

NATIONAL INSTRUMENT 43-101 TECHNICAL REPORT ON THE ZEB NICKEL PROJECT

Limpopo Province South Africa



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Effective Date: 23 June 2023 Issuing Date: 12 July 2023

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Project Number: 609.20.00

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The Report, "National Instrument 43-101 Technical Report on the Zeb Nickel Project, Limpopo Province, South Africa", dated 12 July 2023 and with an Effective Date of 23 June 2023, was prepared for Zeb Nickel Corp and authored by the following:

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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 1721 Bancroft Drive, Sudbury, Ontario, Canada, P3B 1R9.
- 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 the Professional Geoscientists of Ontario, License Number 0183 (since June 2002).
- 4. I have practiced my profession continuously for more than 27 years and have been involved in mineral exploration, mine site geology, mineral resource estimation, 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.
- I am responsible for sections 1.1, 1.1.1 to 1.1.4, 1.3 to 1.14, 2.0 to 2.4, 2.6 to 2.7, 3.0 to 27.0 in the technical report titled, "National Instrument 43-101 Technical Report on the Zeb Nickel Project, Limpopo Province, South Africa" (the "Technical Report"), issued 12 July 2023 and with an Effective Date of 23 June 2023.
- 7. I have not visited the Zeb Nickel Project that is the subject of the Technical Report.
- I am independent of Zeb Nickel Corp, Blue Rhino Capital Corp, URU Metals Ltd, Zebediela Nickel Company (Pty) Ltd, Umbono Minerals Investment (Pty) Ltd, Million 2 One Sure Invest (Pty) Ltd, Umnex Minerals Limpopo (Pty) Ltd, Lesego Platinum Uitloop (Pty) Ltd, Lesego Platinum Uitloop Trust, and Uitloop Communities NPC, applying all of the tests in Section 1.5 of NI 43-101.
- 9. Apart from co-authoring the report titled, "Independent NI 43-101 Technical Report On The Zebediela Nickel Sulphide Project", dated 31 March 2021, I have had no prior involvement with the Project that is the subject of the current 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 Santiago, Chile this 12th day of July 2023.

/s/ Scott Jobin-Bevans

Scott Jobin-Bevans (P.Geo., PhD, PMP)

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 (SEG).
- 4. I have practiced my profession continuously for more than 22 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.
- I am responsible for sections 1.1.4, 1.2, 1.9, 1.11, 1.13, 1.14, 2.4, 2.5, 10.0, 12.0, 24.0, 25.0, 26.0 in the technical report titled, "National Instrument 43-101 Technical Report on the Zeb Nickel Project, Limpopo Province, South Africa" (the "Technical Report"), issued 12 July 2023 and with an Effective Date of 23 June 2023.
- 7. I visited the Zeb Nickel Project on 22 June 2023, for one day and on 2 December 2020, for one day.
- I am independent of Blue Rhino Capital Corp, URU Metals Ltd, Zebediela Nickel Company (Pty) Ltd, Umbono Minerals Investment (Pty) Ltd, Million 2 One Sure Invest (Pty) Ltd, Umnex Minerals Limpopo (Pty) Ltd, Lesego Platinum Uitloop (Pty) Ltd, Lesego Platinum Uitloop Trust, and Uitloop Communities NPC, applying all of the tests in Section 1.5 of NI 43-101.
- 9. Apart from co-authoring the report titled, "Independent NI 43-101 Technical Report On The Zebediela Nickel Sulphide Project", dated 31 March 2021, I have had no prior involvement with the Project that is the subject of the current 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 contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Signed at Gauteng, South Africa this 12th day of July 2023.

/s/ John Hancox

Philip John Hancox (Pr.Sci.Nat., PhD)

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1.0 SUMMARY

At the request of Zeb Nickel Corp (TSXV: ZBNI; "Zeb" or the "Company" or the "Issuer"), Caracle Creek International Consulting Inc. ("Caracle" or the "Consultant"), a Canadian company, has prepared this report on the Zeb Nickel Project (the "Project" or the "Property"), as a National Instrument 43-101 ("NI 43-101") Technical Report (the "Report") in support of an update incorporating the Company's latest drilling results. 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 (30 June 2011).

1.1.1 Purpose of the Technical Report

The Report has been prepared for Zeb Nickel Corp, a Canadian public company trading on the Toronto Venture Exchange (TSX-V: ZBNI), in order to provide a summary of scientific and technical information and data concerning the Project, in support of the Standards of Disclosure for Mineral Projects according to Canadian National Instrument 43-101.

Specifically, the Report provides an independent review of Zeb Nickel's Zeb Nickel Project located in South Africa, verifies the data and information related to historical and current mineral exploration on the Project, and presents a report on data and information available from Zeb Nickel and that from the public domain, with respect to the Project.

1.1.2 Previous Technical Reports

This Report is the current NI 43-101 Technical Report on the Project, replacing the previous report titled, "Independent NI 43-101 Technical Report On The Zebediela Nickel Sulphide Project", dated 31 March 2021.

1.1.3 Effective Date

The Effective Date of the Report is 23 June 2023.

1.1.4 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 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 (PGO#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 sections 1, 2, 10, 12, 25, and 26. Dr. Hancox is responsible for sections 1, 2, 10, 12, 25, and 26. Dr. Hancox visited the Project most recently on 22 June 2023 and previously on 2 December 2020.

The Authors (qualified persons) employed in the preparation of the Report are independent of and have no beneficial interest in Zeb Nickel Corp, URU Metals Ltd, or any associated subsidiary companies, applying all of the tests in Section 1.5 of NI 43-101.

1.2 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. Dr. Hancox visited the Project on 22 June 2023, accompanied by Mr. Sibusiso Sithole (Project Geologist), and Dr. Matthew McCreesh (Project Geologist) from Zeb Nickel Company (Pty) Ltd. Dr. Hancox had previously visited the site on 2 December 2020.

The most recent site visit was required for the purposes of inspection, ground truthing, procedural review and information data collection and collation. The condition of the general Project area and access were observed. Mineralized drill core intersections were reviewed and verified and logging and sampling procedures were checked and validated.

As of the Effective Date of the Report, the Company is continuing with their current drilling campaign on the Project.

1.3 Property Description and Location

The Zeb Nickel 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. 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. The Project area is centred at approximately 24°06′43.64″S Latitude and 29°02′09.34″E Longitude.

1.3.1 Land Tenure

The Project comprises 71 mining titles located on four different farms (Uitloop 3KS, Bloemhof 4KS, Amatava 41KS, Piet Potgietersrust 44KS), covering approximately 4,066 hectares.

The Project comprises various portions of the farms Uitloop 3KS (prospecting right reference number LP30/5/1/1/2/148PR), Amatava 41KS and Bloemhof 4KS (prospecting right reference number LP30/5/1/1/2/1074PR) and Piet Potgietersrust Town and Townlands 44KS (prospecting right reference number LP30/5/1/1/2/1787PR), 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 prospecting right over Farm Uitloop 3KS has been renewed and is currently valid. The other two prospecting rights, although an application has been made for their renewal, these applications will not be processed further as the process has been superseded by a submitted and accepted mining right application which includes all three of these prospecting rights.

The Project consists of these three prospecting areas, which will be amalgamated into a single area upon the granting of the mining right application (Reference: LP30/5/1/2/2/10174MR) that is currently being processed by the South African Department of Mineral Resources and Energy ("DMRE") (submitted 26 July 2019) (the "Mining Right Application").

Pending the granting of the Mining Right Application, Lesego Platinum Uitloop is the holder of a valid renewed prospecting right over Farm Uitloop 3KS under reference number LP30/5/1/1/2/148PR ("Prospecting Right").

1.3.2 Project Ownership and Corporate Structure

The corporate structure around the Issuer and the ownership with respect to the Project is multilayered (Figure 1-1). Zeb Nickel Corp currently owns 74% of the Project by way of Zeb Nickel Company Pty Ltd and Umnex Minerals Limpopo (Pty) Ltd.

The Mining Right Application is held 100% by Lesego Platinum Uitloop (Pty) Ltd ("LPU"), which in turn is held 100% by Umnex Minerals Limpopo (Pty) Ltd ("Umnex").

10% of the share capital of LPU is committed to two black economic empowerment entities upon granting of the Mining Right (5% to be issued to an Employee Share Ownership Program "ESOP", and 5% to be issued to a Non-Profit Company registered for the benefit of the host communities in the Project area ("NPC"), so that UML will, after the granting of the mining right, be diluted to 90%).

16.3% of Umnex is held by Umbono Minerals Investment (Pty) Ltd, and 9.7% by Million 2 One Sure Invest (Pty) Ltd, which are BEE entities.

Ultimately on issuing of the Mining Right, Zeb Nickel Corp will own 66.6% of the Project on a fully diluted basis.





Figure 1-1: Flowchart summarizing the corporate structure and ownership around Zeb Nickel Corp. *Umnex currently holds 100% of the Project through Lesego Platinum, subject to 10% being issued to the BEE upon granting of the Mining Right (Zeb Nickel, 2023).

1.3.3 Property Obligations

Once the Mining Right is awarded, Lesego Platinum Uitloop must meet its obligations in terms of adhering to the submitted Mining Works Program. Should the outcome of the proposed two-phased program warrant any changes to the resource, the Company has the right to submit an amendment to the Mining Works Program to reflect such changes. Taxes and royalties to the South African Government are only due once mining is underway.

With respect to the current Prospecting Right, the obligations are as follows:

- Annual Reports to be submitted to the DMRE this is a report that sets out the work done on the Project during the ensuing year with the results of studies conducted. Estimated cost of this annual report for the Prospecting Right is US\$1,000, which cost is included in the working capital of Lesego Platinum Uitloop.
- 2. Annual Prospecting Fees to be paid to the DMRE the prospecting fees for the Prospecting Right for 2021 and 2022 was US\$908.
- 3. Keeping Lesego Platinum Uitloop in good standing with the Company and Intellectual Property Commission ("CIPC") and the South African Revenue Services ("SARS") this includes the filing of annual returns with the CIPC and keeping accounts up to date.

Annual financial statements are submitted to SARS annually, the estimated costs of these administrative functions are expected to cost less than US\$5,000, which cost is included in the working capital of Lesego Platinum Uitloop.

- 4. Maintaining the environmental guarantees current environmental guarantees for the Prospecting Right of US\$1,020. Compliance with the approved Prospecting Work Programs conducting the activities listed in the prospecting works program to be conducted on the area US\$250,000.
- 5. Compliance with the approved Environmental Management Program (EMPr) rehabilitation activities to rehabilitate the site where the prospecting activities were conducted the cost of which is included under the point 4 above.

In accordance with the South African mineral right legislation, and in order to facilitate *Black Economic Empowerment* in the South African Mining Industry, Lesego Platinum Uitloop is held by various black economic empowerment entities as shown in the Ownership Structure above. The Company is therefore responsible for the full exploration costs required for the development of the Project until mine development.

1.3.4 Surface Rights and Legal Access

While the processing of the Mining Right Application is pending, Lesego Platinum Uitloop is permitted to prospect on the Farm Uitloop 3KS under the Prospecting Right. The prospecting activities that are currently permitted include drilling, mineral resources estimation, bulk sampling for metallurgical studies, metallurgical studies, geotechnical and geophysical surveys, and groundwater investigations. These activities correlate to the proposed activities listed in Section 26.

1.3.5 Exploration Approvals

Lesego Platinum Uitloop is the holder of a valid and effective renewed prospecting right over Farm Uitloop 3KS under reference number LP30/5/1/1/2/148PR, referred to as the Prospecting Right.

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 and annual prospecting reports and environmental compliance reports are submitted to the DMRE.

There are no other items (*i.e.*, permits or permissions) required by the Issuer to conduct the work program proposed for the Property, as the activities set out in Phase 1 and Phase 2 comprise of activities that were approved in the Prospecting Work Programme of the Prospecting Right LP30/5/1/1/2/148PR. While the processing of the Mining Right Application is pending, Lesego Platinum Uitloop is permitted to prospect on Farm Uitloop 3KS under the Prospecting Right. The prospecting activities that are currently permitted include drilling, mineral resources estimation, bulk sampling for metallurgical studies, metallurgical studies, geotechnical and geophysical surveys, and groundwater investigations. These activities correlate to the proposed activities listed in Section 26.

1.3.6 Royalties and Obligations

There are currently two revenue royalty agreements relating to the Project. In terms of these agreements, there is a 2.5% cumulative revenue royalty ("CRR") payable to URU as the previous owner of the Project and Umnex Mineral Holdings (Pty) Ltd as the local partner and operator of the Project. URU had the right to buy back 1.0% of the CRR from the holder within 24 months of the granting of the Mining Right over the Project. This right to buy back the 1.0% CRR was ceded to Zeb.

Further to this revenue royalty, there is a royalty capped at 7% payable to the South African Government in terms of the Royalty Act of 2008.

1.3.7 Environmental Liabilities and Studies

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 EMP, which forms part of the 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.

There are no current environmental liabilities, all drill holes have been rehabilitated in accordance with the approved EMP. A rehabilitation guarantee totalling an amount of R15,000 for the Prospecting Rights is in place with the DMRE.

On 18 January 2021, the DMRE formally acknowledged receipt of the Environmental Impact Assessment ("EIA") which was submitted by the Property holder Lesego Platinum Uitloop (Pty) Ltd on 15 January 2021 (Uys, 2021). The EIA and Environmental Management Programme Report ("EMPR") was prepared by Exigo Sustainability (Pty) Ltd, dated 13 January 2021.

1.4 Property Access, Climate and Operating Season

The 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 all-weather unpaved (dirt) roads lead to the various drill sites. The Project is located in a well-established mining district.

Mokopane normally receives about 470 mm of rain per annum, with the majority of this rainfall falling during the mid-summer months (November – February). 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.

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

1.4.1 Local Resources and Infrastructure

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.

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.

1.4.2 Physiography

The larger area in which the Zeb Nickel Project is located is well drained by various small nonperennial 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.

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.

1.5.1 Prior Ownership and Ownership Changes

The current Project area has a long history dating back to Rand Mines' ownership from 1967 to 1971, followed by Southern Era Resources Limited's (2003-2005) who held the Prospecting Right. A chronology of the Project ownership history is provided in Table 6-1.

In 2021, Blue Rhino Capital Corp (TSXV: RHNO.P; "Blue Rhino"), a capital pool company ("CPC") within the meaning of the policies of the TSX Venture Exchange ("TSXV"), completed a qualifying transaction ("QT") with URU Metals Limited ("URU"), whereby Blue Rhino issued approximately 74.82% of its issued and outstanding shares to URU in exchange for the Zeb Nickel Project. Following the QT, the resulting issuer retained ownership of the Project and become Operator.

On 11 August 2022, at the conclusion of the QT, Blue Rhino completed a name change to Zeb Nickel Corp and began trading on the Toronto Venture Exchange under the symbol "ZBNI".

1.5.2 Historical Exploration Work

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.

1.5.3 Historical Drilling

Two historical drilling programs took place on the Project in 1972 (Rand Mines) and 2001 (Falconbridge Ventures of Africa):

- Rand Mines: 1,238.59 m (minimum) from 14 diamond drill holes (UL-series).
- Falconbridge Ventures of Africa: 1,400 m from 5 diamond drill holes (UIT-series).

1.5.4 Historical Mineral Resource Estimate

In March 2012, as part of an internal Preliminary Economic Assessment ("PEA") study titled, "Preliminary Economic Assessment for the Zebediela Nickel Project", prepared for Umnex Minerals Limpopo (Pty) Ltd, and with an effective date of 31 March 2012, MSA Geoservices (Pty) Ltd ("MSA") prepared a mineral resource estimate ("historical MRE") on nickel mineralisation in the Lower Zone Uitloop II body (Croll *et al.*, 2012).

Drilling results allowed for the estimation of an Indicated Resource of 485.4 million tonnes averaging 0.245% Ni (Table 1-1), with estimation of an additional Inferred Resource of 1,115.1 million tonnes at 0.248% Ni (Table 1-2), using a cut-off grade of 0.1% TNi (Total Nickel). The mineral resources were quoted as TNi and were restricted to mineralisation in the "Sulfide Zone". They were stated as *in-situ* with no geological losses applied. The historical MRE used a nickel price of US\$8.50 per pound or US\$18,739.00 per tonne.

Table 1-1: Grade-sensitivity analysis, in situ historical Indicated Mineral Resources, Lower Zone (Sulfide 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

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

Table 1-2: Grade-sensitivity analysis, in situ historical Inferred Mineral Resources, Lower Zone (Sulfide Zone)	
(Croll <i>et al.,</i> 2012).	

The 2012 historical mineral resources presented in Table 1-1 and Table 1-2 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.

Neither the Principal Author nor a qualified person, for the purposes of NI 43-101, have done sufficient work to classify the historical resources in the Report as current mineral resources and as such the Principal Author and the Issuer are not treating the tonnages and grades reported as current. Investors are cautioned that the historical mineral resource estimates do not mean or imply that economic deposits exist on the Property.

1.6 Geological Setting and Mineralization

The 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 mineralisation, 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 Ni-Cu-PGE bearing pyroxenite and feldspathic pyroxenite lithologies adjacent to the Lower Zone Uitloop II body (McCreesh *et al.*, 2019). These lithologies are similar to Critical Zone lithologies, which 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.

1.6.1 Property Geology

The 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).

The 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), its three-dimensional form remains unclear.

1.6.2 Property Mineralisation

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

"ZEB 1" (Lower Zone): This target type includes existing historical nickel sulfide resources associated with low-grade, disseminated nickel-rich sulfide mineralisation 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 mineralisation associated with the Lower Zone Uitloop II body is hosted mostly in a thick package of alternating dunite, serpentinised dunite, serpentinite, pyroxenite and harzburgite. Like the Uitloop II body, the Uitloop I body has the potential to host low-grade, disseminated nickel sulfides.

"Target 2": referred to as Ni-Cu-PGE mineralisation, this type is characterized by two styles, stratabound and contact-style. The stratabound mineralized zones contain Ni-Cu-PGE mineralisation

hosted by disseminated and/or bleb sulfides in a stratigraphic unit up to 150 m thick. Contact-style Ni-Cu-PGE mineralisation is intimately associated with the footwall contact of the intrusion. Both styles of mineralisation have been intersected in historical and current drill holes on the Project .

"Target 3": comprises nickel-rich massive-sulfide 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.

"Target 4": Recent drilling discovered high grade gold mineralisation located in lithologies adjacent to and beneath the Ni and PGE mineralized zones The discovery of gold mineralisation on the Project is most likely related to remobilized gold from the adjacent Pietersburg Greenstone Belt and hydrothermal activity. High grade gold mineralisation was intersected in drillholes Z027 and Z029 in the southwest portion of the Project area. In addition, smaller gold-rich intervals were also intersected in the northwest portion of the Project area, with the same style of mineralisation.

Target 4 will not be the primary focus of upcoming exploration programs, however core will be assayed for gold mineralisation.

In many respects, the Uitloop II mineralized body shares broad similarities with other significant disseminated nickel sulfide resources reported in Canada and Sweden.

1.7 Deposit Types

Globally, layered igneous intrusions are the most important source of PGE, which form as a result of sulfide 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 km²), 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 known 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 mineralisation at the base of the intrusion (Platreef-type) occurs mainly in the Northern Limb.

The term Platreef style mineralisation is referred to mineralisation 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) mineralisation as well as nickel and copper and minor cobalt. 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 sulfide 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 sulfide deposits in the form of Ivanhoe Mine's Platreef Project, Anglo American Platinum's Mogalakwena Mine and Zeb Nickel's Zeb Nickel Project, the latter based on the historical resource estimate as detailed in Section 6 of this report. The possibility for massive sulfide bodies (similar to the Nkomati Mine within the Uitkomst Complex) also exists within the Project area.

1.8 Exploration

The target company, through various subsidiaries and related companies, has completed mineral exploration programs on the Property since 2007. The first exploration program comprising soil sampling and exploration drilling was conducted by Lesego Platinum Uitloop in 2007, funded by Umnex Mineral Holdings Proprietary Limited.

Further drilling was conducted in 2010 and 2011, funded by South African Nickel (Pty) Ltd ("SAN") (wholly owned subsidiary of Target Company). In 2017 and early 2018, Lesego Platinum Uitloop, funded by URU, drilled a further 6 exploration drill holes.

In 2018, Lesego Platinum Uitloop completed geological mapping and rock grab sampling along the Rooisloot River and on Farm Bloemhof 4KS (a small portion adjacent to Farm Uitloop 3KS). Also in 2018, Lesego Platinum Uitloop contracted ground geophysical surveys of Farm Uitloop 3KS, which included Induced Polarization (IP)/Resistivity (Res) and ground magnetometer surveys. Cobalt analyses were done in 2018. In 2018 and 2019 portions of the core were re-logged, specifically focussing on the interactions between the Lower Zone ultramafic rocks and the metasedimentary footwall rocks.

In 2020, a resistivity geophysical survey was completed on Farm Uitloop 3KS. This was followed up with four percussion holes drilled later in 2020. In 2021 a further 8 exploration drillholes were completed.

All exploration activities from 2017 to 2021 were funded by URU. Exploration activities from 2021 to date have been fully funded by Zeb. The related expenditure for exploration activities from March 2018 to December 2022 are provided in Table 1-3.

