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TECHNICAL REPORT AND
UPDATED MINERAL RESOURCE ESTIMATE
OF THE
HAWK RIDGE NICKEL-COPPER (PGE) PROPERTY,
NORTHERN QUÉBEC

UTM NAD 83 Zone 19N 457,600 m E 6, 548,500 m N LATITUDE 59° 4′ 26" N LONGITUDE 69° 44′ 23" W

**FOR** 

NICKEL NORTH EXPLORATION CORP.

NI 43-101 & 43-101F1 TECHNICAL REPORT

Antoine Yassa, P.Geo.

**P&E Mining Consultants Inc. Report 426** 

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#### 1.0 SUMMARY

This Technical Report was prepared by P&E Mining Consultants Inc. ("P&E") at the request of Mr. Tony Guo, CEO and President, Nickel North Exploration Corp. ("Nickel North"), a public company trading on the TSX Venture Exchange (TSX-V) with the symbol NNX. The purpose of this Technical Report is to provide an independent, National Instrument ("NI") 43-101 Technical Report and Mineral Resource Estimate (the "Report" or "Technical Report") on the Falco 7, Gamma, Hopes Advance Main and Hopes Advance North Zones of the Hawk Ridge Project (the "Project" or the "Property"). The Hawk Ridge Property is located 1,550 km north-northeast of the City of Montréal, in the Nunavik Region of Québec, Canada, at UTM NAD 83 Zone 19N 457,600 m E and 6,548,500 m N or Latitude 59° 4' 26" N Longitude 69° 44' 23" W.

### 1.1 PROPERTY DESCRIPTION, LOCATION, ACCESS AND INFRASTRUCTURE

The Hawk Ridge Property is located in northern Québec, on the west coast of Ungava Bay. The Property is in Nunavik Territory, the traditional homeland of the Inuit in Québec, where they hold certain ancestral rights and the mineral rights to certain lands. Inuit land claims have previously been settled in the Territory of Nunavik. There are fourteen villages within the territory that are mostly located along the coast of Hudson Bay on the west, Hudson Straight to the north, and Ungava Bay to the east. The population of the territory is estimated to be 12,000. Kuujjuaq is the principal village and administrative centre, located 135 km south of the Property.

The Hawk Ridge Property comprises 396 mineral claims covering a total area of 17,303 ha and the claims extend over a total strike length of approximately 50 km. The claims are held 100% by Nickel North. The majority of the Property is subject to a 3% net smelter return royalty ("NSR") and the Company has the option to purchase one third of the NSR (1%) at any time for \$1,000,000 and has a first right-of-refusal on the second 1%. As of the effective date of this Technical Report, all the Hawk Ridge Property claims are in good standing.

Primary access to the Hawk Ridge Property is by air from Montréal to Kuujjuaq. Air Inuit and First Air have daily scheduled flights servicing Kuujjuaq. From Kuujjuaq, the Property is typically accessed by Air Inuit daily scheduled flights to Aupaluk, and then by chartered helicopter. Air Inuit also flies from Kuujjuaq to several other local Inuit communities. Aupaluk's hotel has been utilized for accommodating the Property workers. The centre of the Property is approximately 124 km northwest of Kuujjuaq and 20 km south of Aupaluk. Coastal areas of the Project on Hopes Advance Bay are also accessible by boat from Aupaluk.

The Property area benefits from access to tide water. A deep-sea port has been proposed by Oceanic Iron Ore Corp., on the north shore of Hopes Advance Bay, for a proposed iron mining operation 20 km to 50 km west of Aupaluk. The shipping season at Aupaluk is normally from mid-to late-June until late-November. Electrical power is available in Aupaluk, but additional infrastructure facilities would be required for mining.

#### 1.2 GEOLOGY AND MINERALIZATION

The Hawk Ridge Property is located in the New Québec Orogen at the contact between the Archean (approximately 2.7 Ga) Superior Province to the west and the Paleoproterozoic (approximately 1.9 Ga) Rae Subprovince of the Churchill Province to the east. The New Québec Orogen is a part of the Paleoproterozoic Circum-Superior Belt, a geological environment well known for hosting copper, nickel and platinum group metal mineralization including the deposits of the Thompson Nickel Belt of Manitoba and the Cape Smith Nickel Belt of northern Québec.

All of the magmatic sulphide mineral deposits within the 50 km long Hawk Ridge Project occur in the northern portion of the New Québec Orogen (also known as the Labrador Trough), near the southwest coast of Ungava Bay, Northern Québec. The Hawk Ridge Property is underlain by Paleoproterozoic rocks (ca. 1.88 Ga) that unconformably overlie Archean cratonic rocks of the Superior Province which are exposed to the west. The Paleoproterozoic rocks are composed of a thick sequence of marine metasedimentary and mafic metavolcanic rocks that were intruded by mafic and ultramafic sills and dykes. Regionally, these rocks have been thrust to the West onto the Superior Craton and now dip steeply to the east. Disseminated copper-nickel-PGE and gold-bearing sulphides, with narrow high-grade massive sulphide bands, are predominantly hosted in the mafic and to a minor extent by metasedimentary rocks.

In the Property area, the New Québec Orogen rocks form three distinct lithostratigraphic assemblages that are in fault contact, as a result of southwest-directed crustal shortening and thrust imbrication. The structurally lowest assemblage (Assemblage 1) consists of autochthonous to para-autochthonous rocks of the Sokoman Iron Formation exposed on the west side of the New Québec Orogen; this is structurally overlain by Assemblage 2, which consists of allochthonous metasedimentary rocks of the Aber, Harveng, Larch and Baby Formations, metavolcanic rocks of the Hallancourt Formation, gabbro sills intruding the Larch and Baby Group, and gabbro sills of the Montagnais Group; and an upper Assemblage 3, which consists of metasedimentary rocks of the Thevenet Formation. The majority of the Hawk Ridge Property is underlain by Assemblage 2.

The mineral deposits identified to date at the Hawk Ridge Property are copper-nickel (PGM) deposits associated with massive to disseminated sulphides in mafic, ultramafic and sedimentary rocks. The majority of copper-nickel sulphide deposits are hosted in gabbro and plagioclase glomeroporphyritic gabbro of the Hellancourt Formation and the contemporaneous Montagnais Group Intrusions of Assemblage 2. The deposits occur in close proximity to contacts of gabbro with underlying metasedimentary rocks and peridotite.

The characteristics of mineralization at the Hawk Ridge Property indicate that they are magmatic sulphide deposits, specifically rift and continental flood basalt associated nickel-copper sulphide deposits. These magmatic sulphide deposits form when sulphur undersaturated mafic magma from the mantle becomes saturated in sulphides, generally as a result of magmatic assimilation of sulphur-bearing sedimentary rocks. Assimilation of crustal sulphur results in the formation of an immiscible sulphide liquid, which segregates and concentrates towards the base of the host units. Assimilation and concentration may be enhanced by multiple pulses of magma in a conduit system. The mineralization typically forms lenses or tabular concentrations in the middle or lower parts of the gabbro intrusions. Examples of this type of magmatic sulphide mineralization are the Proterozoic Duluth Complex deposits in Minnesota and the Mesozoic Noril'sk Talnakh deposits in Siberia.

#### 1.3 EXPLORATION AND DRILLING

In 2012, Nickel North undertook the first drilling at the Property in 15 years. The 2012 diamond drill program was designed to test extensions of known mineralization and new targets identified by the 2,400 line-km Geotech VTEM airborne survey flown in 2012. Seven NQ-diameter diamond drill holes (HR-2012-01 to HR-2012-07) totalling 1,055.07 m were completed over a period of five weeks, from August 19, 2012, to September 15, 2012. The drill holes ranged from 110 m to 210 m in depth. In 2012, the Company also undertook a resampling program of the NQ-sized core drilled by previous operator, Troymin Resources Ltd. ("Troymin"), from 1996 to 1997 at the Property. Drill core from these years was stored on site at the Property by the previous operators and the drill core was in good condition and well-marked.

Nickel North commenced its 2013 helicopter-supported drill program at the Property on June 26, 2013, with a single drill rig and added a second drill at the mid-season sealift. A total of 7,330 m of diamond drilling was completed over 38 drill holes (HR-2013-08 TO HR-2013-43) at the Hopes Advance Main Zone, Gamma Zone, Falco 7 Zone, and additional regional exploration targets. The main objective of the 2013 exploration program was to expand upon the known mineralization at the Property and complete an NI 43-101 Mineral Resource Estimate. The drill core was transported daily from the drill site to the field camp by helicopter, where it was held in a secured drill core tent. When the drill core was received in camp it was logged, photographed, sampled and cut in half utilizing a diamond-bladed saw by local individuals employed by Nickel North. Assays were taken along the entire length of the drill core, with more than 7,600 samples collected during the program.

The principal objective for the 2014 exploration program was the identification and assessment of new high-grade Ni-Cu (PGE) targets similar in tenor and geological setting to the Pio Prospect and the Gamma Zone, where drill hole DH-2012-03 intersected 4.67% Cu, 2.84% Ni, 0.09% Co and 1.31 g/t PGE + Au over 1.86 m. A 7.01 m mineralized intersection in drill hole HR-2014-50 averaged 2.11% Ni, 2.73% Cu, 0.62 g/t PGE. Included in this intersection is 3.35 m of massive sulphide averaging 4.24% Ni, 4.70% Cu and 0.95 g/t PGE. Comparison of grades and thickness intersected in drill hole HR-2012-03 to the south demonstrates that both the Ni grades and widths of the HR-2014-50 massive sulphide intersection have increased considerably northwards.

Drill hole HR-2014-49 was collared 42 m east and 10 m south of HR-2014-50 and was completed prior to the latter. HR-2014-49 intersected 8.50 m of 0.13% Ni, 0.51% Cu, 0.147 g/t PGE. This intercept includes 3.50 m of 0.21% Ni, 0.71% Cu and 0.181 g/t PGE. This mineralization and host-rock are typical of the Gamma Zone. Drill hole HR-2014-50 was completed to follow-up a highly conductive borehole geophysical response detected above and to the north of the drill hole HR-2014-49. Examination of geological and geophysical data together with the northward thickening massive sulphide intersections in drill holes HR-2012-03 and HR-2014-50, suggest that the high-grade Ni-Cu-PGE massive sulphides at Gamma Zone are lens-like bodies of magmatic mineralization with a plunge component in the down-dip direction.

### 1.4 QUALITY ASSURANCE/QUALITY CONTROL AND DATA VERIFICATION

A comprehensive Quality Assurance/Quality Control, ("QA/QC" or "QC") program was established for Hawk Ridge by Larry Hulbert, Ph.D., P.Geo., an independent consultant to the

project, and included regular insertion of certified reference materials ("CRM"), blanks and duplicates. The Hawk Ridge Deposit was visited by Mr. Antoine Yassa, P.Geo. of P&E from August 28-31, 2013, for the purposes of completing a site visit and due diligence sampling. General data acquisition procedures, core logging procedures and QA/QC were discussed during the visit. It is this Technical Report author's (the "Author") opinion that the sample preparation, security and analytical procedures utilized by Nickel North were satisfactory.

For the 2012 and 2013 diamond drilling, and the resampling program on the 1996-97 drill core, Nickel North used seven different CRMs prepared and certified by either Ore Research and Pty of Australia, CANMET of Ottawa, or CDN Labs of Langley, BC. With very few exceptions, performance for the CRMs was very good. There were three sources of blank material used on the Project. One of the blanks was prepared and purchased from CDN Resource Labs in Langley, BC, the second material was a silica blank provided by TSL Labs ("TSL"), and the third blank was the in-house quality control blank inserted by TSL for their own purposes. Four hundred sixty-two blanks were analyzed during the drill program, and results indicated that contamination was not an issue for the Mineral Resource estimation. There were 185 field duplicate pairs, comprised of a ¼ core split of the ½ core sent for analysis. Precision was satisfactory for this level of homogeneity. The lab analyzed 213 pulp duplicate pairs as part of their internal quality control. Precision was excellent.

The 2014 QA/QC program continued to follow the protocols established in 2012, again including the collection of drill core field duplicate samples, insertion of CRMs and blanks. Performance was excellent for the CRMs and all elements with all data falling within ± two standard deviations from the recommended mean. Additional drilling at the Project by Nickel North in 2014 resulted in samples from two additional drill holes (HR-2014-49 and HR-2014-50) being imported into the database. Verification of drill hole assay data entry was performed by the Author on 186 assay intervals for Cu, Ni, Co, Au, Pd, Pt and Fe. No data entry errors were observed in the data. The 186 verified intervals were checked against original digital assay lab certificates from TSL. The checked assays represented 100% of the appended data.

It is the Author's opinion that sample preparation, security and analytical procedures for the 2012 to 2014 drilling and re-assaying programs at the Hawk Ridge Project were adequate and examination of QA/QC results for all the sampling indicates no significant issues with accuracy, contamination or precision in the data. Furthermore, the Author considers that there is good correlation between the Cu and Ni assay values in Nickel North's database and the independent verification samples collected by the Author and analyzed at AGAT. In the Author's opinion, the data are of good quality and appropriate for utilization in the current Mineral Resource Estimate.

#### 1.5 MINERAL PROCESSING AND METALLURGICAL TESTING

The Hawk Ridge Deposits can be considered low-grade nickel, copper, cobalt and PGM- mineralized material. In order for a potential Hawk Ridge mine and mineral process facility to be economical, substantial mine-site concentration would be required in advance of concentrate shipment by sea, from a northern all-weather marine port to smelters and refineries. For copper, a concentration ratio of 50:1 would be required.

In 2013, XPS (Expert Process Solutions) forwarded samples of each composite they had at the time to SGS Lakefield for standard Bond Ball Mill Index (BMI) determinations. The Bond Work Index (BWI) was assessed as medium, suggesting a normal value for this type of mineral deposit. Due to high abundance, the non-sulphide minerals would determine the whole mineralized material's BWI.

Mineralogical investigations by XPS determined that all of the copper is held in chalcopyrite. A reasonably high process recovery and grade of copper concentrate was indicated as possible. Nickel occurs mainly in pentlandite, pyrrhotite (0.5% to 0.7% Ni) and pyrite (average 3.7% Ni). Trace levels of Ni were also reported in Fe-Mg silicates. The mineralogy examinations revealed that copper recovery should be high utilizing conventional grinding and flotation processes. However, nickel process recovery is expected to be significantly less than copper.

XPS performed duplicate rougher flotation tests on each of three composites. A single cleaner test was performed on an IPG rougher concentrate. A combined cleaner concentrate assaying 14.9% Cu, 3.6% Ni and 0.15% Co in 3.03% weight was achieved in an open cycle test (scavenger concentrates and cleaner tails were not recycled). Process recoveries were 83.5%, 59.6% and 31.7%, respectively, for Cu, Ni and Co. Whereas a high total copper process recovery, ~ 90%, can be expected in final flotation copper and nickel-copper flotation concentrates, nickel process recovery is expected to be significantly less. The restriction in nickel process recovery, mainly as a pentlandite concentrate, is mineralogically limited, with the maximum rougher flotation nickel process recovery being about 75%.

As indicated by the 2014 XPS testwork, cobalt process recovery can be related to nickel process recovery. A rougher flotation concentrate performed on the Gamma Main IPG Resource indicated a 76% cobalt process recovery at a grade roughly 10 times the feed grade (0.09% versus 0.008%). A single cleaner flotation test reduced the Co performance to 32% process recovery at a grade of 0.15% Co. Cleaner tails or scavenger tails were not recycled, as they would have been in locked-cycle testing. Process Recovery could be expected to be higher in locked cycle testing, which would more accurately represent process plant performance.

No attempts were made to produce separate copper and nickel concentrates. Since smelting and refining processes for copper and nickel are significantly different, the production of separate concentrates is the traditional approach for processing copper-nickel Mineral Resources.

Canadian Royalties Incorporated reported metallurgical performance on potentially mineralogical similar Cu-Ni-PGM deposits in the far northern Nunavik region, but on Mineral Resources of significantly higher grade. Separate copper and nickel concentrates were produced in both bench and pilot scale tests.

The overall copper recovery for the Nickel North Mineral Resources (total in copper plus nickel-copper concentrate) should be relatively high at 80% to 85%. Nickel recovery in a separate concentrate is expected to be <60%, possibly as low as 50%. The complex mineralogical deposition of nickel is the reason for the low nickel recovery potential. The recoveries of Pt, Pd and Au are uncertain. Using the Canadian Royalties Incorporated ("CRI") test data, PGM recovery could approach 40%, predominantly from the copper concentrate. Assuming that 40% of the PGMs are recovered in 2% weight copper concentrate, the PGM content of the copper concentrate could be in the order of 2.2 g/t for Au, 1.4 g/t for Pt, and 4.2 g/t for Pd.

#### 1.6 UPDATED MINERAL RESOURCE ESTIMATE

For this update to the 2013 initial Mineral Resource Estimate, two drill holes (HR2014-49 and HR2014-50) completed in late-2014 were added to the original 2013 database, for a total of 37,262 m drilled. A sampling and mineral characteristic study was completed in 2014 by XPS Consulting and Testwork Service. The results of that study were utilized to calculate the Mineral Resources in the four deposits as presented in Table 1.1 below.

The Pit-Constrained Inferred Mineral Resources of 29.44 Mt grading 0.20% Ni, 0.52% Cu, 0.012% Co, 0.19 g/t Pd, 0.04 g/t Pt and 0.021 g/t Au, which equates to 0.56% NiEq. Out-of-Pit Inferred Mineral Resources of 5.22 Mt at average grades of 0.35% Ni, 0.79% Cu, 0.014% Co, 0.06 g/t Pt, 0.23 g/t Pd and 0.04 g/t Au, which equates to 0.88% NiEq. An NSR cut-off of C\$35/t was used for Pit-Constrained Mineral Resource reporting and an NSR cut-off of C\$100/t for the Out-of-Pit Mineral Resource reporting. This Mineral Resource Estimate was prepared by P&E Mining Consultants Inc. in accordance with 2014 CIM Definition Standards on Mineral Resources and Reserves and 2019 CIM Best Practices Guidelines. The Mineral Resource Estimate is effective as of May 31, 2022.

UPDA	TED TOTAL INFER	RED MINER	AL RESOU	RCE ES	FIMATE FOI		BLE 1.1 IAWK <b>R</b> ID	GE NI-(	Cu-Co-P(	GE SUL	PHIDE PRO	JECT, N	ORTHER	n Québ	SEC (1-9)	
Deposit	Туре	NSR Cut-off (C\$/t)	Tonnes (kt)	Cu (%)	Cu (t)	Ni (%)	Ni (t)	Pt (g/t)	Pt (oz)	Pd (g/t)	Pd (oz)	Co (%)	Co (t)	Au (g/t)	Au (oz)	Fe (%)
HAM		35	14,099	0.54	75,556	0.19	26,484	0.04	18,794	0.18	82,362	0.01	1,459	0.01	5,979	8.44
HAN	Pit Constrained	35	1,305	0.91	11,893	0.36	4,751	0.07	2,861	0.25	10,384	0.01	172	0.02	983	11.2
Subtotal		35	15,404	0.57	87,449	0.20	31,236	0.04	21,655	0.19	92,746	0.01	1,631	0.01	6,962	8.67
HAM		100	693	0.76	5,257	0.26	1,813	0.06	1,235	0.22	4,812	0.01	81	0.02	421	9.34
HAN	Out-of-pit	100	118	1.30	1,540	0.16	194	0.03	127	0.15	588	0.01	10	0.02	86	8.35
Subtotal		100	811	0.84	6,797	0.25	2,006	0.05	1,362	0.21	5,400	0.01	92	0.02	507	9.2
HAM & HAN	Subtotal	35+100	16,215	0.58	94,246	0.21	33,242	0.04	23,017	0.19	98,146	0.01	1,723	0.01	7,469	8.7
	Pit Constrained	35	8,410	0.40	33,852	0.17	14,291	0.04	10,984	0.16	41,961	0.02	1,401	0.02	6,259	15.7
Falco 7	Out-of-pit	100	404	0.77	3,116	0.21	859	0.06	765	0.22	2,841	0.01	56	0.07	872	10.5
	Subtotal	35+100	8,814	0.42	36,969	0.17	15,150	0.04	11,749	0.16	44,801	0.02	1,457	0.03	7,131	15.5
	Pit Constrained	35	5,624	0.59	33,125	0.23	13,031	0.05	9,318	0.23	41,508	0.01	641	0.04	6,967	8.92
Gamma	Out-of-pit	100	4,005	0.78	31,413	0.38	15,189	0.06	7,846	0.23	30,232	0.02	596	0.05	5,794	9.7
	Subtotal	35+100	9,629	0.67	64,538	0.29	28,219	0.06	17,164	0.23	71,740	0.01	1,237	0.04	12,761	9.24
HAM, HAN,	Pit Constrained	35	29,438	0.52	154,426	0.2	58,557	0.04	41,957	0.19	176,214	0.01	3,673	0.02	20,188	10.7
Falco 7 &	Out-of-pit	100	5,220	0.79	41,326	0.35	18,054	0.06	9,973	0.23	38,473	0.01	744	0.04	7,173	9.68
Gamma	Grand Total	35+100	34,658	0.56	195,752	0.22	76,611	0.05	51,930	0.19	214,687	0.01	4,417	0.03	27,361	10.6

Notes: listed on next page.

#### Notes:

- 1. CIM definitions (2014) and Best Practices Guidelines (2019) were followed for Mineral Resource estimation
- 2. Mineral Resources were estimated by conventional 3-D block modelling based on wireframing at a C\$35/t NSR cut-off for Pit-Constrained Mineral Resources and a C\$100/t NSR cut-off for Out-of-Pit Mineral Resources using inverse distance squared grade interpolation.
- 3. Metal prices for the estimate are: US\$4.00/lb Cu, US\$9.25/lb Ni, US\$1,350/oz Pt, US\$1800/oz Pd, US\$1,750/oz Au and US\$26.00/lb Co based on a two-year trailing average as of May 31, 2022, along with Consensus Economics metal price forecasting.
- 4. A variable bulk density of 3.01 tonnes/m³ or greater has been applied for volume to tonnes conversion.
- 5. Pit-Constrained Mineral Resources are estimated from surface to pit floor depths of 100 m to 230 m.
- 6. Out-of-Pit Mineral Resources are estimated from 100 m to 275 m below pit floors
- 7. Mineral Resources are classified as Inferred based on drill hole spacing, geologic continuity and quality of data.
- 8. Mineral Resources, which are not 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.
- 9. The Inferred Mineral Resource in this estimate has a lower level of confidence that applied to an Indicated Mineral Resource and must not be converted to a Mineral Reserve. It is reasonably expected that the majority of the Inferred Mineral Resource could be upgraded to an Indicated Mineral Resource with continued exploration.

The Cu, Ni, Co, Pt, Pd and Au mineralization lies at or near surface and is potentially amenable to low-strip ratio, open-pit mining. The mineralized wireframes for the four deposits were constructed based on host rock lithology and mineralization at an open pit operating cut-off Net Smelter Return ("NSR") of C\$35/t as calculated by the Author. The NSR calculation was based on a two-year trailing average metal prices and Consensus Economics nominal metal price forecasts as of May 31, 2022, metal recoveries and smelter payable metal and treatment costs generalized from other similar projects, and a US exchange rate at 0.78. One-metre composites were generated from the assays captured within each deposit wireframe. The Mineral Resources were all classified as Inferred based on the wide drill hole spacing, level of assaying and geologic confidence in grade continuity.

The Hopes Advance North and Main Deposits have been considered, and reported, as one domain (Hopes Advance). The geologically similar Gamma Deposit occurs 15.5 km to the southeast in a similar stratigraphic setting as the above. The Falco 7 Deposit is 11.4 km north-northeast of this trend. All deposits have strikingly similar geology and styles of mineralization. Mineral Resources for each deposit were estimated individually using Inverse Distance Squared (ID<sup>2</sup>) weighting of composited assay values. The drill-hole database for the Property contains 407 diamond drill holes totalling 37,262 m, of which 88 drill holes for 15,268 m have been utilized to delineate the Mineral Resources. The spacing of the drill-hole cross-sections in the individual deposit areas ranges from 50 m to 200 m.

Inferred Mineral Resources by Deposit at various NSR cut-offs are presented in Tables 1.2 and 1.3 below.

TABLE 1.2 PIT-CONSTRAINED INFERRED MINERAL RESOURCE SENSITIVITY BY DEPOSIT AT VARIOUS NSR CUT-OFFS														
NSR Cut-off (C\$/t)	Tonnes (kt)	Cu (%)	Cu (t)	Ni (%)	Ni (t)	Pt (g/t)	Pt (oz)	Pd (g/t)	Pd (oz)	Co (%)	Co (t)	Au (g/t)	Au (oz)	Fe (%)
Hopes Ad	Hopes Advance Main (HAM)													
55	12,741	0.56	71,629	0.19	24,833	0.04	17,591	0.19	75,911	0.01	1,332	0.014	5,533	8.55
45	13,810	0.54	74,858	0.19	26,190	0.04	18,565	0.18	81,155	0.01	1,434	0.013	5,883	8.47
35	14,099	0.54	75,556	0.19	26,484	0.04	18,794	0.18	82,362	0.01	1,459	0.013	5,979	8.44
25	14,143	0.53	75,648	0.19	26,514	0.04	18,827	0.18	82,505	0.01	1,462	0.013	6,011	8.43
15	14,170	0.53	75,684	0.19	26,523	0.04	18,843	0.18	82,587	0.01	1,463	0.013	6,039	8.43
Hopes Ad	vance No	rth (H	AN)											
55	1,186	0.97	11,540	0.39	4,610	0.07	2,759	0.26	9,823	0.014	161	0.025	954	11.59
45	1,287	0.92	11,851	0.37	4,733	0.07	2,848	0.25	10,304	0.013	171	0.024	979	11.27
35	1,305	0.91	11,893	0.36	4,751	0.07	2,861	0.25	10,384	0.013	172	0.023	983	11.21
25	1,306	0.91	11,894	0.36	4,752	0.07	2,862	0.25	10,386	0.013	173	0.023	983	11.21
15	1,307	0.91	11,897	0.36	4,752	0.07	2,862	0.25	10,390	0.013	173	0.023	984	11.21
Gamma														
55	5,284	0.61	32,199	0.24	12,636	0.05	8,871	0.23	39,489	0.012	611	0.039	6,666	8.95
45	5,552	0.59	33,002	0.23	12,939	0.05	9,237	0.23	41,109	0.011	633	0.039	6,927	8.91
35	5,624	0.59	33,125	0.23	13,031	0.05	9,318	0.23	41,508	0.011	641	0.039	6,967	8.92
25	5,626	0.59	33,130	0.23	13,033	0.05	9,320	0.23	41,516	0.011	641	0.039	6,969	8.92
15	5,626	0.59	33,130				9,320	0.23	41,516	0.011	641	0.039	6,969	8.92
Falco 7														
55	6,515	0.44	28,618	0.18	11,923	0.04	9,111	0.17	34,629	0.018	1,168	0.024	5,052	16.96
45	8,013	0.41	32,860	0.17	13,881	0.04	10,639	0.16	40,728	0.017	1,358	0.023	6,028	15.98
35	8,410	0.4	33,852	0.17	14,291	0.04	10,984	0.16	41,961	0.017	1,401	0.023	6,259	15.71
25	8,659	0.4	34,307	0.17	14,484	0.04	11,151	0.15	42,567	0.016	1,419	0.023	6,379	15.44
15	8,772	0.39	34,464	0.17	14,550	0.04	11,211	0.15	42,773	0.016	1,426	0.023	6,420	15.33

(	TABLE 1.3 Out-of-Pit Inferred Mineral Resource Sensitivity by Deposit at Various NSR Cut-offs													
NSR Cut-off (C\$/t)	Tonnes (kt)	Cu (%)	Cu (t)	Ni (%)	Ni (t)	Pt (g/t)	Pt (oz)	Pd (g/t)	Pd (oz)	Co (%)	Co (t)	Au (g/t)	Au (oz)	Fe (%)
Hopes Advance Main														
120	205	0.78	1,593	0.36	734	0.07	460	0.25	1,675	0.014	28	0.032	212	10.23
110	342	0.76	2,591	0.32	1,096	0.07	715	0.24	2,665	0.013	44	0.025	278	10.13
100	693	0.76	5,257	0.26	1,813	0.06	1,235	0.22	4,812	0.012	81	0.019	421	9.34
90	1,333	0.7	9,329	0.24	3,174	0.05	2,153	0.2	8,756	0.011	150	0.016	687	9.16
80	2,114	0.65	13,785	0.22	4,654	0.05	3,161	0.2	13,336	0.011	233	0.014	981	9.00
Hopes Adv	vance Nor	th												
120	89	1.46	1,297	0.15	131	0.03	86	0.15	419	0.008	7	0.025	71	8.10
110	104	1.38	1,433	0.16	161	0.03	105	0.15	501	0.008	9	0.024	80	8.22
100	118	1.3	1,540	0.16	194	0.03	127	0.15	588	0.009	10	0.023	86	8.35
90	143	1.18	1,691	0.17	248	0.04	163	0.16	737	0.009	13	0.02	93	8.48
80	248	0.93	2,315	0.17	426	0.04	285	0.16	1,315	0.01	24	0.014	112	8.40
Gamma														
120	2,632	0.85	22,331	0.43	11,441	0.06	5,444	0.24	20,437	0.016	431	0.049	4,133	10.31
110	3,277	0.82	26,729	0.41	13,337	0.06	6,593	0.24	25,085	0.016	512	0.047	4,944	10.01
100	4,005	0.78	31,413	0.38	15,189	0.06	7,846	0.23	30,232	0.015	596	0.045	5,794	9.70
90	5,108	0.74	37,910	0.35	17,653	0.06	9,626	0.23	37,765	0.014	713	0.043	7,028	9.34
80	6,760	0.69	46,696	0.31	20,876	0.06	12,218	0.22	48,691	0.013	877	0.041	8,854	8.99
Falco 7												-		
120	82	0.95	781	0.23	189	0.05	122	0.22	573	0.015	12	0.096	253	10.74
110	160	0.86	1,369	0.23	370	0.05	242	0.22	1,114	0.015	24	0.087	447	10.70
100	404	0.77	3,116	0.21	859	0.06	765	0.22	2,841	0.014	56	0.067	872	10.53
90	750	0.71	5,359	0.2	1,522	0.06	1,430	0.21	5,057	0.013	101	0.058	1,390	10.50
80	1,504	0.63	9,438	0.19	2,856	0.05	2,494	0.17	8,330	0.019	281	0.044	2,148	17.22

The mineral deposits contain an additional Exploration Target with a potential range of 35 million tonnes to 60 million tonnes at grade ranges of 0.35% to 0.40% Cu, 0.10% to 0.20% Ni, 0.01% to 0.02% Co, 0.03 g/t to 0.05 g/t Pt, 0.15 g/t to 0.20 g/t Pd, and 0.03 g/t to 0.05 g/t Au, which equates to 0.35% to 0.55% NiEq.

The Exploration Target is based on the estimated strike length, depth and width of the known mineralization, which is supported by intermittent drill holes, geophysics and observations of mineralized surface exposures. The potential quantities and grades of this Exploration Target are conceptual in nature. There has been insufficient work done by a Qualified Person to define these estimates as Mineral Resources. The Company is not treating these estimates as Mineral Resources, and readers should not place undue reliance on these estimates. Even with additional work, there is no certainty that these estimates will be classified as Mineral Resources. In addition, there is no certainty that these estimates will prove to be economically recoverable.

#### 1.7 CONCLUSIONS AND RECOMMENDATIONS

The author of this Technical Report considers that the Hawk Ridge Property contains a sizeable Ni-Cu (PGE) Mineral Resource which merits further evaluation. The author's recommendations are as follows:

- A LiDAR topographic survey (a remote sensing technology that measures distance by illuminating a target with a laser and analyzing the reflected light) be completed and results imported into 3-D modelling software.
- In-fill drilling to upgrade Inferred to Indicated Mineral Resources:
  - The mineralized zones should be drilled on 50 m cross-sections with at least three holes per section to at least 25 m below the conceptual pit floors;
  - The massive sulphide lens in the Hopes Advance North Zone and Gamma Zone should be drilled on 25 m sections or closer to adequately define its geometry; and
  - Old drill holes lacking assays should be re-drilled, except for the down-the-dip holes, which should be eliminated from future Mineral Resource estimation.
- Step-out drilling to evaluate additional exploration targets with the objective of expanding the Mineral Resources.
- The Exploration Target with the potential range of 35 Mt to 60 Mt should be evaluated by very widely spaced grid drilling as deemed appropriate by the known strike lengths, geophysical indications and mineralized outcrops.

#### • Assaying:

o There are a few non-assayed intervals within the Mineral Resource drill hole intercepts post-1995, that are explicitly treated as zero grade for the purpose of

Mineral Resource estimation. Explicit missing assays were dealt with by assigning regression values. However, drill core should be assayed for Co, PGE and Au where assays are lacking. The drill holes with very long assay intervals (>30 m) are 22647, 22678, 22737; all are historical and should be re-drilled; and

• Assaying should be completed continuously within the mineralized zones and hanging wall and footwall for the six payable metals and for Fe and S.

### • Mineralogy and Bulk Density:

- o A study is required to identify PGE mineralogy and deportment;
- O Pending a mineralogical study, systematic bulk density tests on disseminated and massive sulphides are required to better characterize bulk density versus Ni grade and Cu grade relationships. Better clarification is required on when and how S should be analyzed using a Leco sulphur analyzer. Going forward, Nickel North should continue with ICP-MS analyses for S and when better control on the S analysis is necessary, the pulps can be rerun utilizing the Leco analyzer; and
- o If historical drill core is available, the drill holes in which the entire zone is represented by a single assay, should be re-logged and re-assayed at ±1 m intervals, consistent with current sampling protocol. Alternatively, these holes should be re-drilled and sampled.

### • Drill Hole Surveys:

• The downhole surveys should be reviewed for excessive deviation and implausible measurements removed where appropriate.

#### • Geotechnical Study:

O Pit slopes of 50° were utilized for Mineral Resource pit optimization. However, no geotechnical study has been conducted to support this initial assumption. The Author recommends that a preliminary geotechnical study be undertaken to establish pit slopes. If steeper slopes are practical, the stripping ratio can be improved, and more pit constrained Mineral Resources accessed.

#### • Metallurgical Study:

The overall copper recovery should be relatively high at 80% to 85%, since all the copper is in chalcopyrite. Nickel recovery in a separate concentrate is expected to be <60%, possibly as low as 50%, due to its complex deportment in sulphide and non-sulphide phases. The recoveries of Pt, Pd and Au are uncertain. PGM recovery could approach 40%, assuming recovery from the copper concentrate. The PGM content of the copper concentrate could be in the order of 2.2 g/t for Au, 1.4 g/t for Pt, and 4.2 g/t for Pd.

O However, these estimated recoveries are considered conditional. A substantial amount of testwork is required to optimize grinding and flotation performance. This testwork would include the production of separate smelter-acceptable copper, and nickel concentrates. Subsequently, a Net Smelter Return evaluation could be completed that would consider the payable fractions for each metal in the copper and nickel concentrates.

The estimated budget to complete the recommended program is approximately C\$9.6M and is presented in Table 1.4.

TABLE 1.4 RECOMMENDED PROGRAM AND BUDGET											
Program	Units (m)	Budget									
In-fill Diamond Drilling	5,000	\$500	\$2,500,000								
Step-out Drilling	5,000	\$500	\$2,500,000								
LiDAR Survey			\$400,000								
Metallurgical Testwork			\$350,000								
Assaying			\$600,000								
Mineralogy-Bulk Density			\$100,000								
Geotechnical Study			\$250,000								
Personnel, Office, Support			\$2,000,000								
Contingency (10%)			\$870,000								
Total			\$9,570,000								

#### 2.0 INTRODUCTION AND TERMS OF REFERENCE

#### 2.1 TERMS OF REFERENCE

The following Technical Report was prepared to provide a National Instrument ("NI") 43-101 Technical Report and Updated Mineral Resource Estimate for copper-nickel (PGE) sulphide mineralization contained of the Hawk Ridge Property, Northern Québec, Canada. Nickel North Exploration Corp. acquired 100% control of the Hawk Ridge Property through an option agreement with Anthem Resources Inc.

This Technical Report was prepared by P&E Mining Consultants Inc. ("P&E") at the request of Mr. Tony Guo, CEO and President, Nickel North Exploration Corp. ("Nickel North"), a public company trading on the TSX Venture Exchange (TSX-V) with the symbol NNX. Nickel North has its head office at:

Suite No. 1105,750 West Pender Street Vancouver, British Columbia, V6C 2T8

Tel: 778-877-5480 Fax: 604 899-1240

This report has an effective date of July 5, 2022.

Mr. Antoine Yassa, P.Geo. of P&E, an independent Qualified Person under the regulations of NI 43-101, conducted a site visit to the Property from August 28 to 31, 2013. A verification sampling program was conducted by Mr. Yassa at that time. Since 2013, only seven additional drill holes have been completed (in 2014), but only two are in the Mineral Resource models. As such, a more recent site visit was not warranted.

Additionally, and subsequent to the 2013 site visit, the Author of this Technical Report held discussions with technical personnel from the Company regarding all pertinent aspects of the Project and carried out a review of all available literature and documented results concerning the Property. The reader is referred to those data sources, which are listed in the References section (Section 27) of this Technical Report, for further detail.

The purpose of the current Technical Report is to provide an independent, NI 43-101 Technical Report and Resource Estimate of the Hopes Advance Main Zone, Hopes Advance North Zone, Falco 7 Zone, and Gamma Zone of the Hawk Ridge Property. This Technical Report is prepared in accordance with the requirements of NI 43-101F1 of the Ontario Securities Commission ("OSC") and the Canadian Securities Administrators ("CSA"). The Mineral Resources Estimates described in Section 14 of this Technical Report are considered compliant with the Canadian Institute of Mining, Metallurgy and Petroleum (CIM), CIM Standards on Mineral Resources and Reserves, Definitions (2014) and Best Practices Guidelines (2019) prepared by the CIM Standing Committee on Reserve Definitions.

The Author understands that this Technical Report will be used for internal decision-making purposes and filed as required under TSX-V regulations. This Technical Report may also be used to support public equity financing.

#### 2.2 SOURCES OF INFORMATION

This Technical Report is based, in part, on internal company technical reports, and maps, published government reports, company letters, memoranda, public disclosure and public information as listed in the Section 27 of this Technical Report. Sections from reports authored by other consultants have been directly quoted or summarized in this Report, and are so indicated where appropriate. Parts of this Technical Report refer to the NI 43-101 Technical Report by Daniel Beauchamp on the Hawk Ridge Project that was previously filed in 2012 on SEDAR by Nickel North and its precursor companies.

Sections 2 to 10 and 23 of this Technical Report were prepared by William Stone, Ph.D., P.Geo., under the supervision of Antoine Yassa, P.Geo., who acting as Qualified Person as defined by NI 43-101, takes responsibility for those sections of the Technical Report as outlined in the "Certificate of Author" in Section 28. Sections 11 and 12 of this Technical Report were prepared by Jarita Barry, P.Geo., under the supervision of Antoine Yassa, P.Geo., who acting as a Qualified Person as defined by NI 43-101, takes responsibility for those sections of this Technical Report as outlined in the "Certificate of Author" in Section 28. Sections 13 and 20 of this report were prepared by D. Grant Feasby, under the supervision of Antoine Yassa, P.Geo., who acting as a Qualified Person as defined by NI 43-101, takes responsibility for those sections of this Technical Report as outlined in the Certificate of Author in Section 28. Section 14 of this report was prepared by Yungang Wu, P.Geo. and Eugene Puritch, P.Eng, FEC, CET, under the supervision of Antoine Yassa, P.Geo., who acting as a Qualified Person as defined by NI 43-101, takes responsibility for those sections of this Technical Report as outlined in Table 2.1 below and in the "Certificate of Author" in Section 28.

TABLE 2.1 QUALIFIED PERSON RESPONSIBLE FOR THIS TECHNICAL REPORT			
Qualified Person	Contracted By	<b>Sections of Technical Report</b>	
Mr. Antoine Yassa, P.Geo.	P&E Mining Consultants Inc.	All Sections: 1 to 28	

#### 2.3 UNITS AND CURRENCY

Unless otherwise stated all units used in this report are metric. Gold assay values (Au) are reported in grams of metal per tonne ("gm Au/t") unless ounces per ton ("oz Au/T") are specifically stated. The C\$ is used throughout this report unless the US\$ is specifically stated. At the time of this report, the rate of exchange between the US\$ and the C\$ is 1 US = 1.28 C\$.

Table 2.2 and 2.3 list the meaning of the abbreviations for technical terms used throughout the text of this report.

TABLE 2.2 TERMINOLOGY AND ABBREVIATIONS			
Abbreviation	ation Meaning		
\$	dollar(s)		
0	degree(s)		
°C	degrees Celsius		
<	less than		
>	greater than		
%	percent		
3-D	three-dimensional		
AAS	atomic absorption spectrometry		
ACME	ACME Labs (acquired by Bureau Veritas)		
Anthem	Anthem Resources Inc.		
asl	above sea level		
Au	gold		
BMI	Bond Ball Mill Index		
BWI	bond ball mill work index		
°C	degree Celsius		
C\$	Canadian dollar		
CDN Labs	CDN Resource Labs		
CIM	Canadian Institute of Mining, Metallurgy, and Petroleum		
CRI	Canadian Royalties Incorporated		
CRM	certified reference material		
CSA	Canadian Securities Administrators		
Cu	copper		
CuEq	copper equivalent		
Со	cobalt		
Company, the	Nickel North Exploration Corp., the company that the report is written for		
CoV	coefficient of variation		
$CV_{AV}$	coefficients of variation		
\$M	dollars, millions		
Е	east		
EM	electromagnetic		
Falconbridge	Falconbridge Ltd.		
Fe	iron		
g	gram		
g/t	grams per tonne		
Goldrock	Goldrock Resources Co., Ltd.		
ha	hectare(s)		
ICP	inductively coupled plasma		
ICP-ES	inductively coupled plasma emission spectroscopy		
ICP-MS	inductively coupled plasma mass spectrometry		
ID	identification		

<b>TABLE 2.2</b>			
	TERMINOLOGY AND ABBREVIATIONS		
Abbreviation	Meaning		
$ID^2$	inverse distance squared		
IGG	interstitial glomeroporphyritic gabbro		
IPG	interstitial porphyritic gabbro		
ISO	International Organization for Standardization		
ISO/IEC	International Organization for Standardization/ International Electrotechnical Commission		
JV	joint venture		
k	thousand(s)		
KEAC	Kativik Environmental Assessment Committee		
KEAC	Kativik Environmental Quality Commission		
kg	kilograms(s)		
km	kilometre(s)		
koz	thousands of ounces		
KRG	Kativik Regional Government		
kW	kilowatt		
lb	pound (weight)		
LiDAR	Light Detection and Ranging		
M	million(s)		
m	metre(s)		
$m^3$	cubic metre(s)		
Ma			
IVIA	millions of years		
MERN	Province of Québec's Ministère de L'Énergie et Ressources Naturelles		
Mlb	millions of pounds		
mm	millimetre		
MRNF	Province of Québec's Ministère des Ressources Naturelles et de la Faune		
Mt	mega tonne or million tonnes		
N	north		
N-S	north-south		
NAD	North American Datum		
Ni	nickel		
NI	National Instrument		
Nickel North	Nickel North Exploration Corp.		
NiEq	nickel equivalent		
Niton	Niton portable XRF		
NN	Nearest Neighbour		
no.	number		
NSR	net smelter return		
NTS	National Topographic System		
NPV	net present value		

TABLE 2.2 TERMINOLOGY AND ABBREVIATIONS				
Abbreviation				
Oceanic	Oceanic Iron Ore Corporation			
OSC	Ontario Securities Commission			
OZ				
P&E	ounce P&E Mining Consultants Inc.			
Pd	palladium			
PEA	Preliminary Economic Assessment			
PEM	pulse electromagnetic surveys			
P.Eng.	Professional Engineer			
PFS	Pre-Feasibility Study			
PGE or PGM	platinum group elements or platinum group metals			
P.Geo.	Professional Geoscientist			
ppb	parts per billion			
ppm	parts per million			
ррш	the Hawk Ridge Nickel-Copper (PGE) Project that is the subject of			
Project, the	this Technical Report			
	the Hawk Ridge Nickel-Copper (PGE) Property that is the subject of			
Property, the	this Technical Report			
Pt	platinum			
PYX	pyroxenite			
	Pyronomic			
QA/QC or QC	quality assurance/quality control or quality control			
QMS	quality management system			
$\mathbb{R}^2$	coefficients of determination			
S	sulphur			
SE	southeast			
SEDAR	System for Electronic Document Analysis and Retrieval			
Sinotech Minerals	Sinotech Minerals Exploration Co., Ltd. of Beijing, China			
SRC	Saskatchewan Research Council			
SW	southwest			
SQ	Sureté du Québec			
t	metric tonne(s)			
t/m <sup>3</sup>	tonnes per cubic metre			
Technical Report	NI 43-101 Technical Report			
Troymin	Troymin Resources Ltd.			
TSL	TSL Laboratories Inc.			
TSX-V	TSX Venture Exchange			
US	United States of America			
US\$	United States dollar(s)			
UTM	Universal Transverse Mercator grid system			
VLF	very low frequency			
VLF-EM	very low frequency electromagnetic			

TABLE 2.2 TERMINOLOGY AND ABBREVIATIONS		
Abbreviation	Meaning	
VTEM	versatile time domain electromagnetic	
W	west	
XPS	Expert Process Solutions	
XRF	X-ray fluorescence	

TABLE 2.3 UNIT MEASUREMENT ABBREVIATIONS			
Abbreviation	Meaning	Abbreviation	Meaning
μm	microns, micrometre	$m^3/s$	cubic metre per second
\$	dollar	$m^3/y$	cubic metre per year
\$/t	dollar per metric tonne	mØ	metre diameter
%	percent	m/h	metre per hour
% w/w	percent solid by weight	m/s	metre per second
¢/kWh	cent per kilowatt hour	min	minute
0	degree	min/h	minute per hour
°C	degree Celsius	mL	millilitre
cm	centimetre	Mlb	millions of pounds
CMS	cubic metre per second	mm	millimetre
d	day	Mt	million tonnes
ft	feet	Mtpa or Mtpy	million tonnes per annum or
			year
GWh	Gigawatt hours	MV	medium voltage
g	gram	MVA	mega volt-ampere
g/t	grams per tonne	MW	megawatts
h	hour	OZ	ounce (troy)
ha	hectare	Pa	Pascal
hp	horsepower	pН	Measure of acidity
k	kilo, thousands	ppb	part per billion
kg	kilogram	ppm	part per million
kg/t	kilogram per metric tonne	psi	pound per square inch
km	kilometre	S	second
km <sup>2</sup>	square kilometres	scfm	standard cubic feet per minute
kPa	kilopascal	sq km	square kilometres
kt	kilotonnes, thousands of	t or tonne	metric tonne
	tonnes		
ktpd	kilotonnes per day	tpa	metric tonne per annum
ktpa	kilotonnes per annum	tpd	metric tonne per day
kV	kilovolt	t/h	metric tonne per hour
kVA	kilovolt amps, 1,000 volt amps	t/h/m	metric tonne per hour per metre
	unpo		mene

TABLE 2.3 UNIT MEASUREMENT ABBREVIATIONS				
Abbreviation	Meaning	Abbreviation	Meaning	
kW	kilowatt	t/h/m <sup>2</sup>	metric tonne per hour per square metre	
kWh	kilowatt-hour	t/m	metric tonne per month	
kWh/t	kilowatt-hour per metric	t/m <sup>2</sup>	metric tonne per square metre	
	tonne			
L	litre	t/m <sup>3</sup>	metric tonne per cubic metre	
L/s	litres per second	Т	short ton	
lb	pound(s)	tpy	metric tonnes per year	
M	million	V	volt	
m	metre	W	Watt	
$m^2$	square metre	wt%	weight percent	
$m^3$	cubic metre	yd	yard	
m <sup>3</sup> /d	cubic metre per day	$yd^2$	square yard	
m <sup>3</sup> /h	cubic metre per hour	yr	year	

#### 3.0 RELIANCE ON OTHER EXPERTS

The Author of this Technical Report has assumed, and relied on the fact, that all the information and existing technical documents listed in the References section of this Technical Report are accurate and complete in all material aspects. Whereas the Author has carefully reviewed all the available information presented, its accuracy and completeness cannot be guaranteed. The Author reserves the right, but will not be obligated to revise the Technical Report and conclusions if additional information becomes known subsequent to the date of this Technical Report.

Copies of the tenure documents, operating licenses, permits, and work contracts were not reviewed. Information relating to tenure was reviewed by means of the public information available through the Province of Québec's Ministère des Ressources Naturelles et de la Faune ("MRNF") on-line claim management system at https://gestim.mines.gouv.qc.ca/. The Technical Report author has relied on this public information, and tenure information from Nickel North and has not undertaken an independent detailed legal verification of title and ownership of the Hawk Ridge Property. The Author has not verified the legality of any underlying agreement(s) that may exist concerning the licenses or other agreement(s) between third parties, but have relied on, and considers that it has a reasonable basis to rely on Nickel North to have conducted the proper legal due diligence.

Select technical data, as noted in the Technical Report, were provided by Nickel North and the Technical Report Author has relied on the integrity of such data.

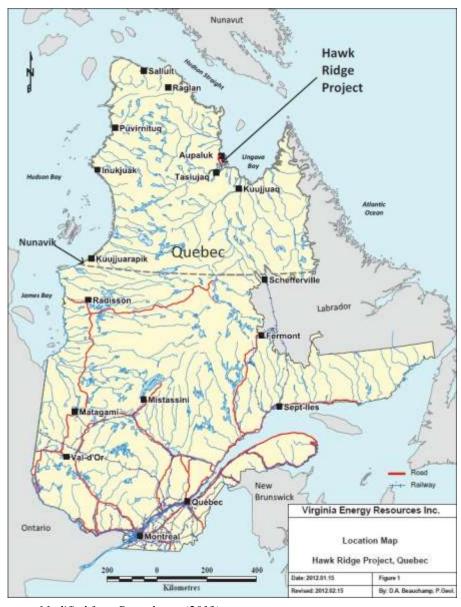
A draft copy of this Technical Report has been reviewed for factual errors by Nickel North and the Technical Report Author has relied on Nickel North's knowledge of the Property in this regard. All statements and opinions expressed in this document are given in good faith and in the belief that such statements and opinions are not false and misleading at the date of this Technical Report.

### 4.0 PROPERTY DESCRIPTION AND LOCATION

#### 4.1 PROPERTY LOCATION

The Hawk Ridge Property is located in northern Québec, approximately 1,550 km north-northeast of Montréal on the west coast of Ungava Bay (Figure 4.1). The Property is in Nunavik Territory, situated in the northern third of Québec. This is the traditional homeland of the Inuit in the province of Québec, where they hold certain ancestral rights and the mineral rights to certain lands. The Property is located at UTM NAD 83 Zone 19N 457,600 m E and 6,548,500 m N, or Latitude 59° 4'2 6" N Longitude 69° 44' 23" W, in NTS (National Topographic System) 24K/14, 24N/03 and 24N/06.

FIGURE 4.1 LOCATION OF HAWK RIDGE PROJECT



Source: Modified from Beauchamp (2013)

#### 4.2 PROPERTY DESCRIPTION

The Hawk Ridge Property comprises 396 mineral claims covering a total area of 17,303.4 ha and the claims extend over a total strike length of approximately 55 km (Figure 4.2). The claims are held 100% by Nickel North. The current status of the claims, including renewal dates, fees, required minimum work and excess credits, have been independently verified by the Author on the Province of Québec's Ministère des Ressources Naturelles et de la Faune (MRNF) on-line claim management system at https://gestim.mines.gouv.qc.ca/, and are summarized in Appendix I. Nickel North has confirmed with the Author the accuracy of the GESTIM claims list. The Property's annual assessment work requirements amount to \$761,520, additional yearly fees total \$49,650. Banked credits from Nickel North's previous exploration programs amount to a combined \$7,381,296.

These mineral claims encompass mineral exploration rights only. All of the Hawk Ridge Property claims are in good standing as of the effective date of this Technical Report. The Mineral Resources stated in Section 14 of this Technical Report are on mineral claims 1017993, 1017994, 1018001, 1019189, 1019192, 2258789, 2258798, 2258797, 2258800, 2258804, 2258805, and 2258808. All these mineral claims are in good standing until at least November 3, 2023. The Property has not been legally surveyed since acquisition by Nickel North and the boundary of individual claims is defined by the MRNF Québec on-line claim management system at the above stated website address.

#### 4.3 AGREEMENTS

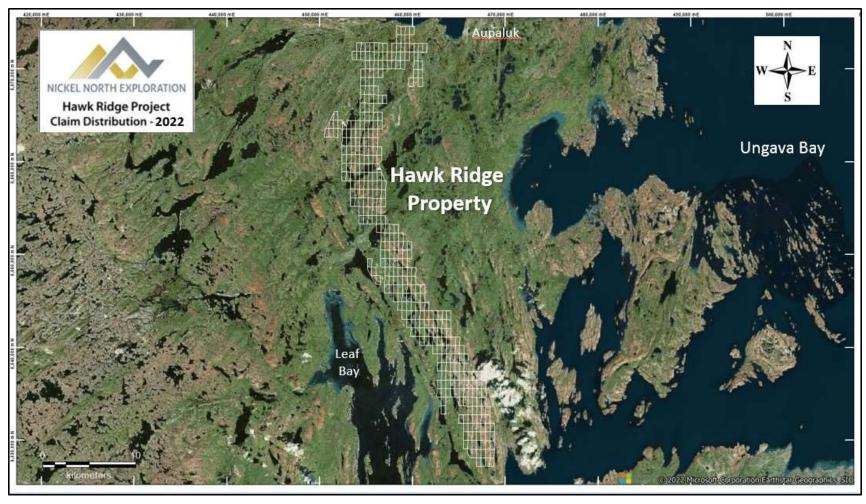
On March 29, 2012, the Nickel North entered into a definitive option agreement (the "Original Agreement") with Anthem Resources Inc. ("Anthem") and its wholly-owned subsidiary (collectively the "Optionor"), whereby the Optionor granted the Company an option to acquire a 100% interest in the Hawk Ridge Property. Under the Original Agreement, the Company agreed to make staged payments totalling \$2,000,000 in cash and \$1,000,000 in common shares of the Company to Anthem by December 31, 2013.

On August 8, 2012, the Company obtained the TSX-V approval of the option agreement with Anthem as its Qualifying Transaction and graduated from being a Capital Pool Company to a Tier 2 mining issuer on the TSX-V.

In accordance with the Original Agreement, the Company made the following staged payments:

- On August 2, 2012, the Company made its first option payment of \$500,000 in cash and issued 1,250,000 common shares of the Company to Anthem. In addition, the company issued a total of 2,302,032 non-flow-through units to Anthem for the total expenses of a geophysical survey conducted by Anthem in the amount of \$460,406; and
- On December 31, 2012, the Company made its second option payment to Anthem in the amount of \$500,000 cash and issued a further 1,250,000 common shares.

FIGURE 4.2 HAWK RIDGE PROJECT CLAIM MAP



**Source:** Google Earth (2022) and P&E (2022) **Note:** Claims information effective May 9, 2022

The option agreement was amended on February 15, 2013, (the "Second Amendment") and subsequently amended again on April 17, 2013 (the "Third Amendment").

