MICON INTERNATIONAL LIMITED | mineral industry consultants

NI 43-101 Technical Report on the Updated Mineral Resources Estimate of the Makwa-Mayville (MM) Project, Manitoba, Canada

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1.0 SUMMARY

1.1 Terms of Reference and Purpose

Micon International Limited (Micon) has been retained by Grid Metals Corp. ('Grid Metals' or Grid) to update the estimate of the mineral resources for the MM (previously Makwa-Mayville) Project located near Lac du Bonnet, Manitoba, and to prepare an independent Technical Report on the updated mineral resource in accordance with the requirements of Canadian National Instrument 43-101 (NI 43-101). A total of 14 new diamond drill holes have been completed on the Makwa property since the last mineral resource estimate conducted by RPA Inc. (RPA) in 2013/14 and this drilling, together with updated cut-off grade input parameters, have necessitated the need to update the resource. The Mayville property mineral resource update is related to newly established input parameters (i.e., improved Ni and Co recoveries) as some of the drilling conducted in 2022 is off the main (M2) deposit area. The purpose of this report is to support the public disclosure of the updated mineral resource estimate for the Project and to make appropriate recommendations to upgrade and expand the resource.

The effective date of this report is December 31, 2023.

1.2 Project Overview

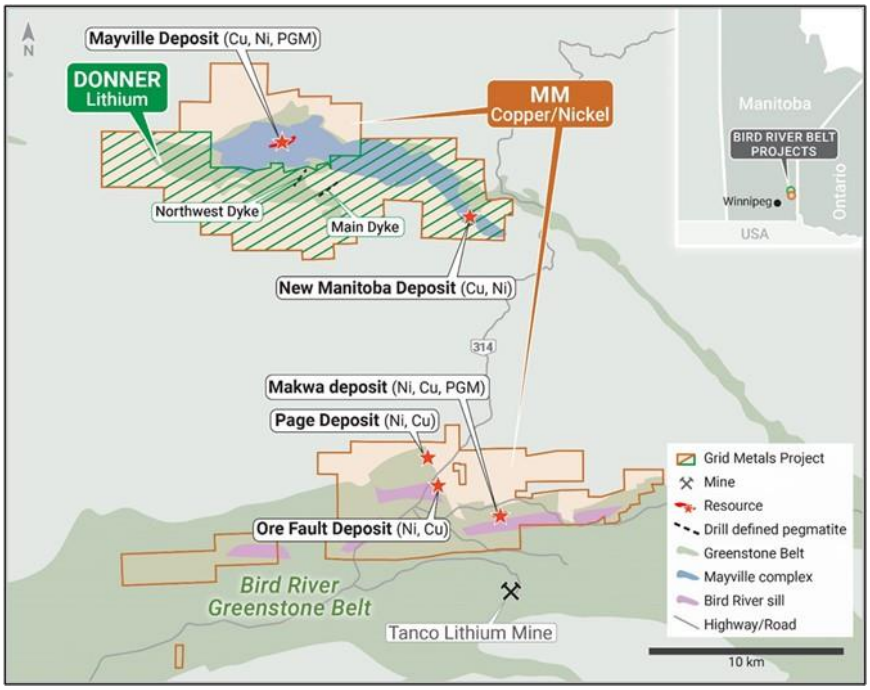
The MM Project includes a copper-rich (Mayville) and a nickel-rich (Makwa) disseminated magmatic sulphide deposit along with three additional near-surface deposits (Page, Ore Fault, and New Manitoba) which were acquired by Grid in April 2023. The Mayville and Makwa deposits are located in the northern and southern parts of the Bird River Greenstone Belt, respectively, in southeastern Manitoba (see Figure 1). The Bird River Greenstone Belt and its mineral occurrences have been the subject of multiple research projects including research work completed under the Targeted Geoscience Initiative by the Canadian Geological Survey. The Project area has been identified as being a direct analogue to the Ring of Fire belt in northwestern Ontario (Houlé et al., 2020) which hosts several significant mineral deposits.

The project consists of a mining lease and mineral claims held by the Company and its subsidiaries. It is readily accessible year-round, by provincial highways from the capital city of Winnipeg located ~145 km to the southwest. The Mayville deposit is situated two km north of the Company's Donner Lithium Project where the Company has published a NI 43-101 Resource Estimate Technical Report. Both the Donner and MM Projects will benefit from efficiencies in exploration, government and First Nations relations, permitting and infrastructure.

1.3 Property Description and Location

The MM Project (Figure 1.1) is located in the Bird River Greenstone Belt, approximately 145 km from Winnipeg, Manitoba.

Figure 1.1
Location of the MM Project and Other Surrounding Grid Metals Properties



Source: https://gridmetalscorp.com/.

The Makwa property is on Zone 15, National Topographic System (NTS) map sheets 52L/5 and 52L/6 at latitude 50°28'10"N and longitude 95°26'27"W. It comprises one mineral lease (ML-331) 499 ha, one surface lease (No. 297) covering the same area as ML-331, and 28 unpatented mineral claims covering 3,609 ha; thus, the Makwa property covers a total area of 4,108 ha.

The Mayville property is at approximately 50° 35' to 50° 39' N latitude and 95° 40' to 95° 30' W longitude, Zone 15, on National Topographic Series (NTS) map sheet 52L-12. It consists of 75 unpatented mineral claims covering an area of 8,110 ha.

1.4 OWNERSHIP

1.4.1 Makwa

All claims are owned either by Global Nickel Inc. (Global Nickel), of which Grid Metals owns 100%, or by Grid Metals itself. The surface rights of the mineral claims are owned by the Crown (Evans, 2005).

1.4.2 Mayville

The current updated mineral resource is in the main zone termed the M2 Zone which is in the northern part of a square enclosing 54 unpatented claims purchased in the option agreement with Exploratus Elementis Diversis Ltd. (Exploratus). Of the 75 claims, 14 were staked by Grid Metals and are 100% owned by Grid Metals. An additional seven claims that were formerly under option to Mustang from Tantalum Mining Corporation (Tantalum) are now 100% owned by Grid Metals.

1.5 GEOLOGY AND EXPLORATION

1.5.1 Regional Setting

The MM Project is located in the Archean Bird River greenstone belt (BRGB) in southeast Manitoba. The BRGB consists of bimodal assemblage of metavolcanic rocks and platform-type metasedimentary rocks that have undergone various stages of deformation, greenschist to amphibolite facies metamorphism, and are locally intruded by differentiated felsic to ultramafic rocks.

1.5.2 Property/Deposit Geology and Mineralization

1.5.2.1 Makwa

The Makwa deposit is a conventional, basal-contact related, Ni- and Pd-rich disseminated magmatic sulphide deposit. The steep south-dipping and west-plunging Makwa deposit has a minimum strike length of 1.1 km, an average vertical depth of ~350 metres and an average width of 30-50 metres. The Makwa deposit remains open along strike to the east and partially down-dip below its currently defined vertical extent. The deposit was briefly mined from a shallow open pit by a subsidiary of Falconbridge Ltd. in 1974. It was the subject of a standalone Prefeasibility Study completed in 2008 (Micon International) for the mining and production of nickel concentrate for sale to a smelter.

The Micon resource estimate discussed here subdivides the deposit into a central higher-grade zone (HG1) and a flanking lower-grade zone (LG1). The metal tenor in both zones is very similar, such that the Ni (and Pd) grades are strongly correlative with the total amount of sulphide present. Localized high-grade nickel mineralization is present in associated with narrow lenses of net-textured and semi-massive sulphides. A longitudinal section of the deposited is shown in Figure 1.2 and a sectional view of the mineralization block model is shown in Figure 1.3 below.

Figure 1.2
Makwa Deposit Longitudinal Section Showing Drill Hole Traces and Mineralization Wireframes HG1 and LG1

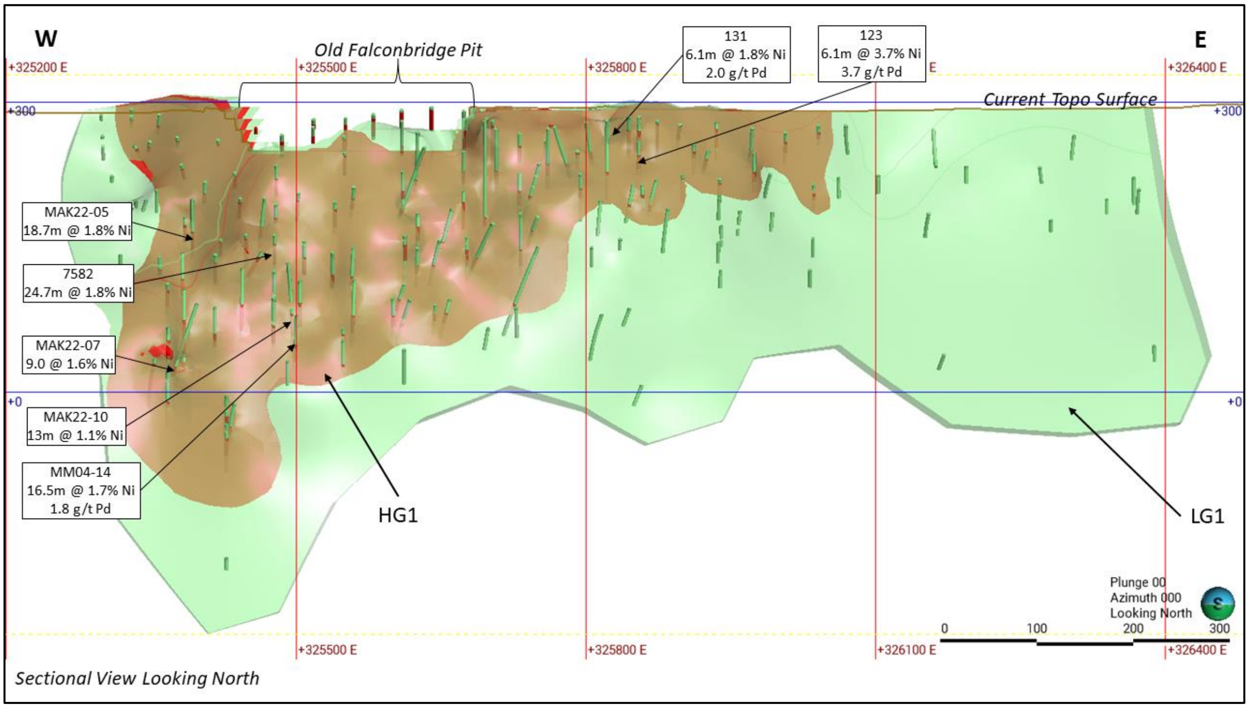
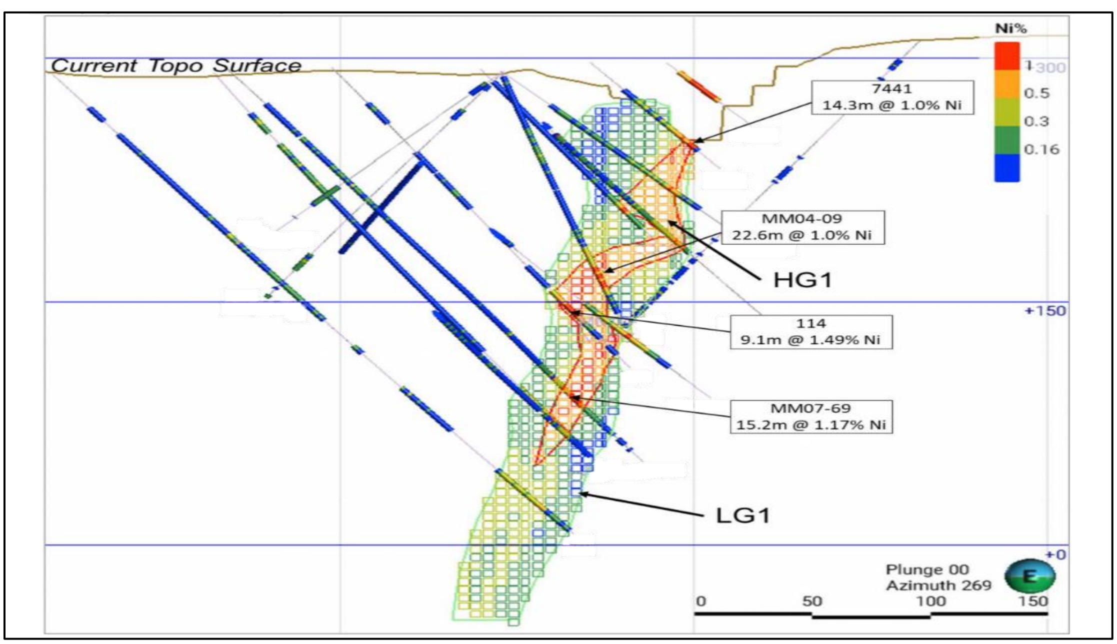


Figure 1.3
Makwa Deposit Typical Cross Section (Looking West) Showing the Current Micon Block Model Coded to Ni Grade, the HG1 and LG1 Zone Boundaries and Selected Length -weighted Interval Assays for Drill Holes Captured on this Section



1.5.2.2 Mayville

The Mayville magmatic sulphide deposit is a copper-rich disseminated sulphide deposit hosted by the western part of the ~17 km long late Archean Mayville mafic-ultramafic complex. The Mayville deposit is approximately 1.5 km long, up to 200 metres wide, and has been delineated to maximum depth of ~500 metres. It dips steeply to the south. The deposit includes the Main Zone (Figure 1.4, below) and two satellite zones (not shown here) located at the eastern end of the deposit. The two satellite zones have not been included in the current resource estimate. A typical section of the deposit block model is shown in Figure 1.5.

The mineralization in the Mayville deposit occurs principally as disseminations of chalcopyrite and pyrrhotite with lesser pentlandite and pyrite hosted by a leucogabbro unit near the base of the Mayville Complex.

Figure 1.4
Mayville Longitudinal Section (looking north) Showing Drill Hole Traces and Mineralization Wireframes

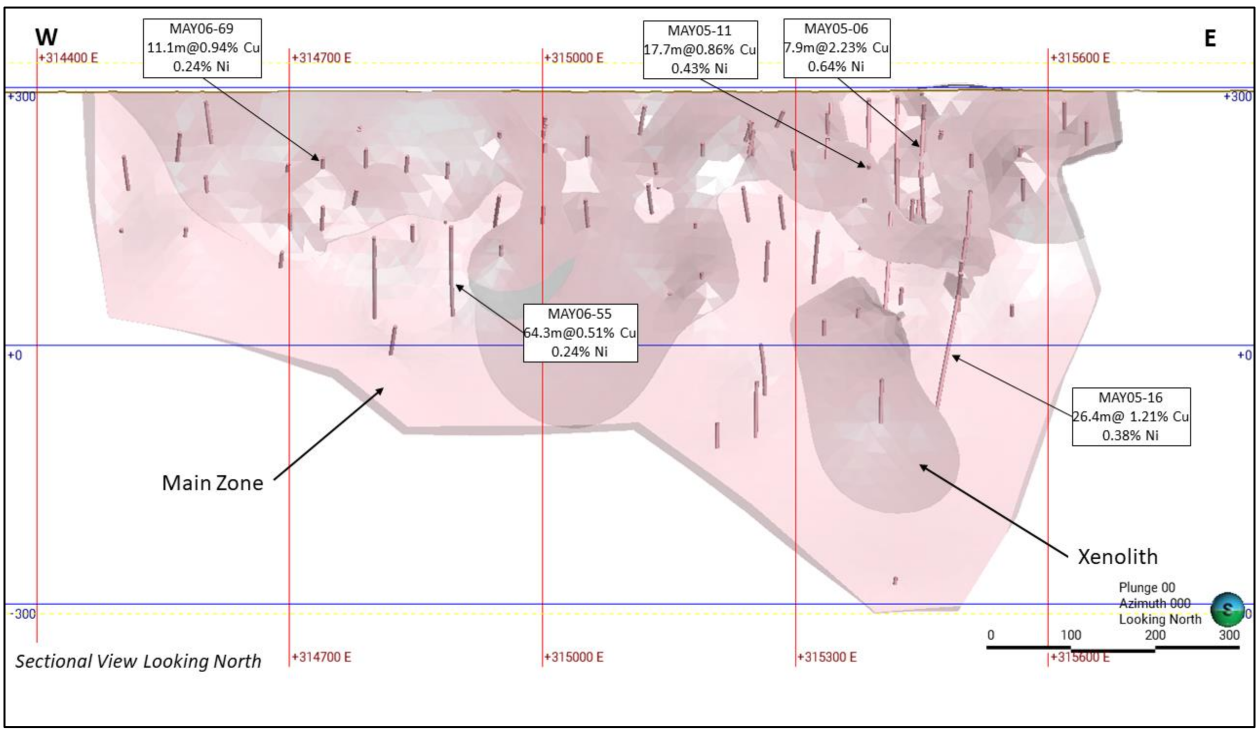
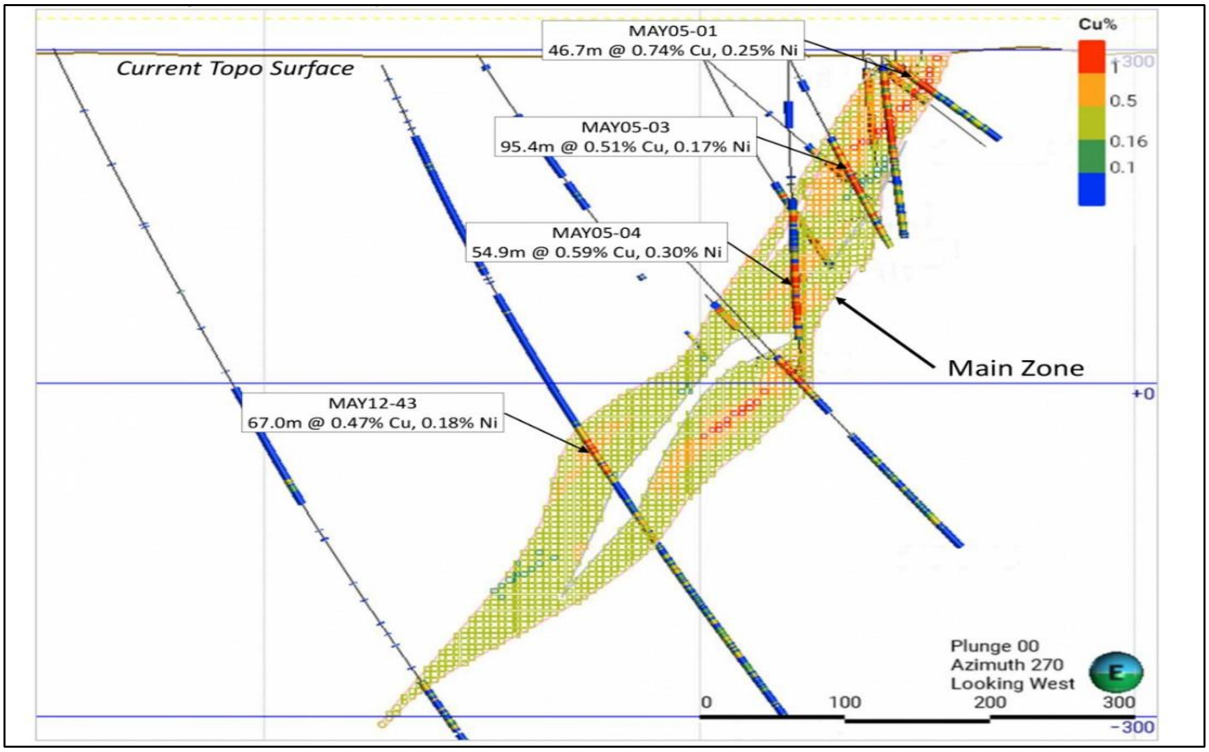


Figure 1.5
Typical Cross Section for the Mayville Deposit (Looking West) and Showing the Current Micon Block Model Coded to Cu Grade and Selected Length-weighted Average Drill Hole Intersections for Drill Holes Captured on this Section



1.5.3 Deposit Types

Both the Makwa and Mayville deposits belong to the magmatic/ortho-magmatic nickel-copper-platinum group-elements (Ni-Cu-PGE) sulphide deposits class. The difference between the two is that Mayville is copper rich while Makwa is nickel rich. The company attributes this difference to the degree of pre-emplacement differentiation that occurred in the respective mafic (Mayville) and ultramafic (Makwa) parental magmas.

An adjacent property to Mayville (i.e., Donner lithium claims also owned by Grid Metals) contains LCT (lithium-cesium-tantalum) pegmatite minerals and is the subject of a separate MRE and study.

1.5.4 Status of Exploration

Resource definition drilling has progressed well at both Makwa and Mayville but is far from being complete as the mineralization remains open along strike in both directions (east - west) and down dip. Deeper drilling is required to better define underground resources.

In addition to resource definition, the drilling at Mayville culminated in the discovery of a PGE rich zone less than 700 metres SE of the main M2 mineral resource area. This new discovery awaits to be fully assessed with further drilling. Several other exploration targets featuring surface occurrences of copper-rich disseminated magmatic sulphide mineralization hosted by gabbroic or pyroxenitic intrusive rocks occur on the Mayville property and in the adjoining, eastern portion of the Donner Lake claim block but most have not been drilled.

In summary, the current MM Project mineral resource estimate is restricted to two separate magmatic sulphide deposits located 35 km apart and approximately 145 kilometres from Winnipeg, the capital of Manitoba. Grid has consolidated the majority of the prospective copper-nickel mineral tenure of the highly prospective Bird River Greenstone Belt including several other deposits near the Makwa and Mayville resources. Concurrently with the new resource estimate the Company has completed a Project wide geophysical review which has identified a number of new, high potential targets for drilling. An initial drill program is in planning and expected to commence later in 2024.

1.6 METALLURGY

A significant amount of metallurgical testing has been completed for Grid Metals (generally under its previous name Mustang Minerals Corp.) on a range of samples from the Makwa deposit, aimed at determining nickel-copper and PGM recoveries by flotation to saleable nickel or copper concentrates. Most of the testing was completed in the laboratories of Process Research Associates Ltd. (PRA) in Richmond B.C., (now Bureau Veritas Minerals). A major amount of testing was completed on several Master composites representing the main zone (herein referred to as the HG1 or high-grade 1 zone) both below and adjacent to the existing pit, in order to develop the optimum flowsheet. This showed that fine grinding of flotation feed to a range of 80% passing 50-65 microns is required together with regrinding of scavenger concentrate in order to produce a concentrate containing around 10% nickel as a minimum grade with good recovery. A Bond ball mill work index test result of 13.2 indicates moderate hardness of the samples.

Further work using the identical flowsheet was conducted with some variability samples for a range of feed grades and then with composites of lower grade hanging wall zones (herein referred to as the LG1 or low-grade 1 zone), which contained lower nickel values (0.22-0.33% Ni) than the main zone samples tested (0.50-1.30% Ni) but still significant content of copper and PGMs, particularly palladium. Most of the tests with multiple cleaning stages produced a nickel concentrate grading in the range of 9-15% Ni, with recovery maximized at the lower grades. Platinum and palladium responded similarly and with a generally high palladium recovery in the range of 60-90%. The copper recovery to the nickel concentrate however was generally constant at close to 80%. Cobalt, due to its mineralogical association with nickel, showed a similar recovery to nickel.

For the purposes of this study, the Makwa results are considered to reliably represent both the HG1 and LG1 zones within the Makwa deposit. The results, including those from 5 locked cycle tests, were recalculated for a constant nickel concentrate grade of 10% Ni, based on the nickel grade-recovery curve from each test and concentrate mass percent, with other metals adjusted accordingly. The resulting feed grade-recovery equation was used for the block model metal recovery calculations.

For the Mayville deposit, initial testing was by PRA using samples in a master composite representing most of the deposit, plus two sub-composites The flowsheet used had sequential copper and nickel roughing flotation followed by separate cleaning of the two rougher concentrates. Copper performance in these tests was very good with high concentrate grade (> 25% Cu) and recovery above 90% but the separation of nickel to a separate concentrate was very variable with generally poor recovery and variable concentrate grade. The flowsheet used had sequential copper and nickel roughing flotation followed by separate cleaning of the two rougher concentrates.

Later work by XPS Expert Process Solutions (XPS), using a new composite sample also representing the main part of the deposit, examined a bulk roughing and cleaning flotation circuit followed by separation to copper and nickel concentrates. This produced a vastly improved nickel concentrate performance, and the final results were obtained from a locked cycle test. For the block model metal recoveries, the final nickel recovery to a 10% Ni concentrate, for a range of feed grades (0.15-0.35% Ni), was estimated based on the single result from the locked cycle test. Copper and PGM recoveries, divided between copper and nickel concentrates, associated with a range of feed grades, were developed graphically from the few XPS test results and generally higher recovery was in the copper product. Cobalt recovery to the nickel concentrate again was seen to be similar to the nickel recovery.

1.7 MINERAL RESOURCE ESTIMATE (MRE)

1.7.1 MRE Statement

The updated mineral resource estimate for the MM Project is provided in Table 1.1and Table 1.2, below. The estimate was prepared following the CIM 2019 Best Practice Guidelines and is reported in accordance with National Instrument 43-101 (“NI 43-101”) - Standards of Disclosure for Mineral Projects and its Companion Policy 43-101CP. Block grade interpolation was performed using the ordinary kriging (OK) technique.

The estimated pit constrained mineral resources were classified as Indicated or Inferred based on drill hole spacing and the confidence in the continuity of mineralization as confirmed by variography and the geometry as dictated by the geology. Indicated resources are in areas with drill holes spaced at about 50 m and under. Inferred resources are in the more sparsely drilled areas, mainly in the peripheral parts of the deposits. The underground (UG) resources classification is based on the same criteria as for the open pit (OP) resources.

N.B. SR in both tables is an abbreviation for strip ratio.

Table 1.1
Makwa Pit Constrained and Underground Resources as of December 31, 2023.

Mining	Category	Zone	Tonnage	Density	NiEq	Ni	Cu	Co	Pd	Pt	SR
					%	%	%	%	g/t	g/t	
OP	Indicated	HG1	4,846,590	2.94	1.26	0.89	0.17	0.03	0.71	0.19	4.66
		LG1	9,370,784	2.88	0.48	0.28	0.08	0.01	0.19	0.06	
		HG1 + LG1	**14,217,374**	**2.90**	**0.75**	**0.48**	**0.11**	**0.02**	**0.37**	**0.10**	
	Inferred	LG1	18,000	2.88	0.36	0.23	0.04	0.01	0.11	0.04	
UG	Indicated	HG1	437,743	2.94	1.19	0.83	0.11	0.03	0.73	0.21	NA
		LG1	62,783	2.88	0.53	0.30	0.08	0.01	0.27	0.08	
		HG1 + LG1	**500,526**	**2.93**	**1.11**	**0.77**	**0.11**	**0.02**	**0.67**	**0.19**	
	Inferred	HG1 + LG1	-	-	-	-	-	-	-	-	

Table 1.2
Mayville Pit Constrained and Underground Resource as of December 31, 2023.

Mining	Category	Tonnage	Density	CuEq	Cu	Ni	Co	Pd	Pt	Au	SR
				%	%	%	%	g/t	g/t	g/t	
OP	Indicated	32,019,000	3.00	0.61	0.40	0.16	0.01	0.13	0.05	0.05	3.17
	Inferred	-	-	-	-	-	-	-	-	-	
UG	Indicated	322,461	3.00	1.62	0.96	0.37	0.02	0.19	0.08	0.11	NA
	Inferred	203,323	3.00	1.50	0.96	0.32	0.02	0.16	0.08	0.11	

Makwa and Mayville Resource Notes:

1. The effective date of this Mineral Resource Estimate is December 31, 2023.
2. The MRE presented above uses economic assumptions for both, surface mining and underground mining.
3. The MRE has been classified in the Indicated and Inferred categories following spatial grade continuity analysis and geological confidence.
4. The calculated cut-off grades (COG) to report the MRE are dynamic in nature following metallurgical recovery curves; the average COG for Makwa is 0.30 % Ni in surface mining and 0.84 % Ni in underground mining, for Mayville is 0.30 % Cu in surface mining and 1.37 % Cu in underground mining.
5. The economic parameters used metal prices of US$9.0/lb Ni, US$3.75/lb Cu, US$23.0/lb Co, US$900/oz Pt, US$1,400/oz Pd and US$1,750/Au with specific metallurgical recovery curves detailed in tables 14.14 and 14.15, a mining cost of US$3.5/t in surface and US$80.0/t in underground. Processing cost of US$15/t and a General & Administration cost of US$3.2/t.
6. For surface mining the open pits at Makwa and Mayville use a slope angle of 53°.
7. The block models for Makwa and Mayville are rotated and use a block size of 10 m x 5 m x 5 m with the narrow side across strike (North-South).
8. The open pit optimization uses a re-blocked size of 10 m x 10 m x 10 m and for the underground the optimization uses stopes of 20 m long by 20 m high and a minimum mining width of 3 m.
9. Messrs. Alan J. San Martin, MAusIMM(CP) and Charley Murahwi, M.Sc., P.Geo., FAusIMM from Micon International Limited are the Qualified Persons (QPs) for this Mineral Resource Estimate (MRE).
10. Mineral resources unlike mineral reserves do not have demonstrated economic viability. The estimate of mineral resources may be materially affected by environmental, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues.
11. The mineral resources have been estimated in accordance with the CIM Best Practice Guidelines (2019) and the CIM Definition Standards (2014).
12. Totals may not add correctly due to rounding.

1.7.2 Risks/Uncertainties

A mineral resource estimate will always be sensitive and vulnerable to fluctuations in the price of base- and precious metals. A downward variation in the metallurgical recoveries would impact the resource negatively. In addition, environmental, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues may materially affect the estimated mineral resources.

Micon is aware of the following environmental constraints:

- Location of Makwa within the western part of Nopiming Provincial Park – a multi-use park that allows mineral extraction.
- Proximity of the Makwa deposit to an all-weather Provincial Road (PR 314) to the north and the Bird River to the south.

It should be noted that mineral resources, unlike mineral reserves, do not have demonstrated economic viability.

1.8 Interpretation And Conclusions

1.8.1 Overview

The MM Project resource is a conventional and near surface copper-nickel sulphide resource with readily apparent upside. The project is ideally located to service critical metals demand in North America. The Mayville deposit is located directly adjacent to Grid Metals' advanced exploration stage Donner Lithium Project which is currently progressing through the mine permitting process. There are tremendous synergies between Grid Metals copper/nickel and lithium projects development plans as the company continues to build the mineral resources necessary to develop an important critical metals production and processing hub in a Tier 1 mining jurisdiction.

1.8.2 Geology and Mineral Resources

The open pit resources at Makwa include 14.2 million tonnes in the indicated category with 0.48% Ni, 0.11% Cu, 0.02% Co, 0.37 g/t Pd and 0.10 g/t Pt (0.75% nickel equivalent grade). The Makwa deposit is subdivided into a central, higher-grade zone ('HG1') and a flanking (both hanging-wall and footwall) lower-grade ('LG1') zone. The new resource estimate includes 4.8 million tonnes of the HG1 zone grading 0.89% Ni (1.26% nickel equivalent grade). The updated open-pit resource estimate for the Mayville deposit includes 32.0 million tonnes in the indicated category with 0.40% Cu and 0.16% Ni and byproduct concentrations of cobalt, palladium, platinum and gold (0.61% copper equivalent grade).

Compared to the previous published resource estimate for the MM project (RPA, 2014), the combined open pit resources (indicated category) increased by 12.4 million tonnes or 36.8%. This increase is largely attributable to the inclusion of recent infill drilling (Makwa – 2022), improved metallurgical recoveries from test-work completed after the previous resource estimate was published, and a more favourable US dollar to Canadian dollar exchange rate.

1.8.3 Metallurgy

Both MM Project deposits have had extensive metallurgical test work completed over multiple campaigns with results indicating that saleable sulphide concentrates can be produced (nickel at Makwa; separate copper and nickel concentrates at Mayville).

1.8.4 Upside Potential of Mineral Resources

The Makwa and Mayville deposits remain open along strike (E - W) and down dip. In addition, the MM Project area has several walk-up targets that could provide immediate upside to the current mineral resource. These include the newly acquired New Manitoba Cu-Ni historical occurrence and numerous untested EM conductors between New Manitoba and the Mayville Cu-Ni Deposit approximately 10 km to the west. As well, the newly acquired Page and Ore Fault deposits and their potential extensions are priority drill targets. The Company plans to commence an initial drill program to test several of these priority targets in the fall of 2024, contingent on funding.

Details on the other deposits mentioned above and mineral occurrences in the MM Project area are:

- The New Manitoba deposit, which has a historical mineral resource estimate of 1.8Mt at 0.75% Cu and 0.33% Ni (Manitoba Mineral Inventory Card #217) (Note: The Company has not been able to verify the historical estimate as relevant and the historical estimate should not be relied on).

- The Ore Fault deposit, containing a previously NI 43-101 reported indicated resource of 0.9Mt at 0.32% Ni and 0.24% Cu and an inferred resource of 2.5Mt 0.35% Ni and 0.19% (Ewert et al., 2009; see reference 1, below); and,

- The Page deposit, containing a previously NI 43-101 reported indicated resource of 1.5Mt at 0.32% Ni and 0.13% Cu (Ewert et al., 2009).

It should be noted that all previous/historical mineral resource estimates mentioned above need to be updated following the CIM (2014) Definition Standards and CIM 2019 Best Practice Guidelines to make them current.

1.8.5 Overall Conclusions

There is no doubt the MM Project is poised for accelerated growth in every aspect as evidenced by the improved metallurgical recoveries from the test-work completed and the recent additions to the company' portfolio holdings as presented in Figure 1.1 above and Figure 23.1 under Section 23.0 below. Furthermore, the Makwa and Mayville deposits in their own right remain open along strike (east – west) and down dip beyond the limits of the current MRE.

It is concluded that further exploration has the potential to significantly increase the mineral resources. Likewise, additional metallurgical test-work is expected to refine the metal recoveries.

1.9 Recommendations

1.9.1 General Statement

The critical issues pertaining to the potential development of the MM Project in the future are (i) the size and quality of the mineral resource, (ii) the metallurgical characteristics of the deposits, and (iii) the exploitation/environmental factors related to mining. Accordingly, Micon makes the following recommendations.

1.9.2 Geology and Mineral Resources

1.9.2.1 Immediate/Short Term Activities

The immediate/short term objective is establishing the global distribution of potentially economic satellite deposits to the main MM Project deposits, i.e., Makwa and Mayville. To this end, Grid Metals has consolidated the majority of the prospective copper-nickel mineral tenure of the highly prospective Bird River Greenstone Belt including several other deposits near the Makwa and Mayville mineral resources. Concurrently with the new resource estimate the Company has completed a Project wide geophysical review that has identified a number of new high potential targets for drilling. An initial drill program (See Table 26.1 below) has been planned and is expected to commence later in 2024.

1.9.2.2 Medium- Long Term Activities

Micon believes that for the MM Project a significant open pit mineral resource in the Indicated + Inferred classes has been delineated and can be increased laterally (east-west) and down dip at both deposits. However, environmental constraints as detailed in Section 4.0 of this report, are likely to severely limit the size of permissible open pit exploitable resources, particularly at Makwa. To overcome this obstacle, Micon recommends that Grid Metals consider growing the resource by developing underground resources by deeper drilling, initially underneath the already established pit resource, followed by expansion laterally along strike with step-out holes.

1.9.3 Metallurgy

Ideally, additional metallurgical test-work should commence now in preparation for detailed engineering studies. This should include further testing on sample grinding characteristics from both deposits and additional flotation testing on Mayville samples, both master composite and variability, to complement the latest results obtained by XPS with a revised flowsheet. This will require some additional core drilling since most of the available drill core sections with typical mineralisation have been used.

1.9.4 In-house Scoping Study Plus Enhanced Baseline Studies

An in-house scoping study is recommended to lay the foundation for comprehensive economic/engineering studies. Simultaneously, enhanced Baseline Studies will facilitate the resolution of future permitting issues.

1.9.5 Budget for 2024/25

To achieve the immediate/short term goal, Grid Metals has proposed a CDN $2M budget as summarized below in Table 1.3. Fundamentally, the budget caters for reconnaissance drilling to define satellite deposits to the Makwa and Mayville mineral resources with a specific focus on validating historical drill holes at the New Manitoba deposit and testing for along strike extensions of that deposit.

Table 1.3
Grid Metals Summary Budget for July 2024-June 2025

ITEM	COST (CAD)
Direct drilling	1,020,000.00
Sample analyses	340,000.00
Labour	200,000.00
Meals, Accommodation	40,000.00
Consumables	200,000.00
Geophysics	200,000.00
Total	**2,000,000.00**

The drill program will target untested VTEM conductors on the Mayville-Donner claim block (east of M2) and several VTEM EM anomalies near the Page and Ore fault deposits in the Gossan block. See Figure 23.1
Location of Adjacent Properties/Claims to the Mayville-Makwa Properties of the MM Project under Section 23.0 for location of the claim blocks. The planned metreage is 3,000 for each block to give a total of 6,000 m of drilling.

Micon's QP believes that the proposed budget is reasonable and warranted and recommend that Grid Metals conduct the planned activities subject to availability of funding and any other matters which may cause the objectives to be altered in the normal course of business activities.

2.0 INTRODUCTION

2.1 TERMS OF REFERENCE AND PURPOSE

Micon International Limited (Micon) has been retained by Grid Metals Corp. ('Grid Metals' or Grid) to update the estimate of the mineral resources of the copper/nickel MM (previously Makwa-Mayville) Project located near Lac du Bonnet, southeastern Manitoba, and to prepare an independent Technical Report on the updated mineral resource in accordance with the requirements of Canadian National Instrument 43-101 (NI 43-101). A total of 14 new diamond drill holes have been completed on the Makwa property since the last mineral resource estimate conducted by Roscoe Postle Associates Inc. (RPA) in 2013/14 and this drilling, together with updated cut-off grade input parameters, have necessitated the need to update the resource. The Mayville property mineral resource update is related to newly established input parameters (i.e., improved Ni and Co recoveries) as some of the drilling conducted in 2022 is off the main (M2) deposit area. The purpose of this report is to support the public disclosure of the updated mineral resource estimate for the MM Project and to make appropriate recommendations to upgrade and expand the resource.

This report is intended to be used by Grid Metals subject to the terms and conditions of its agreement with Micon. That agreement permits Grid Metals to file this report as an NI 43-101 Technical Report with the Canadian Securities Administrators (CSA) pursuant to provincial securities legislation. Except for the purposes legislated under provincial securities laws, any other use of this report, by any third party, is at that party's sole risk.

The requirements of electronic document filing on SEDAR (System for Electronic Document Analysis and Retrieval, www.sedar.com) necessitate the submission of this report as an unlocked, editable pdf (portable document format) file. Micon accepts no responsibility for any changes made to the file after it leaves its control.

The conclusions and recommendations in this report reflect the authors' best judgment in light of the information available at the time of writing. The authors and Micon reserve the right, but will not be obliged, to revise this report and conclusions if additional information becomes known subsequent to the date of this report. Use of this report acknowledges acceptance of the foregoing conditions.

Micon does not have, nor has it previously had any material interest in Grid Metals or related entities. The relationship with Grid Metals is solely a professional association between the client and the independent consultant. This report is prepared in return for fees based upon agreed commercial rates and the payment of these fees is in no way contingent on the results of this report.

This report includes technical information, which requires subsequent calculations or estimates to derive sub-totals, totals, and weighted averages. Such calculations or estimations inherently involve a degree of rounding and consequently introduce a margin of error. Where these occur, Micon does not consider them material.

2.2 Sources of Information

The principal sources of information for this report are:

- Previous technical reports on the MM Project area, referenced in Sections 6.0 and 28.0.
- Drill hole databases and previous block models supplied by Grid Metals.
- Observations made during the site visits by Micon, represented by Mr. Charley Murahwi, M.Sc., P.Geo., FAusIMM
- Grid Metals internal exploration assessment reports.
- Discussions with Grid Metals management and staff familiar with the MM Project.

Micon is pleased to acknowledge the helpful cooperation of Grid Metals' management and staff who made all data requested available and responded openly and helpfully to all questions, queries, and requests for material.

2.3 Scope of Personal Inspection

Micon's Qualified Person (QP) (Charley Murahwi, M.Sc., P. Geo., FAusIMM) conducted a site visit to the Project from 25 to 27 October 2022. During the visit, the QP discussed the geologic model, witnessed drilling on the adjacent Donner Lithium claims, verified drill hole collar positions, reviewed density measurements, examined drill cores, reviewed drill hole logs, reviewed mineralization types, and discussed the Quality Assurance/Quality Control (QA/QC) protocols used by Grid Metals.

2.4 Units of Measurement and Abbreviations

All currency amounts are stated in United States dollars (USD). Where appropriate, some estimates are in Canadian dollars (CAD). Quantities are generally stated in metric units, the standard Canadian and international practice, including metric tons (tonnes, t) or kilograms (kg) for weight, kilometres (km) or metres (m) for distance, hectares (ha) for area and grams (g). Wherever applicable, Imperial units have been converted to Système International d'Unités (SI) units for reporting consistency. A list of abbreviations is provided in Table 2.1.

Table 2.1
Units and Abbreviations

Name	Abbreviation	Name	Abbreviation
Canadian Institute of Mining, Metallurgy and Petroleum	CIM	Million years	Ma
Canadian National Instrument 43-101	NI 43-101	Million metric tonnes per year	Mt/a
Canadian Standards Association	CSA	Milligram(s)	mg
Carbon in leach	CIL	Millimetre(s)	mm
Centimetre(s)	cm	Natural source audio magnetotellurics	NSAMT
Complex resistivity	CRIP	Net present value	NPV
Controlled-Source Audio-Frequency Magnetotellurics	CSAMT	Net smelter return	NSR

Name	Abbreviation	Name	Abbreviation
Cubic feet per minute	cfm	North American Datum	NAD
Day	d	North American Free Trade Agreement	NAFTA
Degree(s)	°	Not available/applicable	n.a.
Degrees Celsius	°C	Ounces	oz
Digital elevation model	DEM	Ounces per year	oz/y
Dollar(s), Canadian and US	$, Cdn $ and US$	Parts per billion	ppb
Gram(s)	g	Parts per million	ppm
Grams per metric tonne	g/t	Percent(age)	%
Greater than	>	Quality Assurance/Quality Control	QA/QC
Hectare(s)	ha	Reverse takeover	RTO
Induced polarization	IP	Second	s
Internal rate of return	IRR	Securities and Exchange Commission	SEC
Kilogram(s)	kg	Specific gravity	SG
Kilometre(s)	km	System for Electronic Document Analysis and Retrieval	SEDAR
Less than	<	Système International d'Unités	SI
Litre(s)	l	Three-dimension	3D
Metre(s)	m	Tonne (metric)	t
Metres above sea level	masl	Tonnes (metric) per day	t/d
Micon International Limited	Micon	Universal Transverse Mercator	UTM
Million tonnes	Mt	Year	y
Million ounces	Moz		

3.0 RELIANCE ON OTHER EXPERTS

In this technical report, the information/data in contained in Sections 1.3, 4.0 and 20.0 regarding royalties, permitting, taxation, and environmental matters, are based on material provided by Grid Metals. The QP and Micon are not qualified to comment on such matters and have relied on the representations and documentation provided by Grid Metals.

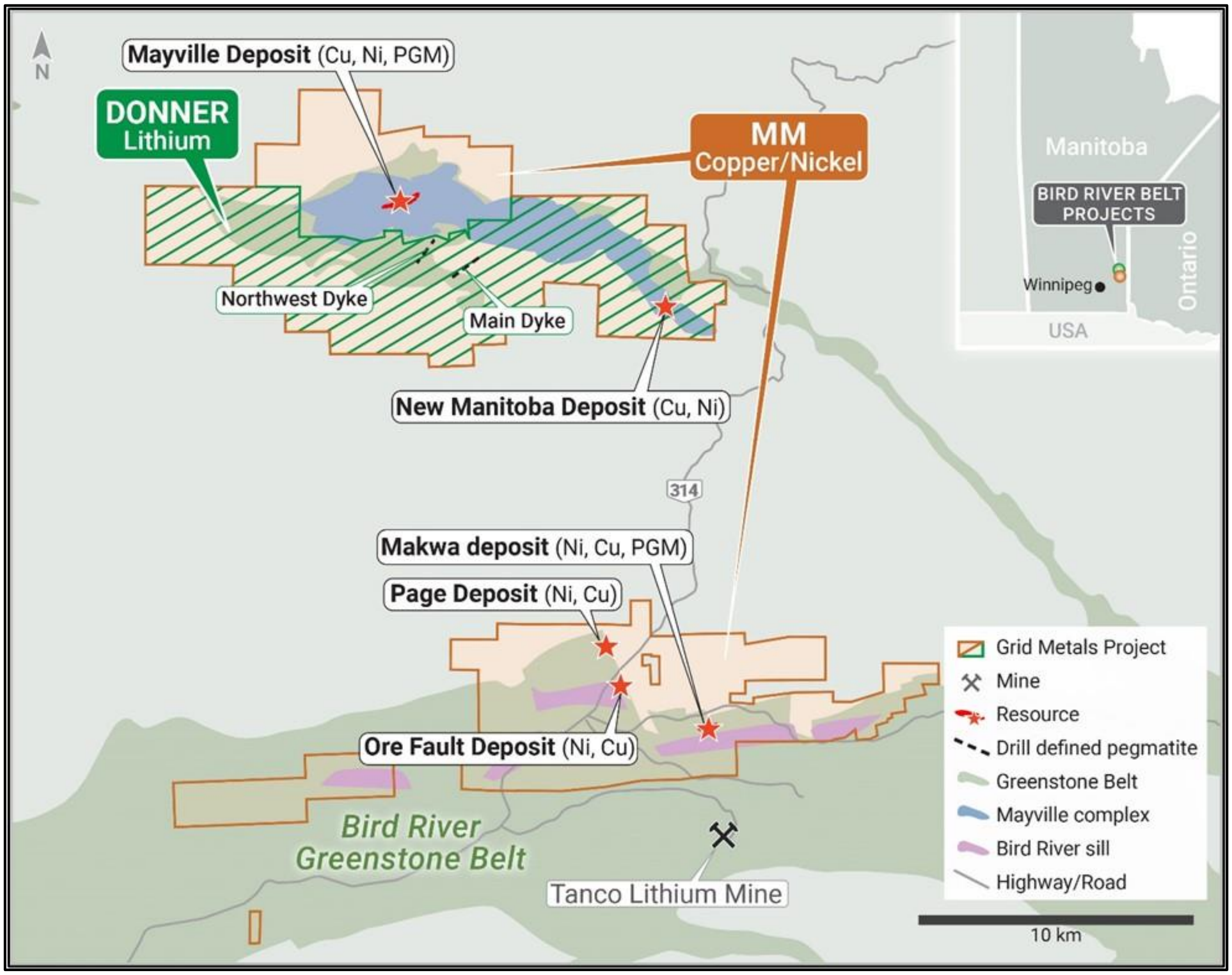
All data used in this report were originally provided by Grid Metals. Micon's QP has reviewed and analyzed this data and has drawn his own conclusions therefrom, augmented by direct field examination conducted during the site visit from 25 to 27 October 2022.

4.0 PROPERTY DESCRIPTION AND LOCATION

4.1 Project/Property Location

The MM Project (Figure 4.1) is located in the Bird River Greenstone Belt approximately 145 km north-east from Winnipeg, Manitoba.

Figure 4.1
Location of the MM Project and Other Surrounding Grid Metals Properties



Source: https://gridmetalscorp.com/.

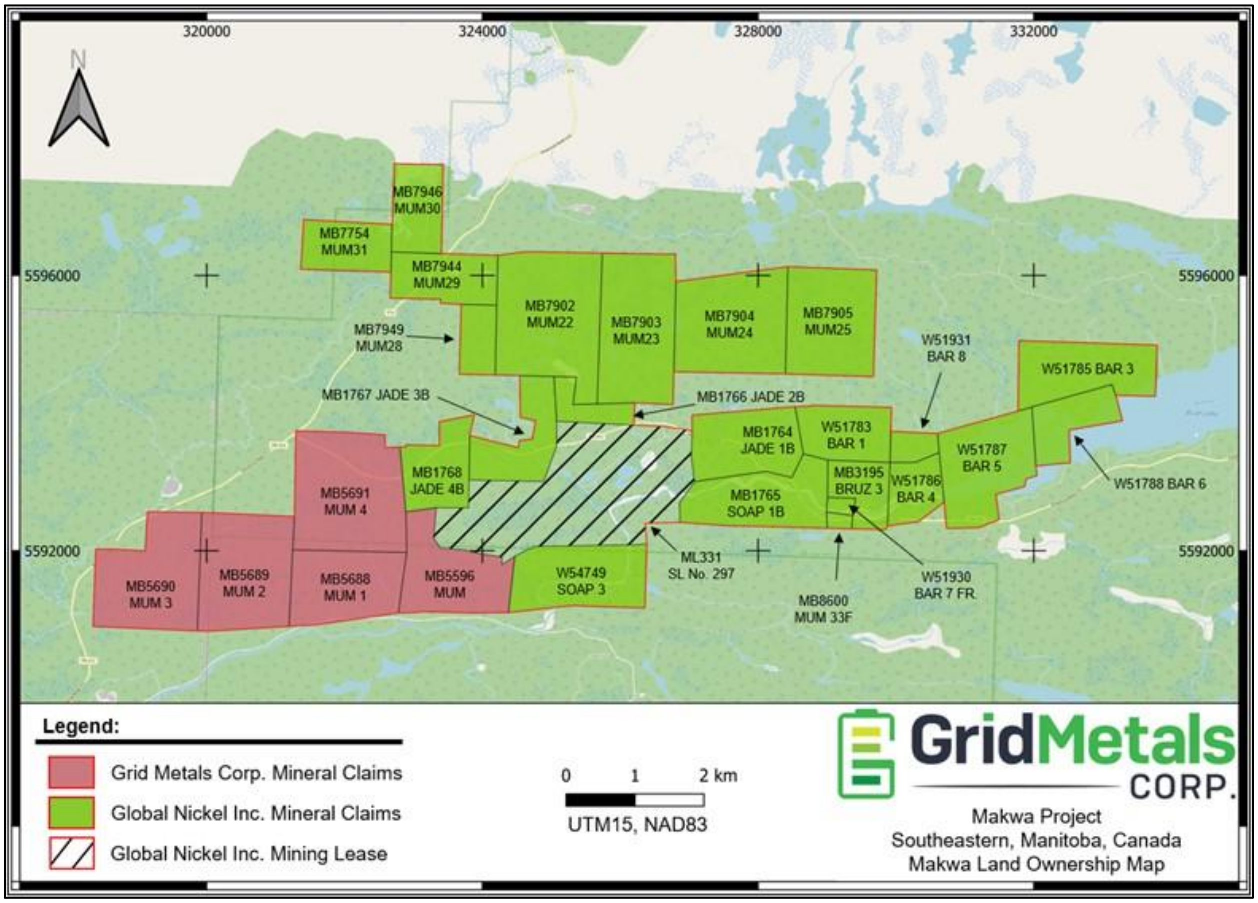
The Makwa property is on UTM Zone 15, National Topographic System (NTS) map sheets 52L/5 and 52L/6 at latitude 50°28'10"N and longitude 95°26'27"W. The Mayville property is at approximately 50° 35' to 50° 39' N latitude and 95° 40' to 95° 30' W longitude, UTM Zone 15, on National Topographic Series (NTS) map sheet 52L-12.

4.2 PROPERTY DESCRIPTION AND LAND TENURE

4.2.1 Makwa

The property comprises one mineral lease (ML-331), one surface lease (No. 297), and 28 unpatented mineral claims, totalling 4,108 ha. Part of the property is within Nopiming Provincial Park, in an area zoned as "Resource Management", which is a multiple-use category that allows for commercial resource development and/or mineral extraction (Figure 4.2).

Figure 4.2
Makwa Property Claims Map



Source: Grid Metals Corp. 2023, internal file.

4.2.1.1 Mineral Lease ML-331

Mineral Lease ML-331 (Figure 4.2) is a renewable 21-year lease covering 499 ha. It was issued by the Province of Manitoba on June 26, 1998, commencing on June 17, 1998. The lease expired on July 17, 2019, and was renewed. The lease annual fee is C$4,256 (C$8/ha) when mining and C$6,384 (C$12/ha) when production is not taking place (Evans, 2005). The lease has been surveyed.

4.2.1.2 Surface Lease No. 297

Surface Lease No. 297 covers the same area as Mining Lease ML-331. It was issued January 22, 1999, by the Province of Manitoba as a renewable 21-year lease commencing on May 1, 1999. The lease was designated for construction and operation of a nickel mine and mill facility and also allows construction and operation of a cobalt mill. The total annual lease fee is C$3,109 (C$5.84/ha) which includes land rental, service fees and federal goods and services tax.

4.2.1.3 Mineral Claims

The Makwa property is comprised of 28 mineral claims encompassing a total area of 3,609 ha. The claims details are summarized in Figure 4.1. All claims are owned either by Global Nickel Inc. (Global Nickel), of which Grid Metals owns 100%, or by Grid Metals itself. The surface rights of the mineral claims are owned by the Crown (Evans, 2005). The staked mineral claims have not been surveyed (Evans, 2005). The current annual cost to hold the claims is C$29,365.50.

Table 4.1
Makwa Property Mineral Claims

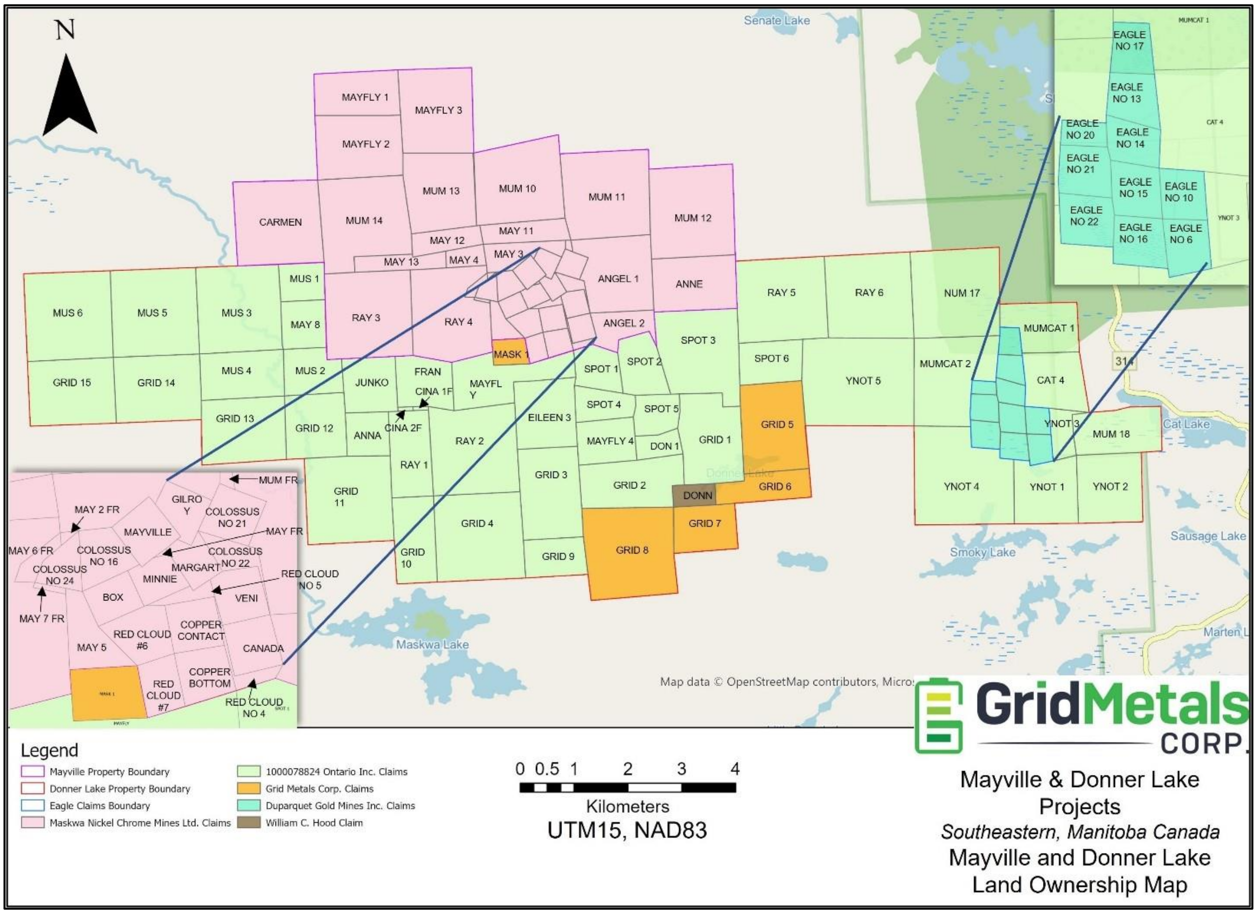
Claim Name	Claim Name	Holder	Recorded	Expires	Area (Ha)
MB5596	MUM	Grid Metals	30/06/2004	2026-08-29	126
MB5688	MUM 1	Grid Metals	17/09/2004	2025-11-16	160
MB5689	MUM 2	Grid Metals	17/09/2004	2025-11-16	180
MB5690	MUM 3	Grid Metals	17/09/2004	2025-11-16	192
MB5691	MUM 4	Grid Metals	17/09/2004	2025-11-16	252
MB1764	JADE 1B	Global Nickel	20/07/1992	2025-09-18	151
MB1765	SOAP 1B	Global Nickel	06/08/1987	2025-09-13	164
MB1766	JADE 2B	Global Nickel	20/07/1992	2025-09-18	43
MB1767	JADE 3B	Global Nickel	20/07/1992	2025-09-18	82
MB1768	JADE 4B	Global Nickel	20/07/1992	2025-09-18	112
MB3195	BRUZ 3	Global Nickel	30/05/2002	2025-07-29	80
MB7754	MUM 31	Global Nickel	15/01/2008	2025-03-16	96
MB7902	MUM 22	Global Nickel	02/10/2007	2025-12-01	225

Claim Name	Claim Name	Holder	Recorded	Expires	Area (Ha)
MB7903	MUM 23	Global Nickel	02/10/2007	2025-12-01	215
MB7904	MUM 24	Global Nickel	02/10/2007	2025-12-01	256
MB7905	MUM 25	Global Nickel	02/10/2007	2025-12-01	203
MB7944	MUM 29	Global Nickel	15/01/2008	2025-03-16	89
MB7946	MUM 30	Global Nickel	15/01/2008	2025-03-16	94
MB7949	MUM 28	Global Nickel	15/01/2008	2026-03-16	54
MB8600	MUM 33 F	Global Nickel	19/08/2008	2025-10-18	11
W51783	BAR 1	Global Nickel	19/03/1987	2025-05-18	100
W51785	BAR 3	Global Nickel	19/03/1987	2025-05-18	159
W51786	BAR 4	Global Nickel	19/03/1987	2025-05-18	61
W51787	BAR 5	Global Nickel	19/03/1987	2025-05-18	209
W51788	BAR 6	Global Nickel	19/03/1987	2025-05-18	96
W51930	BAR 7 FR.	Global Nickel	06/08/1987	2025-10-05	11
W51931	BAR 8	Global Nickel	06/08/1987	2025-10-05	23
W54749	SOAP 3	Global Nickel	15/07/1996	2025-09-13	165
ML331	SOAP 1B	Global Nickel	15/07/1996	2024-07-17	499
Total					**3,609**

4.2.2 Mayville

In 2022, Grid Metals separated the Mayville property into the Mayville base metal property and the Donner Lake lithium property. This division was completed in order to separate claims subject to a Joint Venture Agreement with Lithium Royalty Corp. (Donner Lake claims) from claims excluded from this agreement (Mayville claims). The current Mayville property consists of 42 unpatented mineral claims covering an area of 3,546 ha. The layout of the claims is shown in Figure 4.3.

Figure 4.3
Mayville Claims Map



Source: Grid Metals Corp., 2023, internal file.

The claims comprising the Mayville property are summarized in Table 4.2.

Table 4.2
Mayville Property Unpatented Mineral Claims

	Claim Name	Claim Number	Holder	Recorded	Expires	Area (Ha)
1	CARMEN	MB6081	MNCM	2005/06/29	2024/08/28	256
2	MAY 12	MB3362	MNCM	2002/01/07	2024/03/07	52
3	MAYFLY 3	MB9737	MNCM	2010/06/07	2024/08/06	192
4	COLOSSUS NO 24	W6210	MNCM	1935/09/20	2024/11/19	15
5	MAY 5	MB1975	MNCM	1999/11/02	2024/01/01	24
6	BOX	27482	MNCM	1919/01/07	2024/03/07	17
7	ANGEL 2	W52802	MNCM	1993/11/15	2024/01/14	63
8	ANNE	MB1665	MNCM	1998/08/17	2024/10/16	160
9	RAY 3	W50005	MNCM	1996/01/03	2024/03/03	256
10	MUM 14	MB5934	MNCM	2005/05/04	2024/07/03	234
11	RED CLOUD #7	W6990	MNCM	1936/08/10	2024/10/09	17

	Claim Name	Claim Number	Holder	Recorded	Expires	Area (Ha)
12	RED CLOUD #6	W6989	MNCM	1936/08/10	2024/10/09	24
13	MARGART	26785	MNCM	1918/05/07	2024/07/06	14
14	VENI	27765	MNCM	1919/07/25	2024/09/23	21
15	RED CLOUD NO 4	W6987	MNCM	1936/08/10	2024/10/09	7
16	MAYFLY 1	MB9735	MNCM	2010/06/07	2024/08/06	128
17	MAY 7 FR	MB1977	MNCM	1999/12/03	2024/02/01	2
18	GILROY	26686	MNCM	1917/12/28	2024/02/26	16
19	MAY 4	MB2089	MNCM	1999/11/02	2024/01/01	30
20	CANADA	27769	MNCM	1919/07/25	2024/09/23	21
21	MUM 13	MB5933	MNCM	2005/05/04	2024/07/03	240
22	MAYVILLE	26684	MNCM	1917/12/28	2024/02/26	21
23	MAY 3	MB2090	MNCM	1999/11/02	2024/01/01	54
24	RED CLOUD NO 5	W6988	MNCM	1936/08/10	2024/10/09	6
25	RAY 4	W50006	MNCM	1996/01/03	2024/03/03	241
26	MAY 13	MB3363	MNCM	2002/01/07	2024/03/07	73
27	MAY 2 FR	MB2088	MNCM	1999/10/22	2024/12/21	2
28	MINNIE	27483	MNCM	1919/01/07	2024/03/07	16
29	COPPER CONTACT	27767	MNCM	1919/07/25	2024/09/23	21
30	COLOSSUS NO 21	W6207	MNCM	1935/09/20	2024/11/19	23
31	COLOSSUS NO 22	W6208	MNCM	1935/09/20	2024/11/19	11
32	MUM 10	MB5928	MNCM	2005/05/04	2024/07/03	256
33	MAYFLY 2	MB9736	MNCM	2010/06/07	2024/08/06	256
34	MAY FR	MB1640	MNCM	1999/02/05	2024/04/05	1
35	MAY 11	MB3361	MNCM	2002/01/07	2024/03/07	64
36	MUM 11	MB5929	MNCM	2005/05/04	2024/07/03	240
37	ANGEL 1	W52801	MNCM	1993/11/15	2024/01/14	181
38	MUM 12	MB5930	MNCM	2005/05/04	2024/07/03	240
39	COPPER BOTTOM	27764	MNCM	1919/07/25	2024/09/23	21
40	MAY 6 FR	MB1976	MNCM	1999/12/03	2024/02/01	7
41	COLOSSUS 16	W6202	MNCM	1935/09/20	2024/11/19	21
42	MUM FR	MB5949	MNCM	2005/05/30	2024/07/29	2
	Total					**3,546**

4.3 UNDERLYING AGREEMENTS

4.3.1 Provincial

According to the Mines and Minerals Act of Manitoba (The Mines and Minerals Consequential Amendment Act, Part 7,108 enacted July 26, 1991), a mineral lease grants to the lease holder:

- The exclusive rights to the minerals, other than quarry minerals, that are the property of the Crown and are found in place on, in, or under the land covered by the lease.
- Mineral access rights that include:
    - The right to open and work a shaft or mine within the limits of the lease area; and

    - The right to erect buildings or structures upon the subject land for the purpose of exploration and/or mining.
- According to the same act, the holder of a mineral claim is granted:
    - The exclusive right to explore for and develop the Crown minerals other than quarry minerals, found in place on, in, or under the lands covered by the claim.
    - Subject to certain Ministerial considerations, the holder of a mineral claim may enter, use, and occupy the surface of the land that is governed by the claim for the purpose of prospecting or exploring or developing, mining, or producing minerals on, in, or under the land.

In Manitoba, unpatented mineral claims require annual exploration assessment expenditures of C$12.50 per hectare per year on claims less than 10 years from the date of registration. The amount changes to C$25.00 per hectare per year for any claims held past 10 years from the date of registration. Previous exploration work can be banked, grouped, and applied as needed to meet assessment requirements. Unpatented mineral claims include access to the mining rights only. No outstanding obligations exist with regard to the claims under option.

Exploration work conducted on the Grid Metals mineral claims requires work permits from Manitoba Conservation (Parks Branch). Work permits are submitted to Manitoba Conservation, which is responsible for granting exploration permits for work carried out within Nopiming Park. Manitoba Economic Development, Investment, Trade and Natural Resources conducts consultation with the First Nations prior to the work permits being granted. To date, the company has received all work permits in a timely manner.

4.3.2 Makwa

The following is excerpted from the RPA April 30, 2014, PEA Technical Report:

In 1996, Canmine Resources Corporation (Canmine) optioned the property, consisting of the four Jade claims, from Maskwa Nickel Chrome Mines Ltd. (MNCM), controlled by Falconbridge Ltd. (Falconbridge). The total acquisition cost was C$1.9 million, and the claims were subject to a 3% net smelter return (NSR) to MNCM with a provision that Canmine could reduce the NSR to 2% by paying $1 million to MNCM.

In 2002, Canmine initiated a restructuring of its financial obligations under the Companies' Creditors Arrangement Act (CCAA) and obtained a protection order under CCAA before the Ontario Superior Court of Justice (Evans, 2005). The Ontario Superior Court of Justice ordered Canmine to liquidate all of its assets for stakeholders after the protection order was lifted on February 26, 2003. The leases and claims were sold free of encumbrances, including royalties under the terms of the Court Order authorizing Purchase Agreement.

