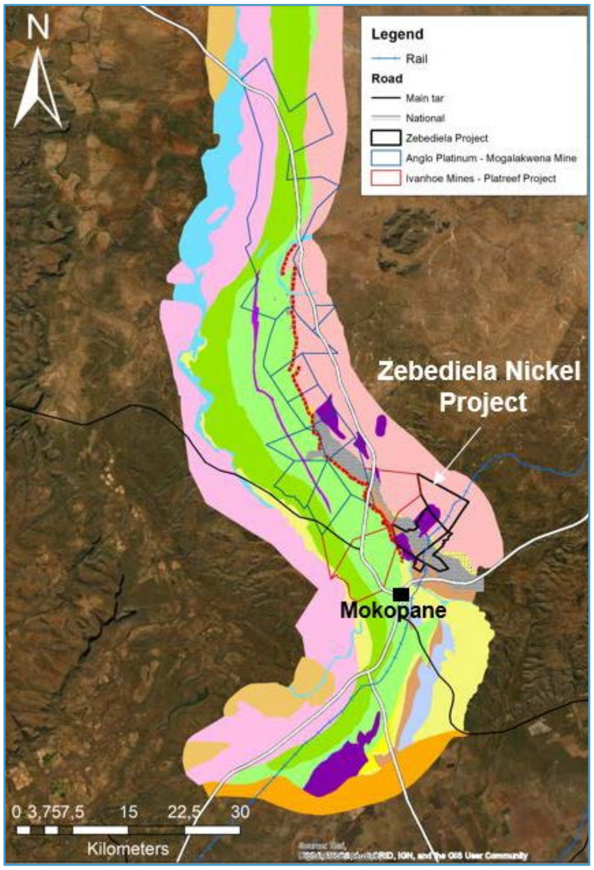

INDEPENDENT NI 43-101 TECHNICAL REPORT ON THE ZEBEDIELA NICKEL SULPHIDE PROJECT

Limpopo Province
South Africa

Report Prepared for:
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Effective Date: February 24, 2021
Issuing Date: February 26, 2021

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Project Number: 609.20.00

DATE AND SIGNATURE

The Report, “Independent NI 43-101 Technical Report on the Zebediela Nickel Sulphide Project, Limpopo Province, South Africa”, dated 26 February 2021 and with an Effective Date of 24 February 2021, was prepared for Blue Rhino Capital Corp. and authored by the following:

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Dated: February 26, 2021

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1.0 SUMMARY

1.1 Introduction

At the request of Blue Rhino Capital Corp. (TSXV: RHNO.P; “Blue Rhino” or the “Company” or the “Issuer”), Caracle Creek International Consulting Inc. (“Caracle” or the “Consultant”), a Canadian company, has prepared this report on the Zebediela Nickel Sulphide Project (the “Project” or the “Property”), as a National Instrument 43-101 (“NI 43-101”) Technical Report (the “Report”) in support of Blue Rhino’s Qualifying Transaction (“QT”).

Blue Rhino is a capital pool company (“CPC”) within the meaning of the policies of the TSX Venture Exchange (“TSXV”) that has not commenced commercial operations and has no assets other than cash. The Report is to be used by the Issuer (Blue Rhino) in support of its QT with URU Metals Ltd. (“URU”), whereby Blue Rhino will issue approximately 80% of its issued and outstanding shares to URU Metals Ltd. in exchange for the Property. The pre-money valuation of the Zebediela Nickel Sulphide Property is set at approximately C$10M. Following the QT, the resulting issuer will retain ownership of the Project and become operator. The agreement between Blue Rhino and URU Metals will see the consideration under the agreement and any underlying agreements, be the obligation of the Issuer.

The Report has been prepared to be in compliance with the disclosure and reporting requirements set forth in the Canadian Securities Administrators’ National Instrument 43-101, Companion Policy 43-101CP, and Form 43-101F1. The Report is intended for use by Blue Rhino subject to the terms and conditions of its contract with Caracle and relevant securities legislation. The user of this document should ensure that this is the most recent technical report for the Project as it is not valid if a new Technical Report has been issued. The Effective Date of the Report is 31 December 2020.

The Report was completed by Dr. Scott Jobin-Bevans and Dr. Philip John Hancox (together the “Consultants” or the “Authors”). Dr. Jobin-Bevans (“Principal Author”) is the Principal Geoscientist at Caracle Creek International Consulting Inc. and Dr. Hancox is a Senior Geologist and Director at Caracle Creek International Consulting (Proprietary) Limited, South Africa (“CCIC”). Dr. Jobin-Bevans is a professional geoscientist (APGO#0183, P.Geo.) with experience in geology, mineral exploration, Mineral Resource and Mineral Reserve estimation and classification, land tenure management, metallurgical testing, mineral processing, capital and operating cost estimation, and mineral economics. Dr. Hancox is a Member in good standing of the South African Council for Natural Scientific Professions (“SACNASP”) (No. 400224/04) as well as a Member and Fellow of the Geological Society of South Africa and the Society of Economic Geologists. His primary experience lies in the fields of economic geology and mineral exploration, Mineral Resource estimation and classification.

Dr. Scott Jobin-Bevans and Dr. Hancox, by virtue of their education, experience, and professional association, are both considered to be a Qualified Person (“QP”), as that term is defined in NI 43-101, for the Report. Dr. Jobin-Bevans is responsible for all sections of the Report except for Section 2.3. Due to travel restrictions resulting from the COVID-19 global pandemic, Dr. Jobin-Bevans was unable to complete a personal inspection of the Property and therefore, Dr. Hancox is responsible for Section 2.3. Dr. Hancox visited the Zebediela Nickel Project on 2 December 2020.

1.2 Property Description and Location

The Zebediela Project comprises various portions of the farms Uitloop 3 KS, Amatava 41 KS, Bloemhof 4 KS and Piet Potgietersrust Town and Townlands 44 KS, and is located approximately 9 km northeast of the town of Mokopane, in the Mogalakwena Local, and Waterberg District Municipalities of the Limpopo Province, South Africa. The Project consists of three Prospecting areas, which will be covered by a single Mining Right (Reference: LP30/5/1/2/2/10174MR) that is currently under application (submitted 26 July 2019).

The Property is held 100% by Lesego Platinum Uitloop (Pty) Ltd, which in turn is held 90% by Umnex Minerals Limpopo (Pty) ("Umnex"), which in turn is held 9.7% by Million 2 One Sure Invest (Pty) Ltd, 16.3% by Umbono Minerals Investment (Pty) Ltd, and 74% by Zebediela Nickel Company (Pty) Ltd; Blue Rhino will own 100% of Zebediela Nickel Company (Pty) Ltd and thereby 74% of the Project. The remainder of the shares in Lesego Platinum Uitloop (Pty) Ltd have been pledged, 5% for the benefit of the Lesego Platinum Uitloop Trust (an Employee Share Ownership Plan), and 5% for the Uitloop Communities NPC.

The major population and commercial centre nearest the Project is Mokopane, a well-serviced town in an established mining district, in close proximity to national roads, the north-south national railway line, electricity, and bulk water supplies. Access to the Property is year-round, taking about 10 minutes to reach from Mokopane on sealed roads.

The Property comprises a historical nickel resource and exploration is targeting three styles of nickel (Ni), copper (Cu), and platinum group element (PGE) sulphide mineralization including large-tonnage disseminated nickel sulphide, Platreef/Contact-type Ni-Cu-PGE, and footwall-associated massive Ni-Cu-PGE sulphide.

1.3 Mining Right Application and Permits

The Mining Right Application (the "Application") was submitted on 26 July 2019, and accepted by the DMRE on 21 August 2019 under reference number LP30/5/1/2/2/10174MR. All further required documentation and information as required by the relevant legislation was timeously submitted and the processing of the Application is currently underway.

All permits required for mineral exploration programs on the Project have been granted. Prospecting activities are in line with the prospecting work program submitted to the DMRE as part of the Prospecting Right application and renewal application. All activities are conducted in line with the approved EMP and annual prospecting reports and environmental compliance reports are submitted to the DMRE.

In terms of the MPRDA (Act No. 28 of 2002) all mineral exploration activities, as per the approved Prospecting Works Program, are to be conducted in accordance with the provisions provided for in the approved Environmental Management Plan, which forms part of the New Order Prospecting Right. Environmental liabilities associated with the mineral exploration activities conducted to date are limited to the agreed upon environmental rehabilitation activities within this approved Environmental Management Plan.

The larger area in which the Zebediela Project is located is well drained by various small non-perennial drainage lines. A possible river diversion of the Rooisloot River may be required depending on final surface infrastructure layout requirements, however, this will be addressed in a future Integrated Water Use License application submitted to the South African Department of Water and Sanitation.

There are several communities adjacent to the Project area and consultation with the relevant authorised representatives from these communities is ongoing. A register of interested and affected parties has been established and consultation is ongoing. Land access agreements are signed with relevant landowners to allow for prospecting activities to proceed.

1.4 Royalties, Agreements and Encumbrances

URU Metals Ltd. has entered into various royalty agreements in terms of which there is a 2.5% cumulative revenue royalty payable to the URU, and Umnex Mineral Holdings Proprietary Limited from the revenue generated from the Project (the “Royalty”). URU Metals Ltd. has the right to buy back 1.0% of the Royalty from the holder within 24 months of the granting of the Mining Right over the Project.

1.5 History

The region has a long history of mineral exploration and metals production dating back to the late 1800s. Historical exploration work within and immediate to the current tenements dates to the 1960s, with the most intense exploration starting in the late 1990s.

The Project area has been the focus of several historical exploration programs for which information is available, including: Rand Mines (1967 - 1971), Southern Era (1998 - 1999), and Falconbridge Ventures of Africa (1999 - 2001). All available exploration data from these programs have been consolidated and are presented and discussed in the Report. Previous exploration programs consisted of soil geochemistry, airborne and ground geophysical surveys, trenching, mapping and rock sampling, and several diamond drilling (core) programs.

1.5.1 Historical Mineral Resource Estimate

The most recent mineral resource estimate (Table 1-1; Table 1-2) on nickel mineralization in the Lower Zone Uitloop II body was completed by MSA Geoservices (Proprietary) Limited (“MSA”) in March 2012 as part of a Preliminary Economic Assessment (“PEA”) of the Project (Croll *et al.,* 2012). This PEA and mineral resource estimate were prepared in accordance with the disclosure and reporting requirements set forth in NI 43-101, its Companion Policy 43-101CP, and Form F1, of the Canadian Securities Administrators.

Drilling results allowed for an Indicated Resource of 485.4 million tonnes averaging 0.245% nickel to be stated (Table 1-1), with an additional Inferred Resources of 1,115.1 million tonnes at 0.248% nickel (Table 1-2). The resource was quoted as Total Nickel (“TNi”) and was restricted to mineralization in the Sulphide Zone. They were stated as *in-situ* resources with no geological losses applied.

Table 1-1. Grade sensitivity analysis, Lower Zone (Sulphide Zone), *in-situ* Indicated Mineral Resources (Croll *et al.,* 2012).

Cut Off	Million	Density	Total Ni	S
TNi ppm	Tonnes		ppm	%
1000	485.4	2.60	2457	0.53
1500	481.8	2.60	2465	0.53
2000	411.4	2.59	2575	0.50
2500	212.3	2.58	2864	0.46
3000	51.2	2.56	3254	0.43
3500	8.9	2.54	3707	0.67
4000	1.0	2.48	4159	0.87
4500	0.0	2.44	4710	0.74

Table 1-2: Grade sensitivity analysis, Lower Zone (Sulphide Zone), *in-situ* Inferred Mineral Resources (Croll *et al.,* 2012).

Cut Off	Million	Density	Total Ni	S
TNi ppm	Tonnes		ppm	%
1,000	1,115.1	2.60	2,482	0.47
1,500	1,110.2	2.60	2,486	0.47
2,000	1,031.3	2.60	2,535	0.47
2,500	486.9	2.61	2,787	0.46
3,000	81.2	2.63	3,245	0.59
3,500	9.7	2.54	3,741	0.92
4,000	1.5	2.39	4,202	1.50
4,500	0.1	2.19	5,080	1.87
5,000	0.0	2.09	5,540	1.36
5,500	0.0	2.12	5,710	1.76

The 2012 historical mineral resource estimate used categories that conformed to CIM Definition Standards on Mineral Resources and Mineral Reserves (CIM, 2010) at the time of completion of the estimate, as outlined in NI 43-101, Standards of Disclosure for Mineral Projects. However, neither the Principal Author nor a qualified person have done sufficient work to classify any of the historical estimates as current mineral resources and as such the Principal Author and the Issuer are treating the tonnages and grades reported as historical mineral resources. Investors are cautioned that the historical mineral resource estimates do not mean or imply that economic deposits exist on the Property.

1.6 Property Geology

The Zebediela Nickel Sulphide Project is underlain by rocks belonging to the mafic-ultramafic Northern Limb of the Bushveld Igneous Complex (“BIC”), the metasedimentary floor rocks of the Transvaal Supergroup, and crystalline granites of the basement complex. The BIC is divided into several discrete limbs of which the Northern Limb is of importance to the Property and the Report.

The Northern Limb is generally north-south striking and west-southwest dipping over a strike length of about 110 km (van der Merwe, 1976; Gain and Mostert, 1982). The RLS north of the TML is generally shallowly buried (<500 m depth) with an approximate area of 160 km x 125 km (Finn *et al.,* 2015). The thickness of the Northern Limb is not well constrained but varies from <1,000 m to >10,000 m with an average thickness of about 4,000 m (Finn *et al.,* 2015).

The Northern Limb is markedly different from the main Eastern and Western limbs of the BIC due to the supposed absence of the platiniferous UG2 and Merensky reefs. By contrast, the PGE endowment of the Northern Limb is carried by the Platreef, a product of contamination of mafic magmas with the reactive, predominantly dolomitic floor rocks of the Pretoria Group and Archaean basement granitoids (Sharman *et al.,* 2013; Smith *et al.,* 2016).

The Lower and Critical zones are only exposed at the southern portion of the limb, whereas the volumetrically more substantial Main and Upper zones occur along the entire length of the limb. The main trend of the Platreef, which occurs at the base of the Main Zone and is enriched in PGE-Ni-Cu mineralization, is found immediately west of the Project area. The Platreef is host to the world’s largest platinum mine, the open pit Mogalakwena Platinum Mine, which is owned by Anglo American Platinum.

The Rustenburg Layered Suite (“RLS”) of the BIC intrudes into the footwall lithologies within the Project area. Two ultramafic bodies of Lower Zone affinity occur on the Project area and these were historically interpreted as satellite bodies to the RLS. These Lower Zone bodies are known as Uitloop I (northeastern portion of the Project area) and Uitloop II (southwestern portion of the Project area).

Recent drilling identified steeply dipping Critical Zone lithologies adjacent to the Lower Zone Uitloop II body (McCreesh *et al.,* 2019). The Critical Zone lithologies have a strong affinity with the Platreef, and outcrop on the west side of the Project boundary, which in turn is overlain by the mafic Main and Upper zones of the Rustenburg Layered Suite.

1.7 Property Mineralization

There are three target mineralization types that occur within the Project, with each target type having a different style of mineralization, mineralization mechanism, and differing host lithologies and stratigraphic units.

Target Type 1 (Lower Zone): This target type includes existing historical nickel sulphide resources associated with low-grade, disseminated nickel-rich sulphide mineralization within the Lower Zone Uitloop II body. The Lower Zone Uitloop II body also contains significant iron minerals in the form of magnetite which is also a potential by-product. Nickel mineralization associated with the Lower

Zone Uitloop II body is hosted mostly in a thick package of alternating dunite, serpentinized dunite, serpentinite, pyroxenite and harzburgite. Like the Uitloop II body, the Uitloop I body has the potential to host low-grade, disseminated nickel sulphides.

Target Type 2: referred to as Platreef/Critical Zone mineralization, this type is characterized by two styles, Platreef stratabound and contact-style. Platreef stratabound mineralized zones contain Ni-Cu-PGE mineralization hosted by disseminated and/or bleb sulphides in a stratigraphic unit up to 150 m thick. Contact-style Ni-Cu-PGE mineralization is intimately associated with the footwall contact of the intrusion. Both styles of mineralization have been intercepted in historical and current boreholes on the Zebediela Nickel Sulphide Project.

Target Type 3: comprises nickel-rich massive-sulphide bodies which may be located within the ultramafic lithologies close to, or on the footwall contact, or injected up to several hundred metres into the granitic rocks of the footwall.

In many respects, the Uitloop II mineralized body shares broad similarities with other significant disseminated nickel sulphide resources reported in Canada and Sweden. In Canada, comparisons can be made to the Turnagain Ni-Co Project in British Columbia (Scheel *et al.,* 2005), the Dumont Nickel Deposit in Quebec (Staples *et al.,* 2013), and the Crawford Nickel-Cobalt Sulphide deposit, near Timmins, Ontario (Jobin-Bevans *et al.,* 2020). In Sweden, comparisons can be made to the Rönnbäcken deposit (Bradley *et al.,* 2011).

This information is presented for comparative purposes only, and with the exception of the Crawford Ni-Co Sulphide Project, has not been independently verified by the Principal Author and qualified person. Technical information regarding these analogous nickel deposits is not necessarily indicative of the mineralization on the Property that is the subject of the Report.

1.8 Deposit Types

Globally, layered igneous intrusions are the most important source of PGE, which form as a result of sulphide immiscibility in the magma triggered by magma mixing/contamination or physical changes in the magma chamber that may result in changes to the stability fields of various metal-enriched phases.

The Paleoproterozoic (2.06 Ga) Bushveld Igneous Complex (“BIC”) is a large layered igneous intrusion (covering >65,000 km^2), comprising an early bimodal volcanic sequence (Rooiberg Group), followed by a thick (up to 9 km) mafic-ultramafic basal sequence (Rustenburg Layered Suite), and overlain by a felsic roof with granitic and granophyric constituents (Lebowa Granite and Rashoop Granophyre suites). It is the largest global repository of PGEs, hosting about 75% of the world’s platinum resources (Naldrett *et al.,* 2009), along with chromitite and vanadium, and also hosts a significant amount of Ni and Cu within its lower mafic-ultramafic portion (Cawthorn, 2010). The upper parts of the complex host large, laterally extensive magnetite layers which are highly enriched in vanadium and titanium.

Two main PGE deposit types occur within the BIC (Peters *et al.,* 2020):

1. Relatively narrow (maximum 1 m wide) stratiform layers (reefs) that occur towards the top of the Upper Critical Zone (UCZ), typically 2 km above the base of the intrusion (Merensky reef-style), mainly found in the Western and Eastern Limbs. These narrow zones have been the principal targets for mining in the past; however, more recently wider zones with more irregular footwall contacts have been mined (referred to as potholes).
2. Contact-style mineralization at the base of the intrusion (Platreef-type) occurs mainly in the Northern Limb.

The term Platreef style mineralization is referred to mineralization that forms from contamination and sulphur precipitation mechanism rather than the specific strata-bound unit and is generally concentrated proximal to the footwall of the BIC. The precipitating mechanism is attributed to either additional influx of new magma, a change in pH of the cooling magma, the assimilation of silica or the incorporation of additional sulphur compounds from external sources. The Platreef style lithologies contain bleb PGE (mainly Pt and Pd) mineralization as well as nickel and copper. The Platreef is considered to have formed from multiple complex sill-like intrusions of mafic and ultramafic compositions (Kinnaird *et al.,* 2005). The distribution of discrete PGE horizons within the Platreef is generally controlled by stratigraphic position with the uppermost part of the Platreef hosting the highest PGE grades.

The BIC and its mafic-ultramafic portion, the Rustenburg Layered Suite, is not typically regarded as a globally important nickel source, as most economic nickel deposits globally are produced from massive sulphide layers associated with ultramafic rocks such as komatiites or ultramafic intrusions. Mudd and Jowitt (2014), recognised that, in terms of contained nickel, the Platreef contains three of the top ten global nickel sulphide deposits in the form of Ivanhoe Mine's Platreef Project, Anglo American Platinum's Mogalakwena Mine and Blue Rhino's Zebediela Project. The possibility for massive sulphide bodies (similar to the Nkomati Mine within the Uitkomst Complex) also exists within the Project area.Table 8-1:

1.9 Exploration – Recent

The Issuer, Blue Rhino, through various subsidiaries and related companies, has completed mineral exploration programs on the Property since 2007. The first exploration program comprising soil sampling was conducted by Lesego Platinum Uitloop (Pty) Ltd. in 2007. In 2018, Lesego Platinum completed geological mapping and rock grab sampling along the Rooisloot River and on the Bloemhof 4 KS farm (a small portion of the Uitloop 3 KS farm). Also in 2018, URU Metals Ltd. contracted ground geophysical surveys of the Uitloop 3 KS Farm, which included Induced Polarization (IP)/ Resistivity (Res) and ground magnetometer surveys.

1.10 Drilling

A number of drilling programs were completed on the Property between 2007 and 2020. In 2007, three boreholes (U series) were completed to further investigate the subsurface extensions of soil geochemistry anomalies (Lowman, 2007). In keeping with the Platreef style mineralization model, the surface anomalies were expected to extend below the surface in a zone sub-parallel to the contact between the Uitloop II Lower Zone body and the Transvaal Supergroup metasedimentary rocks.

In 2011, South African Nickel ("SAN") formed a JV partnership on the Zebediela Nickel Project with Lesego Platinum, targeting the large peridotite Lower Zone in the Uitloop II body. The 16 hole diamond drilling program (Z-series), totalling 5,062.54 m, was undertaken from October 2011 to January 2012.

In 2017, Lesego Platinum (URU Metals) conducted a six borehole drilling program (Z017-022 series), targeting Platreef style (stratabound) sulphide mineralization, semi-massive sulphide contact-style mineralization, and fresh material from the Uitloop II body for metallurgical test work.

1.11 Metallurgical Studies

For the purpose of the 2012 PEA, diamond core drill holes Z05 and Z08 were selected as being representative of the Zebediela mineralized deposit and the planned mining area. The quarter cores for each sample were combined and crushed to create a representative composite sample for each mineralized zone. A 750 kg composite sample was produced for mineralogical and metallurgical test work during the PEA phase. Mineralogical test work on the Zebediela samples were conducted and reported by SGS (https://www.sgs.com/).

The Zebediela Sulphide Zone sample consists primarily of serpentine (90%) with lesser amounts of magnetite (5%), magnesite/brucite (1.7%) and chromite (1.8%). This material has a TNi grade of 0.29% Ni, of which 62% is present in the nickel sulphide pentlandite. Approximately 8% of the total mass of the sample can be attributed to sulphide and/or magnetite containing particles. Processing and upgrading of the nickel via froth flotation and magnetite via magnetic separation was considered viable. Recovery of all the sulphides would account for 62% of the TNi in the feed.

The Zebediela Oxide Zone sample consisted primarily of dolomite (28%), with lesser amounts of serpentine (17%), magnetite (1%), calcite (13%) and clay (10%). This material has a TNi grade of 0.15% Ni, of which magnetite and serpentine hosts 36% and 30% of the Ni, respectively. Only 5% of the TNi is present in the pentlandite. The Oxide Zone sample contains very little sulphides, and all indications are that nickel recovery from this zone would be uneconomical. The oxide material does however contain quantities of magnetite that could be extracted using magnetic separation, although the merit of doing this would depend on the contaminant content of the magnetite.

Comminution metallurgical test work on material from the Sulphide Zone confirmed that crushing and milling indices are in-line with expectation and reference projects. The Zebediela material is classified as medium to hard.

Rougher flotation test work confirmed that 60% of the feed nickel can be recovered to a sulphide concentrate while cleaner test work confirmed that a concentrate containing 16% Ni is achievable. Based on the open circuit test work, it has been confirmed that a 15% Ni concentrate at a 50% overall nickel recovery is achievable under lock cycle conditions.

Results from the early-stage metallurgical test work completed to date offer preliminary information as to the recoverability of the main style of mineralization on the Property. Samples tested thus far are representative of the main style of mineralization on the Property, but further mineralogical and metallurgical test work is required.

1.12 Interpretation and Conclusions

The Zebediela Nickel Sulphide Project is located over what is interpreted to be the largest structurally controlled basin in the Northern Limb (McCreesh *et al.,* 2019). This geological feature could yield Platreef (stratabound) and/or contact-style mineralization close to surface as seen in the rest of the Northern Limb of the BIC and/or deeper semi-massive to massive sulphides associated with footwall contact embayments and within basement rocks as seen at the Nkomati Mine within the Uitkomst Complex.

Historical exploration work within and immediate to the current tenements dates to the 1960s, with modern exploration starting in the late 1990s. This work has identified three different styles of mineralization on the Property, hosted by different lithologies and stratigraphic units.

Based on information and data provided to the Authors by the Issuer and available from public sources, there are three prospective target types (*see* Figure 7-12) within the Project area (McCreesh *et al.,* 2019):

Target 1: Ultramafic-hosted, large-tonnage, low-grade disseminated nickel sulphide, is associated with the serpentinized Lower Zone of the Uitloop II body and may be potentially found within the Uitloop I body to the northeast. Most of the mineralization in the serpentinized Lower Zone ultramafic lithologies (Uitloop I and II bodies) takes the form of disseminated sulphide (mainly fine-grained pentlandite $(Fe,Ni)_9S_8$)), containing potentially large tonnages of low-grade nickel, and forming the basis for historical mineral resources reported in Section 6.4. At the current exploration stage of the Project, this mineralization style is considered a secondary target.

Target 2: Platreef (stratabound) and Contact-style mineralization, containing bleb sulphide mineralization with elevated PGE, nickel, and copper mineralization, occurs along the northeast margin of the Uitloop II body and is the primary target of current exploration work. There is potential for a 6.3 km strike length of Platreef and/or Contact-style mineralization. There is also the potential for up-dip extension of this target type where the Platreef potentially intruded beneath the sedimentary cover, creating a “raft or bridge”, and which may host disseminated and/or semi-massive sulphide.

Target 3: massive-sulphide (Ni-Cu-PGE) deposits associated with ultramafic rocks at or near the base of the ultramafic rocks, within structurally controlled, contact-associated embayments or within footwall lithologies that could include Archean granite basement up to 1 km away from BIC rocks. Contact associated, footwall embayments could form a trap site for BIC magmas to assimilate footwall lithologies and precipitate larger concentrations of sulphur. A continuous flow of magma during emplacement of higher stratigraphic Platreef magmas, would have allowed for sulphur to be constantly replenished and to interact with fresh magma containing additional Ni, Cu and PGE concentrations which would preferentially partition into sulphur-rich liquids and precipitate as massive sulphides within the footwall embayments. This target type, although not a top priority at this stage of the Project, could be encountered as a result of priority Target 1 exploration.

Based on the location of the Project in the Northern Limb of the BIC, the known styles and extent of mineralization, and the multitude of targets to be tested in future work programs, the area shows excellent exploration potential for discovery of potentially economic sulphide deposits.

It is the opinion of the Authors that, after reviewing historical results and other publicly available information and data from the Zebediela Nickel Project, the Project presents an excellent opportunity for the Issuer and is worthy of additional exploration and development work.

1.13 Recommendations

It is the opinion of the Authors that, after reviewing historical results and other publicly available information and data from the Zebediela Nickel Sulphide Project, that significant opportunity exists for Blue Rhino to continue to develop the Project.

A two phase program, totalling US$950,000 (C$1.2M), is recommended with the second phase (drilling) contingent on the success of the first phase (environmental authorization).

The newly discovered Platreef style mineralization (priority Target 2) in particular, deserves further exploration to prove the strike and dip extent of the mineralization, and for resource definition drilling, with the goal to outline maiden PGE resources.

The recommended multi-phase budget (US$950,000) is as follows:

- **Phase 1: US$250,000**
  Complete Mining Right Application and associated environmental authorisation process, including the relevant environmental studies, specialist reports, geophysical studies, water studies and potentially drilling relating to a Water Use Licence Application, in order to secure long term title across the three Prospecting Areas that are included in the Mining Right Application.

  Once the Mining Right has been granted, Phase 2 would commence.

- **Phase 2: US$700,000**
  Six hole diamond drilling program totalling approximately 3,600 metres.

2.0 INTRODUCTION

At the request of Blue Rhino Capital Corp. (TSXV: RHNO.P; “Blue Rhino” or the “Company” or the “Issuer”), Caracle Creek International Consulting Inc. (“Caracle” or the “Consultant”), a Canadian company, has prepared this report on the Zebediela Nickel Project (the “Project” or the “Property”), as a National Instrument 43-101 (“NI 43-101”) Technical Report (the “Report”) as part of Blue Rhino’s Qualifying Transaction (“QT”).

Blue Rhino Capital Corp. is a capital pool company (“CPC”) within the meaning of the policies of the TSX Venture Exchange (“TSXV”) that has not commenced commercial operations and has no assets other than cash.

The Property is held 100% by Lesego Platinum Uitloop (Pty) Ltd, which in turn is held 90% by Umnex Minerals Limpopo (Pty) (“Umnex”), which in turn is held 9.7% by Million 2 One Sure Invest (Pty) Ltd, 16.3% by Umbono Minerals Investment (Pty) Ltd, and 74% by Zebediela Nickel Company (Pty) Ltd; Blue Rhino will own 100% of Zebediela Nickel Company (Pty) Ltd and thereby 74% of the Project. The balance of the shares in Lesego Platinum UItloop (Pty) Ltd is held for the benefit of an Employee Share Ownership Plan, and a non profit company registered for the benefit of the host communities in the Project area. A summary of the corporate structure and ownership is provided in Appendix 1.

2.1 Terms of Reference and Purpose of the Report

The Report has been prepared to be in compliance with the disclosure and reporting requirements set forth in the Canadian Securities Administrators’ National Instrument 43-101, Companion Policy 43-101CP, and Form 43-101F1, as well as with the Canadian Institute of Mining, Metallurgy and Petroleum’s “CIM Definition Standards for Mineral Resources and Reserves, Definitions and Guidelines” (“CIM Standards”) adopted by the CIM Council on November 27, 2010 and updated November 29, 2019 (CIM, 2019).

The quality of information, conclusions, and recommendations contained herein have been determined using information available at the time of Report preparation and data supplied by outside sources as detailed in Section 2.4 of the Report. The information, conclusions and recommendations contained in the Report are qualified by certain assumptions, conditions further detailed herein. The Report is intended for use by Blue Rhino subject to the terms and conditions of its contract with Caracle and relevant securities legislation.

2.2 Qualifications of Consultants

The Report was completed by Dr. Scott Jobin-Bevans and Dr. Philip John Hancox (together the “Consultants” or the “Authors”). Dr. Jobin-Bevans (“Principal Author”) is the Principal Geoscientist at Caracle and Dr. Hancox is a Senior Geologist and Director at Caracle Creek International Consulting (Proprietary) Limited, South Africa (“CCIC”). Dr. Jobin-Bevans is a professional geoscientist (APGO#0183, P.Geo.) with experience in geology, mineral exploration, Mineral Resource and Mineral Reserve estimation and classification, land tenure management, metallurgical testing, mineral processing, capital and operating cost estimation, and mineral economics. Dr. Hancox is a Member in good standing of the South African Council for Natural Scientific Professions

(“SACNASP”; No. 400224/04) as well as a Member and Fellow of the Geological Society of South Africa and the Society of Economic Geologists. His primary experience lies in the fields of economic geology and mineral exploration, Mineral Resource estimation and classification.

Dr. Scott Jobin-Bevans and Dr. Hancox, by virtue of their education, experience, and professional association, are both considered to be a Qualified Person (“QP”), as that term is defined in NI 43-101, for the Report. Dr. Jobin-Bevans is responsible for all sections of the Report except for Section 2.3. Due to travel restrictions resulting from the COVID-19 global pandemic, Dr. Jobin-Bevans was unable to complete a personal inspection of the Property. Dr Hancox is therefore responsible for Section 2.3. A Certificate of Author for each Consultant is provided in Appendix 2.

A qualified person, for the purposes of NI 43-101, has not undertaken an independent detailed investigation of historical exploration work contained in the Report in order to verify the accuracy of the information. A qualified person, for the purposes of NI 43-101, has not done sufficient work to classify the historical estimates referenced in the Report as current mineral resources and the Company is not treating the historical mineral resource estimates as current.

The Consultants employed in the preparation of the Report have no beneficial interest in Blue Rhino and the Consultants are not insiders, associates, or affiliates of Blue Rhino. The results of the Report are not dependent upon any prior agreements concerning the conclusions to be reached, nor are there any undisclosed understandings concerning any future business dealings between Blue Rhino and the Consultants. The Consultants are being paid a fee for their work in accordance with normal professional consulting practices.

2.3 Personal Inspection – Site Visit

Dr. Hancox (SACNASP), who resides in South Africa, completed a personal inspection (site visit) of the Property and shared the information and data gathered from the site visit with Dr. Jobin-Bevans by email. Dr. Hancox visited the Zebediela Nickel Project on 2 December 2020, accompanied by Mr. Innes Buurman (Project Geologist), and Dr. Matthew McCreesh (Project Geologist) from Umbono Natural Resources (Pty) Ltd., and Mr. Malesela Makhafola (CEO and Lead Geologist) from Malren Geo (Pty) Ltd.

The visit was required for the purposes of inspection, ground truthing, procedural review and information data collection and collation. The condition of the general Property and Project access were observed, and the location of some older and more recent drill hole collars (Z05, Z017, Z018, Z021 and Z022) were verified (Figure 2-1 and Figure 2-2). Mineralized drill core intersections were reviewed and verified. Logging and sampling procedures were also checked and validated.

Outcrop is scarce on the Property, so no surface grab samples of target mineralization or lithologies were collected. After the existing drill core logs and assay results were verified against drill core observations, the Author’s did not think it was necessary to re-sample the drill core. Photographs taken during the site visit are provided within the body of the Report, as well as in Appendix 3.

Figure 2-1: Collar check on drill hole Z018 taken during the site visit in early December 2020.

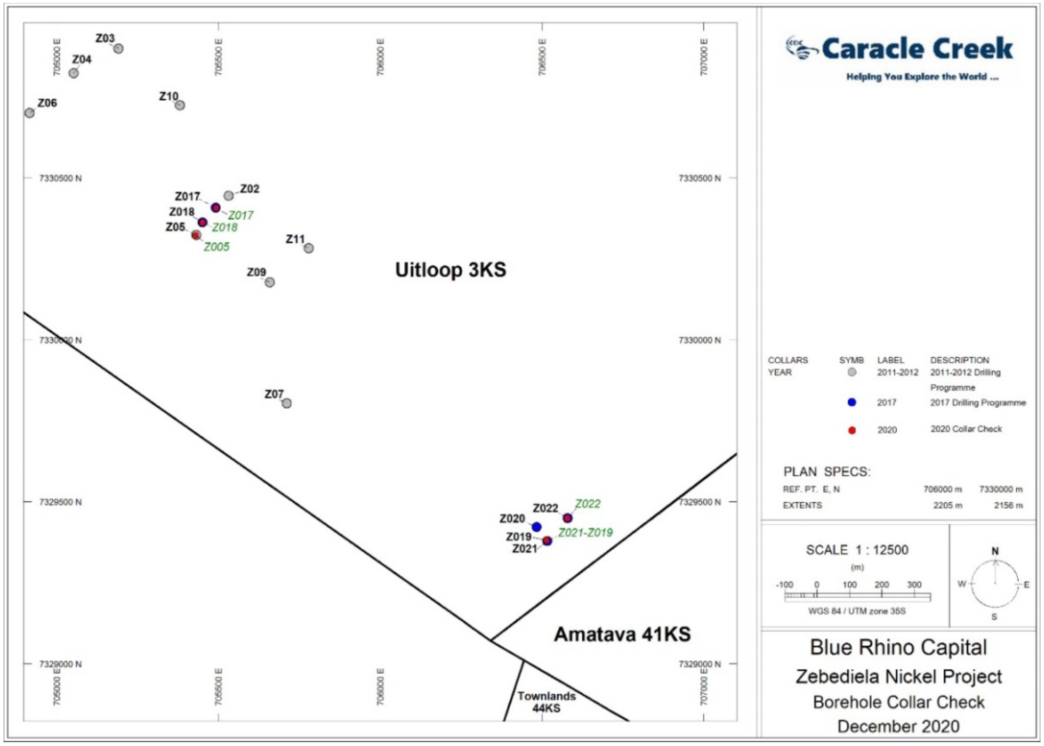


Figure 2-2: Plan map showing the positions of the collars checked during the personal inspection (site visit), December 2020.

2.4 Sources of Information

Standard professional review procedures were used by the Authors in the preparation of the Report. The Consultants reviewed data and information provided by Blue Rhino and conducted a site visit to confirm the Property, infrastructure, data and mineralization as presented.

Company personnel and associates were actively consulted post and during report preparation and during the Property site visit. Personnel from Umbono Natural Resources (Pty) Ltd were also consulted, including Mr. Richard Montjoie (Geologist), Dr. Matthew McCreesh (Project Geologist), and Mr. Innes Buurman (Project Geologist). Mr. Malesela Makhafola (CEO and Lead Geologist) with Malren Geo (Pty) Ltd (www.malrengeo.co.za) was also consulted.

The Report is based in part on internal Company technical reports, previous studies, maps, published reports, Company letters, emails and memoranda, and public information as cited throughout the Report and listed in Section 27.

General information on South Africa was accessed through the government website at: https://www.gov.za/. The mining system for South Africa was accessed online through the Department of Mineral Resources and Energy at: https://www.dmr.gov.za/.

Additional information was reviewed and acquired through public online sources including SEDAR (www.sedar.com) and various corporate websites.

2.5 Effective Date

The Effective Date of the Report is 24 February 2021.

2.6 Units of Measure

All units in the Report are based on the International System of Units ("SI Units"), except for units that are industry standards, such as troy ounces for the mass of precious metals. Additional information and definitions for SI Units can be found at https://www.nist.gov/pml/weights-and-measures/metric-si/si-units. Table 2-1 provides a list of commonly used terms and abbreviations.

Unless specified otherwise, the currency used is United States Dollars ("US$") and coordinates are given in World Geodetic System 84 (“WGS84”), UTM Zone 35S.

Table 2-1: Commonly used terms and abbreviations in the Report.

Units of Measure		**Initialisms**	
above mean sea level	AMSL	2E	Platinum+Palladium
centimetre	cm	3E	Platium+Palladium+Gold
gram	g	AA	Atomic Absorption
gram per tonne	g/t	AIM	Alternative Investment Market
greater than	>	APGO	Association Professional Geoscientists of Ontario
hectare	ha	BEE	Black Economic Empowerment
hour	hr	BIC	Bushveld Igneous Complex
inch	in	CIM	Canadian Institute of Mining
kilo (thousand)	K	CRM	Certified Reference Material
kilogram	kg	DDH	Diamond Drill Hole
kilometre	km	DFS	Definitive Feasibility Study
less than	<	DMR	Department of Mineral Resources
litre	L	DTM	Digital Terrain Model
megawatt	Mw	EM	Electromagnetic
metre	m	EOH	End of Hole
millisecond	ms	FA	Fire Assay
millimetre	mm	ICP	Inductively Coupled Plasma
million	M	Int.	Interval
million years ago	Ma	LDL	Lower Detection Limit
nanotesla	nT	LOM	Life of Mine
ounce	oz	LLD	Lower Limit of Detection
parts per million	ppm	LOI	Letter of Intent
parts per billion	ppb	MAG	Magnetics or Magnetometer
percent	%	MR	Mining Right
pound	lb	Moz	Million Ounces
short ton (2,000 lb)	st	Mt	Million tonnes
specific gravity	SG	Mtpa	Million tonnes per annum
square kilometre	km2	NAD83	North American Datum 83
square metre	m2	NI 43-101	National Instrument 43-101
three-dimensional	3D	NSR	Net Smelter Return Royalty
tonne (1,000 kg) (metric tonne)	t	OK	Ordinary Kriging
United States Dollar	USD	PEA	Preliminary Economic Assessment
South African Currency	ZAR	PFS	Pre-Feasibility Study
		PGE	Platinum Group Element
		PGM	Platinum Group Metals
		pop.	Population
Elements		PR	Prospecting Right
copper	Cu	QA/QC	Quality Assurance / Quality Control
gold	Au	QP	Qualified Person
chalcopyrite	cpy	RLS	Rustenburg Layered Suite
pyrite	py	ROM	Run of Mine
platinum	Pt	SG	Specific Gravity
palladium	Pd	SI	International System of Units
rhodium	Rh	tpa	tonnes per annum
sulphur	S	TSX-V	Toronto Venture Stock Exchange
		UTM	Universal Transverse Mercator
		WGS84	World Geodetic System 84

3.0 RELIANCE ON OTHER EXPERTS

The Principal Author expresses no legal opinion as to the land tenure title or ownership of the Property, other than to comment on the status of the mining lands that comprise the Property as provided by the Company and available on the government website. The Principal Author has reviewed and is relying on the Independent Title Opinion prepared by an independent legal counsel on behalf of Blue Rhino.

4.0 PROPERTY DESCRIPTION AND LOCATION

The Zebediela Project is located in the Mogalakwena Local, and Waterberg District Municipalities of the Limpopo Province of South Africa, approximately 7 km north of the mining town of Mokopane and approximately 250 km north-northeast of Johannesburg (Figure 4-1). The Project area can be accessed from Johannesburg using the N1 highway to Mokopane and then utilising a short unpaved road to the Project area. A summary of the land tenure for the Project is provided in Appendix 4.

The Zebediela Nickel Project area (Figure 4-2) is centred at approximately 24°06’43.64”S (latitude) and 29°02’09.34”E (longitude).

Figure 4-1: Regional map showing the location of the Zebediela Project, South Africa.

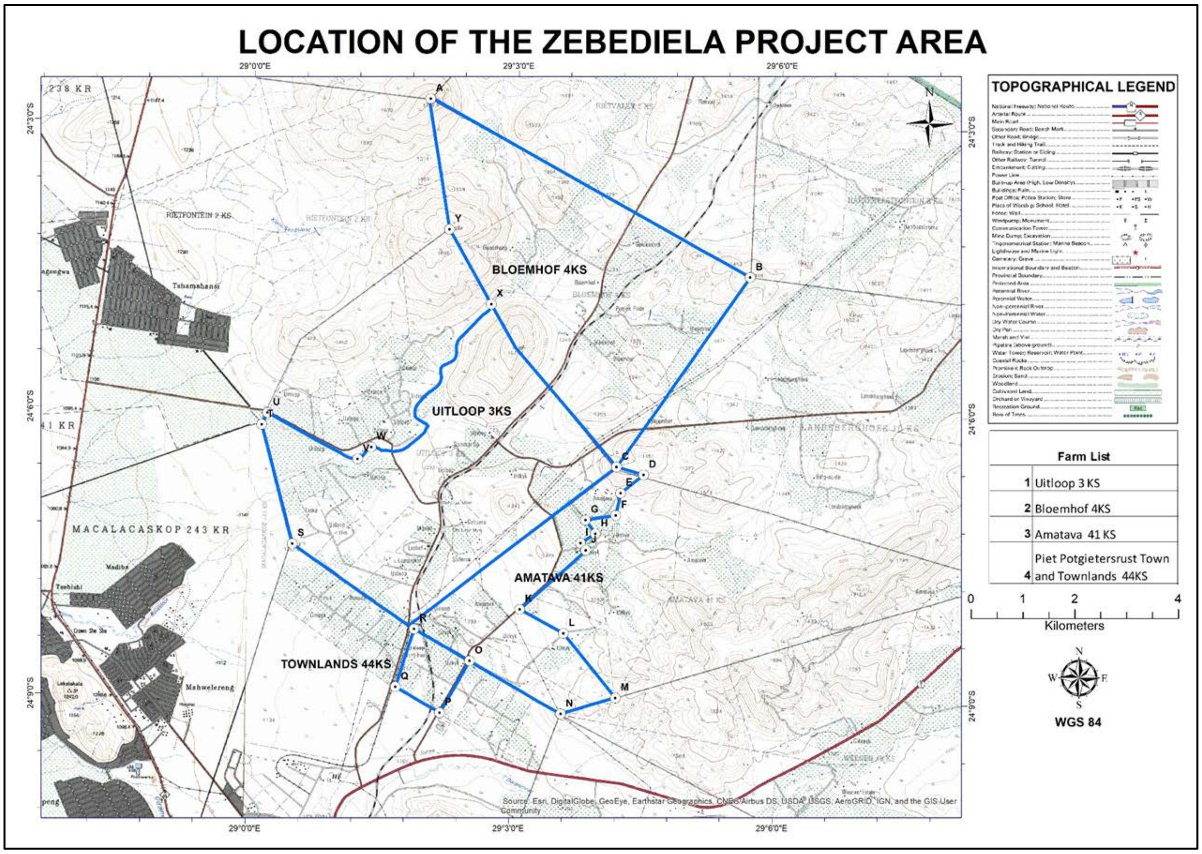


Figure 4-2: Map showing the Farm boundaries (blue) of the properties that comprise the Zebediela Nickel Project area.

4.1 Qualifying Transaction

The Report is to be used by the Issuer (Blue Rhino) in support of its Qualifying Transaction (QT) with URU Metals Ltd., whereby Blue Rhino will issue approximately 80% of its issued and outstanding shares to URU Metals Ltd. in exchange for the Zebediela Property. The pre-money valuation of the Zebediela Nickel Sulphide Property is set at approximately C$10M.

Following the QT, the resulting issuer will retain ownership of the Project and become operator. The agreement between Blue Rhino and URU Metals will see the consideration under the agreement and any underlying agreements, be the obligation of the Issuer.

4.2 Project Ownership and Corporate Structure

The corporate structure around the Property Mining Rights and the Issuer Blue Rhino is multi-layered. Flowcharts outlining the corporate structure and ownerships are provided in Appendix 1.

The Mining Right Application is held 100% by Lesego Platinum Uitloop (Pty) Ltd which is held 90% by Unmex Minerals Limpopo (Pty) Ltd, 5% by ESOP and 5% by Uitloop Communities NPC, the latter two being Black Economic Empowerment (“BEE”) entities. Umnex Minerals Limpopo (Pty) Ltd is held 74% by URU Limited (through Zebediela Nickel Company (Pty) Ltd.), 16.3% by Umbono Minerals Investment (Pty) Ltd, and 9.7% by Million 2 One Sure Invest (Pty) Ltd, the latter two being BEE entities.

The Issuer, Blue Rhino, holds 100% in Zebediela Nickel Company (Pty) Ltd who in turn holds 74% in Umnex Minerals Limpopo (Pty) Ltd, the 90% owner of Lesego Platinum Uitloop (Pty) Ltd, who hold 100% of the Mining Right Application. Blue Rhino itself is held by URU Metals Ltd (80%), Boothbay (3%), and Free Float (17%).

4.3 Mineral Rights

Lesego Platinum Uitloop (Pty) Ltd ("Lesego") has applied for the Mining Right over all three Prospecting Areas on the farms Uitloop 3 KS, Amatava 41 KS and Bloemhof 4 KS, and Piet Potgietersrus Town and Townlands 44 KS (*see* Figure 4-2 and Figure 4-3). Together, these Prospecting Areas comprise the Zebediela Nickel Project.

As the Mining Right Application has been accepted by the DMRE on all three Prospecting Areas, the tenure has been secured insofar as no other application for this area could be accepted by the DMRE. In terms of the MPRDA the DMRE does not have discretion in awarding the Mining Right to Lesego, as the legislation provides that the right must be awarded if the applicant has complied with all the requirements of such application. Lesego currently awaits the processing of the Mining Right Application.

Surface rights are held by various local farmers and business people and access to the mining lands must be gained through agreements with the surface rights owners (Appendix 4).

All known mineralization, economic or potentially economic that is the focus of the Report and that of Blue Rhino, is located within the boundary of the three Prospecting Areas (and MR application) that comprise the Zebediela Nickel Project.

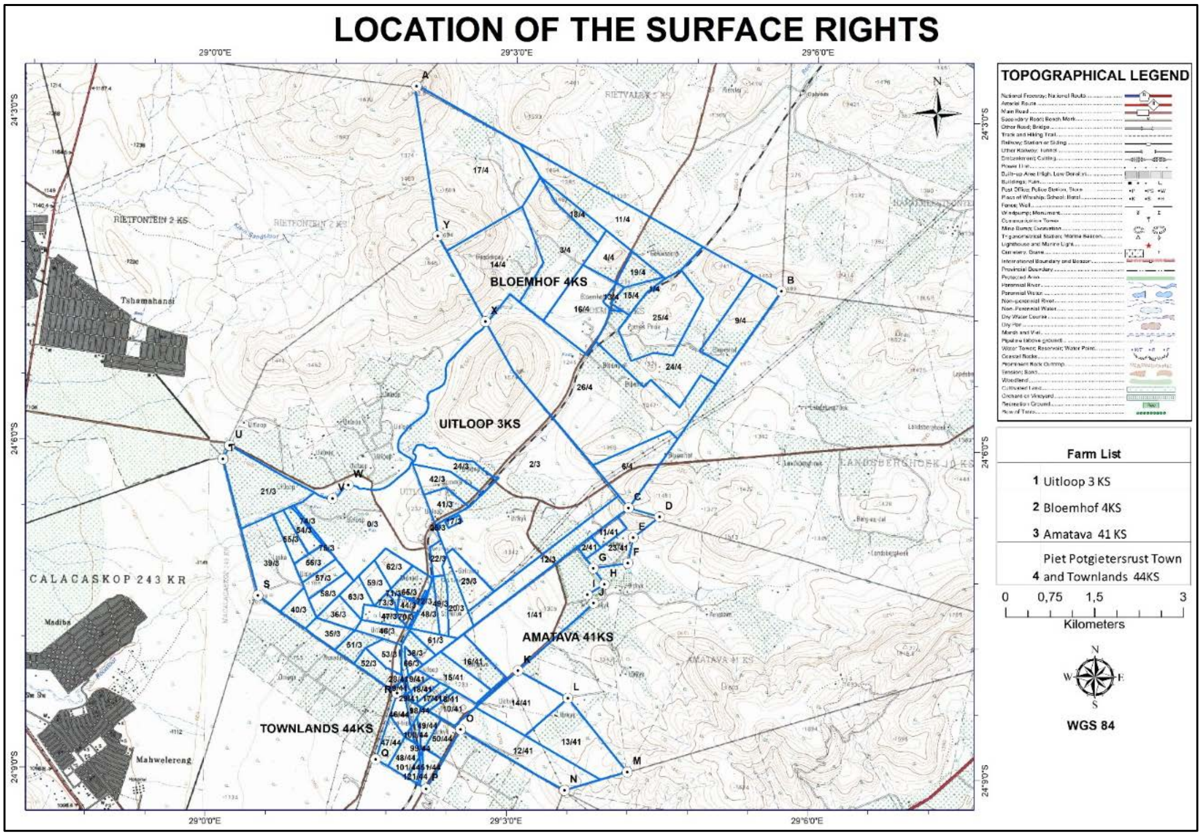


Figure 4-3: Land Tenure map showing various portions of the rights of the Zebediela Nickel Project's Mineral Tenure, Permitting, Rights and Agreements (outlined in blue).

4.3.1 Mining Right Application

A Mining Right application was submitted to the DMRE on 26 July 2019 (reference number LP30/5/1/2/2/10174MR) and the application was accepted on 21 August 2019. The tenure of this area is secured by the acceptance of the Mining Right Application (Table 4-1).

Table 4-1: Prospecting Rights that are consolidated in the Mining Right information, Zebediela Nickel Project.

FARM NAME	MINERALS UNDER MINING RIGHT APPLICATION	DATE OF ISSUE	EXPIRY DATE	PROSPECTING RIGHT LICENCE NUMBERS (DMR)	AREA (ha)
Various portions of the farm Uitloop 3 KS	Chrome, Cobalt, Copper, Gold, Iron, Nickel, Platinum Group Metals and Vanadium	3rd December 2018	2nd December 2021	LP30/5/1/1/2/148 PR	1,925.3
Various portions of the farms Amatava 41 KS and Bloemhof 4 KS		16th April 2008	15th April 2013	LP30/5/1/1/2/1074 PR	2,260.3
Various portions of the farm Piet Potgietersrust Town and Townlands 44 KS		1st April 2009	31st March 2014	LP30/5/1/1/2/1787 PR	115.3

4.4 Property and Title in South Africa

South Africa's exploration and mining industry is governed by the Mineral and Petroleum Resource Development Act of 2002 ("MPRDA"). The MPRDA defines the State's legislation on mineral rights and mineral transactions in South Africa, and all operations at the Zebediela Nickel Project are subject to the Act.

The MPRDA entrenches a "use it and keep it" principle. In the Act, the State has re-affirmed its commitment to guaranteeing security of tenure in respect of prospecting and mining operations.

The Act does not, however, allow for the hoarding of mineral rights to the exclusion of new entrants to the minerals industry. A further objective of the Act is the pursuance of the government's policy of furthering Black Economic Empowerment (BEE) within South Africa's minerals industry, by encouraging mineral exploration and mining companies to enter into equity partnerships with BEE companies. The Act also makes provision for the implementation of social responsibility procedures and programs by resource companies.

The MPRDA now vests all mineral rights in the Nation, with the State as the guardian. The South African Department of Mineral Resources and Energy ("DMRE"), previously part of the Department of Minerals and Energy ("DME"), has sole regulatory control with regards to issuing of mining and prospecting licences and permits, their monitoring, enforcement and closure.

The fundamental principles of the MPRDA are that:

- Mineral resources are non-renewable;
- Mineral resources belong to the Nation and the State is the custodian;
- Protection of the environment for present and future generations to ensure sustainable development of the resources by promoting economic and social development;
- Promotion of local and rural development of communities affected by mining;
- Reformation of the industry to bring about equitable access to the resources and eradicating discriminatory practices; and
- Guaranteed security of tenure.

Section 5(4) of the MPRDA states that any proponent may not mine any mineral or "commence with any work incidental thereto on any area" without:

- An approved and executed Mineral Right;
- An approved Environmental Management Plan ("EMP"); and
- Notifying and consulting with the landowners or lawful occupiers of the land in question.

Section 3(2) of the MPRDA further notes that the State, as the custodian of these resources for the benefit of all people, may determine and levy a fee or consideration payable in respect of these resources. This enabled the South African National Treasury and the DMRE to initiate the development legislation to impose royalties on the extraction of the country's mineral resources. The process culminated in the enactment in November of 2008 of the Mineral and Petroleum Resources Royalty Act (28/2008) ("MPRRA" or "Royalty Act").

Trade in a Mining Right or a Prospecting Right, including sales, leases, security pledges and any other transfers of rights or interests in mining or prospecting rights, is subject to DMRE approval.