Under the Third Amendment, in lieu of paying \$1,000,000 in cash on or before December 31, 2013, the Company agreed to issue to the optionors the number of units (the "Conversion Units") equal to \$1,000,000 less such amount equal to 20% of the cost incurred by the optionors for the geophysical survey, which is estimated to be \$907,919, divided by \$0.25 per Conversion Unit. Each Conversion Unit will consist of one common share and one half of one common share purchase warrant with each whole warrant entitling the holder to acquire one additional common share for a period of two years, at an exercise price of \$0.35 per share in the first year and \$0.60 per share in the second year. In addition, the Company has agreed to issue the remaining common shares equal to \$500,000 divided by the greater of \$0.20 or a 10% discount to the 20-day moving average trading price of the Company for the 20-day period immediately preceding the date of issuance. The Company agreed to change the timing of the issuance of the Conversion Units and the remaining common shares from December 31, 2013, to within 10 business days of the receipt of approval from the TSX Venture Exchange for the Third Amendment.

On May 1, 2013, the Company acquired 100% ownership of the Project with 3,631,675 common shares and 1,815,838 warrants issued to Anthem on conversion of the cash payment. The Company also issued 2,500,000 common shares pursuant to the Third Amendment.

The majority of the Property is subject to a 3% net smelter returns royalty ("NSR") and the Company has the option to purchase one third of the NSR (1%) at any time for \$1,000,000 and has a first right-of-refusal on the second 1%.

On November 5, 2012, the Company entered into a Cooperation Framework Agreement with Goldrock Resources Co., Ltd. ("Goldrock"), a subsidiary of Sinotech Minerals Exploration Co., Ltd. of Beijing, China ("Sinotech Minerals"). The agreement was signed at the China International Mining Conference 2012 in Tianjin and witnessed by the Premier of the Ministry of Land and Resources of China. The agreement sets in place a formal, growth-oriented framework to harness synergies and leverage the combined resources and core competencies of the two parties. Terms of the Cooperation Framework Agreement include, but are not limited to:

- Nickel North to table a detailed "Acquisition Strategy" for approval by both parties within 180 days of this Agreement;
- Goldrock to provide technical expertise, financial resources and its international and industry connections to source and fund projects of exceptional merit;
- Nickel North to become a specialized entity that evaluates, acquires and exploits Ni, Cu, PGE opportunities globally;
- Initial focus on advanced-stage exploration on the "Hawk Ridge Ni-Cu (PGE) Property"; and
- Goldrock or its nominee(s) to have first option to provide funding for the Hawk Ridge Property and other property acquisitions.

Due to unfavourable financial markets in the Mineral Resource sector, agreement-related activities between November 3, 2016, and February 22, 2022, included several related-party loans, loan increases and loan extensions to Nickel North, and debt settlements by Nickel North (press releases available under the Company profile at www.sedar.com).

## 4.4 THE QUÉBEC MINING ACT AND CLAIMS

Claims are valid for a period of two years at a time and convey mining rights only, with no surface rights applied. Claims must be renewed prior to their expiry date to maintain claims in good standing and each claim may be renewed indefinitely, provided the holder meets all the conditions set out in the Québec Mining Act, including carrying out and filing the minimum work required on each claim 60 days prior to the anniversary date of the claim. Work performed in excess of the prescribed requirements may be applied to subsequent claim terms.

Details on claims renewals, work credits, claim access rights, allowable exploration, development, mining works, and site rehabilitation are summarized in the Mining Act of Québec available at www.publicationsduquebec.gouv.qc.ca. In Québec, available mining lands are defined as georeferenced polygons which can be applied for by holders of Québec prospecting licenses through an online portal and payment of a fee online. When acquired, mineral rights are renewable biannually on the anniversary of acquisition. To meet the criteria for renewal, the claim holder must provide evidence that a sufficient value of current and historic exploration work was completed on the claim or nearby claims held by the claimholder or a partner. Exploration work is submitted in reports to MERN and the value of said work is banked against the claims where the work was performed. Renewals can use banked credits to support the renewal of a claim where the work was performed or for nearby adjacent claims. The claim under renewal must be located within a radius of 4.5 km from the centre of the claim from which the banked work credits will be taken.

#### 4.5 MINING RESTRICTIONS

Three types of staking restrictions are present on mining-related activities near the Hawk Ridge Property:

- 1. Mineral exploration is prohibited to the east and southwest of the Property due to the proposed Baie-aux-Feuilles (Leaf Bay) Provincial Park over these areas. Claims cannot be staked in these areas and exploration programs would not be approved;
- 2. The Inuit have owned the mineral rights to a northeast-trending belt in the Aupaluk area to the North and on either side of the Property area since November 24, 1988. Exploration is permitted under specific conditions on Category I Lands. However, an agreement is required with the Inuit for any work to be carried out on these lands. There is some overlap in the areas of the proposed park and Category I Lands, particularly in the area to the northeast of the Hawk Ridge Property; and

3. Another area of Category I Lands is located in the Tasiujaq area south of the Hawk Ridge Property area. This area also overlaps with the proposed Baie-aux-Feuilles Park.

#### 4.6 ENVIRONMENTAL REGULATIONS

The following description relating to Environmental Regulations has relied heavily on Beauchamp's 2012 Technical Report on the Property.

Falconbridge Ltd. ("Falconbridge") and its partners carried out significant exploration programs in the area between 1961 and 1974 and operated a small mine on the Pio Lake Zone from 1973 to 1974. An adit and drifts were developed, several of which were open to surface where they can be observed as pits. When the Falconbridge abandoned the mining site in the area in 1974, it left a significant amount of industrial waste, equipment, explosives and fuel drums on the site.

When Troymin Resources Ltd. ("Troymin"), a predecessor company to Nickel North, acquired an exploration permit over the Property in late-1995, it contracted an environmental review of the Pio Lake Zone area and recognized the potential safety risk of the explosives present in the area. It contracted the Sureté du Québec (SQ), the provincial police force in early-1996 to destroy all the explosive material in the area and secure the site.

As a follow-up to a study completed in 2002 by Kativik Regional Administration, a local administrative agency in northern Québec, of 193 sites examined in all of Nunavik, the Pio Lake site was determined to be one of the mining sites in need of rehabilitation. In 2007, several mining companies based in Québec funded a project to clean-up many of these sites. Over a three-week period in December 2009, 20 trips were made to move 15 large pieces of heavy equipment, including a crane, tractor, crusher and generator motors to Aupaluk along a temporary winter road on the tundra.

In 2010, additional clean-up work was completed on the site. Some of the material was shipped south to Montréal for disposal and several of the larger pieces were left in Aupaluk. As part of the rehabilitation program, a total of 43.5 tonnes of metal and 440 kg of aluminum were shipped south for recycling.

Ten additional trips were made from Lac Pio to Aupaluk in 2011 to remove other equipment. At the request of the community of Aupaluk, the trailer was left on-site to be used as a shelter in case of emergency during the winter (Administration Régionale Kativik, 2011).

Although the 2011 rehabilitation report completed by the Administration Régionale Kativik quotes a water pH reading of 6.9, indicating that no acid rock drainage issues are present, the soils nevertheless indicated higher than acceptable levels of copper, nickel and iron. The total area of contaminated soils at Pio Lake Zone has been estimated at 115 m<sup>2</sup>.

Another site at the south end of Lac Laliberté has been identified as a site requiring an intermediate level of rehabilitation. Although this site is on the Hawk Ridge Property, it is not one that was used by the Nickel North or by its predecessor companies. The site is recent and has many barrels of fuel (several of which are full), burnt aluminum metal, propane tanks and old beds. In the field site

inspection carried out in November 2011, a quick inventory of the Company's 1996-1997 camp site on the east shore of Lac Déry revealed that the drill core from the 1996-1997 drilling campaign was neatly cross-stacked and inventoried. The site was relatively clean and, other than the drill core, an old wooden shack and one empty barrel are still on-site.

There are no other known or reported land improvements, mine workings or tailings ponds on the Hawk Ridge Property. The Property is otherwise free of liens or pending legal actions, back-in rights, payments or other encumbrances. There are no other known existing environmental liabilities to which the Property is subject.

Owners of mineral claims do not have the rights to surficial materials, such as sand or gravel. The Company is required to request permits from the provincial government and the Nunavik Government to establish camps and for the use of surficial materials. The Company would be further required to request permission from the Inuit communities if trails or roads were required to ferry equipment onto the Property.

In 2002, the Government of Québec gave the responsibility for management activities and services, and for the protection and enhancement of the parks proposed in Nunavik to the Kativik Regional Government (KRG). The provincial park for Baie-aux-Feuilles was proposed at least 25 years ago. If mineral development or a mining operation were to be proposed for the Hawk Ridge Property, additional negotiations would be required with the Kativik Regional Government to mitigate any potential damage to the proposed park area.

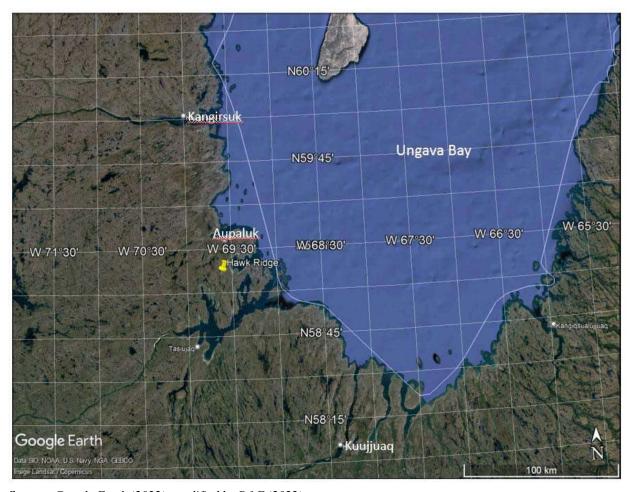
Since the Property is located between two sections of land that are proposed as a park and near land that is owned by the Inuit, there is a risk that any exploration or development of the Property could be delayed by the local population and non-governmental organizations. The corridor of the Hawk Ridge Property itself, however, is "grandfathered" or reserved for mining claims by the MRNQ (personal communication P. Mudry, previously President and CEO of Nickel North).

# 5.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

### 5.1 ACCESS

Primary access to the Hawk Ridge Property is by air from Montréal to Kuujjuaq. Air Inuit and First Air have daily scheduled flights servicing Kuujjuaq (Figure 5.1). Air Inuit also flies from Kuujjuaq to several other Inuit communities, including Aupaluk. The centre of the Property is approximately 130 km northwest of Kuujjuaq and 30 km south of Aupaluk. From Kuujjuaq, the Property is typically accessed by chartered helicopter or float planes. Coastal areas of the Property on Hopes Advance Bay are also accessible by boat from Aupaluk.

FIGURE 5.1 REGIONAL LOCATION MAP



Source: Google Earth (2022), modified by P&E (2022)

#### 5.2 CLIMATE

The Hawk Ridge Property is located near the northern boundary of the Taiga Shield ecozone with the Southern Arctic ecozone. At the Property, the climate is Arctic to Subarctic with cold, snowy,

windy and overcast winters and cool, cloudy, and windy summers. Precipitation is light and generally concentrated in the warmer months. In Kuujjuaq, the temperature typically varies from -28 °C in January-February to 18 °C in July-August, and rarely falls below -36 °C or rises above 25 °C data from www.weatherspark.com). Average annual precipitation in Kuujjuaq is 541 mm.

#### 5.3 LOCAL RESOURCES

There are fourteen villages within the Nunavut Territory that are mostly located along the coast of Hudson Bay on the west, Hudson Straight to the north and Ungava Bay to the east. The total population of the territory is estimated to be 12,000. The majority of the residents are Inuit.

With a population of 2,375 (2011 Census), Kuujjuaq is the regional centre for the area and the administrative capital of the Kativik Regional Government. Kuujjuaq is the main transportation centre of the region and has been the main supply centre for the Hawk Ridge Property in previous years. Float plane and helicopter air transport can be obtained from the village and maritime shipping is also available from Montréal to Kuujjuaq. Kuujjuaq has an airport with two runways, a number of hotels, restaurants, stores and a bank.

Aupaluk has a population of 195 (2011 census) and is the closest community to the Property. Aupaluk hosts basic port facilities where regular shipping to and from Montréal is available from about late June to late November. Tasiujaq, another small community with population of approximately 300 people and a small aircraft runway, is located several km southwest of the southern end of the Property.

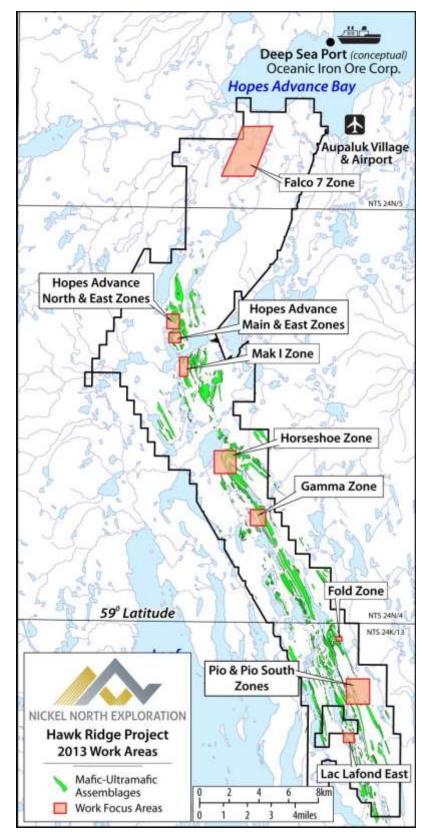
A limited number of unskilled and semi-skilled people could be hired in Kuujjuaq and Aupaluk. Fixed-wing landing strips are present at Kuujjuaq, Aupaluk and Tasiujak. The airport at Kuujjuaq can accommodate jet aircraft, including the Boeing 737. Basic food, supplies and equipment can be obtained from Kuujjuaq. Major equipment and supplies such as fuel and machinery must be shipped from Montréal to the Property area. Nunavut Enterprise Arctic Shipping Inc., a business owned and operated by Inuit, runs a shipping service from Montréal to coastal communities in the Arctic, including Kuujjuaq and Aupaluk.

#### 5.4 INFRASTRUCTURE

The Property area benefits from access to tide water. A deep-sea port has been proposed by Oceanic Iron Ore Corp., on the north shore of Hopes Advance Bay (Figure 5.2), for a proposed iron mining operation 20 to 50 km west of Aupaluk. The shipping season at Aupaluk is normally from mid-to late-June until late-November. Electrical power is available in Aupaluk, but additional facilities would be required for mining.

The nearest road access is the Trans-Taiga gravel road located 380 km south of Kuujjuaq. The Trans-Taiga road extends from Radisson east for 580 km following the electric generating stations operated by Hydro-Québec along the La Grande River and Caniapiscau River, part of the James Bay Project. Proposals have been made to extend the Trans-Taiga Road north to Kuujjuaq as part of the "Plan Nord", a program for the development of the northern part of Québec. A railway from Sept-Iles was constructed to the north to service the iron mines in the Schefferville area, located approximately 370 km south of Kuujjuaq.

FIGURE 5.2 LOCAL RESOURCES



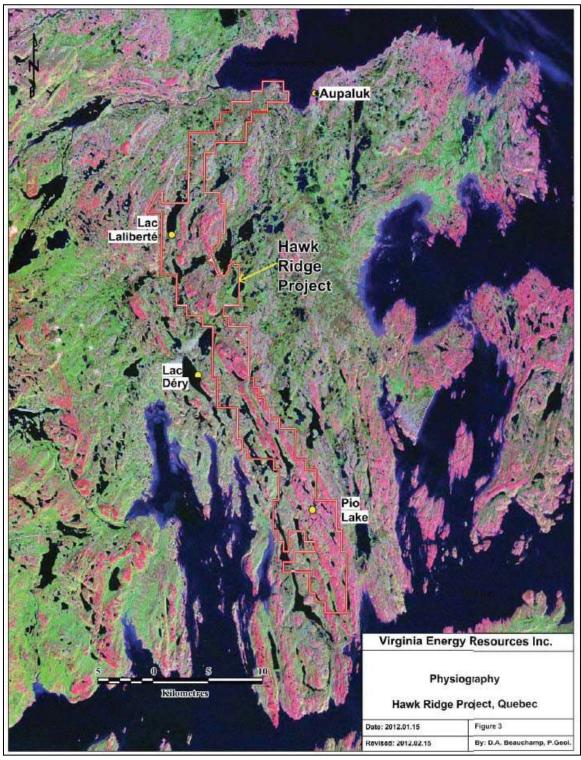
**Source:** P&E (2014)

# 5.5 PHYSIOGRAPHY

Geographically, the Property is located west of Ungava Bay and extends for 50 km from Hopes Advance Bay in the north to Baie-aux-feuilles in the South. The Property is in the Arctic and is north of the tree line. Elevations range from sea level in the north at Hopes Advance Bay to locally >150 m. Typically the Property area is at least 50 m above sea level and several lakes are available as sources of water (Figure 5.3).

The Property area has very good outcrop exposure with limited soil development. The vegetation is represented mostly by minor grass and sedges in low-lying swampy areas with minor dwarf shrubs.

FIGURE 5.3 HAWK RIDGE PROPERTY PHYSIOGRAPHY



Source: Beauchamp (2012)

# 6.0 HISTORY

The first claims were staked in 1961 for the Hawk Ridge Property, when the Sogemines-Falconbridge-Lone Star joint venture worked the Lac Pio area. The historical work completed on and in the region of the Property is summarized in Table 6.1.

	TABLE 6.1 SUMMARY OF HISTORIC EXPLORATION ON THE HAWK RIDGE PROPERTY						
Year	Company/Person	Exploration					
1894	A.P. Low	The presence of iron in sedimentary rocks in the area west of Aupaluk and of Hopes Advance Bay reported.					
1930s	Murray Watts	Watts was one of the first prospectors to venture in the Ungava Trough (Raglan), located about 350 km to the north of the present-day Property. In the Labrador Trough, activities were focused on sedimentary iron exploration (1929-1970).					
1936		Earliest recorded rock sampling along north and south shores of Leaf Bay; results not available.					
1951	Fenimore Iron Mines	Six lines of an aeromagnetic survey flown in N-S direction immediately N of Leaf Bay and 13 km SW of Property.					
1952- 1954	Fenimore Iron Mines	Additional prospecting/mapping completed at base of Labrador Trough sedimentary sequence northwest, west and southwest of Property; iron formation identified.					
1955	Fenimore Iron Mines	Prospecting/mapping on claims in south extension of Property near Leaf Bay; presence of sulphide zones in sedimentary and volcanic rocks reported.					
1958	Ungava Iron Mines	Drilling carried out at Ford Lake Property, west of Hopes Advance Bay. Government also undertook several geological mapping programs at a scale of 1:63,360 in Project area (Freedman and Philpotts, 1958; Bérard, 1959; Gold, 1962).					
1961- 1963	Falconbridge Nickel Mines	Extensive drilling and development at Lac Pio and southern part of Project area and Hopes Advance North Zone. Drilling, trenching and magnetic/electromagnetic surveys at Hopes Advance Main Zone. A pilot plant was established by Oceanic Iron Mines in 1962 to determine potential beneficiation of sedimentary iron at Hopes Advance Bay to the west of the Property. Flotation and spiral tests were carried out in an Aerofall mill.					
1971- 1974	Lone Star / Falconbridge Nickel Mines Ltd. / Premium Iron Ores Ltd. Joint Venture	Extensive drilling and development work mainly at Pio Lake and in the south part of the Hawks Ridge Project area, and drilling at Hopes Advance Main Zone. Ground magnetometer and VLF-EM survey of Lac Pio area with follow-up drilling. Airborne EM, magnetometer and radiometric survey over areas to the west and southwest of the Property in search of iron ore. Detailed geological					

	TABLE 6.1 SUMMARY OF HISTORIC EXPLORATION ON THE HAWK RIDGE PROPERTY						
Year	Company/Person	Exploration					
		mapping and ground EM and magnetic surveys of Lac Pio area and northeast of Hopes Advance 6. A 2.5 m × 3.0 m adit driven to a length of 113 m at Lac Pio to reach the east and west veins approximately 17 m below surface. Approximately 4,200 t of sulphides mined from both veins and an additional 1,200 t mined from open pit. Historical resource estimate calculated for small zone of mineralization on Property; calculation not compliant with NI 43-101 regulations and should not be relied upon. Number of drill holes completed in Lac Pio area. Lakefield Research of Canada performed a study on the recovery of copper and nickel from Lac Pio. Adit extended at Lac Pio by 80 m. Nine trenches dug and ground magnetometer survey performed near Schindler Zone on ground held by Falconbridge/Genstar. Pilot plant including crushing, grinding, screening and concentration facilities capable of 20 tons per hour was set up at Lac Pio. The central part of the permit at the Schindler showing was mapped and 16 drill holes completed.					
1974	Falconbridge Nickel Mines Ltd.	Project abandoned by Falconbridge toward end of 1974 season					
1971- 1979	Imperial Oil/Esso Minerals Canada	Reconnaissance exploration and diamond drilling in the central and northern part of the Hawk Ridge Project area. Hopes Advance claims acquired from Ross Thoms; claims that had been worked in 1961-1962 by Falconbridge and in 1973-1974 by the Lone Star Mining joint venture. Geological mapping, ground EM and magnetometer surveys, trenching and drilling completed at Hopes Advance North area.					
1982- 1983	Daniel Larkin	Ten claims staked over the Hopes Advance Main and Hopes Advance North Zones in 1982 and magnetometer survey carried out over part of the claims in the following year.					
1986	La Fosse Platinum Group Inc.	Mineral exploration company collected 45 rock samples from Lac Pio area and recommended follow-up work.					
1987- 1988	Riverton Resources Corporation	Acquired exploration permit of 75 km <sup>2</sup> over the Lac Pio area and completed detailed mapping and rock sampling of the Lac Pio region.					
1988	Daniel Larkin	Claims staked and additional prospecting and soil sampling completed at Hopes Advance Main Zone.					
1992	Phelps Dodge Corporation	Geological mapping, prospecting and rock sampling completed at the Hopes Advance 5, 6 and 7 areas.					

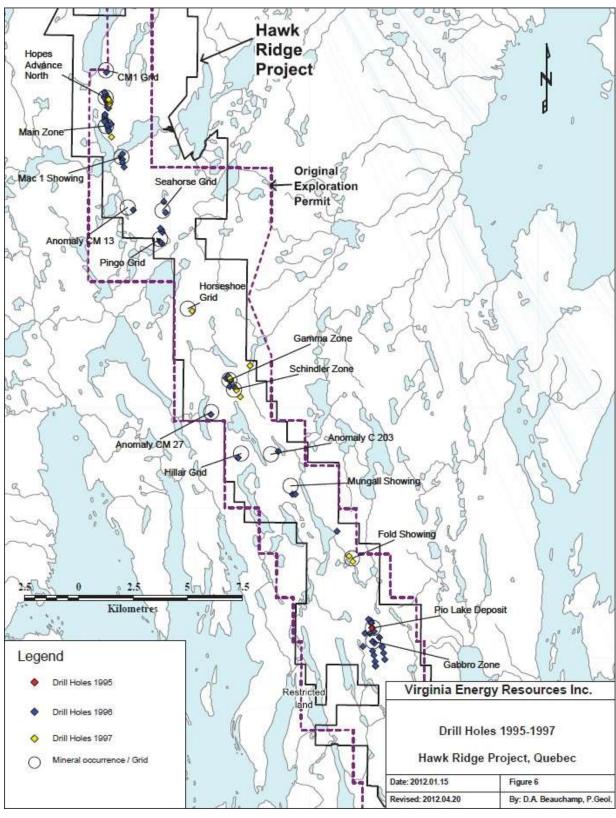
TABLE 6.1 SUMMARY OF HISTORIC EXPLORATION ON THE HAWK RIDGE PROPERTY							
Year	Company/Person	Exploration					
1992	Daniel Larkin	Eleven claims held on Lac Pio mineralized zone. Work carried out on samples from Lac Pio Zone by CANMET (Ottawa), suggested grinding and magnetic separation of sulphides to produce separate copper and nickel concentrates was preferred processing method due to limited tonnage. Direct shipping of mineralization also considered.					
1995- 1997	Troymin Resources and International Butec Industries	Claims optioned from Daniel Larkin and acquired large exploration permit including Pio Lake, Schindler, Hopes Advance Main and Hopes Advance North Zones. Work consisted of ground geophysical surveys, helicopter-borne magnetic and EM survey, geological mapping, trenching and 117 drill holes (5,765 m) completed. In late-1997, Troymin commissioned a preliminary resource calculation on the Hopes Advance Main Zone using assay data from 14 drill holes from the 1996-1997 drilling campaign and from incomplete data in two drill holes completed in 1962. This resource calculation is historical in nature and not NI 43-101 compliant, and therefore cannot be relied upon.					
1999	Centre de Recherche Minérale (City)	Study carried out to determine, if possible, to concentrate nickel and copper sulphides from Hopes Advance Main Zone by performing drop tests on drill core and rock samples. Study inconclusive.					
2000	Behr (2000)	Bachelor of Applied Science thesis from University of Toronto studied rock samples from Hopes Advance North and calculated an average temperature of formation of $367^{\circ}\pm100^{\circ}$ and pressure of 5.77 kbar from garnet and biotite pairs.					
2001	Troymin Resources	Troymin Resources owned 100% of Property and contracted Dr. J. Mungall, of University of Toronto, to carry out a program to evaluate potential for platinum group elements (PGE) at Hopes Advance North. Drill core from previous drill holes analyzed for PGE.					
2001	Daniel A. Beauchamp	Report prepared documenting available data on PGE of Property.					
2002- 2003	Troymin Resources/ Santoy Resources Ltd.	Troymin buys out International Butec's interest; 2003 merger of Troymin with Santoy Resources with company continued under Santoy Resources Ltd. name. Daniel A. Beauchamp completed an additional summary report on the Property for Santoy.					
2004	Santoy Resources Ltd.	Carried out brief sampling program at Property, but little information available.					

	TABLE 6.1 SUMMARY OF HISTORIC EXPLORATION ON THE HAWK RIDGE PROPERTY							
Year	Company/Person	Exploration						
2009	Santoy Resources Ltd./Virginia Uranium Ltd. (Virginia Energy Resources Inc.)	Santoy Resources merged with Virginia Uranium Ltd. to form Virginia Energy Resources Inc. Continuous ownership of original claims and expansion of claim ownership. Performed extensive work including airborne and ground geophysical surveys, rock sampling, geological mapping and diamond drilling.						
2010- 2012	Virginia Energy Resources Inc. (Orient Ventures Capital Inc.)	No exploration or drilling was carried out at the Property until August 2012.						
2012	Orient Ventures Capital Inc. (Nickel North)	The Company, previously incorporated as Orient Ventures Capital Inc., changed its name to Nickel North on July 30, 2012.						

# 6.1 HISTORICAL DRILLING RESULTS

The following summary is based largely on Beauchamp (2012). Significant drill programs were completed on the Hawk Ridge Property in the early 1960s and particularly in the mid-1990s. Between 1995 and 1997, the joint venture completed 117 drill holes totalling 15,765 m on the Hawk Ridge Property (Figure 6.1 and Table 6.2).

FIGURE 6.1 TROYMIN-BUTEC JV 1995 TO 1997 DRILL PROGRAMS



Source: Beauchamp (2012)

TABLE 6.2 TROYMIN-BUTEC JV 1995 TO 1997 DRILLING						
Grid or Zone	Number of Drill Holes	Total Metres				
Anomaly C-203	1	101.00				
Bacchus Grid	2	100.00				
Bay Grid	1	97.90				
CM-!	1	149.00				
CNM-13	1	119.00				
Fold Grid	2	343.00				
Gamma Zone	15	2,772.70				
Hopes Advance Main	15	2,922.00				
Hopes Advance North	30	3,892.00				
Hillar Grid	1	101.00				
Horseshoe Grid	1	90.00				
Line CM-7	1	101.00				
Mac 1	4	453.00				
Mungall Grid	2	202.00				
Pingo Grid	5	637.00				
Pio Zone	29	2,841.30				
Schindler Zone	4	621.00				
Seahorse Grid	2	222.00				
Total	117	15,764.90				

Source: Beauchamp (2012)

The **Pico Lake Zone** area was drilled extensively in the 1960s and 1970s, but little of the information and none of the drill core are available. Four drill holes totalling 198 m were completed by the Troymin and Butec joint venture in 1995, and confirmed the presence of coppernickel mineralization at Pico.

Drilling 300 m north of the Pio Lake Zone in 1996 confirmed the presence of massive sulphide mineralization in altered basalt. Drilling in HR 96-73 reported an average grade of 2.72% Cu and 0.32% Ni over 2.28 m, and in HR 96-90 an average of 2.0% Cu and 0.34% Ni over 4.6 m in altered basalts north of the northeast-trending fault.

Additional zones of mineralization in the region are at the Gabbro Zone, about 600 m to the south of the Pio Lake Zone where a composite 0.66% Cu and 0.23% Ni were intersected over 28.6 m in glomeroporphyritic gabbro in HR 96-77 at the contact between peridotite above, and basalt below. The drill hole east of the fold axis of an overturned syncline was drilled into peridotite. The nearby drill hole HR 96-78 was collared into the lower part of the porphyritic gabbro and only three sporadic samples were taken between 82.48 m and 96.62 m sampled. This mineralization was considered identical in lithology and style to that at the Hopes Advance Main Zone and at Schindler (see below).

At the Gamma Zone, in drill hole 9-53 the highest copper value is 1.310% Cu and highest nickel is 0.16% Ni. At the nearby Schindler Zone, an average 0.334% Cu and 0.16% Ni were reported over 10.5 m, not true thickness in drill hole HR-97-102. The massive sulphide interval reported on surface was not intersected at depth

In 1962, the **Hopes Advance Main Zone** was tested by several channel samples and by two drill holes completed for a total of 676 m. The Main Zone was further evaluated by Troymin in 1996 to 1997 with 15 drill holes completed for 2,922 m. The drilling program was planned to extend the known massive sulphide zones. The drill program discovered a high-grade massive sulphide zone at the south end of the Hopes Advance North grid and extended the mineralization the massive sulphides at depth at Gamma.

Highlight intersections from the Hopes Advance holes are presented in Table 6.3.

TABLE 6.3 HISTORICAL HOPES ADVANCE MAIN DRILLING RESULTS								
Drill Hole ID	From (m)	To (m)	Length (m)	Number of Samples	Cu (%)	Ni (%)	Co (%)	
62-01	287.70	335.00	47.60	1	0.67	0.22		
62-02	138.98	201.00	61.57	1	0.56	0.15		
96-08	90.60	127.00	36.80	28	0.59	0.18	0.01	
96-09	49.00	98.00	49.00	52	0.49	0.17	0.01	
96-10	65.00	112.00	46.57	47	0.45	0.16	0.01	
96-11	68.82	96.40	27.60	18	0.52	0.2	0.01	
96-12	56.00	85.90	29.92	21	0.51	0.19	0.01	
96-13	44.40	74.50	30.05	21	0.57	0.19	0.01	
96-14	38.33	74.20	35.89	25	0.50	0.18	0.01	
96-15	28.02	41.00	12.96	10	0.67	0.28	0.01	
96-15	47.45	53.40	5.98	1	0.65	0.06	0.01	
96-16	48.50	51.70	3.16	2	0.55	0.25	0.01	
96-16	56.10	62.00	5.90	4	0.30	0.15	0.01	
96-17	112.40	178.00	65.20	45	0.41	0.21	0.01	
96-18	166.89	244.00	76.64	52	0.47	0.19	0.01	
96-20	367.08	414.00	46.58	19	0.54	0.17	0.01	
96-21	1.39	362.00	360.61	124	0.56	0.19	0.01	
HR-2012-07	59.00	117.00	58.12	60	0.52	0.19	0.01	
HR-2013-16	416.50	452.00	35.90	37	0.54	0.22	0.01	

Source: Beauchamp (2012), modified by P&E (2022)

*Notes:* Data for HR\_62-01 and HR\_62-02 are available as composited assays only

HR\_62-01 and HR\_96-21 were drilled down-dip

cf. Wares (1997)

The new massive-sulphide zone at Hopes Advance remained open along strike and the Gamma Zone remained open at depth (Mungall and Wares, 1997).

The most important mineralization is commonly reported 1 m to 20 m above the base of the host intrusion, as in drill hole 96-10, where grades 0.7% to 1.4% Cu and 0.2% to 1.03% Ni are reported over a total drill core length of 9.24 m. The composite assays show a consistent average grade of mineralization throughout the unit that averages 0.54% Cu and 0.20% Ni over 46.6 m. However, in some other drill holes, such as HR 96-20, the better mineralization occurs near the metasedimentary unit that has been hornfelsed where composite grades of 0.51% Cu and 0.17% Ni are reported over a drill core length of 51.66 m.

In 1962, at the Hopes Advance North Zone, Falconbridge and its joint venture partners completed four drill holes totalling 600 m in the area. Extensive trenching in the early 1960s reported a composite grade of 6.34% Cu and 1.09% Ni over 17.3 m (not true width) of massive sulphides. In 1996, Troymin-Butec completed 26 drill holes totalling 3,111 m and in 1997 four more drill holes were completed totalling 764 m. Best values in drill hole 96-35 were 0.737% Cu and 0.128% Ni.

In three drill hole fences along a new zone called the Hopes Advance Middle Zone, the drilling intersected massive and disseminated sulphides extending approximately 200 m south of Hopes Advance North. In these three areas, massive, stockwork and disseminated chalcopyrite and pyrrhotite mineralization are associated with graphitic schist and with porphyritic gabbro.

Assays for drill hole HR 96-03 returned 1.3 g/t Pd over 0.88 m at 37.17 m; 3.5 g/t Au over 1.2 m at 45.8 m; 1.0 g/t Pt, 2.8 g/t Pd, and 2.1 g/t Au over 1.0 m at 71.05 m; and 1.1 g/t Pd over 5.0 m at 78.0 m to 83.0 m. These intervals are probably not true thicknesses, due to the complex structural environment in this area.

In a fence of three drill holes approximately 245 m south of the Hopes Advance North a zone of massive sulphides was intersected in two drill holes. In drill hole HR 96-32 the interval of massive sulphides started at bedrock where a composite value of 1.87% Cu and 0.74% Ni were reported over an interval of 4.0 metres true thickness. The first interval of this composite reported 1.18% Cu and 2.0% Ni over 1 m.

Collared to test the down-dip extension of drill hole HR 96-32, drill hole HR 97-112 intersected 2.45% Cu and 0.39% Ni over 3.5 m true thickness, with values of 0.55% Cu and 5.0% Ni over 0.5 m. Drill Hole HR 97-114 drilled farther down-dip, intersected only disseminated mineralization grading 0.21% to 0.81% Cu and averaging 0.50% Cu and 0.19% Ni over 24.0 m, not true thickness.

#### 6.2 HISTORICAL RESOURCE AND RESERVE ESTIMATES

Historical resource and reserve estimates generated by Falconbridge Nickel Mines in 1963, the Lone Star joint venture in 1973, and the Troymin-Butec joint venture in 1997 (Paul, 1997) are summarized below. The historical resource and reserve estimates summarized and tabulated below are historical in nature and, as such, are based on prior data and reports prepared by previous operators and are not in compliance with NI 43-101. A Qualified Person has not done the work necessary to verify the historical estimates as current estimates under

NI 43-101 and the estimates should not be relied upon. There can be no assurance that any of the resources, in whole or in part, will ever become economically viable. Nickel North is not treating the historical estimates as current Mineral Resources or Mineral Reserves. The Company has completed the necessary work to establish a current Mineral Resource on the Hawks Ridge Property as presented in Section 14 of this Technical Report.

From 1961 to 1963, Falconbridge Nickel Mines completed initial exploration and discovered the Hopes Advance Main Zone and Schindler Zone. Drilling was sparse, but the following rough estimate of the geological ore reserves was reported in 1963 (Paul, 1997):

**Hopes Advance Main Zone:** 20.2 million tons grading 0.59% Cu and 0.16% Ni. **Hopes Advance No. 1 North Zone:** 0.043 million tons grading 2.17% Cu and 0.33% Ni. **Schindler Zone:** 6.1 million tons grading 0.69% Cu and 0.23% Ni.

Subsequently, a historical reserve for the Pio Zone was calculated by Lone Star Mining in 1973, as follows (Paul, 1997):

**Pio Lake East Vein:** 17,000 tons grading 5.85% Cu and 0.25% Ni. **Pio Lake West Vein:** 26,500 tons grading 6.4% Cu and 3,0% Ni.

In 1973-1974, a total of 6,437 tonnes of mineralization were mined by Lone Star from underground and open pits on both of the Veins. The remaining resource was estimated to be 7,260 tonnes grading 6.9% Cu and 0.3% Ni in the East Vein and 9,662 tonnes grading an average of 6.6% Cu and 3.2% Ni in the West Vein of the Pio Lake Zone (Lone Star Mining, 1974).

In 1997, Troymin estimated a preliminary resource calculation on the Hopes Advance Main Zone (Paul, 1997). The mineralization occurs in a porphyritic gabbro body that dips 40°E and outcrops over an area 30 m wide and 800 m long. The zone of mineralization was intersected in two drill holes completed in 1962 and 15 drill holes were completed in 1996-97. The resource calculation was made using assay data from 14 drill holes from the 1996-1997 drilling campaign and from incomplete data in two holes drilled in 1962 and provided to a depth of approximately 500 m (Table 6.4).

TABLE 6.4 HISTORICAL (1997) RESOURCE CALCULATION FOR HOPES ADVANCE MAIN ZONE									
Classification Reserves Copper Nickel Cobalt (%) (%)									
Proven Reserves	28.9	0.52	0.17	< 0.01					
Probable Reserves 19.5 0.56 0.18 <0.01									
<b>Total (Proven and Probable)</b>	48.4	0.51	0.18	<0.01					

Source: Paul (1997) as given in Beauchamp (2012). Find Paul (1997) and check resource versus reserve

In addition to the reserves reported in Table 6.4, Paul (1997) also reported possible reserves of 40-50 million tonnes grading 0.54% Cu, 0.18% Ni and <0.01% Co.

Paul (1997) reported on three scenarios for open pit operations at 8,000 and 10,000 tonnes per day and on four scenarios of underground mining at 8,000 tonnes per day.

Note that the Qualified Person has not done sufficient work to classify the historical resource estimate as current Mineral Resources or Mineral Reserves. The calculations were not made by a Qualified Person. The historical resource estimate is not being treated as current Mineral Resources or Mineral Reserves. The economic projections are invalid, because many of the assumptions were not based on factual data, they are based on outdated economic parameters and are no longer acceptable. The historical estimates of mineral reserves calculated by Paul (1997) are not being treated as current Mineral Reserves and should not be relied upon.

#### 6.3 PREVIOUS MINERAL RESOURCE ESTIMATE

The previous Mineral Resource Estimate was completed in 2014 by P&E (P&E, 2014) for the Hopes Advance, Gamma and Falco 7 Deposits (Table 6.5). In summary, total In-Pit Inferred Mineral Resources at a C\$25/t net smelter return cut-off are estimated at 19,636,000 tonnes at average grades of 0.577% Cu, 0.215% Ni, 0.011% Co, 0.051 g/t Pt, 0.207 g/t Pd and 0.105 g/t Au, or 1.029% CuEq.

	Table 6.5 In-Pit Inferred Resources by Zone at Various NSR Cut-offs as of January 2014								
Cut-off NSR (\$/t)	Tonnes (kt)	CuEq (%)	Cu (%)	Ni (%)	Co (%)	Pt (g/t)	Pd (g/t)	Au (g/t)	Bulk Density (t/m³)
Falco 7									
\$50	838	1.074	0.588	0.226	0.015	0.053	0.231	0.102	3.25
\$40	2,241	0.926	0.522	0.198	0.014	0.052	0.210	0.101	3.23
\$30	3,464	0.833	0.470	0.187	0.013	0.048	0.195	0.101	3.21
\$25	3,786	0.806	0.459	0.182	0.013	0.047	0.189	0.101	3.20
\$20	3,827	0.802	0.458	0.181	0.013	0.047	0.188	0.101	3.20
\$15	3,840	0.800	0.457	0.181	0.013	0.047	0.188	0.101	3.20
Hopes Ad	vance								
\$50	6,204	1.252	0.683	0.256	0.012	0.057	0.228	0.108	3.28
\$40	9,866	1.101	0.620	0.224	0.011	0.053	0.213	0.107	3.26
\$30	11,319	1.045	0.591	0.215	0.011	0.051	0.207	0.107	3.25
\$25	11,484	1.038	0.587	0.214	0.011	0.051	0.206	0.106	3.25
\$20	11,565	1.033	0.585	0.213	0.011	0.051	0.205	0.106	3.24
\$15	11,571	1.033	0.585	0.213	0.011	0.051	0.205	0.106	3.24
Gamma									
\$50	2,774	1.414	0.755	0.288	0.013	0.058	0.237	0.107	3.31
\$40	4,192	1.219	0.662	0.252	0.012	0.056	0.228	0.107	3.27

# TABLE 6.5 IN-PIT INFERRED RESOURCES BY ZONE AT VARIOUS NSR CUT-OFFS AS OF JANUARY 2014

Cut-off NSR (\$/t)	Tonnes (kt)	CuEq (%)	Cu (%)	Ni (%)	Co (%)	Pt (g/t)	Pd (g/t)	Au (g/t)	Bulk Density (t/m³)
\$30	4,364	1.198	0.653	0.248	0.012	0.055	0.226	0.106	3.27
\$25	4,366	1.198	0.653	0.248	0.012	0.055	0.226	0.106	3.27
\$20	4,366	1.198	0.653	0.248	0.012	0.055	0.226	0.106	3.27
\$15	4,366	1.198	0.653	0.248	0.012	0.055	0.226	0.106	3.27

#### Notes:

- 1. CIM definitions were followed for Mineral Resources.
- 2. Mineral Resources are estimated by conventional 3-D block modelling based on wireframing at a \$25/t NSR cut-off and inverse distance squared grade interpolation.
- 3. Metal prices for the estimate are: US\$3.67/lb Cu, US\$8.51/lb Ni, US\$1,596/oz Pt, US\$702/oz Pd, US\$1,554/oz Au and US\$15.00/lb Co, based on a three-year trailing average as of November 30, 2013.
- 4. A variable bulk density of 3.01 t/m³ or higher based on density weighting has been applied for volume to tonnes conversion.
- 5. Open pit Mineral Resources are estimated from surface to pit floor depths of 90 m to 160 m.
- 6. Mineral Resources are classified Inferred based on drill hole spacing, geologic continuity and quality of data.
- 7. Mineral Resources, which are not 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. There is no certainty that all or any part of the Inferred Mineral Resource will be upgraded to an Indicated or Measured Mineral Resource as a result of continued exploration.
- 8. *P&E recommends reporting open pit Mineral Resources at the \$25/t NSR cut-off.*

Note that the Hopes Advance Main and North Zones have been considered and reported as a single deposit (Hopes Advance).

This Mineral Resource is superseded by the Mineral Resource stated in Section 14 of this Technical Report.

#### 6.4 HISTORICAL PRODUCTION

At the Pio Lake Zone, miner development work was undertaken by the Lone Star joint Venture until 1974. An adit and drifts were extended for a length of 117 m. Four raises were extended, three of which reached the surface, where they can be observed as pits.

In 1973-1974, a total of 6,437 tonnes of mineralization were mined from underground and open pits from both the East and West Veins at the Pio Lake Zone. The mined mineralized material was stockpiled near the decline portal. Some of the stockpiled material was sampled for metallurgical testwork.

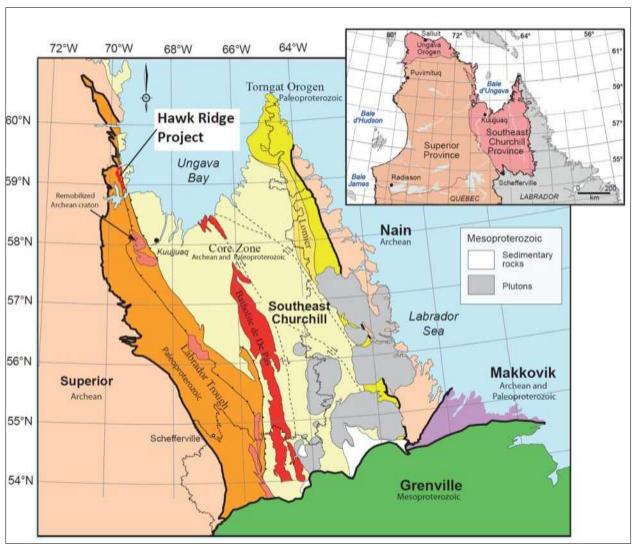
Otherwise, there has been no historical production on the Hawk Ridge Property.

#### 7.0 GEOLOGICAL SETTING AND MINERALIZATION

# 7.1 REGIONAL GEOLOGY

The Hawk Ridge Property is located in the New Québec Orogen (also known as the Labrador Trough) at the contact between the Archean (approximately 2.7 Ga) Superior Province to the west and the Paleoproterozoic (approximately 1.9 Ga) Rae Subprovince of the Churchill Province to the east (Figure 7.1). The Superior Province forms the cratonic basement to the New Québec Orogen. Superior Province rocks are exposed 5 km to 20 km west of the Property (Beauchamp, 2012), specifically granitoid and granitic gneiss terranes with elongated supracrustal sequences of metavolcanic and metasedimentary rocks.

FIGURE 7.1 REGIONAL GEOLOGY



Source: Beauchamp (2012), modified from d'Amours and Simard (2012).

The New Québec Orogen (previously known as the Labrador Trough) is a Paleoproterozoic (ca. 1.88 Ga) north-south trending thrust belt that preserves the deformed northeastern margin of

the Superior Province and southwest-directed thrust sheets of Paleoproterozoic supracrustal rocks. The Paleoproterozoic supracrustal rocks of the New Québec Orogen transition from autochthonous shelf to foredeep sedimentary rocks of the Wishart Quartzite, Sokoman Iron Formation in the east, to allochthonous gabbro sill-sedimentary rock complexes of the Montagnais Group in the west (Hoffman, 1990).

# 7.2 PROPERTY GEOLOGY

The Hawk Ridge Property is underlain by rocks of the New Québec Orogen (Figures 7.2 and 7.3; Table 7.1). Descriptions of the local geology are largely summarized from Beauchamp (2012).

In the Property area, the rocks of the New Québec Orogen form three distinct lithostratigraphic assemblages (termed Cycles by Beauchamp, 2012) that are in fault contact:

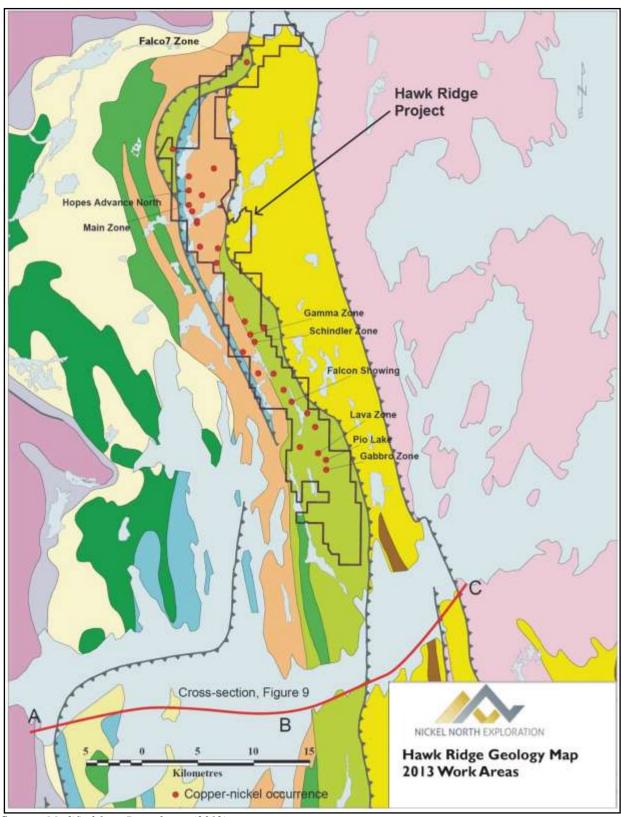
**Assemblage 1**: consists of autochthonous to para-autochthonous rocks of the Sokoman Iron Formation exposed on the west side of the New Québec Orogen;

**Assemblage 2**: consists of allochthonous metasedimentary rocks of the Aber, Harveng, Larch and Baby Formations, metavolcanic rocks of the Hallancourt Formation, gabbroic sills intruding the Larch and Baby Group, and gabbro sills of the Montagnais Group; and

**Assemblage 3**: consists of metasedimentary rocks of the Thevenet Formation.

Assemblage 2 rocks underlie most of the Hawk Ridge Property.

FIGURE 7.2 PROPERTY GEOLOGY



Source: Modified from Beauchamp (2012).

Notes: Geological Legend shown below inn Figure 7.3

# FIGURE 7.3 GEOLOGICAL LEGEND FOR FIGURE 7.2



Source: Beauchamp (2012)

TABLE 7.1 SIMPLIFIED TABLE OF FORMATIONS FOR THE HAWK RIDGE AREA								
Age	Formation	Rock Types	Remarks					
	Thevenet	Metasedimentary gneiss, calc- silicate, quartzite	Assemblage 3					
	Montagnais	Gabbro sills and dykes						
	Hellancourt	Massive and pillowed basalt, hyaloclastite, graphitic schist						
Paleoproterozoic	Larch and Baby	Sandstone, argillite, minor dolostone, iron formation	Assemblage 2					
	Harveng	Dolomite, dolomitic sandstone, argillaceous schist						
	Abner	Dolomite, dolomitic sandstone						
	Sokoman	Iron Formation	Assemblage 1					
Archean		Granitoid rocks, gneissic granitoids, metavolcanic rocks	Not exposed in Project area					

<sup>\*</sup> Modified from Beauchamp (2012)

On the Property, **Abner Formation** rocks at the base of Assemblage 2 consist of dolomite, stromatolitic dolomite and dolomitic sandstone and conglomerate. The Abner Formation is up to 3 m thick. The overlying Harveng Formation is up to 500 m thick and consists of dolomite, dolomitic sandstone, quartzite and argillite. The Larch and Baby Formations are in thrust contact with the Harveng Formation. The Baby Formation is a thick turbidite sequence of black argillite, silt, sandstone, and well-sorted conglomerate. The Larch Formation is an iron formation.

The **Hellancourt Formation** consists of basalt flows and associated volcaniclastic rocks that are in thrust contact with underlying metasedimentary rocks. The Hellancourt Formation comprises two, east-facing volcanic cycles ranging from mafic to intermediate in composition and characterized by massive flows, pillowed flows and hyaloclastite with minor argillite. Two glomeroporphyritic marker horizons are located in the 1,500 m thick lower volcanic cycle. The upper glomeroporphyritic horizon has been age dated at 1,874  $\pm$  3 Ma (Clark and Wares, 2005). The second volcanic cycle is 600 m thick and is more mafic than the lower cycle (Beauchamp, 2012).

The **Montagnais Group** consists of sills and minor dykes of ultramafic to mafic composition that intrude the Baby and Hellancourt Formations. Zircon dating of the gabbro sills defined an age of 1,874 Ma, which is the same age as the Hellancourt glomeroporphyritic horizon. The Montagnais Group Sills are 200 m to 300 m thick and composed of peridotite, pyroxenite, troctolite, gabbro, quartz gabbro, and quartz diorite. Differentiated sills consist of a basal peridotite grading upward to pyroxenite, gabbro and quartz diorite. The Montagnais glomeroporphyritic gabbro sills host magmatic sulphide mineralization.

The **Thevenet Formation** consists of biotite and amphibolite schist, calc-silicate paragneiss, quartzite, sillimanite and garnet schist, and iron formation. The Thevenet Formation may be higher-grade metamorphic equivalent of the Baby and Hellancourt Formations.

Regionally, a large part of the area is covered by a thin layer of **Pleistocene** till and erratic boulders. On the Hawk Ridge Property, there is little overburden and rock exposure is excellent. There is evidence of isostatic rebound after glaciation in the area south of Leaf Bay, where terraces are present at 3, 5, 30 and 50 m above present sea level. To the south, one terrace is located at 150 m asl (Bérard, 1959). On the Property area, glacial striae indicate ice movement direction generally toward the northeast at 030°, with a minor set at 080°.

#### 7.3 STRUCTURE

Tectonic, stratigraphic and geochronological studies show that the Labrador Trough has been the object of complex polyphase deformation and three important phases of structural displacement have been documented in the Hawk Ridge region at the north end of the Labrador Trough (Wares and Goutier, 1990) (Figure 7.4). The regional scale structural setting is summarized below first, and then the local structural geology.

# 7.3.1 Regional Structure

Three phases of deformation have been recognized regionally throughout the Orogen. Each of these phases, D1-D3, is summarized below.

The first deformation, D1, is represented by a delamination of the rocks along the Archean contact and also at the base of the Abner, Baby, Hellancourt and Thévenet Formations over a total distance of approximately 25 km. The thrusting was Mainly parallel to the stratification and is oriented to the west, although locally to the southwest and northwest. Rocks become schistose and are imbricated in the volcanic units of the Hellancourt and Thévenet Formations.

D2 deformation produced open and upright, locally recumbent folds. The folds are generally oriented to the east or northeast with a local cleavage or crenulation. The decollement was produced mainly along the base of the Baby Formation.

D3 deformation is responsible for the north-northwest alignment of the Labrador Trough and is represented by open and upright folds in the central part of the Labrador Trough and recumbent folds to the west in the north part of the Trough. The folds generally plunge 20° SE. The thrust faults along the Abner, Baby, Hellancourt and Thévenet were folded during D3 deformation. Synclines and anticlines were created as a result of this deformation. Late-stage D3 brittle fracturing created northwest-oriented faults, possibly as a result of oblique movement to the southwest with horizontal movement in the order of 15 km and a vertical component of 10 km, based on temperature and pressure components in garnet.

According to Clark and Wares (2005 and references therein), metamorphic grade increases from west to east in the foreland of the orogen (i.e., between the margin of the Superior Province and the Keato Lake and Rachel Lake Faults), progressing from sub-greenschist facies to upper greenschist facies. Rocks in the hinterland were metamorphosed to the upper greenschist facies (near the western limit of the hinterland), the amphibolite facies, or the granulite facies. Metamorphism increases from west to east in the immediate hinterland of the orogen.

# 7.3.2 Local Structure

Most of the geological units in the south of the Hawk Ridge Project strike 340° and dip 75°E to 75°W. In the central part of the Property area, data from the aeromagnetic survey data shows a fault zone approximately 1,600 m wide trending 345° that has deflected the entire sequence westward, north of which the units strike generally 355° to 360° before returning to the northeast at the north end of the Property.

An important synform has been mapped along the Gabbro-Lava Zone areas, where a series of synclines and anticlines strike north-northwest over a strike length of approximately 4,800 m. The nose of this syncline is located west of the Fold Showing. Additional fold structures are present south of the Bacchus and Horseshoe Showings. East and north of the Main and Hopes Advance North Zones three other folds have been mapped striking north-northwest.