Canmine constructed a large steel building on a cement foundation next to the Dumbarton portal and purchased several pieces of mill equipment for pilot testing of cobalt-rich mineralized material (Evans, 2005). These items were later sold to a private individual.

In 2003, Global Nickel purchased 100% undivided interest in the mining lease and six claims (four JADE claims and two SOAP claims) subject to a 1% NSR to Commerce Capital Inc.

In June 2004, Mustang acquired a 100% interest in Global Nickel for $500,000 and 6.679 million shares of Mustang (valued at C$0.43/share) payable to the shareholders of Global Nickel. Through this, Mustang acquired the Makwa (then Maskwa) nickel property that consisted of one renewable 21-year mineral lease, one surface lease, and six mineral claims covering 1,249 ha. The mining lease and six claims are subject to a 1% NSR, however, Mustang can reduce the NSR to 0.5% by paying C$500,000 (Evans, 2005). Five of the MUM series claims in Table 4.1 are 100% owned by Mustang and are not subject to any royalties.

In November 2009, Mustang concluded a Memorandum of Understanding (MOU) with the Sagkeeng First Nation for exploration activities in the area. Maskwa was renamed Makwa to reflect the Ojibway pronunciation of the word "bear". A revised Exploration Agreement with the Sagkeeng First Nation was signed on April 28, 2021.

4.3.3 Mayville

The following is excerpted from the RPA April 30, 2014, PEA Technical Report:

4.3.3.1 Option Agreement with Exploratus Elementis Diversis Ltd.

In January 2005, Mustang and Exploratus signed a letter of intent for the purchase and sale of Exploratus' 60% interest in the Mayville Property Joint Venture Agreement with MNCM, dated April 10, 1997, and amended February 15, 2000. The purchase price of $500,000 was payable in the form of $90,000 cash, a note for $165,000 due on November 16, 2006, and 700,000 common shares subject to various hold and escrow periods. The sale was subject to regulatory and Exploratus shareholder approval and to a 30-day right of first refusal of MNCM, the 40% minority partner in the Mayville Property Joint Venture. The general terms of the agreement were accepted by both parties and MNCM did not exercise its right of first refusal within the time allotted. The formalized purchase and sale agreement of Mustang's initial 60% interest in the Mayville Property was executed on March 31, 2005, with Exploratus shareholders approving the transaction on May 16, 2005. Exploratus retained a 2% NSR royalty on its 60% interest including any mineral rights obtained by Mustang within an 800 m area of interest. Pursuant to an agreement dated December 29, 2011, Mustang purchased the Exploratus NSR royalty (equal to 60% of a 2% modified NSR) by issuing 600,000 common shares of Mustang.

On April 8, 2005, Mustang purchased a 72.6% interest in MNCM from Falconbridge, the majority shareholder of MNCM. Terms of the acquisition included a $120,000 cash payment by Mustang to Falconbridge on closing and the issuance of 400,000 common shares of Mustang. A $210,000 no-interest bearing note is due and payable to Falconbridge over a period of five years in the event that the commercial production is achieved from any part of the properties owned by MNCM. No royalties or off-take rights were retained by Falconbridge in the underlying property assets. The remaining 27.4% of MNCM is owned by 121 minority shareholders.

In summary, Mustang's January 2005 purchase agreement with Exploratus gained a 60% interest in the fifty-four claims of the Mayville Property. At that time, the remaining 40% was owned by MNCM.

Mustang's April 2005 purchase of 72.6% of MNCM resulted in a total interest of 89.04% in those 54 claims that make up part of the Mayville Property. The M2 Deposit and current Mineral Resource are located within this set of claims.

4.3.3.2 Option Agreement with Tantalum Mining Corporation

Under the option agreement, Mustang had the right to earn 100% of the seven claims currently under Tantalum Mining Corporation (Tantalum). To complete the obligations under the Tanco Option, Mustang was obligated to make cash payments of $45,000 (paid) and complete $250,000 in work expenditures by June 2013. On August 9, 2013, the seven claims were transferred 100% to Mustang including SPOT 1, SPOT 2, SPOT 3, SPOT 4, SPOT 5, SPOT 6, and EILEEN 3 (Table 4.2).

4.4 MICON COMMENT

Micon's QP is aware of the following environmental constraints:

- Location of Makwa within the western part of Nopiming Provincial Park – a multi-use park that allows mineral extraction.
- Proximity of the Makwa deposit to an all-weather Provincial Road (PR 314) to the north and the Bird River to the south.

Other than this, Micon is not aware of any other significant factors and risks that may affect access, title, or Grid Metals' right or ability to perform work on the property.

5.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

5.1 General Statement

The MM Project consists of a mining lease and mineral claims held by the Company and its subsidiaries. It is readily accessible year-round, by provincial highways from the capital city of Winnipeg located ~145 km to the southwest. The Mayville deposit is situated two km north of the Company's Donner Lithium Project where the Company has published a NI 43-101 Resource Estimate Technical Report. Both the Donner and MM Projects will benefit from efficiencies in exploration, government, and First Nations relations, permitting and infrastructure.

The following is edited from RPA (2014), Ross (2013) and Duke et al. (2008).

5.2 Accessibility

The Makwa Property is accessible via paved roads approximately 90 km northeast from Winnipeg to the community of Lac du Bonnet, then 61 km northeast of Lac du Bonnet. From Lac du Bonnet, there is road access by Manitoba Provincial Road 313 to Pinawa Bay, and then Manitoba Provincial Road 315 to the property. Manitoba Provincial Roads 313 and 315 are all-weather paved roads in good condition. Manitoba Provincial Road 315 changes to a gravel road at Bird River but is well maintained to provide access to lodges and homes of permanent residents in the area. Nopiming Lodge is located approximately six kilometres east of the property on Bird Lake and provides accommodation, food, and gasoline year-round.

The Mayville Property is accessed by driving north from the Makwa Property on Provincial Road 314 that leads to the Trans Licence Road, which bisects the Mayville Property. The Trans Licence Road is a private road previously owned by the Tembec Forest Resource Management Group. An unmaintained trail leading to the M2 Deposit provides all-season access by either all-terrain vehicle or snowmobile.

5.3 Climate

The climate at the Makwa - Mayville project is north temperate with long cold winters and short summers. July is the warmest month, with an average daily high of about 20°C. January is the coldest month, with an average daily high of about -18°C. Mean annual precipitation in the general area is in the range of 475 mm to 620 mm, with about 25% of the total falling as snow. Mean annual lake evaporation is approximately 435 mm and mean annual surface runoff is approximately 200 mm.

Mining operations can be carried out year-round. Nopiming Lodge and a few cottages even further to the east are occupied year-round. Manitoba Provincial Road 315 is maintained on a twelve-month basis.

5.4 Physiography

The topography of the property area is characterized by a gently rolling surface with elevations ranging from 300 m to 400 m above sea level with a maximum local relief variation in the order of 15 m. The physiography consists of low rock outcrop ridges separated by low-lying areas. Muskeg swamp, small rivers, streams, and beaver ponds occupy these low areas. Vegetation over the positive relief areas and adjacent to the outcrops consists mainly of jack pine and hazel brush with minor white spruce and poplar trees. In the gullies and muskeg areas, willows, tamarack, and black spruce are the most common vegetation. About halfway between the property area and Lac du Bonnet, is the unconformable contact of Paleozoic sediments overlying the Precambrian shield rocks; from that contact west, the relief becomes gentler and is flat at Lac du Bonnet.

5.5 LOCAL RESOURCES AND INFRASTRUCTURE

Lac du Bonnet is a small agricultural community located 90 km northeast of Winnipeg on the west bank of a portion of the Winnipeg River about 60 km to the southwest of Makwa. Lac du Bonnet has a population of 1,100. Winnipeg offers a comprehensive range of services and supplies. The Canadian Pacific Railway mainline passes east-west through Molson and White Mouth, 45 km south of Lac du Bonnet and can be used for dispatching concentrate and other heavy freight as has been done in the past by both Falconbridge and Canmine at the formerly producing Makwa and Dumbarton mines.

The Project has sufficient land holdings for exploration and development purposes, i.e., mining operations and potential waste storage. Water sources are available on the property, mainly from the Bird River south of the Makwa open pit. There is power available from the national grid lines which are within 50 km radius of the property.

6.0 HISTORY

6.1 PRIOR OWNERSHIP AND EXPLORATION HISTORY

The exploration and ownership history of the MM Project dates back to the 1900s and is summarized as follows.

6.1.1 Makwa

The Makwa exploration, ownership and production history progressed intermittently over the years and is summarized in the following list after Harper, 2004 and Evans, 2005:

Prospectors, 1900-1929: This was a period of early prospecting/trenching and claim staking. There are no records of the actual ownership for this period.

Manitoba Copper Company, 1929: This company completed eleven drill holes totalling 653 m targeting copper and nickel mineralization on various showings on the property. The best intersections returned 1% Cu to 2% Cu and 1.5% Ni. However, they apparently did not keep the property.

Northfield Mining Company Ltd., 1936-1937: This company drilled twenty-one (21) drill holes totalling about 1,261 m targeting nickel and copper mineralization on the showing that would later be mined as the Dumbarton Ni-Cu deposit. Records of this work are incomplete.

Bird River Chromite (BRC), 1943-1944: BRC drilled nine holes totalling 894 m and intersected grades of up to 27% Cr2O3 over one metre. No further details are available on the company's activities.

Maskwa Nickel Chrome Mines Limited (MNCM): Acquired the property in 1952 and conducted the following exploration activities.

Between 1952 and 1957, drilled 75 holes totalling approximately 7,622 m on the Dumbarton deposit ("B-" series holes).

In 1965, drilled 9 holes totalling 1,220 m on the Dumbarton deposit.

In 1968, drilled 14 drill holes totalling approximately 1,250 m into the Dumbarton deposit. Records of this work are incomplete. An audio frequency magnetotelluric (AFMAG) ground survey and a fluxgate magnetometer ground survey were also completed.

Between 1969 and 1973, entered into an agreement with Consolidated Canadian Faraday Limited to mine the Dumbarton deposit and the F-Zone, which produced approximately 1,540,000 t of ore averaging 0.81% Ni and 0.30% Cu. Ore was trucked to Gordon Lake, Ontario for milling.

From 1974 to 1975, completed approximately 80 km of line-cutting and 72 km of ground electromagnetic (EM) and magnetometer surveys. Ninety-seven drill holes were completed totalling approximately 15,244 m. The Maskwa deposit was discovered in May 1974.

In 1976, mined 332,000 t from the Makwa deposit averaging 1.16% Ni and 0.20% Cu by open pit. Ore was trucked to Gordon Lake, Ontario for milling.

In 1987, completed approximately 24 km of induced polarization (IP) surveying and eight drill holes totalling 1,893 m targeted platinum and palladium mineralization. Best intersections were 1.5 m of 305 ppb Pt and 1,215 ppb Pd, 1.4 m of 3.97 ppm Au, and 1.3 m of 3.95 g/t Au.

Canmine, 1996-1999: Acquired the property from MNCM and carried out environmental studies (1996-1998), geophysical surveys (1998) and 63 drill holes totalling 17,110 m (September 1996 to March 1998), including 52 drill holes totalling 14,959 m on the Maskwa (now Makwa) deposit, and estimated the Maskwa deposit resource (1998 and 1999). A scoping study on concentrate treatment was completed in 1999. Surface and mining leases were granted in 1999.

During 2003, Canmine was ordered to liquidate its assets on February 26, 2003.

Global Nickel Inc., 2003: Global Nickel purchased a 100% undivided interest in the Maskwa Property.

Mustang, 2004-2005: On May 19, 2004, Mustang acquired a 100% interest in Global Nickel and subsequently completed 36 drill holes totalling 6,228 m.

Mustang 2007-2009: Mustang drilled additional 118 holes for a total of 24,435 m. Environmental assessment and community consultation was completed in conjunction with a pre-feasibility study.

Mustang 2009: Mustang Minerals drills ten additional holes bringing the total number of holes drilled at Makwa to 154.

Mustang 2013/14: Mustang Minerals engages Roscoe Postal Associates (RPA) to complete a Preliminary Economic Assessment (PEA) to evaluate the potential of a combined mining project called the Mayville-Makwa Project, incorporating two separate open pit resources into a single mining scenario with a shared mill complex. Results are positive.

Mustang 2015-2016: Mustang carried out trenching at four sites to collect surface data for the Dumbarton Horizon.

Grid Metals (formerly Mustang Minerals) 2018: Abitibi Geoscience conducted an EM ground survey over the Makwa property.

Grid Metals 2019: Earth Ex Geophysical Solutions Re-interpreted the 2018 EM ground survey data.

Grid Metals 2022: Geophysical consultant Martin St. Pierre reviewed all geophysical data for the Makwa/Mayville properties and developed EM plate models and proposed holes to test these models.

Grid Metals 2023: Grid Metals drilled 18 holes on the Makwa property primarily targeting modeled extensions of both the Dumbarton underground and Makwa open pit resources.

6.1.2 Mayville

The Mayville exploration and ownership history is summarized below after Ross, 2013.

Prospecting, 1917: Following an unspecified period of prospecting, the first claims at Mayville were staked by Mr. Amos May to cover a copper-nickel showing.

Devlin Mining and Development Company Ltd. (Devlin), 1921: Optioned the Mayville claims and enlarged the property. Devlin drilled eight diamond drill holes (C1 to C8) totalling 1,831 ft east and south of the main area which houses what is now referred to as the M2 Deposit.

Several companies, 1928-1944: Several companies continued to explore at Mayville during which time about 9,500 ft of drilling (15 holes) were completed.

MNCM, 1951: Acquired the Mayville Property. Falconbridge, the majority shareholder of MNCM, conducted all exploration work on behalf of MNCM. From 1956 through to 1990, Falconbridge drilled 21 holes (M-1 to M-21) for a total length of 10,680 ft. M-16 returned narrow but significant copper and platinum group element (PGE) mineralization. Drilling tested geophysical targets or extensions of known mineralization. Geophysical campaigns during that time included: regional airborne magnetic surveying, ground magnetics, EM, and IP.

Exploratus, 1995: Purchased a 60% interest in the Maskwa-Mayville properties. Exploratus targeted chromite mineralization and conducted vertical gradient and magnetic surveying, and drilled eight holes totalling 2,742 ft.

Mustang, 2005: Purchased Exploratus' 60% interest in the property and 72.6% of MNCM, which at that time owned the remaining 40% of the property. Mustang's drilling and other exploration work is described in Sections 9 and 10 of this report.

Mustang 2006 – 2023: Mustang's completed extensive exploration and resource delineation drilling, surface geochemical surveys and surface and airborne geophysical surveys and three separate mineral resource estimates. This work is described in Sections 9 and 10 of this report.

6.2 HISTORICAL RESOURCE ESTIMATES

The following has been excerpted from the RPA 2014 technical report with minor edits.

A historic resource estimate for the Makwa deposit was reported for Canmine in 1998 and included a total of 2.66 million tonnes averaging 1.27% Ni, 0.21% Cu, 0.04% Co, 0.3 g/t Pt, and 1.1 g/t Pd (Ferreira, 1999). This historical estimate pre-dates NI 43-101 and does not comply with the Instrument; it is cited for historical purposes only and is not to be relied upon.

RPA has previously prepared Mineral Resource estimates for Makwa (Evans, 2005) and Mayville (Ross and Evans, 2006; Ross, 2010). The Makwa estimate was last updated by Wardrop in 2007 (Duke et al., 2008). In May 2008, Micon prepared a report titled: "Independent Technical Report Presenting Mineral Resource and Reserve Estimates and the Results of the Prefeasibility Study for the Maskwa Property, Manitoba". In 2013, RPA prepared resource estimates for Makwa and Mayville and completed a PEA technical report.

All these historical estimates do not conform to the CIM Definition Standards (2014) and CIM Best Practice Guidelines (2019) and should not be relied upon.

6.3 PRODUCTION HISTORY

6.3.1 Makwa

The Makwa property previously experienced partial development and production from two locations, i.e., the Dumbarton and nearby F-Zone and the Maskwa open pit mine. The Dumbarton Deposit produced approximately 1,540,000 tonnes of ore averaging 0.81% Ni and 0.30% Cu (Ferreira et al., 1999). From 1969 to 1973, approximately 24,948,000 pounds of nickel was produced (Harper, 2004). This represents a recovered grade of 0.73% Ni and approximately a 90% mill recovery. These figures probably include production from the F-Zone.

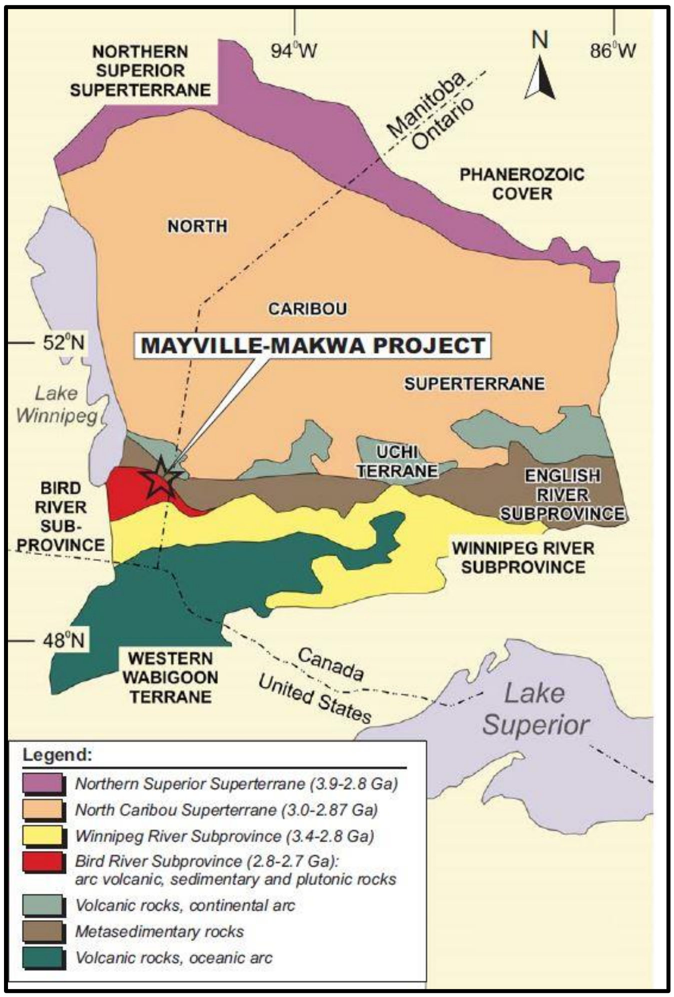
The Maskwa deposit (now Makwa) was discovered in May 1974 and approximately 332,000 tonnes averaging 1.16% Ni and 0.20% Cu was mined by open pit by Maskwa Nickel from 1974 to June 1976 (Ferreira et al., 1999). The ore was trucked to the mill at Gordon Lake, Ontario. Approximately 8,491,000 pounds of nickel and 1,464,000 pounds of copper were produced (Harper, 2004). This represents recovered grades of approximately 1.05% Ni and 0.18% Cu and approximately a 90% mill recovery for both metals. Open pit mining operations are reported to have ceased due to low nickel prices. Currently there are no reserves.

7.0 GEOLOGICAL SETTING AND MINERALIZATION

7.1 REGIONAL GEOLOGICAL SETTING

As shown in Figure 7.1 the Mayville – Makwa properties are located in the Archean Bird River greenstone belt (BRGB) in southeast Manitoba, which is bounded by the English River sub province and the Winnipeg River sub province to the north and south, respectively. These two sub provinces are part of the Superior Province of the Canadian Shield in which granites and gneisses comprise the typical assemblage.

Figure 7.1
Regional Geological Setting of the Mayville-Makwa Project



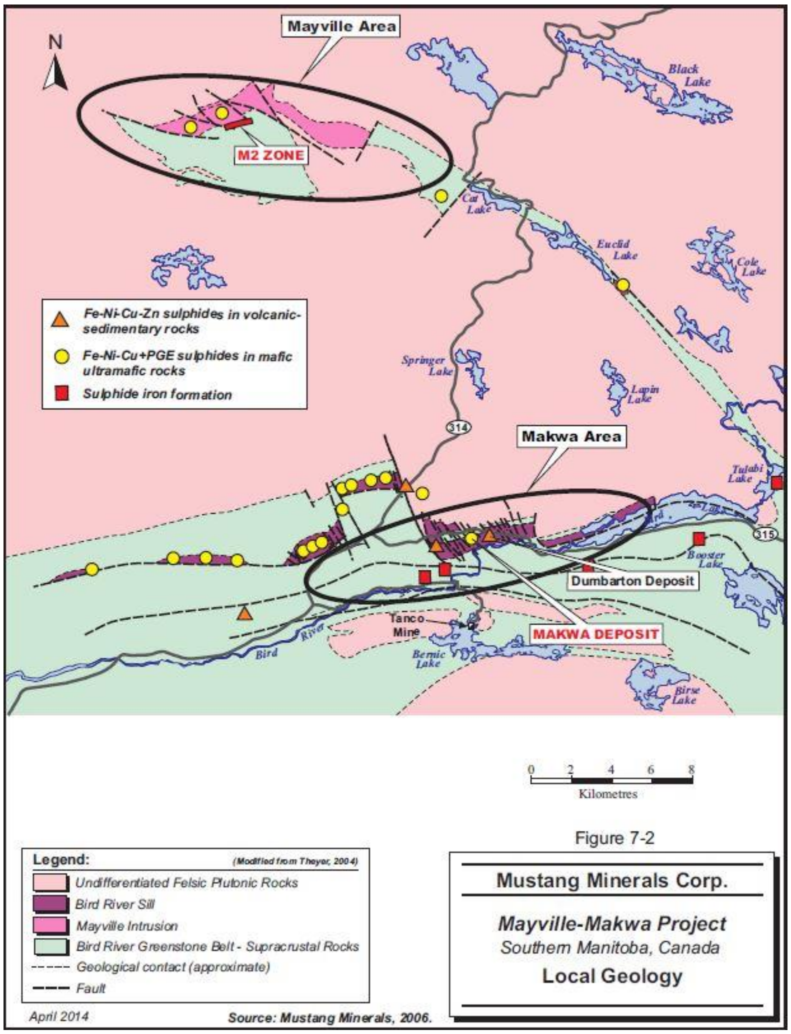
Source: Mustang Minerals Corporation, 2013.

The BRGB consists of bimodal assemblage of metavolcanic rocks and platform-type metasedimentary rocks that have undergone various stages of deformation, greenschist to amphibolite facies metamorphism, and are locally intruded by differentiated felsic to ultramafic rocks.

7.2 Local Geology

The BRGB (Figure 7.2) is a horizontal-Y shaped belt with the two arms/flanks of the "Y" joining near Tulabi Lake. In between the two flanks is a quartz - diorite granodiorite intrusion known as the Makwa Lake Batholith (Duguet et al., 2005).

Figure 7.2
Local Geology Map of the BRG



Source: Mustang Minerals Corporation, 2006.

The southern flank of the BRGB is > 40 km long, ranges in thickness from 3 to 10 km and is dominated by pillowed and massive mafic to felsic metavolcanic rocks, clastic metasediments, and meta-conglomerates of the Rice Lake Group. The layered mafic-ultramafic Bird River Sill (2,470 Ma) intrudes this southern branch and hosts Ni-Cu-sulphide deposits, stratiform chromite, and PGE occurrences. The Makwa property is associated with the Bird River Sill (BRS).

The northern flank of the BRGB is a 40 km long belt with a variable thickness of between 1 to 4 km, and hosts the Mayville Intrusion, which in turn hosts the nickel-copper mineralization and Mineral

Resources at the Mayville property. Supracrustal rocks of the northern splay face north and are composed mainly of pillowed and flow-textured volcanic rocks.

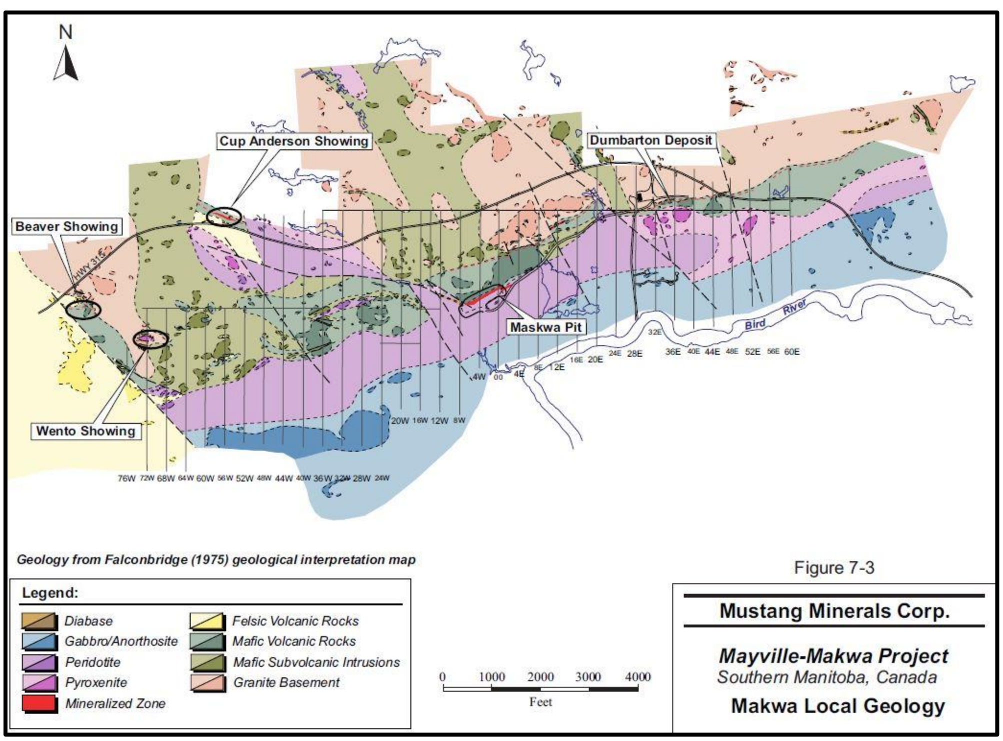
7.3 PROPERTY GEOLOGY

The following descriptions have been excerpted from the RPA Technical Report of April 30, 2014 (see references) with some minor edits.

7.3.1 Makwa

The major geological feature of the Makwa property is the BRS, which extends for eight kilometres across it (Evans, 2005). It consists of an upper anorthositic section, approximately 500 m thick, and a lower 500 m thick section of metaperidotite and metapyroxenite. The anorthosite is a very distinctive rock containing large, 5 to 10 cm-sized, white feldspar porphyroblasts in a darker matrix. A sedimentary package of sandstones, conglomerates, and graphitic shales overlies the BRS to the south. Mafic volcanic rocks underlie the BRS to the north and display large well-developed pillows in several glacially planed outcrops close to Highway 315 (Figure 7.3). Recent litho-geochemical studies completed by Grid Metals geologists based on core samples derived from the Company's 2023 drilling program suggest that the Makwa deposit ultramafic series host rocks were originally olivine + orthopyroxene cumulates (harzburgite, olivine orthopyroxenite).

Figure 7.3
Makwa Property Geology



Source: Mustang Minerals Corporation 2013.

Along the northeast side of the property, the granite basement is stratigraphically overlain by a sulphide iron formation. The iron formation is intermittently continuous for eight kilometres across the Makwa Property and outcrops near Highway 315, south of the Highway 314 junction, approximately 7.5 km further west at the same stratigraphic horizon. It averages approximately one to two metres thick and is cross-cut by younger gabbroic and ultramafic rocks. The Dumbarton deposit, which was the first deposit to be mined on the Makwa property, is part of this stratigraphic horizon. The iron formation is a tabular stratiform deposit that contains layered sulphide and chert bands. It is overlain by pillowed mafic volcanic rocks to the south and is underlain by granite to the north. The Dumbarton deposit is located along the basal contact of the underlying mafic volcanic flow in contact with sulphide facies iron formation.

The Makwa deposit is hosted in peridotite along the basal contact of the BRS. It is located in an area where the ultramafic rocks abruptly change contact relationships from concordant to discordant; the gabbro and ultramafic rocks discordant to stratigraphy may represent a root or feeder zone to this section of the BRS. Alternatively, the discordant contact could represent a primary, structural trap site where sulphide liquid entrained in the parental magmas to the ultramafic series of the Bird River Sill may have been concentrated.

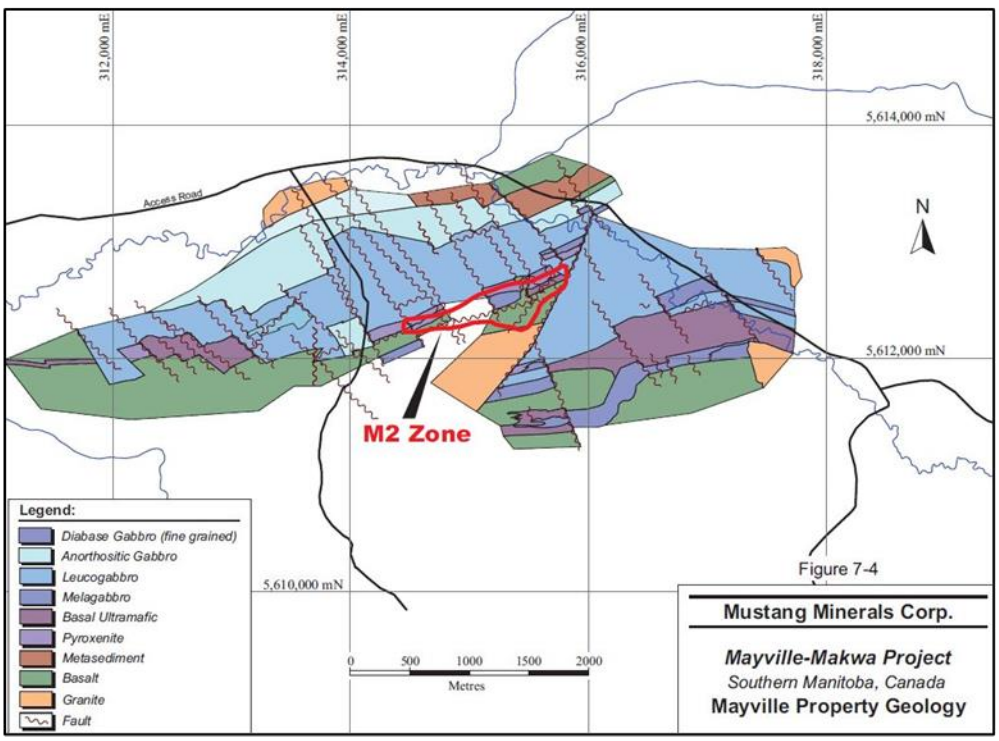
The property is crosscut by northwest-southeast striking faults and near-flat-lying block faults. These faults disrupt stratigraphy as observed in outcrop; they have been interpreted from TEM survey results and are visible in drill core. Strike slip faults are also evident, but the extent to which they are a major factor in the tectonic evolution is unknown. There is one northwest striking fault that cut the Makwa mineralized zone and that was re-exposed on each mining bench. Vugs are present in massive sulphide mineralization in the fault zone and contain radiating millerite crystals. This fault may have had a reverse movement and thickened the deposit locally.

7.3.2 Mayville

The Mayville M2 mineralization is associated with the 5 km long and >1 km thick Mayville Intrusion (Figure 7.4). The upper and lower contacts of the intrusion are not exposed but are generally interpreted from drilling, magnetics and detailed mapping to consist of intermediate to mafic metavolcanic rocks to the south and clastic metasedimentary rocks to the north. Grid's current interpretation of available geophysical data suggest that the Mayville Intrusion is the westernmost, thickest and best preserved portion of a much larger, variably deformed intrusive complex (the 'Mayville complex') that extends for a total strike length of approximately 16 km. The eastern portion of the complex has seen much less exploration activity than the western part. The intrusion is bounded to the north by felsic to intermediate orthogneiss and to the south by mafic to intermediate metavolcanic rocks of the Lamprey Falls Formation. The Lamprey Falls Formation is an overturned sequence of mafic volcanic rocks dipping to the south, with stratigraphic tops to the north.

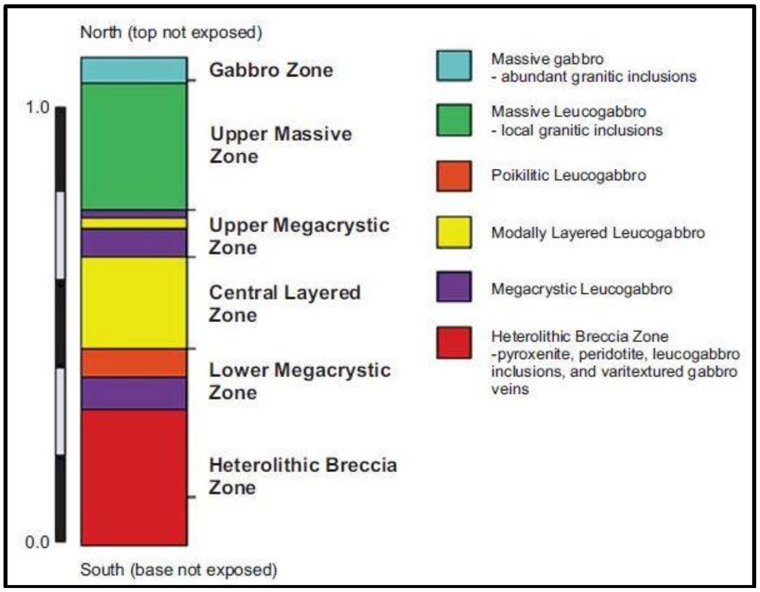
The Mayville Intrusion has undergone upper greenschist to amphibolite grade metamorphism. Original igneous textures are often preserved since deformation is mainly confined to areas proximal to shear zones and isoclinal fold axes. The intrusion is divided into upper and lower zones (Figure 7.5). The 700 m to 800 m thick upper zone consists of leucogabbroic and anorthositic rocks displaying a variety of textures including massive, poikilitic, and megacrystic leucogabbro. The 200 m to 300 m thick lower zone consists of an upper and a lower heterolithic breccia unit with associated disseminated to massive chromite bands and an intervening gabbroic unit that is host to the M2 Deposit mineralization. The breccia zone consists of pods, bands and layers of leucocratic to melanocratic gabbroic rocks, pyroxenite, chromite-rich pyroxenite and xenoliths (inclusions of pre-existing rock in an igneous rock) of mafic volcanic rock. Recent whole-rock lithogeochemical interpretations of drill core samples by Grid geologists suggests that the M2 deposit may occupy the core of a laterally extensive, easterly-striking, tight synclinal fold such that the lower, less competent ultramafic breccia unit has been folded around the more competent gabbroic unit that hosts the M2 deposit. The whole-rock geochemical data also suggest that the primary silicate mineralogy of the gabbroic host unit to the M2 deposit was dominated by plagioclase and orthopyroxene, suggesting that the rocks were originally norites. These recent structural and lithological models require further testing but, if correct, would have important implications for future exploration on the property. More specifically, the deformed, lower stratigraphic units of the Mayville Intrusion could be repeated by folding to the immediate south and east, re-appearing to the south of a narrow package of mafic metavolcanic footwall rocks as a deformed mafic-ultramafic intrusive sequence that hosts similar-styles of Cu-Ni-PGE mineralization in two other mineralized zones (PGM Zone and Copper Contact Zone).

Figure 7.4
Mayville Property Geology



Source: Mustang Minerals Corporation 2013

Figure 7.5
Mayville Type Section



Source: Mustang Minerals Corporation 2013.

Sulphide mineralization in the M2 deposit consists of chalcopyrite, pyrrhotite, pentlandite, and pyrite in a variety of textures including disseminated, blebby, vein, semi-massive, and massive. Oxide mineralization is also abundant within the Lower Zone heterolithic breccia unit and consists of disseminations, pods, or bands of chromite and/or magnetite.

7.4 MINERALIZATION

The following descriptions have been excerpted from the RPA Technical Report of April 30, 2014 (see REFERENCES) with minor edits.

7.4.1 Makwa

Four styles of mineralization on the Makwa Property are summarized in Ferreira et al., 1999 and some smaller mineralized showings are discussed in Juhas, 1973:

1. Magmatic nickel-copper mineralization.
2. Sulphide iron formation nickel-copper mineralization.
3. Sulphide iron formation copper mineralization.
4. Chromite mineralization.

7.4.1.1 Makwa Nickel-Copper Deposit

The Makwa deposit consists of disseminated pyrrhotite, pentlandite, chalcopyrite, and pyrite in an ultramafic peridotite layer at the base of the BRS (Ferreira et al., 1999; Harper, 2004). The higher-grade mineralization near the footwall contact contains approximately 15% disseminated sulphide minerals. About 12% of the sulphides contains nickel.

The host rock of the Makwa deposit is an ultramafic rock consisting of serpentine pseudomorphs after cumulus olivine and orthopyroxene primocrysts in a talc-carbonate groundmass. The deposit is concordant with and located just above the peridotite-mafic volcanic contact. A potential root or feeder zone to the BRS is located immediately to the west of the Makwa deposit. The Makwa deposit strikes at approximately N60°E to N70°E and dips at -60ºS to -90º. The overall average strike is approximately N68°E, however, shorter segments appear to strike at approximately N62°E. The western part of the deposit, west of section 7+00W (original grid), strikes approximately 280° at surface and the strike progressively changes down to approximately the 500 ft elevation, where the overall deposit strike becomes more linear. The deposit dips at approximately -70°S or less at the northeast and southwest extremities and dips at -80°S or steeper from approximately section 3+00W to section 8+00W (original grid). The higher-grade (more sulphide-enriched) core of the deposit (see Section 91 for details) is approximately 500 m long by 10 m wide and extends to at least 500 m below surface. The deposit appears to have a moderate plunge to the southwest. Based on surface mapping and diamond drill hole interpolation, several fault offsets have been interpreted in the model.

The mineralization thickness appears to vary locally, which may be due to original basal contact irregularities and/or post-emplacement deformation including faulting, shearing and related minor-scale folding.

7.4.1.2 Dumbarton Deposit and F-Zone

Sulphide iron formation containing nickel and copper was mined at the Dumbarton deposit and F-Zone, both part of the Makwa mineralization. The iron formation contains pyrrhotite rich sulphide and chert layers. The widest and highest-grade sections of the deposit occur adjacent to both sides of a 60-m long gabbro plug that intruded into the iron formation. Nickel and copper grade-thickness contours suggest that mineralized shoots plunge steeply to moderately to the east and that the F-Zone probably had higher copper grades and much lower nickel grades than the Dumbarton deposit.

The mineralization consists of massive and near massive pyrrhotite, pentlandite, and chalcopyrite interspersed with mafic material and magnetite. Juhas, 1973 concluded the following:

- There were at least two major processes and/or periods of mineralization.
- Scatter diagrams suggest that nickel and copper are not covariant.
- Nickel to sulphur ratios are extremely variable.
- Nickel content of sulphides diminishes with depth, whereas copper content and sulphide abundance remain rather constant.
- Copper is relatively enriched in the stratigraphically highest portion of the mineralized zone whereas nickel is enriched lower down.

The iron formation on the property forms discontinuous lenses that average approximately 1.5 m in thickness and attain thicknesses of up to approximately 15 m (Evans 2005). It is characterized by a massive magnetite zone near the base with decreasing magnetite and increasing sulphides upwards.

Massive sulphide zones are common in the upper part. The unit is well-banded with dark chert bands up to one centimetre thick. Although equivocal, the majority of geological, geochemical and structural data are most consistent with a model in which the Dumbarton nickel and copper sulphide mineralization was sourced from the parental magmas to the overlying Makwa Zone deposit via infiltration metasomatism or physical injection concentrated along primary bedding planes in the host iron formation.

7.4.1.3 Chromite Mineralization

The chromite occurs as stratigraphic layers up to about three metres thick at the transition from ultramafic to anorthositic gabbro at Makwa. In 1943, Bird River Chromite drilled nine holes totalling 894 m over approximately three kilometres of strike length and intersected grades up to 27% Cr2O3 over one metre. The chromite layers may also have potential for nickel, platinum, and palladium.

7.4.1.4 Other Mineralization

Other mineralization at Makwa, including the Cup Anderson, Beaver and Wento copper sulphide showings, and the 1987 gold intersections, was described by Juhas, 1973 and is summarized in Evans, 2005 and Jacobs et al., 2007.

7.4.2 Mayville

Nickel-copper sulphide mineralization at the M2 Deposit is hosted by a leuconorite unit sandwiched between two heterolithic ultramafic breccia units, and just below the structural hanging wall mafic metavolcanic rocks of the Lamprey Falls Formation. As noted in the Property Geology section, the Mayville Intrusion lithostratigraphic sequence is overturned and north facing, therefore, the structural hanging wall rocks represent the lower contact of the Mayville Intrusion.

Mineralization strikes N67°E with variable dips from -60°N to -90°N and is continuous along strike, down dip, and has been traced by drilling from surface to a depth of at least 550 m.

Petrographic analysis confirmed that the mineralization is a typical magmatic sulphide assemblage comprised of pyrrhotite-pentlandite-chalcopyrite, with textures ranging from finely disseminated, to semi-massive net-textured, to inclusion-bearing massive sulphide. Within the mineralized lenses, alteration has destroyed most primary textures, although the semi-massive net-textured sulphides have preserved some primary magmatic textures locally (Huminicki, 2005).

The massive and semi-massive sulphides appear to be more iron and nickel rich, containing predominantly pyrrhotite and pentlandite, whereas the disseminated sulphides are more copper rich, containing predominantly chalcopyrite, with lesser pyrrhotite and pentlandite (Huminicki, 2005).

A magnetic high anomaly located approximately 500m to the south and east of the Mayville (Main/M2) deposit shows similar intensity and size to the magnetic high anomaly that is centered on the Mayville deposit and the lower zone of the Mayville intrusion. This anomaly is sourced in similar, deformed mafic to ultramafic rocks that make up the mineralized basal units in the Mayville intrusion. Two discrete styles of mineralization have been documented by exploration drilling in this area, which is generally referred to as the Mayville SE target area. These include low sulphide, PGE-enriched mineralization hosted in a highly altered (chlorite, actinolite) pyroxenite unit with local chromite enrichment (the PGM Zone), and Mayville deposit-type disseminated chalcopyrite-pyrrhotite-pentlandite mineralization hosted in gabbro and pyroxenite (the Copper Contact and Hititrite occurrences).

8.0 DEPOSIT TYPES

Four deposit types have been identified in the Project area; these are as follows:

1. Magmatic nickel-copper-platinum group-metals (PGM) sulphide deposits.
2. Magmatic chromite deposits.
3. Magmatic PGM.
4. Lithium-cesium-tantalum (LCT) pegmatites.

8.1 MAGMATIC NICKEL-COPPER-PGM SULPHIDE DEPOSITS

This is the dominant deposit type in the MM Project area encompassing both Mayville and Makwa where the mineralization is associated with differentiated mafic/ultramafic sills. Nickel and copper are the main economic commodities with lesser contributions from cobalt, palladium, platinum, and gold.

Magmatic nickel-copper-PGM mineralization forms in magmas originating in the upper mantle. As they rise through the crust and begin to cool, immiscible sulphide droplets form. The sulphur originates from the magma itself and/or from the wall rocks. The sulphide droplets attract metals such as nickel, copper, iron, and PGEs. These metal-rich sulphur droplets have a high density and, therefore, settle by means of gravity towards the bottom of the magma chamber. As the melt cools further, the sulphide liquid crystallizes to form a concentration of pyrrhotite, pentlandite, and chalcopyrite near the bottom of the chamber (Eckstrand and Hulbert, 2007).

The mineralization is generally concentrated in structurally low areas at the base of the intrusion or in other zones where xenoliths interrupt the settling process. The mineralization is commonly layered in cumulate sequences ranging from massive, mineralized material at the bottom to net textured, to disseminated, and to non-mineralized mafic or ultramafic rocks in the upper layer.

Exploration techniques for magmatic nickel-copper deposits include a variety of geophysical techniques. Interconnected sulphide minerals produce electrically conductive zones that can be located with IP, EM, and magneto-telluric surveys. Gravity surveying is useful to identify excess masses from the sulphide mineralization. Magnetic surveys provide a powerful tool for mapping the stratigraphy of the host intrusions and the 3D morphology of the basal contact.

8.2 MAGMATIC CHROMITE DEPOSITS

At Makwa, chromite occurs as stratigraphic layers up to three metre thick at the transition from ultramafic to anorthositic gabbro. In 1943, Bird River Chromite drilled nine holes totalling 894 m over approximately three kilometres of strike length and intersected grades up to 27% $Cr2O3$ over one metre.

Known historical chromite deposits that occur throughout the Bird River Sill, but outside both the Mayville and Makwa properties, include the Chrome, Page, Bird Lake and Euclid properties. Grid Metals has encountered chromite in drilling at both the Makwa and Mayville properties.

8.3 Magmatic PGM

Mustang drilling on the Mayville Property intersected a zone of platinum-palladium mineralization hosted in ultramafic rocks. Drill hole MAY-11-07 intersected 41.1 m at an average grade of 2.9 g/t Pt+Pd including 9.5 g/t Pt+Pd over 9.1 m. Follow-up drill holes in 2011 intersected the zone along strike. Additional drilling is planned to properly define the PGM zone.

8.4 LCT Pegmatites

A series of spodumene-bearing pegmatite dykes (Donner Lake pegmatite field) occur in the greater Mayville area, especially in the central part of the Donner Lake property. These pegmatites are related to the pneumatolytic and hydrothermal phases of the magmatic consolidation process, permeating the contact between the granites and the embedding rocks – in this case mafic metavolcanic and gabbro intrusive units. The deposits belong to the Rare-Element (low temperature and pressure) pegmatites of the LCT (lithium, cesium, and tantalum) type. As the name suggests, these pegmatites are characterized by the abundance of lithium, with cesium and tantalum to a lesser extent. Other co-products are tin, beryllium, rubidium, and silicon. In 2023, the Company reported a maiden NI 43-101 inferred mineral resource estimate for the Donner Lake property.

9.0 EXPLORATION

Grid Metals has reviewed and collated all the previous work completed on the project. The Company resumed exploration drilling at Makwa in 2022, and, at Mayville in 2023, after a ~10 year hiatus due to unfavourable metal market conditions.

9.1 MAKWA

Since the discovery of the Maskwa (now Makwa) deposit in May 1974, the surficial expression, lateral and depth extension of the deposit has been further defined by a multi-disciplinary approach involving geological mapping and geophysics.

9.1.1 Geological Mapping

The initial mapping conducted by MNCM in the late 1960s and mid 1970s focused on the eastern half of the Makwa property. In 2005, the Manitoba Geological Survey initiated a regional multidisciplinary program of targeted bedrock mapping, structural analysis, litho-geochemistry, and uranium-lead geochronology in the BRGB (Duguet, 2006). This work laid a strong foundation for subsequent geophysical investigations.

9.1.2 Geophysics

In 1987, MNCM conducted an IP survey targeting PGE on the property. This work assisted in defining targets for drilling.

In late 1997 and early 1998, Canmine contracted Quantec to complete a surface time domain electromagnetic (TEM) survey, a ground total field magnetic survey, and four three-dimensional borehole TEM surveys (Quantec, 1997, 1998a, 1998b, and 1998c). The surface TEM and magnetometer surveys covered 66.4 and 72.2 line-km, respectively. Lines were spaced at 30 m, 60 m, and 120 m, with closer spacing in higher interest areas. Readings were taken at 30 m and 15 m for the TEM and magnetometer surveys, respectively. The TEM survey identified approximately 70 moderate to very strong chargeability anomalies of significance, including 14 high priority targets. The magnetic survey showed the extent and geometry of the BRS and other rock formations.

Downhole surveys were conducted in drill holes M-121W (wedge hole off M-121), M-145, and M-149 under and to the west of the Makwa deposit and in drill hole M-151 under the Dumbarton deposit. The surveys confirmed the continuity of the deposit in 3D space.

In the spring of 2007, Mustang contracted Geotech Ltd. (Geotech) of Aurora, Ontario, to perform a helicopter-borne geophysical survey, utilizing its proprietary versatile time-domain electromagnetic (VTEM) system. A total of 652 line-km was flown over the Makwa deposit, and over the contiguous land position held by Mustang to the east and west of the deposit. Line spacing was typically at 100 m, although this was reduced to 50 m over the area immediately to the west of the Makwa pit in an effort to locate the source of nickel and platinum group element-bearing massive sulphides. The survey outlined several prominent anomalies, including an EM anomaly to the west of the Makwa deposit (Duke et al., 2008).

In 2008, Mustang completed a Time Domain Induced Polarization (TDIP/Resistivity) and magnetic surveys over part of the Makwa property along the BRS. The survey comprised a grid of 1000 x 3400 m with 100 m spacing. Approximately 34 km of grid lines were covered. Quantitative sections were generated over areas of interest from these surveys to enhance the interpretation of the areas to be drilled. The geophysical survey outlined several high priority targets warranting drill investigation. Priority targets were associated with the known ultramafic host unit at Makwa but were external to the known main deposit. A second phase of IP geophysics was begun to examine the area to the west of the Makwa Deposit (Mustang, 2009).

In 2018, Grid Metals contracted Abitibi Geophysics to complete ground time domain EM surveys covering the Makwa and Dumbarton deposits. Several conductors that had seen limited or no prior drilling were identified along strike from and below the current Makwa deposit outline.

In 2022, Grid Metals completed a comprehensive review of all historical geophysical and drilling data and identified a series of drill targets representing possible extensions of both the Makwa and Dumbarton deposits. Several of these anomalies were tested by exploration drill holes completed in 2022.

9.2 MAYVILLE

9.2.1 Geological Mapping

Geological mapping of the Mayville property was conducted concurrently with the Makwa property in 2005 by the Manitoba Geological Survey. Although this mapping was regional in nature, it helped in generating targets for geophysical investigation.

9.2.2 Geophysics

9.2.2.1 VTEM Surveying

VTEM surveying was the main exploration tool used by Mustang to generate and prioritize drill targets at the Mayville Property. When properly treated, the high-resolution data from VTEM can generate drill-ready targets.

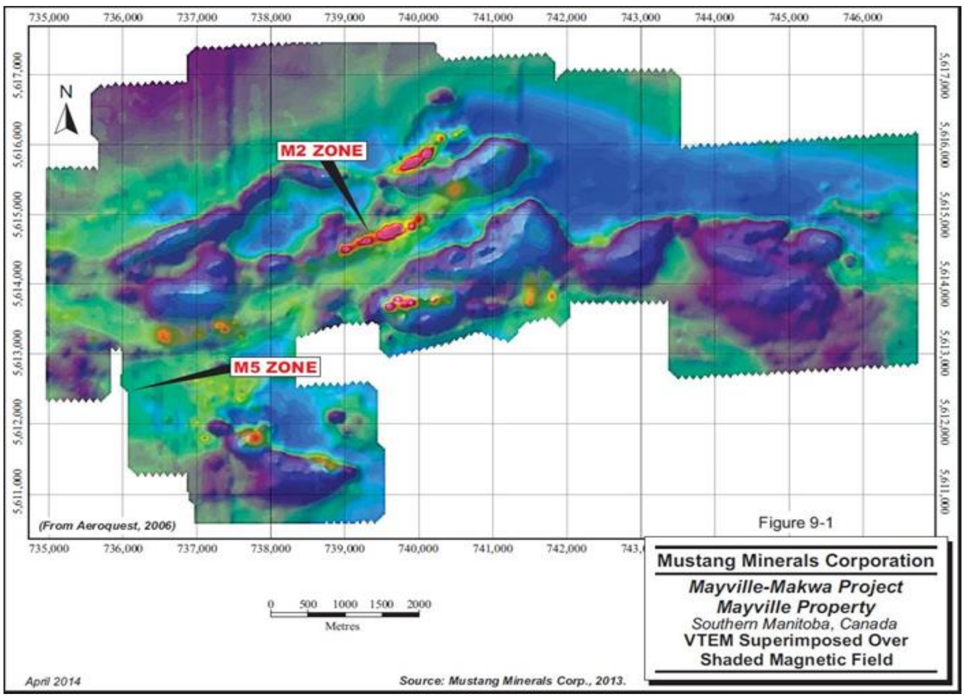
In April and May 2005, Mustang contracted Geotech to collect 580 line-km of VTEM airborne EM and magnetic data over the property covering an area of 49 km2. North-south flight lines were spaced 100 m apart. The sensors used were a TEM system and a cesium magnetometer.

Geotech, Condor Consulting Inc. of Lakewood, Colorado, and Aeroquest Limited (AQL) of Ontario made separate interpretations of the VTEM data. The main purpose of each interpretation was to identify and prioritize new exploration targets. AQL appears to have made the most appropriate and rigorous data processing and interpretation on the Mayville VTEM. AQL results are discussed below.

AQL identified and prioritized six drill-ready targets within two areas identified as the M2 and M5 zones (Figure 9.1). The M2 Deposit includes the area of the estimated Mineral Resources described in this Technical Report. AQL recommended three drill targets within M2, all of which have been subsequently drill tested by Mustang and have intersected mineralization. AQL suggests that the sulphide mineralization is structurally controlled but that structures within the mineralization do not offset the mineralization relative to its strike direction.

The M5 Zone lies approximately 2.5 km to the south-southwest of the M2 Deposit. In the M5 Zone, AQL interpreted many moderately conductive features with no associated magnetic anomalies. AQL suggests that the zone is unlikely related to nickel-copper mineralization within the ultramafic intrusive rocks, but still recommends drilling the three anomalies.

Figure 9.1
Mayville Property – VTEM Superimposed Over Shaded Magnetic Field



Source: Mustang 2013.

In 2010, Mustang acquired an option on seven claims held by Tantalum (which in 2013 became 100% owned by Mustang) adjacent to the Mayville property and subsequently conducted a 218 line-km VTEM survey over the claims. Also in 2010, Mustang conducted a 205 line-km Z-axis tipper electromagnetic (ZTEM) survey over the central part of the property, which included the M2 Deposit and the Tantalum claims.

In 2011, following the discovery of PGE mineralization on the property (in drill hole May-11-07, 9.1 m of 2.8 g/t Pt and 6.7 g/t Pd), Mustang established a 6.0 km by 2.5 km grid over the PGE zone and M2 Deposit and subsequently surveyed these lines with IP-mag and EM during 2011 and 2012. This grid was also geologically mapped during this period. These surveys were followed up with 12,606 m of diamond drilling in 60 holes, which concentrated on evaluating the PGE and nickel-copper potential of the PGE zone and M2 Deposit.

In 2022, the Company and consultants re-interpreted all available geophysical and drilling data for the Mayville property, leading to several new EM anomalies that had not been previously drilled. None of these anomalies have yet been drilled.

9.2.2.2 Borehole EM Survey

In 2011, Mustang commissioned a borehole electromagnetic (BHEM) survey from Crone Geophysics and Exploration Ltd., from Ontario, Canada. A total of 23 holes were probed for a total length of 9,600 m at a nominal sample interval of 10 m.

Crone Pulse EM is a TEM method in which a precise pulse of current with a controlled linear shut-off is transmitted through a large loop of wire on the ground and the rate of decay of the induced secondary field is measured across a series of time windows during the off-time. The EM field created by the shutting-off of the current induces eddy currents in nearby conductive material thus setting up a secondary magnetic field. When the primary field is terminated, this magnetic field decays with time. The amplitude of the secondary field and the decay rate are dependent on the quality and size of the conductor. At Mayville, a 3D Borehole Pulse EM system was assembled in which an axial component (Z) probe and a cross component (XY) probe were used to measure the three components of the induced secondary field. The first pass with the “Z” probe detects any in-hole or off-hole anomalies and gives information on size, conductivity, and distances to the edge of conductors. The second pass with the “XY” probe measures two orthogonal components of the EM field in a plane orientated at right angles to the borehole. These results give directional information to the centre of the conductive body.

Results from the BHEM survey helped identify several drill targets.

10.0 DRILLING

Drilling at the Makwa-Mayville Project has been conducted intermittently over the years since the 1920s. Most of the drilling was conducted prior to Grid Metals involvement as described below.

10.1 CAMPAIGNS

10.1.1 Makwa

The drilling completed on the Makwa project comprises 475 drill holes with a total metreage of 80,000 m broken down as summarized in Table 10.1. The layout of the holes is shown in Figure 10.1, Figure 10.2 and Figure 10.3.

As can be seen in Table 10.1, the majority of the drill holes are directed northwards implying that the mineralized body dips southwards.

The drill hole database considered in the current Mineral Resource estimate contains a total of 256 historical MNCM/Falconbridge, Canmine and Mustang holes plus the 10 drill holes drilled by Grid Metals in 2022.

Table 10.1
Summary of Drilling Completed on the Makwa Project

Company	Period	No. of Holes	Metres
Manitoba Copper Company	1929	11	653
Northfield Mining Company	1936 – 1937	21	1,261
Bird River Chromite	1943	9	894
MNCM/Falconbridge	1952 – 1957	75	7,622
	1965	9	1,220
	1968	14	1,250
	1973 – 1975	97	15,244
	1987	8	1,893
Canmine	1966	59	16,800
Canmine	1966 – 1998	4	310
Mustang	2004 – 2010	154	30,625
Grid Metals	2022	18	10,000
Total		**475**	**87,772**

Figure 10.1
Makwa Property Drill Holes Plan

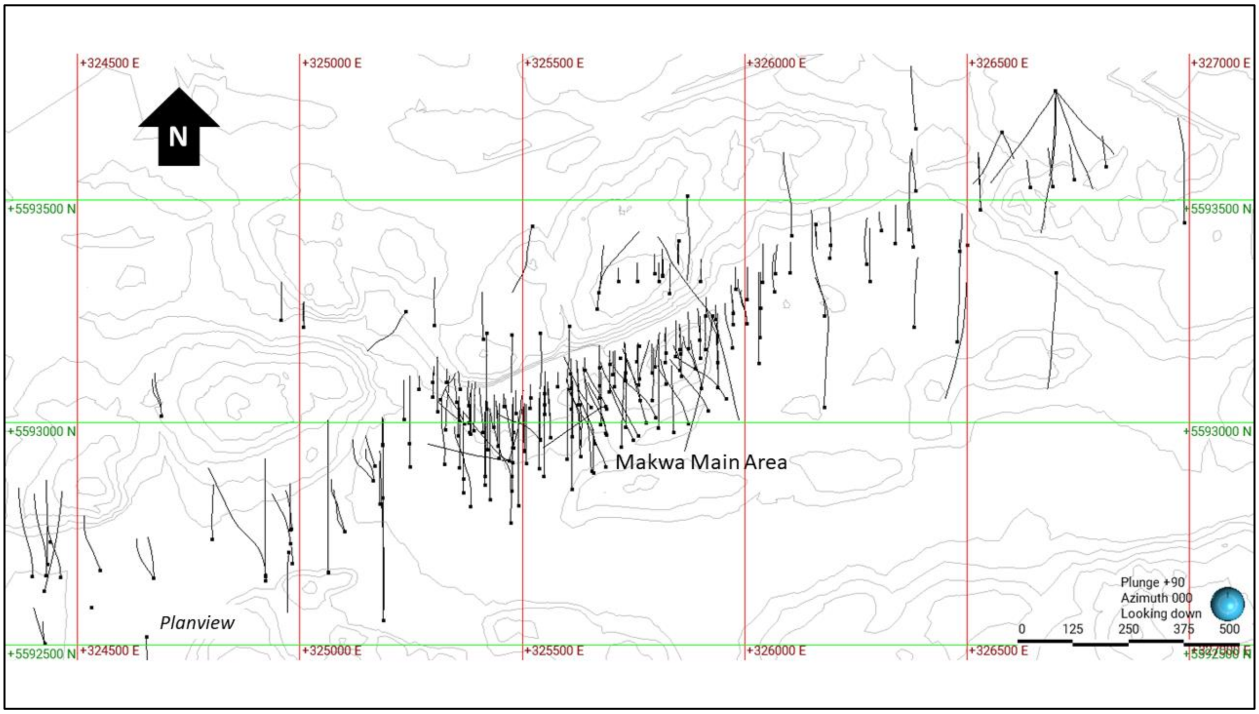


Figure 10.2
Makwa Longitudinal Section (looking north) Showing Drill Hole Traces and Mineralization Intercepts

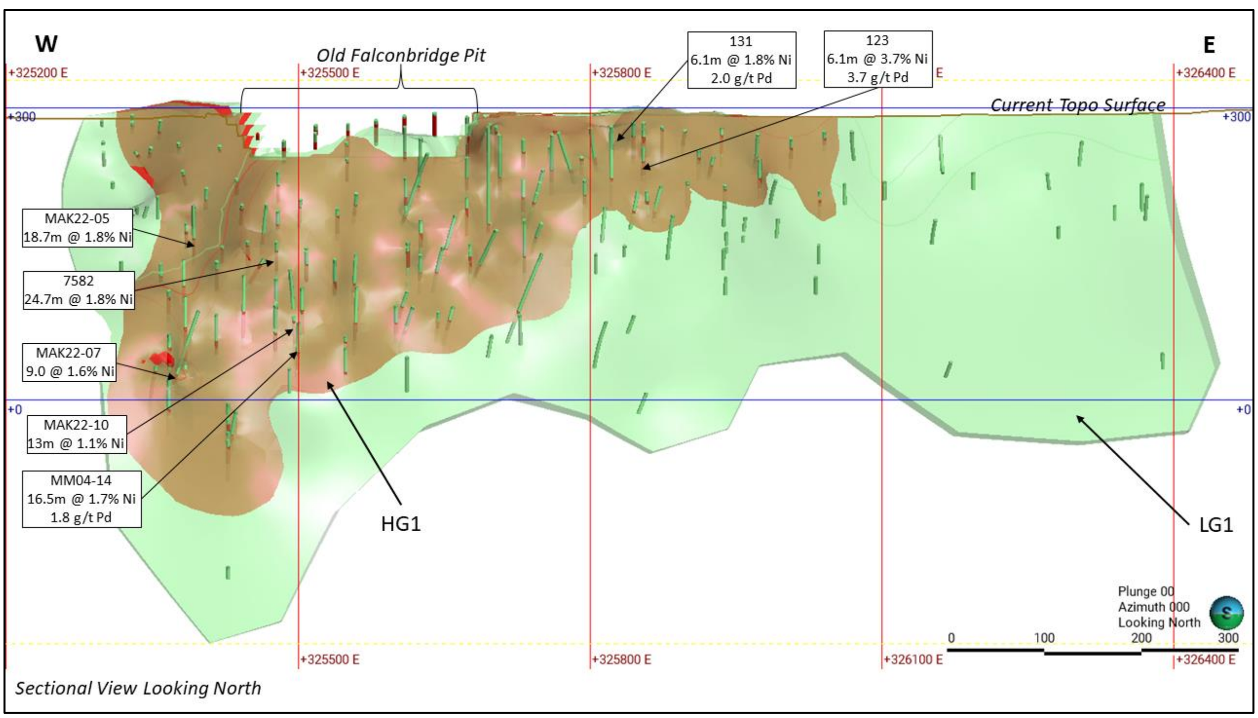
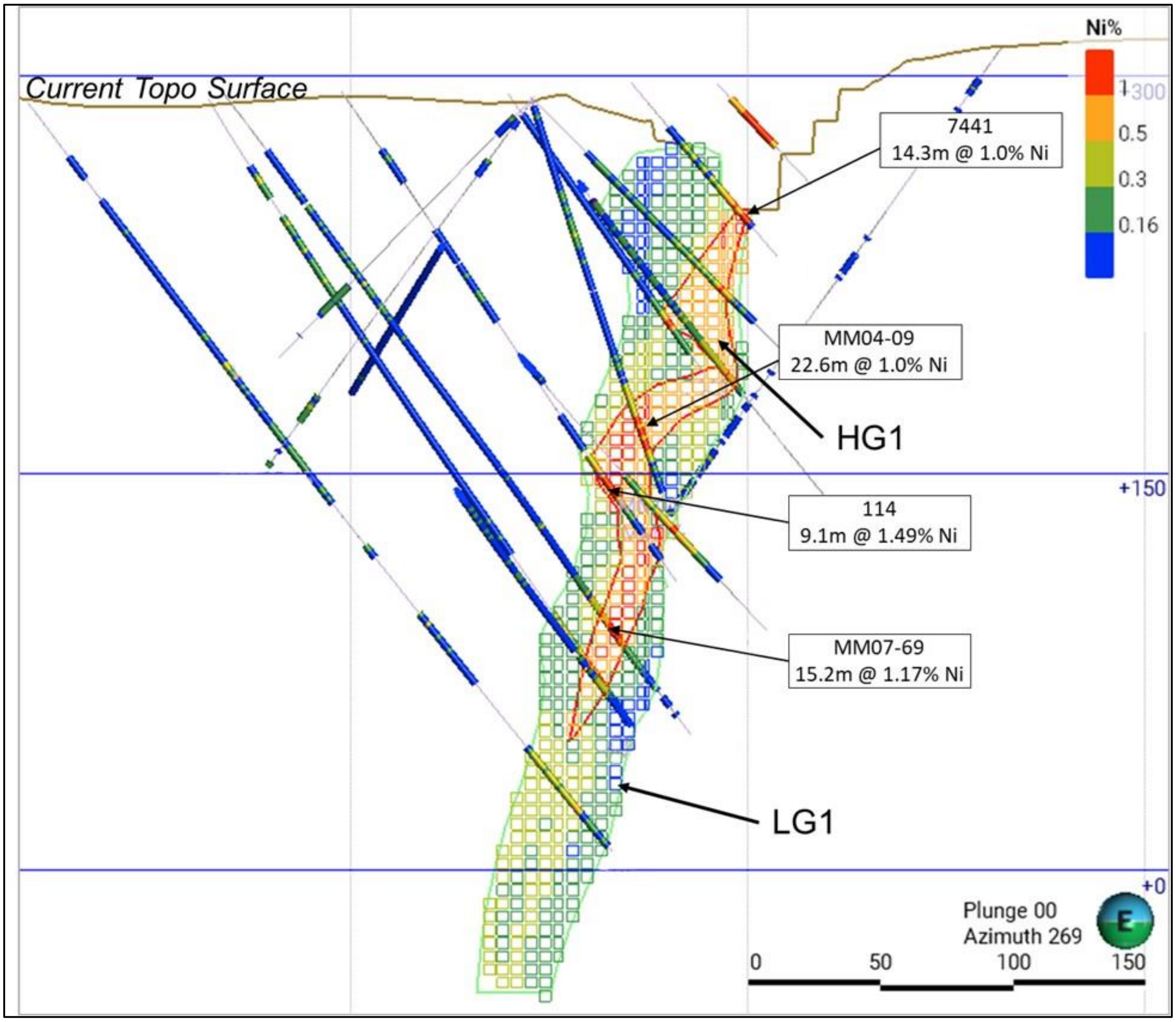


Figure 10.3
Representative cross section, looking west, showing the current Micon block model coded to nickel grade, the HG1 and LG1 zone boundaries, and selected length-weighted interval assays for drill holes captured on this section



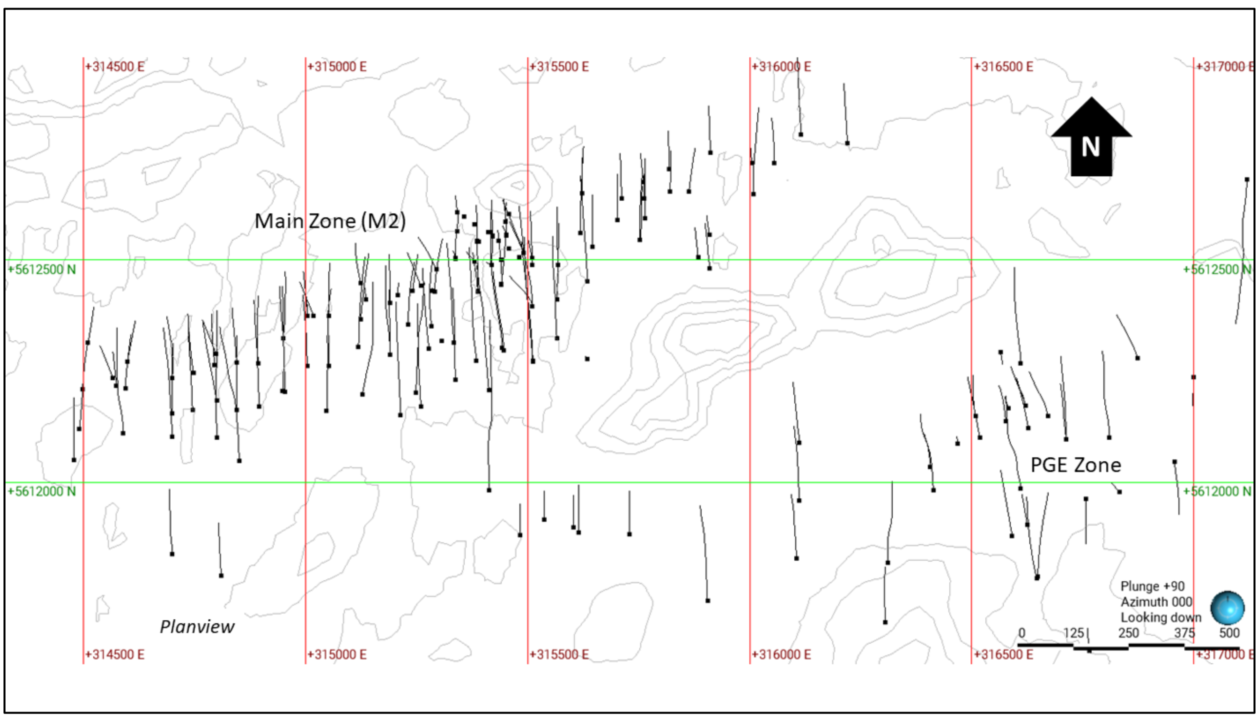
10.1.2 Mayville

The drilling completed on the Mayville project comprises 221 drill holes with a total metreage of about 45,000 m as documented in Table 10.2. The layout of the holes is shown in Figure 10.4.

