# mercotor GEOLOGICAL SERVICES

# NI 43-101 TECHNICAL REPORT ON THE MINERAL RESOURCE ESTIMATE

# FOR THE MINAGO NICKEL PROJECT

# MANITOBA, CANADA

**Prepared For:** 

# Flying Nickel Mining Corp.

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#### 1.0 SUMMARY

#### 1.1 Overview

Flying Nickel Mining Corp. ("Flying Nickel") retained Mercator Geological Services Limited ("Mercator") with respect to completing a Mineral Resource Estimate ("MRE") for the Minago Nickel Project ("Minago" or the "Project"), located within the southern part of the Thompson Nickel Belt in Manitoba, Canada, and reporting the results in a National Instrument 43-101 ("NI 43-101") Technical Report (the "Technical Report"). Flying Nickel is a Canadian mineral exploration company headquartered in Vancouver, British Columbia and listed on the TSX Venture Exchange under the stock symbol "FLYN". On January 14, 2022, Silver Elephant Mining Corp. ("Silver Elephant") completed a spin-out of the Project into Flying Nickel by way of a plan of arrangement pursuant to an arrangement agreement dated November 8, 2021 among Silver Elephant, Flying Nickel and certain other entities.

This Technical Report also summarizes historical drilling and metallurgical testing work completed on the Project by previous operators that forms the basis of the current MRE, and makes recommendations for further exploration and development work on the Project.

#### **1.2** Property Description and Ownership

The Project is located in northern Manitoba, Canada within the southern part of the Thompson Nickel Belt, approximately 107 km north of the Town of Grand Rapids (pop. 268) and 225 km south of the City of Thompson (pop. 13,678). Provincial Trunk Highway 6 crosses the eastern portion of the Project. The closest international airport is the Winnipeg James Armstrong Richardson International Airport (YWG) located approximately 536 km south of the Project. Regional airline service (Calm Air and Perimeter Aviation) is also available from Thompson Municipal Airport (YTH) with direct flights from Winnipeg. The Project can be easily accessed via Highway 6, a paved, two-lane highway that originates in Winnipeg and serves as a major transportation route to northern Manitoba including Thompson. The closest town to offer full services is Grand Rapids, which includes full-service accommodations, grocery stores and restaurants, tool rental, hardware stores, and gas stations.

The Project is comprised of 94 mining claims totaling 19,236 ha (192.36 km<sup>2</sup>) 100% owned by Flying Nickel, and two mining leases totaling 425 ha (4.25 km<sup>2</sup>) 100% owned by Silver Elephant and currently in the process of being transferred to Flying Nickel. These mining claims and leases occur over the Minago nickel deposit located in the Thompson Nickel Belt on Highway 6, approximately 225 km south of Thompson, Manitoba, Canada

Mining claim numbers MB8497, P235F, P237F, P238F, and P239F are subject to a net smelter return ("NSR") royalty interest retained by Xstrata Canada Corporation ("Xstrata") as outlined in the option agreement between Xstrata and Victory Nickel dated January 10, 2008 and assumed by Flying Nickel. The Xstrata option claims are located northeast of ML-002 and of the current mineral resource boundary.

i. The royalty interest in respect of nickel, shall for any calendar quarter be:

- (1) a two percent (2%) NSR royalty when the LME 3-month nickel price is equal to or greater than US\$13,227.74 per tonne in that quarter; and
- (2) a one percent (1%) NSR royalty when the LME 3-month nickel price is less than US\$13,227.74 per tonne in that quarter
- ii. The royalty interest in respect of other metals, minerals, and concentrates, shall be a 2% NSR royalty.

In the event that the royalty interest consists of a 2% NSR royalty, Flying Nickel may purchase a portion of the royalty interest which represents in the aggregate no more than 1% of the royalty interest for \$1,000,000. Xstrata's royalty interest shall never be less than 1% NSR royalty.