Year	Company	Work Type	Description	Amount (US\$)
March 2021 – March 2022	Lesego Platinum Uitloop funded by Zeb Nickel Corp	Exploration Drilling Geological Modelling	8 diamond drill holes targeting Ni mineralisation in the Uitloop II body and Ni-Cu-PGE mineralisation	\$1,074,808
Mar 2020 – Feb 2021		Soil Geochemistry & Geological Mapping	Targeting areas around the geophysical anomalies, specifically on Farm Uitloop 3KS.	\$ 10,741
	Lesego	Percussion Drilling & Geological Mapping	Focussed on Farm Uitloop 3KS. Targeting geophysical anomalies.	\$ 16,334
	Platinum Uitloop funded by	Geological Mapping	Focussed on the Lower Zone ultramafic rocks footwall interaction.	\$ 518
	URU	Geophysics	Resistivity Survey with 6 traverses located on Farm Uitloop 3KS.	\$ 17,710
		Project Geologist	Responsible for all exploration activities, including mapping, sampling, portable XRF analysis.	\$ 44,945
Mar 2019 – Feb 2020	Lesego Platinum Uitloop	Re-Logging & Geological Mapping	Focused on footwall interaction.	\$ 2,974
	funded by URU	Project Geologist	Responsible for all exploration activities, including mapping, sampling, portable XRF analysis.	\$ 62,958
Mar 2018 – Feb 2019		Re-Logging & Geological Mapping	Focused on footwall interaction.	\$ 7,248
	Lesego Platinum Uitloop funded by	Project Geologist	Responsible for all exploration activities, including mapping, sampling, portable XRF analysis.	\$ 52,145
	URU	Assay	Cobalt analysis	\$ 5,879
		Geophysics	Induced Polarisation and ground magnetic survey	\$ 64,929
TOTAL (US\$):				\$ 1,361,189

*Table 1-3 specifically excludes costs associated with the Mining Right Application and Environmental Impact Assessments.

1.9 Drilling

A number of drilling programs were completed on the Property between 2007 and 2022, overseen by Lesego Platinum Uitloop. In 2007, three drill holes (U series) were completed to further investigate the subsurface extensions of soil geochemistry anomalies (Lowman, 2007). In keeping with the Platreef style mineralisation 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, SAN formed a JV partnership on the Project with Lesego Platinum Uitloop, 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. The JV partnership was terminated when the ownership of Umnex Minerals Limpopo (Pty) Ltd was transferred to URU during May 2014.

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

In 2020, four percussion holes were drilled to depth of between 0 and 120 m on the Property, targeting some of the geophysical anomalies identified in the 2020 and 2018 geophysical surveys. This drilling program also assisted with mapping the extent of ultramafic intrusives on the Property and determining the thickness of the overlying metasedimentary rocks in certain areas.

In 2021-2022, Lesego Platinum Uitloop (funded by Zeb Nickel Corp) drilled a further eight diamond drillholes targeting both the nickel sulfide hosted in the Uitloop II body, and the contact style Ni-Cu-PGE mineralisation hosted in pyroxenitic rocks beneath and adjacent to the Uitloop II body. This drilling proved conclusively that Contact style mineralisation (Target 2) is present for a minimum of 3.5 kilometres. High grade gold mineralisation was also discovered during this phase of drilling.

1.10 Sample Preparation, Analysis and Security

Quality Assurance/Quality Control procedures put in place by Umnex Mineral Holdings (Pty) Ltd and Zeb Nickel Corp have been followed by the Company since 2007. The Authors and the Issuer (Zeb Nickel) are independent of all of the laboratories used in the analyses of samples collected from the Property.

There are no drilling, sampling, recovery or analytical factors that would materially affect the results of the drilling campaigns.

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 geological modelling and mineral resource estimation.

1.11 Data Verification

The Authors have reviewed historical data and information regarding past exploration work on the Project. More recent exploration work (*i.e.*, 2011 to 2023), having complete databases and documentation such as assay certificates, work reports, and GPS location data, could be thoroughly reviewed.

Older historical records (pre-2011) are not as complete and so the Authors does not know entirely the exact methodologies used in the information and data collection. The Authors reviewed a portion of the historical records, including selected historical assay certificates (original hard copies), and compared them with the current Zeb Nickel database; no material issues were encountered in this database review.

Historically, MSA conducted a complete audit of the Project exploration database held by Lesego Platinum Uitloop in February of 2012. Minor, non-material, issues were identified and corrected in consultation with Lesego Platinum Uitloop staff.

Dr. Hancox (SACNASP) completed a personal inspection (site visit) of the Project and shared the information and data gathered from the site visit with Dr. Jobin-Bevans. Dr. Hancox's most recent visit to the Project was on 22 June 2023, accompanied by Mr. Sibusiso Sithole (Project Geologist), and Dr. Matthew McCreesh (Project Geologist) from Zeb Nickel Company (Pty) Ltd. Dr. Hancox had previously visited the Project on 2 December 2020.

The visit was required for the purposes of inspection, ground truthing, procedural review and information data collection and collation. The condition of the general Project area and access were observed. Mineralized drill core intersections were reviewed and verified and logging and sampling procedures were checked and validated and the location of some older and more recent drill hole collars were verified.

During the 2 December 2020 site visit, locations drill hole collars Z05, Z017, Z018, Z021 and Z022 were verified by Dr. Hancox. During the 22 June 2023 site visit, the locations of drill hole collars Z024, Z027, Z028 and Z029 were verified. The collars of these holes were inspected and the drill hole name was visible on the collar. GPS co-ordinates taken while on site were cross referenced with drill collar coordinates in the Company's database. No discrepancies between actual collar positions measured on the GPS with what was stored in the Company's database were observed.

Original assay certificates for drillholes Z024, Z028, Z029 and Z030 was inspected and validated against the Company's database by Dr. Hancox. This covered mineralization associated with Targets 1 through to 4 and various assay techniques. Assay results contained in the Company's database matched exactly with assay results contained in the original laboratory certificates and no discrepancies were observed.

Drillholes Z019, Z020, Z021, Z022, Z023, Z026, Z028 and Z029 were inspected and compared against the geological logs by Dr. Hancox. The logging and sampling methodology aligned with the Company's Standard Operating Procedures.

Outcrop is scarce on the Property, so no surface grab samples of target mineralisation or lithologies were collected. Existing drill core logs were validated by Dr. Hancox against actual core and assay results in the Company's database were verified against the original laboratory certificates. After a thorough drill core examinations by Dr. Hancox during the two site visits conducted, the Author's did not think it was necessary to re-sample the drill core.

Borehole files were complete and well maintained, and all data contained within these files cross referenced with field observations made by Dr. Hancox.

The Company maintains a rock library of the various rock types found on the Project area. This library is accurate and deemed to be representative of the various lithologies encountered in exploration drilling on the Project area.

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 for the purpose of the Report and to support a future NI 43-101 compliant mineral resource estimates.

1.12 Mineral Processing and Metallurgical Testing

For the purpose of the 2012 historical PEA, core from diamond drill holes Z05 and Z08 were selected as being representative of the Zeb Nickel 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 Zeb Nickel samples were conducted and reported by SGS Laboratories.

The Zeb Nickel Sulfide 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 sulfide pentlandite. Approximately 8% of the total mass of the sample can be attributed to sulfide 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 sulfides would account for 62% of the TNi in the feed.

The Zeb Nickel 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 sulfides, 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 Sulfide Zone confirmed that crushing and milling indices are in-line with expectation and reference projects. The Zeb material is classified as medium to hard.

Rougher flotation test work confirmed that 60% of the feed nickel can be recovered to a sulfide 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 mineralisation on the Property.

1.13 Interpretation and Conclusions

The objective of this work was to prepare an independent NI 43-101 Technical Report capturing historical and current information available for the 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 sulfide mineralisation close to surface as seen in the rest of the Northern Limb of the BIC and/or deeper semi-massive to massive sulfides associated with footwall contact embayments and/or possible magmatic plumbing systems 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 mineralisation on the Property, hosted by different lithologies and stratigraphic units.

1.13.1 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:

Target 1: Ultramafic-hosted, low-grade disseminated nickel sulfide, is associated with the serpentinised Lower Zone of the Uitloop II body and may be potentially found within the Uitloop I body to the northeast. Most of the mineralisation in the serpentinised Lower Zone ultramafic lithologies (Uitloop I and II bodies) takes the form of disseminated sulfide (mainly fine-grained pentlandite. At the current exploration stage of the Project, this mineralisation style is considered a secondary target.

Target 2: Ni-Cu-PGE- (stratabound) and Contact-style mineralisation, containing bleb sulfide mineralisation with elevated PGE, nickel, and copper mineralisation, occurs along the northeast margin of the Uitloop II body and is the primary target of current exploration work. There is potential for a 3.5 km strike length of Ni-Cu-PGE and/or Contact-style mineralisation. 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 semimassive sulfide.

Target 3: massive-sulfide (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. Mineralisation associated with Target style 3 may be connected with ultramafic magma conduits. These 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 the emplacement of the higher stratigraphically placed Platreef magmas, would have allowed for sulphur to be constantly replenished and to interact with fresh magma containing additional Ni, Cu and PGE concentrations. These could preferentially partition into sulphur-rich liquids and precipitate as massive sulfides within the footwall embayments. The presence of a magma conduit would be key in providing these mineralizing conditions. Although not a top priority at this stage of the Project, Target type 3 could be encountered as a result of Target 1 and Target 2 exploration drilling.

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

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

1.14 Recommendations

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

The Authors recommend a Phase 1 program with the implementation of Phase 2 contingent on the results of Phase 1.

The recommended multi-phase budget (US\$2,960,000) is as follows:

• <u>Phase 1</u>: US\$875,000

Phase 1 of drilling should consist of infill drilling on Target 1, drilling into Target 2 beneath the Uitloop II body in the vicinity of possible magma conduits located on the northeast boundary of the Uitloop II body. The goal of Phase 1 should be to identify and confirm the extent of higher grade Ni mineralisation at the base of Target 1, as well as identify and confirm the grade and extent of higher grade Ni-Cu-PGE mineralisation down dip of that intersected in the 2021 drilling campaign. Samples should also be assayed to test for potential gold mineralisation.

Phase 1 needs to demonstrate that mineralization of an economic grade is in fact present in these target areas, which will warrant further drilling in Phase 2.

This work would all be located on Farm Uitloop 3KS.

• <u>Phase 2</u>: US\$2,085,000

Phase 2 of the drilling program should step out both along strike and downdip to understand the extent of the Target 2 mineralisation and ultimately to define a resource. Samples should also be assayed for potential gold mineralisation.

All drill holes should drill through Zeb 1, into Target 2 located beneath Zeb 1, and test for Target 3 mineralisation simultaneously by drilling at least 50 m into the footwall lithologies.

A detailed breakdown of the proposed two-phase exploration budget is presented in Table 1-4. All the costs associated with the two-phase program will be paid for by the Issuer. Preliminary locations of the proposed drill hole collars are shown in Figure 26-1.

Item	Phase 1 (US\$)	Phase 2 (US\$)	Total (US\$)
Exploration Drilling	182 216	1 025 003	1 207 219
Assays	72 886	444 498	517 384
Geological	182 216	75 778	257 993
Reporting	7 289	20 275	27 563
South African Costs	72 886	155 317	228 203
Public Company Costs	328 499	328 499	656 997
Contingency	29 155	35 017	64 172
Total (US\$):	\$875,000	\$2,085,000	\$2,960,000

Table 1-4: Recommended exploration budget for Phase 1 and Phase 2 programs.

2.0 INTRODUCTION

At the request of Zeb Nickel Corp (TSXV: ZBNI; "Zeb" or the "Company" or the "Issuer"), Caracle Creek International Consulting Inc. ("Caracle"), a Canadian company, has prepared this report on the Zeb Nickel Project (the "Project" or the "Property"), as a National Instrument 43-101 ("NI 43-101") Technical Report (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 (30 June 2011).

2.1 Purpose of the Technical Report

The Technical Report has been prepared for Zeb Nickel Corp, a Canadian public company trading on the Toronto Venture Exchange (TSX-V: ZBNI), in order to provide a summary of scientific and technical information and data concerning the Project, in support of the Standards of Disclosure for Mineral Projects according to Canadian National Instrument 43-101.

Specifically, the Report provides an independent review of Zeb Nickel's Zeb Nickel Project located in South Africa, verifies the data and information related to historical and current mineral exploration on the Project, and presents a report on data and information available from Zeb Nickel and that from the public domain, with respect to the Project.

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 outlined in Section 2.4 and Section 27. The Report is intended for use by Zeb Nickel subject to the terms and conditions of its contract with Caracle and relevant securities legislation.

2.2 Previous Technical Reports

This Report is the current NI 43-101 Technical Report on the Project, replacing the previous report titled, "Independent NI 43-101 Technical Report On The Zebediela Nickel Sulphide Project", dated 31 March 2021.

2.3 Effective Date

The Effective Date of the Report is 23 June 2023 ("Effective Date").

2.4 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 ("Co-Author") is a Senior Geologist and Director at Caracle Creek International Consulting (Proprietary) Limited, South Africa ("CCIC").

Dr. Jobin-Bevans is a Professional Geoscientist (PGO#0183, P.Geo.) with experience in geology, mineral exploration, mineral resource 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. A responsibility matrix for preparation of sections in the Report that each of the authors are responsible is provided in Table 2-1.

Author	Complete Section Responsibility	Sub-Section Responsibility
Dr. Jobin-Bevans	3.0 to 27.0	1.1, 1.1.1 to 1.1.4, 1.3 to 1.14, 2.0 to 2.4, 2.6 to 2.7
Dr. Hancox	10.0, 12.0, 24.0, 25.0, 26.0	1.1.4, 1.2, 1.9, 1.11, 1.13, 1.14, 2.4, 2.5

Table 2-1. Responsibility matrix for preparation of sections in the Report by the Authors.

The Authors (qualified persons) employed in the preparation of the Report are independent of and have no beneficial interest in Zeb Nickel Corp, URU Metals Ltd, or any associated subsidiary companies, applying all of the tests in Section 1.5 of NI 43-101.

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 Zeb Nickel and the Consultants. The Consultants are being paid a fee for their work in accordance with normal professional consulting practices.

2.5 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. Dr. Hancox visited the Project on 22 June 2023, accompanied by Mr. Sibusiso Sithole (Project Geologist), and Dr. Matthew McCreesh (Project Geologist) from Zeb Nickel Company (Pty) Ltd. Dr. Hancox had previously visited the site on 2 December 2020.

The most recent site visit was required for the purposes of inspection, ground truthing, procedural review and information data collection and collation. The condition of the general Project area and access were observed. Mineralized drill core intersections were reviewed and verified and logging and sampling procedures were checked and validated. During the 2 December 2020 site visit, locations of some older drill hole collars (Z05, Z017, Z018, Z021 and Z022) were verified.

During the 22 June 2023 site visit, the locations of recent drill hole collars Z024, Z027, Z028 and Z029 were verified (Figure 2-2 and Figure 2-3).

As of the Effective Date of the Report, the Company is continuing with their current drilling campaign on the Project.



Figure 2-2: Collar check on drill hole Z029 taken during a site visit by Co-Author Dr. John Hancox, 22 June 2023 (Caracle, 2023).



Figure 2-3: Plan map showing drill collars checked during a site visit to the Property by Co-Author Dr. John Hancox, 2 December 2020 and 22 June 2023 (Caracle, 2023).



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.



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



RC water monitoring borehole on Uitloop Farm.



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

Figure 2-4: Photographs taken during the personal inspection of the Property and site visit on 2 December 2020.



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.

Figure 2-4 (cont.): Photographs taken during the personal inspection of the Property and site visit on 2 December 2020.


Figure 2-4 (cont.): Photographs taken during the personal inspection of the Property and site visit on 2 December 2020.

Additionally, during the 22 June 2023 site visit, various assay certificates were cross-referenced against the Company's database with Dr. McCreesh, and a number of the full data files for the drill holes were inspected by Dr. John Hancox.

2.6 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 Zeb Nickel Corp and conducted a site visit to confirm the Property, infrastructure, data and mineralisation as presented. Company personnel and associates were actively consulted post and during report preparation and during the Property site visit. Personnel from Zeb Nickel Company (Pty) Ltd were also consulted, including Mr. Richard Montjoie (VP Exploration – Zeb Nickel Corp), Dr. Matthew McCreesh (Project Geologist), and Mr. Sibusiso Sithole (Project Geologist).

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. Drill hole collars were visited and inspected and GPS co-ordinates taken while on site were cross referenced with drill collar coordinates in the Company's database.

A sample of original assay certificates was inspected and validated against the Company's database.

General information on South Africa was accessed through the South African government website and information on the mining system of South Africa was accessed online through the Department of Mineral Resources and Energy.

Additional information was reviewed and acquired through public online sources including the System for Electronic Document Analysis and Retrieval ("SEDAR") and various corporate websites.

2.7 Units of Measure and Abbreviations

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. Table 2-2 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") datum, UTM Zone 35S projection.

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

Table 2-2: Commonly used terms a Units of Measure		Initialisms		
above mean sea level	AMSL	2E	Platinum + Palladium	
centimetre	cm	3E	Platinum + Palladium + Gold	
gram		AA	Atomic Absorption	
gram per tonne	g g/t	AIM	Alternative Investment Market	
	g/۱ >	PGO	Professional Geoscientists of Ontario	
greater than hectare	ha	BEE		
hour	hr	BIC	Black Economic Empowerment Bushveld Igneous Complex	
inch		_	Canadian Institute of Mining	
kilo (thousand)	in K	CIM	Certified Reference Material	
			Diamond Drill Hole	
kilogram kilometre	kg km	DDH DFS		
less than	KIII <	DPS	Definitive Feasibility Study Department of Mineral Resources and Energy	
litre	-			
	L		Digital Terrain Model	
megawatt	Mw	EM	Electromagnetic End of Hole	
metre	m	EOH		
	ms	FA	Fire Assay	
millimetre	mm M	ICP	Inductively Coupled Plasma Interval	
	Ma	Int. LDL	Lower Detection Limit	
million years ago nanotesla		LOM	Life of Mine	
	nT	LUN	Lower Limit of Detection	
ounce	OZ	LOI	Letter of Intent	
parts per million parts per billion	ppm ppb	MAG	Magnetics or Magnetometer	
percent	рр <u>о</u> %	MR	Mining Right	
pound	/0 Ib	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	ОК	Ordinary Kriging	
United States Dollar	USD	PFS	Pre-Feasibility Study	
South African Currency	ZAR	PGE	Platinum Group Element	
Elements/Minerals		PGM	Platinum Group Metals	
chalcopyrite	сру	рор.	Population	
copper	Cu	PR	Prospecting Right	
gold	Au	QA/QC	Quality Assurance / Quality Control	
nickel	Ni	QP	Qualified Person	
palladium	Pd	RLS	Rustenburg Layered Suite	
pentlandite	pn	ROM	Run of Mine	
platinum	Pt	SG	Specific Gravity	
pyrite	ру	SI	International System of Units	
pyrrhotite	ро	tpa	tonnes per annum	
rhodium	Rh	TSX-V	Toronto Venture Stock Exchange	
sulphur	S	UTM	Universal Transverse Mercator	
Total Nickel	TNi	WGS84	World Geodetic System 84	

3.0 RELIANCE ON OTHER EXPERTS

The Report has been prepared by Caracle Creek International Consulting Inc. for the Issuer Zeb Nickel Corp.

Caracle has not researched Property title or mineral rights for the Zeb Nickel Project and for the purposes of the Report, Caracle has relied on ownership information provided by Zeb Nickel Corp.

A Title Opinion titled, "Lesego Platinum Uitloop Proprietary Limited ("Lesego") / Mining Right Application in Terms of Section 22 of the Mineral and petroleum Resources Development Act 28 of 2002 ("MPRD Act")", dated 3 March 2021 and provided by Malan Scholes Incorporated, Johannesburg, South Africa, was reviewed by the Principal Author and is being relied upon as it relates to the status and expected granting of the Lesego Mining Right Application.

The Principal Author expresses no legal opinion as to the land tenure title or ownership status, other than to comment on the status of mining lands and other information that was provided by the Issuer, that which is publicly available on the Government of South Africa website, and that which has been provided in the Title Opinion.

The Principal Author has not relied on any other report, opinion or statement of another expert who is not a qualified person, or on information provided by the Issuer concerning legal, political, environmental or tax matters relevant to the Report.

4.0 PROPERTY DESCRIPTION AND LOCATION

4.1 Location

The Zeb Nickel 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. The Project area (Figure 4-1; 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 Zeb Nickel Project, South Africa (MSA, 2012).

4.2 Land Tenure

A summary of the land tenure for the Project is provided in Table 4-1. The Project comprises 71 mining titles located on four different farms (Uitloop 3KS, Bloemhof 4KS, Amatava 41KS, Piet Potgietersrust 44KS), covering approximately 4,066 hectares (Figure 4-2; Table 4-1).



Figure 4-2: Map showing the farm boundaries (blue) of the properties that comprise the Project area (Zeb Nickel, 2023).