Table 10.2
Summary of Drilling Completed on the Mayville Property

Company Name	Period	No. of Holes	Metres
Smith and Travers Company Ltd.	1923	8	558
Consolidated Mining and Smelting Company	1928	4	1,347
Gods Lake Gold Mines Ltd.	1944	9	Unknown
MNCM/Falconbridge	1956	10	859
	1980	4	218
	1988	3	300
	1990	4	822
Exploratus Elements Diversis Ltd	1995	4	459
Mustang	2005	37	7,203
	2006	39	9,080
	2011	32	5,811
	2012	40	13,429
	2013	17	3,262
Grid Metals	2023	2	2,000
Total		**221**	**About 45,000**

Figure 10.4
Mayville Project Drill Holes Plan



Longitudinal and cross sections of the deposit are shown in Figure 10.5 and Figure 10.6, respectively.

Figure 10.5
Mayville Longitudinal Section Looking North Showing Drill Hole Traces and Selected Assays

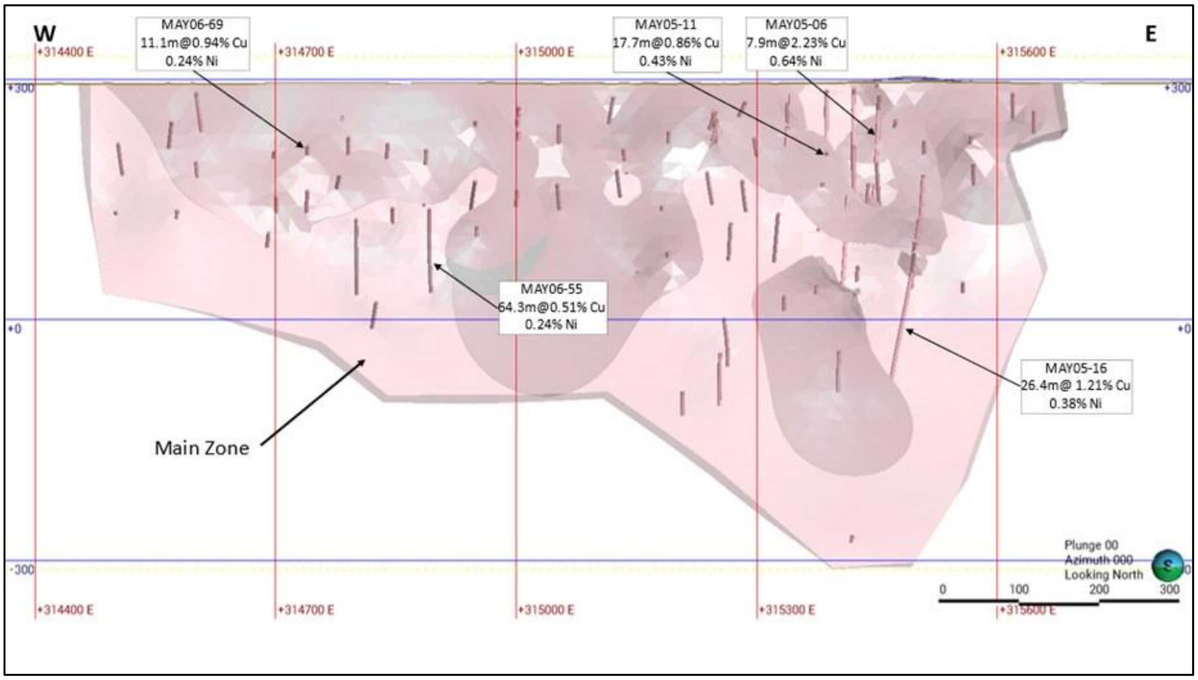
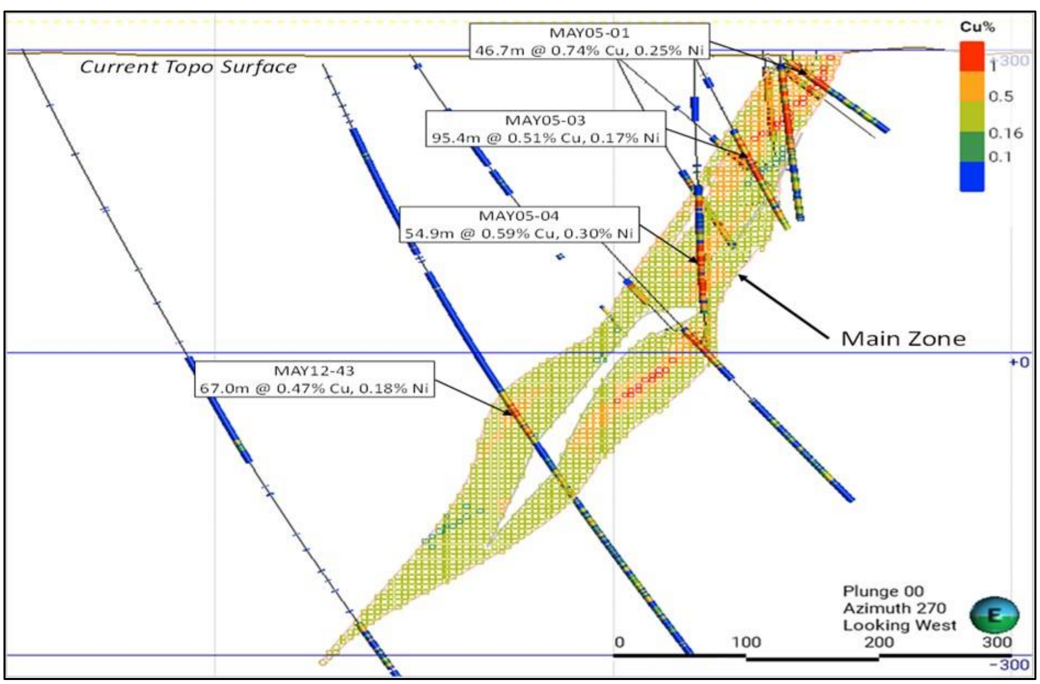


Figure 10.6
Representative Cross Section for the Mayville Deposit, Looking West, and Showing the Current Micon Block Model Coded to Copper Grade and Selected Length-weighted Average Drill Hole Intersections for Drill Holes Captured on this Section



10.2 DRILLING PROCEDURES

10.2.1 Collar Location

Once targets are defined, geologists locate drillhole collars at surface using a GPS and mark the position with a wooden stake. The new drill bay is cleared, and sumps constructed to manage drill water and cuttings. Then, the drill rig is positioned, and the drill alignment of azimuth and hole inclination are confirmed by the project geologist(s).

10.2.2 Drill Core size

Drill core sizes varied from campaign to campaign. E size (22 mm) was used in the 1950s, AXT (32 mm) mostly in the 1970s and BQ (37 mm) in the 1990s. All drill core as from 2004 to date is NQ size (approximately 48 mm in diameter).

10.2.3 Drill Hole Downhole Survey

Pre-2004 programs conducted acid dip tests approximately every 30 m and the collar azimuth were assumed to the toe of each hole. From 2004 to 2023, downhole surveys were completed by the drilling company using a Reflex EZ Shot instrument at 100 m to 200 m intervals.

10.2.4 Operational Control

The drilling and survey are supervised by the site project geologists who ensure sure that good core recoveries are obtained, depth markers are put in the right places and downhole surveys are done correctly. At the end of each shift, drill core is transported to the core shed for logging, sampling, and storage.

For selected holes, PVC casing is placed in the weathered part of the drillhole by the drill contractor. Typically, the hole ID is marked on a metal tag that is affixed to a stake that is placed inside the casing or in the open hole.

10.3 DRILL CORE LOGGING/SAMPLING

Once core boxes arrive at the core shack, geologists complete a “quick log” to note core losses and to describe major geological features encompassing lithology, structures, alteration, and mineralization. Before detailed logging/sampling takes place, the drill cores in the core boxes are photographed dry and wet using a high-definition camera. Rock quality designation (RQD) is conducted at this stage.

The logging process begins after the samples are carefully marked. Sample intervals are identified based on changes in lithology, structure, alteration, and mineralization. Prior to 2022, all drill core was selectively sampled based on visual identification of mineralization. The current practice is generally, samples of mineralized core are in shorter interval lengths while barren/weakly mineralized core is sampled in longer intervals. The entire drill hole is sampled to establish the broader zone of mineralization and to provide continuous geochemical data to support lithological interpretations and help constrain the fractionation and sulphide deposition/transport history in the host ultramafic units.

The project geologist identifies and marks the beginning and the end of the sampling intervals, and then prepares a detailed geologic log including lithology, alteration (type and intensity), mineralization, mineralized structures, and barren structures. All these characteristics follow a regulated list of codes and parameters established by Grid Metals.

Upon completion of the logging and demarcating the sample intervals, technicians saw the core into symmetrical halves with a diamond saw, except for material which is highly fractured and contains clay minerals, which is divided manually with hammer and chisel. One half of the core is bagged, tagged with a sample number, and then sealed; the other half is put back in the core boxes and kept as a reference and check sample in the event that duplicate assays are required. All core samples are recorded in the geological drill logs and in a sample chain of custody spreadsheet. Samples are transported in sealed bags placed in wooden crates by courier to the analytical laboratory.

In addition to samples for analytical purposes, density samples are collected at the rate of 1 in every 10 m. The densities are determined using the Archimedes principal technique.

Grid Metals' drill core logging/sampling facility is shown in Figure 10.7

Figure 10.7
Grid Metals Core Logging/Sampling facility

10.4 DRILLING RESULTS AND INTERPRETATION

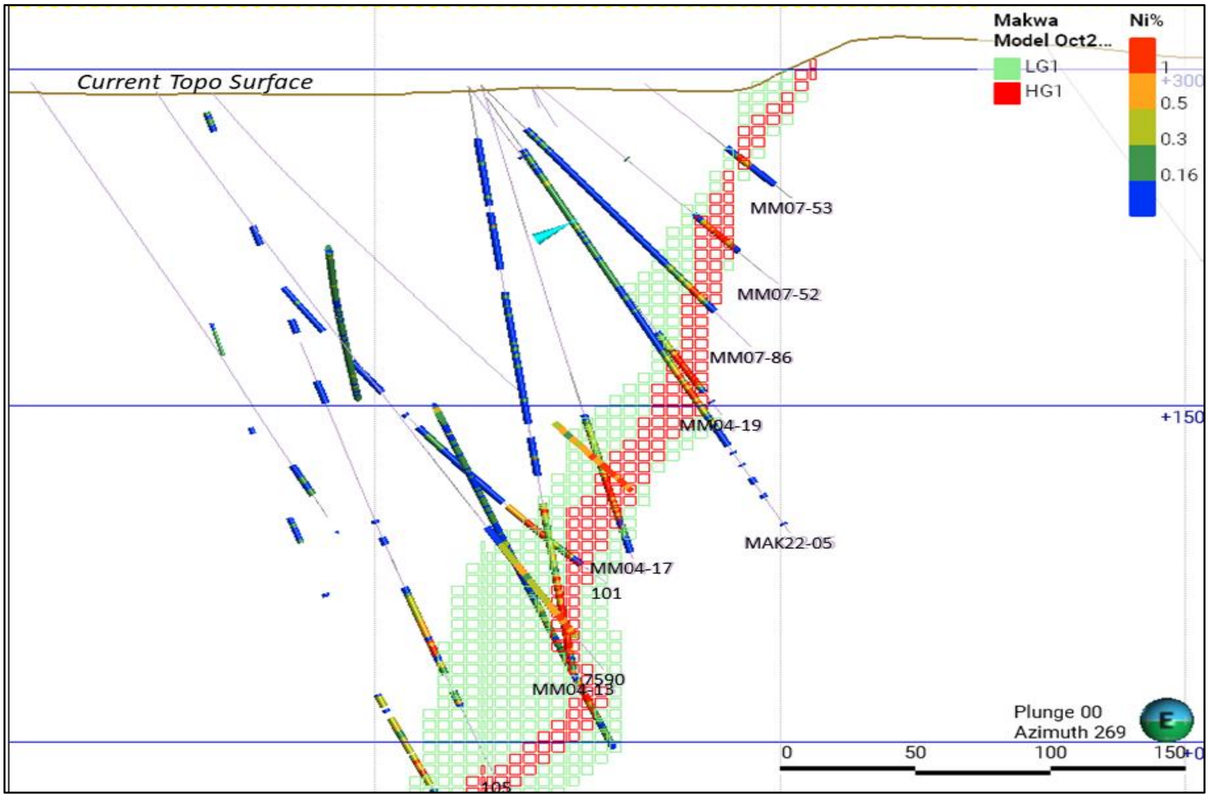
Significant drilling results are shown in Figure 10.2 to Figure 10.3 (for Makwa) and Figure 10.5 to Figure 10.6 (for Mayville) – sub-section 10.1 above. Note that for both deposits the true thickness varies between 20 and 60 m. In addition, the following overall comments are applicable.

10.4.1 Makwa

The drilling conducted at Makwa has defined a continuous zone of magmatic sulphide mineralization over a cumulative strike distance of more than 1.5 km in a roughly east-west direction. The local geology map (Figure 7.2 presented in Section 7.0 of this report) has identified the Makwa deposit and the

Dumbarton deposit as separate entities as they are believed to be physically separate and mineralogically/geochemically distinct. Nonetheless, the mineralization trend is contiguous and remains open along strike in both directions and also down dip. Most importantly, the 2022 drilling program proved the presence of mineralization in areas previously perceived to be barren – see Figure 10.8

Figure 10.8
Section Showing 2022 Drilling Mineralization vs Previously Selectively Sampled Holes



The deposit envelope (based on a 0.16% Ni threshold value) typically varies in true thickness from 20 m to about 60 m, with a steep dip of about 65 degrees to the south.

10.4.2 Mayville

The drilling completed on the Mayville Project has identified two main mineralized areas as shown in Figure 10.4. The Mayville Main corresponds to the copper-nickel M2 deposit whilst the Mayville SE includes the PGM Zone, and the adjacent Copper Contact Zone as discussed in Section 7.0.

Grid geologists interpret the Mayville SE as likely representing a structural repletion on the lower zone of the Mayville Intrusion. However, additional investigations/drilling are warranted to better constrain the relationships between these two areas of magmatic sulphide mineralization.

10.5 MICON QP COMMENTS

Micon has not identified any drilling, sampling or recovery factors that could result in sampling bias or otherwise materially impact the accuracy and reliability of the assays and, hence, the resource database. However, selective sampling in earlier drilling campaigns will constrict the resource envelope and resampling of older generation drill holes is recommended where feasible, depending on the availability of the drill cores.

The Reflex EZ Shot is affected by magnetic rocks and hence, the accuracy of the survey readings, especially for the deep holes, may be compromised. However, most of the holes are short to medium depth and the impact of any survey errors is minimal. The Company is now requiring downhole positional surveys to be done using a north seeking gyro tool.

11.0 SAMPLE PREPARATION, ANALYSES AND SECURITY

The majority of sample data used for the estimation of resources in this report includes historical data from holes drilled by MNCM/Falconbridge and Canmine (between 1973 and 1998) combined with data collected from 144 drill holes by Mustang between 2004 and 2013 and is well documented in the RPA technical report dated April 2014. No sampling data was collected between 2014 and 2021. The most recent sample data is only about 15% of the total and comes from fourteen holes drilled at Makwa during the 2022 drilling campaign and two holes drilled at Mayville during 2023.

11.1 SAMPLE PREPARATION/QUALITY CONTROL BEFORE DISPATCH TO ANALYTICAL LABORATORY

Sample preparation at projects sites has followed the same modus operandi since the 1970s to recent times. Prior to sampling, drill core is cut/split longitudinally into symmetrical halves using a diamond saw; one half is taken as the sample for laboratory analysis and the other half is retained for future reference. For both Mayville and Makwa, drill core samples were collected at 2m intervals; however, where warranted, sample lengths were varied based on lithological, alteration and mineralogical changes.

QA/QC samples were inserted at regular intervals in the sample batches. The QA/QC samples comprise certified reference materials (CRMs) representing low, medium, and high-grade mineralization that were sourced from various research/commercial laboratories including Ore Research & Exploration (OREAS), CDN Resource Laboratories (CDN), and Rocklabs Reference Materials (RRM). QA/QC samples also include certified analytical blanks from one or more of these laboratories.

The rate of insertion of CRMs and blanks has been variable over the years as specified below:

1. MNCM/FALCONBRIDGE/CANMINE (1973 to 1998): Prevailing industry standards were followed.
2. MUSTANG (2004 to 2013): Between 5 and 10% of the total samples analyzed were control samples.
3. GRID METALS (2022): About 10% of the total samples analyzed are control samples.

11.2 SAMPLE PACKAGING AND SECURITY

All activities pertaining to sampling and insertion of control samples, were/are conducted under the supervision of the project geologist. There is no other action taken at site; thus, no aspect of the sample preparation for analysis is conducted by an employee, officer, director or associate of the issuer.

Samples are placed in sequence into rice bags/boxes labelled with the company code and sample series included in the bag/box. Requisition forms were/are compiled using sample reference sheets for the duration since the last shipment. The bags are sealed and then stored in a locked sample dispatch room. When a shipment is ready, the sealed rice bags/boxes are dispatched to the laboratory via courier. Laboratory personnel check to ensure that no seal has been tampered with and then acknowledge receipt of samples in good order via telephone/email.

11.3 LABORATORY DETAILS

The Mayville-Makwa project has used several different laboratories over the years. Based on information available to the QP, the laboratories are as follows:

MNCM samples (1970s) – Laboratory unknown

CANMINE samples (1980s -1998) – TSL Laboratories (TSL) in Saskatoon (report by Harper, 2004).

MUSTANG samples (2004 – 2013) – Laboratoire Expert Inc. between 2004 and 2007; TSL during 2008; and Accurassay Laboratories Ltd. between 2009 and 2010.

GRID METALS (2022) - Activation Laboratories (Actlabs).

All the above laboratories are ISO/IEC 17025:2005 accredited and are independent of Grid Metals. The laboratories are among several other laboratories that regularly participate in the PTP-MAL (Proficiency Testing Program for Mineral Analysis Laboratories) round robin provided by Natural Resources, Canada for base and precious metals.

11.4 LABORATORY SAMPLE PREPARATION AND ANALYSIS

11.4.1 Sample Preparation

Sample preparation procedures at analytical laboratories are nearly universal. Generally, samples are prepared by drying, if necessary, then the entire sample is crushed to a nominal minus 10 mesh (1.7 mm), mechanically split (riffle) to obtain a representative sample and then pulverized to >90% passing 107 microns. Silica sand is/was used to clean the pulverizing dishes between each sample to prevent cross contamination. Splits of 30 g or 50 g are typically used for analysis.

11.4.2 Sample Analysis

<u>MNCM Samples</u>

MNCM samples were analyzed for nickel, copper, and cobalt but neither the laboratory nor the analytical method used are disclosed in the reports available to Micon. Canmine calculated cobalt, platinum, and palladium values for the MNCM samples in the Borsurv database using regression analysis.

<u>CANMINE Samples</u>

A total of 689 Canmine samples were analyzed for nickel, copper, cobalt, platinum, and palladium by TSL Laboratories (TSL) in Saskatoon (Harper, 2004). Fire assay with atomic adsorption (AA) finish was used for precious metals (platinum and palladium). Base metals were weighed for geochemical analyses and digested using aqua regia.

MUSTANG Samples

Prior to the 2007 program, Mustang submitted its samples to be analyzed for nickel, copper, cobalt, gold, platinum, and palladium by Laboratoire Expert Inc. in Rouyn-Noranda, Quebec. Silver and cobalt were determined by partial digestion atomic absorption on a 50 g sample at a detection limit of 0.2 ppm for silver and 2 ppm for cobalt. Copper and nickel were determined by total digestion atomic absorption (AA) on a 50 g sample. The detection limit was 0.01% for copper and nickel. Silver, platinum, and palladium were determined by fire assay with AA finish or by inductively coupled plasma mass spectrometry (ICP-MS). The detection limits were 2 ppb for gold, 5 ppb for platinum, and 4 ppb for palladium.

In 2008, Mustang submitted its samples to TSL prior to reverting back to Accurassay in 2009 and 2010. All samples from the 2007, 2009, and 2010 programs were analyzed for nickel, copper, cobalt, iron, gold, platinum, and palladium by Accurassay in Thunder Bay. In addition, analysis for a further suite of 30 elements was carried out for silver, aluminum, arsenic, boron, barium, beryllium, bismuth, calcium, cadmium, chromium, potassium, lithium, magnesium, manganese, molybdenum, sodium, phosphorus, lead, sulphur, antimony, selenium, silicon, tin, strontium, titanium, thallium, vanadium, tungsten, yttrium, and zinc.

A fire assay with atomic adsorption (AA) finish process was used for the analysis of precious metals (gold, platinum, palladium, and/or rhodium).

Samples analyzed for copper nickel, cobalt, lead, zinc, and silver were weighed for geochemical analysis and digested using aqua regia. The samples were bulked to a final volume and mixed. Once the samples had settled, they were analyzed for copper, nickel, and cobalt using atomic absorption spectroscopy. The atomic absorption spectrometer was calibrated for each element using the appropriate ISO 9002 certified standards in an air acetylene flame.

In 2022, Grid's core samples were prepped and analyzed at Actlabs (Thunder Bay). Base metals plus selected major and trace elements were determined on 1g pulp splits using a multi-acid digestion and an ICP- ICP-optical emission spectroscopy (OES) finish. Precious metals were determined using a 30g split and the same multi-acid digestion and an ICP-OES finish.

11.5 QUALITY CONTROL PROTOCOLS AND RESULTS

11.5.1 Protocols/Procedures

The QA/QC procedures have involved/involve the following:

- Internal/in-house laboratory controls.
- Insertion of control samples (CRMs including blanks) before dispatching the sample batches to the analytical laboratory.
- Repeat analyses of pulps at umpire/external laboratory (Lakefield Research Ltd., now SGS Mineral Services and ALS Chemex).
- Comparison of analytical results with drill logs.

11.5.2 Overview of QA/QC Results

11.5.2.1 Laboratory Internal/in-house controls

Should any of the standards fall outside the warning limits (+/- 2SD) re-assays are performed on 10% of the samples analyzed in the same batch and the re-assay values are compared with the original values. If the values from the re-assays match the original assays, the data is certified; if they do not match, the entire batch is re-assayed. Should any of the standards fall outside the control limit (+/- 3SD), all assay values are rejected and all the samples in the batch are re-assayed.

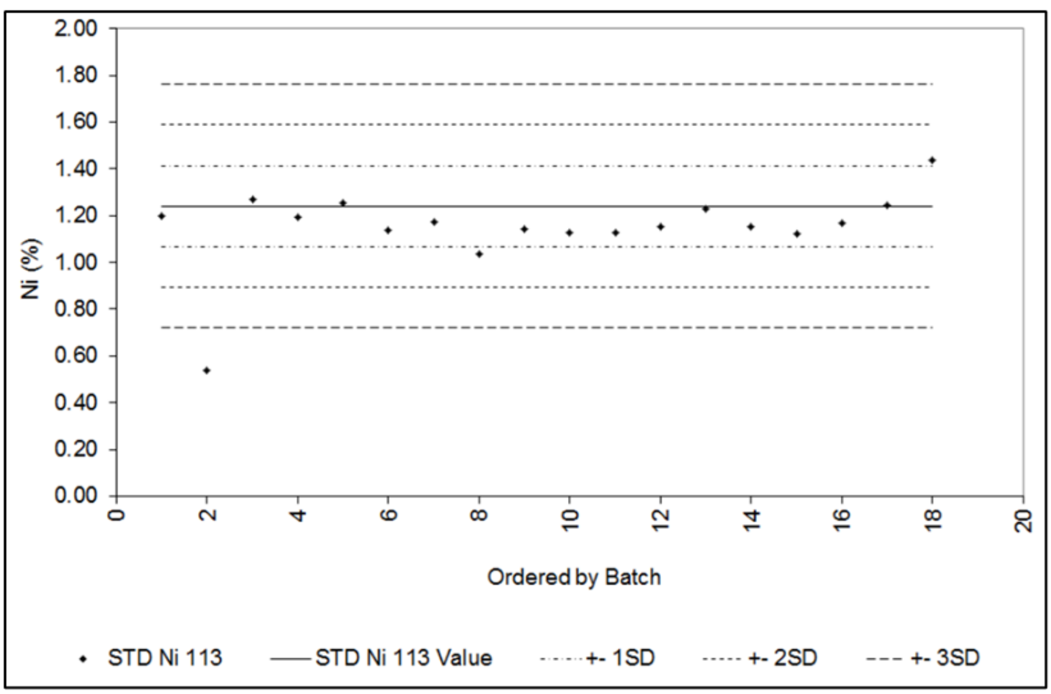
11.5.2.2 Company/Project Control Samples

Generally, QA/QC sample results are considered as failures if they are outside 3 standard deviations of the certified values. All assays are reported directly to Grid Metals via email to designated personnel. Signed assay certificates are sent via courier or post. The monitoring of the performance of the QA/QC samples is conducted immediately after the assay results are received.

Control charts prepared for various CRMs and blanks indicate that the analytical work was conducted to acceptable standards in the majority of the cases. Where failures occasionally occurred as exemplified by batch 2 in

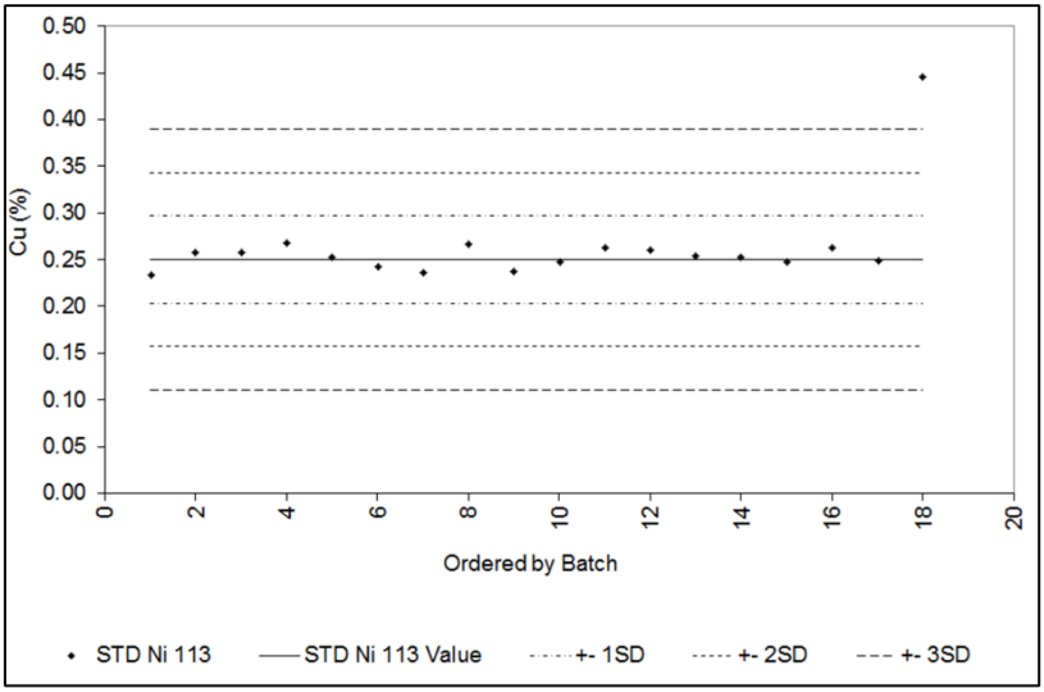
Figure 11.1 and batch 18 in Figure 11.2, the whole batch had to be reanalyzed.

Figure 11.1
Mayville Control Chart Showing Nickel Results for CRM NI 113



The re-analysis of a whole batch would also serve to validate the initial assays obtained for other associated elements.

Figure 11.2
Mayville Control Chart Showing Copper Results for CRM NI 113



11.5.2.3 Project Repeat Analyses at Secondary/Umpire laboratory

Pulp duplicates are submitted to a second laboratory to make an additional assessment of laboratory bias. ASL (2006) reviewed results from 363 external pulp check samples assayed at Laboratoire Expert and ALS-Chemex and reports that, based on regression line analysis, nickel assays reported at Laboratoire Expert are on average 3% lower than those reported at ALS-Chemex. ASL (2006) suggests that this bias is due to different digestion procedures at the laboratories. ASL (2006) concludes that, overall, there is generally good agreement between the two laboratories for both nickel and copper results.

11.5.2.4 Comparison of analytical results with drill logs

Comparison of drill hole intercepts with analytical results as described in section 12 above showed a good match particularly where nickel/copper sulphides were visually identifiable.

11.6 MICON QP COMMENTS

Micon's QP considers the sample preparation, security, and analytical procedures to be adequate to ensure the credibility of the analytical results used for mineral resource estimation. The QA/QC protocols and the assessment of the results are in line the CIM 2019 Best Practice Guidelines. The monitoring of the laboratory's performance on a real time basis ensures that corrective measures, if needed, are taken at the relevant time and gives confidence in the validity of the assay data.

12.0 DATA VERIFICATION

Micon's QP (Charley Murahwi, M.Sc., P.Geo., FAusIMM) visited the MM Project for data verification from 25 to 27 October 2022, during which time he undertook the verification exercises listed below.

12.1 MAKWA

12.1.1 Ground Truthing

Ground truthing was conducted to determine trends and magnitude of mineralization. This exercise is considered critical in the subsequent modelling of the deposit and yielded the following:

(i) Confirmed the position of the Makwa open pit (depicted in Figure 12.1) in relation to the strike extent of the mineralization model.

Figure 12.1
Makwa Open Pit Looking NE

Photo taken by Micon, 2022.

(ii) Confirmed continuous visible mineralization for > 2 km starting from about 100 m west of the Makwa open (Figure 12.1) going eastwards to beyond the F Zone – see Figure 12.2 to Figure 12.4. Visible mineralization on both ends of the strike remains open.

Figure 12.2
Mineralization Exposed in Trench above the Dumbarton Underground Workings

Photo taken by Micon, 2022.

Figure 12.3
Dumbarton – F Zone Boundary

Photo taken by Micon, 2022.

Figure 12.4
Channel Sample Traversing Mineralization About 80 m Along strike east of the F zone

Photo taken by Micon, 2022

(iii) More significantly, Micon's QP established that the Makwa open pit, Dumbarton and F zone deposits are separate entities but lie within the same broad zone dominated by mineralized ultramafic rocks in contact with mafic metavolcanic host rocks. However, at Dumbarton, the ultramafic rocks intruded through a sulphide facies banded iron formation in which magmatic sulphide mineralization separated from the ultramafic source rocks was captured along bedding planes.

(iv) Verified several drill holes collars positions. Examples are shown in Figure 12.5 and Figure 12.6.

Figure 12.5
Drill Hole Collars at the Western End of the Makwa Open Pit

Photo taken by Micon, 2022.

Figure 12.6
Drill Hole Collars for the Three 2022 Holes Directed South

Photo taken by Micon, 2022.

12.1.2 Examination of Drill Cores

Micon's QP examined drill core from several drill holes and verified mineralization in drill hole intercepts; an example is shown in Figure 12.7.

Figure 12.7
Combination of Semi-massive, Net-textured and Disseminated Sulphides in MAK-22-02

Photo taken by Micon, 2022.

12.1.3 QA/QC

Micon's QP reviewed QA/QC protocols, core logging and sampling procedures. Micon found no major issues and concur with RPA's observations as documented in the April 2014 Technical Report. Records of drill holes drilled and sampled are well kept – see Figure 12.8.

Figure 12.8
Core Storage Facility at Makwa

Photo taken by Micon, 2022.

12.2 MAYVILLE

12.2.1 Ground Truthing

Ground truthing to determine the extent of mineralization was conducted mainly via a helicopter hired by Grid Metals as ground access routes were impassable. The best exposed part of the deposit is where clearing was previously conducted for the collection of a bulk sample (Figure 12.9 and Figure 12.10).

Noteworthy features are the consistent southward dips, evidence of magmatic layering, and the presence of ptygmatic folds and boudins which indicate complex structural regimes within the mineralized mafic units in the Mayville deposit. The width of the exposed area is between 30 m and 50 m.

Figure 12.9
Mayville Deposit Bulk Sample Site

Photo taken by Micon, 2022.

Figure 12.10
Mayville Bulk Sample Site Showing Ptygmatic Folds

Photo taken by Micon, 2022.

12.2.2 Examination of Drill Cores

As for Makwa, the QP examined cores from several Mayville drill holes; an example is shown in Figure 12.11.

Figure 12.11
Mayville Drill Core Intercept

Photo taken by Micon, 2022.

12.2.3 QA/QC

QA/QC protocols are the same as those for the Makwa property and drill cores are stored at the same complex.

12.3 Adjacent Property

Donner Lithium is an adjacent property immediately to the south of Mayville and is owned by Grid. It is enriched in lithium minerals contained in LCT type pegmatites. The dominant lithium mineral is spodumene which is well exposed in outcrops – see Figure 12.12 and Figure 12.13.

Figure 12.12
Spodumene Crystals in Outcrop of the Main Dyke Pegmatite

Photo taken by Micon, 2022.

Figure 12.13
West Main Dyke Exposure

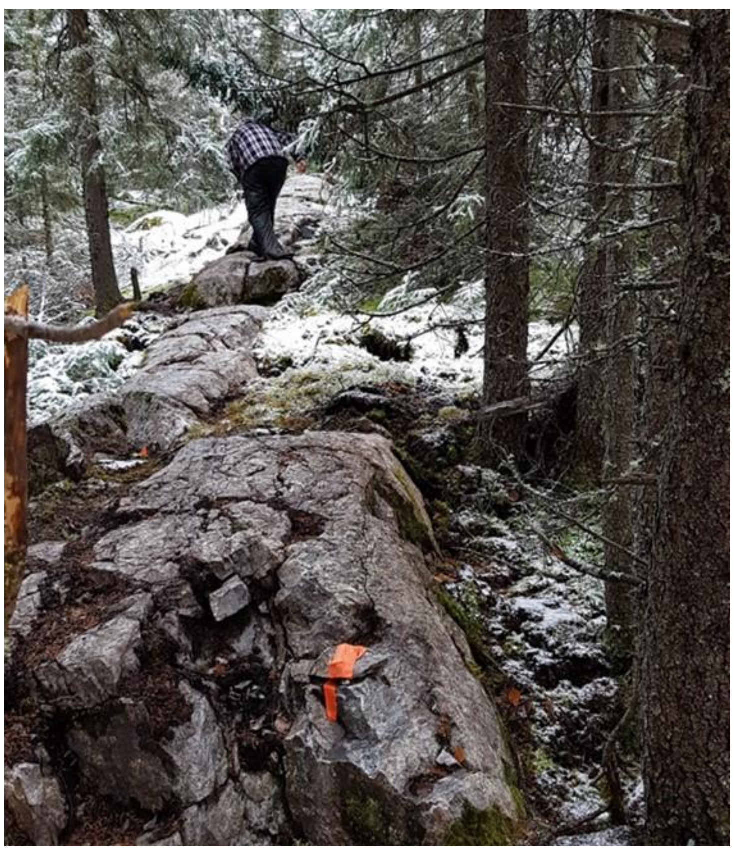


Photo taken by Micon, 2022.

Grid Metals completed resource delineation drilling in 2022 and 2023 and published a maiden inferred resource estimate for the Main and NW pegmatite dykes in 2023. To date, all drill holes intersecting the two dykes have encountered lithium minerals dominated by spodumene – See example in Figure 12.14.

Figure 12.14
Donner Lithium Drill Hole Intersection Showing the Dominant Spodumene Mineral

Photo taken by Micon, 2022.

12.4 MICON QP OPINION/DATA VERIFICATION CONCLUSIONS

Overall, Micon's QP is of the opinion that the findings from the earlier RPA site visit (2013) and the results of the subsequent Micon data verification exercises described above, demonstrate that the project database being generated by Grid Metals is of sufficient quality to support mineral resource estimates and updates.

A ground inspection of the project area offered the QP the clearest and most convincing evidence of mineralization continuity on the property and imparted confidence in the modelling of the deposit.

13.0 MINERAL PROCESSING AND METALLURGICAL TESTING

13.1 METALLURGICAL TESTING SUMMARY

A large amount of metallurgical testing has been completed by Grid Metals (generally under its previous name Mustang Minerals Corp.) on a range of samples from the Makwa deposit, mainly during the years 2005-2010. At that time the deposit was named Maskwa and referred to by that name in reports. During the same period a small amount of testing was completed on composite samples obtained from the Mayville deposit and was followed up in 2019 by further testing using a different flowsheet.

Most of the testing was completed in the laboratories of Process Research Associates Ltd. (PRA) in Richmond B.C., although the facilities later became part of Inspectorate America Corp. and then Bureau Veritas Minerals. Early work by PRA was reported by Frank Wright, P.Eng. who supervised the testing on behalf of Mustang Minerals Corp. ("Maskwa Project, Preliminary Flotation Testing", Frank Wright P.Eng., May 26, 2006; "Maskwa Nickel Project, Flotation Study", Frank Wright P.Eng., December 21, 2007) and PRA reported on the later testing ("Confirmatory Flotation Study to address Grade and Recovery issues- Maskwa Nickel Project, Southeastern Manitoba", Inspectorate America Corp. PRA Metallurgical Division, May 20. 2010). Initial work on a 2005 Makwa composite sample was conducted by G&T Metallurgical Services Ltd. ("G&T", now ALS Metallurgy Kamloops), but flotation testing used a preliminary flowsheet, and results are not used for this evaluation although the Bond work index for the composite is of value. The most recent testing of Mayville samples was conducted by XPS Expert Process Solutions (XPS).

A summary of the testing results has been developed to cover the range of contained metal grades and sample source, in order to predict metal recovery from the deposits. Within the testing campaigns there have been variations in the flowsheet and process conditions such as grind size and reagent additions. For Makwa, results from a total of 109 tests were available but 17 were excluded due to not making a final concentrate, for a final total of 92. Of these a total of 5 locked cycle tests were completed. Results are shown in Table 13.1 (from the earlier tests when nickel results only were obtained) and Table 13.2 (with nickel plus copper, platinum, palladium and cobalt). Within the set of test results, some were excluded from recovery comparison, and identified by grey shading on the rows, due to poor assay balance with head grade, the use of erratic flowsheet or reagent conditions, and some due to test conditions which prevented making the target concentrate grade of 10% nickel.

Initial samples used for metallurgical testing from Makwa represented the Main zone, which was mineralization both below and along the sides of the zone previously mined by an open pit. These are characterized by having a nickel content in the range of 0.40 to 1.20%, plus low copper, and significant content of cobalt plus platinum and palladium (PGE's). Later samples used to represent a Low-grade zone (referred to in original test reports and in result tables as Hanging Wall), branching out from the Main zone, typically show nickel values of 0.20-0.35% but still have significant PGE content. All samples contain a high proportion of serpentine, talc and similar gangue minerals. Most of the successful test-work on the Makwa samples generated a single flotation concentrate containing greater than 10% nickel and high recovery of copper and PGE's. Fine primary grinding and sequential roughing and scavenging flotation plus regrinding prior to cleaning stages was needed to ensure a marketable grade of concentrate. Most of the tests completed by PRA after Test # 40 used the same flowsheet as shown in Figure 13.1. From the results obtained the grade recovery curve, typically as shown in Figure 13.2, was used to visually select the nickel recovery expected at a 10% Ni concentrate grade. The locked cycle tests used a similar flowsheet except for recycle of cleaner tailings to the following stage.

Due to the influence of concentrate grade on metal recovery, the recovery values were adjusted mathematically to compare recovery of all economic metals at a fixed concentrate grade of 10% Ni, using the grade-recovery curve for nickel as reported for each test, and calculating the 10% Ni concentrate weight percent. The weight percent value was then used to adjust recoveries and then grade for the other metals to correspond to the simulated 10% Ni concentrate. Also, due to some tests reporting nickel content in assayed samples based on the Aqua Regia analysis method (NiAR), such results were adjusted to represent total nickel (NiT) for all test results using a factor of 93% based on an average of samples showing both (NiT=NiAR/0.93). A few of the calculated results appear to be erratic due principally to possible assay inaccuracies of the metals particularly in the case of copper and cobalt. For example, these were reported by the laboratory for 2 decimal places in the feed sample and at a feed value of say 0.02%, the closest next level represents a 50% difference.

Table 13.1
Makwa Testing Results 2006-2007

test no.	Sample or composite	Feed % calc.Ni-T	Feed % NiS	Feed % calcNiSil	Grind mins	Grind F80	Actual final conc Ni Rec%	Actual final conc Ni% grade	Calc. Recovery Ni Rec%	Calc. Recovery Grade Ni%	Comments	Sample or composite	NiT feed %	Ni Recov %
1	06 MC1	0.84	n/a	5.6	13	244					coarse grind	06 MC1		
2	06 MC1	0.87	n/a	5.6	17	221					coarse grind	06 MC1		
3	06 MC1	0.87	n/a	5.6	23	132						06 MC1		
4	06 MC1	0.78	n/a	5.6	29	67						06 MC1		
5	06 MC1	1.03	n/a	5.6	25	63	68.50	12.19	70.00	10.00	coarse grind-talc flot-regrind	06 MC1		
6	06 MC1	0.95	n/a	5.6	29	70	73.10	11.68	77.00	10.00		06 MC1	0.95	77.00
7	06 MC1	1.00	n/a	5.6	19	48	42.30	13.37	62.00	10.00	coarse grind-talc flot-regrind	06 MC1		
8	06 MC1	**0.93**	n/a	5.6	**29**	**63**	**75.50**	**10.35**	**76.00**	**10.00**	13.2%Ni in final cleaner	06 MC1	0.93	76.00
9	06 MC1	0.74	n/a	5.6	29	71	56.90	9.92	56.78	10.00	no regrind ro conc	06 MC1	0.74	56.78
10	MC1sands 74%	0.98	n/a	13.3	21.5	177	58.60	12.89			sands fraction only	MC1sands 74%		
10	MC1slimes 26%	0.85	n/a			31	64.80	8.93			slimes fraction only	MC1slimes 26%		
11	MC1sands 71%	0.97	n/a	2.1	21.5+reg	52	69.50	12.24			sands fraction only	MC1sands 71%		
11	MC1slimes 29%	0.78	n/a			29	37.10	12.32			slimes fraction only	MC1slimes 29%		
12	06 MC1	0.88	n/a	5.6	29	74	53.50	12.26	56.89	10.00	soda ash for pHcontrol	06 MC1	0.88	56.89
13	MC1sands	1.07	n/a		25	148	68.10	10.28			sands fraction only	MC1sands		
13	MC1slimes	0.82	n/a			36	25.40	4.90			slimes fraction only	MC1slimes		
14	06 MC1	0.97	n/a	5.6	29	72	73.40	11.40	75.50	10.00		06 MC1	0.97	75.50
15	06 MC1	0.95	n/a	5.6	29	89	71.20	11.85	73.98	10.00	depramin C, no CMC	06 MC1	0.95	73.98
16	mm17-592-647	0.68	n/a	4.8	29	65	41.50	13.41	46.62	10.00		mm17-592-647	0.68	46.62
17	mm18-637-722	1.16	n/a	1.4	29	77	86.20	11.57	88.56	10.00		mm18-637-722	1.16	88.56
18	06 MC1	0.95	n/a	5.6	29	79	65.90	10.99	67.39	10.00		06 MC1	0.95	67.39
LC1	06 MC1	0.80	n/a	5.6	29	65	66.9	10.81	68.12	10.00	no regrind	06 MC1	0.80	68.12
18	07 MC1	0.72	n/a	8.1	14.5	86	40.00	10.22	40.33	10.00	no regrind ro conc	07 MC1		
19	07 MC1	0.81	n/a	8.1	6	188	48.60	10.44	49.26	10.00	flash float, regrind flash conc	07 MC1		
20	07 MC1	0.53	n/a	8.1	14.5	83	36.40	8.64	34.36	10.00	sep ro and sc cleaning	07 MC1		
21	07 MC1	0.73	n/a	8.1	14.5	82	52.30	12.20	55.60	10.00	regrind ro conc	07 MC1		
22	07 MC1	0.55	n/a	8.1	16	57	53.40	11.64	55.86	10.00	no regrind ro conc	07 MC1	0.55	55.86
23	07 MC1	0.56	n/a	8.1	17	53	46.70	12.29	50.14	10.00	no regrind ro conc	07 MC1	0.56	50.14
24	07 MC1	0.55	n/a	8.1	17	59	49.30	10.94	50.71	10.00	plus dextrine, no regrind	07 MC1	0.55	50.71
25	07 MC1	**0.78**	n/a	8.1	15	51					acid in ro float, no balance	07 MC1		
26	07 MC1	0.71	n/a	8.1	18.5	53	49.00	10.67	50.01	10.00		07 MC1	0.71	50.01
LCT FLC1	07 MC1	0.61	n/a	8.1	16	55	57.90	9.77	57.56	10.00	no regrind, estimated	07 MC1	0.61	57.56
LCT FLC2	07 MC1	0.64	0.59	8.13	18.5	49	**67.56**	**10.21**	67.88	10.00	RECALC, regrind, used for PFS	07 MC1	0.64	67.88
27	HNI3	1.07	0.96	10.3	27	57	55.40	12.11	58.57	10.00	no regrind	HNI3	1.07	58.57
28	HNI 4	0.82	0.8	2.4	31	44	63.10	9.16	61.84	10.00	no regrind	HNI 4	0.82	61.84
29	HMG 1	0.62	0.61	1.6	18	98	47.60	8.86	45.89	10.00		HMG 1	0.62	45.89
30	LMG 2	0.64	0.58	9.4	20	54	45.30	10.92	46.68	10.00	no regrind	LMG 2	0.64	46.68
31	HMG 1	0.61	0.55	9.8	25	60	36.80	9.09	35.44	10.00	regrind cl tail	HMG 1		
32	LNI 5	0.35	0.29	17.1	21	43	31.30	8.98	29.77	10.00	regrind cl tail-fine grind	LNI 5		
33	LNI 6	0.26	n/a	n/a	21	42	33.40	7.70	29.95	10.00	regrind cl tail-fine grind	LNI 6		
34	06 MC1	0.85	n/a	6.0	20	56	67.20	11.73	69.80	10.00	no regrind	06 MC1	0.85	69.80
35	06 MC1	0.76	n/a	6.0	20	63	73.90	13.01	78.42	10.00	no regrind	06 MC1	0.76	78.42
36	07 MC1	0.59	0.54		18	57	38.20	7.48	34.42	10.00	sep grind scav after 115 grind	07 MC1		
37	07 MC1	0.57	0.44	22.8	21	60	58.20	8.89	56.54	10.00	2 stage grind plus regrind	07 MC1	0.57	56.54
38	07 MC1	0.58	0.52	10.3	18.5	49						07 MC1		
39	07 MC1	0.56	0.51	8.9	18.5	48						07 MC1		
40	LNI 7	0.28	0.18	35.7	37	53			23.0	10.00	regrind Cl tail 24	LNI 7		

Table 13.2
Makwa Testing Results 2007-2010

		Sample or	Feed %						Feed g/t		Grind	Grind	Actual final conc. Grades							Recovery %				Calculated final conc. Grades							Recovery %				Comments
series	test no.	composite	calc.Ni-T	NiS	calcNiSil	NiAR	Cu	Co	Pt	Pd	mins	F80	wt%	Ni Rec%	Ni%	Cu%	Co%	Ptg/t	Pdg/t	Cu	Co	Pt	Pd	wt%	Ni Rec%	Ni%	Cu%	Co%	Ptg/t	Pdg/t	Cu	Co	Pt	Pd	
2007	41	HNI 3	1.06	n/a	1.7		0.10	0.03	0.17	0.80	27	55	4.80	47.1	10.39	1.47	0.31	1.37	8.06	70.6	49.6	38.7	48.4	6.30	59.5	10.00	1.41	0.30	1.32	7.76	89.1	62.7	48.9	61.1	regrind Cl tail
	42	07 MC1	0.78	n/a	8.1		0.10	0.02	0.11	0.53	18	51	3.20	42.7	10.46	2.20	0.30	1.40	11.50	70.4	48.0	40.7	69.4	3.92	50.0	10.00	2.10	0.29	1.34	10.99	82.4	56.2	47.7	81.3	regrind Cl tail
	43	MC 2	0.64	0.57	11.3		0.18	0.02	0.10	0.45	18	66	2.70	42.9	10.15	3.91	0.30	1.02	8.98	58.7	40.5	27.5	53.9	3.05	47.8	10.00	3.85	0.30	1.00	8.85	65.3	45.1	30.7	60.0	regrind
	44	LNI 5	0.38	0.31	18.4		0.06	0.02	0.06	0.21	26	56	1.00	33.7	12.56	4.33	0.51	1.29	10.67	76.0	31.9	21.5	50.8	2.01	54.0	10.00	3.45	0.41	1.03	8.50	121.7	51.1	34.5	81.4	regrind Cl tail
	45	LNI 5	0.35	0.31	11.4		0.06	0.02	0.06	0.21	19	97	1.10	36.3	10.12	3.45	0.41	0.80	7.76	66.6	28.2	14.7	40.6	1.17	38.0	10.00	3.41	0.41	0.79	7.67	69.7	29.5	15.4	42.6	Coarse grind
2008	46	LNI-8-M07-93	0.24	0.16	33.3		0.04		0.02	0.01	27	57	0.50	24.6	12.34									0.74	29.5	10.00									NO regr., sep.scav cl conc
	47	LNI-8-M07-93	0.26	0.15	42.3		0.04		0.02	0.01	27	59	0.50	19.5	10.69									0.55	20.0	10.00									regrind, sep. scav cl conc
	48	LNI-8-M07-93	0.25	0.16	36.0	0.23	0.04		0.02	0.01	27	48	0.60	26.4	10.79	4.85				60.4				0.74	30.0	10.00	3.73				68.6				regrind, recycle scav cl con
	49	LNI-8-M07-93	0.24	0.16	33.3	0.23	0.04		0.02	0.01	27	58	0.90	31.4	8.50									0.58	24.0	10.00									regrind, rec sc. cl , soda ash
	50	MC-2	0.70	0.63	9.7	0.68	0.18	0.02	0.10	0.45	18	61	3.10	54.5	12.39	4.41				73.9				4.90	69.5	10.00	3.46				94.2				regrind, recycle scav cl con
	51	HNI-4	0.74	0.68	8.6	0.73	0.15	0.03	0.18	0.69	23	44	3.90	59.4	11.43	2.84				72.7				5.03	67.0	10.00	2.45				82.0				regrind, recycle scav cl con
	52	06-Rem-A	0.47	0.42	10.6	0.46	0.12	0.02	0.13	0.37	23.5	57	2.30	50.9	10.15	3.32	0.47	1.70	9.94	65.9	54.1	30.1	61.8	2.52	55.0	10.00	3.39	0.46	1.68	9.79	71.2	58.4	32.5	66.8	regrind, recycle scav cl con
	53	06-Rem-B	1.06	0.99	6.3	1.05	0.12	0.03	0.28	1.00	23.5	49	4.00	46.1	12.33	2.02	0.42	2.44	14.18	66.8	56.0	34.9	56.7	7.70	72.0	10.00	1.63	0.34	1.98	11.50	104.3	87.5	54.5	88.6	regrind, recycle scav cl con
	54	06-Rem-C	1.34	1.28	4.5	1.37	0.16	0.04	0.22	1.14	21.5	49	8.00	75.8	12.67	1.62	0.38	1.60	11.00	86.4	76.0	58.2	77.2	11.03	82.5	10.00	1.36	0.30	1.26	8.68	94.0	82.7	63.3	84.0	regrind, recycle scav cl con
2009	55	hole 08 HW	0.25	0.15	40.0	0.19	0.02		0.02	0.08	20	52	0.70	40.5	13.64	2.00				75.0				0.97	41.00	10.00	1.57				75.9				regrind, recycle scav cl con
	56	hole 08 HW	0.22	0.13	39.8	0.16	0.02		0.02	0.08	20	51	0.70	39.9	11.81	2.30				80.5				0.83	40.00	10.00	1.95				80.7				no regrind, as above
	57	hole 09 HW	0.23	0.11	52.2	0.18	0.01	0.00	0.01	0.03	20	59		21.1	17.76									0.00	21.00	10.00									regrind, recycle scav cl con
	58	hole 09 HW	0.23	0.09	60.9	0.17	0.01	0.00	0.01	0.03	20	55		17.8	14.52									0.00	17.00	10.00									no regrind, as above
	59	hole 08+09HW	0.23	0.11	52.2	0.18	0.02	0.00	0.02	0.06	20	61		37.1	15.03									0.00	30.00	10.00									regrind, recycle scav cl con
	60	06-A+C blend	0.96	0.90	6.2	0.91	0.14		0.15	0.76	21	55	4.90	67.4	13.14	2.02		1.91	11.06	80.0		64.5	71.8	7.36	77.00	10.00	1.74		1.45	8.42	91.4		73.7	82.0	regrind, recycle as above
	61	06-A+C blend	0.61	0.56	8.2	0.55	0.12		0.10	0.46	22	64	3.00	60.3	12.37	3.06		2.01	11.18	76.5		60.3	72.9	4.31	70.00	10.00	2.47		1.62	9.04	88.8		70.0	84.6	regrind, recycle scav cl con
	62	06-A+C blend	0.82	0.79	3.7	0.79	0.13		0.15	0.70	22	64	4.60	70.3	12.60	2.08		1.92	11.05	82.0		58.9	72.6	6.35	77.00	10.00	1.84		1.52	8.77	89.8		64.5	79.5	regrind, recycle scav cl con
	63	Comp D-06/7	1.14	1.10	3.5	1.12	0.16	0.03	0.21	0.87	21	62	6.60	72.7	12.54	1.86		1.89	10.95	90.0		87.4	90.8	9.11	80.00	10.00	1.74		2.22	9.54	99.0		96.2	99.9	regrind, recycle scav cl con
	64	Comp HW-C	0.32	0.22	31.3	0.26	0.06	0.01	0.06	0.17	23	61	1.00	50.5	15.94	6.40		1.90	11.13	84.2		64.9	82.7	1.77	56.00	10.00	3.28		2.44	8.82	93.4		72.0	91.7	regrind, recycle scav cl con
dupl.	65	Comp HW-C	0.29	0.22	24.1	0.24	0.06	0.01	0.06	0.17	23	60	1.00	49.4	14.44	5.73		2.22	11.15	81.7		69.8	83.2	1.52	52.00	10.00	3.51		2.90	9.80	86.0		73.5	87.6	regrind, recycle scav cl con
Qscan	66	Comp HW-C	0.30	0.19	36.7	0.25	0.06	0.01	0.06	0.17	22.5	57	1.10	48.3	14.13									1.61	50.00	10.00									rerun for mineralogy samples
Qscan	67	Comp D-06/7	1.29	1.24	3.9	1.21	0.16	0.03	0.21	0.87	21	53	6.10	65.1	13.74									9.66	75.00	10.00									rerun for mineralogy samples
	68	HW-C LO	0.24	0.10	58.3	0.18	0.07	0.01	0.04	0.11	23	52	0.80	42.4	12.12	0.26	0.77	1.68	10.80	80.5	46.8	35.9	80.5	0.99	43.50	10.00	5.81	0.68	1.48	9.13	82.6	48.0	36.8	82.6	
	69	HW-C MED	0.23	0.12	47.8	0.20	0.03	0.01	0.02	0.08	23	62	0.70	32.9	10.05	1.11	0.44	0.92	6.18	28.5	30.5	33.2	57.9	0.71	33.00	10.00	1.22	0.48	0.94	6.58	28.6	30.6	33.3	58.1	
	70	HW-C HI	0.28	0.19	32.1	0.26					23	73		39.2	4.15										*20.00*	*10.00*									est. conc, suspect coarse grind
	70B	HW-C HI	0.31	0.22	29.0	0.26	0.11	0.02	0.06	0.20	23	58	1.10	49.0	14.38	7.68	0.70	3.90	14.93	75.2	45.7	67.3	77.4	1.61	50.00	10.00	5.23	0.46	2.55	9.79	76.7	46.6	68.7	79.0	corrected grind
	71	HW-E comp	0.31	0.22	29.0	0.29	0.08	0.02	0.04	0.15	23	60	1.00	42.9	12.83	4.95	0.60	2.18	10.65	67.9	37.7	59.7	73.7	1.35	45.00	10.00	4.23	0.50	1.86	8.62	71.2	39.5	62.6	77.3	
dupl.	72	HW-E comp	0.29	0.21	27.6	0.27	0.08	0.02	0.04	0.15	23	72	0.90	41.1	12.64	5.77	0.57	2.30	9.99	67.1	34.7	54.9	63.7	1.20	43.50	10.00	4.78	0.46	1.88	8.29	71.0	36.7	58.1	67.4	
	73	HW-E comp	0.31	0.22	29.0	0.27	0.09	0.02	0.05	0.19	26	52	1.00	44.3	14.10	6.68	0.59	2.32	10.64	73.1	35.4	44.6	55.2	1.51	47.50	10.00	4.67	0.40	1.58	7.44	78.4	38.0	47.8	59.2	
	74	HW-E LO	0.27	0.17	37.0	0.23	0.07	0.01	0.04	0.13	23	52	0.80	36.4	12.70	6.77	0.69	1.98	6.72	70.0	36.5	34.6	49.4	1.09	39.00	10.00	4.82	0.50	1.36	6.32	75.0	39.1	37.1	52.9	
Qscan	75	Comp D-06/7	1.20	1.16	3.3	1.15	0.16	0.03	0.23	0.97	21	52	5.00	56.1	13.32			2.18	12.81			48.4	66.7	8.55	72.00	10.00			1.67	9.71			62.1	85.6	Fine regrind
LCT	76	HW-C+E comp	0.30	0.21	30.0	0.28	0.09	0.02	0.06	0.17	23	57	1.11	54.2	14.73	5.78	0.78	2.40	11.90	81.2	51.3	47.3	68.1	1.85	61.30	10.00	4.47	0.56	1.74	7.08	91.8	58.0	53.5	77.0	estimated 10% equiv. conc
Ro kin	77	HW-C+E comp	na	na	na	0.26					23	58		na											na										rougher kinetic test only
	78	KM1657-2005	0.83	0.76	8.4	0.82	0.17	0.03	0.19	0.68	23	55	5.00	56.2	9.34	2.43	0.37	2.32	9.99	71.8	58.6	61.6	73.9	4.49	54.00	10.00	2.61	0.39	2.51	10.76	69.0	56.3	59.2	71.0	different lab, old sample
	79	HW-C+E comp	na	na	na						23			na											na										10kg cell test for flot rate
LCT	80	Comp 09Main	0.72	0.65	9.7	0.70	0.14	0.03	0.12	0.56	23	49	5.90	72.3	8.82	1.98	0.31	1.33	7.45	83.4	70.3	65.2	78.3	4.97	69.00	10.00	2.24	0.35	1.50	8.43	79.6	67.1	62.2	74.7	
	81	Comp 09Main	0.68	0.63	7.4	0.70	0.13		0.12	0.56	23	44	3.50	50.4	9.80	2.62		1.10	9.04	68.5		32.1	56.5	3.27	48.00	10.00	2.60		1.12	9.22	65.2		30.6	53.8	4th cl. still poor grade/recov.
	82	Comp 09Main	0.71	0.64	9.9	0.70	0.14		0.12	0.56	23	42	4.00	55.4	9.78	2.41		1.51	9.22	71.8		50.3	65.9	3.74	53.00	10.00	2.57		1.54	9.43	68.7		48.2	63.0	added coll for recovery
	83	Comp09MainA	0.59			0.59					22	51	4.09	57.5	8.29									2.66	45.00	10.00									Comp09 less 2004 samples
2010	84	Eastzone2010	0.33	0.17	43.3	0.30					23	52	1.08	37.8	11.53									1.32	40.00	10.00									

Figure 13.1
Typical Makwa Test Flowsheet, PRA Test #60

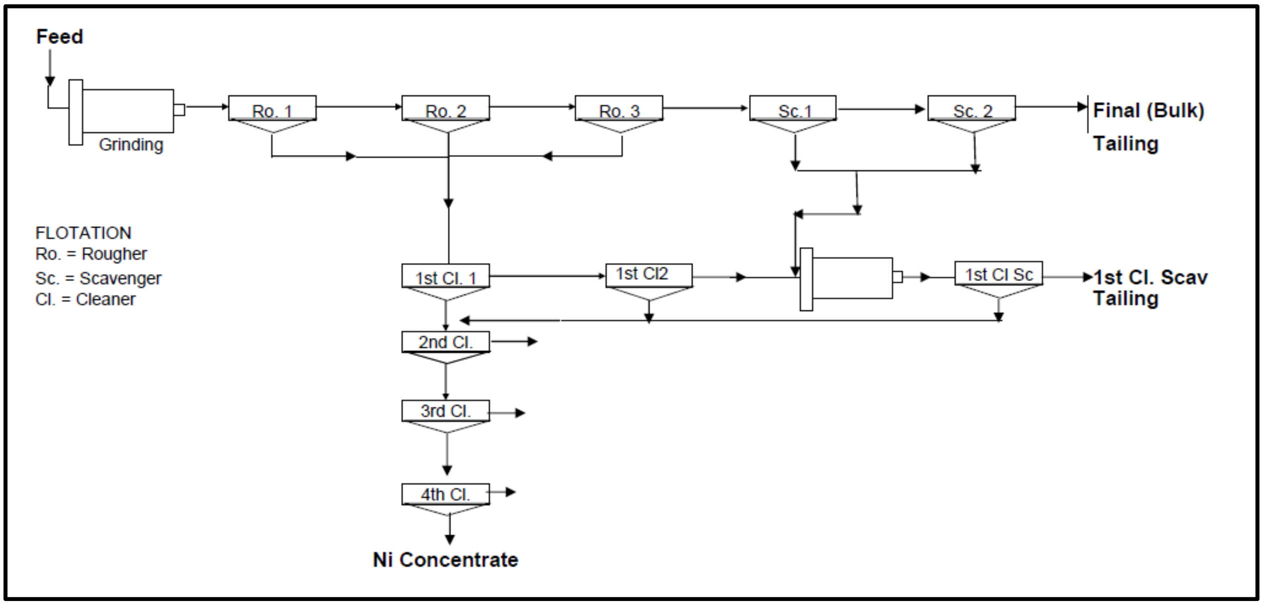
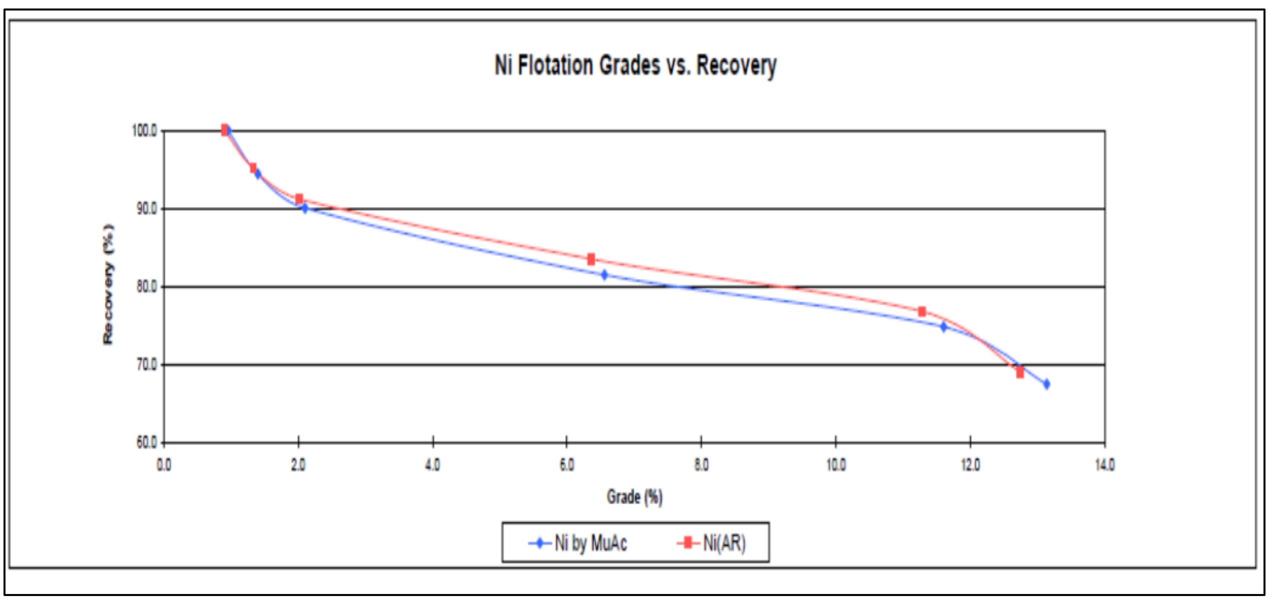


Figure 13.2
Typical Nickel Concentrate Grade/Recovery Function, PRA Test #60



13.2 Makwa Samples and Results

The origin of the various samples used for the testing programs is shown in Table 13.3 and Table 13.4. Much of the earlier drill cores were placed in 6 feet core boxes so that core lengths sampled are expressed often in feet as well as in metres.