In addition, Flying Nickel, as payor, has granted and agreed to pay, in each fiscal quarter where the average price per pound of nickel as reported on the Nominated Metals Exchange or Substitute Metals Exchange in the event such pricing is not reported on the Nominated Metals Exchange exceeds \$15.00, to Battery Metals Royalties Corp., a royalty equal to two per cent (2%) of returns in respect of all mineral products produced from the Minago Property.

#### 1.3 Geology and Mineralization

The regional geology comprises the eastern edge of the Phanerozoic sediments of the Western Canada Sedimentary Basin that unconformably overlie Precambrian crystalline basement rocks including the Thompson Nickel Belt. The Western Canada Sedimentary Basin tapers from a maximum thickness of approximately 6,000 m in Alberta to zero to the north and east where it is bounded by the Canadian Shield. The Property is located near the northeast corner of the Western Canada Sedimentary Basin where it comprises approximately 53 m of Ordovician dolomite underlain by approximately 7.5 m of Ordovician sandstone.

The Precambrian basement rocks of the Thompson Nickel Belt form a northeast southwest trending 10 to 35 km wide belt of variably reworked Archean age basement gneisses and Early Proterozoic age cover rocks along the northwest margin of the Superior Province. Lithotectonically the Thompson Nickel Belt is part of the Churchill Superior boundary zone.

The Early Proterozoic rocks that occur along the western margin of the Thompson Nickel Belt are a geologically distinguishable stratigraphic sequence of rocks termed the Opswagan Group.

The Ospwagan Group hosts the nickel deposits of the Thompson Nickel Belt. Within the Ospwagan Group almost all of the nickel deposits of the Thompson Nickel Belt are found within lower Pipe Formation rocks. The rocks of the Thompson Nickel Belt have been complexly folded with three major periods of folding commonly recognized.

There is no outcrop on the Minago Property. Bedrock geology is inferred from geophysical data and diamond drill hole core. The surface cover typically comprises 1.0 to several meters of muskeg and peat that is underlain by approximately 10 m of impermeable compacted glacial lacustrine clays.

The dominant geological feature with mineralization potential underlying the Minago property is a series of boudinaged nickeliferous ultramafic bodies that are folded in a large Z-shaped pattern. The ultramafic bodies contain intraparental magmatic nickel sulphide mineralization and intrude mafic metavolcanic and metasedimentary rocks interpreted to be lower Pipe Formation stratigraphy. Within the ultramafic rocks, the nickel sulphides are concentrated in several tabular lenses that parallel the trend of the ultramafic bodies.

Lower grade nickel occurs between and adjacent to the higher-grade lenses. Typically, nickel sulphides are fine grained, varying in size from <0.5 to 4 mm (generally 1 to 2 mm) and range in volume from 2 to 15% (generally 2 to 7%). The nickel sulphides predominantly occur as disseminated crystals, small aggregates (<5mm) and occasionally are net textured. The dominant sulphide species are nickel bearing pentlandite with lessor violarite and millerite. Minor amounts of pyrite, pyrrhotite and chalcopyrite are present. Graphitic, coarse grained and sometimes nodular sedimentary and extraparental nickeliferous sulphide mineralization occurs sporadically along the southeast margin of the Minago deposit.

#### 1.4 Exploration and Drilling

Flying Nickel has not conducted any exploration or drilling on the Project as of the effective date of this Technical Report. The descriptions below are based on historical exploration and drilling work completed by previous operators of the Project.

The Project began as Geophysical Reservation 34 (GR 34) covering an area of 19.2 km by 38.4 km that was granted to Amax Potash Ltd. ("Amax") on November 1, 1966 for a period of two years and extended in 1968 to April 30, 1969 (reference to Amax in this Technical Report includes the subsidiaries and successor companies of Amax Potash Limited, namely Amax of Canada Limited, 121991 Canada Limited and Canamax Resources Inc.).