Farm Name	Portion	Title Deed No.	Area (ha)
	47 KS	T95464/2015	3.1449
	39 KS	T129595/1997	98.5004
	23 KS	T48928/2013	34.2432
	25 KS	T10862/1958	0.2369
	22 KS	T5943/1989	11.9495
	2 KS	T77012/2012	741.9380
	21 KS	T25701/1990	106.0116
	20 KS	T48928/2013	31.2952
UITLOOP 3KS	49 KS	T171496/2003	21.4133
	48 KS	T48928/2013	21.4133
	59 KS	T8385/2017	21.4133
	52 KS	T45711/2001	21.4133
	63 KS	T24157/2008	19.0449
	51 KS	T86240/2004	21.4133
	36 KS	T28585/2001	21.4133
	70 KS	T40904/2014	5.1592
	73 KS	T40904/2014	5.1592

Farm Name	Portion	Title Deed No.	Area (ha)
	65 KS	T87816/1998	34.8825
	71 KS	T40904/2014	5.1592
	72 KS	T40904/2014	5.1592
	75 KS	T88061/2016	0.2999
	74 KS	T4150/2017	2.6808
	35 KS	T112313/2006	21.4133
	40 KS	T25291/2005	21.4133
	54 KS	T151033/2007	18.7325
	56 KS	T121493/1998	21.4133
	46 KS	T81683/2004	21.4133
	53 KS	T45711/2001	21.4133
	55 KS	T4977/2015	21.4133
	58 KS	T132799/2006	21.4133
	24 KS	T50483/2012	43.8449
	12 KS	T54660/2015	85.6532
		Total:	1,531.4681
	14 KS	T4116/2018	171.3064
	17 KS	T27683/1998	324.0853
	26 KS	T44759/1996	439.3363
	25 KS	T104261/1996	111.3492
	19 KS	T89136/2006	23.5126
	4 KS	T49168/2012	38.0584
	16 KS	T117336/2000	99.1942
BLOEMHOF 4KS	3 KS	T38168/2011	148.9103
BLUEIWINUF 4K3	6 KS	T851/2017	77.0879
	9 KS	T19022/1982	85.6532
	13 KS	T49168/2012	6.7740
	15 KS	T87456/1994	21.4133
	24 KS	T75954/1993	240.5720
	18 KS	T49168/2012	24.6032
	11 KS	T67534/2016	106.1429
		Total:	1,746.6928
	12 KS	T74029/2010	107.0665
	10 KS	T103038/2008	25.6960
	28 KS	T2614/1975	1.5610
AMATAVA 41KS	29 KS	T71861/1976	1.3669
	17 KS	T116967/2001	8.5653
	9 KS	T96781/1994	11.2870
	2 KS	T141097/2002	7.1448
	11 KS	T141097/2002	13.0951

Farm Name	Portion	Title Deed No.	Area (ha)
	23 KS	T113003/2005	46.1223
	14 KS	T66288/2015	85.6532
	1 KS	T48928/2013	227.9810
	15 KS	T135496/2001	42.8266
	13 KS	T74029/2010	102.3454
		Total:	680.7111
	47 KS	T71388/2014	21.4133
	121 KS	No Data	5.2229
	101 KS	No Data	2.0670
	46 KS	T156922/2004	15.2119
	49 KS	T25654/2000	17.0152
	98 KS	T29648/1976	6.2014
PIET POTGIETERSRUST 44KS	100 KS	T3930/1977	4.3981
	50 KS	T1407/2019	21.4133
	48 KS	T122513/2006	20.8577
	99 KS	T3433/1976	0.5556
	51 KS	T105208/2006	14.1234
		Total:	107.0665
		G-Total (ha):	4,065.9385

4.3 Project Ownership and Corporate Structure

The corporate structure around the Issuer and the ownership with respect to the Project is multilayered as shown in Figure 4-3, a flowchart summarizing the corporate structure and ownership. Zeb Nickel Corp currently owns 74% of the Project by way of Zeb Nickel Company Pty Ltd and Umnex Minerals Limpopo (Pty) Ltd.

The Mining Right Application is held 100% by Lesego Platinum Uitloop (Pty) Ltd ("LPU"), which in turn is held 100% by Umnex Minerals Limpopo (Pty) Ltd ("Umnex").

10% of the share capital of LPU is committed to two black economic empowerment entities upon granting of the Mining Right (5% to be issued to an Employee Share Ownership Program "ESOP", and 5% to be issued to a Non-Profit Company registered for the benefit of the host communities in the Project area ("NPC"), so that UML will, after the granting of the mining right, be diluted to 90%).

16.3% of Umnex is held by Umbono Minerals Investment (Pty) Ltd, and 9.7% by Million 2 One Sure Invest (Pty) Ltd, which are BEE entities (Figure 4-3).

Ultimately on issuing of the Mining Right, Zeb Nickel Corp will own 66.6% of the Project on a fully diluted basis.





Figure 4-3: Flowchart summarizing the corporate structure and ownership around Zeb Nickel Corp. *Umnex currently holds 100% of the Project through Lesego Platinum, subject to 10% being issued to the BEE upon granting of the Mining Right (Zeb Nickel, 2023).

4.4 Mineral Rights

Lesego Platinum Uitloop has submitted the Mining Right Application over all three Prospecting Areas on various portions of the farms Uitloop 3KS, Amatava 41KS and Bloemhof 4KS, and Piet Potgietersrus Town and Townlands 44KS (*see* Figure 4-2 and Figure 4-4). Together, these Prospecting Areas comprise the Project.

As the Mining Right Application has been accepted by the South African Department of Mineral Resources and Energy (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 MPRD Act the DMRE does not have discretion in awarding the Mining Right to Lesego Platinum Uitloop, as the legislation provides that the right must be awarded if the applicant has complied with all the requirements of such application. Lesego Platinum Uitloop 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 (*see* Table 4-1).

All known mineralisation, economic or potentially economic that is the focus of the Report and that of Zeb Nickel, is located within the boundary of the three Prospecting Areas (and Mining Right Application) that comprise the Project.



Figure 4-3: Map showing various portions of the surface rights of the Project (outlined in blue) (Zeb Nickel, 2023).

4.4.1 **Property Obligations**

Once the Mining Right is awarded, Lesego Platinum Uitloop must meet its obligations in terms of adhering to the submitted Mining Works Program. Should the outcome of the proposed two-phased program warrant any changes to the resource, the Company has the right to submit an amendment to the Mining Works Program to reflect such changes. Taxes and royalties to the South African Government are only due once mining is underway.

With respect to the current Prospecting Right, the obligations are as follows:

- 6. Annual Reports to be submitted to the DMRE this is a report that sets out the work done on the Project during the ensuing year with the results of studies conducted. Estimated cost of this annual report for the Prospecting Right is US\$1,000, which cost is included in the working capital of Lesego Platinum Uitloop.
- 7. Annual Prospecting Fees to be paid to the DMRE the prospecting fees for the Prospecting Right for 2021 and 2022 was US\$908.
- 8. Keeping Lesego Platinum Uitloop in good standing with the Company and Intellectual Property Commission ("CIPC") and the South African Revenue Services ("SARS") this

includes the filing of annual returns with the CIPC and keeping accounts up to date. Annual financial statements are submitted to SARS annually, the estimated costs of these administrative functions are expected to cost less than US\$5,000, which cost is included in the working capital of Lesego Platinum Uitloop.

- Maintaining the environmental guarantees current environmental guarantees for the Prospecting Right of US\$1,020. Compliance with the approved Prospecting Work Programs – conducting the activities listed in the prospecting works program to be conducted on the area US\$250,000.
- 10. Compliance with the approved Environmental Management Program (EMPr) rehabilitation activities to rehabilitate the site where the prospecting activities were conducted the cost of which is included under the point 4 above.

4.4.2 Mining Right Application

The Mining Right Application was submitted to the DMRE on 26 July 2019 (reference number LP30/5/1/2/2/10174MR), the application was accepted on 21 August 2019 and is awaiting approval. The tenure of this area is secured by the acceptance of the Mining Right Application , in that no other party would be able to apply for these areas pending the processing of the Mining Right Application (Table 4-2). The Mining Right Application consolidates the three Prospecting Areas as listed below into one Project. Until the mining right is granted, the activities listed in Section 26 may continue under the approved and valid Prospecting Right.

FARM NAME	MINERALS UNDER MINING RIGHT APPLICATION	DATE OF ISSUE	RENEWAL	PROSPECTING RIGHT LICENCE NUMBERS (DMRE)	AREA (ha)
Various portions of			Granted until 2		
the farm Uitloop 3KS		11 July 2007	December 2021	LP30/5/1/1/2/148PR	1,925.3
Various portions of					
the farms Amatava	chrome, cobalt, copper, gold, iron,				
41KS and Bloemhof	nickel, platinum group metals and				
4KS	vanadium	16 April 2008	Pending	LP30/5/1/1/2/1074PR	2,260.3
Various portions of					
the farm Piet					
Potgietersrust Town					
and Townlands 44KS		1 April 2009	Pending	LP30/5/1/1/2/1787PR	115.3

Table 4-2: Prospecting Rights that are consolidated in the Mining Right Application for the Zeb Nickel Project.

During November 2018, an application was made to the DMRE to amalgamate all three prospecting rights listed in the table above into Farm Uitloop 3KS Prospecting Right by way of a cession of the prospecting rights reference number LP30/5/1/1/2/1074 and LP30/5/1/1/2/1787PR into the prospecting right LP30/5/1/1/2/148PR. This application was made in terms of Section 11 and Section 102 of the MPRD Act. This application in terms of Section 11 and Section 102 of the MPRD Act. This application in terms of Section 11 and Section 102 of the MPRD Act. This application for the DMRE will process the Mining Right Application as a priority and that the application for the amalgamation of these three prospecting rights would not be processed further. The amalgamation will then be accomplished by the inclusion of all three areas in the Mining Right Application. This Mining Right Application will supersede all previous applications.

While the processing of the Mining Right Application is pending, Lesego Platinum Uitloop is permitted to prospect on the Farm Uitloop 3KS under the Prospecting Right. The prospecting activities that are

currently permitted include drilling, mineral resources estimation, bulk sampling for metallurgical studies, metallurgical studies, geotechnical and geophysical surveys, and groundwater investigations. These activities correlate to the proposed activities listed in Section 26.

The Company has designated specific areas on the Project for surface mining infrastructure, and these areas are underlain by dolomite, as stated in the submitted Mining Right Application. The DMRE requested the Company to conduct a dolomitic stability investigation in this designated area to ensure that any future surface mining infrastructure is not located on geotechnically unstable ground, which can be associated with dolomite. Ntamu Engineers, a South African Professional Environmental Consulting agency, completed the Dolomitic Stability Investigation. The study's findings were submitted to the South African Council for Geoscience for review, and the final report was subsequently submitted to the DMRE on December 12, 2022.

Once awarded, the Mining Right will be valid for a period of 30 years and can be renewed.

4.5 **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 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 custodian. 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.

4.5.1 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.

4.5.2 Mining Right

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

- lodge such a right for registration at the Mining Petroleum Titles Registration Office 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 2018 and the Social and Labour Plan.

4.6 **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 and annual prospecting reports and environmental compliance reports are submitted to the DMRE.

There are no other items (*i.e.*, permits or permissions) required by the Issuer to conduct the work program proposed for the Property, as the activities set out in Phase 1 and Phase 2 comprise of activities that were approved in the Prospecting Work Programme of the Prospecting Right LP30/5/1/1/2/148PR. While the processing of the Mining Right Application is pending, Lesego Platinum Uitloop is permitted to prospect on Farm Uitloop 3KS under the Prospecting Right. The prospecting activities that are currently permitted include drilling, mineral resources estimation, bulk sampling for metallurgical studies, metallurgical studies, geotechnical and geophysical surveys, and groundwater investigations. These activities correlate to the proposed activities listed in Section 26.

4.7 Royalties, Agreements and Encumbrances

4.7.1 Royalty Agreements

There are currently two revenue royalty agreements relating to the Project. In terms of these agreements, there is a 2.5% cumulative revenue royalty ("CRR") payable to URU as the previous owner of the Project and Umnex Mineral Holdings (Pty) Ltd as the local partner and operator of the Project. URU had the right to buy back 1.0% of the CRR from the holder within 24 months of the granting of the Mining Right over the Project. This right to buy back the 1.0% CRR was ceded to Zeb.

4.7.2 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 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 mining companies are subject to a royalty, prescribed by the Royalty Act of 2008 (Act No.28/2008). A full copy of the Royalty Act is available at https://www.gov.za/sites/default/files/gcis_document/201409/316351260.pdf.

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. According to the current Mine Works Program, no processing plant is provided for and therefore it is anticipated that the product will be classified as "Unrefined".

The main aspect of the Royalty 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.

4.8 Environmental Liabilities and Studies

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 EMP, which forms part of the 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.

There are no current environmental liabilities, all drill holes have been rehabilitated in accordance with the approved EMP. A rehabilitation guarantee totalling an amount of R15,000 for the Prospecting Rights is in place with the DMRE.

The Principal Author is not aware of any environmental liabilities that would inhibit the Issuer from conducting the planned work program.

4.8.1 Environmental Impact Assessment

On 18 January 2021, the DMRE formally acknowledged receipt of the Environmental Impact Assessment ("EIA") which was submitted by the Property holder Lesego Platinum Uitloop (Pty) Ltd on 15 January 2021 (Uys, 2021). The EIA and Environmental Management Programme Report ("EMPR") was prepared by Exigo Sustainability (Pty) Ltd, dated 13 January 2021.

4.9 Other Significant Factors and Risks

Certain risks related to advancing the exploration Project have been identified:

- Continuity of the various styles of mineralization in all targets: there is a risk that mineralization may not be continuous, especially in Targets 2, 3 and 4 for the ultimate declaration of a mineral resource on these Targets.
- Low metal tenor: there is a risk that Ni-Cu-PGE mineralization may not have a high enough metal content to support a mineral resource estimate.
- Structural complexity: there is a risk that faulting and other geological structures may have disrupted both the mineralization process and continuity of mineralization and may prevent the ultimate declaration of a mineral resource.

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.

4.10 Community Consultation

There are several villages adjacent to the area of the Project. A database of considered an Interested and Affected Party ("IAP") has been established and consultation with the IAPs is ongoing, and as of the Effective Date of the Report, no objections to the Project proceeding have been raised.

5.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

5.1 Accessibility

The 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 all-weather unpaved (dirt) roads lead to the various drill sites.

The Project is located in a well-established mining district. The main electrified railway line from Gauteng to Zimbabwe through 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 and Operating Season

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).





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 future open pit operations may be lost to thunderstorm activity.



Figure 5-2: Temperate chart for the region (source: website "Weather and Climate").

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 Sufficiency of Potential Surface Rights

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

5.3.2 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. These issues will be addressed in due course in the water use license application process.

5.4 Physiography

The Limpopo Province is classified as a Savannah biome, an area of mixed grassland and trees, which is generally referred to as the Bushveld. The larger area in which the 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.

5.4.1 Topography

The 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 5-3) 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.

Figure 5-3: Surface topography (coloured) within the Project area and the locations of Z-series drill hole collars from 2011-2012 and 2017-2018 drilling campaigns (Caracle, 2023).

5.4.2 Flora and Fauna

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 5-4). The largest tree in South Africa, the baobab, is found in many areas of Limpopo, as is the tallest tree, the Eucalyptus.

The Limpopo Province and the Project area specifically, is host to a wide variety of birds, mammals, reptiles, and insects. The 2021 EIA reported on the fauna in the Project area (Uys, 2021):

The majority of the habitat types on the respective study sites are fragmented and therefore the expected mammalian richness on these areas is considered low, although slightly higher richness values are expected from the more intact mountain habitats. Predators such as leopard, brown hyena, caracal, serval, honey badger and cape clawless otter are common throughout the area. Antelope species such as klipspringer, kudu, bushbuck and duiker roam freely through the area and are not restricted by game fences. According to Birdlife South Africa, the study area does not fall within any Important Bird Area (IBA). There is a potential presence of some toads and sand frogs in the non-perennial channels on site. Amphibian species potentially occurring in the area include Common River Frog, Natal Sand Frog, Gutteral Toad, Raucous Toad and Bubbling Kassina. The mountainous habitat and riverine woodland represent the most suitable habitat for a variety of reptile species. The reptiles of the study area include snakes, lizards, geckos and tortoises. Species such as the southern rock python, puff adder, black mamba, boomslang, vine snake, spotted bush snake and several members of the green snakes (Philothamnus spp.) is expected to occur in the study area, although the presence of these snakes is dependent on the presence of their prey species (rodents, frogs etc.). All the aforementioned amphibian and reptile species are common and widespread, and as such the development will not have any impact on reptile conservation within the region. All of the potential invertebrate habitats are well represented by a high family richness of insects and spiders. No red data fauna species were documented during the survey.



Figure 5-4: Flats on Farm Uitloop 3KS in the area of the proposed open pit with the Uitloop I hill in the background (Caracle, 2023).

This section details the historical work undertaken within the Project area. Both the Lower Zone bodies (Uitloop I and II) on farms Uitloop 3KS and Bloemhof 4KS, as well as the Platreef style mineralisation, 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 **Prior Ownership and Ownership Changes**

The current Project area has a long history dating back to Rand Mines' ownership from 1967 to 1971, followed by Southern Era Resources Limited's (2003-2005) who held the Prospecting Right. A chronology of the Project ownership history is provided in Table 6-1.

Date	Corporate Entity	Mineral Right Comment	Reference
1967 - 1971	Rand Mines	-	
10 October 2003 – 09-Oct-05	Southern Era Resources Limited	Old Order Prospecting Right.	
Jan-06	Southern Era Mining and Exploration South Africa (Pty) Ltd	Applied for a new order Prospecting Right, which was issued 11 July 2007 (LP148PR).	Uitloop 3 KS
Jan-06	Southern Era Mining and Exploration South Africa (Pty) Ltd granted an option to MSA Projects (Pty) Ltd to acquire the New Order Prospecting Right		
21-Feb-06	MSA Projects (Pty) Ltd (now Minex Pty Ltd) and Umbono Platinum Mining (Pty) Ltd, a subsidiary of Umbono Capital Partners (Pty) Ltd sign an agreement to incorporate the New Order Prospecting Right known as Uitloop 3 KS in its joint venture incorporated as JV - Lesego Platinum Mining (Pty) Ltd		

Table 6-1. Corporate and mineral right chronology for the Project area.

Date	Corporate Entity	Mineral Right Comment	Reference
2007	MSA Projects and Umbono incorporate Umnex Mineral Holdings (Pty) Ltd and its subsidiary, Umnex Minerals Limpopo (Pty) Ltd as the holder of its nickel portfolio, in order to split the nickel assets from the platinum assets.		
11-Jul-07	Southern Era Mining and Exploration South Africa (Pty) Ltd	New order Prospecting Right LP148PR issued.	Uitloop 3 KS
2007		Apply for a Section 11 to transfer the right LP148PR from Southern Era Mining and Exploration (Pty) Ltd to Lesego Platinum Mining (Pty) Ltd.	Uitloop 3 KS / Figure 3
16-Apr-08		Prospecting right LP1074PR executed in the name of Lesego Platinum Mining (Pty) Ltd.	Bloemhof 4 KS & Amatava 41 KS
01-Apr-09		Prospecting right LP1787PR and executed in the name of Lesego Platinum Mining (Pty) Ltd.	Townlands 44 KS
Nov-09	IDC signs deal with Lesego Platinum Mining wherein the IDC subscribed for shares in Lesego Platinum Mining. It was agreed between the parties that Uitloop 3 KS would be spun out and not form part of that transaction.		
Apr-10		A Section 11 Application was made to the DMR to move LP1787PR to Lesego Platinum Uitloop (Pty) Ltd.	Townlands 44 KS

Date	Corporate Entity	Mineral Right Comment	Reference
25-Jan-11	Southern African Nickel Limited (SAN) – Umnex Mineral Holdings (Pty) Ltd sign a term sheet with SAN in terms of which the parties would cooperate on the development of the Uitloop 3 KS Project among other projects. Niger Uranium agreed to fund the development of, inter alia, Uitloop in terms of an existing agreement between Niger and SAN.		
03-Nov-11	Niger Uranium Limited changes its name to URU[?] Metals Limited to reflect the Company's broad business activities, both in geographic coverage and portfolio of the metals projects in which it was exploring.		
19-Apr-12		Section 11 approval to move LP1074PR into Lesego Platinum Uitloop (Pty) Ltd.	Bloemhof 4 KS & Amatava 41 KS
May-12	A dispute arose between SAN and Umnex regarding certain obligations that the parties had in respect of their Joint Venture agreements. The parties commenced arbitration proceedings to resolve this dispute. The arbitration proceedings were eventually withdrawn as the matter was finally settled between the parties during January 2014.		