Calculated metal recovery results for the Makwa samples from test number 41 onwards, with the selected metal recovery values at the 10% Ni concentrate grade, are assembled as shown in Table 13.5. The same values for earlier tests where only nickel was measured are included in Table 13.1. The values are organized according to the sample origin, being either from the Main Zone or the enveloping Low-grade zone, originally called Hanging Wall area.

The graphs indicating the calculated relationships between feed grade and recovery to a 10% Ni concentrate are shown in the following Figure 13.3 to Figure 13.7.

The 2005 Makwa sample composite used in the preliminary work by G&T comprised the drill cores as shown in Table 13.3, and the average nickel content was 0.68% as NiAR. The Bond Ball Mill work index value was reported as 13.0 kWh/t.

Table 13.3
2005 Global Composite

Drill hole	From (ft)	To (ft)	%Ni
MM04-01	277.0	367	0.673
MM04-05	167.0	277	0.595
MM04-08	247.0	372	0.399
MM04-09	373.7	477	0.869
MM04-10	442.0	517	0.859
MM04-13	407.0	540	0.592
MM04-15	411.0	486	1.179

A Bond Ball Millwork index test was also completed by PRA on a sample of the 2007 Master Composite and provided a result of 13.2 kWh/t.

Table 13.4
2006-2010 Sample Selection and Composites

2006 Composite 06-MC1					
Drill hole	**From (ft)**	**To (ft)**	**From (m)**	**To (m)**	**%Ni(T)**
MM04-17	507	592	154.5	180.4	0.46
MM04-17	592	647	180.4	197.2	1.44
MM04-18	622	637	189.6	194.1	1.01
MM04-18	637	722	194.1	220	0.43
MM04-18	722	837	220	255.1	1.32
MM04-20	647	717	197.2	218.5	0.46
MM04-20	717	747	218.5	227.7	1.22
MM04-20	762	807	232.2	246	1.54
2007 Composite 07-MC1					
Drill hole	**From (ft)**	**To (ft)**	**From (m)**	**To (m)**	**%Ni (T)**
MM07-52	268	338.5	81.7	103.2	0.81
MM07-67	107	266.3	32.6	81.2	0.83
MM07-68	662	767	201.8	233.8	0.58
MM07-69	747	892	227.7	271.9	0.61

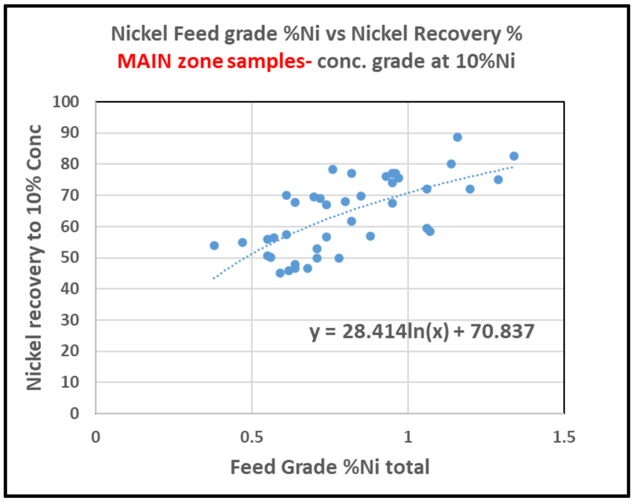
MM07-70	177	252	53.9	76.8	0.43
MM07-78	987	1167	300.8	355.7	0.52
2007 Sub Composites					
Composite Name			**%Ni (T)**	**%Ni (S)**	**%MgO**
Master Composite -All samples			0.64	0.59	28.7
HMg-1, High Mg Avg Ni			0.61	0.61	31.2
LMg-2, Low Mg Avg Ni			0.6	0.58	24.2
HNi-3, High Ni High Mg			0.98	0.96	29.6
HNi-4, High Ni Low Mg			0.83	0.8	26.3
LNi-5, Low Ni High Mg			0.32	0.3	28.9
LNi-6, Low Ni Low Mg			0.23	0.21	20.4
LNi-7, MM07-93, 340.8-462.7 ft			0.21	0.14	30.2
2008 Composites and Samples					
Composite Name			**%Ni (T)**	**%Ni (S)**	**%Ni(AR)**
LNi-8, also MM07-93, 340.8-462.7 ft			0.22	0.15	0.22
Hole	**Interval ft**	**%Ni (T)**	**%Ni (S)**	**%Ni(AR)**	**g/t Pd**
MM04-08	98-157	0.23	0.14	0.23	0.08
	170-217				
MM04-09	17.4-162	0.22	0.06	0.22	0.03
	182-227				
	253-277				
Central Hanging Wall (C-HW) Composite					
Hole	**From (ft)**	**To (ft)**	**SubComp**	**%Ni (AR)**	**%Ni(S)**
MM04-07	45.3	60.6	MED	0.25	0.2
	70.6	181.1			
MM04-21	92.7	187	-	0.25	0.21
MM04-22	252.6	307.5	LOW	0.17	0.13
MM07-63	167	189.1	HIGH	0.3	0.23
MM07-87	292	367	MED	0.23	0.14
MM07-94	282	312	HIGH	0.3	0.21
	352	362			
MM08-130	36.5	77	-	0.26	0.21
	232	267			
MM08-134	121	147	LOW	0.2	0.14
East Hanging Wall (E-HW) Composite					
Hole	**From (ft)**	**To (ft)**	**SubComp**	**%Ni (AR)**	**%Ni(S)**
MM05-47	217	257	-	0.27	0.22
MM07-65	212	242	-	0.27	0.25
MM07-71	195	230	LOW	0.2	0.16
MM08-131	142	172	LOW	0.22	0.19
MM08-132	122	149	-	0.26	0.23
MM08-135	86.8	137	-	0.26	0.25

Variability Composites A-D					
Hole	**From (ft)**	**To (ft)**	**Comp**	**%Ni (AR)**	**%Ni(S)**
MM04-17	507	592	Comp A	0.44	0.43
MM04-18	637	722			
MM04-20	647	717			
MM04-18	622	637	Comp B	0.98	0.95
MM04-20	717	747			
MM04-17	592	647	Comp C	1.28	1.21
MM04-18	722	837			
MM04-20	762	807			
MM04-18	722	837	Comp D	1.09	0.94

Table 13.5
Calculated Metals Recovery for Makwa 2007-2010 Test Results

Sample or Composite	Met. Test Number	Nickel				Copper				Platinum				Palladium				Cobalt	
		MAIN Zone 10% conc		HANG. WALL 10% conc		MAIN Zone 10% conc		HANG. WALL 10% conc		MAIN Zone 10% conc		HANG. WALL 10% conc		MAIN Zone 10% conc		HANG. WALL 10% conc		ALL Zones 10% conc	
		NiT feed %	Ni Recov %	NiT feed %	Ni Recov %	Cu feed %	Cu Recov %	Cu feed %	Cu Recov %	Pt feed g/t	Pt Recov %	Pt feed %	Pt Recov %	Pd feed g/t	Pd Recov %	Pd feed %	Pd Recov %	Ni recov %	Co Recov %
HNI 3	41	1.06	59.50			0.10	89.14			0.17	48.9			0.80	61.1			59.5	62.7
07 MC1	42	0.78	50.00			0.10	82.44			0.11	47.7			0.53	81.3			50.0	56.2
MC 2	43	0.64	47.80			0.18	65.35			0.10	30.7			0.45	60.0			47.8	45.1
LNI 5	44																	54.0	51.1
LNI 5	45																	38.0	29.5
LNI-8-M07-93	46																		
LNI-8-M07-93	47																		
LNI-8-M07-93	48																		
LNI-8-M07-93	49																		
MC-2	50	0.70	69.50			0.18	94.24												
HNI-4	51	0.74	67.00			0.15	82.00												
06-Rem-A	52	0.47	55.00			0.12	71.21			0.13	32.5			0.37	66.8			55.0	58.4
06-Rem-B	53	1.06	72.00			0.12	*104.33*			0.28	54.5			1.00	88.6			72.0	87.5
06-Rem-C	54	1.34	82.50			0.16	94.04			0.22	63.3			1.14	84.0			82.5	82.7
hole 08 HW	55			0.25	41.00			0.02	*75.9*										
hole 08 HW	56			0.22	40.00			0.02	*80.7*										
hole 09 HW	57																		
hole 09 HW	58																		
hole 08+09HW	59																		
06-A+C blend	60	0.96	77.00			0.14	91.39			0.15	73.7			0.76	82.0				
06-A+C blend	61	0.61	70.00			0.12	88.81			0.10	70.0			0.46	84.6				
06-A+C blend	62	0.82	77.00			0.13	89.82			0.15	64.5			0.70	79.5				
Comp D-06/7	63	1.14	80.00			0.16	99.04			0.21	96.2			0.87	99.9				
Comp HW-C	64			0.32	56.00			0.06	*93.4*			0.06	72.0			0.17	91.7		
Comp HW-C	65			0.29	52.00			0.06	*86.0*			0.06	73.5			0.17	87.6		
Comp HW-C	66			0.30	50.00														
Comp D-06/7	67	1.29	75.00																
HW-C LO	68			0.24	43.50			0.07	*82.6*			0.04	36.8			0.11	82.6	43.5	48.0
HW-C MED	69			0.23	33.00			0.03	*28.6*			0.02	33.3			0.08	58.1	33.0	30.6
HW-C HI	70																		
HW-C HI	70B			0.31	50.00			0.11	*76.7*			0.06	68.7			0.20	79.0	50.0	46.6
HW-E comp	71			0.31	45.00			0.08	*71.2*			0.04	62.6			0.15	77.3	45.0	39.5
HW-E comp	72			0.29	43.50			0.08	*71.0*			0.04	58.1			0.15	67.4	43.5	36.7
HW-E comp	73			0.31	47.50			0.09	*78.4*			0.05	47.8			0.19	59.2	47.5	38.0
HW-E LO	74			0.27	39.00			0.07	*75.0*			0.04	37.1			0.13	52.9	39.0	39.1
Comp D-06/7	75	1.2	72.00							0.23	62.1			0.97	85.6				
HW-C+E comp	76			0.30	61.30			0.09	*91.8*			0.06	53.5			0.17	77.0	61.3	58.0
HW-C+E comp	77																		
KM1657-2005	78																	54.0	56.3
HW-C+E comp	79																		
Comp 09Main	80	0.72	69.00			0.14	79.59			0.12	62.2			0.56	74.7			69.0	67.1
Comp 09Main	81																		
Comp 09Main	82	0.71	53.00			0.14	68.69			0.12	48.2			0.56	63.0				
Comp09MainA	83	0.59	45.00																
Eastzone2010	84			0.33	40.00														

Figure 13.3
Nickel Feed Grade and Recovery



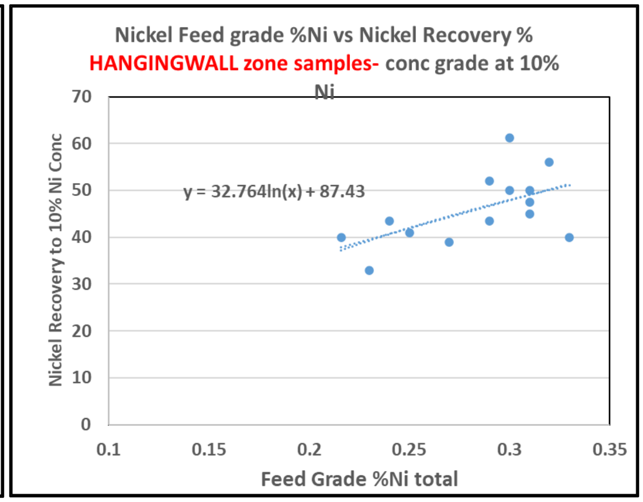
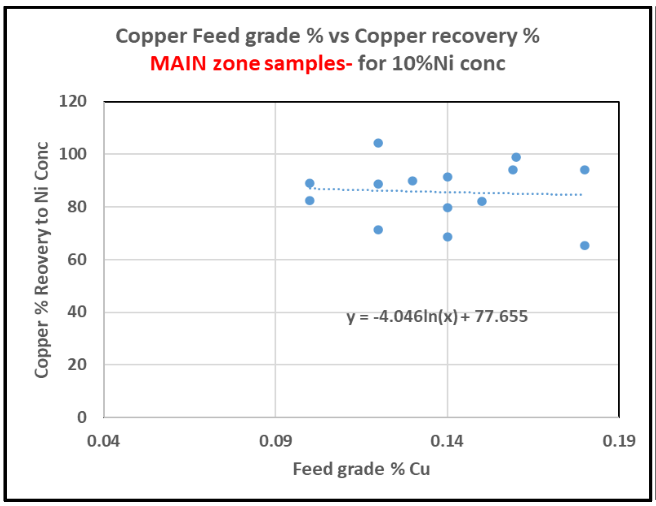


Figure 13.4
Copper Feed Grade and Recovery



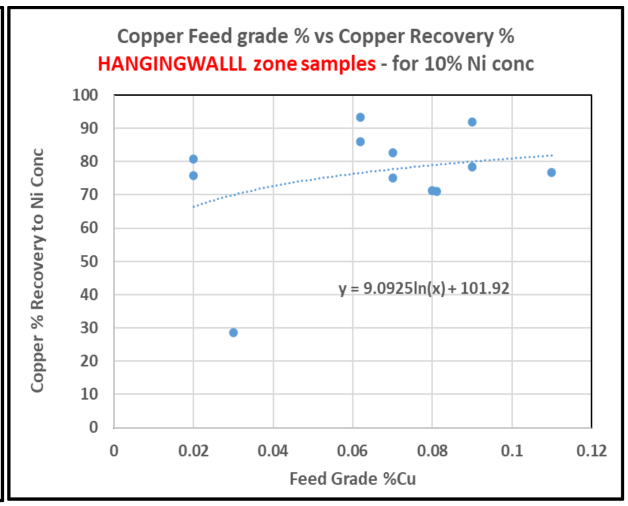
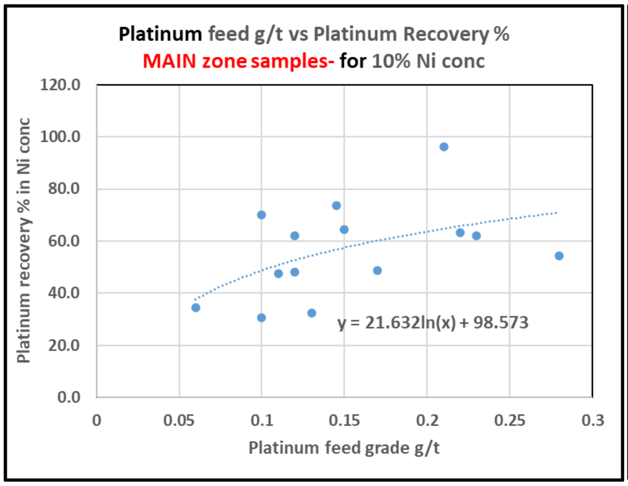


Figure 13.5
Platinum Feed Grade and Recovery



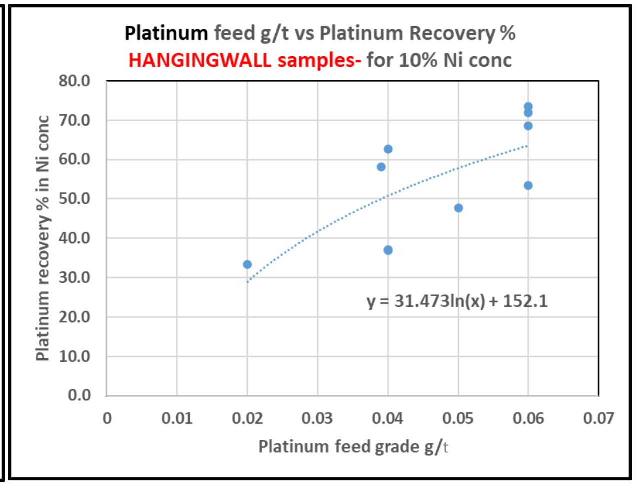
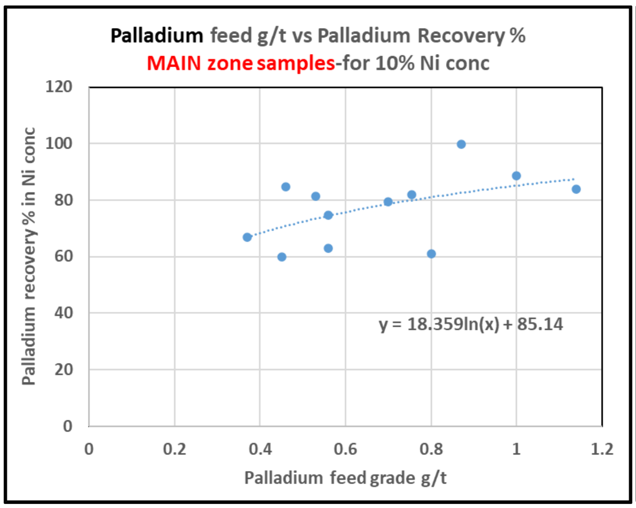


Figure 13.6
Palladium Feed Grade and Recovery



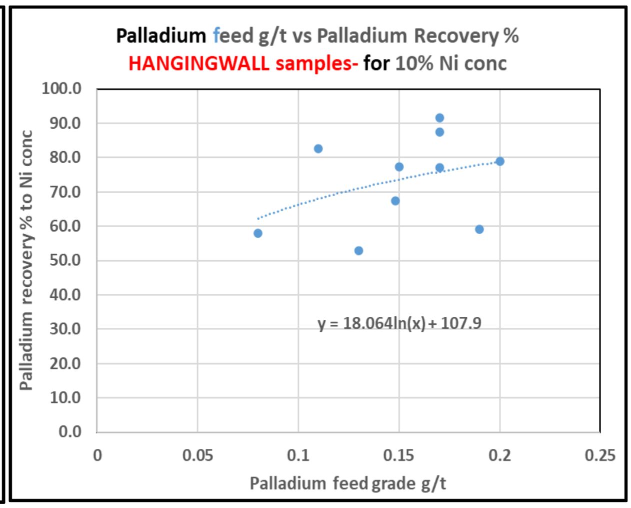
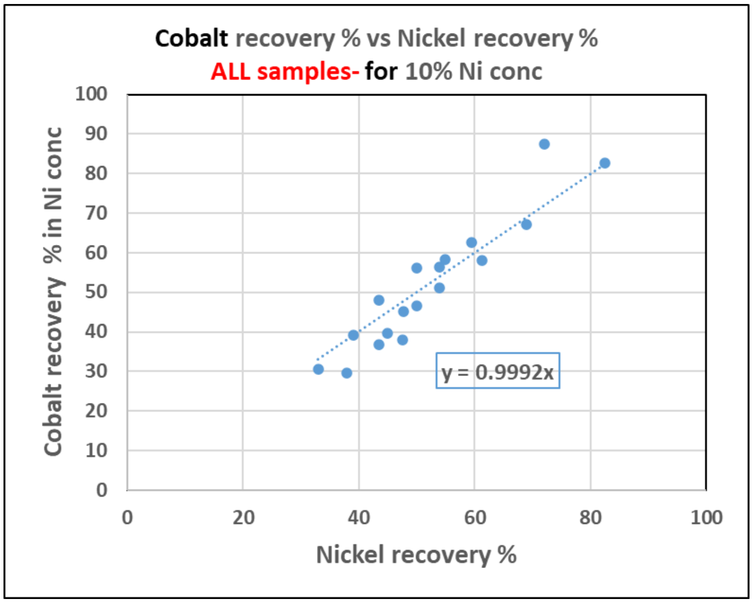


Figure 13.7
Cobalt Feed Grade vs Nickel Recovery



13.3 MAYVILLE SAMPLES AND RESULTS

Initial metallurgical testing of Mayville samples was conducted by PRA in 2005 using a composite of one drill hole, MAY05-03, which provided a composite head assay of 0.84% Copper and 0.276% Nickel. Preliminary flotation testing showed that a high-grade copper concentrate (typically 30% copper content) with high copper recovery could be produced. However, nickel performance was poor. ("Mayville Project, Preliminary Flotation Testing". Frank Wright P.Eng., April 5, 2005).

Further work was done by PRA starting in 2009 using a suite of samples to make a master composite (MC2009) and sub-composites named H2009 and L2010. The samples used are listed in Table 13.6 Copper performance in these tests was very good with high concentrate grade and recovery but again the separation of nickel to a separate concentrate was very variable. The flowsheet used had sequential copper and nickel roughing flotation followed by separate cleaning of the two rougher concentrates.

Table 13.6
Mayville 2009 Samples

Drill Hole	From (ft)	To (ft)	Est. Cu%
M05-01	42.25	59.50	0.714
M05-01	103.25	132.00	1.329
M05-02	152.00	262.00	1.011
M05-06	185.00	212.20	0.652
M05-08	502.00	542.00	0.786
M05-08	572.00	602.00	0.928
M05-08	627.00	677.60	0.739
M05-09	87.00	109.25	0.846
M05-09	129.50	154.00	1.002

Drill Hole	From (ft)	To (ft)	Est. Cu%
M05-10	67.00	107.00	0.742
M05-10	122.40	145.80	1.03
M05-11	407.00	469.00	0.775
M05-26	175.00	212.00	0.859
M06-38	168.00	244.00	0.851
M06-38	267.00	307.00	0.893
M06-42	133.70	172.00	1.000
Composite Estimate			0.89

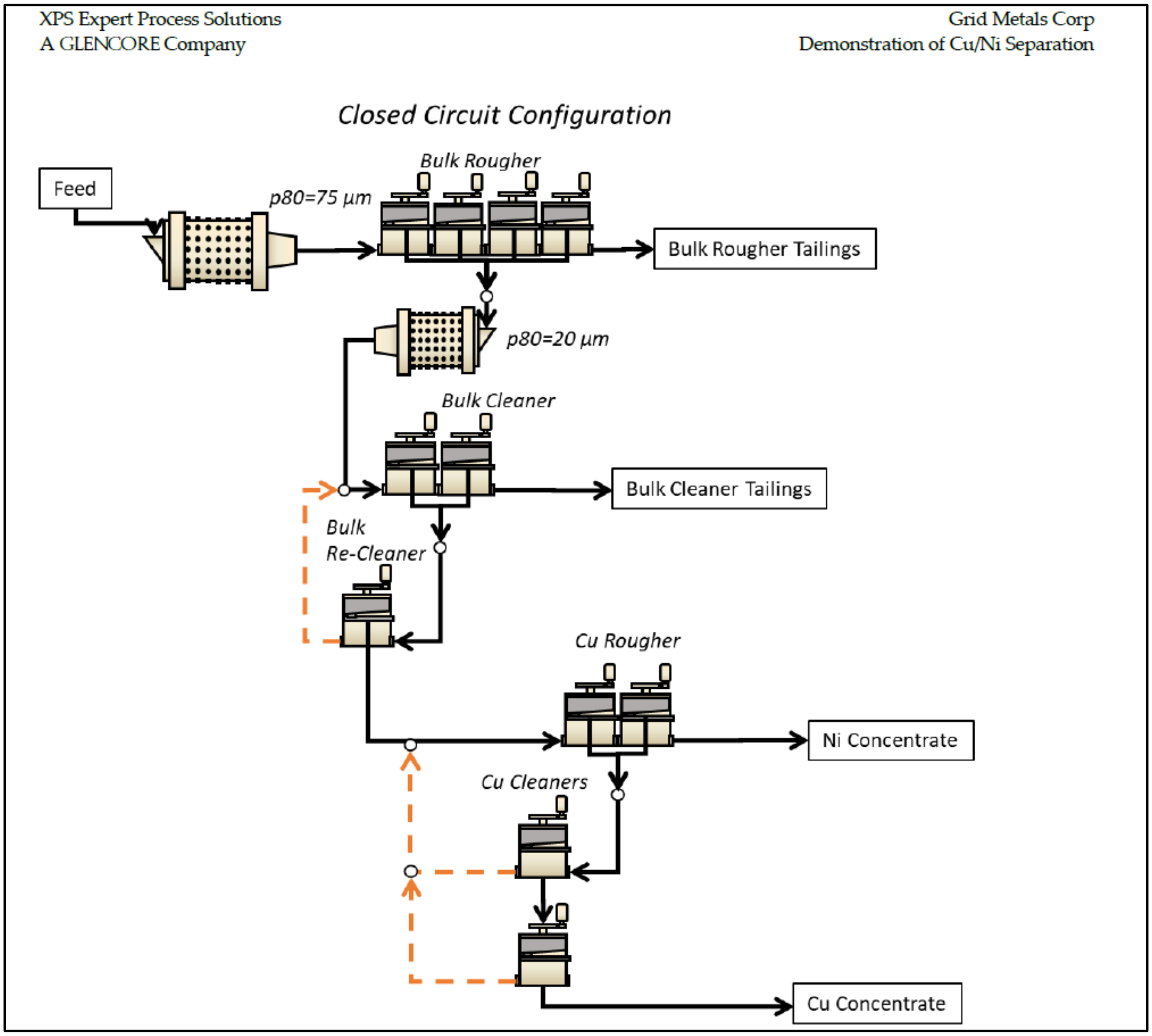
Testing of Mayville samples was resumed in 2018 by XPS using new samples as listed in Table 13.7., and in two phases. Phase 1 explored basic copper nickel separation and Phase 2, using a new composite, optimized testing conditions to generate separate concentrates of copper and nickel both at marketable grades. A final locked cycle test was completed by XPS and the simulated recovery of all economic metals reported. ("Demonstration of Cu/Ni Separation, Medium Grade feed Ni-Cu-Co ore from the Mayville Project", XPS Expert Process Solutions, Revision 2, July 19, 2019). Improvement to metal separation was shown compared with previous work based on bulk (copper plus nickel) flotation to a cleaner concentrate followed by copper-nickel separation. The flowsheet used in shown in Figure 13.8.

Table 13.7
Samples Prepared for 2018-2019 Testing at XPS

Drill Hole	From (m)	To (m)	Length (m)	Ni%	Cu%	Co%
Phase 1						
MAY05-10	56.8	68.6	11.8	0.50	1.15	0.03
MAY05-07	181.9	189.5	7.6	0.46	1.06	0.03
MAY05-33[1]	22.6	41.7	19.1	0.29	0.56	0.02
Phase 2						
MAY05-33	22.6	41.7	19.1	0.29	0.70	0.02
MAY06-41	187.7	195.7	8.0	0.27	0.54	0.02
MAY05-37	99.7	117.2	17.5	0.25	0.61	0.02
MAY06-59	68.3	79.9	11.6	0.24	0.37	0.02

[1] Approx half of MAY05-33 used in each phase composite.

Figure 13.8
Flowsheet Used in Final XPS Testing, 2019



The results from the later PRA tests plus the final XPS results based on the locked cycle simulation are used for metal recovery estimation. For nickel, the XPS locked cycle test simulation was accepted for the actual nickel feed grade. In order to estimate recovery for other possible feed grades, it was assumed that recovery of nickel to a 10% Ni concentrate would vary as a value of 50% of the change in feed grade. The values assumed and the graphical results are as shown in Table 13.8 and Figure 13.9. Nickel content is expressed here as Ni(T) and has been calculated from the values reported by XPS which were as Ni(AR) using a factor of 1.0/0.93.

Copper recovery was developed from the PRA plus XPS results as shown in Table 13.8 and graphically as Figure 13.1, assuming a 28% Cu grade in concentrate.

Table 13.8
Estimated Nickel Recovery Based on Feed Grade %Ni(T)

Feed Grade (%NiT)	Recovery (%)
0.15	49.40
0.20	55.20
0.27	63.50
0.30	67.00
0.35	72.90

Figure 13.9
Nickel Recovery to 10% Conc. vs Feed Grade

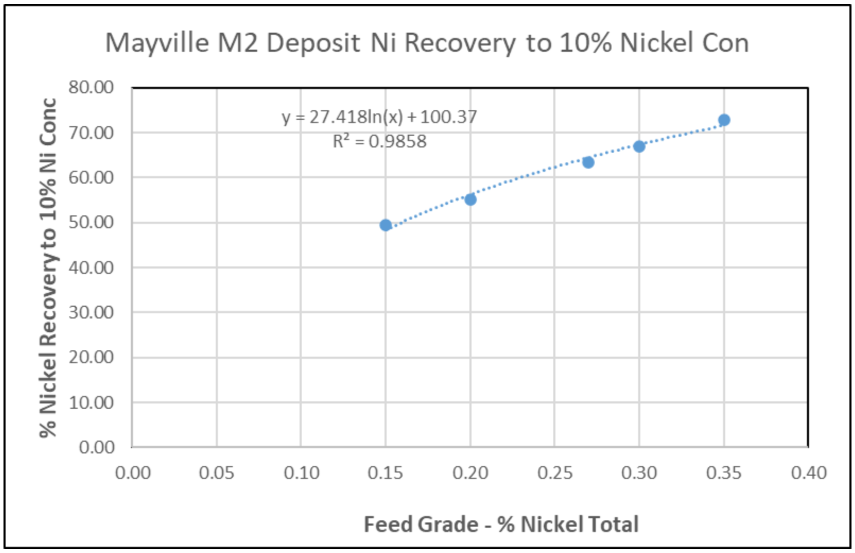
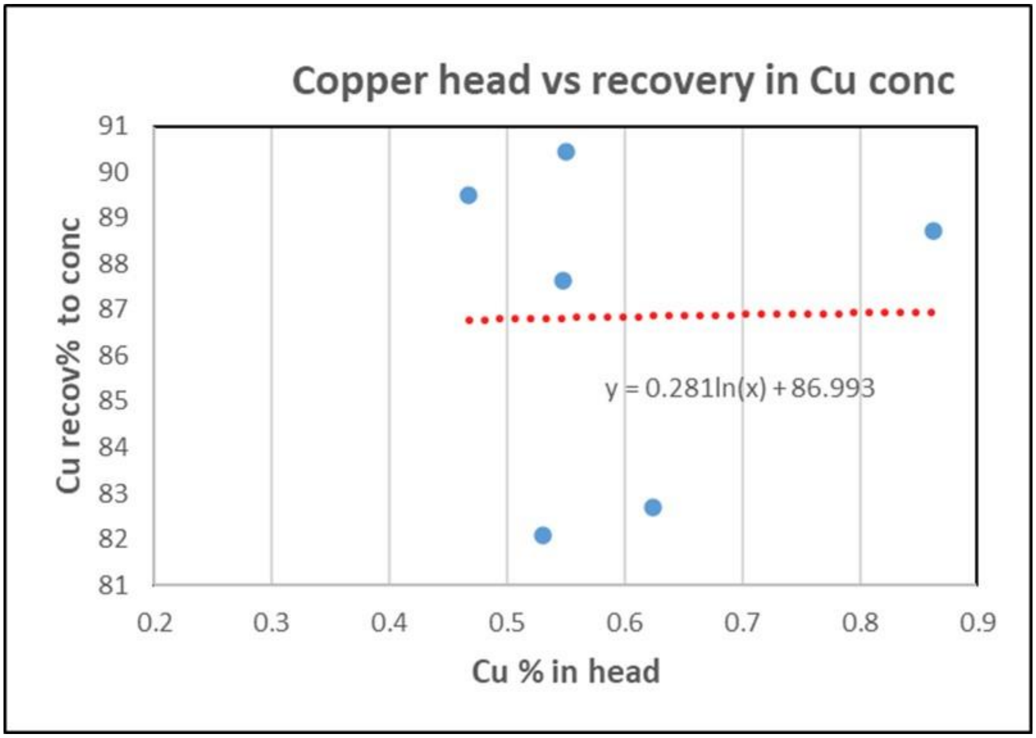


Table 13.9
Copper Concentrate Grade and Recovery

COPPER conc. results		Calc HEAD			Assay			Recovery		
Source	Test	Cu%	Ni(T)%	Ni(AR)%	Cu%	Ni(T)%	Ni(AR)%	Cu%	Ni(T)%	Ni(AR)%
PRA	8	0.86	0.41	0.15	28.96	1.47	1.37	88.71	9.40	24.11
PRA	10	0.47	0.20	0.18	29.95	0.89	0.81	89.49	6.28	6.35
PRA	11	0.66	0.26	0.25	*23.15*	*3.04*	*3.21*	*90.56*	*30.01*	*32.97*
PRA	12	0.62		0.27	29.77		1.79	82.69		11.33
XPS	12	0.55		0.26	24.44		1.74	90.44		11.72
XPS	13	0.53		0.27	29.97		0.50	82.10		2.60
XPS	CC sim	0.55		0.26	25.04		0.47	90.12		3.60

Figure 13.10
Copper Recovery to Copper Concentrate



The recoveries of platinum, palladium and gold to each of the copper and nickel concentrates were estimated as fixed values based on the XPS results and summarized in the following Table 13.10.

Table 13.10
Estimated Gold and PGE Recoveries

PALLADIUM	Ni conc		Cu conc	
	Pd recov	Ni recov	Pd recov	Cu recov
XPS-13	39.3	65.1	34.1	82.1
XPS-Ccsim	28.4	68.3	49.0	90.1
selected value	**33.0**		**42.0**	
PLATINUM	Ni conc		Cu conc	
	Pt recov	Ni recov	Pt recov	Cu recov
XPS-13	25.0	65.1	29.9	82.1
XPS-Ccsim	16.5	68.3	42.9	90.1
selected value	**21.0**		**35.0**	
GOLD	Ni conc		Cu conc	
	Au recov	Ni recov	Au recov	Cu recov
XPS-13	14.1	65.1	21.4	82.1
XPS-Ccsim	9.6	68.3	28.2	90.1
selected value	**10.0**		**30.0**	

Cobalt recovery was seen to be directly proportional to that of nickel in the nickel concentrate based on test results, as shown in Table 13.11. A nominal recovery of 5% to the copper concentrate was used based on results shown.

Table 13.11
Cobalt Recovery versus Copper and Nickel Recovery

COBALT	Ni conc		Cu conc	
	Co recov	Ni recov	Co recov	Cu recov
PRA-11	19.1	14.1	43.0	90.6
XPS-12	56.2	60.4	11.8	90.4
XPS-13	62.5	65.1	2.8	82.1
XPS-CCsim	65.2	68.3	3.8	90.1
selected value	**same as Ni**		**5.0**	

13.4 CONCLUSIONS

Based on the results shown in the preceding sections, specific values or relationships were developed for use in the resource evaluation for both Makwa and Mayville deposits. A summary of these values is shown in Table 13.12.

Table 13.12
Metal Recovery Values for Resource Evaluation

Project	Zone	Metal	Units	Concentrate	Concentrate Grade	Recovery Equation
Makwa	HG1, LG1	Ni	%	Nickel	10.00%	28.414*LN(Ni Feed Grade %) + 70.837
	HG1, LG1	Cu	%	Nickel	10.00%	85.6%
	HG1, LG1	Co	%	Nickel	10.00%	=Nickel Recovery
	HG1, LG1	Pd	ppm	Nickel	10.00%	18.359*LN(Pd Feed Grade ppm) + 85.14
	HG1, LG1	Pt	ppm	Nickel	10.00%	21.632*LN(Pt Feed Grade ppm) +98.573
	HG1, LG1	Au	ppm	Nickel	10.00%	Not payable - exclude
	LG2 (HW)	Ni	%	Nickel	10.00%	32.764*LN(Ni Feed Grade %) + 87.43
	LG2 (HW)	Cu	%	Nickel	10.00%	9.0925* LN(Copper Feed Grade %) +101.92
	LG2 (HW)	Co	%	Nickel	10.00%	=Nickel Recovery
	LG2 (HW)	Pd	ppm	Nickel	10.00%	18.064*LN(Pd Feed Grade ppm) + 107.9
	LG2 (HW)	Pt	ppm	Nickel	10.00%	31.473*LN(Pt Feed Grade ppm) + 152.1
	LG2 (HW)	Au	ppm	Nickel	10.00%	Not payable - exclude
Mayville	M2	Ni	%	Nickel	10.00%	27.418*LN(Nickel Feed Grade %) + 100.37
	M2	Cu	%	Nickel	10.00%	5%
	M2	Co	%	Nickel	10.00%	=Nickel Recovery
	M2	Pd	ppm	Nickel	10.00%	33%
	M2	Pt	ppm	Nickel	10.00%	21%
	M2	Au	ppm	Nickel	10.00%	10%
	M2	Ni	%	Copper	28.00%	5%
	M2	Cu	%	Copper	28.00%	0.281*LN(Cu Feed Grade %) + 86.993
	M2	Co	%	Copper	28.00%	=Nickel Recovery
	M2	Pd	ppm	Copper	28.00%	42%
	M2	Pt	ppm	Copper	28.00%	35%
	M2	Au	ppm	Copper	28.00%	30%

14.0 MINERAL RESOURCE ESTIMATES

14.1 Overview of Methodology

The mineral resource estimation (MRE) strategy adopted for the Makwa and Mayville deposits comprises the following logical sequence:

- Exploratory data analysis/review
- Modelling
- Compositing/Grade Capping/Statistics
- Geostatistics/Variography/Spatial Analysis
- Definition of Block Model and Search Parameters
- Grade Interpolation and Validation
- Determination of Tonnage
- Establishment of Parameters/Prospects for Economic Recovery
- Mineral Resource Definition: parameters; classification

While both the Mayville and the Makwa deposits belong to the same deposit class, the former is copper dominant while the latter is nickel dominant. Accordingly, the two deposits have been estimated separately.

For the Makwa deposit, two subzones have been modeled, viz.: (1) A central high-grade zone, herein referred to as the HG1 zone; and (2) An enveloping lower-grade zone, herein referred to as the LG1 zone. The boundaries between LG1 and HG1 are ‘soft’ boundaries that are based on cutoff grades for nickel that reflect a decrease in total sulphide content above and below the HG1 zone.

14.2 Makwa

14.2.1 Exploratory Data Analysis

The inputs for the core area of the Makwa deposit considered for updating the MRE are as follows:

- Number of drill holes = 172
- Assays = 4,380
- Density measurements = 1,454

14.2.1.1 Drill Holes Coverage/Representativity

As described in Section 10, an additional 18 drill holes were drilled on the Makwa property in 2022. Several of these targeted the Makwa Zone and directly adjacent ultramafic units, bringing the total drilling on the Makwa Zone trend to 172 drill holes. The 172 drill holes cover a cumulative strike length of 3.0 km with the majority (90%) having intercepted mineralization. Average drill-hole spacing is 50 to 80 m along strike and 30 to 50 m across strike. The drilling is denser in the central area where the Falconbridge old Makwa pit is located. All drill holes pre-2022 were selectively sampled in areas perceived to be nickel enriched; this is a major weakness in the database and one of the prime reasons why the resource cannot be placed in the measured category.

14.2.1.2 Handling of Missing Sample Assays

Missing sample assay data within the deposit wireframe(s) is problematic as leaving/ignoring these gaps could potentially create over estimation from nearby high-grade composites. To prevent this problem, background values determined from the 25th quartile (Q1) of the most recent assay data statistics within the wireframes was used to fill the gaps.

Table 14.1below shows the Q1 values adopted for each element.

Table 14.1
Table Showing the Adopted Q1 Background Values Within the HG1 and LG1 Wireframes

Deposit	Element (Unit)	Data Used	Average	Max	Q1 (Background Value)
Makwa HG	Ni %	662	0.86	8.86	0.53
	Pd g/t	654	0.82	8.96	0.46
	Pt g/t	654	0.21	2.18	0.12
	Cu %	651	0.15	1.12	0.08
	Au g/t	210	0.02	0.18	0.01
	Co %	651	0.03	0.18	0.02
Makwa LG	Ni %	2,382	0.25	3.8	0.16
	Pd g/t	2,255	0.20	2.87	0.08
	Pt g/t	2,264	0.06	0.48	0.03
	Cu %	2,335	0.06	3.52	0.02
	Au g/t	1,128	0.02	0.40	0.01
	Co %	2,339	0.01	0.22	0.01
Mayville (All)	Cu %	3,304	0.39	20.15	0.15

Deposit	Element (Unit)	Data Used	Average	Max	Q1 (Background Value)
	Ni %	3,304	0.16	3.33	0.07
	Pd g/t	3,304	0.13	15.25	0.05
	Pt g/t	3,304	0.06	25.94	0.02
	Au g/t	3,304	0.05	6.69	0.02
	Co %	3,304	0.01	0.34	0.01

14.2.1.3 Deposit Components

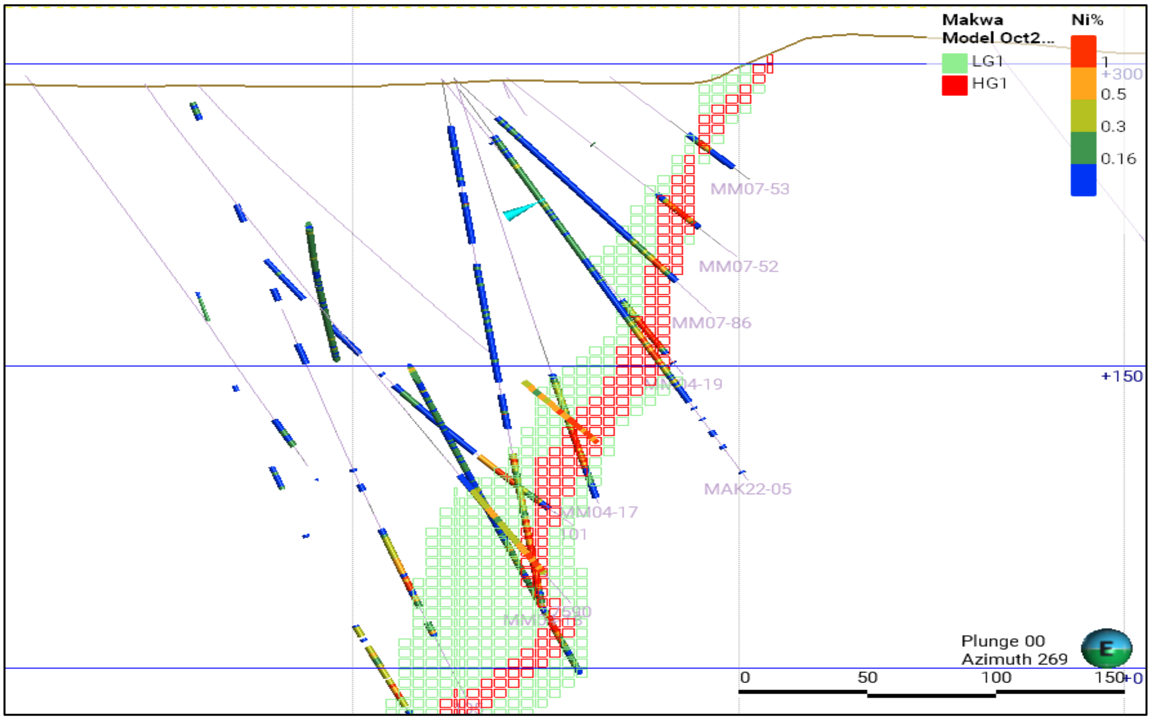
The principal metals of economic interest in the Makwa deposit are nickel (Ni) and palladium (Pd). Other notable components of lesser importance are cobalt (Co), copper (Cu), platinum (Pt), and gold (Au). The relationships between the various elements associated with the deposit cannot be assessed with precision because of the selective sampling in 75% of the drill hole data.

14.2.1.4 Geological Continuity

The mineralization is ortho-magmatic in origin and has been noted at surface and confirmed by drilling over a strike distance of over 1.5 km in an approximate east – west direction. The local geology map (Figure 7.2 presented in Section 7 of this report) has identified the Makwa deposit and the Dumbarton deposit as separate entities as they are believed to be physically separate and mineralogically/geochemically distinct. The timing of formation of the Dumbarton deposit is not known – it could be post-magmatic or syn-magmatic. However, the deposits could be related through high-temperature post mineralization processes.

Continuity along strike has been confirmed by ground truthing during the site visit as detailed in Section 12. Continuity across considerable width (25 to 50 m) has been confirmed by continuous sampling of the 2022 drill holes as demonstrated on **Figure 14.1**. There is a general, albeit inconsistent, vertical zonation through the ultramafic series rocks of the Bird River Sill at Makwa in terms of total sulphide content and Ni and Pd (especially) grade with higher grades occurring close to the basal contact and patchy low grade sulphides occurring above the HG1-LG1 units but below the contact with the overlying mafic series gabbroic rocks. The geometry of the deposit indicates that the most significant post mineralization event was a deformation episode which culminated in the deposit being tilted to dip steeply to the south-southeast.

Figure 14.1
Makwa NS Section (Looking West) Showing Recent Drill Holes and Historical Drill Holes Intersections

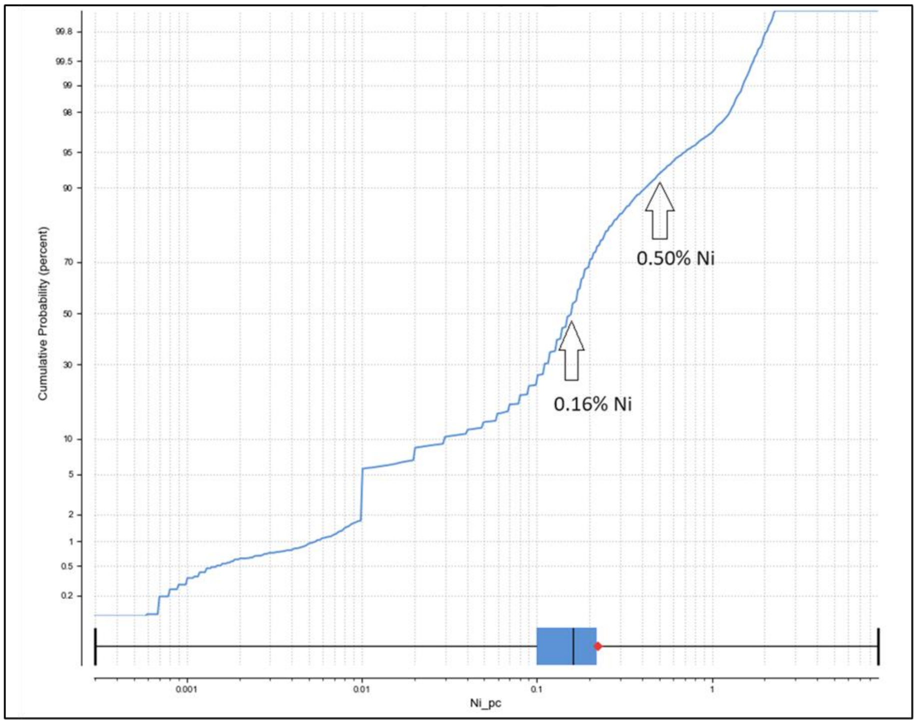


Note: The 2022 drill holes with marker on the image shows mineralization while older holes cannot confirm due to selective sampling.

14.2.2 Modelling

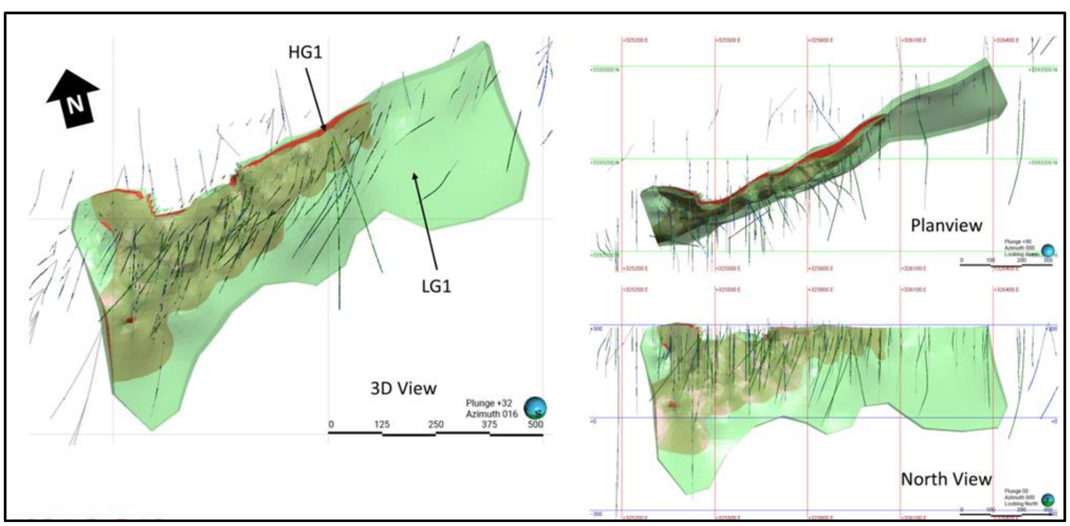
The global log-probability curve of the Ni assays (Figure 14.2) shows 3 distinct populations: background/unmineralized (below 0.16% Ni), low grade (from 0.16% to 0.5% Ni) and high grade (above 0.5% Ni).

Figure 14.2
Global Log-Probability Curve for the Makwa Deposit Ni Assays



Using Ni threshold values of 0.16% and 0.5%, Micon's QP modelled low grade (LG1) and high grade (HG1) envelopes/domains as shown in Figure 14.3.

Figure 14.3
Makwa Deposit High Grade (HG1) and Low Grade (LG1) Wireframes in 3D Perspective.



It is important to note that the strike length of the area considered for modelling was determined by Grid Metals QPs. There is a scope to extend the modelling eastwards and westwards as more information becomes available.

14.2.3 Compositing, Grade Capping and Statistics

A composite length of 2 m was selected based on the average sample length which also equals the mode of the sample lengths.

Samples population histograms revealed log-normal metal distributions in both the high-grade (HG1) and low-grade wireframes (LG1); accordingly, log-probability plots were used to assess the grade capping threshold values for Ni, Co, Cu, Au, Pd, and Pt. The log-probability plots and the relevant statistics for Ni in the HG1 and LG1 Domains are shown in Figure 14.4 and Figure 14.5.

Figure 14.4
Domain HG1 Ni Log-Probability Plot Showing Grade Capping Value

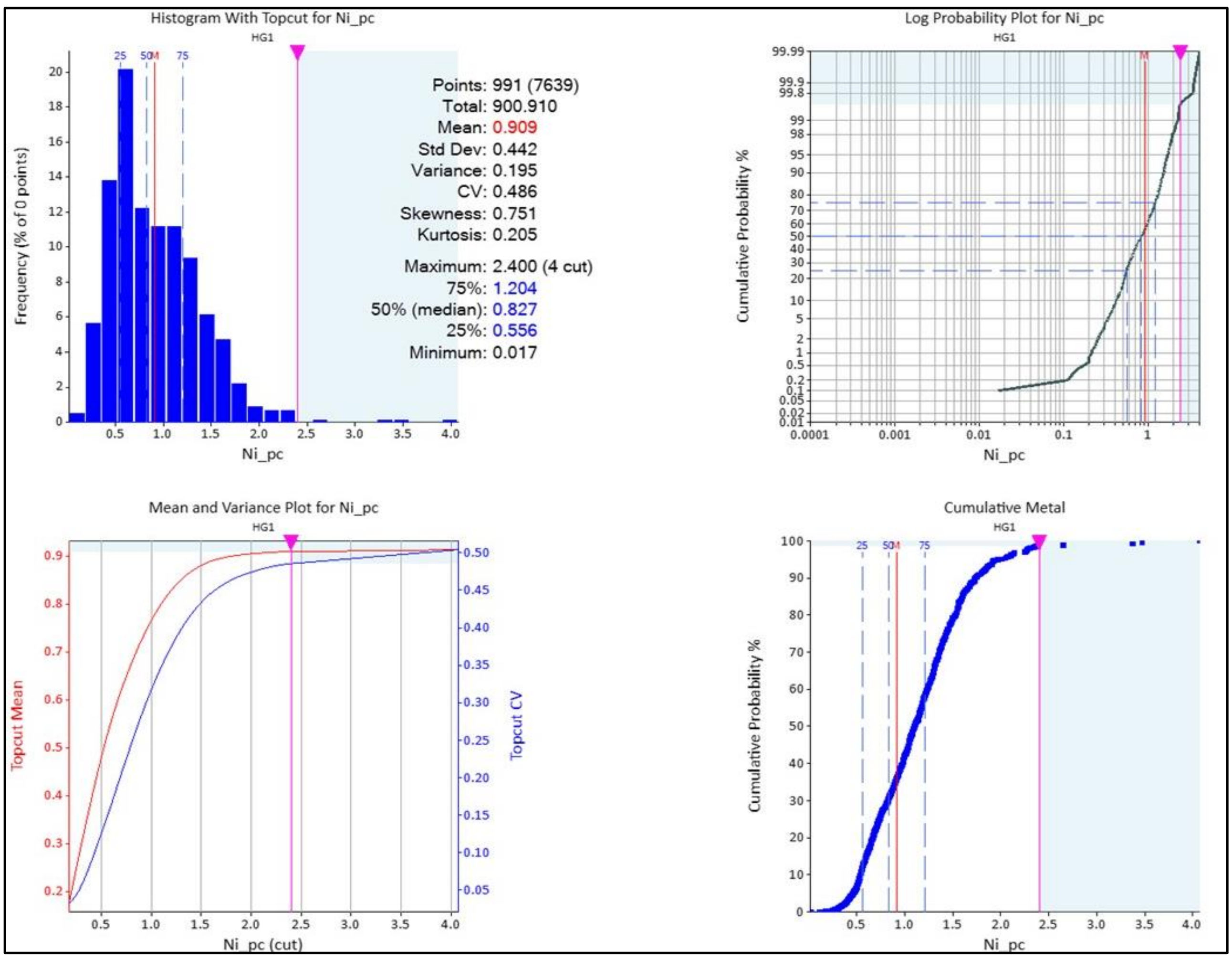
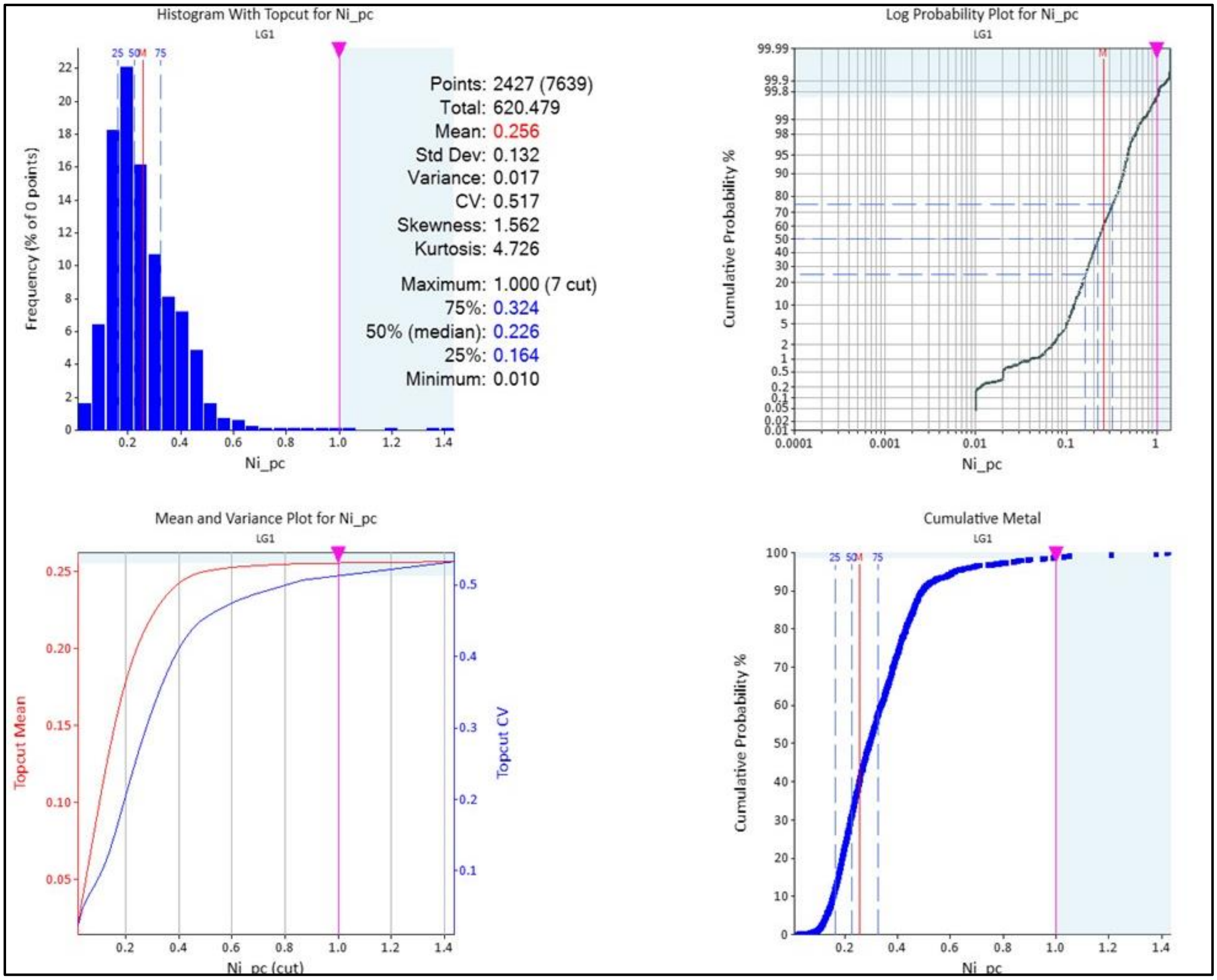


Figure 14.5
Domain LG1 Ni Log-Probability Plot Showing Grade Capping Value



As shown in Figure 14.4 and Figure 14.5, the Ni grade capping values for the HG1 Domain and LG1 Domain are 2.4% Ni and 1.0% Ni, respectively. The graphics/log-probability plots for the rest of the elements are shown in Appendix 1.

The statistics of the raw and capped composites within the wireframes are presented in Table 14.2 below.

Table 14.2
Makwa Deposit Global Statistics of 2 m Composites by Domain

Domain	Element	Count	Length	Mean	SD	CoV	Var	Min	Q1	Median	Q3	Max
HG1		991	1,906.87									
Uncapped												
	Au_gpt	158	304.47	0.019	0.019	1.037	0.000	0.003	0.010	0.014	0.020	0.181
	Co_pc	725	1,398.01	0.027	0.010	0.379	0.000	0.010	0.020	0.026	0.033	0.097
	Cu_pc	987	1,898.61	0.165	0.110	0.664	0.012	0.013	0.093	0.139	0.208	1.080
	Ni_pc	991	1,906.87	0.916	0.464	0.506	0.215	0.017	0.555	0.831	1.209	4.073
	Pd_gpt	727	1,402.01	0.816	0.478	0.586	0.228	0.023	0.489	0.744	1.056	4.267
	Pt_gpt	726	1,399.98	0.220	0.173	0.788	0.030	0.010	0.129	0.186	0.260	2.570
Capped												
	AuCAP	158	304.47	0.017	0.012	0.718	0.000	0.003	0.010	0.014	0.020	0.060
	CoCAP	725	1,398.01	0.027	0.010	0.358	0.000	0.010	0.020	0.026	0.033	0.060
	CuCAP	987	1,898.61	0.165	0.109	0.660	0.012	0.013	0.093	0.139	0.208	0.800
	NiCAP	991	1,906.87	0.912	0.444	0.487	0.198	0.017	0.555	0.831	1.209	2.400
	PdCAP	727	1,402.01	0.801	0.410	0.512	0.168	0.023	0.489	0.744	1.056	2.000
	PtCAP	726	1,399.98	0.216	0.143	0.662	0.020	0.010	0.129	0.186	0.260	1.000
LG1		2,436	4,739.59									
Uncapped												
	Au_gpt	851	1,663.20	0.018	0.022	1.195	0.000	0.001	0.010	0.012	0.021	0.400
	Co_pc	2,165	4,227.58	0.014	0.005	0.348	0.000	0.004	0.010	0.012	0.019	0.052
	Cu_pc	2,392	4,654.22	0.069	0.071	1.035	0.005	0.001	0.021	0.051	0.090	1.172
	Ni_pc	2,427	4,721.49	0.256	0.135	0.528	0.018	0.010	0.165	0.225	0.322	1.436
	Pd_gpt	2,041	3,975.25	0.208	0.160	0.769	0.026	0.003	0.092	0.171	0.290	1.545
	Pt_gpt	2,046	3,984.91	0.062	0.044	0.700	0.002	0.003	0.030	0.053	0.088	0.380
Capped												
	AuCAP	851	1,663.20	0.017	0.014	0.833	0.000	0.001	0.010	0.012	0.021	0.100
	CoCAP	2,165	4,227.58	0.014	0.005	0.335	0.000	0.004	0.010	0.012	0.019	0.030
	CuCAP	2,392	4,654.22	0.068	0.063	0.928	0.004	0.001	0.021	0.051	0.090	0.400
	NiCAP	2,427	4,721.49	0.255	0.131	0.513	0.017	0.010	0.165	0.225	0.322	1.000
	PdCAP	2,041	3,975.25	0.207	0.156	0.751	0.024	0.003	0.092	0.171	0.290	0.850
	PtCAP	2,046	3,984.91	0.062	0.043	0.696	0.002	0.003	0.030	0.053	0.088	0.300

14.2.4 Geostatistics/Spatial Analysis

14.2.4.1 Variography/Spatial Analysis

Micon completed a spatial analysis of the two major domains (HG1 and LG1) to determine the structure of the mineralization and the optimum grade interpolation parameters.

It should be noted that precision in spatial analysis/variography is directly proportional to the quality of the sampling pattern. Due to the moderate to steeply dipping nature of the Makwa deposit, some of the drill holes from surface intersect the mineralization at oblique angles, while some are at the desired right angles, culminating in a mixture of orientations. Furthermore, all pre-2022 drill holes are selectively sampled, yielding reduced confidence in the representation of mineralization patterns. Thus, variography results cannot be perfectly representative of the spatial continuity/distribution patterns and structure of the mineralization. Nonetheless, the geostatistical analysis results serve as a useful guide in the determination of the optimum grade interpolation parameters.

The Ni variograms for the HG1 and LG1 Domains are shown in Figure 14.6 and Figure 14.7, respectively. The full variography results inclusive of all the metals of interest are presented in Appendix 2.