4.4.1 Prospecting Right

A Prospecting Right ("PR") is a permit which allows an individual or company to survey or investigate an area of land for the purpose of identifying an actual or probable mineral deposit. A PR is usually valid for five years and may be renewed once for an additional three years. The holding of a PR grants exclusivity to the holder in regard to an application for a Mining Right.

4.4.2 Mining Right

A Mining Right ("MR") entitles the holder to the exclusive right to mine for prescribed minerals over a prescribed area of land. A MR may be granted for an initial period of up to 30 years and may be renewed. The holder of a MR must:

- lodge such a right for registration at the MPTRO within 60 days after the right has become effective;
- commence with mining operations within one year from the date on which the mining right becomes effective;
- actively conduct mining operations in accordance with the mining work program;
- comply with the terms and conditions of the mining right, relevant provisions of the MPRDA and any other relevant law;
- comply with the conditions of the environmental authorisation;
- comply with the requirements of the prescribed social and labour plan;
- pay royalties to the state; and
- submit the prescribed annual report, detailing the extent of the holders' compliance with the Mining Charter 2010 and the social and labour plan.

4.5 Exploration Approvals

Land access agreements are signed with land owners on a case by case basis in order to gain access for prospecting activities. Land owners are fairly compensated for access and any disturbances. Prospecting activities are in line with the prospecting work program submitted to the DMRE as part of the Prospecting Right application and renewal application. All activities are conducted in line with the approved Environmental Management Program ("EMP") and annual prospecting reports and environmental compliance reports are submitted to the DMRE.

4.6 Royalties, Agreements and Encumbrances

URU Metals Ltd. has entered into various royalty agreements in terms of which there is a 2.5% cumulative revenue royalty payable to the URU, and Umnex Mineral Holdings Proprietary Limited from the revenue generated from the Project (the "Royalty"). URU Metals Ltd. has the right to buy back 1.0% of the Royalty from the holder within 24 months of the granting of the Mining Right over the Project.

4.6.1 The Royalty Act

The Royalty Act affects all parties, who hold a prospecting, mining, or production right, and as such are covered here for the impact they may have on rights and material agreements as held for the Zebediela Nickel Project.

A mineral royalty is an instrument that provides the owners of mineral resources (in South Africa, this is the Nation with the State as custodian) with compensation for the depletion of their non-renewable resources by a mining company. As of 1 March 2010, all companies are subject to a royalty, prescribed by the Royalty Act of 2008 (Act No.28/2008). A full copy of the Royalty Act may be downloaded from www.gov.za/documents/download.php?f=92824.

Royalty payments are calculated as a percentage of gross sales, Earnings before interest and taxes (“EBIT”), and whether the mineral is refined or unrefined. A royalty will be payable to the South African Government on production; this will be determined on whether the mined product will be classified as either a refined (capped at 5%), or unrefined (capped at 7%) material.

The main aspect of the Act that affects exploration is that as of 1 March 2010, the Act will impose a royalty on all transfers of mineral resources. A transfer, which is the event that triggers the royalty, includes the sale, export, consumption, theft, destruction, or loss of mineral resources.

4.7 Environmental Liabilities and Studies

At the exploration stage, the Government of South Africa does not require any extensive studies related to the environment (*i.e.*, Environmental Impact Assessment) which are required for more advanced stage projects planning for a mining operation.

In terms of the MPRDA (Act No. 28 of 2002), all mineral exploration activities, as per the approved Prospecting Works Program, are to be conducted in accordance with the provisions provided for in the approved Environmental Management Plan, which forms part of the New Order Prospecting Right. Environmental liabilities associated with the mineral exploration activities conducted to date are limited to the agreed upon environmental rehabilitation activities within this approved EMP.

4.8 Other Significant Factors and Risks

The significant infrastructural and tenure risks identified include:

- securing an adequate long-term bulk water supply;
- the availability of a suitable long-term power supply;
- potential noise, dust pollution, vibration, and water contamination as a result of any mining activities; and
- access to privately held surface rights.

Any future studies into the viability of the Zebediela Project would need to identify and confirm the extent of these risks and the associated potential risk mitigation.

Land claims by communities forcibly removed from their land after 1914 have been lodged with a government commission over many regions of South Africa and all such South African land claims are to be reviewed by a governmental entity.

Caracle is not aware of any other significant factors and risks which may affect access, title, or the right and ability to perform the proposed work program (*see* Section 26) on the Property.

4.9 Community Consultation

There are several villages adjacent to the area of the Project. A database of Interested and Affected Parties (“IAP”s) has been established and consultation with the IAPs is ongoing, and as of the time of writing, no objections to the Project proceeding have been raised.

5.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

5.1 Accessibility

The Zebediela Nickel Project is located about 250 km north-northeast of Johannesburg. Year-round access to the Project area is by paved, all-weather National freeway (N1), from Johannesburg to Mokopane (formerly Potgietersrus), and regional tarred roads to the site, from which several unpaved (sand) roads lead to the various drill sites.

The Zebediela Project is located in a well-established mining district. The main electrified railway line from Gauteng to Beit Bridge via Mokopane and Polokwane runs through the Project area. Both Polokwane (Pietersburg Civil Aerodrome) and Mokopane (Rudolf Hiemstra Aerodrome) have airstrips that which may be used for private flights. Polokwane (formerly Pietersburg), about 30 km north of Mokopane, has an International Airport (IATA: PTG, ICAO: FAPP), which opened in 1996 on the site of a former air force base and is located 5 km north of the city. The airport has daily scheduled flights to Johannesburg.

5.2 Climate

Mokopane normally receives about 470 mm of rain per annum, with the majority of this rainfall falling during the mid-summer months (November – February; Figure 5-1). The area receives the lowest rainfall, 0 mm, in June and the highest, 100 mm, in January. Average midday temperatures range from 20°C in June to 28°C in January (Figure 5-2).

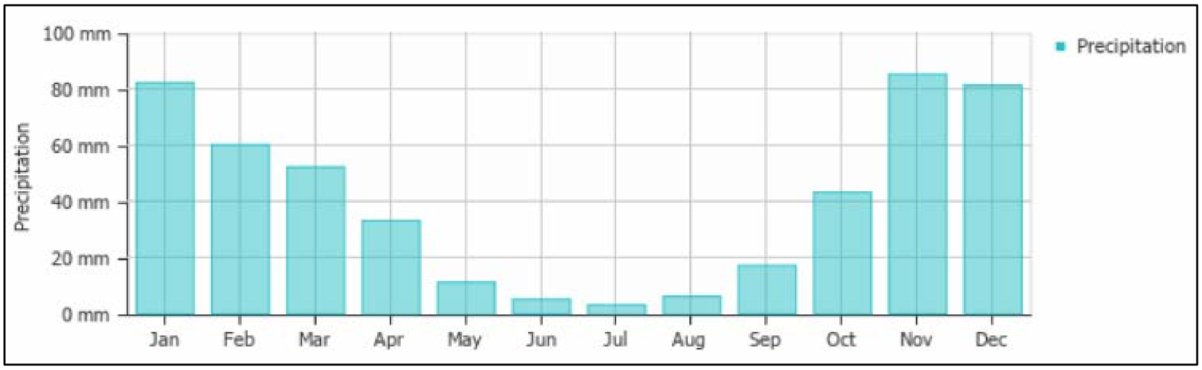


Figure 5-1: Precipitation chart for Polokwane (source: https://weather-and-climate.com/).

The nearest weather station is in Polokwane, some 50 km to the northeast. The dominant wind direction is from the northwest.

The presence of generally favourable climatic conditions should enable the proposed Project to operate year-round although some time during open pit operations may be lost to thunderstorm activity.

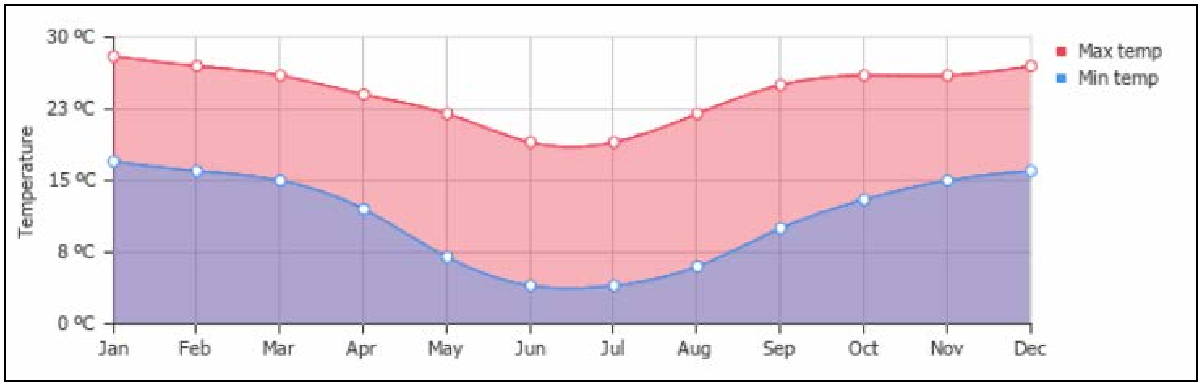


Figure 5-2: Temperate chart for Polokwane (source: https://weather-and-climate.com/).

5.3 Local Resources and Infrastructure

Mokopane is a well-developed mining town offering a variety of technical and professional services, including mining-related services. These may be augmented by services supplied from Gauteng.

The larger area is serviced with electricity provided through the national grid (Eskom).

5.3.1 Water Availability

Water supply in the area is limited and further investigation is required to identify and secure possible bulk water sources. Good groundwater seems to exist in the area, with initial indications suggesting that there could be enough groundwater to meet the requirements of the proposed mining operation, using a water trading model to purchase or utilise existing water rights. The surrounding farming community rely on the groundwater in the area as a sole source of water supply.

5.4 Physiography

The larger area in which the Zebediela Project is located is well drained by various small non-perennial drainage lines. There is a small non-perennial drainage line, the Rooisloot River, which runs along the northwest boundary of the prospecting area, draining to the southwest.

The vegetation type is generally dominated by mixed bushveld, found on undulating to flat plains and varies from a dense, short bushveld to a rather open tree savannah covering the greater part of Limpopo Province (Figure 5-1).

Figure 5-1: Flats on Uitloop 3KS in the area of the proposed open pit with the Uitloop I hill in the background.

5.4.1 Topography

The Zebediela Project area is located at an altitude of approximately 1,165 m above mean sea level ("AMSL"). The historical exploration activities focused on the southern portion of the Project, which is situated approximately 1,180 m AMSL (Figure 5-4) on relatively flat plain of mixed bushveld vegetation and cultivated land. Future exploration may target areas of the northern portion of the PR, where the Property is hilly with a maximum height of 1,646 m AMSL.

5.5 Sufficiency of Potential Surface Rights

Although an early stage project, there is sufficient suitable land area available within the PR (MR) licences for any future tailings disposal, mine waste disposal, and installations such as a concentrator and related mine infrastructure.

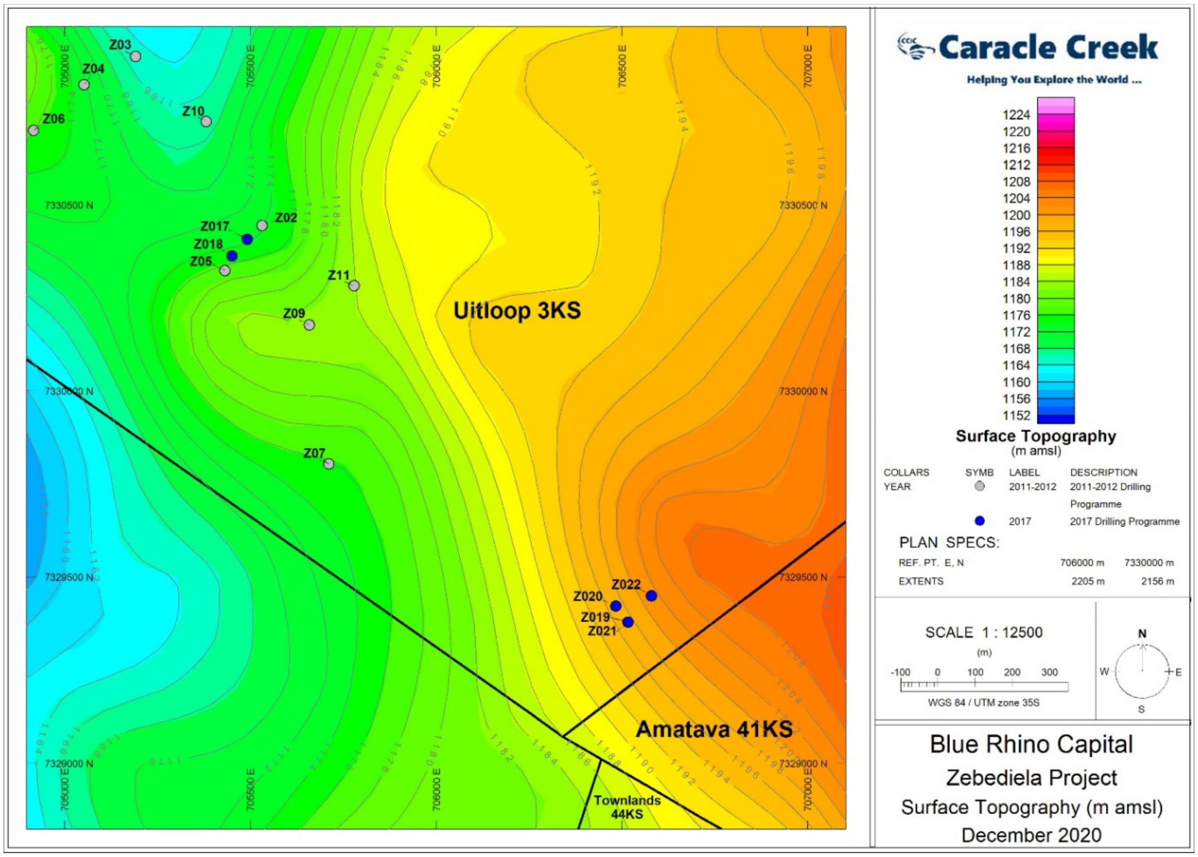


Figure 5-4: Surface topography of the Zebediela Project area showing the positions of the Z-series drill holes.

6.0 HISTORY

This section details the historical work undertaken within the Project area. Both the Lower Zone sulphide bodies (Uitloop I and II) on the farms Uitloop 3 KS and Bloemhof 4KS, as well as the Platreef style mineralization, have been the focus of several exploration programs as described in the following sections. Historical exploration work within and immediate to the current tenements dates to the 1960s, with modern exploration starting in the late 1990s.

6.1 Rand Mines (1967-1971)

Rand Mines conducted a nickel and copper soil sampling program over portions of the farm Uitloop 3 KS between 1967 and 1971, however, this data and results are not available (*e.g.*, Lowman, 2007). It was reported that a reconnaissance ground magnetic survey was also undertaken during this time. In 1968, Dr. A. Zietsman of Rand Mines compiled a detailed geological report discussing the economic potential of the prospecting area. In this report, he reportedly described two slightly nickeliferous gossans in the south-western portion of the farm Uitloop 3 KS.

Rand Mines commissioned an Induced Polarisation ("IP") survey over portions of the Uitloop 3 KS in 1972. The data and associated maps of this work are not available, however, a report on the findings was located during the desktop study. Four target horizons located within the Bushveld Igneous Complex ("BIC") lithologies were identified, with a further target horizon located in the Malmani Subgroup dolomites of the Transvaal Supergroup.

6.1.1 Diamond Drilling Program

In 1972, a drilling program on the IP survey defined target was conducted. The program (UL-series holes; Figure 6-1, Figure 6-2 and Table 6-1) originally consisted of seven diamond drill holes, with an additional seven holes drilled on geologically and geochemically defined targets. An additional drilling program of six boreholes was recommended to further test the soil geochemical anomalies. This program was never implemented, and Rand Mines reportedly did not undertake any further work on the Property.

Only the boreholes positioned on the Cu and Ni soil anomalies returned PGE (Pt+Pd=2PGE), Cu and Ni concentrations, with borehole UL8 returning a continuous mineralized zone of 6 m grading at 2.1 g/t PGE+Au, with a peak nickel value of 2.05% Ni (Table 6-1).

A recurring problem of the Rand Mines drilling program was the significant core loss in the upper 30 m of drill core for almost all the boreholes. Further evaluation of this data was also hampered by inconsistencies in the sampling of the core as Rand Mines only sampled isolated areas of the core where there was visible sulphide development. These samples were only assayed for Ni and in some cases Cu. If interesting results were obtained further analysis for PGE+Au was undertaken. This resulted in the majority of the cores not being assayed at all. It is now industry practice to assay all Platreef core continuously, as PGM rich sulphides are often very finely disseminated and can be potentially overlooked.

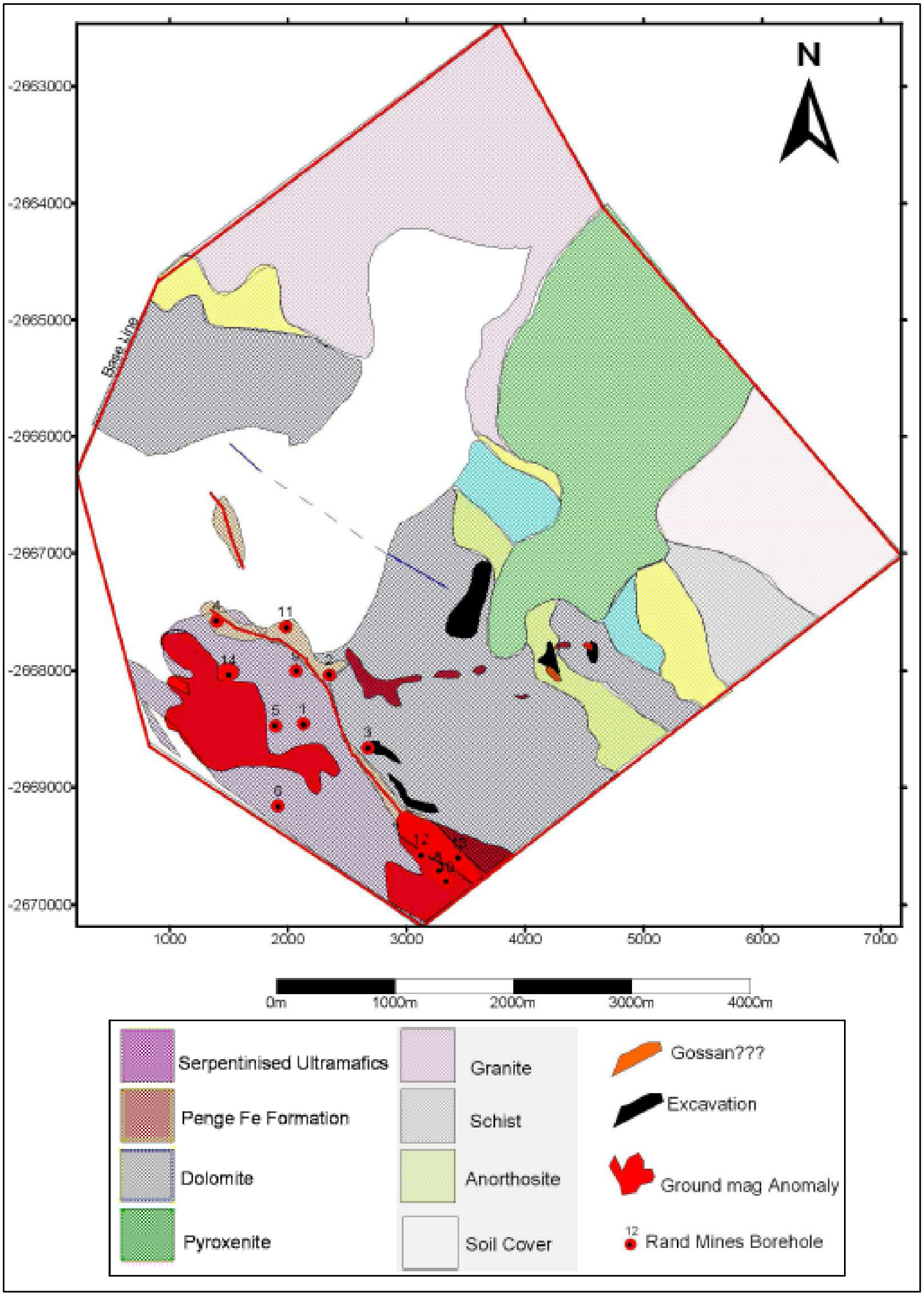


Figure 6-1: General geology of the Uitloop 3 KS property and location of UL series boreholes (Lowman, 2007).

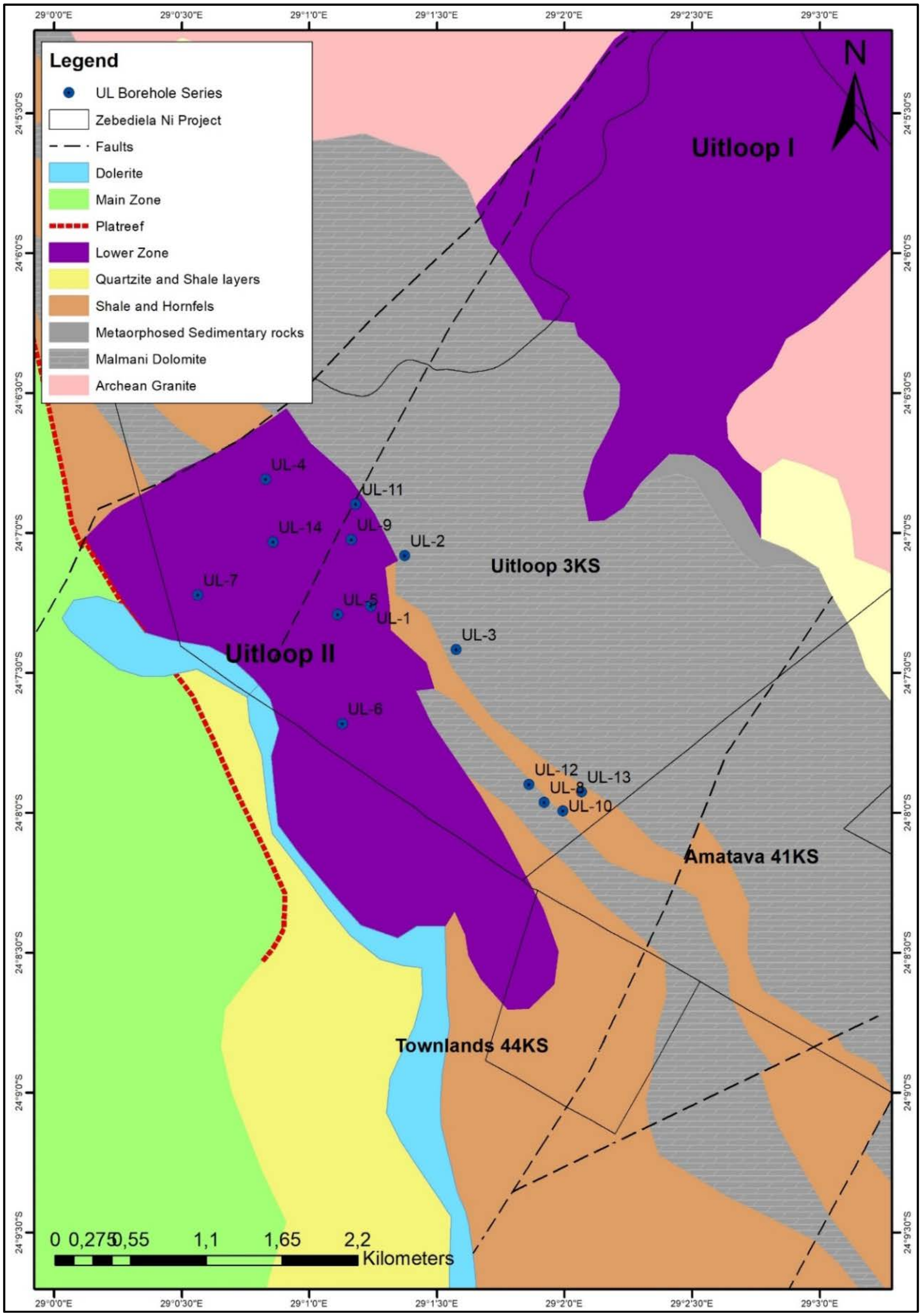


Figure 6-2: The location of the historical Rand Mines UL borehole series shown on the geological map (source map modified from van der Merwe, 1978).

Table 6-1: Rand Mines drilling results from 1972 drilling program and UL series boreholes.

BHID	EOH	CORE LOSS (Surface m)	SAMPLING	PGE+AU (g/t/cm)	Cu (%/cm)	Ni (%/cm)
UL1	90.95	16	5 isolated samples			0.22/13
UL2	76.25	6	not sampled			
UL3		6	3 isolated samples			0.05/16
UL4	81.14	20.09	3 isolated samples			0.11/75
UL5	204	23.12	11 isolated samples	0.5/13	N/A	0.43/13
UL6	92	10.04	not sampled			
UL7	76.25	6.09	not sampled			
UL8	90	33.72	continuously sampled	2.11/573	0.12/573	0.39/573
UL9	92		not sampled			
UL10	101.1	18.08	continuously sampled	0.5/50	0.38/50	2.95/50
UL11	98.7	10.4	not sampled			
UL12	106.6	2.62	continuously sampled	3.32/20	0.61/20	0.92/20
UL13	106.7	24.94	isolated Ni/Cu assays			
UL14	22.9	8.2	not sampled			

There are no borehole logs or detailed assay results for the UL series boreholes with only brief descriptions (*see* below) and summary assays provided (Lowman, 2007; McCreesh *et al.,* 2019).

6.1.1.1 Drill Hole Interpretation

The following drill hole and core descriptions are from McCreesh *et al*. (2019) with summary assay results in Table 6-1.

Borehole UL1: drilled based on IP and resistivity anomalies; collared in serpentinite, at 47.46 m changed to a serpentinized gabbro to the final depth of 90.59 metres. Four approximately 1 m wide schistose gabbro zones were intersected at 36 m, 46 m, 67 m, and 76 m. These can possibly be associated with fault zones within the serpentinite mass. Mineralization was poor and as a check, only five samples at ±10 m intervals were analysed. Although the borehole was drilled as recommended by the geophysics report, the x-section shows the possibility that the borehole did not reach the indicated position and depth of the IP anomaly.

Borehole UL2: drilled to test a peak chargeability anomaly located by the IP survey work. Was thought to indicate a shallow body with limited lateral dimensions and near vertical dip with a conducting mineralization content of between 2% and 4% by volume. The hole was drilled to a depth of 76.25 m and only exposed non-mineralized slightly serpentinized dolomite with occasional chert bands. No source of the minor copper geochemical anomaly located at this position could be proved although 6 m core was lost to a depth of 18 metres.

Borehole UL3: located on an IP anomaly, according to the geophysics report, reflected a shallow zone with a near vertical dip with an indicated metallic conducting content of between 2% and 5% by volume (sulphides and/or graphite). Only non-mineralized dolomite with some shale and chert bands. A highly weathered dolerite was also intersected from 16.76 m to 19.80 metres. Core recovery was fair, and the three check samples yielded a maximum of 0.05% Ni.

Borehole UL4: tested an IP anomaly inferred to reflect a narrow linear zone with near vertical north-easterly dip. It was postulated that, because the zone may lie in the limestone (?) and thus have no nickel potential, the possibility of other base metal mineralization warranted drill testing. The borehole was drilled to 84.14 m and intersected serpentinite to a depth of 17.07 m, serpentinized gabbro to 59.05 m and gabbro with inclusions of chert and serpentinite to its final depth. Pyrrhotite mineralization was observed in the zone between 59 m to 69 m but three selected samples did not yield values higher than 0.11% Ni. A recommendation was made to deepen or duplicate this borehole in order to intersect the contact between the hybrid phase of the serpentinite mass and the dolomite host.

Borehole UL5: Aimed to test a low resistivity zone, partially correlated with the peak nickel anomaly and was suggested as a “wildcat” type of drill target. The borehole, located near the north contact of the peak nickel geochemical anomaly, was drilled to a depth of 204 metres and intersected alternating zones of serpentinite and serpentinized gabbro. Fine, disseminated pyrrhotite was intersected and 11 samples taken at ± 10 m intervals from 40 m to 140 m, were analysed. The sample at 40 m yielded the highest nickel value of 0.43% Ni. This nickel concentration could reflect the nickel geochemical anomaly on surface but because some 18.9 m of core was lost to a depth of 27.6 m, and with the weathered zone extending to 40 m, it makes it difficult to truly correlate values in the hole with the surface nickel anomaly. On the assumption that the target zone dips to the west, it was recommended that a 200 m borehole be drilled at 45 degrees to the east, positioned about 330 m west of UL5, to intersect the possible extension of the nickeliferous body at depth.

Borehole UL6: drill-tested an IP anomaly which was considered to represent an approximately 215 m wide zone with an estimated depth of burial of less than 15 metres. The various IP responses allowed for a potential 1% to 2.5% content by volume of metallic conducting minerals (*i.e.*, sulphides and/or graphite). Only non-mineralized serpentinite and serpentinized gabbro were intersected to a depth of 92 m which were not considered necessary to sample.

Borehole UL7: drill-tested an IP anomaly which was interpreted to be a highly polarisable north trending source some 245 m wide with a strike length of 550 m with a metallic conducting content by volume of 1.5% to 4% of sulphides and/or graphite. The borehole intersected non-mineralized serpentinite and gabbro to a depth of 76.25 m, the borehole also intersected a 10 m wide quartzite band (xenolith) at 40 metres. Due to the lack of sulphide mineralization it was not considered necessary to sample the borehole.

Borehole UL8: drill-tested a peak copper soil geochemical anomaly. Drilled to a depth of 90 m and exposed fairly well pyrrhotite mineralized serpentinite and serpentinized gabbro. Mineralization was mainly in the form of disseminated sulphides but some massive sulphides were also observed. Unfortunately, 28.2 m of core was lost to a depth of 31.5 m which meant that nickel concentrations from the weathered zone could not be correlated with the soil geochemical anomaly at surface. A drill hole was recommended to be placed to the west of UL8 to probe the weathered zone (indicating the copper anomaly).

Borehole UL9: drill-tested the outcrops of chromite rubble mapped in this area. It was drilled to a depth of 92 m and intersected non-mineralized serpentinite and gabbro. None of the core was sampled.

Borehole UL10: drilled to the east of UL8 to test the same large copper soil geochemical anomaly. The borehole intersected weathered serpentinite to a depth of 29 m (with 18 m of core-loss), serpentinized gabbro to 86 m, and gabbro to the final depth of 101.1 metres. Mineralization was mainly fine disseminated sulphides with a few more massive sulphide zones (pyrrhotite with fine-grained chalcopyrite). The highest assay value was 2.95% Ni and 0.38% Cu, hosted in gabbro at a depth of 88 m to 91 metres. A gradual increase in nickel concentrations were observed with increasing depth and it was recommended that further drilling be done to test this zone (40 m to 90 m interval).

Borehole UL11: drill-tested an isolated copper soil geochemical anomaly. Drilled to a depth of 98.7 m, intersecting non-mineralized serpentinized gabbro with a small anorthosite seam from 30 m to 32.6 metres. Core recovery was poor, with a 9 m loss to a depth of 16 metres. No core was sampled.

Borehole UL12: drill-tested the same copper soil geochemical anomaly as at UL8 and UL10. Drilled to a depth of 106.6 m, and in contrast to the previous boreholes, an anorthosite with chert inclusions was intersected to a depth of 54 metres. A heavily brecciated zone was followed at 71.2 m by slightly serpentinized gabbro. Core was fresh from surface with only a 2.6 m loss. It was recommended to test the hybrid-dolomite contact by either deepening hole UL12 or drilling another deeper hole.

Borehole UL13: collared in the gossan northeast of UL10 and drilled to 106.7 metres. The depth of the top soil and rubble (complete core-loss) was 18.5 m and was followed by serpentinized gabbro to a depth of 50.3 metres. Beyond this, the hybrid phase, gabbro with chert and serpentine, continued to 67 m from where the borehole exposed dolomite to its final depth. Two gabbro stringers were exposed within the dolomite. This was the only borehole in the UL series that intersected the contact between the hybrid-dolomite contact. Sampling from 50 m to 93 m yielded a maximum concentration of 0.01% Ni and/or 0.01% Cu.

Borehole UL14: drilled in the centre of the circular gossan in the northwestern part of the farm. Intersected serpentinite was highly weathered with no sign of mineralization and so the hole was terminated at a depth of 22.9 metres. The peak Ni-in-soil anomaly is located just to the west of the borehole and it was recommended to drill a borehole on the same line to the west of UL14 to test the soil geochemical anomaly and the gossan to depth. Core from this borehole was not sampled.

6.2 Southern Era Resources (1998-1999)

In 1998, as part of a desktop study, Minex Projects (“Minex”) identified the potential of Uitloop 3 KS to host Platreef style mineralization and approached Southern Era Resources to develop the Project further. During the same time period, Falconbridge Ventures of Africa (“FVA”) was performing a regional airborne EM survey in the area which overlapped on to Uitloop 3 KS (*see* Section 6.3).

6.2.1 Geochemical Soil Survey

Fieldwork undertaken on behalf of Southern Era commenced in 1998 with geochemical soil sampling on a 25 m x 400 m grid (Figure 6-3 and Figure 6-4). Samples collected were assayed for acid soluble Ni and Cu. This initial work highlighted a broad, moderate to low level Cu-anomaly on the western portion of Uitloop 3 KS, with sympathies to nickel. This grid was also mapped in detail.

The southern portion of the farm displayed a very strong Cu and Ni occurrence in the vicinity of the positive UL8 borehole drilled by Rand Mines. A large area of highly anomalous Cu values in the northern area was attributed to the agricultural use of $CuSO_4$. As a prelude to drilling, a 10 m by 100 m grid was sampled over the southern area to provide a highly resolved drill target. Samples were assayed again for acid soluble Ni and Cu and produced a very well-defined sympathetic Cu and Ni anomaly.

In 1999, the exploration budget for Uitloop was cut by Southern Era and funds were diverted to the then recently acquired Messina Project, and thus no drilling was undertaken.

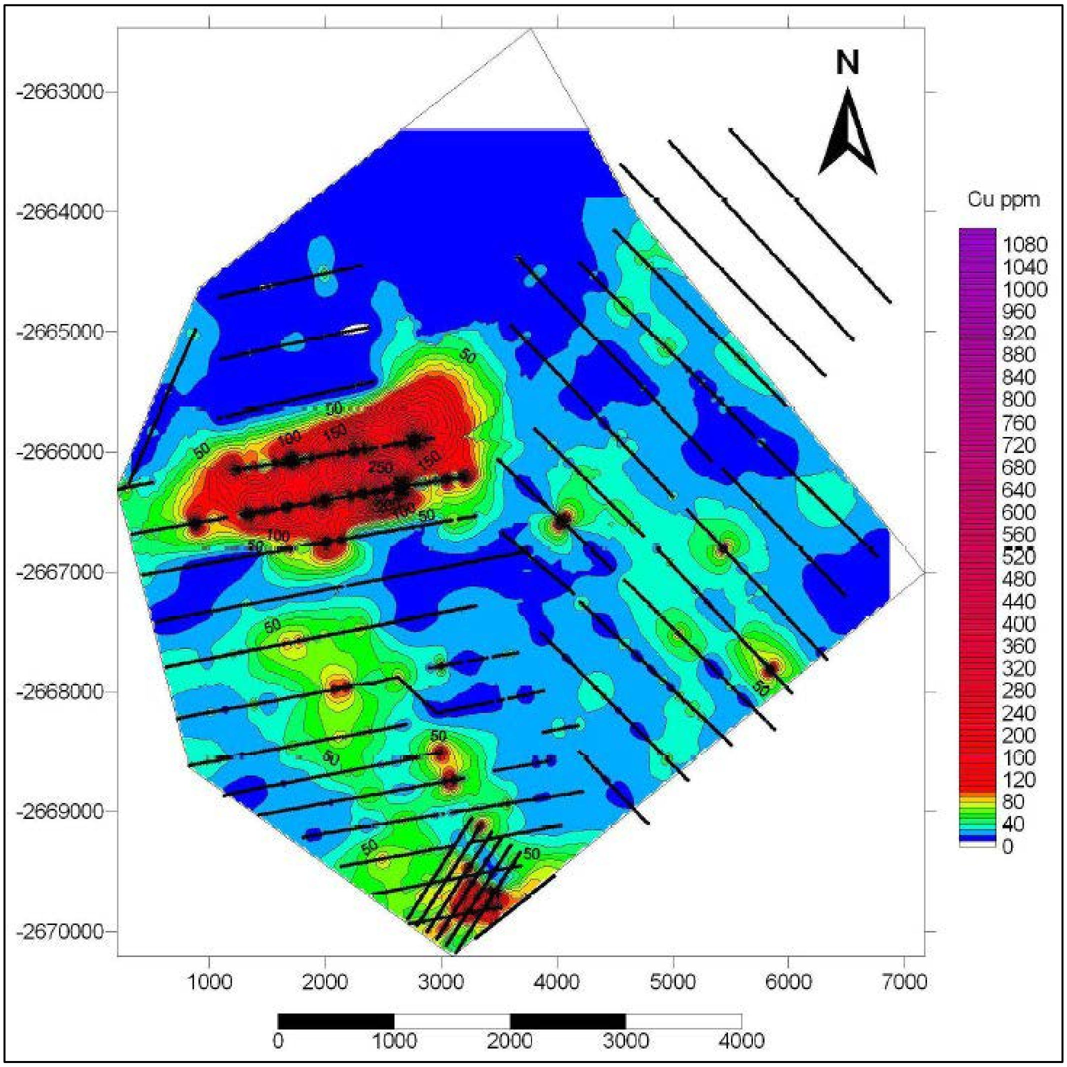


Figure 6-3: Southern Era soil geochemistry Cu results in the farm Uitloop 3 KS.

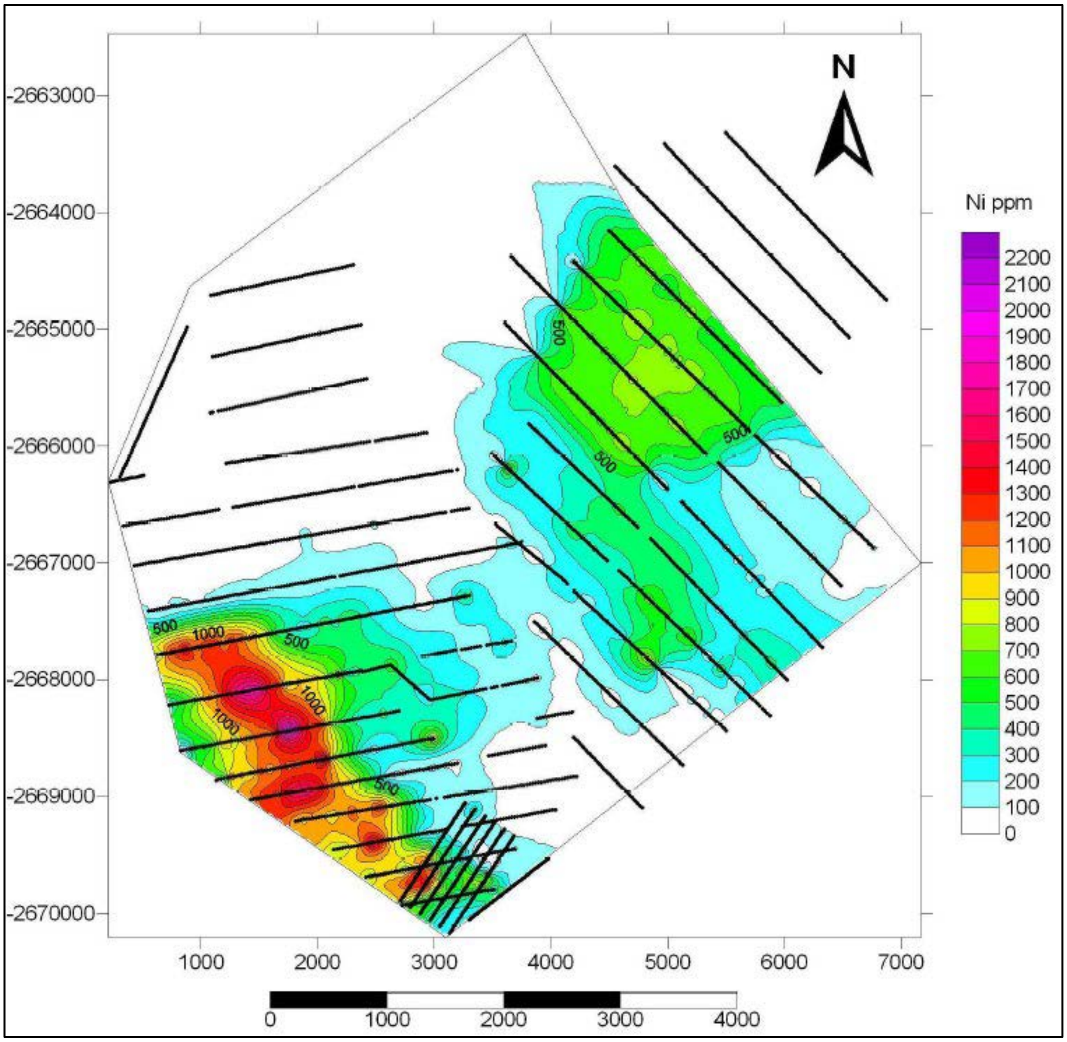


Figure 6-4: Southern Era soil geochemistry Ni results on the farm Uitloop 3 KS.

6.3 Falconbridge Ventures of Africa (1999-2001)

Starting in 1998, Falconbridge Ventures of Africa began assembling a mineral portfolio (the Lion's Den Project), targeting massive Ni-sulphide occurrences, through fixed wing airborne QUESTEM and heliborne magnetic and EM surveys. The portfolio consisted of the properties Potgietersrus Townlands and Amatava, with interest in the Uitloop 3 KS property.

In 1999, FVA entered into discussions with Southern Era regarding possible farm-in options for the Uitloop 3 KS property, and in 2000 a Joint Venture Agreement between FVA and Southern Era was formed. Work undertaken consisted of detailed field mapping of the western portion of Uitloop 3 KS and the cutting of approximately 80 km of lines for ground geophysical work. Work completed included detailed field mapping of the western portion of Uitloop 3 KS, a ground magnetic survey, and a time-domain electro-magnetic ("TDEM") survey by Spectral Geophysics (McCreesh *et al.,* 2019).

6.3.1 Airborne EM Survey

In 1999, FVA completed a regional airborne Electromagnetic ("EM") survey in the area, which overlapped onto Uitloop 3 KS (Figure 6-5). The FVA regional airborne EM results identified the potential for massive sulphide targets on the Project area. In addition, interpretation of the aeromagnetic survey suggested the western sector was structurally complex, characterised by multiple NNW-SSE faulting showing significant lateral displacements, along with younger NE-SW faults.

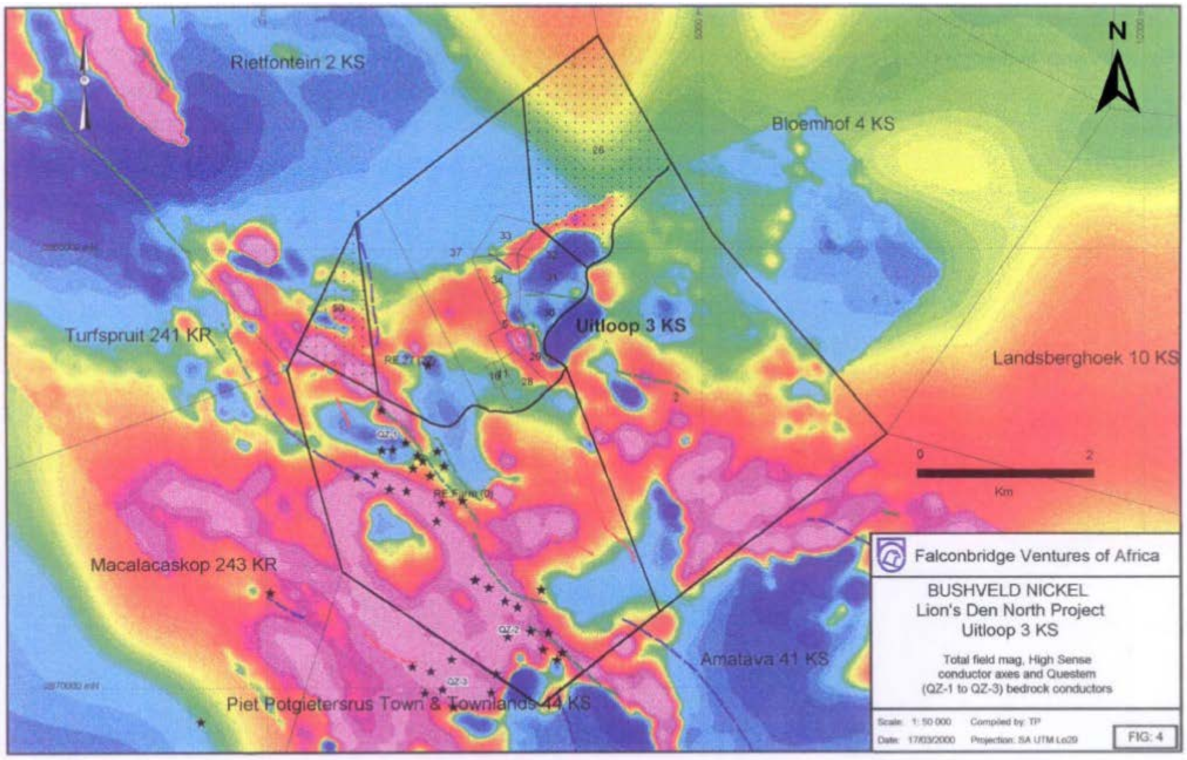


Figure 6-5: Regional airborne EM survey on Uitloop 3 KS (source: Falconbridge Ventures of Africa, 1999).

6.3.2 Diamond Drilling Program

In late 2001, MSA was contracted by FVA to undertake a diamond drilling program designed to test anomalies generated from earlier surveys and specifically targeting coincident TDEM and geochemical anomalies from the 2000 surveys (Lowman, 2007; McCreesh *et al.,* 2019). The drilling program was aimed at massive Ni sulphides and did not specifically target disseminated Platreef style mineralization (McCreesh *et al.,* 2019).

A total of five UIT series boreholes (aka "Uit") were completed, totalling 1,400 metres (Table 6-2). All boreholes except UIT1-2 were angled at -50° and at an azimuth of approximately 60Az, to coincide with the survey grid (Lowman, 2007).

Borehole collar locations are shown in Figure 6-6 and Figure 6-7, superimposed on results of geophysical surveys completed by FVA.

Table 6-2: Falconbridge Ventures of Africa 2001 drilling program, four of the five Uit series boreholes (2001).

BHID	Latitude	Longitude	Elevation (m)	Azimuth (deg)	Inclination (deg)	EOH (m)
UIT1-1	706450.000001	7329465.999996	1171	59	-50	233.44
UIT1-3	705801.000002	73330215.999999	1171	57	-50	330.89
UIT1-4	706184.999997	7329757.000002	1171	49.5	-52	244.75
UIT1-5	704961.000002	7331641.999995	1171	50	-50	277.59

Borehole Uit1-1: drilled to attempt to duplicate the Rand Mines UL8 borehole. Whilst it is believed that this borehole was sited too close to the contact and did not intersect the upper portion of the Platreef style mineralization, encouraging grades of 1.2 g/t PGE+Au, 0.41% Ni and 0.16% Cu over 8 m were encountered at a depth of approximately 90 metres.

Borehole Uit1-2: sited to collar in the Transvaal dolomites and planned to intersect a moderate sub-horizontal conductor identified from the TDEM survey. The hole intersected a highly conductive shale horizon at a depth of 109 m containing up to 10% pyrite, which was identified as the source of the anomaly. PGE+Au, Ni and Cu assays over the unit returned values below detection limits.

Borehole Uit1-3: aimed to drill test a TDEM target. The borehole intersected largely barren harzburgite before terminating in dolomite containing graphitic shale. The graphitic shale close to, or on the footwall contact of, the harzburgite were identified as the source of the TDEM anomaly. Coincidently the anomaly that borehole Uit1-3 was testing (potential massive Ni sulphide conductor), approximated the position of the Platreef, however, it is felt that the hole was sited too close to the contact (as is believed to be the case with Uit1-1) and missed the potential Platreef style mineralization. Samples of the entire core showed no encouraging PGE+Au, Cu or Ni values.

Borehole Uit1-4: drilled to close the gap between boreholes Uit1-1 and Uit1-3. The borehole intersected a mixed stratigraphy consisting of alternating limestone and pyroxenite before intersecting graphitic shales which constitute the floor rock to the BIC at 146 metres. FVA did not sample this borehole. In 2004, MSA sampled the core in its entirety and a best intersection of 0.5 g/t 3PGE+Au over 5 m was obtained at the downhole depth of 142 metres.

Borehole Uit1-5: targeted a TDEM anomaly associated with the contact between the BIC and underlying floor rocks. Again as with Uit1-3 and Uit1-4, the conductors intersected at 178 m down the hole were identified as graphitic shales which mark the immediate floor rocks. However as with Uit1-1 what is believed to be the lower portion of the Platreef Style mineralization was intersected at 130 m down the hole, grading 1.66 g/t PGE+Au over 6 m with 0.31% Ni and 0.16% Cu over the same interval.

Down-hole TDEM surveys were undertaken on holes Uit1-2 to Uit1-5. No responses were reported, except in Uit1-3 where a highly conductive response at 310 m was attributed to the graphitic shale at the floor rock contact.

FVA trenched the suspected agricultural Cu soil anomaly to the north of the farm and confirmed the original interpretation as being caused by contamination from agricultural chemicals.

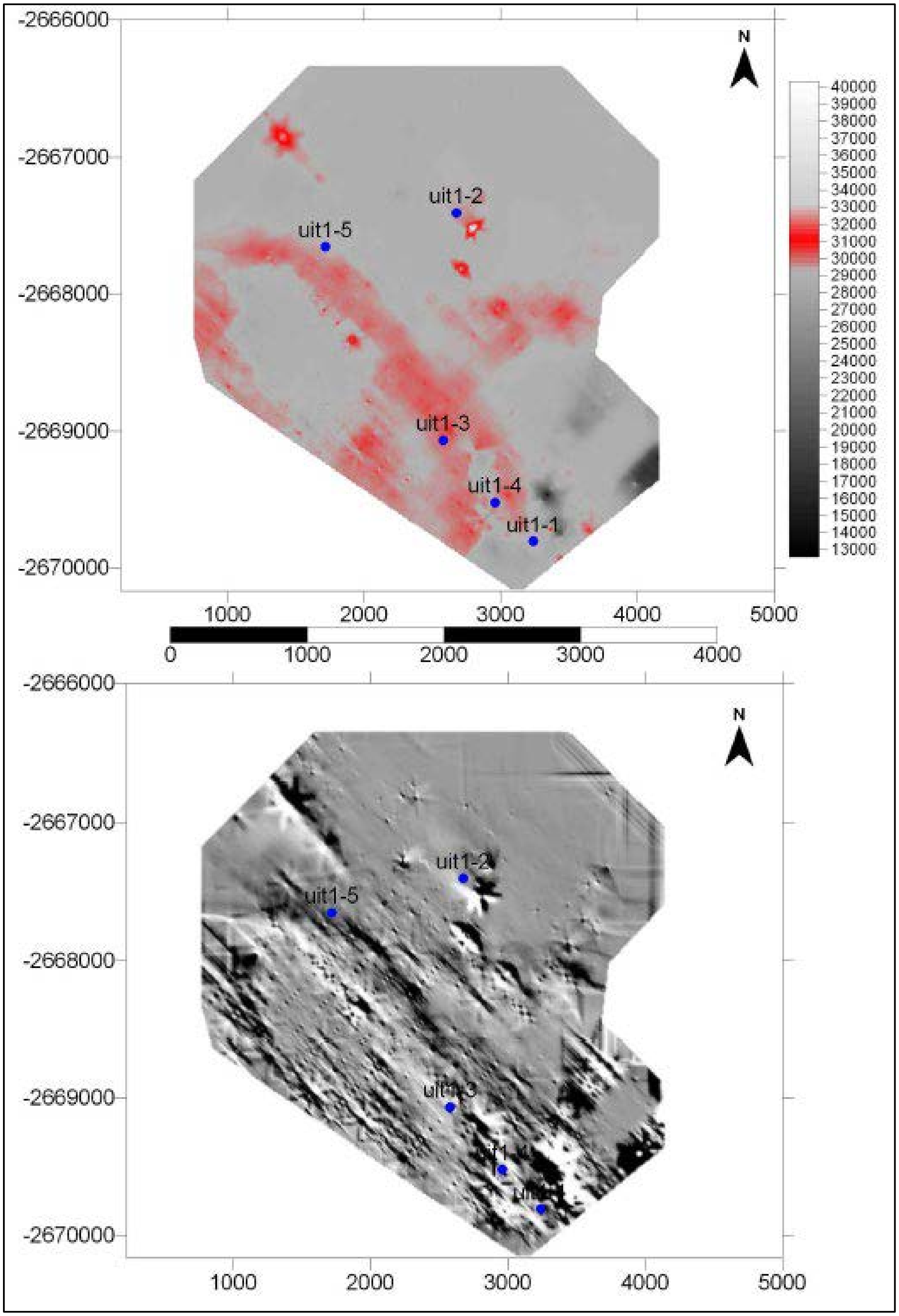


Figure 6-6: Falconbridge Ventures of Africa ground magnetics and positions of the UIT series borehole collars, labelled “uit1-x” (2001).

