yes	Yes	33.67	CU11U intersection, ore domain classification
GVS020	-3940.23	-2694978.32	1088.83	194.92	88.50	Yes	No	No	-	CU11U intersection, no ore domain classification
GVS021	-3984.09	-2694925.14	1083.39	225.01	87.39	Yes	Yes	Yes	12.99	CU11U intersection, ore domain classification
GVS022	-3994.30	-2695056.27	1089.51	132.04	88.90	Yes	No	No	-	CU11U intersection, no ore domain classification
GVS023	-4017.77	-2694990.46	1085.66	168.01	89.18	Yes	Yes	Yes	35.00	CU11U intersection, ore domain classification
GVS024	-4054.30	-2694951.53	1082.45	231.01	88.60	Yes	Yes	Yes	19.00	CU11U intersection, ore domain classification

GVS025	-4055.25	-2695082.81	1086.36	120.01	88.49	Yes	No	No	-	CU11U intersection, no ore domain classification
GVS026	-4133.50	-2694984.48	1077.67	249.01	88.40	Yes	Yes	Yes	40.07	CU11U intersection, ore domain classification
GVS027	-4192.48	-2695003.22	1077.25	206.92	89.10	Yes	Yes	Yes	47.07	CU11U intersection, ore domain classification
GVS028	-4470.96	-2695099.17	1070.42	219.01	89.77	Yes	Yes	Yes	42.01	CU11U intersection, ore domain classification
GVS029	-4552.07	-2695118.21	1067.61	114.01	89.31	Yes	Yes	Yes	17.20	CU11U intersection, ore domain classification
GVS030	-3866.57	-2694837.64	1084.51	255.01	87.61	Yes	Yes	Yes	20.04	CU11U intersection, ore domain classification
GVS031	-3725.36	-2694755.64	1081.15	247.80	89.49	Yes	No	No	-	CU11U intersection, no ore domain classification
GVS032	-3820.79	-2694939.79	1089.46	195.06	88.54	Yes	No	No	-	CU11U intersection, no ore domain classification
GVS033	-3630.85	-2694885.06	1091.95	215.81	85.26	No	No	No	-	Not within model parameter extent
GVS034	-3729.79	-2694915.30	1091.78	179.81	88.27	Yes	No	No	-	CU11U intersection, no ore domain classification
GVS035	-4624.60	-2695262.26	1068.05	89.00	89.47	Yes	No	No	-	CU11U intersection, no ore domain classification
GVS036	-4425.10	-2695196.37	1071.38	168.10	87.61	Yes	No	No	-	CU11U intersection, no ore domain classification
GVS037	-4457.19	-2695308.90	1070.41	120.01	89.67	No	No	No	-	Not within model parameter extent
GVS038	-4272.23	-2695226.19	1076.75	63.01	87.37	No	No	No	-	Not within model parameter extent
GVS039	-4079.61	-2695183.66	1087.32	65.04	86.96	No	No	No	-	Not within model parameter extent
GVS040	-3940.98	-2695122.48	1094.85	72.01	87.50	No	No	No	-	Not within model parameter extent
GVS041	-4525.48	-2695228.15	1069.38	97.71	88.54	Yes	No	No	-	CU11U intersection, no ore domain classification
GVS042	-4354.49	-2695272.77	1073.29	63.01	87.12	No	No	No	-	Not within model parameter extent
GVS043	-4643.71	-2695199.32	1066.43	103.44	90.00	Yes	No	No	-	CU11U intersection, no ore domain classification
GVS045	-4657.34	-2695290.14	1068.68	135.98	90.00	No	No	No	-	No CU11U intersection