In March 1969, Amax converted the most prospective area of GR 34 to 844 contiguous claims and in April 1969, an additional 18 claims were staked. In 1973, the claims covering the Minago Nickel Deposit (Deposit) and other ground deemed to have the most potential for nickel mineralization were taken to lease status as Explored Area Lease 3 (North Block) and Explored Area Lease 4 (South Block). In an agreement with Amax dated December 12, 1973, Granges Exploration Aktiebolag ("Granges") was granted an option on the Explored Area Leases. Reference to Granges in this report includes the subsidiaries and successor companies of Granges Exploration Aktiebolag, namely Granges Exploration Ltd. and Granges International Ltd. In 1977, Granges became a passive partner with a 25% interest and a 0.5% NSR royalty in the leases. On May 18, 1989, Black Hawk Mining Inc. ("Black Hawk") purchased the Amax interest in the explored area leases. On August 2, 1989, Black Hawk purchased the Granges interest and NSR royalty in the explored area leases. On April 1, 1992, Explored Area Lease 3 and Explored Area Lease 4 were converted to Mineral Lease 002 and Mineral Lease 003 respectively. On March 18, 1994, a portion of Mineral Lease 002 was converted to mineral claims KON 1, KON 2 and KON 3, and a portion of Mineral Lease 003 was converted to mineral claim KON 4. On November 3, 1999, Nuinsco Resources Ltd. ("Nuinsco"), and its successor Victory Nickel, purchased the Black Hawk interest in the Property subject to a graduated NSR royalty based on nickel prices.

Amax conducted a regional scale exploration program on the southern extension of the Thompson Nickel Belt and concluded that the corporate threshold for deposit size justifying production would not be achieved on the Project. A brief summary of work conducted on the Property by Amax is as follows:

- Audio Frequency Magnetics (AFMAG) airborne survey with nominal 1,609 m line spacing;
- Helicopter airborne magnetic survey with nominal 402 m line spacing;
- Turair electromagnetic (EM) survey;
- Linecutting at 305 m line spacing with ground geophysical surveys including magnetic (Askania magnetometer), electromagnetic (Radem Vertical Loop Electromagnetic (VLEM)), dipole-dipole induced polarization (McPhar) and gravity surveys;
- Eighteen (18) diamond drill hole plus one wedged hole were completed on the Project;
- Fourteen (14) diamond drill holes were completed on ML-002; and
- Twelve (12) diamond drill holes were completed on ML-003.

Granges focused their efforts on the Deposit and completed geological modeling, and mining, metallurgical and milling studies. Eight diamond drill holes were completed by Granges with limited inhole surveys completed. Granges concluded that the Deposit was sufficiently confirmed and that further delineation and exploration should be conducted from underground workings.

Black Hawk conducted a deep penetrating ground electromagnetic survey, geological modeling, and mining, metallurgical and milling studies. A helicopter-borne electromagnetic and magnetic survey covering the Project was obtained from Falconbridge Limited and interpreted by Black Hawk. Forty-five holes were drilled in the vicinity of the Project.

Nuinsco Resources Ltd. ("Nuinsco") and its successor company, Victory Nickel Corp. ("Victory Nickel"), completed exploration and numerous diamond drilling programs on the Project from 2005 to 2012. Between January and April 2005, Nuinsco drilled 6 diamond drill holes or 2,948.1 metres (N-05-01 to N-05-06) on Mineral Lease ML-002. Between March 4 to April 21, 2006, Nuinsco completed two diamond drill holes (NM-06-01 and NM-06-02) totaling 1,533.6 metres. The drilling was undertaken in order to: (1) produce a geological model for the Project, (2) enable geotechnical observations and measurements to revise preliminary open pit shell designs, (3) and provide additional material for metallurgical testing.

Between January and May 2007, Victory Nickel completed 44 diamond drill holes on ML-002 in the Minago River area for a total of 13,284.2 m. The drill holes were completed to update the geological model for the Minago/Nose Deposit.

Between January and May 2008, Victory Nickel completed 18 diamond drill holes for a total of 9,082 m, on ML-002 and the adjacent claims in the Minago River area. Ten of the holes (V-08-01 to V-08-10) were drilled to increase confidence in the previous geological model for the Minago/Nose deposit, while the remaining eight (VC-08-01 to VC-08-08) were condemnation holes put in to confirm the absence of potentially minable material underground where construction of surface facilities was contemplated. In February 2009, Victory Nickel completed a now historical resource estimate for the Project.