Finally, tectonism is in part responsible for the present form of at least several massive or disseminated sulphide lenses in mafic sills in the Orogen (Clark and Wares, 2005). The lens of massive sulphides forming the West Zone in the Lac Pio Deposit (on the Hawk Ridge Property) is interpreted to be a mass detached from a larger massive-sulphide deposit of magmatic origin (Wares and Mungall, 1997). Regionally, massive sulphides in the Lac Bleu 1 Deposit, south of the Hawk Ridge Property, appear to have been partially detached from the base of their host sill and injected some distance into the underlying metasedimentary rocks (Clark, 1991). This detachment may have been due to the possible presence of a thrust fault beneath the sill. Deposits in the Aulneau Lake area have the shape of flattened cigars plunging down-dip. This shape resulted from ductile deformation and movement on a nearby thrust fault (Lacroix and Darling,1991). These characteristics may reflect the ease with which sulphides can deform in the plastic state, even at relatively low temperatures and pressures (e.g., Clark and Kelly, 1973; Stone *et al.*, 2005). The effects of tectonism should therefore be taken into consideration when exploring for magmatic sulphide deposits on the Hawk Ridge Property and elsewhere in the Orogen.

HAWK RIDGE FOLD THRUST BELT IN GEOLOGIC CROSS-SECTIONAL PROJECTION **FIGURE 7.4** West BAIE SECHE В BAJE ROUGE POINTE DE LA RIVIÈRE LE DE L'HÉLICOPTÈRE BIVIÈRE HARVENS LAC RABY 17 East ANSE DU COMPTOIR POINTE REEF POINTE MARY PORTE GRUR PONTE GARRY Legend 8 Larch-Baby Formation 12 Pegmatite 6 Chicak Formation Marrier or dissertinated a greywacke (turbidite, schist a conglomerate, argillite conglomeratic mineralization sandstone minor dolomitic 11 Montagnais Group sandstone conglomeratic schist sandstone a massive gabbro b mica schist sandstone biron formation Pseudota; helle b glomeroporphyritic basalt 5 Dragon Formation 7a Abner Formation, dolomite, sandstone 10 Laporte Group quartz-feldspar sandstone, argillite gneiss, quartz-feldspar gneiss Virginia Energy Resources Inc. 7b Harveng Formation calc-silicate rocks, quartzite 4 Fenimore Iron Formation a phyllite quartz sandstone Geological Cross-Section b dolomitic sandstone 9 Hellancourt Formation 3 Alison Formation c do lomite a massive & pillow lava, breccia, tuff quartz sandstone, conglomerate d carbonate phylite b felsic and carbonated flows

2 Lower dolomite

1 Archean Superior Province

biotite-amphibole gneiss, granodiorite, granite

Source: Beauchamp (2012). *Note: Line of section shown in Figure 7.2* 

kilometres

modified from Goulet, 1986

Date: 2012.02.15

Paysed 2012.02.15

Hawk Ridge Project, Quebec

Figure: 11

By D.A. Seauchamp, géo.

In the south, from approximately 1,600 m north of the Pio Lake showing to the southern boundary of the Hawk Ridge Property, many fractures are apparent in air photographs. The fractures strike northeast and northwest, some of which may be conjugate, but all of which show little apparent horizontal displacement. On the other hand, the vertical displacement is reported to be "appreciable" (Beauchamp, 2012).

#### 7.4 DEPOSIT GEOLOGY

The majority of copper-nickel sulphide deposits on the Hawk Ridge Property are hosted in gabbro and plagioclase glomeroporphyritic gabbro of the contemporaneous Montagnais Group Intrusions and Hellancourt Formation. The deposits occur in close proximity to contacts of gabbro with underlying metasedimentary rocks and peridotite (Beauchamp, 2012). Mineral Resources Estimates are described in Section 14 of this Technical Report for the Hopes Advance Main, Hopes Advance North, Gamma and Falco 7 Zones (see Figure 7.2). Each of these Zones is summarized briefly below.

# 7.4.1 Hopes Advance Main Zone

The Hopes Advance Main Zone is located near Lambda Lake, in the northern part of the Property. On surface, this Zone is associated with a gossan 800 m long and 30 m wide (Figure 7.5). The north-northwest trending zone has been defined over a strike length of 750 m, dips 50° to 60° east, and is approximately 25 m wide (Figures 7.6 and 7.7). The mineralization consists of disseminations and veins of pyrrhotite and chalcopyrite near the base of a plagioclase glomeroporphyritic gabbro. The glomeroporphyritic gabbro overlies siliceous metasedimentary rocks and graphitic schist.

# 7.4.2 Hopes Advance North Zone

The Hopes Advance North Zone appears to be a small zone located 800 m north-northeast of the Hopes Advance Main Zone. This Zone has a strike length of 250 m, is 10 m wide, and dips 45° to 70° east (Figures 7.8 and 7.9). Copper and nickel mineralization occur as massive and disseminated sulphides. This Zone appears to be structurally complex and mineralization is associated with porphyritic gabbro, gabbro, peridotite and graphitic schist.

FIGURE 7.5 HOPES ADVANCE MAIN ZONE OUTCROP

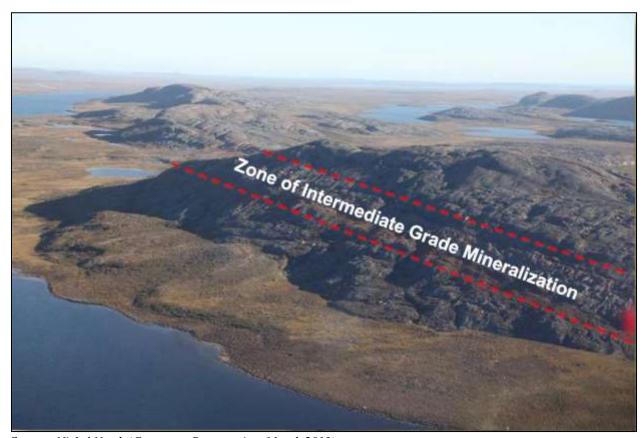
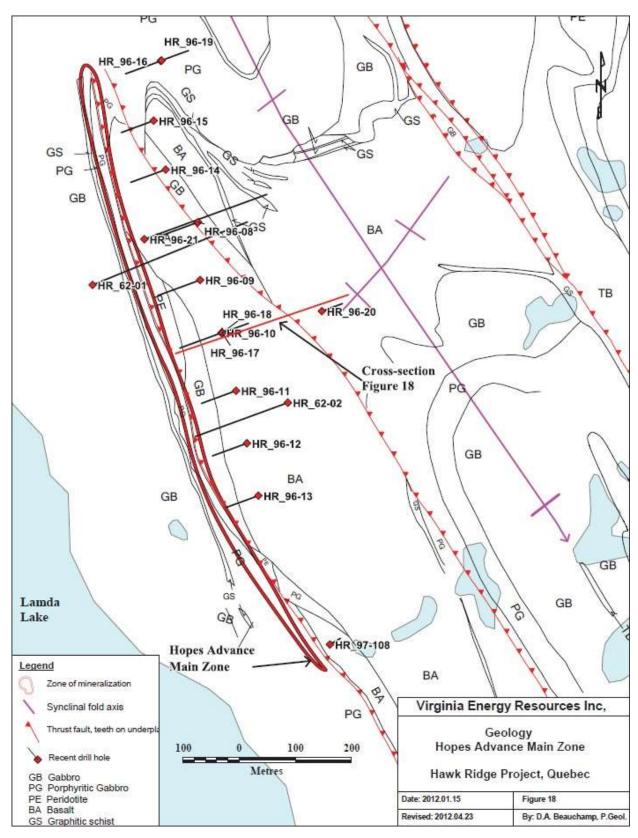


FIGURE 7.6 HOPES ADVANCE MAIN ZONE



Source: Beauchamp (2012)

FIGURE 7.7 HOPES ADVANCE MAIN ZONE CROSS-SECTIONAL PROJECTION

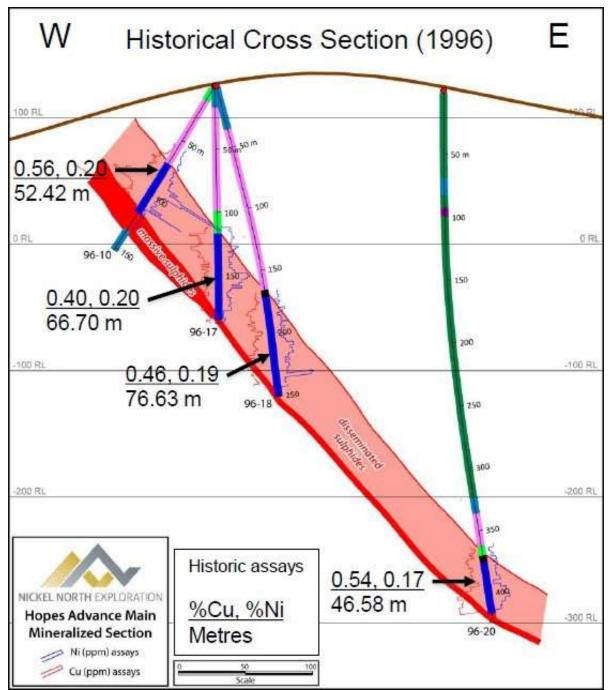
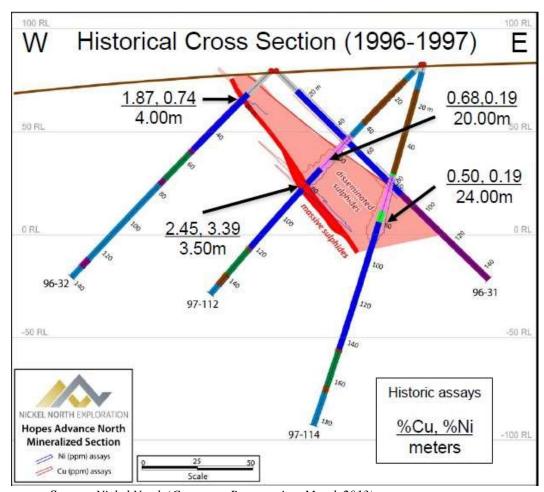


FIGURE 7.8 HOPES ADVANCE NORTH ZONE OUTCROP



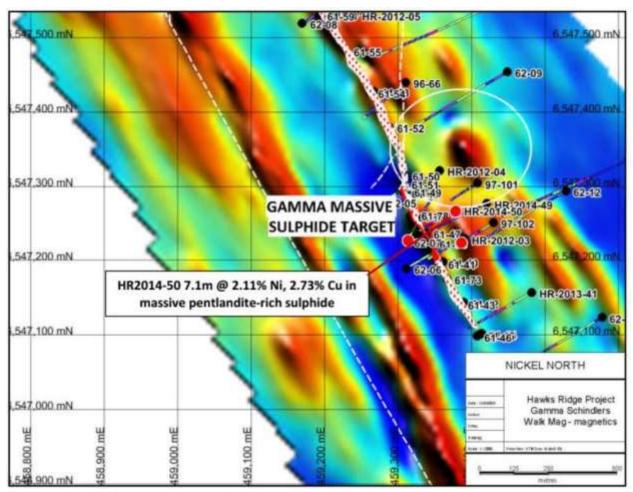
FIGURE 7.9 HOPES ADVANCE NORTH ZONE CROSS-SECTIONAL PROJECTION



#### 7.4.3 Gamma Zone

The Gamma Zone is located in the central part of the Hawk Ridge Property (Figure 7.10). The northwest-trending zone has a 1 km strike length, is 10 m to 15 m wide, and dips 60° to 75° east (Figures 7.10 to 7.14). Mineralization at the Gamma Zone consists of massive pyrrhotite, chalcopyrite and pentlandite at the base of a porphyritic gabbro sill in contact with underlying metasedimentary units. Massive mineralization has been intersected for 60 m strike length and 60 m down-dip over widths of approximately 3.5 m. Associated disseminated mineralization occurs over widths of approximately 16 m within the porphyritic gabbro.

FIGURE 7.10 GAMMA ZONE GROUND GEOPHYSICAL RESPONSE



Source: Nickel North press release (April 5, 2022)

Description: High-grade Gamma Zone discovered in 2014 drilling program and remains open to the south.

FIGURE 7.11 GAMMA ZONE OUTCROP



FIGURE 7.12 GAMMA ZONE PLAN MAP

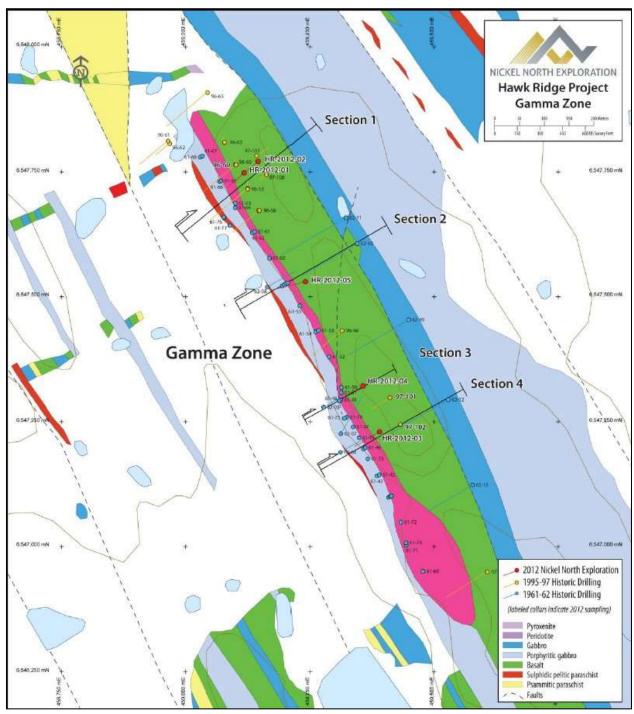


FIGURE 7.13 GAMMA ZONE CROSS-SECTIONAL PROJECTION 1

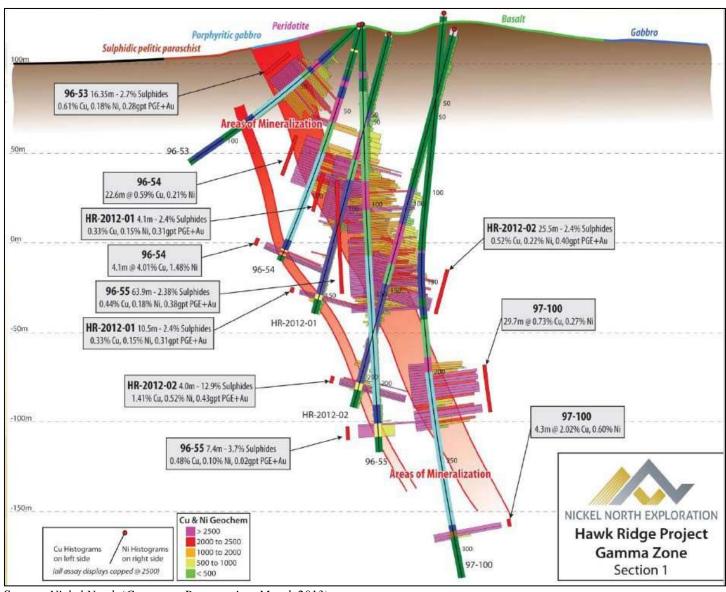
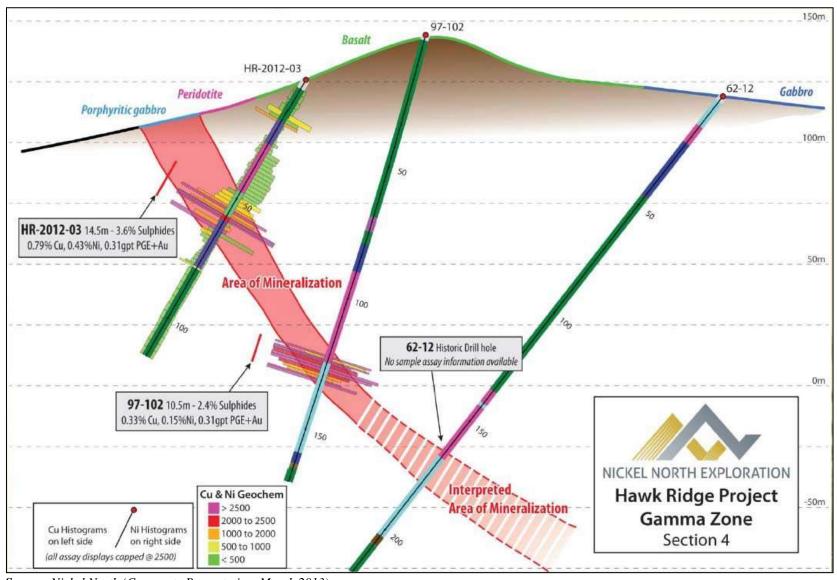


FIGURE 7.14 GAMMA ZONE CROSS-SECTIONAL PROJECTION 4



**Description:** High-grade massive sulphide zone (4.67% Cu & 2.84% Ni over 1.86 m) discovered in drill hole HR-2012-03.

# **7.4.4** Falco **7** Zone

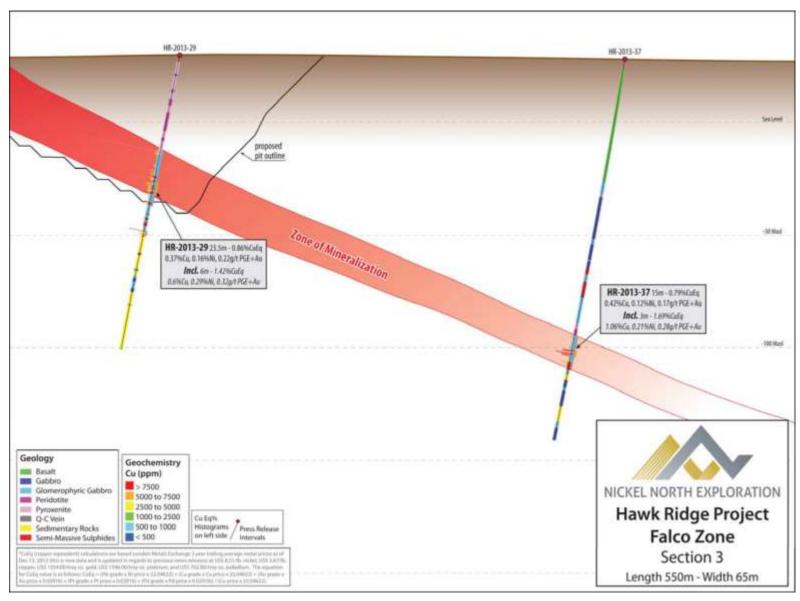
The Falco 7 Zone is a recently discovered zone of mineralization located at the north end of the Property, west of Aupaluk. The Falco 7 Zone strikes north to north-northeast is 2.6 km long and approximately 10 m to 20 m wide, and dips  $20^{\circ}$  to  $45^{\circ}$  east, Figures 7.15 to 7.17. Falco 7 consists of an upper interval with 3% to 5% disseminated sulphides in porphyritic gabbro and an underlying massive sulphide interval at the basal contact of the gabbro.

NICKEL NORTH EXPLORATION Falco 7 Zone 0

FIGURE 7.15 FALCO 7 ZONE PLAN MAP

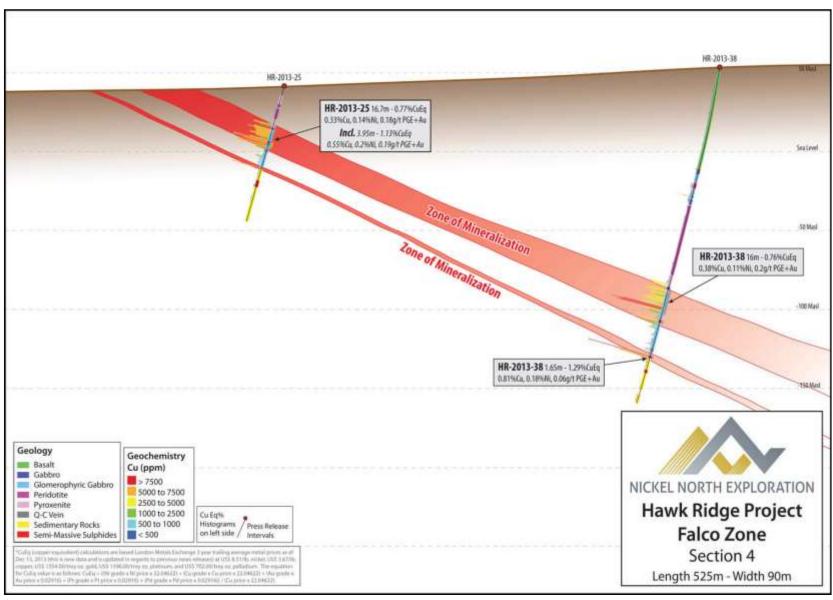
Source: Nickel North (August 2022)

FIGURE 7.16 FALCO 7 ZONE CROSS-SECTIONAL PROJECTION 3



Source: Nickel North (August 2022)

FIGURE 7.17 FALCO 7 ZONE CROSS-SECTIONAL PROJECTION 4



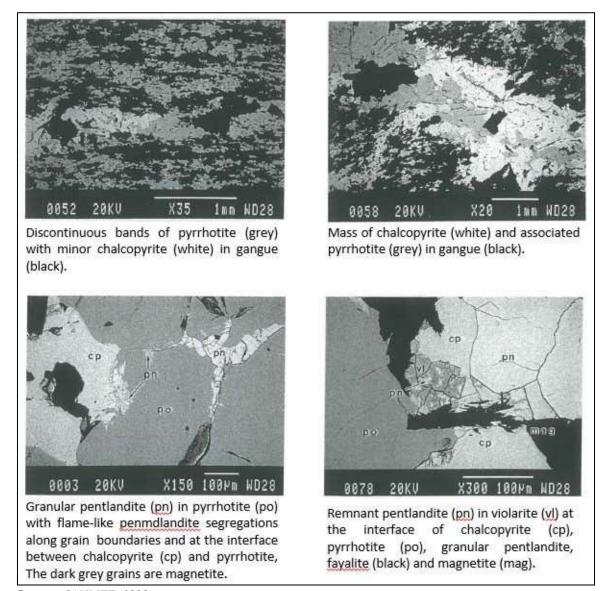
Source: Nickel North (August 2022)

#### 7.5 MINERALIZATION

The Hawk Ridge Property hosts disseminated mineralization typically with 3% to 5% sulphide minerals, and subordinate lenses of massive sulphide that are hosted in porphyritic gabbro and olivine-rich gabbro. The sulphide minerals are mainly pyrrhotite (FeS), chalcopyrite (CuFeS<sub>2</sub>), and pentlandite ((Fe,Ni)<sub>9</sub>S<sub>8</sub>), with minor violarite (FeNi<sub>2</sub>S<sub>4</sub>) and cobaltite (CoAsS) (Figure 7.18). Higher copper grades are associated with localized concentrations of massive sulphides in gabbro and in remobilized sulphide mineralization in footwall metasedimentary rocks.

A mineralogical study of massive sulphide samples from the Property reported that the dominant sulphide mineral is pyrrhotite followed by chalcopyrite and pentlandite (Lastra and Owens, 1993). Magnetite is also present. Minor minerals are violarite, sphalerite, goethite, rutile, and possibly cobaltite. Platinum-group minerals were not identified. Pyrrhotite occurs as coarse-grained intergrowths with chalcopyrite, magnetite and pentlandite, and as discontinuous veinlets in silicates. Chalcopyrite occurs mainly as coarse intergrowths with pyrrhotite and pentlandite, and as disseminations in silicates. Pentlandite occurs as granular discrete grains and flame-like segregations in pyrrhotite.

# FIGURE 7.18 HAWK RIDGE MAGMATIC SULPHIDE MINERALIZATION



Source: CANMET (1993)

#### 7.6 OTHER DEPOSITS/PROSPECTS OF INTEREST

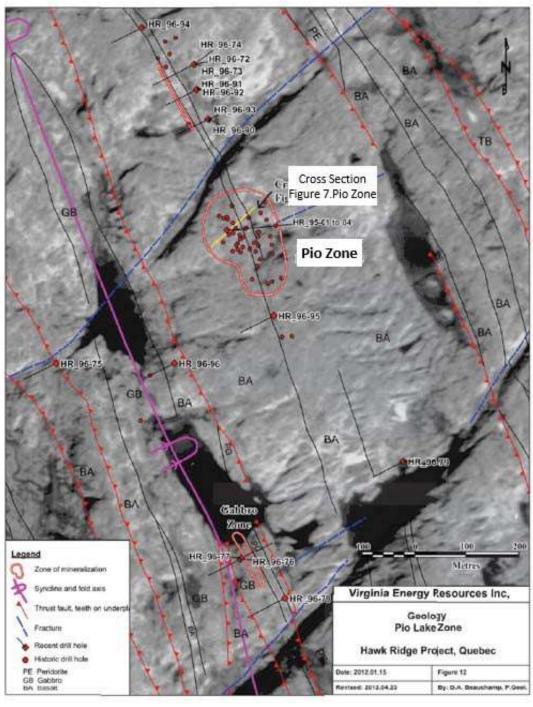
The Lac Pio Zone is not included in the current Mineral Resource Estimates stated in Section 14 of this Technical Report. However, with more exploration and particularly drilling, Lac Pio could be included in future Mineral Resource Estimates.

The Lac Pio Zone (also known as Pio Lake Zone) is located in the south part of the Hawk Ridge Property (see Figure 7.2). This Zone contains copper and nickel mineralization in two lenses (historically referred to as veins) within chloritized basalt flows of the Hellancourt Formation (Figures 7.19 and 7.20). The West Lens is 60 m long, 3 m wide, strikes north-northwest, and dips 60° to 85° east, and consists of massive to disseminated pyrrhotite, chalcopyrite and pentlandite.

The East Lens is 46 m long, 2 m wide, strikes north-northwest, and dips 60° to 85° E, and consists of disseminated and laminated chalcopyrite and pyrrhotite mineralization.

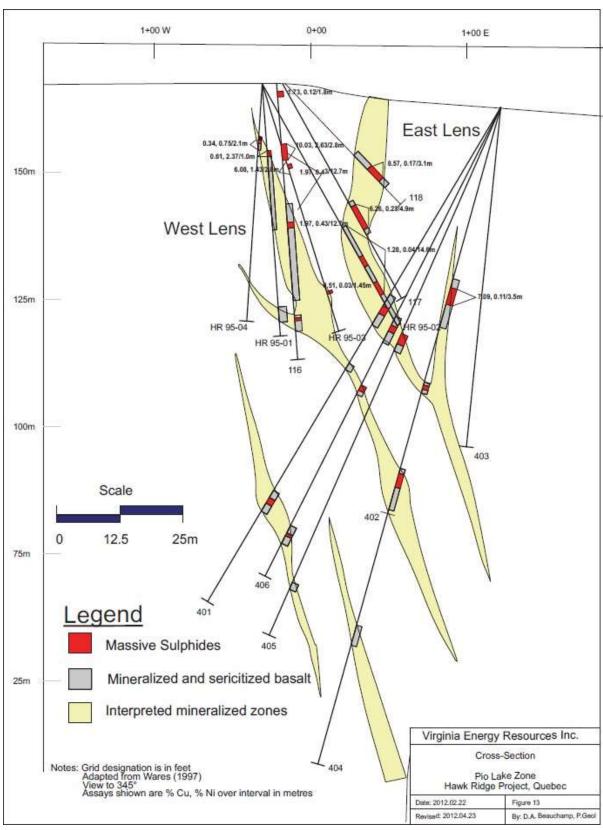
According to Paul (1997, a historical reserve for the Pio Zone was calculated by Lone Star Mining in 1973 (see Section 6.2 of this Technical Report).

FIGURE 7.19 PIO LAKE ZONE PLAN VIEW



Source: Beauchamp (2012)

FIGURE 7.20 PIO LAKE ZONE CROSS-SECTIONAL PROJECTION

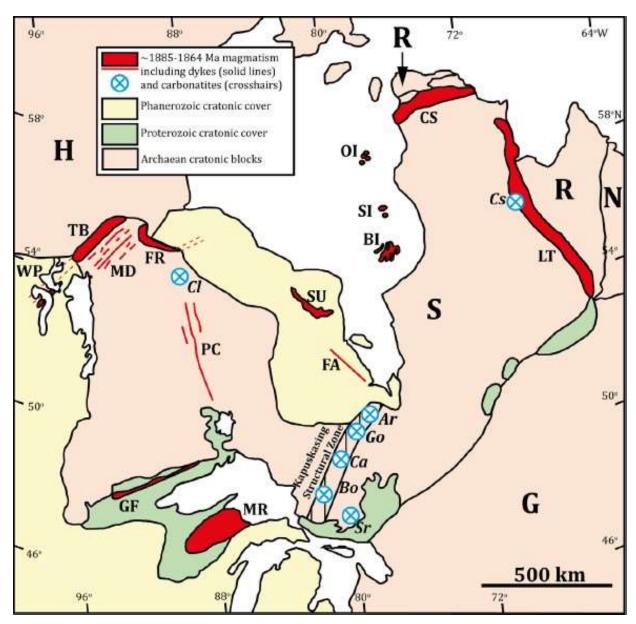


Source: Beauchamp (2012)

#### 8.0 DEPOSIT TYPES

The New Québec Orogen is a part of the Paleoproterozoic Circum-Superior Belt, a geological environment known for hosting nickel-copper (PGE) sulphide mineralization, specifically the deposits of the Thompson Belt of north-central Manitoba and the Cape Smith Belt (Raglan) of northern Québec (Figure 8.1) (Hulbert *et al.*, 2005; Eckstrand and Hulbert, 2007).

FIGURE 8.1 LOCATION OF THE LABRADOR TROUGH IN THE CIRCUM-SUPERIOR CRATON BELTS



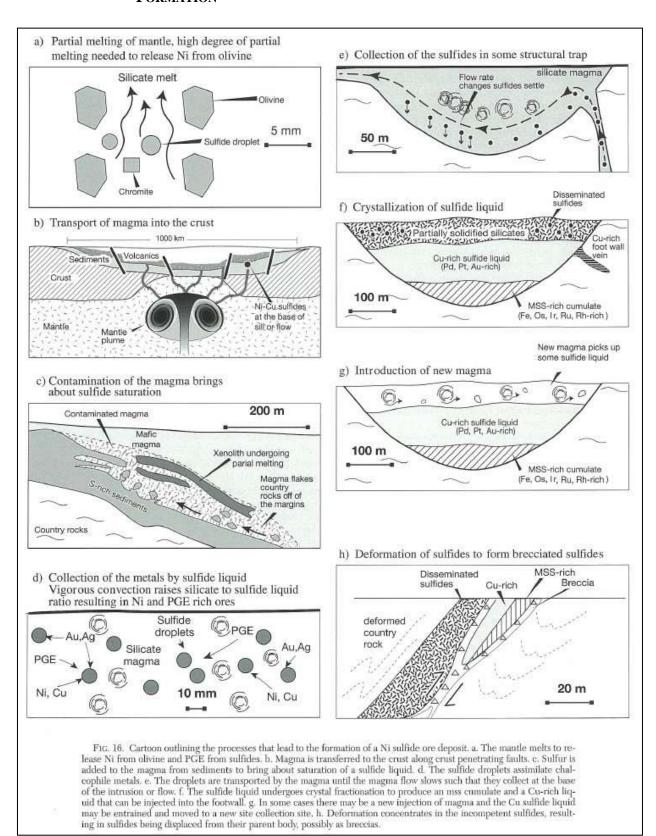
Source: Ciborowski et al. (2017).

Notes:  $LT = Labrador\ Trough;\ CS = Cape\ Smith\ Belt,\ TB = Thompson\ Belt;\ S = Superior\ Province$ 

The mineral deposits on the Hawk Ridge Property are copper-nickel (platinum-group element or "PGE") massive to disseminated nickel sulphides in mafic and locally ultramafic rocks. The association of massive pyrrhotite, chalcopyrite and pentlandite mineralization overlain by disseminated sulphide mineralization near the base of host gabbro intrusions is characteristic of sulphide deposits that form by segregation of an immiscible sulphide liquid in parental silicate melt.

The mineralization characteristics at the Hawk Ridge Property are consistent with the rift and continental flood basalt-associated nickel copper sulphide deposits (Eckstrand, 1996; Barnes and Lightfoot, 2005) (Figure 8.2). Such magmatic sulphide deposits form when sulphur-undersaturated picrite or high magnesium basalt magma becomes saturated in sulphides, generally as a result of interaction with and assimilation of sulphur-bearing sedimentary rocks. Assimilation of crustal sulphur results in the formation of an immiscible sulphide liquid that segregates toward the base of the flow or sill. Assimilation and concentration may be enhanced by multiple pulses of magma in a dynamic conduit system. The mineralization typically forms lenses or tabular concentrations in the middle or lower parts of the gabbro intrusions. Well-known examples of this type of mineralization include Proterozoic Duluth Complex in Minnesota, USA (Hauck et al., 1997; Severson et al., 2002; Naldrett, 2010) and the Mesozoic Noril'sk Talnakh deposits of Siberia, Russia (Lightfoot and Naldrett, 1994; Diakov et al., 2002).

# FIGURE 8.2 PROCESSES LEADING TO MAGMATIC NICKEL SULPHIDE DEPOSIT FORMATION



Source: Barnes and Lightfoot (2005).

#### 9.0 EXPLORATION

Nickel North completed exploration programs on the Hawk Ridge Property in 2012, 2013 and 2014. The non-drilling exploration program results are summarized below. The drilling program results are summarized in Section 10 of this Technical Report.

#### 9.1 2012 EXPLORATION PROGRAM

The 2012 Hawk Ridge exploration program commenced on August 9, 2012, following barge delivery of jet fuel, drill equipment and other supplies in mid-July. The program included geological mapping, sampling, splitting and additional sampling of historical diamond drill core, a 2,400 line-km Geotech VTEM airborne survey, and 1,000 m of diamond drilling.

# 9.1.1 2012 Mapping and Sampling Program

Geological consultants to Nickel North, Dr. Larry Hulbert and Dr. Quentin Gall, completed a geological and structural mapping program at the Property, which included a detailed examination of the Pio, Gamma and Hopes Advance Zones. The program confirmed presence of magmatic sulphides in all zones, and confirmed extended strike lengths of some Zones (Nickel North News Release, dated September 19, 2012).

# 9.1.2 Historical Drill Core Resampling Program

The Company undertook a resampling program of the NQ-sized drill core completed by previous operators, Troymin Resources Ltd., from 1996 to 1997 at the Property. Drill core from these years was stored on-site at the Property by the previous operators and the core was in good condition and well-marked.

Nickel North's resampling program had the following objectives:

- To check the historical drilling results for accuracy;
- To sample core that had not been previously sampled or analyzed for PGEs; and
- To define and expand on the NI 43-101 non-compliant historical Ni-Cu resources.

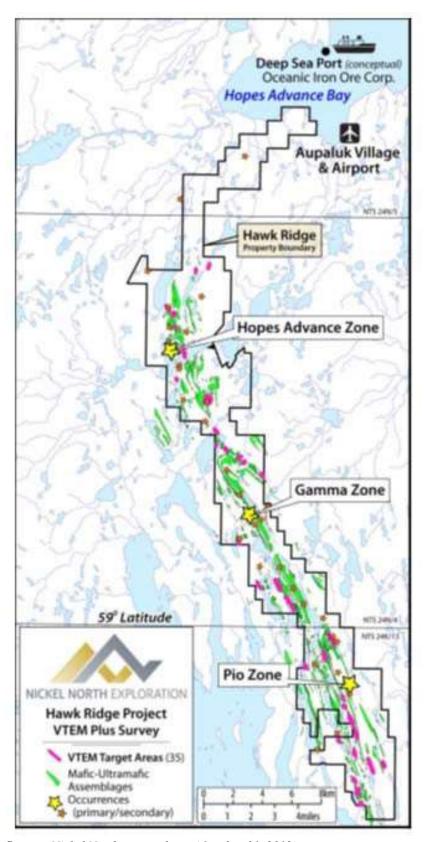
Nine historical drill holes completed from the Hopes Advance Main, Hopes Advance North, Gamma and Schindler Zones were resampled, with a total of 988 samples taken over a length of 956 m. The drill holes were sampled along the total length of the drill core, except where the drill core was missing or the remaining half drill core was previously sampled. The Company's 2012 sampling protocol was utilized for the resampling program, as described in Section 11 of this Technical Report.

Drill core samples were assayed for Pt and Pd by fire assay method and for Ni and Cu plus 41 additional elements by 4-acid digest with ICP finish. Comparison of the historical drill core results and those results from Nickel North's 2012 resampling program were favourable, in that they validated the historical records. These results are discussed further in Section 12 of this Technical Report.

# 9.1.3 Geotech VTEM Airborne Survey

A Geotech VTEM-PLUS airborne survey was flown over the entire Hawk Ridge Property in 2012 (Figure 9.1). The survey covered 2,195 km at a line spacing of 100 m. The survey data were interpreted by Dr. Mark Shore (P.Geo.), of Magma Geosciences Inc, based in Ottawa, Ontario. The criteria utilized to establish and prioritize anomalies included detailed analysis of high conductivity and associated magnetic responses, in comparison to the electromagnetic and magnetic characteristics of the known deposits and mineralized zones at Hawk Ridge, and to geophysical responses of deposits in other nickel belts elsewhere. Proximity to favourable mapped mafic and ultramafic rock units and their geophysically-inferred extensions were utilized in ranking and prioritizing conductors as drill targets.

FIGURE 9.1 HAWK RIDGE PROPERTY 2012 VTEM SURVEY



Source: Nickel North press release (October 31, 2012)

The majority of these new targets have not been tested by modern or detailed exploration work in the past, and there is no record of them having been drilled by previous operators. Dr. Shore concluded the following from the VTEM survey results:

- 35 new anomalous areas present encouraging geophysical responses for Ni, Cu, PGE mineralization;
- Greater than 500, near-surface high-conductivity anomalies exhibit signatures characteristic of magmatic sulphides;
- Previously identified copper-rich mineralization at the Property showed its own distinctive geophysical signatures;
- VTEM-PLUS data enabled stratigraphic/subsurface mapping within non-magnetic zones at Hawk Ridge; and
- Combining the VTEM data with the geological data and comparison to the known Deposits of the Property, helped to identify drill targets (Nickel North News Release, dated October 31, 2012).

The VTEM-PLUS survey was successful in identifying the anomaly that subsequently became known as the Falco 7 Zone (Figure 9.2).

#### 9.2 2013 EXPLORATION PROGRAM

Nickel North completed a follow-up helicopter-supported exploration program in 2013, which included a ground geophysical program followed by field mapping, mineral prospecting and drilling (Nickel North News Release, dated September 10, 2013).

# 9.2.1 Ground Geophysics Survey

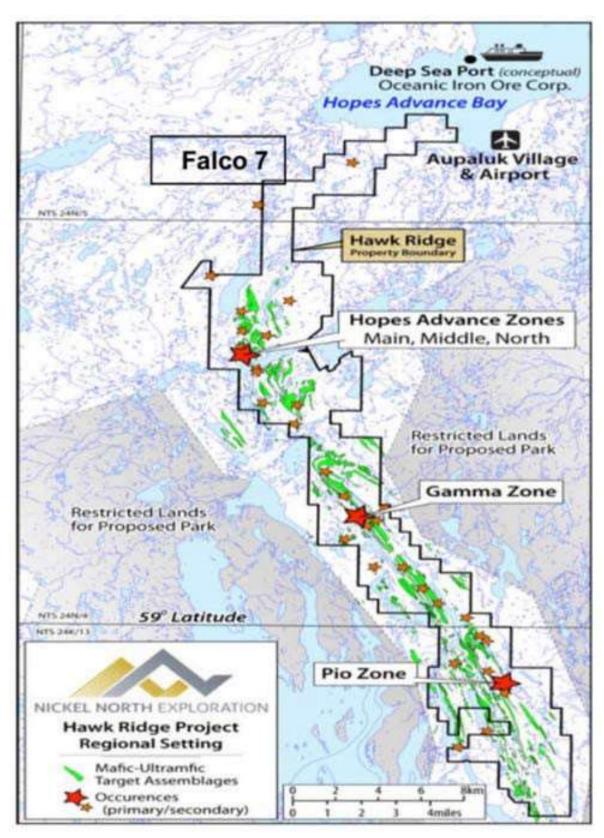
CRONE Pulse EM and "Walkmag" Magnetometer surveys were completed during the 2013 exploration program. The Pulse EM survey was completed on five grids and the magnetic surveys on two grids. Borehole EM geophysical surveys were completed on all available drill holes.

The ground survey was successful in confirming the presence of the Falco 7 Zone. Follow-up groundwork led to the discovery of surface exposures of mineralized boulders and outcrop and the area was extensively drilled during the 2013 drill program

# 9.2.2 Field Mapping and Sampling Program

Nickel North followed-up the ground geophysics surveys with a field mapping and sampling program. During this program, the Falco 7 Zone was confirmed with the discovery of mineralized outcrop and boulders. This Zone was mapped and subsequently drilled in 2013.

FIGURE 9.2 HAWK RIDGE EXPLORATION TARGET AREAS



Source: Nickel North press release (April 5, 2022)

#### 9.3 2014 EXPLORATION PROGRAM

Compilation studies indicated that high-grade mineralization on the Hawk Ridge Property is associated primarily with sedimentary sulphides. Known metalliferous-sedimentary sulphide zones on the Property are Pio, Gamma and Hopes Advance North. Exceptions to this mineralization style are known on the Property, as exemplified by the high-grade drill hole intercept in the Gamma Zone (Nickel North News Release December 2, 2012), which is recognized as high-grade magmatic sulphide mineralization. The data indicate that potential exists for additional discoveries of both high-grade mineralization types on the Hawk Ridge Project.

The exploration program was planned to consist of initial fieldwork focused on ground proofing targets generated through recent desk—top studies. Multi-element geochemical analyses of bedrock mineralization using handheld, portable XRF devices, geological mapping and sampling of targeted prospects are expected to be employed to qualify all potential target zones for follow-up ground geophysical surveys and diamond drilling. Additional ground Pulse EM surveys and diamond drilling were expected to be considered for inclusion in the 2014 exploration program, based the on the results of the initial fieldwork.

#### **9.3.1** Phase I

Work completed in the first phase of the 2014 exploration program has consisted of systematic Niton portable XRF (Niton) prospecting, sampling and mapping to further assess and define Ni-Cu-PGE prospects within the Hawk Ridge Property. To date, 2788 Niton stations have been collected on a number of VTEM conductors, showings and intrusions along a 126 km<sup>2</sup> area of interest in the central portion of the Property. This work is partially complete, with current investigations being expanded to previously un-surveyed portions of the Property. Initial results have provided some new insight as the key criterion for identifying and prioritizing high-grade Ni-Cu-PGE mineralization at Hawk Ridge.

The highest-grade nickel readings from the Niton survey have been returned from mineralization associated with magmatic settings and have affirmed the geological concept that high-grade Ni-Cu (PGE) deposit(s) with a metallogenic setting similar to Raglan and "Raglan South" are likely present on the Property and should be the focus of further exploration.

To date, this style of mineralization at Hawk Ridge has been identified as both disseminated and massive varieties. These narrow-mineralized horizons display good lateral and down-dip continuity have significance as components of a magmatic system that potentially includes substantial accumulations and thicknesses of similar high-grade material.

Exploration work has also identified new Ni-Cu-PGE showings of importance. The Brad Zone is a Ni-rich Zone with magmatic affinity and is spatially associated with the enigmatic high-grade Pio Lake Ni-Cu-PGE deposit. The Brad Zone is 500 m east of the Pio Deposit and is defined by a 1.0 to 1.2 km-long trend of massive and sheared ultramafic rocks contain disseminated magmatic sulphides.

The mineralized zone is characterized by areas of malachite staining characterized by areas of malachite staining containing extreme Ni and Cu concentrations as recorded by the Niton Portable

XRF. The northern portion of the Brad Zone is associated with VTEM conductors with high conductivity characteristic of nickel sulphide conductors. Ground pulse electromagnetic surveys (PEM) over this Zone and the Pio Deposit were planned in preparation for drilling.

The Lucille Prospect is a previously unexplored 2.3 km, 400-metre thick, north-trending peridotite-gabbro intrusive complex in the extreme southwestern portion of the Property. This intrusion differs from all other peridotite bodies on the Property in its lithological, geochemical and geophysical character. Outcrops have a marked iron-stained fractured appearance, and anomalous disseminated magmatic sulphides. Routine property-wide Niton (portable XRF) analyses on the Lucille prospect returned initial Ni and Cu contents several orders of magnitude higher than that found elsewhere (other than at known Ni-Cu-PGE deposits). Follow-up grid based Niton analyses on lines 25 m apart with 20 m sample stations (408 stations) identified a pronounced Ni anomaly on the southernmost peridotite-gabbro body.

A detailed ground magnetic and VLF survey (50 m line spacing) completed at Lucille confirmed coincidental geophysical anomalies associated with areas of anomalous nickel from the Niton survey. Strong VTEM geophysical conductors have been identified and ground-based Pulse EM surveys were completed over Lucille.

#### **9.3.2** Phase II

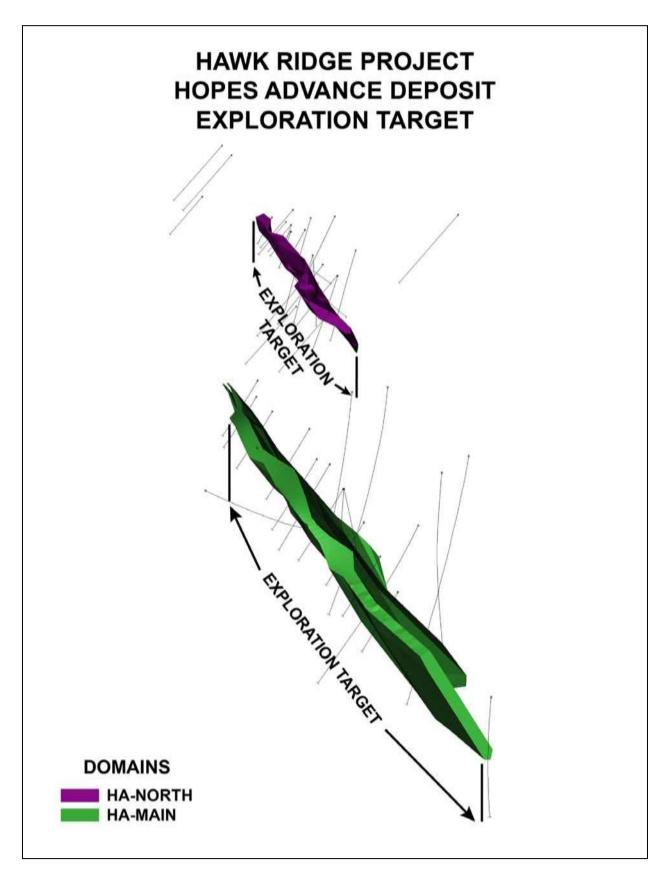
The Brad Zone and Lucille Prospect, along with other magmatic and high-grade nickel dominant occurrences, are priority exploration targets, which the Phase II program was designed to test with geophysics and a limited amount of drilling.

Conditional on successful completion of the geophysical surveys and further target prioritization, the drilling program was designed to test subsurface mineralization at; the Brad Zone, Lucille Ni-Cu (PGE) Prospect, Hopes Advance North high-grade Ni-Cu-PGE rich Zone and down-dip extension potential, and the Gamma Zone high-grade massive Ni-Cu-PGE sulphide Zone and its possible down-dip extension.

#### 9.4 EXPLORATION POTENTIAL

In addition to the exploration work completed, the Author established that the Hawk Ridge mineral deposits contain additional Exploration Targets with a potential range of 35 Mt to 60 Mt at grade ranges of 0.35% to 0.40% Cu, 0.10% to 0.20% Ni, 0.01% to 0.02% Co, 0.03 g/t to 0.05 g/t Pt, 0.15 g/t to 0.20 g/t Pd, and 0.03 g/t to 0.05 g/t Au, which equates to a 0.35% to 0.55% NiEq. The Exploration Targets are based on the estimated strike length, depth and width of the known mineralization, which is supported by intermittent drill-holes, geophysics and observations of mineralized surface exposures. The Exploration Targets are shown in Figures 9.3 to 9.5

The potential quantities and grades of the Exploration Targets are conceptual in nature. There has been insufficient work done by a Qualified Person to define these estimates as Mineral Resources. The Company is not treating these estimates as Mineral Resources, and readers should not place undue reliance on these estimates. Even with additional work, there is no certainty that these estimates will be classified as Mineral Resources. In addition, there is no certainty that these estimates will prove to be economically recoverable.



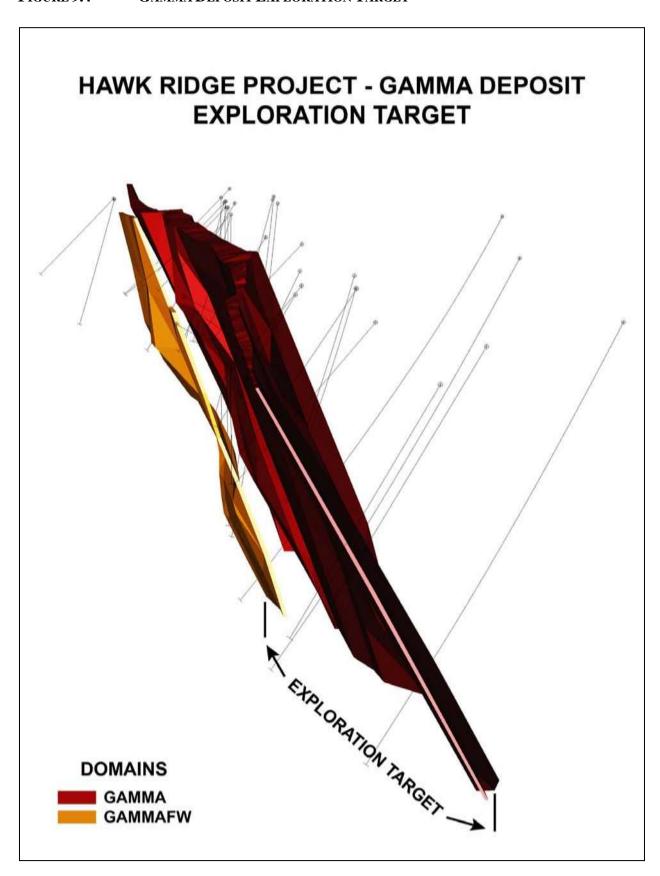
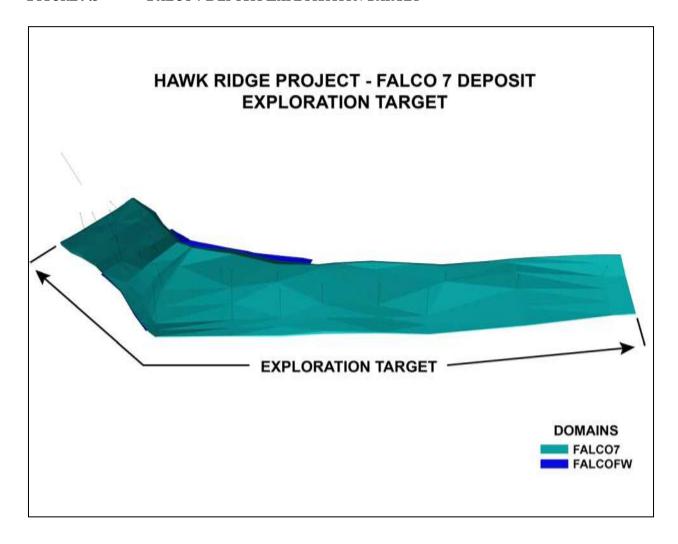


FIGURE 9.5 FALCO 7 DEPOSIT EXPLORATION TARGET



#### 10.0 DRILLING

Nickel North completed diamond drill programs in 2012, 2013 and 2014. The results of each of these drilling programs are summarized below.

#### 10.1 2012 DRILLING PROGRAM

In 2012, Nickel North completed the first drilling on the Property in 15 years. The 2012 diamond drill program was designed to test extensions of known mineralization and new targets identified from the 2012 VTEM-PLUS airborne survey (see Section 9 above).

A total of seven NQ-diameter diamond drill holes (HR-2012-01 to HR-2012-07) over 1,055.07 m were completed over a period of five weeks, from August 19, 2012, to September 15, 2012. Holes ranged in depth from 110 m to 210 m (Table 10.1).

Drilling focused on three areas; namely the Gamma, Pio and Hopes Advance Main Zones. The purpose of the drill program was to confirm results from historical drilling, and to expand the known mineralization.

All drill holes intercepted sulphide mineralization, and confirmed results of the historical drilling. Numerous thick disseminated sections and high-grade semi-massive to massive zones of magmatic Ni-Cu (PGE) contained within mafic to ultramafic sills were identified (see Nickel North News Release dated September 19, 2012).

Assays were taken along the entire length of the core.

#### **10.1.1 Gamma Zone**

Nickel North completed a total of five drill holes at the Gamma Zone (HR-2012-01 to HR-2012-05) (see Figure 10.1) over a length of 721.1 m, as a follow-up to surface mapping completed by Dr. Quentin Gall, Geological Consultant. Mineralization at the Gamma Zone was mapped along a length of >800 m and across a minimum width of 10 m.

All five drill holes intersected sulphide mineralization and successfully confirmed and expanded the previously known Ni-Cu (PGE) mineralization in the area. Drilling also identified intermediate-grade mineralization of large tonnage with open pit potential and high-grade Raglanstyle mineralization (see Nickel North News Release dated September 19, 2012).

Highlights of the mineralization intersected during the 2012 drill program at the Gamma Zone are presented in Table 10.2.

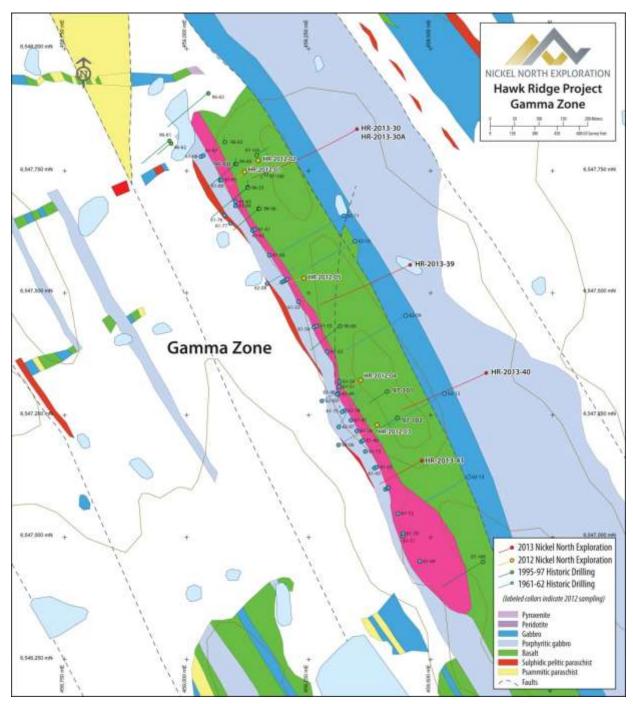
	TABLE 10.1 COLLAR DATA FOR THE 2012 DRILL PROGRAM AT HAWK RIDGE											
Drill Hole ID	UTM Easting (m)	Zone										
HR-2012-01	459,118.5	6,547748.0	126.3	161.0	-60.0	249.8	1018001	Gamma Zone				
HR-2012-02	459,146.6	6,547771.2	128.6	218.0	-75.0	230.0	1018001	Gamma Zone				
HR-2012-03	459,390.0	6,547230.0	139.6	116.0	-60.0	240.0	1017994	Gamma Zone				
HR-2012-04	459,356.5	6,547321.6	141.9	116.0	-65.0	240.0	1017993	Gamma Zone				
HR-2012-05	459,240.4	6,547530.4	132.3	110.0	-57.8	256.1	1017993	Gamma Zone				
HR-2012-06	465,699.2	6,535665.6	151.9	152.0	-42.6	77.5	1019200	Pio Grid				
HR-2012-07	453,490.3	6,559497.6	158.3	182.0	-60.0	249.8	1019189	Hopes Advance Main				

Note: UTM coordinates are UTM NAD 83 Zone 19N.