Date	Corporate Entity	Mineral Right Comment	Reference
20-Jun-12		Granting of a Section 11 to move LP148PR from Southern Era to Lesego Platinum Mining (Pty) Ltd after which a second Section 11 could be applied for to move the Uitloop right into Lesego Platinum Uitloop (Pty) Ltd.	Uitloop 3 KS
24-Jan-13		Applied for the renewal of LP1074PR.	Bloemhof 4 KS & Amatava 41 KS
22-Feb-13		Granting of a Section 11 to move LP174PR from Lesego Platinum Mining to Lesego Platinum Uitloop (Pty) Ltd	Uitloop 3 KS
02-Dec-13		Submission of a Section 102 to consolidate the prospecting rights LP1074PR and LP1787PR into LP148PR.	Uitloop 3 KS Bloemhof 4 KS & Amatava 41 KS Townlands 44 KS
12-Dec-13		Receipt of Acknowledgement of a Section 102 for the consolidation of the prospecting rights.	Uitloop 3 KS Bloemhof 4 KS & Amatava 41 KS Townlands 44 KS
Dec-13	URU acquires 100% of SAN.		
24-Jan-14	URU purchases 100% of the shares in Umnex Minerals Limpopo in consideration for issuing shares to Umbono Capital Partners and Minex (Pty) Ltd and URU committed to 26% of the shares of Umnex Minerals Limpopo (Pty) Ltd being issued reserved for a BEE partner.		
13-Feb-14		Acknowledgement of the receipt for the application of the renewal of LP1787PR.	Townlands 44 KS
14-Apr-14		Acknowledgement of the receipt for the application of the renewal of LP1074PR.	Bloemhof 4 KS & Amatava 41 KS

Date	Corporate Entity	Mineral Right Comment	Reference
19-Apr-17	A Corporate and Managements Services Agreement was signed between Umnex Mineral Holdings (Pty) Ltd, URU Metals Limited, Umnex Minerals Limpopo (Pty) Ltd, and Lesego Platinum Uitloop (Pty) Ltd, whereby Umnex Mineral Holdings undertakes to provide project management services, mineral rights management services, technical, engineering and geological services and corporate finance and capital raising services for a fee and other rights.		
Nov-18	BEE agreements between URU Metals Limited, Umnex Minerals Limpopo (Pty) Ltd, Lesego Platinum Uitloop (Pty) Ltd, Million 2 One Sureinvest (Pty) Ltd and Umbono Mineral Investments (Pty) Ltd signed.		
03-Dec-18		Renewal of LP148PR was executed.	Uitloop 3 KS
26-Jul-19	A 5% ESOP and 5% Community ownership into Lesego Platinum Uitloop, conditional upon the granting of the mining right, is submitted to the DMR.	Mining Right application for portions of Uitloop 3 KS, Bloemhof, Amatava and Townlands submitted.	Uitloop 3 KS Bloemhof 4 KS & Amatava 41 KS Townlands 44 KS
21-Aug-19		Mining Right Application LP10174MR accepted by the DMR.	Uitloop 3 KS Bloemhof 4 KS & Amatava 41 KS Townlands 44 KS

In 2021, Blue Rhino Capital Corp (TSXV: RHNO.P; "Blue Rhino"), a capital pool company ("CPC") within the meaning of the policies of the TSX Venture Exchange ("TSXV"), completed a qualifying transaction ("QT") with URU Metals Limited ("URU"), whereby Blue Rhino issued approximately 74.82% of its issued and outstanding shares to URU in exchange for the Zeb Nickel Project. Following the QT, the resulting issuer retained ownership of the Project and become Operator.

On 11 August 2022, at the conclusion of the QT, Blue Rhino completed a name change to Zeb Nickel Corp and began trading on the Toronto Venture Exchange under the symbol "ZBNI".

6.2 Rand Mines (1967-1972)

Rand Mines conducted a nickel and copper soil sampling program over portions of Farm Uitloop 3KS 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 Farm Uitloop 3KS.

Rand Mines commissioned an Induced Polarisation ("IP") survey over portions of Uitloop 3KS 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.

6.2.1 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; Table 6-2) 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 (McCreesh *et al.*, 2019).

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 6-2).

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 sulfide 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. It is now industry practice to assay all Platreef core continuously, as PGM rich sulfides are often very finely disseminated and can be overlooked.



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



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

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			

Table 6-2: Selected Rand Mines assay results, 1972 drilling program, UL series drill holes (McCreesh et al., 2019).

6.2.1.1 Drill Hole Interpretation

There are no borehole logs or detailed assay results for the UL series boreholes, only brief descriptions (below) and summary assays as provided in Table 6-2. The following is a summary of the UL-series drill holes (Lowman, 2007; McCreesh *et al.*, 2019).

Borehole UL1: drilled based on IP and resistivity anomalies; collared in serpentinite, at 47.46 m changed to a serpentinised 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. Mineralisation 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 mineralisation 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 serpentinised 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 (sulfides 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 northeasterly 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 mineralisation warranted drill testing. The borehole was drilled to 84.14 m and intersected serpentinite to a depth of 17.07 m, serpentinised gabbro to 59.05 m and gabbro with inclusions of chert and serpentinite to its final depth. Pyrrhotite mineralisation 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 serpentinised gabbro. Fine, disseminated pyrrhotite was intersected and 11 samples taken at \pm 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.*, sulfides and/or graphite). Only non-mineralized serpentinite and serpentinised 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 sulfides 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 sulfide mineralisation 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 serpentinised gabbro. Mineralisation was mainly in the form of disseminated sulfides but some massive sulfides 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), serpentinised gabbro to 86 m, and gabbro to the final depth of 101.1 metres. Mineralisation was mainly fine disseminated sulfides with a few more massive sulfide 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 serpentinised 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 serpentinised 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 serpentinised 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 mineralisation 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.

6.3 Southern Era Resources (1998-1999)

In 1998, as part of a desktop study, Minex Projects ("Minex") identified the potential of Uitloop 3KS to host Platreef style mineralisation 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 3KS (*see* Section 6.3).

6.3.1 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 3KS, 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 CuSO₄. 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 Farm Uitloop 3KS (Southern Era, 1998).



Figure 6-4: Southern Era soil geochemistry Ni results on Farm Uitloop 3KS (Southern Era, 1998).

6.4 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-sulfide 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 3KS property.

In 1999, FVA entered into discussions with Southern Era regarding possible farm-in options for the Uitloop 3KS 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 3KS 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 3KS, a ground magnetic survey, and a time-domain electro-magnetic ("TDEM") survey by Spectral Geophysics (McCreesh *et al.,* 2019).

6.4.1 Airborne EM Survey

In 1999, FVA completed a regional airborne Electromagnetic ("EM") survey in the area, which overlapped onto Uitloop 3KS (Figure 6-5). The FVA regional airborne EM results identified the potential for massive sulfide 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 3KS (Falconbridge Ventures of Africa, 1999).

6.4.2 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 sulfides and did not specifically target disseminated Platreef style mineralisation (McCreesh *et al.,* 2019).

A total of five UIT series boreholes (aka "Uit") were completed, totalling 1,400 metres (Table 6-3). 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.

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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

Table 6-3: Falconbridge Ventures of Africa 2001 drilling program, four of the five Uit series drill holes (2001).

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 mineralisation, 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 subhorizontal 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 sulfide 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 mineralisation. 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 mineralisation 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 drill hole collars, labelled "uit1-x" (Falconbridge Ventures of Africa, 2001).



Figure 6-7: Locations of historical UIT series drill hole collars (2001) superimposed on a simplified geological map (map modified from van der Merwe, 1978).
6.5 Historical Mineral Processing and Metallurgical Testing

There is no historical mineral processing and metallurgical testing related to mineralization within the boundary of the Zeb Nickel Project.

6.6 Historical Mineral Resource Estimates

In March 2012, as part of an internal Preliminary Economic Assessment ("PEA") study titled, "Preliminary Economic Assessment for the Zebediela Nickel Project", prepared for Umnex Minerals Limpopo (Pty) Ltd, and with an effective date of 31 March 2012, MSA Geoservices (Pty) Ltd ("MSA") prepared a mineral resource estimate ("historical MRE") on nickel mineralisation in the Lower Zone Uitloop II body (Croll *et al.*, 2012).

Drilling results allowed for the estimation of an Indicated Resource of 485.4 million tonnes averaging 0.245% Ni (Table 6-4), with estimation of an additional Inferred Resource of 1,115.1 million tonnes at 0.248% Ni (Table 6-5), using a cut-off grade of 0.1% TNi (Total Nickel). The mineral resources were quoted as TNi and were restricted to mineralisation in the "Sulfide Zone". They were stated as *in-situ* with no geological losses applied. The historical MRE used a nickel price of US\$8.50 per pound or US\$18,739.00 per tonne.

Table 6-4: Grade-sensitivity analysis, in situ historical Indicated Mineral Resources, Lower Zone (Sulfide Zone)
(Croll <i>et al.,</i> 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 6-5: Grade-sensitivity analysis, in situ historical Inferred Mineral Resources, Lower Zone (Sulfide 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 historical mineral resources presented in Table 6-4 and Table 6-5 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.

Neither the Principal Author nor a qualified person, for the purposes of NI 43-101, have done sufficient work to classify the historical resources in the Report as current mineral resources and as such the Principal Author and the Issuer are not treating the tonnages and grades reported as current. Investors are cautioned that the historical mineral resource estimates do not mean or imply that economic deposits exist on the Property.

The geological block model from the 2012 historical mineral resource estimate is not available and as such a qualified person, for the purposes of NI 43-101, has not undertaken an independent detailed investigation of the historical MRE.

6.6.1 Historical 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 Project (Figure 6-8).



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

MSA carried out the following:

- Reviewed all available geological information and data pertaining to the Zeb Nickel Project area, including drill hole (borehole) collar, geology, downhole survey and assays.
- Reviewed the existing wireframe model(s).
- Reviewed the existing interpretation of the oxidized-fresh (sulfide) interface.
- Created a block model of the Mineral Resource envelope.
- Undertook a Mineral Resource estimation exercise for the oxide and sulfide zones.
- Declared code-compliant Mineral Resources, according to NI 43-101.
- 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.

6.6.1.1 Geological Modelling and Block Model Creation

The ultramafic body hosting the nickel resource comprises of intrusive pyroxenite-harzburgitedunites, 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 Project, was investigated by Lesego Platinum Uitloop 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 mineralisation.

6.6.1.2 Database

Data supplied by Lesego Platinum Uitloop included borehole collars, downhole survey, geology, assay, including 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 TNi in the Sulfide Zone of the deposit.

The mineralized interval is an average of 271 m thick in the Uitloop II body and is at its thickest in the south, around boreholes Z07 and U01 (approximately 465 m vertically). The target sulfide mineralisation 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 Uitloop II body to better than Inferred Mineral Resource status.

6.6.1.3 Data Validation

Borehole data were provided for a series of exploration phases over the Uitloop II body, 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.

6.6.1.4 Raw Statistics

Univariate statistics were run on the raw data, as received and subsequently corrected. The oxidesulfide interface was identified as a critical parameter for the Uitloop II body_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 Sulfide zones. The average oxide-sulfide interface depth was calculated as 46.5 metres. The borehole data were analysed statistically per Oxide and Sulfide zones.

6.6.1.5 Compositing

Having delineated the Oxide and Sulfide 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 metres. A single population was observed in the TNi and ACNi in the Oxide and Sulfide zones.

6.6.1.6 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 todepths 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 density 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 the outset.

6.6.1.7 Geostatistical Analysis

The borehole data for the Oxide and Sulfide 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 Sulfide Zone was therefore applied to the Oxide Zone.

It was determined that the separated Oxide and Sulfide 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.

6.6.1.8 Block Modelling

Borehole data were modelled to construct a mineralisation 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 Lesego Platinum Uitloop.

A block model was constructed and split between the Oxide and Sulfide 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 Sulfide 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-sulfide 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 6-6).

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

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

*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 Sulfide Zone only are shown in Figure 6-9 and Figure 6-10.



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



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

6.6.2 Historical Mineral Resource Estimates

The mineralisation in the Uitloop II body 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 mineralisation across the body. The degree of geological continuity is considered sufficient for declaring up to Indicated Mineral Resources.

6.6.2.1 Classification

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

6.6.3 Historical Mineral Resource Statement

The historical Mineral Resources were declared for the Uitloop II body, with an effective date of 31 March 2012, using a cut-off grade of 0.1% TNi. These resources are stated as in-situ as no geological losses have been applied (*see* Table 6-4 and Table 6-5).

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

A qualified person, for the purposes of NI 43-101, has not done sufficient work to classify the historical resources in the Report as current mineral resources and as such the Company is 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.

6.6.4 Grade-Tonnage Curves

The following grade-tonnage curves represent the spread of grades within the Sulfide Zone, at various TNi cut-offs (Figure 6-11 and Figure 6-12). The resulting historical mineral resource statement used a cut-off grade of 0.1% total nickel (TNi).



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



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

6.6.5 Block Model for Mining Plan and Schedule

A nominal open pit design was superimposed onto the combined block model for the Oxide and Sulfide zones, starting at surface and using pit slopes of 50 degrees, 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.

6.6.6 Summary

Historical Mineral Resources where declared for the Sulfide Zone only, using a cut-off grade of 0.1% TNi (Total Nickel).

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 sulfide minerals present in the Sulfide 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).

A qualified person, for the purposes of NI 43-101, has not done sufficient work to classify the historical resources in the Report as current mineral resources and as such the Company is treating the tonnages and grades reported herein 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.

6.7 Historical Production

There is no known historical production on the Zeb Nickel Project.

7.0 GEOLOGICAL SETTING AND MINERALISATION

7.1 Regional Geology

The 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 km².

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 (source: South African Council for Geoscience 1:250,000 geological datasets, 2018).

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 ٠ 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 mineralisation. 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 orthopyroxene 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 mineralisation, but is known to contain small amounts of cumulus chromitite, magnetite developed from serpentinisation of the ultramafic rocks and disseminated sulfide mineralisation.



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 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 mineralisation 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 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).

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).

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 (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 7-3: Geological map of the Northern Limb of the Bushveld Igneous Complex showing the location of the Uitloop intrusions and general area of the Project (Black Boundary). 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).







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 Cr₂O₃ 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). 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 gabbro 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.

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

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

7.3 Property Geology

The 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 subbodies 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).

Van der Merwe (1978), was able, from surface mapping, to broadly differentiate the body into orthopyroxenite and harzburgite (olivine-orthopyroxene cumulate) portions (Figure 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 Critical Zone outcrop on the south-western side of the Uitloop II body slightly outside the Prospecting Right. Here, the Critical Zone 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 intersected a steeply dipping (~70°), thick succession of Critical Zone lithologies overlain by calcrete and younger sediments. The 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. Based on Ni-Cu-PGE mineralisation seen in exploration drilling, the 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 Project (Figure 7-7).

A simplified stratigraphy of the geology of the Project area, 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 intersected in exploration boreholes and some of the stratigraphic units can also be mapped at surface (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).



Figure 7-8: Main lithologies seen in the Lower Zone Uitloop II body: (A) medium-grained oxidised dunite, (B) medium-grained oxidised dunite with relic of olivine, (C) fine to medium-grained dunite with serpentinite richveins, (D) medium-grained serpentinised dunite, (E) fine to medium-grained serpentinised dunite with veinlets of magnesite, (F) fine-grained serpentine with finely disseminated sulfides (3-5%), (G) fine-grained serpentine with disseminated sulfides (3%), (H) medium-grained harzburgite with disseminated and blebby sulfides, (I) medium-grained poikilitic harzburgite with disseminated sulfides, (J) medium-grained pyroxenite with acicular pyroxene crystals (Zeb Nickel, 2023).



Figure 7-9: Main lithology associated with the Ni-Cu-PGE mineralisation: (A) fine to medium grained melagabbronorite, (B) fine-grained pyroxenite, (C) medium to coarse-grained feldspathic pyroxenite with disseminated and blebby pyrrhotite, pentlandite and chalcopyrite, (D) medium-grained olivine-bearing pyroxenite with minor finely disseminated sulfides, and (E) medium-grained feldspathic harzburgite with minor disseminated sulfides (Zeb Nickel, 2023).

	Overburden	Karoo sediments · Calcrete Overburden top-soil
	Platreef/Critical Zone →	Feldspathic pyroxenite Pyroxenite Gabbronorite Norite Anorthosite Chromitite Disseminated and semi-massive sulphides
	Lower Zone ———	Dunite Harzburgite Pyroxenite Serpentinite Chromitite Disseminated and semi-massive sulphides
	Duitschland Formation ——	Shale/Hornfels with significant dolomite Minor conglomerates and quartzite
	Penge Formation ———	Banded Ironstone Ferruginous Shales Minor quartzite at the base
	Malmani Subgroup ———•	Dolomite Interbedded chert-rich dolomite Minor quartzite and mudstone
+ $+$ $+$ $+$ $+$ $+$ $+$ $+$ $+$ $+$	Archean Granite Basement →	· Granite and gneisses

Figure 7-10: Simplified stratigraphy of the main rock units within the Zeb Nickel Project, based on the general stratigraphy of the Northern Limb. Local variations of this stratigraphy do occur (Zeb Nickel, 2023).

7.4 **Property Mineralisation**

Target mineralisation types on the Project are shown in Figure 7-11, Figure 7-12, and Figure 7-13. There are four styles of mineralisation being targeted within the Project, with each target type having a different style of mineralisation, mineralisation mechanism, and differing host lithologies and stratigraphic units. The four target types identified are:

- Lower Zone disseminated nickel sulfide striking along a length of approximately 3,500 m, a width of about 1,500 m on surface and defined down to a depth in excess of 380 metres.
- 2. Stratabound and contact-style Ni-Cu-PGE mineralisation generally hosted in feldspathic pyroxenite, striking along a length of approximately 5,000 m, a width of 5 to 100 m and extending down to a depth in excess of 400 metres.
- 3. Ni-PGE Mineralisation hosted in highly metamorphized footwall lithologies or xenoliths. The sulfide mineralisation is mostly net textured, semi-massive to massive

in nature. This target has only been intersected in a few drill holes, and so the length, width, depth and continuity of mineralisation has yet to be established. These bodies vary greatly in size and extent, and further drilling will establish the dimensions and extent of this target. It is also postulated that semi-massive to massive sulfides may be associated with what has been mapped as magmatic conduit systems between the Uitloop I and Uitloop II bodies. On this basis, this style of mineralisation may be encountered in the footwall of both the Uitloop I and II bodies as indicated on Figure 7-11 and Figure 7-12

4. High-grade gold mineralisation that is possibly related to remobilized gold from the adjacent Pietersburg Greenstone Belt and hydrothermal activity, as intersected in Z027 and Z029 in the southwest portion of the project area. In addition, small gold-rich intervals were also intersected in the northwest portion of the project.

7.4.1 Target 1 (also referred to as ZEB 1): Lower Zone

This target type includes historical nickel sulfide resources associated with low-grade, disseminated nickel-rich sulfide mineralisation within the Lower Zone Uitloop II body (Figure 7-11 and Figure 7-12). The Lower Zone Uitloop II body also contains significant iron minerals in the form of magnetite which is also a potential by-product. Nickel mineralisation associated with the Lower Zone Uitloop II body is hosted mostly in a thick package of alternating dunite, serpentinised dunite, serpentinite, pyroxenite and harzburgite. Sulfide mineralisation mainly occurs as fine-grained disseminated pyrrhotite and pentlandite, with minor chalcopyrite and pyrite.

This body was previously thought to be relatively homogenous in both lithologies and nickel mineralisation. A recent investigation conducted by Zeb's geologists has indicated that this body can be divided into four broad stratigraphic units, namely the Dunite Unit, the Serpentinised Dunite Unit, the Serpentinite Unit and the Poikilitic Harzburgite Unit. These four units have different abundances of sulfide mineralisation.

The Serpentinite and Poikilitic Harzburgite Units close to the base of the body have an increased sulfide content of 5% - 10% that are blebby and disseminated in nature. These two zones appear to correspond with higher nickel grades, most likely related to the higher sulfide content in these lower two stratigraphic units. However, majority of the historical drillholes were stopped in the middle of the Serpentinised Dunite Unit and did not test for higher-grade Ni mineralisation associated with the lower two units.



Figure 7-11: A section taken from the 3D model showing how the majority of the historical drill holes stopped short of the sulfide-rich Serpentinite and Poikilitic Harzburgite Units. Drill hole Z015 intersected these lower sulfide-rich units, which have increased nickel grade of 0.49% Ni over 21.5 m, including 5.50 m at 0.72% Ni. Photo (A) shows a core sample of the disseminated 5-10% sulfide-rich Serpentinite Unit. Photo (B) shows a core sample of the blebby and disseminated sulfide nature associated with the Poikilitic Harzburgite Unit (Zeb Nickel, 2023).

There are two hypothesised mechanisms for the nickel mineralisation in the Lower Zone Uitloop body: (1) Croll *et al.* (2012), suggested that the low-grade nickel mineralisation to be epigenetic in nature, having formed during the release of chalcophile elements from olivine during serpentinisation. This serpentinisation process is a mineralisation mechanism seen in other low-grade disseminated nickel deposits 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 mineralisation process: olivine contains higher Ni concentrations in the sulphur-poor Lower Zone sequences but are depleted in Ni-content associated with sulphurrich sequences which is due to partial Ni extraction into a coexisting sulfide 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 sulfide mineralisation as seen in the Uitloop II body. At the base and margins of the Lower Zone body, there is potential for semi-massive sulfides associated with footwall or xenolith lithologies as seen in borehole Z017, Z03 and Z024. 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.