Figure 14.6
Ni Variograms for the HG1 Domain

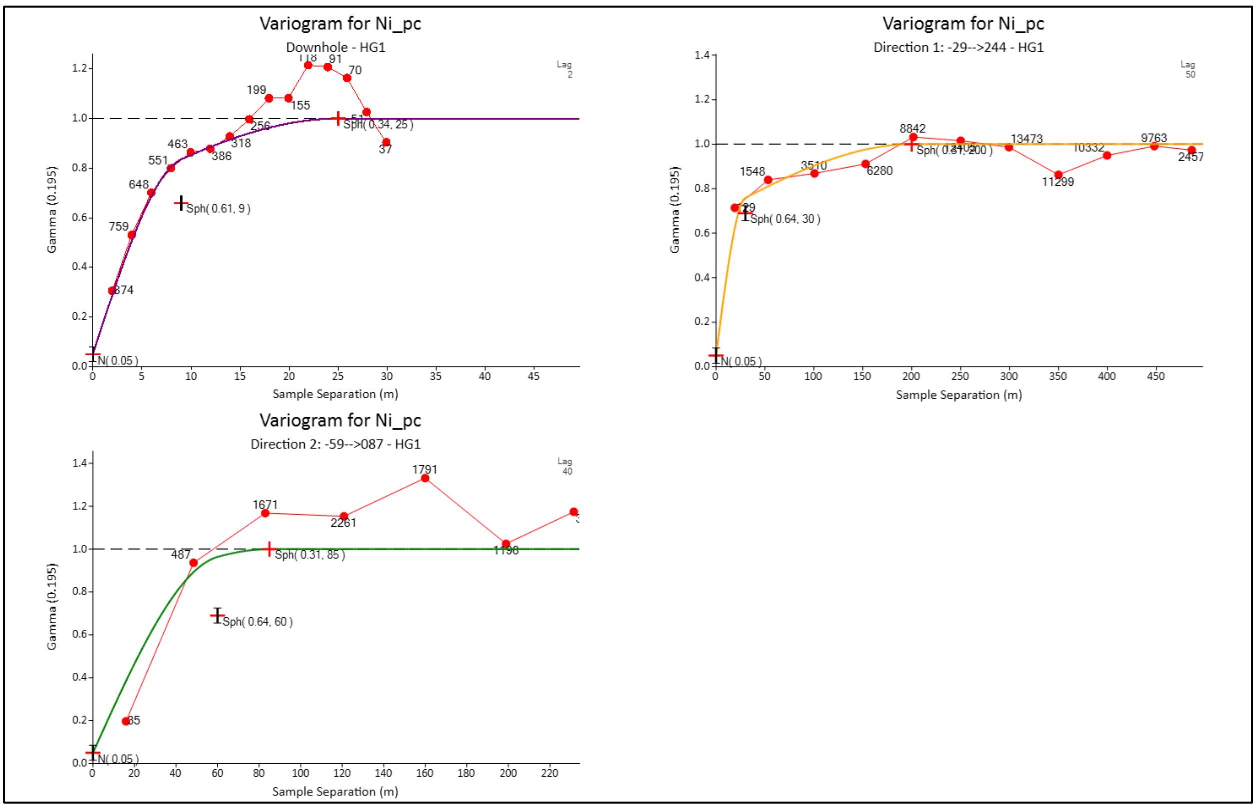


Figure 14.7
Ni Variograms for the LG1 Domain

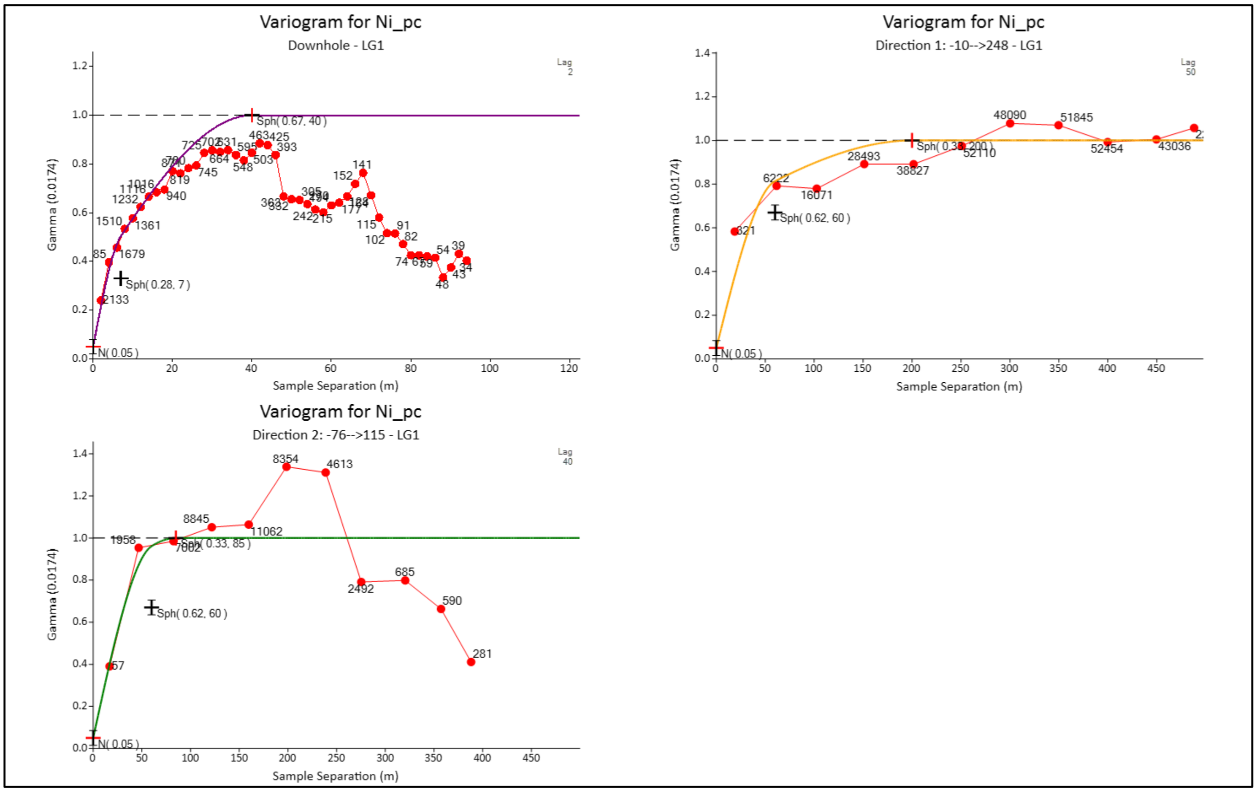


Table 14.3 summarizes the various ranges of influence as displayed by the variography.

Table 14.3
Summary of Variogram Ranges

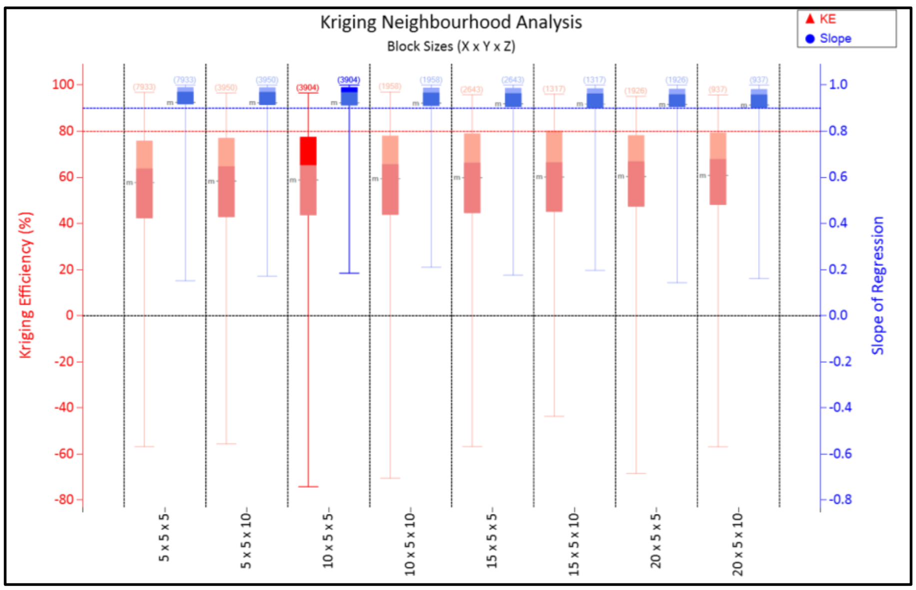
Domain	Element	Major	Semi-Major	Minor
HG1	Ni (%)	130	130	50
	Cu (%)	130	130	50
	Co (%)	100	100	50
	Pd (g/t)	100	100	50
	Pt (g/t)	120	120	50
	Au (g/t)	100	100	50
LG1	Ni (%)	120	120	120
	Cu (%)	120	120	120
	Co (%)	120	120	70
	Pd (g/t)	100	100	100
	Pt (g/t)	100	100	100
	Au (g/t)	80	80	80

In summary, the variography results indicate long ranges of influence (i.e., significant continuity of mineralization) which is characteristic of magmatic deposits and consistent with the QP's observations on the ground.

14.2.4.2 Kriging Neighbourhood Analysis (KNA/QKNA)

KNA was utilised to provide further guidance on the selection of the optimum estimation parameters, including block size, number of informing samples, search range and the number of discretization points suitable for each block size. The results for the optimum block size are displayed in Figure 14.8and the remainder of the results on the other parameters are in Appendix 2 (b). Note that the red highlighted vertical lines on the Figures display the optimum parameters. (N.B. QKNA = Quantitative kriging neighbourhood analysis).

Figure 14.8
KNA for Optimum Block Size, Domain HG1



14.2.5 Block Model Definition and Grade Interpolation/Search Parameters

The block model definition is presented in Table 14.4. The upper limit representing surface topography is based on a DTM provided by Grid. The block size was based on KNA results with due regard to drill hole spacing, envisaged selective mining unit (SMU) and the geometry of the deposit. A volume check of the block model versus the wireframes revealed a good representation of the volume of the deposit components.

Table 14.4
Makwa Block Model Attributes

Item	X	Y	Z
Origin Coordinates (Top Lower Left Corner)	325260	5592610	325
Model Dimensions (Length, Width, Height)	1450	625	580
Block Size	10	5	5
Rotation	340°		

The search ellipse configurations were defined using a combination of variography and KNA, combined with the geometry of the deposit. A three-pass (for both HG1 and LG1) estimation procedure was used for the grade interpolation. For all passes, the maximum number of samples per drill hole was set to control the number of drill holes in the interpolation. The search parameters adopted for grade interpolation are summarized in Table 14.5.

Table 14.5
Summary of block Grade Interpolation Parameters for Makwa

Variable	Search Ellipse					Composite Selection		
Element	**Pass**	**Major**	**Semi-Major**	**Minor**	**Orientation**	**Min**	**Max**	**Max/Hole**
All	P1	50	50	20	Dynamic	12	24	3
All	P2	100	100	40	Dynamic	9	18	3
All	P3	200	200	80	Dynamic	3	12	3

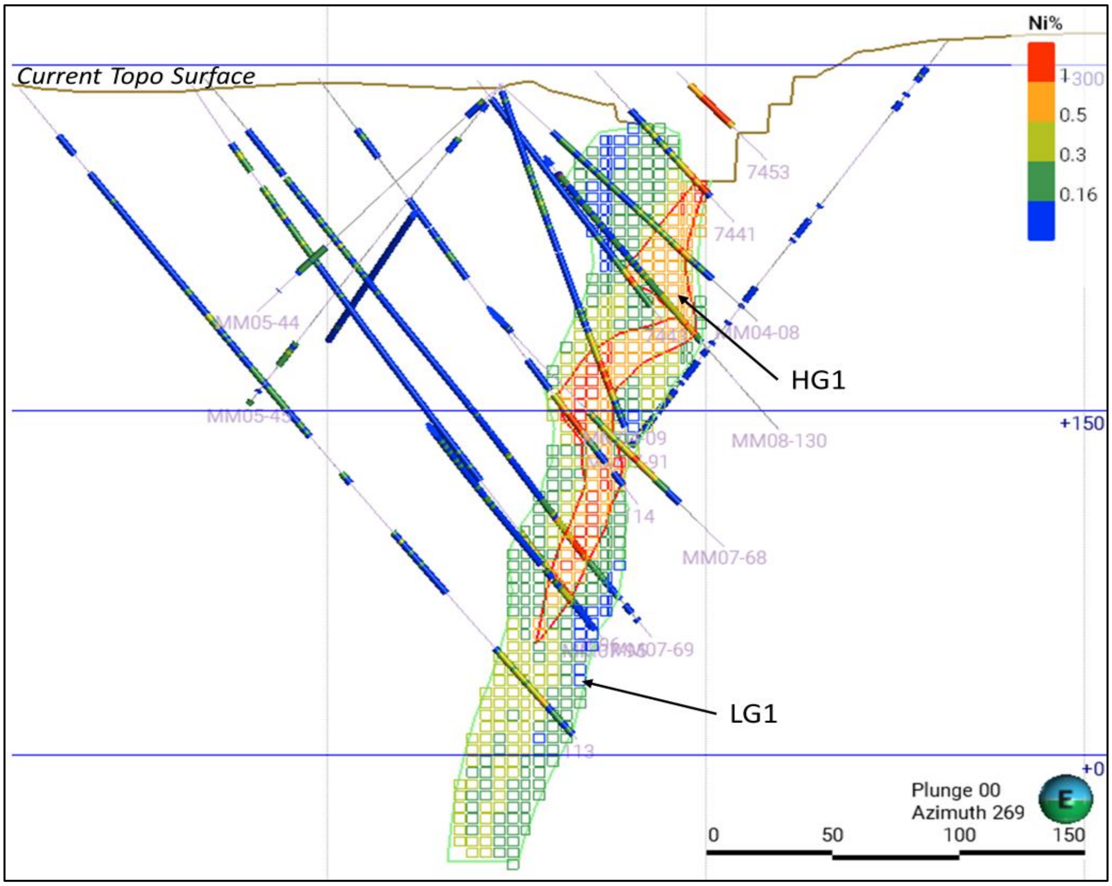
Note that in every case for the major/semi-major directions, pass 1 = 25% of the variogram range, pass 2 = 50% variogram range, and pass 3 = 100% variogram range. For the minor direction, pass 1 = 50% variogram range, pass 2 = 100% variogram range and pass 3 = 2x variogram range to fill all the remaining voids representing geological potential zones. The block grade interpolations/estimations were conducted using ordinary kriging (OK).

14.2.6 Block Grade Validation

14.2.6.1 Visual Evidence

The model blocks and the drillhole intercepts were reviewed interactively in 3D mode to ensure that the blocks were honouring the in-put drillhole data. The concurrence/agreement between the block grades and the drill intercepts was found to be satisfactory as demonstrated in Figure 14.9.

Figure 14.9
Vertical Section through the Makwa Block Model Comparing Block Grades and Drill Intercepts



14.2.6.2 Global Composites versus Block Grades

Global validation of the interpolated grades was achieved by comparing total inputs versus total outputs, i.e., comparing composites statistics with the block model statistics. This test shows a close global match between composites and block grades as revealed in Table 14.6.

Table 14.6
Global Comparison of Composites and Block Grades

Domain	Element	Composite Mean	Block Model Mean	%Diff
HG1	Ni (%)	0.912	0.874	-4%
	Cu (%)	0.165	0.161	-3%
	Co (%)	0.027	0.025	-6%
	Pd (g/t)	0.801	0.703	-12%
	Pt (g/t)	0.216	0.192	-11%
LG1	Ni (%)	0.255	0.245	-4%
	Cu (%)	0.068	0.065	-4%
	Co (%)	0.014	0.013	-6%
	Pd (g/t)	0.207	0.174	-16%
	Pt (g/t)	0.062	0.056	-11%

14.2.6.3 Swath Plots

The inverse distance cubed (ID^3) method was used to generate parallel estimates for the two key metals (i.e., Ni and Pd). Thereafter, local validation of the OK interpolated grades was achieved by using swath plots comparing OK, ID^3 and composites. The swath plots for Ni (HG1 Domain) are shown in Figure 14.10, Figure 14.11 and Figure 14.12. The swath plots for Pd and Pt (which constitute the more important secondary elements for the Makwa deposit) are in Appendix 3.

Figure 14.10
HG 1 Swath Plot of Ni Along Strike

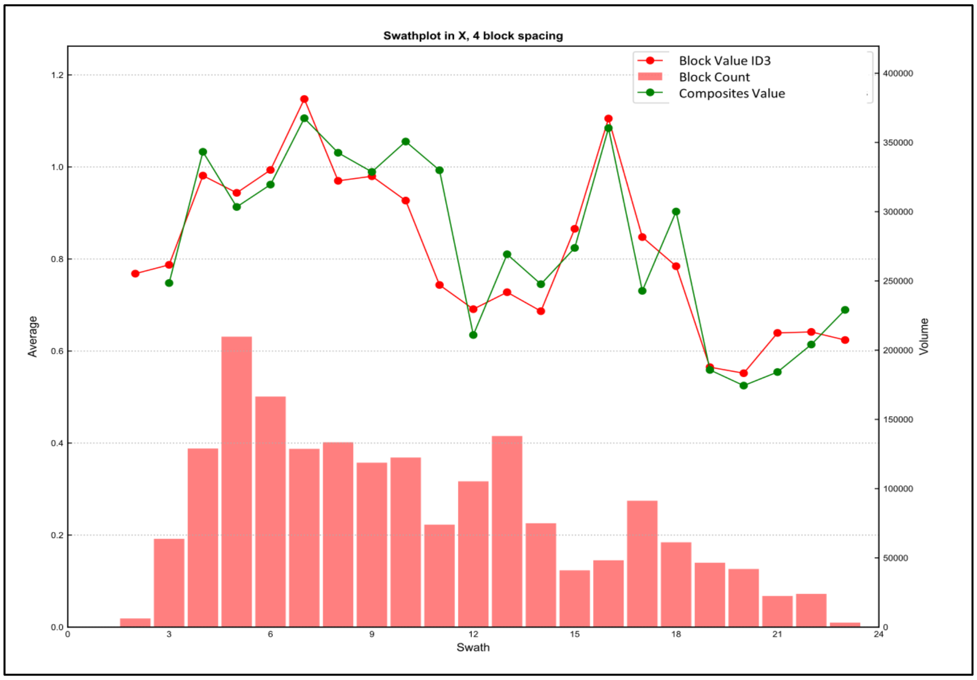


Figure 14.11
HG 1 Swath Plot of Ni Down Dip

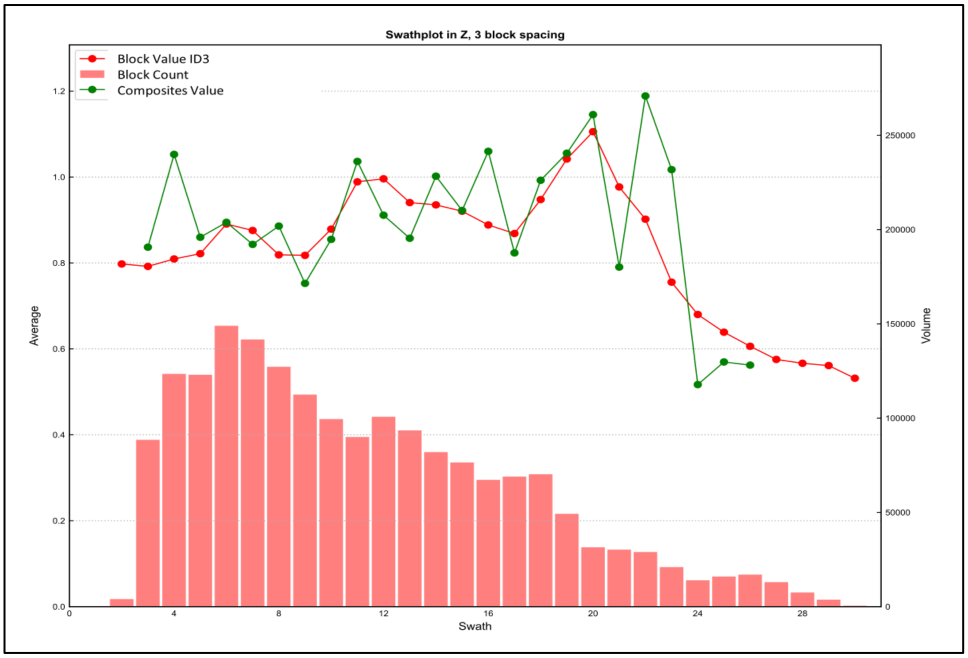
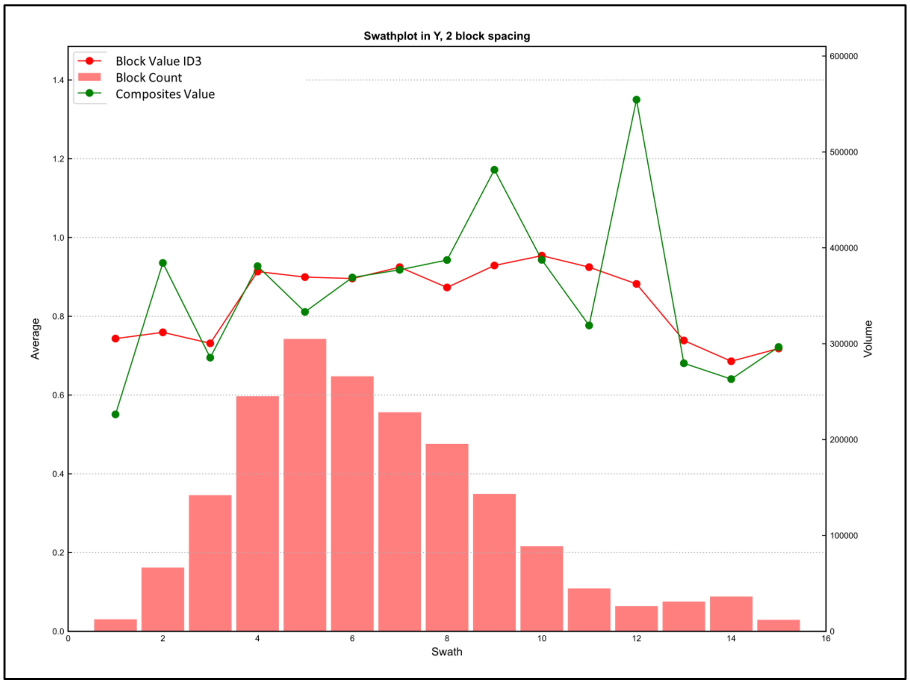


Figure 14.12
HG 1 Swath Plot of Ni Across Width



The swath plots (Figure 14.10, Figure 14.11 and Figure 14.12) show comparable results for OK, ID^3 and composites, demonstrating that the estimated block grades using OK are reasonable. Generally, the greater the number of composites, the better the estimate.

All three methods used to validate block grade estimation supported the estimation results. Of particular importance is that clearly demonstrates that the overall estimate is reasonably conservative.

14.3 Mayville

14.3.1 Exploratory Data Analysis

The inputs for the core area of the Mayville deposit considered for updating the MRE are as follows:

- Number of drill holes = 84
- Assays = 3,459
- Density measurements = 1,454

14.3.1.1 Drill Holes Coverage/Representativity

The drill hole spacing is on average 20 to 30 m in the core area of the deposit but averages 40 to 100 m in the sparsely drilled areas. Micon has noted that Grid drilled 2 holes during 2023 but the results are beyond the database cut-off date for this updated MRE and have been excluded from the current resource. The QP believes that, even if the two new holes were to be incorporated, they would not bring about a material change in the estimate of the resources. Thus, whilst there has not been any significant additional exploration/drilling conducted on the Mayville core deposit since the 2013 estimate by RPA, the mineral resource model is no longer valid because the assumptions previously used are outdated.

14.3.1.2 Handling of Missing Sample Assays

As was observed on the Makwa deposit, some of the earlier Mayville drill holes were selectively sampled. A similar solution as adopted for Makwa was applied to Mayville, as stated below. To limit the risk of overestimation due to nearby high-grade samples populating into unsampled zones, background values determined from the 25th quartile (Q1) of the most recent assay data statistics within the deposit wireframe was used to fill the gaps before grade interpolation. Table 14.7 below shows the Q1 assay values. All values are rounded to two decimal places.

Table 14.7
Table Showing Adopted Q1 Background Values Within the Global Wireframe

Element	Data Used	Average	Maximum	Q1 (Background Value
Cu%	3,304	0.39	20.15	0.15
Ni%	3,304	0.16	3.33	0.07
Pd g/t	3,304	0.13	15.25	0.05
Pt g/t	3,304	0.06	25.94	0.02
Au g/t	3,304	0.05	6.69	0.02
Co%	3,304	0.01	0.34	0.01

14.3.1.3 Deposit Components

The global statistics of the assay data (Table 14.8) within a mineralized envelope (0.2% Cu threshold) clearly demonstrates that the primary element is Cu followed by Ni and Pd with minor Au, Co, and Pt.

Table 14.8
Mayville Deposit Global Statistics Within Mayville Domain

Domain	Element	Count	Length	Mean	SD	CoV	Var	Min	Q1	Median	Q3	Max
LG1		3,438	4,362.5									
	Co_pc	3,437	4,362.2	0.01	0.02	1.36	0.00	0.00	0.01	0.01	0.01	0.34
	Cu_pc	3,437	4,362.2	0.40	0.47	1.18	0.22	0.00	0.16	0.28	0.49	20.15
	Ni_pc	3,437	4,362.2	0.16	0.17	1.10	0.03	0.00	0.07	0.11	0.19	3.33
	Au_ppm	3,437	4,362.2	0.05	0.11	2.29	0.01	0.00	0.02	0.03	0.05	6.69
	Pd_ppm	3,437	4,362.2	0.13	0.21	1.68	0.04	0.00	0.05	0.09	0.16	15.25
	Pt_ppm	3,437	4,362.2	0.06	0.52	8.83	0.27	0.00	0.02	0.03	0.05	25.94

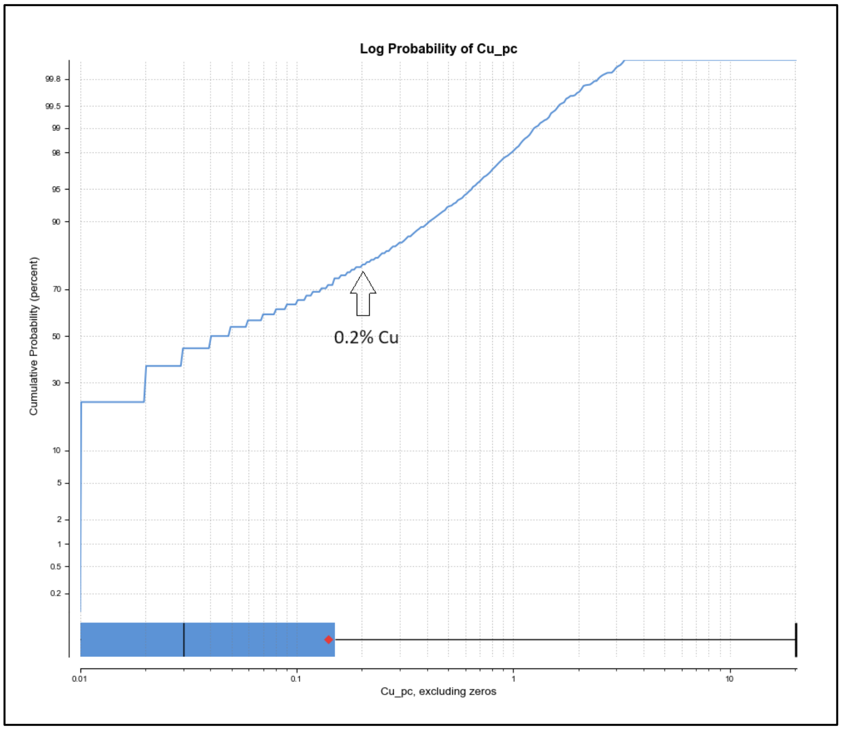
14.3.1.4 Geological Continuity

Unlike the Makwa mineralisation, which is characterised by massive sulphides in the footwall, the Mayville mineralization is primarily disseminated except in isolated patches where remobilization has culminated in semi-massive sulphides. Random xenoliths, mostly aligned to the strike direction of the deposit, have been encountered in a number of drill holes.

14.3.2 Modelling

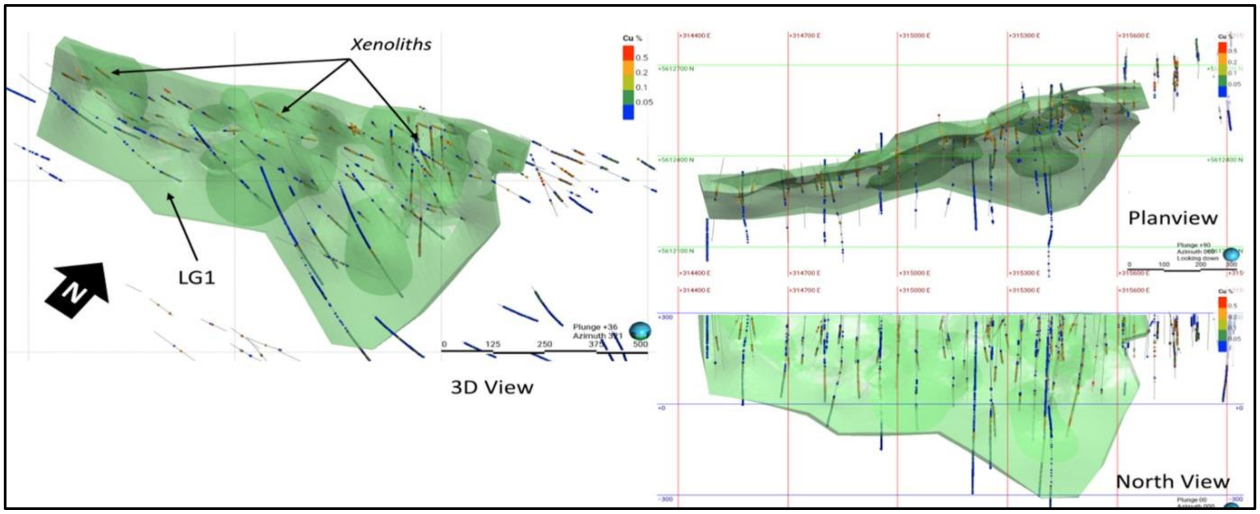
The deposit wireframe is based on a Cu threshold value of 0.2% Cu as deduced from the log-probability curve shown Figure 14.13.

Figure 14.13
Log-Probability Curve of the Mayville Cu Assays



The modelled deposit is shown in Figure 14.14and reveal some low-grade subzones occurring within the broad mineralized envelope. Closer drilling will yield a more precise definition of these low-grade zones.

Figure 14.14
Mayville Deposit Wireframe at 0.2% Cu Threshold



14.3.3 Compositing, Grade Capping and Statistics

A composite length of 2 m was selected based on the average sample length which also equals the mode of the sample lengths.

Samples population histograms revealed log-normal metal distributions; accordingly, log-probability plots were used to assess the grade capping threshold values for the elements. The log-probability plots for Cu (i.e., the primary deposit component) and Ni (the number 2 component) are shown in Figure 14.15 and Figure 14.16.

Figure 14.15
Mayville Cu Log-Probability Plot Showing Grade Capping Value

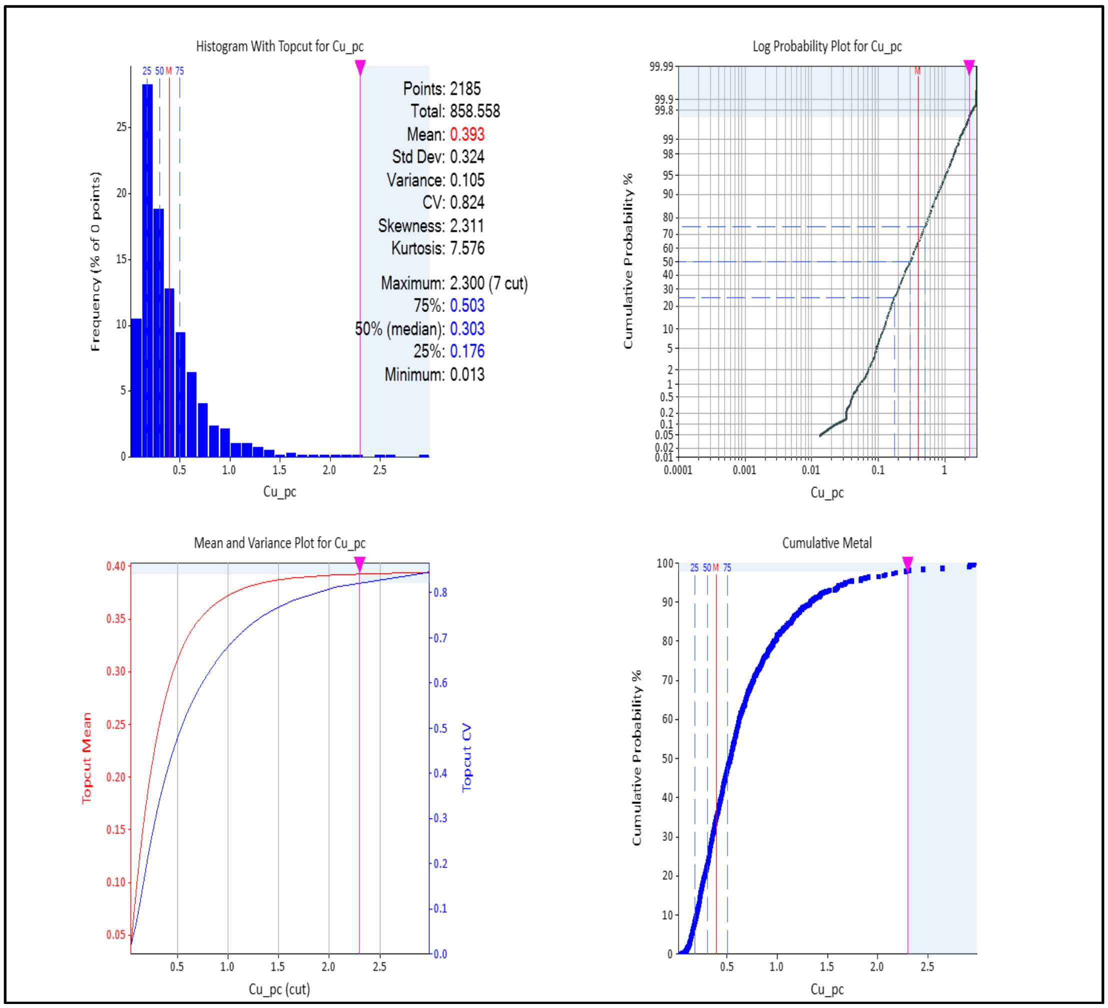
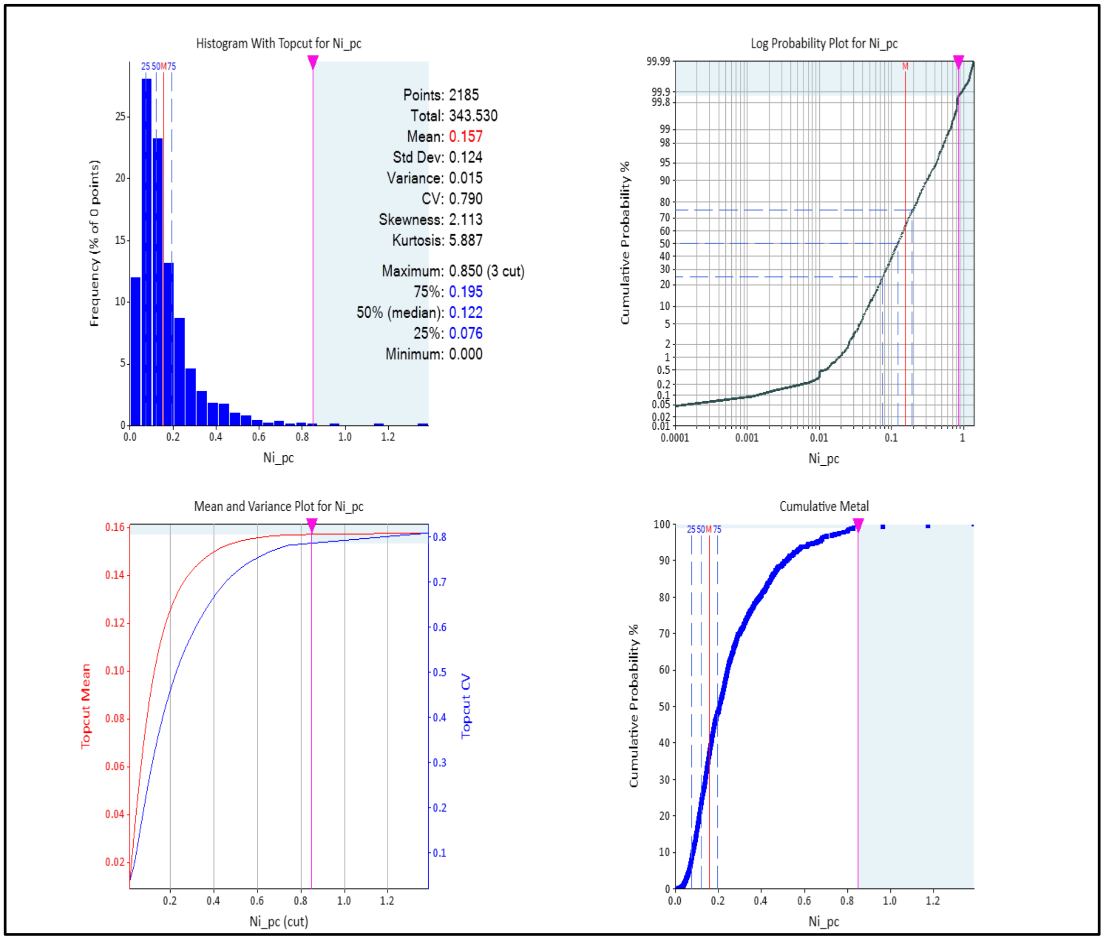


Figure 14.16
Mayville Ni Log-Probability Plot Showing Grade Capping Value



As shown in Figure 14.15 and Figure 14.16, the Cu and Ni grade capping values are 2.3% Cu and 0.85% Ni, respectively. The log-probability plots for the rest of the of the elements are shown in Appendix 4.

The statistics of the raw and capped composites within the wireframe are presented in Table 14.9.

Table 14.9
Statistics of Uncapped and Capped Composites

Domain	Element	Count	Length	Mean	SD	CoV	Var	Min	Q1	Median	Q3	Max
LG		2185	4360.33									
Uncapped												
	Au_ppm	2,185	4,360.3	0.048	0.076	1.570	0.006	0.000	0.023	0.035	0.054	1.692
	Co_pc	2,185	4,360.3	0.012	0.013	1.148	0.000	0.000	0.006	0.010	0.015	0.279
	Cu_pc	2,185	4,360.3	0.396	0.335	0.846	0.112	0.013	0.176	0.304	0.504	2.990
	Ni_pc	2,185	4,360.3	0.158	0.128	0.809	0.016	0.000	0.076	0.122	0.196	1.386
	Pd_ppm	2,185	4,360.3	0.125	0.130	1.039	0.017	0.000	0.059	0.102	0.157	3.478
	Pt_ppm	2,185	4,360.3	0.059	0.421	7.196	0.177	0.000	0.019	0.035	0.055	19.069
Capped												
	CuCAP	2,185	4,360.3	0.394	0.325	0.824	0.106	0.013	0.176	0.304	0.504	2.300
	NiCAP	2,185	4,360.3	0.158	0.125	0.790	0.016	0.000	0.076	0.122	0.196	0.850
	PdCAP	2,185	4,360.3	0.123	0.097	0.787	0.009	0.000	0.059	0.102	0.157	0.650
	PtCAP	2,185	4,360.3	0.048	0.072	1.492	0.005	0.000	0.019	0.035	0.055	0.900
	AuCAP	2,185	4,360.3	0.047	0.056	1.202	0.003	0.000	0.023	0.035	0.054	0.700
	CoCAP	2,185	4,360.3	0.011	0.008	0.758	0.000	0.000	0.006	0.010	0.015	0.050

14.3.4 Geostatistics

14.3.4.1 Variography/Spatial Analysis

The Cu and Ni variograms for Mayville are shown in Figure 14.17and Figure 14.18, respectively. The full variography results are presented in Appendix 5 (a).

Figure 14.17
Mayville Deposit Cu Variograms

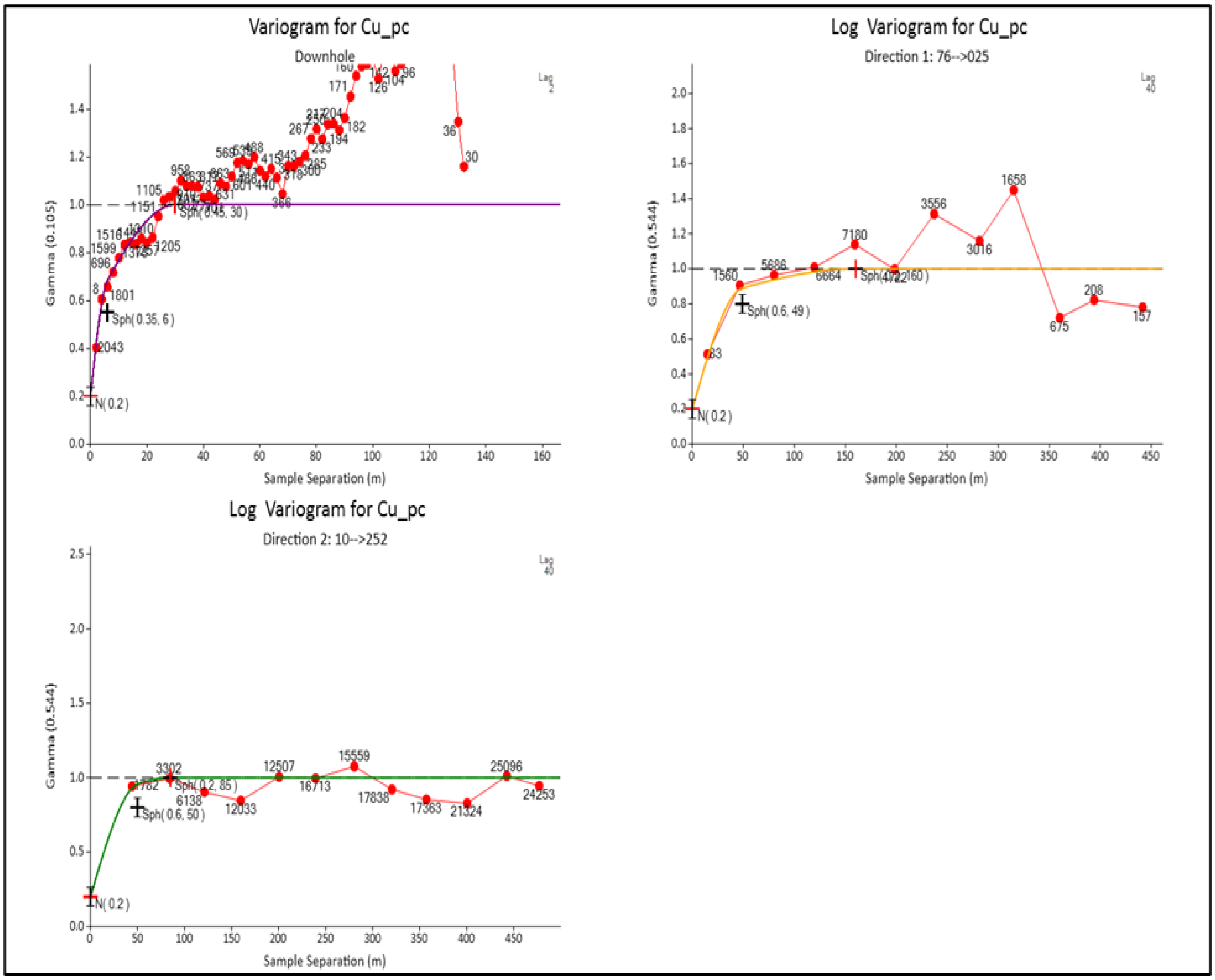


Figure 14.18
Mayville Deposit Ni Variograms

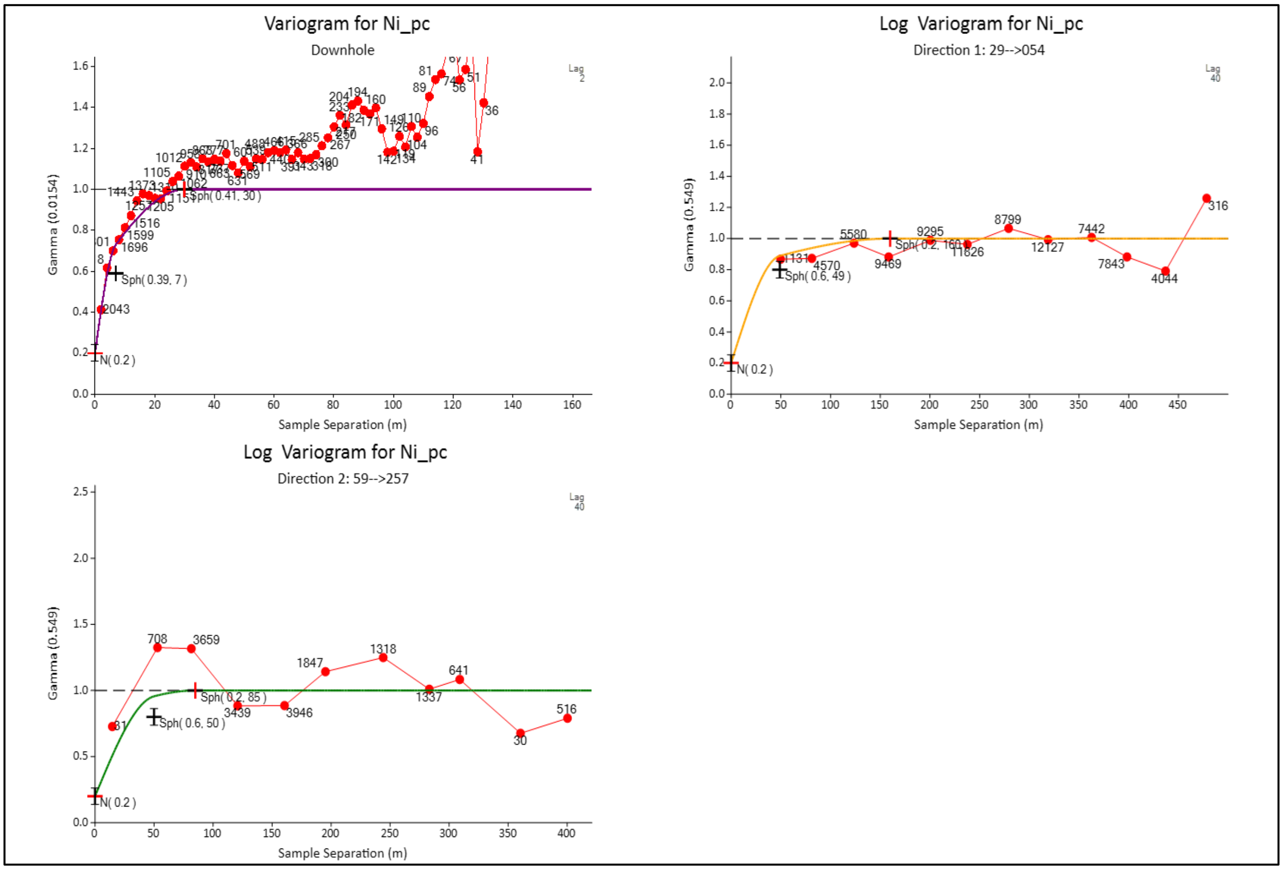


Table 14.10 summarizes the various ranges of influence as displayed by the variography.

Table 14.10
Summary of Variogram Ranges

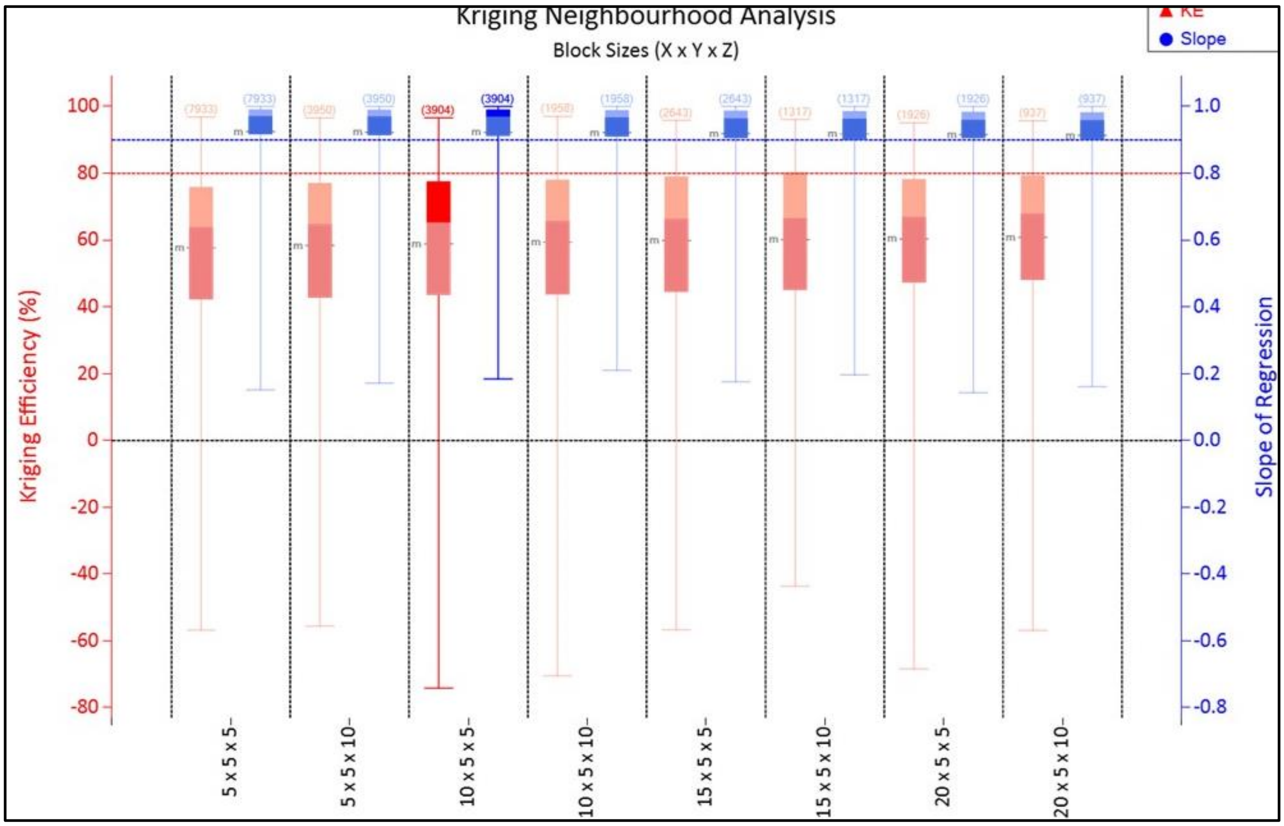
Domain	Element	Major	Semi-Major	Minor
LG	Ni (%)	200	85	30
	Cu (%)	100	75	30
	Co (%)	200	85	30
	Pd (g/t)	200	85	30
	Pt (g/t)	200	85	30
	Au (g/t)	175	60	10

In summary, the variography results indicate long ranges of influence (i.e., significant continuity of mineralization) which is characteristic of magmatic deposits as was also noted for the Makwa deposit.

14.3.4.2 Kriging Neighbourhood Analysis (KNA/QKNA)

KNA was utilised to provide further guidance on the selection of the optimum estimation parameters, including block size, number of informing samples, search range and the number of discretization points suitable for each block size. The results for the optimum block size are displayed in Figure 14.19. Note that the red highlighted vertical line on the Figure displays the optimum parameters i.e., 10x5x5 blocks. (N.B. QKNA = Quantitative Kriging Neighbourhood Analysis).

Figure 14.19
KNA for Optimum Block Size



The KNA results for the number of informing samples, search range and the number of discretization points suitable for each block size are in Appendix 5 (b).

14.3.5 Block Model Definition and Grade Interpolation/Search Parameters

The block model definition is presented in Table 14.11. The upper limit representing surface topography is based on a DTM provided by Grid. The block size considers the results of KNA combined with drill hole spacing, envisaged selective mining unit (SMU) and the geometry of the deposit. A volume check of the block model versus the wireframes revealed a good representation of the volume of the deposit.

Table 14.11
Makwa Block Model Attributes

Item	X	Y	Z
Origin Coordinates (Top Lower Left Corner)	314450	5611800	325
Model Dimensions (Length, Width, Height)	1640	770	650
Block Size	10	5	5
Rotation	345°		

The search ellipse configurations were defined using geostatistical results (variography and KNA/QKNA), combined with the geometry of the deposit. A three-pass estimation procedure was used for the interpolation. For all passes, the maximum number of samples per drill hole was set to control the number of drill holes in the interpolation. The search parameters adopted for grade interpolation are summarized in Table 14.12.

Table 14.12
Summary of block Grade Interpolation Parameters for Makwa

Variable	Search Ellipse					Composite Selection		
Element	**Pass**	**Major**	**Semi-Major**	**Minor**	**Orientation**	**Min**	**Max**	**Max/Hole**
All	P1	50	50	20	Dynamic	12	24	3
All	P2	100	100	40	Dynamic	9	18	3
All	P3	200	200	80	Dynamic	3	12	3

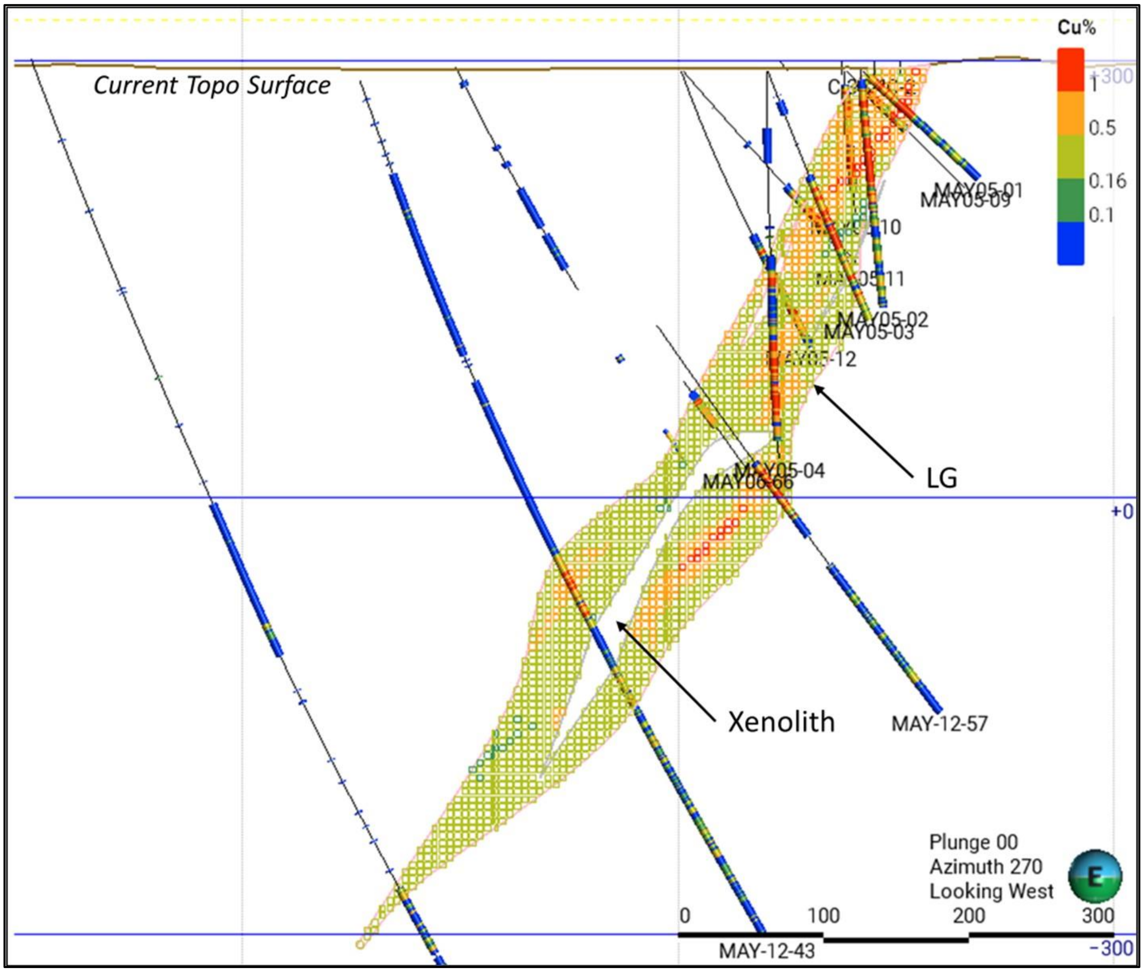
Note that (like Makwa) in every case for the major/semi-major directions, pass 1 = 25% of the variogram range, pass 2 = 50% variogram range, and pass 3 = 100% variogram range. For the minor direction, pass 1 = 50% variogram range, pass 2 = 100% variogram range and pass 3 = 2x variogram range to fill all the remaining voids representing geological potential zones. The block grade interpolations/estimations were conducted using ordinary kriging (OK).

14.3.6 Block Grade Validation

14.3.6.1 Visual Evidence

The model blocks and the drillhole intercepts were reviewed interactively in 3D mode to ensure that the blocks were honouring the drillhole data. The concurrence/agreement between the block grades and the drill intercepts was found to be satisfactory, as demonstrated in Figure 14.20.

Figure 14.20
Vertical Section through the Mayville Block Model Comparing Block Grades and Drill Intercepts



14.3.6.2 Global Composites versus Block Grades

Global validation of the interpolated grades was achieved by comparing total inputs versus total outputs, i.e., comparing composites statistics with the block model statistics. This test shows a close global match between composites and block grades as revealed in Table 14.13.

Table 14.13
Global Comparison of Composites and Block Grades

Domain	Element	Composite Mean	Block Model Mean	%Diff
All Deposit	Cu (%)	0.394	0.353	-10%
	Ni (%)	0.158	0.139	-12%
	Co (%)	0.014	0.013	-2%
	Pd (g/t)	0.124	0.112	-10%
	Pt (g/t)	0.050	0.048	-3%
	Au (g/t)	0.048	0.044	-8%

14.3.6.3 Swath Plots

The inverse distance cubed (ID^3) technique was used to generate parallel estimates for the two key deposit components (i.e., Ni and Pd). Thereafter, local validation of the OK interpolated grades was achieved by using swath plots comparing OK, ID^3 and composites. The swath plots for Cu are shown in Figure 14.21, Figure 14.22 and Figure 14.23. Swath plots for Ni and Pd are in Appendix 6.

Figure 14.21
Mayville Swath Plot of Cu Along Strike

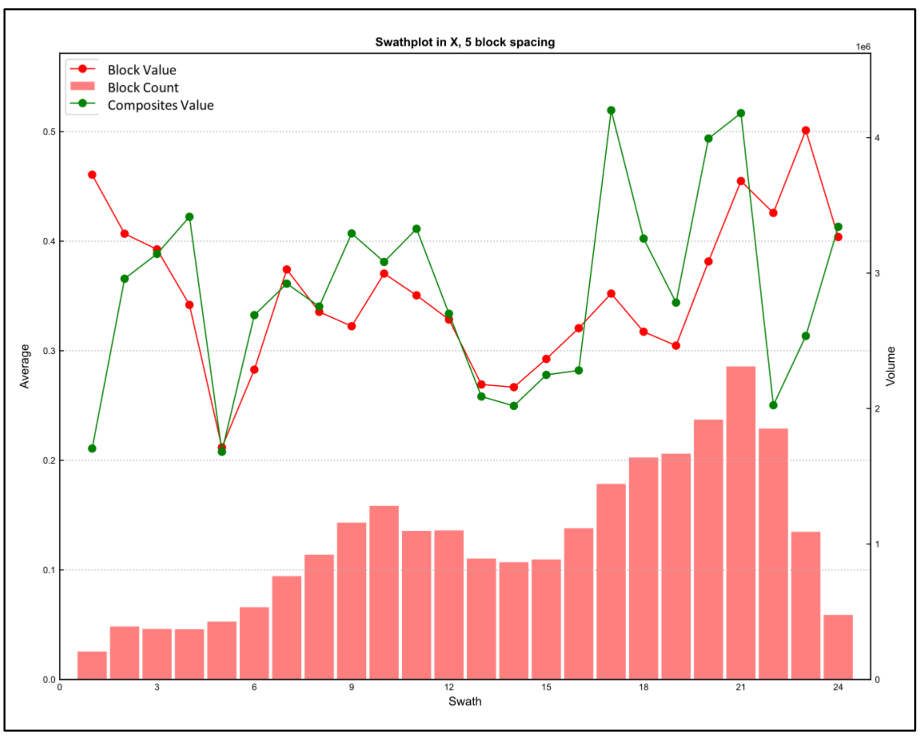


Figure 14.22
Mayville Swath Plot of Cu Down Dip

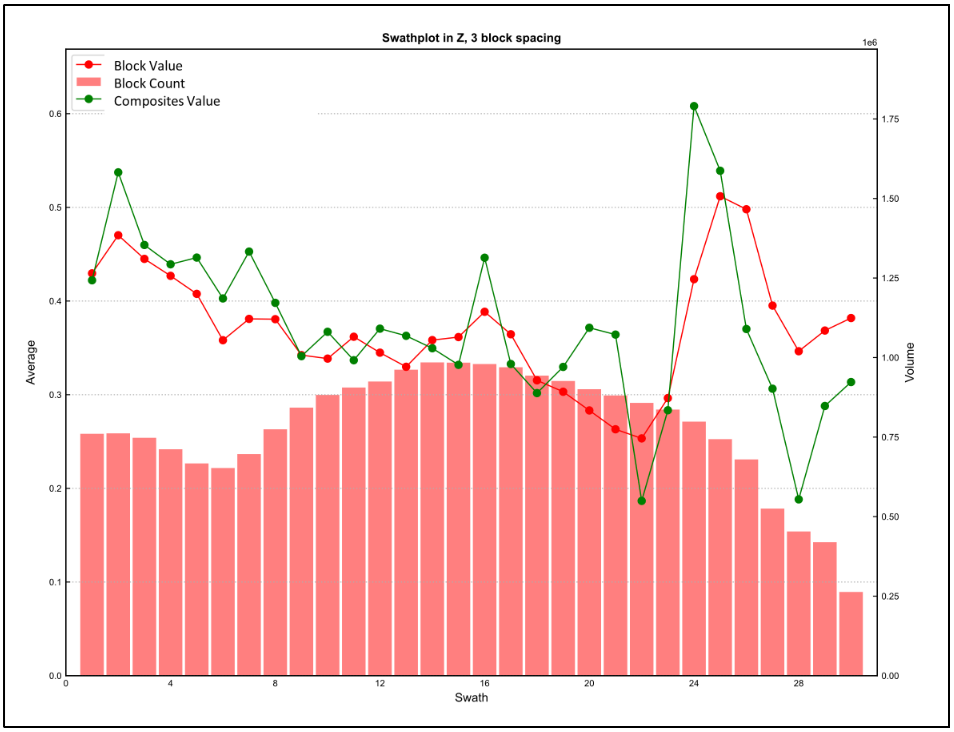
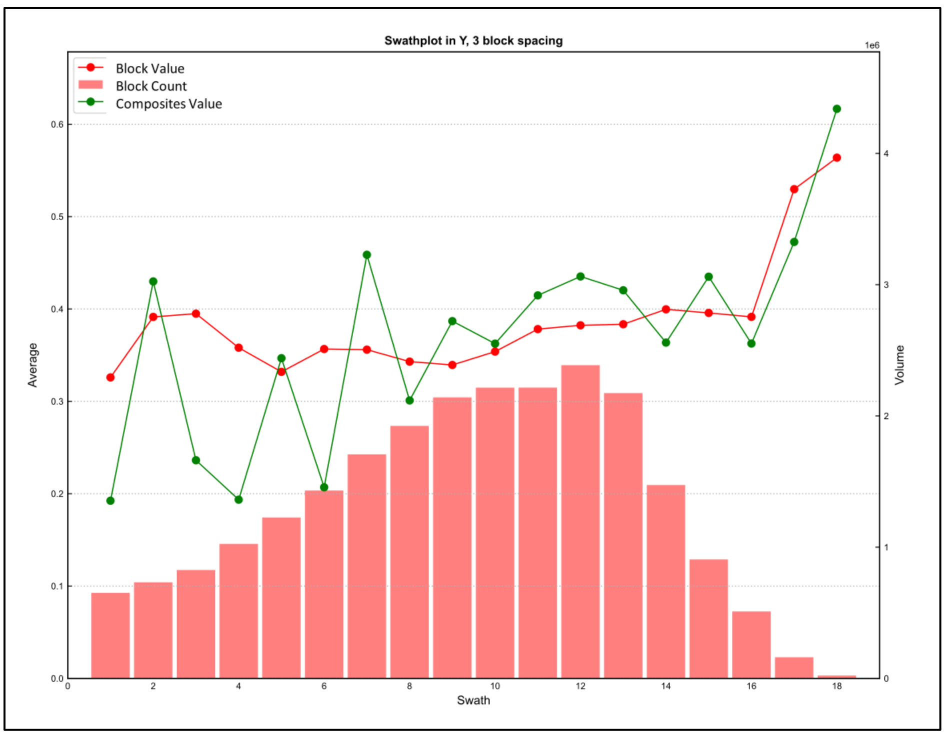


Figure 14.23
Mayville Swath Plot of Cu Across Width



The swath plots (Figure 14.21 to Figure 14.23) show comparable results for OK and composites, demonstrating that the estimated block grades using OK are reasonable. As already observed for the Makwa swath plots, the greater the number of composites, the better the estimate.

14.4 MINERAL RESOURCES DETERMINATION

14.4.1 Tonnage Factors

All SG determinations for the two deposits were obtained using the Archimedes Principle method.

14.4.1.1 Makwa Deposit

The Makwa database contains a total of 2017 SG measurements from which average densities for the high-grade (HG1) domain, disseminated low-grade (LG1) domain and the enclosing barren/unmineralized domain were determined. The averages are as follows:

High-grade (HG1) Domain: 2.94

Low-grade halo (LG1) Domain: 2.88.

Unmineralized/Barren zones: 2.86

Micon used the above average SGs for each of these material types to code the appropriate codes in the block model.

14.4.1.2 Mayville Deposit

The Mayville database contains 1454 SG measurements of which 539 are within the mineralized disseminated zone. The averages for the mineralized and unmineralized/barren zones are as follow:

Disseminated Cu rich zone: 3.00.

Unmineralized/Barren zone: 2.95

The block model was coded in accordance with the above average values.

14.4.2 Assumptions/Parameters

The CIM Definition Standards (2014) require that a Mineral Resource must have reasonable prospects for eventual economic extraction. The economic and technical parameters/assumptions for the Makwa-Mayville deposits offer reasonable prospects for eventual economic extraction by open pit and underground mining, as summarized in Table 14.14, Table 14.15 and Table 14.16.