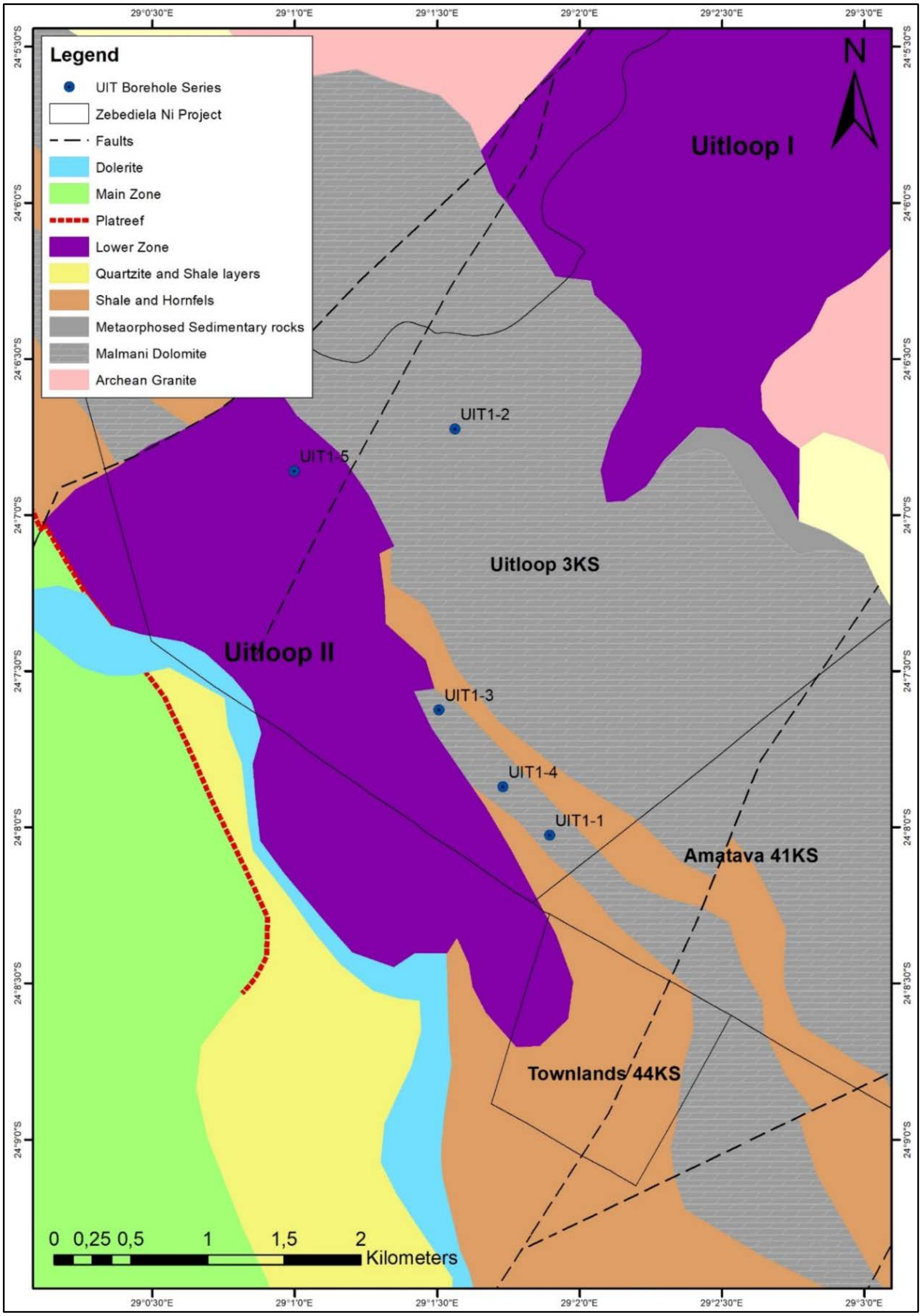


Figure 6-7: Locations of historical UIT series borehole collars (2001) superimposed on a simplified geological map (source map modified from van der Merwe, 1978).

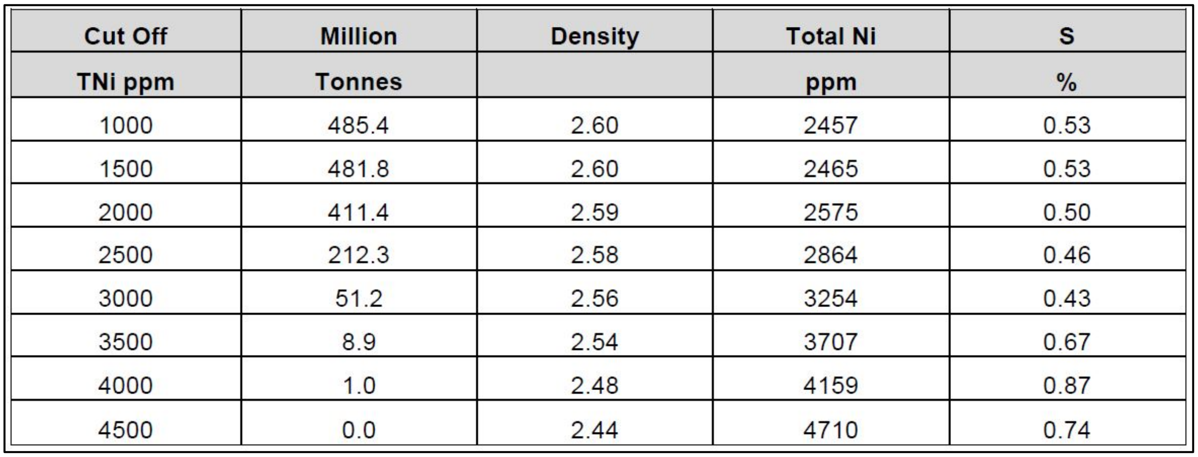
6.4 Historical Mineral Resource Estimates

The most recent mineral resource estimate on nickel mineralization in the Lower Zone Uitloop II body was completed by MSA Geoservices (Proprietary) Limited in March 2012 as part of a Preliminary Economic Assessment ("PEA") study on the Project (Croll *et al.,* 2012).

The PEA and mineral resource estimate ("MRE") were prepared in accordance with the disclosure and reporting requirements set forth in NI 43-101, its Companion Policy 43-101CP, and Form F1, of the Canadian Securities Administrators and used categories that conformed to CIM Definition Standards on Mineral Resources and Mineral Reserves (CIM, 2010) at the time of the completion of the estimate. The mineral resource estimates have an effective date of 31 March 2012.

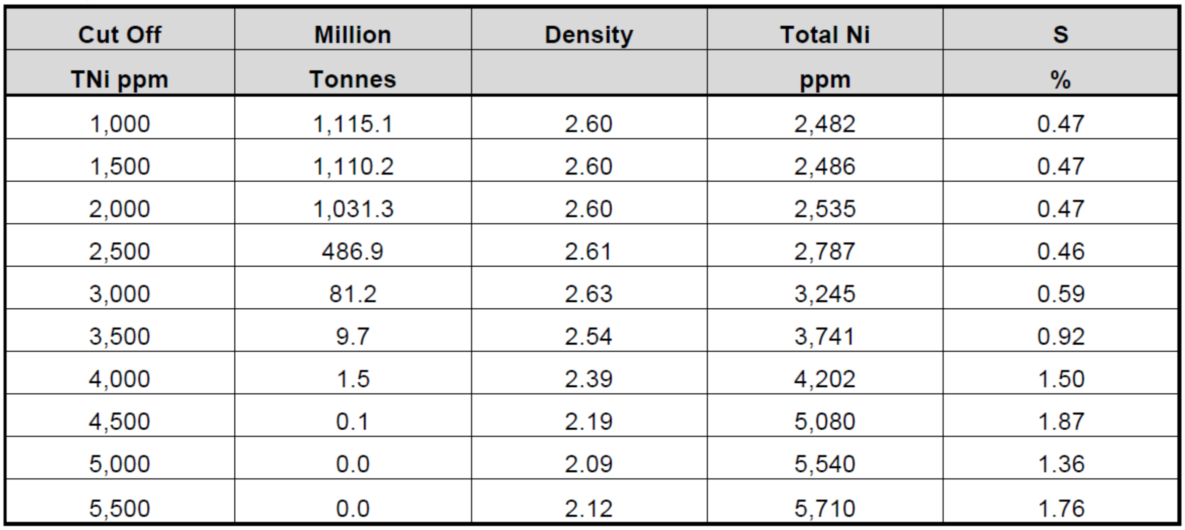
Drilling results allowed for an Indicated Resource of 485.4 million tonnes averaging 0.245% Ni to be stated (Table 6-3), with an additional Inferred Resource of 1,115.1 million tonnes at 0.248% Ni (Table 6-4). The mineral resources were quoted as Total Nickel (TNi) and were restricted to mineralization in the "Sulphide Zone". They were stated as *in-situ* with no geological losses applied.

Table 6-3: Grade sensitivity analysis, in situ Indicated Mineral Resources, Lower Zone (Sulphide Zone) (Croll *et al.,* 2012).



Cut Off	Million	Density	Total Ni	S
TNi ppm	Tonnes		ppm	%
1000	485.4	2.60	2457	0.53
1500	481.8	2.60	2465	0.53
2000	411.4	2.59	2575	0.50
2500	212.3	2.58	2864	0.46
3000	51.2	2.56	3254	0.43
3500	8.9	2.54	3707	0.67
4000	1.0	2.48	4159	0.87
4500	0.0	2.44	4710	0.74

Table 6-4: Grade sensitivity analysis, in situ Inferred Mineral Resources, Lower Zone (Sulphide Zone) (Croll *et al*, 2012).



Cut Off	Million	Density	Total Ni	S
TNi ppm	Tonnes		ppm	%
1,000	1,115.1	2.60	2,482	0.47
1,500	1,110.2	2.60	2,486	0.47
2,000	1,031.3	2.60	2,535	0.47
2,500	486.9	2.61	2,787	0.46
3,000	81.2	2.63	3,245	0.59
3,500	9.7	2.54	3,741	0.92
4,000	1.5	2.39	4,202	1.50
4,500	0.1	2.19	5,080	1.87
5,000	0.0	2.09	5,540	1.36
5,500	0.0	2.12	5,710	1.76

The mineral resource estimates presented in Table 6-3 and Table 6-4 used categories that conformed to CIM Definition Standards on Mineral Resources and Mineral Reserves (CIM, 2010) at the time of completion of the estimate, as outlined in NI 43-101, Standards of Disclosure for Mineral Projects. However, neither the Principal Author nor a qualified person have done sufficient work to classify any of the historical estimates as current mineral resources and as such the Principal Author and the Issuer are treating the tonnages and grades reported as historical mineral resources. Investors are cautioned that the historical mineral resource estimates do not mean or imply that economic deposits exist on the Property.

6.4.1 Mineral Resource Estimation Methodology

MSA undertook a review and interrogation of supplied data and created a block model followed by the Mineral Resource estimation for the Zebediela Nickel Project (Figure 6-8). The Zebediela Nickel Project area covers portions of the farm Uitloop 3KS as shown on Figure 6-8.

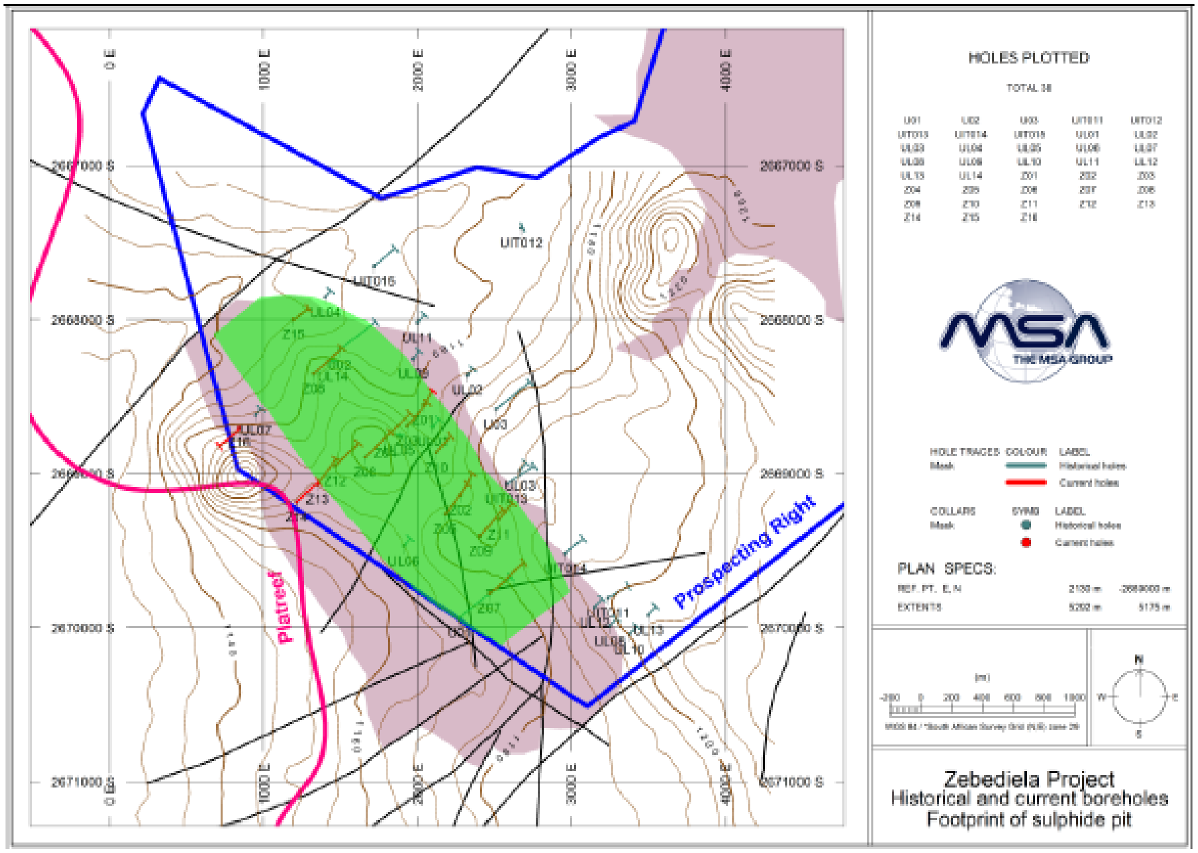


Figure 6-8: Mineralized envelope (green shaded area) on the Zebediela Project, 2012 MSA historical mineral resource estimate (Croll 2012).

MSA carried out the following:

- reviewed all available geological information and data pertaining to the Zebediela Project area, including borehole collar, geology, downhole survey and assays;
- reviewed the existing wireframe model(s);
- reviewed the existing interpretation of the oxidized-fresh (sulphide) interface;
- created a block model of the Mineral Resource envelope;

- undertook a Mineral Resource estimation exercise for the oxide and sulphide zones;
- declared code-compliant Mineral Resources, according to NI 43-101; and
- imposed a nominal pit outline within the deposit to facilitate a mining design and production schedule.

The following sections, from Croll *et al*. (2012), describe the methodology used in the calculation of the 2012 historical mineral resource estimate.

6.4.1.1 Geological Modelling and Block Model Creation

The Zebediela Project comprises an intrusive pyroxenite-harzburgite-dunite body, approximately 8 km by 1.5 km in extent at outcrop, previously correlated with the Lower Zone of the BIC, referred to as the Uitloop II body. The intrusion strikes northwest and dips at 40° to the southwest. It is truncated by the Mahopani Fault. It is estimated that the body attains a maximum thickness of 600 metres.

A second larger similar intrusive, the Uitloop I body, lies 1 km to the northeast of a tongue of dolomite. The intervening dolomite has been de-dolomitized (loss of magnesium) and was once the site of previous limestone mining. The possibility that these two bodies are linked at depth has not been investigated.

The Uitloop II body, which is the main focus of the Zebediela Nickel Project, was investigated by Umnex using 16 inclined diamond boreholes (Z01 to Z16). These confirmed a minimum thickness of 380 m from surface and did not intersect the footwall lithologies beyond this depth.

It has been postulated that sulphur-bearing fluids emanating from a fracture zone to the northeast permeated the intrusive body and concentrated Ni from silicate minerals giving rise to the mineralization.

6.4.1.2 Database

Data supplied by Umnex included borehole collars, downhole survey, geology, assay, including Total Ni (TNi), Ammonium Citrate leach Ni (ACNi), sulphur and some bulk density data. Borehole collar data are WGS84 datum, with 29 degrees east as the central meridian. Note that the Mineral Resource Estimate was made only for Total Nickel mineralization (TNi) in the Sulphide Zone of the deposit.

The mineralized interval is an average of 271 m thick in the Zebediela Project area and is at its thickest in the south, around boreholes Z07 and U01 (approximately 465 m vertically). The target sulphide mineralization is very fine-grained and not visible to the naked eye. Secondary pyrite agglomerations up to 30 mm diameter were, however, noted in the cores viewed.

The boreholes with available assay results are not spatially arranged on an equally-spaced grid layout, which, in the absence of any other data deficiencies would by definition lead to a low confidence level of Mineral Resource classification, in areas of sparse drilling coverage. Additional drilling is required to upgrade portions of the Zebediela Project area to better than Inferred Mineral Resource status.

6.4.1.3 Data Validation

Borehole data were provided for a series of exploration phases over the Zebediela Project area, including U-, UL-, UIT and Z series boreholes. Assay data for TNi were only available for the Z series and the three U series boreholes. ACNi assay data were only available for the Z series boreholes. These were inspected for omissions and overlaps by means of import into Datamine software and errors so identified were communicated to Umnex for rectification.

6.4.1.4 Raw Statistics

Univariate statistics were run on the raw data, as received and subsequently corrected. The oxide-sulphide interface was identified as a critical parameter for the Zebediela Project as was investigated by means of calculating various ACNi proportions in the TNi assay, limited to the Z series boreholes. It was determined, over the spread of the 16 Z-series boreholes that a 30% ACNi proportion best delineated the break between the Oxide and Sulphide zones. The average oxide-sulphide interface depth was calculated as 46.5 metres. The borehole data were analysed statistically per Oxide and Sulphide zones.

6.4.1.5 Compositing

Having delineated the Oxide and Sulphide zones, the borehole data were separated into the same zones, using a wireframe generated at their interface from borehole intersections. This wireframe was extended beyond borehole intersection points by the average depth of the interface. Borehole data were composited over 2 m lengths within each zone. There were no residuals – all sample lengths were included in composites with a minimum composite length of 1.96 m and a maximum of 2.09 m. A single population was observed in the TNi and ACNi in the Oxide and Sulphide zones.

6.4.1.6 Density Analysis

Density data were supplied for 2,358 samples, as point data. These were extended to a nominal 20 cm sample length, for the purposes of importation into Datamine. Individual sample from- and to-depths were adjusted to exclude any resultant overlaps. It is noted that the average density of 2.50 is considered low for a mixture of pyroxenite (expected density of 3.2) and harzburgite with dunite (expected densities of 2.8). There are abundant serpentinite entries recorded in the database, being an alteration lithology after the latter two rock types. Serpentinite, as a result of the alteration process, contains magnetite as a secondary alteration product after olivine. The average density appears to be contradictory to reported mineralogical work which identified significant magnetite contents as an accessory mineral in the Oxide Zone. Further studies on the oxide material are recommended to investigate whether there is a potential source of revenue from magnetite recovery. The oxide material is planned to be stacked as waste at Zebediela Project outset.

6.4.1.7 Geostatistical Analysis

The borehole data for the Oxide and Sulphide zones were imported separately into Snowden Supervisor software for variographic analysis. This was undertaken for TNi, S and bulk density.

Variography

Fewer samples were available for the Oxide Zone and only poor variogram modelling was possible. The resultant variography for the Sulphide Zone was therefore applied to the Oxide Zone.

It was determined that the separated Oxide and Sulphide zones represent the optimal route for Mineral Resource estimation.

Interpolation Process

Ordinary Kriging was selected as the interpolation method within Datamine Studio 3. Coefficients of variation were low for each population supporting this approach.

6.4.1.8 Block Modelling

Borehole data were modelled to construct a mineralization model, constrained in the north by the Mahopani Fault, in the south by the PR boundary and to the northeast by the interpolated boundary of the intrusive body with the Platreef and, or dolomite. The model was truncated at surface by a topography wireframe, generated from data supplied by Umnex.

A block model was constructed and split between the Oxide and Sulphide zones, using the modelled interface wireframe. The Z series borehole data is spaced at an average of 375 m and thus the block model block size was assigned as 37.5 m in the X and Y directions. A cell size of 5 m was assigned in the Z direction approximating a likely mining bench height or proportion there-of. The coordinate origin for the combined Oxide and Sulphide block model was: X (easting): -1 000 Y (northing): -2 671 000 Z (elevation): 500. Sub-celling was only applied to the model in the Z direction, in order to accurately model the topographic surface and the oxide-sulphide interface.

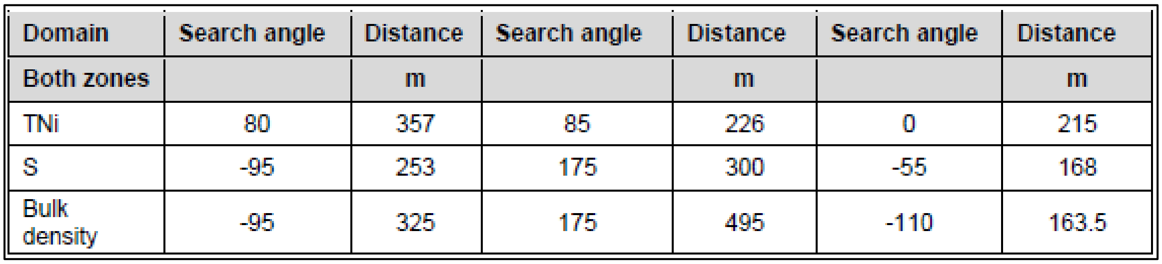
Interpolation

Interpolation used the 2 m composited borehole data, per zone, interpolating only into the respective zone. The zones were thus treated as hard boundaries, with no smearing of grade data from one zone into the other. A minimum of 10 and a maximum of 30 samples were used for an estimate. The first estimation pass designated Indicated Mineral Resource status. All other blocks were assigned Inferred status.

Search Ellipse Parameters

The variogram-derived search parameters were applied as search radii. The full variogram range was assigned to the first search distances (Table 6-5).

Table 6-5: Variogram-derived search parameters, Oxide and Sulphide zones (Croll *et al.,* 2012).



Domain	Search angle	Distance	Search angle	Distance	Search angle	Distance
Both zones		m		m		m
TNi	80	357	85	226	0	215
S	-95	253	175	300	-55	168
Bulk density	-95	325	175	495	-110	163.5

*Angles are positive as clockwise, around Z, then X, then Z again.

Block Model Validation

Visual inspection of the block model versus input data was undertaken in section and in 3-D. A close correlation was observed between the two data populations and spatial distributions of elemental grades. The Oxide Zone has been assigned as waste at this stage. Sectional views showing TNi in the Sulphide Zone only are shown in Figure 6-9 and Figure 6-10.

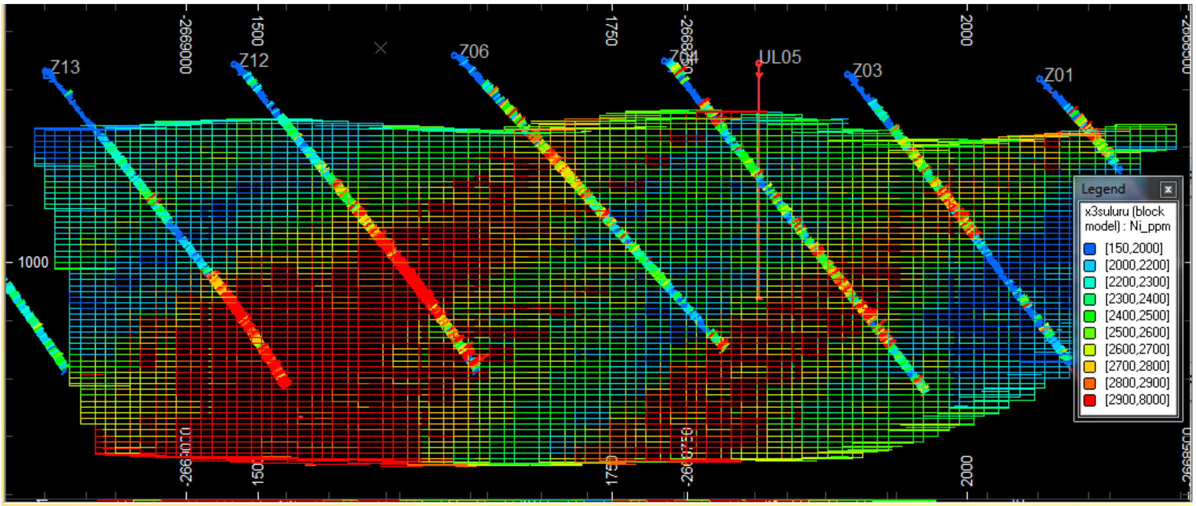


Figure 6-9: Oblique sectional block model view #1 showing borehole and estimated block TNi grades in the Sulphide Zone (ppm Ni) (Croll *et al.,* 2012).

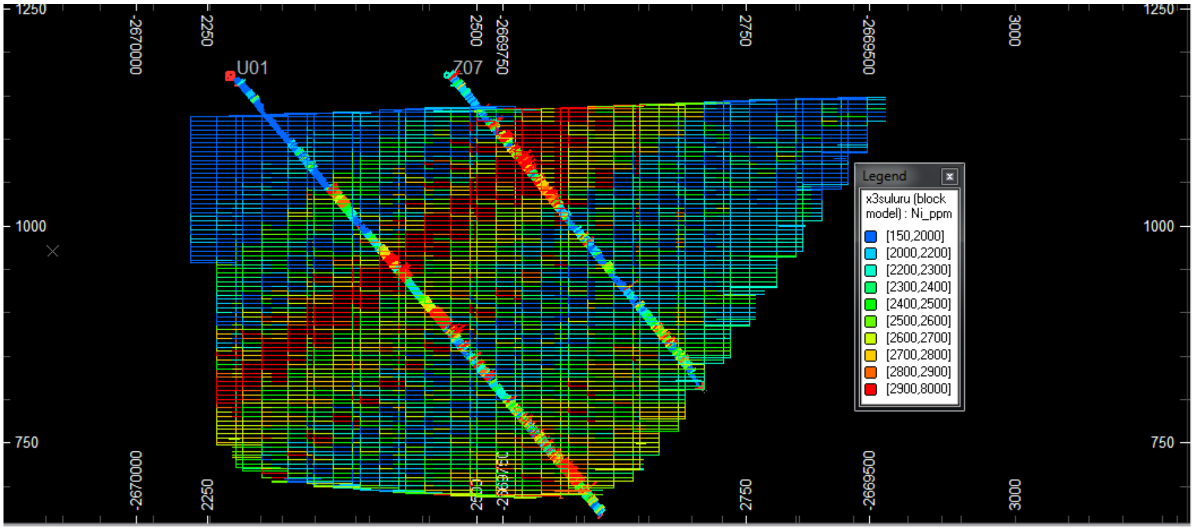


Figure 6-10: Oblique sectional block model view #2 showing borehole and estimated block TNi grades in the Sulphide Zone (ppm Ni) (Croll *et al.,* 2012).

6.4.2 Mineral Resource Estimates

The mineralization at Uitloop was constrained by a TNi grade-derived envelope. Although the intrusive body is largely coincident with this, there is no uniform geological control on the mineralization across the body. The degree of geological continuity is considered sufficient for declaring up to Indicated Mineral Resources. Additional drilling is required to further investigate the morphology of the mineralized envelope and to in-fill sparsely-drilled areas.

6.4.2.1 Classification

The data spread and level of detail has allowed for Indicated and Inferred Mineral Resource declaration, according to the Canadian Institute for Mining and Petroleum (CIM, 2010) definitions as presented in June 2010.

6.4.3 Mineral Resource Statement

The NI-43-101 compliant Mineral Resources were declared for the Zebediela Project, with an effective date of 31 March 2012. These resources are stated as in-situ as no geological losses have been applied (*see* Table 6-3 and Table 6-4).

It should be noted that the currently stated Mineral Resource estimates refer to TNi. Mineral deportment studies have shown that approximately 62% of the nickel is contained in sulphides and therefore potentially recoverable (*see* Section 13). Furthermore, the average ratio of ACNi to TNi throughout the Sulphide Zone is 58%, based on assay data, providing independent support for the mineralogical studies.

6.4.4 Grade Tonnage Curves

The following grade-tonnage curves represent the spread of grades within the Sulphide Zone, at various TNi cut-offs (Figure 6-11 and Figure 6-12).

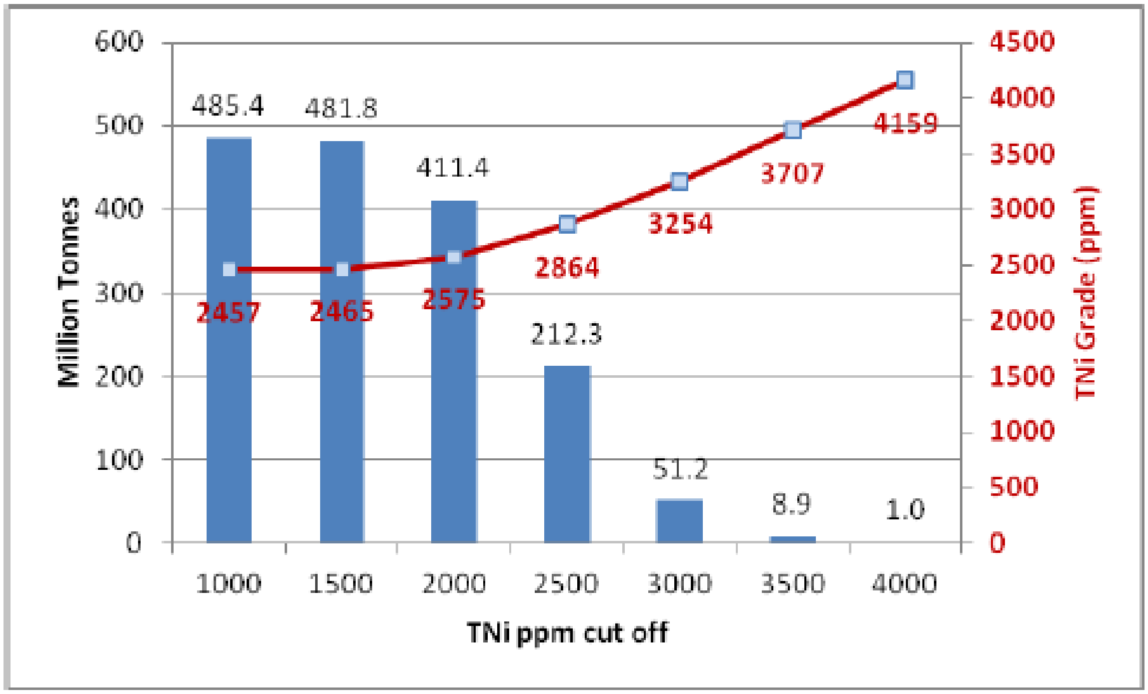


Figure 6-11: Grade – tonnage curve: Indicated Mineral Resources, Sulphide Zone (Croll *et al.,* 2012).

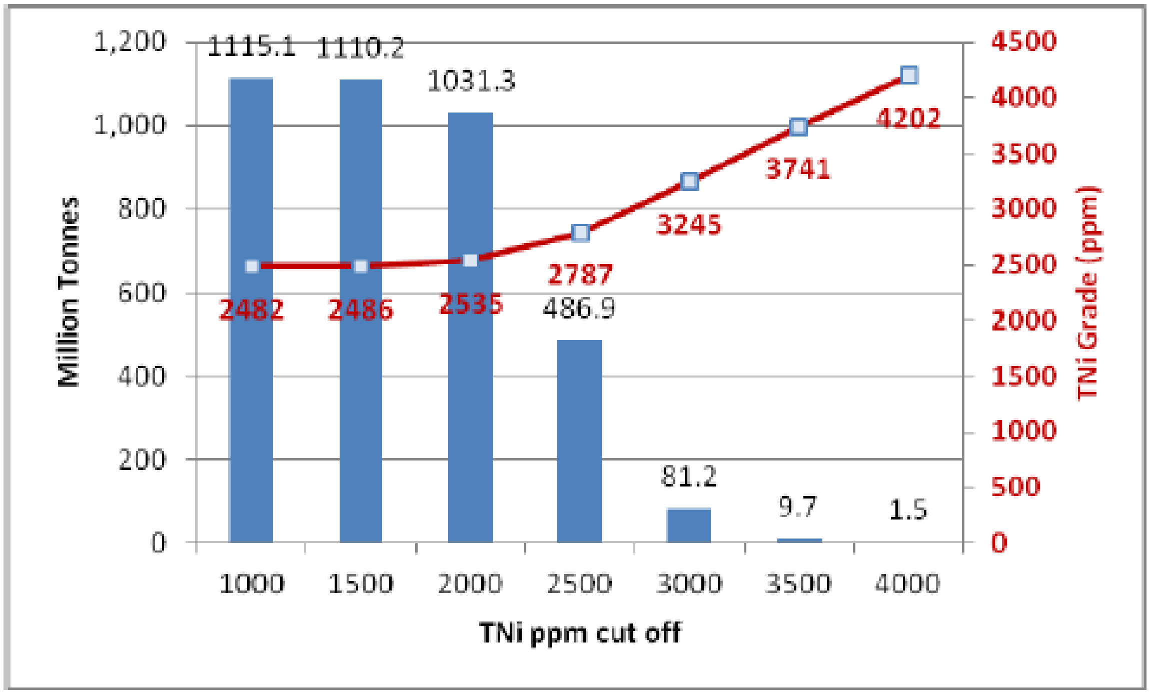


Figure 6-12: Grade – tonnage curve: Inferred Mineral Resources, Sulphide Zone (Croll *et al.,* 2012).

6.4.5 Block Model for Mining Plan and Schedule

A nominal open pit design was superimposed onto the combined block model for the Oxide and Sulphide zones, starting at surface and using pit slopes of 50°, extending down to 250 m below surface. The modelled pit volume was further divided into five sectors, in plan and four depth intervals, to facilitate an initial mine plan and schedule. The oxide interval was modelled as a single depth slice, with ensuing depth intervals being 50 m in thickness each (*i.e.*, from 46.5 m below surface to 96.5 m; down to 146.5 m; down to 196.5 m and down to 250 m below surface respectively).

In order to reduce the contained tonnage within the pit to closer to 500 million tonnes, lower grade material was excluded at the margins of the pit design, to form a "revised pit outline".

The plan view of the sectors for the original pit outline is shown in Figure 6-13, the revised pit outline in Figure 6-14 and an example section showing the depth slices in Figure 6-15. Mineral Resources were tabulated for each level within each sector. The oxide was deemed to be stockpiled waste for this exercise. The Mineral Resources so outlined served as the input data for the mining design and subsequently utilized for a financial model.

A view of the modelled pit, to 250 m below surface and the blocks of >2700 ppm TNi is shown in Figure 6-16.

6.4.6 Summary

Mineral Resources are declared for the Sulphide Zone only. The Oxide Zone was considered as waste. The potential of reclaiming the magnetite content of the oxide domain remains a subject for future study. Assay data shows that only 58% of the contained nickel is present in the sulphide minerals present in the Sulphide Zone, and therefore potentially recoverable.

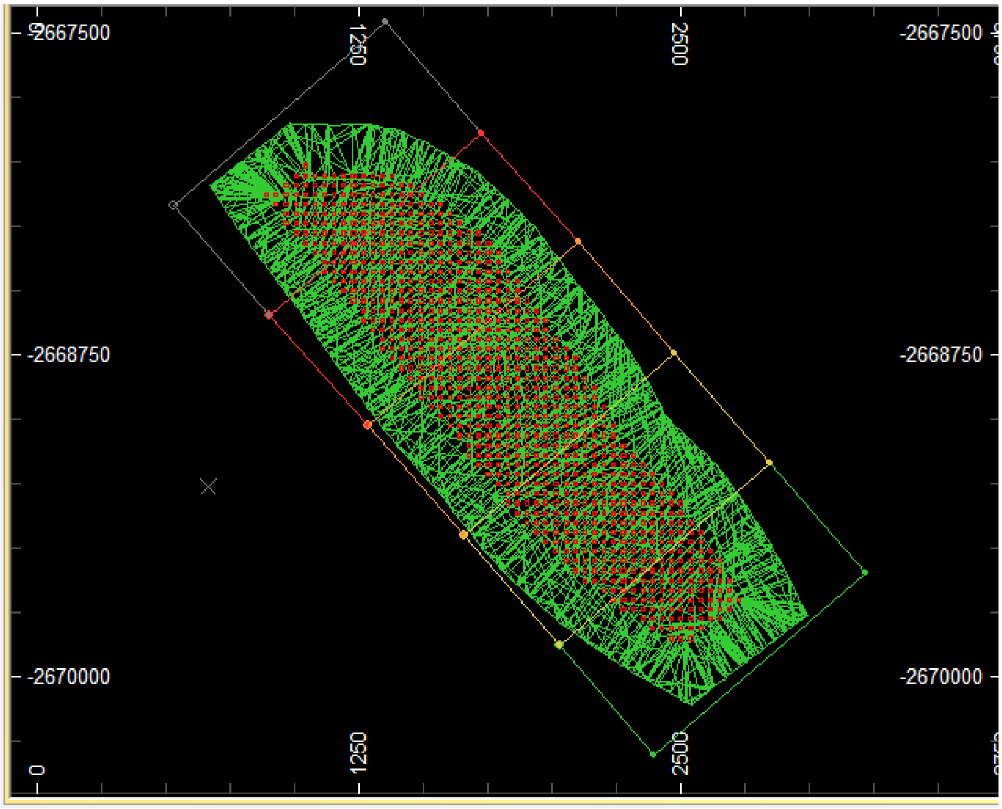


Figure 6-13: Pit Sectors for dividing the Open Pit Model (Croll *et al.,* 2012).

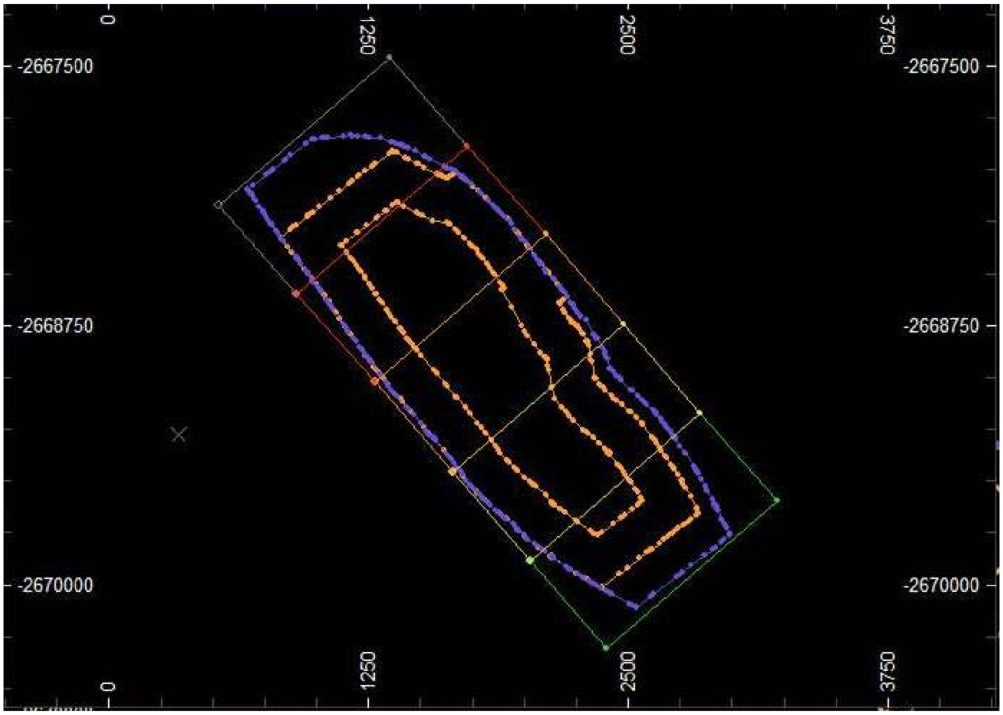


Figure 6-14: Revised Pit Outline – Top and Base (orange) within the Pit Sectors (Croll *et al.,* 2012).

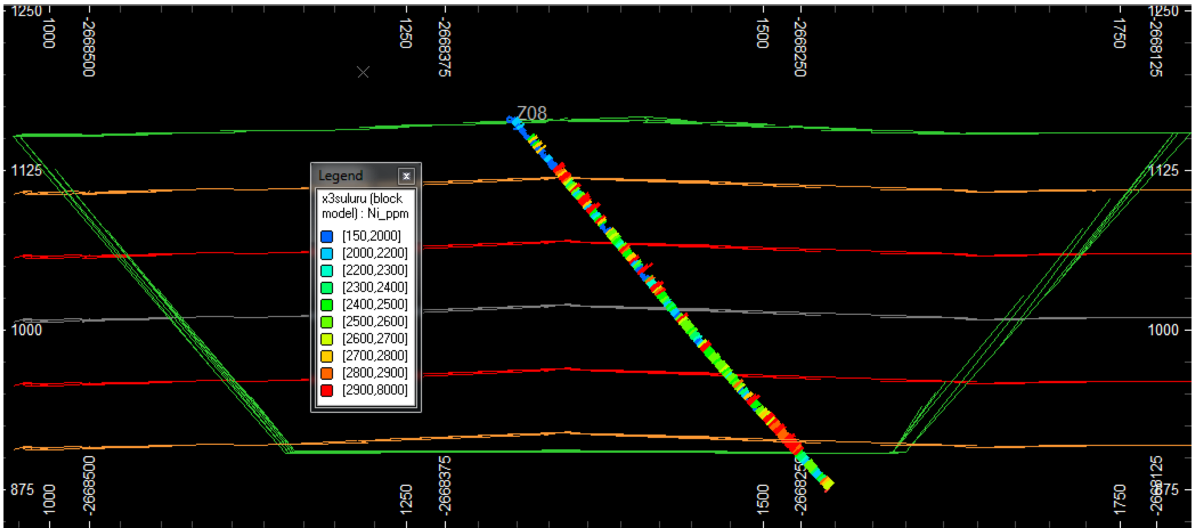


Figure 6-15: Sectional view of the Pit Depth Slices (Croll *et al.,* 2012).

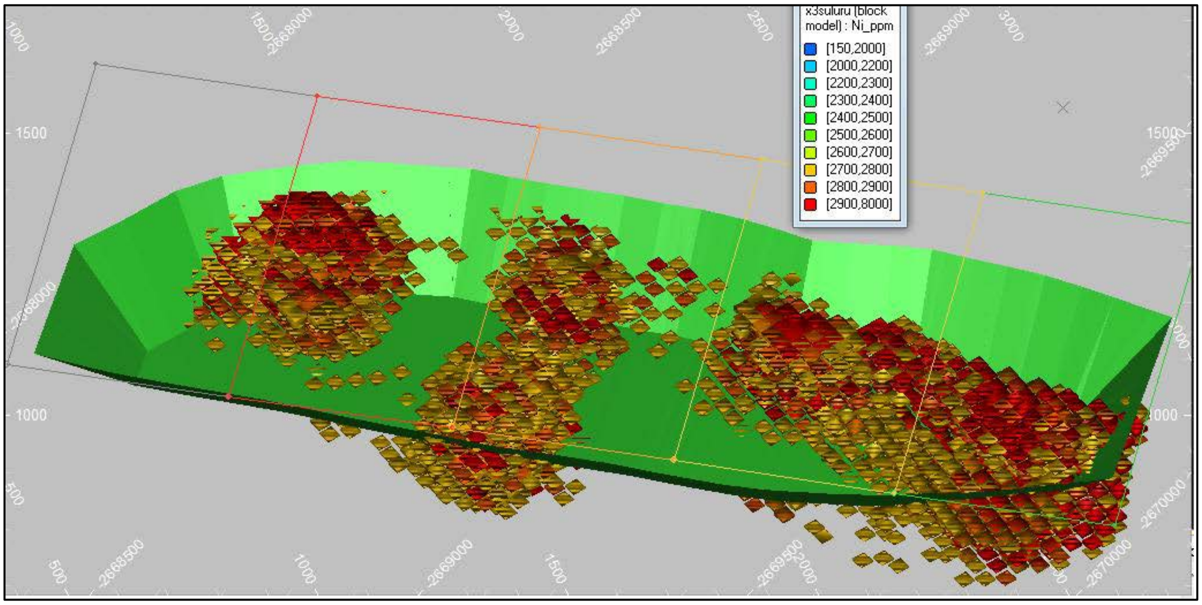


Figure 6-16: Oblique view of the modelled open pit looking northeast, showing model blocks with >2700 ppm TNi (Croll *et al.,* 2012).

7.0 GEOLOGICAL SETTING AND MINERALIZATION

7.1 Regional Geology

The Zebediela Nickel Project area is underlain by rocks belonging to the mafic-ultramafic Bushveld Igneous Complex (“BIC”), the metasedimentary floor rocks of the Transvaal Supergroup, and crystalline granites of the Archaean basement complex.

The BIC is the world’s largest repository of PGEs, chrome, and vanadium, and was emplaced into the ca. 2.2Ga Pretoria Group of the Transvaal Supergroup at 2.06 Ga (Cawthorn *et al.,* 2006). The BIC comprises the mafic-ultramafic Rustenburg Layered Suite (“RLS”), which is overlain by the Lebowa Granite Suite. The RLS locally attains true (stratigraphic) thicknesses up to 9 km and has an extent of 66,000 km^2.

The BIC is divided into several discrete limbs (Figure 7-1) of which the Northern Limb is of importance to the Property and the Report.

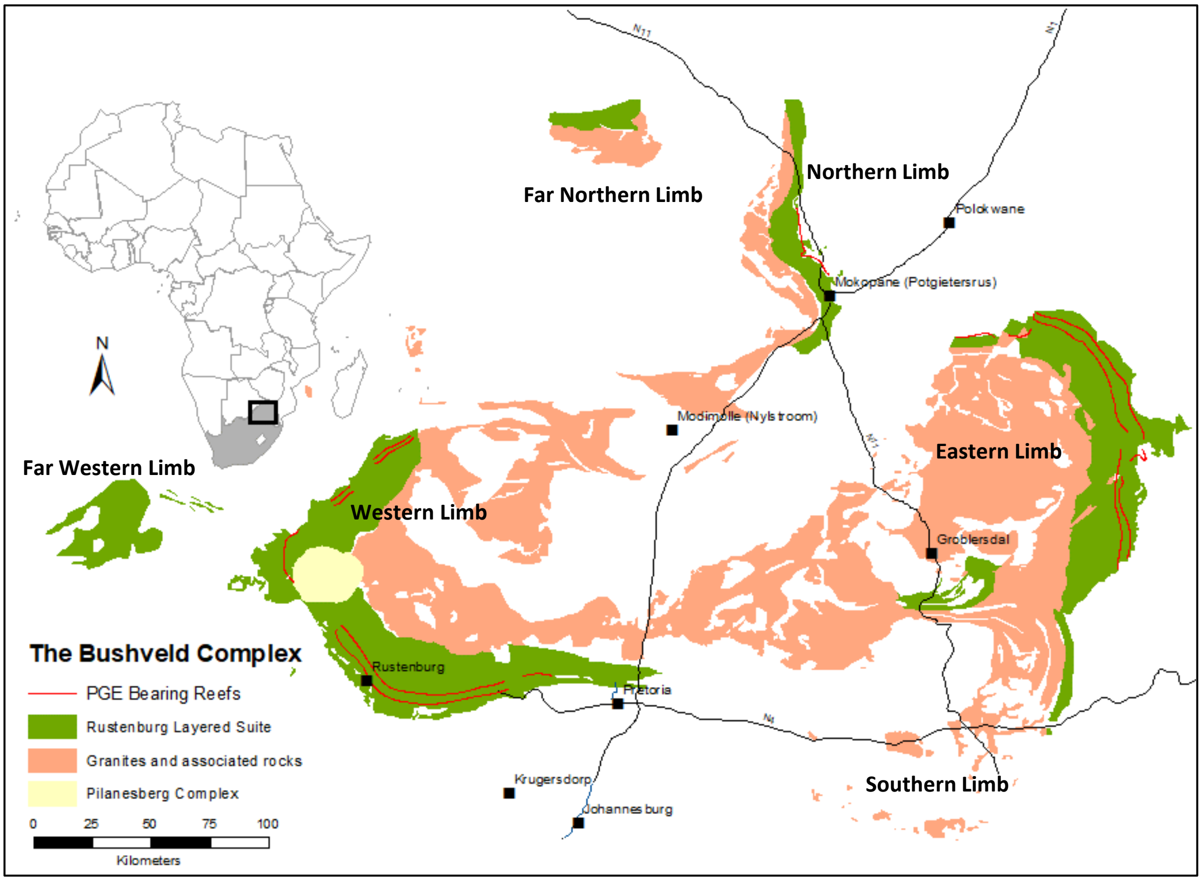


Figure 7-1: Simplified regional geological map, based on mapping data from 1:250,000 geological map sheets ((*M. McCreesh, unpublished Report 2018; after various South African Council for Geoscience 1:250,000 geological datasets*).

The Northern Limb is markedly different from the main Eastern and Western limbs of the BIC due to the supposed absence of the platiniferous UG2 and Merensky reefs. By contrast, the PGE endowment of the Northern Limb is carried by the Platreef, a product of contamination of mafic magmas with the reactive, predominantly dolomitic floor rocks of the Pretoria Group and Archaean basement granitoids (Sharman *et al.,* 2013; Smith *et al.,* 2016).

Locally, emplacement of the RLS was discordant to the floor rocks, resulting in marked transgressions into the underlying crystalline Archaean basement. This is particularly evident in the Northern Limb, which oversteps the Pretoria Group northwards to rest directly on the basement granites and gneiss.

Multiple emplacement events coupled with *in-situ* and lateral differentiation processes have resulted in five discrete zones being developed within the Rustenburg Layered Suite (Figure 7-2).

From the base upward, these zones are:

- Marginal Zone: This zone comprises medium-grained, poorly layered heterogeneous rocks, predominantly noritic rocks that form an irregularly distributed and developed “cushion” separating the floor rocks from the overlying, well-layered, main constituents of the RLS (Eales and Cawthorn, 1996). The Marginal Zone is not developed throughout the BIC. This sequence of rocks reaches a maximum thickness of 800 m (Figure 7-2) (Vermaak, 1976). Associated with the Marginal Zone are numerous calc-silicate xenoliths derived from the underlying Pretoria Group. The Marginal Zone is not associated with significant PGE or base metal mineralization. A Basal Ultramafic Sequence (“BUS”) has been identified beneath the noritic Marginal Zone in the Clapham section of the Eastern Limb of the BIC (Wilson, 2015). This previously unknown section is approximately 750 m thick and is composed of pyroxenites, harzburgite and dunites. Olivine and orthopyroxenite through the BUS have the highest Magnesium (“Mg”) composition in the BIC (Mg#> 0.91) (Wilson, 2012). The lowest 10 m of the BUS section preserves different lithologies as well as a true chilled margin against quartzite floor rocks of the Transvaal Supergroup. Similar high-Mg compositions of olivine and orthopyroxene have been reported for the recent discovery of an 800 m thick package of Lower Zone beneath the Platreef in the Northern Limb (Yudovskaya *et al.,* 2013) and for the 1,600 m thick Lower Zone package on the Grasvally, Volspruit and Zoetveld farms (Hulbert, 1983; Hulbert and von Gruenewaldt, 1986);

- Lower Zone: This zone is an exclusively ultramafic package that is well-preserved in structural troughs, particularly in the Eastern Limb. It comprises an alternating succession of dunite, harzburgite and orthopyroxenite (bronzitites), which may be preserved as cyclic units. There is no cumulus plagioclase recorded in the Lower Zone of the Western Limb apart from within a noritic layer midway up the succession, which has also been identified in the Eastern Limb of the complex. In the far Western Limb, the Lower Zone contains nine cyclic units of dunite-harzburgite-pyroxenite reaching an approximate thickness of 1,050 m (Engelbrecht, 1985). The southern or Bethal limb contains tens of metres of Lower Zone harzburgite overlain by more evolved magnetite-rich lithologies (Buchanan, 1975). The Lower Zone is not typically associated with PGE mineralization, but is known to contain small amounts of cumulus chromitite, magnetite developed from serpentinization of the ultramafic rocks and disseminated sulphide mineralization;

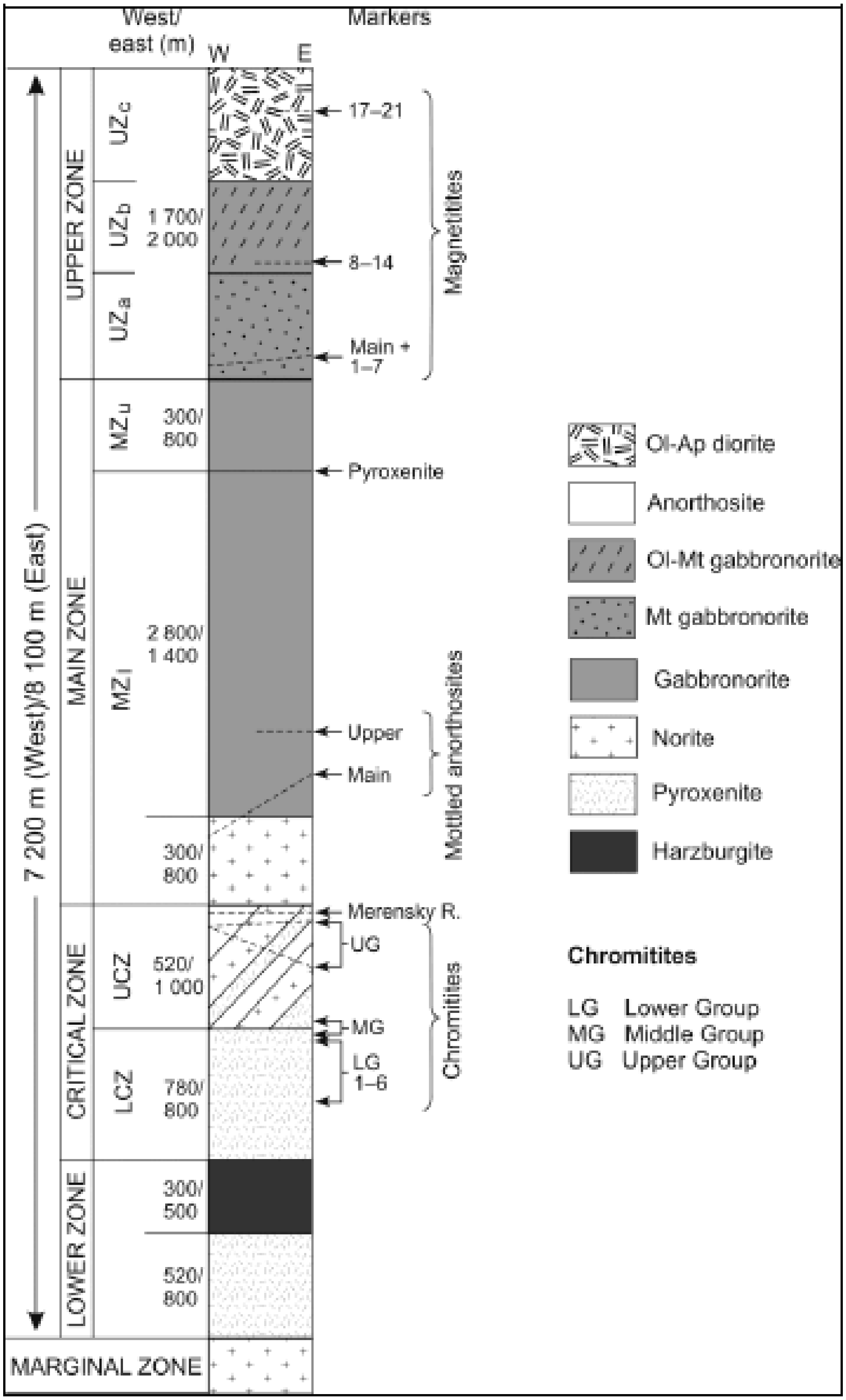


Figure 7-2: Schematic stratigraphic column for the main Bushveld Igneous Complex, showing key economic layers and thicknesses in the Western and Eastern limbs (modified after Cawthorn *et al.,* 2006).