GVS047	-4598.35	-2695289.49	1065.76	100.62	90.00	Yes	No	No	-	CU11U intersection, no ore domain classification
GVS048	-4578.85	-2695111.71	1066.26	82.15	90.00	Yes	No	No	-	CU11U intersection, no ore domain classification
GVS048D	Removed from data set, no downhole survey on deflection.									
GVS049	-4580.31	-2695210.55	1066.71	100.62	90.00	Yes	No	No	-	CU11U intersection, no ore domain classification
GVS050	-4531.61	-2695190.80	1066.64	100.05	90.00	No	No	No	-	No CU11U intersection
GVS050A	-4533.04	-2695194.64	1066.67	62.74	90.00	No	No	No	-	No CU11U intersection
GVS052	-4388.07	-2695132.49	1069.22	100.50	90.00	Yes	No	No	-	CU11U intersection, no ore domain classification
GVS060	-4300.81	-2695187.57	1073.90	251.30	59.60	No	No	No	-	Switched of CU11U hanging wall and footwall contacts, not confident in logging
GVS061	-4124.32	-2695120.94	1081.24	250.57	61.19	Yes	No	No	-	CU11U intersection, no ore domain classification
GVS062	-4010.93	-2695093.39	1089.92	250.84	58.70	Yes	No	No	-	CU11U intersection, no ore domain classification
GVS063	-3985.99	-2695160.16	1093.72	150.00	59.80	No	No	No	-	Not within model parameter extent

18 APPENDIX B: JORC TABLE 1

Criteria: JORC Table 1 - Section 1: Sampling techniques and data	
Explanation	Answer
Sampling Techniques	
• Nature and quality of sampling (e.g., cut channels, random chips, or specific specialised industry standard measurement tool appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These should not be taken as limiting the broad meaning of sampling. • Include reference to measures taken to ensure sample representavity 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 (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g., submarine nodules) may warrant disclosure of detailed information.	Historical Work Completed • A total of 46 un-orientated sampled drill holes were analysed for the South Body resource modelling on the Volspruit Project. Samples were taken at different interval lengths ranging from 0.21 m to 7.73 m with a mean of 1.09 m. Only cross-cutting granite and dolerite dykes were left unsampled. • Measures were put in place to prevent sampling errors. • Double check metre marks and sample numbers • Mark in standard, duplicates & blanks.
Drilling Techniques	
• Drill type (e.g., core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g., core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).	Historical Work Completed • Both diamond core and reverse circulation drilling methods were used to recover in-situ material for the Volspruit Project. • Diamond core drilling was done at NQ size core (47.6 mm diameter) using a standard tube. • Diamond drill core was not orientated.

<table>
<tr><th colspan="2">Drill Sample Recovery</th></tr>
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Method of recording and assessing core and chip sample recoveries and results assessed.
Measures taken to maximise sample recovery and ensure 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.

</td><td>
Historical Work Completed

Drill core was transported from the drilling site to the core yard on a daily basis. Core received was measured for core recoveries to consider any losses and gains and recorded onto a recovery log. RQD measurements were also carried out. Any discrepancies noted were taken up with the drill rig supervisors to be rectified and resolved.

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<tr><th colspan="2">Logging</th></tr>
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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.

</td><td>
Historical Work Completed

Geological logging of the drill holes was done qualitatively by PPD.
Logging included lithological, structural, alteration and weathering. These were logged by zones showing the same characteristics rather than in extreme detail. The historical dataset includes a combination of cumulus and whole rock terminology. Stratigraphic logs were not consistent throughout the drill holes. Post-processing operations were required to delineate geological horizons with acceptable continuity.
Geological logging was done over the entire length of the drill holes.

Relogging

46 Historical diamond drill holes of NQ-size core were relogged amounting to 8061.54 m. the core was a mixture of full core, half core, and quarter core. The drill holes were logged in terms of their stratigraphy, lithology, BMS mineralisation and weathering intervals. The relogging started in September 2022 and was completed in December 2022.
It was established that the Volspruit Reef was only confined to the Cyclic Unit 11 Upper associated with the BMS concentrates hosted in the pyroxenites. The units above and below can be considered as hanging wall and footwall, respectively. In some instances, the core was very structurally dense and highly serpentinised.