Table 14.14
Makwa – Metallurgical Recoveries

Metal (Grade Units)	Zone	Concentrate Grade	Recovery Equations (%)	Minimum Grade	Upper Cap
Ni (%)	HG1, LG1	10% Ni	28.414*LN(Ni Feed Grade %) + 70.837	0.10%	90% recovery for Ni Grade>2.00%
Cu (%)			85.6%	0.01%	NA
Co (%)			=Nickel Recovery	0.01%	90% recovery for Ni Grade>2.00%
Pd (g/t)			18.359*LN(Pd Feed Grade g/t) + 85.14	0.05 g/t	90% recovery for Pd Grade>1.30g/t
Pt (g/t)			21.632*LN(Pt Feed Grade g/t) + 98.573	0.02 g/t	90% recovery for Pt Grade>0.67g/t
Au (g/t)			0% (Not Payable)	NA	NA
Ni (%)	LG2	10% Ni	32.764*LN(Ni Feed Grade %) + 87.43	0.10%	90% recovery for Ni Grade>2.00%
Cu (%)			9.093* LN(Copper Feed Grade %) + 101.92	0.01%	NA
Co (%)			=Nickel Recovery	0.01%	90% recovery for Ni Grade>2.00%
Pd (g/t)			18.064*LN(Pd Feed Grade g/t) + 107.9	0.05 g/t	90% recovery for Pd Grade>0.37g/t
Pt (g/t)			31.473*LN(Pt Feed Grade g/t) + 152.1	0.02 g/t	90% recovery for Pt Grade>0.14g/t
Au (g/t)			0% (Not Payable)	NA	NA

Table 14.15
Mayville – Metallurgical Recoveries

Metal (Grade Units)	Zone	Concentrate Grade	Recovery Equations (%)	Minimum Grade	Upper Cap
Ni (%)	M2	10% Ni	27.418*LN(Nickel Feed Grade %) + 100.37	None	90% recovery for Ni Grade>0.68%
Cu (%)			5%	None	None
Co (%)			=Nickel Recovery	None	None
Pd (g/t)			33%	None	None
Pt (g/t)			21%	None	None
Au (g/t)			10%	None	None
Ni (%)	M2	28% Cu	5%	None	None
Cu (%)			0.281*LN(Cu Feed Grade %) + 86.993	None	None
Co (%)			=Nickel Recovery	None	None

Metal (Grade Units)	Zone	Concentrate Grade	Recovery Equations (%)	Minimum Grade	Upper Cap
Pd (g/t)			42%	None	None
Pt (g/t)			35%	None	None
Au (g/t)			30%	None	None

Table 14.16
Makwa & Mayville – Smelting Factors (Nickel and Copper Concentrates)

Metals	Refining Charges	Payabilities Ni Concentrate	Payabilities Cu Concentrate	Minimum Deductibles
Nickel	0.93USD/lb	89%	0%	0%
Copper	0.12USD/lb	75%	97%	1%
Cobalt	3.67USD/lb	50%	0%	0%
Platinum	20USD/lb	75%	70%	1g/t
Palladium	15USD/lb	80%	70%	1g/t
Gold	6.67USD/lb	0%	90%	1g/t
Processing Inputs				
Parameters	**Concentrate Grade**	**Moisture Content**	**Treatment Costs**	**Transport Costs**
Ni Concentrate	10%	8%	488 US/dmt	116US/wmt
Cu Concentrate	28%	8%	116US/dmt	113US/wmt

N.B. The metallurgical/smelting factors summarized in the tables above (Table 14.14, Table 14.15 and Table 14.16) are based on metallurgical test results reviewed by Grid Metals' metallurgical consultant/specialist (Ian Ward, B.Sc. (Hons), P.Eng.) as described in chapter 13 of this technical report.

14.4.3 Mining Considerations

Given the geometry of the orebody, the mining methods at Makwa & Mayville call for an initial conventional truck and shovel open pit process, followed by a later underground extraction process. Accordingly, an open pit optimization was conducted using Datamine Studio NPVS software to determine the optimal shape that satisfies economic, operational, and technical requirements suitable for a mineral resource estimate, at a Preliminary Economical Assessment Study level.

The open pit optimization was carried out using the Lerch Grossman method, taking into consideration the Makwa environmental constraints pertaining to Provincial Road 314 to the north and the Bird River to the south. Coherent mineralization located beneath the pit shell was classified as an underground mineral resource, as determined using Datamine software MSO. Table 14.17 summarizes the parameters used in the mineral pit shell optimization process.

Table 14.17
Summary of Mineral Resource Parameters/Assumptions

Item Metal Recoveries.	Unit	Value
Exchange Rate Assumption		
CAD to USD		1.25
Metal Price Assumptions		
Nickel (Ni)	USD/lb	9.00
Copper (Cu)	USD/lb	3.75
Cobalt (Co)	USD/oz	23.00
Platinum (Pt)	USD/oz	900.00
Palladium (Pd)	USD/oz	1400.00
Gold (Au)	USD/oz	1750.00
Metallurgical Recoveries: See Tables 14.14, 14.15 and 14.16.		
Cut-off parameters/Operating Costs		
NSR	$/t	1
Recovery Process (Already in NSR)	%	100
Mining Dilution	%	0
Mining Waste	$/t	3.50
Mining Ore	$/t	3.50
Processing	$/t	15.00
G & A	$/t	3.20
Transport (Applicable to Makwa only)	$/t	8.90
Economic Cut-off Cost Parameters		
Makwa	$/tonne of rock	27.10
Mayville	$/tonne of rock	18.20
Mining & Pit Parameters		
General angle of the pit slope	Degree	53
Bench height Makwa	metre	5
Bench height Mayville	metre	10

14.4.4 Mineral Resources Primary and By-products

The by-products for each deposit were included in the mineral resources using the following Metal Equivalent formulae:

Makwa NiEq = Ni% + ((Cu% x CuR x CuP) + (Co% x CoR x CoP) + (Pt g/t x PtR x PtP) + (Pd g/t x PdR x PdP))/(NiR x NiP)

Mayville CuEq = Cu% + ((Ni% x NiR x NiP) + (Co% x CoR x CoP) + (Pt g/t x PtR x PtP) + (Pd g/t x PdR x PdP) + (Au g/t x AuR x AuP))/(CuR x CuP)

**Note: The Mayville CuEq assumes the recovery of Cu + Ni concentrates*

Where P = metal price; R = recovery based on the Ni Recovery Curve

14.4.5 Cut-off Grade Pronouncement

Makwa

It is well known that the primary metal of the deposit is Ni with subordinate amounts of Pd, Cu, Co and Pt which all contribute to the revenue in the Pit Optimization process. All recoveries are governed by the Ni recovery curve, and hence, if a Ni grade cut-off grade is used for reporting resources, it should be considered dynamic. In fact, it would be misleading to report a single metal cut-off grade where a metal equivalent approach has been used as a base in assessing the mineral resources.

Mayville

The primary metal is Cu with more or less a fixed recovery. The pit optimization considers the subordinate elements (Ni, Co, Pd, Pt and Au). A corresponding Cu cut-off grade can be used loosely to report the resource. However, it is imperative to state that the pronounced cut-off grade is low due to other secondary elements contributing to the economic equation.

14.5 Mineral Resources Statement

The estimated pit constrained mineral resources were classified as Indicated or Inferred based on drill hole spacing and the confidence in the continuity of mineralization as confirmed by variography and the geometry as dictated by the geology. Indicated resources are in areas with drill holes spaced at about 50 m and under. Inferred resources are in the more sparsely drilled areas, mainly in the peripheral areas of the deposits. The underground (UG) resources classification is based on the same criteria as for the open pit (OP) resources. The mineral resources are presented in Table 14.18 and Table 14.19.

Table 14.18
Makwa Pit Constrained and Underground Resource as of December 31, 2023

Mining	Category	Zone	Tonnage	Density	NiEq	Ni	Cu	Co	Pd	Pt	SR
					%	%	%	%	g/t	g/t	
OP	Indicated	HG1	4,846,590	2.94	1.26	0.89	0.17	0.03	0.71	0.19	4.66
		LG1	9,370,784	2.88	0.48	0.28	0.08	0.01	0.19	0.06	
		HG1 + LG1	**14,217,374**	**2.90**	**0.75**	**0.48**	**0.11**	**0.02**	**0.37**	**0.10**	
	Inferred	LG1	18,000	2.88	0.36	0.23	0.04	0.01	0.11	0.04	
UG	Indicated	HG1	437,743	2.94	1.19	0.83	0.11	0.03	0.73	0.21	NA
		LG1	62,783	2.88	0.53	0.30	0.08	0.01	0.27	0.08	
		HG1 + LG1	**500,526**	**2.93**	**1.11**	**0.77**	**0.11**	**0.02**	**0.67**	**0.19**	
	Inferred	HG1 + LG1	-	-	-	-	-	-	-	-	

Table 14.19
Mayville Pit Constrained and Underground Resource as of December 31, 2023.

Mining	Category	Tonnage	Density	CuEq	Cu	Ni	Co	Pd	Pt	Au	SR
				%	%	%	%	g/t	g/t	g/t	
OP	Indicated	32,019,000	3.00	0.61	0.40	0.16	0.01	0.13	0.05	0.05	3.17
	Inferred	-	-	-	-	-	-	-	-	-	
UG	Indicated	322,461	3.00	1.62	0.96	0.37	0.02	0.19	0.08	0.11	NA
	Inferred	203,323	3.00	1.50	0.96	0.32	0.02	0.16	0.08	0.11	

Makwa and Mayville Resource Notes:

13. The effective date of this Mineral Resource Estimate is December 31, 2023.
14. The MRE presented above uses economic assumptions for both, surface mining and underground mining.
15. The MRE has been classified in the Indicated and Inferred categories following spatial grade continuity analysis and geological confidence.
16. The calculated cut-off grades (COG) to report the MRE are dynamic in nature following metallurgical recovery curves, the average COG for Makwa is 0.30 % Ni in surface mining and 0.84 % Ni in underground mining, for Mayville is 0.30 % Cu in surface mining and 1.37 % Cu in underground mining.
17. The economic parameters used metal prices of US$9.0/lb Ni, US$3.75/lb Cu, US$23.0/lb Co, US$900/oz Pt, US$1,400/oz Pd and US$1,750/Au with specific metallurgical recovery curves detailed in tables 14.14 and 14.15, a mining cost of US$3.5/t in surface and US$80.0/t in underground. Processing cost of US$15/t and a General & Administration cost of US$3.2/t.
18. For surface mining the open pits at Makwa and Mayville use a slope angle of 53°.
19. The block models for Makwa and Mayville are rotated and use a block size of 10 m x 5 m x 5 m with the narrow side across strike (North-South).
20. The open pit optimization uses a re-blocked size of 10 m x 10 m x 10 m and for the underground the optimization uses stopes of 20 m long by 20 m high and a minimum mining width of 3 m.
21. Messrs. Alan J. San Martin, MAusIMM(CP) and Charley Murahwi, M.Sc., P. Geo., FAusIMM from Micon International Limited are the Qualified Persons (QPs) for this Mineral Resource Estimate (MRE).
22. Mineral resources unlike mineral reserves do not have demonstrated economic viability. The estimate of mineral resources may be materially affected by environmental, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues.
23. The mineral resources have been estimated in accordance with the CIM Best Practice Guidelines (2019) and the CIM Definition Standards (2014).
24. Totals may not add correctly due to rounding.

3D perspective views of the mineral resources are shown in Figure 14.24 and Figure 14.25.

Figure 14.24
Sectional Perspective of the Makwa Pit Constrained and Underground Resources

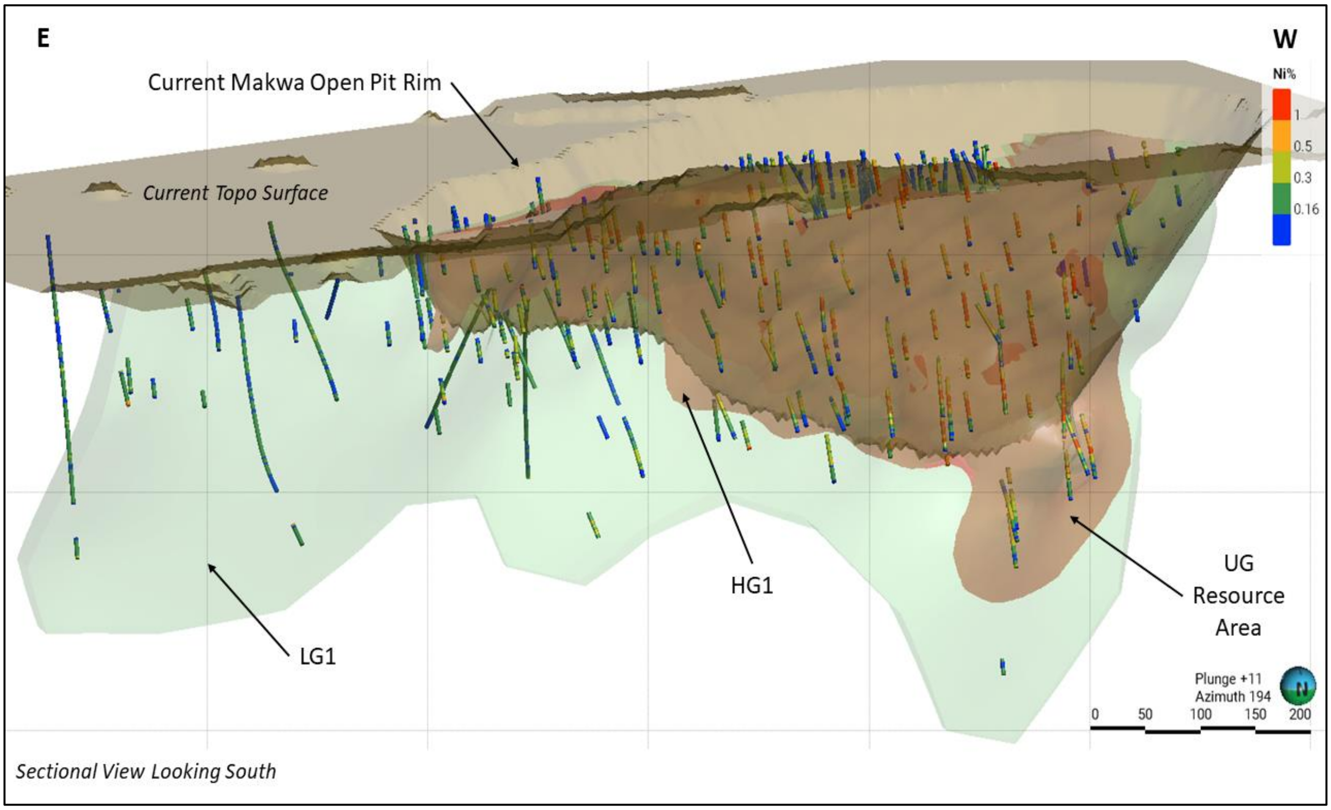
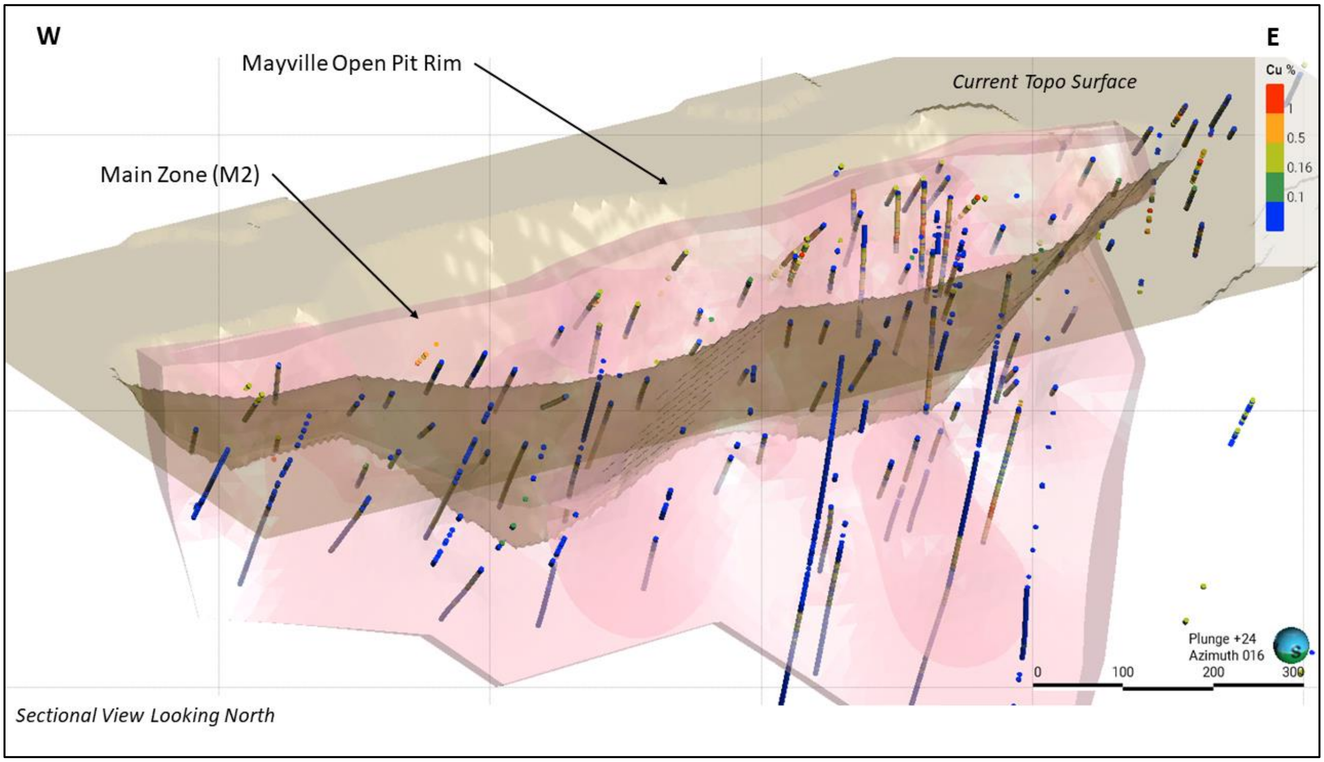


Figure 14.25
Sectional Perspective of the Mayville Pit Constrained and Underground Resources



14.6 RISKS/UNCERTAINTIES

A mineral resource estimate will always be sensitive and vulnerable to fluctuations in the price of base- and precious metals. A downward variation in the metallurgical recoveries would impact the resource negatively. In addition, environmental, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues may materially affect the estimated mineral resources.

Micon is aware of the following environmental constraints:

- Location of Makwa within the western part of Nopiming Provincial Park – a multi-use park that allows mineral extraction.
- proximity of the Makwa deposit to an all-weather Provincial Road (PR 314) to the north and the Bird River to the south.

It should be noted that mineral resources, unlike mineral reserves, do not have demonstrated economic viability.

15.0 MINERAL RESERVE ESTIMATES

Currently there are no mineral reserves on the MM Project.

16.0 MINING METHODS

This section is not applicable as the MM Project is still at an exploration stage.

17.0 RECOVERY METHODS

This section is not applicable as the MM Project is still at an exploration stage.

18.0 PROJECT INFRASTRUCTURE

This section is not applicable as the MM Project is still at an exploration stage.

19.0 MARKET STUDIES AND CONTRACTS

This section is not applicable as the MM Project is still at an exploration stage.

20.0 ENVIRONMENTAL STUDIES, PERMITTING AND SOCIAL OR COMMUNITY IMPACT

This section outlines the environmental and social context for the future/proposed mining and processing operations at the Makwa and Mayville deposits. It summarises the specialist studies that have been undertaken, including those that are currently underway. Potential environmental and social risks are identified at a strategic level, together with indicative requirements for mitigation, monitoring and closure planning. The approach to permitting is described, and recommendations for further studies and assessment are provided.

The content provided in this section is based on secondary information obtained from Grid Metals Corp. personnel and previous Project reports. Whist every effort has been made to include relevant and up to date information, it should be noted that environmental and social baseline studies for the Project are still ongoing, and the Environmental and Social Impact Assessment (ESIA) process has not yet been completed.

20.1 REGULATORY FRAMEWORK AND PROJECT PERMITTING

As the MM Project comprises two separate properties (Makwa and Mayville), and therefore two separate mine license areas, it is understood that each property will be permitted separately but ultimately managed as a combined mining operation.

Both properties are located on Crown Land in the province of Manitoba and are therefore potentially subject to both Federal and Provincial legislative requirements. In practice, many mining projects in Manitoba are regulated solely at the Provincial level, depending on the nature and scale of the proposed operations. It is understood that Grid Metals Corp. have undertaken a separate review of environmental permitting requirements for the Project with appropriate local specialists, and that the Project has been designed to remain within the scale of mining and processing operations that fall under the jurisdiction of Manitoba Province.

It should be noted that until Grid Metals Corp. has undertaken the necessary engagement with the regulatory authorities in Manitoba, the need for additional Federal approval of the Project cannot be completely excluded.

20.1.1 Summary of Federal Regulations

Canadian Federal legislation that is potentially applicable to the Project includes:

- Impact Assessment Act (IAA): P.C. 2019-1182.
- Physical Activities Regulations: SOR/2019-285.

Other legislation that may potentially be relevant at Federal level includes the Fisheries Act, The Canadian Navigable Waters Act, and the Species at Risk Act.

The Physical Activities Regulations lists metal mining and processing operations with an ore production capacity of 5000 tpd or higher as activities which may trigger the need for Federal review under the IAA. The Project has been designed with a production capacity below this rate for both the Makwa and Mayville properties.

If the IAA is deemed to be applicable to the Project, the timeline for the environmental permitting process will be considerably longer compared to the Provincial regulatory process.

20.1.2 Summary of Provincial Regulations

Manitoba Provincial legislation that is applicable to the Project includes:

- The Environment Act: C.C.S.M. c. E125.
- The Mines and Minerals Act: C.C.S.M. c. M162.

Other provincial legislation that may potentially be relevant includes permits for Crown Land work, proximity to provincial park areas, highway access, quarry activity, water rights, timber/salvage, vegetation burning, energy supply and waste management.

The full scope of applicable supplementary permits will be determined once the Project design has been further advanced.

The MM Project activities at the Makwa and Mayville properties will be designated as 'Class 2 Developments' (Mining) under the Environment Act, and as such each property will require an Environment Act License (EAL), which is essentially the environmental permit. The EAL is requested by submitting a cover letter and Environment Act Proposal (EAP), which includes an environmental and social impact assessment (ESIA) report and Closure Plan, to the Environmental Approval branch of Manitoba Environment, Climate and Parks (MECP).

The preparation time needed for the environmental permit application (EAP) is dependent on the extent of baseline studies that need to be undertaken and the complexity of the ESIA and stakeholder consultation process.

The EAP review undertaken by MECP includes posting the submitted documentation in the Manitoba Public Registry, initiating the opportunity for public comment, and undertaking review via a Technical Advisory Committee, working in partnership with other regulatory agencies. The expected timeline for the review process for the Makwa and Mayville EAPs is understood to be approximately 4 to 8 months from official submission of the application.

Whilst the environmental permitting process is ongoing, and in the event that bulk sampling is required to better understand the metallurgical properties of the mineral deposit, it may be possible to obtain approval for an Advanced Exploration Project (AEP) via the Department of Economic Development, Investment, Trade and Natural Resources. This is an interim measure, and the full environmental permit (EAL) is required to be in place prior to mining and processing operations commencing.

20.1.3 Project Permitting Status

A significant number of mineral claims are associated with the Project and exploration activity is ongoing at both the Makwa and Mayville properties.

Grid Metals Corp hold the rights to Mineral Lease ML-331 from the State of Manitoba. The Lease covers 499 ha and initially commenced in 1998. It was renewed for a second term of 21 years, commencing June 17, 2019, and ending June 17, 2040. The corresponding surface lease (SL-297) is also valid.

Grid Metals is planning to apply to convert crown mineral claims to mineral and surface leases to support a potential, future mine development project at the Mayville property.

The environmental permitting process for the Project has not yet commenced, and as such the environmental permits (EAL) for each property have not yet been obtained. Although the Makwa and Mayville projects will be permitted separately, in practice much of the information required to support the permit applications, such as baseline studies, public consultation, and impact assessment, will be very similar for both properties and hence a combined approach and timeline is anticipated.

20.1.4 Good International Industry Practice

In addition to compliance with all applicable provincial and federal requirements, it is understood that Grid Metals Corp. intends to develop the Project in general alignment with good international industry practice (GIIP), in order to demonstrate their business ethics and commitment to environment, social and governance (ESG) principles, and help facilitate any potential financial lender requirements in the future.

GIIP for mining projects is generally considered to include guidelines from the International Finance Corporation, Equator Principles, and World Bank. For Projects that include tailings impoundments, this also includes the Global Industry Standard on Tailings Dams. Further information on these guidelines is as follows:

- International Finance Corporation Environmental and Social Performance Standards (IFC PS) – these are part of the IFC's Sustainability Framework. The IFC PS provide a baseline of environmental and social good practice and form an important assessment reference.
- Equator Principles (EP) – these form a risk management framework, adopted by international financial institutions for determining, assessing and managing environmental and social risk in projects. The principles are primarily intended to provide a minimum standard for due diligence to support a responsible approach to risk in decision-making. The EP framework is based on the IFC PS and on the World Bank Group (WBG) Environmental, Health and Safety (EHS) Guidelines on environmental and social sustainability.
- World Bank Environmental, Health and Safety Guidelines (WB EHS) – these provide a source of technical information during project appraisal. They are widely accepted as technical reference documents presenting general and industry specific examples of GIIP. For the mining industry, sector specific guidelines for open-pit mining are also relevant.
- Global Industry Standard for Tailings Dams (GISTD) - the Standard was developed by an independent review process in response to a number of tailings dam failures. It was initiated by the International Council on Mining and Metals (ICMM), United Nations Environment Programme (UNEP) and Principles for Responsible Investment (PRI) and provides a global benchmark to achieve strong social, environmental and technical outcomes in tailings management.

20.2 Environmental and Social Context

The MM Project is located in the Canadian province of Manitoba, approximately 145 km northeast of the city of Winnipeg, and close to the Nopiming Provincial Park and the border with the province of Ontario. Both properties are located in the Bird River Greenstone Belt, with Mayville (8,110 ha) approximately 35km further north than Makwa (4,100 ha). Grid Metals Corp. has a separate lithium project (Donner Lake) directly adjacent to Mayville, and the operational Tanco Lithium Mine is situated 4 km south of the Makwa deposit.

Exploration activity has taken place at both properties, and historic commercial mining has taken place at Makwa. There is currently an all-weather access road to the Makwa property which supports exploration activity, a power line, and a core storage building. There is no infrastructure at Mayville, other than an access trail. The nearest settlement to the Project is Lac du Bonnet, approximately 60 km to the southeast.

The Project area includes the Bird River watershed. The environment is typical of the Canadian Shield, with surface elevations ranging from 300 masl to 400 masl, and low rock outcrop ridges separated by muskeg swamp, small rivers, streams and beaver ponds (RPA, 2014).

20.2.1 Climate

The climate in the Project area is northern temperate, with long cold winters and short summers. Mining and drilling operations can be carried out all year round. The average temperature ranges from 20°C in July to -18°C in January. Mean annual precipitation ranges from 475 mm to 620 mm, with 25% of the total falling as snow. (RPA, 2014).

It is recommended to install a weather station at each property.

20.2.2 Air Quality, Noise and Vibration

The Project is located in an area of existing exploration activity and in relative proximity to an operational mine site (Tanco). Localised dust, gaseous emissions and noise generation associated with vehicle traffic and drilling activities will already occur on a periodic basis at both properties.

Historical (Makwa) and ongoing (Mayville/Donner properties) baseline studies have been undertaken for air quality, noise and vibration. A review of air quality from the monitoring station in Winnipeg was undertaken by Wardrop in 2010, which identified elevated concentrations of ground level ozone, associated with vehicle traffic.

20.2.3 Water Resources

A detailed hydrogeological study has not been undertaken for the Project. Groundwater is present at the Makwa property and comprises an unconfined overburden aquifer and a confined fractured crystalline bedrock aquifer (Wardrop, 2009). Four monitoring boreholes were installed at Makwa in the 1970s in connection with a study on the former mining operations, and these were sampled during baseline studies undertaken in 2006-2007; the current condition of these boreholes is unknown. It is understood that open pits at both properties will require dewatering. Further studies are needed to understand groundwater flow rates, but an assumption was made that 45 L/s will be pumped from the Makwa pit area, and 30-45 L/s will be pumped from the Mayville pit area (RPA, 2014).

Both properties are located within the Bird River Watershed, which has a total drainage area of 1039 km^2 and is influenced by seasonal ice melt. The Bird River originates in Ontario and flows from the northeast to the southwest, through the Nopiming Provincial Park and the Project area, before discharging into the Winnipeg River at Lac du Bonnet. Several tributaries of the Bird River flow through the Makwa property, including F-Zone Creek, Pumphouse Creek, Waste Rock Creek, West Creek, and Mill Creek. It is understood that Waste Rock Creek has been altered by former mining operations, and West Creek may require diversion to facilitate development of the Makwa open pit (Wardrop, 2009). Surface water quality sampling was undertaken during the original baseline studies for the Project in 2006-2007 and updated in 2022; data analysis is ongoing.

20.2.4 Ecology

Ecology surveys were undertaken during the original baseline studies for the Project in 2006-2007 and updated in 2022; data analysis is ongoing.

Vegetation in the Project area consists mainly of jackpine and hazel brush with minor white spruce and poplar trees in the positive relief areas, and willows, tamarack and black spruce in the gullies and muskeg areas. No areas of critical habitat were identified in the original baseline surveys, and no threatened or endangered species were found within the proposed development area (RPA, 2014).

Mammals observed during baseline surveys in 2006-2007 included white-tailed deer, beaver, red squirrel, snowshoe hare, moose, gray wolf and black bear. The highest number of mammal species were found in black spruce bog and mixed wood forest habitats. Some of the most abundant bird species included Winter Wren, red-breasted Nuthatch, Brown Creeper, Northern Flicker, and Boreal Chickadee (Wardrop, 2009).

The Bird River system supports a diverse fish community that includes northern pike, walleye, yellow perch, white sucker, and forage species. Fish migration and spawning occurs in Spring. The existing Makwa open pit (flooded since former mining operations ceased) supports a community of Arctic char and northern redbelly dace. It is unclear how these fish came to be in the pit, and it is understood that the Manitoba government has no records of char being stocked in the pit (RPA, 2014).

20.2.5 Land Use and Protected Areas

The Project is located on traditional and ancestral territory of the Sagkeeng First Nation, and an agreement is in place to allow exploration activity.

Part of the Makwa Property is located within the southern boundary of Nopiming Provincial Park. Nopiming contains a number of campgrounds, lodges and cottage developments and the park and surrounding area in the vicinity of Bird River is used for canoeing, hiking, snowmobiling, wild rice harvesting, hunting, fishing, and trapping.

This portion of Nopiming is designated as a 'Resource Management Zone' and therefore mineral extraction is permitted, subject to the necessary authorizations. The Project has been designed so that processing facilities are located at the Mayville property, and therefore outside of the park.

20.2.6 Cultural Heritage

An archaeological study was undertaken in 2006-2007 at the Makwa property. A small area of artefacts was identified, catalogued and recovered by the Manitoba authorities (Wardrop, 2009). An archaeology study was completed in 2022 for the Mayville and Donner Lake properties.

20.2.7 Socio-economic Setting

The Project is located approximately 145 km from the city of Winnipeg. The town of Lac du Bonnet is approximately 60 km away, and local rural municipalities include Alexander and Lac du Bonnet, in addition to the Local Government District of Pinawa. There is a higher proportion of residents during the summer season (Wardrop, 2009).

The regional economy is diverse and is based on agriculture, mining, forestry, tourism, and hydro-electricity generation (RPA, 2014). Services and supplies are available from Lac du Bonnet and Winnipeg. The Tanco lithium mine is located four kilometres to the south the Makwa deposit.

20.2.8 Traffic, Transport and Supporting Infrastructure

A limited assessment of traffic in the Project area was undertaken as part of the original baseline surveys (Wardrop, 2009). Access roads to both properties will require upgrading.

Power supply for the Project will likely be via connection to the Manitoba municipal network, supplied by hydropower. The Makwa property is already connected.

Water for the Project will be sourced from the Bird River. Water reclaimed from the process circuit and Tailings Management Facility (TMF) will be recirculated for use on site and treated as necessary. A water balance has not yet been developed for the Project and further work is needed to refine the design of the water intake and water treatment system, wastewater and sewage management, and assess any necessary discharge points. It is understood that groundwater will not be used for water supply.

The Canadian Pacific Railway line passes east-west 45 km south of Lac du Bonnet and can be used for importing heavy freight and dispatching concentrate.

20.3 Status of Environmental and Social Studies

Baseline studies were undertaken for the Project in 2006-2007 by Wardrop Consulting (subsequently purchased by Tetra Tech). These studies were focused solely on the Makwa property, in keeping with the planned development at that time, and included hydrology, hydrogeology, water quality, sediment quality, vegetation surveys, wildlife surveys (mammals, bats, birds, reptiles and amphibians, fish, and benthic invertebrates), socio-economic conditions, cultural heritage and traffic. The baseline studies were intended to support the environmental permitting process (EAL) for the Makwa property, but the ESIA was not completed.

Wardrop Consulting also undertook an environmental scoping study for the Project in 2010, focusing on the Mayville property which had not been included in the previous baseline studies. The scoping study was based on a review of secondary information and was intended to provide a high level overview of potential environmental issues that may affect the Project.

The environmental permitting process was not completed for either the Makwa or Mayville properties, and it is understood that there were no additional environmental or social studies undertaken in the interim period from 2011-2021. ESIAs have therefore not been undertaken for either property, and the original baseline work undertaken in 2006-2007 requires updating and expanding to cover the entire Project area for both properties.

In April 2022, Grid Metals Corp. engaged AECOM Canada Ltd to undertake updated baseline environmental studies for a portion of both the Mayville and Donner Lake properties. The scope of work included water and ecology studies, including bird surveys, a summer tracking study with game cameras, bats and crepuscular studies, characterization of landcover and vegetation communities, and fish and benthos assessment.

It is understood that AECOM have completed water and ecology studies which cover both the Makwa and Mayville properties for Spring and Fall seasons, and that data analysis and reporting is ongoing. It is also understood that AECOM will undertake any additional baseline studies that may be required, and that they will assess the full spectrum of environmental and socio-economic conditions that may be affected by the Project.

20.4 ENVIRONMENTAL AND SOCIAL RISKS AND IMPACTS

The Project will be designed to minimise environmental impacts as far as possible and enhance socio-economic opportunities. A full review of the potential environmental and social impacts will be undertaken as part of the ESIA process. Preliminary risks identified to date include the following:

Air Quality, Noise and Vibration - The Project will generate air emissions in connection with processing activities and the operation of vehicles and equipment. Operational controls such as good driving practices will be used to help minimise dust generation and greenhouse gas emissions. Local noise and vibration levels will be influenced by routine Project activities, including drilling and blasting.

Water Resources – The Project has the potential to impact hydrological processes in tributaries of the Bird River by altering flow conditions through water abstraction and channel diversion, and groundwater flow conditions by dewatering the open pits. Project operations also have the potential to negatively impact water quality via site runoff/drainage and potential seepage from waste material. Sufficient testwork to determine ARDML potential has not yet been undertaken at both properties.

Ecology – The Project is located in close proximity to the Nopiming Provincial Park, with the Makwa Property located within the southern boundary of the park. Close cooperation will be required with the regulatory authorities to ensure disturbance to wildlife and habitat loss is minimised. Impacts on downstream fish habitat will need to be carefully monitored, with construction work timed to avoid the sensitive Spring period, particularly for the river water intake and road crossings.

Tailings Management -The Project will require construction of a Tailings Management facility (TMF) at the Mayville site. Detailed design has not yet been undertaken but will incorporate international guidelines and include an appropriate liner, drainage and monitoring system. As extensive exploration activity has been undertaken, a survey will need to be undertaken to ensure that drill holes in the vicinity of the proposed TMF have been adequately sealed, to minimise the risk of seepage to groundwater.

Socio-economic impacts – The Project is expected to have a positive impact on the regional economy, through creation of direct and indirect jobs and associated training opportunities. Details of job opportunities will be refined as the Project progresses through PFS stage, and it is understood that priority will be given to hiring and procurement from local communities, including the Sagkeeng FN.

There is a risk that some local community members or NGO groups may oppose a new mining Project in the area, and therefore proactive and transparent engagement is important from an early stage in the Project development. It is also possible that other aboriginal groups may assert treaty or heritage rights to the area in the future.

20.5 ENVIRONMENTAL AND SOCIAL MANAGEMENT

Environmental and social management requirements will be identified as part of the forthcoming ESIA process, and any necessary engineering controls included in the Project design. An environmental and social management system (ESMS) will be developed for the Project and will include appropriate mitigation measures and management practices.

Of particular importance within the ESMS will be plans and procedures for water management, tailings management, biodiversity protection, air quality, materials handling, stakeholder engagement, and non-mining waste management. The Closure Plan that will be prepared as part of the environmental permit (EAL) application will be incorporated into the ESMS. Environmental monitoring programmes will also be developed based on the findings of the latest baseline surveys.

Consideration will need to be given to any potential short or long term contractors at the Project site, to ensure their approach to environmental and social management is aligned with the overall Project approach.

20.6 STAKEHOLDER ENGAGEMENT AND CONSULTATION

Grid Metals Corp. signed a formal agreement with Sagkeeng Anicinabe First Nation (FN), also known as the Fort Alexander Band, to allow exploration activities on traditional and ancestral territory. The agreement is dated April 28, 2021, and is valid for an open-ended time period whilst the Project remains in the exploration phase. It is understood that an Impact Benefit Agreement (IBA) will be developed and agreed with Sagkeeng FN in the future, prior to any mining operations taking place.

The Exploration Agreement with Sagkeeng FN aims to promote a cooperative and mutually respectful relationship with transparent communication concerning the Project. It includes the following specific commitments:

- Financial provision for Sagkeeng FN to retain an environmental/cultural monitor for site visits where specific disruptive activities (such as drilling) takes place;
- Financial provision for Sagkeeng FN to retain a qualified archaeologist to undertake Stage 1 archaeological assessments, with any necessary Stage 2 (more detailed) assessments being undertaken by an archaeologist retained by Grid Metals;
- Financial compensation for harvesting activities (fishing, hunting, gathering) and trapline use that are disrupted by exploration activity;
- Financial provision for Sagkeeng FN to retain an appropriate technical specialist(s) to review any documented plans relating to exploration activity, including environmental and safety plans;
- Priority for Sagkeeng FN businesses in relation to any opportunities that arise for provision of goods and services in connection with exploration activities;
- Preferential employment and training for Sagkeeng FN members, where job or contracting opportunities arise in connection with exploration activities; and
- Annual financial contribution to the Sagkeeng Community Fund.

Outside of the ongoing engagement with Sagkeeng FN, and historical public stakeholder meetings, Grid Metals Corp. have not held any recent, specific community information meetings for the Project. Stakeholder engagement will be proactively undertaken as the Project develops, and public consultation will be undertaken as part of the ESIA process. It is recommended that a Stakeholder Engagement Plan is developed a part of the Project's ESMS.

20.7 Project Closure Planning

The former mining operations at the Makwa property (including Maskwa open pit and Dumbarton underground mines) were decommissioned during the 1970s, with additional remedial work undertaken in the late 1980s and 1990s. Apart from the abandoned open pit, all infrastructure was removed from the site and access to the underground mining areas was sealed off. As all processing activity was undertaken offsite, there are no tailings storage areas. It is understood that an assessment of site conditions including soil contamination, surface water and groundwater was undertaken in 1997 and it was determined that no further remedial actions were required (RPA, 2014).

A preliminary closure concept for the Project was presented in the previous PEA report (RPA, 2014) and this concept has not yet been updated. Initial closure methods identified in the previous PEA included:

- Installation of a safety berm on the waste rock dumps;
- Allowing the open pits to fill with water and support fish habitat, and
- Covering the TSF with a clay layer and revegetating the surface.

There is an intention to stockpile suitable soil material for future reclamation activities during the initial vegetation clearance that will be taken for Project construction.

The capital reclamation and closure costs were estimated at 11.7 million CAD in 2014. These estimated costs need updating and will require further review and refinement as the Project develops.

A Closure Plan will need to be developed for the Project and submitted as part of the environmental permitting application, together with an updated closure cost estimate that will form the basis for the Financial Assurance. The Closure Plan must meet the requirements of the Manitoba Mines and Minerals Act (C.C.S.M. c. M162) and Mine Closure Regulation (Man. Reg. 67/99) and should be reviewed and revised, if necessary, as the Project develops. Consideration of the ICMM Guidance for Integrated Mine Closure and the World Bank Group/IFC EHS Guidelines for Mining is also recommended.

The estimated total Life of the Project will be estimated in the future, based on the findings of a new economic study and mineral resource estimates available at that time.

20.8 RECOMMENDATIONS

The ESIA process for the Project is not yet complete, and therefore specific recommendations will arise as a result of the baseline studies, impact assessment, and public consultation process, in addition to any terms and conditions outlined in the environmental permits (EALs).

Recommendations that are considered important for ongoing development of the Project include the following:

- Review the need for additional baseline studies;
- Continue baseline monitoring so that a consistent record can be established, particularly for surface water quality. Installation of a weather station at each property is recommended;
- Continue to undertake proactive engagement with Sagkeeng First Nation and local communities;
- Undertake a hydrogeological study for both properties;
- Undertake geochemical test-work to determine the risk from potentially acid generating material and metal leaching;
- Develop a water balance for the Project and confirm the design details for water supply and treatment;
- Undertake additional studies to support detailed design of the Tailings Management Facility; and
- Confirm the permitting requirements with the regulatory authorities of Manitoba

Prior to commencing the operational phase of the Project, development of the ESMS should be completed and implemented, with staff and contractors trained in their respective responsibilities and associated procedures for environmental, social and safety management. It is recommended that the ESMS is aligned with ISO14001 requirements, and that due consideration is given to the various GIIP guidelines and voluntary commitments that Grid Metals Corp. intends to implement.

21.0 CAPITAL AND OPERATING COSTS

This section is not applicable as the MM Project is still at an exploration stage.

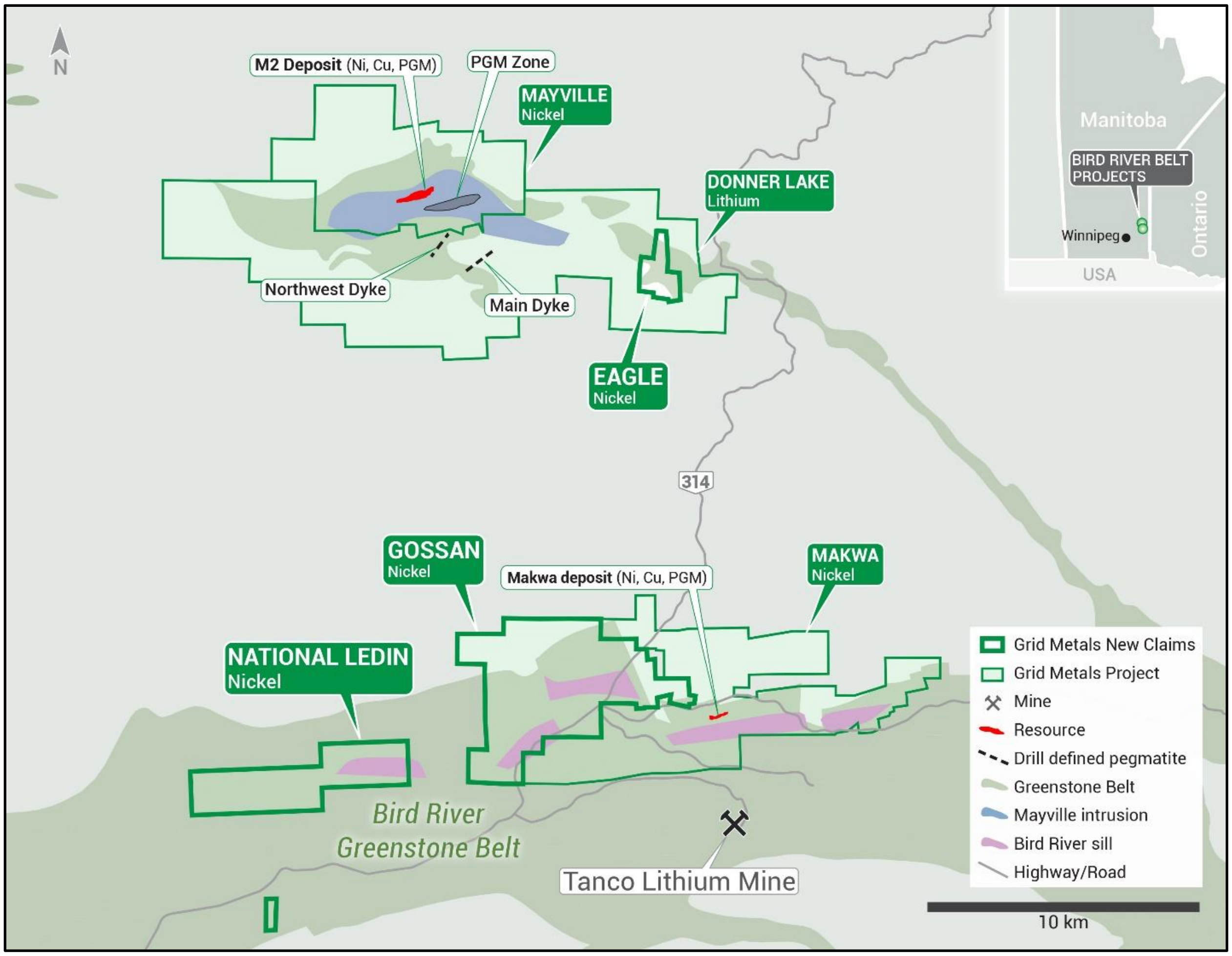
22.0 ECONOMIC ANALYSIS

This section is not applicable as the MM Project is still at an exploration stage.

23.0 ADJACENT PROPERTIES

The adjoining properties to the MM Project are shown in Figure 23.1 and all of them are owned by Grid Metals. Mineralization on the Donner Lithium claims was verified by the Micon QP during the site visit; a description of the mineralization encountered on the claims is given in Section 12.3. Mineralization on the rest of the adjoining/surrounding properties has not been verified by the Micon QP.

Figure 23.1
Location of Adjacent Properties/Claims to the Mayville-Makwa Properties of the MM Project



Source: Grid Metals 2023.

Tanco mine is about 4 km due south of the Makwa deposit but the properties do not share a common boundary. The Micon QP did not verify the lithium-cesium-tantalum mineralization at Tanco mine.

24.0 OTHER RELEVANT DATA AND INFORMATION

All relevant data and information pertaining to the MM Project have been disclosed under the relevant sections of this report. No additional information or explanation is necessary to make this Technical Report understandable and not misleading.

25.0 INTERPRETATION AND CONCLUSIONS

25.1 OVERVIEW

The MM Project resource is a conventional and near surface copper-nickel sulphide resource with readily apparent upside. The Project is ideally located to service critical metals demand in North America. The Mayville deposit is located directly adjacent to the Company's advanced exploration stage Donner Lithium Project which is currently progressing through the mine permitting process. There are tremendous synergies between Grid Metals copper/nickel and lithium projects development plans as the company continues to build the mineral resources necessary to develop an important critical metals production and processing hub in a Tier 1 mining jurisdiction.

25.2 GEOLOGY AND MINERAL RESOURCES

The open pit resources at Makwa include 14.2 million tonnes in the indicated category with 0.48% Ni, 0.11% Cu, 0.02% Co, 0.37 g/t Pd and 0.10 g/t Pt (0.75% nickel equivalent grade). The Makwa deposit is subdivided into a central, higher-grade zone ('HG1') and a flanking (both hanging-wall and footwall) lower-grade ('LG1') zone. The new resource estimate includes 4.8 million tonnes of the HG1 zone grading 0.89% Ni (1.26% nickel equivalent grade). The updated open-pit resource estimate for the Mayville deposit includes 32.0 million tonnes in the indicated category with 0.40% Cu and 0.16% Ni and byproduct concentrations of cobalt, palladium, platinum and gold (0.61% copper equivalent grade).

Compared to the previous published resource estimate for the MM project (RPA, 2014), the combined open pit resources (indicated category) increased by 12.4 million tonnes or 36.8%. This increase is largely attributable to the inclusion of recent infill drilling (Makwa – 2022), improved metallurgical recoveries from test-work completed after the previous resource estimate was published, and a more favourable US dollar to Canadian dollar exchange rate.

The main factors contributing to the increased resources from previous estimates are improvements in modelled metallurgical recoveries, changes in metal prices and forex used in the resource estimation and additional drilling.

25.3 METALLURGY

Both deposits have had extensive metallurgical test work completed over multiple campaigns with results indicating that saleable sulphide concentrates can be produced (nickel at Makwa; separate copper and nickel concentrates at Mayville).

25.4 UPSIDE POTENTIAL OF MINERAL RESOURCES

The Makwa and Mayville deposits remain open along strike (E – W) and down dip. In addition, the MM Project has several walk-up targets that could provide immediate upside to the current mineral resource. These include the newly acquired New Manitoba Cu-Ni historical occurrence and the untested EM conductors between New Manitoba and the Mayville Cu-Ni Deposit approximately 10 km to the west. As well, the newly acquired Page and Ore Fault deposits and their potential extensions are also priority targets. The Company plans to complete an initial drill program to test these priority targets at the opportune moment, depending on funding.

Details on the other deposits mentioned above and mineral occurrences in the MM Project area are:

- The New Manitoba deposit, which has a historical mineral resource estimate of 1.8Mt at 0.75% Cu and 0.33% Ni (Manitoba Mineral Inventory Card #217) (Note: The Company has not been able to verify the historical estimate as relevant and the historical estimate should not be relied on).

- The Ore Fault deposit, containing a previously NI 43-101 reported indicated resource of 0.9Mt at 0.32% Ni and 0.24% Cu and an inferred resource of 2.5Mt 0.35% Ni and 0.19% (Ewert et al., 2009; see reference 1, below); and,

- The Page deposit, containing a previously NI 43-101 reported indicated resource of 1.5Mt at 0.32% Ni and 0.13% Cu (Ewert et al., 2009).

It should be noted that all previous/historical mineral resource estimates mentioned above need to be updated following the CIM 2019 Best Practice Guidelines to make them current.

25.5 Overall Conclusions

There is no doubt the MM Project is poised for accelerated growth in every aspect as evidenced by the improved metallurgical recoveries from the test-work completed and the recent additions to the company' portfolio holdings as presented in Figure 23.1 above. Furthermore, the Makwa and Mayville deposits in their own right remain open along strike (east – west) and down dip beyond the limits of the current MRE.

It is concluded that further exploration has the potential to significantly increase the mineral resources, with the potential to add higher-grade massive sulphide deposits and greatly improve project economics in both the northern and southern claim groups. Likewise, additional metallurgical test-work is expected to refine the metal recoveries.

26.0 RECOMMENDATIONS

26.1 General Statement

The critical issues pertaining to the potential development of the MM Project in the future are (i) the size and quality of the mineral resource, (ii) the metallurgical characteristics of the deposits, and (iii) the exploitation/environmental factors related to mining. Accordingly, Micon makes the following recommendations.

26.2 Geology/Mineral Resources

26.2.1 Immediate/Short Term Activities

The immediate/short term objective is establishing the global distribution of potentially economic satellite deposits to the MM Project. To this end, Grid Metals has consolidated the majority of the prospective copper-nickel mineral tenure of the highly prospective Bird River Greenstone Belt including several other deposits near the Makwa and Mayville mineral resources. Concurrently with the new resource estimate the Company has completed a Project-wide geophysical review which has identified a number of new high potential targets for drilling. An initial drill program (See Table 26.1 below) has been planned and is expected to commence later in 2024.

26.2.2 Medium- Long Term Activities

Micon believes that for the MM Project a significant open pit mineral resource in the Indicated + Inferred classes has been delineated and can be increased laterally (east-west) and down dip at both deposits. However, environmental constraints as detailed in Section 4.0 of this report, are likely to limit the size of permissible open pit exploitable resources, particularly at Makwa. To overcome this obstacle, Micon recommends that Grid Metals consider growing the resource by developing underground resources by deeper drilling, initially underneath the already established pit resource, followed by expansion laterally along strike with step-out holes.

26.3 Metallurgy

Ideally, additional metallurgical test-work should commence now in preparation for detailed engineering studies. This should include further testing on sample grinding characteristics from both deposits and additional flotation testing on Mayville samples, both master composite and variability, to complement the latest results obtained by XPS with a revised flowsheet. This will require some additional core drilling since most of the available drill core sections with typical mineralisation have been used.

26.4 In-House Scoping Study

An in-house scoping study is recommended to lay the foundation for comprehensive economic/engineering studies. Simultaneously, enhanced Baseline Studies will facilitate the resolution of future permitting issues.

26.5 BUDGET

To achieve the immediate/short term goal, Grid Metals has proposed a CAD $2 M budget as summarized below in Table 26.1. Fundamentally, the budget caters for exploration drilling to define satellite deposits to the Makwa and Mayville mineral resources.

Table 26.1
Grid Metals Budget for July 2024-June 2025

ITEM	COST (CAD)
Direct drilling	1,020,000.00
Sample analyses	340,000.00
Labour	200,000.00
Meals, Accommodation	40,000.00
Consumables	200,000.00
Geophysics	200,000.00
Total	**2,000,000.00**

The drill program will target untested VTEM conductors on the Mayville-Donner claim block (east of M2) and several VTEM EM anomalies near the Page and Ore fault deposits in the Gossan block. See Figure 23.1 above under Section 23 for location of the claim blocks. The planned metreage is 3,000 for each block to give a total of 6,000 m of drilling.

Micon's QP believes that the proposed budget is reasonable and warranted and recommend that Grid Metals conduct the planned activities subject to availability of funding and any other matters which may cause the objectives to be altered in the normal course of business activities.

27.0 DATE AND SIGNATURE PAGE

27.1 MICON INTERNATIONAL LIMITED

“Charley Murahwi” {signed and sealed as of the report date}

Charley Murahwi, M.Sc., P.Geo., FAusIMM	Report Date: June 14, 2024
Senior Economic Geologist	Effective Date: December 31, 2023

“Alan San Martin” {signed and sealed as of the report date}

Ing. Alan San Martin, MAusIMM(CP)	Report Date: June 14, 2024
Mineral Resource Specialist	Effective Date: December 31, 2023

“Chitrali Sarkar” {signed and sealed as of the report date}

Chitrali Sarkar, M.Sc., P.Geo.	Report Date: June 14, 2024
Resource Geologist	Effective Date: December 31, 2023

“Ian Ward” {signed and sealed as of the report date}

Ian Ward, B.Sc. (Hons), P.Eng.	Report Date: June 14, 2024
Metallurgist	Effective Date: December 31, 2023

28.0 REFERENCES

Technical reports filed on SEDAR

Jacobs et al., 2007: Technical Report on the Preliminary Economic Assessment for the Maskwa Property, Manitoba Canada. (Micon International Limited NI 43-101 Report).

Ewert et al., 2009: Technical Report and Resource Estimate on the Ore Fault, Galaxy and Page Zones of the Marathon PGM/Gossan Resources JV Bird River Property, Southeast Manitoba. (P & E Mining Consultants Inc. NI 43-101 Report).

Stuart et al., 2014: Technical Report on the Preliminary Economic Assessment of the combined Mayville – Makwa Project, Manitoba, Canada. (RPA NI 43-101 Report).

Company in-house/internal reports

Frank Wright P.Eng., April 5, 2005: Mayville Project, Preliminary Flotation Testing.

Frank Wright P.Eng., May 26, 2006: Maskwa Project, Preliminary Flotation Testing.

Frank Wright P.Eng., December 21, 2007: Maskwa Nickel Project, Flotation Study.

Inspectorate America Corp. PRA Metallurgical Division, May 20, 2010: Confirmatory Flotation Study to Address Grade and Recovery Issues- Maskwa Nickel Project, Southeastern Manitoba.

XPS Expert Process Solutions, Revision 2, July 19, 2019: Demonstration of Cu/Ni Separation, Medium Grade Feed Ni-Cu-Co Ore from the Mayville Project.

Dave Peck, PhD., P. Geo., 2022/2023/2024: Pers. Comm.

Carey Galeschuk, P.Geo., 2022: Pers. Comm.

Literature survey/review

CIM 2014: Definition Standards for Mineral Resources & Mineral Reserves.

CIM 2019: Estimation of Mineral Resources and Mineral Reserves - Best Practice Guidelines.

Eckstrand, R., and Hulbert, L., 2007: Mineral Deposits of Canada - Magmatic Nickel-Copper-PGE Deposits, *in* Mineral Resources of Canada: A Synthesis of Major Deposit-types, District Metallogeny, the Evolution of Geological Provinces, and Exploration Methods. Internet reference: http://gsc.nrcan.gc.ca/mindep/

Houlé, M.G., Lesher, C.M., Sappi, A., Bédard, M., Goutier, J. and Yang, E., 2020. Overview of Ni-Cu-(PGE), Cr-(PGE), and Fe-Ti-V magmatic mineralization in the Superior Province: Insights on Metallotects and Metal Endowment. In: Targeted Geoscience Initiative 5: Advances in the Understanding of Canadian

Ni-Cu-PGE and Cr Ore Systems – Examples from the Midcontinent Rift, the Circum-Superior Belt, the Archean Superior Province, and Cordilleran Alaskan-type Intrusions. Geological Survey of Canada, Open File 8722, p. 117–139.

Houlé, M.G., et al., 2013: Temporal and Spatial Distribution of Magmatic Ni-Cu-PGE, Cr, and Fe-Ti-V Deposits in the Bird River-Uchi-Oxford-Stull-La Grande-Eastmain Superdomain: a New Metallotect within the Superior Province, 12th Biennial Meeting 2013: Mineral Deposit Research for a High-Tech World, Proceedings, Volume 3, p.1009 – p.1012.

Karup-Møller, S., and Brummer, J. J., 1971: Geology and sulphide deposits of the Bird River claim group, southeastern Manitoba, Geological Association of Canada, Special Paper 9, pp.143-154.

29.0 CERTIFICATES

CERTIFICATE OF QUALIFIED PERSON
Charley Murahwi, M.Sc., P.Geo., Pr.Sci.Nat., FAusIMM

As the co-author of this report for Grid Metals Corp. entitled "NI 43-101 Technical Report on the Updated Mineral Resources Estimate of the MM Project, Manitoba, Canada", with an effective date of December 31, 2023, I, Charley Murahwi, do hereby certify that:

1. I am employed as a Senior Economic Geologist by Micon International Limited, 601 – 90 Eglinton Ave East, Toronto, ON M4P 2Y3, tel. +1 416 362 5135, e-mail cmurahwi@micon-international.com;
2. I hold the following academic qualifications:

   B.Sc. (Geology) University of Rhodesia, Zimbabwe.

   Diplome d´Ingénieur Expert en Techniques Minières, Nancy, France.

   M.Sc. (Economic Geology), Rhodes University, South Africa, 1996.
3. I am a registered Professional Geoscientist in Ontario (membership # 1618) and in PEGNL (membership # 05662), a registered Professional Natural Scientist with the South African Council for Natural Scientific Professions (membership # 400133/09) and am a Fellow of the Australasian Institute of Mining & Metallurgy (FAusIMM) (membership number 300395).
4. I have worked as a geologist in the minerals industry for over 40 years.
5. I am familiar with NI 43-101, and, by reason of education, experience and professional registration, I fulfill the requirements of a Qualified Person as defined in NI 43-101. My work experience (on and off mine) includes 18 years on lithium, tin and tantalite projects, VMS, gold, silver and copper; 12 years on Cr-Ni-Cu-PGE deposits in layered intrusions/komatiitic environments and 13 years as a consulting geologist on precious/base metals, industrial minerals and specialty minerals (lithium and graphite).
6. I have visited the Property that is the subject of this report from 25 to 27 October 2022.
7. I am responsible for all Sections except 13 and summaries therefrom in Sections 1, 25 and 26 of this Technical Report.
8. I am independent of Grid Metals Corp., and related entities, as defined in Section 1.5 of NI 43-101.
9. I have read NI 43-101 and the Sections of this report for which I am responsible have been prepared in compliance with the instrument.
10. As of the date of this certificate to the best of my knowledge, information and belief, the sections of this Technical Report for which I am responsible contain all scientific and technical information that is required to be disclosed to make this report not misleading.

Report Date: June 14, 2024
Effective Date: December 31, 2023

"Charley Murahwi" {signed and sealed as of the report date}

Charley Murahwi, M.Sc., P.Geo., Pr.Sci.Nat., FAusIMM

CERTIFICATE OF QUALIFIED PERSON
Ing. Alan J. San Martin, MAusIMM(CP)

As the co-author of this report for Grid Metals Corp. entitled "NI 43-101 Technical Report on the Updated Mineral Resources Estimate of the MM Project, Manitoba, Canada" with an effective date of December 31, 2023, I, Alan J. San Martin, do hereby certify that:

1. I am employed by, and carried out this assignment for, Micon International Limited, whose address is Suite 601, 90 Eglington Ave. East, Toronto, Ontario M4P 2Y3., tel: (416) 362-5135, e-mail asanmartin@micon-international.com.
2. I hold a bachelor's degree in mining engineering (equivalent to B.Sc.) from the National University of Piura, Peru, 1999;
3. I am a member in good standing of the following professional entities:
   - The Australasian Institute of Mining and Metallurgy (AusIMM), Membership #301778
   - Canadian Institute of Mining, Metallurgy and Petroleum, Member ID 151724
   - Colegio de Ingenieros del Perú (CIP), Membership # 79184
4. I have continuously worked in my profession since 1999. My experience includes mining exploration, mineral deposit modelling, mineral resource estimation and consulting services for the mineral industry;
5. I am familiar with NI 43-101 and form 43-101F1 and by reason of education, experience and professional registration with AusIMM as Chartered Professional, MAusIMM(CP), I fulfill the requirements of a Qualified Person as defined in NI 43-101;
6. I have read NI 43-101 and Form 43-101F1 and the portions of this Technical Report for which I am responsible have been prepared in compliance with that instrument and form.
7. I have not visited the property that is the subject of the Technical Report.
8. I have not co-authored previous Micon reports for the property that is the subject of the Technical Report.
9. I am independent of Grid Metals Corp. and its related entities, as defined in Section 1.5 of NI 43-101.
10. I am responsible for Sections 14.2 to 14.5 of this Technical Report.
11. As of the date of this certificate, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make this technical report not misleading.

Report Date: June 14, 2024

Effective Date: December 31, 2023

"Alan J. San Martin" {signed and sealed}

Ing. Alan J. San Martin, MAusIMM(CP)
Mineral Resource Specialist

CERTIFICATE OF QUALIFIED PERSON
Chitrali Sarkar

As the co-author of this report for Grid Metals Corp. entitled "NI 43-101 Technical Report on the Updated Mineral Resources Estimate of the MM Project, Manitoba, Canada", with an effective date of December 31, 2023, I, Chitrali Sarkar, do hereby certify that:

1. I am employed as a Geologist by, and carried out this assignment for, Micon International Limited, Suite 601, 90 Eglington Ave. East, Toronto, Ontario M4P 2Y3, tel. (416) 362-5135, e-mail csarkar@micon-international.com.
2. This certificate applies to the Technical Report titled "Technical Report and Mineral Resource Estimate for the Bonanza Project, State of Nayarit, México" dated July 11, 2022, with an effective date of June 20, 2022.
3. I hold a Master's Degree in Applied Geology from Indian School of Mines (IIT), India, 2012.
4. I am a Registered Professional Geoscientist of Ontario (membership # 3584) also a member in good standing of the Canadian Institute of Mining, Metallurgy and Petroleum.
5. I am familiar with NI 43-101 and by reason of education, experience and professional registration, fulfil the requirements of a Qualified Person as defined in NI 43-101. My work experience includes 10 years in the metal mining industry, including more than 5 years as an exploration and production geologist in open pit and underground mines and more than 4 years as a resource geologist.
6. I have read NI 43-101 and this Technical Report has been prepared in compliance with the instrument.
7. I have not visited the Mayville-Makwa Project.
8. This is the first report I have co-authored for the mineral property that is the subject of this Technical Report.
9. I am jointly responsible for Sections 14 and summaries therefrom in Sections 1, 25 and 26 of this of this Technical Report with Sections 15 through 21 not applicable to this Technical Report.
10. I am independent of Grid Metals Corp. and its subsidiaries according to the definition described in NI 43-101 and the Companion Policy 43-101 CP.
11. As of the date of this certificate, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make this technical report not misleading.

Report Date: June 14, 2024
Effective Date: December 31, 2023

"Chitrali Sarkar" {signed and sealed as of the report date}

Chitrali Sarkar, M.Sc. P.Geo.
Geologist

CERTIFICATE OF QUALIFIED PERSON
Ian Ward, B.Sc. (Hons), P.Eng

As the co-author of this report for Grid Metals Corp. entitled “NI 43-101 Technical Report on the Updated Mineral Resources Estimate of the Mayville-Makwa Project, Manitoba, Canada”, with an effective date of December 31, 2023, I, Ian Ward, BSc., P.Eng., do hereby certify that:

1. I am self employed and Principal at Ian Ward Consulting Services, located at 15 Herbert Avenue, Toronto, Ontario, Canada.
2. I am a graduate of the University of Birmingham, UK in 1968 with the degree of B.Sc. (Hons) Minerals Engineering.
3. I am a member in good standing of Professional Engineers Ontario (Reg. #48869010). I have worked continuously as a Professional Engineer/metallurgist in the minerals industry, for consulting engineering companies, and as an independent consultant, for the last 47 years since initial registration in 1977.
4. My relevant experience includes management of technical and feasibility studies, processing plant audits and evaluations, management of metallurgical testing programs and the design plus start-up of numerous processing plants. During the last 16 years I have been responsible for supervising a number of metallurgical testing programs, analysing the results and developing plant design criteria based on the selected results.
5. I have read the definition of “Qualified Person” set out in the NI 43-101 – Standards of Disclosure for Mineral Projects (“NI 43-101”) and certify that, by reason of my education, affiliation with a professional association, and past relevant work experience, I fulfill the requirements to be a Qualified Person for the purposes of NI 43-101.
6. I am independent of the issuer applying all the tests in Section 1.5 of NI 43-101.
7. I am author and responsible for the preparation of Sections 1.6 and 13. I am also co-author and responsible for the relevant portions of Chapters 14, 25 and 26 of the Technical Report.
8. I have visited both the Makwa and Mayville properties several times during 2008-2010 that are the subject of the Technical Report, during which time I was employed by Mustang Minerals Corp., although visit dates are no longer available.
9. I have had prior involvement with the property that is the subject of the Technical Report.
10. I have read NI 43-101, and the sections of the Technical Report for which I am responsible have been prepared following NI 43-101 rules and regulations.
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 portions of the Technical Report for which I am responsible not misleading.