Between January and May 2010, Victory Nickel completed 23 diamond drill holes in the Nose deposit and 3 drill holes in the North Limb area of the Project for a total of 9,647.7 m. The purpose of the 2010 drilling program was to:

- Upgrade confidence in the 2009 historical estimate completed by Victory Nickel within the historical pit limits so that they could be incorporated into a proposed mine plan;
- Attempt to incorporate areas at the top of the Project near the sandstone contact that were excluded from the historical estimate due to a perceived lack of drill coverage;
- To obtain additional geological information to improve the predictability of the geological model; and
- To further evaluate the potential of the North Limb mineralization.

Between February 5, 2011 and April 28, 2011, Victory Nickel completed 20 diamond drill holes (V-11-01 to V-11-14 and V-11-20 to V-11-24) on the Project for a total of 8,673.4 m. The purpose of the 2011 drilling program was to:

- Complete deep holes targeting the down-plunge extension of the nickel mineralization within the Minago deposit;
- Develop a geological model in the North Limb area of the Deposit to demonstrate continuity and significant thickness of the nickel-mineralized rock unit; and
- Complete several drill holes to examine geology and assess local conditions with regard to potential mining infrastructure.

Between February 17, 2012 and April 27, 2012, Victory Nickel completed a 10-hole diamond drilling program (V-12-01 to V-12-10) at the Project totaling 4,137.1 metres. This is the most recent drilling program completed on the Project and its purpose was to complete:

- Six drill holes (V-12-01, V-12-02, V-12-04, V-12-06, V-12-08 and V-12-10) to test geophysical anomalies;
- Two drill holes (V-12-03 and V-12-05) on ML-2 to test for extensions of the Project; and
- Two drill holes (V-12-07 and V-12-09) on ML-3 to further explore and delineate a known occurrence of nickeliferous serpentinite not in the Project area.

#### 1.5 Mineral Processing and Metallurgical Testing

No new testing or plant design work was undertaken by Flying Nickel as of the effective date of this Technical Report. The historical metallurgical testing and design summaries disclosed in this Technical Report were completed by Wardrop Engineering Inc. ("Wardrop") for Victory Nickel, a previous operator of the Project.

The historical metallurgical testing results summarized herein meet the Best Practices Guidelines of the Canadian Institute of Mining, Metallurgy, and Petroleum (CIM) and the historical test data has been reviewed and verified by Mr. John Eggert P.Eng., a Qualified Person and report author.

For the purposes of this Technical Report and based on a detailed review of the historical testing results, only one change to the final plant design was recommended by the report author. The historical metallurgical study proposed a SAG mill circuit with a pebble crusher, however, the report author recommends that a SAG circuit be designed without the need for a pebble crusher. This does not impact any other equipment in the facility, nor does it impact on the metallurgical performance of the facility.

#### 1.6 Mineral Resource Estimate

The current mineral resource estimate for the Minago Nickel Deposit ("Deposit") was prepared by Mr. Matthew Harrington, P.Geo., Mr. David Murray, P.Geo. and Mr. Michael Cullen, P. Geo., of Mercator. Mr. Harrington is responsible for the Project mineral resource estimate, which has an effective date of July 2, 2021. Mr. Lawrence Elgert, P. Eng. of AGP Mining Consultants ("AGP") provided pit optimization and associated services in support of the mineral resource estimate program.

The mineral resource estimate is comprised of two zones of nickel mineralization, the Nose Zone and North Limb Zone. The mineral resource estimate is based on validated results of 202 diamond drill holes (86,118 m), including 29 drill holes (11,581 m) completed between 1966 and 1972 by Amax, 11 drill holes (6,440 m) completed between 1973 and 1976 by Granges, 52 drill holes (23,292 m) completed between 1989 and 1991 by Black Hawk, and 110 drill holes (44,304 m) completed between 2005 and 2012 by Nuinsco-Victory Nickel. Solid modelling was performed using GEOVIA Surpac<sup>TM</sup> 2021 (Surpac) and Seequent Leapfrog<sup>TM</sup> Geo 6 (Leapfrog) modeling software. Block model volume, grade, and density modeling was performed using Surpac with nickel percent values for the block model estimated using ordinary kriging (OK) interpolation methodology based on 2 m down hole assay composites. Block density values were applied on a lithological model basis and reflect averaging of bulk density determinations for each lithology. The resource block model was set up with a block size of 6 m (x) by 6 m (y) by 6 m (z).