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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. • 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 representavity 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.	Historical Work Completed • Two core cutters were allocated to split the core to produce 1 m half-core samples for laboratory analysis. The remaining half-core samples were left in the original core trays for future analysis and verification, or resampling. Every sample was duplicated into quarter core samples with the same sample number. One sample went for assay analysis and the other for bulk sampling. • Sample preparation techniques were carried out by two commercial laboratories over the life of the exploration campaigns for the Volspruit Project. These were SetPoint Laboratories and ALS Chemex Laboratories. ALS supplied VMC with their certificates of accreditation and descriptions of each method carried out on the samples, while SetPoint only provided a description of the methods used at their laboratories. • The exploration geologist on-site provided the sampling team with a control sheet that specified the type, sample number, and depth intervals of all control samples inserted into the consignment. The control samples include both standards and blanks. • From the historical data, it is not clear whether field duplicates were created for the purpose of verifying the representativeness of the in-situ material collected. It is clear that a large portion of pulp duplicates was created by the laboratories at the time of analysis which has been analysed by Earthlab for QAQC purposes of the assay data. • The sample sizes for the drill core were physically composited at 1 m intervals, which is considered standard practice and suitable for drill core material.
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.	• All quality control sample assays were analysed by Earthlab Technical Division (Pty) Ltd to assess the usability and quality of the assay data for Mineral Resource Estimation.

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- 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 (e.g., standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.

</td><td>

- All samples were analysed for Pt, Pd, Au using Fire Assay technique. Cu and Ni were analysed using ICP-AES techniques.
- Verification of depth intervals allocated for sampling, a hand-held XRF device was used at 1 m intervals on the half core. No information regarding calibration of this instrument at the time has been retained.
- Quality control procedures adopted for the historic exploration included several certified reference materials and blanks. Duplicates were created as lab duplicates for selected samples throughout the sampling campaigns.
- Acceptable levels of accuracy and precision were established for the Volspruit Project.

</td></tr>
<tr><td colspan="2">Verification of Sampling and Assaying</td></tr>
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- 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, data storage (physical and electronic) protocols.
- Discuss any adjustment to assay data.

</td><td>

- Independent verification of the significant intersections has not been completed to date.
- No twinned holes were drilled.
- Historical data has been migrated from an Access Database to a secure and validated SABLE®7.2 Database.
- No numerical adjustments were made to the assay data. No samples were disqualified for use in the Mineral Resource Estimation.

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<tr><td colspan="2">Location of Data Points</td></tr>
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- 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.

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- All GVS drill hole collars for the South Body deposit were surveyed by a certified land surveyor, L. Nel.
- Collar surveys were measured in the WGS84 as well as the Clarke 1880 grid system.
- Collar position coordinates were converted from the WGS84 to Hartebeesthoek 94 Lo29 for geological modelling and Mineral Resource Estimation by Earthlab.
- No information regarding downhole surveys has been retained by the historical database, the method, and instrument used is currently unknown.
- Topographic control was completed through collar survey data and geophysics provided by GAP Geophysics (LiDAR).

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Data Spacing and Distribution	
• Data spacing for reporting of Exploration Results. • Whether the data spacing, and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied. • Whether sample compositing has been applied.	• The average drill hole spacing (of those used in the estimation) varied from 20 m to 160 m. • The data spacing and distribution is sufficient to produce geological and grade continuity appropriate for a Mineral Resource, with Inferred classification. • 1 m composites were created, bounded by the interpreted reef and waste units, as well as weathering zones.
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 orientation of the mineralised horizon is horizontal to sub-horizontal, while most of the orientation of drilling apart from four holes (of which all four intersected the mineralised zone) was vertical to sub-vertical, resulting in perpendicular intersection of the reef mineralisation. The four sub-vertical holes were not used in the MRE but contributed the geological interpretation of stratigraphic units and fault positions.
Sample Security	
• The measures taken to ensure sample security.	• Samples were transported from the Volspruit core yard to the laboratories by a senior geologist or responsible assistant. All samples were checked into the various facilities and signed for by a facility representative. The signed sample submission control documents and laboratory work orders are filed at the Volspruit office. All laboratory pulps and reject returns are stored at the Volspruit core yard facility.
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 park 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.	• A mining right MPT No. 11/2018 in respect of the farm Volspruit 326 KR and portion 2 of Zoetveld 294 KR was granted to Volspruit Mining Company (Pty) Ltd. (Volspruit) for thirty years commencing on 4 October 2017. • The Mining Right was granted for PGMs, Au, Ni, and Cr. • Section 102 application was lodged with DMRE to add the mineral copper and subsequently granted and notarially executed on 12 January 2021. • The Volspruit Project is 100% owned by Volspruit Mining Company (Pty) Ltd. o Iolite Trading 16 (Pty) Ltd, a Broad-based Black Economic Empowerment company owns 26% of Volspruit Mining Company. o Pan Palladium South Africa (Pty) Ltd owns 74% of Volspruit Mining Company. o Sylvania (Mauritius) Ltd owns 100% of Pan Palladium South Africa (Pty) Ltd o Sylvania Platinum Ltd owns 100% of Sylvania (Mauritius) Ltd.