Report Date: June 14, 2024

Effective Date: December 31, 2023

“Ian Ward” {signed and sealed}

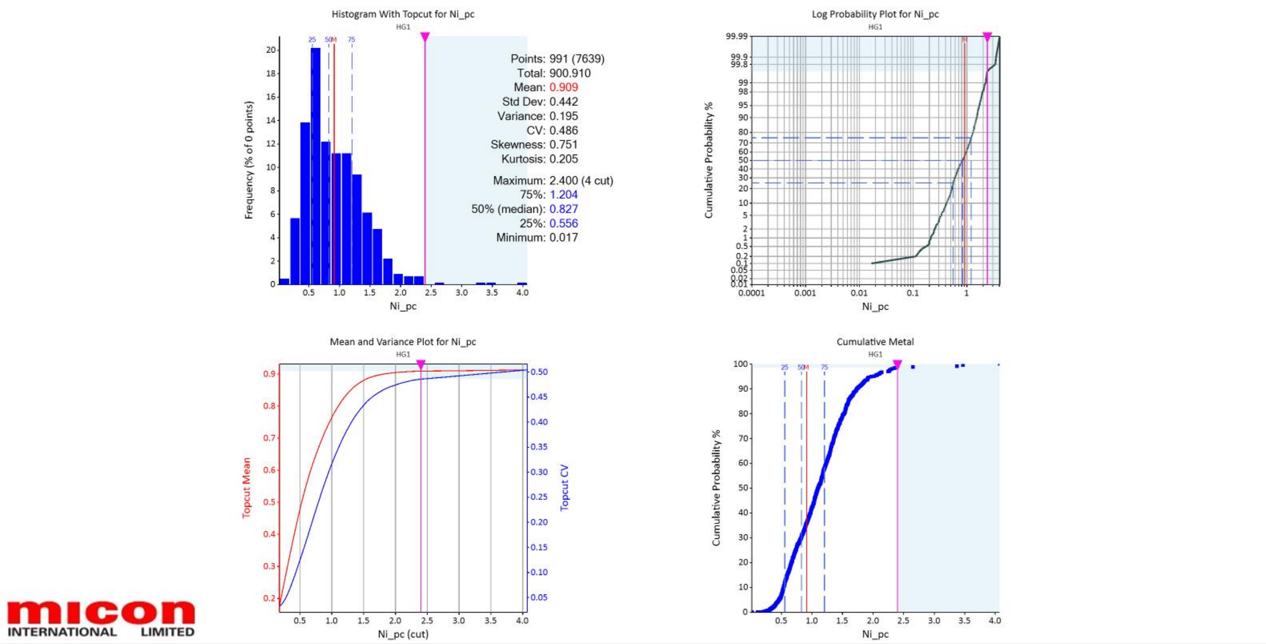
Ian Ward, P.Eng.
Ian Ward Consulting Services

APPENDIX 1

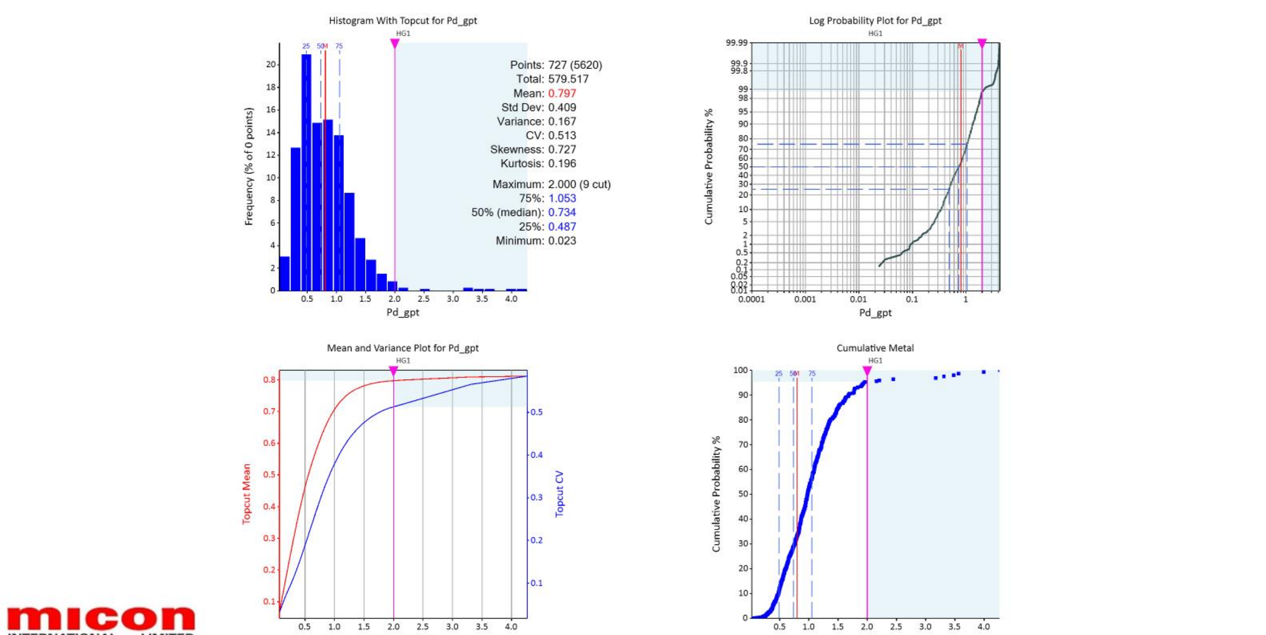
MAKWA DEPOSIT GRADE CAPPING GRAPHICS/PROBABILITY PLOTS

HG1 DOMAIN

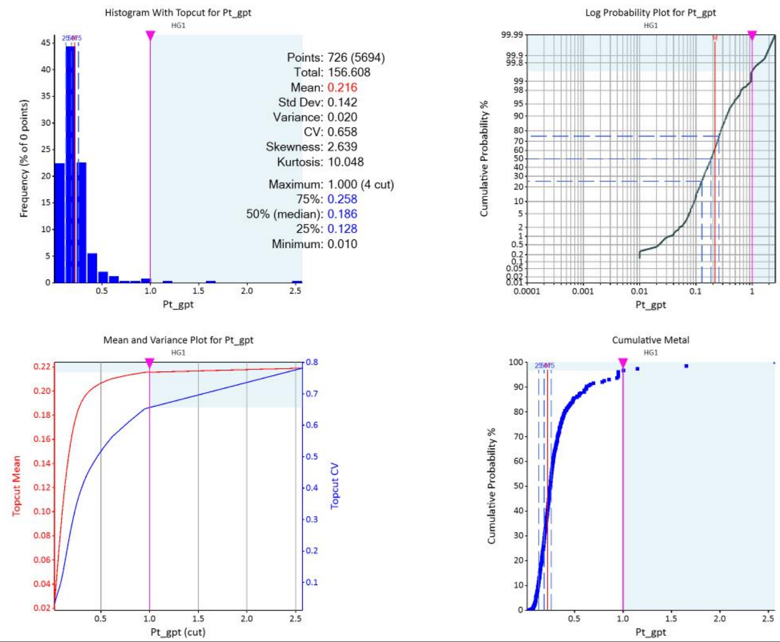
Makwa Deposit Domain HG1: 2m Composites Capping Grade for Ni



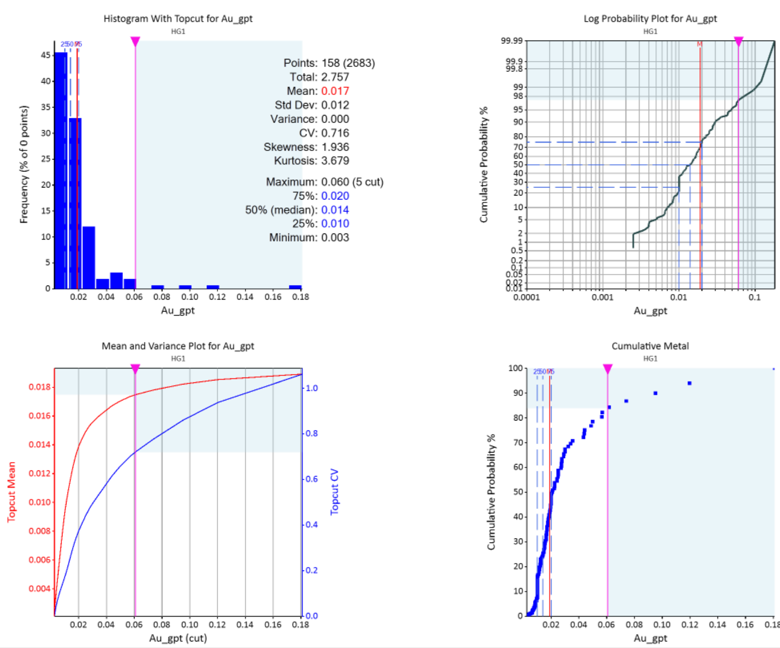
Makwa Deposit Domain HG1: 2m Composites Capping Grade for Pd



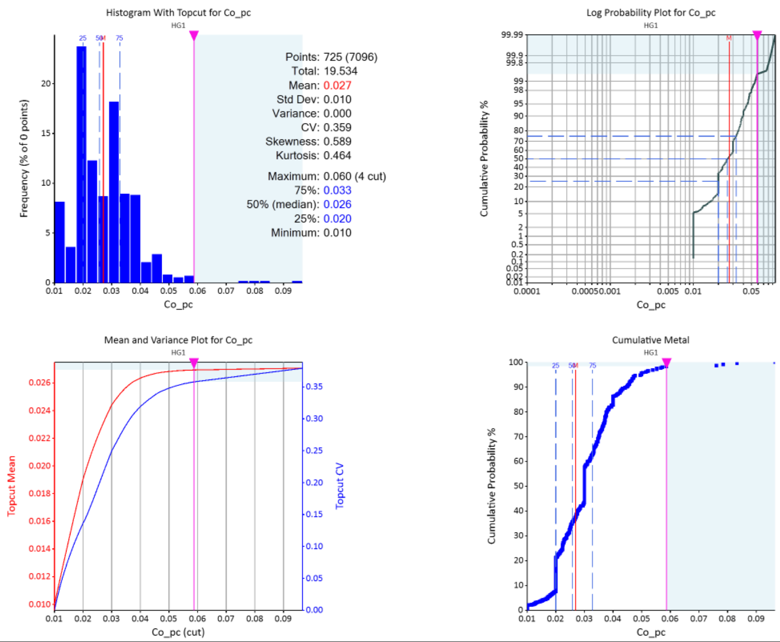
Makwa Deposit Domain HG1: 2m Composites Capping Grade for Pt



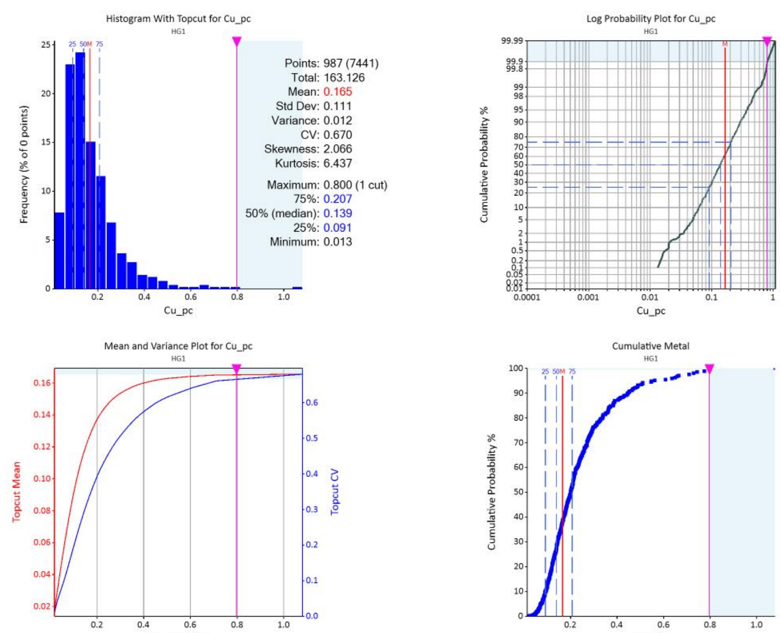
Makwa Deposit Domain HG1: 2m Composites Capping Grade for Au



Makwa Deposit Domain HG1: 2m Composites Capping Grade for Co

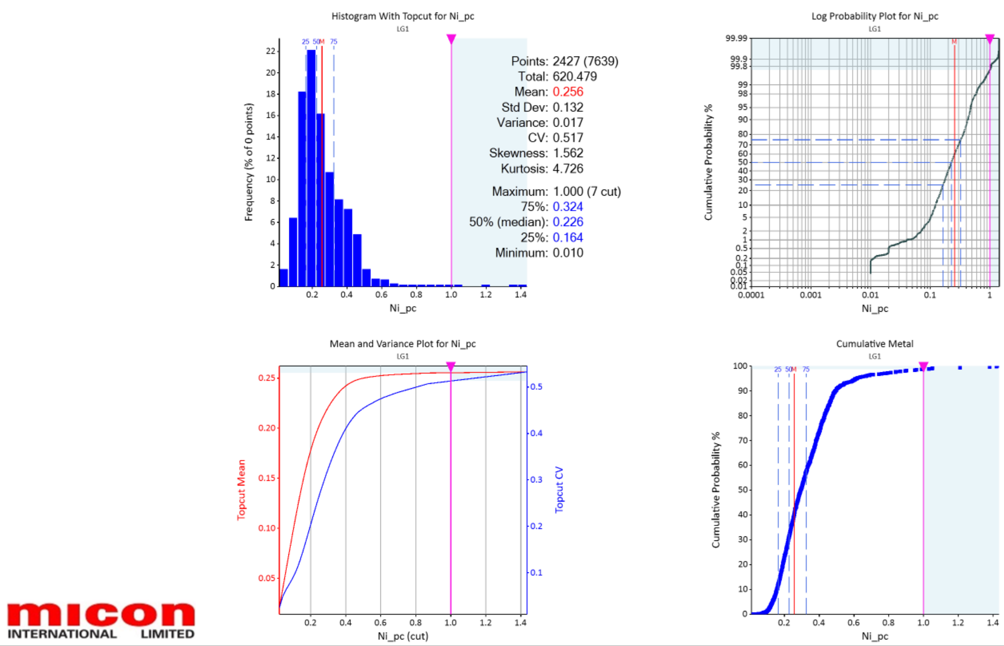


Makwa Deposit Domain HG1: 2m Composites Capping Grade for Cu

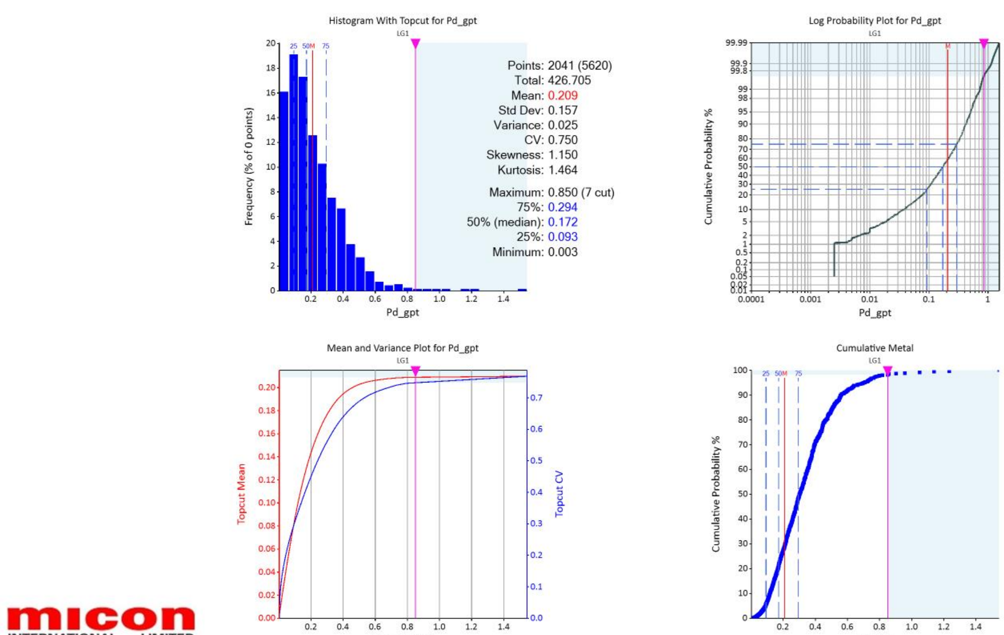


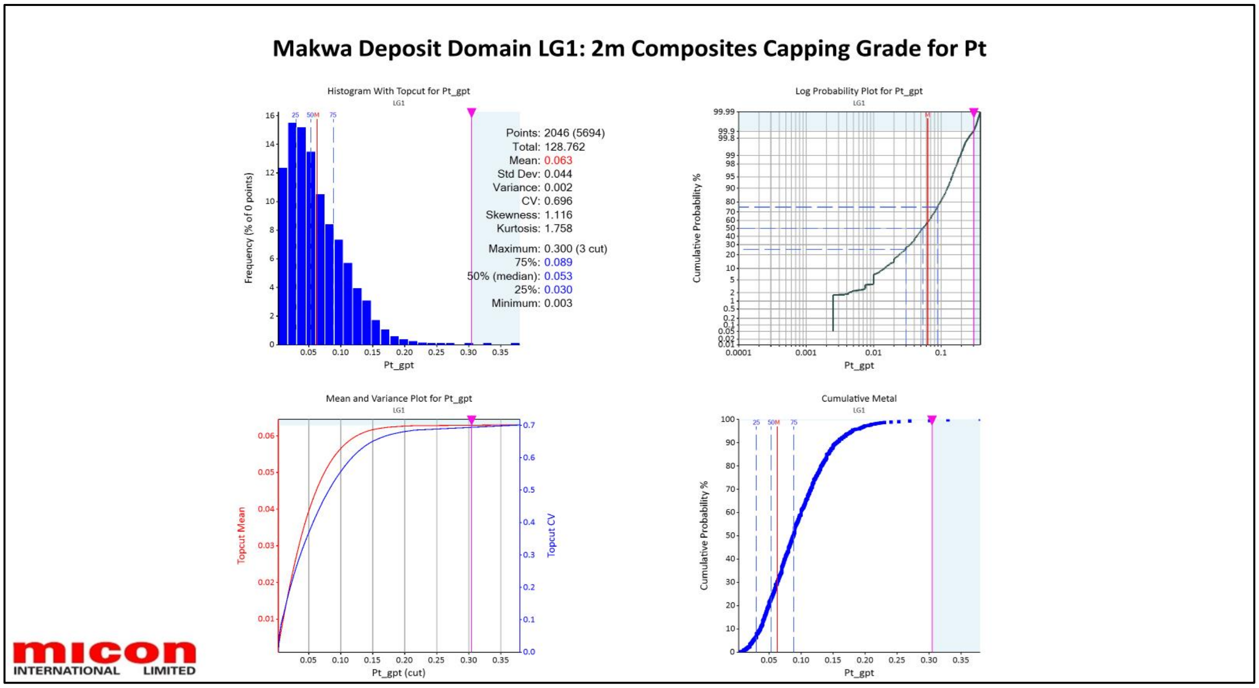
LG1 DOMAIN

Makwa Deposit Domain LG1: 2m Composites Capping Grade for Ni

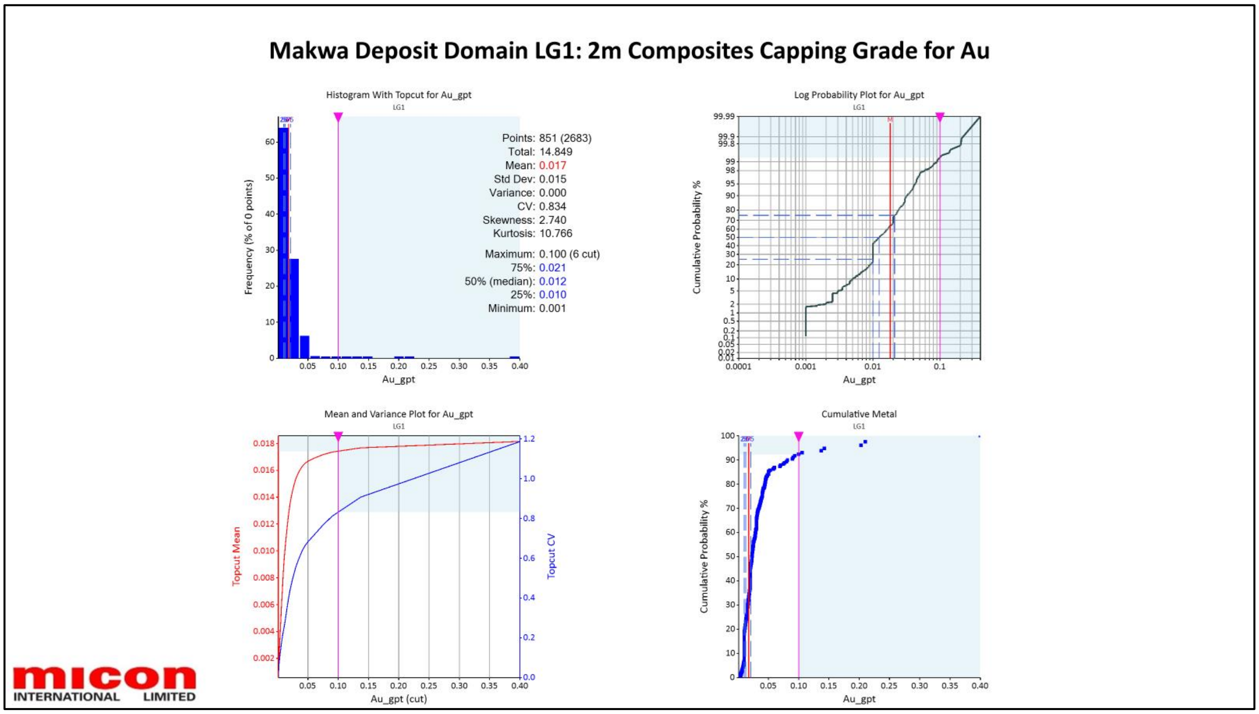


Makwa Deposit Domain LG1: 2m Composites Capping Grade for Pd



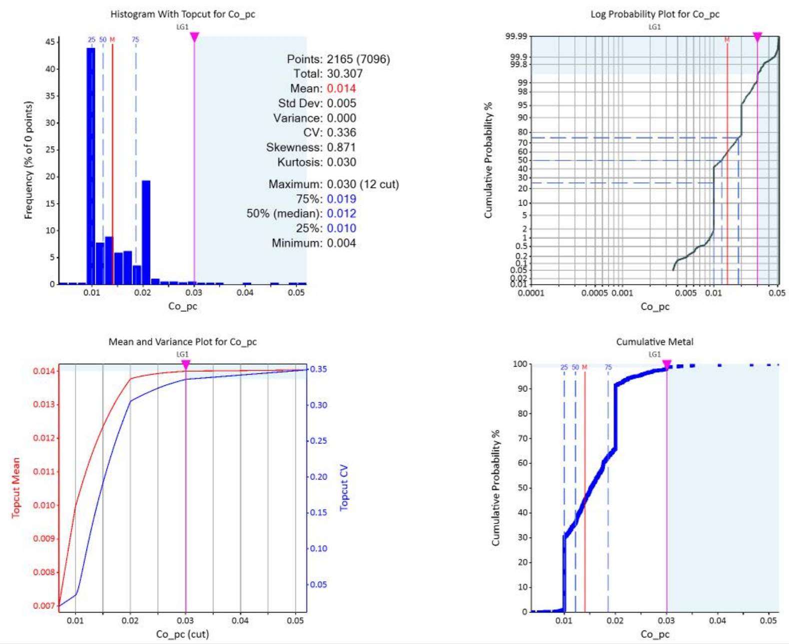


Makwa Deposit Domain LG1: 2m Composites Capping Grade for Pt
Histogram With Topcut for Pt_gpt
Points: 2046 (5694)
Total: 128.762
Mean: 0.063
Std Dev: 0.044
Variance: 0.002
CV: 0.696
Skewness: 1.116
Kurtosis: 1.758
Maximum: 0.300 (3 cut)
75%: 0.089
50% (median): 0.053
25%: 0.030
Minimum: 0.003
Frequency (% of 0 points)
Pt_gpt
Log Probability Plot for Pt_gpt
Cumulative Probability %
Mean and Variance Plot for Pt_gpt
Topcut Mean
Topcut CV
Pt_gpt (cut)
Cumulative Metal

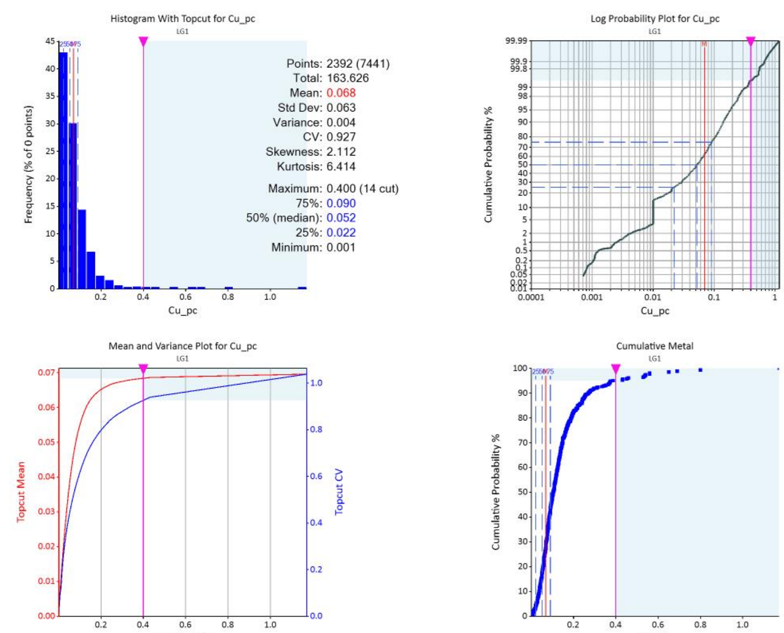


Makwa Deposit Domain LG1: 2m Composites Capping Grade for Au
Histogram With Topcut for Au_gpt
Points: 851 (2683)
Total: 14.849
Mean: 0.017
Std Dev: 0.015
Variance: 0.000
CV: 0.834
Skewness: 2.740
Kurtosis: 10.766
Maximum: 0.100 (6 cut)
75%: 0.021
50% (median): 0.012
25%: 0.010
Minimum: 0.001
Frequency (% of 0 points)
Au_gpt
Log Probability Plot for Au_gpt
Cumulative Probability %
Mean and Variance Plot for Au_gpt
Topcut Mean
Topcut CV
Au_gpt (cut)
Cumulative Metal

Makwa Deposit Domain LG1: 2m Composites Capping Grade for Co



Makwa Deposit Domain LG1: 2m Composites Capping Grade for Cu

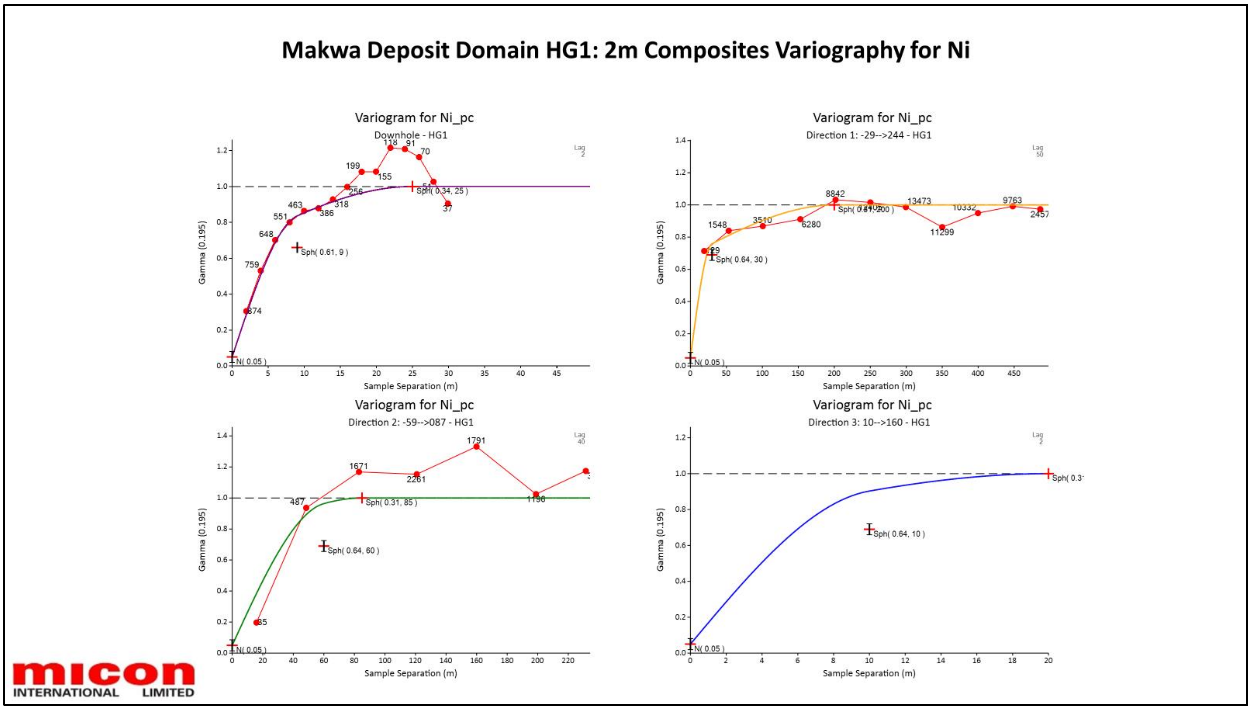


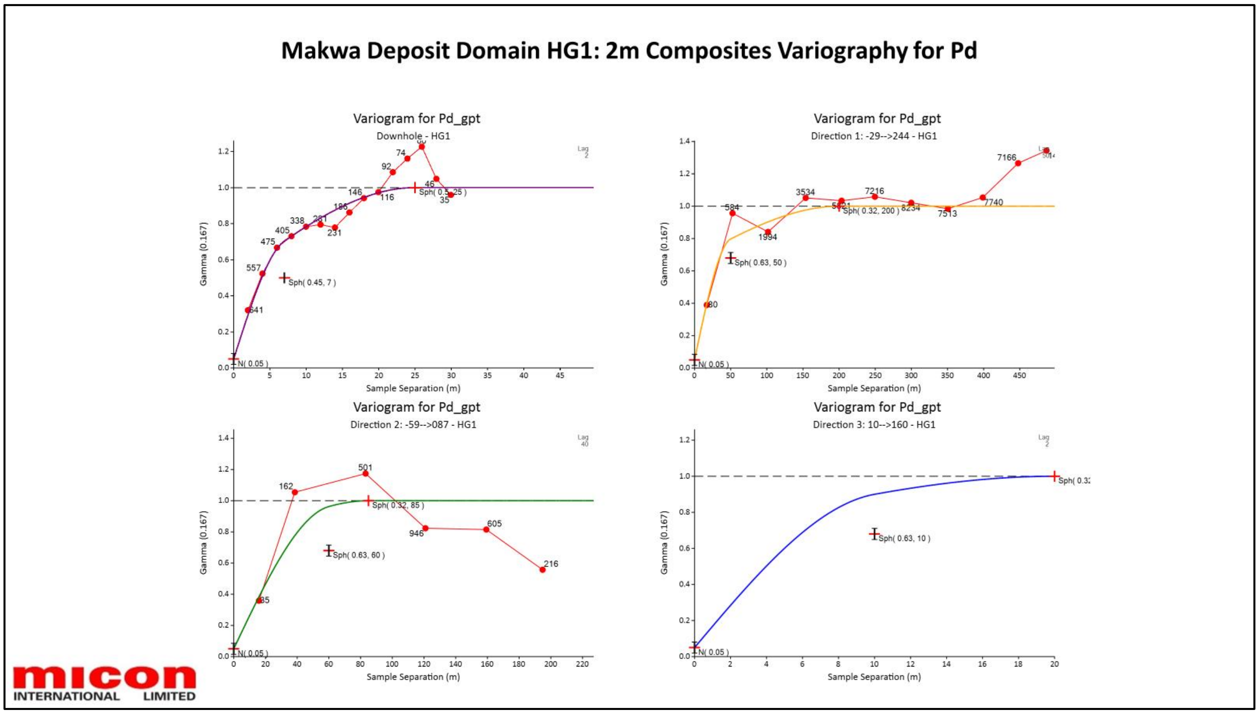
APPENDIX 2

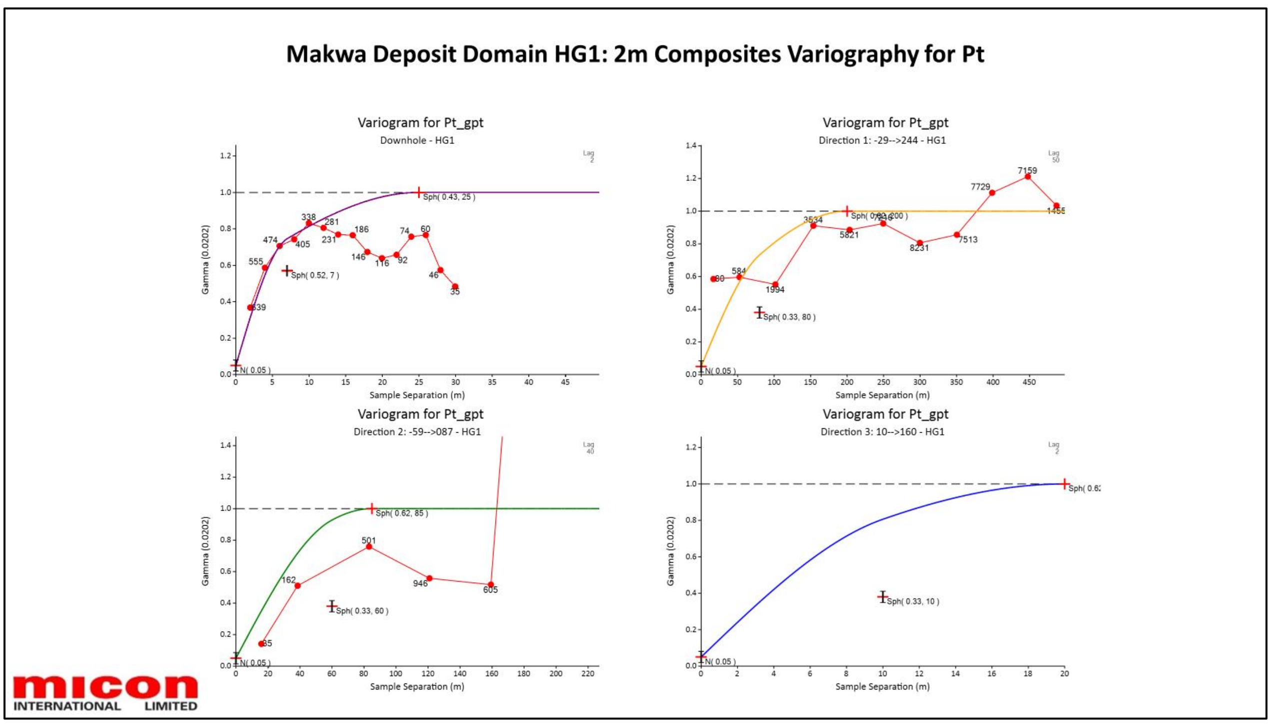
MAKWA DEPOSIT GEOSTATISTICS: VARIOGRAPHY & KNA

2 (a) MAKWA DEPOSIT VARIOGRAPHY/ SPATIAL ANALYSIS

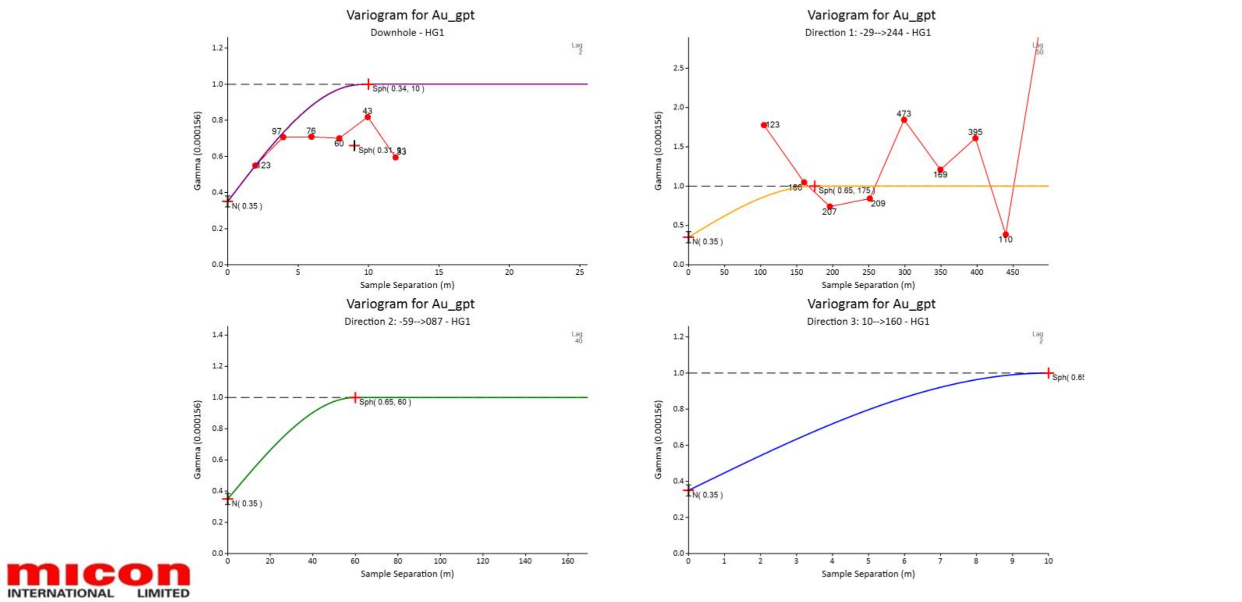
HG1 DOMAIN



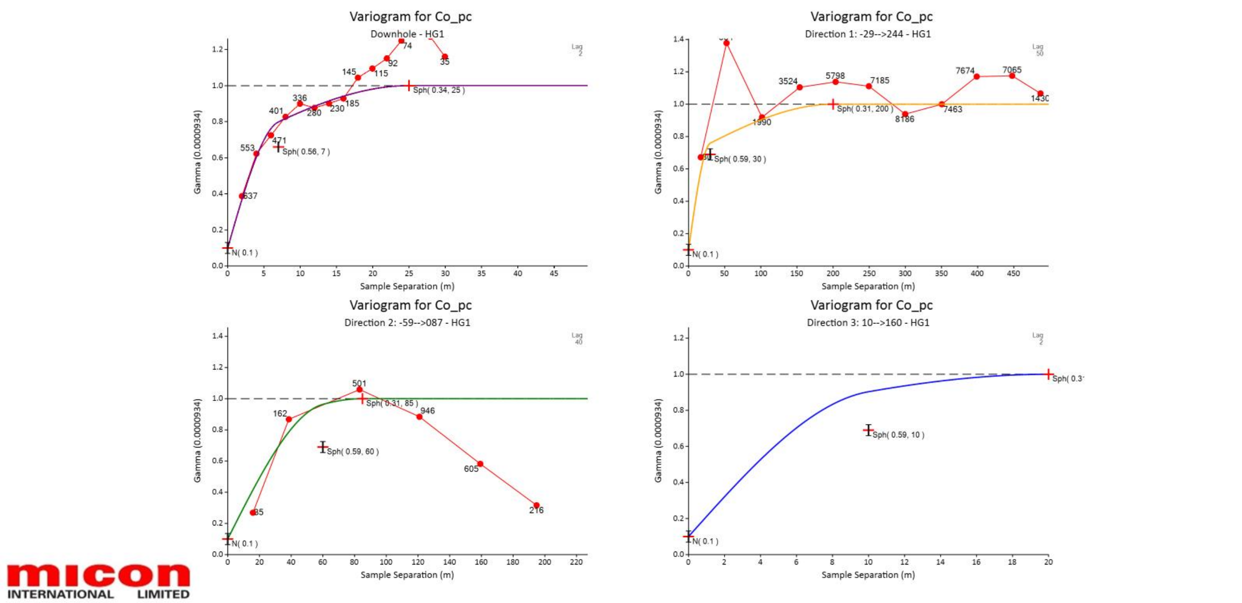

Makwa Deposit Domain HG1: 2m Composites Variography for Pd
Variogram for Pd_gpt
Downhole - HG1
Variogram for Pd_gpt
Direction 1: -29-->244 - HG1
Variogram for Pd_gpt
Direction 2: -59-->087 - HG1
Variogram for Pd_gpt
Direction 3: 10-->160 - HG1
Gamma (0.167)
Sample Separation (m)


Makwa Deposit Domain HG1: 2m Composites Variography for Pt
Variogram for Pt_gpt
Downhole - HG1
Variogram for Pt_gpt
Direction 1: -29-->244 - HG1
Variogram for Pt_gpt
Direction 2: -59-->087 - HG1
Variogram for Pt_gpt
Direction 3: 10-->160 - HG1
Gamma (0.0202)
Sample Separation (m)

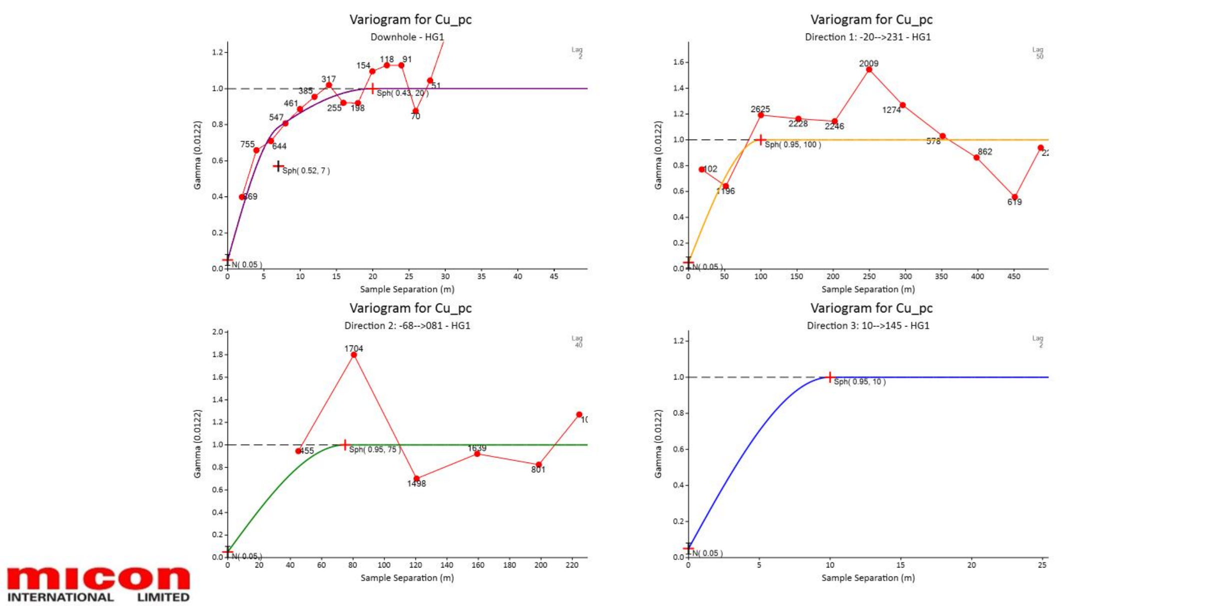
Makwa Deposit Domain HG1: 2m Composites Variography for Au



Makwa Deposit Domain HG1: 2m Composites Variography for Co

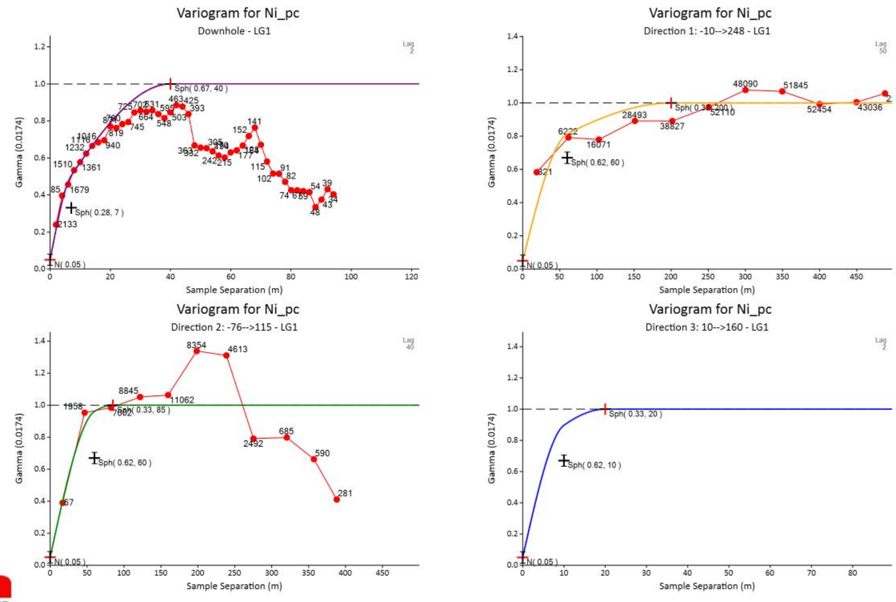


Makwa Deposit Domain HG1: 2m Composites Variography for Cu

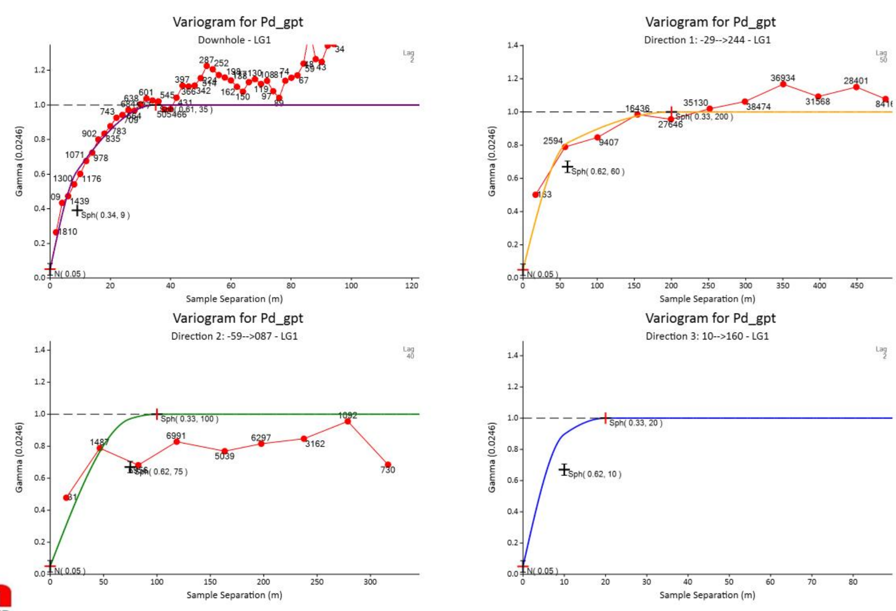


<u>LG1 DOMAIN</u>

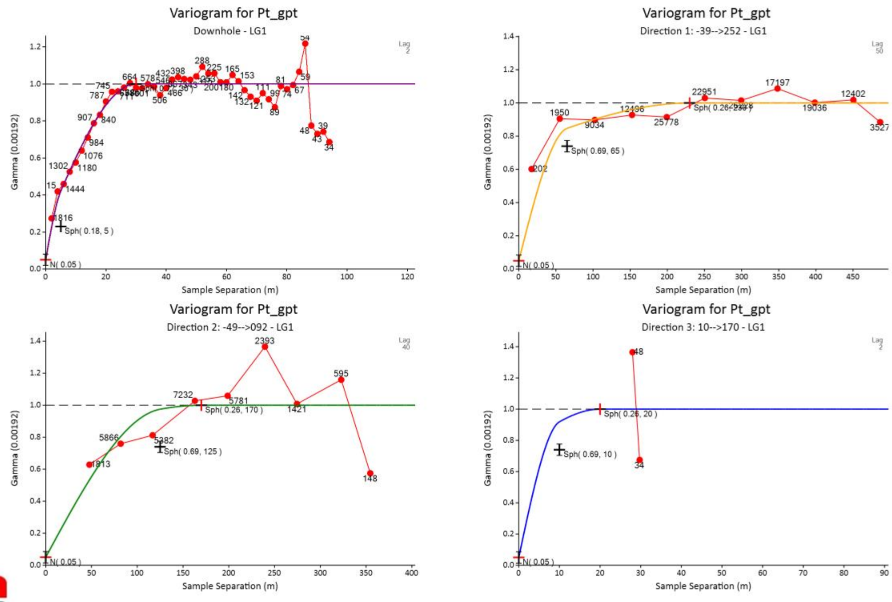
Makwa Deposit Domain LG1: 2m Composites Variography for Ni



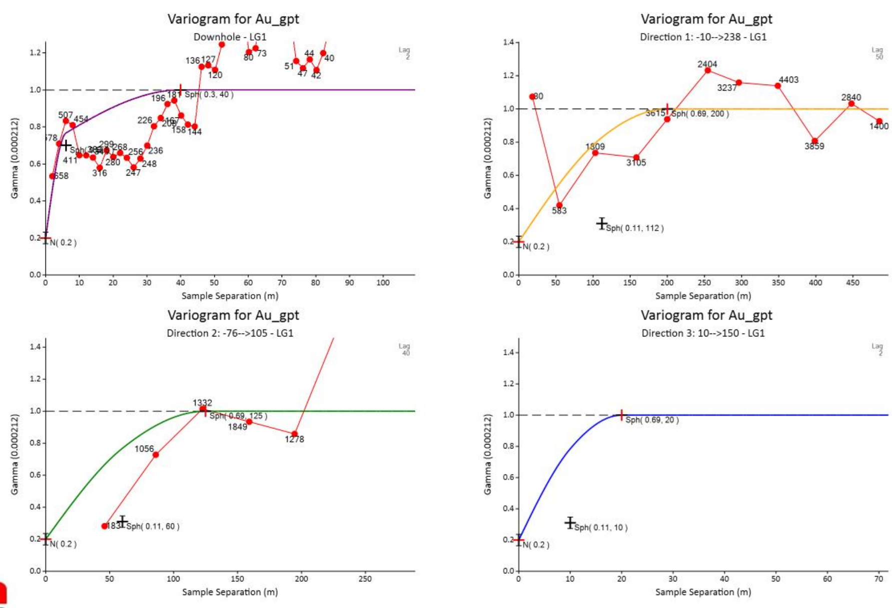
Makwa Deposit Domain LG1: 2m Composites Variography for Pd

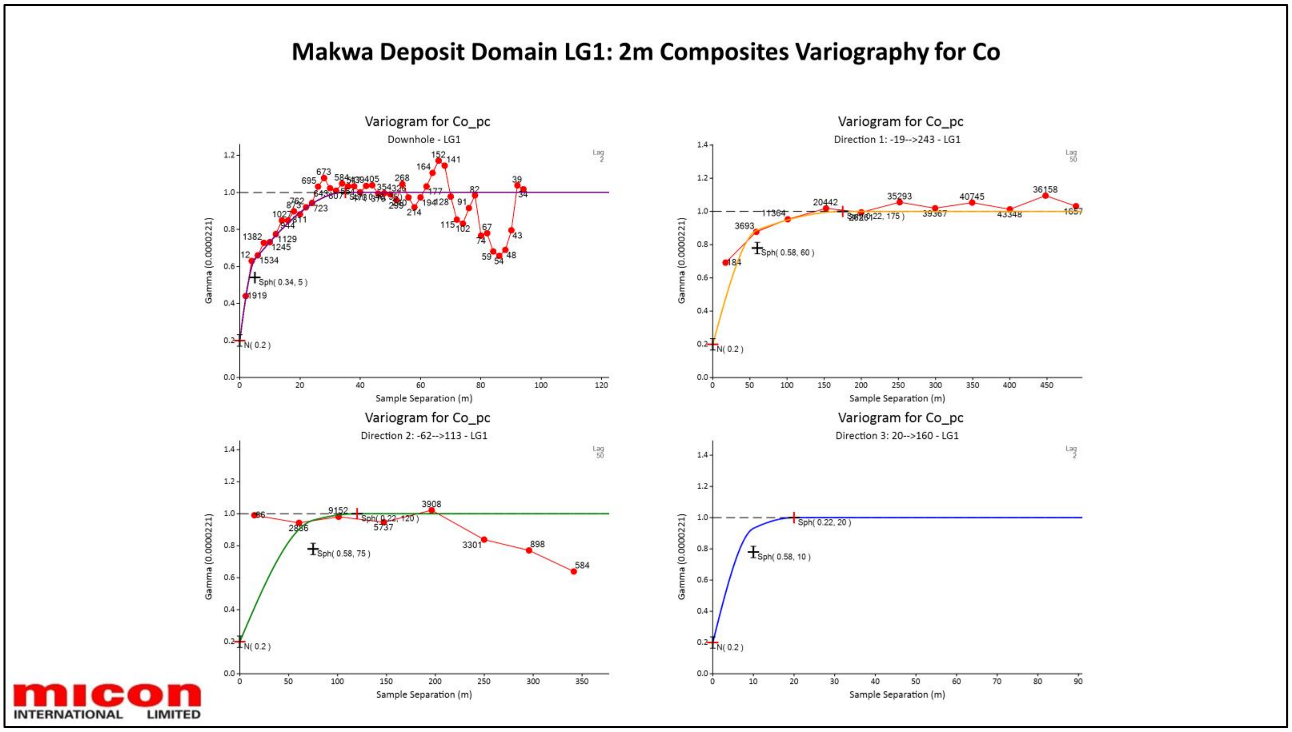


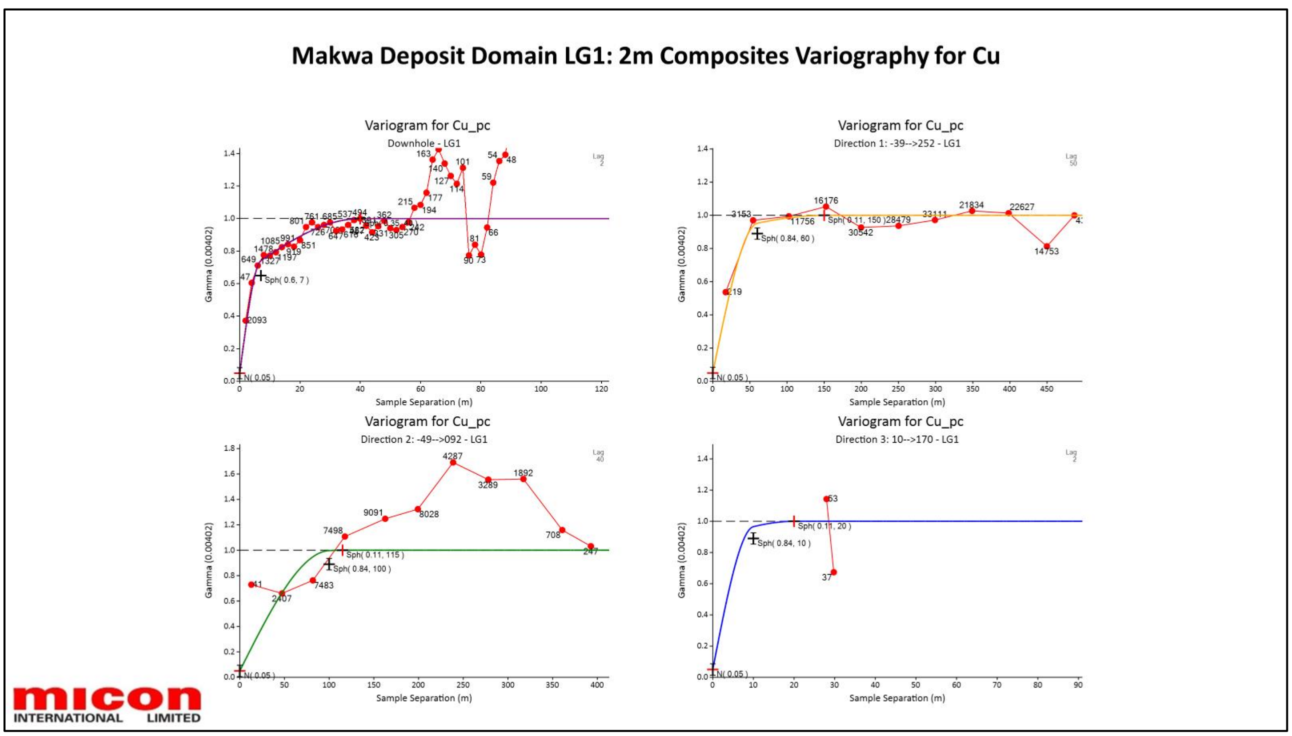
Makwa Deposit Domain LG1: 2m Composites Variography for Pt



Makwa Deposit Domain LG1: 2m Composites Variography for Au



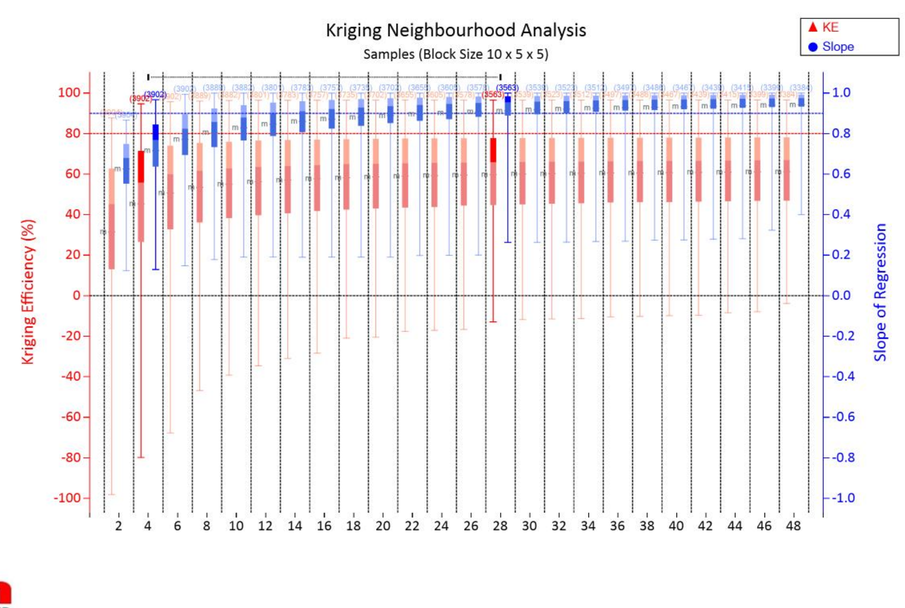

Makwa Deposit Domain LG1: 2m Composites Variography for Co
Variogram for Co_pc
Downhole - LG1
Variogram for Co_pc
Direction 1: -19-->243 - LG1
Variogram for Co_pc
Direction 2: -62-->113 - LG1
Variogram for Co_pc
Direction 3: 20-->160 - LG1
Gamma (0.0000221)
Sample Separation (m)
Sph(0.34, 5)
N(0.2)
Sph(0.58, 60)
Sph(0.58, 75)
Sph(0.22, 120)
Sph(0.58, 10)
Sph(0.22, 20)
micon INTERNATIONAL LIMITED


Makwa Deposit Domain LG1: 2m Composites Variography for Cu
Variogram for Cu_pc
Downhole - LG1
Variogram for Cu_pc
Direction 1: -39-->252 - LG1
Variogram for Cu_pc
Direction 2: -49-->092 - LG1
Variogram for Cu_pc
Direction 3: 10-->170 - LG1
Gamma (0.00402)
Sample Separation (m)
Sph(0.6, 7)
N(0.05)
Sph(0.84, 60)
Sph(0.11, 150)
Sph(0.84, 100)
Sph(0.11, 115)
Sph(0.84, 10)
Sph(0.11, 20)
micon INTERNATIONAL LIMITED

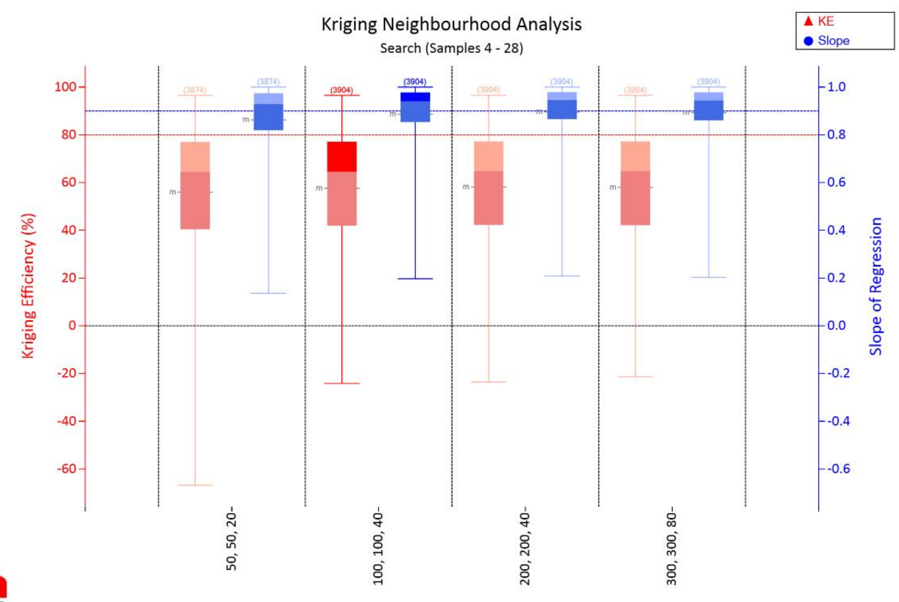
2.(b) MAKWA DEPOSIT KNA/QKNA

Makwa Deposit Domain HG1: QKNA on Ni – Block Size

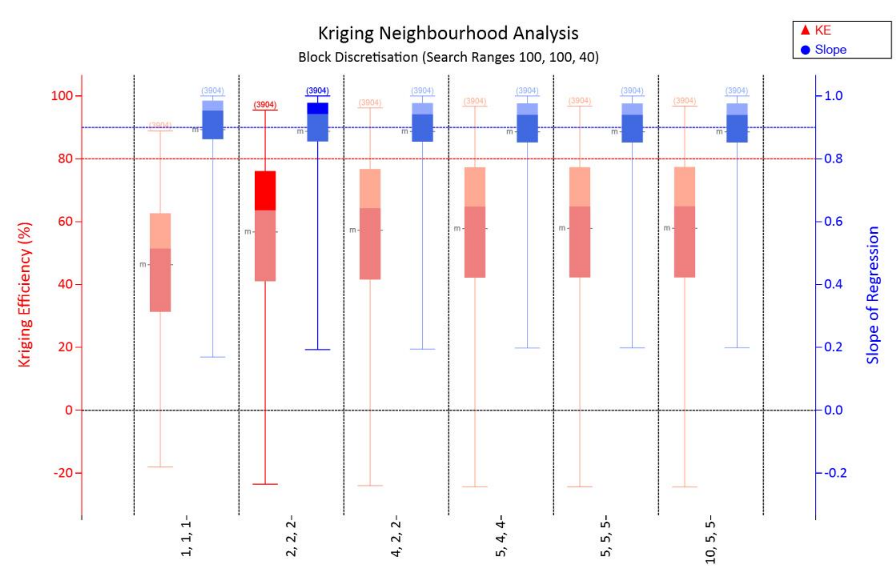
Makwa Deposit Domain HG1: QKNA on Ni – Number of Samples (Composites)



Makwa Deposit Domain HG1: QKNA on Ni – Search Ellipse Ranges



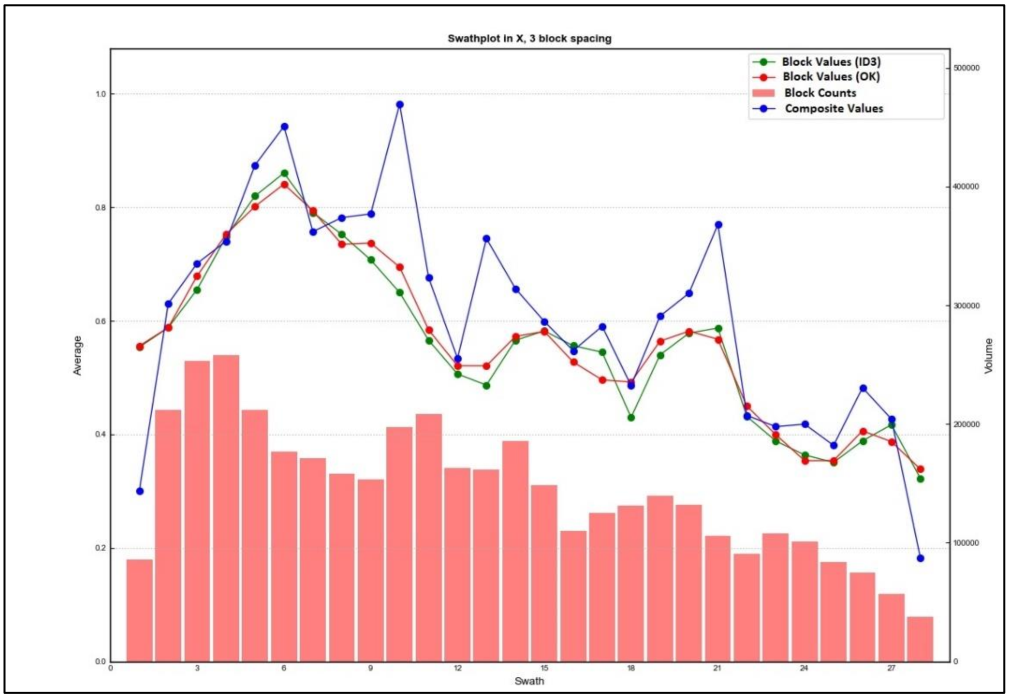
Makwa Deposit Domain HG1: QKNA on Ni – Block Discretisation