Figure 7-12: Simplified geological map showing the four mineralisation target types. Target 1 "ZEB 1": approximate extent of known disseminated nickel sulfide mineralisation (purple dashed square) associated with the Lower Zone Uitloop II body - could also be found in the Uitloop I body. Target 2: approximate Ni-Cu-PGE stratabound and contact-style mineralisation (green dashed square and green hatching). Target 3: massive sulfide mineralisation (yellow dashed square). Target 4: high-grade gold discovery is related to remobilized gold from the adjacent Pietersburg Greenstone Belt and hydrothermal activity. Blue dots represent boreholes with Lower Zone intercepts and red dots represent boreholes that have intercepted Ni-Cu-PGE bearing lithologies and mineralisation (base geological map modified from van der Merwe, 1976).



Like the Uitloop II body, the Uitloop I Lower Zone body has the potential to host low-grade, disseminated nickel sulfides. The Uitloop I body forms a small hill about 1,574 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 2: Ni-Cu-PGE Stratabound and Contact-style Mineralisation

Target 2 is referred to as Ni-Cu-PGE mineralisation and is characterized by two styles of mineralisation, namely stratabound and contact-style mineralisation typically hosted in feldspathic pyroxenites, pyroxenites, harzburgites and olivine-bearing pyroxenites (*see* Figure 7-11 and Figure 7-12). Stratabound mineralized zones contain Ni-Cu-PGE mineralisation associated with disseminated and/or blebby sulfides in a stratigraphic unit up to 150 m thick (Figure 7-14). Contact-style Ni-Cu-PGE mineralisation is intimately associated with the footwall contact of the intrusion. Both styles of mineralisation have been intercepted in historical and current boreholes on the Project (*see* Figure 7-11 and Figure 7-11 and Figure 7-12).



Figure 7-14: Blebby and disseminated sulfides in drill hole Z028 hosted in feldspathic pyroxenite from the Ni-Cu-PGE mineralised interval (Zeb Nickel, 2023).

Stratabound mineralized zones are not confined to a specific lithological zone, but rather a zone of elevated Ni-Cu-PGE mineralisation across several lithologies, which is mainly composed of feldspathic pyroxenite, pyroxenite, norite/gabbronorite and harzburgite. Isolated semi-massive sulfides 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 mineralisation is referred to as a reaction zone that transgresses and assimilates the footwall lithologies, a likely external sulfur source. Mineralisation is hosted in blebby and/or semi-massive sulfides either at the contact between the magmatic rocks and the hybrid footwall or within the hybrid footwall lithologies.

Semi-massive sulfides associated with both the stratabound and contact style mineralisation 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 sulfides associated with the contact-style mineralisation zones.

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

During a re-logging exercise, the Ni-Cu-PGE host lithologies and sulfide mineralisation were observed in a number of boreholes which were targeting the Lower Zone Ni sulfide 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 Ni-Cu-PGE host lithologies and sulfide mineralisation. Based on these borehole intercepts, the Ni-Cu-PGE horizon 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).

In 2017 (Phase 1) and 2021 (Phase 2), Zeb Nickel Company (Pty) Ltd undertook drilling campaigns which intersected the near surface subcrop of the Ni-Cu-PGE mineralized horizon and successfully delineated \sim 5 km of strike with Ni-Cu-PGE mineralized intervals of between \sim 10 – 20 m in thickness. From the current intersections the Ni-Cu-PGE mineralized zone is interpreted to form chonolith-like bodies beneath the Uitloop II body and forms sheet-like (layered) intrusions to the north and south of the Uitloop II body. The relationship between the Uitloop II body and Ni-Cu-PGE host lithologies still needs to be investigated at depth but holds considerable interest for Ni-Cu-PGE mineralisation. Most Ni-Cu-PGE Zone intersections to date have been of between depths of 30 m to 350 m below surface, with a high degree of country rock contamination. The subcrop position of the Ni-Cu-PGE Zone is interpreted to be where the magma flow ended on the Project area and often leads to a reduction in metal content. Where the Ni-Cu-PGE mineralized zone is intersected downdip closer to where the magma is interpreted to have originated, thicker and higher-grade Ni-Cu-PGE mineralisation often occurs. This relationship of increasing grade with depth appears to be consistent with what is seen on the Northern Limb; Ni-Cu-PGE grades in the Critical Zone tend to increase downdip as seen on Ivanplats Platreef Project and Anglo Platinum's Mogalakwena Mine (Ivanhoe Mine Ltd. Platreef 2022 Feasibility Study; Anglo American - Ore Reserves and Mineral resources Report 2022)

7.4.3 Target 3: Footwall Mineralisation (Massive Sulfide Target)

Target 3 is semi-massive to massive Ni-PGE Mineralisation hosted in highly metamorphized footwall lithologies or xenoliths. These nickel-rich massive-sulfide bodies 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 and Figure 7-13). These massive-sulfide bodies may be up to 1 km away from the primary BIC intrusions. High concentrations of sulfides, up to 10% disseminated and blebby sulfides 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). This suggests the possibility for semi-massive to massive magmatic sulfide bodies to occur within the footwall of the BIC.

At the base of the Uitloop II body metasedimentary units have been intersected, which may represent xenoliths or the footwall to the intrusion. In the 2017 drilling program, a 2.25 m thick semi-massive sulfide hosted in metasediments was intersected. This sulfide is mainly composed of pyrrhotite, with minor pentlandite, chalcopyrite and pyrite and had an average nickel grade of 1.66% Ni over 2.25 metres.

The Project Area meets several geological and geochemical requirements for the formation of massive nickel sulfide mineralisation (Naldrett, 2010), namely:

- Long lived ultramafic to mafic magmatism;
- Sulphur in the system;
- High metal tenor;
- Feeder and conduit system acting as collection sites; and
- Footwall embayments acting as trap sites.

Condition	Fulfilled
Hot magma becomes saturated in sulfide and segregates immiscible sulfide	Immiscible Ni-bearing sulfides intersected in numerous drillholes to date
Sulfides are concentrated in a restricted locality (trap site)	Presence of footwall embayment and a plumbing system presents targets
That these sulfides react with a sufficient amount of magma to concentrate chalcophile elements to an economic level	Long lived magmatic system in the form of both Lower and Critical Zone magmas in the area, proximity to feeder system?

Table 7-2: Summary of geological conditions for formation of massive sulfide mineralisation in the Project Area.

The increasing nickel grade in disseminated sulfides across the Northern Limb may be acting as a vector to higher grade massive sulfides possibly located in this area. Mineralisation could be located within Lower Zone, Critical Zone, Transvaal metasediments or Archaean Basement.

These conditions are highly analogous to the Uitkomst Complex, as discussed below.

7.4.3.1 Uitkomst Complex

The Uitkomst Complex provides a mineralisation model that may be applicable to the Zeb Nickel Project, where there is potential for massive-sulfides 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 highgrade, nickel-rich massive-sulfide 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 lowgrade disseminated nickel-rich sulfides 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).

7.4.4 Target 4: Gold mineralisation

The gold mineralisation is possibly related to the close proximity of the Pietersburg Greenstone Belt, which hosts several historical gold mines. The gold-rich intervals overprint several lithologies which range from quartzite and shale in the Duitschland formation and feldspathic pyroxenites and gabbronorites of the Rustenburg Layered Suite (*see* Figure 7-13). Highest gold grades are associated with diamictites found within the Duitschland formation and Banded Iron Formation and shales of the Penge formation. The gold is most likely hydrothermal in origin and remobilized from the adjacent Pietersburg Greenstone Belt. High grade intersections of gold have been found both in the northern and southern areas of the project.

8.0 DEPOSIT TYPES

Globally, layered igneous intrusions are the most important source of PGE, which form as a result of sulfide 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 km²), 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 mineralisation 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):

- 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 pyriterich shales. Assimilation of S is viewed as a modifying process, not as the primary trigger for mineralisation.

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

- 1. Platreef sulfides 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 sulfides 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 sulfides were subsequently expelled as a crystal-sulfide mush by an early pulse of Main Zone magma that broke into and spread through the earlier Lower Zone magma chambers.

8.1.1 PGE in the Platreef

The term Platreef style mineralisation is referred to mineralisation 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 sulfide layers associated with ultramafic rocks such as komatiites or ultramafic intrusions.

Massive sulfides, 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 stricto* 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 sulfide zones, together with layered chromitite and lowgrade 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 serpentinised ultramafic-hosted disseminated nickel sulfide 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 komatiite-hosted (Mt. Keith type deposits) Dumont Nickel Deposit in Quebec (Staples *et al.*, 2013) and the Crawford Nickel-Cobalt Sulfide deposit, near Timmins, Ontario (Jobin-Bevans *et al.*, 2020) are additional examples of large tonnage, low grade, disseminated sulfide nickel hosted by highly serpentinised ultramafic rocks.

The Turnagain Ni-Co Project is being developed by Gigametals Corporation. The Turnagain deposit is an Alaskan-type serpentinised ultramafic intrusion with grades averaging about 0.22% Ni, hosted by what is interpreted as primary nickel sulfides (Riles *et al.*, 2011).

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

The Dumont Nickel Deposit, held by Magneto Investments L.P., is interpreted to be hosted by an Archaean sill of komatiitic affinity that is highly serpentinised and with reported nickel grades of approximately 0.24% Ni (Lewis *et al.*, 2010).

The Crawford Ni-Co Sulfide Project includes the Crawford Ni-Co-PGE deposits (Main and East zones), interpreted to be hosted by highly serpentinised, 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.

This information is presented for comparative purposes only, and with the exception of the Crawford Ni-Co Sulfide 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 mineralisation on the Property that is the subject of the Report.
9.0 EXPLORATION

Lesego Platinum Uitloop and various related companies, has completed mineral exploration programs on the Property since 2007. The first exploration program comprising soil sampling and exploration drilling was conducted by Lesego Platinum Uitloop. in 2007, funded by Umnex Mineral Holdings Proprietary Limited. Further drilling was conducted in 2010 and 2011, funded by South African Nickel (Pty) Ltd ("SAN").

In 2017 and early 2018, Lesego Platinum Uitloop, funded by URU, drilled a further 6 exploration drill holes. In 2018, Lesego Platinum Uitloop completed geological mapping and rock grab sampling along the Rooisloot River and on Farm Bloemhof 4KS (a small portion adjacent to Farm Uitloop 3KS). Also in 2018, Lesego Platinum Uitloop. Contracted ground geophysical surveys of Farm Uitloop 3KS, which included Induced Polarization (IP)/Resistivity (Res) and ground magnetometer surveys. Cobalt analyses were done in 2018. In 2018 and 2019, portions of the core were re-logged, specifically focussing on the interactions between the Lower Zone ultramafic rocks and the metasedimentary footwall rocks.

In 2020, a resistivity geophysical survey was completed on Farm Uitloop 3KS. This was followed up with four percussion holes drilled later in 2020. In 2021, a further 8 exploration diamond drill holes were drilled.

Details of drilling programs completed by Lesego Platinum Uitloop and its related companies are provided in Section 10. An approximation of the related expenditures for exploration activities from March 2018 to December 2022 are provided in Table 9-1.

All exploration activities from 2017 to 2021 were funded by URU. Exploration activities from 2021 to date have been fully funded by Zeb. As of the Effective Date of the Report, the Company is continuing with their current drilling campaign on the Project.

Year	Company	Work Type	Description	Amount (US\$)
March 2021 – March 2022	Lesego Platinum Uitloop funded by Zeb Nickel Corp	Exploration Drilling Geological Modelling	8 diamond drill holes targeting Ni mineralisation in the Uitloop II body and Ni-Cu-PGE mineralization	\$1,074,808
Mar 2020 – Feb 2021		Soil Geochemistry & Geological Mapping	Targeting areas around the geophysical anomalies, specifically on Farm Uitloop 3KS.	\$ 10,741
		Percussion Drilling & Geological Mapping	Focussed on Farm Uitloop 3KS. Targeting geophysical anomalies.	\$ 16,334
	Lesego Platinum Uitloop funded by URU	Geological Mapping	Focussed on the Lower Zone ultramafic rocks footwall interaction.	\$ 518
		Geophysics	Resistivity Survey with 6 traverses located on Farm Uitloop 3KS.	\$ 17,710
		Project Geologist	Responsible for all exploration activities, including mapping, sampling, portable XRF analysis.	\$ 44,945

Table 9-1: Exploration and related exploration expenditures from March 2018 to December 2022.

Year	Company	Work Type	Description	Amount (US\$)
Mar 2019 – Feb 2020	Lesego Platinum	Re-Logging & Geological Mapping	Focused on footwall interaction.	\$ 2,974
	Uitloop funded by URU	Project Geologist	Responsible for all exploration activities, including mapping, sampling, portable XRF analysis.	\$ 62,958
Mar 2018 – Feb 2019		Re-Logging & Geological Mapping	Focused on footwall interaction.	\$ 7,248
	Lesego Platinum Uitloop funded by URU	Project Geologist	Responsible for all exploration activities, including mapping, sampling, portable XRF analysis.	\$ 52,145
	UKU	Assay	Cobalt analysis	\$ 5 <i>,</i> 879
		Geophysics	Induced Polarisation and ground magnetic survey	\$ 64,929
TOTAL (US\$):				\$ 1,361,189

9.1 Lesego Platinum Uitloop (Pty) Ltd (2007)

Lesego Platinum Uitloop was awarded various prospecting rights in 2007 and began exploration at that time, targeting Platreef style mineralisation on Uitloop 3 KS (Figure 9-1). MSA was appointed to undertake and manage an exploration program aimed at investigating and delineating platinum and base metal mineralisation on Uitloop 3 KS (Lowman, 2007).



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

9.1.1 Soil Sampling

Previous soil sampling and drilling programs had indicated the existence of anomalous copper and nickel values on Uitloop 3 KS. All samples were believed to be representative, except for samples near the centre of the surveyed area which were later identified to be caused by agricultural features, as discussed below.

The exploration model interpreted these values as possible Platreef style mineralisation. 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: Geochemical soil sampling traverse lines and cultural features (2007).

The 2007 soil sampling program consisted of 985 soil samples collected and analysed for 19 elements: Ag, Al, As, Ba, Ca, Co, Cr, Cu, Fe, K, Mg, Mn, Ni, P, Pb, Sc, Sr, V and Zn. Twenty six lines (UL001 through UL026) were planned across the entire Uitloop 3KS farm area, and samples were collected every 50 m along the lines (*see* Figure 9-2). The primary laboratory used for the assay function was independent Genalysis Laboratories (Genalysis) an ISO17025 accredited laboratory.

Soil sampling 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 Project 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 surveyed area 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 Platinum Uitloop 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 9-5) (McCreesh *et al.*, 2019). Locations of stations along the river are shown in Figure 9-5 and summary descriptions of the sample stations are provided in Table 9-2.

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 9-5: Geological field mapping results and station locations along the Rooisloot River, (McCreesh *et al.,* 2019).

The second phase of mapping took place on Farm Bloemhof 4KS and on a small portion of Farm Uitloop 3 KS (Figure 9-6). 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 Uitloop I body. Towards the southwestern portion of the mapping area on Farm Uitloop 3KS altered Malmani dolomite was mapped (Figure 9-6). There was also a high amount of overburden and calcrete in areas of this mapping exercise.



Figure 9-6: Geological field mapping results for the farms Bloemhof 4KS and Uitloop 3KS from the 2018 mapping program (McCreesh *et al.*, 2019).

During August 2018, GAP Geophysics carried out a ground geophysical program comprising timedomain Induced Polarization (IP)/ Resistivity (Res) and ground magnetometer surveys over the Zeb Nickel Project Area on the farm Uitloop, on behalf of URU Metals Ltd (Figure 9-7). 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 sulfide bodies hosting nickel (pentlandite) mineralisation in the BIC Lower Zone rocks; and (b) mapping the distribution of serpentinised units via the IP and magnetic responses of accessory magnetite released



in the serpentinisation process, along with any significant pyrrhotite in the sulfide-rich zone (Boitshepo *et al.,* 2018).

Figure 9-7: 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 serpentinised 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 serpentinised northern contact of Uitloop II and may reflect a magnetite-only or magnetite plus sulfide 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 9-3.

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

Table 9-3: Geophysical target locations of significant prospecting interests (Boitshepo et al., 2018).

Major findings from an integrated interpretation of ground magnetic and time-domain IP/resistivity survey data, and historical aeromagnetic data over the Project on Farm Uitloop 3KS were as follows (Boitshepo *et al.,* 2018):

- Magnetic data mapped out the large Uitloop II body whose serpentinised 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 L1 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 sulfides 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 sulfides 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 sulfides, 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).
- Zone IP-1 spatially correlates with the serpentinised 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 mineralisation.

Recommendations resulting from 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.
- There are at least seven historical boreholes drilled into the serpentinised zone of Uitloop II body that should be adequate to validate the provenance of this combined IP/mag anomaly.

10.0 DRILLING

A number of drilling programs were completed on the Property between 2007 and 2020 (Croll *et al.*, 2012; McCreesh *et al.*, 2019).

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 Quality Assurance/Quality Control ("QA/QC") procedures, or other factors that could materially impact the accuracy and reliability of the drilling results.

In the Authors' 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 mineralisation 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 mineralisation.

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.

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

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

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 mineralisation and the Platreef contact style mineralisation. 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 (U1, U2, U3) drill holes is provided in Figure 10-5. Drill hole core sample intervals reported in what follows are core lengths and are not representative of true width. Sufficient enough work has not been performed to determine the attitude of the mineralized zones and to provide an estimate of true width.

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 (2007) with trace of the BIF and interpreted results from the UIT and U series boreholes.

The most significant nickel concentrations occur in the approximately 220 m thick dunite/harzburgite unit in the upper part of the hole. Spikes in mineralisation 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 sulfides. Further, Ni and Cu mineralisation 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, serpentinised unit at the contact with the footwall rock. In terms of its mineralisation 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 (serpentinised olivine), returned elevated Ni (1,500-2,500 ppm) and PGE values (500-1,500 ppb). Anomalous PGE concentrations, related to zones of increased sulfide mineralisation, 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 mineralisation 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 mineralisation, significant nickel mineralisation 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 sulfides close to the contact with overlying pyroxenite.

Platreef style mineralisation has been intersected in four stratigraphic intervals with variable thicknesses in borehole U3. The mineralisation 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 mineralisation 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 Project with Lesego Platinum Uitloop. SAN was targeting the 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 sulfide deposit associated with the Lower Zone Uitloop II body (base geological map modified after van der Merwe, 1978).

Drill Hole	X COLLAR UTM_m	Y COLLAR UTM_m	Z ELEVATION (m)	AZIMUTH	INCLINATION	EOH (m)
Z01	705 300.14	7 331 033.19	1157.55	52.00	-50.00	168.05
Z02	705 530.83	7 330 444.25	1168.23	52.00	-50.00	255.40
Z03	705 190.31	7 330 898.47	1161.57	52.00	-50.00	336.00
Z04	705 051.68	7 330 822.64	1173.26	52.00	-50.00	364.11
Z05	705 430.70	7 330 323.41	1177.82	52.00	-50.00	396.05
Z06	704 915.65	7 330 699.70	1178.44	52.00	-50.00	345.10
Z07	705 710.56	7 329 803.82	1172.34	52.00	-50.00	474.20
Z08	704 587.53	7 331 246.52	1163.85	52.00	-50.00	381.10
Z09	705 657.90	7 330 177.26	1175.37	52.00	-50.00	350.40
Z010	705 380.15	7 330 723.67	1161.87	52.00	-50.00	219.40
Z011	705 778.33	7 330 282.45	1175.66	52.00	-45.00	198.20
Z012	704 721.13	7 330 646.28	1170.58	52.00	-50.00	338.40
Z013	704 605.13	7 330 528.14	1164.94	52.00	-50.00	342.65
Z014	704 469.74	7 330 412.98	1161.59	52.00	-50.00	321.70
Z015	704 464.80	7 331 602.47	1140.94	52.00	-50.00	255.38
Z016	704 099.76	7 330 904.13	1161.11	52.00	-50.00	316.40

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

All holes, with the exception of Z16, were inclined at 50 degrees 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 nickel mineralisation 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 sulfide mineralisation in the Lower Zone Uitloop II body (2011-2012).