Criteria: JORC Table 1 - Section 2: Reporting of Exploration Results	
Explanation	Answer
Exploration Done by Other Parties	
• Acknowledgment and appraisal of exploration by other parties.	• Exploration work over the Volspruit Project has been conducted by various mineral exploration companies as far back as the 1950s by Anglo American. • Between 1970 and 1992 Rio Tinto Zinc and Genmin conducted exploration activities that led to the definition of Mineral Resources for two deposits, namely North Deposit and South Deposit. The initial Mineral Resources were defined by Rio Tinto for North Deposit (7 Mt with 1.99 g/t Pt & Pd, 0.15% Ni and 0.06% Cu) and South Deposit (39 Mt with 1.15 g/t Pt & Pd, 0.17% Ni and 0.05% Cu).

	• Genmin updated the mineral resources of Volspruit in 1988 with additional drilling to: Indicated Mineral Resource at 12.7 Mt 2.25 3E + Au g/t and 0.19% Ni for the North Deposit and 24 Mt at 1.33 3E + Au g/t for the South Deposit. • Additional drilling of 151 drill holes by PPD as part of the Pre-feasibility Study on the Volspruit Project was commissioned between 2001 and 2003, followed by several specialised studies by various consultants to support the Pre-feasibility Study covering the period 2004 to 2012. It is not denoted whether these 151 drill holes stated above form part of the exploration activities performed on the South body. • DRA was commissioned in 2020 –2021 to, among other things, produce a Whittle Pit optimisation for the North and South bodies. • The exploration activities conducted on the Volspruit Project over the years have been of a professional level and have met industry standards at the time.
Geology	
• Deposit type, geological setting and style of mineralisation.	• The South Body is provisionally classified as a syngenetic, ortho-magmatic, PGE-Cu-Ni disseminated deposit hosted within the Lower Zone, of the RLS in the Northern Limb of the Bushveld Complex. • The Lower Zone magmas can be split into three units within the Northern Limb, from the base upwards; the Volspruit Pyroxenite, Drummondlea Harzburgite-Chromitite, and the Moordrift Harzburgite-Pyroxenite. The South Body is hosted within the middle portions of the Volspruit Pyroxenite sub-group. • The South Body is primarily hosted within fine-grained ortho-pyroxenites with varying proportions of olivine, chromite, and minor plagioclase. The overall textures of the host rocks vary from massive equigranular to streaky or even poikilitic. The genesis of the deposit is linked to a series of partially developed ultramafic magmas progressively increasing in incompatible elements, i.e., PGMs within the upper portion of cyclic unit 11. Together with this increase in incompatible elements, along with mixing from a pulse of more evolved magma, the precipitation of PGE minerals and