A tabulation of the mineral resource estimate for the Project is presented in Table 1.1, with contributing mineral resources presented in Table 1.2 and Table 1.3 for the Nose Zone and North Limb Zone respectively. Open Pit mineral resources were defined within optimized pit shells developed using Hexagon Mine Plan 3D version 15.4, MineSight<sup>®</sup> Economic Planner version 4.00-11. Pit optimization parameters include mining at US\$1.77 per tonne, processing at US\$7.62 per tonne processed and General and Administration (G&A) at US\$3.33 per tonne processed. A metal price of US\$7.80/lb Ni and an average sulphide nickel (NiS) recovery above the cut-off grade of 78% (ranging from 40% to 90%), based on previous metallurgical test programs, was used.

Open Pit mineral resources are reported at a cut-off grade of 0.18 % NiS within the optimized pit shell. The 0.18 % NiS cut-off grade approximates a 0.25 % Ni grade when applying the average ratio of NiS to total Ni for the mineral resource. The cut-off grade reflects total operating costs used in pit optimization to define "reasonable prospects for eventual economic extraction" by open pit mining methods. Underground mineral resources are reported at a cut-off grade of 0.36 % NiS. The 0.36 % NiS cut-off grade approximates a 0.50 % Ni grade when applying the average ratio of NiS to total Ni for the mineral resource. The cut-off grade reflects total operating costs of US\$41.72/t processed to define "reasonable prospects for eventual economic extraction" by underground mining methods.

Туре	Ni % Cut-off	Category	Rounded Tonnes	Ni %	Ni Lbs (million)
Open Pit		Measured	11,490,000	0.73	184.92
		Indicated	12,450,000	0.69	189.39
Open Pit	0.25	Measured and			
		Indicated	23,940,000	0.71	374.30
		Inferred	2,070,000	0.57	26.01
Underground	0.5	Measured	610,000	0.81	10.89
		Indicated	19,680,000	0.77	334.08
		Measured and			
		Indicated	20,290,000	0.77	344.97
		Inferred	17,480,000	0.76	292.88
		Measured	12,100,000	0.73	194.73
Combined		Indicated	32,130,000	0.74	524.17
	0.25/0.50	Measured and			
		Indicated	44,230,000	0.74	721.58
		Inferred	19,550,000	0.74	318.94

Table 1.1: Minago	Nickel Project	Mineral Resource	Estimate – I	Effective Date:	July 2. 2021'

#### Mineral Resource Estimate Notes:

- 1. Mineral resources were prepared in accordance with the CIM Definition Standards for Mineral Resources and Mineral Reserves (MRMR) (2014) and CIM MRMR Best Practice Guidelines (2019).
- 2. Open Pit mineral resources are defined within an optimized pit shell with average pit slope angles of 40° and overall 13.3:1 strip ratio (waste : mineralized material). The 13.3:1 strip ratio is comprised of a 6.2:1 pre-strip component and a 7.1:1 deposit component.
- 3. Pit optimization parameters include: metal pricing at US\$7.80/lb Ni, mining at US\$1.77/t, processing at US\$7.62/t processed, G&A at US\$3.33/t processed, and an average sulphide Ni (NiS) recovery above the cut-off grade of 78% (ranging from 40% to 90%), based on previous metallurgical test programs. An average Ni recovery of 56% can be calculated using the average NiS recovery and the average ratio of NiS to Ni (72%) reported above the cut-off grade. Concentrate by-product credits were applied at metal prices of US\$3.25/lb (Cu), US\$2,000/oz Pd and US\$ 1,000/oz Pt. A potential frac-sand overburden unit was assigned a value of US \$20/t, a recovery factor of 68.8 %, mining cost of US \$1.77/t, and processing cost of US \$6.55/t processed.
- 4. Open Pit mineral resources are reported at a cut-off grade of 0.18 % NiS within the optimized pit shell. The 0.18 % NiS cut-off grade approximates a 0.25 % Ni grade when applying the average ratio of NiS to total Ni for the mineral resource. The cut-off grade reflects total operating costs used in pit optimization to define reasonable prospects for eventual economic extraction by open pit mining methods.
- 5. Underground mineral resources are reported at a cut-off grade of 0.36 % NiS. The 0.36 % NiS cut-off grade approximates a 0.50 % Ni grade when applying the average ratio of NiS to total Ni for the mineral resource. The cut-off grade reflects total operating costs of US\$41.72/t processed to define reasonable prospects for eventual economic extraction by underground mining methods.