- Critical Zone: This zone is subdivided into the lower Critical Zone consisting mainly of orthopyroxenite, chromitite and some harzburgite and the upper Critical Zone, which is made up of cyclic units consisting of successive alternations including some of chromitite, harzburgite, orthopyroxenite, norite and anorthosite. The boundary between the upper and the lower Critical zones is located above the MG2 cyclic unit and is marked by the first appearance of cumulus plagioclase (Figure 7-2);

- The Critical Zone hosts the overwhelming majority of the RLS's PGE endowment, with the UG2 chromitite layer and pyroxenitic Merensky Reef hosted within the upper parts of the upper Critical Zone. Base metal enrichment (up to a few thousand ppm Cu, Ni) is associated with the Merensky Reef in particular. The well-developed layering that characterises the RLS is best highlighted by the numerous chromitite seams developed throughout the Critical Zone, from the lower Critical Zone (the "LG" or Lower Group seams), through the transition zone ("MG" or Middle Group) to the upper Critical Zone, which hosts the Upper Group ("UG") seams, including the UG1 and economically payable UG2. A UG3 seam is locally developed in the northern part of the Eastern Limb. The Merensky Reef occurs near the interface between the upper Critical and Main zones, and comprises a variably mineralized, locally pegmatitic pyroxenite associated with thin chromitite layers.

- Main Zone: this is the thickest zone in the RLS and is devoid of olivine and chromite in the Eastern and Western limbs. The Main Zone is generally a homogeneous sequence composed of equigranular norites and gabbronorites with minor anorthosite and pyroxenite layers in the Eastern and Western limbs (Eales and Cawthorn, 1996). The Main Zone is 2,200 m thick in the western limb and has been subdivided into the lower Main Zone comprising Norite Units I-II, overlain by Gabbronorite Units I-IV forming the upper Main Zone, separated by the Pyroxenite Marker (Figure 7-2; Mitchell, 1990). However, Nex *et al.* (1998) has subdivided the western Main Zone into five subdivisions A-E based on the appearance of primary orthopyroxenite and inverted pigeonite. The Main Zone in the Eastern Limb has a thickness of 3,100 m (von Gruenewaldt, 1973; Molyneux, 1974). There is no significant economic value attached to this zone in the Eastern and Western limbs although some PGE enrichment is known within the "Pyroxenite Marker" layer, which records a major magma influx into the RLS magma chamber near the top of the Main Zone although this has to date not proven economic viable;

- Upper Zone: is the lost laterally extensive zone in the RLS, the base of the zone is defined by the first appearance of cumulus magnetite (Kruger, 2005). The Upper Zone is approximately 2,000 m thick (SACS, 1980). The Upper Zone comprises a thick sequence of gabbronorites that are characterised by cumulus magnetite. Associated with disseminated magnetite mineralization are up to 24 magnetitite layers in the Eastern Limb and they are divided into four groups with up to seven magnetitite layers per group (Molyneux, 1974; Tegner *et al.,* 2006). The thickest of these magnetitite layers is 6 m thick, with others ranging from a few centimetres to 2 m thick. The Main Magnetitite Layer near the base of the Upper Zone is 2 m thick and is mined for its vanadium content (Eales and Cawthorn, 1996). The Upper Zone becomes progressively more differentiated upwards, with cumulus fayalitic (Fe-rich) olivine and apatite being present as major modal phases as seen in Figure 7-2.

The RLS is characterised by its centroclinal dip, with the Eastern and Western limbs dipping centrally inwards and the dip of the Eastern, Western and Northern limbs flattening with depth, giving the body a broad saucer shape in profile.

The Northern Limb is separated from the Eastern Limb by the Thabazimbi-Murchison Lineament ("TML"), a prominent crustal scale feature that has been periodically reactivated since the Archean (Good and De Wit, 1997) and has been postulated as a feeder for the RLS magmas (Clarke *et al.,* 2009a), with magmas being fed laterally from a dyke-like feeder at the TML north-eastwards into the Northern Limb and south-eastwards into the western and Eastern Limbs.

7.2 Northern Limb Geology

The Zebediela Nickel Sulphide Project is located on the Northern Limb of the BIC, whose stratigraphy is north-south striking and west-southwest dipping body, occurring over a strike length of about 110 km (van der Merwe, 1976; Gain and Mostert, 1982). The RLS north of the TML is generally shallowly buried (<500 m depth) with an approximate area of 160 km x 125 km (Finn *et al.,* 2015). The thickness of the Northern Limb is not well constrained but varies from <1,000 m to >10,000 m with an average thickness of about 4,000 m (Finn *et al.,* 2015).

South of Mokopane the RLS of the Northern Limb is north-east trending with a westward dip between 15° and 27°. Northwards the strike changes to the northwest and eventually due north, with westward dips decreasing upwards through the layered mafic-ultramafic rocks from 45° to 10° (van der Merwe, 2008; Figure 7-3). The Lower and Critical zones are only exposed at the southern portion of the Northern Limb whereas the volumetrically more substantial Main and Upper zones occur along the entire length of the limb (*see* Figure 7-2; Figure 7-3).

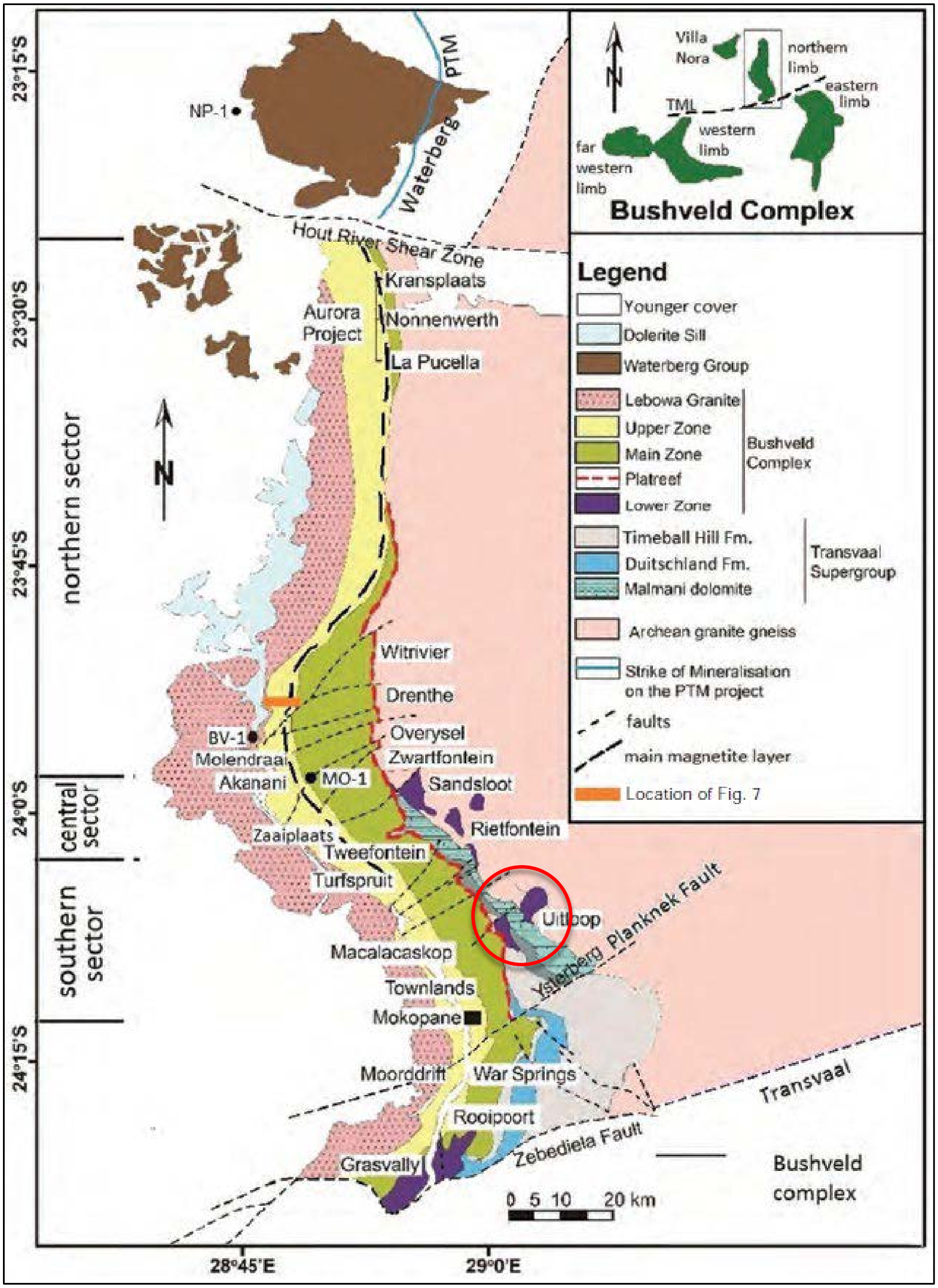
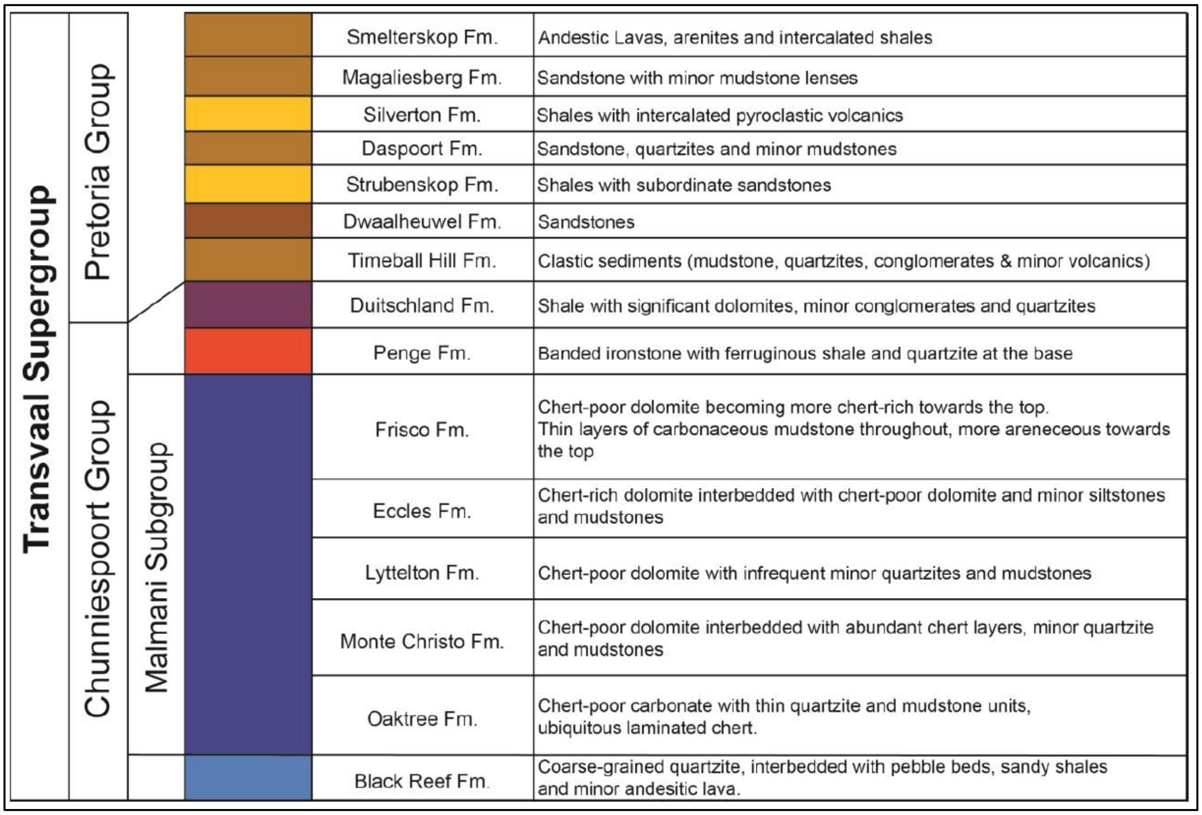


Figure 7-3: Geological map of the Northern Limb of the Bushveld Igneous Complex showing the location of the Uitloop intrusions and general area of the Project (circled in red). The Thabazimbi-Murchison lineament (TML) comprises an en-echelon array of faults that included the Ysterberg-Planknek fault and the Zebediela fault (modified from van der Merwe, 1976: M. McCreesh, unpub. Report 2018). Inset shows the location of the Northern Limb in the Bushveld Igneous Complex. Abbreviations: BV1 = Bellevue borehole, MO-1 = Moordkopje borehole, NP-1 = Non Parella borehole.

A characteristic feature of the Northern Limb is the pronounced transgression of the layered mafic succession northwards from the TML, across different Transvaal Supergroup metasedimentary strata. The <12 km thick Transvaal Supergroup sediments were deposited on the Archean basement between 2,670 to 2,100 Ma (Figure 7-4).

The footwall units of the layered cumulates, from south moving northwards, consist of: a thin basal clastic unit of the Black Reef Formation; interbedded quartzites and shales of the Magaliesberg Formation; clastics with minor volcanics of the Timeball Hill Formation; shales of the Duitschland Formation; the Penge Formation (BIF); the Malmani Subgroup dolomites; and in the far north the RLS rests on Archean granites and gneisses (Eriksson *et al.,* 2001).



Transvaal Supergroup	Pretoria Group		Smelterskop Fm.	Andestic Lavas, arenites and intercalated shales
			Magaliesberg Fm.	Sandstone with minor mudstone lenses
			Silverton Fm.	Shales with intercalated pyroclastic volcanics
			Daspoort Fm.	Sandstone, quartzites and minor mudstones
			Strubenskop Fm.	Shales with subordinate sandstones
			Dwaalheuwel Fm.	Sandstones
			Timeball Hill Fm.	Clastic sediments (mudstone, quartzites, conglomerates & minor volcanics)
			Duitschland Fm.	Shale with significant dolomites, minor conglomerates and quartzites
	Chunniespoort Group		Penge Fm.	Banded ironstone with ferruginous shale and quartzite at the base
		Malmani Subgroup	Frisco Fm.	Chert-poor dolomite becoming more chert-rich towards the top. Thin layers of carbonaceous mudstone throughout, more areneceous towards the top
			Eccles Fm.	Chert-rich dolomite interbedded with chert-poor dolomite and minor siltstones and mudstones
			Lyttelton Fm.	Chert-poor dolomite with infrequent minor quartzites and mudstones
			Monte Christo Fm.	Chert-poor dolomite interbedded with abundant chert layers, minor quartzite and mudstones
			Oaktree Fm.	Chert-poor carbonate with thin quartzite and mudstone units, ubiquitous laminated chert.
			Black Reef Fm.	Coarse-grained quartzite, interbedded with pebble beds, sandy shales and minor andesitic lava.

Figure 7-4: Lithostratigraphy of the Transvaal Supergroup floor rocks beneath the RLS of the Northern Limb of the Bushveld Igneous Complex (from Eriksson *et al.,* 2001).

The stratigraphy of the Northern Limb does not correlate exactly with the stratigraphy of the other limbs of the BIC south of the TML, although all stratigraphic zones of the RLS can be recognised. These differences are seen both north of the Zebediela fault and the Ysterberg Planknek fault which are both branches of the TML (*see* Figure 7-3). Figure 7-5 schematically summarises the view of the stratigraphic relationship between the Northern Limb and the rest of the BIC.

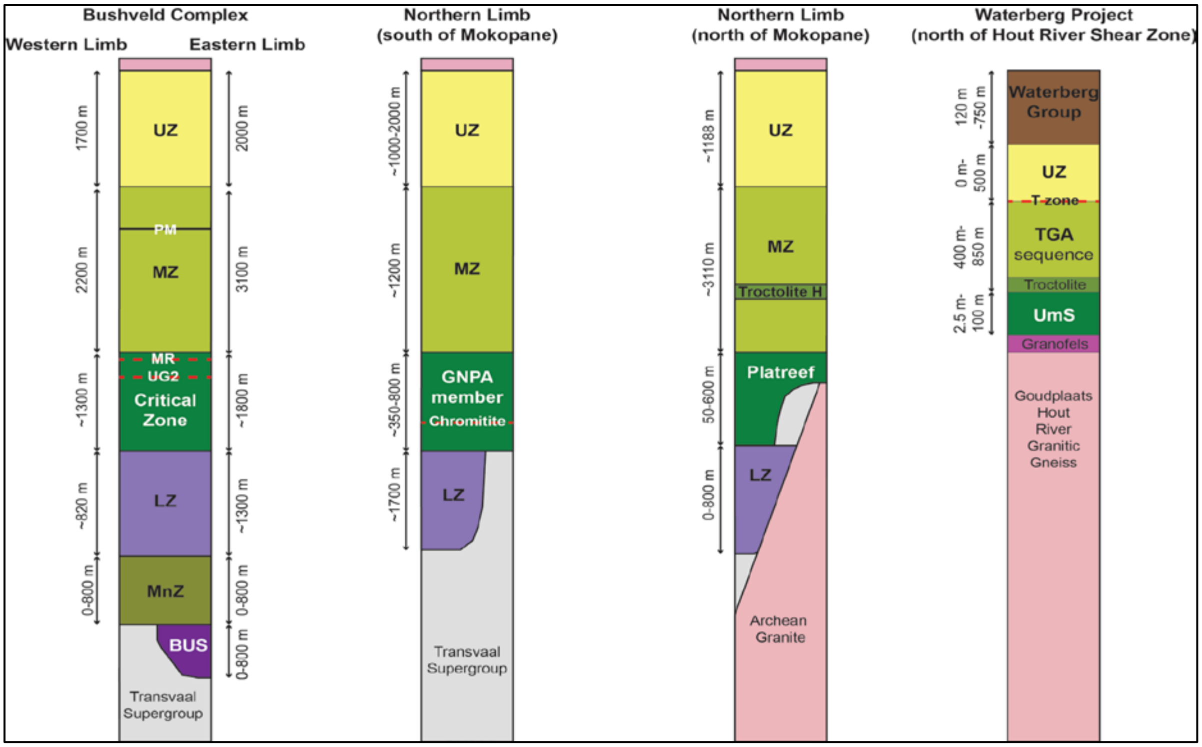


Figure 7-5: Schematic stratigraphic columns showing the contrast between the eastern and western lobes of the typical Bushveld Igneous Complex and the Northern Limb (McCreesh, 2018).

The Marginal Zone is generally poorly exposed in the Northern Limb, although where there is outcrop, they are noritic to doleritic rocks from a few centimetres to tens of metres thick (van der Merwe, 1976). There exposed Marginal Zone rocks host several inclusions including carbonate rocks, hornfels, quartzite and granite. Another feature of the Marginal Zone in the Northern Limb is an olivine-bearing chilled margin along the contact with the Lower Zone at the base of the Uitloop I body (van der Merwe, 1976). Recent studies and results from exploration drilling have shown that the Marginal Zone lithologies are found between the Platreef and the Lower Zone (Yudovskaya *et al.,* 2013). Marginal Zone lithologies are intercalated within a package of country rocks approximately 100 m thick (Yudovskaya *et al.,* 2013).

The Lower Zone cumulates are comprised of at least 1,600 m of 37 cyclic units of pyroxenite, dunite, harzburgite and chromitite on the Grasvally, Volspruit and Zoetveld farms (Figure 7-3) (Hulbert, 1983; Hulbert and von Gruenewaldt, 1986). This sequence of ultramafic rocks differs from the Lower Zone in the eastern and western limb of the complex in that it contains orthopyroxene with higher enstatite content and olivine with higher forsterite content (van der Merwe, 1976: Maier *et al.,* 2013), and chromitite layers with the highest Cr_2O_3 content in the entire BIC (Hulbert, 1983). The Lower Zone north of the Ysterberg Planknek fault was previously only identified as several satellite bodies to the RLS composed of orthopyroxenite and orthopyroxene-olivine cumulates with occasional chromite layers (de Villiers, 1970, van der Merwe, 1976; Gain and Mostert, 1982). Recent deep drilling in the southern sector of the Northern Limb has exposed an >800 m thick package of Lower Zone lithologies beneath the Platreef on the farms Turfspruit and Sandsloot (Yudovskaya and Kinnaird, 2010; Yudovskaya *et al.,* 2013). These Lower Zone lithologies have comparable chemistry to the Lower Zone lithologies on the Grasvally, Volspruit and Zoetveld farms (Hulbert and von Gruenewaldt, 1985) and to the Basal Ultramafic Sequence ("BUS") discovered in the Clapham section of the Eastern Limb of the BIC (Wilson, 2012; Wilson, 2015). Yudovskaya *et al.* (2013) suggested that the satellite Lower Zone bodies of the Northern Limb may all be connected at depth following the discovery of the thick Lower Zone package beneath the Platreef (Figure 7-5).

The Critical Zone, as it is seen in the Eastern and Western limbs of the BIC, is not developed in the same way in the Northern Limb. South of Mokopane, between the Ysterberg-Planknek fault and the Zebediela fault (Figure 7-3), is a succession of rocks, up to 350 m thick, composed of pyroxenite, norite, anorthosites and chromitites known as the Grasvally Norite-Pyroxenite-Anorthosite (GNPA) member (Figure 7-5). The GNPA is in the same stratigraphic position as the Critical Zone, between the Lower Zone and Main Zone. Smith *et al.* (2016), suggests that the GNPA member is likely to be the Platreef equivalent. It has been suggested (van der Merwe, 1976; White, 1994; Kinnaird, 2005; Yudovskaya *et al.,* 2017a; Grobler *et al.,* 2018) that both the GNPA member and the Platreef are the stratigraphic equivalents of the upper Critical Zone in the rest of the BIC. It is, however, still unclear as to whether they represent the exact time equivalence.

7.2.1 Platreef

The Platreef can be traced for approximately 30 km along strike north of the Ysterberg-Planknek fault. Northwards the Platreef transgresses progressively older Transvaal Supergroup sediments and eventually abuts against Archean basement on the northern portion of the Zwartfontein farm (Figure 7-6). The Platreef is approximately 400 m thick in the south and <50 m thick in the north. The Platreef strikes in a north to northwest direction and dips towards the west at 40-45°, although down-dip the angle gradually decreases to an almost horizontal angle with a more regularly layered sequence termed "the Flatreef", which again, is thought to be the upper Critical Zone (Grobler *et al.* 2012; Nodder *et al.,* 2015). The overall geometry of the Platreef seems to have been controlled by the irregular footwall topography (Kinnaird and McDonald, 2018). The Platreef hosts one of the world's largest repository of PGE as well as significant reserves of Ni and Cu (Naldrett, 2010). It is estimated that the Platreef contains reserves of 16.3 million ounces of platinum and palladium (Cawthorn, 1999). The Platreef is a very complex body of diverse lithologies that include igneous, hybrid and contact metamorphic rocks such as feldspathic pyroxenites, gabbronorite, igneous and metamorphic peridotites, serpentinites and a range of hybrid lithologies.

The Platreef is considered to have formed multiple complex sill-like intrusions of mafic and ultramafic compositions (Kinnaird *et al.,* 2005). There are several aspects where the Platreef differs from the Critical Zone, although the major difference is the high degree of contamination with the Transvaal footwall lithologies at the base of the Platreef. As a result of the contamination, the Platreef lacks the cyclicity typical for much of the Bushveld Complex, especially the Critical Zone. Initial thoughts were that chromitites and anorthosite layers were absent from the Platreef package, although recent down-dip drilling on the Ivanplats, Mogalakwena and Akanani projects have revealed some similarities to the Critical Zone (Dunnett *et al.,* 2012; Yudovskaya *et al.,* 2017; Grobler *et al.,* 2018; Beukes *et al.,* 2020; Maier *et al.,* 2020; Mayer *et al.,* 2020).

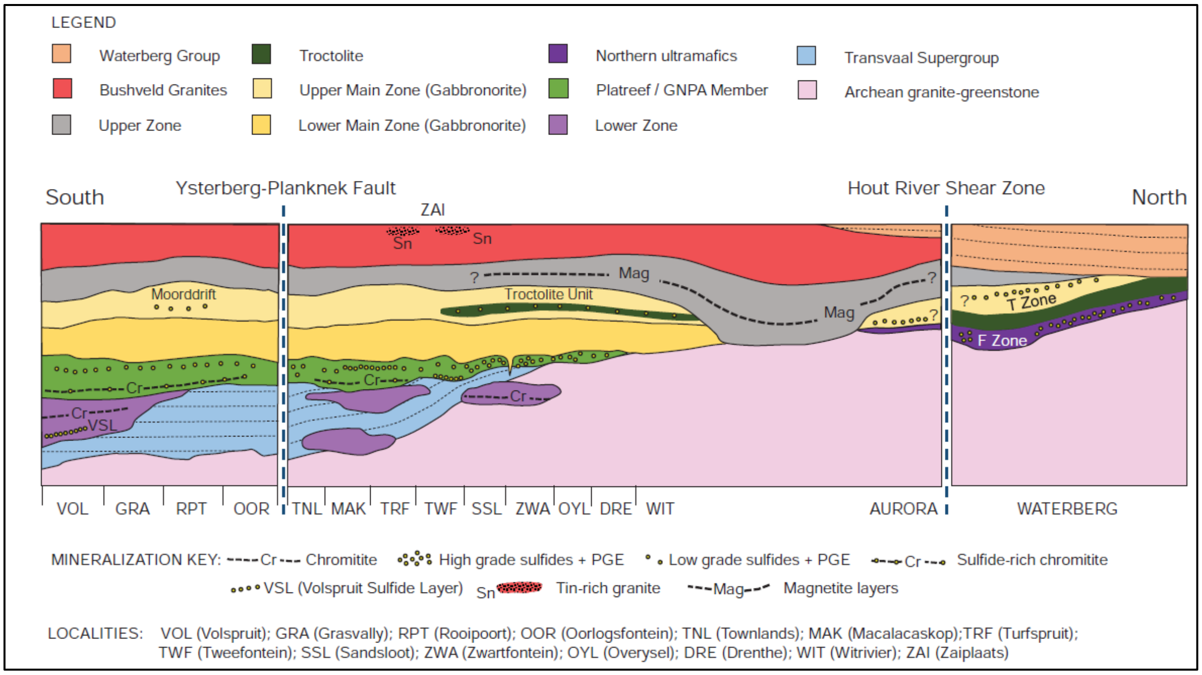


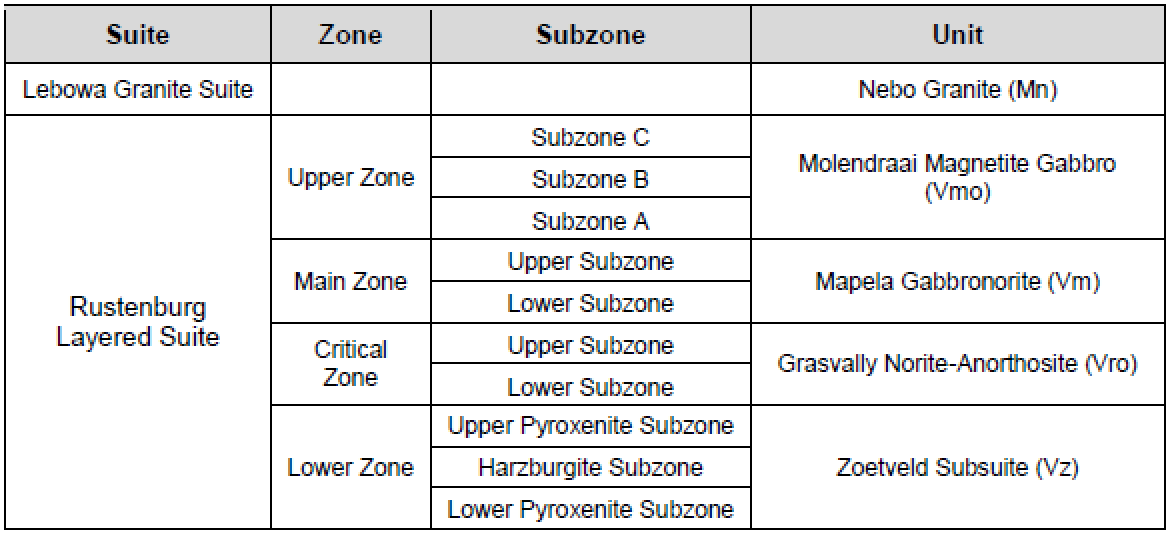
Figure 7-6: Schematic longitudinal section through the Northern Limb of the Bushveld Igneous Complex over the entire strike length (Kinnaird and McDonald, 2018). Note the positions of major east-west or NE-SW-trending structures such as the Ysterberg-Planknek fault and the Hout River Shear Zone the compartmentalise the Northern Limb.

The contact between the Platreef and Main Zone shows that Main Zone gabbronorite cuts down into the Platreef in the Zwartfontein south pit (Holwell and Jordaan, 2006). A fine-grained leuconorite is observed at the base of the Main Zone with textures that exhibit eroded Platreef, indicating that the Main Zone was emplaced after the Platreef had crystallised and began to cool (Holwell *et al.,* 2005). In addition, there are xenoliths of Platreef pyroxenite found in the Main Zone hanging wall gabbronorite. This boundary has been described as a chilled margin between the Platreef and the Main Zone (Holwell *et al.,* 2005; Holwell and Jordaan, 2006).

The Main Zone of the Northern Limb is generally comparable with the Main Zone seen in the rest of the BIC. However, north of the Ysterberg -Planknek fault the Main Zone hosts a 110-160 m thick sequence of olivine-bearing norites called the Troctolite Horizon, approximately 1,100 m above the top contact with the Platreef (van der Merwe, 1976; Ashwal *et al.,* 2005). To date, the Troctolite Horizon has only been described for the Northern Limb and is absent elsewhere in the Main Zone of the BIC. In addition, the orthopyroxene-dominated Pyroxenite Maker of the Eastern and Western limbs, is absent in the Main Zone of the northern Limb (Ashwal *et al.,* 2005; Cawthorn 2012).

The Upper Zone overlies the Main Zone and has an approximate thickness of 1,400 m (Ashwal *et al.,* 2005). The boundary between the Upper Zone and Main Zone is determined by the first appearance of cumulus magnetite, similar to the rest of the BIC (van der Merwe, 1976; SACS, 1980; Ashwal *et al.,* 2005). This zone is composed of alternating layers of gabbro, anorthosite, magnetite-bearing gabbros and olivine-bearing diorites as well as twenty distinct magnetitite layers ranging in thickness from few centimetres to tens of metres (Ashwal *et al.,* 2005; Longridge, 2015). The simplified stratigraphy of the RLS as seen in the Northern Limb of the BIC is provided in Table 7-1.

Table 7-1: Simplified stratigraphy of the Northern Limb of the Bushveld Igneous Complex.



Suite	Zone	Subzone	Unit
Lebowa Granite Suite			Nebo Granite (Mn)
Rustenburg Layered Suite	Upper Zone	Subzone C	Molendraai Magnetite Gabbro (Vmo)
		Subzone B	
		Subzone A	
	Main Zone	Upper Subzone	Mapela Gabbronorite (Vm)
		Lower Subzone	
	Critical Zone	Upper Subzone	Grasvally Norite-Anorthosite (Vro)
		Lower Subzone	
	Lower Zone	Upper Pyroxenite Subzone	Zoetveld Subsuite (Vz)
		Harzburgite Subzone	
		Lower Pyroxenite Subzone	

7.3 Property Geology

The Zebediela Nickel Project area is underlain by the Rustenburg Layered Suite (RLS) which discordantly intruded the Transvaal floor rocks and the Archean granite basement. The geometry of the body is uncertain and while its extent has been mapped on surface by van der Merwe (1978) (*see* Figure 7-3; Figure 7-7), its three-dimensional form remains unclear.

The majority of the bodies are overlain by a brucite-enriched calcrete cap (up to about 7 m based on borehole data) developed from the weathering of the underlying ultramafic body. Two distinct sub-bodies have been mapped by van der Merwe (1978) in the southwestern portion of the prospecting right the Uitloop II body is shown to be underlain by calcareous metasedimentary rocks and overlain by quartzites and hornfels shales, both belonging to the Chuniespoort Group. The Uitloop I body in the northeast of the Project area, is underlain by Archean granitoids and overlain by dolomites and metasediments that form the footwall to the main south-western body (Figure 7-7).

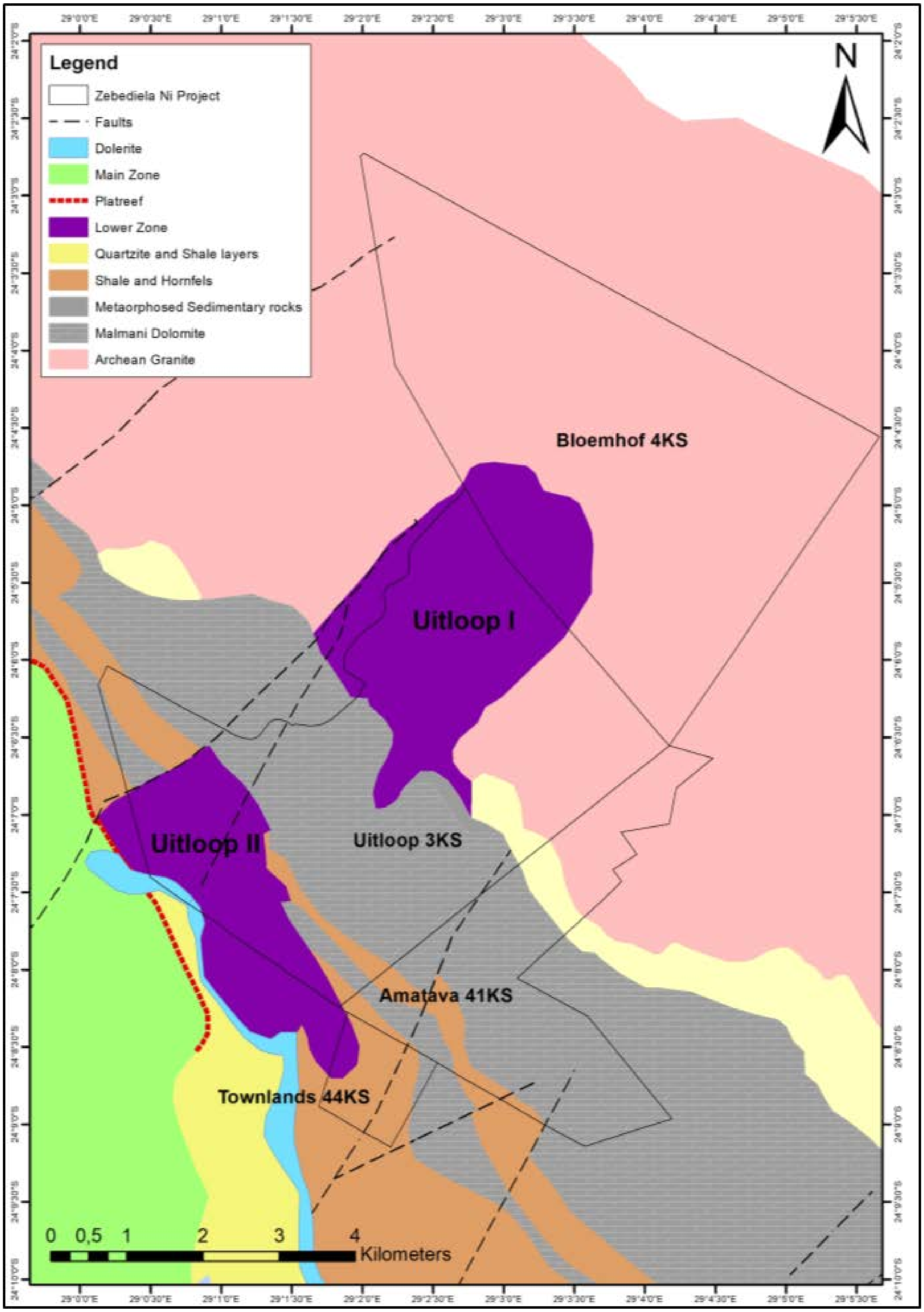


Figure 7-7: Geological map of the Project area and the location of the two Lower Zone bodies (Uitloop I and II), as well as the outcrop of the Platreef on the western side of the southwestern boundary of the Prospecting Right (base geological map modified from van der Merwe, 1978).

Van der Merwe (1978), was able, from surface mapping, to broadly differentiate the body into othropyroxenite and harzburgite (olivine-orthopyroxene cumulate) portions (*seeFigure 7-7).* Drilling of the Uitloop II body, from historical programs, has revealed significant additional lithologies and the main rock type include; dunite, harzburgite and serpentinite (Figure 7-8).Outcrops mapped at surface dip between 10° and 60° to the southwest which is generally steeper than the 10-20° southwest dip of the RLS package in the area. Sections constructed across the Uitloop II body area are strongly suggestive of a steeply southwest-plunging (30-70°) geometry of the body, further highlighting the discordance relative to the country-rock stratigraphy. Because of this discordance, the Uitloop II Lower Zone body on the Prospecting Right is both under-and overlain by carbonate metasedimentary strata of the Chuniespoort Group. Linkage between the Uitloop II body and the Uitloop I Lower Zone body that crops-out to the northeast i.e., up-plunge, is equivocal and has not been proven by historical drilling programs.

Van der Merwe (1978), has mapped the Platreef outcrop on the south-western side of the Uitloop II body slightly outside the Prospecting Right. Here, the Platreef is underlain by both the quartzite and the hornfels shales and is overlain by the Main Zone (Figure 7-7).Drilling in recent years, has intercepted a steeply dipping (~70°), thick succession of Platreef/Critical Zone lithologies overlain by calcrete and younger sediments. The Platreef/Critical Zone is mainly composed of feldspathic pyroxenite (Figure 7-9), with minor intervals of norite, gabbronorite, pyroxenite, olivine-bearing pyroxenite and harzburgite. Thin stingers of chromitite have also been identified in core. The Platreef/Critical Zone is interpreted to follow the strike length of the Penge Formation (shale and hornfels), on the north-eastern side of the Lower Zone Uitloop II body on the Zebediela Nickel Project (*see* Figure 7-7).

A simplified stratigraphy of the Zebediela Nickel Project, showing main lithologies in the different stratigraphic units, is provided in Figure 7-10. Local variations in stratigraphy are to be expected. The simplified stratigraphy shows the BIC stratigraphic unit intercepted in exploration boreholes and some of the stratigraphic units can also be mapped at surface (*see* Figure 7-7).

Figure 7-8: Main lithologies seen in the Lower Zone Uitloop II body: (a) medium-grained serpentinized dunite, (b) poikilitic harzburgite, (c) fine- to medium-grained serpentinite with finely disseminated pyrrhotite and pentlandite sulphides (McCreesh *et al.,* 2019).

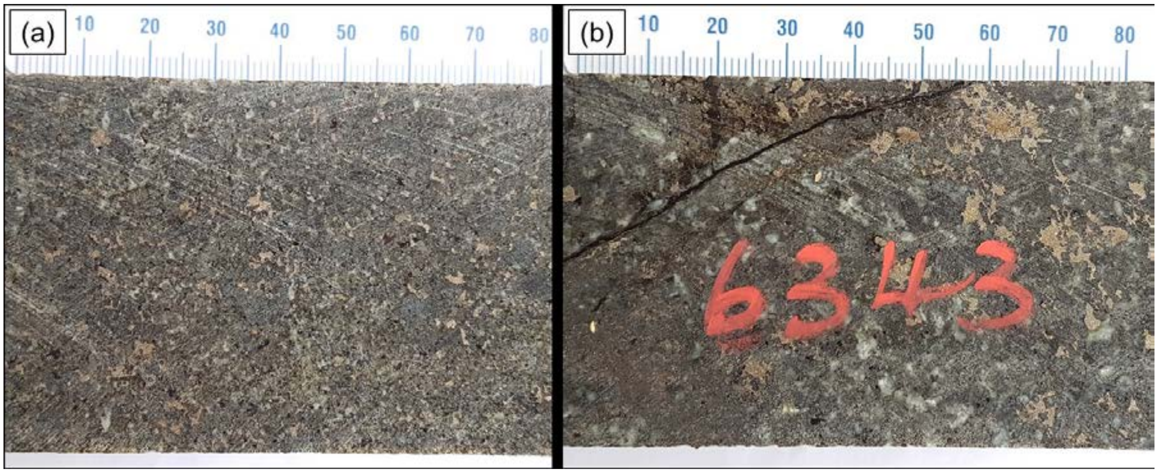


Figure 7-9: Main lithology associated with the Platreef/Critical Zone: (a) fine- to medium-grained feldspathic pyroxenite with finely disseminated pyrrhotite and pentlandite and minor chalcopyrite; and (b) medium-grained feldspathic pyroxenite with disseminated and bleb sulphides of pyrrhotite, pentlandite and minor chalcopyrite around the margins of the other sulphides (McCreesh *et al.,* 2019).

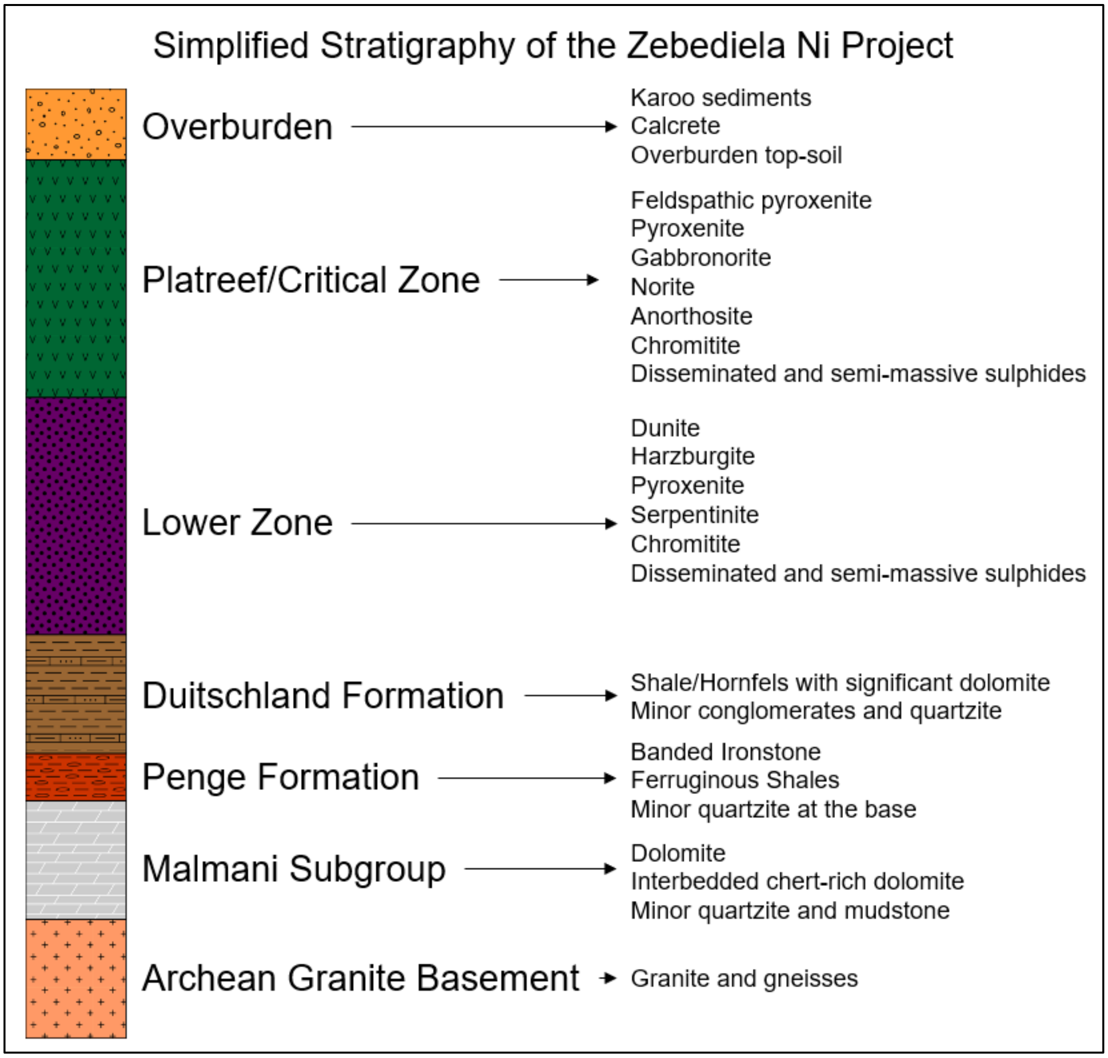


Figure 7-10: Simplified stratigraphy of the main rock units within the Zebediela Nickel Project.

7.4 Property Mineralization

Target mineralization types within the BIC stratigraphy that occur within the Project are shown in Figure 7-11 and Figure 7-12. There are three styles of mineralization being targeted within the Zebediela Nickel Project, with each target type having a different style of mineralization, mineralization mechanism, and differing host lithologies and stratigraphic units (Figure 7-12).

7.4.1 Target Type 1: Lower Zone

This target type includes existing historical nickel sulphide resources associated with low-grade, disseminated nickel-rich sulphide mineralization within the Lower Zone Uitloop II body. The Lower Zone Uitloop II body also contains significant iron minerals in the form of magnetite which is also a potential by-product. Nickel mineralization associated with the Lower Zone Uitloop II body is hosted mostly in a thick package of alternating dunite, serpentinized dunite, serpentinite, pyroxenite and harzburgite.

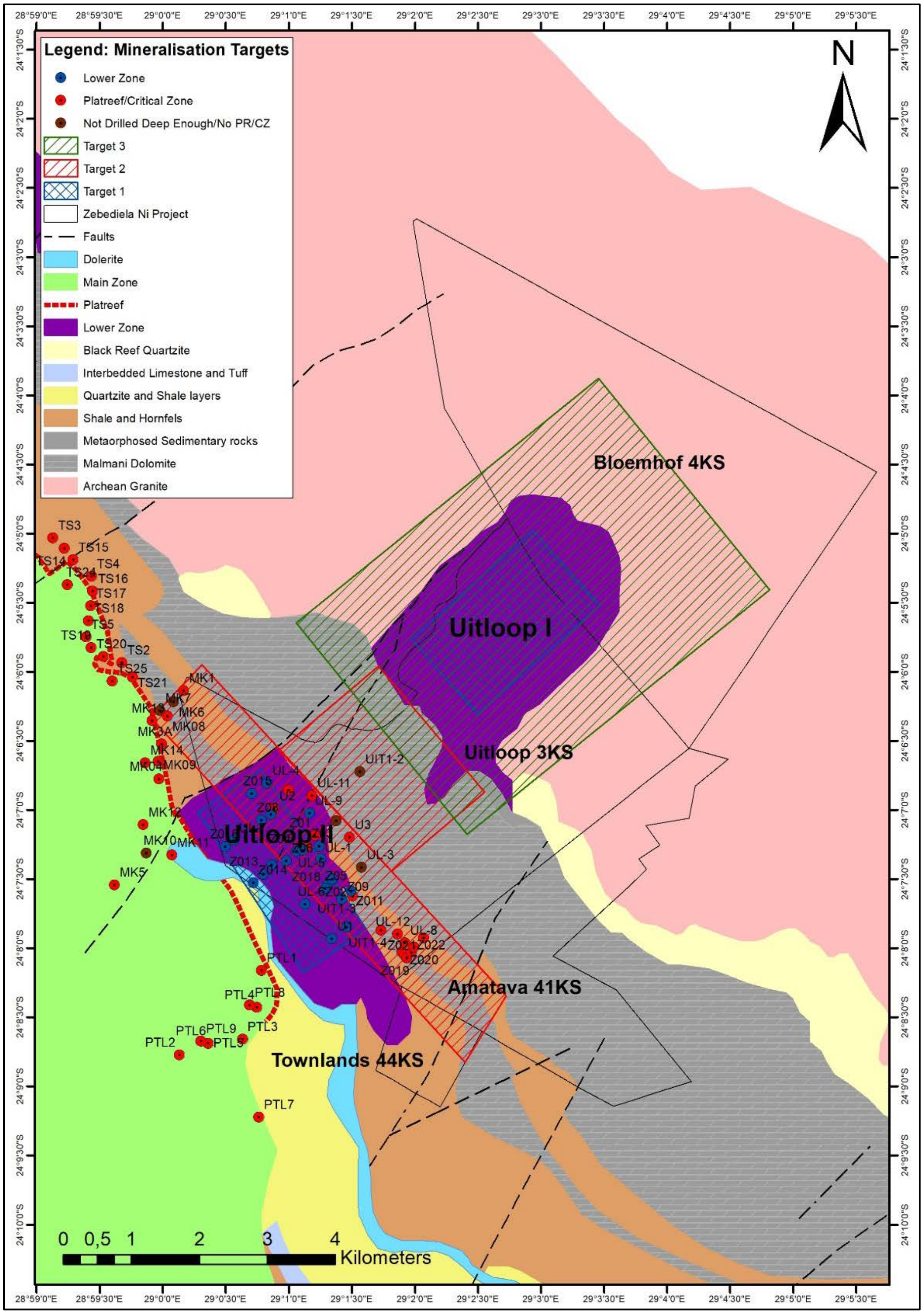


Figure 7-11: Plan geological map showing the three mineralization target types. Type I: approximate extent of known disseminated nickel sulphide mineralization (blue cross-hatching) associated with the Lower Zone Uitloop II body - could also be found in the Uitloop I body. Type II: approximate Platreef stratabound and contact-style mineralization (red hatching). Type III: massive sulphide mineralization (green hatching). Blue dots represent boreholes with Lower Zone intercepts and red dots represent boreholes that have intercepted Platreef lithologies and mineralization (base geological map modified from van der Merwe, 1978).

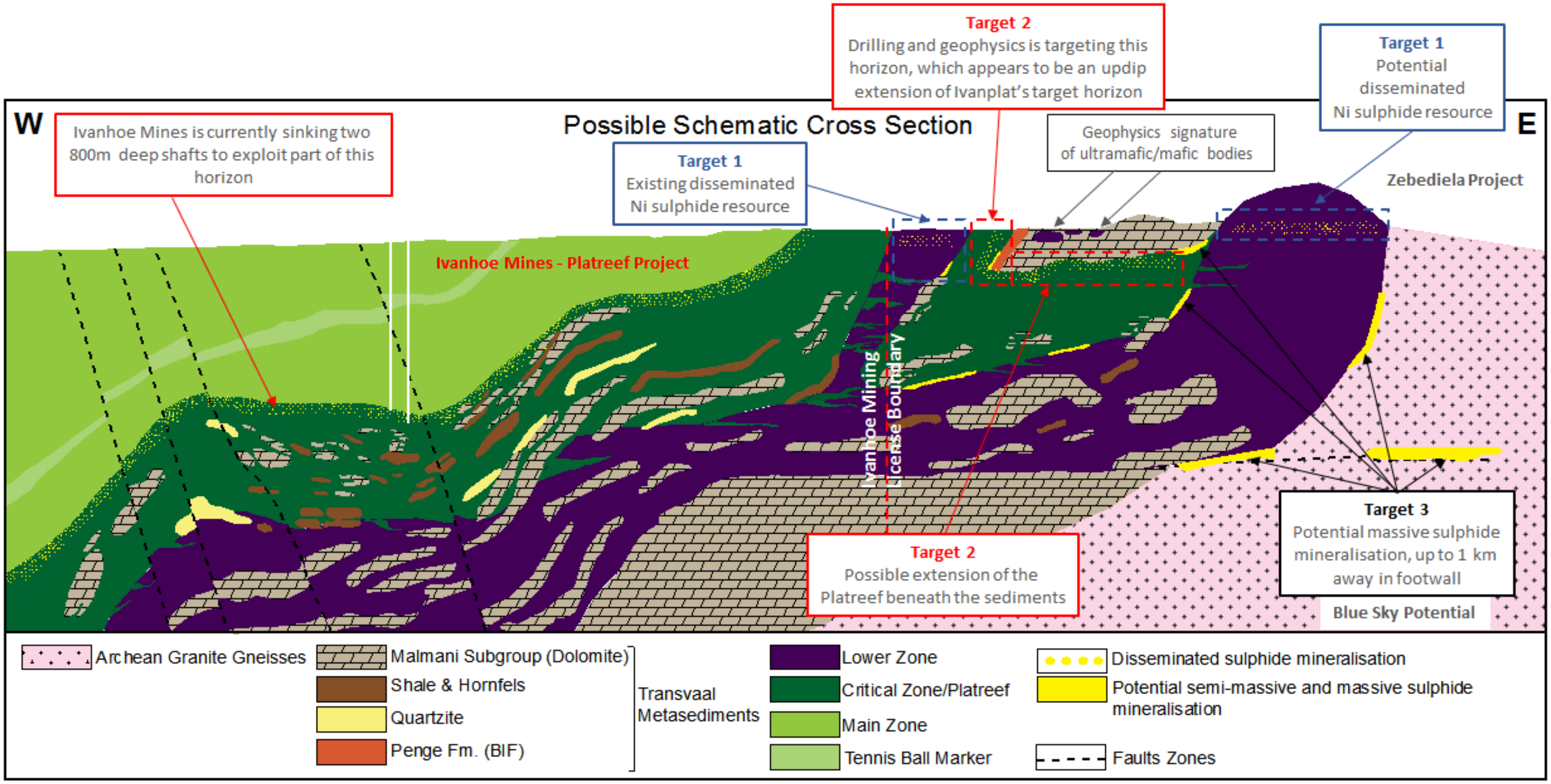


Figure 7-12. Interpreted schematic cross-section through the Property showing the different target types being explored for on the Project.