FROM	ТО	Interval	% Total Ni*	Remarks
(m)	(m)	(m)	70 I Otal MI	Remarks
101.00	622.00	521.00	0.26	Stopped in NE footwall
536.00	631.00	95.00	0.30	
60.00	222.00	165.00	0.27	Stopped in NE footwall
116.00	211.00	95.00	0.33	
35.00	96.00	61.00	0.26	Stopped in NE footwall
59.54	96.00	36.46	0.26	
51.70	235.53	186.83	0.22	Stopped in NE footwall
174.00	228.00	54.00	0.25	
59.34	312.37	253.03	0.23	Stopped in NE footwall
83.00	178.00	95.00	0.28	
47.00	364.00	317.00	0.25	Stopped in mineralised harzburgite
203.00	314.00	111.00	0.28	
44.82	368.00	323.18	0.26	Stopped in NE footwall
59.00	167.00	108.00	0.28	
57.65	354.10	287.45	0.24	Stopped in mineralised harzburgite
93.08	201.00	107.92	0.27	
51.17	446.25	395.10	0.24	Stopped in NE footwall
76.00	200.00	124.00	0.29	
60.94	381.00	320.06	0.26	Stopped in NE footwall
230.00	345.00	115.00	0.27	
58.00	329.35	271.35	0.22	Stopped in NE footwall
58.00	158.00	100.00	0.26	
50.80	202.80	152.00	0.21	Stopped in NE footwall
71.00	159.00	88.00	0.22	
137.00	159.00	22.00	0.26	
35.10	183.20	148.10	0.19	Stopped in NE footwall
119.00	141.00	22.00	0.25	
59.00	338.40	279.40	0.28	Stopped in mineralised harzburgite
132.00	335.00	203.00	0.31	
72.60	342.65	270.05	0.25	Stopped in mineralised harzburgite
225.00	342.65	117.65	0.30	
46.00	321.70	175.70	0.20	Stopped in mineralised harzburgite
160.85	321.70	160.85	0.22	
38.03	217.00	178.97	0.25	Stopped in mineralised harzburgite
153.54	215.00	61.46	0.35	
34.00	316.40	282.40	0.17	Failed to reach SW hangingwall target
	(m) 101.00 536.00 60.00 116.00 35.00 59.54 51.70 174.00 59.34 83.00 47.00 203.00 44.82 59.00 57.65 93.08 51.17 76.00 60.94 230.00 58.00 58.00 58.00 58.00 58.00 51.17 76.00 60.94 230.00 58.00 58.00 51.17 76.00 137.00 35.10 119.00 59.00 132.00 72.60 225.00 46.00 160.85 38.03 153.54	(m)(m)101.00622.00536.00631.0060.00222.00116.00211.0035.0096.0059.5496.0051.70235.53174.00228.0059.34312.3783.00178.0047.00364.00203.00314.0044.82368.0059.00167.0057.65354.1093.08201.0051.17446.2576.00200.0060.94381.00230.00345.0058.00158.0058.00158.0058.00159.00137.00159.0035.10183.20119.00141.0059.00338.40132.00335.0072.60342.65225.00342.6546.00321.70160.85321.7038.03217.00153.54215.00	(m)(m)(m)101.00622.00521.00536.00631.0095.0060.00222.00165.00116.00211.0095.0035.0096.0061.0059.5496.0036.4651.70235.53186.83174.00228.0054.0059.34312.37253.0383.00178.0095.0047.00364.00317.00203.00314.00111.0044.82368.00323.1859.00167.00108.0057.65354.10287.4593.08201.00107.9251.17446.25395.1076.00200.00124.0060.94381.00320.06230.00345.00115.0058.00158.00100.0050.80202.80152.0071.00159.0022.0035.10183.20148.10119.00141.0022.0035.10335.00203.0072.60342.65270.05225.00342.65117.6546.00321.70160.8538.03217.00178.97153.54215.0061.46	(m)(m)(m) $\%$ F Granver101.00622.00521.000.26536.00631.0095.000.3060.00222.00165.000.27116.00211.0095.000.3335.0096.0061.000.2659.5496.0036.460.2651.70235.53186.830.22174.00228.0054.000.2559.34312.37253.030.2383.00178.0095.000.2847.00364.00317.000.25203.00314.00111.000.2844.82368.00323.180.2659.00167.00108.000.2857.65354.10287.450.2493.08201.00107.920.2751.17446.25395.100.2476.00200.00124.000.2960.94381.00320.060.26230.00345.00115.000.2758.00158.00100.000.2650.80202.80152.000.2171.00159.0022.000.2635.10183.20148.100.19119.00141.0022.000.2559.00338.40279.400.28132.00335.00203.000.3172.60342.65270.050.25225.00342.65117.650.3046.00321.70178.970.25<

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

Reported drill hole sample intervals in Table 10-3 are core lengths and are not representative of true width. Sufficient enough work has not been performed to determine the attitude of the mineralized zones and to provide an estimate of true width.

10.2.1 Drilling Controls and Procedures

Lesego Platinum Uitloop's 2011-2012 program was contracted and carried out by South Africanbased 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).

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
Z 07	-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	<mark>338.40</mark>
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

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

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) 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 and mineral resource estimation.

10.3 Lesego Platinum Uitloop (Pty) Ltd (2017 - 2018)

From April 2017 through to early 2018, Lesego Platinum Uitloop, funded by URU conducted a six borehole drilling program totalling 1,681.64 metres (Z017 to Z022; Figure 10-5) targeting Platreef style (stratabound) sulfide mineralisation, semi-massive sulfide contact-style mineralisation, and fresh material from the Uitloop II body for metallurgical test work. This program has been termed Phase 1 of the Company's drilling campaign.

Drill Hole	X COLLAR UTM_m	Y COLLAR UTM_m	Z ELEVATION (m)	AZIMUTH	INCLINATION	EOH (m)
Z017	705 491	7 330 407	1 169.34	103.95	-39.10	421.85
Z018	705 450	7 330 362	1 174.61	97.95	-40.60	424.90
Z019	706 515	7 329 379	1 187.46	49.95	-36.40	206.14
Z020	706 483	7 329 422	1 186.65	51.93	-51.30	221.85
Z021	706 516	7 329 379	1 187.46	53.93	-64.40	275.50
Z022	706 579	7 329 449	1 193.03	50.93	-47.30	131.40

Table 10-5: Summary of 2017 – 2018 exploration drill hole collar locations, dips and azimuths.

10.3.1 Drilling Results

Boreholes Z017 and Z018 were positioned on the Uitloop II Lower Zone body and drilled to intercept the Lower Zone footwall contact (Table 10-6; Table 10-7).

Borehole Z017 intercepted a low-grade, disseminated Ni sulfide zone associated with pyroxenite, harzburgite and dunite, as well as a semi-massive sulfide 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 10-6). Drill hole Z018 intersected low-grade disseminated Ni sulfide mineralisation associated with the Lower Zone body, however, no semi-massive sulfides were intercepted at the hornfels/shale footwall contact (Table 10-6).

Drill Hole	From (m)	To (m)	Int. (m)	Vertical (m)	Ni1	Cu	Pt	Pd	Rh	Au	3PGE + Au ²	Mineralisation Style
					%	%	g/t	g/t	g/t	g/t	g/t	
Z017	37.43	415.00	377.57	23.61	0.24	0.01					**	Ni Mineralisation (Zeb 1)
Incl.	38.00	110.00	72.00	23.97	0.25	0.01					**	Ni Mineralisation (Zeb 1)
Incl.	124.00	136.00	12.00	78.20	0.33	0.02					**	Ni Mineralisation (Zeb 1)
Incl.	170.00	178.00	8.00	107.21	0.28	0.01					**	Ni Mineralisation (Zeb 1)
Incl.	193.00	198.00	5.00	121.72	0.37	0.01					**	Ni Mineralisation (Zeb 1)
Incl.	212.10	239.60	27.50	133.76	0.25	0.01					**	Ni Mineralisation (Zeb 1)

Table 10-6: Selected results from the 2017 drilling campaign.

Drill Hole	From (m)	To (m)	Int. (m)	Vertical (m)	Ni1	Cu	Pt	Pd	Rh	Au	3PGE + Au ²	Mineralisation Style
Incl.	304.00	308.00	4.00	191.73	0.40	0.02					**	Ni Mineralisation (Zeb 1)
Incl.	319.63	386.00	66.37	201.58	0.27	0.01					**	Ni Mineralisation (Zeb 1)
Incl.	412.75	415.00	2.25	260.31	1.67	0.51	0.21	0.41	0.03	0.06	0.71	Ni Mineralisation (Zeb 1)
Z018	33.00	394.00	361.00	21.48	0.25	0.01					**	Ni Mineralisation (Zeb 1)
Incl.	88.00	125.19	37.19	57.27	0.30	0.01					**	Ni Mineralisation (Zeb 1)
Incl.	144.00	171.80	27.80	93.71	0.28	0.01					**	Ni Mineralisation (Zeb 1)
Incl.	328.00	348.00	20.00	213.45	0.31	0.01					**	Ni Mineralisation (Zeb 1)
Z019	89.00	103.00	14.00	52.81	0.22	0.06	0.20	0.36	0.02	0.03	0.61	Ni-Cu-PGE Mineralisation (Target 2)
Z019	133.00	170.80	37.80	78.92	0.29	0.09	0.40	0.68	0.07	0.04	1.19	Ni-Cu-PGE Mineralisation (Target 2)
Incl.	133.00	142.00	9.00	78.92	0.42	0.15	0.60	1.22	0.08	0.07	1.97	Ni-Cu-PGE Mineralisation (Target 2)
Incl.	169.00	170.60	1.60	100.29	0.50	0.12	0.73	0.92	0.22	0.04	1.90	Ni-Cu-PGE Mineralisation (Target 2)
Z020	53.00	71.00	18.00	41.19	0.41	0.13	0.53	1.07	0.10	0.05	1.75	Ni-Cu-PGE Mineralisation (Target 2)
Incl.	55.00	64.00	9.00	42.74	0.51	0.18	0.73	1.47	0.13	0.07	2.45	Ni-Cu-PGE Mineralisation (Target 2)
Z020	106.00	145.00	39.00	82.38	0.30	0.11	0.31	0.64	0.06	0.04	1.05	Ni-Cu-PGE Mineralisation (Target 2)
Z020	174.00	176.07	2.07	135.22	0.59	0.15	0.90	0.95	0.11	0.05	2.00	Ni-Cu-PGE Mineralisation (Target 2)
Z021	187.00	210.00	23.00	169.62	0.32	0.10	0.36	0.79	0.05	0.05	1.25	Ni-Cu-PGE Mineralisation (Target 2)
Incl.	194.00	199.00	5.00	175.97	0.48	0.12	0.57	1.45	0.08	0.06	2.16	Ni-Cu-PGE Mineralisation (Target 2)
Z022	38.08	41.74	3.66	28.87	0.35	0.08	0.30	0.46	0.10	0.03	0.89	Ni-Cu-PGE Mineralisation (Target 2)
Z022	69.00	76.00	7.00	52.31	0.25	0.08	0.20	0.42	0.02	0.03	0.67	Ni-Cu-PGE Mineralisation (Target 2)
Z022	95.00	95.50	0.50	72.02	0.39	0.13	5.68	0.63	0.02	0.04	6.37	Ni-Cu-PGE Mineralisation (Target 2)

Notes: ¹Total Ni assay by complete digestion, representing silicate and sulfide portion of nickel; ²3PGE+Au equals Pt + Pd + Rh + Au by fire assay with ICP-MS-finish.

Reported drill hole sample intervals in Table 10-6 are core lengths and are not representative of true width. Sufficient enough work has not been performed to determine the attitude of the mineralized zones and to provide an estimate of true width.



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

Table 10-7: Summary of notable results from the 2017 drilling program.							
Drill Hole	Summary of Drilling Results	Comments					
2017	Collared close to the eastern edge of the Uitloop II body in the central portion, Z017 was originally drilled as a twin hole to validate the SAN drilling and to provide material for further metallurgical testwork. Lower Zone lithologies were intersected to a depth of 413.75 m down the hole. A calcsilicate mixed with pyroxenites, harzburgites and dunites from 413.75 to the EOH at 421.85 m was then intersected. Z017 intersected a low-grade, disseminated Ni sulfide zone associated with pyroxenite, harzburgite and dunite, as well as a semi-massive sulfide associated with the metasedimentary footwall lithologies at a depth of 260.31 m below surface (413.75 m to 415.82 m down the hole), with an interval of 2.25 m at 1.66% Ni and minor PGE and Cu. The sulfide consisted of a mix of pyrrhotite, chalcopyrite, pentlandite and pyrite up to about 50%.	This hole stopped in footwall mineralisation (Target 3) but showed potential for semi massive to massive sulfide mineralisation in the vicinity of a possible magmatic conduit system interacting with the Uitloop II body.					
Z018	Collared just west of Z017, Z018 was originally drilled as a twin hole to validate the SAN drilling and to provide material for further metallurgical testwork. Z018 was collared in weathered dunites and drilled through Lower Zone material to a depth of 416.60 m. A zone of para-pyroxenites, calc silicates and hornfels material was intersected until the EOH at a depth of 423.73 . Drill hole Z018 intersected the low-grade disseminated Ni sulfide mineralisation associated with the Lower Zone body, however, no semi-massive sulfides were intercepted at the hornfels/shale footwall contact.	This hole appeared to have stopped short of intersecting mineralized Target 2 (and 3?) material as it only drilled ~ 9 m into footwall material. Further drilling has shown that this calc silicate footwall package can be up to and exceed 20 m, and mineralisation is found after this.					
Z019	Collared in Duitschland formation metasediments, Z019 is drilled to the southeast of the Uitloop II body and tested a historical Cu soil anomaly. The hole was drilled at angle of -45 degrees towards the northeast. Duitschland metasediments were intersected to a depth of 65.58 m. A package of feldspathic pyroxenites, olivine bearing feldspathic pyroxenites and gabbro norites were intersected to a depth of 170.80 m. From 170.80 m to 188.87 m, a mixture of para-pyroxenites and hornfels lithologies were intersected. A shale and hornfels sequence of the Duitschland formation was intersected to the EOH at a depth of 206.14 m.	This hole demonstrated the presence of Ni-Cu-PGE mineralized pyroxenitic lithologies, initially thought to be Critical Zone material. It also showed that this material is present beneath what was initially thought to be footwall lithologies with no magmatic rocks underlying them.					

Drill Hole	Summary of Drilling Results	Comments
Z020	Summary of Drilling ResultsFrom 133.00 m to 170.80 m down the hole,0.29% Ni, 0.09% Cu, 0.40 g/t Pt, 0.68 Pd, 0.07 g/tRh and 0.04 g/t Au, including 0.42 % Ni, 0.15% Cuand 1.97 3PGE+Au over 9 m, also including 0.50%Ni, 0.12% Cu and 1.90 g/t 3PGE+Au over 1.60 m.Collared in Duitschland formationmetasediments, this hole was drilled up-dip fromthe collar location of Z019 and at the sameazimuth but an inclination of 51.3° to test the up-dip extension of the mineralisation intersected inZ019.Duitschland metasediments were intersected toa depth of 52.48 m. A package of feldspathicpyroxenites, olivine bearing feldspathicpyroxenites and gabbro norites were intersected	Comments This hole demonstrated the up-dip extension of Z019 and continuity of mineralisation, and the presence of Ni-Cu-PGE bearing pyroxenites beneath what was previously thought to be footwall sediments with no magmatic rocks underlying them.
	to a depth of 176.65 m. From 176.65 m to EOH at 220.84 m, a mixture of hornfels, dolomites, calcsilicate material with minor para-pyroxenites was intersected. Mineralisation included: 53.00 m to 71.00 m, 0.41% Ni, 0.13% Cu, 0.53 g/t Pt, 1.07 g/t Pd, 0.10 g/t Rh and 0.50 g/t Au, including 0.51% Ni, 0.18% Cu and 2.45 g/t 3PGE+Au. Also, from 106.00 m to 145.00 m, 0.30% Ni, 0.11% Cu, 0.31 g/t Pt, 0.64 g/t Pd, 0.06 g/t Rh and 0.04 g/t Au. Also, from 174.00 m to 176.07 m, 0.59% Ni, 0.15% Cu, 0.90 g/t Pt, 0.95 g/t Pd, 0.11 g/t Rh and 0.05 g/t Au.	
Z021	Collared in Duitschland formation metasediments, this hole was drilled at the same location as Z019 and at the same azimuth but an inclination of 65° to test the downdip extension of the mineralisation intersected in Z019. Duitschland metasediments were intersected to a depth of 80.96 m consisting of dolomites and metasediments. A package of feldspathic pyroxenites, olivine bearing feldspathic pyroxenites, feldspathic harzburgites and gabbro norites were intersected to a depth of 212.02 m. From 212.02 m to EOH at 275.50 m, a mixture of hornfels, shales and dolomites with minor para- pyroxenites of the Duitschland formation was intersected. From 187.00 m to 210.00 m down the hole, 0.32% Ni, 0.10% Cu, 0.36 g/t Pt, 0.79 g/t Pd, 0.05 g/t Rh and 0.05 g/t Au, including 0.48% Ni, 0.12% Cu, 0.57 g/t Pt, 1.45 g/t Pd, 0.08 g/t Rh and 0.06 g/t Au over 5.0 m was intersected.	This hole demonstrated the downdip extension of Z019 and continuity of mineralisation, and the presence of Ni-Cu-PGE earing pyroxenites beneath what was previously thought to be footwall sediments with no magmatic rocks underlying them.

10.3.2 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.

There were no drilling, sampling or recovery factors that could materially impact accuracy and reliability of the results. It is the Principal Author's opinion that the survey data are sufficiently accurate and robust to support geological modelling and mineral resource estimation.

10.4 Lesego Platinum Uitloop (Pty) Ltd (2021 - 2022)

From April 2021 through to early 2022, the Company conducted an eight hole diamond drilling program totalling 3,219.64 metres (Z023 to Z030; Table 10-8; Figure 10-8) and targeting Platreef style (stratabound) sulfide mineralisation, semi-massive sulfide Contact-style mineralisation, and fresh material from the Uitloop II body for metallurgical test work.

10.4.1 Drilling Results

This phase of drilling was effectively a continuation of the 2017 drill campaign, and has been termed Phase 2 (Table 10-8). The objective of this phase of drilling was to test and better understand both

the strike extent and up dip extension of the i-Cu-PGE bearing lithologies. A series of 8 holes was planned across the strike extent of the Uitloop II body and collared either in weathered dunites of the Uitloop II body, or the footwall metasediments of the Duitschland Formation (Figure 10-8). Drill core diameter for all holes is NQ and drill holes are drilled at an inclination of 50 degrees on an azimuth of approximately 45 degrees.

BHID	Farm	Farm Portion	Easting	Northing	Elevation (m)	Azimuth (deg)	Inclination (deg)	EOH (m)
Z023	UITLOOP 3KS	54	704849,44	7331587,68	1145,33	52,00	-49,70	329,34
Z024	UITLOOP 3KS	36	705653,56	7330378,98	1172,89	56,00	-48,60	350,68
Z025	UITLOOP 3KS	54	704668,94	7331905,60	1143,60	55,00	-49,60	210,84
Z026	UITLOOP 3KS	56	705164,00	7331166,53	1152,94	50,00	-49,00	392,45
Z027	UITLOOP 3KS	52	706310,62	7329273,52	1180,77	25,00	-49,80	449,74
Z028	AMATAVA 41KS	9	706541,32	7328983,79	1182,93	51,00	-49,80	521,68
Z029	UITLOOP 3KS	52	706043,47	7329559,77	1175,69	40,90	-48,90	443,55
Z030	UITLOOP 3KS	57	705126,36	7330868,00	1167,16	44,00	-49,30	521,36

Table 10-8: Summary of 2021 – 2022 exploration drill hole collar locations, dips and azimuths.

A summary of selected core assay results is provided in Table 10-9 and summary of drill core logs in Table 10-10.



Figure 10-8: Locations of the Z023 to Z030 borehole series collars overlain on 2022 geological map.

Table 10-9: Results of various drilling programs associated with the Platreef strata-bound mineralisation (Critical Zone), Platreef-footwall contamination style mineralisation and massive-sulfide mineralisation continuation of the Z drill hole series.