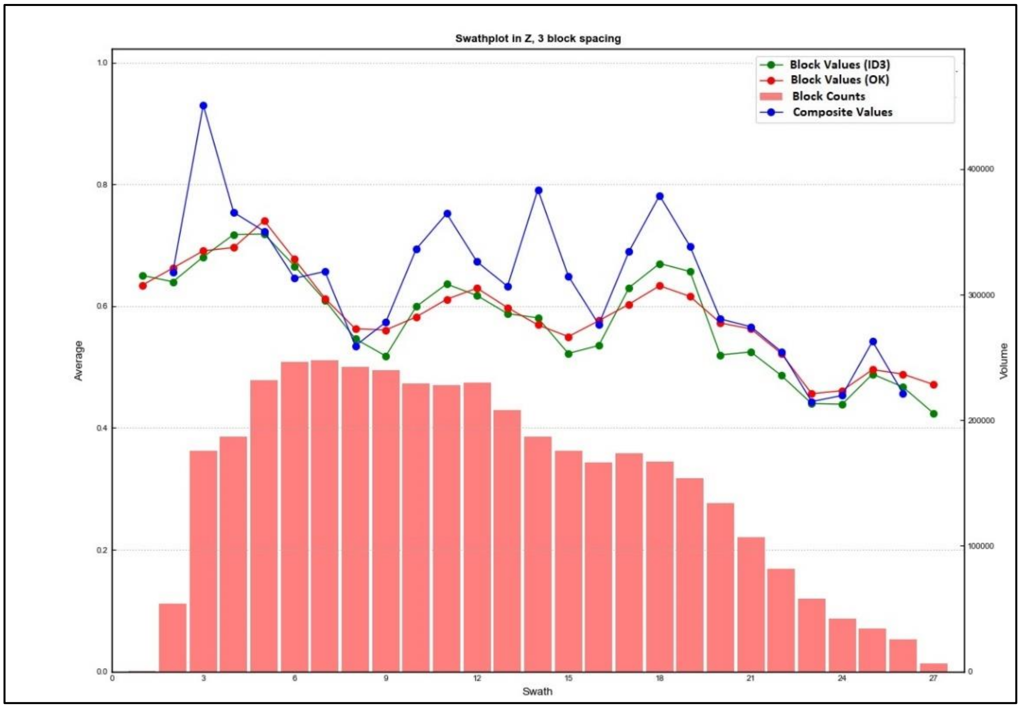
APPENDIX 3

MAKWA DEPOSIT SWATH PLOTS FOR PD AND PT

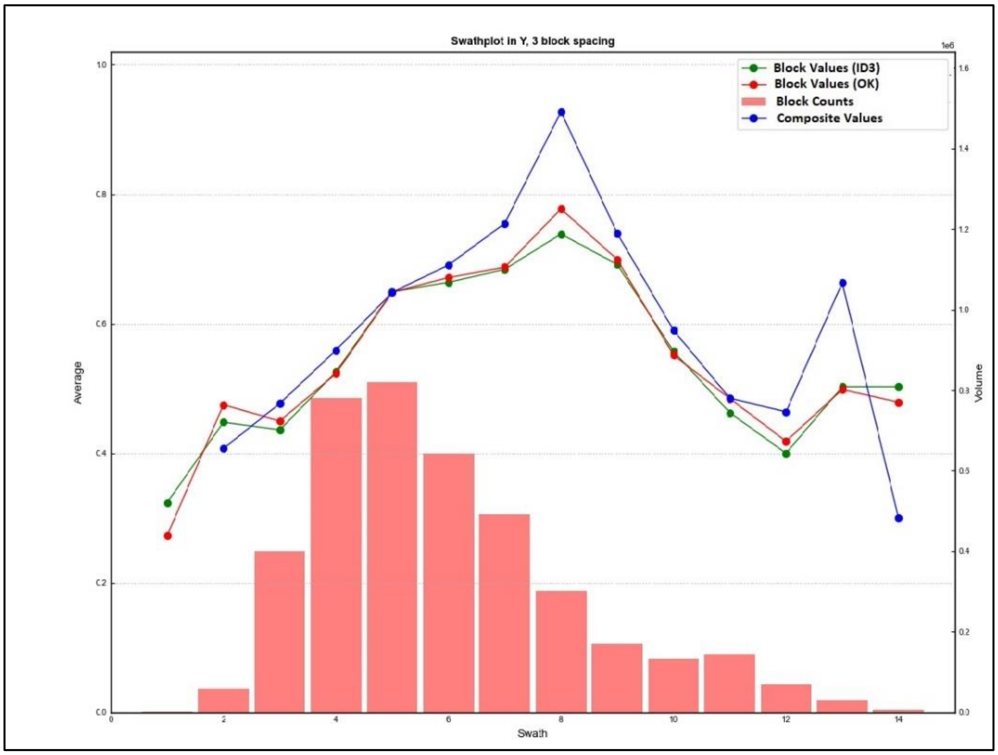
HG 1 Swath Plot of Pd Along Strike



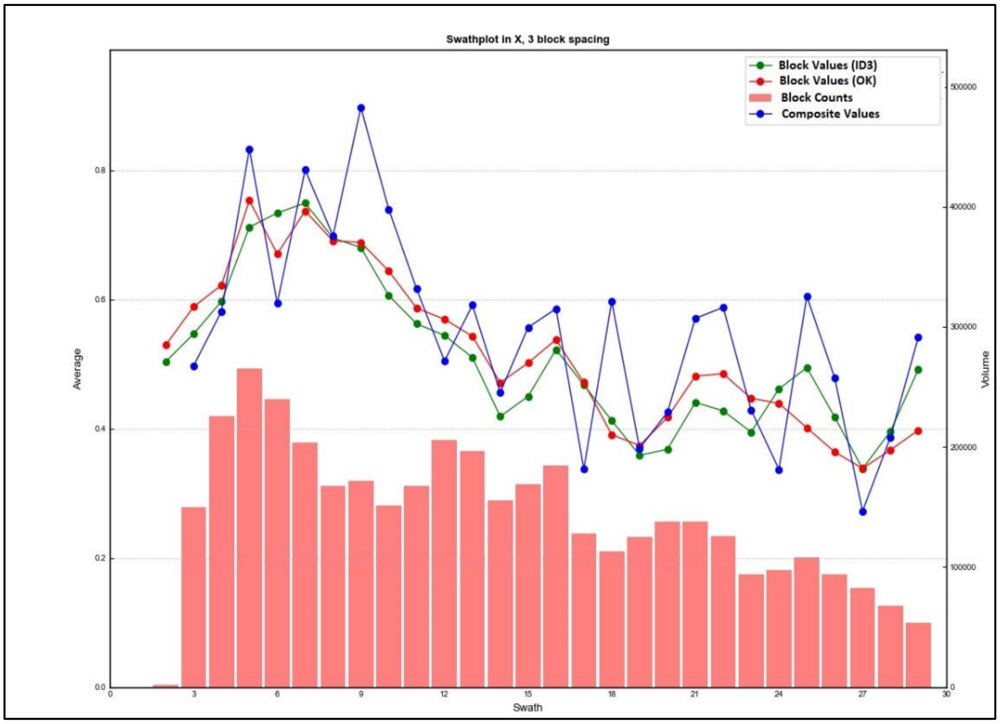
HG 1 Swath Plot of Pd Down Dip



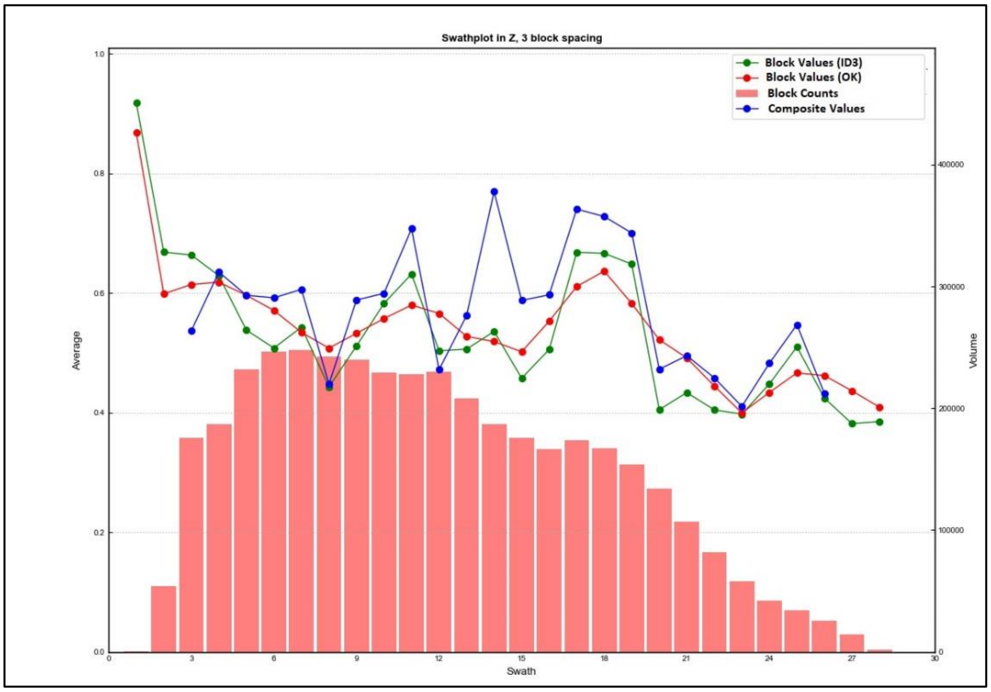
HG 1 Swath Plot of Pd Across Width



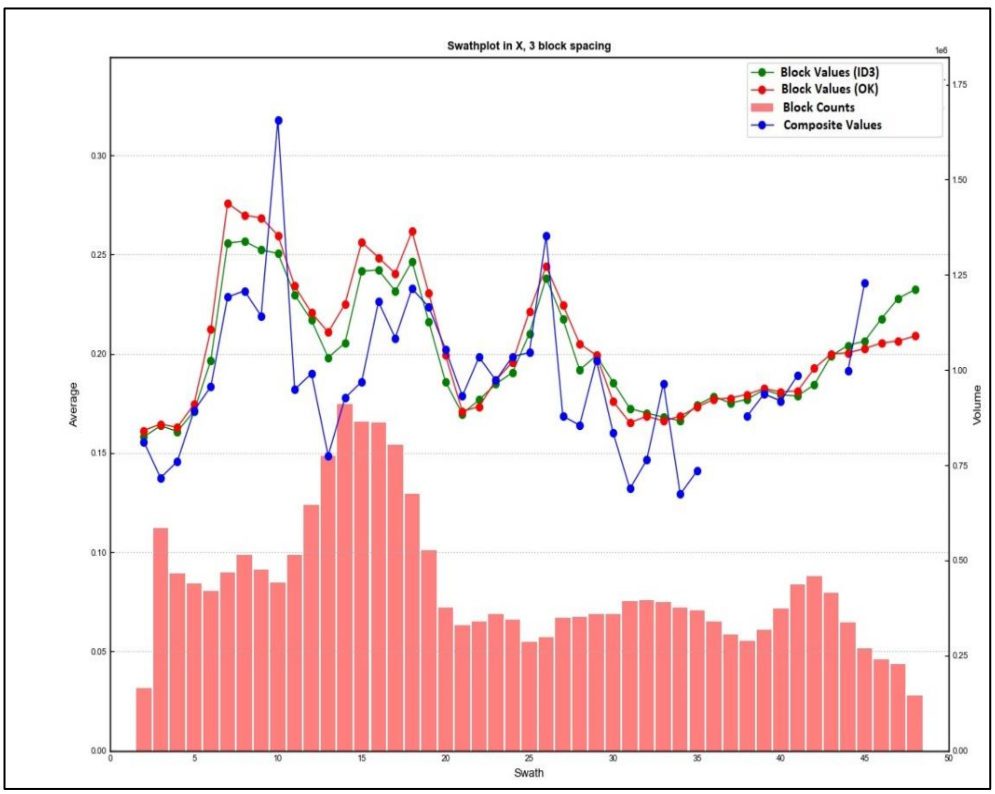
HG1 Swath Plot of Pt Along Strike



HG1 Swath Plot of Pt Down Dip

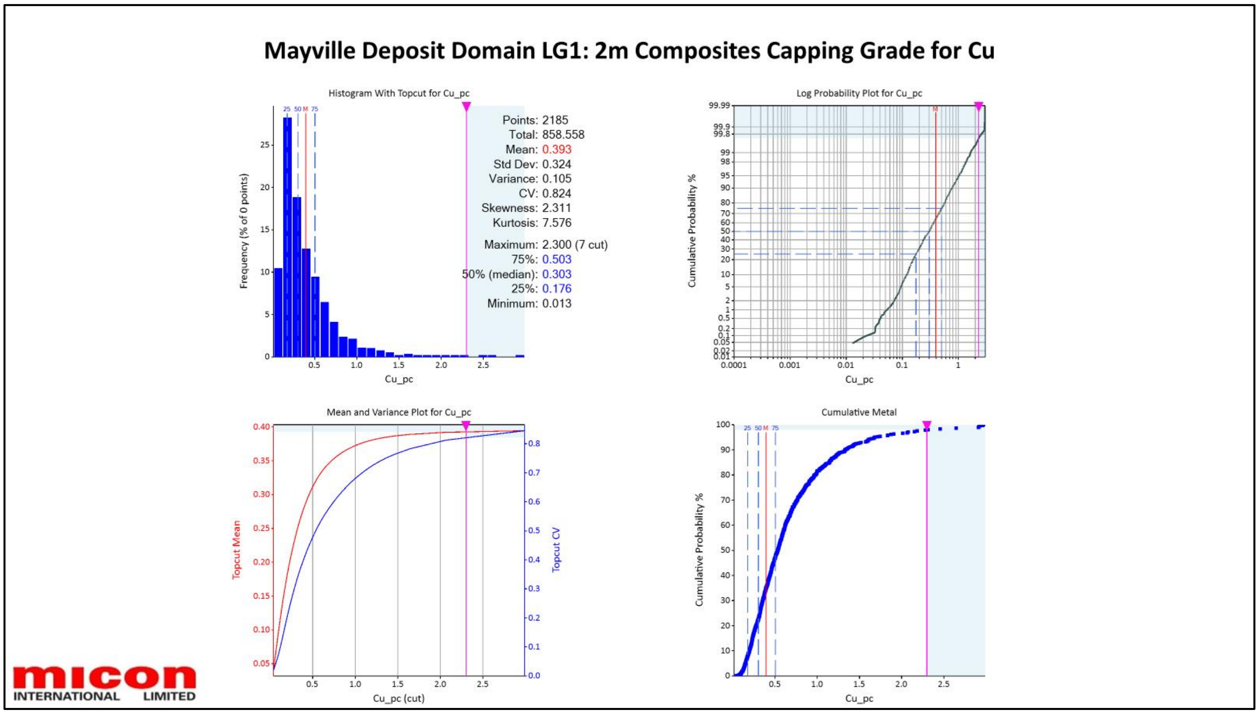


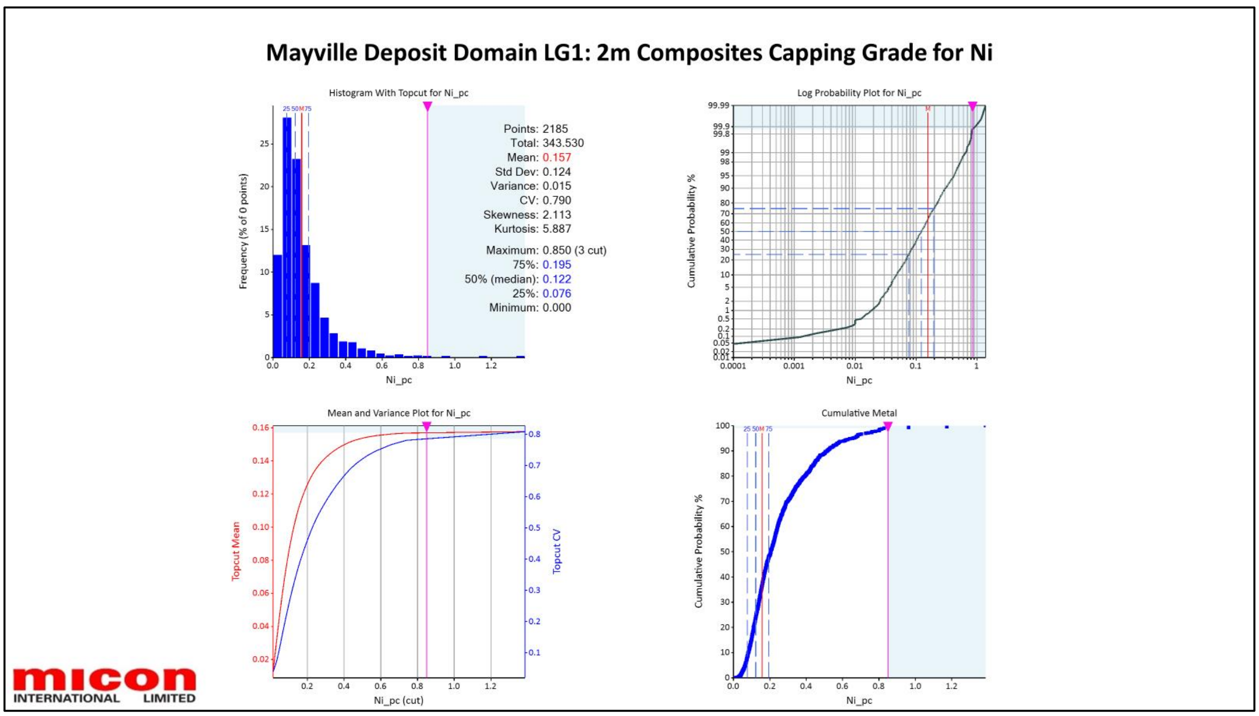
HG1 Swath Plot of Pt Across Width



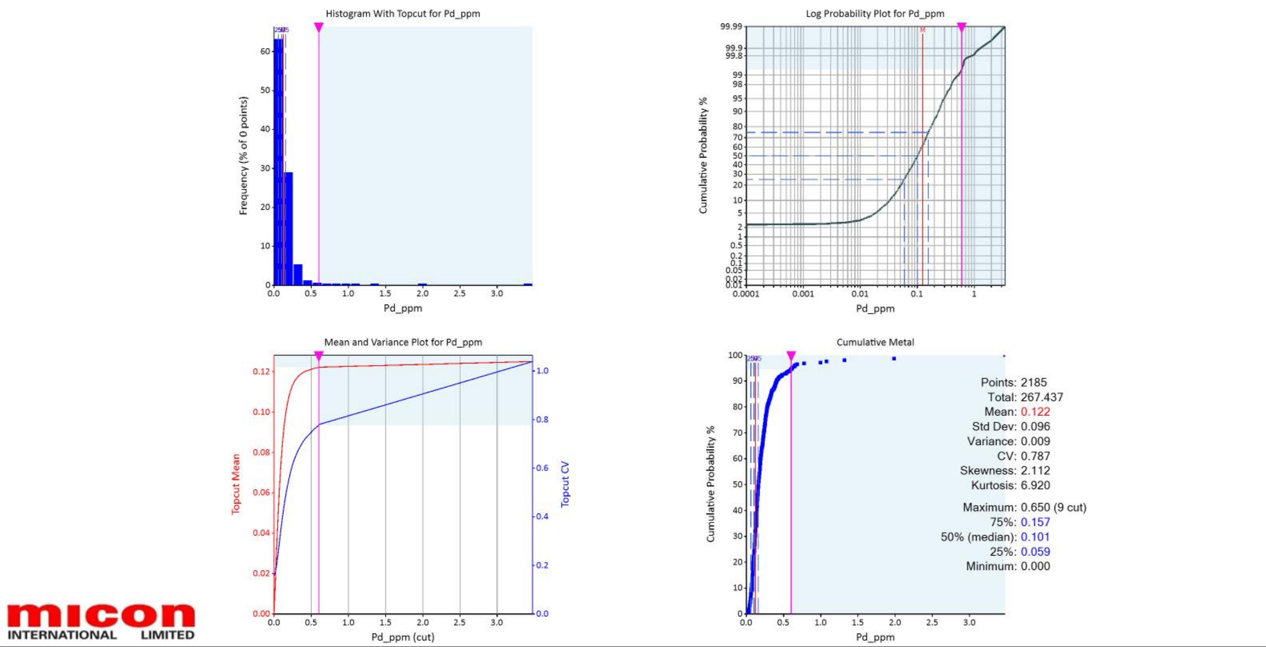
APPENDIX 4

MAYVILLE GRADE CAPPING GRAPHICS/LOG-PROBABILITY PLOTS

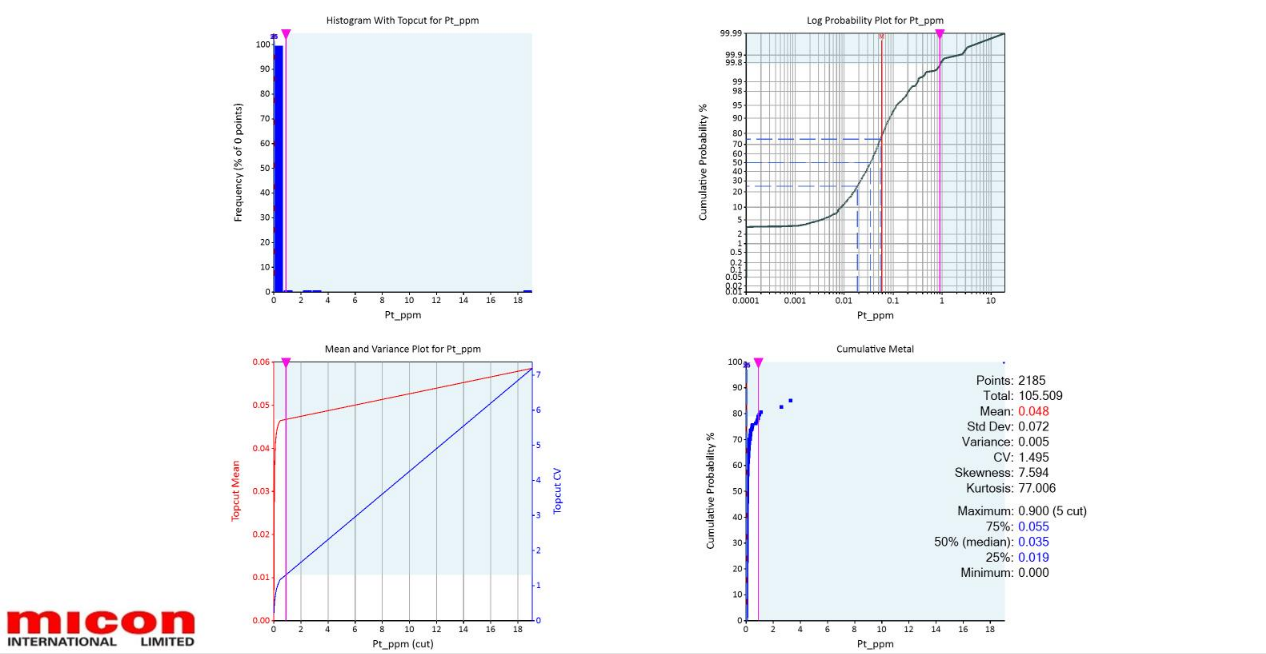

Mayville Deposit Domain LG1: 2m Composites Capping Grade for Cu
Histogram With Topcut for Cu_pc
Points: 2185
Total: 858.558
Mean: 0.393
Std Dev: 0.324
Variance: 0.105
CV: 0.824
Skewness: 2.311
Kurtosis: 7.576
Maximum: 2.300 (7 cut)
75%: 0.503
50% (median): 0.303
25%: 0.176
Minimum: 0.013
Log Probability Plot for Cu_pc
Mean and Variance Plot for Cu_pc
Cumulative Metal


Mayville Deposit Domain LG1: 2m Composites Capping Grade for Ni
Histogram With Topcut for Ni_pc
Points: 2185
Total: 343.530
Mean: 0.157
Std Dev: 0.124
Variance: 0.015
CV: 0.790
Skewness: 2.113
Kurtosis: 5.887
Maximum: 0.850 (3 cut)
75%: 0.195
50% (median): 0.122
25%: 0.076
Minimum: 0.000
Log Probability Plot for Ni_pc
Mean and Variance Plot for Ni_pc
Cumulative Metal

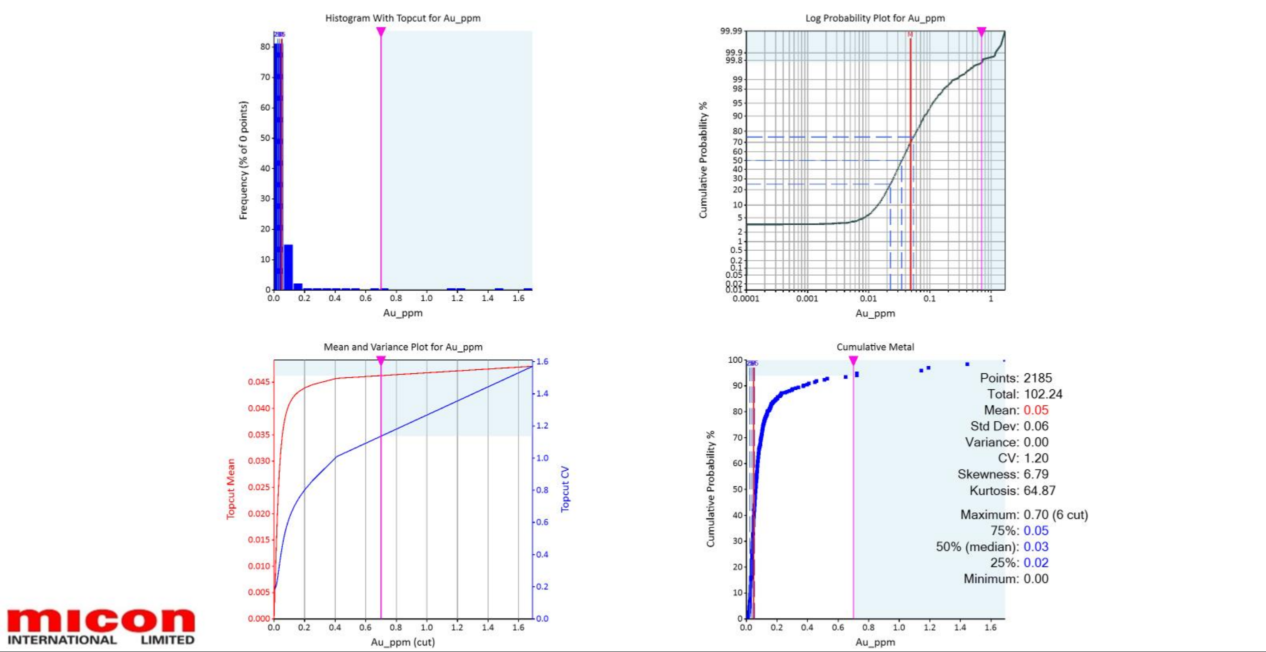
Mayville Deposit Domain LG1: 2m Composites Capping Grade for Pd



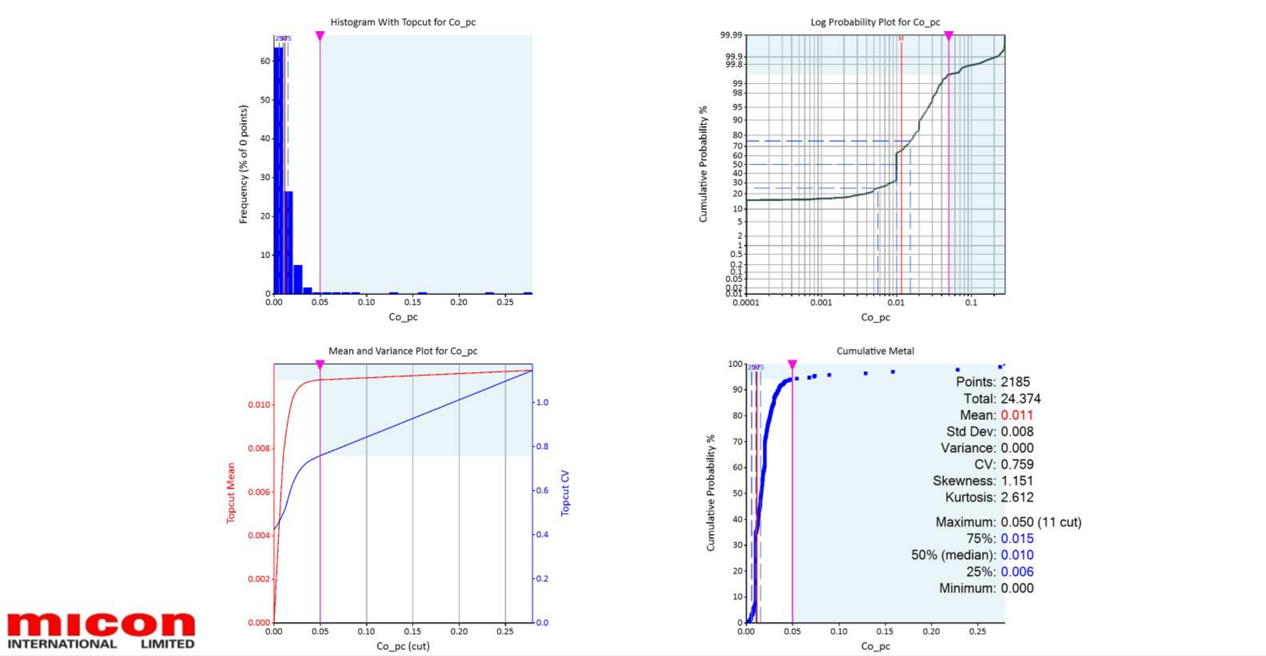
Mayville Deposit Domain LG1: 2m Composites Capping Grade for Pt



Mayville Deposit Domain LG1: 2m Composites Capping Grade for Au



Mayville Deposit Domain LG1: 2m Composites Capping Grade for Co

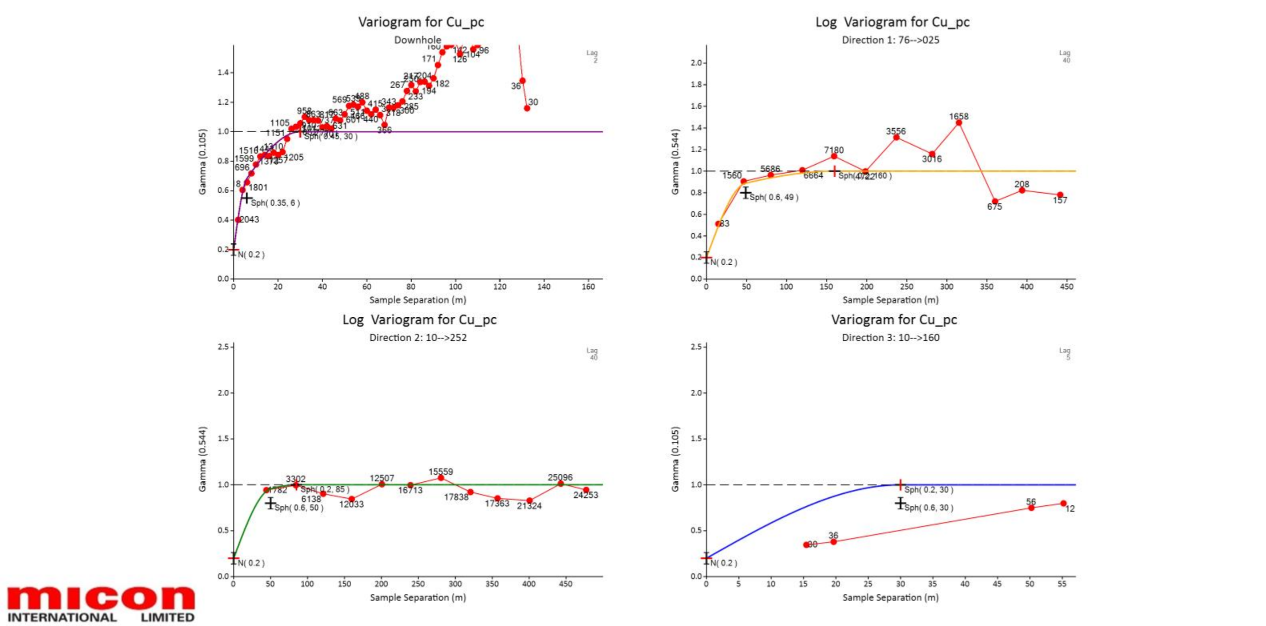


APPENDIX 5

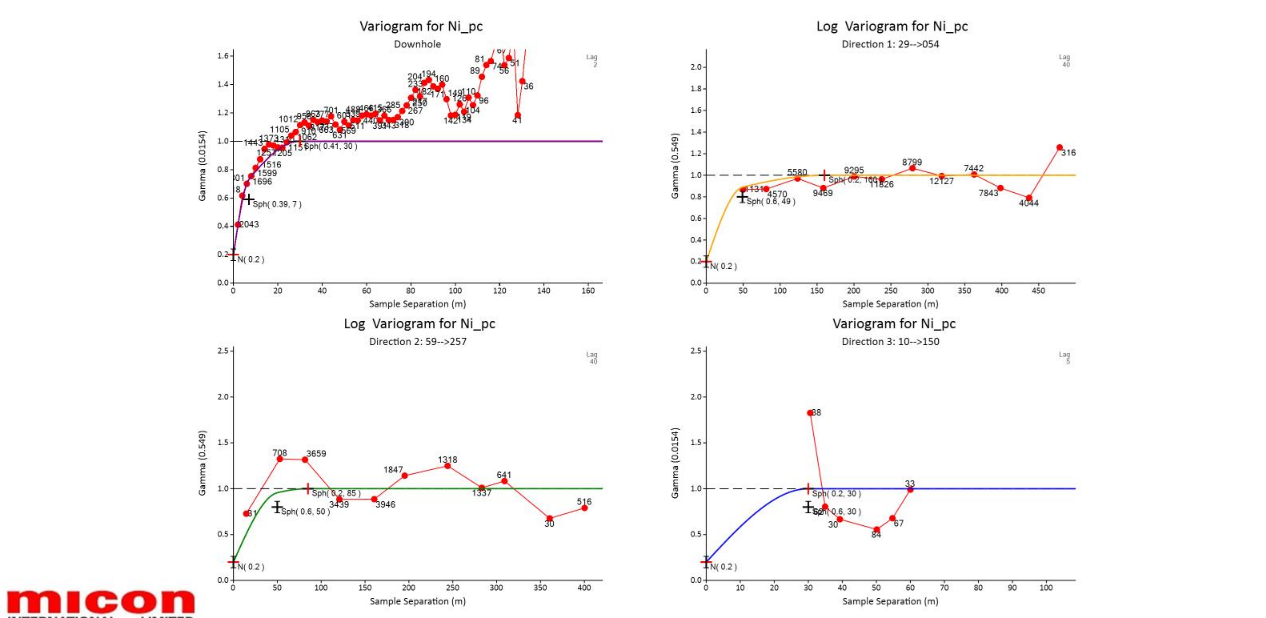
MAYVILLE GEOSTATISTICS: VARIOGRAPHY/SPATIAL ANALYSIS & KNA/QKNA

5 (a) VARIOGRAPHY/SPATIAL ANALYSIS

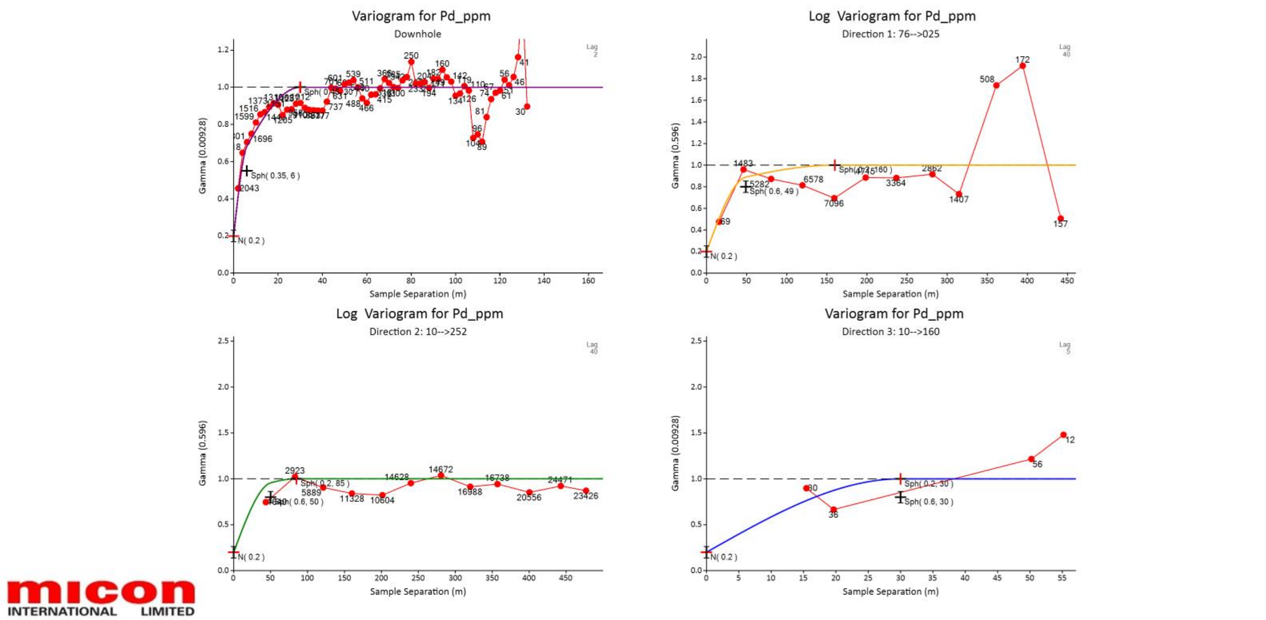
Mayville Deposit: 2m Composites Variography for Cu



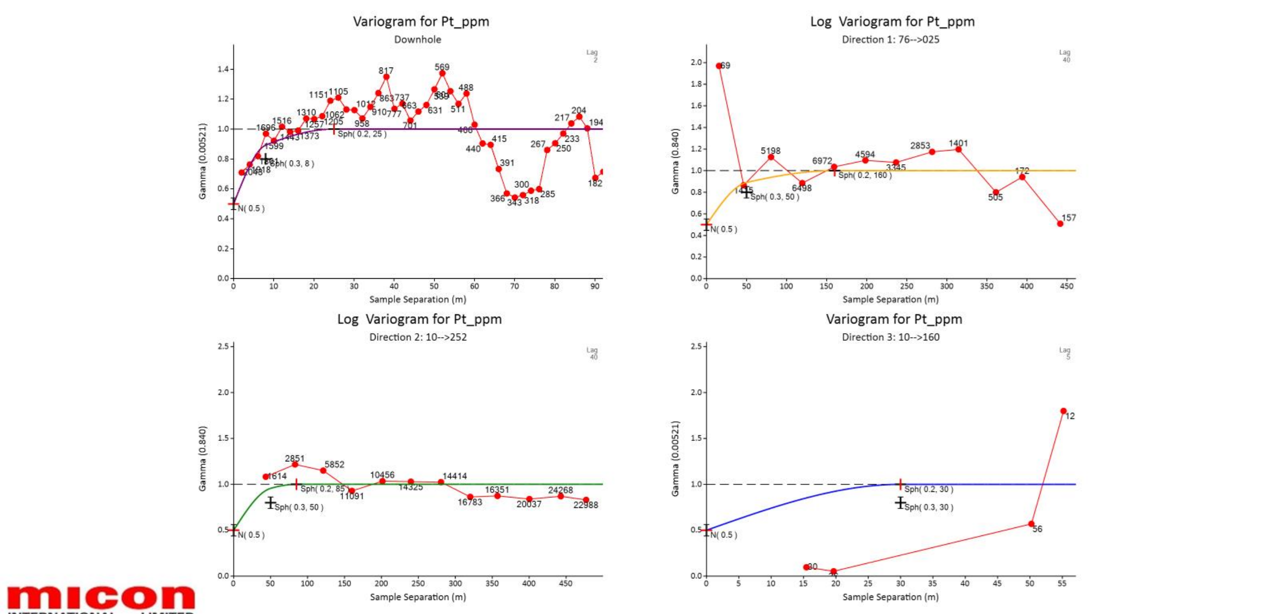
Mayville Deposit 2m Composites Variography for Ni



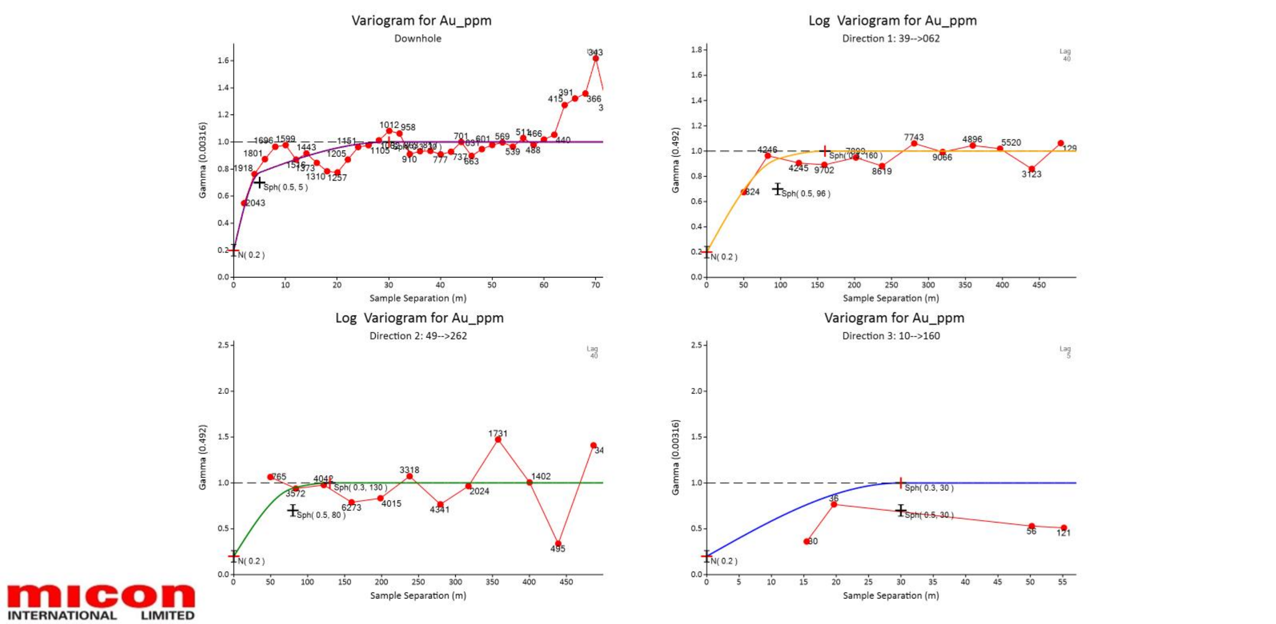
Mayville Deposit 2m Composites Variography for Pd



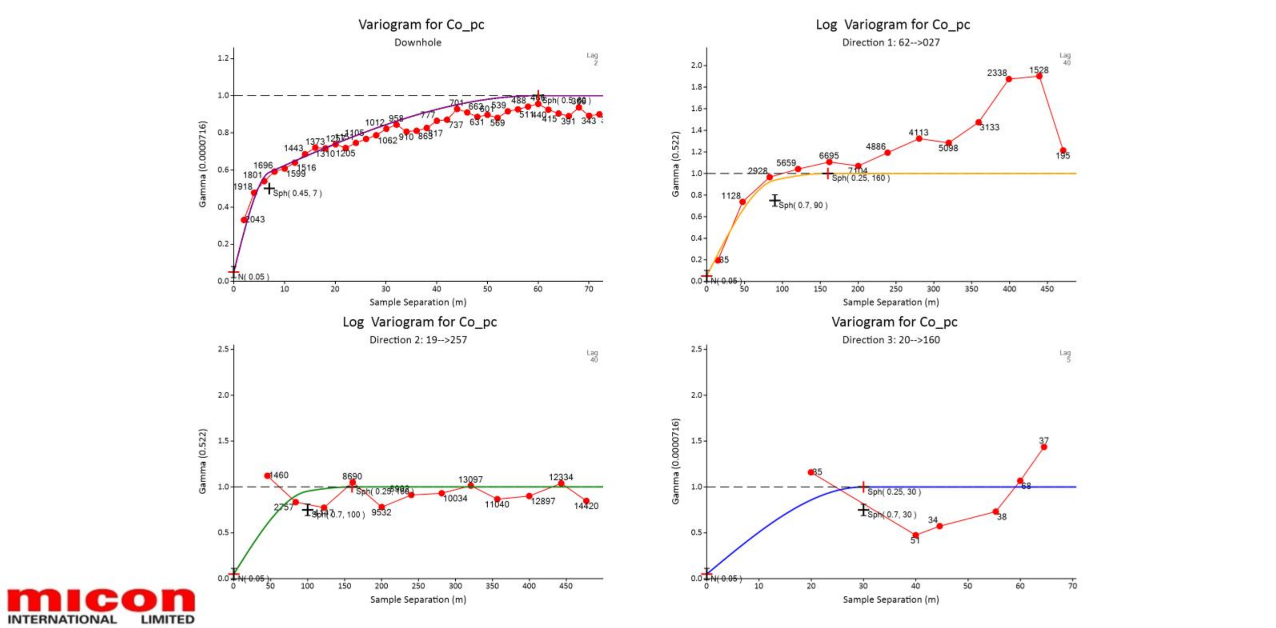
Mayville Deposit Domain LG1: 2m Composites Variography for Pt



Mayville Deposit 2m Composites Variography for Au



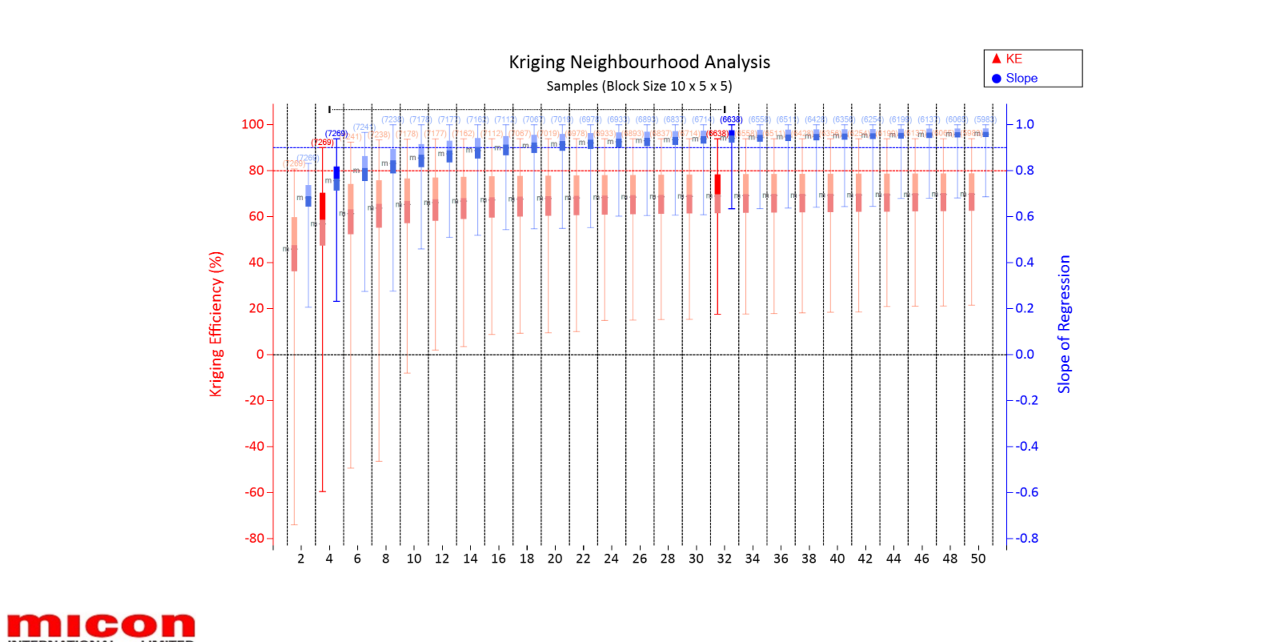
Mayville Deposit 2m Composites Variography for Co

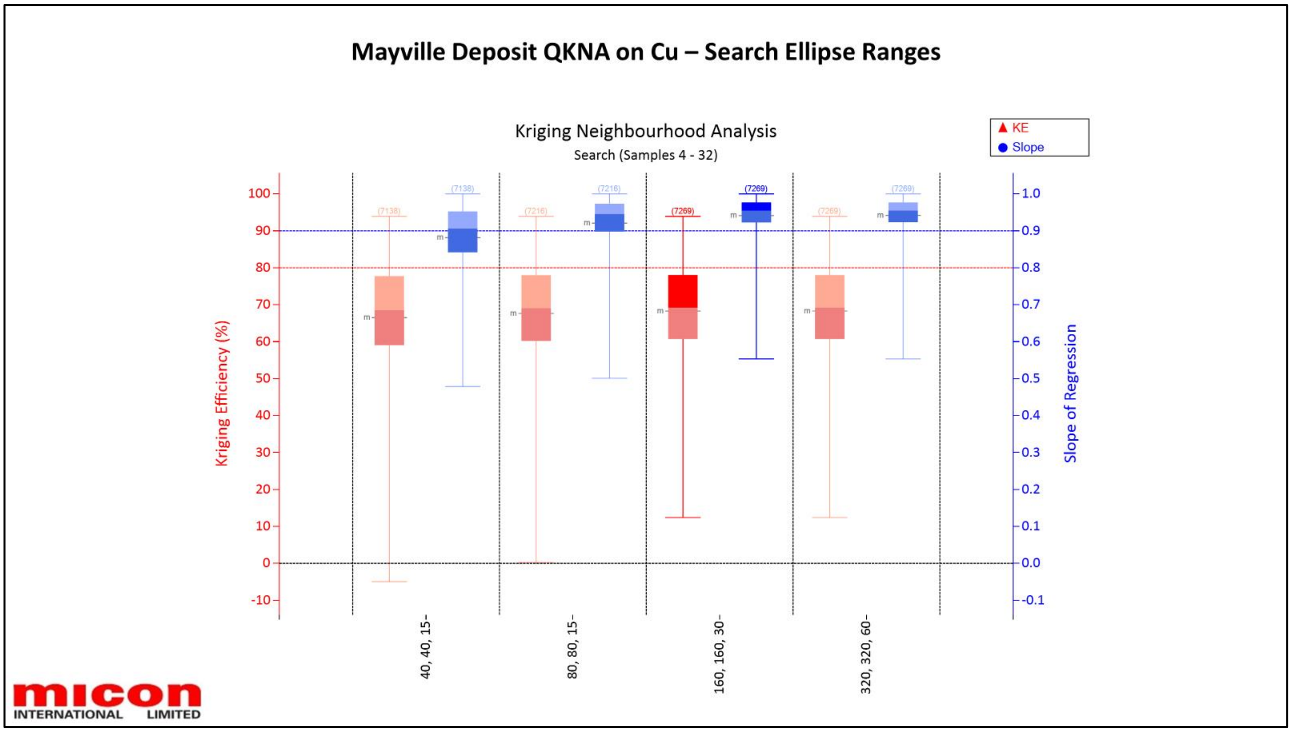


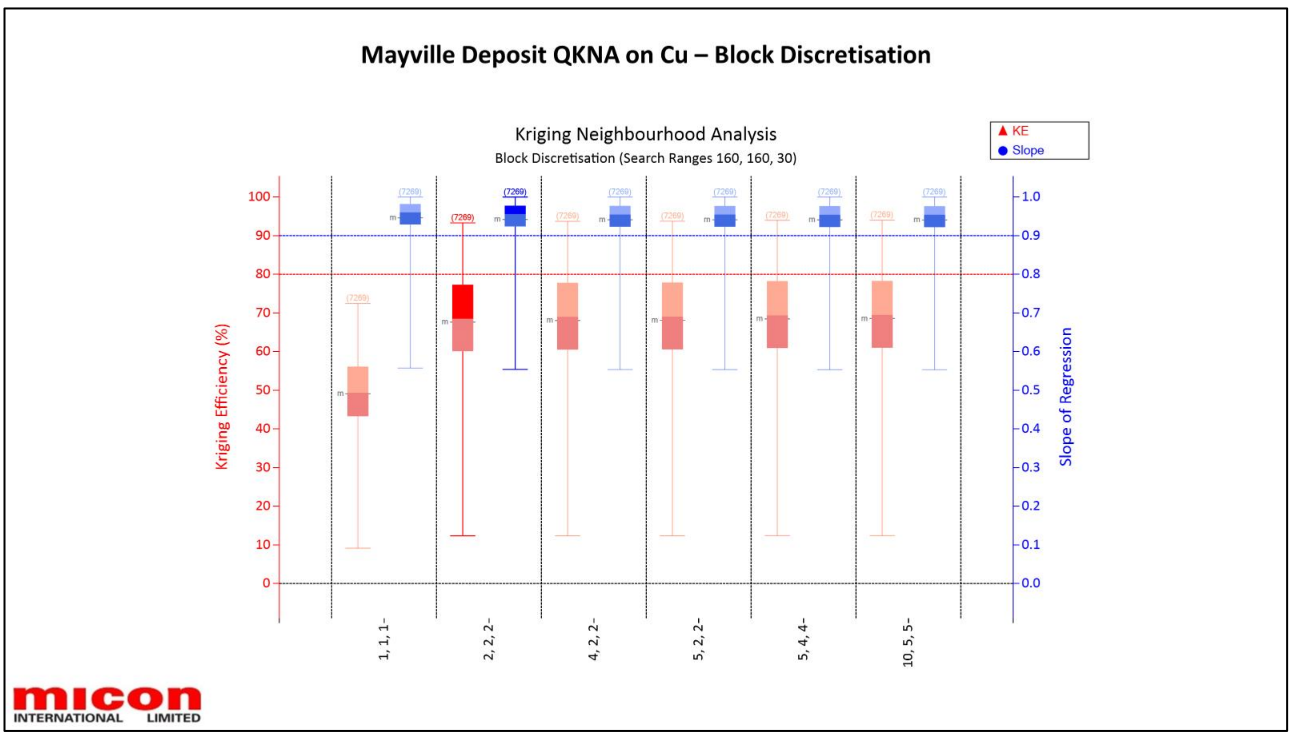
5.(b) KNA/QKNA

Mayville Deposit : QKNA on Cu – Block Size

Mayville Deposit QKNA on Cu – Number of Samples (Composites)



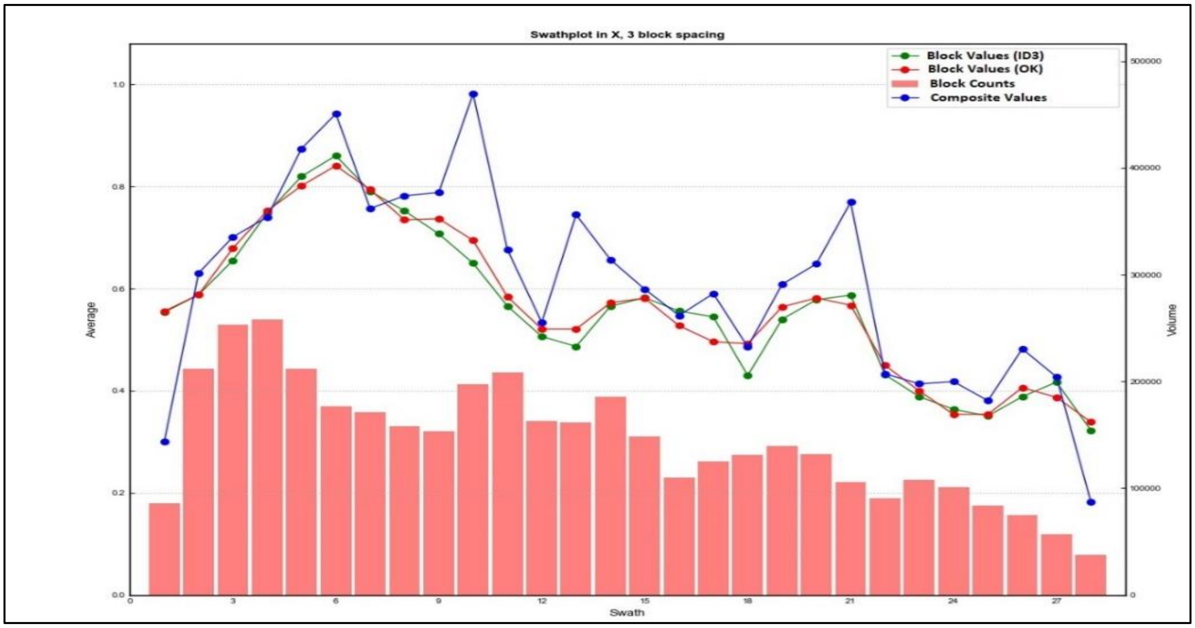

Mayville Deposit QKNA on Cu – Search Ellipse Ranges
Kriging Neighbourhood Analysis
Search (Samples 4 - 32)
KE
Slope
Kriging Efficiency (%)
Slope of Regression
40, 40, 15
80, 80, 15
160, 160, 30
320, 320, 60
micon INTERNATIONAL LIMITED


Mayville Deposit QKNA on Cu – Block Discretisation
Kriging Neighbourhood Analysis
Block Discretisation (Search Ranges 160, 160, 30)
KE
Slope
Kriging Efficiency (%)
Slope of Regression
1, 1, 1
2, 2, 2
4, 2, 2
5, 2, 2
5, 4, 4
10, 5, 5
micon INTERNATIONAL LIMITED

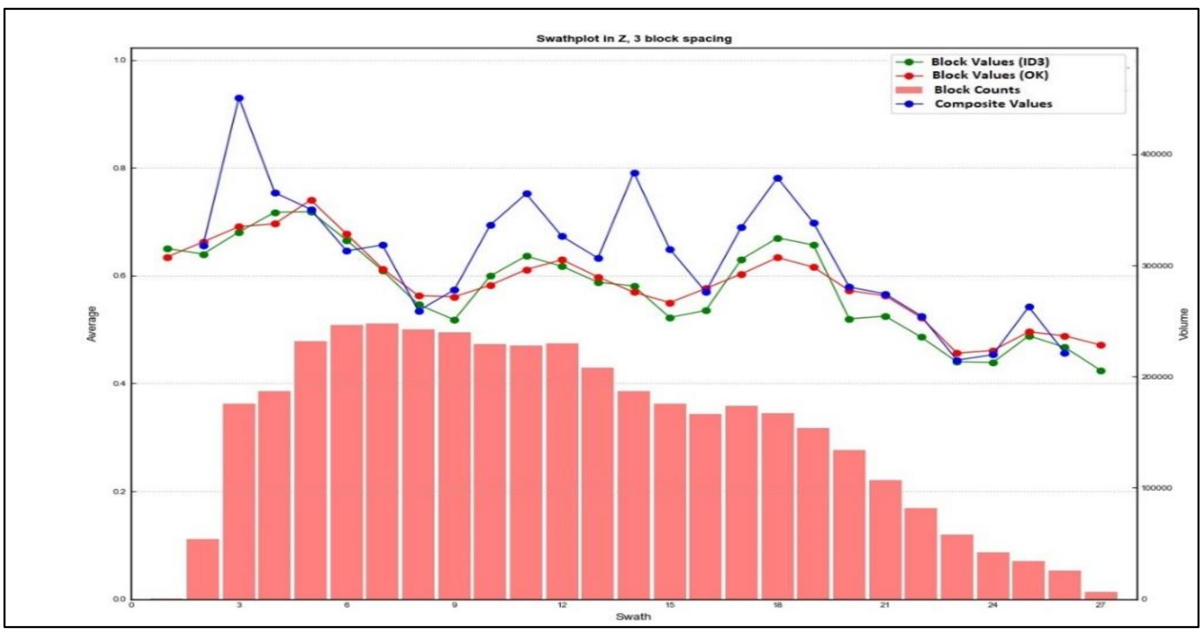
APPENDIX 6

MAYVILLE SWATH PLOTS FOR NI & PD

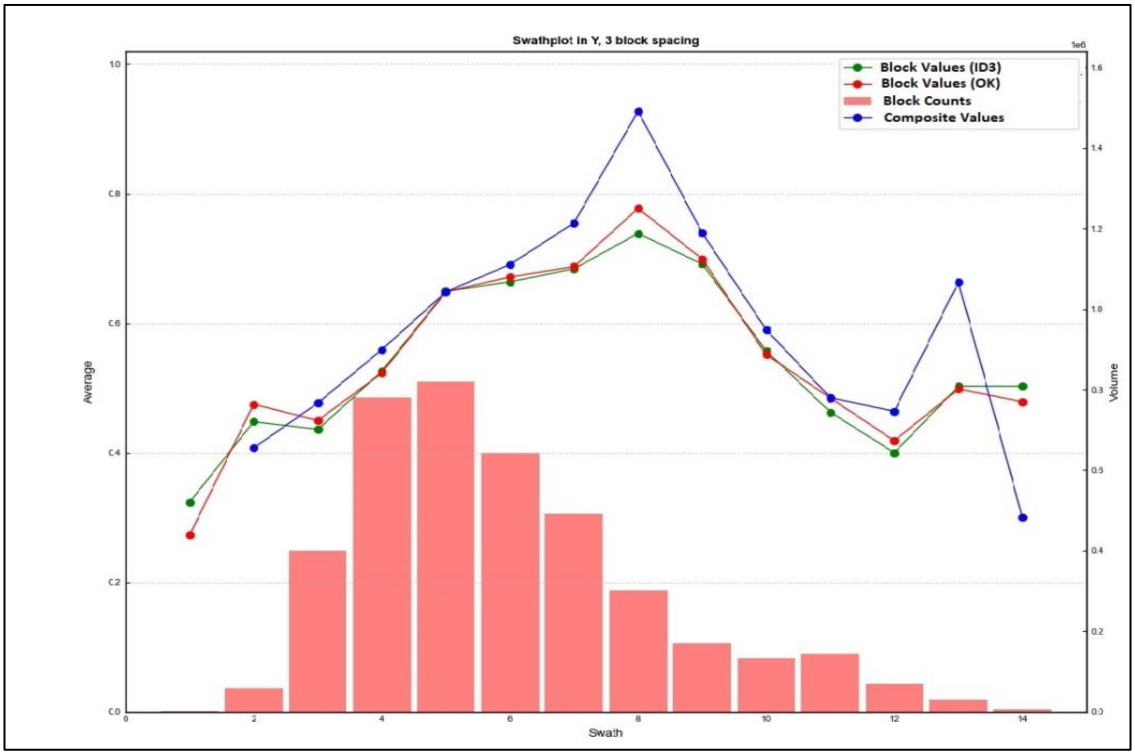
Swath Plot of Ni Along Strike



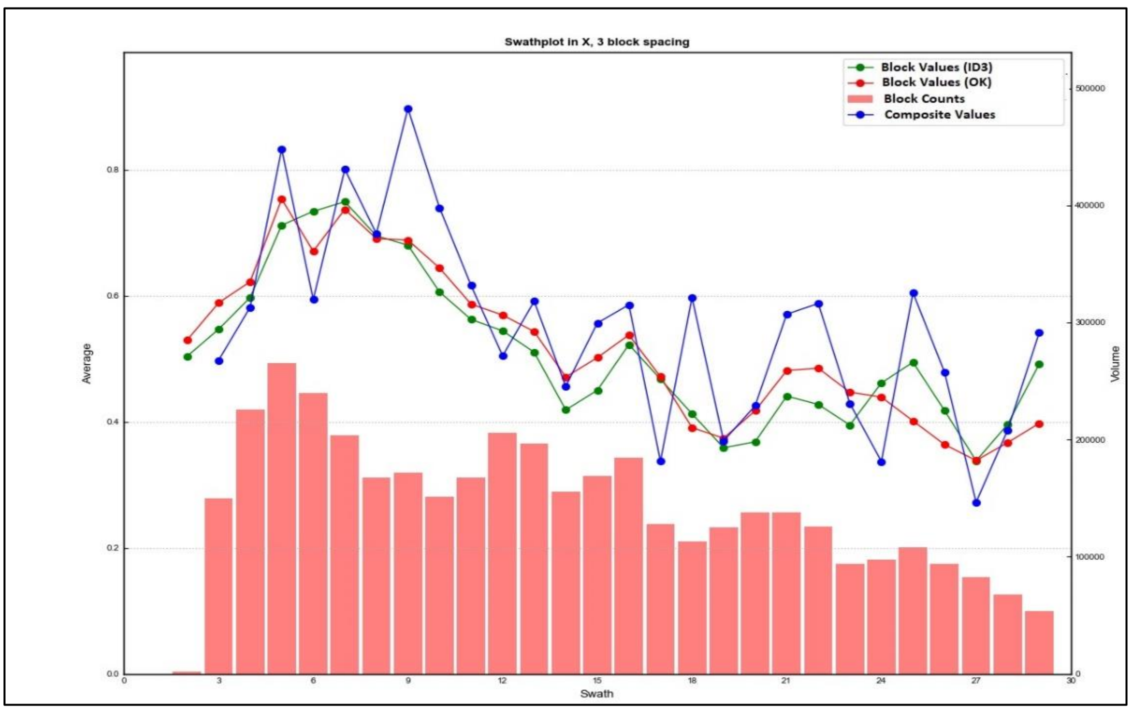
Swath Plot of Ni Down Dip



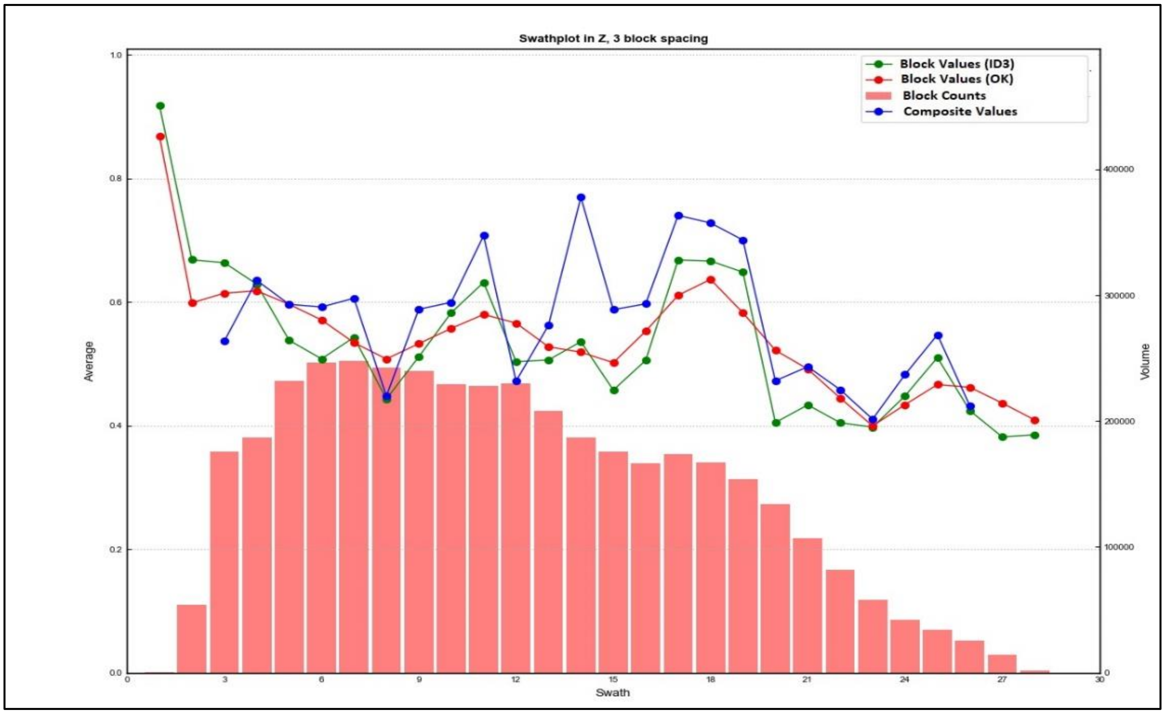
Swath Plot of Ni Across Width



Swath Plot of Pd Along Strike



Swath Plot of Pd Down Dip



Swath Plot of Pd Across Width