	TABLE 10.2 SIGNIFICANT MINERALIZED INTERCEPTS FOR GAMMA ZONE												
Drill Hole ID	From (m)	To (m)	Width (m)	Cu (%)	Ni (%)	Co (%)	Pd (ppb)	Pt (ppb)	Au (ppb)	Sulphide (%)			
HR-2012-01	72.4	108.0	35.6	0.52	0.22	0.01	290	60	40	2.6			
incl.	98.0	108.0	10.0	0.66	0.30	0.01	320	70	40	4.1			
and	150.1	152.8	2.8	2.19	1.15	0.05	650	80	290	19.9			
HR-2012-02	129.5	163.0	33.5	0.45	0.18	0.01	240	50	40	2.0			
incl.	142.8	157.3	14.5	0.59	0.24	0.01	290	60	50	3.3			
and	204.0	208.0	4.0	1.41	0.52	0.02	300	10	120	12.9			
incl.	205.6	208.3	2.4	1.70	0.63	0.02	360	10	170	15.1			
HR-2012-03	57.1	59.0	1.9	4.67	2.84	0.09	1,210	100	0	22.8			
incl.	58.3	59.0	0.7	5.47	2.59	0.08	1,890	220	0	19.2			
and	62.0	63.5	1.5	1.02	0.02	0.00	190	10	10	2.7			

TABLE 10.2 SIGNIFICANT MINERALIZED INTERCEPTS FOR GAMMA ZONE											
Drill Hole ID	From (m)	To (m)	Width (m)	Cu (%)	Ni (%)	Co (%)	Pd (ppb)	Pt (ppb)	Au (ppb)	Sulphide (%)	
HR-2012-04	52.2	69.0	16.8	0.54	0.14	0.01	130	40	60	2.4	
incl.	54.1	63.0	8.9	0.77	0.20	0.01	170	60	80	3.8	
incl.	57.0	58.0	1.0	2.29	0.20	0.01	180	90	380	6.9	
HR-2012-05	36.5	58.6	22.1	0.56	0.20	0.01	200	50	20	3.1	
incl.	36.5	54.0	17.5	0.60	0.24	0.01	210	50	20	3.6	
incl.	49.0	50.0	1.0	1.81	0.35	0.02	310	80	30	8.0	

FIGURE 10.1 GAMMA ZONE 2012-2013 DRILL HOLE LAYOUT MAP



**Source:** P&E (2014)

#### **10.1.2 Pio Zone**

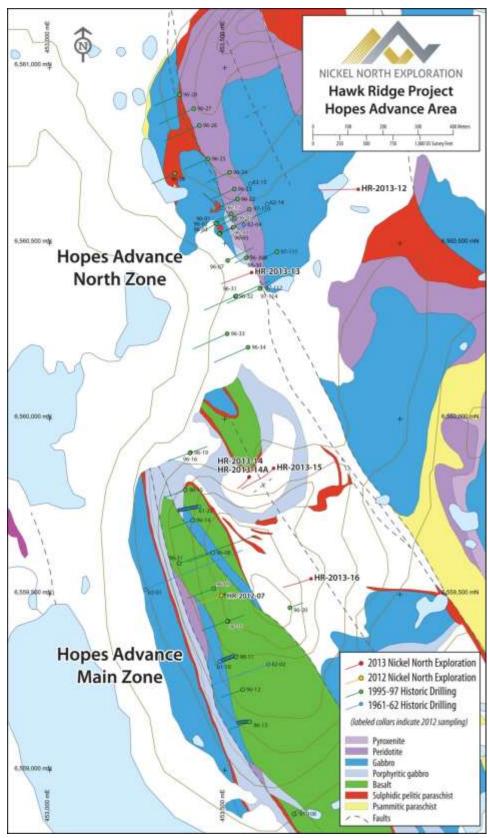
Nickel North completed one hole in total at the Pio Zone (HR-2012-06) (see Figure 10.1) over a length of 152.0 m, identifying a similar high-grade semi-massive to massive mineralization and disseminated sulphides seen at the Gamma Zone. Highlights of the mineralization intersected in drill hole HR-2012-06 at the Pio Zone are presented in Table 10.3.

	TABLE 10.3 SIGNIFICANT MINERALIZED INTERCEPTS FOR PIO ZONE											
Drill Hole ID												
	(m) (m) (%) (%) (%) (ppb) (ppb) (%)											
HR-2012-06	46.0	53.0	7.0	0.34	0.15	0.01	70	20	20	3.5		
and	57.1	74.9	17.8	0.81	0.32	0.02	310	70	210	4.4		
Including	61.0	62.0	1.0	1.09	0.39	0.02	480	90	30	5.6		
Including	71.0	72.0	1.0	1.25	0.48	0.02	410	70	40	6.1		

# 10.1.3 Hopes Advance Main Zone

The Company completed a single drill hole (HR-2012-07) at the Hopes Advance Main Zone (Figure 10.2) over a length of 182.0 m and encountered disseminated to net-textured mineralization of greater than 40 m thickness. Similar potential was recognized at the Hopes Advance Main Zone to that of the Gamma Zone with high-grade mineralization, and large tonnage intermediate-grade mineralization with open pit potential identified by drilling. Highlights of the mineralization intersected in drill hole HR-2012-07 of the Hopes Advance Main Zone are presented in Table 10.4.

FIGURE 10.2 HOPES ADVANCE MAIN ZONE 2012-2013 DRILL HOLE LAYOUT MAP



**Source:** P&E (2014)

Sig	TABLE 10.4 SIGNIFICANT MINERALIZED INTERCEPTS FOR HOPES ADVANCE MAIN ZONE											
Drill Hole ID												
HR- 2012-07	63.0	117.1	54.1	0.54	0.19	0.01	170	50	40	3.1		
Including	89.0	112.5	23.5	0.76	0.22	0.01	200	80	50	3.5		
and	122.4	126.0	3.6	0.27	0.02	0.01	10	10	0	15.8		

#### 10.2 2013 DRILLING PROGRAM

The Company commenced its 2013 helicopter-supported drill program at the Property on June 26, 2013, with a single drill rig and added a second drill at the mid-season sealift. A total of 7,330 m of diamond drilling was completed in 38 drill holes (HR-2013-08 to HR-2013-43) at the Hopes Advance Main Zone, the Gamma Zone, the newly discovered Falco 7 Zone, and additional regional exploration targets (Table 10.5).

Mineral Resource drilling was completed at the Hopes Advance Main, Gamma and Falco 7 Zones and reconnaissance drilling at numerous new targets estimated from the 2012 VTEM Airborne Survey. The main objective of the 2013 exploration program was to expand the known mineralization at the Property and complete a Mineral Resource calculation. Assays were taken along the entire length of the drill core, with more than 7,600 samples collected during the drilling program.

TABLE 10.5
DATA FOR THE 2013 DRILL PROGRAM AT HAWK RIDGE

Drill Hole ID	UTM Easting (m)	UTM Northing (m)	Elev- ation (m)	Length (m)	Dip (°)	Azimuth (°)	Claim ID	Zone
HR-2013-08	464,712.3	6,539,169.9	127.2	191.0	-67.0	267.0	1018059	Fold Grid
HR-2013-09	466,154.9	6,535,327.3	164.9	145.6	-54.5	244.0	1019199	Pio Grid
HR-2013-10	466,154.5	6,535,269.5	167.6	119.0	-57.2	90.5	1019199	Pio South
HR-2013-11	457,365.0	6,550,965.0	163.3	116.0	-53.0	274.5	1018019	Horseshoe Grid
HR-2013-12	453,880.9	6,560,653.9	83.8	192.0	-54.8	271.0	1019193	Hopes Advance Northeast
HR-2013-13	453,576.6	6,560,417.1	87.6	149.0	-52.2	248.3	1019193	Hopes Advance North
HR-2013-14	453,569.6	6,559,835.2	118.3	326.0	-80.5	227.7	1019192	Hopes Advance Main
HR-2013-14A	453,569.0	6,559,834.0	118.3	34.3	-85.0	240.0	1019192	Hopes Advance Main
HR-2013-15	453,639.3	6,559,859.5	115.4	476.0	-53.5	270.0	1019192	Hopes Advance Main
HR-2013-16	453,746.3	6,559,545.3	147.1	517.5	-85.4	250.0	1019189	Hopes Advance Main
HR-2013-17	458,890.7	6,572,361.7	26.3	218.0	-48.8	271.1	2258804	Falco 7
HR-2013-18	458,747.7	6,571,758.4	33.9	92.0	-73.2	269.2	2258799	Falco 7
HR-2013-19	458,497.8	6,571,456.0	44.1	56.0	-67.9	270.0	2258798	Falco 7
HR-2013-20	458,740.5	6,571,362.1	55.0	158.0	-73.7	269.1	2258799	Falco 7
HR-2013-21	458,977.0	6,572,654.5	24.6	113.1	-74.0	270.3	2258804	Falco 7
HR-2013-22	458,991.1	6,572,959.5	24.4	107.0	-73.3	269.5	2258808	Falco 7
HR-2013-23	458,893.0	6,573,362.4	23.6	107.0	-48.2	268.5	2258808	Falco 7
HR-2013-24	457,116.5	6,570,850.3	44.6	225.0	-58.0	320.0	2258789	Falco 7
HR-2013-25	458,187.8	6,571,333.5	41.6	89.0	-74.3	0.0	2258797	Falco 7
HR-2013-26	458,925.4	6,571,443.3	45.1	208.2	-74.3	318.0	2258799	Falco 7
HR-2013-27	458,977.6	6,571,757.5	35.0	182.1	-77.9	270.2	2258799	Falco 7
HR-2013-28	458,559.3	6,571,247.0	57.0	191.1	-79.3	319.5	2258804	Falco 7
HR-2013-29	458,984.1	6,571,947.8	30.2	133.8	-78.6	269.0	2258804	Falco 7
HR-2013-30	459,349.0	6,547,835.7	118.4	32.0	-65.0	240.0	1018001	Gamma Zone
HR-2013-30A	459,349.0	6,547,835.7	118.4	437.0	-63.6	238.5	1018001	Gamma Zone
HR-2013-31	459,177.4	6,571,756.6	32.2	206.0	-78.7	272.0	2258800	Falco 7

TABLE 10.5
DATA FOR THE 2013 DRILL PROGRAM AT HAWK RIDGE

Drill Hole ID	UTM Easting (m)	UTM Northing (m)	Elev- ation (m)	Length (m)	Dip (°)	Azimuth (°)	Claim ID	Zone
HR-2013-32	459,143.3	6,571,441.4	36.7	239.0	-79.0	270.5	2258799	Falco 7
HR-2013-33	458,896.3	6,572,125.0	27.2	80.0	-79.3	269.1	2258804	Falco 7
HR-2013-34	459,110.6	6,572,125.0	28.3	146.0	-79.1	272.5	2258804	Falco 7
HR-2013-35	459,106.9	6,572,361.8	26.5	143.0	-77.9	270.2	2258804	Falco 7
HR-2013-36	459,165.3	6,572,553.7	24.0	164.0	-80.0	270.0	2258804	Falco 7
HR-2013-37	459,182.6	6,571,950.8	28.5	173.0	-80.9	273.5	2258805	Falco 7
HR-2013-38	458,229.5	6,571,058.7	53.5	221.0	-79.4	330.0	2258798	Falco 7
HR-2013-39	459,458.0	6,547,557.7	126.4	407.0	-63.4	245.5	1017994	Gamma Zone
HR-2013-40	459,613.9	6,547,336.5	119.9	398.0	-64.0	244.2	1017994	Gamma Zone
HR-2013-41	459,481.8	6,547,157.0	137.5	152.0	-50.3	240.0	1017994	Gamma Zone
HR-2013-42	465,405.2	6,532,662.9	115.4	251.0	-44.3	271.5	2337969	Pio South
HR-2013-43	454,259.4	6,557,886.3	65.3	137.0	-53.5	270.0	1017839	Mac I

Note: UTM coordinates are UTM NAD 83 Zone 19N.

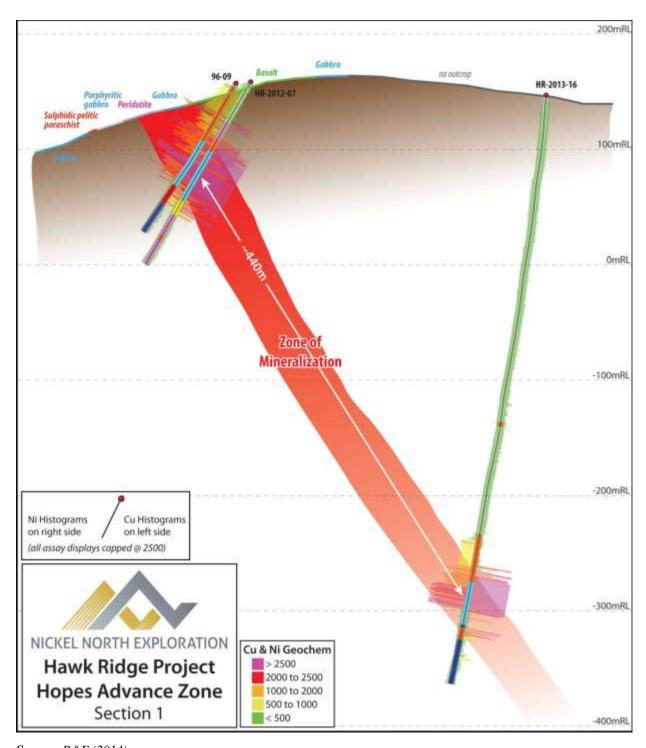
# **10.2.1** Hopes Advance Main Zone

The Company completed four drill holes at the Hopes Advance Main Zone (HR-2013-14 to HR-2013-16) for a total of 1,353.9 m. Drilling confirmed the continuity of mineralization (HR-2013-16) for an additional 430 m down-dip from HR-2012-07 and at least 495 m from surface (Nickel North News Release dated November 12, 2013).

A typical cross-section of the Hopes Advance Main Zone is shown in Figure 10.3. Highlights of the mineralization intersected during the 2013 drill program are presented in Table 10.6.

TABLE 10.6 SIGNIFICANT 2013 MINERALIZED INTERCEPTS FOR HOPES ADVANCE MAIN ZONE											
Drill Hole ID	Drill Hole ID From (m) Width Cu Ni Pd+Pt+Au Sulphide (m) (m) (%) (%) (%)										
HR-2013-16											
including											

FIGURE 10.3 HOPES ADVANCE MAIN ZONE CROSS-SECTIONAL PROJECTION



**Source:** P&E (2014)

# 10.2.2 Hopes Advance North Zone

Nickel North also completed one drill hole over 192.0 m at the Hopes Advance North Zone, which lies approximately 800 m north of the Hopes Advance Main Zone (see Figure 10.2).

Both areas have a similar mineralization style. However, the northern zone is structurally more complex and separated from the Main Zone by a northeast-trending dextral fault.

Step-out drill hole HR-2013-13 expanded the Hopes Advance North Zone by intersecting 11.65 m of disseminated mineralization, similar to the mineralized gabbro overlying semi-massive sulphides in drill hole 97-112, 55 m to the south (Figure 10.2). Follow-up geophysical surveying and drilling are planned in 2014 to trace the thicker higher-grade mineralized interval observed in historical drill hole 97-112 (Nickel North News Release dated November 12, 2013).

Highlights of the mineralization intersected during the 2013 drill program at the Hopes Advance North Zone are presented in Table 10.7.

TABLE 10.7 SIGNIFICANT 2013 MINERALIZED INTERCEPTS FOR HOPES ADVANCE NORTH ZONE													
Drill Hole ID From (m) Width Cu Ni Pd+Pt+Au Sulphide (m) (m) (%) (%) (%) (g/t) (%)													
HR-2013-13													
including	30.00												

#### **10.2.3 Gamma Zone**

The Company completed five drill holes totalling 1,240 m at the Gamma Zone. Three of the five holes intersected significant mineralization and extended the mineralized zone from surface to 325 m down-dip. Highlights of the mineralization intersected during the 2013 drill program at the Gamma Zone are presented in Table 10.8.

TABLE 10.8 SIGNIFICANT 2013 MINERALIZED INTERCEPTS FOR GAMMA ZONE											
Drill Hole ID	From (m)	To (m)	Width (m)	Cu (%)	Ni (%)	Pd+Pt+Au (g/t)	Sulphide (%)				
HR-2013-30A	330.50	359.00	28.50	0.53	0.22	0.23	3.2				
Including	335.00	349.25	14.25	0.62	0.26	0.28	3.7				
Including	353.25	358.00	4.75	0.69	0.31	0.23	4.5				
HR-2013-30A	400.08	401.63	1.55	1.10	0.35	0.45	22.5				
Including	401.02	401.20	0.18	0.18	1.02	1.56	89.1				
Including	401.20	401.50	0.30	0.26	0.58	0.81	24.8				
Including	401.50	401.63	0.13	0.26	0.52	0.68	22.7				
HR-2013-39	258.50	302.25	43.75	0.58	0.24	0.33	3.6				
Including	282.25	286.75	4.50	0.82	0.32	0.39	5.6				
Including	289.25	291.75	2.50	0.86	0.34	0.36	5.8				
Including	298.25	302.25	4.00	1.11	0.38	0.35	6.4				
Including	300.25	300.75	0.50	1.12	0.61	0.55	11.7				
Including	301.25	301.75	0.50	1.26	0.70	0.44	7.7				

Table 10.8 SIGNIFICANT 2013 MINERALIZED INTERCEPTS FOR GAMMA ZONE											
Drill Hole ID From (m) Width Cu Ni Pd+Pt+Au Sulphide (%) (%) (g/t) (%)											
HR-2013-40	298.50	320.50	22.00	0.39	0.15	0.18	2.2				
Including	304.50	312.50	8.00	0.51	0.19	0.19	3				
HR-2013-41	96.50	109.30	12.80	0.46	0.17	0.23	2.6				
Including	99.30	100.80	1.50	0.62	0.21	0.23	3.8				
including	101.80	103.80	2.00	0.76	0.28	0.32	4.5				

# **10.2.4** Falco 7 Zone

Nickel North completed 21 drill holes totalling 3,430 m along the newly discovered Falco 7 Zone, located in the northern portion of the Hawk Ridge Ni-Cu-PGE Belt, <3 km from tide water (see Figure 10.4). Drilling has delineated a north-striking zone of mineralization 1.2 km long, 600 m wide, dips 18° east and between 0 m and 150 m below surface. The mineralization is open along-strike and down-dip.

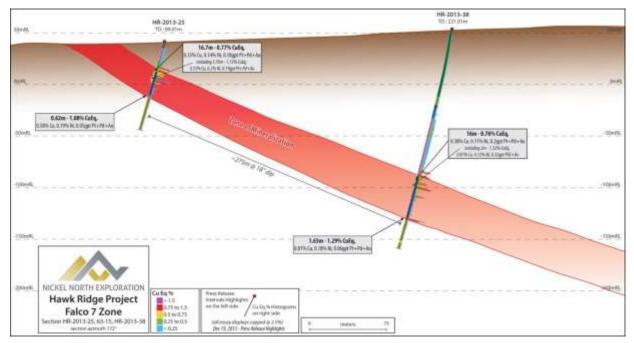
0 HR-2013-23 NICKEL NORTH EXPLORATION Hawk Ridge Project 2013 Falco 7 Zone HR-2013-22 Peridotite Pyroxenite HR-2013-21 Ultramafic Porphyritic gabbro HR-2013-36 Porphyritic gabbro (mineralized) Gabbro-melanogabbro HR-2013-1 Paraschist HR-2013-35 Amphibolite (primarily metabasalt) Faults (primarily thrust) HR-2013-33 Lithologic Contacts (approx., assumed) HR-2013-34 NNX 20113 Drill hole and trace Grab Sample Structural Features HR-2013-37 HR-2013-31 HR-2013-32 HR-2013-26 HR-2013-28 HR-2013-38 400 600 Meters HR-2013-24 2,000 Feet 1,000

FIGURE 10.4 FALCO 7 ZONE 2013 DRILL HOLE LAYOUT MAP

**Source:** P&E (2014)

A typical cross-sectional projection of the Falco 7 Zone is shown in Figure 10.5. Highlights of the mineralization intersected during the 2013 drill program at this Zone are presented in Table 10.9.

FIGURE 10.5 CROSS-SECTIONAL PROJECTION OF FALCO 7 ZONE



**Source:** P&E (2014)

SIGN	TABLE 10.9 SIGNIFICANT 2013 MINERALIZED INTERCEPTS FOR FALCO 7 ZONE											
Drill Hole ID	From (m)	To (m)	Width (m)	Cu (%)	Ni (%)	Pd+Pt+Au (g/t)	Sulphide (%)					
HR-2013-17	6.00	12.65	6.65	0.26	0.06	0.06	10.2					
and	29.35	38.30	8.95	0.38	0.08	0.04	45					
HR-2013-18	8.20	27.70	19.50	0.45	0.16	0.24	3.9					
Including	22.75	27.70	4.95	0.69	0.19	0.32	5.7					
HR-2013-18	37.75	41.40	3.65	0.37	0.09	0.05	53.6					
Including	39.20	41.40	2.20	0.52	0.13	0.06	76.8					
HR-2013-19	25.80	38.25	12.45	0.33	0.12	0.13	3.6					
Including	34.30	38.25	3.95	0.62	0.21	0.16	6.6					
HR-2013-19	45.65	48.15	2.50	0.50	0.15	0.06	76.2					
HR-2013-20	116.80	130.15	13.35	0.47	0.14	0.27	3.5					
Including	127.15	130.15	3.00	0.91	0.19	0.41	6					
HR-2013-20	138.85	146.80	7.95	0.34	0.10	0.05	43.2					
Including	142.15	145.55	3.40	0.56	0.17	0.05	87.3					
HR-2013-21	42.00	47.50	5.50	0.41	0.10	0.17	7.6					
HR-2013-22	75.85	78.90	3.05	0.30	0.13	0.22	4.1					
HR-2013-23	89.15	92.70	3.55	0.53	0.11	0.32	4					
Including	91.10	92.50	1.40	0.87	0.09	0.39	4.8					

TABLE 10.9 SIGNIFICANT 2013 MINERALIZED INTERCEPTS FOR FALCO 7 ZONE							
Drill Hole ID	From	To	Width	Cu	Ni	Pd+Pt+Au	Sulphide
	( <b>m</b> )	( <b>m</b> )	( <b>m</b> )	(%)	(%)	(g/t)	(%)
HR-2013-25	25.60	42.30	16.70	0.33	0.14	0.18	3.7
Including	36.45	40.40	3.95	0.55	0.20	0.19	6.6
HR-2013-25	53.91	54.53	0.62	0.58	0.19	0.05	26.7
HR-2013-26	130.00	151.00	21.00	0.35	0.17	0.24	3.5
Including	141.00	149.00	8.00	0.52	0.23	0.33	5.4
HR-2013-27	80.00	100.00	20.00	0.33	0.13	0.19	3.5
Including	92.00	98.00	6.00	0.55	0.18	0.26	5.3
HR-2013-27	115.58	117.85	2.27	0.32	0.10	0.03	17.2
HR-2013-28	130.75	144.00	13.25	0.30	0.13	0.19	3.3
Including	137.00	143.00	6.00	0.39	0.17	0.23	4.6
HR-2013-29	43.00	68.50	25.50	0.37	0.16	0.22	5.3
Including	57.50	63.50	6.00	0.60	0.29	0.32	8.1
HR-2013-29	80.00	81.95	1.95	0.46	0.02	0.03	5.9
HR-2013-31	91.10	95.25	4.15	0.43	0.14	0.08	8
HR-2013-33	12.00	22.00	10.00	0.23	0.08	0.10	8.1
HR-2013-33	40.80	41.00	0.20	0.30	0.08	0.05	24.5
HR-2013-34	95.20	113.50	18.30	0.34	0.11	0.10	10.3
Including	107.20	108.77	1.57	0.85	0.07	0.04	12.5
HR-2013-35	108.50	112.00	3.50	0.31	0.09	0.07	14.8
HR-2013-36	120.00	122.50	2.50	0.24	0.10	0.15	6.9
HR-2013-36	128.42	129.00	0.58	1.01	0.07	0.03	17.2
HR-2013-37	125.50	140.50	15.00	0.42	0.12	0.17	6.6
including	132.00	135.00	3.00	1.06	0.21	0.28	8.1
HR-2013-38	146.00	162.00	16.00	0.38	0.11	0.20	3.9
HR-2013-38	166.00	168.00	2.00	0.39	0.15	0.06	8.8
HR-2013-38	189.65	191.30	1.65	0.81	0.18	0.06	94.7

# 10.2.5 Regional Drilling

Nickel North completed eight regional exploration drill holes totalling 1,300 m. Several holes tested several airborne VTEM survey conductors proximal to ultramafic and mafic intrusions in the Fold, Pio, Horseshoe, Hopes Advance Main-east and Hopes Advance East Zones (drill holes HR-2013-08, HR-2013-09, HR-2013-10, HR-2013-11, HR-2013-12, HR-2013-14 and HR-2013-15). All the drill holes did intersect massive to semi-massive sulphide mineralization. However, assay results indicated low contents of Cu, Ni and precious metals (Nickel North News Release dated November 12, 2013).

#### 10.3 2014 DRILLING PROGRAM

The principal objective for the 2014 exploration program is the identification and assessment of new high-grade Ni-Cu (PGE) targets similar in tenor and geological setting to the Pio Prospect and the Gamma Zone, where drill hole DH-2012-03 returned an intercept 4.67% Cu, 2.84% Ni, 0.09% Co and 1.31 g/t PGE + Au over 1.86 m (Nickel North News Release dated December 4, 2012).

Highlights of the 2014 drill results from the Hawke Ridge Property are given in Table 10.10.

The 7.01 m mineralized intersection in drill hole HR-2014-50 averaged 2.11% Ni, 2.73% Cu, 0.62 g/t PGE. Included in this intersection is 3.35 m of massive sulphide averaging 4.24% Ni, 4.70% Cu and 0.95 g/t PGE. Including the semi-massive sulphide interval in the immediate footwall to the above, gives 4.35 m averaging 3.37% Ni, 4.28% Cu and 0.86 g/t PGE. These intersections are considered to be near true thicknesses. Comparison of grades and thickness intersected in drill hole HR-2012-03 to the south demonstrates that both the Ni grades and widths of the massive sulphide intersection in drill hole HR-2014-50 have increased considerably northwards.

Drill hole HR-2014-49 was collared 42 m east and 10 m south of HR-2014-50 and was drilled prior to the latter. HR-2014-49 intersected 8.50 m of 0.13% Ni, 0.51% Cu, 0.147 g/t PGE. This intercept includes 3.50 m of 0.21% Ni, 0.71% Cu and 0.181 g/t PGE. This mineralization and host-rock are typical of the Gamma Zone. Drill hole HR-2014-50 was drilled to follow-up a highly conductive borehole geophysical response detected above and to the north of the drill hole HR-2014-49.

Examination of geological and geophysical data together with the northward thickening massive sulphide intersections in drill holes HR-2012-03 and HR-2014-50, suggest that the high-grade Ni-Cu-PGE massive sulphides at Gamma Zone are lens-like bodies of magmatic mineralization which a plunge component in the down-dip direction.

# **TABLE 10.10** HAWK RIDGE 2014 DRILL HOLE RESULTS

Drill Hole ID	From (m)	To (m)	Width <sup>1,2</sup> (m)	Ni <sup>3</sup> (%)	Cu <sup>3</sup> (%)	Pd <sup>3</sup> (g/t)	Pt <sup>3</sup> (g/t)	Au <sup>3</sup> (g/t)	Zone	Comments
HR-2014-50	57.84	64.85	7.01	2.11	2.73	0.500	0.120	0.01	Gamma	massive magmatic sulphides
Including	60.50	64.85	4.35	3.37	4.28	0.688	0.168	0.01	Gamma	massive magmatic sulphides
Including	60.50	63.85	3.35	4.24	4.70	0.759	0.193	0.01	Gamma	massive magmatic sulphides
HR-2014-49	100.50	109.00	8.50	0.13	0.51	0.104	0.043	0.03	Gamma	interstitial magmatic sulphides
Including	100.50	104.00	3.50	0.21	0.71	0.135	0.046	0.03	Gamma	interstitial magmatic sulphides
HR-2014-48	64.80	70.30	5.50		no sig	nificant	assays		Pio	sedimentary sulphides
HR-2014-47			no sigr	nificant	tassays				Pio	no significant sulphides
HR-2014-46	32.50	74.50	42.00		no sig	nificant	assays		Lucille	disseminated magmatic sulphides
HR-2014-45			no sigr	nificant assays				Lucille	no significant sulphides	
HR-2014-44	60.00	80.00	20.00		no sig	nificant	assays	•	Lucille	disseminated magmatic sulphides

Source: Nickel North press release (November 10, 2014) and Nickel North database (May 2022)

Notes: <sup>1</sup> reported intervals are considered to represent true thickness <sup>2</sup> calculated intervals use a 0.25% Cu per tonne cut-off value

<sup>&</sup>lt;sup>3</sup> no top-cut has been used on assay values

# 11.0 SAMPLE PREPARATION, ANALYSES AND SECURITY

The following procedures have largely been taken from the February 25, 2013, Quality Assurance/Quality Control ("QA/QC" or "QC") report authored by Larry Hulbert, Ph.D., an independent consultant to the Project. The report is titled, "Report on Assessment of the QA/QC Program for the 2012 Drilling and Re-Assaying Campaigns". It is to be noted that the procedures for the 2012 through 2014 drill campaigns were the same.

#### 11.1 SAMPLE PREPARATION AND SECURITY

Drill core was transported daily from the drill site to the field camp by helicopter, where it was held in a secured core tent. When the drill core was received in camp, it was logged, photographed, sampled and cut in half utilizing a diamond-bladed saw by local individuals employed by Nickel North.

A summary of the comprehensive QA/QC program established by Dr. Hulbert in 2012, is as follows:

- All drill hole samples were comprised of half of the NQ core (60.3 mm) and varied in length from 0.5 m, in mineralogically (sulphide) interesting zones, to 1.0 m, in zones of weaker to moderate mineralization;
- All samples were packaged in 14 inch x 18 inch polypropylene bags with tags and labels, and further grouped into rice bags bound with security tags to ensure a secure chain of custody;
- All samples were crushed and pulverized by TSL in Saskatoon;
- All samples were analyzed for Au, Pd and Pt by TSL;
- Pulps weighing 90 grams were forwarded to ACME in Vancouver, BC for a 41 element, 4-acid digest with ICP-ES or ICP-MS finish (ACME code 1 EX);
- Rejects and remaining pulp were stored at TSL in Saskatoon;
- Every 25 m to 30 m along the drill hole, bulk density was determined in the camp laboratory. Due to the homogenous nature of the various lithologies, this sampling interval was considered practical. In some cases, more detailed measurements were taken at 1 to 2 m intervals; and
- Within a batch of 40 samples, a blank, a certified reference material ("CRM"), and a field duplicate (½ of sampled core (¼ of core)) was inserted; Sample 10 was denoted as the blank, sample 20 as the CRM, and sample 30 as the field duplicate.

# 11.2 SAMPLING PROTOCOL

Two sampling and analytical programs were conducted during the 2012 Hawk Ridge exploration program. The first program was designed to sample and analyze the drill core from the 2012 drill program, and the second was designed to resample and assay the old 1996 and 1997 Troymin drill core stored on the Property at Lac Déry. Due to the rather homogenous nature of the mineralized zones and the associated lithology, continuous 1.0 m to 1.5 m sample intervals were employed to help define the extent of the mineralized zones, chemical trends in wall rock approaching the zones, lateral variations, and to provide geochemical vectors for the discovery of new mineralization.

The 2012 drill program sampling consisted of 706 samples from drill holes HR-2012-01 to HR-2012-07. A total of 1033.11 m of drill core were sampled. The sample interval was routinely 1.0 m to 1.5 m in length. The computed average interval length was 1.46 m, with the shortest interval being 0.32 m and the longest 3.0 m. The sampled material represented one-half of a designated interval of NQ drill core.

The 2012 re-sampling and assaying of the old Troymin drill core from 1996 and 1997 consisted of collecting 987 samples from drill holes 96-09, 96-10, 96-35, 96-44, 96-45, 96-53, 96-55, 96-60, and 97-101. A total of 956.5 m of drill core were sampled. The sample interval was routinely taken at 1.0 m and 0.5 m lengths. The average interval length was calculated to be 0.96 m, with the shortest interval being 0.20 m. The sampled material was the remaining half of the BQ drill core in the boxes. Due to the smaller drill core diameter relative to the 2012 NQ drill core, the broken and split rather than cut nature of the remaining drill core, potential future vandalism of the drill core, time constraints and the weather, it was decided to sample the entire remaining portion of the drill core for analysis.

Bulk density measurements were determined routinely every 25 m to 30 m in the drill core. The homogenous nature of the different lithologies and disseminated mineralization justified this spacing interval. However, in areas of more intense or variable mineralization or changes in rock type, 1 m to 2 m intervals were utilized. A total of 153 bulk density measurements were taken, most of which were taken on the new and unbroken 2012 NQ drill core (141 readings), whereas only 12 readings were taken on the older broken 1996 and 1997 BQ drill core.

Nickel North carried out water immersion bulk density analyses on 980 samples of drill core from the 2013 series holes. Duplicate tests were performed for 107 of the above samples and pycnometer tests on six duplicate samples pulps by TSL Laboratories. Results for the duplicates confirmed the accuracy of the Nickel North tests.

#### 11.3 SAMPLE PREPARATION AND ANALYSES

Drill core samples are received at TSL Laboratories Inc. ("TSL"), in Saskatoon (Saskatchewan), opened, sorted and dried prior to preparation. Drill core and rock samples are crushed using a primary jaw crusher to a minimum 70% passing -10 mesh. Equipment is cleaned between each sample with compressed air and brushes. In order to verify compliance with QC specifications, the lab performs a screen test at a minimum of: 1) start of each group; 2) change of operator; 3) change of machine or environmental conditions; or 4) nature of sample appears different. All

screen data are recorded in a QC book, and this book is open for examination at the request of the Client.

A representative split sample is obtained by passing the entire reject sample through a riffle splitter, and by alternating catch pans before taking the final split. The final pulp size is 250 grams. The remaining reject material is returned to a labelled bag and stored. The sub-sample thus obtained is pulverized to a minimum 95% passing -150 mesh. The QC screen tests performed are the same as for the crushing stage.

TSL was in continuous operation from 1981 until December 1, 2021, at which time Saskatchewan Research Council ("SRC") commenced servicing TSL's former clients. The TSL quality system conformed to requirements of ISO/IEC Standard 17025 guidelines, and participated in the Proficiency Testing program sponsored by the Canadian Certified Reference Materials Project. The lab qualified for the Certificates of Laboratory Proficiency since the inception of the program in 1997.

Sample pulps are subsequently shipped by commercial airfreight directly to ACME Labs ("ACME") in Vancouver, BC (acquired by Bureau Veritas in 2012) for analysis of a 41-element suite. ACME operated 19 offices in 11 countries. At each lab, a quality system compliant with the International Standards Organization (ISO) 9001 Model for Quality Assurance and ISO/IEC 17025 General Requirements for the Competence of Testing and Calibration Laboratories is implemented. The Vancouver laboratory received formal approval of its ISO/IEC 17025:2005 accreditation from the Standards Council of Canada for the tests listed in the approved scope of accreditation.

Nickel, copper and cobalt are determined by a 4-acid digest using HNO–HClO–HF on a 0.25 g sample, and the residue is dissolved in HCL. Detection limit for Ni and Cu is 0.1 ppm and 1 ppm for Co. If copper or nickel exceed 10,000 ppm (1%), a 0.50 g sample is digested with HNO<sub>3</sub>-HF-HClO<sub>4</sub>-HCl and the solution is diluted and analyzed by Atomic Absorption Spectrometry.

The precious metals are determined by lead-collection fire assay on a 30 g aliquot with ICP finish. An upper limit of 3,000 ppb is set for gold (10,000 ppb for Pt and Pd) above which the samples are rerun using a gravimetric finish.

# 11.4 QUALITY ASSURANCE/QUALITY CONTROL REVIEW

# 11.4.1 2012 to 2013 Quality Assurance/Quality Control

The two following paragraphs are taken largely from the "Report on Assessment of the QA/QC Program for the 2012 Drilling and Re-Assaying Campaigns", by L. Hulbert, Ph.D. The 2013 QA/QC program continued from the protocols set up in 2012.

"The QA/QC procedures utilized are industry standard and included collection of drill core field duplicate samples, insertion of certified reference standards and blanks, and systematic laboratory inserted certified reference materials (CRMs), pulp duplicates and client specified sample pulp repeats. The QA/QC program for the Hawk Ridge 2012 exploration project was set-up in advance

of the drill program to ensure the program was compliant to the standards of industry, and provide the accuracy and precision of the sampling and analytical processes to an acceptable level."

#### 11.4.1.1 Performance of Certified Reference Materials

The 2012 QC program evaluated data from the 2012 drilling campaign, and data from the resampling program completed on 1996-1997 drill core. The 2013 drill program continued with the protocols set-up in 2012. The protocols included the insertion of six CRMs, three of which were prepared and certified by Ore Research and Pty of Australia (OREAS 45E, 45C and 24P), two were prepared and certified by CANMET of Ottawa (WMG-1 and WPR-1), and the remaining CRM (BTM) was prepared and certified by CDN Labs of Langley, BC. One of the CRMs was certified for Au, Pd and Pt only, and the remaining six were certified for Cu and Ni.

Performance was generally satisfactory, as defined by warning limits of  $\pm$  two standard deviations from the mean of the between-lab round robin characterization, and tolerance limits of  $\pm$  three standard deviations from the mean. Values should remain between  $\pm$  two standard deviations nine times out of ten. Any values falling outside the tolerance limits are failures and must be examined on a case-by-case basis.

The Author of this Technical Report considers that the CRM data demonstrate acceptable accuracy in the 2012 to 2013 Hawk Ridge data.

#### 11.4.1.2 Performance of Blank Material

There were three sources of blank material used at the Project. One of the blanks was prepared and purchased from CDN Resource Labs in Langley, BC. The second material was a silica blank provided by TSL Labs. The third blank was the in-house quality control blank inserted by TSL for their own purposes. The CDN Labs blank, named BL-10, was certified sterile for Au, Pd and Pt only, and as such, had background values for Cu of approximately 40 ppm and for Ni of approximately 70 ppm. The TSL blank was sterile for Cu and Ni, with background values for Cu and Ni of generally <10 ppm. The third blank, denoted as blank 2013, had detection limit values for Cu and Ni. All blanks were pre-pulverized and as such did not pass through all stages of the sample preparation. Four hundred sixty-two blanks were analyzed during the drill program, and results indicated that contamination was not an issue for Cu, Ni, Au, Pd and Pt.

# 11.4.1.3 Performance of Duplicates

There were 185 field duplicate pairs, comprised of a ¼ drill core split of the ½ drill core sent for analysis. Precision was satisfactory for this level of homogeneity.

The lab analyzed 213 pulp duplicate pairs as part of their internal quality control. Precision was excellent, as indicated by scatter plots of the duplicate pairs for copper and nickel. There were no duplicate results for Au, Pd or Pt.

# 11.4.2 2014 Quality Assurance/Quality Control

The 2014 QA/QC program continued to follow the protocols established in 2012, again including the collection of drill core field duplicate samples, insertion of CRMs and blanks.

#### 11.4.2.1 Performance of Certified Reference Materials

The 2014 drill program protocols included the insertion of two CRMs (WMG-1 and WPR-1) prepared and certified by CANMET of Ottawa. The WMG-1 CRM is certified for Au, Pd and Pt, and provisional for Cu, Co and Ni. The WPR-1 is certified for Au, Cu, Pd and Pt, and provisional for Co and Ni.

Performance was excellent for both CRMs and all elements with all data falling within  $\pm$  two standard deviations from the recommended mean (Figures 11.1 to 11.12). The Author considers that the CRM data demonstrate acceptable accuracy in the 2014 Hawk Ridge data.

FIGURE 11.1 CRM RESULTS FOR WMG-1: CU

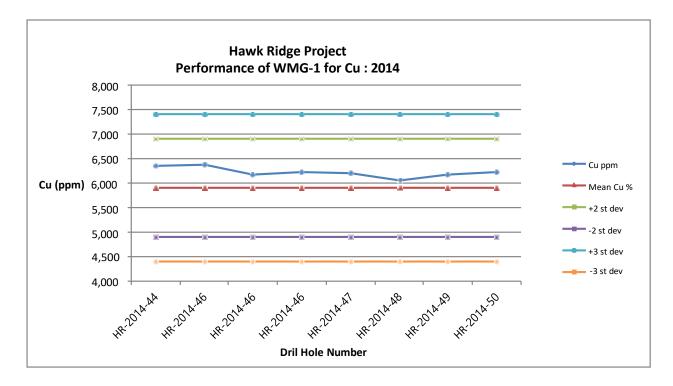


FIGURE 11.2 CRM RESULTS FOR WMG-1: NI

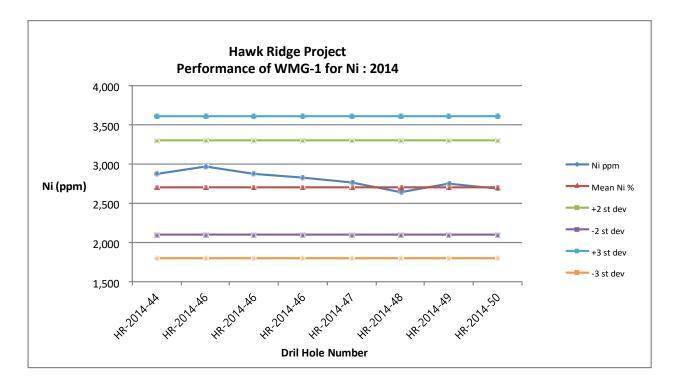


FIGURE 11.3 CRM RESULTS FOR WMG-1: CO

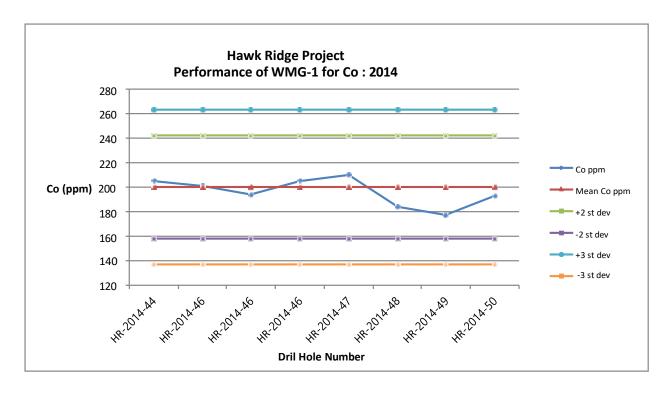


FIGURE 11.4 CRM RESULTS FOR WMG-1: AU

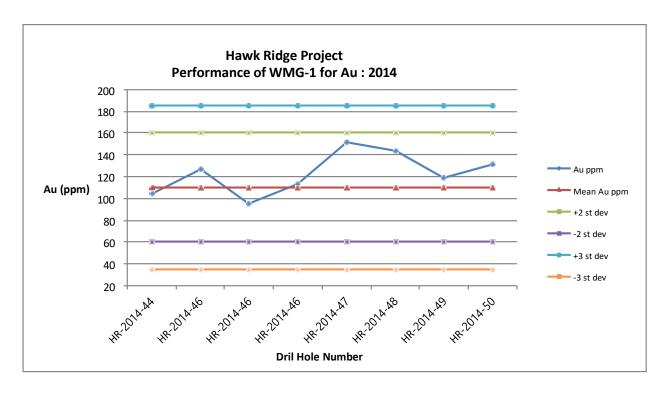


FIGURE 11.5 CRM RESULTS FOR WMG-1: PD

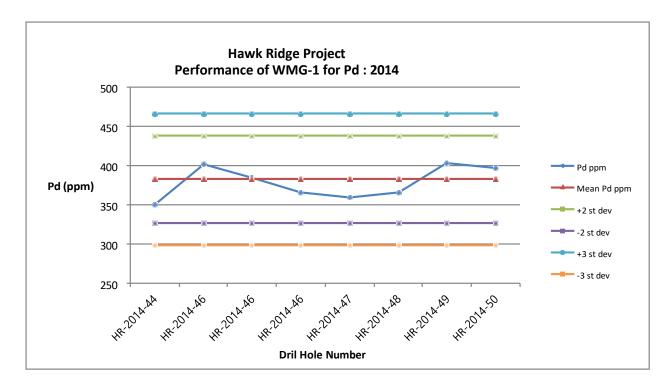


FIGURE 11.6 CRM RESULTS FOR WMG-1: PT

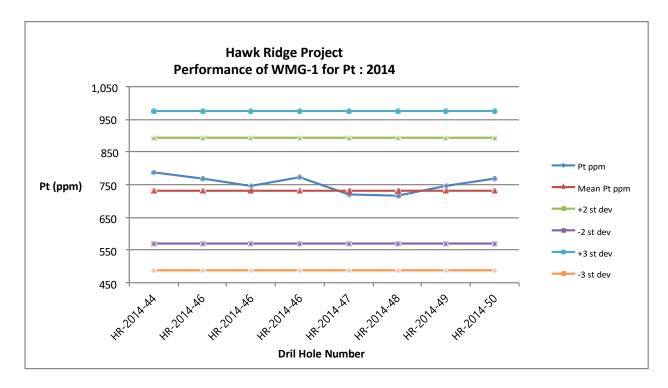


FIGURE 11.7 CRM RESULTS FOR WPR-1: CU

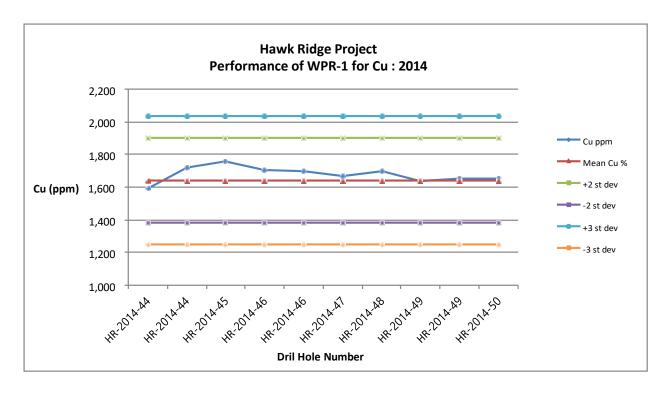


FIGURE 11.8 CRM RESULTS FOR WPR-1: NI

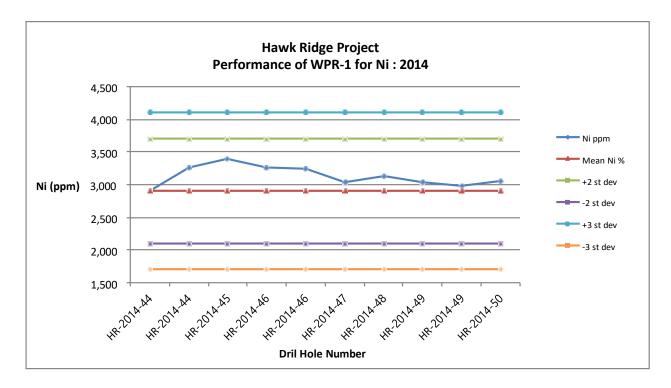


FIGURE 11.9 CRM RESULTS FOR WPR-1: CO

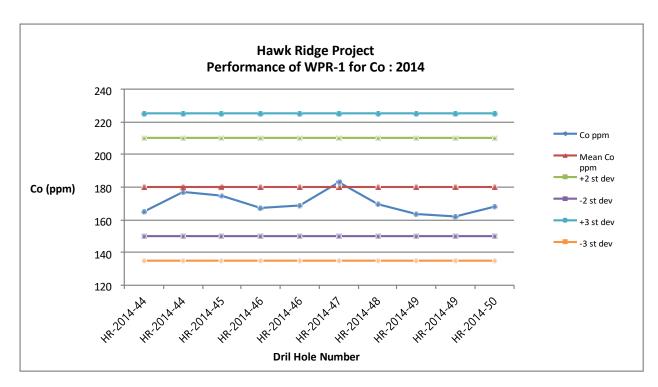


FIGURE 11.10 CRM RESULTS FOR WPR-1: AU

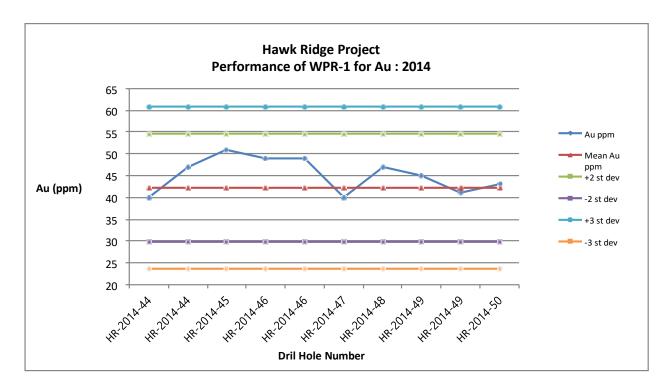


FIGURE 11.11 CRM RESULTS FOR WPR-1: PD

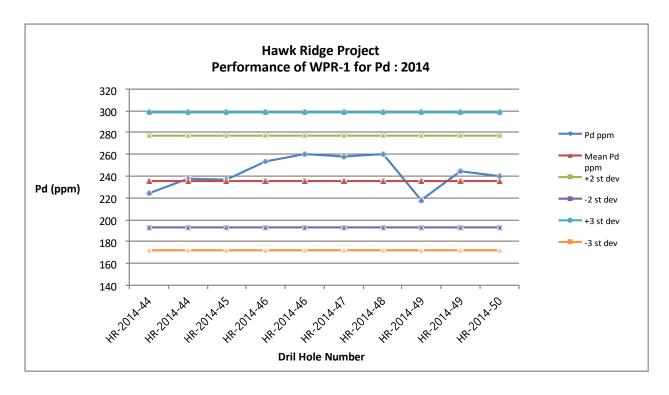
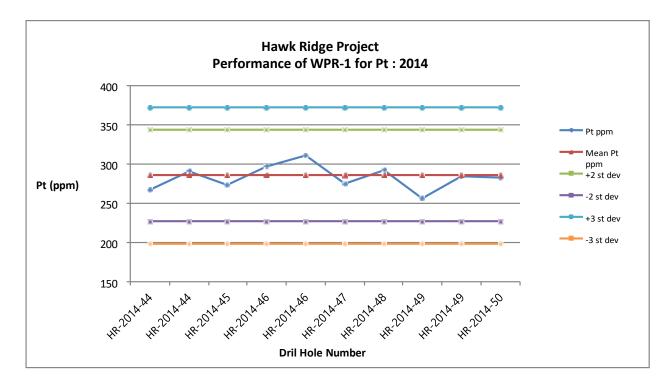


FIGURE 11.12 CRM RESULTS FOR WPR-1: PT



#### 11.4.2.2 Performance of Blank Material

There were 19 blank samples to assess in the 2014 drill hole data for the Project and the author reviewed blank results for Au, Pd, Pt, Cu, Ni and Co. All results for Au, Pd and Pt fell below detection limit level. Background values were again evident in the Cu, Ni and Co blank results, with respective results falling close to the calculated average of 49.2 ppm, 41.3 ppm and 13.4 ppm, respectively. The Author does not consider contamination to be an issue for the 2014 drill data.

# 11.4.2.3 Performance of Duplicates

Company-inserted ¼ drill core field duplicate data for Au, Pd, Pt, Cu, Ni and Co were reviewed by the author for the 2014 drill program. The data were scatter-graphed and the coefficients of determination ("R²") and average coefficients of variation ("CVAV") were utilized to estimate precision. Duplicate samples with combined means of <15 times the detection limit were excluded from the CVAV data, to eliminate the level of influence of the data nearer the detection limit where higher-grade variations are more likely to occur. A summary of precision analysis is given in Table 11.1. Data show acceptable precision at the field duplicate level.

TABLE 11.1 DUPLICATE PERFORMANCE (OUTLIERS REMOVED FROM CVAV DATA)										
Element	Au Pd					Pt				
Precision Technique	R2	CVAV	R2	CVav	R2	CVav				
Field Duplicates	0.912		1	5.5	0.997					
Element	(	Cu	ľ	Ni	Со					
Precision Technique	R2	CVav	R2	CVav	R2	CVav				
Field Duplicates	0.978	8.3	0.995	7.1	1	4.6				

**Note:** -- Majority of data close to lower detection level, leaving insufficient data to estimate precision.  $CV_{AV} = coefficients$  of variation

# 11.5 CONCLUSION

It is the Author's opinion that sample preparation, security and analytical procedures for the 2012 to 2014 drilling and re-assaying programs at the Hawk Ridge Project were adequate and examination of QA/QC results for all recent sampling indicates no significant issues with accuracy, contamination or precision in the data. The Author considers the data to be of good quality and satisfactory for use in the current Mineral Resource Estimate.

#### 12.0 DATA VERIFICATION

# 12.1 DRILL HOLE DATABASE

#### 12.1.1 1996-97 and 2012-13 Drill Hole Database Verification

Verification of drill hole assay data entry was performed by P&E on 8,550 assay intervals for Cu, Ni, Co, Au, Pd and Pt. Data from holes drilled in 1996 to 1997 and 2012 to 2013 were verified. No data entry errors were observed for Cu, Ni, Co or Pt and one discrepancy each for Au and Pd was found. The 8,550 verified intervals were checked against original digital assay lab certificates from TSL. The checked assays represented 79.8% of the entire database comprised of 10,712 samples. The Author does not consider the discrepancies to be of significant impact to the data.

# 12.1.2 2014 Drill Hole Database Verification

Additional drilling at the Project by Nickel North in 2014 resulted in samples from two additional drill holes (HR-2014-49 and HR-2014-50) being imported into the database. Verification of drill hole assay data entry was performed by P&E on 186 assay intervals for Cu, Ni, Co, Au, Pd, Pt and Fe. No data entry errors were observed in the data. The 186 verified intervals were checked against original digital assay lab certificates from TSL. The checked assays represented 100% of the appended data.