Sulphide mineralization mainly occurs as fine-grained disseminated pyrrhotite and pentlandite, with minor chalcopyrite and pyrite. Nickel grades are generally a 0.25% Ni with no significant PGE concentrations. At the base of the Lower Zone Uitloop II body metasedimentary units have been intercepted, which may represent xenoliths or the footwall to the intrusion. In the 2017 drilling program, a semi-massive sulphide was intercepted hosted by metasediments. This 2.25 m thick semi-massive sulphide is mainly composed of pyrrhotite, with minor pentlandite, chalcopyrite and pyrite and yielded nickel grades of 1.66% Ni.

There are two hypothesised mechanisms for the nickel mineralization in the Lower Zone Uitloop body: (1) Croll *et al*. (2012), suggested that the low-grade nickel mineralization to be epigenetic in nature, having formed during the release of chalcophile elements from olivine during serpentinization. This serpentinization process is a mineralization mechanism seen in other low-grade disseminated nickel resources in Canada, the Domont intrusion (Eckstrand, 1975; Lewis *et al.,* 2010), in Sweden, the Rönnbäcken deposit (Bradley *et al.,* 2011) and in British Columbia, the Turnagain body (Riles *et al.,* 2011); and (2) magmatic mineralization process: olivine contains higher Ni concentrations in the sulphur-poor Lower Zone sequences but are depleted in Ni-content associated with sulphur-rich sequences which is due to partial Ni extraction into a coexisting sulphide melt (McDonald *et al.,* 2009; Yudovskaya *et al.,* 2013).

The Lower Zone sequence of the Uitloop bodies intruded the Transvaal Supergroup, possibly assimilating and digesting sedimentary sulphur resulting in sulphur saturation, Ni-depletion in ultramafic silicates and enriched disseminated sulphide mineralization as seen in the Uitloop II body. At the base and margins of the Lower Zone body, there is potential for semi-massive sulphides associated with footwall or xenolith lithologies as seen in borehole Z017. The majority of boreholes drilled on the Lower Zone Uitloop II body stopped short of the footwall contact and hence did not intercept the footwall or xenoliths. Yudovskaya *et al.* (2013), suggests that Lower Zone satellite intrusive bodies associated with the Northern Limb are likely connected at depth and that the Lower Zone forms a thick succession of ultramafic lithologies beneath the Platreef.

Like the Uitloop II body, the Uitloop I Lower Zone body has the potential to host low-grade, disseminated nickel sulphides. The Uitloop I body forms a small hill about 1574.10 m high (koppie) as the main lithology is pyroxenite, which is more resistant to weathering and erosion compared to the less resistant dunite which is the main lithology in the Uitloop II body. Mapping suggests that the Uitloop I body contains a dunite core, with an outer layer of orthopyroxenite.

7.4.2 Target Type 2: Platreef/Critical Zone Mineralization

Target type 2 is referred to as Platreef/Critical Zone mineralization and is characterized by two styles, stratabound and contact-style (*see* Figures 7-11 and 7-12). Platreef stratabound mineralized zones contain Ni-Cu-PGE mineralization hosted by disseminated and/or blebby sulphides in a stratigraphic unit up to 150 m thick (Figure 7-13). Contact-style Ni-Cu-PGE mineralization is intimately associated with the footwall contact of the intrusion. Both styles of mineralization have been intercepted in historical and current boreholes on the Zebediela Nickel Project (*see* Figure 7-11).

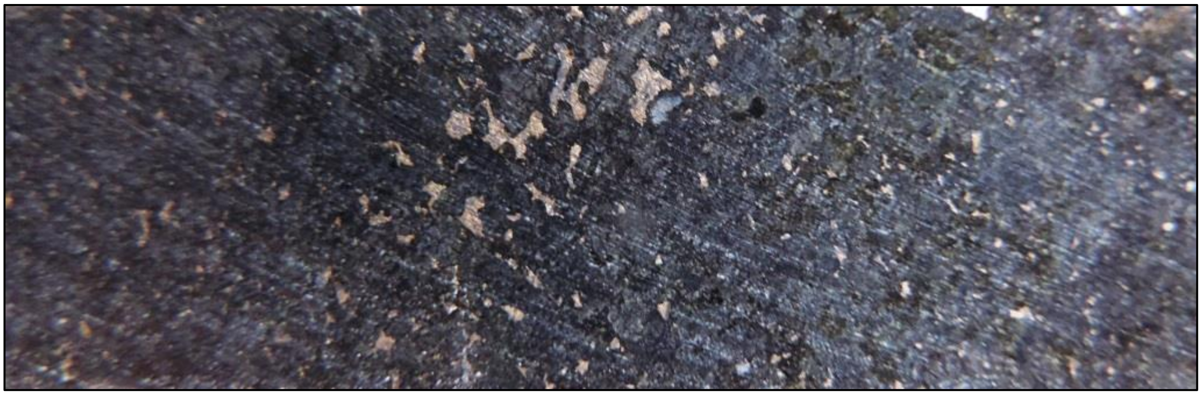


Figure 7-13: Bleb sulphides in drill hole Z022 from the Platreef/Critical Zone.

Platreef stratabound mineralized zones are not lithological defined zones but rather a zone of elevated Ni-Cu-PGE mineralization occurring in the Platreef stratigraphic unit, which is mainly composed of feldspathic pyroxenite, pyroxenite, norite/gabbronorite, anorthosite and harzburgite. Isolated semi-massive sulphides may occur in the stratabound mineralized zones. Distribution of Ni-Cu-PGE in the stratabound mineralized zone is closely related to the distribution of pyrrhotite, pentlandite and chalcopyrite with minor pyrite.

Contact-style Ni-Cu-PGE mineralization is referred to as a reaction zone that transgresses and assimilates the footwall lithologies, a likely external sulphur source. Mineralization is hosted in blebby and/or semi-massive sulphides either at the contact between the Platreef and the hybrid footwall or within the hybrid footwall lithologies.

Semi-massive sulphides associated with both the stratabound and contact style mineralization are mainly composed of pyrrhotite up to 70-80%, with minor pentlandite and chalcopyrite. The highest grades of 2.95% Ni and 0.38% Cu was exposed in the semi-massive sulphides associated with the contact-style mineralization zones. An average grade of 0.56% Ni, 0.17% Cu and 1.88 g/t 3PGE plus Au over a width of 4.82 metres.

Borehole, surface mapping and geophysical evidence, suggests that the Platreef extends for more than 5 km and is generally at depths of <30 m within the Project area (*see* Figure 7-11). The Platreef may outcrop on the southwest side of the Uitloop II body and the Platreef to the east of the Uitloop II body may represent an up-dip extension to the Platreef mineralization seen on the adjacent Ivanplats property, immediately northwest of the Project area (see Section 23).

During a re-logging exercise, Platreef lithologies and mineralization were observed in a number of boreholes which were targeting the Lower Zone Ni sulphide deposits (Target type 1). Boreholes Z01 and Z03 both end in an interval of mineralized feldspathic pyroxenite which was previously not sampled. Boreholes UIT1-3 to UIT1-5 and U3 all intercepted Platreef lithologies and mineralization. Based on these borehole intercepts, the Platreef is interpreted to be steeply dipping, in excess of 45°, extending at depth and adjacent to the Lower Zone Uitloop II body (McCreesh *et al.,* 2019).

7.4.3 Target Type 3: Footwall Mineralization

Target type 3 comprises nickel-rich massive-sulphide bodies which may be located within the ultramafic lithologies close to, or on the footwall contact, or injected up to several hundred metres into the footwall granitic basement rocks (*see* Figure 7-12). These massive-sulphide bodies may be up to 1 km away from the primary BIC. High concentrations of sulphides, up to 10% disseminated and blebby sulphides composed mainly of pyrite, have been noted in the footwall lithologies of the Platreef and Lower Zone bodies across the Northern Limb, hosted mainly in the shales and hornfels (McCreesh *et al.,* 2019). Naldrett (2004) and Naldrett (2010), also suggested the possibility for semi-massive to massive magmatic sulphide bodies to occur within the footwall of the BIC.

7.4.3.1 Uitkomst Complex

The Uitkomst Complex provides a mineralization model that may be applicable to the Zebediela Nickel Project, where there is potential for massive-sulphides at the base of the Uitloop Lower Zone bodies or within the footwall Archean granite basement.

The Uitkomst Complex, a satellite intrusion to the BIC, contains the Nkomati nickel deposit, a high-grade, nickel-rich massive-sulphide deposit discovered several metres into the footwall granites (Theart and de Nooy, 2001; Maier *et al.,* 2004). Like the Uitloop II body, the Uitkomst Complex contains low-grade disseminated nickel-rich sulphides hosted by dunite, harzburgite and pyroxenite.

The Uitkomst Complex and the Uitloop I and II bodies are both of Lower Zone/Critical Zone affinities and both intruded similar sequences of Transvaal Supergroup units, up against Archean granite basement. It would appear that both intrusions would have also assimilated a large amount of country rock, thus upgrading the concentration of sulphur in the magma, due to the high amount of sulphur in the assimilated host sedimentary rocks. The Uitkomst Complex is interpreted as a chonolith (pipe-like) structure, whereas the Uitloop bodies are interpreted to represent conduit-type intrusions (Clarke *et al.,* 2009).

8.0 DEPOSIT TYPES

Globally, layered igneous intrusions are the most important source of PGE, which form as a result of sulphide immiscibility in the magma triggered by magma mixing/contamination or physical changes in the magma chamber that may result in changes to the stability fields of various metal-enriched phases.

The Paleoproterozoic (2.06 Ga) Bushveld Igneous Complex (“BIC”) is a large layered igneous intrusion (covering >65,000 km^2), comprising an early bimodal volcanic sequence (Rooiberg Group), followed by a thick (up to 9 km) mafic-ultramafic basal sequence (Rustenburg Layered Suite), and overlain by a felsic roof with granitic and granophyric constituents (Lebowa Granite and Rashoop Granophyre suites). It is the largest global repository of PGEs, hosting about 75% of the world’s platinum resources (Naldrett *et al.,* 2009), along with chromitite and vanadium, and also hosts a significant amount of Ni and Cu within its lower mafic-ultramafic portion (Cawthorn, 2010). The upper parts of the complex host large, laterally extensive magnetite layers which are highly enriched in vanadium and titanium.

Two main PGE deposit types occur within the BIC (Peters *et al.,* 2020):

1. Relatively narrow (maximum 1 m wide) stratiform layers (reefs) that occur towards the top of the Upper Critical Zone (UCZ), typically 2 km above the base of the intrusion (Merensky reef-style), mainly found in the Western and Eastern Limbs. These narrow zones have been the principal targets for mining in the past; however, more recently wider zones with more irregular footwall contacts have been mined (referred to as potholes).
2. Contact-style mineralization at the base of the intrusion (Platreef-type) occurs mainly in the Northern Limb.

8.1 Northern Limb and Platreef

In general, within the Northern Limb, the Platreef comprises a variably layered, composite norite–pyroxenite–harzburgite intrusion that lies at the base of the BIC, in contact with metasedimentary and granitic floor rocks (Peters *et al.,* 2020).

McDonald and Holwell (2011), summarized the principal features that characterize the Platreef and Northern Limb (Peters *et al.,* 2020):

- The Platreef remains a complex and enigmatic deposit;
- Stratigraphic relationships with other stratiform deposits such as the Merensky and UG2 reefs have been suggested;
- The extent to which the Northern Limb was connected to the rest of the BIC across the Thabazimbi–Murchison Lineament (TML Fault line) remains to be established;
- The Platreef represents a complex of sills intruded into basement granite-gneiss, Transvaal Supergroup sediments or pre-Platreef Lower Zone intrusions;
- Intrusive relationships of the Main Zone gabbronorites, into solidified and deformed Platreef, removes the Main Zone as a source of metals for the Platreef;
- Mineral chemistry, bulk geochemistry, and Sr, Nd, and Os isotope geochemistry of the Platreef are most consistent with an ultramafic (Critical or Lower Zone) component’

- Platreef Nd values and 187Os/188Os initial osmium isotope ratios overlap with the Merensky Reef but not the Upper Critical Zone;
- Conventional and mass-independent S isotopes suggest a primary mantle source of S that was overprinted by the addition of local crustal S where Platreef intruded pyrite-rich shales. Assimilation of S is viewed as a modifying process, not as the primary trigger for mineralization.

Two emplacement models are considered to be the most likely to explain Platreef style mineralization (McDonald and Holwell, 2011):

1. Platreef sulphides may have been derived from the same magma(s) that formed the Merensky Reef in the central part of each of the Bushveld limbs and which were injected up and out along intrusion walls as the chamber expanded.
2. Alternatively, the sulphides may have formed in pre-Platreef staging chambers for Lower Zone intrusions where they were upgraded by repeated interactions with batches of Lower Zone magma. The sulphides were subsequently expelled as a crystal-sulphide mush by an early pulse of Main Zone magma that broke into and spread through the earlier Lower Zone magma chambers.

8.1.1 PGEs in the Platreef

The term Platreef style mineralization is referred to mineralization that forms from contamination and sulphur precipitation mechanism rather than the specific stratabound unit and is generally concentrated proximal to the footwall of the BIC. The precipitating mechanism is attributed to either additional influx of new magma, a change in pH of the cooling magma, the assimilation of silica or the incorporation of additional sulphur compounds from external sources.

The Platreef is considered to have formed from multiple complex sill-like intrusions of mafic and ultramafic compositions (Kinnaird *et al.,* 2005). The distribution of discrete PGE horizons within the Platreef is generally controlled by stratigraphic position with the uppermost part of the Platreef hosting the highest PGE grades.

8.2 Nickel in the Bushveld Complex

The BIC and its mafic-ultramafic portion, the Rustenburg Layered Suite, is not typically regarded as a globally important nickel source, as most economic nickel deposits globally are produced from massive sulphide layers associated with ultramafic rocks such as komatiites or ultramafic intrusions.

Mudd and Jowitt (2014), recognised that, in terms of contained nickel, the Platreef contains three of the top ten global nickel sulphide deposits in the form of Ivanhoe Mine’s Platreef Project, Anglo American Platinum’s Mogalakwena Mine and Blue Rhino’s Zebediela Project (Table 8-1:Table 8-1).

Table 8-1: Ten largest nickel sulphide projects by contained nickel (Mudd and Jowitt, 2014)

Mine Name	Status	Deposit type	Ni (kt)	Ore (Mt)	Ni (%)	Cu (%)	Co (%)	Other	Company (% ownership)
Platreef Project	Deposit	Magmatic Sulphide	7 942	3 610,00	0,220	0,120	-	PGEs	Ivanplats 100%
Kola Peninsula	Operating	Magmatic Sulphide	6 907	1 030,00	0,670	0,330	-	PGEs	Norilsk Nickel 100%
Mogalakwena	Operating	Magmatic Sulphide	6 319	3 510,80	0,180	0,100	-	PGEs	Anglo American Platinum 100%
Jinchuan	Operating	Magmatic Sulphide	6 000	432,00	1,390	0,880	0,025	PGEs	Jinchuan Nickel 100%
Dumont	Deposit	Magmatic Sulphide	5 653	2 105,30	0,270	-	0,011	PGEs	Royal Nickel Corp 100%
Talnakh	Operating	Magmatic Sulphide	5 215	1 638,30	0,320	0,530	-	PGEs	Norilsk Nickel 100%
Noril'sk-Talnakh	Operating	Magmatic Sulphide	4 118	462,70	0,890	1,850	-	PGEs	Norilsk Nickel 100%
Zebediela	**Deposit**	**Magmatic Sulphide**	**3 955**	**1 600,50**	**0,247**	-	-	**PGEs**	**Zebedeila Nickel Company 100%**
Turnagain	Deposit	Magmatic Sulphide	3 793	1 841,80	0,210	-	0,013	-	Gigametals 100%
Clarion-Clipperton	Deposit	Hydrothermal Ni	3 696	308,00	1,200	1,100	0,240	Mn	Nautilus Minerals 100%

Massive sulphides, however, are almost completely absent from the RLS and although the RLS hosts a significant amount of nickel in the PGE-bearing Merensky Reef and Platreef (and to a much smaller extent the UG2), the Bushveld Igneous Complex *sensu strictu* does not host any nickel mines, with all nickel being produced as a by-product during extraction and beneficiation of the platiniferous horizons.

8.2.1 The Nkomati Mine

The Nkomati Mine, the only primary nickel mine in South Africa, is located within the Uitkomst Complex, a satellite, pipe-like intrusion related to the BIC. Production at the Nkomati Mine is from discrete massive and disseminated nickel sulphide zones, together with layered chromitite and low-grade PGEs (*see* Section 7.4.3.1).

8.2.2 The Uitloop Body

The Rustenburg Layered Suite of the BIC intrudes into the footwall lithologies on the Project area. Two ultramafic bodies of Lower Zone affinity occur within the Project area, known as Uitloop I (northeastern portion of the Project) and Uitloop II (southwestern portion of the Project). Drilling has identified steeply dipping Critical Zone lithologies adjacent to the southwestern Uitloop II body. These Critical Zone lithologies have a strong affinity with the Platreef, which outcrop in the southwest side of the Project, and overlain by the mafic Main and Upper zones of the RLS.

8.2.2.1 Analogous Nickel Deposits

In many respects, the Uitloop II mineralized body shares broad similarities with other significant serpentinized ultramfic-hosted disseminated nickel sulphide resources reported in Canada and Sweden. In Canada, comparisons can be made with the Turnagain Ni-Co Project in British Columbia (Scheel *et al.,* 2005), and in Sweden, comparisons can be made to the Rönnbäcken deposit (Bradley *et al.,* 2011). The komattite-hosted (Mt. Keith type deposits) Dumont Nickel Deposit in Quebec (Staples *et al.,* 2013) and the Crawford Nickel-Cobalt Sulphide deposit, near Timmins, Ontario (Jobin-Bevans *et al.,* 2020) are additional examples of large tonnage, low grade, disseminated sulphide nickel hosted by highly serpentinized ultramafic rocks.

The Turnagain Ni-Co Project is being developed by Gigametals Corporation (https://www.gigametals.com/projects/turnagain-project/). The Turnagain deposit is an Alaskan-type serpentinized ultramafic intrusion with grades averaging about 0.22% Ni, hosted by what is interpreted as primary nickel sulphides (Riles *et al.,* 2011).

In Sweden, Nickel Mountain Resources (https://se.nickelmountain.se/) is exploring the Rönnbäcken deposit which comprises disseminated nickel mineralization hosted within an extensively serpentinized ultramafic body. It averages about 0.18% Ni and Bradley *et al*. (2011), consider much of the mineralization to be epigenetic in nature, having formed from the release of chalcophile elements during the serpentinization of olivine cumulates.

The Dumont Nickel Deposit (https://dumontnickel.com/en/dumont-project/), being developed by Magneto Investments L.P., is interpreted to be hosted by an Archaean sill of komatiitic affinity that is highly serpentinized and with reported nickel grades of approximately 0.24% Ni (Lewis *et al.,* 2010).

The Crawford Ni-Co Sulphide Project includes the Crawford Ni-Co-PGE deposits (Main and East zones), interpreted to be hosted by highly serpentinized, thick komatiitic flows with nickel grades in the Main Zone ultramafic body ranging from 0.15% to +0.35% Ni. The project is being developed by Canada Nickel Company (https://canadanickel.com/).

This information is presented for comparative purposes only, and with the exception of the Crawford Ni-Co Sulphide Project, has not been independently verified by the Principal Author and qualified person. Technical information regarding these analogous nickel deposits is not necessarily indicative of the mineralization on the Property that is the subject of the Report.

9.0 EXPLORATION

The Issuer, Blue Rhino, through various subsidiaries and related companies, has completed mineral exploration programs on the Property since 2007 with the first exploration program conducted by Lesego Platinum Uitloop (Pty) Ltd. Previous, historical exploration programs consisted of mapping, soil geochemistry, geophysical surveys and drilling programs (*see* Section 6). Details of drilling programs completed by the Issuer and its various subsidiaries since 2007 are provided in Section 10.

9.1 Lesego Platinum Uitloop (Pty) Ltd (2007)

Lesego Platinum Uitloop (Pty) Ltd. was awarded various prospecting rights in 2007 and began exploration at that time, targeting Platreef style mineralization within the Uitloop 3 KS Property (Figure 9-1). MSA Geoservices was appointed by Lesego Platinum Mining to undertake and manage an exploration program aimed at investigating and delineating platinum and base metal mineralization on their Uitloop 3 KS property (Lowman, 2007).

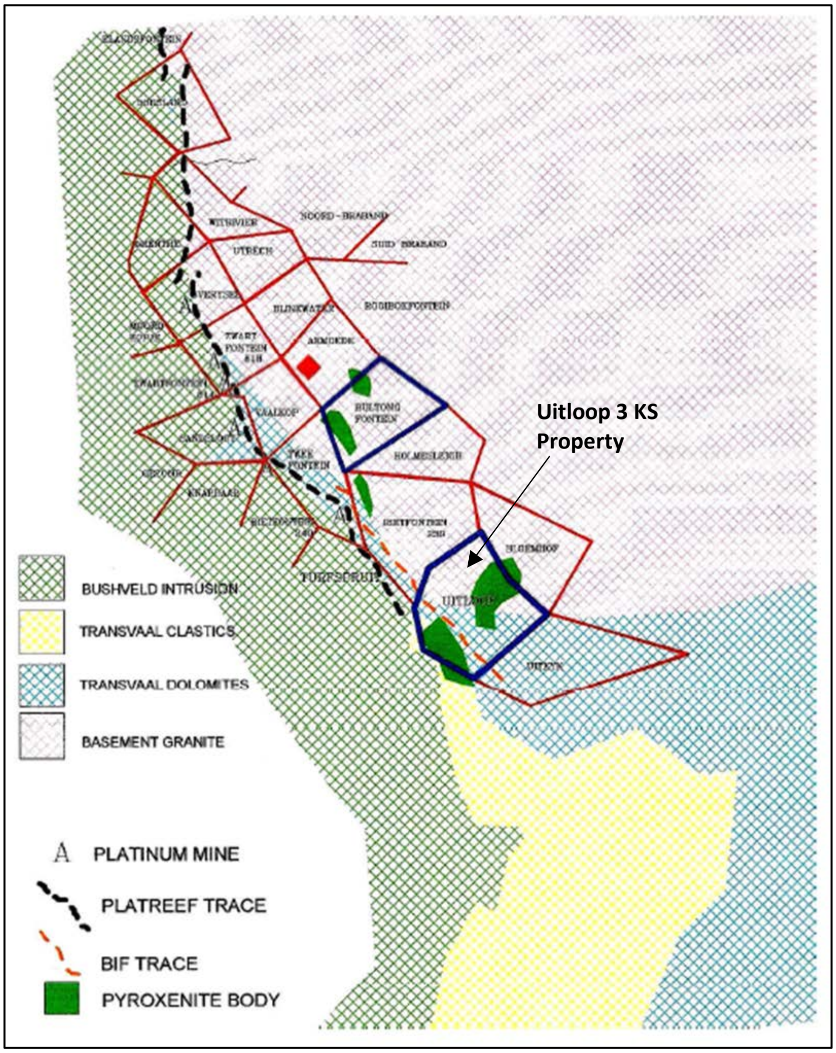


Figure 9-1: General geological map of the Northern Limb, showing the location of the Uitloop 3 KS property, trace of the banded iron formation, and locations of satellite pyroxenitic bodies (green) including Uitloop I and II on the Uitloop 3 KS property (Lowman, 2007).

9.1.1 Soil Sampling

Previous soil sampling and drilling programs had indicated the existence of anomalous copper and nickel values on the Uitloop 3 KS property. The exploration model interprets these values as possible Platreef style mineralization. To follow up on previous work, a soil sampling program was completed in February 2007. Figure 9-2 shows the geochemical traverse lines, which were orientated at approximately 052Az. Contour plots for Ni and Cu assay results are shown in Figure 9-3 and Figure 9-4.

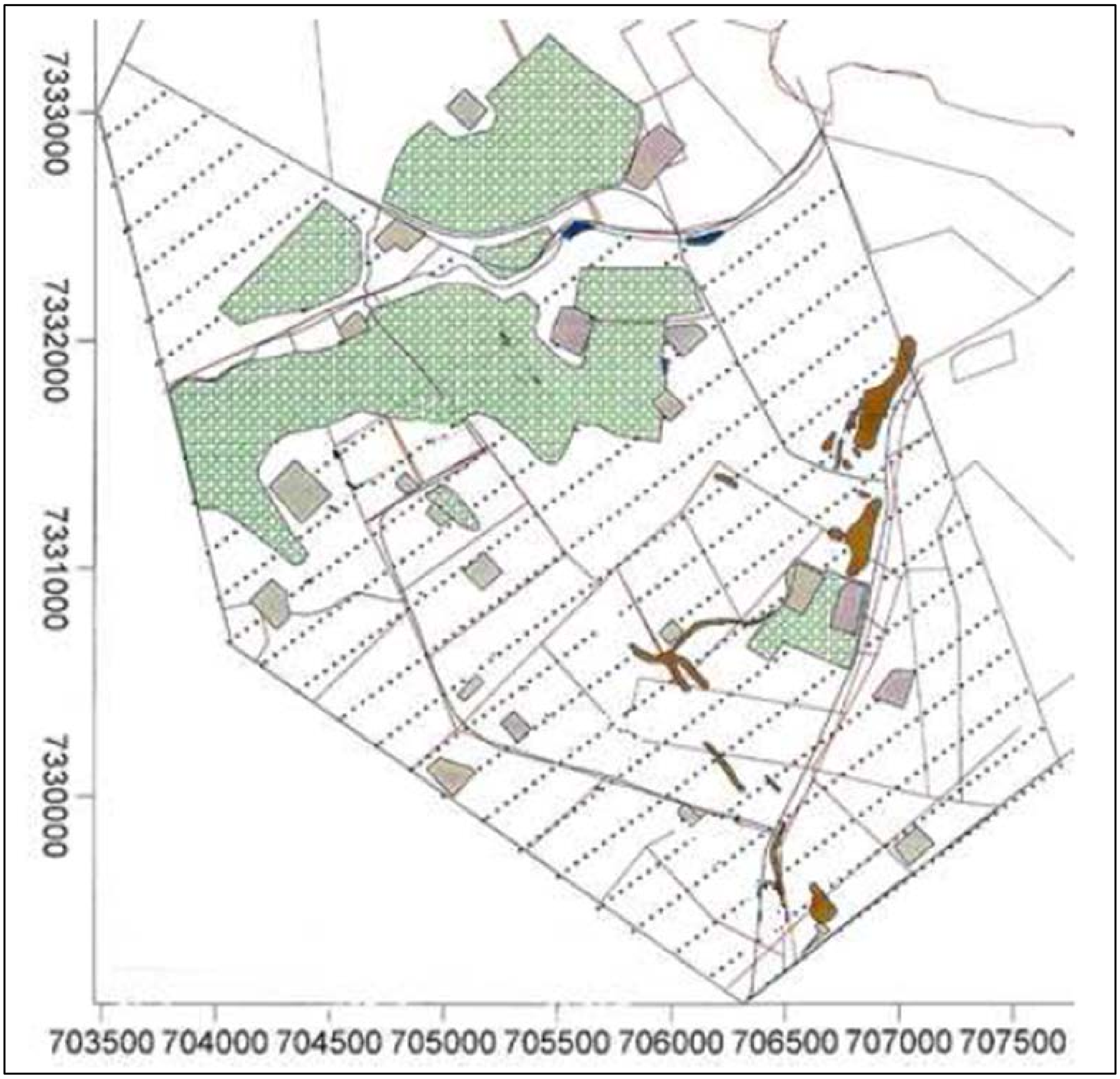


Figure 9-2: Lesego Platinum Uitloop geochemical sampling traverse lines and cultural features (2007).

Results confirmed and outlined more precisely historical geochemical anomalies. Nickel is elevated along a broad strip in the southwestern portion of the Property, running parallel to, and approximately bounded by the outcropping of banded iron formation ("BIF") (Figure 9-3). A further, less intense semi-rectangular anomaly occurs to the east of the banded iron formation outcrop.

The previously identified copper anomaly in the southernmost corner of the Property has been further outlined (Figure 9-4). This highly anomalous copper zone and an adjacent relatively lower tenor copper zone are also bounded along their northwestern boundary by the outcrop position of the banded iron formation. The large copper anomaly near the centre of the Property was previously trenched by FVA and confirmed to be caused by contamination from agricultural chemicals.

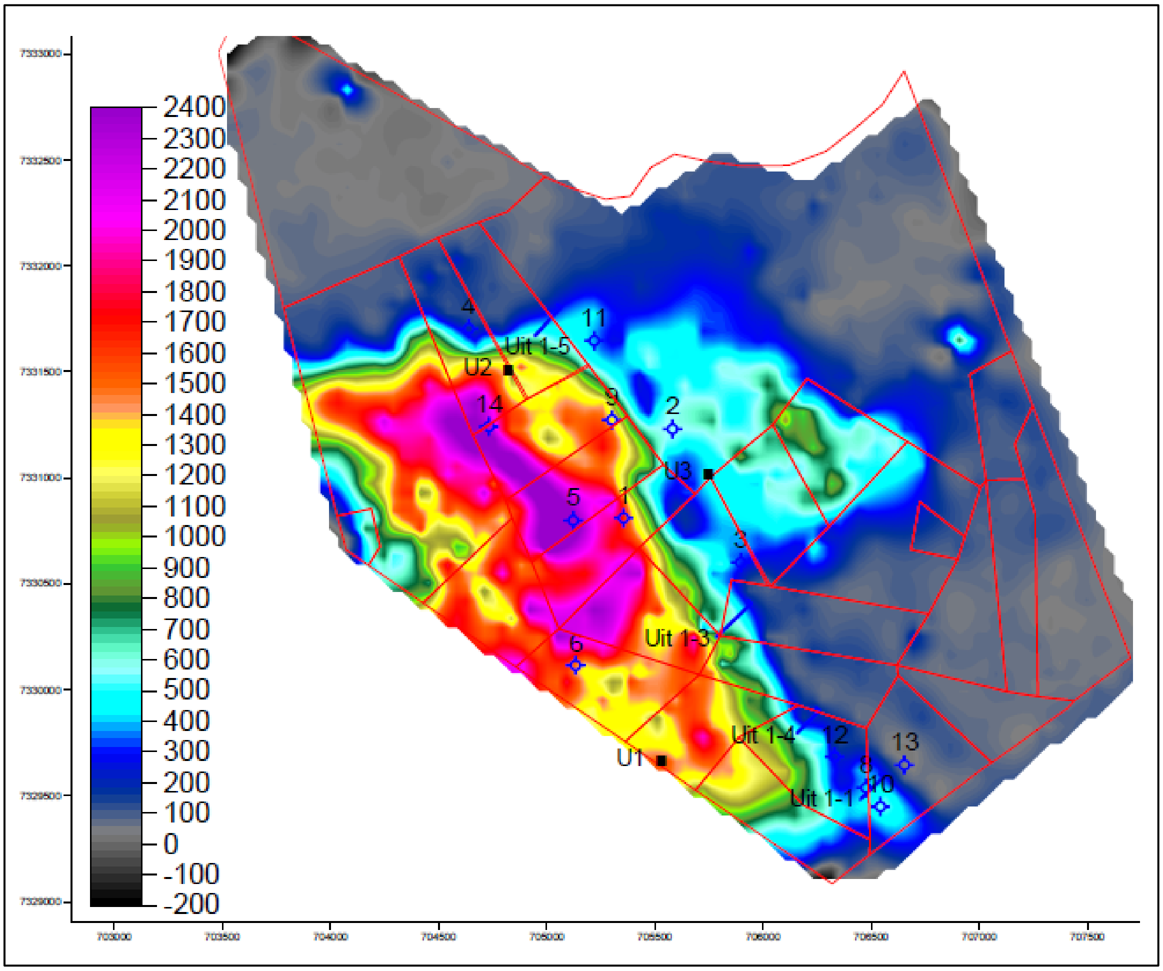


Figure 9-3: Soil geochemistry contours showing ppm nickel results and approximate positions of historical UIT series (labelled Uit) and UL series (numbered blue 4 point stars) boreholes and 2007 U series (black squares) boreholes.

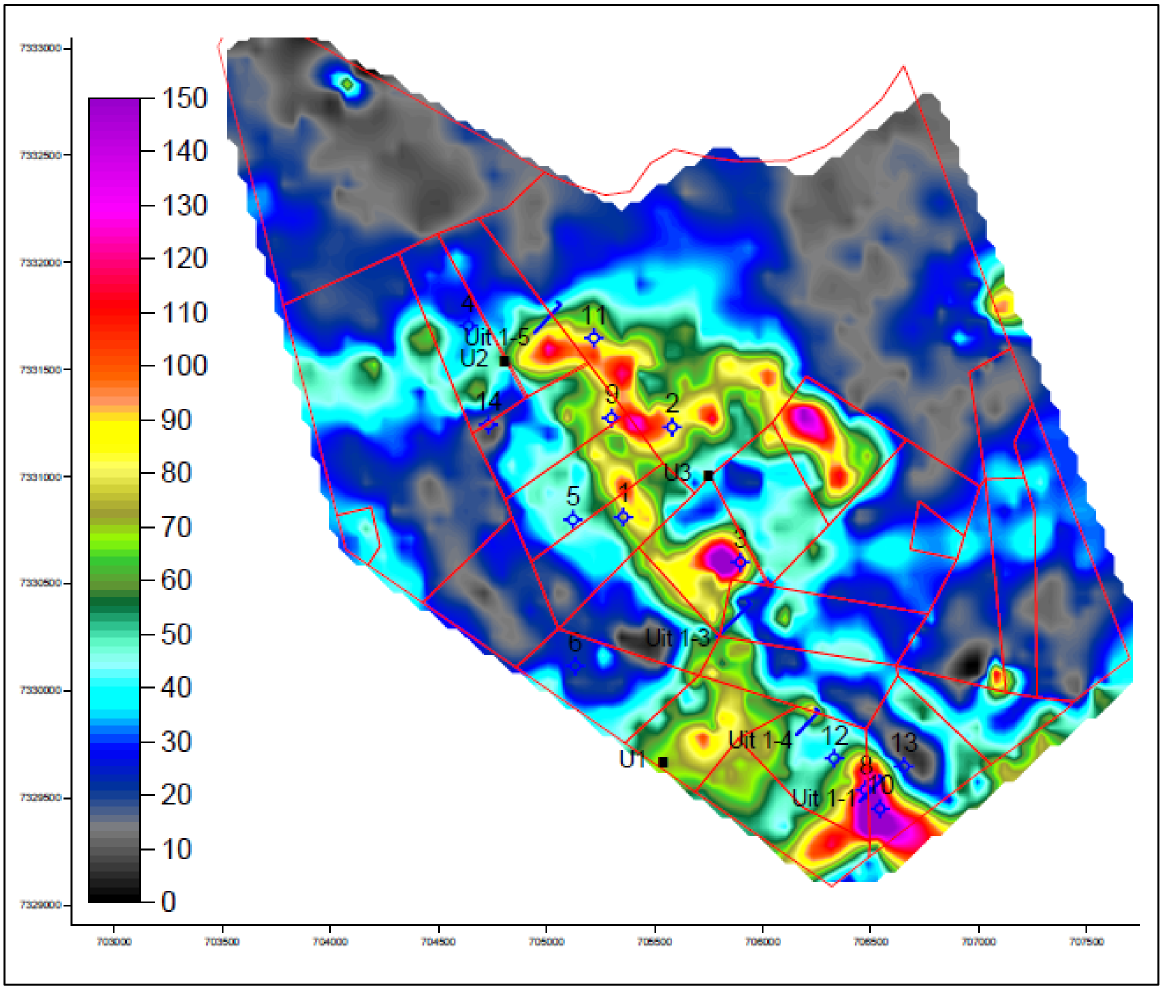


Figure 9-4: Soil geochemistry contours showing ppm copper results and approximate positions of historical UIT series (labelled Uit) and UL series (numbered blue 4 point stars) boreholes and 2007 U series (black squares) boreholes.

9.2 Lesego Platinum Uitloop (Pty) Ltd (2018)

In 2018, Lesego conducted further geological mapping to determine a more detailed geological understanding of the Project area. The first mapping exercise took place along the Rooisloot River section (Figure 9-4) (McCreesh *et al.,* 2019). Locations of stations along the river are shown in Figure 9-4 and summary descriptions of the sample stations are provided in Table 9-1.

Table 9-1: Geological field station information from the Rooisloot River section (McCreesh *et al.,* 2019).

Station	Stratigraphy	Description
ZEBSS002	Platreef/Critical Zone	pyroxenite/feldspathic pyroxenite
ZEBSS003	Platreef/Critical Zone	Contact: feldspathic pyroxenite and quartzite
ZEBSS004	Platreef/Critical Zone	Contact: feldspathic pyroxenite/pyroxenite and quartzite
ZEBSS005	Platreef/Critical Zone	Contact: feldspathic pyroxenite/pyroxenite and granite
ZEBSS006/007	Platreef/Critical Zone	Contact: feldspathic pyroxenite/pyroxenite and granite
ZEBSS008	Platreef/Critical Zone	Contact: feldspathic pyroxenite/pyroxenite and granite
ZEBSS009	Footwall	calcrete/weathered dolomite/conglomerate
ZEBSS010	Footwall	calcrete/weathered dolomite/conglomerate
ZEBSS011	Footwall	dolomite interbedded with shale
ZEBSS012	Contact	pyroxenite interacting with dolomite
ZEBSS013	Footwall	contact between dolomite and shale
ZEBSS014	Footwall	contact between dolomite and shale
ZEBSS015	Footwall	dolomite
ZEBSS016	Footwall	dolomite
ZEBSS017	Footwall	dolomite, contact with calcrete
ZEBSS018	Footwall	dolomite, contact with calcrete
ZEBSS019	Footwall	dolomite interbedded with chert
ZEBSS020	Footwall	dolomite interbedded with chert

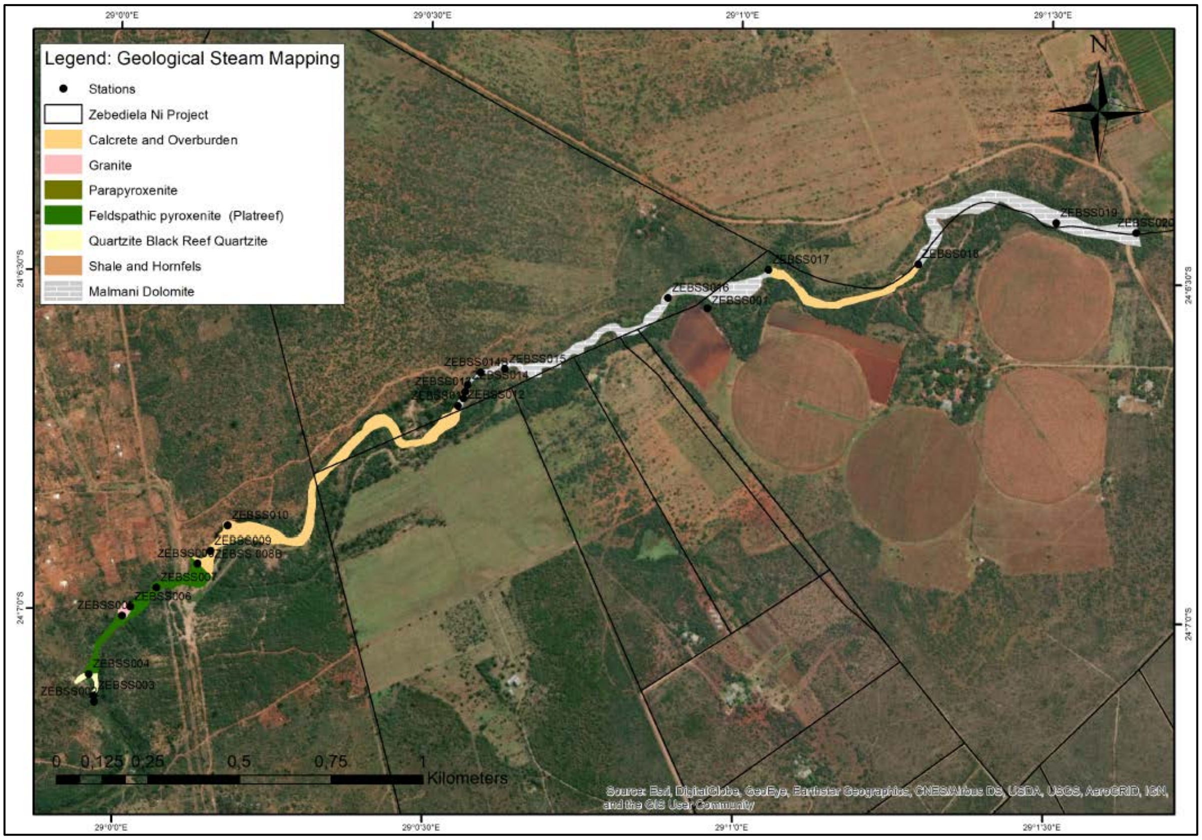


Figure 9-1: Geological field mapping results and station locations along the Rooisloot River, Zebediela Nickel Project (McCreesh *et al.,* 2019).

The second phase of mapping took place on the farm Bloemhof 4 KS and on a small portion of the farm Uitloop 3 KS (Figure 9-5). Here, only two major rock types were identified; medium-grained orthopyroxene associated with the Uitloop I Lower Zone body and medium to coarse-grained granite associated with the Archean granite-gneiss basement. On the small portion of the farm Uitloop 3 KS extremely weathered and altered (mainly serpentinite) dunite were associated with the base of the Lower Zone Uitloop I body. Towards the southwestern portion of the mapping area on the farm Uitloop 3 KS altered Malmani dolomite was mapped (Figure 9-5).There was also a high amount of overburden and calcrete in areas of this mapping exercise.

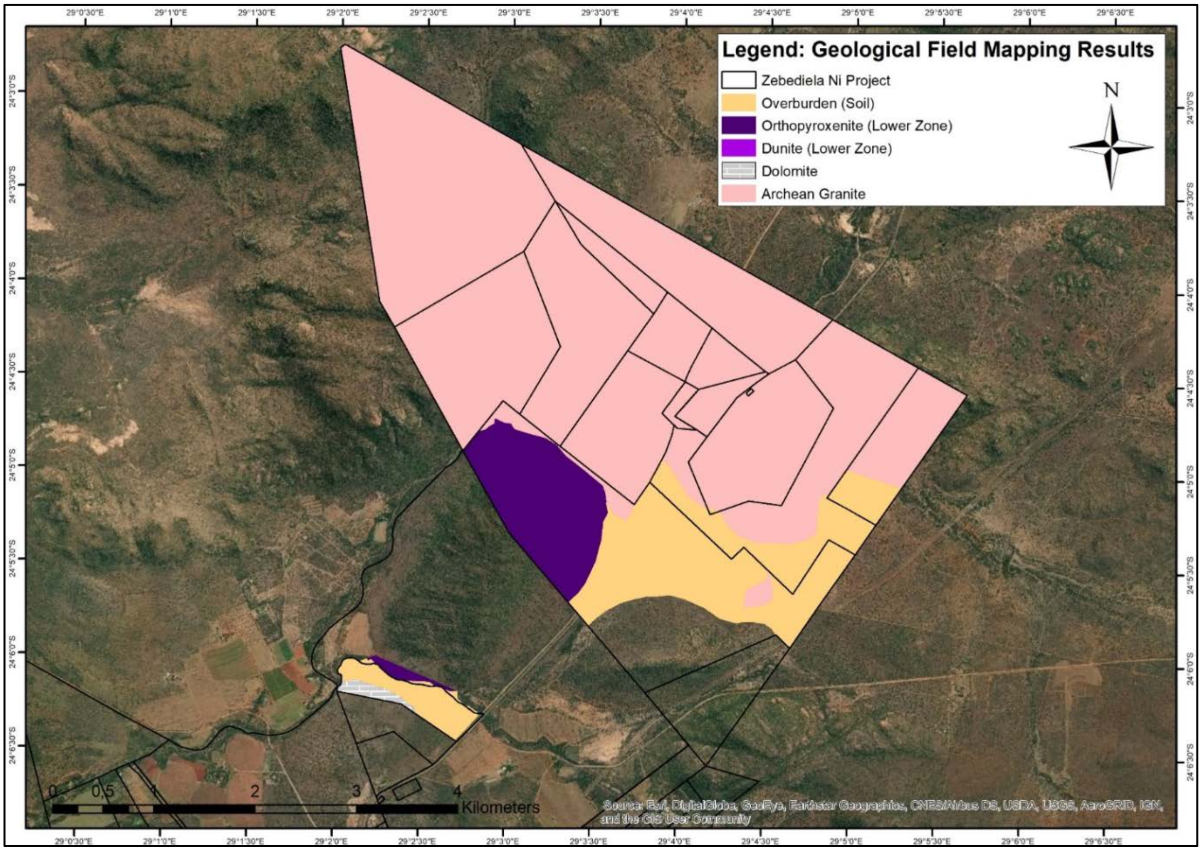


Figure 9-5: Geological field mapping results for the farms Bloemhof 4 KS and Uitloop 3 KS from the 2018 mapping program (McCreesh *et al.,* 2019).

9.3 URU Metals Ltd (2018)

During August 2018, GAP Geophysics carried out a ground geophysical program comprising time-domain Induced Polarization (IP)/ Resistivity (Res) and ground magnetometer surveys over the Zebediela Project Area on the Farm Uitloop, on behalf of URU Metals Ltd (Figure 9-6). The IP/ Resistivity data acquisition program was subcontracted to Geophysical Surveys and Systems (GSS) while ground magnetometer surveys were carried out by GAP Geophysics personnel. Survey planning plus data acquisition and processing quality control were managed by GAP Geophysics, who were also responsible for data interpretation.

The geophysical survey aimed at: (a) mapping highly polarizable, sheet-like disseminated sulphide bodies hosting nickel (pentlandite) mineralization in the BIC Lower Zone rocks; and (b) mapping the distribution of serpentinized units via the IP and magnetic responses of accessory magnetite released in the serpentinization process, along with any significant pyrrhotite in the sulphide-rich zone (Boitshepo *et al.,* 2018).

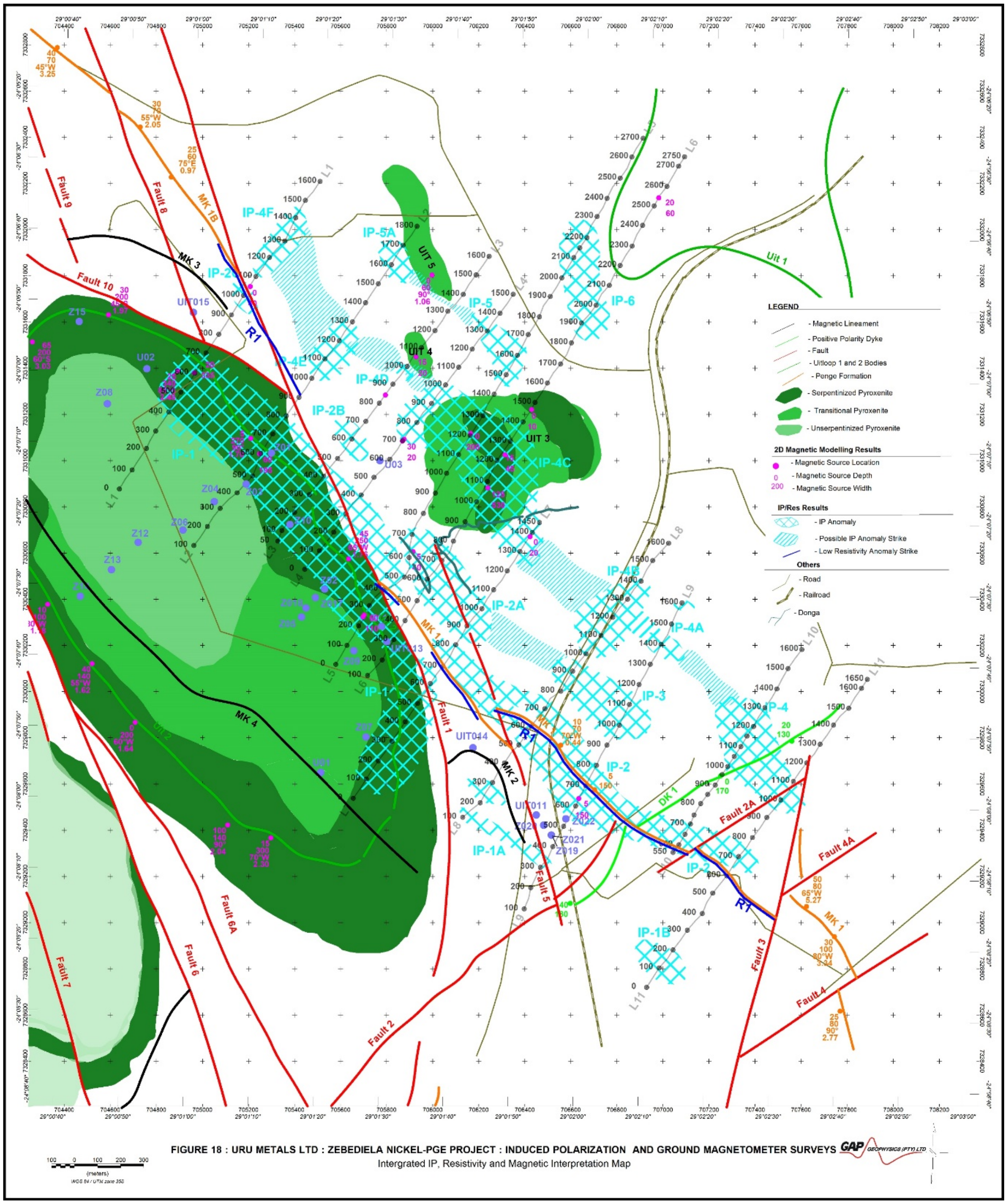


Figure 9-6: Interpreted and integrated induced polarization, resistivity, and ground magnetics surveys showing IP anomalies (light blue cross-hatching) and a low resistivity anomaly (solid dark blue line), from work completed in 2018 (Boitshepo *et al.,* 2018).

Historical aeromagnetic surveys and recent ground magnetometer surveys along 19.6 km of line have mapped the serpentinized northern contact of a large satellite pyroxenite body (Uitloop II body) over the southern sector of the grid area, along with the strike trace of the Penge BIF. Aeromagnetic interpretation indicates that over its western sector the area is structurally complex and characterized by multiple north-northwest-south-southeast faults showing significant lateral displacements, along with younger northeast-southwest faults.

Time-domain induced polarisation and resistivity (RES) surveys along 19.6 km of line over some 11 north-northeast orientated traverses have mapped up to 5 individual IP chargeability anomalies per traverse reflecting wide causative sources at depths of around 10 m to 80 m (exceptionally 140 m) with an average of 50 metres. Confident line-to-line correlation of multiple anomalies is not always possible where line spacing is large (>200 m), but the general trend appears to be northwest-southeast in line with regional strike trends. Higher priority anomalies have chargeability responses in the range of 40msec to75msec, which is some 2 to 3 times background, and have been grouped into 4 sets of subparallel, short to long strike extent zones.

Zone IP-1 spatially correlates with the serpentinized northern contact of Uitloop II and may reflect a magnetite-only or magnetite plus sulphide zone whose width ranges from approximately 100 m to 350 m (average 200 m) and whose depth of burial ranges from 0 m to 60 m (exceptionally 100 m) with an average of 30 metres. Anomaly IP-2 correlates with the locale of the interpreted Penge marker horizon. This marker horizon is also imaged a resistivity "LO" over the southeastern and northern sectors of the survey block. Other zones may (IP-4C and 4D) or may not (IP-3, 4A, 4B and 4E) correlate with magnetic horizons. Certain IP zones may have been intersected (at least peripherally) in recent drilling exercises, these being IP-2 (borehole Z022), IP-1 (boreholes Z01, Z10 and UIT13) and IP-2C (borehole UIT015).

In all, some eight IP targets were recommended for drill-testing. The Z and Y coordinates for target anomaly centre-points are provided, along with ball-park depths to the centroid of the respective IP anomaly are provided in Table 9-2.

Table 9-2: Geophysical target locations of significant prospecting interests (Boitshepo *et al.,* 2018).

Line	Station	Latitude	Longitude	IP Anomaly	Top (m)	Centre (m)	Bottom (m)
L1	1166	705265	7331840	IP-4F	70	116	200
L4	858	705958	7331207	IP-4C	94	168	275
L6	1189	706280	7331002	IP-4C	52	118	259
L8	556	706403	7329809	IP-2	36	64	104
L8	863	706579	7330044	IP-3	13	58	195
L9	608	706621	7329505	IP-2	30	70	131
L10	1175	707365	7329807	IP-4	82	164	312
L11	731	707364	7329327	IP-2	81	149	267

Major findings from an integrated interpretation of ground magnetic and time-domain IP/resistivity survey data, and historical aeromagnetic data over the Zebediela Nickel Project on the farm Uitloop were as follows (Boitshepo *et al.,* 2018):

- Magnetic data mapped out the large Uitloop II body whose serpentinized northern contact underlies the southern sector of the grid and in part falls in close proximity to the Penge Iron Formation magnetic marker. Other much smaller satellite pyroxenite bodies are present to the north;
- The western sector of the area is structurally complex, hosting north-northwest trending "near-strike" faults exhibiting both sinistral and dextral displacements with opposite senses of down-throw, plus younger northeast trending faults which throw down to the southeast;
- Near surface interpreted geology and structures show only a limited correlation with that shown on regional geology;
- Up to four sub-parallel, roughly northwest striking, continuous to discontinuous belts of IP anomalies (IP-1 to IP-4) are mapped over the southern to central sectors of the grid area;
- A near-continuous resistivity "low" feature (R1=100 Ωm) runs in an approximately northwest-southeast direction through the southern grid area, possibly sidestepping to the west. This may reflect a cultural (*e.g.*, fence line, underground pipe) or geologic feature (*e.g.*, shale, wide fault, massive magnetite). Over the southeastern sector and along traverses L7 to L11, this feature correlates with the locale of the interpreted Penge BIF marker horizon (MK-1) while over the far northern sector and along traverses L 1 and L2 it correlates with the locales of both the Penge BIF and interpreted fault F1;
- Causative bodies of interest are characterised by formation chargeabilities of 40 ms to 80 ms, or some two to three times background. In some cases, these anomalies can be correlated over multiple lines while in other cases they appear to show only limited inter-line continuity;
- IP anomalies may reflect the presence of disseminated sulphides and/ or magnetite, or certain silts/ shales;
- Approximate interpreted widths range between 100 and 350 m, while depth-to-top estimates range between 10 and 80 m (exceptionally 140 m depth). Dip information is not available, in part because of the deployment of the asymmetrical pole-dipole array, and possibly because of variations in cross-sectional widths with depth. Or even depth-limited sheet-like deposits;
- Few IP anomalies exhibit correlating resistivity "low" anomalies, but this should not be taken as a negative factor because the search is for disseminated sulphides whose percentage distribution may not be high enough to depress host rock resistivities;
- Correlating or stand-alone resistivity "low" anomalies may reflect geological sources such as carbonaceous horizons, massive magnetite (such as the Penge BIF), massive sulphides, conducting fault zones or cultural features (*e.g.*, grounded fence-lines, underground cables);
- IP anomalies recommended for drill-investigation are IP-2, IP-3 and IP-4 (IP-4, IP4-C and IP-4F); and,
- Zone IP-1 spatially correlates with the serpentinized northern contact of the Uitloop II body, mapped with a strike length of 1,600 m between lines L1 and L7. The chargeability anomaly source is probably magnetite. Boreholes drilled along this anomaly have intersected serpentinite and pyroxenite mineralization.