- 6. Ni % deposit grade was estimated using Ordinary Kriging methods applied to 2 m downhole assay composites. No grade capping was applied. NiS % block values were calculated from Ni % block values using a regression curve based on Ni and NiS drilling database assay values. Model block size is 6 m (x) by 6 m (y) by 6 m (z).
- 7. Bulk density was applied on a lithological model basis and reflects averaging of bulk density determinations for each lithology.
- 8. Mineral resources may be materially affected by environmental, permitting, legal, title, taxation, sociopolitical, marketing, or other relevant issues.
- 9. Mineral resources are not mineral reserves and do not have demonstrated economic viability.
- 10. Mineral resource tonnages are rounded to the nearest 10,000.

Туре	Ni % Cut-off	Category	Rounded Tonnes	Ni %	Ni Lbs (million)
		Measured	11,490,000	0.73	184.92
		Indicated	10,310,000	0.70	159.11
Open Pit	0.25	Measured and Indicated	21.800.000	0.72	344.02
		Inferred	1,410,000	0.51	15.85
		Measured	610,000	0.81	10.89
		Indicated	13,870,000	0.80	244.62
Underground	0.5	Measured and Indicated	14,480,000	0.80	255.52
		Inferred	10,610,000	0.80	187.13
		Measured	12,100,000	0.73	194.73
		Indicated	24,180,000	0.76	405.14
Combined	0.25/0.50	Measured and			
		Indicated	36,280,000	0.75	599.88
		Inferred	12,020,000	0.77	204.05

Table 1.2: Minago Nose Zone Mineral Resource Estimate – Effective Date: July 2, 2021\*

\* The Minago Nose Zone mineral resource forms part of the total Minago Project mineral resource. See detailed notes on mineral resources in Table 1.1 of Section 1.6

Туре	Ni % Cut-off	Category	Rounded Tonnes	Ni %	Ni Lbs (million)
		Measured			
		Indicated	2,140,000	0.65	30.67
Open Pit	0.25	Measured and			
		Indicated	2,140,000	0.65	30.67
		Inferred	660,000	0.70	10.19
		Measured			
		Indicated	5,810,000	0.68	87.10
Underground	0.5	Measured and			
		Indicated	5,810,000	0.68	87.10
		Inferred	6,870,000	0.68	102.99
Combined	0.25/0.50	Measured			
Combined	0.25/0.50	Indicated	7,950,000	0.67	117.43

Table 1.3: Minag	o North Limb Zone	Mineral Resource Estima	ate – Effective Date: Jul <sup>,</sup>	v 2. 2021*
				y 2, 2021

Туре	Ni % Cut-off	Category	Rounded Tonnes	Ni %	Ni Lbs (million)
		Measured and			
		Indicated	7,950,000	0.67	117.43
		Inferred	7,530,000	0.68	112.89

\* The Minago North Limb Zone mineral resource forms part of the total Minago Project mineral resource. See detailed notes on mineral resources in Table 1.1 of Section 1.6

#### 1.7 Project Risks and Uncertainties

All mineral projects are subject to risks and uncertainties arising from various sources. These include, but are not limited to, the following items:

- (1) Political instability of the host country or region;
- (2) Site environmental conditions that affect deposit access;
- (3) Issues associated with legal access to sufficient land areas to support development and mining;
- (4) Lack of certainty with respect to mineral tenure and development regulatory regimes;
- (5) Lack of social licence for project development;
- (6) Unforeseen negative market pricing trends;
- (7) Inadequacy of deposit modelling and grade estimation programs with respect to actual metal grades and tonnages contained within the deposit;
- (8) Metallurgical recoveries that fall within economically acceptable ranges cannot be attained.