		111016 361										
Drill Hole	From (m)	To (m)	Interval (m)	Vertical (m)	¹ Ni	Cu	Pt	Pd	Rh	Au	² 3PGE + Au*	Mineralisation Style
					%	%	g/t	g/t	g/t	g/t	g/t	
Z0231	214.00	217.00	3.00	163.93	0.22	0.11	0.71	0.25	0.03	0.12	1.10	Ni-Cu-PGE Mineralisation (Target 2)
Incl.	214.50	215.50	1.00	164.32	0.44	0.25	1.80	0.45	0.06	0.24	2.54	Ni-Cu-PGE Mineralisation (Target 2)
Z024 ¹	63.00	212.00	144.03	48.26	0.19						**	Ni Mineralisation (Zeb 1)
Incl.	155.00	168.78	13.63	118.74	0.23						**	Ni Mineralisation (Zeb 1)
Incl.	196.23	211.00	2.18	150.32	0.41						**	Ni Mineralisation (Zeb 1)
Incl.	210.44	211.00	0.56		0.96	0.11	0.20	0.33	0.00	0.03	0.67	Target 3
Z025 ¹	87.00	93.00	5.00	66.65	0.07	0.02	0.08	0.13	0.01	0.01	0.24	Ni-Cu-PGE Mineralisation (Target 2)
Z026	277.50	290.00	12.50	209.43	0.35	0.15	0.74	0.97	0.06	0.06	1.82	Ni-Cu-PGE Mineralisation (Target 2)
Incl.	284.00	287.00	3.00	214.35	0.47	0.19	0.70	1.30	0.07	0.06	2.13	Ni-Cu-PGE Mineralisation (Target 2)
Incl.	288.50	290.00	1.50	217.73	0.41	0.16	0.55	1.20	0.07	0.06	1.88	Ni-Cu-PGE Mineralisation (Target 2)
Z027	406.50	411.50	5.00	310.02	0.31	0.11	0.23	0.52	0.03	0.05	0.84	Ni-Cu-PGE Mineralisation (Target 2)
Incl.	406.50	408.50	2.00	310.02	0.32	0.11	0.26	0.59	0.04	0.05	0.94	Ni-Cu-PGE Mineralisation (Target 2)
Z027	413.00	426.00	13.00	314.98	0.17	0.04	0.15	0.28	0.04	0.03	0.50	Ni-Cu-PGE Mineralisation (Target 2)
Incl.	420.00	421.50	1.50	320.32	0.69	0.11	0.31	0.67	0.25	0.25	1.27	Ni-Cu-PGE Mineralisation (Target 2)
Z027 ¹	290.00	324.00	33.81	222.15	<0.01	0.01				1.67		Gold Zone Discovery
Incl.	305.00	310.00	4.81	233.64	<0.01	0.01				5.07		Gold Zone Discovery
Z028	413.00	449.50	36.00	314.98	0.22	0.08	0.24	0.48	0.04	0.03	0.80	Ni-Cu-PGE Mineralisation (Target 2)
Incl.	427.00	433.50	6.50	325.65	0.37	0.18	0.54	1.10	0.10	0.06	1.80	Ni-Cu-PGE Mineralisation (Target 2)
Z029 ¹	87.00	375.55	286.36	66.65	0.16	0.02					**	Ni Mineralisation (Zeb 1)
Incl.	87.00	114.55	54.55	66.65	0.20	0.02					**	Ni Mineralisation (Zeb 1)
Z029 ¹	387.68	416.00	28.32	296.98	<0.01	0.01	+	+	+	9.05	-	Gold Zone Discovery
Incl.	387.68	398.54	10.86	296.98	<0.01	0.01	+	+	+	12.21	-	Gold Zone Discovery
Incl.	402.00	412.64	10.64	307.95	<0.01	0.01	+	+	+	11.25	-	Gold Zone Discovery
Z030 ¹	84.0	347.00	263.00	64.35	0.21	0.01					**	Ni Mineralisation (Zeb 1)
Incl.	103.00	110.00	7.00	78.90	0.23	0.01					**	Ni Mineralisation (Zeb 1)
Incl.	183.00	272.78	89.78	140.18	0.24	0.01					**	Ni Mineralisation (Zeb 1)
Incl.	227.00	237.00	10.00	173.89	0.32	0.01					**	Ni Mineralisation (Zeb 1)
Incl.	311.00	333.00	3.00	328.23	0.35	0.01					**	Ni Mineralisation (Zeb 1)
			•	•								

Notes: ¹Total Ni assay by complete digestion, representing silicate and sulfide portion of nickel; ²3PGE+Au equals Pt + Pd + Rh + Au by fire assay with ICP-MS-finish.

Reported drill hole sample intervals in Table 10-9 are core lengths and are not representative of true width. Sufficient work has not been performed to determine the attitude of the mineralized zones and to provide an estimate of true width.

Table 10-10: Sur	nmary of drill core logs from the 2021-2022 d	Irilling program.
Drill Hole	Summary of Drilling Results	Comments
Z023	Collared in calcrete, drilled into a ~90 m thick sequence of Duitschland formation metasediments, transgressing into a sequence of feldspathic pyroxenites, pyroxenites and gabbronorites to a depth of 266 m down the hole. The Penge Iron Formation was intersected between 266 m and 297 m. The hole was terminated in Malmani subgroup dolomites at 329.34 m. Ni-Cu-PGE mineralisation included 1 m at a depth of 214.5 m at a grade of 0.44% Ni, Cu at 0.25%, Pt at 1.8 g/t, Pd at 0.45 g/t, and Au at 0.24 g/t.	Hole confirmed the presence of Target 2 lithologies beneath metasediments on the northern portion of the northeastern boundary of the Uitloop II body.
Z024	Collared on the east central portion of the Uitloop II body, and drilled through Lower Zone lithologies to a depth of 210.44 m down the hole. A semi massive sulfide was intersected at a depth of 210.44 m to 211.00 m, at a grade of 0.96% Ni, 0.11% Cu, 0.20 g/t Pt, 0.33 g/t Pd and Au 0.03 g/t. A para-pyroxenite unit was intersected to a depth of 265 m, followed by the Penge Iron Formation to a depth of 270.60 cm. The hole was terminated in Malmani subgroup dolomites at 350.68 m.	Hole confirmed presence of both Target 1 and Target 3 mineralisation. The location of higher grade Ni-Cu-PGE mineralisation proximal to a possible magmatic conduit system recognised in percussion drilling and historical aeromagnetic surveys gives support to the Target 3 exploration model.
Z025	Collared in close proximity to a northeast – southwest trending fault, the hole immediately intersected Duitschland formation metasediments. Only a thin horizon of para-pyroxenites and calc silicates possibly related to magmatic intrusions, was intersected at a depth of 77.60 m to 95.80 m down the hole. A further sequence of Duitschland Formation was intersected to a depth of 190.10 m down the hole, and Penge Iron Formation to a depth of 205.90 m. The hole was terminated in Malmani subgroup dolomites at 210.84 m.	Hole confirmed the northern extent of the Ni-Cu-PGE -bearing lithologies is constrained by this northeast – southwest trending fault, and further drilling should focus south of this fault.
Z026	Collared close to the northeastern edge of the Uitloop II body, Lower Zone lithologies were intersected to a depth of 155 m down the hole. A sequence of calc silicates, para-pyroxenites and norites were intersected to a depth of 266.10 m down the hole. Pyroxenites and feldspathic pyroxenites were	Hole confirmed the presence of Ni-Cu-PGE mineralisation in the northeastern sector below Zeb 1 mineralisation. The Duitschland and Penge Iron Formation were not intersected in this hole and are possibly faulted out.

Table 10-10: Summary of drill core logs from the 2021-2022 drilling program.

Drill Hole	Summary of Drilling Results	Comments
	intersected to a depth of 342.00 m. A	
	12.5 m mineralized package was	
	intersected from depth of 277.50 m to	
	290.00 m carrying grades of 0.35% Ni,	
	0.15% Cu, 0.74 g/t Pt, 0.97 g/t Pd, 0.06	
	g/t Rh and 0.06 g/t Au. This included a 3	
	m package of 0.47% Ni, 0.19% Cu and	
	2.13 g/t 3PGE+Au. The hole intersected	
	Malmani subgroup dolomites at a depth	
	of 342.00 m and was terminated in the	
	same dolomites at a depth of 392.45 m.	
Z027	Collared in Duitschland formation to a	Hole confirmed the presence of Ni-Cu-PGE
	depth of 326.80 m. Gold mineralisation	mineralisation below a thick package of
	was intersected from a depth of 290.00	Duitschland formation metasediments on
	m to 324.00 m down the hole, at a grade	the southeastern side of the Uitloop II body.
	of 1.67 g/t over a width of 34 m down the	
	hole. This included 305.00 m to 310.00 m	
	at 5.07 g/t and 313.00 m to 313.00 m at	
	4.30 g/t. From 326.80 m to a depth of 429.40 m, a	
	sequence of feldspathic pyroxenites,	
	pyroxenites and harzburgite units were	
	intersected. From 406.50 m to 411.50 m	
	down the hole, 0.31% Ni, 0.11% Cu, 0.23	
	g/t Pt, 0.52 g/t Pd, 0.03 g/t Rh and 0.50	
	g/t Au was intersected. A further	
	intersection at a depth of 420 m to	
	421.50 m down the hole carried grades	
	of 0.69% Ni, 0.11% Cu, 0.13 g/t Pt, 0.67	
	g/t Pd, 0.25 g/t Rh and 0.25 g/t Au.	
	A further sequence Penge Iron	
	Formation was intersected to a depth of	
	436.90 m. The hole was terminated in	
	Malmani subgroup dolomites at 449.74	
	m.	
Z028	Collared in Duitschland formation to a	Hole confirmed the presence of Ni-Cu-PGE
	depth of 265.25 m down the hole. From	mineralisation below a thick package of
	265.25 m to a depth of 445.00 m, a	Duitschland formation metasediments on
	sequence of feldspathic pyroxenites,	the southeastern side of the Uitloop II body.
	pyroxenites and harzburgite units were	Confirmed the presence of magma mixing
	intersected. From 413.00 m to 449.50 m	and Ni-Cu-PGE mineralisation within
	down the hole, 0.22% Ni, 0.8% Cu, 0.24	portions of the Penge Iron Formation; Ni-Cu-
	g/t Pt, 0.48 g/t Pd, 0.04 g/t Rh and 0.30	PGE mineralisation is associated with para-
	g/t Au was intersected, including a 6.5 m	pyroxenites within the para-pyroxenites.
	thick package at 0.37% Ni, 0.18% Cu,	
	0.54 g/t Pt, 1.10 g/t Pd, 0.10 g/t Rh and	
	0.06 g/t Au. Penge Iron Formation and para-	
	Penge Iron Formation and para- pyroxenites were intersected from	
	445.00 m to a depth of 454.00 m. The	
	++5.00 m to a depth of 454.00 m. me	

Drill Hole	Summary of Drilling Results	Comments
	hole was terminated in Malmani	
	subgroup dolomites at 521.68 m.	
Z029	Collared on the southeast central portion of the Uitloop II body, and drilled through Lower Zone lithologies to a depth of 373.80 m down the hole. From 373.80 m to a depth of 397.10 m, a sequence of feldspathic pyroxenites, pyroxenites and para-pyroxenites were intersected. Penge Iron Formation was intersected from a depth of 397.10 m to a depth of 413.25 m. Malmani subgroup dolomites were encountered from 413.25 m to the end of hole at a depth of 443.55 m. Gold mineralisation was encountered from a depth of 387.68 m to 416.00 m over an interval of 28.32 m at 9.05 g/t Au, including 10.86 m at 12.21 g/t Au, and 10.64 m at 11.25 g./t Au (widths measured down the hole). No significant Ni-Cu-PGE mineralisation was intersected.	Hole confirmed the presence of a feldspathic pyroxenite unit to the east of the Uitloop II body in this region, but also suggested that the thickness and grade of this unit pinches out at shallower depths. It is anticipated that better Ni-Cu-PGE mineralisation will be intersected at down dip from this location. Gold mineralisation overprints both metasedimentary and magmatic lithologies.
Z030	Collared close to the northeastern edge of the Uitloop II body, Lower Zone lithologies were intersected to a depth of 383.80 m down the hole. A sequence of calc silicates, para-pyroxenites, feldspathic pyroxenites and norites were intersected to a depth of 409.00 m down the hole. The hole intersected Malmani subgroup dolomites at a depth of 383.80 m and was terminated in the same dolomites at a depth of 521.36 m. 10 m at 0.32% Ni from depth of 227.00 m to 237.00 m down the hole was intersected in Lower Zone lithologies Zeb 1). This included 3 m at 0.35% Ni. No significant Ni-Cu-PGE mineralisation was intersected in this hole.	Hole confirmed the presence of a feldspathic pyroxenite unit to the east of the Uitloop II body in this region, but also suggested that the thickness and grade of this unit pinches out at shallower depths. It is anticipated that better Ni-Cu-PGE mineralisation will be intersected at down dip from this location. The Duitschland and Penge Iron Formation were not intersected in this hole and are possibly faulted out.

10.4.2 Drilling Controls and Procedures

Collar locations for the 2021 - 2022 drilling program were measured 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.

There were no drilling, sampling or recovery factors that could materially impact accuracy and reliability of the results. It is the Principal Author's opinion that the survey data are sufficiently accurate and robust to support geological modelling and mineral resource estimation.

11.0 SAMPLE PREPARATION, ANALYSIS AND SECURITY

Quality Assurance/Quality Control procedures put in place by Umnex Mineral Holdings (Pty) Ltd and Zeb Nickel Corp have been followed by the Company since 2007 and 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.

The Authors and the Issuer (Zeb Nickel) are independent of all of the laboratories used in the analyses of samples collected from the Property.

There are no drilling, sampling, recovery or analytical factors that would materially affect the results of the drilling campaigns.

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 geological modelling and mineral resource estimation.

11.1 Soil Sampling Program 2007

In 2007, 985 soil samples were collected and analysed for 19 elements: Ag, Al, As, Ba, Ca, Co, Cr, Cu, Fe, K, Mg, Mn, Ni, P, Pb, Sc, Sr, V and Zn. Twenty six lines (labelled UL001 to UL026) were planned across the entire Uitloop 3KS farm area and samples were taken every 50 m along the lines. The primary laboratory used for the assay function was independent Genalysis Laboratories (Genalysis). Genalysis is an ISO17025 accredited laboratory for all of the elements mention above.

No information exists on the QA/QC, sampling methodology and program specifics.

11.2 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 (Lowman, 2007).

11.2.1 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-graph 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-graph 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 China-graph) 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 China-graph marker (grease pencil) 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.

11.2.1.1 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.

11.2.1.2 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 100 g taken from each individual sample and combined to make up one 500 g 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.

11.2.1.3 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.

11.2.1.4 Quality Protocols and Results

Quality Control/Quality Assurance 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 QA/QC 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)

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 QA/QC 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).

11.3 Diamond Drilling Program 2011-2012

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

11.3.1 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.

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.



Figure 11-1: The Zeb Nickel Project's core shed in central Mokopane in 2007 consisted of a large, covered area with offices.

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 serpentinisation (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 to 3 core boxes in a single photograph.

11.3.2 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.

11.3.2.1 Setpoint Laboratories

Setpoint Laboratories ("Setpoint") 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 Lesego Platinum Uitloop'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 Lesego Platinum Uitloop. 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 Setpoint for the 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 sulfidehosted 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 sulfide 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 sulfide-hosted Ni content of the Uitloop II 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.

11.3.3 QA/QC Protocols

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

11.3.3.1 Certified Reference Materials

Lesego Platinum Uitloop employed the use of three commercially prepared and accredited (for multiacid 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.

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	IS0093 Amphibolite hosted disseminated Ni-Cu - Phoenix Mine, Botswana		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 Project and the partial failure of this standard is therefore considered non-material.



Figure 11-2: Performance of AMIS0061 for TNi.

AMIS0073

AMIS0073 has a grade approximately double the grade of the mineralized zone at the Project, 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 11-3: Performance of AMIS0073 for TNi.

AMIS0093

AMIS0093 has the Ni grade that most closely approximates the Uitloop II mineralized zone and all samples returned values within the two standard deviation envelope about the certified mean (Figure 11-4).



Figure 11-4: Performance of AMIS0093 for TNi.

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.

Blanks

A commercially-prepared "blank" (AMIS0108) from African Mineral Standards ("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.

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 11-5: 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).



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

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 11-7: 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 multiacid 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 11-8: 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 11-9: 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 SQLbased 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 Lesego Platinum Uitloop are appropriate to the Project and the style of mineralisation. 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 Lesego Platinum Uitloop 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 sulfide 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.

11.3.4 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 Platinum Uitloop personnel using this method. No specific gravity measurements were completed at the laboratory.

11.3.5 Sample Security

Samples were hand-delivered by Lesego Platinum Uitloop staff to the Setpoint Mokopane preparation facility with dispatch notes being signed by both the receiving party (Setpoint) and the dispatching party (Lesego Platinum Uitloop). Setpoint took responsibility for delivery of prepared sample pulps to Setpoint's main analytical facility in Johannesburg. Pulps and coarse rejects were returned by Setpoint to the Mokopane facility and delivered to the Lesego Platinum Uitloop 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 Lesego Platinum Uitloop 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 Lesego Platinum Uitloop's Johannesburg office for collation and saving onto the centralized server.

11.4 Diamond Drilling Program 2017 - 2018

From April 2017 through to March 2018, Lesego Platinum Uitloop, funded by URU Metals conducted a six borehole (Z017 to Z022) drilling program (Figure 10-3) targeting Platreef style (stratabound) sulfide mineralisation (Target 2), semi-massive sulfide contact-style mineralisation, and fresh material from the Uitloop II body for metallurgical test work.

This drilling program followed the same sampling, analytical and security procedures used in the 2011 - 2012 drilling program.

11.4.1 Handling and Preparation of Drill Cores

In order to optimise core handling and preparation the following procedures were rigorously applied:

- 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-graph 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.
 - \circ The "From" and "To" depths applicable for that specific box.

11.4.1.1 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 Excel database.

11.4.1.2 Core orientation and splitting

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.
- One metre 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-graph 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. The top half is then spilt into two ¼ samples.
- Sample interval marks (yellow China-graph) are now extended onto the cut surface of the bottom core and at the break at the end of each sample.
- The one of the two ¼ samples from each sample interval is removed and placed in a plastic sample bag. One sample ticket is placed inside the sample bag and a second is stapled on the inside of the bag before the bag is folded over.
- A corresponding sample number is written with a China-graph 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.

11.4.1.3 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 Z (for Zeb) with a second letter corresponding to the number of the hole (*e.g.*, samples from drill hole Z017 contain the prefix Z0, 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 1 m sample.

11.4.1.4 Analytical Procedures

The primary laboratory used for the Run Of Program ("ROP") assay function was Setpoint in the town of Mokopane. Setpoint 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. The Mokopane branch has subsequently closed due to a lack of demand.

11.4.1.5 Quality Protocols and Results

Quality Assurance/Quality Control 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 QA/QC 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 samples (*e.g.*, quartzite)

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 QA/QC results for the AMIS standards and lab duplicates were generally good and individual element concentrations were within acceptable levels.

11.5 Diamond Drilling Program 2021 - 2022

From September 2021 through to January 2022, Lesego Platinum Uitloop, funded by Zeb conducted an eight borehole (Z023 to Z030) drilling program (Figure 10-4) targeting nickel mineralisation in the Uitloop II body (Target 1), Contact style sulfide mineralisation (Target 2) and semi-massive sulfide contact-style mineralisation (Target 3).

This drilling program followed the same sampling, analytical and security procedures used in the 2011 - 2012 drilling program.

11.5.1 Handling and Preparation of Drill Cores

In order to optimise core handling and preparation the following procedures were rigorously applied:

- Upon commencement of drilling and throughout the drilling, the project geologists monitored and assessed the driller's operation methods (i.e., rod size, drill runs, measuring stick-ups, removal of core from the core barrel and placing core in core boxes, etc.).
- All other instructions by the project geologists to the drill rig supervisor, such as stopping distances, top of wedge depths for deflections, preparation for surveys, depth checks, etc., were recorded in a duplicate book.
- It was ensured that each drill rig operator or drill rig supervisor completes a daily drilling report which includes meters drilled per day, water losses, breakdowns, casing depth, change of bit and stick-up depths for each drill run.
- 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"). Core Recovery and Rock Quality Determination (RQD) were measured on the drill site by geological field assistants. RQD measurements were calculated based on the total sum of solid core pieces greater than 10 cm, divided by the total length of the core run and multiplied by 100 to obtain the RQD percentage (%). Core Recoveries were calculated based on the total sum of core obtained in the run, divided by the total length of the core run and multiplied by 100 to obtain the CR percentage (%).
- The core was photographed both wet and dry and correctly labelled on the core photo whiteboard prior to removing the core from the drill site.
- 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-graph 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").
- The minimum core recovery in each borehole was required to be at least 95% overall and 99% core recovery within the reef/mineralised zones.
- All boreholes were downhole surveyed to measure borehole deviation and later collar surveyed to verify collar positions after drilling was completed
- 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
- The core was covered with 400mm thick protective foam/sponges and strapped onto the transporting vehicle to avoid rolling around and misalignment of the drill core samples contained in the core boxes. All the core trays were interlocked to enhance vertical stacking stability and the core trays were stacked at minimal heights to avoid dropping core samples.
- The core boxes were transported safely from the drill site to the core yard by ZEB Nickel staff or drilling contractor driving at minimum speeds.

• The stacking height was restricted to a maximum of 20 trays on a firm, level ground, all the core trays were interlocked to enhance vertical stacking stability and each individual borehole was stacked in a single stack with all its boxes stored in sequence.

11.5.1.1 Core logging

It was ensured that the core received at the core yard was free of oil, grease, dirt and had the correct borehole depth meter markings every meter. Core depth blocks were placed after each and every run by drillers, visibly bearing the drillhole ID, depth drilled to and the core loss/gain values.

The geological logging was conducted by logging of lithology, structure, mineralisation and alteration using the International Union of Geological Sciences IUGS framework, British Geological framework Survey and local Northern Limb, Bushveld Complex nomenclature.

Lithological logging of the mother hole and all deflections was aimed at giving detailed descriptions of the lithological features, such as identifying rock forming minerals, mineral modal percentages and inter-boundary mineral framework, rock types, from-to depths, stratigraphy, contacts between the rocks, structural feature, alteration features, mineralisation, texture, grain sizes, core loss and core size, as well as any other significant geological observations.

All altered zones were identified and logged by the geologists. Lithological alteration features logged were alteration type, intensity and style of alteration observed in the inspected lithological unit or interval (from-to depth). Alteration zones were also classified and logged as major (Alteration Type 1) and minor zones (Alteration Type 2).

All zones which hosted minerals of potential economic importance were logged in a mineralisation log sheet. The mineralisation was recorded as a percentage concentration of the interval (from-to depth) where mineralisation style and mineralisation type were also recorded.