Recommendations resulting out of the geophysical surveys were:

- Target centres of prospective drilling targets (*see* Table 9-2). These targets may be modified in light of geological/ borehole information not held by GAP. These initial drilling investigations should be located on traverses as confident positioning cannot be assured at stations located between survey traverses;
- Local knowledge of geological dip should be incorporated when determining the drill collar positions if inclined holes are to be drilled, otherwise vertical holes should be drilled through the listed anomaly centres; and,
- There are at least seven historical boreholes drilled into the serpentinized zone of Uitloop II body that should be adequate to validate the provenance of this combined IP/mag anomaly.

10.0 DRILLING

Information in this section has been largely taken from Croll *et al*. (2012) and McCreesh *et al.* (2019), as provided by Lesego Platinum Uitloop (Pty) Limited. A number of drilling programs were completed on the Property between 2007 and 2020.

The Authors have reviewed the database provided by the Company and consider it to be an accurate reflection of the historical exploration work completed on the Project to date as reported by the Company. The Authors see no significant issues with respect to the drilling (collar locations, surveys, logging etc.), sampling and QAQC procedures, or other factors that could materially impact the accuracy and reliability of the drilling results.

In the Principal Author's opinion, the historical drill hole information and data is adequate for the purpose of verification of the drill core assays and future calculations of mineral resource estimations.

10.1 Lesego Platinum Uitloop (Pty) Ltd (2007)

In 2007, three boreholes (U series) were completed to further investigate the subsurface extensions of soil geochemistry anomalies (*see* Section 9) (Lowman, 2007). In keeping with the Platreef style mineralization model, the surface anomalies were expected to extend below the surface in a zone sub-parallel to the contact between the Uitloop II Lower Zone body and the Transvaal Supergroup metasedimentary rocks.

The contact zone is relatively clearly demarcated by the BIF outcrop, which strikes approximately northwest-southeast and dips approximately 40° in a westerly direction (*see* Figure 9-1). Boreholes were laid out parallel to the geochemical lines with an azimuth sub-perpendicular to the strike of the contact zone (Platreef trace) and with an inclination of 50° (Figure 10-1). The boreholes were collared some distance away from the soil anomalies and from the contact with the BIF in order to intersect the full extent of any Platreef style mineralization.

Coordinates and general details of the three U series boreholes are given in Table 10-1. Zaaiman Exploration Drilling ("ZED") was contracted to carry out the drilling. Borehole core was NXC for casing requirements and NQ (47.6 mm core diameter) for coring.

Table 10-1: Lesego Platinum Uitloop (Pty) Ltd U borehole series (UTM WGS84 Zone 35S) (Lowman, 2007).

BHID	Elevation (m)	Easting	Northing	Azimuth (deg)	Inclination (deg)	START DATE	FINISH DATE	EOH (m)
U1	1172	705514	7329650	52	-50	2007/04/05	2007/05/16	662.03
U2	1160	704759	7331398	52	-50	2007/06/15	2007/07/06	461.63
U3	1185	705771	7331000	52	-50	2007/05/19	2007/06/13	438.16

Cross-sections and assay results for the three boreholes are shown in Figures 10-2 to 10-4 and an interpreted plan map in Figure 10-5.

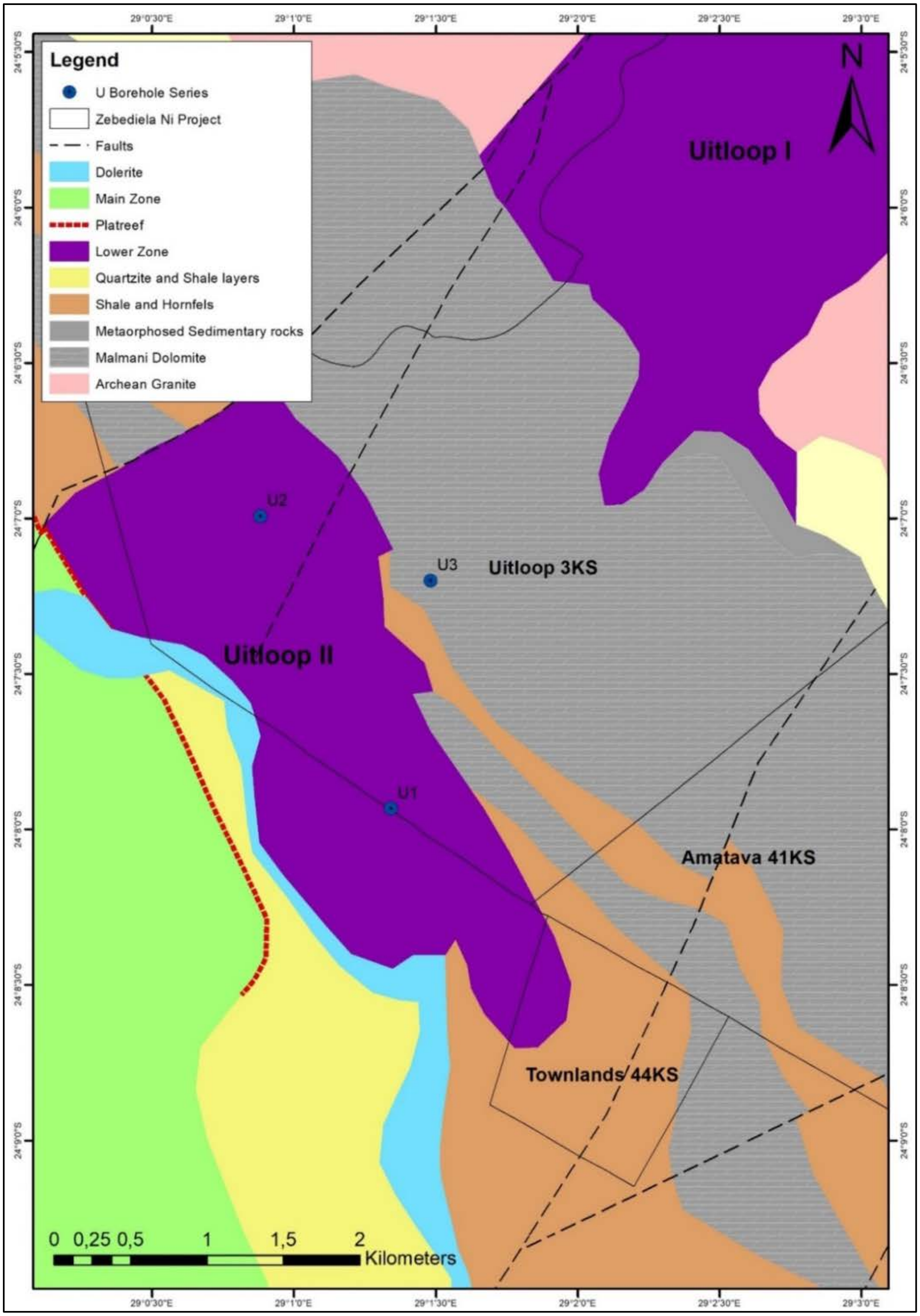


Figure 10-1: Location of U series borehole which targeted the Platreef mineralization and the Platreef contact style mineralization. Geological base map modified from van der Merwe (1978).

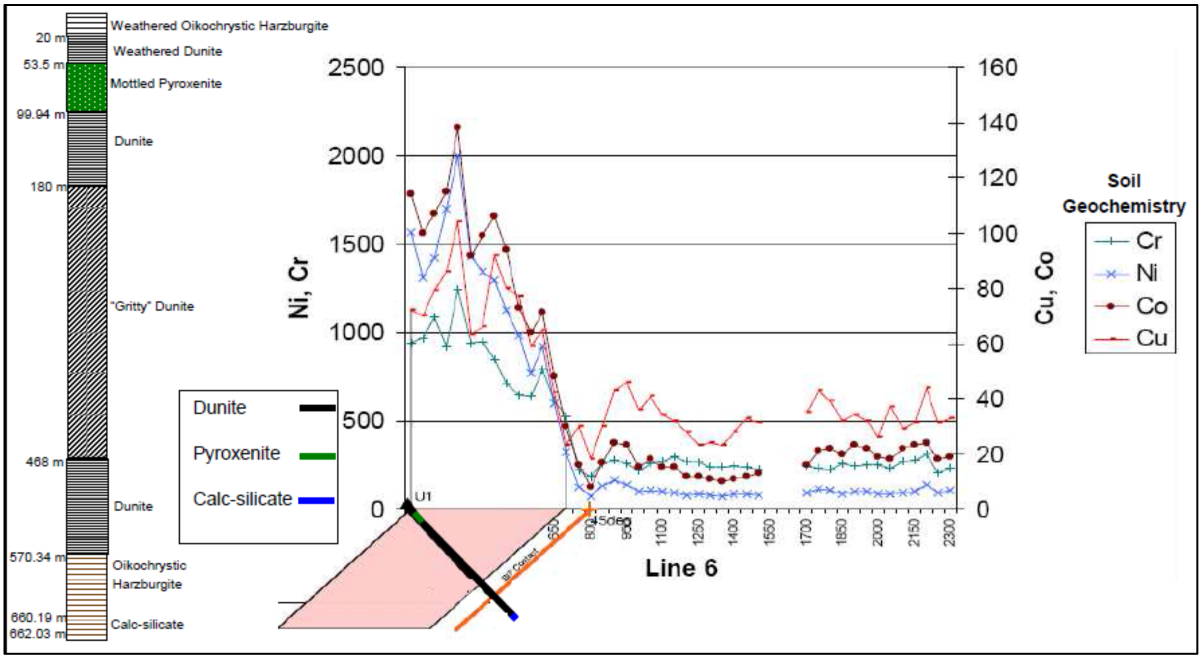


Figure 10-2. Cross-section of borehole U1 (looking northwest), simplified core log and assay results (Lowman, 2007).

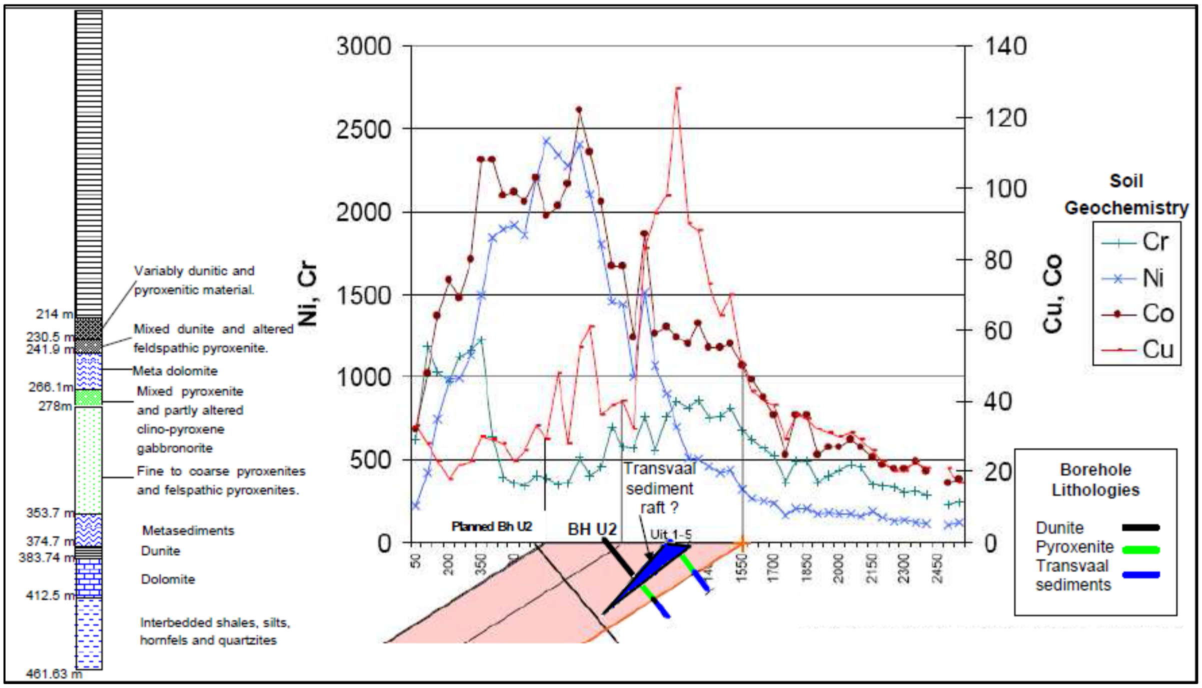


Figure 10-3. Cross-section of borehole U2 (looking northwest), simplified core log and assay results (Lowman, 2007).

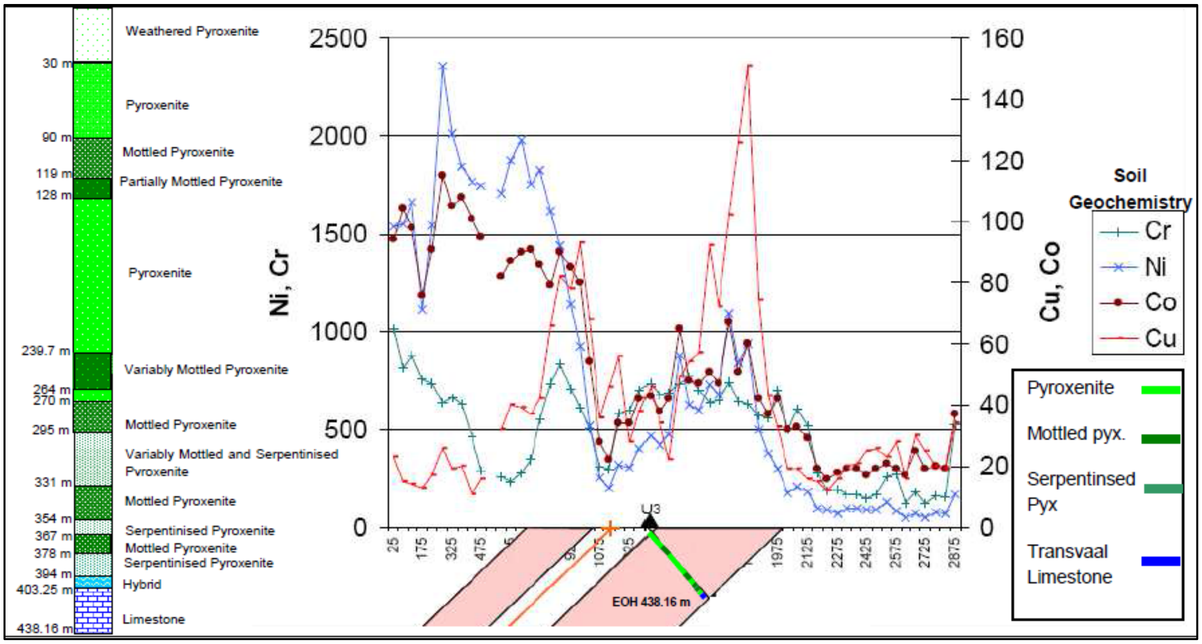


Figure 10-4. Cross-section of borehole U1 (looking northwest), simplified core log and assay results (Lowman, 2007).

Note that in Figures 10-2 to 10-4, flat lines in the assay graphs, as opposed to spikes, result from the compositing of five individual one-metre samples into a single sample. This was done to decrease analysis costs for material which was considered to be visually un-mineralized. Simplified borehole logs showing major lithologies intersected are shown in both cross-sections and assay graphs. The cross-sections include projections of previously drilled boreholes provided that they are situated close to the section line. These projections are only approximations, since strikes of BIC lithologies are not well constrained. Results from the 2007 soil geochemistry of the relevant traverse lines are also included (*see* Section 9.1), as is the outcrop position of the footwall contact zone (Lowman, 2007).

10.1.1 Drilling Results

A plan map showing the 2007 soil sampling results, surface trace of the BIF, and interpreted results from the UIT and U series drill holes is provided in Figure 10-5.

Borehole U1: positioned to test the prominent Ni soil anomaly and a less pronounced Cu soil anomaly (*see* Figures 9-2 and 9-3). The hole intersected very olivine-rich rocks (dunite and harzburgite) to a depth of 660 metres. In terms of Cu and PGEs, no units of economic interest were encountered. Average concentrations across the hole were: 4.5 ppb Au, 39 ppb Pd, 24 ppb Pt and 119 ppm Cu.

Borehole U2: sited close to the margin of the prominent Ni-in-soil anomaly and to test a Cu-in-soil anomaly which appeared to be spatially unrelated to the Ni anomaly (*see* Figures 9-2 and 9-3). The upper part of borehole U2 (0 m – 214 m) intersected a succession of harzburgite and dunite very similar to that encountered in borehole U1. The dunite/harzburgite rocks returned relatively high Ni values over significant portions of the unit, while the upper and more metasomatised sequence has generally lower Ni values.

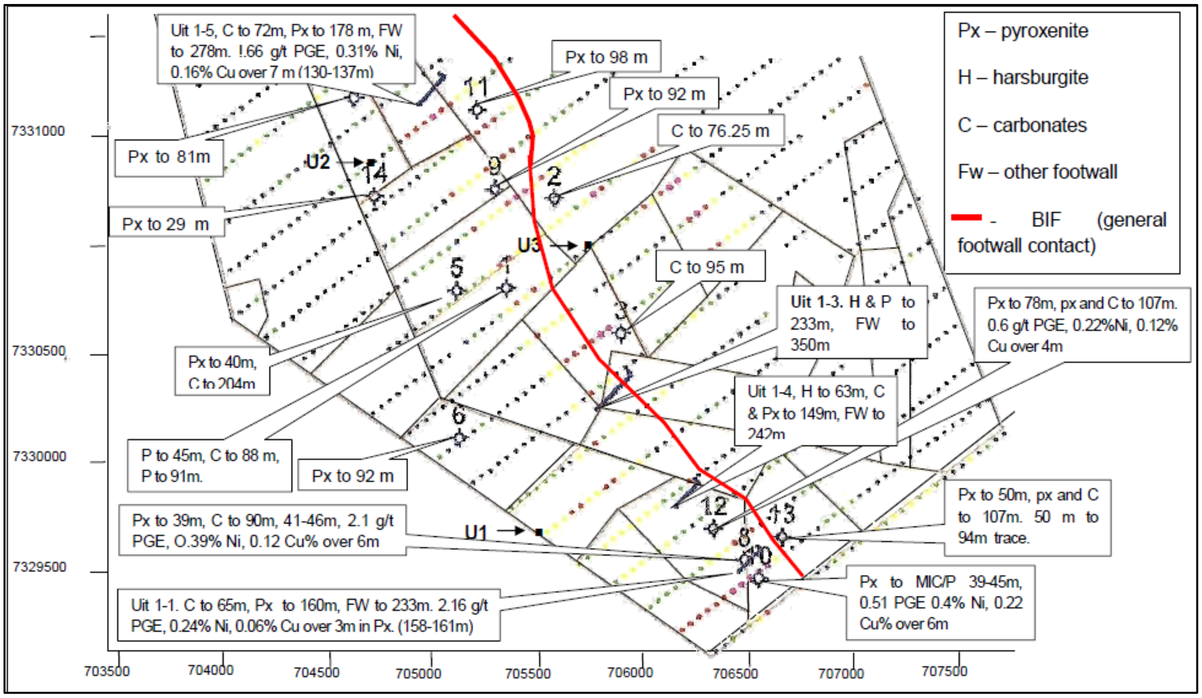


Figure 10-5. Soil sampling results with trace of the BIF and interpreted results from the UIT and U series boreholes

The most significant Ni concentrations occur in the approximately 220 m thick dunite/harzburgite unit in the upper part of the hole. Spikes in mineralization do, however, occur in other portions of the hole. Relatively elevated Ni and Cu values with very low PGE tenor occur between 235 m and 240 metres. This interval consists of feldspathic pyroxenite with high concentrations of fine, disseminated sulphides. Further, Ni and Cu mineralization with a high PGE tenor occurs from 276 m to 292 m, associated with a relatively coarse-grained pyroxenite unit. A medium-grained pyroxenite unit at 344.50 m contains low to moderate Cu and Ni concentrations, with elevated PGE values.

Borehole U3: sited to the east of the large Ni soil anomaly (tested by holes U1 and U2) and aimed to intersect a prominent Cu soil anomaly (*see* Figures 9-2 and 9-3). The borehole intersected predominantly pyroxenitic lithologies, without olivine-dominant rocks such as those encountered in boreholes U1 and U2, except for a strongly altered, serpentinized unit at the contact with the footwall rock. In terms of its mineralization borehole U3 shares a few common features with the other boreholes as well as exhibiting some unique features. Of note is the lack of broad zones containing elevated Ni values, but rather that four distinct pyroxenitic zones, characterised by magnetic mottles (serpentinized olivine), returned elevated Ni (1,500-2,500 ppm) and PGE values (500-1,500 ppb). Anomalous PGE concentrations, related to zones of increased sulphide mineralization, occur at 120 m to 129 m, 255 m to 258 m, 273 m to 308 m, 342 m, 351 m, and 367 m to 372 metres.

The 2007 drilling program made a number of valuable contributions towards the understanding of the general geology and potential economic mineralization on the Uitloop 3 KS property (Lowman, 2007). The drilling further delineated general geological features such as lithologies, stratigraphy and footwall contacts.

With respect to mineralization, significant nickel mineralization has been identified in a thick dunite/harzburgite succession intersected in boreholes U1 and U2. Similar ultramafic rocks were also intersected in previous drill programs ("Uit" series boreholes). Historical boreholes Uit 1-3 and Uit 1-4 reported Ni values in the 1000 ppm to 2000 ppm range which is significantly lower than the 2000 ppm to 4000 ppm obtained from boreholes U1 and U2. However, towards the base of Uit 1-3, Ni concentrations increase and range between 2000 ppm and 3000 ppm.

The combined results, therefore, indicate Ni values in excess of 2000 ppm in the dunite/harzburgite sequence intersected in the portion of Uitloop to the West of the banded iron formation. This area coincides with a broad zone of elevated Ni values delineated by the soil sampling programs. A useful feature of the dunite/harzburgite lithology is the strongly magnetic signature and further delineation using geophysical techniques may be applicable. Follow up drilling between U1 and U2 is recommended to constrain the Ni potential further.

The drilling program did not explain the source for the copper anomaly identified from the soil samples. Borehole U2 returned consistently low Cu values except for a moderately to well mineralized zone between 280 m and 290 m with a peak value of 1900 ppm Cu and 2000 ppb PGE+Au and a 1-metre interval at 345 m assaying 6222 ppm Cu with no PGE. Latter occurrence is hosted by a metasedimentary unit which contains coarse-grained sulphides close to the contact with overlying pyroxenite.

Platreef style mineralization has been intersected in four stratigraphic intervals with variable thicknesses in borehole U3. The mineralization is generally hosted by mottled pyroxenite in a thick pyroxenitic sequence which is clearly different to the more ultramafic, olivine-dominant succession intersected in holes U1 and U2. The most coherent mineralization occurs between 272 m and 298 m with average Cu, Ni and PGE+Au values of about 300 ppm, 2000 ppm and 800 ppb, respectively. The geological and structural setting of the area tested by borehole U3 is not well understood and requires further work.

The prominent Cu-in-soil anomaly occurring in the southwestern tip of the Uitloop 3 KS property was thought to be genetically rather than spatially linked with the predominantly pyroxenitic succession intersected by borehole U3 (Lowman, 2007).

10.2 Lesego Platinum Uitloop (Pty) Ltd - South African Nickel JV (2011-2012)

In 2011, South African Nickel ("SAN") pursuing further nickel targets associated with the BIC in South Africa, formed a JV partnership on the Zebediela Nickel Project with Lesego Platinum Uitloop. SAN was targeting the large peridotite Lower Zone Uitloop II body.

The 16 hole diamond drilling program (Z-series; Figure 10-6 and Table 10-2), totalling 5,062.54 m, was undertaken from October 2011 to January 2012, to determine the extent and average grade of the peridotite Lower Zone Uitloop II body. Significant intercepts of the 16 boreholes, together with the results of two historical holes, are shown in Table 10-3.

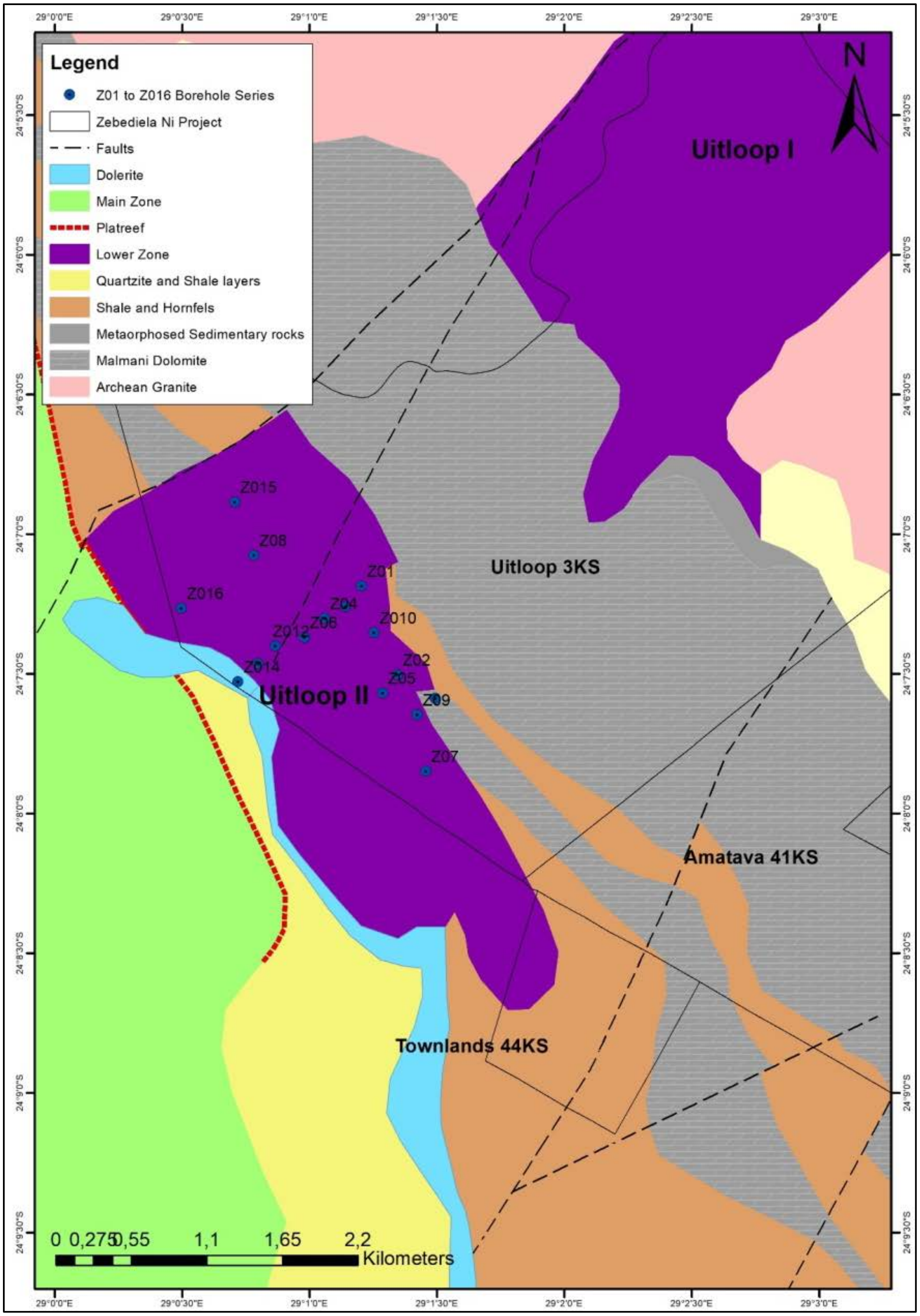


Figure 10-6: Locations of the Z01-Z016 borehole series collars, which targeted the low-grade, disseminated Ni sulphide deposit associated with the Lower Zone Uitloop II body. Shown on the geological map modified from van der Merwe (1978).

Table 10-2: Zebediela Lower Zone Uitloop II body drilling program Z borehole series (2011-2012).

BHID	X_Collar_UTM (m)	Y_Collar_UTM (m)	ELEVATION masl	AZIMUTH (deg)	INCLINATION (deg)	EOH (m)
U01	705 514.00	7 329 650.00	1 172.00	52.00	- 50.00	662.03
U02	704 759.00	7 331 398.00	1 160.00	52.00	- 50.00	461.63
U03	705 770.76	7 330 999.50	1 185.00	52.00	- 50.00	438.16
Z01	705 300.14	7 331 033.19	1 157.55	52.00	- 50.00	168.05
Z02	705 530.83	7 330 444.25	1 168.23	52.00	- 50.00	255.40
Z03	705 190.31	7 330 898.47	1 161.57	52.00	- 50.00	336.00
Z04	705 051.68	7 330 822.64	1 173.26	52.00	- 50.00	364.11
Z05	705 430.70	7 330 323.40	1 177.82	52.00	- 50.00	396.05
Z06	704 915.65	7 330 699.70	1 178.44	52.00	- 50.00	345.10
Z07	705 710.56	7 329 803.81	1 172.34	52.00	- 50.00	474.20
Z08	704 587.53	7 331 246.52	1 163.85	52.00	- 50.00	381.10
Z09	705 657.90	7 330 177.26	1 175.37	52.00	- 50.00	350.40
Z10	705 380.15	7 330 723.67	1 161.87	52.00	- 50.00	219.40
Z11	705 778.32	7 330 282.44	1 175.66	52.00	- 45.00	198.20
Z12	704 721.13	7 330 646.28	1 170.58	52.00	- 50.00	338.40
Z13	704 605.13	7 330 528.14	1 164.94	52.00	- 50.00	342.65
Z14	704 469.74	7 330 412.98	1 161.59	52.00	- 50.00	321.70
Z15	704 464.80	7 331 602.47	1 140.94	52.00	- 50.00	255.38
Z16	704 099.76	7 330 904.13	1 161.11	52.00	- 50.00	316.40

All holes, with the exception of Z16, were inclined at 50° to the northeast, with the intention of intersecting the internal layering of the intrusion, which dips moderately to the southwest, orthogonally. By contrast, Z16 was drilled towards the southeast, subparallel to the plunge of the body, with the aim of testing the Uitloop body hanging wall contact on the edge of the Prospecting Right.

Boreholes Z01, Z03, Z04, Z06, Z012, Z013 and Z014 were heel-toe boreholes along the same section, drilled to evaluate the full width of the peridotite Lower Zone body. Borehole Z01 was drilled close to the bottom contact and the other boreholes were drilled to intersect peridotite stratigraphically deeper into the Lower Zone Uitloop II body. Boreholes Z05, Z07 to Z011, Z015 and Z016 were positioned to define the strike extent of the Lower Zone Uitloop II body, together with historical boreholes U1 and U2.

The 2011-2012 drilling program complemented the two historical boreholes (U1 and U2) previously drilled into the north-eastern contact of the peridotite body, which had intersections of 552 m at 0.25% Ni and 220 m at 0.25% Ni, respectively (Table 10-3).

Drilling and assay results have shown very little variation in both host rocks dunite and harzburgite compositions, and the Ni mineralization found throughout the Lower Zone Uitloop II body (Lowden, 2007).

Table 10-3: Results of the South African Nickel (SAN) drilling program associated with the low-grade, disseminated sulphide mineralization in the Lower Zone Uitloop II body (2011-2012).

BHID	FROM (m)	TO (m)	Interval (m)	% Total Ni*	Remarks
U1	101.00	622.00	521.00	0.26	Stopped in NE footwall
Including	536.00	631.00	95.00	0.30	
U2	60.00	222.00	165.00	0.27	Stopped in NE footwall
Including	116.00	211.00	95.00	0.33	
Z01	35.00	96.00	61.00	0.26	Stopped in NE footwall
Including	59.54	96.00	36.46	0.26	
Z02	51.70	235.53	186.83	0.22	Stopped in NE footwall
Including	174.00	228.00	54.00	0.25	
Z03	59.34	312.37	253.03	0.23	Stopped in NE footwall
Including	83.00	178.00	95.00	0.28	
Z04	47.00	364.00	317.00	0.25	Stopped in mineralised harzburgite
Including	203.00	314.00	111.00	0.28	
Z05	44.82	368.00	323.18	0.26	Stopped in NE footwall
Including	59.00	167.00	108.00	0.28	
Z06	57.65	354.10	287.45	0.24	Stopped in mineralised harzburgite
Including	93.08	201.00	107.92	0.27	
Z07	51.17	446.25	395.10	0.24	Stopped in NE footwall
Including	76.00	200.00	124.00	0.29	
Z08	60.94	381.00	320.06	0.26	Stopped in NE footwall
Including	230.00	345.00	115.00	0.27	
Z09	58.00	329.35	271.35	0.22	Stopped in NE footwall
Including	58.00	158.00	100.00	0.26	
Z10	50.80	202.80	152.00	0.21	Stopped in NE footwall
Including	71.00	159.00	88.00	0.22	
Including	137.00	159.00	22.00	0.26	
Z11	35.10	183.20	148.10	0.19	Stopped in NE footwall
Including	119.00	141.00	22.00	0.25	
Z12	59.00	338.40	279.40	0.28	Stopped in mineralised harzburgite
Including	132.00	335.00	203.00	0.31	
Z13	72.60	342.65	270.05	0.25	Stopped in mineralised harzburgite
Including	225.00	342.65	117.65	0.30	
Z14	46.00	321.70	175.70	0.20	Stopped in mineralised harzburgite
Including	160.85	321.70	160.85	0.22	
Z15	38.03	217.00	178.97	0.25	Stopped in mineralised harzburgite
Including	153.54	215.00	61.46	0.35	
Z16	34.00	316.40	282.40	0.17	Failed to reach SW hangingwall target

*: Ni grades shown as determined by multi-acid digest with ICP finish.

10.2.1 Drilling Controls and Procedures

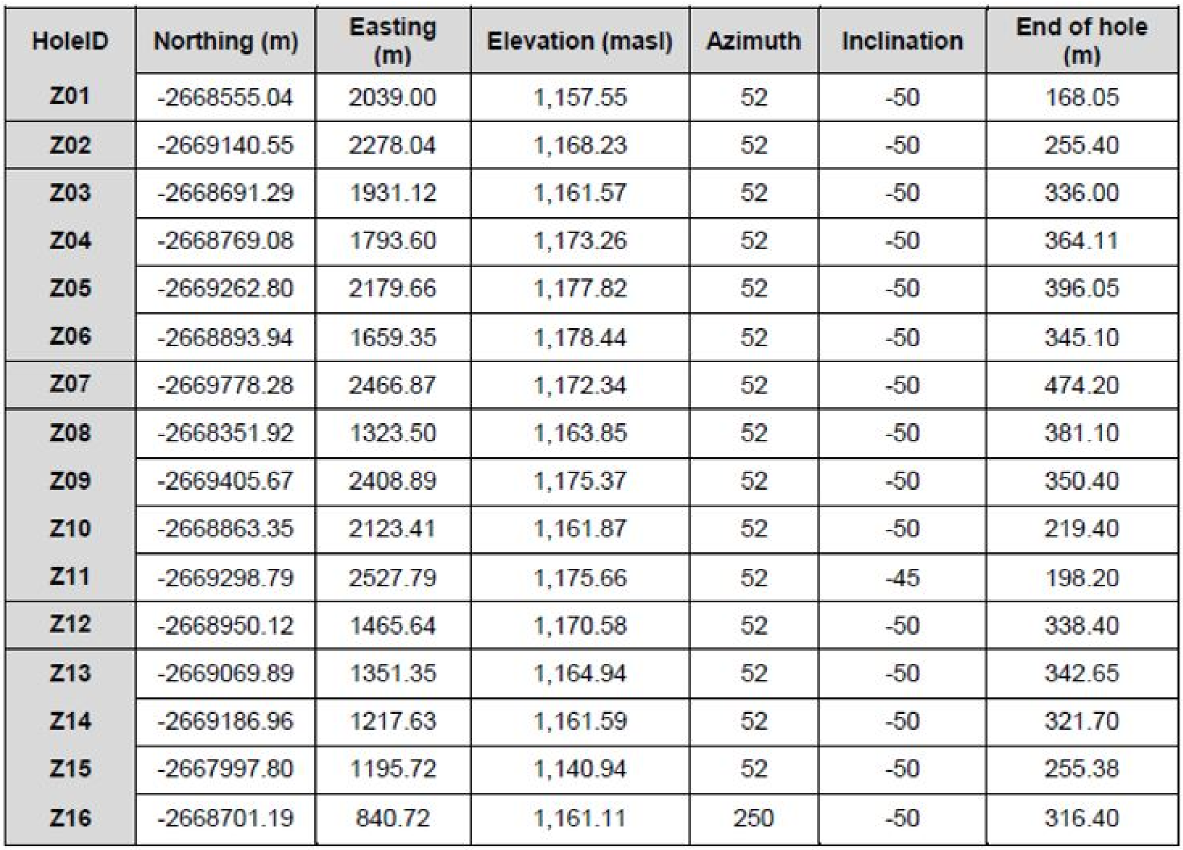
Lesego Platinum Uitloop‘s 2011-2012 program was contracted and carried out by South African-based drilling contractor Geomechanics. Core was initially drilled at HQ diameter (63.5mm core diameter) before switching to NQ diameter (47.6 mm core diameter), once the drill hole had advanced into competent material.

Diamond core drilling utilized an annular diamond-impregnated drill bit attached to a double tube core barrel and a length of hollow drill rods to cut a cylindrical core of rock. Drilling was conducted by the wireline method whereby the inner tube of the core barrel, containing the core samples, is retrieved by a wireline winch at the end of each drill run. On surface, the core was carefully removed from the inner tube and placed in an empty core tray, where it is aligned and cleaned.

10.2.1.1 Collar Surveys and Topographic Control

Borehole collars were initially sited using a handheld GPS and later resurveyed using a differential GPS system referenced according to the South African Trignet network (Table 10-4).

Table 10-4: Collar surveys for the 2011-2012 Lesego-SAN drilling, Zebediela Nickel Project.



HoleID	Northing (m)	Easting (m)	Elevation (masl)	Azimuth	Inclination	End of hole (m)
Z01	-2668555.04	2039.00	1,157.55	52	-50	168.05
Z02	-2669140.55	2278.04	1,168.23	52	-50	255.40
Z03	-2668691.29	1931.12	1,161.57	52	-50	336.00
Z04	-2668769.08	1793.60	1,173.26	52	-50	364.11
Z05	-2669262.80	2179.66	1,177.82	52	-50	396.05
Z06	-2668893.94	1659.35	1,178.44	52	-50	345.10
Z07	-2669778.28	2466.87	1,172.34	52	-50	474.20
Z08	-2668351.92	1323.50	1,163.85	52	-50	381.10
Z09	-2669405.67	2408.89	1,175.37	52	-50	350.40
Z10	-2668863.35	2123.41	1,161.87	52	-50	219.40
Z11	-2669298.79	2527.79	1,175.66	52	-45	198.20
Z12	-2668950.12	1465.64	1,170.58	52	-50	338.40
Z13	-2669069.89	1351.35	1,164.94	52	-50	342.65
Z14	-2669186.96	1217.63	1,161.59	52	-50	321.70
Z15	-2667997.80	1195.72	1,140.94	52	-50	255.38
Z16	-2668701.19	840.72	1,161.11	250	-50	316.40

10.2.1.2 Drill Hole Surveys

All 16 drill holes were surveyed down-the-hole using a reflex multi-shot magnetic survey tool by BTC Survey Services, a local service provider based in Mokopane. Holes were surveyed at nominal intervals of approximately 7 m in the uppermost Oxide Zone and 3 m in the unweathered hard rock zone to the end of the hole. Hole azimuths were setup by Lesego field geologists using a handheld Brunton-type compass corrected for magnetic declination.

Supplied downhole survey data were not corrected for magnetic declination by the contractor and this correction has been manually made by subtracting the magnetic declination (15.5° west of True North; www.ngdc.noaa.gov) from the azimuths recorded in the borehole database. Despite the relatively high proportion of magnetite in the altered ultramafic rocks, the downhole traces of the boreholes derived from the collar survey program are relatively smooth and exhibit only minimal deviations that could be attributed to magnetic interference.

It is the Principal Author's opinion that the survey data are sufficiently accurate and robust to support geological modelling exercises.

10.3 Lesego Platinum Uitloop (Pty) Ltd (2017)

In 2017, Lesego Platinum Uitloop (Pty) Ltd (URU Metals) conducted a six borehole drilling program (Z017-022; Figure 10-7) targeting Platreef style (stratabound) sulphide mineralization, semi-massive sulphide contact-style mineralization, and fresh material from the Uitloop II body for metallurgical test work.

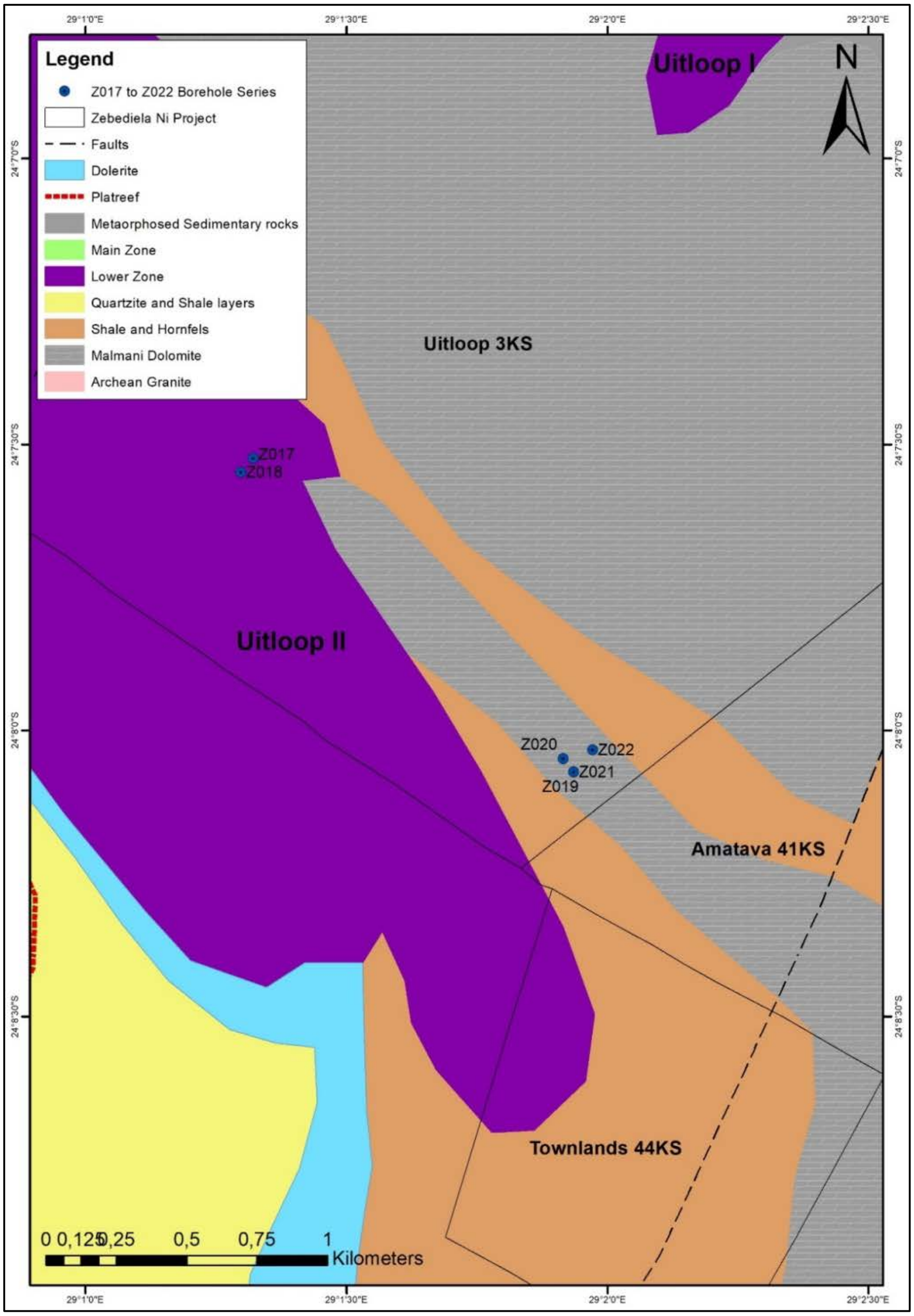


Figure 10-7: Locations of the Z017 to Z022 borehole series collars which targeted the Platreef contact-style mineralization/ massive sulphides (Z017-Z018) and Platreef strata-bound mineralization (Z019-Z022) (base geological map modified after van der Merwe, 1978).

Boreholes Z017 and Z018 were positioned on the Uitloop II Lower Zone body and drilled to intercept the Lower Zone footwall contact (Table 10-5).

Borehole Z017 intercepted a low-grade, disseminated Ni sulphide zone associated with pyroxenite, harzburgite and dunite, as well as a semi-massive sulphide associated with the metasedimentary footwall lithologies at a depth of 260.31 m below surface, with an interval of 2.25 m at 1.66% Ni and minor PGE and Cu (Table 10-5). Drill hole Z018 intercepted the low-grade disseminated Ni sulphide mineralization associated with the Lower Zone body, however, no semi-massive sulphides were intercepted at the hornfels/shale footwall contact (Table 10-5).

Table 10-5: Results of URU Metals drilling program associated with the Zebediela Platreef strata-bound mineralization (Critical Zone), Platreef-footwall contamination style mineralization and massive-sulphide mineralization continuation of the Z borehole series.

BHID	Depth From m)	Depth To (m)	Sample Interval (m)	Depth below Surface (m)	Cu (%)	Ni[1] (%)	Ni[2] (%)	3PGE+Au[3]	Rock Type
UL-8[4]	-	-	-	-	-	2.05	-	-	-
UL-10[4]	88.00	91.00	3.00	-	0.38	2.95	-	-	-
UIT1-1[4]	90.00	97.00	7.00	68.94	0.15	0.42	-	-	-
UIT1-1[4]	458.00	161.00	3.00	121.04	0.51	1.66	-	0.69	-
UIT1-5[4]	131.00	137.00	6.00	100.35	0.12	0.39	-	1.66	-
Z017	67.22	391.00	323.78	42.39	0.01	0.23	0.18	-	Dunite
Z017	412.75	415.00	2.25	260.31	0.51	1.66	1.10	0.69	Pyroxenite
Z018	90.40	251.00	160.60	58.83	0.004	0.26	0.20	-	Dunite
Z019	133.00	142.00	9.00	78.92	0.15	0.43	0.34	1.97	Feldspathic Pyroxenite
Z019	169.00	170.80	1.80	100.28	0.10	0.44	0.34	1.60	Feldspathic Pyroxenite
Z020	55.00	65.00	10.00	43.23	0.18	0.51	0.43	2.39	Feldspathic Pyroxenite
Z020	175.00	176.07	2.07	136.98	0.15	0.59	0.42	2.00	Feldspathic Pyroxenite
Z021[5]	194.00	199.00	5.00	175.97	0.12	0.48	0.34	2.15	Feldspathic Pyroxenite
Z022	38.08	41.74	3.66	28.87	0.08	0.35	0.33	0.89	Feldspathic Pyroxenite

Notes: [1]Total Ni assay by complete digestion, representing silicate and sulphide portion of nickel; [2]Citric acid leach, representing the sulphides Ni portion; [3]Historical data is not complete and will have to be verified with future drilling; [4]3PGE+Au equals Pt + Pd + Rh + Au by fire assay with ICP-MS-finish.

10.3.1 Drilling Controls and Procedures

Collar locations for the 2017 drilling program were measured up by a Registered Land Surveyor immediately after the completion of each drilling phase. Down-the-hole surveys were conducted at the completion of each primary hole, by means of a calibrated electronic multi-shot survey ("EMS") instrument, operated by an independent competent surveyor. The survey company had to provide a valid calibration certificate, not older than six months for each instrument used.

11.0 SAMPLE PREPARATION, ANALYSIS AND SECURITY

Information in this section has been taken from Lowman (2007), Croll *et al*. (2012), McCreesh *et al.* (2019), and the Standard Operating Procedures ("SOP"s) provided by the Umbono Natural Resources (Pty) Ltd. Procedures followed by Umnex and Lesego since 2007 are well documented. QAQC procedures followed by the Company since 2007 are summarized in the following sections. Logging, sampling and assays procedures for drilling programs not completed by the Issuer are reported on, to the extent that information is available, in Section 6.

In the Principal Author's opinion, the sample preparation, security and analytical procedures are adequate for the purpose of verification of the technical database and that the Company's internal system for QA/QC (collection and processing) is of sufficient quality to provide adequate confidence in the database for future geo-modelling and mineral resource estimation.

11.1 Diamond Drilling Program 2007

In 2007, three boreholes (U-1, U-2 and U-3) were completed within the Project area by Lesego Platinum Uitloop (Pty) Ltd (Lowman, 2007).

11.1.1 Handling and Preparation of Drill Cores

In order to optimise core handling and preparation the following procedures were rigorously applied (Lowman, 2007):

- The site geologist checked the core at the drill rig and only removed it from the drill site once the depth and core recovery were verified.
- The core was then checked against the relative depths as reported in the Daily Drilling Report ("DDR").
- Any core loss was recorded and positioned in the core box by inserting a block with loss or gain clearly inscribed on the marker. The geologist recorded the core loss on the DDR or in the book provided at the rig before removing the core trays from site.
- Geological field assistants arranged all core pieces in the core box such that it would represent a column of unbroken core in the borehole. Each two consecutive core pieces should fit properly. A mark (with a china marker) across the break, from one piece of core to the other, indicated a proper fit and will ease later refitting. Any misfit indicated mixed core or grinding on the core edges.
- Where limited grinding occurred, the core can in most cases be lined up to some extent, using matching structural or lithological features on each side of the break.
- The ground surfaces on core ends are rarely indicative of the extent of grinding. Minor grinding (with no or insignificant core loss) can occur by insufficient hydraulic pressure. The drilling crew should address such malpractice immediately and instances of this recorded in the drill record and brought to the attention of the driller as quickly as possible.
- Field assistants measured and, or verified the driller's depth marks (in waterproof marker) at one metre intervals on the core, taking in account core losses and fractured core on the same day as the run/s were drilled. Any discrepancies were reported to the responsible geologist and if necessary the driller would be requested (by recording in an instruction book) to do a proper depth check – measure stick-up

with rods down the hole at rod weight and count the number of rods to the end of the hole ("EOH").

- Core boxes were permanently marked with waterproof markers and stencils.
- The following information was recorded on the label:
    - Borehole and deflection number.
    - Box number.
    - The "From" and "To" depths applicable for that specific box.

A register with the core box information was kept and incorporated in the database. Prior to core splitting, the following preparation was done:

- The core was fitted and orientated with lowest elevation of contacts in the middle at the bottom of the core tray.
- In the case of broken core, it would be reconstructed (using masking tape) to resemble the original core as close as possible.
- 1 m intervals were marked and recorded with black marking pen on the core.
- The high and low points of the contacts were marked with china-graph marker to the nearest cm with reference to the 1m depth intervals.
- The centre line of the core (along the top of the core) was marked with a china marker. This was the core splitting line. The reference centre line was carried over onto the next run matching the core across the last break.

Core splitting was performed according to the following protocols:

- A rotary saw, equipped with a diamond-impregnated blade is used to split each sample into two equal segments along the cut line. A V-shape channel on a sliding table is used to support the core past the saw blade.
- The split core is cleaned and returned to the angle iron, such that the marked half (with the red line) is placed at the bottom of the V-shape channel. A close fit is again established.
- The one metre marks are carried over onto the cut surface of the bottom half and the borehole depth recorded at these marks, using a waterproof marker.
- Sample interval marks (yellow chinagraph) are now extended onto the cut surface of the bottom core and at the break at the end of each sample.
- The top half of each sample is removed and placed in a plastic sample bag. One aluminium sample ticket is placed inside the sample bag and a second is stapled on the outside of the bag before the bag is folded over.
- A corresponding sample number is written with a chinagraph marker on the cut surface of the remaining core
- The end depth of each sample is measured from the one metre depth marks on the core and is marked on the cut surface of the remaining core.
- Sample numbers and depths are recorded and captured on the database. The spreadsheet is formulated to highlight any anomaly in sample widths and to verify sample data entry.
- The number of samples dispatched is checked against the number of data entries.
- A duplicated sample dispatch notice was completed with every dispatch and signed by the site geologist and by the lab.
- A checklist of samples dispatched was captured on database and kept up to date.

11.1.1.1 Core logging

The core was logged before splitting and was checked and amended, if necessary, after splitting. Consistency is essential for proper stratigraphic correlation, mineral resources estimation and electronic data capture prior to digital modelling, therefore, predefined parameters for geological descriptions were applied, being coded to standardise and to save time and space. Non-parametric descriptions are brief and do not reiterate coded parameters. Logging information was stored off site in a custom designed SQL/Access database.

11.1.1.2 Sampling Methodology

The following core sampling procedures were followed. The core was sampled at one metre intervals, generally corresponding to the one metre marks. Core loss, or the occurrence of lithological variations or contacts, may require variation from the metre to metre procedure.

Sample numbers combine a borehole code with a sequential number. The borehole code combines the letter U (for Uitloop) with a second letter corresponding to the number of the hole (*e.g.*, samples from Bh U1 contain the prefix UA, followed by the number 1,2,3….etc.).