#### 12.2 2013 P&E SITE VISIT AND INDEPENDENT SAMPLING

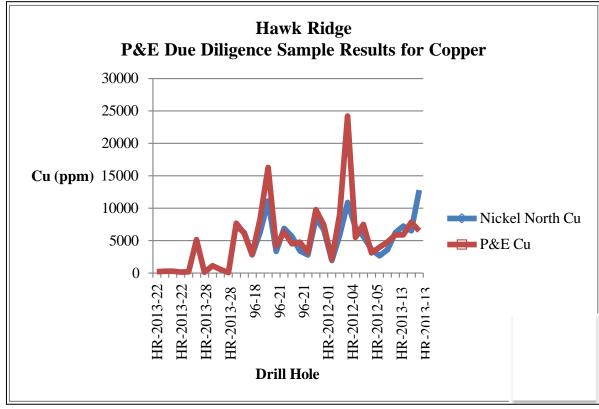
The Hawk Ridge Deposit was visited by Mr. Antoine Yassa, P.Geo., of P&E, from August 28 to 31, 2013 for the purposes of completing a site visit and due diligence sampling. General data acquisition procedures, core logging procedures, and QA/QC procedures were discussed during the visit.

Mr. Yassa collected 35 samples from nine diamond drill holes. Samples were collected by taking a ¼-split of the half drill core remaining in the drill core box. When the samples were ¼-sawed, they were placed in a large bag and taken by Mr. Yassa to Dicom Express courier in Rouyn-Noranda, QC. From there they were sent to AGAT Labs, ("AGAT") in Mississauga, ON for analysis.

AGAT is an independent lab that has developed and implemented at each of its locations a Quality Management System ("QMS") designed to ensure the production of consistently reliable data. The system covers all laboratory activities and takes into consideration the requirements of ISO standards. AGAT maintains ISO registrations and accreditations. ISO registration and accreditation provide independent verification that a QMS is in operation at the location in question. AGAT Laboratories is certified to ISO 9001:2015 standards and is accredited, for specific tests, to ISO/IEC 17025:2017 standards.

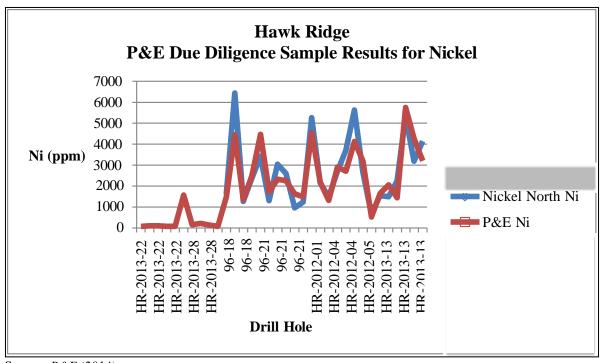
Samples at AGAT were analyzed for copper and nickel by four-acid digest-AAS. Results of the Hawk Ridge site visit samples are presented in Figures 12.1 and 12.2.

FIGURE 12.1 P&E SITE VISIT RESULTS FOR CU



Source: P&E (2014)

FIGURE 12.2 P&E SITE VISIT RESULTS FOR NI



Source: P&E (2014)

# 12.3 CONCLUSION

The Author considers that there is good correlation between the Cu and Ni assay values in Nickel North's database and the independent verification samples collected by the Author and analyzed at AGAT. In the Author's opinion, the data are of good quality and appropriate for use in the current Mineral Resource Estimate.

# 13.0 MINERAL PROCESSING AND METALLURGICAL TESTING

The following information is based on 2013-2014 test results at XPS (Expert Process Solutions of Falconbridge, Ontario; XPS, 2014), the 2014 Mineral Resource Estimate (P&E, 2014) of the Hawk Ridge Deposits, results reported on somewhat similar deposits by other companies, and professional considerations by the Author of this Technical Report. Additional metallurgical tests on fresh drill core are recommended.

#### 13.1 13.1 THE HAWK RIDGE DEPOSITS

The Hawk Ridge Deposits can be considered low-grade nickel, copper, cobalt and PGM- mineralized material. In order for a potential Hawk Ridge mine and mineral process facility to be economical, substantial mine-site concentration would be required in advance of concentrate shipment by sea, from a northern all-weather marine port to smelters and refineries. For example, for copper a concentration ratio of 50:1 would be required.

# 13.2 GRINDING TESTS

In 2013, XPS forwarded samples of each composite they had at the time to SGS Lakefield for standard Bond Ball Mill Index (BMI) determinations - the results are shown in Table 13.1.

TABLE 13.1 BOND WORK INDEX (BWI)						
Deposit / Host Rock	Bond Work Index (kWh/t)					
Gamma-Main/IPG	15.3					
Falco/IGG	13.9					
Gamma-Main/PYX	13.3					

**Source:** XPS (2014)

**Host Rocks:** IPG = Interstitial Porphyritic Gabbro;

*IGG* = *Interstitial Glomeroporphyritic Gabbro*; and *PYX* = *Pyroxenite* 

The BWI was assessed as medium, suggesting a normal value for this type of mineral deposit. Due to the high abundance, the non-sulphide minerals would determine the bulk mineralized material's BWI.

#### 13.3 MINERALOGICAL EXAMINATIONS

Mineralogical investigations by XPS determined that all of the copper is carried in chalcopyrite. A reasonably high recovery and grade of copper concentrate was indicated to be possible. Nickel was observed to be present in pentlandite and in solid solution in pyrrhotite at 0.5% to 0.7% Ni. Pyrite was also nickel-bearing, at higher average concentration of 3.7% Ni. Trace levels of Ni were also reported in Fe-Mg silicates. Other important mineralogical observations included:

• The sulphide content of the Falco Deposit was higher than the other two;

- The sulphide grain size was coarsest in the Falco unit and finest in the PYX unit;
- No copper was detected in non-chalcopyrite mineralization;
- Cobalt was determined to be primarily associated with pentlandite an average content 1.4% Co; and
- Pentlandite is generally associated with pyrrhotite and chalcopyrite with silicates as shown in Figures 13.1, 13.2 and 13.3. As shown in Figure 13.2 a significant percent of the nickel is held in gangue minerals and would not be recovered.

FIGURE 13.1 PENTLANDITE MINERAL ASSOCIATION

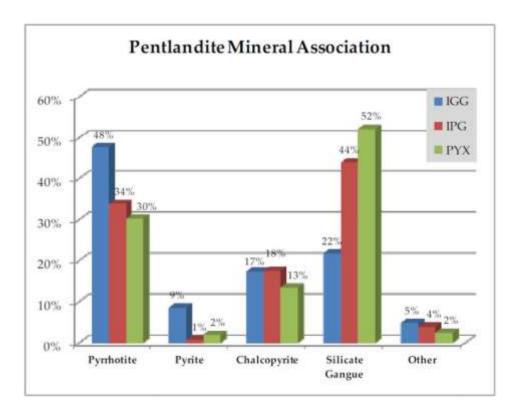


FIGURE 13.2 NICKEL DISTRIBUTION IN THREE HAWK RIDGE MINERAL RESOURCES

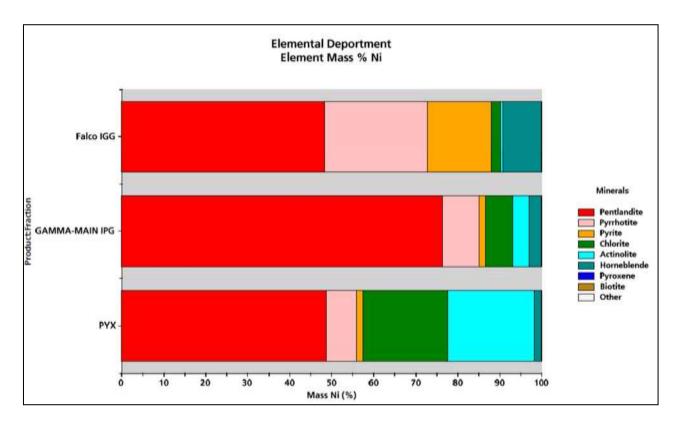
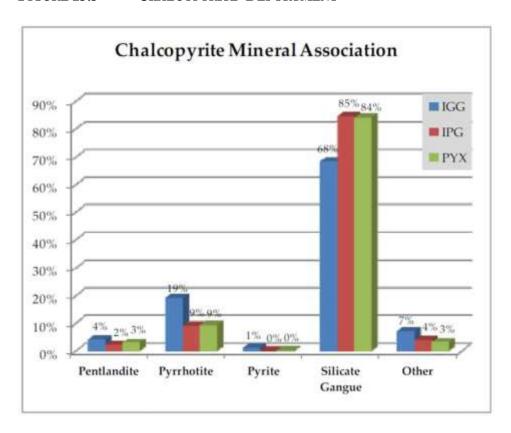


FIGURE 13.3 CHALCOPYRITE DEPORTMENT



The mineralogy examinations revealed that copper recovery should be high utilizing conventional grinding and flotation processes. However, nickel recovery is expected to be significantly less than copper.

# 13.4 FLOTATION TEST RESULTS

XPS performed duplicate rougher flotation tests on each of three composites. The results are shown in Table 13.2.

TABLE 13.2 ROUGHER BULK FLOTATION TEST RESULTS – XPS									
Composito	R	ecovery %	ó	Grade %					
Composite	Cu	Ni	Co	Cu	Ni	Co			
Gamma Main IPG	93.2	75.6	76	7.32	2.29	0.09			
Falco IGG	94.9	77.2	45	4.47	1.63	0.03			
Gamma Main PYX	90.1	47.3	38	6.98	1.70	0.09			

A single cleaner test was performed on an IPG rougher concentrate. A combined cleaner concentrate assaying 14.9% Cu, 3.6% Ni and 0.15% Co in 3.03% weight was achieved in an open cycle test (scavenger concentrates and cleaner tails were not recycled). Process recoveries were 83.5%, 59.6% and 31.7%, respectively, for Cu, Ni and Co.

Whereas a high total copper process recovery, approximately 90%, can be expected in final flotation copper and nickel-copper flotation concentrates, nickel process recovery is expected to be significantly less. The restriction in nickel process recovery, mainly as a pentlandite concentrate, is mineralogically limited, with the maximum <u>rougher</u> flotation nickel recovery being about 75% for the Gamma Main, but much less for Falco and PYX Deposits.

As indicated by the 2014 XPS testwork, cobalt process recovery can be related to nickel process recovery. A rougher flotation concentrate performed on the Gamma Main IPG Resource indicated a 76% cobalt process recovery at a grade roughly 10 times the feed grade (0.09% versus 0.008%). A single cleaner flotation test reduced the Co performance to 32% process recovery at a grade of 0.15% Co. Cleaner tails or scavenger tails were not recycled as they would have been in locked-cycle testing. Process recovery could be expected to be higher in locked cycle testing, which would more accurately represent process plant performance.

It should be emphasized that no attempts were made to produce separate copper and nickel concentrates. Since smelting and refining processes for copper and nickel are significantly different, the production of separate concentrates is the traditional approach for processing coppernickel Mineral Resources.

#### 13.5 REFERENCE TO OTHER DEPOSITS OF SIMILAR MINERALOGY

Canadian Royalties Incorporated (CRI, 2008) reported metallurgical performance on potentially mineralogical similar Cu-Ni-PGM deposits in the far northern Nunavik region, but on Mineral Resources of significantly higher grade. Six separate deposits were tested and the average results are summarized below in Table 13.3. Separate copper and nickel concentrates were produced in both bench and pilot scale tests. (Nickel North is assumed to produce both copper and nickel-copper concentrates).

TABLE 13.3 CRI MINERAL RESOURCE TEST RESULTS											
Test	Cu (%)	Ni Co Pt Pd Au									
Average Head Grade	2.03	1.42	0.060	0.79 g/t	3.15 g/t	0.18 g/t					
Copper Conc Recovery	70.0	2.70		40.0%	42.7%	42.8%					
Nickel Conc Recovery	16.5	69.2	63.1								
<b>Average Total Recovery</b>	86.5	71.9	65.0								

#### 13.6 RECOVERY EXPECTATIONS FOR NICKEL NORTH MINERAL RESOURCES

The overall copper recovery for the Nickel North Mineral Resources (total in copper plus nickel-copper concentrate) should be relatively high at 80% to 85%, and somewhat independent of feed grade. Grade independence is related to the XPS observation that all of the copper is in chalcopyrite.

Nickel process recovery in a separate concentrate is expected to be <60%, possibly as low as 50%. The complex mineralogical deposition of nickel (see Figure 13.2) reveals the reason for the low nickel process recovery potential.

The process recoveries of Pt, Pd and Au are uncertain. Using the CRI test data, PGM recovery could approach 40%. The payable PGMs would likely be restricted to the content of the copper concentrate. Assuming that 40% of the PGMs are recovered in 2% weight copper concentrate, the PGM content of the copper concentrate could be in the order of 2.2 g/t for Au, 1.4 g/t for Pt, and 4.2 g/t for Pd.

The estimated process recoveries noted above can be considered as conditional. A substantial amount of testwork is required to optimize grinding and flotation performance. This would include the production of separate, smelter-acceptable copper, and nickel concentrates. Subsequently, a Net Smelter Return evaluation could be completed that would consider the payable fractions for each metal in the copper and nickel concentrates.

#### 14.0 MINERAL RESOURCE ESTIMATES

# 14.1 INTRODUCTION

The purpose of this Technical Report section is to update the Mineral Resource Estimate for the Hawk Ridge Project in Québec for Nickel North Exploration Corp. ("Nickel North"). This update incorporates two drill holes completed after the previous Mineral Resource Estimate with an effective date of November 30, 2013 and uses recent metal prices to estimate potential open pit and underground mining. The Mineral Resource Estimate presented herein is reported in accordance with the Canadian Securities Administrators' National Instrument 43-101 (2014) and has been estimated in conformity with the generally accepted CIM "Estimation of Mineral Resource and Mineral Reserves Definitions (2014) and Best Practices" guidelines (2019). Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability. There is no guarantee that all or any part of the Mineral Resource will be converted into a Mineral Reserve. Confidence in the estimate of Inferred Mineral Resource is insufficient to allow the meaningful application of technical and economic parameters or to enable an evaluation of economic viability worthy of public disclosure. Mineral Resources may be affected by further infill and exploration drilling that may result in increases or decreases in subsequent Mineral Resource Estimates.

This Mineral Resource Estimate was based on information and data supplied by Nickel North, and was undertaken by Yungang Wu, P.Geo. and Eugene Puritch, P.Eng., FEC, CET, of P&E Mining Consultants Inc. of Brampton, Ontario, supervised, reviewed and accepted by Antoine Yassa, P.Geo., an independent Qualified Person in terms of NI 43-101. The effective date of this Mineral Resource Estimate is July 5, 2022.

# 14.2 PREVIOUS MINERAL RESOURCE ESTIMATE

A previous released Mineral Resource Estimate for the Hawk Ridge Deposit with an effective date of November 30, 2013, at a cut-off grade of C\$25/t NSR for potential open pit mining is presented in Table 14.1. This previous Mineral Resource Estimate is superseded by the Mineral Resource Estimate reported herein.

Ріт-	Table 14.1 PIT-Constrained Inferred Mineral Resource Estimate at Cut-off \$25/t NSR on November 30, 2013										
Deposit	Tonnes         Cu         Ni         Co         Pt         Pd         Au           (kt)         (%)         (%)         (g/t)         (g/t)         (g/t)										
Falco 7	3,786	0.46	0.18	0.01	0.05	0.19	0.10				
Hopes Advance	11,484	0.59	0.21	0.01	0.05	0.21	0.11				
Gamma	4,366	0.65	0.25	0.01	0.06	0.23	0.11				
Total	19,636	0.58	0.22	0.01	0.05	0.21	0.11				

### 14.3 DATABASE

All drilling data were provided in the form of Excel data files by Nickel North. The GEOVIA GEMS<sup>TM</sup> V6.8.4 database consisted of 407 drill holes totalling 37,262 m, of which 219 holes totalling 22,250 m were drilled in three Resource Estimate deposits (Falco 7, Hopes Advance and Gamma). Drill holes with no assays were not utilized for this estimate and were treated as null values. A total of 88 drill holes intersected the mineralization wireframes used for the Mineral Resource Estimate (see Table 14.2). Seven drill holes were completed in 2014, post the previous Mineral Resource Estimate, of which two drill holes (HR-2014-49 and HR-2014-50) completed in Gamma were used for this Mineral Resource Estimate. Drill hole plans are shown in Appendix A.

MII	TABLE 14.2 MINERAL RESOURCE DRILL HOLE DATABASE SUMMARY										
Deposit	Number of Drill Holes	Drill Hole* Length (m)	Number of Drill Holes Intersected Wireframes	Length of Drill Holes Intersected Wireframes (m)	Number of Drill Holes with no Assays						
Falco 7	32	4,291	20	3,071	11						
Hopes Advance	108	10,470	37	6,374	54						
Gamma	79	7,489	31	5,822	45						
Total	219	22,250	88	15,267	110						

*Note:* \*- entire length of drill hole

The drill hole database contained assays for Ni, Cu, Co, Pd, Pt, Au and other lesser elements of non-economic importance as well as bulk density. The basic statistics of all raw assays are presented in Table 14.3.

	TABLE 14.3 ASSAY DATABASE SUMMARY												
Deposit	Variable	Ni (%)	Cu (%)	Co (%)	Pd (g/t)	Pt (g/t)	Au (g/t)	Bulk Density (t/m³)					
	Number of Samples	2,992	2,992	2,992	2,992	2,992	2,992	418					
	Minimum Value	0.00	0.00	0.00	0.01	0.01	0.01	2.63					
	Maximum Value	0.75	8.39	0.11	1.62	0.25	0.39	7.51					
	Mean	0.04	0.08	0.01	0.03	0.01	0.01	3.08					
Falco 7	Median	0.01	0.01	0.01	0.01	0.01	0.01	2.99					
raico /	Geometric Mean	0.02	0.02	0.01	0.01	0.01	0.01	3.06					
	Variance	0.00	0.06	0.00	0.00	0.00	0.00	0.19					
	Standard Deviation	0.06	0.25	0.01	0.06	0.01	0.01	0.44					
	Coefficient of Variation	1.47	3.32	1.00	2.30	0.94	1.76	0.14					

		ASSAY I	TABLE 1		RY			
Deposit	Variable	Ni (%)	Cu (%)	Co (%)	Pd (g/t)	Pt (g/t)	Au (g/t)	Bulk Density (t/m³)
	Skewness	3.19	17.30	4.45	9.98	6.75	11.74	5.83
	Kurtosis	20.79	490.31	33.05	214.01	78.59	215.17	47.62
	Number of Samples	3,480	3,482	3,418	2,621	2,621	3,405	223
	Minimum Value	0.00	0.00	0.00	0.01	0.00	0.00	1.95
	Maximum Value	5.00	13.70	0.15	2.77	1.01	3.50	4.98
	Mean	0.08	0.21	0.01	0.04	0.02	0.01	3.02
	Median	0.01	0.02	0.01	0.01	0.01	0.01	3.02
Hopes	Geometric Mean	0.02	0.04	0.01	0.01	0.01	0.01	3.01
Advance	Variance	0.06	0.44	0.00	0.01	0.00	0.01	0.03
	Standard Deviation	0.25	0.66	0.01	0.12	0.04	0.08	0.17
	Coefficient of Variation	3.17	3.21	0.90	3.15	2.44	6.72	0.06
	Skewness	10.58	10.02	12.06	9.46	12.00	35.23	6.05
	Kurtosis	149.07	143.81	241.27	154.67	191.06	1,437.7	93.47
	Number of Samples	2,583	2,583	2,275	2,275	2,275	2,275	220
	Minimum Value	0.00	0.00	0.00	0.01	0.01	0.01	2.64
	Maximum Value	5.04	14.00	0.17	1.89	0.61	1.00	7.52
	Mean	0.10	0.22	0.01	0.06	0.02	0.01	3.12
	Median	0.02	0.02	0.01	0.01	0.01	0.01	3.05
Gamma	Geometric Mean	0.03	0.04	0.01	0.02	0.01	0.01	3.10
Gaiiilia	Variance	0.09	0.33	0.00	0.02	0.00	0.00	0.19
	Standard Deviation	0.30	0.57	0.01	0.14	0.03	0.03	0.43
	Coefficient of Variation	2.95	2.64	1.28	2.18	1.38	2.35	0.14
	Skewness	10.70	10.57	11.61	4.96	7.98	16.44	7.30
	Kurtosis	142.81	183.19	167.77	41.51	117.54	432.22	64.48

All drill hole survey and assay values are expressed in metric units. The coordinates are utilizing the NAD83, Zone 19 UTM geodetic reference system.

# 14.4 DATA VERIFICATION

Verification of the assay database was performed by the Author with a few insignificant errors found and corrected. Historical data were not checked due to lab certificates not being made available to the Author.

The Author also validated the Mineral Resource database by checking for inconsistencies in analytical units, duplicate entries, interval, length or distance values less than or equal to zero, blank or zero-value assay results, out-of-sequence intervals, intervals or distances greater than the reported drill hole length, inappropriate collar locations, survey and missing interval and coordinate fields. No errors were identified in the database. The Author considers that the supplied database is suitable for Mineral Resource estimation.

# 14.5 DOMAIN INTERPRETATION

Six mineralization domain wireframes from three deposits were created for the Mineral Resource Estimate. The domain boundaries were determined from grade boundary interpretation constrained by lithological and structural controls determined from visual inspection of drill hole cross-sections. The outlines were influenced by the selection of mineralized material above C\$35/t Net Smelter Return ("NSR") that demonstrated a lithological and structural zonal continuity along strike and down dip and that had a reasonable expectation of being profitably mined. The C\$/t NSR values were calculated with the formula below.

$$NSR \ C$/t = (Ni \% x 155.81) + (Cu \% x 85.26) + (Co \% x 273.03) + (Au g/t x 32.27) + (Pt g/t x 22.78) + (Pd g/t x 41.50) - 4.38$$

The minimum constrained sample length for the wireframes was 2.0 m. In some cases, mineralization below C\$35/t NSR was included for the purpose of maintaining zonal continuity and minimum width. On each section, polyline interpretations were digitized from drill hole to drill hole, but were not extended more than 50 m into untested territory. The interpreted polylines from each cross-section were wireframed into 3-D solids. The resulting solids (domains) were utilized for statistical analysis, grade interpolation, rock coding and Mineral Resource reporting purposes. Four mineralization domains were constructed for potential underground mining of the Mineral Resource Estimate. The 3-D domains are presented in Appendix B.

The topographic and overburden surfaces were created with LiDAR and drill hole logs, and the mineralization domains were clipped to the overburden surface.

The Author notes that there is additional mineralization indicated by the drilling results that is not encapsulated by the modelled Mineral Resource domains. This additional mineralization is described as an Exploration Target in Section 9 of this Technical Report.

# 14.6 ROCK CODE DETERMINATION

A unique model rock code was assigned to each domain in the Mineral Resource model as presented in Table 14.4.

ROCK COD	TABLE 14.4 ROCK CODES USED FOR THE MINERAL RESOURCE ESTIMATE								
Deposit	Domain	Rock Code	Volume (m³)						
Foloo 7	Falco	100	10,985,579						
Falco 7	Falco FW	150	1,110,519						
TT A 1	HA_North	200	657,536						
Hopes Advance	HA_Main	300	9,645,337						
Commo	Gamma	400	5,585,827						
Gamma	Gamma FW	450	89,787						
	Air	0							
All	Overburden	10							
	Country rock	99							

# 14.7 WIREFRAME CONSTRAINED ASSAYS

Wireframe constrained assays were back coded in the assay database with model rock codes that were derived from intersections of the mineralization solids and drill holes. The basic statistics of mineralization wireframe constrained assays are presented in Table 14.5.

As shown in Table 14.5, approximately 64% of the constrained samples intervals lacked Pd and Pt assays in the Hopes Advance domains, and 36% of the constrained sample intervals lacked Pd, Pt, Au and Co assays in the Gamma domains. Correlation between the accessory metals Pd, Pt, Au and Co and primary metals Cu and Ni was analyzed using constrained assays for each deposit and are presented in Table 14.6.

Regression formulae were developed in order to assign metal grade values to the missing assay records. A combination of assays and assigned values were utilized for the Mineral Resource estimation. The linear formulae are as follows:

# **Hopes Advance**

Pd = 0.4272Ni + 0.0999

Pt = 0.1862Ni + 0.0046

Co = 0.0185Ni + 0.0064

Au = 0.0095Cu + 0.0125

#### Gamma

Pd = 0.2023Ni + 0.1812

Pt = 0.035Ni + 0.0441

Co = 0.0313Ni + 0.0041

Au = 0.0112Cu + 0.0334

	BASIC ST		TABLE 14.5 S OF CONS		) Assay	S			
Deposit	Variable	Ni (%)	Cu (%)	Co (%)	Pd (g/t)	Pt (g/t)	Au (g/t)	Fe (%)	Bulk Density (t/m³)
	Number of Samples	388	388	388	388	388	388	388	54
	Minimum Value	0.00	0.00	0.00	0.01	0.01	0.01	2.64	2.83
	Maximum Value	0.75	8.39	0.06	1.62	0.22	0.39	60.00	4.57
	Mean	0.13	0.41	0.02	0.11	0.03	0.03	16.25	3.36
	Median	0.12	0.30	0.01	0.09	0.03	0.02	10.66	3.10
Falco 7	Geometric Mean	0.10	0.27	0.01	0.07	0.02	0.02	12.39	3.32
	Variance	0.01	0.33	0.00	0.01	0.00	0.00	208.23	0.28
	Standard Deviation	0.09	0.57	0.01	0.12	0.02	0.03	14.43	0.53
	Coefficient of Variation	0.67	1.40	0.79	1.06	0.79	1.39	0.89	0.16
	Skewness	1.83	9.14	1.80	5.60	2.21	5.25	1.89	1.11
	Kurtosis	10.35	114.55	5.47	63.76	12.26	42.55	5.43	2.71
	Number of Samples	797	797	779	290	290	775	244	16
	Minimum Value	0.00	0.00	0.00	0.01	0.00	0.00	4.40	2.94
	Maximum Value	5.00	13.70	0.15	2.77	1.01	3.50	30.26	3.26
	Mean	0.29	0.78	0.01	0.25	0.07	0.03	9.12	3.06
	Median	0.18	0.50	0.01	0.19	0.04	0.01	8.35	3.05
<b>Hopes Advance</b>	Geometric Mean	0.18	0.50	0.01	0.17	0.03	0.01	8.65	3.06
_	Variance	0.22	1.42	0.00	0.07	0.01	0.02	11.26	0.01
	Standard Deviation	0.47	1.19	0.01	0.26	0.12	0.15	3.36	0.07
	Coefficient of Variation	1.64	1.53	0.91	1.05	1.69	5.46	0.37	0.02
	Skewness	5.79	5.83	9.05	4.68	4.34	18.22	2.26	0.96
	Kurtosis	43.08	46.47	104.39	36.75	26.02	372.13	10.96	4.33
<b>C</b>	Number of Samples	754	754	485	485	485	485	485	41
Gamma	Minimum Value	0.01	0.01	0.00	0.01	0.01	0.01	3.49	2.93

	TABLE 14.5 BASIC STATISTICS OF CONSTRAINED ASSAYS											
Deposit	Variable	Ni (%)	Cu (%)	Co (%)	Pd (g/t)	Pt (g/t)	Au (g/t)	Fe (%)	Bulk Density (t/m³)			
	Maximum Value	5.04	14.00	0.17	1.89	0.61	1.00	61.02	4.73			
	Mean	0.29	0.68	0.01	0.24	0.05	0.04	9.52	3.23			
	Median	0.19	0.51	0.01	0.19	0.05	0.03	7.68	3.09			
	Geometric Mean	0.20	0.50	0.01	0.19	0.04	0.03	8.32	3.21			
	Variance	0.25	0.81	0.00	0.04	0.00	0.00	58.94	0.21			
	Standard Deviation	0.50	0.90	0.02	0.20	0.05	0.06	7.68	0.46			
	Coefficient of Variation	1.73	1.34	1.34	0.84	0.88	1.52	0.81	0.14			
	Skewness	6.51	7.55	6.08	3.50	5.61	9.42	4.84	2.64			
	Kurtosis	50.21	83.77	43.40	21.37	52.26	130.00	28.67	8.57			

TABLE 14.6 CONSTRAINED ASSAY CORRELATION COEFFICIENT TABLE											
Deposit	t Attribute Au Co Cu Fe Length Ni Pd Pt D										
	Au	1.00									
	Co	-0.06	1.00								
	Cu	0.53	0.07	1.00							
	Fe	-0.16	0.93	0.03	1.00						
Falco 7	Length	0.02	-0.24	-0.18	-0.32	1.00					
	Ni	0.30	0.45	0.19	0.20	0.01	1.00				
	Pd	0.60	-0.01	0.51	-0.22	0.06	0.65	1.00			
	Pt	0.32	-0.10	0.09	-0.27	0.15	0.48	0.48	1.00		
	Bulk Density	-0.30	0.78	-0.23	0.85	- 0.49	0.11	-0.35	-0.34	1.00	

# TABLE 14.6 CONSTRAINED ASSAY CORRELATION COEFFICIENT TABLE

Deposit	Attribute	Au	Co	Cu	Fe	Length	Ni	Pd	Pt	Bulk Density
	Au	1.00								
	Co	0.05	1.00							
	Cu	0.28	0.22	1.00						
	Fe	0.16	0.58	0.41	1.00					
Hopes Advance	Length	-0.08	-0.13	-0.05	0.10	1.00				
	Ni	0.16	0.82	0.44	0.79	- 0.06	1.00			
	Pd	0.30	0.65	0.53	0.56	- 0.03	0.83	1.00		
	Pt	0.24	0.58	0.61	-0.08	- 0.03	0.81	0.82	1.00	
	Bulk Density	0.08	0.73	0.41	0.68	- 0.48	0.75	0.28	-0.09	1.00
	Au	1.00								
	Co	0.11	1.00							
	Cu	0.14	0.78	1.00						
	Fe	0.13	0.93	0.69	1.00					
Gamma	Length	-0.07	-0.16	-0.11	-0.13	1.00				
	Ni	0.07	0.98	0.65	0.89	- 0.13	1.00			
	Pd	0.27	0.61	0.49	0.59	- 0.14	0.55	1.00		
	Pt	0.22	0.42	0.40	0.45	- 0.15	0.41	0.57	1.00	
	Bulk Density	0.46	0.71	0.57	0.74	- 0.07	0.72	0.55	0.19	1.00

The bulk density was evaluated with linear regression of bulk density versus Fe and the formulae are as follows:

Falco 7: Bulk density  $t/m^3 = 0.025 Fe + 2.8551$ Hopes Advance: Bulk density  $t/m^3 = 0.0221 Fe + 2.8826$ Gamma: Bulk density  $t/m^3 = 0.0418 Fe + 2.8005$ 

# 14.8 COMPOSITING

In order to regularize the assay sampling intervals for grade interpolation, a 1.0 m compositing length was selected for the drill hole intervals that fell within the constraints of the above-mentioned Mineral Resource wireframe domains. The composites were calculated with bulk density weighing over 1.0 m lengths starting at the first point of intersection between the drill hole and the hanging wall of the 3-D zonal constraint. The compositing process was halted upon exit from the footwall of the aforementioned constraint. If the last composite interval was <0.5 m, the composite length was adjusted to make all composite intervals equal within the domain. The resulting composite length ranged from 0.83 m to 1.22 m. This process would not introduce any short sample bias in the grade interpolation process. The constrained composite data were extracted to a point file for a grade capping analysis. The composite statistics are summarized in Table 14.7.

	TABLE 14.7 BASIC COMPOSITE STATISTICS										
Deposit	Variable	Ni (%)	Cu (%)	Co (%)	Pd (g/t)	Pt (g/t)	Au (g/t)	Fe (%)			
	Number of Samples	249	249	249	249	249	249	249			
	Minimum Value	0.01	0.01	0.00	0.01	0.01	0.01	4.04			
	Maximum Value	0.49	1.13	0.06	0.46	0.13	0.23	60.00			
	Mean	0.13	0.36	0.01	0.12	0.03	0.03	14.44			
	Median	0.12	0.33	0.01	0.11	0.03	0.02	10.30			
Falco 7	Geometric Mean	0.12	0.30	0.01	0.08	0.03	0.02	11.48			
	Variance	0.00	0.04	0.00	0.01	0.00	0.00	158.55			
	Standard Deviation	0.07	0.21	0.01	0.08	0.02	0.03	12.59			
	Coefficient of Variation	0.51	0.58	0.70	0.66	0.62	1.10	0.87			
	Skewness	1.26	1.16	2.22	0.70	1.35	3.77	2.32			
	Kurtosis	6.38	4.88	7.78	3.76	5.94	22.72	7.49			
	Number of Samples	1,400	1,400	1,400	1,400	1,400	1,400	1,400			
	Minimum Value	0.00	0.00	0.00	0.01	0.00	0.00	4.82			
Hopes	Maximum Value	4.56	13.41	0.14	2.76	1.01	3.50	76.03			
Advance	Mean	0.24	0.67	0.01	0.20	0.05	0.02	9.38			
	Median	0.17	0.52	0.01	0.17	0.04	0.01	8.33			
	Variance	0.11	0.78	0.00	0.02	0.00	0.01	27.60			

	TABLE 14.7 BASIC COMPOSITE STATISTICS										
Deposit	Variable	Ni (%)	Cu (%)	Co (%)	Pd (g/t)	Pt (g/t)	Au (g/t)	Fe (%)			
	Standard Deviation	0.34	0.88	0.01	0.16	0.07	0.11	5.25			
	Coefficient of Variation	1.41	1.33	0.57	0.79	1.42	5.73	0.56			
	Skewness	6.98	7.86	13.10	7.63	7.44	24.70	6.72			
	Kurtosis	63.11	85.66	244.18	87.27	72.40	687.21	59.69			
	Number of Samples	854	854	854	854	854	854	854			
	Minimum Value	0.01	0.01	0.00	0.01	0.01	0.01	4.12			
	Maximum Value	4.73	8.46	0.15	1.66	0.32	0.64	59.95			
	Mean	0.26	0.63	0.01	0.23	0.05	0.04	9.31			
	Median	0.19	0.51	0.01	0.22	0.05	0.04	8.52			
Gamma	Geometric Mean	0.19	0.48	0.01	0.20	0.05	0.03	8.67			
Gaiiiiia	Variance	0.15	0.47	0.00	0.02	0.00	0.00	25.77			
	Standard Deviation	0.38	0.69	0.01	0.13	0.02	0.04	5.08			
	Coefficient of Variation	1.48	1.09	0.98	0.58	0.46	0.89	0.55			
	Skewness	7.12	6.43	6.69	3.90	3.11	8.87	5.68			
	Kurtosis	63.49	58.31	57.41	31.96	25.59	123.42	44.42			

# 14.9 GRADE CAPPING

Grade capping was investigated on the 1.0 m composite values in the database within the constraining domain to ensure that the possible influence of erratic high-grade values did not bias the database. Log-normal histograms and log-probability plots for the composites were generated for each mineralized domain and the selected resulting graphs are exhibited in Appendix C. The grade capping values are detailed in Table 14.8. The capped composite statistics are summarized above in Table 14.9. The capped composites were utilized to develop variograms and for block model grade interpolation.

TABLE 14.8 GRADE CAPPING VALUES

Domain	Element	Total No. of Composites	Capping Value	No. of Capped Composites	Mean of Composites	Mean of Capped Composites	CoV of Composites	CoV of Capped Composites	Capping Percentile
	Cu	227	No Cap	0	0.36	0.36	0.58	0.58	100.0
	Ni	227	No Cap	0	0.13	0.13	0.51	0.51	100.0
	Co	227	No Cap	0	0.012	0.012	0.54	0.54	100.0
Falco	Pd	227	No Cap	0	0.13	0.13	0.60	0.60	100.0
	Pt	227	No Cap	0	0.04	0.04	0.58	0.58	100.0
	Au	227	No Cap	0	0.03	0.03	1.06	1.06	100.0
	Fe	227	50	3	11.83	11.76	0.73	0.70	98.7
	Cu	22	No Cap	0	0.360	0.360	0.55	0.55	100.0
Falco FW	Ni	22	No Cap	0	0.120	0.120	0.45	0.45	100.0
	Co	22	No Cap	0	0.035	0.035	0.43	0.43	100.0
	Pd	22	No Cap	0	0.030	0.030	0.91	0.91	100.0
	Pt	22	No Cap	0	0.010	0.010	0.32	0.32	100.0
	Au	22	No Cap	0	0.010	0.010	0.36	0.36	100.0
	Fe	22	No Cap	0	41.380	41.380	0.37	0.37	100.0
	Cu	1039	No Cap	0	0.530	0.530	0.39	0.39	100.0
	Ni	1039	No Cap	0	0.190	0.190	0.46	0.46	100.0
Hopes	Co	1039	No Cap	0	0.010	0.010	0.24	0.24	100.0
Advance	Pd	1039	No Cap	0	0.180	0.180	0.27	0.27	100.0
Main	Pt	1039	No Cap	0	0.040	0.040	0.55	0.55	100.0
	Au	1039	No Cap	0	0.010	0.010	1.40	1.40	100.0
	Fe	1039	No Cap	0	8.500	8.500	0.17	0.17	100.0
Hopes	Cu	361	10.5	2	1.050	1.04	1.56	1.49	99.4
Advance	Ni	361	No Cap	0	0.390	0.390	1.61	1.61	100.0
North	Co	361	No Cap	0	0.012	0.012	0.94	0.94	100.0

TABLE 14.8 GRADE CAPPING VALUES

Domain	Element	Total No. of Composites	Capping Value	No. of Capped Composites	Mean of Composites	Mean of Capped Composites	CoV of Composites	CoV of Capped Composites	Capping Percentile
	Pd	361	No Cap	0	0.250	0.250	1.16	1.16	100.0
	Pt	361	No Cap	0	0.070	0.070	1.85	1.85	100.0
	Au	361	1	2	0.040	0.03	5.38	3.10	99.4
	Fe	361	56	2	11.940	11.840	0.81	0.77	99.4
	Cu	823	No Cap	0	0.590	0.590	1.00	1.00	100.0
	Ni	823	No Cap	0	0.250	0.250	1.47	1.47	100.0
	Co	823	No Cap	0	0.012	0.012	0.95	0.95	100.0
Gamma	Pd	823	No Cap	0	0.230	0.230	0.56	0.56	100.0
	Pt	823	No Cap	0	0.050	0.050	0.44	0.44	100.0
	Au	823	No Cap	0	0.040	0.040	0.69	0.69	100.0
	Fe	823	45	3	9.050	9.01	0.51	0.47	99.6
	Cu	31	5	1	1.640	1.53	1.01	0.83	96.8
	Ni	31	2	1	0.610	0.56	1.14	0.93	96.8
	Co	31	No Cap	0	0.024	0.024	0.93	0.93	100.0
Gamma	Pd	31	No Cap	0	0.290	0.290	0.83	0.83	100.0
FW	Pt	31	No Cap	0	0.050	0.050	0.83	0.83	100.0
	Au	31	No Cap	0	0.070	0.070	1.61	1.61	100.0
	Fe	31	No Cap	0	16.160	16.160	0.59	0.59	100.0

*Note:* CoV = coefficient of variation.

Number of Samples		TABLE 14.9 BASIC CAPPED COMPOSITE STATISTICS										
Number of Samples   249   24	Domosit	Variable	Ni	Cu	Co	Pd	Pt	Au	Fe			
Minimum Value	Deposit	variable	(%)	(%)	(%)	(g/t)	(g/t)	(g/t)	(%)			
Maximum Value		Number of Samples	249	249	249	249	249	249	249			
Falco 7   Median   0.13   0.36   0.01   0.12   0.03   0.03   14.37			0.01	0.01	0.00	0.01	0.01	0.01	4.04			
Falco 7    Median		Maximum Value	0.49	1.13	0.06	0.46	0.13	0.23	60.00			
Falco 7    Geometric Mean   0.12   0.30   0.01   0.08   0.03   0.02   11.47     Variance   0.00   0.04   0.00   0.01   0.00   0.00   153.00     Standard Deviation   0.07   0.21   0.01   0.08   0.02   0.03   12.37     Coefficient of Variation   0.51   0.58   0.70   0.66   0.62   1.10   0.86     Skewness   1.26   1.16   2.22   0.70   1.35   3.77   2.29     Kurtosis   6.38   4.88   7.78   3.76   5.94   22.72   7.37     Number of Samples   1,400   1,400   1,400   1,400   1,400   1,400   1,400     Minimum Value   0.00   0.00   0.00   0.01   0.00   0.00   4.82     Maximum Value   4.56   10.50   0.14   2.76   1.01   1.00   56.00     Mean   0.24   0.66   0.01   0.20   0.05   0.02   9.36     Median   0.17   0.52   0.01   0.17   0.04   0.01   8.33     Variance   0.11   0.70   0.00   0.02   0.00   0.00   24.85     Standard Deviation   0.34   0.83   0.01   0.16   0.07   0.05   4.98     Coefficient of Variation   1.41   1.26   0.57   0.79   1.42   3.00   0.53     Skewness   6.98   6.92   13.10   7.63   7.44   13.80   6.01     Kurtosis   63.11   64.28   244.18   87.27   72.40   232.96   45.54     Minimum Value   0.01   0.01   0.00   0.01   0.01   0.01   4.12     Maximum Value   4.73   7.92   0.15   1.66   0.32   0.64   49.25     Mean   0.26   0.62   0.01   0.23   0.05   0.04   9.27     Median   0.19   0.51   0.01   0.22   0.05   0.04   8.52     Geometric Mean   0.19   0.48   0.01   0.20   0.05   0.03   8.66     Variance   0.14   0.42   0.00   0.02   0.00   0.00   22.32     Standard Deviation   0.37   0.65   0.01   0.13   0.02   0.04   4.72     Coefficient   0.57   0.65   0.01		Mean	0.13	0.36	0.01	0.12	0.03	0.03	14.37			
Variance		Median	0.12	0.33	0.01	0.11	0.03	0.02	10.30			
Variance	Falco 7		0.12	0.30	0.01	0.08	0.03	0.02	11.47			
Coefficient of Variation	T alco /	Variance	0.00	0.04	0.00	0.01	0.00	0.00	153.00			
Variation   0.51   0.58   0.70   0.66   0.62   1.10   0.86   Skewness   1.26   1.16   2.22   0.70   1.35   3.77   2.29   Kurtosis   6.38   4.88   7.78   3.76   5.94   22.72   7.37   Number of Samples   1,400   1,		Standard Deviation	0.07	0.21	0.01	0.08	0.02	0.03	12.37			
Number of Samples			0.51	0.58	0.70	0.66	0.62	1.10	0.86			
Number of Samples   1,400		Skewness	1.26	1.16	2.22	0.70	1.35	3.77	2.29			
Minimum Value		Kurtosis	6.38	4.88	7.78	3.76	5.94	22.72	7.37			
Hopes Advance		Number of Samples	1,400	1,400	1,400	1,400	1,400	1,400	1,400			
Hopes Advance		Minimum Value	0.00	0.00	0.00	0.01	0.00	0.00	4.82			
Median		Maximum Value	4.56	10.50	0.14	2.76	1.01	1.00	56.00			
Number of Samples   Royal Maximum Value		Mean	0.24	0.66	0.01	0.20	0.05	0.02	9.36			
Advance	Honos	Median	0.17	0.52	0.01	0.17	0.04	0.01	8.33			
Standard Deviation   0.34   0.83   0.01   0.16   0.07   0.05   4.98	_	Variance	0.11	0.70	0.00	0.02	0.00	0.00	24.85			
Variation   1.41   1.26   0.57   0.79   1.42   3.00   0.53     Skewness   6.98   6.92   13.10   7.63   7.44   13.80   6.01     Kurtosis   63.11   64.28   244.18   87.27   72.40   232.96   45.54     Number of Samples   854   854   854   854   854   854     Minimum Value   0.01   0.01   0.00   0.01   0.01   0.01   4.12     Maximum Value   4.73   7.92   0.15   1.66   0.32   0.64   49.25     Mean   0.26   0.62   0.01   0.23   0.05   0.04   9.27     Median   0.19   0.51   0.01   0.22   0.05   0.04   8.52     Geometric Mean   0.19   0.48   0.01   0.20   0.05   0.03   8.66     Variance   0.14   0.42   0.00   0.02   0.00   0.00   22.32     Standard Deviation   0.37   0.65   0.01   0.13   0.02   0.04   4.72     Coefficient   of	ravance	Standard Deviation	0.34	0.83	0.01	0.16	0.07	0.05	4.98			
Kurtosis         63.11         64.28         244.18         87.27         72.40         232.96         45.54           Number of Samples         854         854         854         854         854         854         854           Minimum Value         0.01         0.01         0.00         0.01         0.01         0.01         4.12           Maximum Value         4.73         7.92         0.15         1.66         0.32         0.64         49.25           Mean         0.26         0.62         0.01         0.23         0.05         0.04         9.27           Median         0.19         0.51         0.01         0.22         0.05         0.04         8.52           Geometric Mean         0.19         0.48         0.01         0.20         0.05         0.03         8.66           Variance         0.14         0.42         0.00         0.02         0.00         0.00         22.32           Standard Deviation         0.37         0.65         0.01         0.13         0.02         0.04         4.72			1.41	1.26	0.57	0.79	1.42	3.00	0.53			
Number of Samples         854		Skewness	6.98	6.92	13.10	7.63	7.44	13.80	6.01			
Minimum Value         0.01         0.01         0.00         0.01         0.01         0.01         4.12           Maximum Value         4.73         7.92         0.15         1.66         0.32         0.64         49.25           Mean         0.26         0.62         0.01         0.23         0.05         0.04         9.27           Median         0.19         0.51         0.01         0.22         0.05         0.04         8.52           Geometric Mean         0.19         0.48         0.01         0.20         0.05         0.03         8.66           Variance         0.14         0.42         0.00         0.02         0.00         0.00         22.32           Standard Deviation         0.37         0.65         0.01         0.13         0.02         0.04         4.72		Kurtosis	63.11	64.28	244.18	87.27	72.40	232.96	45.54			
Maximum Value         4.73         7.92         0.15         1.66         0.32         0.64         49.25           Mean         0.26         0.62         0.01         0.23         0.05         0.04         9.27           Median         0.19         0.51         0.01         0.22         0.05         0.04         8.52           Geometric Mean         0.19         0.48         0.01         0.20         0.05         0.03         8.66           Variance         0.14         0.42         0.00         0.02         0.00         0.00         22.32           Standard Deviation         0.37         0.65         0.01         0.13         0.02         0.04         4.72		Number of Samples	854	854	854	854	854	854	854			
Mean         0.26         0.62         0.01         0.23         0.05         0.04         9.27           Median         0.19         0.51         0.01         0.22         0.05         0.04         8.52           Geometric Mean         0.19         0.48         0.01         0.20         0.05         0.03         8.66           Variance         0.14         0.42         0.00         0.02         0.00         0.00         22.32           Standard Deviation         0.37         0.65         0.01         0.13         0.02         0.04         4.72		Minimum Value	0.01	0.01	0.00	0.01	0.01	0.01	4.12			
Median         0.19         0.51         0.01         0.22         0.05         0.04         8.52           Geometric Mean         0.19         0.48         0.01         0.20         0.05         0.03         8.66           Variance         0.14         0.42         0.00         0.02         0.00         0.00         22.32           Standard Deviation         0.37         0.65         0.01         0.13         0.02         0.04         4.72		Maximum Value	4.73	7.92	0.15	1.66	0.32	0.64	49.25			
Gamma         Geometric Mean         0.19         0.48         0.01         0.20         0.05         0.03         8.66           Variance         0.14         0.42         0.00         0.02         0.00         0.00         22.32           Standard Deviation         0.37         0.65         0.01         0.13         0.02         0.04         4.72		Mean	0.26	0.62	0.01	0.23	0.05	0.04	9.27			
Variance         0.14         0.42         0.00         0.02         0.00         0.00         22.32           Standard Deviation         0.37         0.65         0.01         0.13         0.02         0.04         4.72		Median	0.19	0.51	0.01	0.22	0.05	0.04	8.52			
Variance         0.14         0.42         0.00         0.02         0.00         0.00         22.32           Standard Deviation         0.37         0.65         0.01         0.13         0.02         0.04         4.72	Commo	Geometric Mean	0.19	0.48	0.01	0.20	0.05	0.03	8.66			
Coefficient of	Gaillilla	Variance	0.14	0.42	0.00	0.02	0.00	0.00	22.32			
Coefficient of		Standard Deviation	0.37	0.65	0.01	0.13	0.02	0.04	4.72			
Variation   1.45   1.04   0.98   0.58   0.46   0.89   0.51		Coefficient of Variation	1.45	1.04	0.98	0.58	0.46	0.89	0.51			
Skewness 7.16 5.91 6.69 3.90 3.11 8.87 4.99		Skewness	7.16	5.91	6.69	3.90	3.11	8.87	4.99			
Kurtosis 65.76 50.43 57.41 31.96 25.59 123.42 34.28		Kurtosis	65.76	50.43	57.41	31.96	25.59	123.42	34.28			

#### 14.10 VARIOGRAPHY

A variography analysis was performed as a guide to determining a grade interpolation search strategy. Directional variograms were attempted using the Cu composites. Selected variograms are attached in Appendix D.

Continuity ellipses based on the observed ranges were subsequently generated and utilized as the basis for estimation search ranges, distance weighting calculations and Mineral Resource classification criteria.

# 14.11 BULK DENSITY

A total of 997 bulk density measurements were provided in the database, of which 111 bulk density measurements were constrained inside mineralization wireframes. A positive linear correlation between Fe content and bulk density was established for each deposit as exhibit in Section 14.7. Based on this relationship, regression equations were utilized to assign a modelled bulk density value to those assay samples in the database where no bulk density measurements had been taken. The bulk density measurements and regression values were used for weighing assay composites to ensure the proper representation of grade between low and high bulk density samples.

# 14.12 BLOCK MODELLING

The Hawk Ridge block models were constructed using GEOVIA GEMS<sup>TM</sup> V6.8.4 modelling software. The block model origin and block size are presented in Table 14.10. The block model consists of separate model attributes for estimated grades of Cu, Ni, Co, Pd, Pt, Au, Fe and NSR, rock type (mineralization domains), volume percent, bulk density and classification.

TABLE 14.10 BLOCK MODEL DEFINITION										
Deposit	Direction	Origin	Origin No. of Blocks							
	X	457,675	400	5						
F 1 7	Y	6,570,640	600	5						
Falco 7	Z	200	160	2.5						
	Rotation	No rotation								
	X	453,400	600	2.5						
TT A 1	Y	6,558,525	450	5						
Hopes Advance	Z	200	120	5						
	Rotation	27° (counter-clock	(wise)							
	X	459,210	500	2.5						
C	Y	6,546,500	350	5						
Gamma	Z	200	120	5						
	Rotation	27° (counter-clock	(wise)							

**Note:** Origin for a block model in GEMS<sup>TM</sup> represents the coordinate of the outer edge of the block with minimum X and Y, and maximum Z.

All blocks in the rock type block model were initially assigned a waste rock code of 99, corresponding to the surrounding country rocks. The mineralized domains were used to code all blocks within the rock type block model that contain 0.01% or greater volume within the domain. These blocks were assigned rock type codes as presented in Table 14.4. The overburden and topographic surfaces were subsequently utilized to assign rock codes 10 and 0, corresponding to overburden and air respectively, to all blocks 50% or greater above the surfaces.

A volume percent block model was set up to accurately represent the volume and subsequent tonnage that was occupied by each block inside the constraining wireframe domain. As a result, the domain boundary was properly represented by the volume percent model ability to measure individual infinitely variable block inclusion percentages within that domain. The minimum percentage of the mineralized block was set to 0.01%.

The grade blocks for Cu, Ni, Co, Pd, Pt, Au and Fe were interpolated with Inverse Distance Squared ("ID<sup>2</sup>"). Nearest Neighbour ("NN") was utilized for validation. Multiple passes were executed for the grade interpolation to progressively capture the sample points to avoid over-smoothing and preserve local grade variability. Search ranges and directions were based on the variograms. Grade blocks were interpolated using the parameters in Table 14.11.

	TABLE 14.11 BLOCK MODEL INTERPOLATION PARAMETERS											
Deposit	Pass	Major Range (m)	Semi- major Range (m)	Minor Range (m)	Max No. Samples Per Drill Hole	Min No. Samples	Max No. Samples					
Folio 7	I	200	200	100	2	3	12					
Falco 7	II	300	300	150	2	1	12					
11	I	50	50	25	3	4	12					
Hopes Advance	II	100	100	50	3	2	12					
Advance	III	300	300	150	3	1	12					
Commo	I	100	100	50	3	4	12					
Gamma	II	300	300	150	3	1	12					

NSR models were calculated with the following formula:

$$NSR \ C / t = (Ni \% x 155.81) + (Cu \% x 85.26) + (Co \% x 273.03) + (Au g/t x 32.27) + (Pt g/t x 22.78) + (Pd g/t x 41.50) - 4.38$$

Selected cross-sections and plans of the Cu, Ni and NSR grade blocks are presented in **Appendices E, F and G.** 

Bulk density models were calculated with Fe using the formulae in Section 14.7.

#### 14.13 MINERAL RESOURCE CLASSIFICATION

It is the opinion of the Author that all the drilling, assaying and exploration work on the Hawk Ridge Project support this Mineral Resource Estimate and are sufficient to indicate a reasonable potential for economic extraction, and thus qualify it as a Mineral Resource under the CIM definition standards. The Mineral Resource was classified as Inferred based on the geological interpretation, variogram performance, quality of data and drill hole spacing.

#### 14.14 NSR CUT-OFF CALCULATION

The Hawk Ridge Mineral Resource Estimate was derived from applying Ni cut-off grades to the block models and reporting the resulting tonnes and grades for potentially mineable areas. The following parameters were used to calculate the Ni grades that determine both open pit and out-of-pit mining potentially economic portions of the constrained mineralization. Optimized pit shells are presented in Appendix H.

#### **NSR Cut-off Calculation and Pit Optimization Parameters:**

Metal prices are based on a two-year trailing average as of May 31, 2022, along with consensus Economics forecasting.

US\$:C\$ Exchange Rate Cu Price Ni Price Co Price Pd Price Pt Price Au Price	0.78 US\$4.00/lb US\$9.25/lb US\$26.00/lb US\$1,800/oz US\$1,350/oz US\$1,750/oz
Ni Process recovery Ni Smelter payable Cu Process recovery Cu Smelter payable	70% 90% 70% 96%
Mass pull Ni Smelter treatment Cu Smelter treatment Concentrate moisture content Concentrate freight	1.2% C\$256/t C\$103/t 8% C\$94/t
Underground mining cost Processing cost G&A	C\$65/t C\$25/t C\$10/t
Pit Slopes	$50^{0}$

The NSR cut-off for potential open pit mining is calculated at C\$35/t.

The NSR cut-off for potential out-of-pit mining is calculated at C\$100/t.

#### 14.15 MINERAL RESOURCE ESTIMATE

The resulting Mineral Resource Estimate is tabulated in Table 14.12. The mineralization of the Hawk Ridge Project is considered to be potentially amenable to both open pit and out-of-pit economic extraction. The Mineral Resource Estimate sensitivity for the pit constrained estimate is given in Table 14.13 and out of pit estimate is in Table 14.14.

The block model is shown as example cross sections and plans for copper (Cu) in Appendix E and nickel (Ni) in Appendix F.