However, at this time, the report authors do not foresee any significant risks and uncertainties that could reasonably be expected to affect the reliability or confidence in the exploration and drilling information, mineral resource estimate, and metallurgical study conclusions disclosed in this Technical Report. The existing drill hole database for the Project has been thoroughly validated by the report authors and is acceptable for use in the current mineral resource estimate. However, prior to commencing a Pre-Feasibility or Feasibility study the report authors do recommend further infill and expansion drilling, and metallurgical core testing of the Minago deposit to meet the currently recognized level of detail and confidence required to support a Pre-Feasibility or Feasibility Study. Full details on the report author's recommendations are discussed in Section 26 of this Technical Report.

In addition, there are currently no environmental concerns, or permitting and surface rights issues that prevent Flying Nickel from completing their planned exploration and drilling programs on the Project. A socioeconomic assessment was previously conducted by Victory Nickel that resulted in signing of a Memorandum of Understanding (MOU) with each of the Pimichikamak Cree Nation (Cross Lake), Mosakahiken First Nation (Moose Lake), and Misipawistik Cree Nation (Grand Rapids). Flying Nickel is currently re-engaging the First Nations with traditional territories that include the Project site, and now including the Norway House Fist Nation, to work toward inclusion and renewal of the MOU's.

#### 1.8 Interpretation and Conclusions

#### 1.8.1 Future Opportunities

This Technical Report reports a current mineral resource estimate for the Project that includes an increase in mineral resources compared to the historical mineral resource estimates completed for the Project by previous operators. The main factor contributing to the increase in mineral resources for the Project is the inclusion of North Limb Zone mineralization in the current mineral resource estimate. This is based on the results of infill core drilling completed in this area of the deposit in 2011 by previous operator Victory Nickel. The mineralized strike length of the entire drilling-defined deposit, measured continuously around the Nose Zone fold and then northward to the North Limb Zone, is approximately 2,500 m, and good potential exists to define strike extensions to this trend beyond its current limits. An opportunity also exists to define additional mineralization in the drilling gap that exists between the two zones at present. The Nose Zone has been defined by drilling to a maximum depth of approximately 925 m below surface and remains open down dip along its entire modelled length. The North Limb Zone has not been as thoroughly defined by drilling as the Nose Zone but similarly remains open down dip below the limit of current modelling, that occurs at a depth below surface of approximately 450 m. Successful future testing of these direct deposit extension areas by diamond core drilling may result in substantial additions to the current mineral resource estimate. Based on current results and market conditions, such an assessment of resource expansion potential is warranted.

An extensive amount of historical metallurgical testing has been carried out on the Project. In combination with analytical results present in the core drilling database, historical metallurgical testing results indicate that nickel associated with sulphide mineralization in the deposit represents the most important potential source of recoverable nickel. Nickel is also present throughout the deposit in various silicate mineral phases from which very low recoveries by conventional processing have been documented.

The ratio of sulphide and silicate associated nickel varies spatially within the deposit and bears directly on definition of mineralization having potential for categorization within a mineral resource estimate. To address this important distribution relationship, the current mineral resource estimate is based on modelling of the sulphide-associated nickel content as well as the total nickel content. The cut-off value is directly based on sulphide-associated nickel grades plus pit optimization recoveries applied to each model block that reflect application of a sulphide-associated nickel recovery regression equation. This approach ensured that mineralization included in the mineral resource estimate was restricted to material with demonstrated potential for recovery by conventional processing methods. It also contributed to qualification of mineral resources as having reasonable prospects for eventual economic extraction. A sulphide-nickel approach to mineral resource estimation and associated modelling also formed the basis of historical mineral resource estimates and mining studies for the Project.