In certain instances, where lithologies were unvarying over significant intervals, and were considered unlikely to return significant grades, compositing of the samples was done. The samples were still taken as before (metre by metre) and sent to the laboratory. The laboratory was instructed to composite five samples into one. A list was given to the laboratories detailing which samples were to be composited, and a new composite sample number was provided. The pulverisation of the samples took place individually, with 100g taken from each individual sample and combined to make up one 500g sample which was sent for analysis. This resulted in a five metre sample as opposed to a one metre interval. The process allowed for the individual one metre samples to be assayed at a later date if necessary (*i.e.*, if the five metre sample returned significant grade.

11.1.1.3 Analytical Procedures

The primary laboratory used for the Run Of Program ("ROP") assay function was independent Genalysis Laboratories (Genalysis). Genalysis is an ISO17025 accredited laboratory for all of the elements being analysed for, namely Lead collection PGE+Au analysis and acid soluble Ni and Cu.

11.1.1.4 Quality Protocols and Results

Quality Control and Quality Assurance ("QAQC") was undertaken on an ongoing basis to ensure that assay results from the exploration program could be confidently relied upon. This procedure involved the introduction of appropriately inserted Certified Reference Material ("CRM"), and material containing trace (or reasonably assumed to contain trace) quantities of the element being assayed for, (Blank). Further QAQC checks were in the form of intra and extra lab duplicates. If undertaken diligently, the use of these protocols ensures that the laboratory procedures are not introducing a bias to the results. Specifically, the following aspects of the laboratory operation were checked:

- Calibration of Instrumentation (Accuracy).
- Repeatability of Analyses (Precision).
- Sample Preparation (contamination, homogeneity).

- General Sample Management (sample swapping).

Reference materials used:

- Standard – 70 to 100 g of CRM.
- Blank - barren core samples (*e.g.*, Bushveld granite) were used.

Blanks and standards were inserted every 10 samples on an alternating basis. The assay laboratory is requested to use internal standards and duplicates in each tray in the fusion furnace. The results of the internal QC samples were then reported by the lab. The laboratory was also requested to make available its replicate assay checks.

The QAQC results for the AMIS standards and lab duplicates were generally good and individual element concentrations were within acceptable levels. The results for each borehole are reported on by Lowman (2019).

11.2 Diamond Drilling Program 2011-2012

Lesego Platinum Uitloop's 2011-2012 program was contracted and carried out by South African-based drilling contractor Geomechanics.

11.2.1 Core Logging and Sampling

At the Mokopane core shed (Figure 11-1), core was washed free of grease and other drilling fluids or lubricants. Following cleaning the core was realigned and fit together, after which core recovery and rock quality designation ("RQD") logging was completed, in conjunction with metre-marking of the core.

Figure 11-1: The Zebediela Nickel Project's core shed in central Mokopane consists of a large, covered area with offices.

Umnex staff executed core recovery logging on a drill-run by drill-run basis for each of the 16 holes drilled. The overall recovery was very high, with an average of 95.6% for all drilled holes. Recovery in the fresh material exceeded 98% whereas the Oxide Zone was variably recovered with individual recoveries within this zone of between 11% and 98%. The average recovery for the Oxide Zone for all holes was in excess of 83%. The majority of core losses were recorded in the upper 10 m of the holes.

Lithological logging was carried out using an established set of lookup codes, with structural features logged as narrow lithology entries. Logging was carried out on predesigned paper templates, and the data thereafter captured into Excel spreadsheets. Magnetic susceptibility measurements were taken using a handheld Kappameter at nominal 2 m points down the core length to attempt to establish the extent of serpentinization (and hence magnetite formation).

Boreholes were sampled from the collar to the base of the Uitloop intrusion, marked either by the metasedimentary floor contact or unmineralized norite and pyroxenite of the Rustenburg Layered Suite.

A centreline was drawn down the entire core length as a core cutting datum for sampling, with cutting carried out by an Almonte diamond blade core splitter. Sampling was carried out at nominal 2 m intervals that honoured lithological and structural intervals. Departures from the 2 m sampling interval were locally incurred to avoid sampling across major lithological intervals and as such, there are several instances of samples with lengths less than or greater than 2 metres.

For generation of field duplicates, the corresponding remaining quarter core sample was included in the sample batch immediately after the first quarter core sample. For quarter core samples, the upper half of each core length was split lengthways at the midpoint to generate three core lengths comprising one half core and two quarter cores. The half core length and one of the quarter core lengths were retained in the core trays with the remaining quarter core length being placed in a plastic sample bags with a sample number ticket.

Each sample was assigned a sequential sample number from a sampling ticket book and sample batches included standards, blanks and the aforementioned field duplicates. Samples were placed into plastic sample bags prior to submission to Set Point Laboratories (“Set Point”) sample preparation facility in Mokopane.

Set Point is a reputable and South African National Accreditation System (“SANAS”) accredited ISO 17025 analytical chemistry laboratory, and is independent, with no shared interests with Lesego Uitloop Platinum.

After sampling, each core tray was photographed in wet and dry state by Lesego personnel. Core photography was executed from an elevated photography platform that allowed for the photography of 2-3 core boxes in a single photograph.

11.2.2 Core Assaying

Two independent assay laboratories were used for the 2011-2012 drill core assays; a primary lab (Setpoint Primary Samples) and an umpire lab (Genalysis Laboratory). No specific laboratory audits were carried out, however, MSA is familiar with, and had in the past, conducted audits on both appointed laboratories.

11.2.2.1 Setpoint Primary Samples

Setpoint Primary Samples ("SPL") was the appointed primary assay laboratory. At the time, the company had a well-established sample preparation facility in Mokopane, located a few kilometres from Umnex's core shed. At the preparation facility, samples were received into the low-intensity magnetic separation ("LIMS") system prior to being crushed and pulverized to a nominal 85% passing 80 microns. Coarse rejects were retained by Setpoint and later returned to Umnex. Following preparation, the sample pulps were transported by Setpoint by road, on a batch-by-batch basis to Setpoint's primary analytical facility in Isando, Johannesburg.

The following analytical techniques are employed by SPL for the Umnex samples:

- TNi by multi-acid (perchloric, nitric, hydrofluoric, and hydrochloric; HNO3-HClO4-HF-HCl) digest with an ICP-OES finish (SPL code M446) – carried out on all samples. The detection limit is 10 ppm;
- partial-leach Ni using ammonium citrate leach (ACNi) in order to quantify the sulphide-hosted Ni – carried out on all samples;
- total S by LECO ™ – carried out on all samples;
- a multi-element XRF (fused disc) (SPL code M451) suite carried out on a total of 747 samples from boreholes Z4 to Z14. Analysed elements include: Fe2O3, MnO, Cr2O3, V2O5, TiO2, CaO, K2O, P2O5, SiO2, AL2O3, MgO and Na2O.

Setpoint is accredited for M446 and M451 by the SANAS and is ISO 17025 accredited for these methodologies.

The ACNi leach technique was a custom analysis carried out on Umnex's instruction. The method was developed by SPL from the methodology used by Labtium Laboratories in Canada and the methodology is briefly described (from Cox *et al.,* 2009) as follows:

> *A 0.15 g subsample is leached in a mixture of ammonium citrate and hydrogen peroxide (1:2; total volume 15 mL). The leach is done on a shaking table for two hours at room temperature. The solution is decanted from the sample powder directly after the leach. The solutions are diluted (5:1) and measured with ICP atomic emission spectroscopy (ICP-AES). It is a partial leach and is selective at dissolving nickel, cobalt, and copper from sulphide mineral species while leaving those elements in silicates unaffected. The detection limits are 10 ppm.*

The ACNi leach technique is not accredited globally, nor are any certified reference materials (CRMs) accredited for the methodology. As a result, MSA has declared the Mineral Resource (Section 14) using TNi (accredited SPL method M446). A good reconciliation exists, however, between the ratios of ACNi to TNi when compared to the metallurgical recovery data, suggesting the ACNi method provides a reliable estimate of sulphide-hosted Ni content of the Uitloop rocks.

The XRF determinations on boreholes Z4-Z14 were employed to quantify the interface between oxidized and fresh material based on downhole variations in the determined major elements.

11.2.3 QA/QC Protocols

For the 2011-2012 drilling program and field exploration program, Umnex established the following QA/QC methodology.

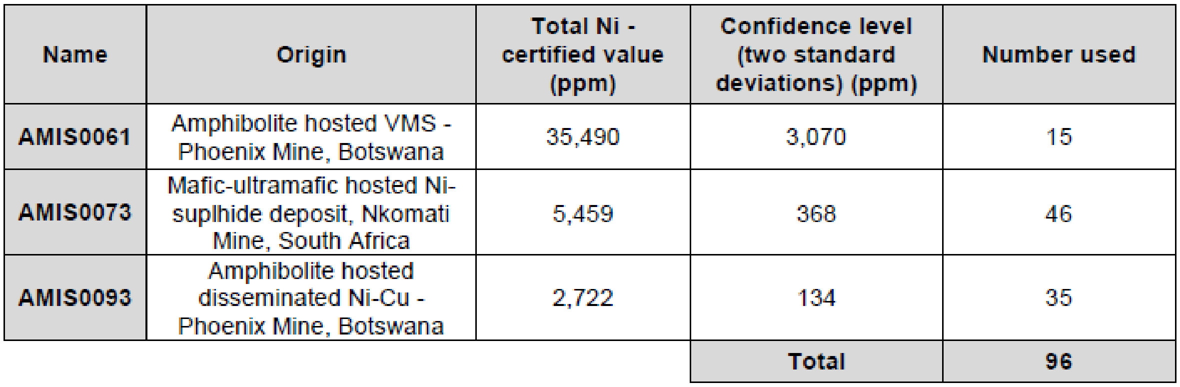
11.2.3.1 Certified Reference Materials

Umnex employed the use of three commercially prepared and accredited (for multi-acid digestion and ICP finish) Ni Certified Reference Materials ("CRM") or standards (all from AMIS). Details of these are provided in Table 11-1.

The standards were inserted into the sampling stream, at a nominal frequency of 1:30 routine samples, with the total of 96 standards representing 3.8% of total routine samples. Of the standards used, it is noted that the Ni grade of AMIS0061 is too high to practically monitor analytical results in the deposit, which has an average grade of 2,425 ppm Ni.

None of the standards are accredited for a partial leach methodology directly comparable to the ACNi leach.

Table 11-1: Certified Reference Materials used for the Zebediela Nickel Project.



Name	Origin	Total Ni - certified value (ppm)	Confidence level (two standard deviations) (ppm)	Number used
AMIS0061	Amphibolite hosted VMS - Phoenix Mine, Botswana	35,490	3,070	15
AMIS0073	Mafic-ultramafic hosted Ni-suplhide deposit, Nkomati Mine, South Africa	5,459	368	46
AMIS0093	Amphibolite hosted disseminated Ni-Cu - Phoenix Mine, Botswana	2,722	134	35
			Total	**96**

Additionally, Setpoint reports on the results of its internal QA/QC process on a batch-by-batch basis. From a CRM perspective, this involves the in-stream insertion of AMIS standards AMIS0053 and AMIS0075 at an approximate frequency of 1:30.

AMIS0061

The performance of AMIS0061, the highest grade of the inserted standards, is shown in Figure 11-2. The graph shows persistent under-reporting of the Ni values, with all samples reporting values below the certified mean and three samples reporting below the two standard deviation confidence limit. Given the high-grade nature of the standard and the upper calibration level of 10,000 ppm stated by SPL for its method M446, it is expected that results from this standard will not conform to the certified values. The high-grade nature of this standard (about 15 times higher grade than the mineralized zone) indicates it is not a suitable choice of standard for the Zebediela Nickel Project and the partial failure of this standard is therefore considered non-material.

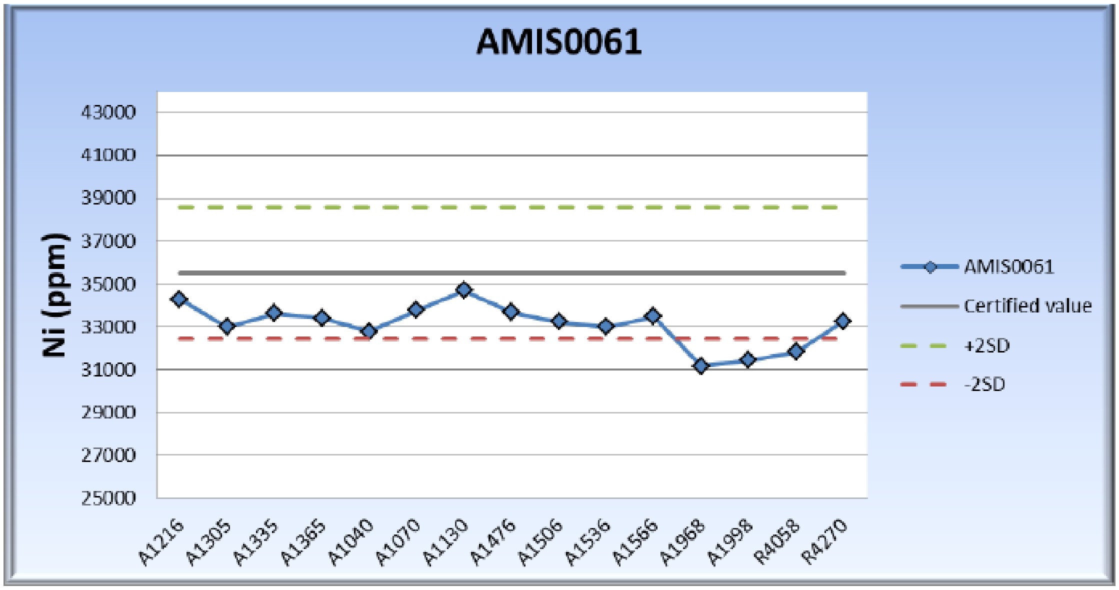


Figure 11-1: Performance of AMIS0061 for TNi.

AMIS0073

AMIS0073 has a grade approximately double the grade of the mineralized zone at Zebediela, but unlike AMIS0061 the grade of the standard still falls within the calibration level of Setpoint's method M446. The performance of this standard is plotted in Figure 11-3 and shows that all standards returned values within the two standard deviation limits applied to the data. A systematic bias towards underreporting appears to exist, the cause of which was not categorically determined, but it may be due to incomplete dissolution of silicate-hosted nickel by the multi-acid digest. This bias is considered non-material and acceptable given that it is conservative in potentially underreporting Ni grades. Croll *et al.* (2012) however recommended further work for any subsequent studies to resolve the underreporting of Ni for this CRM.

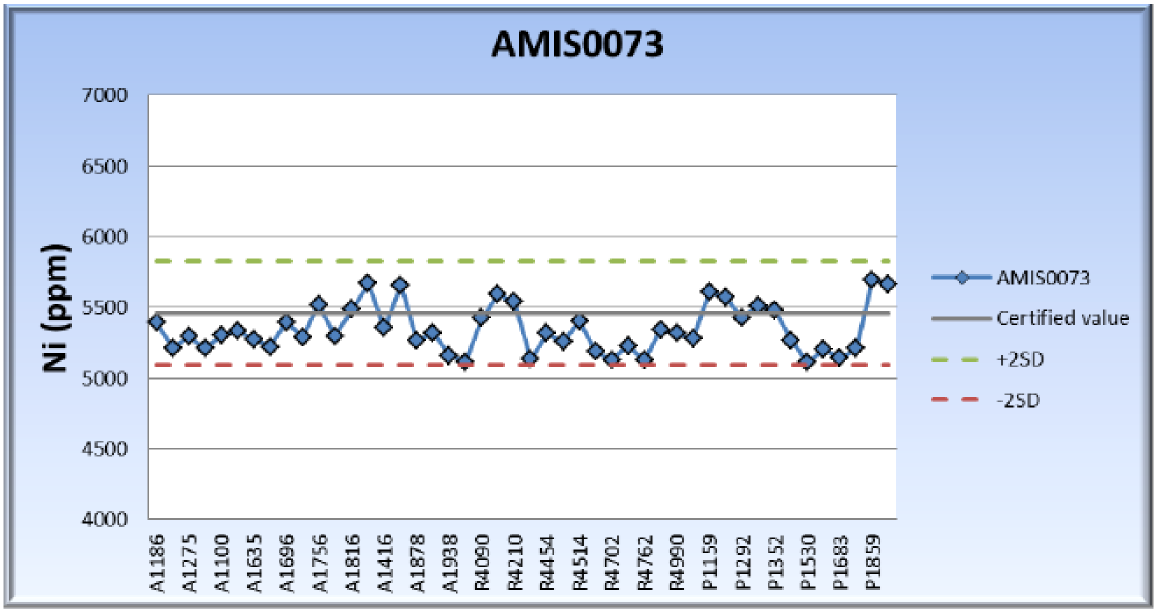


Figure 11-2: Performance of AMIS0073 for TNi.

AMIS0093

AMIS0093 has the Ni grade that most closely approximates the Zebediela mineralized zone and all samples returned values within the two standard deviation envelope about the certified mean (Figure 11-4). As with AMIS0073, a significant systematic bias towards underreporting appears to exist. The cause of this was not been categorically determined but it may be due to incomplete dissolution of silicate-hosted nickel by the multi-acid digest. This bias is considered non-material and acceptable given that it is conservative in potentially underreporting Ni grades. As for AMIS0073, additional work should be undertaken to determine the cause of the underreporting of TNi in this CRM.

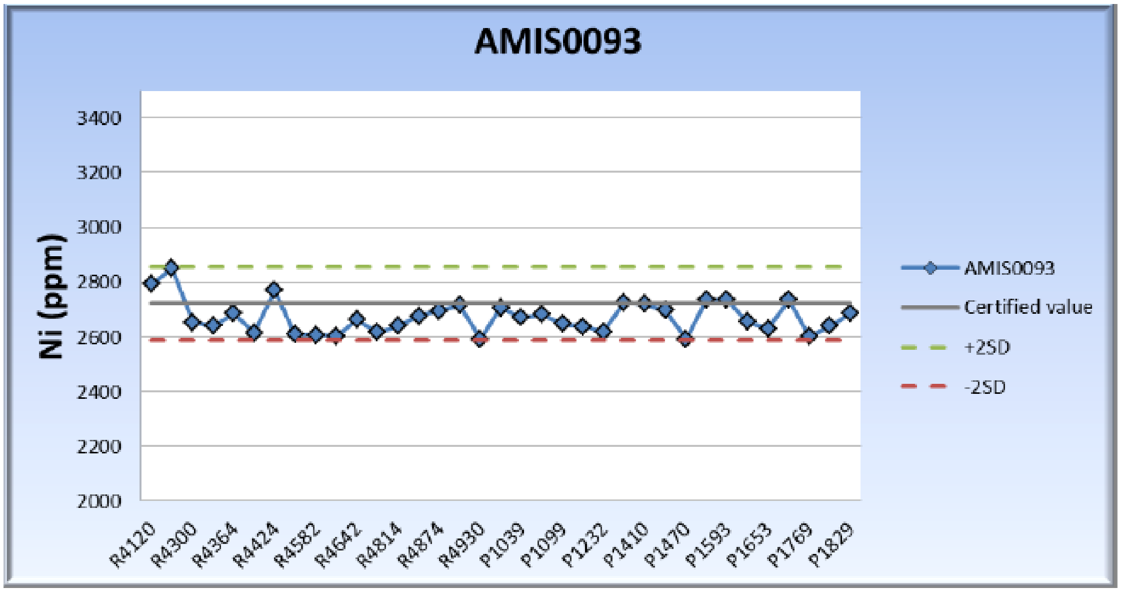


Figure 11-3: Performance of AMIS0093 for TNi.

Blanks

A commercially-prepared "blank" (AMIS0108) from African Mineral Standards (https://www.amis.co.za/; "AMIS") in Johannesburg was used to monitor potential contamination. This is a pulverized blank made from coarse silica sand.

A total of 91 commercially prepared blank pulps (AMIS0108), constituting 3.6 % of routine samples, were inserted into the sampling stream at a nominal frequency of 1:30 routine samples, to monitor for contamination in the sample analytical process and analytical drift. Additionally, Setpoint reports on the results of its internally inserted blanks on a batch-by-batch basis.

The results are shown in Figure 11-5, relative to a warning limit of 50 ppm Ni, which Croll *et al.* (2012) considered to be a realistic warning limit for Ni using multi-acid digestion with an ICP finish (*i.e.*, 5 times the detection limit of 10 ppm). A total of three of 91 blanks failed (*i.e.*, 3.3 %), plotting substantially above the warning limit. Interrogation of the results, however, strongly suggests that two of the failed blanks i.e. sample P1570 (5,355 ppm Ni) and sample P1633 (2,652 ppm Ni) are mislabelled standards as the value for P1570 corresponds closely to the certified value of the standard AMIS0073 (5,459 ppm Ni), and the value for P1633 corresponds very closely to the certified value of the standard AMIS0091 (2,722 ppm Ni). Only sample P1212 (1,951 ppm Ni) is regarded as a definitive failure and is most likely a mislabelled routine sample, as the values returned for all three flagged blanks are well in excess of what would be expected for laboratory contamination.

No analytical drift is noted throughout the analytical sequence.

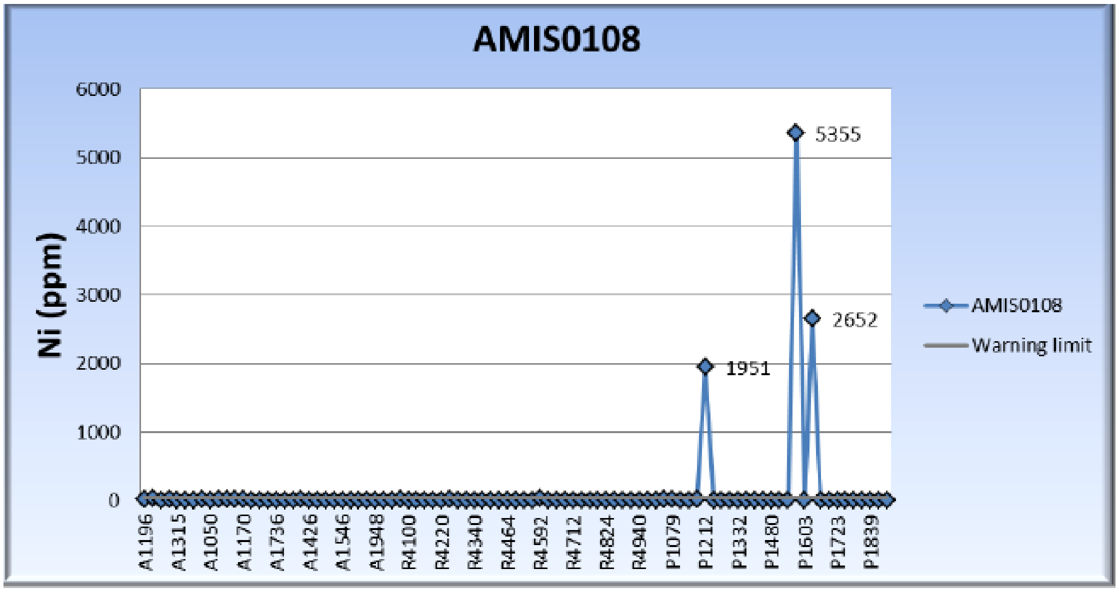


Figure 11-4: Performance of Blank Pulps (AMIS0108), highlighting the blank failures.

Field Duplicates

A total of 85 quarter-core field duplicates, comprising the remaining quarter core sample length, were inserted sequentially into the sampling stream at a nominal frequency of 1:30 routine samples. Duplicate samples were inserted immediately after the original sample but were assigned a sequential sample ticket number and are therefore regarded as “blind” duplicates. Duplicate performance was extremely good, with a correlation coefficient of 0.99 (Figure 11-6). The limited grade range of the analysed samples also results in no detectable breakdown of the relative difference data at lower grades, given that no assays were performed on samples of grades less than approximately 800 ppm. This half-relative difference (HRD) plot shows remarkable consistency in values between original and duplicate samples with no detectable bias (Figure 11-7).

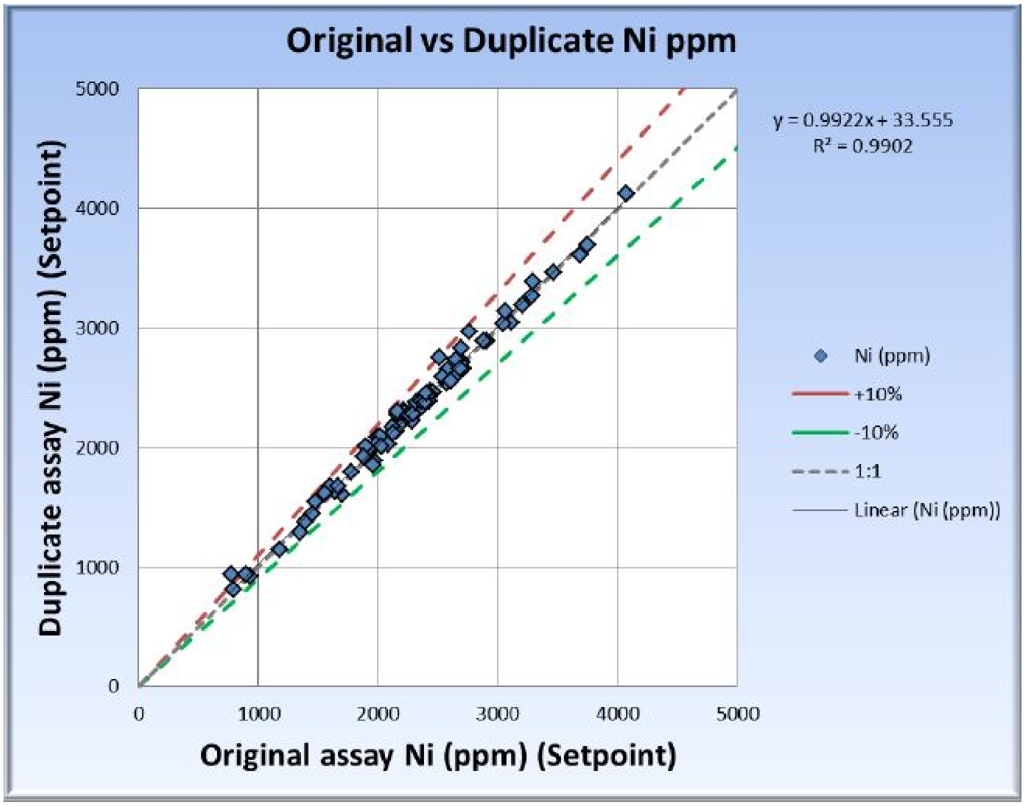


Figure 11-5: Original vs Duplicate plot (TNi).

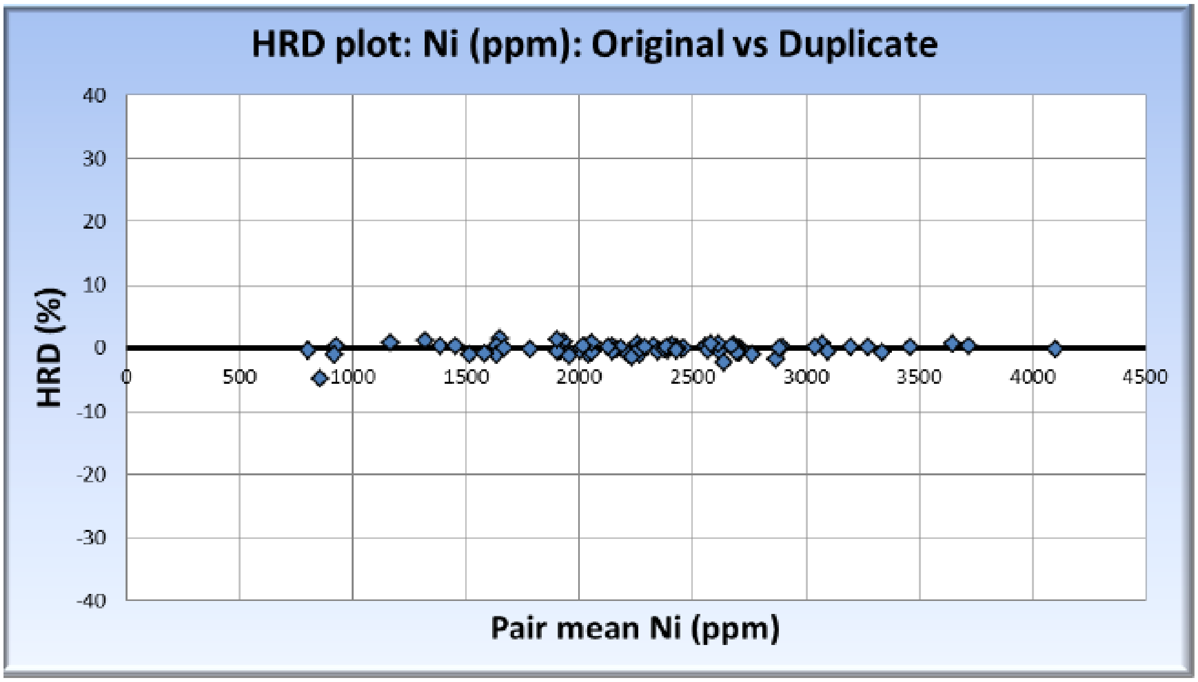


Figure 11-6: HRD plot of Original vs Duplicate Results (TNi).

Umpire Laboratory Results

A total of 123 sample pulps, constituting 4.9% of the routine assays, were uplifted from Setpoint and resubmitted to Genalysis Laboratories (Johannesburg) ("Genalysis") for Ni determination by multi-acid digestion with an ICP finish (method ICP/OM for TNi only). The duplicate samples were randomly selected within the range of TNi values. The umpire values are closely comparable to the original SPL assays, with a correlation coefficient of 0.97 (Figure 11-8). A total of 5 of the 123 pulps within the mineralized zone (800 ppm upwards) returned values outside of 10% of the original assay but there is no detectable bias between the two laboratories.

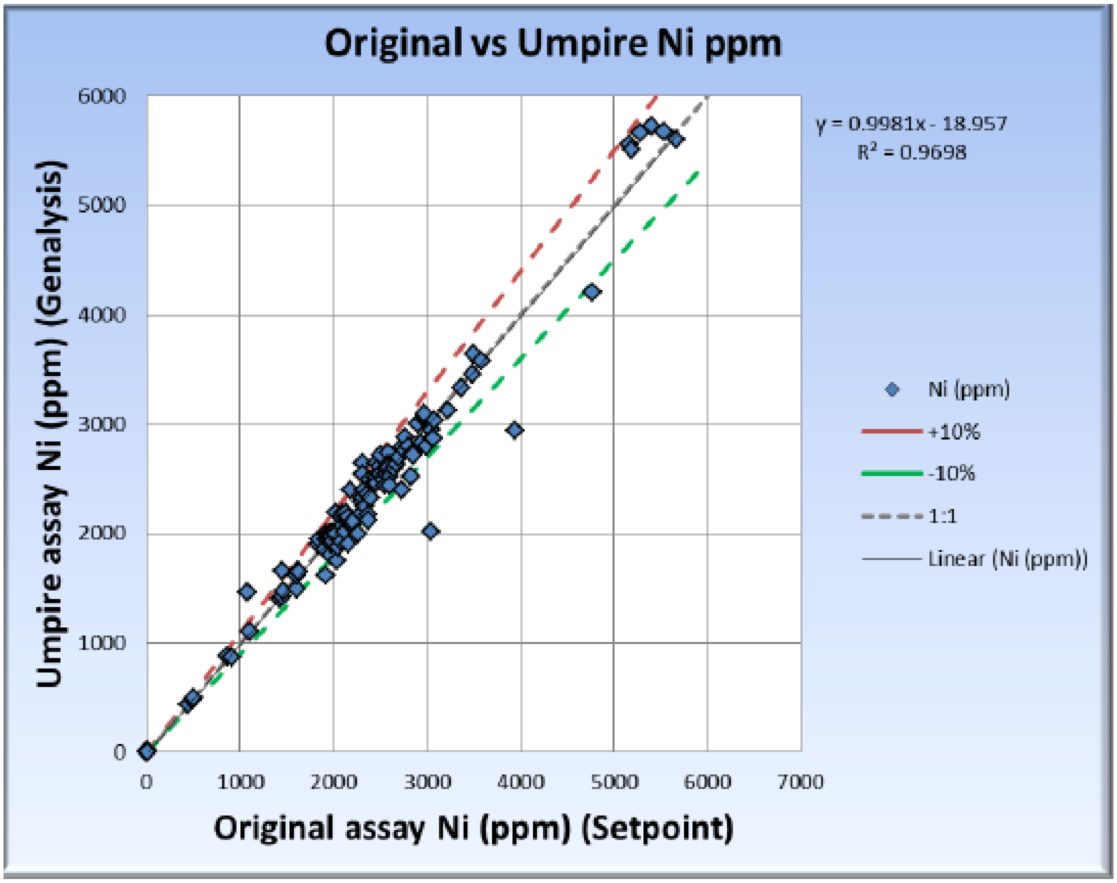


Figure 11-7: Original vs umpire plot (TNi).

The HRD plot (Figure 11-9) shows that only samples at or near the detection limits returned HRD results in excess of 10% and are therefore not material failures that would impact on a Mineral Resource estimate. Only scattered maximum HRD values of 10% are noted in the grade range of the mineralized zone and no bias is indicated by this plot.

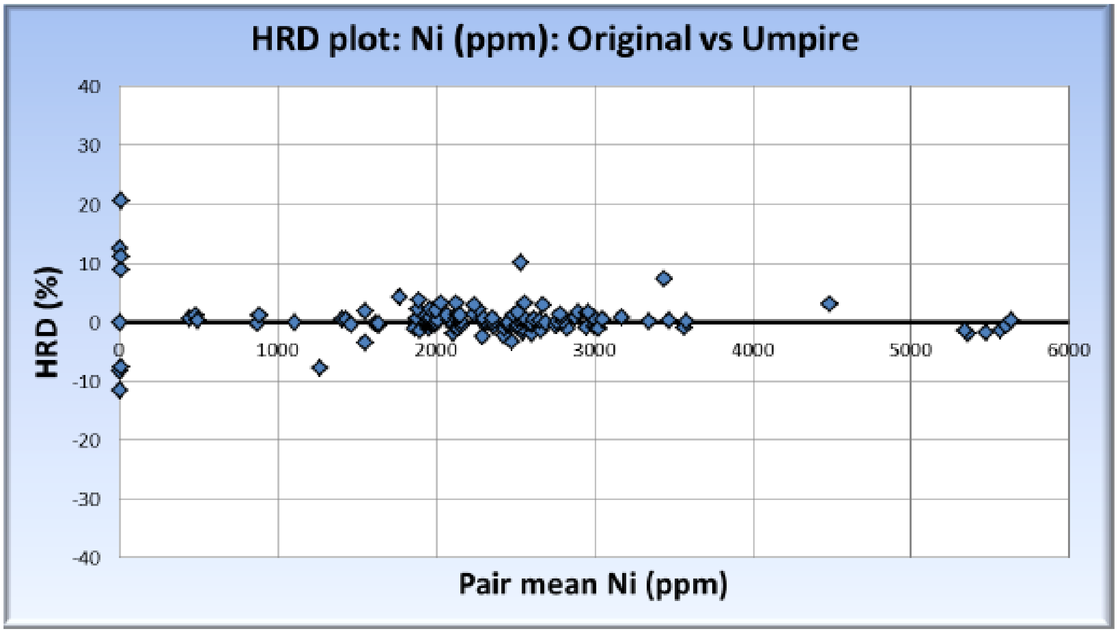


Figure 11-8: HRD plot of Umpire vs Original Sample (TNi).

QA/QC Summary

Croll *et al*. (2012), identified no material issues during the analysis of the analytical data and were of the opinion that the analytical data are sufficiently accurate and precise to be used to generate a code-compliant Mineral Resource Estimate. Minor issues flagged include:

- interrogation of the pulps of the three "failed" blanks and possible re-assay or database editing if justified;
- the use of a coarse (*i.e.*, unmilled) blank will help identify potential contamination during the sample preparation phase;
- the current Microsoft Excel ™ based exploration database is converted into a SQL-based relational database to streamline workflows and timeously identify data capture errors in the database; and
- a series of density/SG standards should be acquired to monitor the results generated during density determinations using the Archimedes' principle.

Croll *et al*. (2012) were of the opinion that the geological and QA/QC measures implemented by Umnex are appropriate to the Zebediela Nickel Project and the style of mineralization. Ordinarily, it would be expected to include at least 5% blanks, 5% standards and 5% duplicates in the sampling stream, but given the limited grade range of the mineralized zone, the levels adhered to by Umnex were considered acceptable. Future work will focus on executing a QA/QC program for the ACNi results, which will potentially allow for the declaration of a sulphide resource based on these ACNi results - which were not included in the 2012 MSA PEA study (Croll *et al.,* 2012).

MSA recommended the use of a coarse unmilled blank for future work in order to monitor potential contamination during the sample preparation phase. The use of the milled AMIS0108 blank only allows for detection of potential contamination in the sample analysis phase of work; at the low TNi grades coarse blanks should be used to monitor the sample preparation phase.

11.2.4 Core Specific Gravity (Relative Density)

Prior to dispatch, samples identified for dispatch were subject to density (or specific gravity "SG") determination using the Archimedes principle by comparing dry sample masses to their masses when immersed in water. A total of 2,358 density measurements were taken by Lesego/Umnex personnel using this method. No specific gravity measurements were completed at the laboratory.

11.2.5 Sample Security

Samples were hand-delivered by Umnex staff to the SPL Mokopane preparation facility with dispatch notes being signed by both the receiving party (SPL) and the dispatching party (Umnex). SPL took responsibility for delivery of prepared sample pulps to SPL's main analytical facility in Johannesburg. Pulps and coarse rejects were returned by SPL to the Mokopane facility and delivered to the Umnex core shed, where they were kept in a separate room in the core shed. Borehole core, hardcopy data files and samples awaiting dispatch were also kept in the Umnex core shed, which is fenced and kept locked when not in use. Electronically captured data are regularly sent via email from the core shed to Umnex's Johannesburg office for collation and saving onto the centralized server.

11.3 Diamond Drilling Program 2017

In 2017, Lesego Platinum Uitloop (Pty) Ltd (URU Metals) conducted a six borehole (Z017 to Z022) drilling program (Figure 10-3) targeting Platreef style (stratabound) sulphide mineralization, semi-massive sulphide contact-style mineralization, and fresh material from the Uitloop II body for metallurgical test work. The 2017 drilling program followed the same sampling, analytical and security procedures used in the 2011-2012 drilling program.

12.0 DATA VERIFICATION

The Principal Author has reviewed historical data and information regarding past exploration work on the Project. More recent exploration work (*i.e.*, 2011 to 2020), having complete databases and documentation such as assay certificates, could be thoroughly reviewed. Older historical records (pre-2011) are, however, not as complete and so the Principal Author does not know the exact methodologies used in the data collection.

Historically MSA conducted a complete audit of the Zebediela Nickel Project exploration database held by Umnex in February of 2012. Minor, non-material, issues were identified and corrected in consultation with Umnex staff, following which MSA considered the database and the data contained therein to support a code-compliant Mineral Resource Estimate (Croll *et al.,* 2012).

Dr. Hancox, who resides in South Africa, completed the personal inspection (site visit) of the Property on the 2 December 2020, accompanied by Mr. Innes Buurman (Project Geologist, Umbono Natural Resources (Pty) Ltd), Dr. Matthew McCreesh (Project Geologist, Umbono Natural Resources (Pty) Ltd), and Mr. Malesela Makhafola (CEO, Malren Geo). The visit was required for the purposes of inspection, ground truthing, procedural review and information data collection and collation. The condition of the general Property and Project access were observed, and the location of some older and more recent drill hole collars were verified. Mineralized drill core intersections were reviewed and verified. Logging and sampling procedures were also checked and validated.

Outcrop is scarce on the Property, so no surface grab samples of target mineralization or lithologies were collected. After the existing drill core logs and assay results were verified against drill core observations, the Author's did not think it was necessary to re-sample the drill core.

The Authors have no reason to doubt the adequacy of historical sample preparation, security and analytical procedures in the historical information and data that was reviewed and verify that this information and data could be used to support a future NI 43-101 compliant Mineral Resource estimate.

13.0 MINERAL PROCESSING AND METALLURGICAL TESTING

Metallurgical test work was completed on material from the Zebediela Nickel Project for the 2012 PEA, which was commissioned by Umnex Minerals Limpopo (Pty) Ltd and completed by MSA (Croll *et al.,* 2012).

Results from the early stage metallurgical test work completed to date and outlined below, offer preliminary information as to the recoverability of the main style of mineralization on the Property. Samples tested thus far are representative of the main style of mineralization on the Property but further mineralogical and metallurgical test work is required.

13.1 Mineralogical Studies (2006)

Petrographic examination (transmitted and reflected light) and Scanning Electron Microscope ("SEM") studies were completed in 2006 by Microsearch CC, South Africa. Detailed descriptions of this work (samples from drill holes UL-1 to UL-15) are provided in Lowman (2007).

13.2 Umnex Minerals Limpopo (Pty) Ltd (2011)

In 2011, Umnex Minerals Limpopo (Pty) Ltd undertook metallurgical test work through several work program partners. Diamond core drill holes Z05 and Z08 were selected as being representative of the Zebediela mineralized deposit (Figure 13-1). Initial test work was performed on Z05 and then continued on Z08 as the Z05 material was depleted during testing. The top 45 m of each core is representative of the mineralized oxide and transition zone material, while the core below to depth is representative of the zone containing significant Ni mineralization. The quarter cores for each sample were combined and crushed to create a representative composite sample for each mineralized zone. A 750 kg composite sample was produced for mineralogical and metallurgical test work during the PEA phase (Croll *et al.,* 2012).

13.2.1 Mineralogy

Mineralogical test work on the Zebediela samples was conducted and reported by SGS (https://www.sgs.com/). The Zebediela Sulphide Zone sample consisted primarily of serpentine (90%) with lesser amounts of magnetite (5%), magnesite/brucite (1.7%) and chromite (1.8%). This material has an average TNi grade of 0.29% of which 62% occurs as the nickel sulphide pentlandite. Approximately 8% of the total mass of the sample can be attributed to sulphide and/or magnetite containing particles. Processing and upgrading of the nickel via froth flotation and magnetite via magnetic separation is considered viable (Croll *et al.,* 2012). Recovery of all the sulphides would account for 62% of the TNi in the feed. The liberated and middling sulphide particles account for only 1.3% of the total sample mass at a grind of P_{80} 75 µm and represent a recovery of approximately 54% of the Ni by froth flotation.

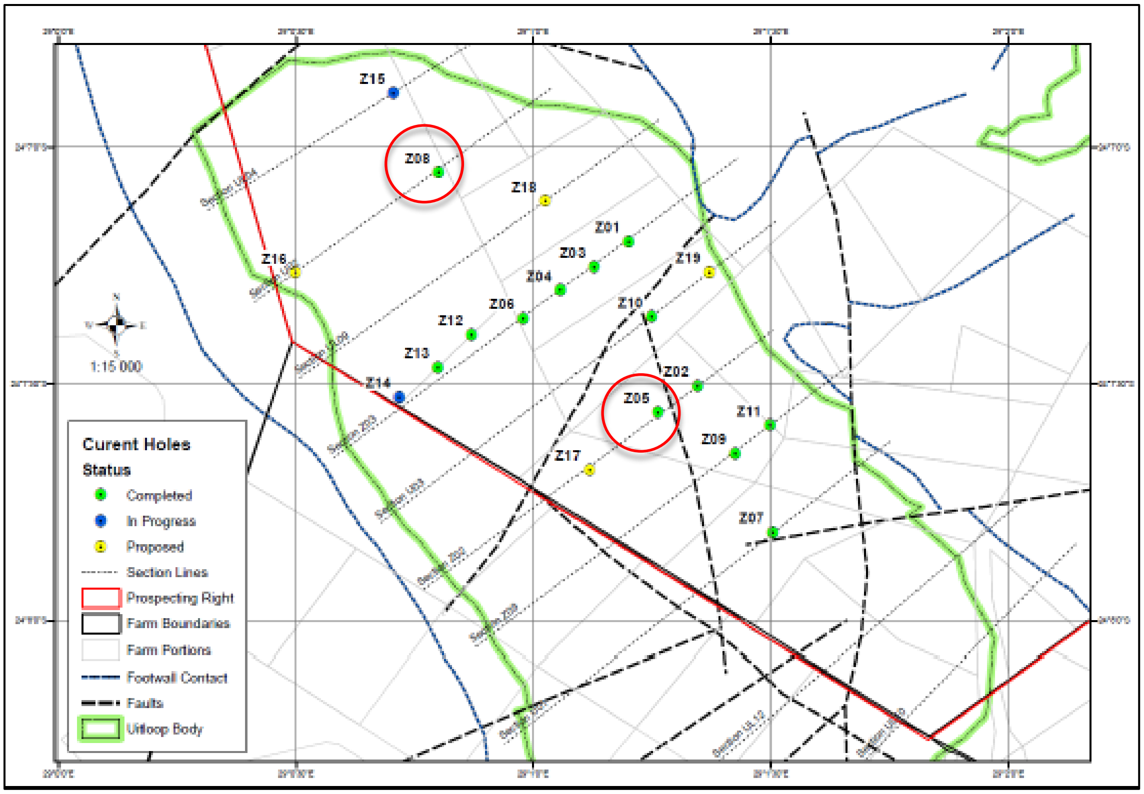


Figure 13-1. Location of metallurgical drill hole collars Z05 and Z08 (circled in red) within the Zebediela Deposit (green outline) (Croll *et al.,* 2012).

The Zebediela Oxide Zone sample consists primarily of dolomite (28%) with lesser amounts of serpentine (17%), magnetite (1%), calcite (13%) and clay (10%). This material has an average TNi grade of 0.15%, of which magnetite and serpentine host 36% and 30% of the Ni respectively. Only 5% of the TNi occurs as pentlandite. The Oxide Zone sample contains very little sulphides and all indications are that Ni recovery from the Oxide Zone would be uneconomical. The oxide material does however contain quantities of magnetite, which could be extracted using magnetic separation.

13.2.1.1 Methodology

A 200 g aliquot was taken from each sample, pulverized and submitted for chemical analyses. The chemical analyses included:

- major elements by borate fusion X-ray Fluorescence (XRF);
- base metals by pyrosulphate fusion XRF;
- sodium peroxide fusion ICP-OES (TNi, Cu, Co, Zn, and Pb); and
- total S and sulphide S by LECO.

A 50 g aliquot was split from each sample and submitted for X-ray Diffraction (XRD). Two aliquots were split from each sample. The first sample was milled to 90% -500 µm while the second was milled to 80% -75 µm.

The 90% -500 µm material was used to make normal and transverse cut polished sections of the head material. Following this, the remainder of the sample was wet screened into five size fractions, namely; +300 µm, -300/+150 µm, +150/-75 µm, +75/-38 µm and -38 µm. Transverse cut polished sections were then created for each size fraction. The remainder of the material from each size fraction was pulverized and submitted for chemical analyses, including:

- major elements by borate fusion XRF;
- TNi by ICP; and
- total S by LECO.

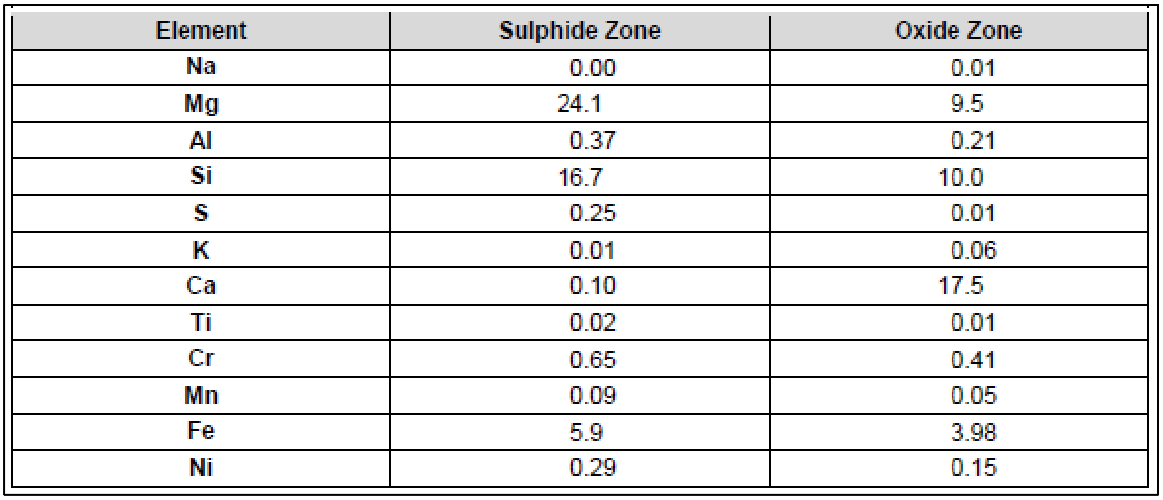
A Bulk Modal Analysis ("BMA") by QEMSCAN was conducted on the head fraction, as well as the size fractions of the transverse cut polished sections. Specific Mineral Search ("SMS") analysis was done on the normal polished sections. The SMS was set up to map all the sulphide and magnetite containing particles. From the BMA data, a quantitative mineral composition was established for each individual sample. The particle maps were used to describe the association, liberation and grain size distribution of the minerals of interest (sulphides and magnetite).

Electron Microprobe ("EMP") analyses were performed on the normal polished sections. The EMP investigation entailed the analysis of a number of grains to quantify the mineral Ni content. The Ni content was then apportioned to each Ni-containing phase (oxides, silicates and sulphides) in order to calculate the elemental Ni-deportment.

13.2.1.2 Chemistry

The chemical analysis (bulk head assays) for the Sulphide and Oxide zones are shown in Table 13-1.

Table 13-1: Zebediela head assays for Sulphide and Oxide zones (values in % contained element) (Croll *et al.,* 2012).



Element	Sulphide Zone	Oxide Zone
Na	0.00	0.01
Mg	24.1	9.5
Al	0.37	0.21
Si	16.7	10.0
S	0.25	0.01
K	0.01	0.06
Ca	0.10	17.5
Ti	0.02	0.01
Cr	0.65	0.41
Mn	0.09	0.05
Fe	5.9	3.98
Ni	0.29	0.15

13.2.1.3 Bulk Modal and Mineral Size Analysis

The Bulk Modal and Mineral Size Analysis investigation for the various size fractions of the Sulphide Zone sample revealed that silicate concentrations are higher in the coarser fractions, while sulphides and oxides are concentrated in the finer fractions. The pentlandite grains are generally fine-grained and a large portion are locked up in larger silicate particles.

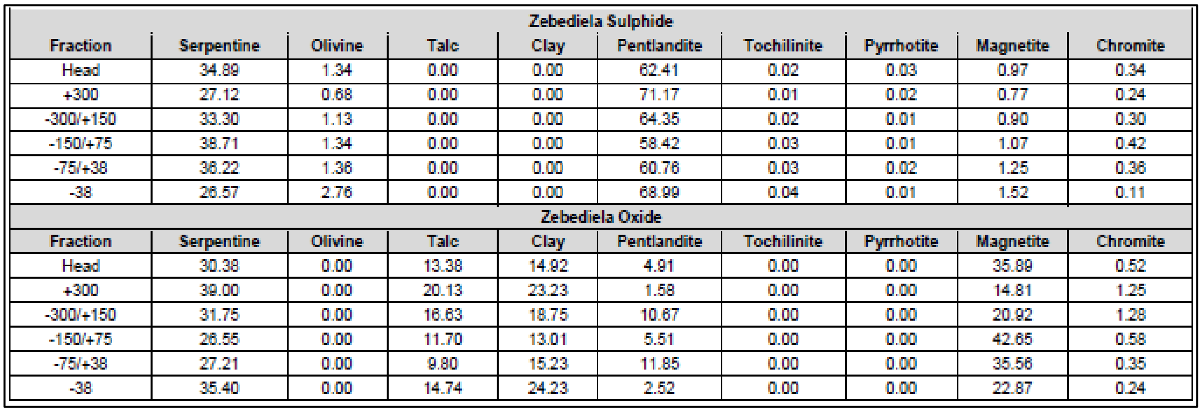
The Oxide Zone sample contained much less sulphides and contains major amounts of dolomite and calcite not present in the Sulphide Zone sample. Indications are also that the pentlandite grains are much smaller in the Oxide sample than in the Sulphide sample. It is expected that the clay components will contain a significant amount of the head Ni assay.

13.2.1.4 *Nickel Deportment Studies*

For the nickel deportment studies ("NDS"), SGS (2011a) analysed single composited samples from both the Sulphide and Oxide zones. The Ni-elemental deportment of the sulphide and oxide samples indicates that the major phases containing nickel are serpentine, olivine, pentlandite, pyrrhotite, tochilinite, clay, magnetite and chromite (Table 13-2). The nickel in each phase is deemed to be locked within the crystal lattice of the mineral.

The Sulphide Zone sample, with a TNi grade of ~0.29%, reported about 62% of the TNi in pentlandite, 0.03% in pyrrhotite, and 0.02% in tochilinite. If all of the sulphides are recoverable, then 62.46% of the total 0.29% Ni will be recoverable. Approximately 35% of the TNi is present in serpentine, 1.34% in olivine, 0.97% in magnetite and 0.34% in chromite. By contrast, the Oxide Zone sample contained 0.15% TNi of which 4.91% of the nickel was present as pentlandite. Approximately 95% of the 0.15% Ni is locked in refractory minerals, specifically serpentine (30.38%), clay (14.92%), magnetite (35.89%) and chromite (0.52%).

Table 13-2: Nickel deportment to major minerals in the Sulphide and Oxide zone samples (Croll *et al.,* 2012).