	base-metal sulphides could occur through sulphur saturation. • Tanner et al (2019) explains the genesis of the deposit: The parental magma of the lower zone had a separate ultramafic source, which intruded along sedimentary contacts. Carbonates with a minor contribution from the surrounding sediments increased the oxygen fugacity leading to the exotic chromite inclusions. As the chromite crystalised iron concentrations were depleting. Sedimentary contamination led to an increase in sulphur. These conditions led to sulphur saturation thus leading to the formation of sulphide droplets. Sudden faulting moved the magma slurry from the staging chamber into the main Grasvally magma chamber where the cumulates cooled to form the Volspruit Reef Sulphides and PGM mineralisation. • The sulphide mineralisation within this horizon, in decreasing abundance, consists of pyrrhotite, pentlandite, chalcopyrite and cubanite, where the only noted platinum group mineral within this zone is sperrylite. Mineralisation is predominantly interstitially disseminated to net-textured sulphide assemblages hosted within olivine and chrome bearing pyroxenites. Sulphide assemblages reach their peak modal abundance at approximately 3 wt.% of the whole rock composition.
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: o easting and northing of the drill hole collar o elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar o dip and azimuth of the hole o down hole length and interception depth o 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	• Provided in Appendix A attached to the end of the Volspruit Project JORC Report (CPR) for the South Body, produced by Earthlab.

Person should clearly explain why this is the case.	
Data Aggregation Methods	
• In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g., cutting of high grades) and cut-off grades are usually Material and should be stated. • 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.	• No top-capping was applied to the elements in the reef unit during variography and estimation. • Density samples of the entire data set was top-capped at 3.4 g/cm^3 regardless of weathering zones. • No metal equivalent values are reported.
Relationship Between Mineralisation Widths and Intercept Lengths	
• These relationships are particularly important in the reporting of Exploration Results. • If the geometry of the mineralisation with respect to 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 (e.g., 'down hole length, true width not known').	• The new faulted structure interpretation, as opposed to the historic dipped interpretation suggests mostly near perpendicular intersection of the drill holes relative to the mineralised horizon which offers a good interception of the mineralisation width.
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.	• Provided in the Earthlab Technical Division (Pty) Ltd Volspruit Project CPR for the South Body.

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.	• Geophysical surveys
Further Work	
• The nature and scale of planned further work (e.g., tests for lateral extensions or depth extensions or large-scale step-out drilling). • Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	• No official future work has been planned to Earthlab's knowledge at the time of reporting, however future work recommendations were included in the technical report.

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 was migrated from a historical Microsoft Access database into a secure SABLE®7.2 Database.
Site Visits	
• Comment on any site visits undertaken by the Competent Person and the outcome of those visits.	• Earthlab has been conducting work on behalf of VMC and other subsidiaries of Sylvania since 2020, with a team on the Volspruit farm for

• If no site visits have been undertaken indicate why this is the case.	more than two years and is well-acquainted with the project site. The CP has also been on-site several times.
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.	• Earthlab re-logged the available 46 drill holes core and defined a more detailed breakdown of the cyclic units. • After modelling the stratigraphic units (CU12U, CU12L, CU11U, and CU11L, it was clear that practically all the mineralisation was situated within a single stratigraphic unit namely CU11U. • After testing several sample-level cut-off grades, a cut-off grade of 1.2 g/t 2E+Au was applied with the parameters such as requiring a minimum length of 2.5 m, allowing up to 2.5 m of internal waste, etc. The cut-off grade and accompanying parameters were used to code samples with indicators: 1 for the Mineralised Domain and 0 for the Waste Domain. • Probability estimation with IPD^2 was used in 5 mX by 5 mY by 2.5 mZ blocks and by applying a probability threshold 0.518 and manual cleaning of artifact blocks, the (grade-based) Mineralised Domain was created in a block model. • The data showed moderate short scale variability. The current model therefore was moderately useful for estimating the approximate metal content and approximate locations, however an increase in the availability of drill hole data at a denser drill hole spacing will improve the accuracy and understanding of the fault system and short grade variability of the data. • If more geophysics and drilling is done and/or a different resource geologist creates a new geological model, domain and MRE, the numbers will undoubtably change. The locations (and orientation) of faults and the perimeter will change, and it is most likely the domain will also change, considering the structural density within the South Body it is likely that improvements in fault interpretations will cause a change in the domain. It is however unlikely that a completely new structural interpretation e.g. a deposit-scale folded structure is interpreted, altering the model, grade, and metal content completely. The likelihood of alternative geological