<b>TABLE 14.12</b>
INFERRED MINERAL RESOURCE ESTIMATE (1-4)

Deposit	Mining	Cut-off NSR (\$/t)	Tonnes (kt)	Cu (%)	Cu (Mlb)	Ni (%)	Ni (Mlb)	Co (%)	Co (Mlb)	Pd (g/t)	Pd (koz)	Pt (g/t)	Pt (koz)	Au (g/t)	Au (koz)	Fe (%)
HA_Main		35	14,099	0.54	166.6	0.19	8.4	0.01	3.22	.18	82.4	.04	18.8	0.01	6.0	8.4
HA_North	Pit Constrained	35	1,305	0.91	26.2	0.36	10.5	.01	0.38	0.25	10.4	0.07	2.9	0.02	.0	11.2
Subtotal		35	15,404	0.57	92.8	0.20	68.9	0.01	3.60	0.19	92.7	0.04	21.7	0.01	7.0	8.7
HA_Main		100	693	0.76	11.6	0.26	4.0	0.01	0.18	0.22	4.8	0.06	1.2	0.02	0.4	9.3
HA_North	Out-of-pit	100	118	1.30	3.4	0.16	0.4	0.01	0.02	0.15	0.6	0.03	0.1	0.02	0.1	8.4
Subtotal		100	811	0.84	15.0	0.25	4.4	0.01	0.20	0.21	5.4	0.05	1.4	0.02	0.5	9.2
HA	Subtotal	35+100	16,215	0.58	207.8	0.21	73.3	0.01	3.80	0.19	98.1	0.04	23.0	0.01	7.5	8.7
	Pit Constrained	35	8,410	0.40	74.6	0.17	31.5	0.02	3.09	0.16	42.0	0.04	11.0	0.02	6.3	15.7
Falco 7	Out-of-pit	100	404	0.77	6.9	0.21	1.9	0.01	0.12	0.22	2.8	0.06	0.8	0.07	0.9	10.5
	Subtotal	35+100	8,814	0.42	81.5	0.17	33.4	0.02	3.21	0.16	44.8	0.04	11.7	0.03	7.1	15.5
	Pit Constrained	35	5,624	0.59	73.0	0.23	28.7	0.01	1.41	0.23	41.5	0.05	9.3	0.04	7.0	8.9
Gamma	Out-of-pit	100	4,005	0.78	69.3	0.38	33.5	0.01	1.31	0.23	30.2	0.06	7.8	0.04	5.8	9.7
	Subtotal	35+100	9,629	0.67	142.3	0.29	62.2	0.01	2.73	0.23	71.7	0.06	17.2	0.04	12.8	9.2
	Pit Constrained	35	29,438	0.52	340.5	0.20	129.1	0.01	8.10	0.19	176.2	0.04	42.0	0.02	20.2	10.7
Overall	Out-of-pit	100	5,220	0.79	91.1	0.35	39.8	0.01	1.64	0.23	38.5	0.06	10.0	0.04	7.2	9.7
	Total	35+100	34,658	0.56	431.6	0.22	168.9	0.01	9.74	0.19	214.7	0.05	51.9	0.02	27.4	10.6

#### Notes:

- 1. Mineral Resources, which are not Mineral Reserves, do not have demonstrated economic viability.
- 2. The estimate of Mineral Resources may be materially affected by environmental, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues.
- 3. The Inferred Mineral Resource in this estimate has a lower level of confidence than that applied to an Indicated Mineral Resource and must not be converted to a Mineral Reserve. It is reasonably expected that the majority of the Inferred Mineral Resource could be upgraded to an Indicated Mineral Resource with continued exploration.
- 4. The Mineral Resources in this report were estimated using the Canadian Institute of Mining, Metallurgy and Petroleum (CIM), CIM Standards on Mineral Resources and Reserves, Definitions (2014) and Best Practices Guidelines (2019) prepared by the CIM Standing Committee on Reserve Definitions and adopted by the CIM Council.

TABLE 14.13 PIT CONSTRAINED MINERAL RESOURCE ESTIMATE SENSITIVITY									
Deposit	Cut-off NSR (C\$/t)	Tonnes (kt)	Cu (%)	Ni (%)	Pt (g/t)	Pd (g/t)	Co (%)	Au (g/t)	Fe (%)
	75	2,929	0.52	0.21	0.05	0.18	0.02	0.03	17.25
	65	4,926	0.47	0.19	0.04	0.17	0.02	0.02	18.55
	55	6,515	0.44	0.18	0.04	0.17	0.02	0.02	16.96
Falco 7	45	8,013	0.41	0.17	0.04	0.16	0.02	0.02	15.98
	35	8,410	0.40	0.17	0.04	0.16	0.02	0.02	15.71
	25	8,659	0.40	0.17	0.04	0.15	0.02	0.02	15.44
	15	8,772	0.39	0.17	0.04	0.15	0.02	0.02	15.33
	75	9,623	0.67	0.24	0.05	0.20	0.01	0.02	9.27
	65	12,055	0.63	0.22	0.05	0.20	0.01	0.01	8.99
	55	13,927	0.60	0.21	0.05	0.19	0.01	0.01	8.81
Hopes Advance	45	15,098	0.57	0.20	0.04	0.19	0.01	0.01	8.70
Advance	35	15,404	0.57	0.20	0.04	0.19	0.01	0.01	8.67
	25	15,449	0.57	0.20	0.04	0.19	0.01	0.01	8.67
	15	15,476	0.57	0.20	0.04	0.19	0.01	0.01	8.66
	75	3,499	0.71	0.29	0.05	0.24	0.01	0.04	9.53
	65	4,646	0.64	0.25	0.05	0.24	0.01	0.04	9.12
	55	5,284	0.61	0.24	0.05	0.23	0.01	0.04	8.95
Gamma	45	5,552	0.59	0.23	0.05	0.23	0.01	0.04	8.91
	35	5,624	0.59	0.23	0.05	0.23	0.01	0.04	8.92
	25	5,626	0.59	0.23	0.05	0.23	0.01	0.04	8.92
	15	5,626	0.59	0.23	0.05	0.23	0.01	0.04	8.92

TABLE 14.14 OUT-OF-PIT MINERAL RESOURCE ESTIMATE SENSITIVITY									
Deposit	Cut-off NSR (C\$/t)	Tonnes (kt)	Cu (%)	Ni (%)	Pt (g/t)	Pd (g/t)	Co (%)	Au (g/t)	Fe (%)
	130	37	1.05	0.21	0.05	0.23	0.01	0.10	10.62
	120	82	0.95	0.23	0.05	0.22	0.02	0.10	10.74
Folgo 7	110	160	0.86	0.23	0.05	0.22	0.02	0.09	10.70
Falco 7	100	404	0.77	0.21	0.06	0.22	0.01	0.07	10.53
	90	750	0.71	0.20	0.06	0.21	0.01	0.06	10.50
	80	1,504	0.63	0.19	0.05	0.17	0.02	0.04	17.22
	130	162	1.16	0.29	0.06	0.22	0.01	0.03	9.53

TABLE 14.14 Out-of-Pit Mineral Resource Estimate Sensitivity									
Deposit	Cut-off NSR (C\$/t)	Tonnes (kt)	Cu (%)	Ni (%)	Pt (g/t)	Pd (g/t)	Co (%)	Au (g/t)	Fe (%)
Hopes Advance	120	294	0.98	0.29	0.06	0.22	0.01	0.03	9.58
	110	446	0.90	0.28	0.06	0.22	0.01	0.02	9.69
	100	811	0.84	0.25	0.05	0.21	0.01	0.02	9.20
Advance	90	1,476	0.75	0.23	0.05	0.20	0.01	0.02	9.10
	80	2,363	0.68	0.22	0.05	0.19	0.01	0.01	8.94
	130	1,991	0.89	0.46	0.07	0.25	0.02	0.05	10.74
	120	2,632	0.85	0.43	0.06	0.24	0.02	0.05	10.31
C	110	3,277	0.82	0.41	0.06	0.24	0.02	0.05	10.01
Gamma	100	4,005	0.78	0.38	0.06	0.23	0.01	0.04	9.70
	90	5,108	0.74	0.35	0.06	0.23	0.01	0.04	9.34
	80	6,760	0.69	0.31	0.06	0.22	0.01	0.04	8.99

#### 14.16 CONFIRMATION OF ESTIMATE

The block model was validated using a number of industry standard methods including visual and statistical methods.

- Visual examination of composites and block grades on successive plans and cross-sections were performed on-screen to confirm that the block models correctly reflect the distribution of composite grades. The review of estimation parameters included:
  - Number of composites used for grade estimation;
  - Number of drill holes used for grade estimation;
  - o Number of passes used for grade estimation;
  - Mean value of the composites used;
  - Mean distance to sample used;
  - o Actual distance to closest point; and
  - o Grade of true closest point.
- A comparison of the mean grades of composites with the block model is presented in Table 14.15.

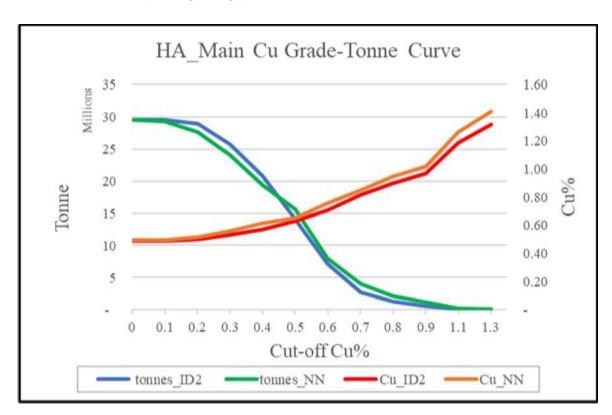
TABLE 14.15 AVERAGE GRADE COMPARISON OF COMPOSITES WITH BLOCK MODEL							
Deposit	Data Type	Cu (%)	Ni (%)				
Falco 7	Composites	0.36	0.13				
	Capped Composites	0.36	0.13				
	Block Model ID <sup>2</sup>	0.35	0.14				
	Block Model NN	0.35	0.14				
	Composites	0.67	0.24				
TT A	Capped Composites	0.66	0.24				
Hopes Advance	Block Model ID <sup>2</sup>	0.53	0.19				
	Block Model NN	0.53	0.19				
	Composites	0.63	0.26				
Commo	Capped Composites	0.62	0.26				
Gamma	Block Model ID <sup>2</sup>	0.60	0.25				
	Block Model NN	0.57	0.22				

Notes: ID<sup>2</sup>= block model grades were interpolated with Inverse Distance Squared NN= block model grades were interpolated using Nearest Neighbour.

The comparisons above show the average grades of block models were lower than that of composites used for the grade estimations. These were most likely due to smoothing by the grade interpolation process and data distribution. The composite mean is a simple average, whereas the block model has 3-D spatial distribution characteristics; therefore, the block values will be more representative than the composites.

• A comparison of the grade-tonnage curve of the Cu grade model of the Hopes Advance \_Main interpolated with Inverse Distance Squared ("ID<sup>2</sup>") and Nearest Neighbour ("NN") on a global Mineral Resource basis are presented in Figure 14.1.

FIGURE 14.1 HOPES ADVANCE MAIN CU GRADE-TONNAGE CURVE FOR ID<sup>2</sup> AND NN INTERPOLATION



• Cu local trends of the Hopes Advance\_Main were evaluated by comparing the ID<sup>2</sup> and NN estimate against the composites. As shown in Figures 14.2 to 14.4, Cu grade interpolations with ID<sup>2</sup> and NN agreed well.

FIGURE 14.2 HOPES ADVANCE MAIN CU GRADE SWATH EASTING PLOT

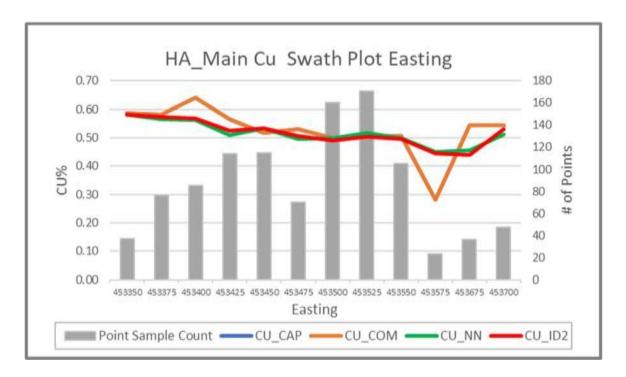


FIGURE 14.3 HOPES ADVANCE MAIN CU GRADE SWATH NORTHING PLOT

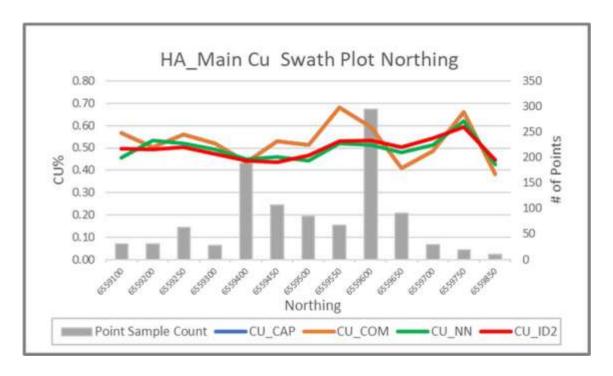
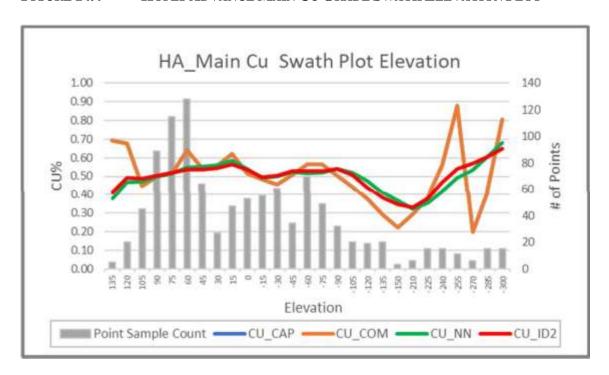


FIGURE 14.4 HOPES ADVANCE MAIN CU GRADE SWATH ELEVATION PLOT



#### 15.0 MINERAL RESERVE ESTIMATES

This section is not applicable to this report.

## MINING METHODS 16.0 This section is not applicable to this report.

#### 17.0 RECOVERY METHODS

This section is not applicable to this report.

# PROJECT INFRASTRUCTURE 18.0 There is no infrastructure on the Property apart from the camp facilities.

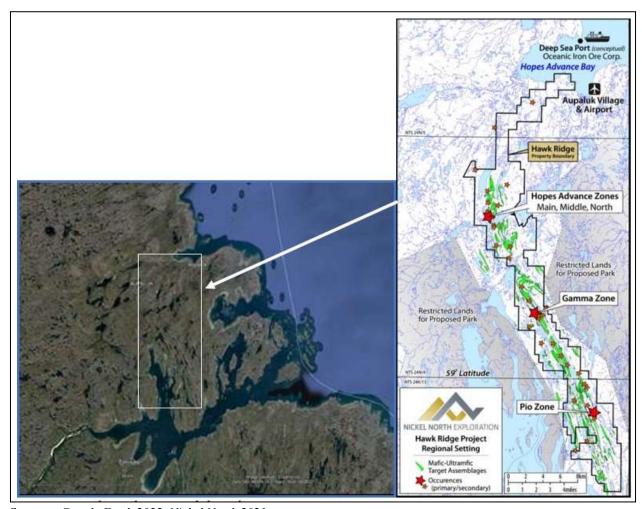
### 19.0 MARKET STUDIES AND CONTRACTSThis section is not applicable to this report.

#### 20.0 ENVIRONMENTAL STUDIES, PERMITTING AND SOCIAL OR COMMUNITY IMPACT

#### 20.1 MINERAL RESOURCE LOCATION

As illustrated in Figure 20.1, the Hawk Ridge Property is located near the western shore of Ungava Bay in the Northern Québec district of Nunavik. Mineralized occurrences span a 50 km north-south corridor in an area between two inlets. There are two Inuit villages in the area: 1) Aupaluk - a community of 250 people on Hopes Advance Bay; and 2) Tasiujaq a community of over 400 people at the fresh-water end of Deep Harbour, known as Baie-aux-feuilles.

FIGURE 20.1 HAWK RIDGE RESOURCE LOCATION



Sources: Goggle Earth 2022, Nickel North 2021

The mineral deposits are located between two areas with restricted mining or mining-related activity and are locations of a Proposed Park (Figure 20.1).

#### 20.2 MARINE AND TERRESTRIAL ENVIRONMENT

The Hawk Ridge Property region is located many km north of the tree line, with shrubs and grasses habiting wind-protected or swampy zones. Marine, freshwater and terrestrial wildlife is abundant and provides vital food sources for the local, predominantly Inuit, people. The wildlife abundancy is considered to not have been permanently disturbed by exploration activity over the past 76 years.

Some land disturbance occurred during exploration activity, such as pits, trenches and a 113 m adit driven 17 m below surface at the La Pio Deposit in 1973. This adit was lengthened in 1974. Over 4,000 t of mineralized material were extracted from the adit and 1,200 t from a pit. No pit and adit-related reclamation activities have been reported.

#### 20.3 HUMAN AND SOCIAL ENVIRONMENT

The two Inuit villages are accessed and supplied by small aircraft most of the year. Major supplies, such as fuel oil, are delivered in the ice-free season by small sea-going vessels and barges. Each of the villages have appropriate infrastructure, such as diesel-generated electricity, fresh water, food and supply stores information, tele-communication systems, nursing stations, and schools.

Hunting and fishing are significant local activities. Terrestrial transport on local roads is by truck and car and off-road is by ATV and snowmobile.

#### 20.4 POTENTIAL ENVIRONMENTAL IMPACTS OF A HAWK RIDGE MINING PROJECT

A large-scale Hawk Ridge Mining Project would include both open pit and underground mines and a central mineral processing plant. Major supporting infrastructure would be composed of fuel storage and electric power generation, roads, worker housing, airport expansion, port wharves, and warehouses.

Major environmental aspects that would be subject to mitigation may be:

- Waste rock and tailings management specifically acid rock drainage and metal leaching;
- Fresh water sourcing, conservation and treatment; and
- Noise and dust.

The Project permitting pathway would be initiated with a detailed Environmental Assessment.

#### 20.5 CLOSURE AND RECLAMATION

A rehabilitation and restoration plan must be submitted to and approved by the Ministère de L'Énergie et Ressources Naturelles ("MERN") before a mining lease could be approved. This plan is likely to include the reclamation of significant disturbances resulting from historical exploration activity.

#### 20.6 SOCIAL ACCEPTANCE

Social acceptance by the local communities of Aupaluk and Tasiujaq, and the administration and general public of Nunavik is of critical importance. The proximity to existing communities and their reliance on local natural resources will be important aspects.

Ongoing experience with other copper-nickel-cobalt mines in Nunavik, such as Glencore's Raglan and CRI's Nunavik Nickel operations, may be appropriate guides in successfully developing and operating an environmentally and socially sustainable Hawk Ridge Project. Raglan, in particular, has adopted low emission power generation technologies (wind turbine integration with conventional diesel). It is understood that the various stakeholders would be involved in the Project Planning and that the results of consultations would be taken into account.

#### 20.7 PERMITTING FOR PROJECTS NORTH OF THE 55<sup>TH</sup> PARALLEL IN QUÉBEC (KATIVIK)

The Project permitting pathway would be opened with a detailed Project Description followed by an Environmental Impact Assessment. The Kativik Environmental Assessment Committee ("KEAC"), a body composed of representatives of Inuit organizations, the Province of Québec and the Government of Canada, will act as preferential and official for a concerning environmental protection matters for a Hawk Ridge Project. KEAC will also administer specific environmental protection strategies and regimes.

The Kativik Environmental Quality Commission (KEQC) composed of Québec and Inuit representatives is responsible for reviewing and assessing projects north of the 55<sup>th</sup> parallel in Ouébec.

Permitting will follow successful compliance with Sections 22, 31.5, 165 and 201 of the Environmental Quality Act administered by Ministère de L'Environment et de la Lutte contre les changements climatiques.

## **21.0 CAPITAL AND OPERATING COSTS**This section is not applicable to this report.

#### 22.0 ECONOMIC ANALYSIS

This section is not applicable to this report.

#### 23.0 ADJACENT PROPERTIES

Oceanic Iron Ore Corporation ("Oceanic") holds a large number of claims contiguous to the west on NTS sheet 24N/04. Oceanic is focused on the development of the Ungava Bay iron properties. These properties consist of 3,703 claims over three project areas; namely Hopes Advance, Morgan Lake and Roberts Lake, which cover 1,568 km² along the northern extension of the Labrador Trough. The projects cover over 300 km of iron formation and all the deposits are located within 20 km to 50 km of tidewater. The Hopes Advance Iron Project is contiguous to Hawk Ridge (Figure 23.1).

In December 2019, Oceanic reported the results of an updated NI 43-101 Preliminary Economic Assessment ("PEA") at Hopes Advance prepared by BBA Engineering Ltd. in respect of the Oceanic's Hopes Advance Project. A Pre-Feasibility Study was completed on the iron project in 2012 ("2012 PFS"). Oceanic is not treating the economic results of the 2012 PFS or the related Mineral Reserve Estimates as current. However, some of the scientific and technical information generated during the 2012 PFS was utilized as a basis for the Study.

The objective of the PEA was to rescope the iron project profile and production scale using Measured and Indicated Mineral Resources estimated within three of the ten defined iron deposits, in order to reduce the up-front capital required to bring the project to commercial production. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.

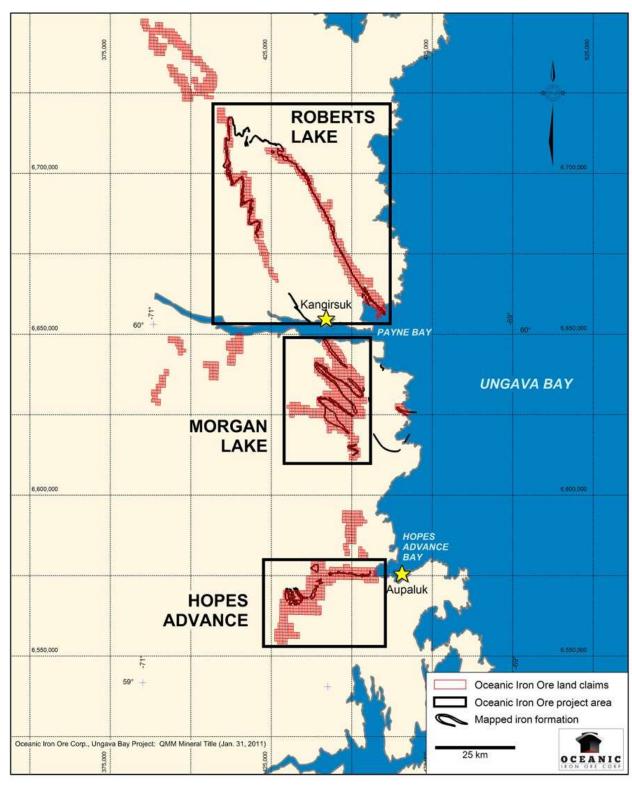
In the PEA, Oceanic presents two cases as part of the Study with the only variable between the cases being the FOB selling price. The Base Case assumes an FOB selling price of approximately US\$82/t (approximately US\$105/t CFR). The alternate case presents the economics of the iron project utilizing a spot price of approximately US\$89/t FOB (November 22, 2019).

In both cases, the Study is based on initial production of approximately 5 Mt per annum of dry concentrate followed by an expansion in year 5 to approximately 10 Mt per annum. The financial analysis for the Study is limited to a 28-year mine life and considers only three of the 10 deposits for which Mineral Resources have been estimated. Oceanic considers that the remaining Mineral Resources could support continued operations well beyond 28 years.

Those Mineral Resources are not located on the Hawk Ridge Property and there is no indication to date that this type of mineralization is present on the Hawk Ridge Property.

All information for this section of this Technical Report has been obtained from the Oceanic website www.oceanicironore.com. The Author cannot guarantee the accuracy of information on the Oceanic website, and cautions that the type and tenor of mineralization present on this adjacent property is not necessarily indicative of the mineralization at the Hawk Ridge Property.

FIGURE 23.1 OCEANIC IRON ORE PROPERTY LOCATION MAP



Source: Oceanic website (May 2022)

#### 24.0 OTHER RELEVANT DATA AND INFORMATION

Beauchamp (2012) reports that there are restrictions on staking and mining activity in certain areas surrounding the Hawk Ridge Property. East and southwest of the Project, mineral exploration is prohibited as a result of the proposed Baie-aux-Feuilles (Leaf Bay) Provincial Park.

In the northern part of the area, on both the east and west sides of the Hawk Ridge Project, exploration is permitted under specific conditions on Category 1 lands owned by the Inuit. An agreement with the Inuit is required for work on these lands.

To the best of the Author's knowledge, there are no other relevant data, additional information or explanations necessary to make this Technical Report understandable and not misleading.

#### 25.0 INTERPRETATION AND CONCLUSIONS

Nickel North's 100% owned Hawk Ridge Property is located in northern Québec, approximately 1,550 km north-northeast of Montréal, on the west coast of Ungava Bay. The Property is in Nunavik Territory, the traditional homeland of the Inuit and where they hold certain ancestral rights and the mineral rights to certain lands. Inuit land claims have previously been settled in the Territory of Nunavik. There are fourteen villages within the territory that are mostly located along Ungava Bay to the east, Hudson Straight to the north, and the coast of Hudson Bay on the west. The population of the territory is estimated to be 12,000, and Kuujjuaq is the principal village and administrative centre.

Comparisons to similar deposits in northern Québec and the results of limited metallurgical studies suggest that the overall copper process recovery should be relatively high at 80% to 85%, since all the copper is in chalcopyrite. Nickel process recovery in a separate concentrate is anticipated to be <60%, possibly as low as 50%, due to its complex deportment in sulphide and non-sulphide phases. The recoveries of Pt, Pd and Au are uncertain. PGM process recovery could approach 40%, assuming recovery from the copper concentrate. The PGM content of the copper concentrate could be in the order of 2.2 g/t for Au, 1.4 g/t for Pt, and 4.2 g/t for Pd. However, these estimated recoveries are considered conditional pending a substantial amount of additional testwork.

The Author has evaluated drilling procedures, sample preparation, analyses and security, and are of the opinion that the core logging procedures utilized, and the sampling methods used were thorough and have provided sufficient geological and analytical information. The Author considers the data to be of good quality and satisfactory for use in a Mineral Resource Estimate. The Author compared independent sample verification results versus the original assay results for Cu and Ni and the P&E results demonstrate that the results obtained and reported by Nickel North are reproducible.

Mineral Resources have been estimated for the Falco 7, Gamma, Hopes Advance Main and Hopes Advance North Zones. Metals included in the Mineral Resource Estimate are copper, nickel, cobalt, platinum, palladium and gold with reporting done by C\$ net smelter return (NSR) cut-off, as appropriate for magmatic polymetallic deposits.

This Mineral Resource Estimate is based entirely on diamond drilling, drill core sampling and assaying. For this update to the 2013 initial Mineral Resource Estimate, two drill holes completed in late-2014 were added to the original 2013 database, for a total of 37,262 m drilled. A sampling and mineral characteristic study was completed in 2014 by XPS Consulting and Testwork Service. The results of that study were utilized to calculate the current Mineral Resources.

In the opinion of the Author, the drilling, assaying and exploration work completed on the four zones at the Hawk Ridge Project supporting this Mineral Resource Estimate are sufficient to indicate reasonable potential for economic extraction, and thus qualify it as a Mineral Resource under CIM definition standards. The grade and NSR block models were exported to Datamine Limited's NPV Scheduler<sup>TM</sup> for open pit optimization and the resulting pit shells were used to report Mineral Resources from the GEMS<sup>TM</sup> block models. These results are summarized in Appendix G, NSR block model cross sections and plans.

The Pit-Constrained Inferred Mineral Resources of 29.44 Mt grading 0.20% Ni, 0.52% Cu, 0.012% Co, 0.19 g/t Pd, 0.04 g/t Pt and 0.021 g/t Au, which equates to 0.56% NiEq. Out-of-Pit Inferred Mineral Resources of 5.22 Mt at average grades of 0.35% Ni, 0.79% Cu, 0.014% Co, 0.06 g/t Pt, 0.23 g/t Pd and 0.04 g/t Au, which equates to 0.88% NiEq. An NSR cut-off of C\$35/t was used for Pit-Constrained Mineral Resource reporting and an NSR cut-off of C\$100/t for the Out-of-Pit Mineral Resource reporting. This Mineral Resource Estimate was prepared by P&E Mining Consultants Inc. in accordance with 2014 CIM Definition Standards on Mineral Resources and Reserves and 2019 CIM Best Practices Guidelines. The Mineral Resource Estimate is effective as of July 5, 2022.

Mineral Resources, which are not 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. The quantity and grade of reported Inferred Mineral Resources in this estimation are uncertain in nature and there has been insufficient exploration to define these Inferred Mineral Resources as Indicated Mineral Resources or Measured Mineral Resources, and it is uncertain if further exploration will result in upgrading them to Indicated or Measured Mineral Resource classification.

The mineral deposits contain an additional Exploration Target with a potential range of 35 Mt to 60 Mt at grade ranges of 0.35% to 0.40% Cu, 0.10% to 0.20% Ni, 0.01% to 0.02% Co, 0.03 g/t to 0.05 g/t Pt, 0.15 g/t to 0.20 g/t Pd, and 0.03 g/t to 0.05 g/t Au, which equates to a 0.35% to 0.55% NiEq. The Exploration Target is based on the estimated strike length, depth and width of the known mineralization, which is supported by intermittent drill-holes, geophysics and observations of mineralized surface exposures. The potential quantities and grades of this Exploration Target are conceptual in nature. There has been insufficient work done by a Qualified Person to define these estimates as Mineral Resources. The Company is not treating these estimates as Mineral Resources, and readers should not place undue reliance on these estimates. Even with additional work, there is no certainty that these estimates will be classified as Mineral Resources. In addition, there is no certainty that these estimates will prove to be economically recoverable.

#### 26.0 **RECOMMENDATIONS**

The Author considers that the Hawk Ridge Property contains a sizeable Ni-Cu (PGE) Mineral Resource which merits further evaluation. The author's recommendations are as follows:

#### **Topographic Survey**

• A LiDAR survey (a remote sensing technology that measures distance by illuminating a target with a laser and analyzing the reflected light) be completed and results imported into 3-D modelling software.

#### **In-fill Drilling**

- Advance Inferred to Indicated Mineral Resources;
- The mineralized zones should be drilled on 50 m cross-sections with at least three holes per section to at least 25 m below the conceptual pit floors;
- The massive sulphide lens in the Hopes Advance North Zone should be drilled on 25 m sections or closer to adequately define its geometry; and
- Historical drill holes lacking assays should be re-drilled, except for the down-the-dip drill holes, which should be eliminated from future Mineral Resource estimation.

#### **Step-out Drilling**

- Step-out drilling to evaluate additional exploration targets with the objective of expanding the Mineral Resources.
- The Exploration Target with the potential range of 35 to 60 Mt should be evaluated by very widely spaced grid drilling as deemed appropriate by the known strike lengths, geophysical indications and mineralized outcrops.

#### **Assaying**

- There are a few non-assayed intervals within the Mineral Resource drill hole intercepts for holes post-1995, that are explicitly treated as zero grade for the purpose of Mineral Resource estimation. Explicit missing assays were dealt with by assigning regression values. However, drill core should be assayed for Co, PGE and Au where assays are lacking. The drill holes with very long assay intervals (>30 m) are 22647, 22678, 22737; all are historical and should be re-drilled.
- Assaying should be completed continuously downhole within the mineralized zones and hanging wall and footwall for the six payable metals and for Fe and S.

#### **Mineralogy and Bulk Density**

- A study is required to identify PGE mineralogy and deportment.
- Pending a mineralogical study, systematic bulk density tests on disseminated and
  massive sulphides are required to better characterize bulk density versus Ni grade and
  Cu grade relationships. Better clarification is required on when and how S should be
  analyzed using a Leco sulphur analyzer. Going forward, Nickel North should continue
  with ICP-MS analyses for S and when better control on the S analysis is necessary, the
  pulps can be rerun utilizing the Leco analyzer; and
- If historical core is available, the drill holes in which the entire zone is represented by a single assay, should be re-logged and re-assayed at ±1 m intervals, consistent with the existing sampling protocol. Alternatively, these drill holes should be re-drilled and sampled.

#### **Drill Hole Surveys**

• The downhole surveys should be reviewed for excessive deviation and implausible readings removed where appropriate.

#### **Geotechnical Study**

• Pit slopes of 50° were assumed for Mineral Resource pit design. However, this assumption is not supported by a completed geotechnical study. The Author recommends that a preliminary geotechnical study be undertaken to establish pit slopes. If steeper slopes are practicable, the stripping ratio can be improved and more pit-constrained Mineral Resources accessed.

#### **Metallurgical Studies**

- The overall copper process recovery should be relatively high at 80% to 85%, since all the copper is in chalcopyrite. Nickel process recovery in a separate concentrate is expected to be <60%, possibly as low as 50%, due to its complex deportment in sulphide and non-sulphide phases. The process recoveries of Pt, Pd and Au are uncertain. PGM process recovery could approach 40%, assuming recovery from the copper concentrate. The PGM content of the copper concentrate could be in the order of 2.2 g/t for Au, 1.4 g/t for Pt, and 4.2 g/t for Pd.
- However, these estimated process recoveries are considered conditional. A substantial amount of testwork is required to optimize grinding and flotation performance. This testwork would include the production of separate smelter-acceptable copper and nickel concentrates. Subsequently, a Net Smelter Return evaluation could be completed that would consider the payable fractions for each metal in the copper and nickel concentrates.

The estimated budget to complete the recommended program is approximately C\$9.6M and is presented in Table 26.1.

TABLE 26.1 RECOMMENDED PROGRAM AND BUDGET							
Program	Units (m)	Unit Cost (\$/m)	Budget				
In-fill Diamond Drilling	5,000	\$500	\$2,500,000				
Step-out Drilling	5,000	\$500	\$2,500,000				
LiDAR Survey			\$400,000				
Metallurgical Testwork			\$350,000				
Assaying			\$600,000				
Mineralogy-Bulk Density			\$100,000				
Geotechnical Study			\$250,000				
Personnel, Office, Support			\$2,000,000				
Contingency (10%)			\$870,000				
Total			\$9,570,000				

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#### 28.0 CERTIFICATES

#### CERTIFICATE OF QUALIFIED PERSON

#### ANTOINE R. YASSA, P.GEO.

I, Antoine R. Yassa, P.Geo. residing at 3602 Rang des Cavaliers, Rouyn-Noranda, Quebec, J0Z 1Y2, do hereby certify that:

- 1. I am an independent geological consultant contracted by P&E Mining Consultants Inc.
- 2. This certificate applies to the Technical Report titled "Technical Report and Updated Mineral Resource Estimate of the Hawk Ridge Nickel-Copper (PGE) Property, Northern Québec", (The "Technical Report") with an effective date of July 5, 2022.
- 3. I am a graduate of Ottawa University at Ottawa, Ontario with a B. Sc (HONS) in Geological Sciences (1977) with continuous experience as a geologist since 1979. I am a geological consultant currently licensed by the Order of Geologists of Québec (License No 224) and by the Association of Professional Geoscientist of Ontario (License No 1890);

I have read the definition of "Qualified Person" set out in National Instrument 43-101 ("NI 43-101") and certify that, by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "Qualified Person" for the purposes of NI 43-101.

My relevant experience for the purpose of the Technical Report is:

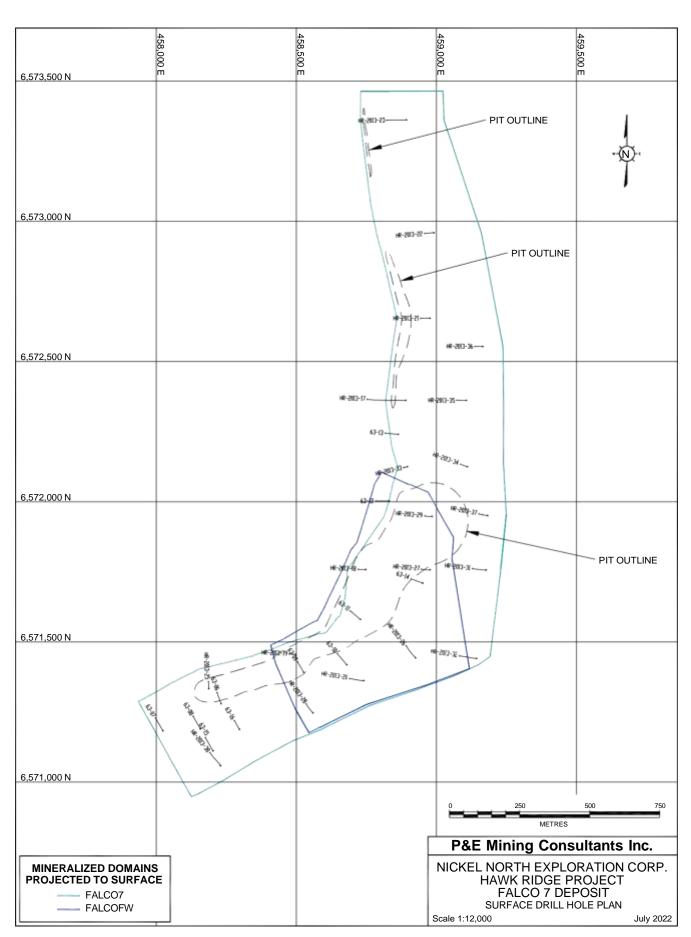
•	Minex Geologist (Val d'Or), 3-D Modeling (Timmins), Placer Dome	1993-1995
•	Database Manager, Senior Geologist, West Africa, PDX,	1996-1998
•	Senior Geologist, Database Manager, McWatters Mine	1998-2000
•	Database Manager, Gemcom modeling and Resources Evaluation (Kiena Mine)	2001-2003
•	Database Manager and Resources Evaluation at Julietta Mine, Bema Gold Corp.	2003-2006
•	Consulting Geologist	2006-present

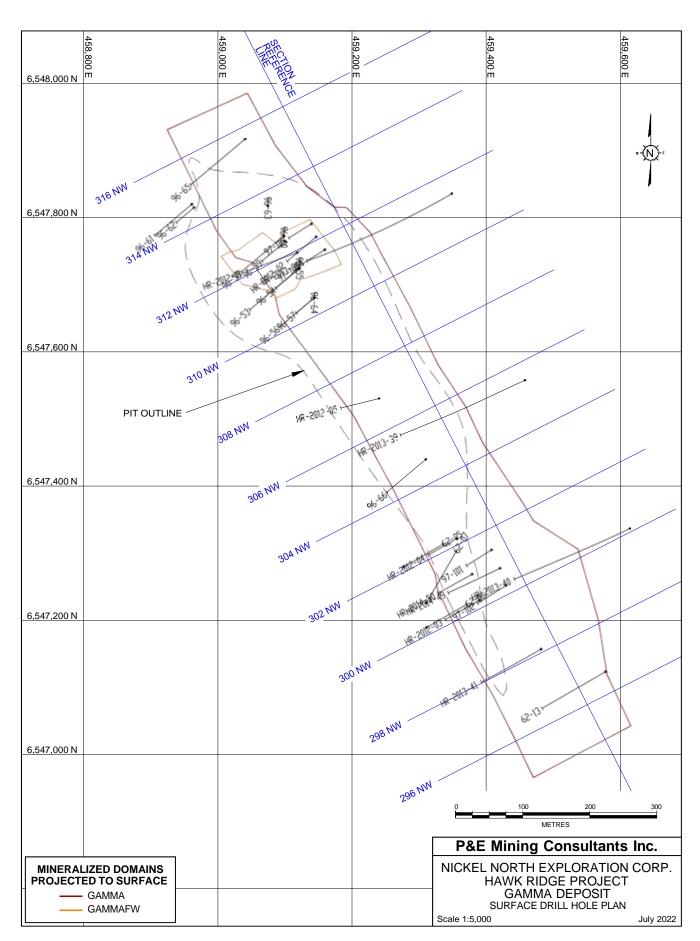
- 4. I have visited the Property that is the subject of this Technical Report on August 28 to 31, 2013.
- 5. I am responsible for authoring Sections 1 to 28, all sections of this Technical Report.
- 6. I am independent of the Issuer applying the test in Section 1.5 of NI 43-101. I am independent of the Vendor and the Property.
- 7. I have had prior involvement with the Project that is the subject of this Technical Report. I was a "Qualified Person" for a Technical Report titled "Technical Report and Resource Estimate of the Hawk Ridge Nickel-Copper Project, Northern Québec. Prepared for Nickel North Exploration Corporation", with an effective date of November 30, 2013.
- 8. I have read NI 43-101 and Form 43-101F1. This Technical Report has been prepared in compliance therewith.
- 9. As of the effective date of this Technical Report, 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 the Technical Report not misleading.

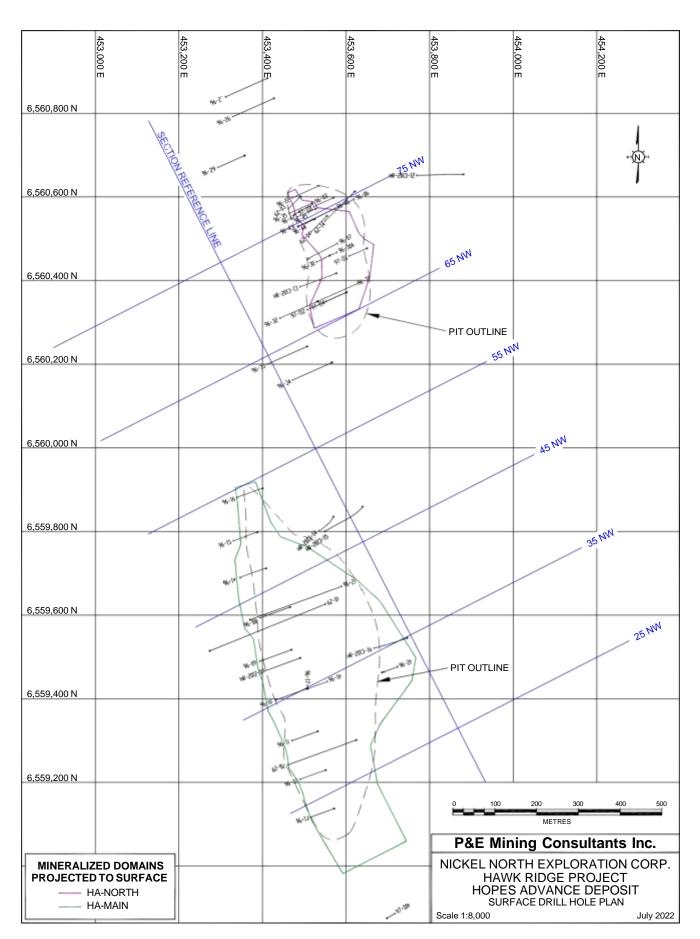
Signing Date: August 19, 2022	
{SIGNED AND SEALED} [Antoine R. Yassa]	
Antoine R. Yassa, P.Geo.	_

Effective Date: July 5, 2022

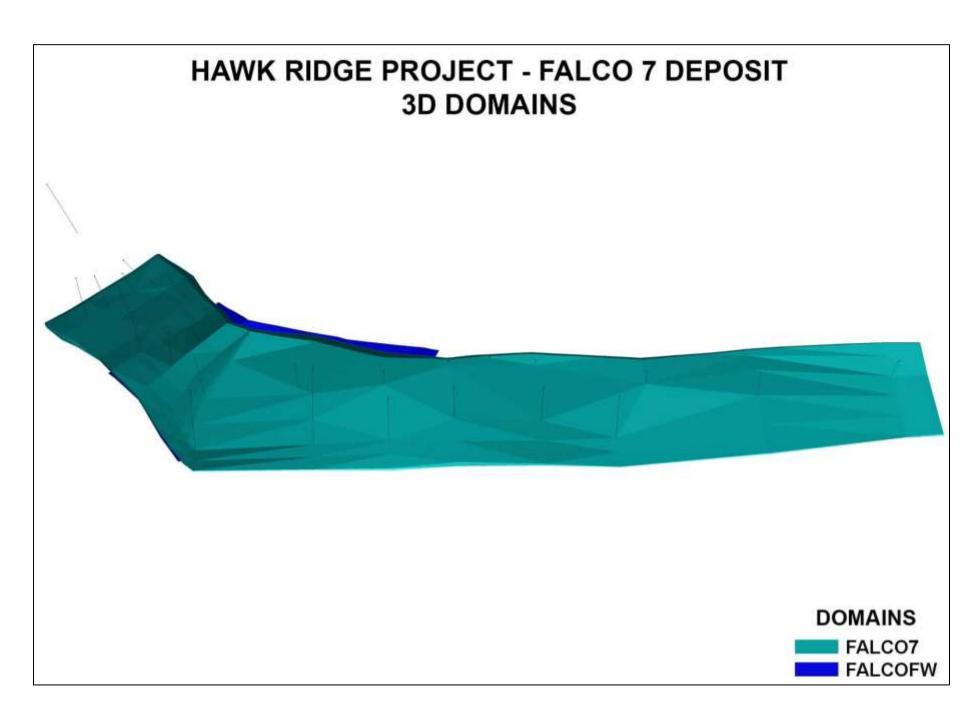
#### APPENDIX A SURFACE DRILL HOLE PLANS