Zebediela Sulphide									
Fraction	**Serpentine**	**Olivine**	**Talc**	**Clay**	**Pentlandite**	**Tochilinite**	**Pyrrhotite**	**Magnetite**	**Chromite**
Head	34.89	1.34	0.00	0.00	62.41	0.02	0.03	0.97	0.34
+300	27.12	0.68	0.00	0.00	71.17	0.01	0.02	0.77	0.24
-300/+150	33.30	1.13	0.00	0.00	64.35	0.02	0.01	0.90	0.30
-150/+75	38.71	1.34	0.00	0.00	58.42	0.03	0.01	1.07	0.42
-75/+38	36.22	1.36	0.00	0.00	60.76	0.03	0.02	1.25	0.36
-38	26.57	2.76	0.00	0.00	68.99	0.04	0.01	1.52	0.11
Zebediela Oxide									
Fraction	**Serpentine**	**Olivine**	**Talc**	**Clay**	**Pentlandite**	**Tochilinite**	**Pyrrhotite**	**Magnetite**	**Chromite**
Head	30.38	0.00	13.38	14.92	4.91	0.00	0.00	35.89	0.52
+300	39.00	0.00	20.13	23.23	1.58	0.00	0.00	14.81	1.25
-300/+150	31.75	0.00	16.63	18.75	10.67	0.00	0.00	20.92	1.28
-150/+75	26.55	0.00	11.70	13.01	5.51	0.00	0.00	42.65	0.58
-75/+38	27.21	0.00	9.80	15.23	11.85	0.00	0.00	35.56	0.35
-38	35.40	0.00	14.74	24.23	2.52	0.00	0.00	22.87	0.24

13.2.1.5 *Mineral Association*

Two minerals are deemed to be associated if they touch each other. In order to quantify such associations, the number of pixels of different minerals touching each other is counted and a percentage calculated (excluding background associations). An understanding of the mineral associations is of particular importance for the recovery via flotation and magnetic separation. It was concluded that the close association of pentlandite and pyrrhotite within the Sulphide Zone sample would facilitate simultaneous extraction, although the pyrrhotite would contribute very little to the overall nickel recovery.

13.2.1.6 *Mineral Liberation*

Liberation of sulphide phases is deemed a very good indicator of floatability. The results indicated that 40-70% of pentlandite is liberated within the range 30-80% at a grind of P_{80} 75 µm. This high proportion of middlings is quite typical of disseminated nickel ores and requires recycling of flotation cleaner tailings in close circuit to ensure maximum recovery. Improvements in pentlandite liberation and thus overall nickel recovery could also necessitate a finer grind. The results indicate that the total sulphides are well liberated at a grind of P_{80} 75 µm with 60% of the sulphides liberated to an extent greater than 80%.

13.2.1.7 Particle Map, Size and Distribution Analysis

For a better understanding of the physical behaviour of the sulphide/ magnetite-containing particles during process recovery, the particles were grouped into nine different associated particle types for further optical investigation. These include:

- Pe (lib): fully liberated pentlandite particle;
- Po (lib): fully liberated pyrrhotite particle;
- Mt (lib): fully liberated magnetite particle;
- Pe+Po (lib): fully liberated composite pentlandite and pyrrhotite particle;
- Pe+Po (midds): middlings composite pentlandite and pyrrhotite particle;
- Pe+Po+Mt (lib): fully liberated composite pentlandite, pyrrhotite and magnetite particle;
- Pe+Po+Mt (midds): middlings composite pentlandite, pyrrhotite and magnetite particle; Mt (low): middlings magnetite particle; and
- Other No Mt: All other particles containing no magnetite.

The optical investigations above confirm the relatively good liberation of both pentlandite and pyrrhotite from the gangue at a grind of P_{80} 75µm. Inclusion of limited amounts of pentlandite locked in composite magnetite particles could require a finer grind for recovery.

The quantitative particle type analysis for the Sulphide Zone sample above revealed that 0.07% of the sample mass is liberated pentlandite. This 0.07% accounts for 23% of the TNi content of the sample. In total, the liberated pentlandite and pyrrhotite as well as composite particles of these minerals account for 33% of the TNi content. Similarly middlings of pentlandite, pyrrhotite and composite particles of these two minerals account for 16% of the TNi. It is also envisaged that a portion of the pentlandite associated with magnetite would also be recoverable by flotation.

Overall, the sulphide recovery by flotation will account for both liberated and middlings particles; and it is estimated that of the TNi content (0.29%) of the Sulphide Zone, 54% or 0.16% Ni would be recoverable.

It is clear from the analysis above that the limited amount of pentlandite for the Oxide Zone sample is largely liberated, but that it is not of economic value.

While the average size of a pure pentlandite particle, in theory, is only 11 µm, the composite sulphide particles generated at a grind of P_{80} 75 µm range between 14 and 30 µm. This implies that a coarse grind could be sufficient for nickel recovery as a fine grind could generate fine pentlandite particles that are difficult to recover via froth flotation.

13.2.2 Metallurgical Testwork

Comminution test work has confirmed that crushing and milling indices are in-line with expectation and reference Projects (Croll *et al.,* 2012). The Zebediela material is classified as medium to hard.

Rougher flotation test work has confirmed that 60% of the feed nickel can be recovered to a sulphide concentrate while cleaner test work confirmed that concentrates of 16% nickel are achievable. Based on the open circuit test work it has been confirmed that 50% overall nickel recovery at 15% nickel concentration is achievable under lock cycle conditions. This compares well with the conclusions from optical investigations (Particle Map, Size and Distribution Analysis) of the sample which reported that approximately 54% of the TNi content of the Sulphide Zone could be recovered. Rougher LIMS test work confirmed that 64% of the feed iron could be recovered to a magnetite concentrate.

13.2.2.1 Comminution

Sag Mill Comminution ("SMC") tests were performed on ¼ core samples from the Sulphide Zone by GeoMet laboratories and the crushability parameters were determined and reported by JKTech. Standard Bond Ball Mill Index (BBMI) test work was performed and reported by Mintek laboratories.

The SMC test was designed for the breakage characterization of drill core and it generates a relationship between input energy (kWh/t) and the percent of broken product passing a specified sieve size. The results are used to determine the strength of the rock when broken under impact conditions (expressed as kWh/t).

The SMC test is a precision test, which uses particles that are cut from drill core using a diamond saw to achieve close size replication. The particles are then broken at a number of prescribed impact energies. The high degree of control imposed on both the size of particles and the breakage energies used, means that the test is largely free of the repeatability problems associated with tumbling-mill based tests.

The BBMI test provides useful information for the design of grinding circuits, and, in particular, to estimate the energy requirements for closed circuit ball milling. It is also used to predict and continually evaluate the performance of commercial ball mills.

With a conventional crusher index of 6.1 kWh/t and a high pressure grinding roll index of 11.8 kWh/t, Zebediela's crushability was classified as medium hardness within the lower 50 percentile of the JKTech database. The Bond work index was found to be 18.7 kWh/t, indicating that the sample is hard.

13.2.2.2 Flotation

Flotation tests were conducted using a standard Denver laboratory flotation machine. Airflow into the flotation cell was by an induced draught system and froth recovery was achieved by scraping at constant depth and intervals. Flotation tests were performed on the Sulphide Zone composite sample and reported by Maelgwyn Mineral Services. The products from these tests were assayed for Ni, Fe and S at SGS Laboratories, Johannesburg.

The Zebediela deposit consists mainly of magnesium silicate gangue minerals and the main proportion of nickel occurs as pentlandite and associated with iron sulphides. A large proportion of the nickel, however, occurs as ultra-fine grains or solid solution in the gangue minerals and therefore is not recoverable by flotation. Mineralogical investigations determined that the nickel sulphides account for 62% of the TNi, with 54% of TNi potentially recoverable by flotation. The mineralogy is such that conventional sulphide flotation conditions do not result in acceptable nickel concentrate grades and recoveries. Typical poor Ni flotation is associated with flotation bubbles coalescing, slow flotation rate, very low nickel recovery, high gangue recovery and finally poor concentrate cleaning and grade. The test work performed set out to address these issues and aimed at producing a high-grade concentrate. The resultant reagent configuration and specific flotation conditions are deemed proprietary and handled as confidential in the context of this report (Croll *et al.,* 2012).

The results show an overall Ni recovery of around 60% which is what was estimated during the mineralogical investigations. A final concentrate grade of 16% Ni is achievable at a recovery of around 33% in open circuit. The cleaners' tails contain about 27% of the nickel and in closed circuit a larger proportion of that will report to the final concentrate and a smaller proportion to the final tails.

It is noted that lock-cycle flotation tests, which represent actual closed circuit plant operation, would result in an estimated overall nickel recovery of 50% and a concentrate of >15% nickel. It is further noted from the flotation program that it will be critical to address the following flotation mechanisms to ensure high nickel recoveries and concentrate grades:

- liberation of small pentlandite particles by fine grinding, while keeping gangue fines generation and sulphide over-grind to a minimum;
- reagent availability to freshly produced sulphide surfaces;
- coagulation properties of serpentine and its role in coating liberated pentlandite particles as well as its impact on slurry viscosity;
- crowding effect of fine gangue and the minimization of this effect;
- solution chemistry to minimize gangue flotation and promote pentlandite flotation;
- flotation energy to ensure that very fine pentlandite particles collide with air bubbles and get floated, while keeping gangue entrainment to a minimum;
- oxidation of sulphide particles and the effect on nickel recoveries;
- the impact of froth structure and stability on nickel recovery and concentrate grade; and
- the impact of mineral association on nickel recovery and concentrate grade.

The following flotation conditions have been found to produce optimal flotation recoveries and concentrate grade for Zebediela mineralization:

- feed grind of 80 % passing 53 µm;
- combination of alkaline and acidic flotation conditions;
- slurry concentrations of < 25 % solids in rougher and < 10 % solids in cleaners;
- high energy input required to roughers and low energy input to cleaners;
- the use of industrial dispersants significantly outperforms depressants;
- conventional sulphide collector and frothing reagents; and
- concentrate regrind not required.

Three-stages of cleaning are required to produce a free shippable concentrate.

13.2.2.3 Magnetic Separation

Magnetic separation tests (LIMS) were performed on the Sulphide Zone composite and reported by Mintek. The magnetite potential of the South Zone sample was determined by Satmangan analysis.

This analysis involves measuring the total magnetic moment of a sample in a saturating magnetic field and is a quick, accurate and reliable method of measuring the magnetic material content of the sample.

A 1 kg Sulphide Zone sample was passed through a laboratory LIMS at 20% solids. The LIMS is used to remove particles with a high magnetic susceptibility namely magnetite (Fe_3O_4). This method utilizes a drum with permanent magnets which generate a magnetic field of about 900 Gauss at the surface of the drum. The drum rotates and the magnetics adhering to the drum move co-currently with the feed. The magnetics are removed with a scraper from the surface of the drum opposite from the feed in an area where the magnetic attraction ends. The rougher LIMS magnetic fraction was dried, weighed and prepared for chemical analysis. The remaining non-magnetic fraction was filtered and processed through the LIMS as a scavenger stage. The magnetic and non-magnetic fraction from the scavenger stage was collected, dried and sub-sampled for chemical analysis.

The Satmangan analysis confirmed a feed grade of 5.5% magnetite for the Sulphide Zone material. The rougher-scavenger LIMS circuit upgraded the Fe from 6% to 20% at a recovery of 64% and mass pull of 20% to the magnetic fraction. Forty percent of the Ni reported to the magnetic fraction at a grade of 0.6%. Since the nickel recovered to a magnetite concentrate would not attract any credit, the plant flowsheet would implement nickel recovery prior to magnetite recovery. Based on these positive results further lock cycle test work was recommended for the next phase.

13.2.3 Recommendations

Future bench-top developmental metallurgical test work could be performed on a composite sample from borehole Z12, while pilot scale test work could be performed on a bulk sample to be made up from 5 boreholes, specifically drilled for metallurgical test work, representing the future mine plan. The following test work should be considered for a future pre-feasibility study:

- additional flotation studies;
- High Pressure Grinding Rolls (HPGR) crushing to determine the flotation benefits;
- ball milling and fines removal to minimize over-grinding;
- lock cycle test work to confirm middlings recoveries;
- product quality to finalize the refining process options;
- G-cell pilot plant to prove application of this technology and to confirm flotation benefits;
- magnetic separation;
- lock cycle test work;
- product quality to determine marketing options; and
- paste thickening in support of the water saving strategy.

14.0 MINERAL RESOURCE ESTIMATES

The Zebediela Nickel Project has no current NI 43-101 Mineral Resources.

15.0 MINERAL RESERVE ESTIMATES

This Section does not apply to the Zebediela Nickel Project at this stage.

16.0 MINING METHODS

This Section does not apply to the Zebediela Nickel Project at this stage.

17.0 RECOVERY METHODS

This Section does not apply to the Zebediela Nickel Project at this stage.

18.0 PROJECT INFRASTRUCTURE

This Section does not apply to the Zebediela Nickel Project at this stage.

19.0 MARKET STUDIES AND CONTRACTS

This Section does not apply to the Zebediela Nickel Project at this stage.

20.0 ENVIRONMENTAL STUDIES, PERMITTING AND SOCIAL OR COMMUNITY IMPACT

This Section does not apply to the Zebediela Nickel Project at this stage.

21.0 CAPITAL AND OPERATING COSTS

This Section does not apply to the Zebediela Nickel Project at this stage.

22.0 ECONOMIC ANALYSIS

This Section does not apply to the Zebediela Nickel Project at this stage.

23.0 ADJACENT PROPERTIES

23.1 Platreef Project (Ivanhoe Mines)

Ivanhoe Mines' (TSX: IVN; "Ivanhoe") Platreef Project, located in the Northern Limb of the Bushveld Igneous Complex, is immediately west of the Zebediela Project (Figure 23-1). Information for this Project is publically available through Ivanhoe Mines' website and technical reports filed on SEDAR (www.ivanhoemines.com/projects/platreef-project/).

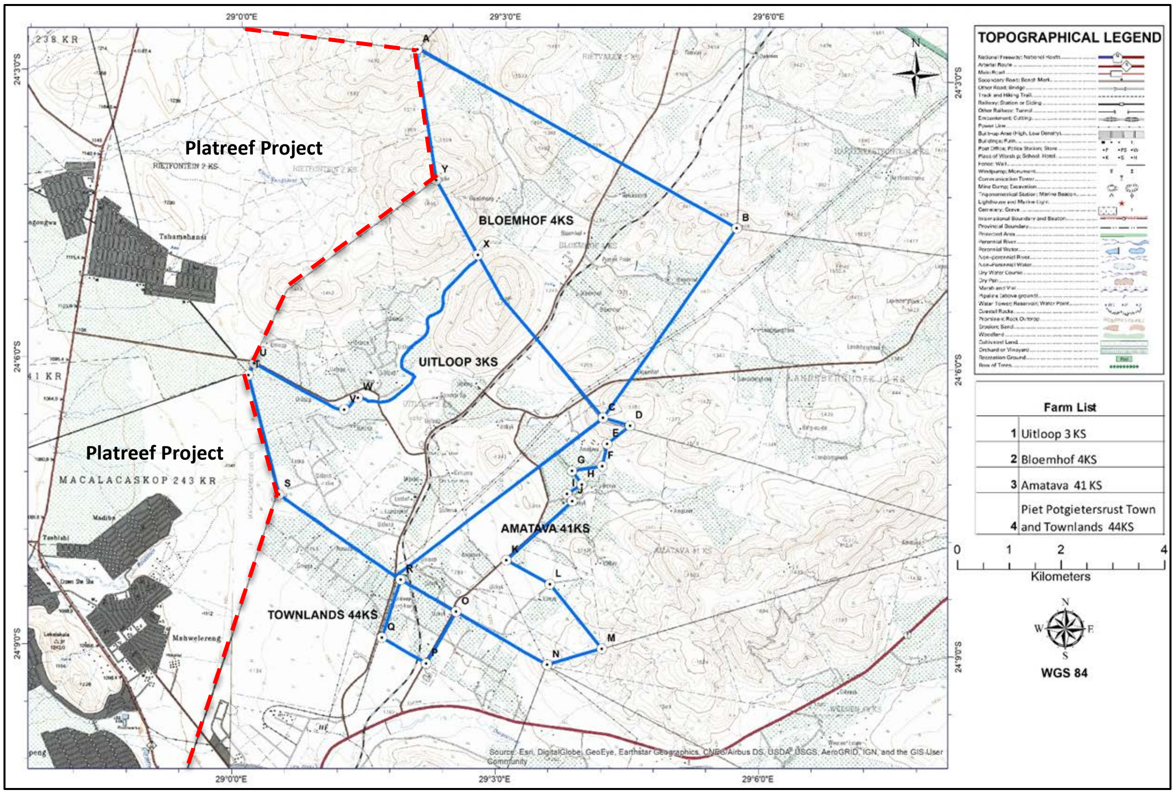


Figure 23-1: Location of Ivanhoe's Platreef Project (dashed red line boundary) west of the Zebediela Nickel Project (blue boundary).

Ivanhoe Mines indirectly owns 64% of the Platreef Project through its subsidiary, Ivanplats, and is directing all mine development work. The South African beneficiaries of the approved broad-based, black economic empowerment structure have a 26% stake in the Platreef Project. The remaining 10% is owned by a Japanese consortium of ITOCHU Corporation; Japan Oil, Gas and Metals National Corporation; and Japan Gas Corporation. The Platreef Project consists of a granted mining right over the farms Macalakaskop 243 KR and Turfspruit 238 KR, and a prospecting right application over Rietfontein 5 KS.

On 10 December 2020, Ivanhoe announced that it had filed a new NI 43-101 Technical Report (Peters *et al.,* 2020) covering the Platreef Integrated Development Plan 2020 ("Platreef IDP20"). The updated NI 43-101 Technical Report includes an independent Feasibility Study ("Platreef 2020 FS") for the development of the Platreef Project as a 4.4 Million tonne per annum ("Mtpa") underground mine with two new concentrators built in modules of 2.2 Mtpa; together with a PEA (Platreef 2020

PEA) for an alternative scenario evaluating the phased development of an initial 700,000 tonne per annum ("tpa") underground mine, including a new concentrator with a capacity of up to 770,000 tpa. On 16 June 2020, Ivanhoe Mines announced that it had completed the sinking of Shaft 1 to a final depth of 996 m below surface on the Platreef mining licence.

Platreef mineralization comprises a variably layered, composite norite–pyroxenite–harzburgite intrusion that lies near the base of the Northern Limb of the BIC, in contact with metasedimentary and granitic floor rocks (Figure 23-2).

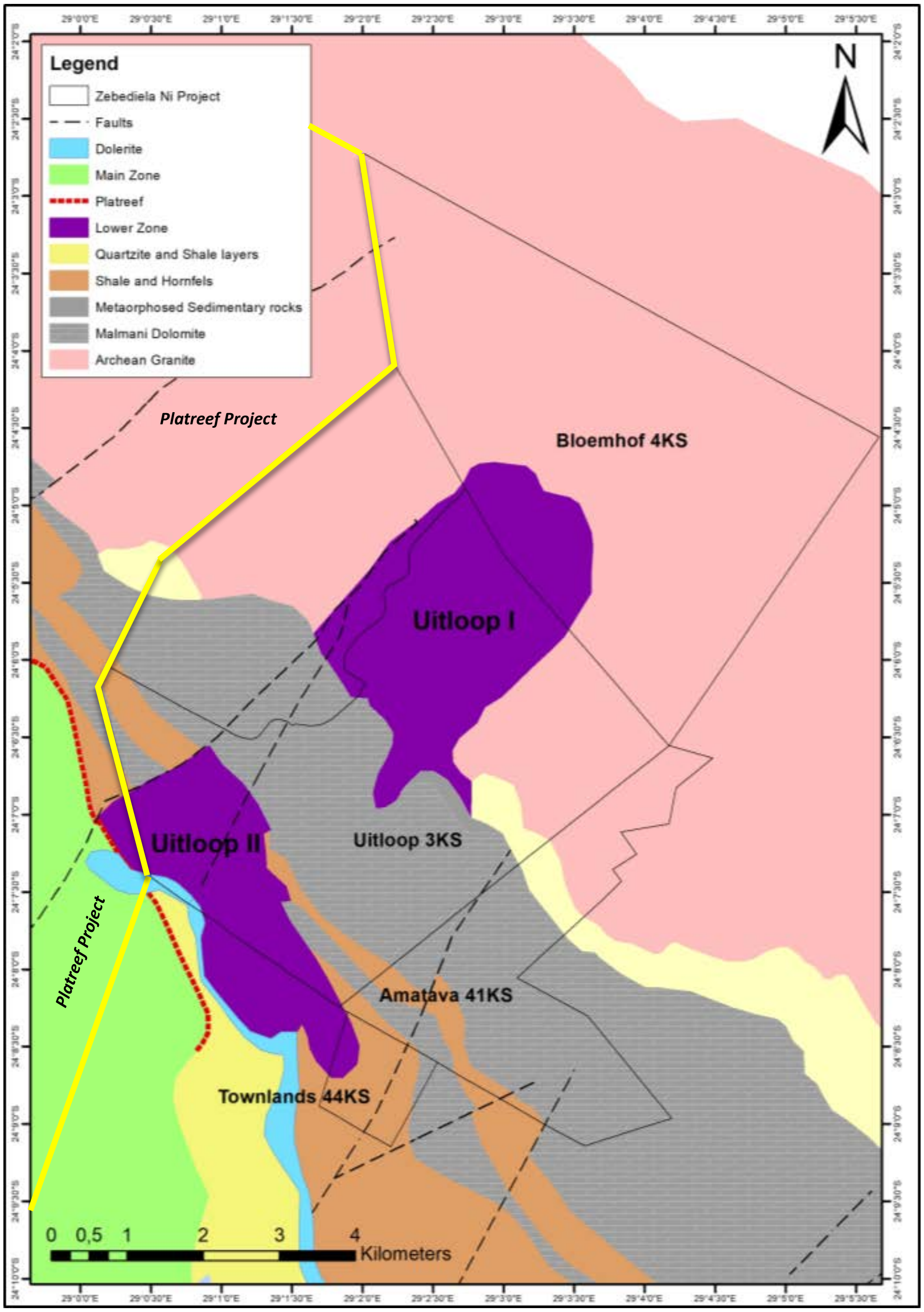


Figure 23-2: Geological map of the Project area and location of the two Lower Zone bodies (Uitloop I and II) as well as the outcrop of the Platreef on the western side of the southwestern boundary of the Prospecting Right

(base geological map modified from van der Merwe, 1978). The location of the southeastern boundary of Ivanhoe Mines' Platreef Project is approximated (yellow boundary).

The variability of lithology and thickness along strike is attributed to underlying structures and assimilation of local country rocks. A primary target of the Platreef Project is the relatively thick, high-grade, flat-lying, underground PGE deposit referred to as the Flatreef Deposit.

Work completed to date on the Platreef Project (since 1998) includes geological mapping, airborne and ground geophysical surveys, percussion drilling over the Platreef sub-crop, diamond core drilling, petrography, density determinations, metallurgical test work, geotechnical and hydrological investigations, seismic survey, social and environmental impact assessments, mineralogical studies, Mineral Resource and Mineral Reserve estimation and subsequent updates, a preliminary economic assessment, and a pre-feasibility study.

The Principal Author and qualified person has been unable to verify the information presented above and this information is not necessarily indicative of the mineralization on the Property that is the subject of the Report.

24.0 OTHER RELEVANT DATA AND INFORMATION

24.1 Preliminary Economic Assessment Study (2012)

In 2012, the MSA Group was commissioned by Umnex Minerals Limpopo (Pty) Ltd to conduct a Preliminary Economic Assessment study (Croll *et al.,* 2012), based on work performed by the following experts:

- TWP Engineering, responsible for the comminution circuit design;
- Bateman Engineering N.V., responsible for the concentrator design;
- Mintek SA, responsible for the comminution test work;
- SGS South Africa (Pty) Ltd., responsible for mineralogy work and magnetite recovery test work;
- Maelgwyn Mineral Services Africa (Pty) Limited, responsible for Ni flotation test work;
- Professional Cost Consultants (Pty) Ltd., responsible for the process facility costing; and
- The MSA Group, responsible for the NI43-101 compliant mineral resource statement and accompanying NI43-101 technical report, mine plan, mine and infrastructure costing, environmental studies, financial model, and collation of the overall PEA report.

The PEA considered the mining and milling of 500 million tonnes of mineralized material in an open pit mine approximately 1,700 m long by 880 m wide by 250 m deep. The proposed mining rate was 20 Mtpa using a contractor mining fleet. The strip ratio was calculated to be 0.36:1. Consideration of the development of Inferred Resources was not contemplated in the PEA nor was the material within the overlying Oxide Zone (considered waste). The Mine Right Application (MRA) has a reduced environmental footprint of 150 ha, further engineering studies will be done to align the PEA and the MRA.

Extensive work was conducted on the Zebediela Nickel Deposit metallurgy (*see* Section 13). Testing indicated that 50% of the total contained nickel could be recovered into a high-quality saleable nickel concentrate averaging 16% Ni. Start-up capital expenditures, including contingencies and working capital, were estimated to be US$650 million and sustaining capital was estimated at US$58 million over the Life of Mine. Operating expenditures were estimated to be US$3.35 per pound of recoverable nickel and the average base case nickel price was US$8.50 per pound (Croll *et al.,* 2012).

The PEA projected a pre-tax and pre-royalty net present value of US$1,018 million, an internal rate of return of 25.7%, and a 3.8 year payback period at an 8% discount rate using a nickel price of US$8.50/lb and a ZAR/USD ratio of 8.1. Annual cash flow was projected to be US$203 million.

The PEA also recommended the commencement of a phased pre-feasibility study with the objectives of upgrading and expanding mineral resources, securing long-term water and electrical supplies, conducting geotechnical work to confirm pit design, continued metallurgical work and a bulk sampling program, detailed investigations into toll smelting and refining, optimising tailings disposal options, the initiation of base-line environmental studies, and confirming the viability of recovering magnetite as an economically viable by-product. Phase I of the recommended study was estimated to cost US$4.23 million, and Phase II to cost US$4.03 million.

Since the inception of the Project, the JV was aware of the potential value of magnetite as an iron concentrate by-product at Zebediela. Metallurgical work investigating by-product magnetite was included in the scope of the PEA investigations, but due to analytical delays, any potential economic impact from iron by-product was not included in the report. If by-product magnetite is proven to be economically viable, an amendment to the PEA will have to be issued.

The PEA validated the Zebediela Nickel Project as a large, disseminated sulphide resource, with mining engineering aspects similar to typical porphyry copper deposits in terms of size and grade (Croll *et al.,* 2012). The Zebediela Nickel Project also contains significant iron minerals in the form of magnetite that should also be investigated as a potential by-product of nickel production.

25.0 INTERPRETATION AND CONCLUSIONS

The objective of this work was to prepare an independent NI 43-101 Technical Report capturing historical information available for the Zebediela Nickel Sulphide Project, to evaluate this information with respect to the prospectivity of the Project, and to provide recommendations for future exploration and development on the Project along with a budget proposal.

The Project is located over what is interpreted to be the largest structurally controlled basin in the Northern Limb (McCreesh *et al.,* 2019). This geological feature could yield Platreef (stratabound) and/or contact-style mineralization close to surface as seen in the rest of the Northern Limb of the BIC and/or deeper semi-massive to massive sulphides associated with footwall contact embayments and within basement rocks as seen at the Nkomati Mine within the Uitkomst Complex.

Historical exploration work within and immediate to the current tenements dates to the 1960s, with modern exploration starting in the late 1990s. This work has identified three different styles of mineralization on the Property, hosted by different lithologies and stratigraphic units.

25.1 Interpreted Targets

Based on information and data provided to the Authors by the Issuer and available from public sources, there are three prospective target types within the Project area (McCreesh *et al.,* 2019):

Target 1: Large-tonnage, low-grade, disseminated nickel sulphide, is associated with the Lower Zone of the Uitloop II body and may be potentially found within the Uitloop I body to the northeast (*see* Figure 7-12). Most of the mineralization in the serpentinized Lower Zone ultramafic lithologies (Uitloop I and II bodies) takes the form of disseminated sulphide (mainly fine-grained pentlandite $(Fe,Ni)_9S_8$)), containing potentially large tonnages of low-grade nickel, and forming the basis for historical mineral resources reported in Section 6.4. At the current exploration stage of the Project, this mineralization style is considered a secondary target.

Target 2: Platreef (stratabound) and Contact-style mineralization, containing bleb sulphide mineralization with elevated PGE, nickel, and copper mineralization, occurs along the northeast margin of the Uitloop II body and is the primary target of current exploration work (*see* Figure 7-12). There is potential for a 6.3 km strike length of Platreef and/or Contact-style mineralization. There is also the potential for up-dip extension of this target type where the Platreef potentially intruded beneath the sedimentary cover, creating a “raft or bridge”, and which may host disseminated and/or semi-massive sulphide.

Target 3: massive-sulphide (Ni-Cu-PGE) deposits associated with ultramafic rocks at or near the base of the ultramafic rocks, within structurally controlled, contact-associated embayments or within footwall lithologies that could include Archean granite basement up to 1 km away from BIC rocks (*see* Figure 7-12). Contact associated, footwall embayments could form a trap site for BIC magmas to assimilate footwall lithologies and precipitate larger concentrations of sulphur. A continuous flow of magma during emplacement of higher stratigraphic Platreef magmas, would have allowed for sulphur to be constantly replenished and to interact with fresh magma containing additional Ni, Cu and PGE concentrations which would preferentially partition into sulphur-rich liquids and precipitate as massive sulphides within the footwall embayments. This target type, although not a top priority at this stage of the Project, could be encountered as a result of priority Target 1 exploration.

25.2 Risks and Opportunities

Certain risks and opportunities relating to the potential development of the Zebediela Nickel Sulphide Project were identified during the course of the Preliminary Economic Assessment (Croll *et al.,* 2012). The most material of these risks are:

- securing a long-term bulk water supply. At present all the available sources of bulk water supply in the Region have been allocated. The Government of South Africa has tasked the Lebalelo Water Users Association with identifying potential future long term bulk water supply options for the Region, and Umnex has registered its interest and requirements with Lebalelo. However, this initiative may not in itself succeed in identifying appropriate or sufficient water resources to enable the Project to proceed;
- the availability of a suitable long term power supply. The construction of additional power supply facilities has already commenced, but at this stage, there is uncertainty as to whether this additional power will be available as scheduled;
- the potential impact of the mining operation in terms of noise, dust pollution, vibration and water contamination on the communities and environment in the vicinity of the Zebediela Project; and,
- the ability to procure a local and/or international toll options for smelting and refining.

25.2.1 Opportunities

There are also a number of opportunities for this Project, beyond the current targets:

- the potential economic extraction of the magnetite component of the deposit; work on determining the economic potential of extracting the magnetite content from the deposit could be conducted during the PFS stage; and,
- developing a viable technical-economic model for the recovery of Ni and/or magnetite from the stockpiled Oxide Zone material.

25.3 Conclusions

Based on the location of the Project in the Northern Limb of the BIC, the known styles and extent of mineralization, and the multitude of targets to be tested in future work programs, the area shows excellent exploration potential for discovery of potentially economic sulphide deposits.

It is the opinion of the Authors that, after reviewing historical results and other publicly available information and data from the Zebediela Nickel Project, the Project presents an excellent opportunity for the Issuer and is worthy of additional exploration and development work.

26.0 RECOMMENDATIONS

It is the opinion of the Authors that, after reviewing historical results and other publicly available information and data from the Zebediela Nickel Sulphide Project, that significant opportunity exists for Blue Rhino to continue to develop the Project.

A two phase program, totalling US$950,000 (C$1.2M), is recommended with the second phase (drilling) contingent on the success of the first phase (environmental authorization and granting of the Mining Right). The newly discovered Platreef style mineralization (priority Target 2) in particular, deserves further exploration to prove the strike and dip extent of the mineralization, and for resource definition drilling, with the goal to outline maiden PGE resources.

The recommended multi-phase budget (US$950,000) is as follows:

- **Phase 1: US$250,000**
  Complete Mining Right application and associated environmental authorisation process in order to secure long term title across the three Prospecting Areas.

  After successful granting of the Mining Right:

- **Phase 2: US$700,000**
  Six hole diamond drilling program totalling approximately 3,600 m.

Drill hole parameters are summarized in Table 26-1 and locations of the proposed drill hole collars are shown in Figure 26-1.

Table 26-1. Summary of proposed drill hole parameters (*see* Figure 26-1).

BHID	Farm	Collar_Xm	Collar_Ym	Elev (m)	Az	Inclination	EOH (m)
PZ023	Uitloop 3KS	704812.53	7331642.46	1150	45-50° (NE-ENE)	-50	600
PZ024	Uitloop 3KS	705702.33	7330450.91	1180	45-50° (NE-ENE)	-50	600
PZ025	Uitloop 3KS	704562.50	7331945.81	1143	45-50° (NE-ENE)	-50	600
PZ026	Uitloop 3KS	705185.34	7331184.65	1155	45-50° (NE-ENE)	-50	600
PZ027	Uitloop 3KS	706344.14	7329262.20	1182	45-50° (NE-ENE)	-50	600
PZ028	Amatava 41KS	706807.48	7329190.82	1195	45-50° (NE-ENE)	-50	600

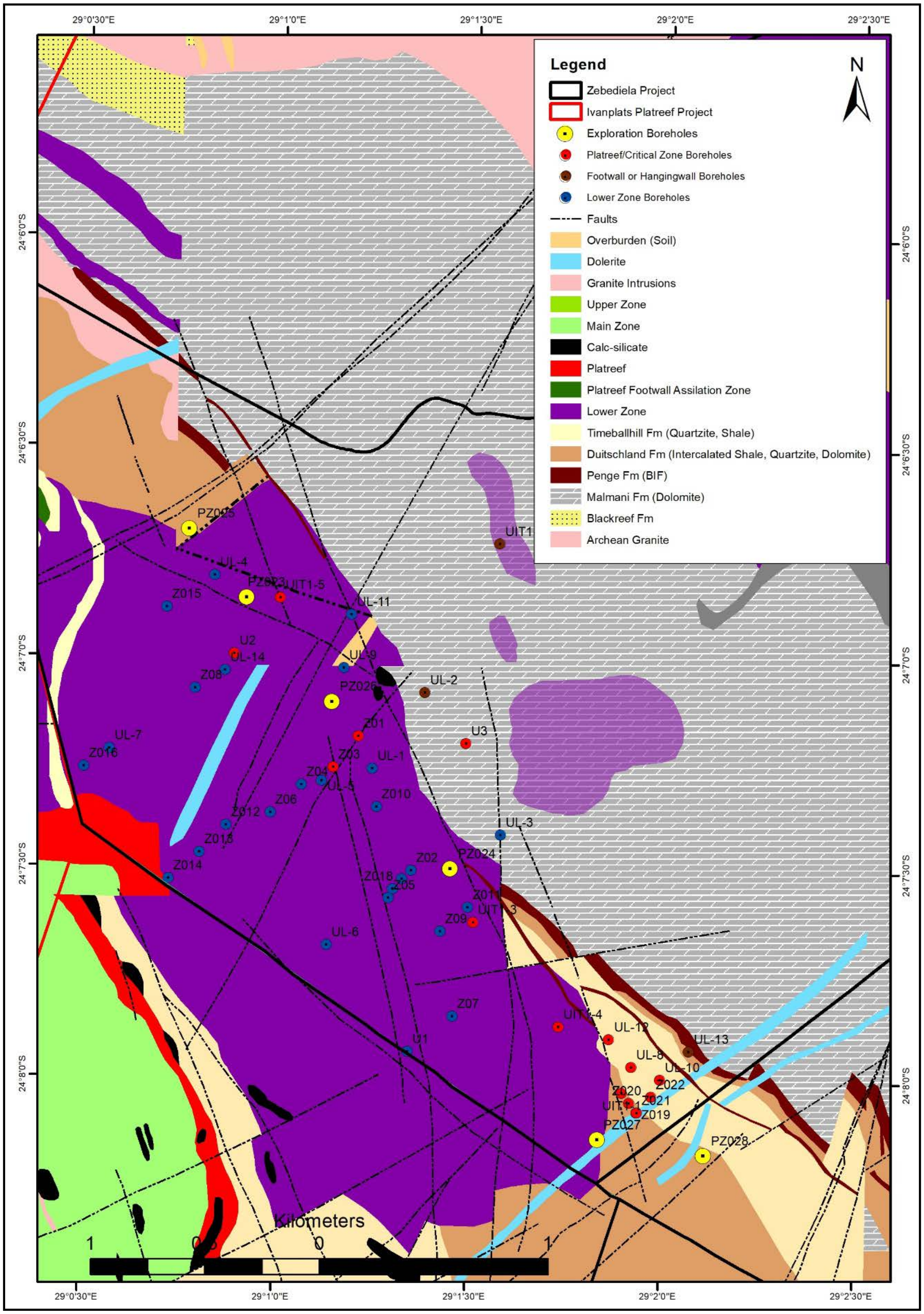


Figure 26-1.Locations of the six proposed drill hole collars (yellow), along with collar locations from previous drilling. The geological base map is preliminary and has been provided by the Issuer.

26.1 General Recommendations

In all work programs, the Issuer should consider the following general recommendations:

- Drill hole collar surveys: measured to sub-metre accuracy at a minimum, using a Differential Global Positioning System (DGPS) system.
- Drill core orientation: utilize a tool such as the Reflex ACT II, a digital core orientation system, to obtain oriented drill core and making more accurate structural interpretations.
- Specific gravity (relative density) checks at an accredited laboratory.
- Consistent QA/QC procedures.
- Down-hole Imaging: for additional *in-situ* structural information, a borehole inspection camera system should be considered on selected drill holes.
- 3D geological modelling (creation and systematic updating) to determine the shape of the Lower Zone, Platreef lithologies, structural controls, continuity of mineralization, contact geometry, and relationship of the ultramafic body and sulphide mineralization with footwall lithologies and/or margin xenoliths.

26.2 Future Recommendations

Additional work that could be considered for future work programs targeting the three target types of mineralization includes (McCreesh *et al.,* 2019):

Target 1

1. Infill drilling to determine the measured resource of the low-grade disseminated Ni sulphide deposit.

2. Further investigation on the Uitloop I Lower Zone body to determine if there is a similar style of mineralization to Uitloop II body.

3. Lithological correlation within the boreholes to determine a stratigraphy within the ultramafic/mafic packages. Identify potential marker horizons in the core to have a better understanding of the lithologies and stratigraphy in the Lower Zone bodies. These will aid in determining the depth to mineralized intervals within the Lower Zone bodies.

Target 2

1. Completion of detailed geological mapping across the whole Project area with an emphasis of looking for Platreef Lithologies.

2. Detailed structural interpretations of the Project area, both in borehole sections and surface mapping.

3. Detailed geochemistry along the Platreef stratigraphic package to determine the chemically different sill as seen in Kinnaird, (2005). The chemistry results can be obtained using a handheld pXRF machine, scanning down the entire core or detailed sampling of the Platreef interval and samples sent to a laboratory for conventional XFR methods.

4. Detailed stratigraphic correlations within the boreholes to determine a better understanding of the geology and structures in the Project area. Identifying potential marker horizons in the

stratigraphy to determine continuity of lithologies/stratigraphic horizons along strike and to aid in determining the depth to mineralized zones.

5. Further exploration drilling programs to investigate the potential the 6.3 km strike length of the Platreef mineralization by following the approximate strike extent of the Penge BIF.

7. Deep exploration drilling on the potential Platreef extension investigating the soil geochemistry anomalies and the geophysical signatures, to determine whether the Platreef mineralization extends at depth below the possible "raft or bridge" of sedimentary lithologies (Transvaal Supergroup).

Target 3

1. Completion of detailed mapping in areas where potential massive-sulphides may occur in the footwall.

2. Soil geochemistry program to test the potential Ni and Cu anomalies on the north-eastern portion of the Zebediela Project, on the farms Bloemhof 4 KS and the north-eastern portion of Uitloop 3 KS farm.

3. Structural investigation where potential massive-sulphide deposits are associated with the footwall (Archean granite-gneiss), and potentially up to 1 km from the intrusive Bushveld Complex.

4. Geophysics program targeting massive-sulphides. Magnetotellurics (MT) and audio-frequency magnetotellurics (AMT) geophysical survey and transient electromagnetic (TEM) geophysics method have been recommended when exploring for massive nickel-sulphide bodies.

5. Drilling program to investigate the potential anomalies that arise from the soil geochemistry and geophysics.

6. All boreholes need to be drilled deeper into the footwall to test these targets.

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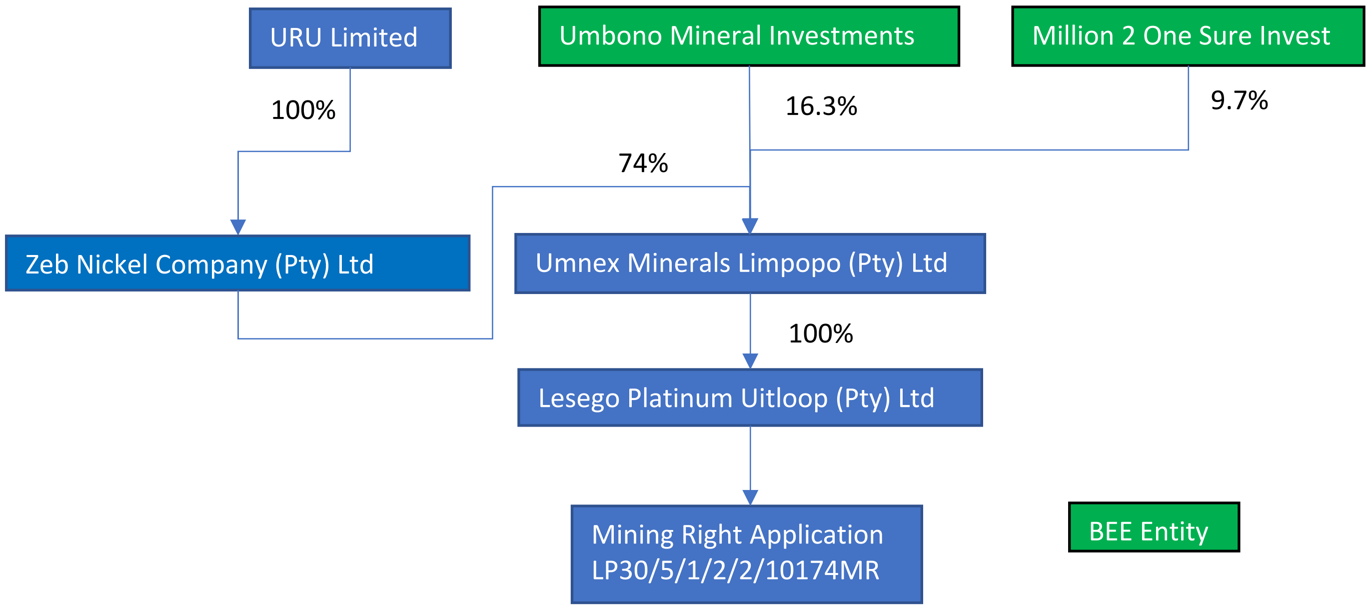
https://geoscience.org.za/
Department of Mineral resources and Energy:
https://www.gov.za/source-department/department-mineral-resources-and-energy
Mining, Minerals and Energy:
https://www.gov.za/links/mining-minerals-and-energy#
Permits, Licences and Rights
https://www.gov.za/services/services-organisations/permits-licences-and-rights/mining-water
SEDAR:
www.sedar.com
URU Metals Limited:
http://www.urumetals.com/

APPENDIX 1 – Corporate Structure

[1 page]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9.7%
74%
Zeb Nickel Company (Pty) Ltd
Umnex Minerals Limpopo (Pty) Ltd
100%
Lesego Platinum Uitloop (Pty) Ltd
Mining Right Application
LP30/5/1/2/2/10174MR
BEE Entity

APPENDIX 2 – Certificates of Authors

[2 Pages]

CERTIFICATE OF AUTHOR

Scott Jobin-Bevans (P.Geo.)

I, Scott Jobin-Bevans, P.Geo., do hereby certify that:

1. I am an independent consultant of Caracle Creek International Consulting Inc. (Caracle) and have an address at 1545 Maley Drive, Ste. 2018, Sudbury, Ontario, Canada, P3A 4R7.
2. I graduated from the University of Manitoba (Winnipeg, Manitoba) with a B.Sc. Geosciences (Hons) in 1995 and an M.Sc. Geosciences in 1997, and from the University of Western Ontario (London, Ontario) with a Ph.D. (Geology) in 2004.
3. I am a member, in good standing, of Association of Professional Geoscientists of Ontario, License Number 0183.
4. I have practiced my profession continuously for more than 25 years and have been involved in mineral exploration, mine site geology, mineral resource and reserve estimations, preliminary economic assessments, pre-feasibility studies, due diligence, valuation and evaluation reporting, and have authored or co-authored numerous NI-43-101 reports on a multitude of commodities including nickel-copper-platinum group element, base metals, gold, silver, vanadium, and lithium projects in Canada, the United States, China, Central and South America, Europe, Africa, and Australia.
5. I have read the definition of "Qualified Person" set out in National Instrument 43-101 Standards of Disclosure for Mineral Projects ("NI 43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "Qualified Person" for the purposes of NI 43-101.
6. I am responsible for all sections except Section 2.3 in the technical report titled "Independent NI 43-101 Technical Report on the Zebediela Nickel Sulphide Project, Limpopo province, South Africa" (the "Technical Report"), issued February 26, 2021 and with an Effective Date of February 24, 2021.
7. I have not visited the Zebediela Nickel Sulphide Property.
8. I am independent of the Issuer Blue Rhino Capital Corp., applying all of the tests in Section 1.5 of NI 43-101.
9. I have had no prior involvement with the Property that is the subject of the Technical Report.
10. I have read NI 43-101, Form 43-101F1 and confirm the Technical Report has been prepared in compliance with that instrument and form.
11. As of the Effective Date of the Technical Report, to the best of my knowledge, information and belief, the Sections of the Technical Report for which I am responsible contain all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Signed at Toronto, Ontario, Canada this 26th day of February 2021.

____

Scott Jobin-Bevans (Ph.D., PMP, P.Geo.)

CERTIFICATE OF AUTHOR

Philip John Hancox (Pr.Sci.Nat.)

I, Philip John Hancox, Pr.Sci.Nat., do hereby certify that:

1. I am an independent consultant of Caracle Creek International Consulting (Pty) Limited (CCIC) and have an address at 11 Cliffside Crescent, Northcliff, Gauteng, South Africa.
2. I graduated from the University of the Witwatersrand (Johannesburg, South Africa) with a B.Sc. Geosciences (Hons) in 1991 and a Ph.D. (Geology and Palaeontology) in 1998.
3. I am registered as a Professional Natural Scientist (Geological Science) with the South African Council for Natural Scientific Professions (SACNASP), registration No. 400224/04 and am a Member and Fellow of the Geological Society of South Africa (GSSA) and of the Society of Economic Geologists.
4. I have practiced my profession continuously for more than 20 years and have been involved in mineral exploration, mine site geology, mineral resource estimations, preliminary economic assessments, pre-feasibility, and due diligence studies, and have authored or co-authored several NI-43-101 Technical Reports on a multitude of commodities including coal, copper, graphite, platinum and rare earth elements.
5. I have read the definition of “Qualified Person” set out in National Instrument 43-101 Standards of Disclosure for Mineral Projects (“NI 43-101”) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a “Qualified Person” for the purposes of NI 43-101.
6. I am responsible for Section 2.3 in the technical report titled “Independent NI 43-101 Technical Report on the Zebediela Nickel Sulphide Project, Limpopo province, South Africa” (the “Technical Report”), issued February 26, 2021 and with an Effective Date of February 24, 2021.
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9. I have had no prior involvement with the Property that is the subject of the Technical Report.
10. I have read NI 43-101, Form 43-101F1 and confirm the Technical Report has been prepared in compliance with that instrument and form.
11. As of the Effective Date of the Technical Report, to the best of my knowledge, information and belief, the Section of the Technical Report for which I am responsible contain all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Signed at Johannesburg, Gauteng, South Africa, this 26th day of February 2021.

____

Philip John Hancox (Ph.D., Pr.Sci.Nat.)

APPENDIX 3 – Photographs from the Zebediela Project Site Visit

[5 Pages]

Flats on Uitloop 3KS in the area of the proposed open pit with Uitloop Hills in the background.

Collar stand pipe for drill hole Z017.

Collar stand pipe for drill hole Z021.

RC water monitoring borehole on Uitloop Farm.

Drill hole Z01 laid out for inspection (Dec 2, 2020).

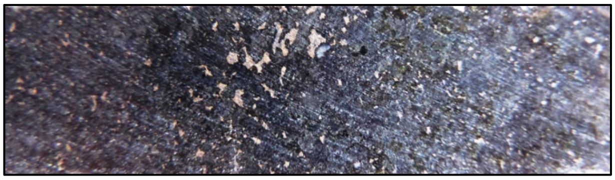
Drill hole Z01 showing faulted contact between serpentinized dunite and Platreef-style feldspathic pyroxenite.

Transvaal - Lower Zone contact zone in drill hole Z01.

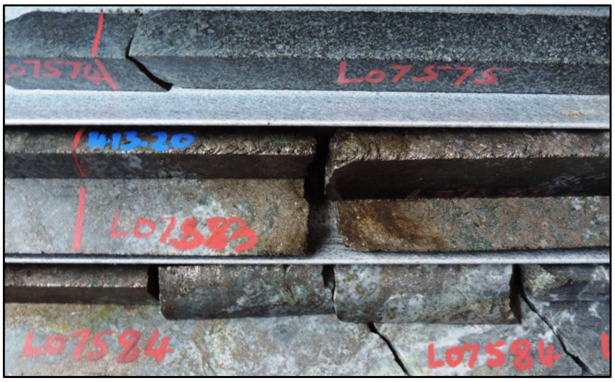
Drill holes Z017, Z019, Z020 and Z022 laid out for inspection (December 2, 2020).

Disseminated Ni-Cu sulphides in serpentinized dunite, drill hole Z017 Lower Zone.

Massive sulphide zone towards the base of drill hole Z017.



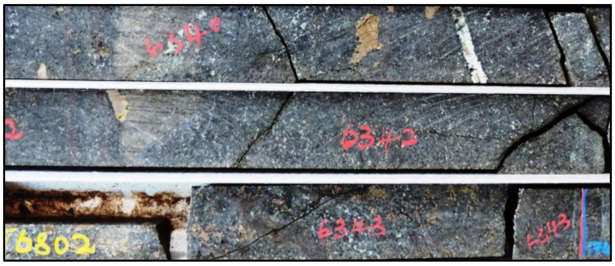
Blebby and disseminated Ni-Cu sulphides in serpentinized dunite, drill hole Z017 Lower Zone.



Drill hole Z017 - Lower Zone metasedimentary contact with massive and blebby sulphides.

Blebby Ni-Cu sulphide mineralisation in drill hole Z019.

Dolomite xenoliths at the base of drill hole Z019.



Typical Platreef-style mineralization in drill hole Z0202.

Contact between Transvaal Supergroup metasedimentary hanging wall and Platreef-style intrusive in drill hole Z022.

Drill hole Z020: magnetite layers in the footwall Transvaal Supergroup metasedimentary strata.

APPENDIX 4 – Land Tenure

[2 pages]

Appendix 4 - Zebediela Project

FARM NAME	PORTION	REGISTRATION DIVISION	TITLE DEEDS NO	AREAS
UITLOOP 3 KS	47	KS	T95464/2015	3.1449H
	39	KS	T129595/1997	98.5004H
	23	KS	T48928/2013	34.2432H
	25	KS	T10862/1958	2369.000SQM
	22	KS	T5943/1989	11.9495H
	2	KS	T77012/2012	741.938H
	21	KS	T25701/1990	106.0116H
	20	KS	T48928/2013	31.2952H
	49	KS	T171496/2003	21.4133H
	48	KS	T48928/2013	21.4133H
	59	KS	T8385/2017	21.4133H
	52	KS	T45711/2001	21.4133H
	63	KS	T24157/2008	19.0449H
	51	KS	T86240/2004	21.4133H
	36	KS	T28585/2001	21.4133H
	70	KS	T40904/2014	5.1592H
	73	KS	T40904/2014	5.1592H
	65	KS	T87816/1998	34.8825H
	71	KS	T40904/2014	5.1592H
	72	KS	T40904/2014	5.1592H
	75	KS	T88061/2016	2990.0000SQM
	74	KS	T4150/2017	2.6808H
	35	KS	T112313/2006	21.4133H
	40	KS	T25291/2005	21.4133H
	54	KS	T151033/2007	18.7325H
	56	KS	T121493/1998	21.4133H
	46	KS	T81683/2004	21.4133H
	53	KS	T45711/2001	21.4133H
	55	KS	T4977/2015	21.4133H
	58	KS	T132799/2006	21.4133H
	24	KS	T50483/2012	43.8449H
	12	KS	T54660/2015	85.6532H
	REMAINDER			
	TOTAL			
BLOEMHOF 4 KS	14	KS	T4116/2018	171.3064H
	17	KS	T27683/1998	324.0853H
	26	KS	T44759/1996	439.3363H
	25	KS	T104261/1996	111.3492H
	19	KS	T89136/2006	23.5126H
	4	KS	T49168/2012	38.0584H
	16	KS	T117336/2000	99.1942H
	3	KS	T38168/2011	148.9103H
	6	KS	T851/2017	77.0879H
	9	KS	T19022/1982	85.6532H
	13	KS	T49168/2012	6.7740H
	15	KS	T87456/1994	21.4133H
	24	KS	T75954/1993	240.5720H
	18	KS	T49168/2012	24.6032H

Appendix 4 - Zebediela Project

FARM NAME	PORTION	REGISTRATION DIVISION	TITLE DEEDS NO	AREAS
	11	KS	T67534/2016	106.1429H
	REMAINDER			
	TOTAL			
AMATAVA 41 KS	12	KS	T74029/2010	107.0665H
	10	KS	T103038/2008	25.6960H
	28	KS	T2614/1975	1.5610H
	29	KS	T71861/1976	1.3669H
	17	KS	T116967/2001	8.5653H
	9	KS	T96781/1994	11.2870H
	2	KS	T141097/2002	7.1448H
	11	KS	T141097/2002	13.0951H
	23	KS	T113003/2005	46.1223H
	14	KS	T66288/2015	85.6532H
	1	KS	T48928/2013	227.981H
	15	KS	T135496/2001	42.8266H
	13	KS	T74029/2010	102.3454H
	REMAINDER			
	TOTAL			
PIET POTGIETERSRUST 44 KS	47	KS	T71388/2014	21.4133H
	121	KS	NO DATA FOND FOR THIS QUERY	5.2229H
	101	KS	NO DATA FOND FOR THIS QUERY	2.0670H
	46	KS	T156922/2004	15.2119H
	49	KS	T25654/2000	17.0152H
	98	KS	T29648/1976	6.2014H
	100	KS	T3930/1977	4.3981H
	50	KS	T1407/2019	21.4133H
	48	KS	T122513/2006	20.8577H
	99	KS	T3433/1976	5556.000SQM
	51	KS	T105208/2006	14.1234H
	REMAINDER			