	interpretation is suspected to have a moderate effect, considering the size of the dataset used in this MRE. Any alternative domain modelling technique would alter the numbers.
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 Mineral Resource was confined by interpreted faults, geological features suggested by the geophysics and the absence of mineralisation. The model had a relatively elongated rectangular shape with ~770 m at its longest axis, covering a projected area of ~148,767 m^2 (~14.8 ha) from SW to NE. The Mineralised domain ranges from sub cropping at the surface to roughly 233 m below surface.
Estimation and Modelling Techniques	
• The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used. • The 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 (e.g. 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 modelling of selective mining units. • Any assumptions about correlation between variables. • Description of how the geological interpretation was used to control the resource estimates. • Discussion of basis for using or not using grade cutting or capping.	• Domaining was done on a cut-off grade basis, with certain additional parameters set in the software. Probability estimation with a threshold of 0.52 was applied to create the Mineralised Domain in a block model. • Drill hole plotting, wireframe modelling, and estimation were performed in Datamine Studio RM v1.13.202. Sample statistical evaluation, directional variography, and Kriging Neighbourhood Analysis were done in Snowden Supervisor v8.15. • Grade estimation of Pt, Pd, Au, Cu, and Ni was done by means of Simple Kriging, with a search distance allowed to a maximum of three times the variogram range of the respective elements. • No octants were used during estimation. • Density estimation was done by Inverse Power of Distance to the power of 2, with a second pass with two times the search volume range, using between 10 and 100 samples, without the requirement of filling octants. The samples had a low enough coefficient of variation in density values to warrant the use of Inverse Power of Distance. • Rh and Ru estimation was done by means of machine learning regression, using Pt, Pd, and Au in the block model. The machine leaning model was trained with the 2023 Volspruit South historic re-sampled assay results that were analysed for 5E+Au. Ir was excluded from regression due to being mostly below the detection limit.

• The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.	• Parent block dimensions for grade and density estimation was 80 mX by 40 mY by 2.5 mZ allowing subcells. Parent cell estimation with 3 x 3 x 3 cell discretisation was used. • Block estimates were compared to drill hole samples on section as part of validation. • Cu and Ni were included in the Mineral Resource with the assumption that it can be recovered. • No other deleterious elements were estimated. • No mine production data exists to use in estimation or validation.
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 estimated with SG measurements that could have included natural moisture. Grades reported by the lab were based on dried weights. Reported metal content could therefore potentially still be over-stated, hence the verification of SG measurements as suggested by Earthlab.
Cut-Off Parameters	
• The basis of the adopted cut-off grade(s) or quality parameters applied.	• A sample-level cut-off grade of 1.2 g/t 2E+Au was used to create the grade-based domain within the CU11U. • No cut-off grade was applied on a block model level post grade estimation.
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	• No mining study has been performed on the this MRE.

should be reported with an explanation of the basis of the mining assumptions made.	
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 study has been performed on the this MRE.
Environmental Factors or Assumptions	
• Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.	• VMC invested in the permitting requirements of the existing Mining Right. This work continues with specialist technical teams currently working on the authorisations. These authorisations include the Water Use License for the mining and on-site processing of the ore, updating of the the Environmental Impact Assessment and the finalisation of the amended Social and Labour Plan (SLP), which will update the Local Economic Development (LED) project that is included in the Mining Right held by the Company.
Bulk Density	
• Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.	• No bulk density campaigns have been performed.

• 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.	
Audits or Reviews	
• The results of any audits or reviews of Mineral Resource Estimates.	• No audits have been performed on this MRE.
Classification	
• The basis for the classification of the Mineral Resources into varying confidence categories. • Whether appropriate account has been taken of all relevant factors (i.e., relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data). • Whether the result appropriately reflects the Competent Person's view of the deposit.	• Earthlab performed a quality verification exercise on the assay data. • The Mineral Resource classification was manually done by the Competent Person and based on the Kriging Efficiency and Weight given to the mean which coincided with areas of denser drill hole spacing. • The Competent Person considered reliability of input data, data coverage, continuity, and statistical performance and applied a manual classification.
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	• No production data exists yet, and the statement relates to global estimates without any current confidence limits stated. The relative accuracy has not yet been calculated.

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.	