Structural logging was aimed at giving detailed descriptions of the structural features, such as structure types, associated alteration type, orientation, from-to-depth, infill material and descriptions in attempt to properly deducing a structural geology framework of the Project area.

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 Excel database.

11.5.1.2 Core orientation and splitting

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.
- One metre 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-graph 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. The top half is then spilt into two ¼ samples.
- Sample interval marks (yellow China-graph) are now extended onto the cut surface of the bottom core and at the break at the end of each sample.
- The one of the two ¼ samples from each sample interval is removed and placed in a plastic sample bag. One sample ticket is placed inside the sample bag and a second is stapled on the inside of the bag before the bag is folded over.
- A corresponding sample number is written with a China-graph 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.

11.5.1.3 Sampling Methodology

The following core sampling procedures were followed. Borehole sampling was conducted after boreholes had been geologically logged. A quarter core sample with a minimum sample interval of 25 cm and a maximum sample interval of 2 m is taken to the laboratory for analysis. The sampling intervals were also guided by lithological boundaries and sulfide mineralisation abundance on core. In Target 1 was sampled by 2 m sample intervals and where sulfides increase to 3-5% the sampling intervals were reduced to 1 m intervals, Target 2 was sampled at 1 m samples intervals and where there was an increased sulfide mineralisation the sampling intervals were reduced to 0.50 cm, Target 3 was sampled at 0.50 cm sample intervals and Target 4 was sampled at 1 m sample intervals in both hanging wall and footwall units.

A sample sheet was created which contained the borehole number, batch number, individual sample numbers, sample interval width, sample lithology, sample weight, Certified Reference Material

(CRM), blanks. CRMs and blanks were inserted alternating at every 10 samples in Ni-Cu-PGE and Nionly batches. The CRM labels found on the geochem envelopes were removed and replaced as per sample sheet by writing sample number on the geochem envelopes using a permanent marker before bagging.

The top individual ¼ core samples were bagged into labelled sampling bags, the remaining ¼ core and bottom half core remains in the tray for future reference. The first corresponding sample ticket was placed into the sample bag, the second sample ticket was stapled on the sample bag and third ticket reference number remained onsite for future reference. The sample number and sample interval widths were also written on the bottom half of the core remaining in the core tray using a paint marker pen.

Individual samples were weighed and recorded (to 2 decimals) prior to dispatch and put into a large bag with a maximum of 20 samples per large bag. The large sample bags were labelled accordingly (i.e., company name, batch number, sample IDs and total number of samples). All samples dispatched to the Laboratory were accompanied by the following documents i.e., Chain of Custody and Submission Sheet. One copy of each signed document remained at SGS Laboratories, and the duplicate copies were filed by Zeb Nickel.

The Chain of Custody document was used as a sample submission control document indicated the batch number, quantity of samples, date of submission and was cross signed by Zeb Nickel Geologists and the SGS laboratory representative upon sample delivery as proof of sample receival.

The Submission Sheet was a detailed instruction document indicating to the Laboratory what analytical methods to use for sample assay, elements to be assayed for, quantity of samples to be analysed, and pulp storage instruction. This document was cross signed by the Zeb Nickel Geologists and the SGS laboratory representative upon sample delivery as proof of sample receival.

Sample numbers combine a drill hole code with a sequential number. The borehole code combines the letter Z (for Zeb) with a second letter corresponding to the number of the hole (e.g., samples from Bh Z017 contain the prefix Z0, followed by the number 1,2,3, etc.). Sample numbers used for this program were FT0, O0, B0, K0 and U0 series.

11.5.1.4 Analytical Procedures

The primary laboratory used for the Run Of Program ("ROP") assay function was SGS in the town of Randfontein. SGS is an ISO17025 accredited laboratory for all of the elements being analysed for, namely 30 g fire assay ICP-OES finish PGE+Au analysis, 30 g fire assay Nickel Sulfide collection ICP-OES finish Rh, Multi element analysis by ICP-OES after using sodium peroxide fusion Ni and Cu analysis and Multi element analysis by ICP-OES after using aqua regia digestion Ni and Cu. Quality Protocols and Results

Quality Assurance/Quality Control 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 QA/QC 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:

- AMIS0317- Ni 0.26%, Cu 0.16% 3E 0.9 g/t Bushveld Nkomati ZA.
- AMIS0320- Ni 0.47%, Cu 0.17% 3E 1.1 g/t Bushveld Nkomati ZA.
- AMIS0442- PGM 4E 5.17 g/t Platreef ZA.
- AMIS0448- PGM 4E 5.189 g/t Platreef ZA.
- AMIS0502- PGM 4E 2.109 g/t Platreef ZA.
- AMIS0577- Blank Silica Powder.

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 QA/QC results for the AMIS standards and lab duplicates were generally good and individual element concentrations were within acceptable levels.

12.0 DATA VERIFICATION

The Authors have reviewed historical data and information regarding past exploration work on the Project. More recent exploration work (*i.e.*, 2011 to 2023), having complete databases and documentation such as assay certificates, work reports, and GPS location data, could be thoroughly reviewed.

Older historical records (pre-2011) are not as complete and so the Authors do not know entirely the exact methodologies used in the information and data collection. The Authors reviewed a portion of the historical records, including selected historical assay certificates (hard copies), geological logs and drill hole collar locations, and compared them with the current Zeb Nickel database; no material issues were encountered in this database review. These included Z05, Z017, Z018, Z021, Z022, Z024, Z027, Z028, Z029 and Z030.

Historically, MSA conducted a complete audit of the Project exploration database held by Lesego Platinum Uitloop in February of 2012. Minor, non-material, issues were identified and corrected in consultation with Lesego Platinum Uitloop staff.

Dr. Hancox (SACNASP) completed a personal inspection (site visit) of the Project and shared the information and data gathered from the site visit with Dr. Jobin-Bevans. Dr. Hancox's most recent visit to the Project was on 22 June 2023, accompanied by Mr. Sibusiso Sithole (Project Geologist), and Dr. Matthew McCreesh (Project Geologist) from Zeb Nickel Company (Pty) Ltd. Dr. Hancox had previously visited the Project on 2 December 2020 (*see* Section 2.5).

The visit was required for the purposes of inspection, ground truthing, procedural review and information data collection and collation. The condition of the general Project area and access were observed. Mineralized drill core intersections were reviewed and verified and logging and sampling procedures were checked and validated and the location of some older and more recent drill hole collars were verified.

During the 2 December 2020 site visit, locations drill hole collars Z05, Z017, Z018, Z021 and Z022 were verified by Dr. Hancox. During the 22 June 2023 site visit, the locations of drill hole collars Z024, Z027, Z028 and Z029 were verified. The collars of these holes were inspected and the drill hole name was visible on the collar. GPS co-ordinates taken while on site were cross referenced with drill collar coordinates in the Company's database.

All of the original assay certificates for drillholes Z024, Z028, Z029 and Z030 were inspected and validated against the Company's database by Dr. Hancox. This covered mineralization associated with Targets 1 through to 4 and various assay techniques, and covered approximately 13% of the records. Assay results contained in the Company's database matched exactly with assay results contained in the original laboratory certificates and no discrepancies were observed.

Drillholes Z019, Z020, Z021, Z022, Z023, Z026, Z028 and Z029 were inspected and compared against the geological logs by Dr. Hancox. The logging and sampling methodology aligned with the Company's Standard Operating Procedures.

Outcrop is scarce on the Property, so no surface grab samples of target mineralisation or lithologies were collected. Existing drill core logs were validated by Dr. Hancox against actual core and assay results in the Company's database were verified against the original laboratory certificates. After a thorough drill core examinations by Dr. Hancox during the two site visits conducted, the Author's did not think it was necessary to re-sample the drill core.

Borehole files were complete and well maintained, and all data contained within these files cross referenced with field observations made by Dr. Hancox.

The Company maintains a rock library of the various rock types found on the Project area. This library is accurate and deemed to be representative of the various lithologies encountered in exploration drilling on the Project area.

Apart from viewing drill hole cores Z05 and Z08, which were sampled for metallurgical test work, no verification of the metallurgical test work data discussed in Section 13 of the Report was done by the Authors.

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 for the purpose of the Report and to support a future NI 43-101 compliant mineral resource estimates.

13.0 MINERAL PROCESSING AND METALLURGICAL TESTING

Metallurgical test work was completed on material from drill cores from the Uitloop II for the 2012 PEA, which was commissioned by Lesego Platinum Uitloop 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 mineralisation on the Property. Samples tested thus far are representative of the main style of mineralisation on the Property but further mineralogical and metallurgical test work is required.

Apart from viewing drill cores from holes Z05 and Z08, which were sampled for metallurgical test work, no verification of the metallurgical test work data discussed in this section of the Report was done by the Authors.

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 Lesego Platinum Uitloop (Pty) Ltd (2011)

In 2011, Lesego Platinum Uitloop undertook metallurgical test work through several work program partners. Diamond core drill holes Z05 and Z08 were selected as being representative of the Uitloop II 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 mineralisation. 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 Uitloop II samples was conducted and reported by SGS Laboratories. The Sulfide 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 sulfide pentlandite (Po). Approximately 8% of the total mass of the sample can be attributed to sulfide 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 sulfides would account for 62% of the TNi in the feed. The liberated (lib) and middling (midds) sulfide 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 Zeb Nickel Deposit (green outline) (Croll *et al.*, 2012).

The 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 sulfides 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).
- total S and sulfide 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 μ m while the second was milled to 80% -75 μ m.

The 90% -500 μ m 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 μ m, -300/+150 μ m, +150/-75 μ m, +75/-38 μ m and -38 μ m. 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.
- Total Nickel (TNi) by ICP.
- 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 sulfide 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 (sulfides 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 sulfides) in order to calculate the elemental Ni-deportment.

13.2.1.2 Chemistry

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

Table 13-1: Zeb head grade assays for Sulfide 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			
AI	0.37	0.21			
Si	16.7	10.0			
S	0.25	0.01			
к	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 Sulfide Zone sample revealed that silicate concentrations are higher in the coarser fractions, while sulfides 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 sulfides and contains major amounts of dolomite and calcite not present in the Sulfide Zone sample. Indications are also that the pentlandite grains are

much smaller in the Oxide sample than in the Sulfide 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 Sulfide and Oxide zones. The Ni-elemental deportment of the sulfide and oxide samples indicates that the major phases containing nickel are serpentine, olivine, pentlandite (Pe), pyrrhotite (Po), tochilinite, clay, magnetite (Mt) and chromite (Table 13-2). The nickel in each phase is deemed to be locked within the crystal lattice of the mineral.

The Sulfide 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 sulfides 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%).

				Zebediel	a 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
				Zebedi	ela 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

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

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 Sulfide 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 sulfide 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 floatation 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

sulfides are well liberated at a grind of P_{80} 75 μ m with 60% of the sulfides 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 sulfide/ magnetite-containing particles during process recovery, the particles were grouped into nine different associated particle types for further optical investigation. These included (Pe=pentlandite; Po=pyrrhotite; Mt=Magnetite):

- 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.
- 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} 75 μ m. 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 Sulfide 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 content. It is also envisaged that a portion of the pentlandite associated with magnetite would also be recoverable by flotation.

Overall, the sulfide recovery by flotation will account for both liberated and middlings particles; and it is estimated that of the TNi content (0.29% TNi) of the Sulfide 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 μ m, the composite sulfide particles generated at a grind of P₈₀ 75 μ m range between 14 and 30 μ m. 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 Zeb material is classified as medium to hard.

Rougher flotation test work has confirmed that 60% of the feed nickel can be recovered to a sulfide concentrate while cleaner test work confirmed that concentrates of 16% Ni 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 Sulfide 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 Sulfide 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, Zeb'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 Sulfide 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 Uitloop II deposit consists mainly of magnesium silicate gangue minerals and the main proportion of nickel occurs as pentlandite and associated with iron sulfides. 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 sulfides account for 62% of the TNi, with 54% of TNi potentially recoverable by flotation. The mineralogy is such that conventional sulfide 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 sulfide over-grind to a minimum.
- Reagent availability to freshly produced sulfide 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 sulfide particles and the effect on nickel recoveries.
- Impact of froth structure and stability on nickel recovery and concentrate grade.
- 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 Zeb mineralisation:

- 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.
- Use of industrial dispersants significantly outperforms depressants.
- Conventional sulfide collector and frothing reagents.
- 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 Sulfide 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 Sulfide 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 Sulfide 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.
- Paste thickening in support of the water saving strategy.

14.0 MINERAL RESOURCE ESTIMATES

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

15.0 MINERAL RESERVE ESTIMATES

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

16.0 MINING METHODS

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

17.0 RECOVERY METHODS

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

18.0 PROJECT INFRASTRUCTURE

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

19.0 MARKET STUDIES AND CONTRACTS

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

20.0 ENVIRONMENTAL STUDIES, PERMITTING AND SOCIAL OR COMMUNITY IMPACT

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

21.0 CAPITAL AND OPERATING COSTS

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

22.0 ECONOMIC ANALYSIS

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

23.0 ADJACENT PROPERTIES

23.1 Platreef Project (Ivanhoe Mines Ltd.)

Ivanhoe Mines Ltd.'s (TSX:IVN; "Ivanhoe") Platreef Project, located in the Northern Limb of the Bushveld Igneous Complex, is immediately west of the Zeb Nickel Project (Figure 23-1). Information for this Project is publicly available through Ivanhoe Mines' website and technical reports filed on SEDAR.



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

Ivanhoe Mines Ltd. ("Ivanhoe") indirectly owns 64% of the Platreef Project through its subsidiary, Ivanplats (Pty) Ltd. ("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 5KS.

In March 2022, Ivanhoe filed a new NI 43-101 Technical Report (Peters *et al.*, 2022) covering the Platreef Project Platreef 2022 Feasibility Study ("Platreef 2022 FS"). The updated NI 43-101 Technical Report covers an independent Feasibility Study for the phased development of the Platreef Project. The development plan is based on the continued development and earlier production from Shaft 1

which starts with 700 ktpa production (2024–2027) and then two 2.2 Mtpa concentrator streams will be added in 2028 and 2030, increasing the production rate to 5.2 Mtpa.

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 mineralisation 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.

Dr. Jobin-Bevans has been unable to verify the information presented above and this information is not necessarily indicative of the mineralisation on the Property that is the subject of the Report.

24.0 OTHER RELEVANT DATA AND INFORMATION

The Authors are not aware of any additional information or explanations necessary to make the Report understandable and not misleading.
25.0 INTERPRETATION AND CONCLUSIONS

The objective of this work was to prepare an independent NI 43-101 Technical Report capturing historical and current information available for the 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 mineralisation close to surface as seen in the rest of the Northern Limb of the BIC and/or deeper semi-massive to massive sulfides 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 four different styles of mineralisation 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: Disseminated nickel sulfide mineralization that is associated with the Lower Zone lithologies 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 mineralisation in the serpentinised Lower Zone ultramafic lithologies (Uitloop I and II bodies) takes the form of disseminated sulfide (mainly fine-grained pentlandite.

Recent drilling has revealed higher grade zones in the lower stratigraphic horizons of this body. Further exploration drilling will test the grade, extent and continuity of this zone.

Target 2: Contact-style and Platreef (stratabound) mineralisation, containing bleb sulfide mineralisation with elevated PGE, nickel, and copper mineralisation, occurs along the northeast margin of the Uitloop II body and is the primary target of current exploration work (*see* Figure 7-12 and Figure 7-13). There is potential for a 6.3 km strike length of Platreef and/or Contact-style mineralisation, and the last phase of drilling demonstrated a strike length of at least 3.5 kilometres. 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 sulfide.

Target 3: massive-sulfide (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 and Figure 7-13), possibly associated with magmatic conduits. 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 sulfides 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.

Target 4: Gold mineralisation probably associated with remobilized gold from the adjacent Pietersburg Greenstone Belt. This mineralisation should be tested by assaying prospective drill core for gold. This target type, although not a top priority at this stage of the Project, could be encountered as a result of drill testing Targets 1, 2 and 3.

25.2 Risks and Opportunities

25.2.1 Risks

Certain risks related to advancing the exploration Project have been identified:

- Continuity of the various styles of mineralization in all targets: there is a risk that mineralization may not be continuous, especially in Targets 2, 3 and 4 for the ultimate declaration of a mineral resource on these Targets.
- Low metal tenor: there is a risk that Ni-Cu-PGE mineralization may not have a high enough metal content to support a mineral resource estimate.
- Structural complexity: there is a risk that faulting and other geological structures may have disrupted both the mineralization process and continuity of mineralization and may prevent the ultimate declaration of a mineral resource.

25.2.2 Opportunities

A number of opportunities regarding the Project have been identified:

- Recent drilling has identified a zone of higher grade nickel sulfide mineralization contained in the lower units of Target 1. These units should be drilled to fully test the extent and continuity of this mineralization.
- Cobalt is often associated with magmatic Ni-Cu-PGE mineralization; and cobalt should be assayed for and possibly included in any future mineral resource estimations; metallurgical testwork on Target 2 and Target 3 material may result in higher metal recoveries than those discussed in Section 13 of the Report.

25.3 Conclusions

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

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

The Authors recommend a Phase 1 program with the implementation of Phase 2 contingent on the results of Phase 1.

The recommended multi-phase budget (US\$2,960,000) is as follows:

• <u>Phase 1</u>: US\$875,000

Phase 1 of drilling should consist of infill drilling on Target 1, drilling into Target 2 beneath the Uitloop II body in the vicinity of possible magma conduits located on the northeast boundary of the Uitloop II body. The goal of Phase 1 should be to identify and confirm the extent of higher grade Ni mineralisation at the base of Target 1, as well as identify and confirm the grade and extent of higher grade Ni-Cu-PGE mineralisation down dip of that intersected in the 2021 drilling campaign. Samples should also be assayed to test for potential gold mineralisation.

Phase 1 needs to demonstrate that mineralization of an economic grade is in fact present in these target areas, which will warrant further drilling in Phase 2.

This work would all be located on Farm Uitloop 3KS.

• <u>Phase 2</u>: US\$2,085,000

Phase 2 of the drilling program should step out both along strike and downdip to understand the broader extent of the Target 2 mineralization and ultimately to define a mineral resource. Samples should also be assayed for potential gold mineralisation.

All drill holes should drill through Zeb 1, into Target 2 located beneath Zeb 1, and test for Target 3 mineralisation simultaneously by drilling at least 50 m into the footwall lithologies.

A detailed breakdown of the proposed two-phase exploration budget is presented in Table 26-1. All the costs associated with the two-phase program will be paid for by the Issuer.

Item	Phase 1 (US\$)	Phase 2 (US\$)	Total (US\$)
Exploration Drilling	182 216	1 025 003	1 207 219
Assays	72 886	444 498	517 384
Geological	182 216	75 778	257 993
Reporting	7 289	20 275	27 563
South African Costs	72 886	155 317	228 203
Public Company Costs	328 499	328 499	656 997
Contingency	29 155	35 017	64 172
Total (US\$):	\$875,000	\$2,085,000	\$2,960,000

Table 26-1: Recommended exploration budget for Phase 1 and Phase 2.

Drill hole parameters for approximately 12,850 m of diamond drilling, are provided in Table 26-2 and preliminary locations of the proposed drill hole collars are shown in Figure 26-1.

Planned	Target	Core Size	Estimated Depth (m)	Inclination	Metres (-90°) 0-500
Drill Hole					
PZ031	1, 2 & 3	NQ	450	90°	450
PZ032	1, 2 & 3	NQ	450	90°	450
PZ033	1, 2 & 3	NQ	400	90°	400
PZ034	1, 2 & 3	NQ	500	90°	500
PZ035	1, 2 & 3	NQ	450	90°	450
PZ036	1, 2 & 3	NQ	400	90°	400
PZ037	1, 2 & 3	NQ	450	90°	450
PZ038	1, 2 & 3	NQ	500	90°	500
PZ039	1, 2 & 3	NQ	500	90°	500
PZ040	1, 2 & 3	NQ	600	90°	500
PZ041	1, 2 & 3	NQ	550	90°	500
PZ042	1, 2, 3 & 4	NQ	600	90°	500
PZ043	1, 2, 3 & 4	NQ	600	90°	500
PZ044	1, 2, 3 & 4	NQ	550	90°	500
PZ045	1, 2 & 3	NQ	550	90°	500
PZ046	1, 2 & 3	NQ	600	90°	500
PZ047	1, 2 & 3	NQ	500	90°	500
PZ048	1, 2 & 3	NQ	550	90°	550
PZ049	1, 2 & 3	NQ	500	90°	500
PZ050	1, 2 & 3	NQ	450	90°	450
PZ051	1, 2 & 3	NQ	450	90°	450
PZ052	1, 2 & 3	NQ	500	90°	500
PZ053	1, 2 & 3	NQ	550	90°	500
PZ054	1, 2 & 3	NQ	600	90°	500
PZ055	1, 2 & 3	NQ	600	90°	500
		Total (m):	12,850		

Table 26-2: Summary of proposed drill hole parameters (see Figure 26-1).



Figure 26-1: Preliminary locations of the proposed drill hole collars (green), 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 mineralisation, contact geometry, and relationship of the ultramafic body and sulfide mineralisation with footwall lithologies and/or margin xenoliths; and
- Material should be retained for bench scale metallurgical testwork to help understand metal recoveries.

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