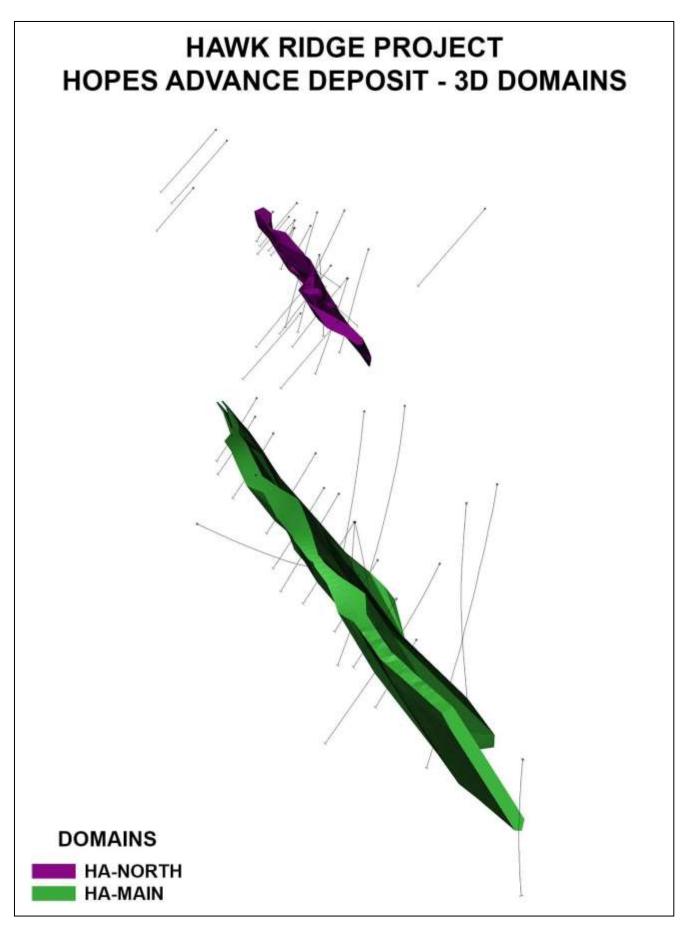




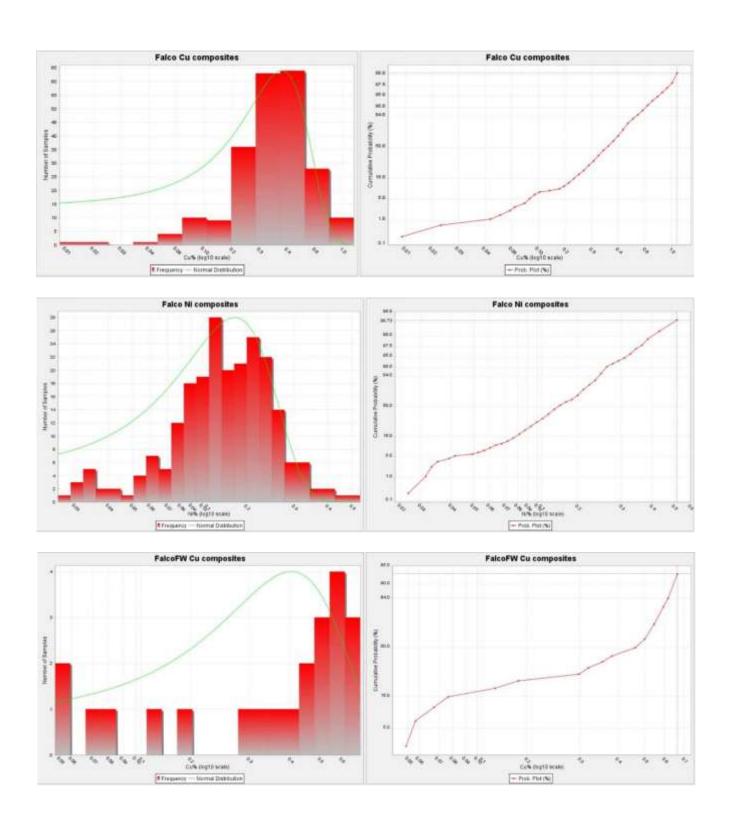
#### APPENDIX B 3-D DOMAINS

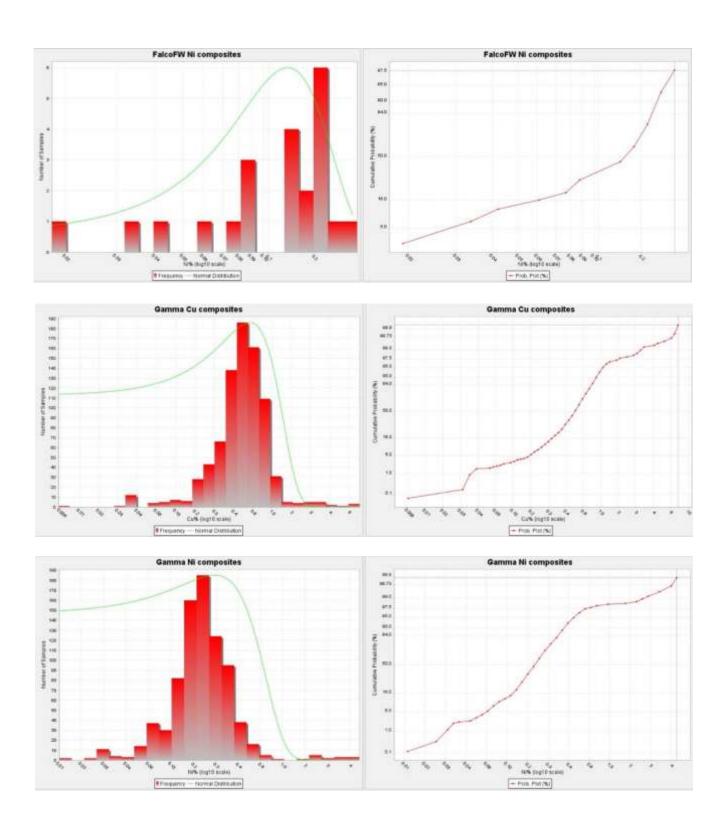


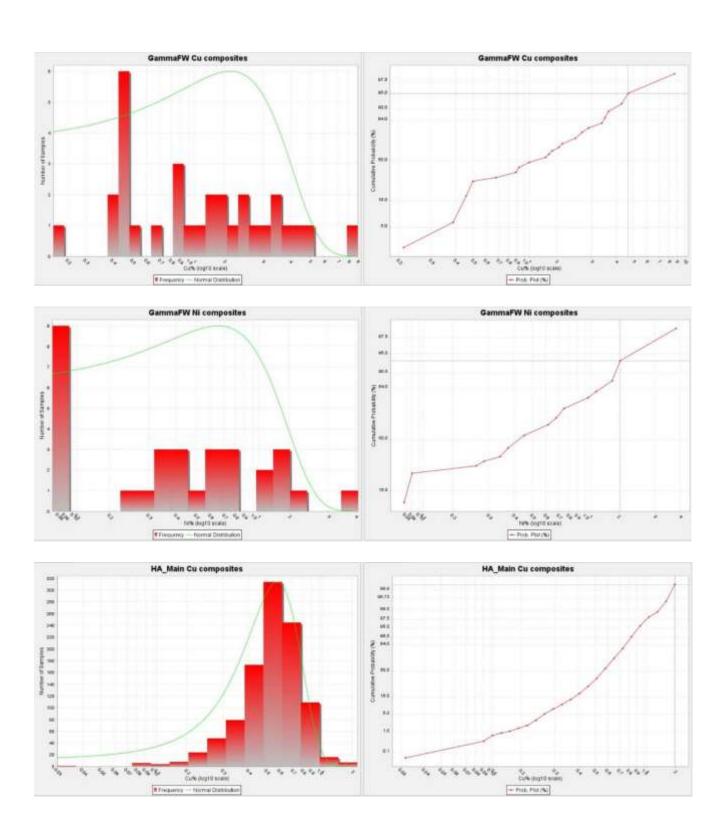


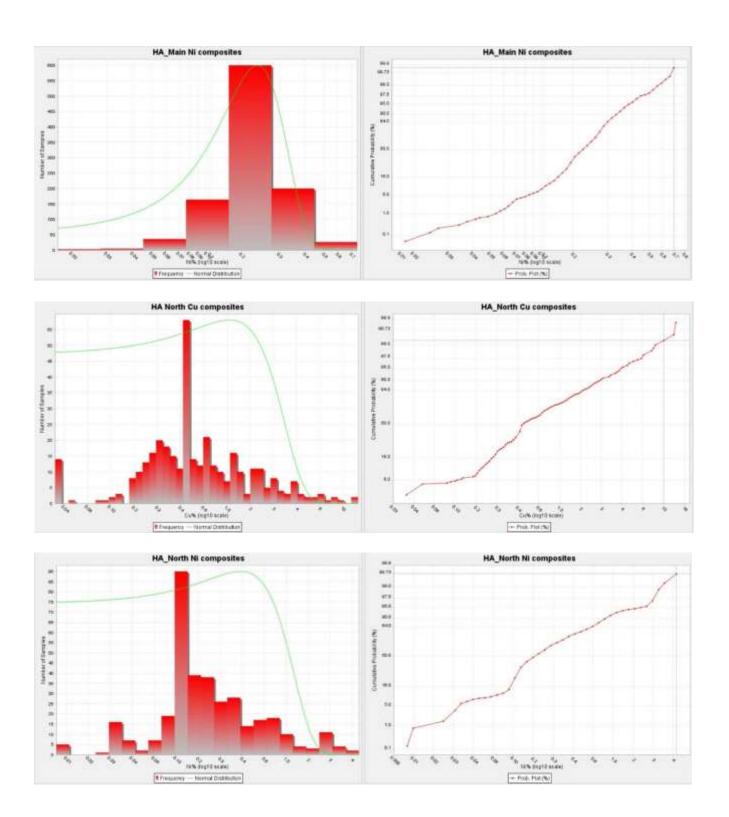


## APPENDIX C LOG NORMAL HISTOGRAMS AND PROBABILITY PLOTS

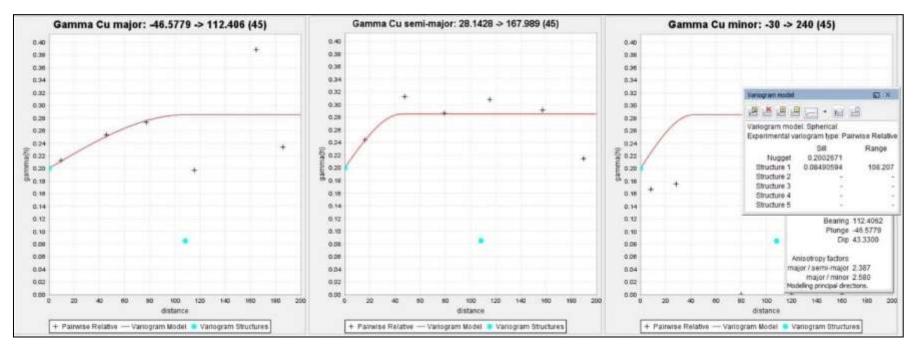


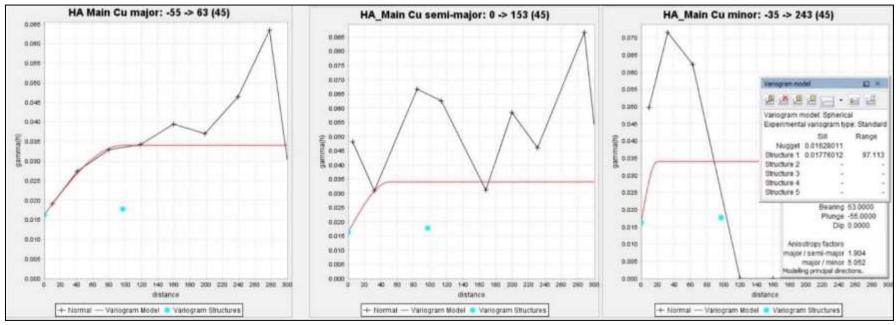






# APPENDIX D VARIOGRAMS

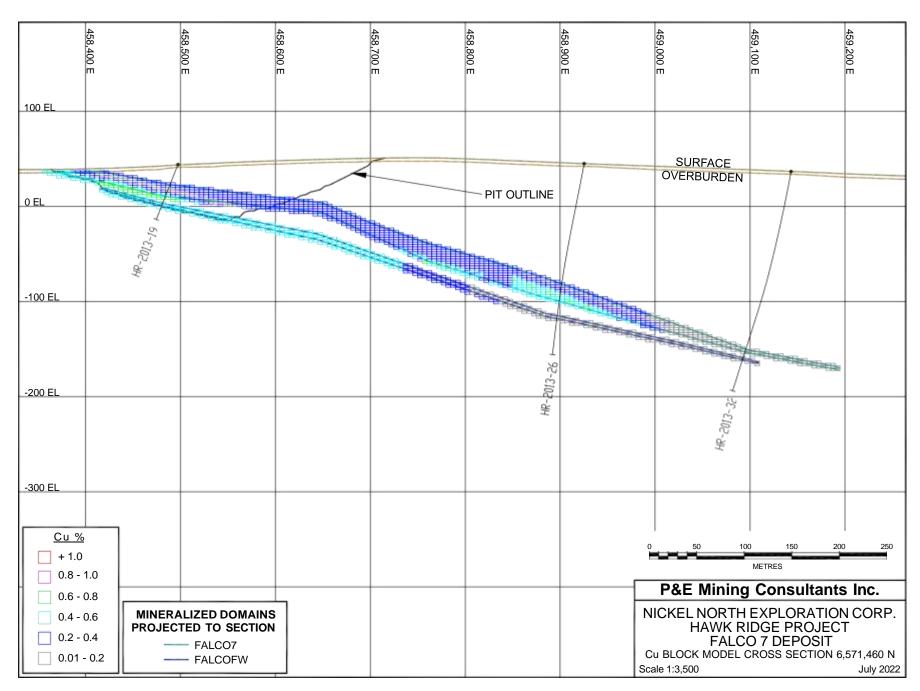


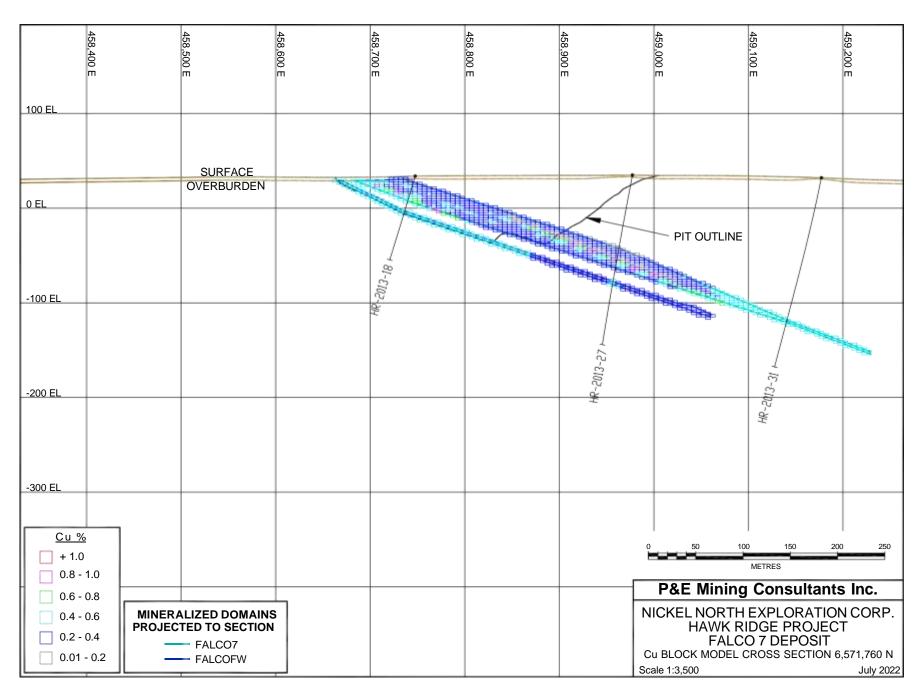


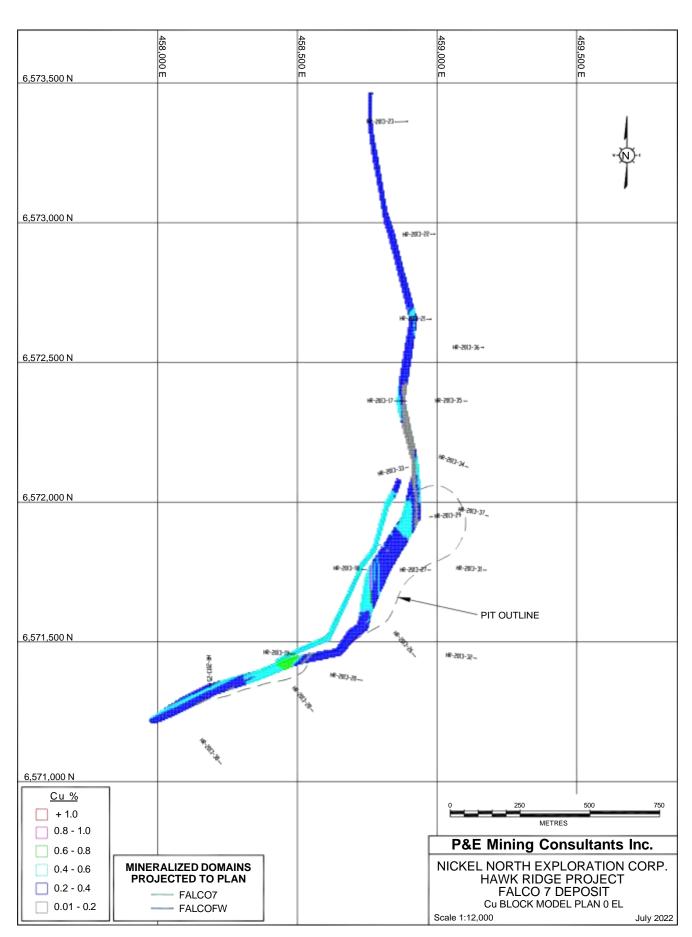
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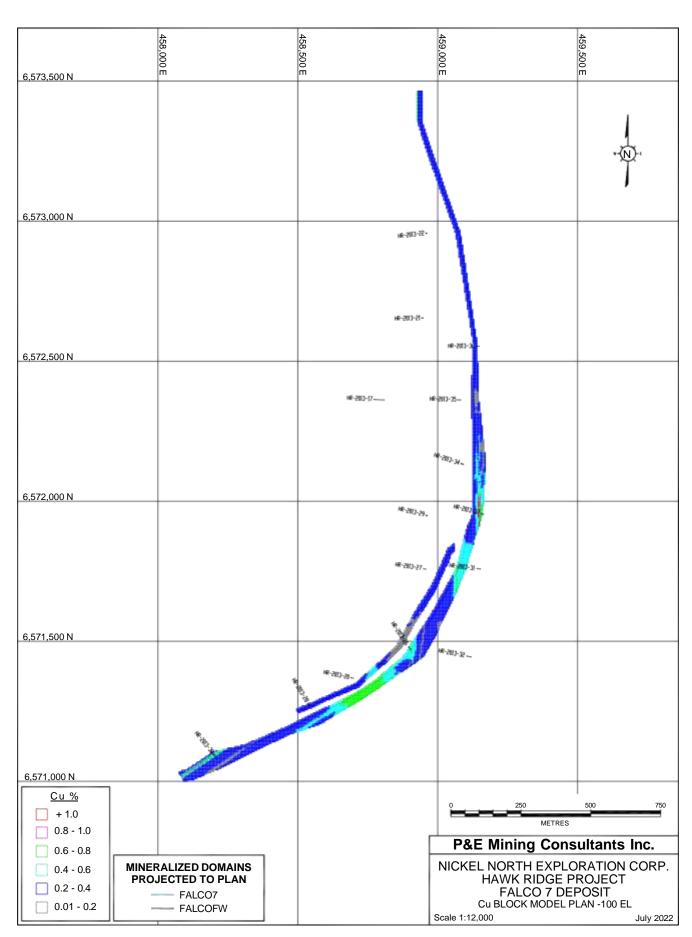
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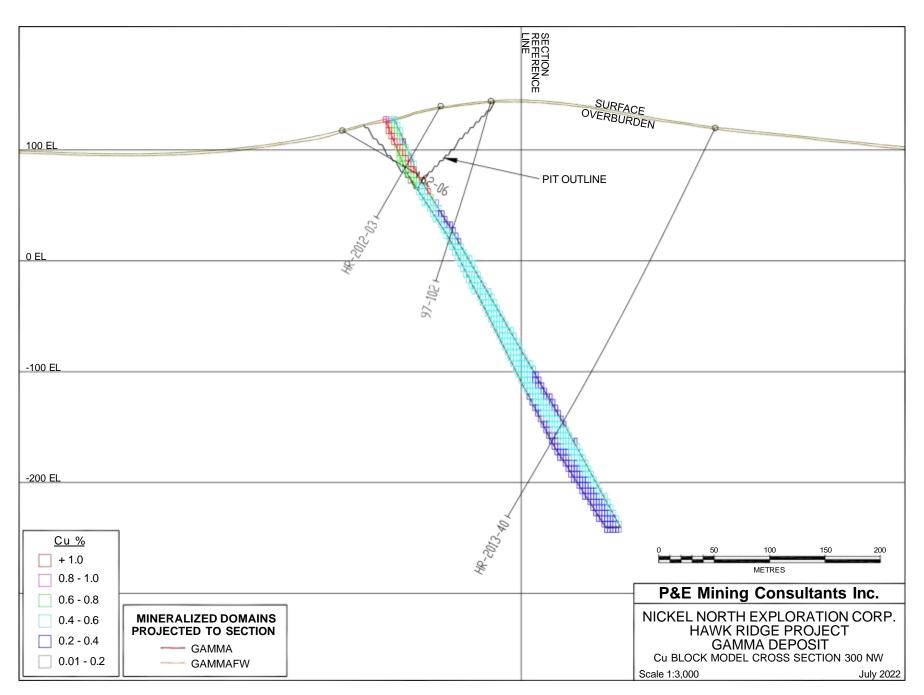
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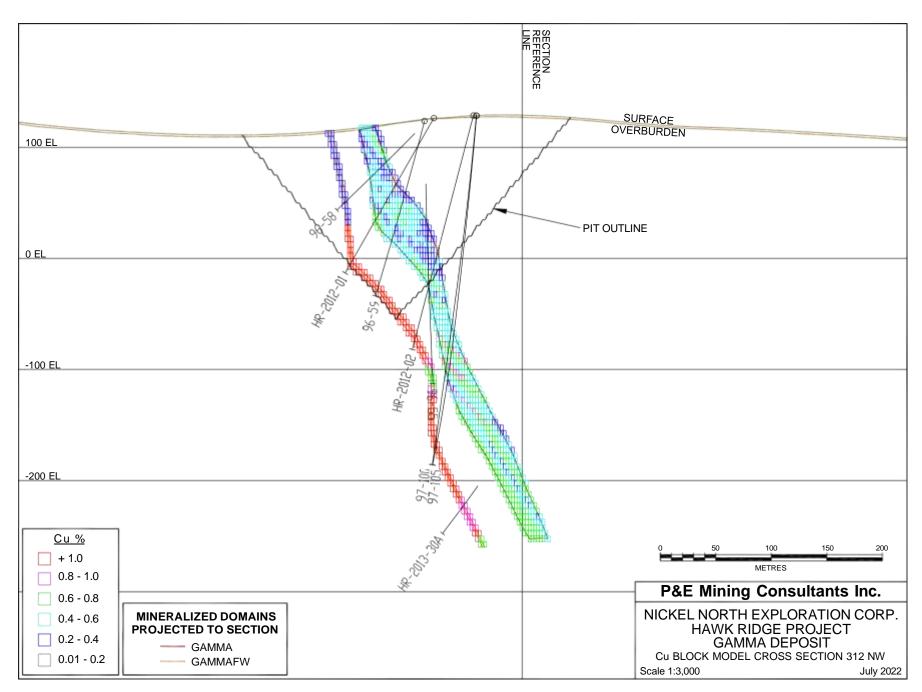


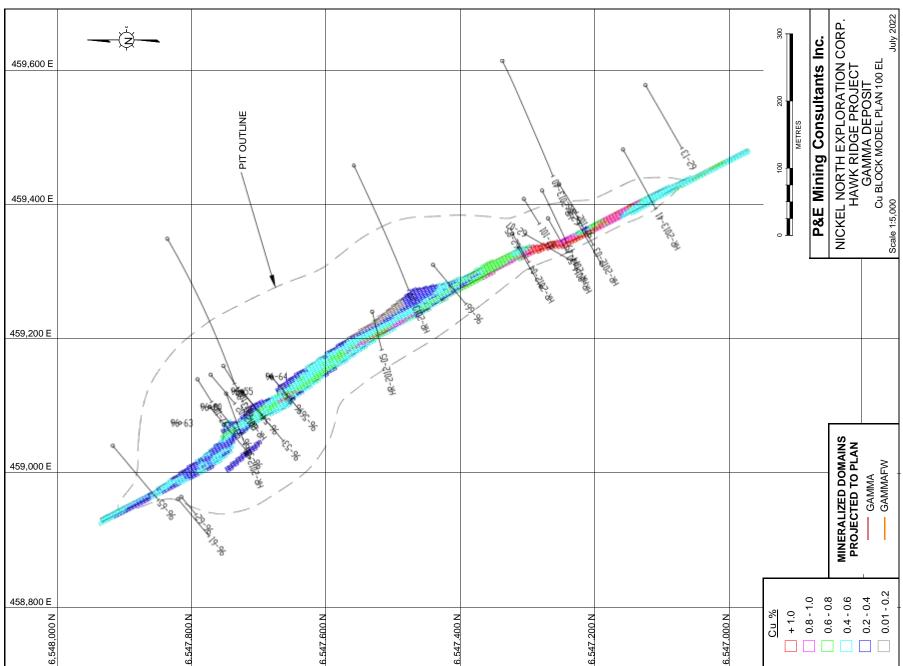






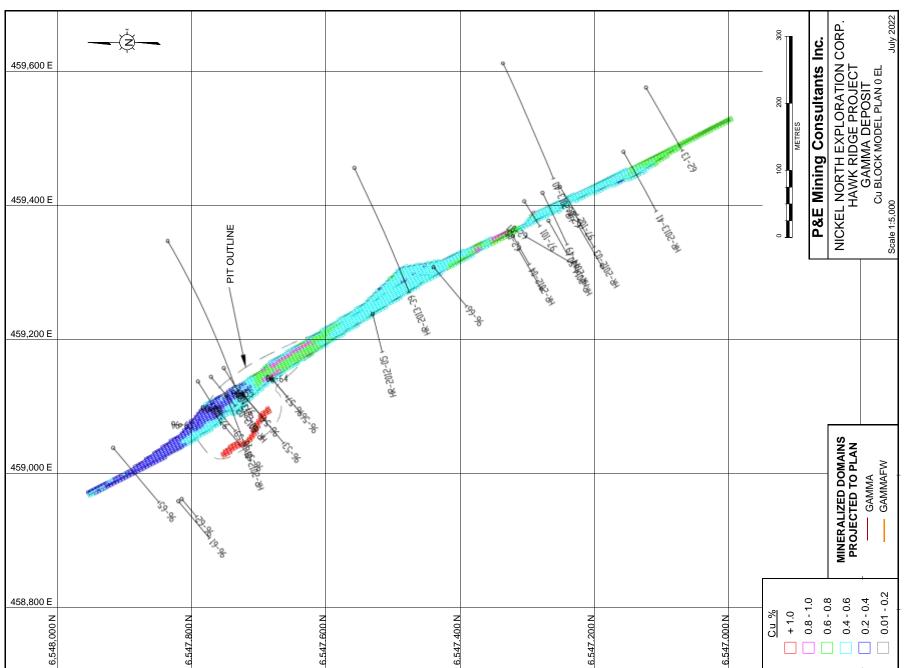




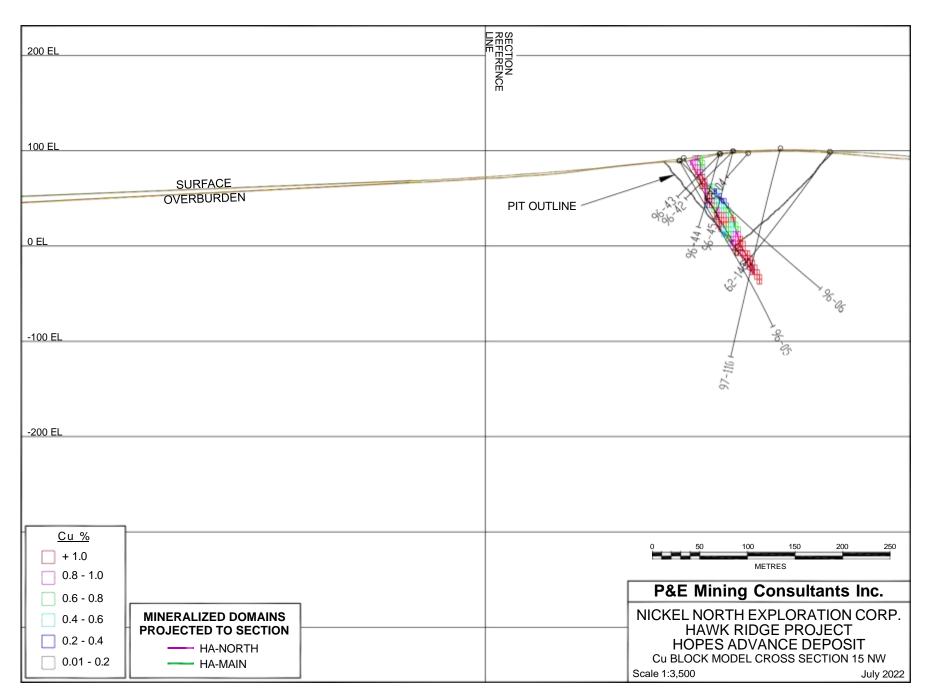


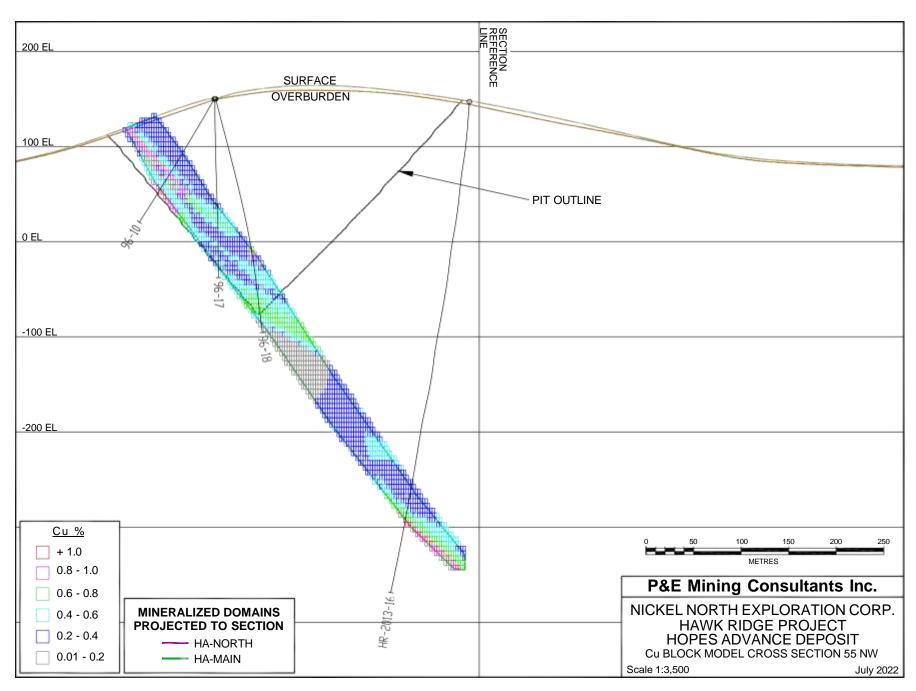
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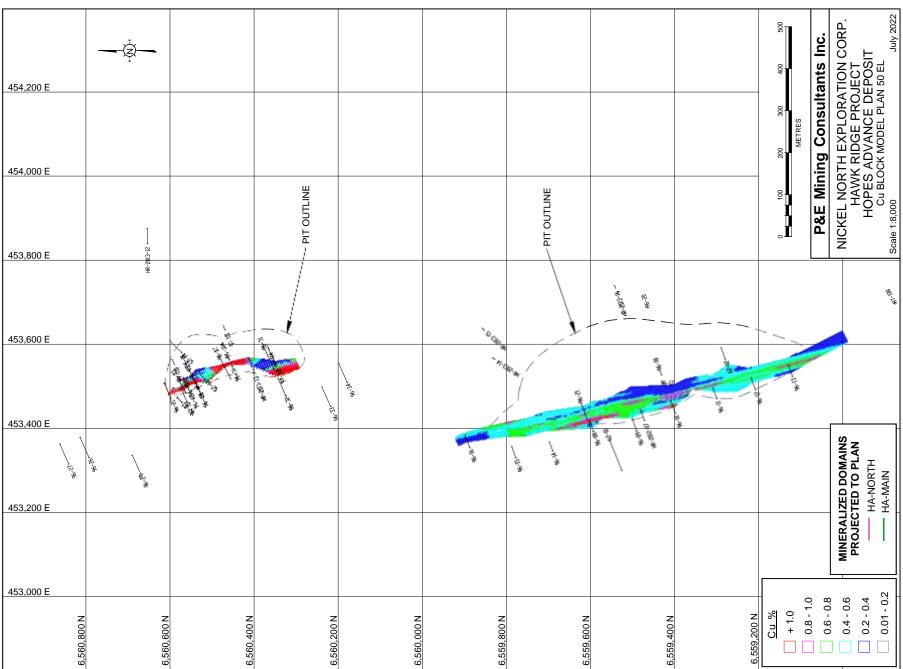
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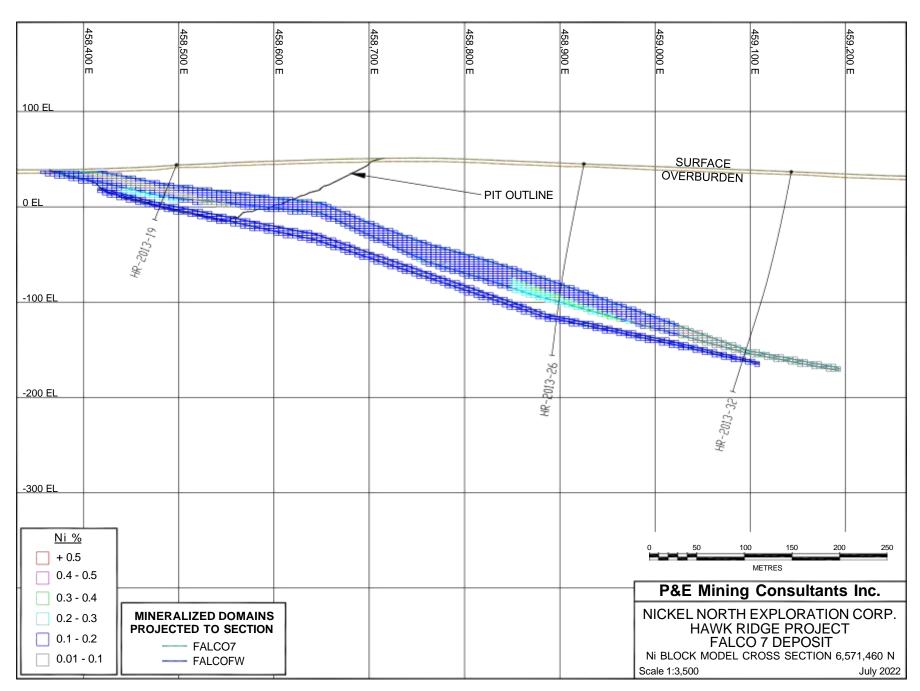
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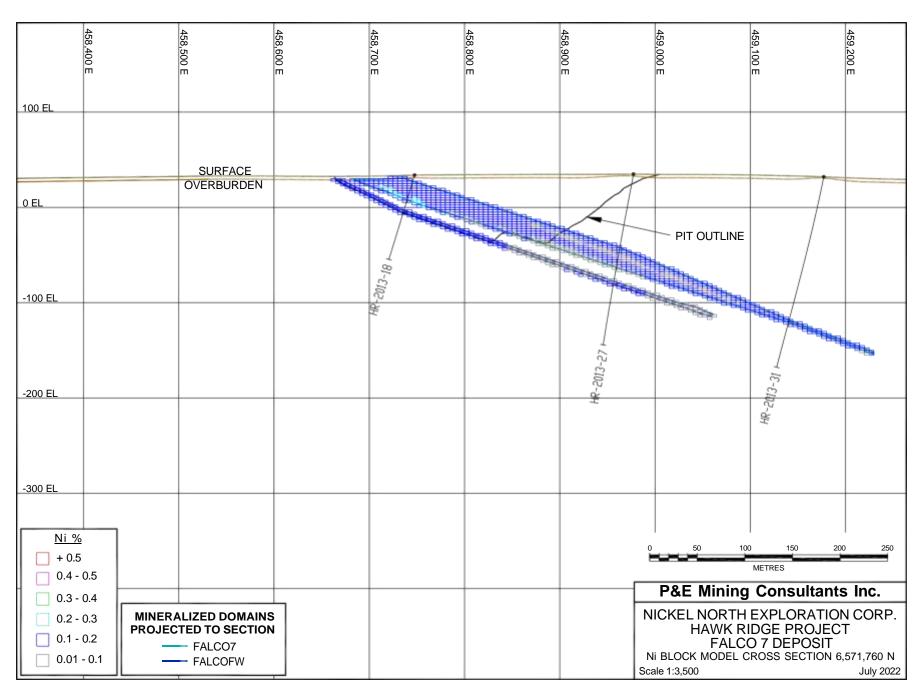
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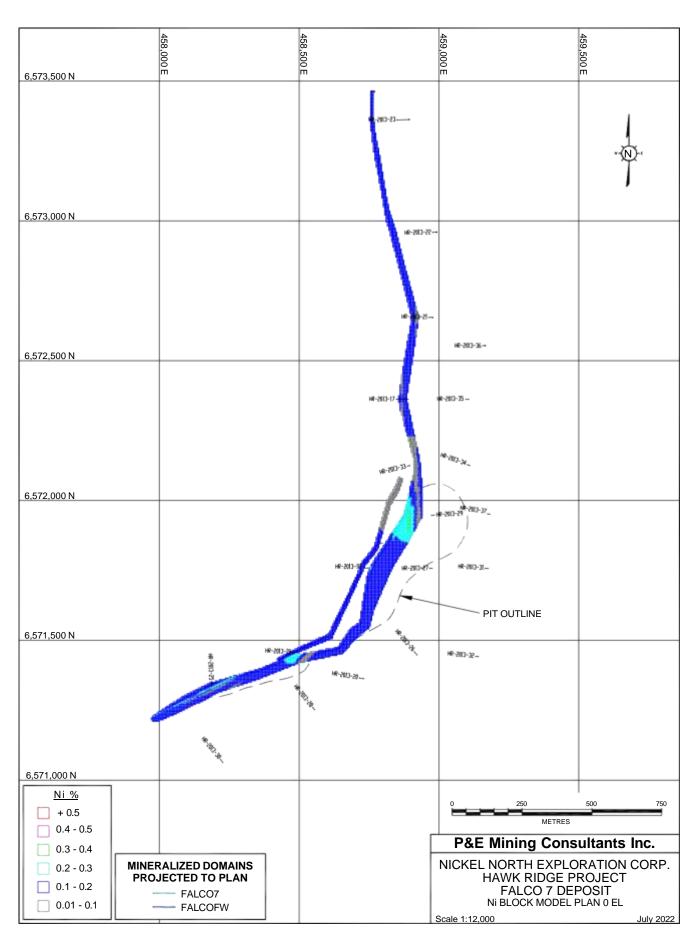
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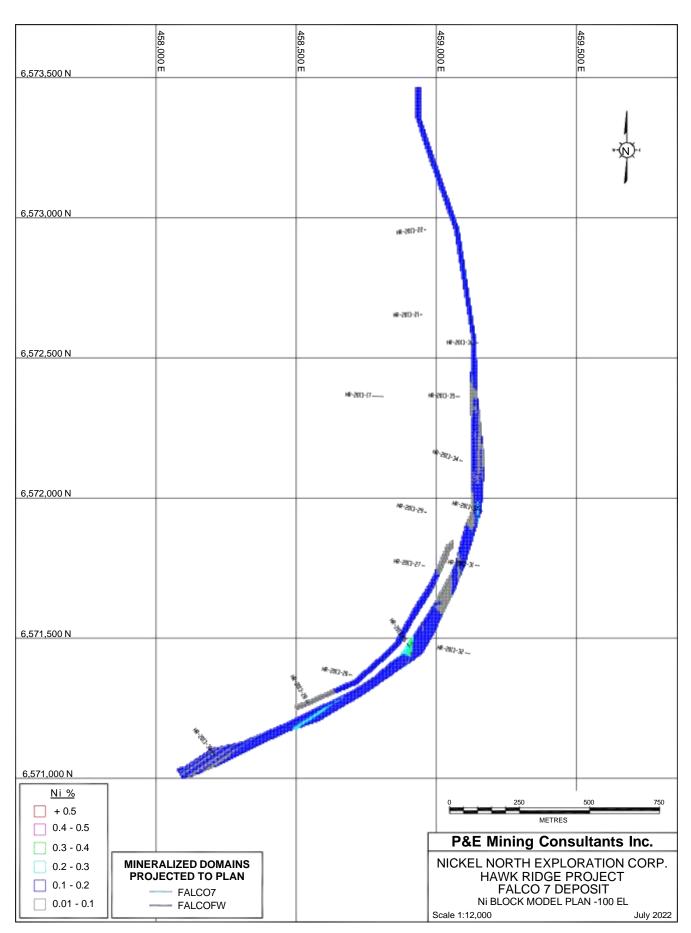
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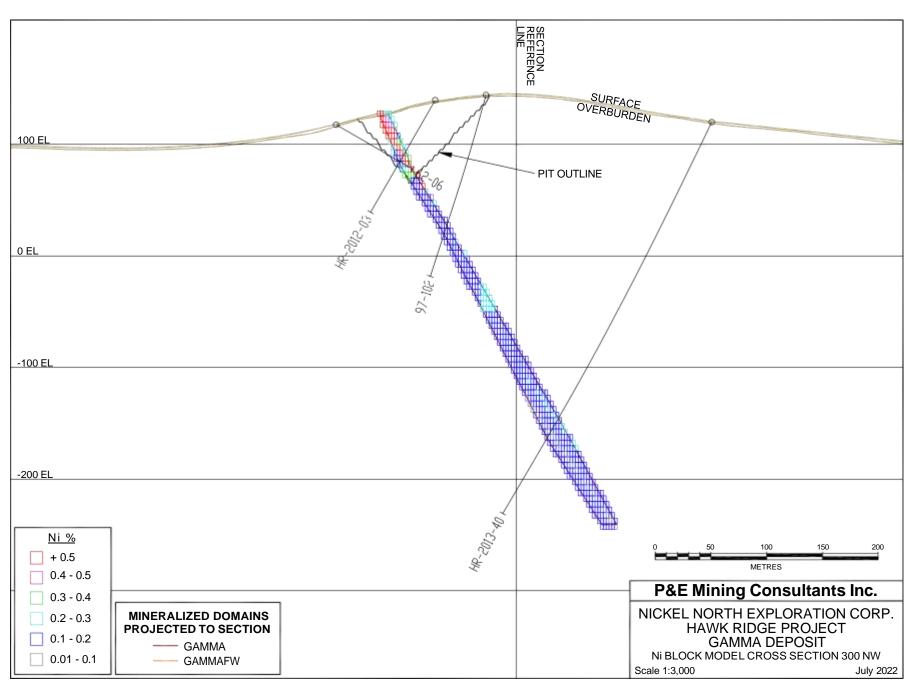
# APPENDIX F NI BLOCK MODEL CROSS SECTIONS AND PLANS

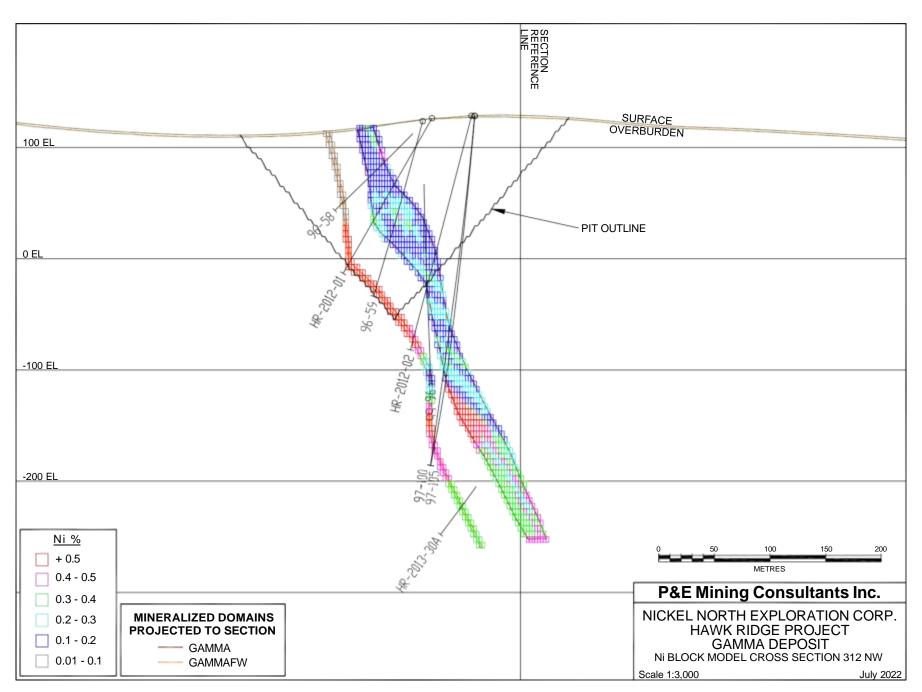


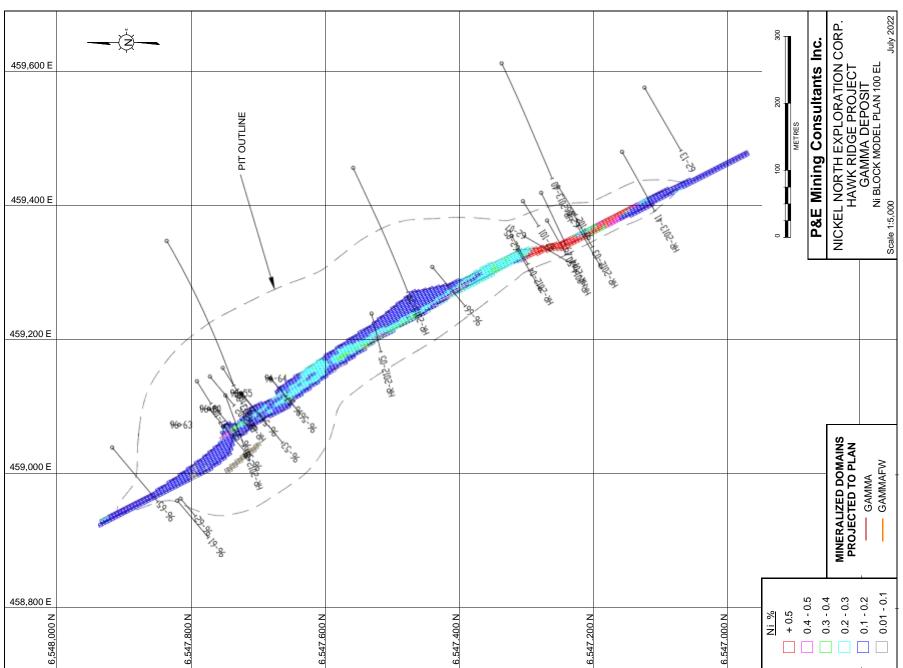






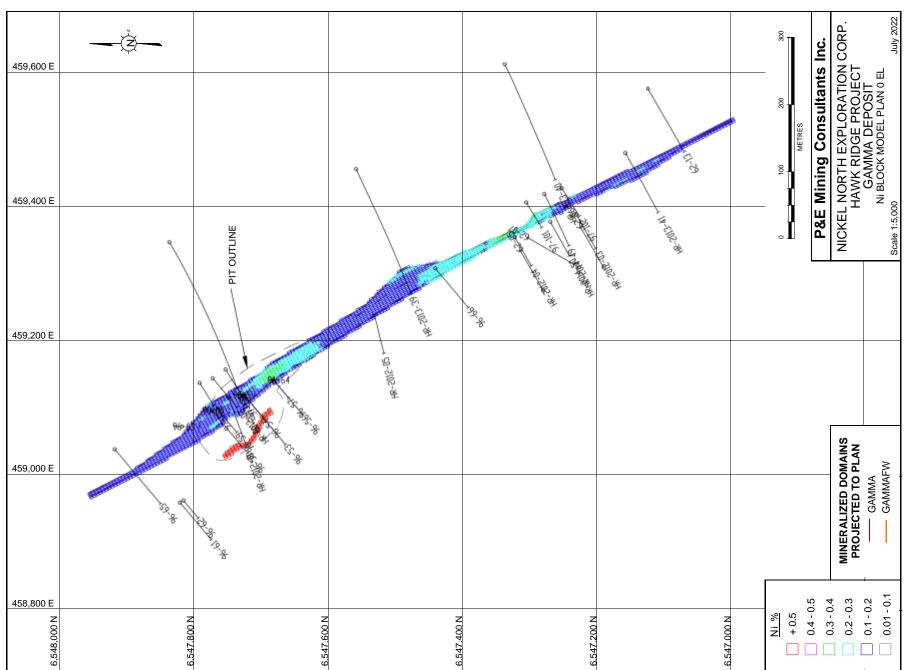






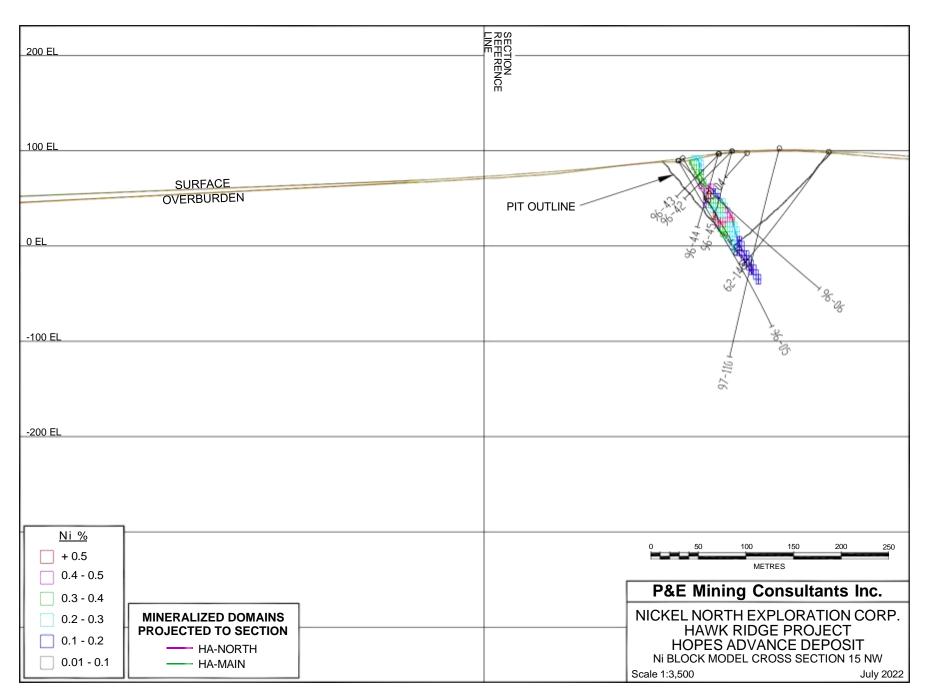
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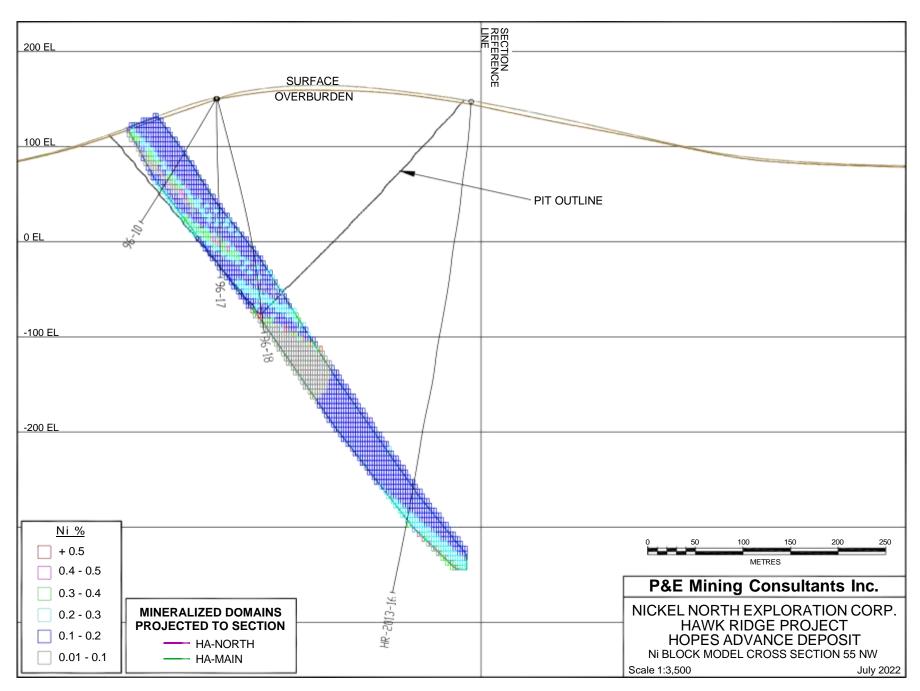
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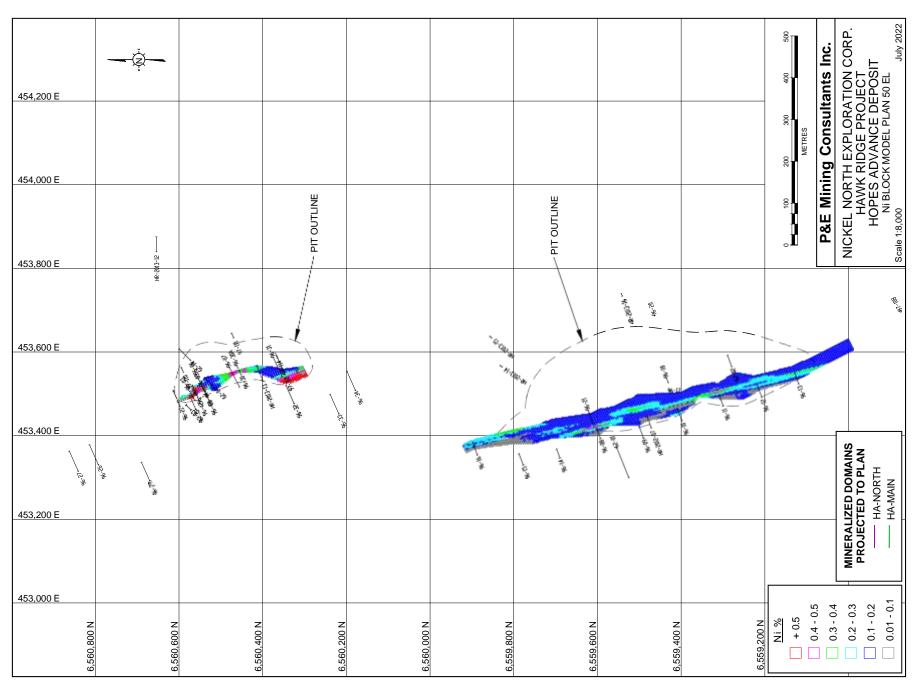


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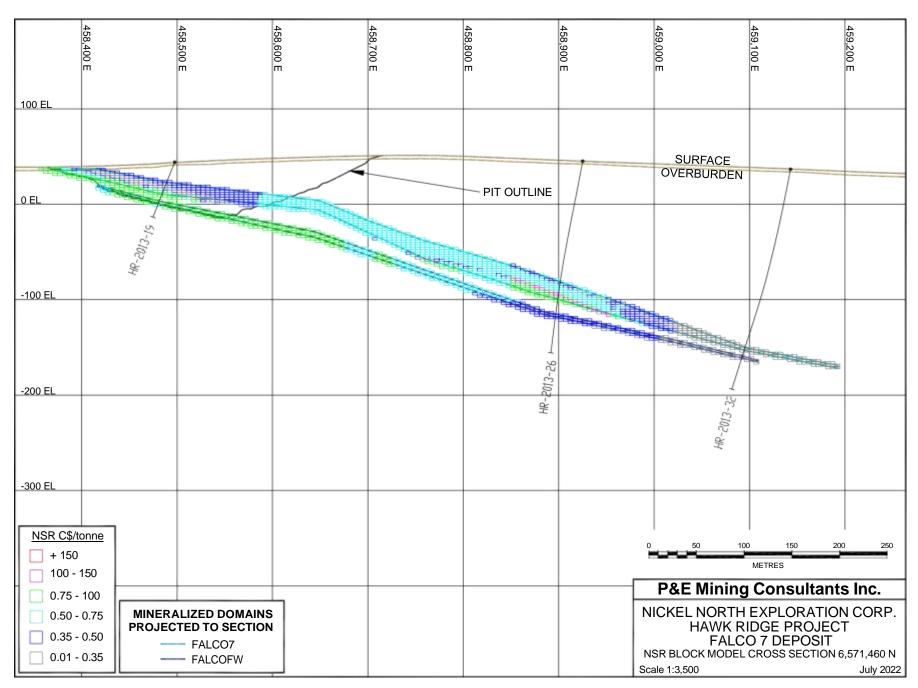


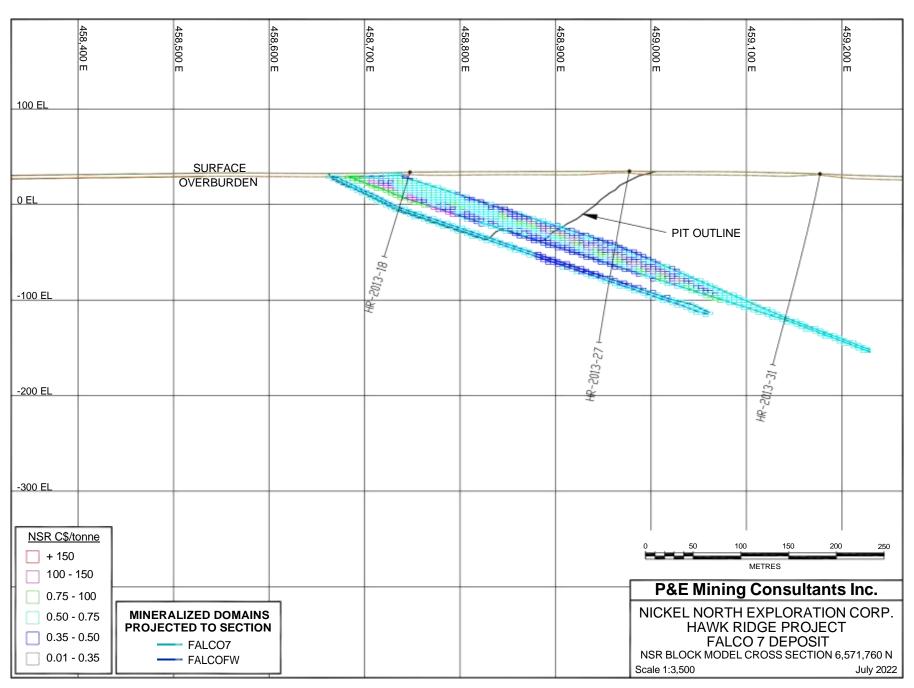


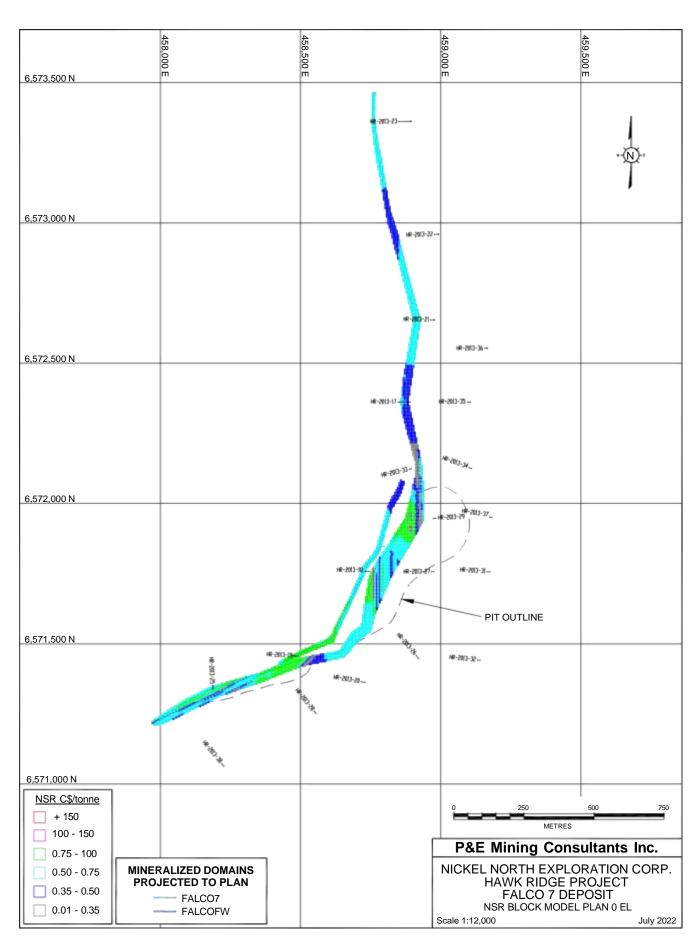
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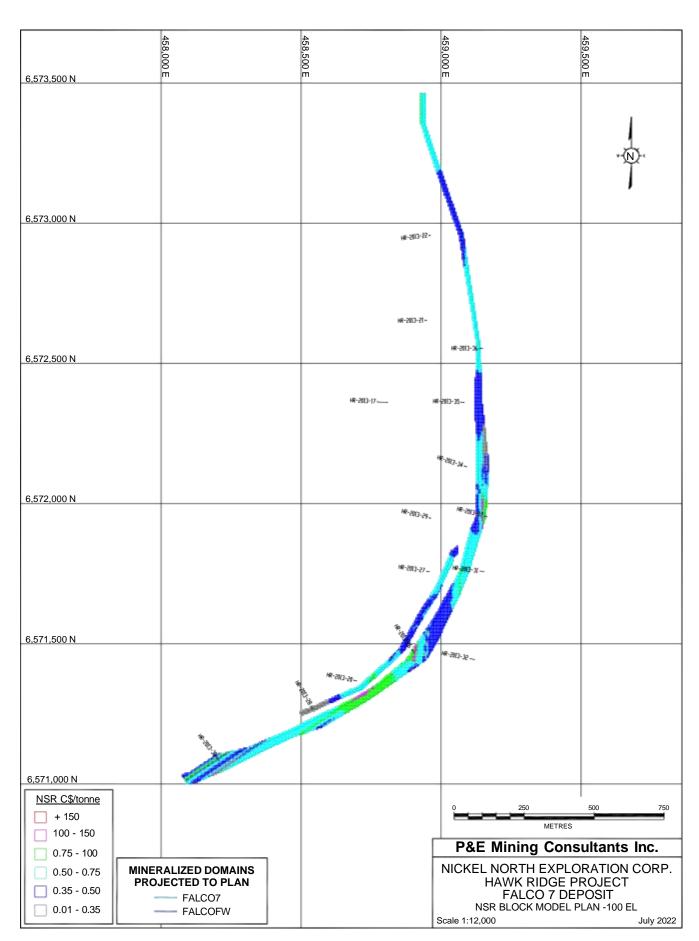
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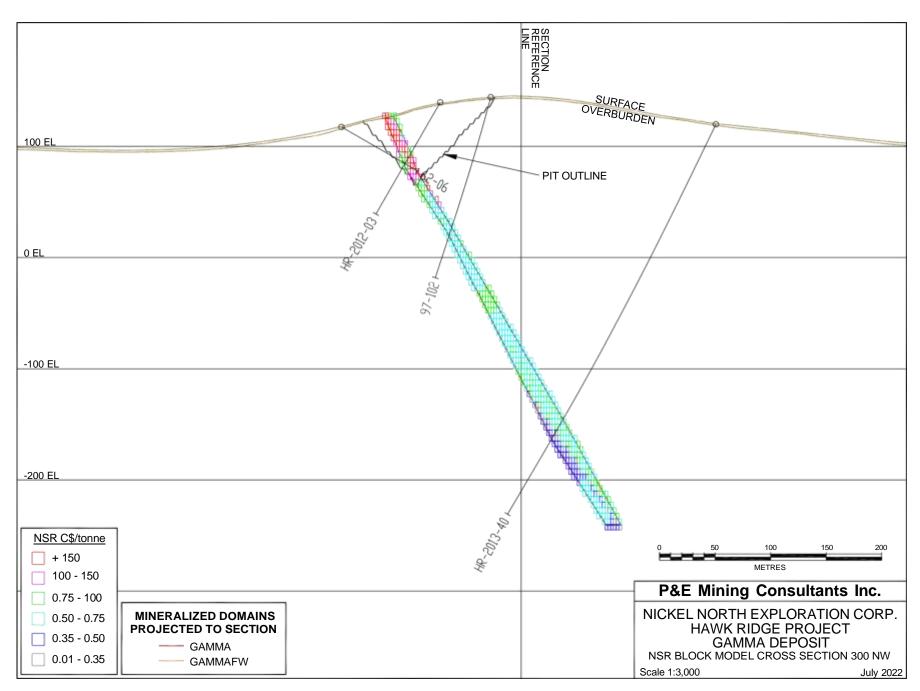
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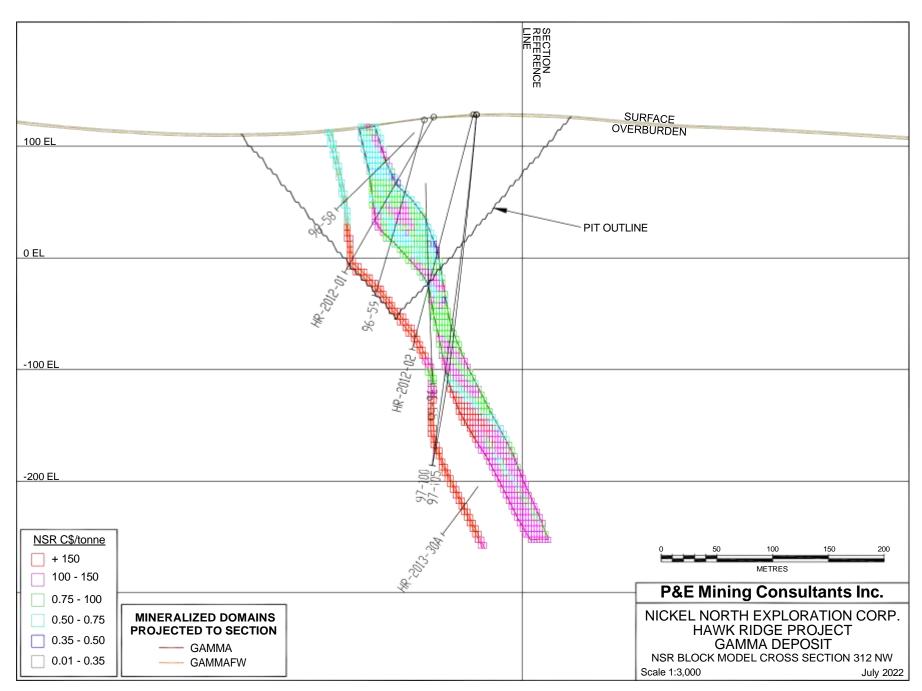






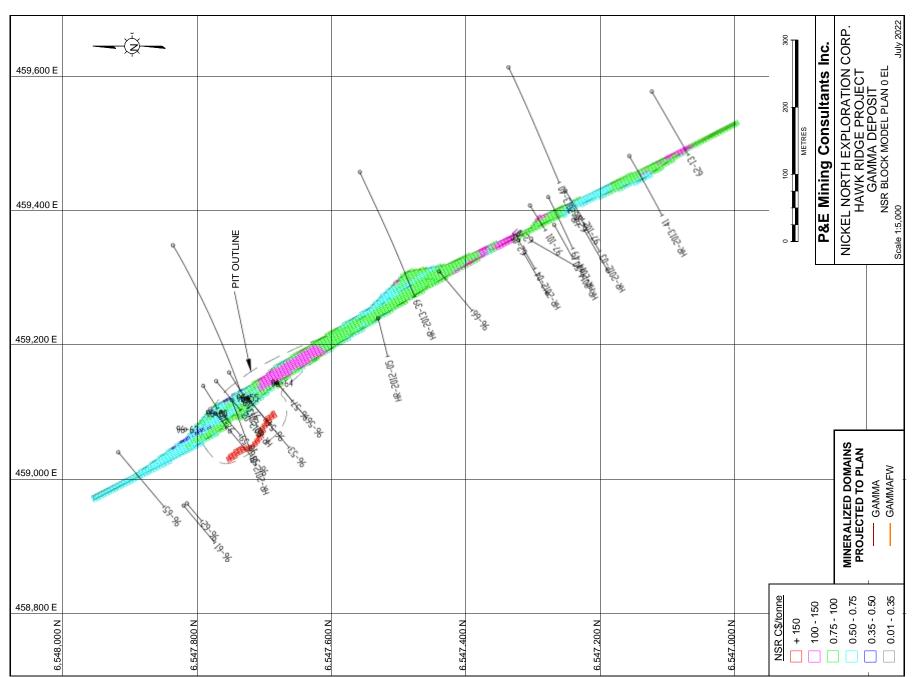






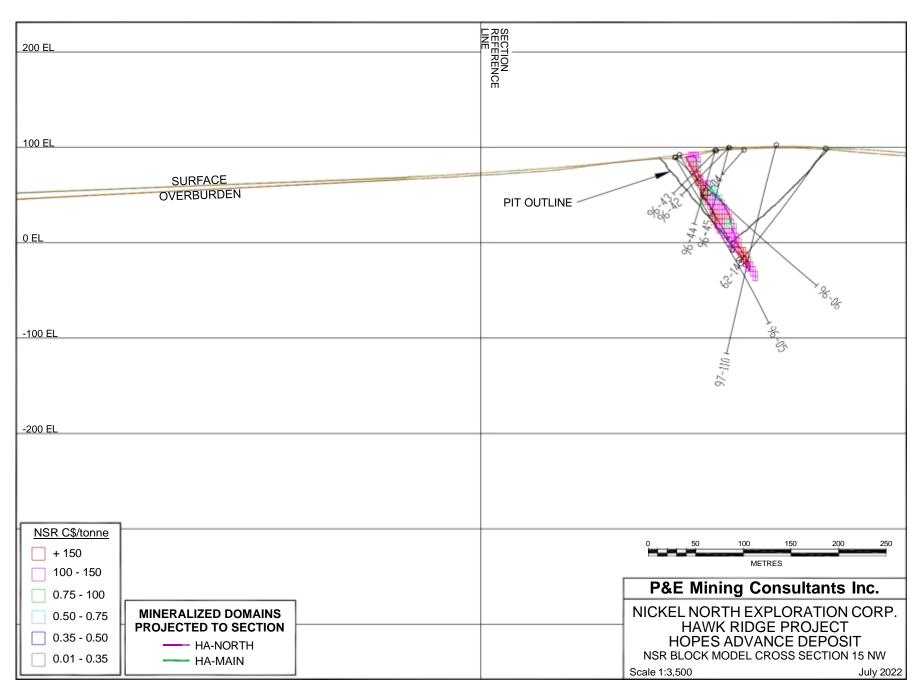
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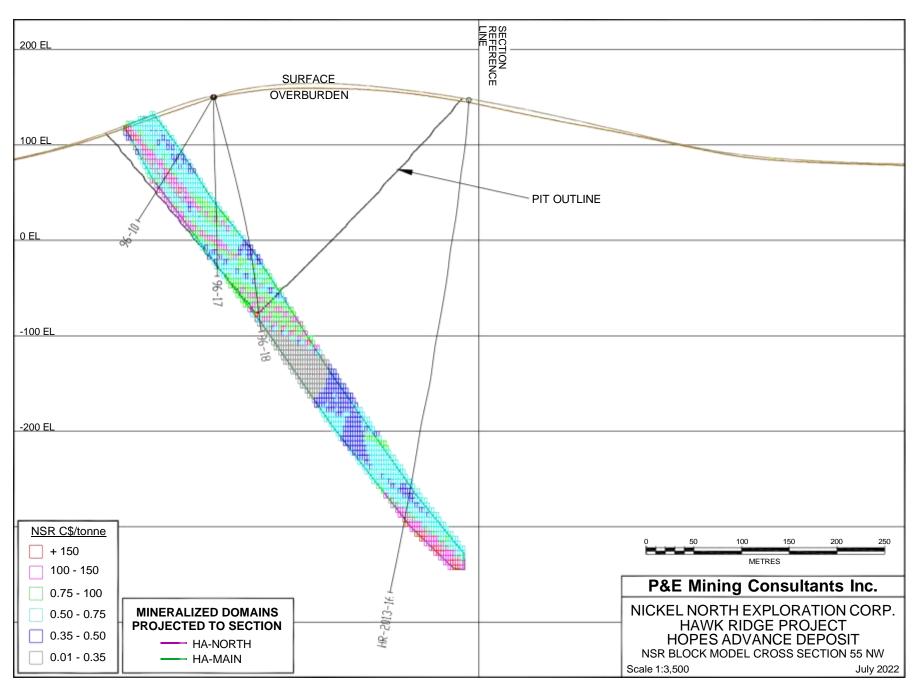
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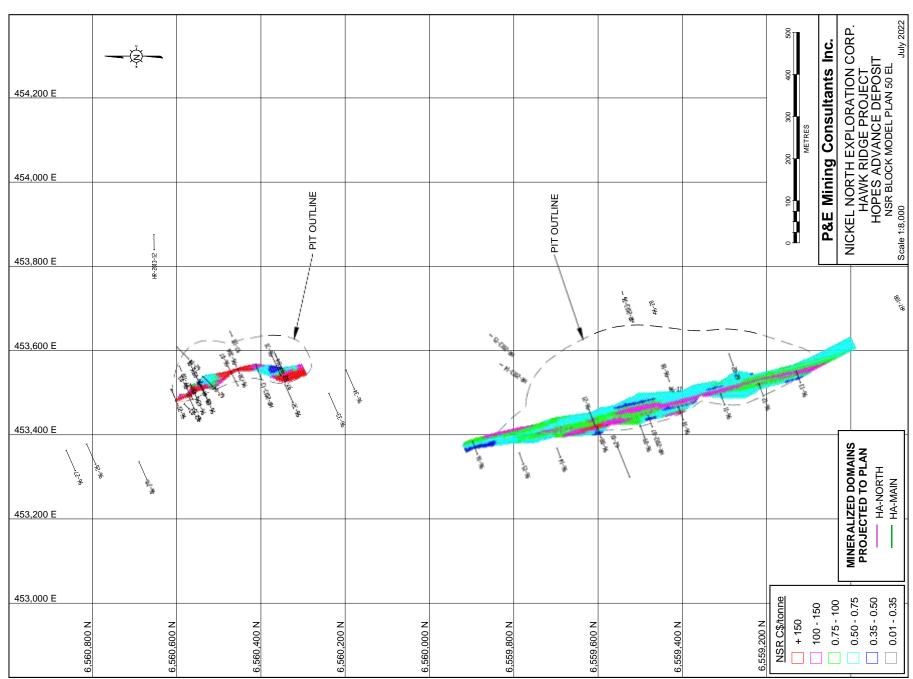


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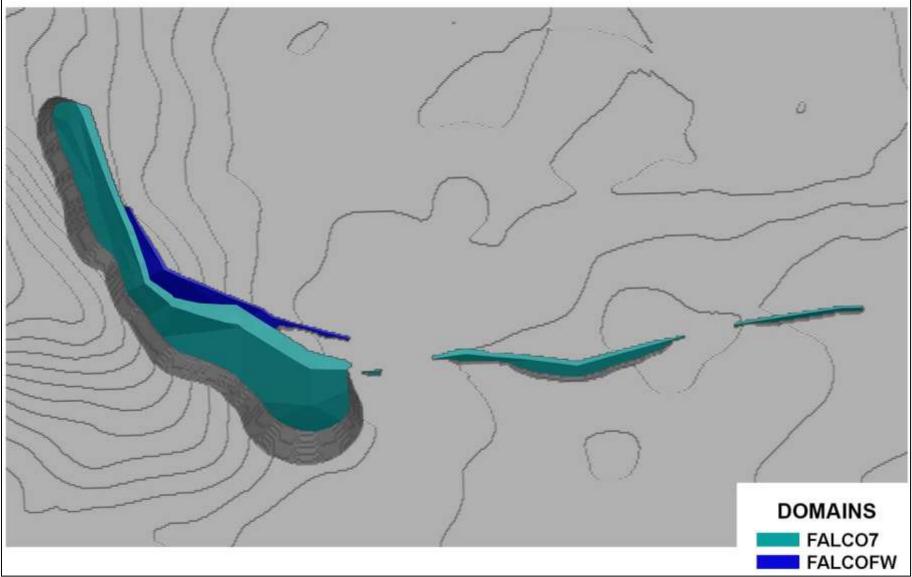
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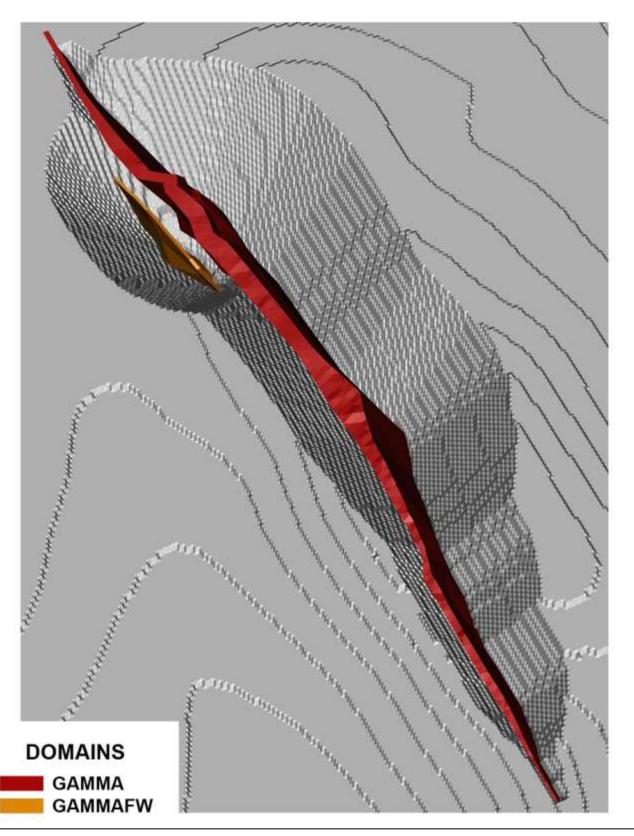
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#### APPENDIX H OPTIMIZED PIT SHELLS

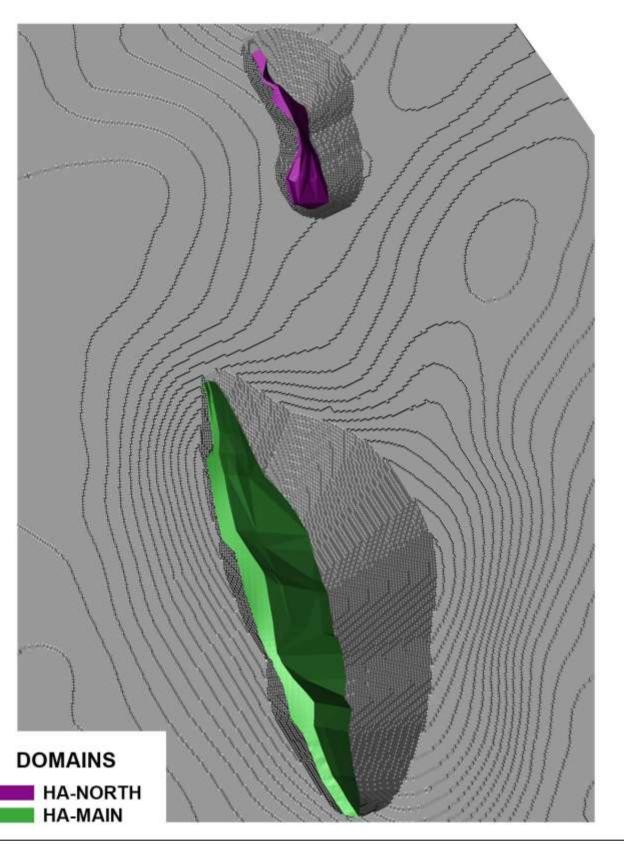
# HAWK RIDGE PROJECT - FALCO 7 DEPOSIT OPTIMIZED PIT SHELLS



# HAWK RIDGE PROJECT - GAMMA DEPOSIT OPTIMIZED PIT SHELL



## HAWK RIDGE PROJECT HOPES ADVANCE DEPOSIT - OPTIMIZED PIT SHELLS



#### APPENDIX I LAND TENURE RECORDS

#### TABLE APPENDIX I-1 HAWK RIDGE PROPERTY LAND TENURE INFORMATION 1

Claim No.	Principal Holder	Percentage	Area (ha)	Expiry Date	Status	Excess Work (\$)	Work Required (\$)	Required Fees (\$)
1013573	Nickel North Exploration Corp.	100	44.22	20240625	Active	0	2500	127
1013574	Nickel North Exploration Corp.	100	44.22	20240625	Active	0	2500	127
1013578	Nickel North Exploration Corp.	100	43.92	20240625	Active	0	2500	127
1013579	Nickel North Exploration Corp.	100	14.35	20240625	Active	0	1000	35.25
1013582	Nickel North Exploration Corp.	100	44.20	20240625	Active	0	2500	127
1013583	Nickel North Exploration Corp.	100	36.70	20240625	Active	0	2500	127
1013589	Nickel North Exploration Corp.	100	44.19	20240625	Active	0	2500	127
1013590	Nickel North Exploration Corp.	100	44.19	20240625	Active	0	2500	127
1013596	Nickel North Exploration Corp.	100	44.18	20240625	Active	0	2500	127
1013601	Nickel North Exploration Corp.	100	44.17	20240625	Active	0	2500	127
1013602	Nickel North Exploration Corp.	100	44.17	20240625	Active	0	2500	127
1013603	Nickel North Exploration Corp.	100	44.17	20240625	Active	0	2500	127
1013605	Nickel North Exploration Corp.	100	44.17	20240625	Active	0	2500	127
1013613	Nickel North Exploration Corp.	100	44.17	20240625	Active	0	2500	127
1013614	Nickel North Exploration Corp.	100	44.17	20240625	Active	0	2500	127
1013615	Nickel North Exploration Corp.	100	44.17	20240625	Active	0	2500	127
1013616	Nickel North Exploration Corp.	100	44.16	20240625	Active	0	2500	127
1013618	Nickel North Exploration Corp.	100	44.16	20240625	Active	0	2500	127
1017823	Nickel North Exploration Corp.	100	44.25	20240717	Active	0	2500	127
1017824	Nickel North Exploration Corp.	100	44.25	20240717	Active	0	2500	127
1017825	Nickel North Exploration Corp.	100	44.25	20240717	Active	0	2500	127
1017826	Nickel North Exploration Corp.	100	44.25	20240717	Active	0	2500	127

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Claim No.	Principal Holder	Percentage	Area (ha)	Expiry Date	Status	Excess Work (\$)	Work Required (\$)	Required Fees (\$)
1017827	Nickel North Exploration Corp.	100	44.25	20240717	Active	0	2500	127
1017829	Nickel North Exploration Corp.	100	44.24	20240717	Active	0	2500	127
1017830	Nickel North Exploration Corp.	100	44.24	20240717	Active	0	2500	127
1017831	Nickel North Exploration Corp.	100	44.24	20240717	Active	26,749	2500	127
1017832	Nickel North Exploration Corp.	100	44.24	20240717	Active	0	2500	127
1017833	Nickel North Exploration Corp.	100	44.24	20240717	Active	0	2500	127
1017834	Nickel North Exploration Corp.	100	44.24	20240717	Active	0	2500	127
1017835	Nickel North Exploration Corp.	100	44.24	20240717	Active	0	2500	127
1017836	Nickel North Exploration Corp.	100	44.24	20240717	Active	0	2500	127
1017837	Nickel North Exploration Corp.	100	44.23	20240717	Active	0	2500	127
1017838	Nickel North Exploration Corp.	100	44.23	20240717	Active	0	2500	127
1017839	Nickel North Exploration Corp.	100	44.23	20240717	Active	33,011	2500	127
1017840	Nickel North Exploration Corp.	100	44.23	20240717	Active	0	2500	127
1017841	Nickel North Exploration Corp.	100	44.23	20240717	Active	0	2500	127
1017842	Nickel North Exploration Corp.	100	44.23	20240717	Active	0	2500	127
1017843	Nickel North Exploration Corp.	100	44.23	20240717	Active	0	2500	127
1017844	Nickel North Exploration Corp.	100	44.02	20240717	Active	0	2500	127
1017845	Nickel North Exploration Corp.	100	44.22	20240717	Active	0	2500	127
1017846	Nickel North Exploration Corp.	100	44.22	20240717	Active	0	2500	127
1017847	Nickel North Exploration Corp.	100	44.22	20240717	Active	0	2500	127
1017848	Nickel North Exploration Corp.	100	44.22	20240717	Active	0	2500	127
1017849	Nickel North Exploration Corp.	100	44.22	20240717	Active	0	2500	127
1017850	Nickel North Exploration Corp.	100	44.22	20240717	Active	0	2500	127
1017851	Nickel North Exploration Corp.	100	44.22	20240717	Active	0	2500	127
1017853	Nickel North Exploration Corp.	100	44.21	20240717	Active	0	2500	127
1017854	Nickel North Exploration Corp.	100	44.21	20240717	Active	0	2500	127
1017855	Nickel North Exploration Corp.	100	44.21	20240717	Active	0	2500	127
1017857	Nickel North Exploration Corp.	100	44.20	20240717	Active	0	2500	127

Claim No.	Principal Holder	Percentage	Area (ha)	Expiry Date	Status	Excess Work (\$)	Work Required (\$)	Required Fees (\$)
1017858	Nickel North Exploration Corp.	100	44.20	20240717	Active	0	2500	127
1017859	Nickel North Exploration Corp.	100	44.20	20240717	Active	0	2500	127
1017861	Nickel North Exploration Corp.	100	44.19	20240717	Active	0	2500	127
1017862	Nickel North Exploration Corp.	100	44.19	20240717	Active	0	2500	127
1017863	Nickel North Exploration Corp.	100	44.19	20240717	Active	0	2500	127
1017865	Nickel North Exploration Corp.	100	44.18	20240717	Active	0	2500	127
1017866	Nickel North Exploration Corp.	100	44.18	20240717	Active	0	2500	127
1017867	Nickel North Exploration Corp.	100	44.18	20240717	Active	0	2500	127
1017868	Nickel North Exploration Corp.	100	44.18	20240717	Active	0	2500	127
1017869	Nickel North Exploration Corp.	100	44.18	20240717	Active	0	2500	127
1017870	Nickel North Exploration Corp.	100	44.18	20240717	Active	448	2500	127
1017943	Nickel North Exploration Corp.	100	44.41	20240717	Active	0	2500	127
1017944	Nickel North Exploration Corp.	100	44.41	20240717	Active	25,447	2500	127
1017945	Nickel North Exploration Corp.	100	44.41	20240717	Active	0	2500	127
1017946	Nickel North Exploration Corp.	100	44.41	20240717	Active	893	2500	127
1017947	Nickel North Exploration Corp.	100	44.41	20240717	Active	14,130	2500	127
1017948	Nickel North Exploration Corp.	100	44.41	20240717	Active	0	2500	127
1017949	Nickel North Exploration Corp.	100	44.40	20240717	Active	0	2500	127
1017950	Nickel North Exploration Corp.	100	44.40	20240717	Active	0	2500	127
1017951	Nickel North Exploration Corp.	100	44.40	20240717	Active	0	2500	127
1017952	Nickel North Exploration Corp.	100	44.40	20240717	Active	0	2500	127
1017953	Nickel North Exploration Corp.	100	44.40	20240717	Active	4,724	2500	127
1017954	Nickel North Exploration Corp.	100	44.40	20240717	Active	5,769	2500	127
1017955	Nickel North Exploration Corp.	100	44.40	20240717	Active	0	2500	127
1017958	Nickel North Exploration Corp.	100	44.39	20240717	Active	0	2500	127
1017959	Nickel North Exploration Corp.	100	44.39	20240717	Active	0	2500	127
1017960	Nickel North Exploration Corp.	100	44.39	20240717	Active	0	2500	127
1017961	Nickel North Exploration Corp.	100	44.39	20240717	Active	0	2500	127

Claim No.	Principal Holder	Percentage	Area (ha)	Expiry Date	Status	Excess Work (\$)	Work Required (\$)	Required Fees (\$)
1017962	Nickel North Exploration Corp.	100	44.39	20240717	Active	0	2500	127
1017963	Nickel North Exploration Corp.	100	44.39	20240717	Active	0	2500	127
1017964	Nickel North Exploration Corp.	100	44.39	20240717	Active	0	2500	127
1017967	Nickel North Exploration Corp.	100	44.38	20240717	Active	0	2500	127
1017968	Nickel North Exploration Corp.	100	44.38	20240717	Active	0	2500	127
1017969	Nickel North Exploration Corp.	100	44.38	20240717	Active	0	2500	127
1017970	Nickel North Exploration Corp.	100	44.38	20240717	Active	0	2500	127
1017971	Nickel North Exploration Corp.	100	44.38	20240717	Active	2,982	2500	127
1017972	Nickel North Exploration Corp.	100	44.38	20240717	Active	0	2500	127
1017974	Nickel North Exploration Corp.	100	44.37	20240717	Active	0	2500	127
1017975	Nickel North Exploration Corp.	100	44.37	20240717	Active	0	2500	127
1017976	Nickel North Exploration Corp.	100	44.37	20240717	Active	0	2500	127
1017977	Nickel North Exploration Corp.	100	44.37	20240717	Active	0	2500	127
1017978	Nickel North Exploration Corp.	100	44.37	20240717	Active	0	2500	127
1017981	Nickel North Exploration Corp.	100	44.36	20240717	Active	0	2500	127
1017982	Nickel North Exploration Corp.	100	44.36	20240717	Active	0	2500	127
1017983	Nickel North Exploration Corp.	100	44.36	20240717	Active	0	2500	127
1017984	Nickel North Exploration Corp.	100	44.36	20240717	Active	40,957	2500	127
1017985	Nickel North Exploration Corp.	100	44.36	20240717	Active	42,234	2500	127
1017986	Nickel North Exploration Corp.	100	44.36	20240717	Active	34,931	2500	127
1017987	Nickel North Exploration Corp.	100	44.36	20240717	Active	0	2500	127
1017990	Nickel North Exploration Corp.	100	44.35	20240717	Active	0	2500	127
1017991	Nickel North Exploration Corp.	100	44.35	20240717	Active	0	2500	127
1017992	Nickel North Exploration Corp.	100	44.35	20240717	Active	103,769	2500	127
1017993	Nickel North Exploration Corp.	100	44.35	20240717	Active	201,416	2500	127
1017994	Nickel North Exploration Corp.	100	44.35	20240717	Active	536,295	2500	127
1017995	Nickel North Exploration Corp.	100	44.35	20240717	Active	41,557	2500	127
1017997	Nickel North Exploration Corp.	100	44.34	20240717	Active	0	2500	127

Claim No.	Principal Holder	Percentage	Area (ha)	Expiry Date	Status	Excess Work (\$)	Work Required (\$)	Required Fees (\$)
1017998	Nickel North Exploration Corp.	100	44.34	20240717	Active	0	2500	127
1017999	Nickel North Exploration Corp.	100	44.34	20240717	Active	0	2500	127
1018000	Nickel North Exploration Corp.	100	44.34	20240717	Active	107,402	2500	127
1018001	Nickel North Exploration Corp.	100	44.34	20240717	Active	457,542	2500	127
1018002	Nickel North Exploration Corp.	100	44.34	20240717	Active	41,556	2500	127
1018003	Nickel North Exploration Corp.	100	44.34	20240717	Active	0	2500	127
1018004	Nickel North Exploration Corp.	100	44.33	20240717	Active	0	2500	127
1018005	Nickel North Exploration Corp.	100	44.33	20240717	Active	0	2500	127
1018006	Nickel North Exploration Corp.	100	44.33	20240717	Active	0	2500	127
1018007	Nickel North Exploration Corp.	100	44.33	20240717	Active	0	2500	127
1018008	Nickel North Exploration Corp.	100	44.33	20240717	Active	0	2500	127
1018009	Nickel North Exploration Corp.	100	44.33	20240717	Active	0	2500	127
1018011	Nickel North Exploration Corp.	100	44.32	20240717	Active	0	2500	127
1018012	Nickel North Exploration Corp.	100	44.32	20240717	Active	0	2500	127
1018013	Nickel North Exploration Corp.	100	44.32	20240717	Active	0	2500	127
1018014	Nickel North Exploration Corp.	100	44.32	20240717	Active	0	2500	127
1018015	Nickel North Exploration Corp.	100	44.32	20240717	Active	0	2500	127
1018016	Nickel North Exploration Corp.	100	44.32	20240717	Active	0	2500	127
1018017	Nickel North Exploration Corp.	100	44.32	20240717	Active	0	2500	127
1018018	Nickel North Exploration Corp.	100	44.31	20240717	Active	0	2500	127
1018019	Nickel North Exploration Corp.	100	44.31	20240717	Active	54,167	2500	127
1018020	Nickel North Exploration Corp.	100	44.31	20240717	Active	193	2500	127
1018021	Nickel North Exploration Corp.	100	44.31	20240717	Active	3,329	2500	127
1018022	Nickel North Exploration Corp.	100	44.31	20240717	Active	0	2500	127
1018023	Nickel North Exploration Corp.	100	44.30	20240717	Active	1,238	2500	127
1018024	Nickel North Exploration Corp.	100	44.30	20240717	Active	0	2500	127
1018025	Nickel North Exploration Corp.	100	44.50	20240717	Active	0	2500	127
1018026	Nickel North Exploration Corp.	100	44.50	20240717	Active	0	2500	127

Claim No.	Principal Holder	Percentage	Area (ha)	Expiry Date	Status	Excess Work (\$)	Work Required (\$)	Required Fees (\$)
1018027	Nickel North Exploration Corp.	100	44.50	20240717	Active	1,940	2500	127
1018028	Nickel North Exploration Corp.	100	44.50	20240717	Active	0	2500	127
1018029	Nickel North Exploration Corp.	100	44.50	20240717	Active	0	2500	127
1018030	Nickel North Exploration Corp.	100	44.49	20240717	Active	0	2500	127
1018031	Nickel North Exploration Corp.	100	44.49	20240717	Active	0	2500	127
1018032	Nickel North Exploration Corp.	100	44.49	20240717	Active	2,288	2500	127
1018033	Nickel North Exploration Corp.	100	44.49	20240717	Active	0	2500	127
1018035	Nickel North Exploration Corp.	100	44.48	20240717	Active	0	2500	127
1018036	Nickel North Exploration Corp.	100	44.48	20240717	Active	0	2500	127
1018037	Nickel North Exploration Corp.	100	44.48	20240717	Active	4,378	2500	127
1018038	Nickel North Exploration Corp.	100	44.48	20240717	Active	0	2500	127
1018041	Nickel North Exploration Corp.	100	44.46	20240717	Active	0	2500	127
1018042	Nickel North Exploration Corp.	100	44.46	20240717	Active	0	2500	127
1018043	Nickel North Exploration Corp.	100	44.46	20240717	Active	0	2500	127
1018044	Nickel North Exploration Corp.	100	44.46	20240717	Active	31,201	2500	127
1018045	Nickel North Exploration Corp.	100	44.46	20240717	Active	0	2500	127
1018048	Nickel North Exploration Corp.	100	44.45	20240717	Active	0	2500	127
1018049	Nickel North Exploration Corp.	100	44.45	20240717	Active	0	2500	127
1018050	Nickel North Exploration Corp.	100	44.45	20240717	Active	0	2500	127
1018051	Nickel North Exploration Corp.	100	44.45	20240717	Active	9,254	2500	127
1018052	Nickel North Exploration Corp.	100	44.45	20240717	Active	13,783	2500	127
1018053	Nickel North Exploration Corp.	100	44.45	20240717	Active	11,344	2500	127
1018055	Nickel North Exploration Corp.	100	44.44	20240717	Active	0	2500	127
1018056	Nickel North Exploration Corp.	100	44.44	20240717	Active	0	2500	127
1018057	Nickel North Exploration Corp.	100	44.44	20240717	Active	10,299	2500	127
1018058	Nickel North Exploration Corp.	100	44.44	20240717	Active	8,557	2500	127
1018059	Nickel North Exploration Corp.	100	44.44	20240717	Active	90,597	2500	127
1018060	Nickel North Exploration Corp.	100	44.44	20240717	Active	0	2500	127

Claim No.	Principal Holder	Percentage	Area (ha)	Expiry Date	Status	Excess Work (\$)	Work Required (\$)	Required Fees (\$)
1018061	Nickel North Exploration Corp.	100	44.43	20240717	Active	0	2500	127
1018062	Nickel North Exploration Corp.	100	44.43	20240717	Active	0	2500	127
1018063	Nickel North Exploration Corp.	100	44.43	20240717	Active	13,947	2500	127
1018064	Nickel North Exploration Corp.	100	44.43	20240717	Active	26,488	2500	127
1019188	Nickel North Exploration Corp.	100	44.21	20240430	Active	139,159	2500	127
1019189	Nickel North Exploration Corp.	100	44.21	20240430	Active	474,487	2500	127
1019190	Nickel North Exploration Corp.	100	44.21	20240430	Active	117,891	2500	127
1019191	Nickel North Exploration Corp.	100	44.20	20240430	Active	204,757	2500	127
1019192	Nickel North Exploration Corp.	100	44.20	20240430	Active	446,754	2500	127
1019193	Nickel North Exploration Corp.	100	44.20	20240430	Active	289,896	2500	127
1019194	Nickel North Exploration Corp.	100	44.19	20240430	Active	154,411	2500	127
1019195	Nickel North Exploration Corp.	100	44.19	20240430	Active	154,870	2500	127
1019198	Nickel North Exploration Corp.	100	44.49	20240604	Active	76,333	2500	127
1019199	Nickel North Exploration Corp.	100	44.49	20240604	Active	179,871	2500	127
1019200	Nickel North Exploration Corp.	100	44.48	20240604	Active	186,330	2500	127
1019201	Nickel North Exploration Corp.	100	44.48	20240604	Active	106,635	2500	127
1019202	Nickel North Exploration Corp.	100	44.46	20240604	Active	85,848	2500	127
1019203	Nickel North Exploration Corp.	100	44.46	20240604	Active	109,776	2500	127
1019204	Nickel North Exploration Corp.	100	44.46	20240604	Active	116,061	2500	127
1020521	Nickel North Exploration Corp.	100	44.19	20240729	Active	59,548	2500	127
1020522	Nickel North Exploration Corp.	100	44.49	20240729	Active	2,985	2500	127
1020523	Nickel North Exploration Corp.	100	44.48	20240729	Active	19,206	2500	127
1129215	Nickel North Exploration Corp.	100	19.81	20240625	Active	0	1000	35.25
1129219	Nickel North Exploration Corp.	100	12.60	20240625	Active	0	1000	35.25
2258726	Nickel North Exploration Corp.	100	44.51	20231103	Active	4,923	1800	127
2258727	Nickel North Exploration Corp.	100	44.51	20231103	Active	0	1800	127
2258728	Nickel North Exploration Corp.	100	44.44	20231103	Active	0	1800	127
2258729	Nickel North Exploration Corp.	100	44.43	20231103	Active	21,110	1800	127

Claim No.	Principal Holder	Percentage	Area (ha)	Expiry Date	Status	Excess Work (\$)	Work Required (\$)	Required Fees (\$)
2258730	Nickel North Exploration Corp.	100	44.43	20231103	Active	0	1800	127
2258732	Nickel North Exploration Corp.	100	44.42	20231103	Active	2,482	1800	127
2258733	Nickel North Exploration Corp.	100	44.42	20231103	Active	1,437	1800	127
2258734	Nickel North Exploration Corp.	100	44.42	20231103	Active	0	1800	127
2258735	Nickel North Exploration Corp.	100	44.42	20231103	Active	4,389	1800	127
2258736	Nickel North Exploration Corp.	100	44.42	20231103	Active	0	1800	127
2258737	Nickel North Exploration Corp.	100	44.42	20231103	Active	0	1800	127
2258738	Nickel North Exploration Corp.	100	44.41	20231103	Active	0	1800	127
2258739	Nickel North Exploration Corp.	100	44.41	20231103	Active	0	1800	127
2258740	Nickel North Exploration Corp.	100	44.29	20231103	Active	4,221	1800	127
2258741	Nickel North Exploration Corp.	100	44.29	20231103	Active	12,581	1800	127
2258742	Nickel North Exploration Corp.	100	44.29	20231103	Active	9,098	1800	127
2258743	Nickel North Exploration Corp.	100	44.29	20231103	Active	1,782	1800	127
2258744	Nickel North Exploration Corp.	100	44.28	20231103	Active	7,521	1800	127
2258745	Nickel North Exploration Corp.	100	44.28	20231103	Active	2,130	1800	127
2258746	Nickel North Exploration Corp.	100	44.28	20231103	Active	0	1800	127
2258747	Nickel North Exploration Corp.	100	44.28	20231103	Active	0	1800	127
2258748	Nickel North Exploration Corp.	100	44.27	20231103	Active	0	1800	127
2258749	Nickel North Exploration Corp.	100	44.27	20231103	Active	0	1800	127
2258750	Nickel North Exploration Corp.	100	44.27	20231103	Active	0	1800	127
2258753	Nickel North Exploration Corp.	100	44.26	20231103	Active	1,085	1800	127
2258754	Nickel North Exploration Corp.	100	44.26	20231103	Active	2,992	1800	127
2258755	Nickel North Exploration Corp.	100	44.26	20231103	Active	0	1800	127
2258758	Nickel North Exploration Corp.	100	44.17	20231103	Active	1,807	1800	127
2258759	Nickel North Exploration Corp.	100	44.16	20231103	Active	0	1800	127
2258760	Nickel North Exploration Corp.	100	44.16	20231103	Active	0	1800	127
2258761	Nickel North Exploration Corp.	100	44.16	20231103	Active	1,779	1800	127
2258762	Nickel North Exploration Corp.	100	44.16	20231103	Active	386	1800	127

Claim No.	Principal Holder	Percentage	Area (ha)	Expiry Date	Status	Excess Work (\$)	Work Required (\$)	Required Fees (\$)
2258763	Nickel North Exploration Corp.	100	44.14	20231103	Active	0	1800	127
2258764	Nickel North Exploration Corp.	100	44.14	20231103	Active	0	1800	127
2258765	Nickel North Exploration Corp.	100	44.14	20231103	Active	0	1800	127
2258766	Nickel North Exploration Corp.	100	44.14	20231103	Active	0	1800	127
2258767	Nickel North Exploration Corp.	100	44.13	20231103	Active	0	1800	127
2258768	Nickel North Exploration Corp.	100	44.13	20231103	Active	0	1800	127
2258769	Nickel North Exploration Corp.	100	44.13	20231103	Active	0	1800	127
2258770	Nickel North Exploration Corp.	100	44.12	20231103	Active	0	1800	127
2258771	Nickel North Exploration Corp.	100	44.12	20231103	Active	0	1800	127
2258772	Nickel North Exploration Corp.	100	44.12	20231103	Active	0	1800	127
2258773	Nickel North Exploration Corp.	100	44.11	20231103	Active	0	1800	127
2258774	Nickel North Exploration Corp.	100	44.11	20231103	Active	0	1800	127
2258775	Nickel North Exploration Corp.	100	44.11	20231103	Active	0	1800	127
2258776	Nickel North Exploration Corp.	100	44.10	20231103	Active	0	1800	127
2258777	Nickel North Exploration Corp.	100	44.10	20231103	Active	0	1800	127
2258778	Nickel North Exploration Corp.	100	44.10	20231103	Active	0	1800	127
2258779	Nickel North Exploration Corp.	100	44.09	20231103	Active	0	1800	127
2258780	Nickel North Exploration Corp.	100	44.09	20231103	Active	0	1800	127
2258781	Nickel North Exploration Corp.	100	44.09	20231103	Active	0	1800	127
2258782	Nickel North Exploration Corp.	100	44.09	20231103	Active	0	1800	127
2258783	Nickel North Exploration Corp.	100	44.09	20231103	Active	0	1800	127
2258785	Nickel North Exploration Corp.	100	44.08	20231103	Active	0	1800	127
2258786	Nickel North Exploration Corp.	100	44.08	20231103	Active	0	1800	127
2258787	Nickel North Exploration Corp.	100	44.08	20231103	Active	0	1800	127
2258788	Nickel North Exploration Corp.	100	44.08	20231103	Active	0	1800	127
2258789	Nickel North Exploration Corp.	100	44.08	20231103	Active	85,720	1800	127
2258790	Nickel North Exploration Corp.	100	44.08	20231103	Active	0	1800	127
2258791	Nickel North Exploration Corp.	100	44.08	20231103	Active	0	1800	127

Claim No.	Principal Holder	Percentage	Area (ha)	Expiry Date	Status	Excess Work (\$)	Work Required (\$)	Required Fees (\$)
2258792	Nickel North Exploration Corp.	100	44.08	20231103	Active	0	1800	127
2258793	Nickel North Exploration Corp.	100	44.08	20231103	Active	0	1800	127
2258795	Nickel North Exploration Corp.	100	44.07	20231103	Active	0	1800	127
2258796	Nickel North Exploration Corp.	100	44.07	20231103	Active	0	1800	127
2258797	Nickel North Exploration Corp.	100	44.07	20231103	Active	45,865	1800	127
2258798	Nickel North Exploration Corp.	100	44.07	20231103	Active	261,983	1800	127
2258799	Nickel North Exploration Corp.	100	44.07	20231103	Active	467,381	1800	127
2258800	Nickel North Exploration Corp.	100	44.07	20231103	Active	128,483	1800	127
2258802	Nickel North Exploration Corp.	100	44.06	20231103	Active	0	1800	127
2258803	Nickel North Exploration Corp.	100	44.06	20231103	Active	19,341	1800	127
2258804	Nickel North Exploration Corp.	100	44.06	20231103	Active	510,548	1800	127
2258805	Nickel North Exploration Corp.	100	44.06	20231103	Active	111,723	1800	127
2258806	Nickel North Exploration Corp.	100	44.06	20231103	Active	0	1800	127
2258807	Nickel North Exploration Corp.	100	44.05	20231103	Active	0	1800	127
2258808	Nickel North Exploration Corp.	100	44.05	20231103	Active	111,803	1800	127
2258809	Nickel North Exploration Corp.	100	44.05	20231103	Active	0	1800	127
2265619	Nickel North Exploration Corp.	100	14.62	20231220	Active	0	750	35.25
2265620	Nickel North Exploration Corp.	100	43.45	20231220	Active	0	1800	127
2265621	Nickel North Exploration Corp.	100	15.17	20231220	Active	0	750	35.25
2265622	Nickel North Exploration Corp.	100	43.56	20231220	Active	0	1800	127
2337938	Nickel North Exploration Corp.	100	44.55	20230325	Active	3,666	1600	127
2337939	Nickel North Exploration Corp.	100	44.57	20230325	Active	0	1600	127
2337940	Nickel North Exploration Corp.	100	44.57	20230325	Active	0	1600	127
2337941	Nickel North Exploration Corp.	100	44.57	20230325	Active	1,228	1600	127
2337942	Nickel North Exploration Corp.	100	44.57	20230325	Active	5,059	1600	127
2337943	Nickel North Exploration Corp.	100	44.56	20230325	Active	67,845	1600	127
2337944	Nickel North Exploration Corp.	100	44.56	20230325	Active	0	1600	127
2337945	Nickel North Exploration Corp.	100	44.56	20230325	Active	0	1600	127

Claim No.	Principal Holder	Percentage	Area (ha)	Expiry Date	Status	Excess Work (\$)	Work Required (\$)	Required Fees (\$)
2337946	Nickel North Exploration Corp.	100	44.56	20230325	Active	8,194	1600	127
2337947	Nickel North Exploration Corp.	100	44.56	20230325	Active	2,969	1600	127
2337948	Nickel North Exploration Corp.	100	44.55	20230325	Active	96,286	1600	127
2337949	Nickel North Exploration Corp.	100	44.55	20230325	Active	182	1600	127
2337950	Nickel North Exploration Corp.	100	44.55	20230325	Active	0	1600	127
2337951	Nickel North Exploration Corp.	100	44.55	20230325	Active	6,452	1600	127
2337952	Nickel North Exploration Corp.	100	44.54	20230325	Active	29,914	1600	127
2337953	Nickel North Exploration Corp.	100	44.54	20230325	Active	14,769	1600	127
2337954	Nickel North Exploration Corp.	100	44.54	20230325	Active	0	1600	127
2337955	Nickel North Exploration Corp.	100	44.54	20230325	Active	3,317	1600	127
2337956	Nickel North Exploration Corp.	100	44.54	20230325	Active	878	1600	127
2337957	Nickel North Exploration Corp.	100	44.54	20230325	Active	13,071	1600	127
2337961	Nickel North Exploration Corp.	100	44.53	20230325	Active	878	1600	127
2337962	Nickel North Exploration Corp.	100	44.53	20230325	Active	0	1600	127
2337963	Nickel North Exploration Corp.	100	44.53	20230325	Active	2,620	1600	127
2337964	Nickel North Exploration Corp.	100	44.53	20230325	Active	10,284	1600	127
2337965	Nickel North Exploration Corp.	100	44.53	20230325	Active	8,890	1600	127
2337966	Nickel North Exploration Corp.	100	44.53	20230325	Active	9,239	1600	127
2337969	Nickel North Exploration Corp.	100	44.52	20230325	Active	127,325	1600	127
2337970	Nickel North Exploration Corp.	100	44.52	20230325	Active	0	1600	127
2337971	Nickel North Exploration Corp.	100	44.52	20230325	Active	878	1600	127
2337972	Nickel North Exploration Corp.	100	44.52	20230325	Active	6,800	1600	127
2337973	Nickel North Exploration Corp.	100	44.52	20230325	Active	2,968	1600	127
2337974	Nickel North Exploration Corp.	100	44.52	20230325	Active	7,497	1600	127
2337975	Nickel North Exploration Corp.	100	44.52	20230325	Active	3,316	1600	127
2337976	Nickel North Exploration Corp.	100	44.51	20230325	Active	1,574	1600	127
2337977	Nickel North Exploration Corp.	100	44.51	20230325	Active	4,710	1600	127
2337978	Nickel North Exploration Corp.	100	44.51	20230325	Active	10,283	1600	127

Claim No.	Principal Holder	Percentage	Area (ha)	Expiry Date	Status	Excess Work (\$)	Work Required (\$)	Required Fees (\$)
2337979	Nickel North Exploration Corp.	100	44.51	20230325	Active	878	1600	127
2337981	Nickel North Exploration Corp.	100	44.50	20230325	Active	2,619	1600	127
2337982	Nickel North Exploration Corp.	100	44.50	20230325	Active	1,574	1600	127
2337985	Nickel North Exploration Corp.	100	44.49	20230325	Active	0	1600	127
2337986	Nickel North Exploration Corp.	100	44.49	20230325	Active	180	1600	127
2337987	Nickel North Exploration Corp.	100	44.49	20230325	Active	0	1600	127
2337989	Nickel North Exploration Corp.	100	44.48	20230325	Active	2,270	1600	127
2337993	Nickel North Exploration Corp.	100	44.40	20230325	Active	0	1600	127
2337994	Nickel North Exploration Corp.	100	44.39	20230325	Active	0	1600	127
2337995	Nickel North Exploration Corp.	100	44.39	20230325	Active	0	1600	127
2337997	Nickel North Exploration Corp.	100	44.29	20230325	Active	1,569	1600	127
2338003	Nickel North Exploration Corp.	100	44.26	20230325	Active	0	1600	127
2338004	Nickel North Exploration Corp.	100	44.26	20230325	Active	2,373	1600	127
2338005	Nickel North Exploration Corp.	100	44.25	20230325	Active	0	1600	127
2338006	Nickel North Exploration Corp.	100	44.25	20230325	Active	0	1600	127
2338007	Nickel North Exploration Corp.	100	44.16	20230325	Active	0	1600	127
2338008	Nickel North Exploration Corp.	100	44.16	20230325	Active	0	1600	127
2338009	Nickel North Exploration Corp.	100	44.16	20230325	Active	3,644	1600	127
2338012	Nickel North Exploration Corp.	100	44.14	20230325	Active	189	1600	127
2338014	Nickel North Exploration Corp.	100	44.55	20230325	Active	2,272	1600	127
2338015	Nickel North Exploration Corp.	100	44.54	20230325	Active	0	1600	127
2338016	Nickel North Exploration Corp.	100	44.53	20230325	Active	0	1600	127
2341758	Nickel North Exploration Corp.	100	37.43	20230423	Active	136,776	1600	127
2341759	Nickel North Exploration Corp.	100	44.13	20230423	Active	21,263	1600	127
2390451	Nickel North Exploration Corp.	100	44.10	20220912	Active	1,012	1200	127
2390453	Nickel North Exploration Corp.	100	44.10	20220912	Active	0	1200	127
2390462	Nickel North Exploration Corp.	100	44.09	20220912	Active	832	1200	127
2390463	Nickel North Exploration Corp.	100	44.09	20220912	Active	0	1200	127

Claim No.	Principal Holder	Percentage	Area (ha)	Expiry Date	Status	Excess Work (\$)	Work Required (\$)	Required Fees (\$)
2390467	Nickel North Exploration Corp.	100	44.08	20220912	Active	0	1200	127
2390468	Nickel North Exploration Corp.	100	44.08	20220912	Active	0	1200	127
2390472	Nickel North Exploration Corp.	100	44.07	20220912	Active	0	1200	127
2390477	Nickel North Exploration Corp.	100	44.06	20220912	Active	0	1200	127
2390478	Nickel North Exploration Corp.	100	44.06	20220912	Active	0	1200	127
2390479	Nickel North Exploration Corp.	100	44.06	20220912	Active	0	1200	127
2390509	Nickel North Exploration Corp.	100	44.43	20220912	Active	0	1200	127
2390512	Nickel North Exploration Corp.	100	44.42	20220912	Active	484	1200	127
2390513	Nickel North Exploration Corp.	100	44.42	20220912	Active	0	1200	127
2390514	Nickel North Exploration Corp.	100	44.42	20220912	Active	0	1200	127
2390519	Nickel North Exploration Corp.	100	44.38	20220912	Active	0	1200	127
2390521	Nickel North Exploration Corp.	100	44.37	20220912	Active	0	1200	127
2390522	Nickel North Exploration Corp.	100	44.37	20220912	Active	0	1200	127
2390543	Nickel North Exploration Corp.	100	44.12	20220912	Active	0	1200	127
2390544	Nickel North Exploration Corp.	100	44.12	20220912	Active	0	1200	127
2390545	Nickel North Exploration Corp.	100	44.12	20220912	Active	0	1200	127
2390554	Nickel North Exploration Corp.	100	44.11	20220912	Active	0	1200	127
2390566	Nickel North Exploration Corp.	100	44.34	20220912	Active	0	1200	127
2390569	Nickel North Exploration Corp.	100	44.33	20220912	Active	0	1200	127
2390601	Nickel North Exploration Corp.	100	44.28	20220912	Active	0	1200	127
2390608	Nickel North Exploration Corp.	100	44.27	20220912	Active	0	1200	127
2390609	Nickel North Exploration Corp.	100	44.27	20220912	Active	0	1200	127
2390610	Nickel North Exploration Corp.	100	44.27	20220912	Active	0	1200	127
2390668	Nickel North Exploration Corp.	100	43.33	20220912	Active	0	1200	127
2390669	Nickel North Exploration Corp.	100	44.17	20220912	Active	0	1200	127
2390670	Nickel North Exploration Corp.	100	44.17	20220912	Active	0	1200	127
2390671	Nickel North Exploration Corp.	100	43.96	20220912	Active	0	1200	127
2390672	Nickel North Exploration Corp.	100	44.07	20220912	Active	0	1200	127

Claim No.	Principal Holder	Percentage	Area (ha)	Expiry Date	Status	Excess Work (\$)	Work Required (\$)	Required Fees (\$)
2390673	Nickel North Exploration Corp.	100	44.07	20220912	Active	0	1200	127
2390674	Nickel North Exploration Corp.	100	44.07	20220912	Active	0	1200	127
2390675	Nickel North Exploration Corp.	100	44.07	20220912	Active	0	1200	127
2390676	Nickel North Exploration Corp.	100	44.07	20220912	Active	63	1200	127
2390677	Nickel North Exploration Corp.	100	44.07	20220912	Active	0	1200	127
2390678	Nickel North Exploration Corp.	100	44.06	20220912	Active	0	1200	127
2390679	Nickel North Exploration Corp.	100	44.06	20220912	Active	0	1200	127
2390680	Nickel North Exploration Corp.	100	44.06	20220912	Active	0	1200	127
2390681	Nickel North Exploration Corp.	100	44.06	20220912	Active	0	1200	127
2390682	Nickel North Exploration Corp.	100	44.06	20220912	Active	0	1200	127
2390683	Nickel North Exploration Corp.	100	44.06	20220912	Active	0	1200	127
2390684	Nickel North Exploration Corp.	100	44.06	20220912	Active	0	1200	127
2390685	Nickel North Exploration Corp.	100	44.04	20220912	Active	0	1200	127
2390686	Nickel North Exploration Corp.	100	44.04	20220912	Active	0	1200	127
2390687	Nickel North Exploration Corp.	100	44.04	20220912	Active	0	1200	127
2390944	Nickel North Exploration Corp.	100	41.29	20220919	Active	0	1200	127
2390945	Nickel North Exploration Corp.	100	2.75	20220919	Active	0	480	35.25
2391609	Nickel North Exploration Corp.	100	24.81	20221008	Active	0	480	35.25
2391610	Nickel North Exploration Corp.	100	44.35	20221008	Active	0	1200	127
2391611	Nickel North Exploration Corp.	100	30.38	20221008	Active	0	1200	127
2538779	Nickel North Exploration Corp.	100	44.49	20230505	Active	0	120	127
2538780	Nickel North Exploration Corp.	100	44.48	20230505	Active	0	120	127
2538781	Nickel North Exploration Corp.	100	44.48	20230505	Active	0	120	127
2538782	Nickel North Exploration Corp.	100	44.46	20230505	Active	0	120	127
2538783	Nickel North Exploration Corp.	100	44.46	20230505	Active	0	120	127
2538784	Nickel North Exploration Corp.	100	44.41	20230505	Active	0	120	127
2538785	Nickel North Exploration Corp.	100	44.40	20230505	Active	0	120	127
2538786	Nickel North Exploration Corp.	100	44.40	20230505	Active	0	120	127

Claim No.	Principal Holder	Percentage	Area (ha)	Expiry Date	Status	Excess Work (\$)	Work Required (\$)	Required Fees (\$)
2538787	Nickel North Exploration Corp.	100	44.39	20230505	Active	0	120	127
2538788	Nickel North Exploration Corp.	100	44.39	20230505	Active	0	120	127
2538789	Nickel North Exploration Corp.	100	44.36	20230505	Active	0	120	127
2538790	Nickel North Exploration Corp.	100	44.36	20230505	Active	0	120	127
2538791	Nickel North Exploration Corp.	100	44.35	20230505	Active	0	120	127
2538792	Nickel North Exploration Corp.	100	44.25	20230505	Active	0	120	127
2538793	Nickel North Exploration Corp.	100	44.21	20230505	Active	0	120	127
2538794	Nickel North Exploration Corp.	100	44.20	20230505	Active	0	120	127
2538795	Nickel North Exploration Corp.	100	44.19	20230505	Active	0	120	127
2538796	Nickel North Exploration Corp.	100	44.18	20230505	Active	0	120	127

*Note:* <sup>1</sup> Land tenure information as of July 5, 2022