Open-pit mineral resources defined at a 0.18% sulphide nickel cut-off grade account for approximately 40 % of the current mineral resource estimate. The remaining 60% of the current mineral resource estimate is defined at a sulphide nickel cut-off grade of 0.36% and is considered to have reasonable prospects for eventual economic extraction using conventional underground bulk mining methods.

#### 1.8.2 Metallurgical Testing

The review of historical metallurgical testing and processing results completed by the report author to support this Technical Report was focused in particular on evaluating the flotation results from historical metallurgical testing completed for Victory Nickel. These historical results indicate that the grade – recovery curve generated from the testing is suitable for an estimate of metallurgical performance and also highlighted that additional research related to further definition of the sulphide-nickel head grade recovery curve is required. Investigation of the possibility that some of the nickel in the concentrates generated is associated with higher grade serpentine requires particular attention, since presence of this as gangue in the nickel concentrate would cause an associated total nickel assay to exceed the sulphide-nickel assay. That said, the discrepancy does not significantly impact the results from historical studies.

In summary, the grade recovery relationship for the Project can be estimated as:

Nickel Recovery =  $(61.375X^3 - 198.87X^2 + 218.02X + 9.435)\%$  for  $0.1 \le X \le 1.25$ 

Nickel Recovery = 91.1%; for X >1.25

Nickel Recovery = 0%; for X<0.1

where X = sulphidic nickel grade %.

To advance the Minago Project on the metallurgical front to a stage sufficient to support a Pre-Feasibility or Feasibility Study it will be necessary to complete further laboratory metallurgical testing. Definition of the scope of such testing will require a detailed analysis of previous testing to determine if there are alternatives to the flowsheet derived from historical metallurgical studies.

A full review of previous testing may also provide insight into potentially beneficial changes to the flowsheet presented in the historical studies. Technology has evolved since that time and changes may, or may not, improve the project economics. It is probable that a new drilling program will be required to obtain metallurgical sample cores for future metallurgical studies and such core needs to be stored properly, preferably at a temperature below 0° C and possibly under nitrogen. In addition to the obvious nickel and related concentrate metals (eg. Cu, Pt, Pd) interest, re-evaluation of potential for flotation concentration of talc is appropriate. This reflects its potential positive effect on concentrate quality and its potential for sale of the recovered material as a filler product within the plastics and rubber industries. Additional specific programs that will serve to address the goal of preparation for a future Pre-Feasibility or Feasibility Study include:

- Geo-metallurgical mapping of the deposits using historical data;
- Obtaining appropriate samples for future studies this will almost certainly involve further drilling. If existing core is to be used, it will need to be evaluated for storage history and potential oxidation;
- Confirmatory bench scale testing to determine reagent schedules;
- Comminution testing suitable for obtaining the crushing, SAG milling and ball milling parameters;

- Pilot plant testing of the flowsheet derived from historical metallurgical studies a 'Mini-Pilot' will provide this information while minimizing the mass of material necessary;
- Pilot plant testing of alternatives to the historical metallurgical study flowsheets, if this is determined as potentially beneficial;
- Confirmatory testing on Mini-Pilot products to determine settling rates for dewatering and water characteristics of pertinent streams, particularly tailings;
- Analysis of final concentrates from the Mini-Pilot to determine saleability and potential penalties;
- Coarse particle flotation this technology is currently available from Eriez Flotation. In the event that this testing is performed, it will be necessary to determine if other suppliers have developed a competitive product.

Although it is not entirely necessary to support completion of a future Pre-Feasibility or Feasibility Study, results of the historical metallurgical studies review for this Technical Report indicate that completion of a trade off study to evaluate alternatives to SAG milling could be beneficial.

#### 1.9 Recommendations

Recommended future work programs on the Project are centered on the completion of a Pre-Feasibility or Feasibility Study. A two-phase approach is proposed to meet this objective, with Phase I consisting of completion of deposit infill and expansion drilling on the North Limb Zone, deposit extension drilling on the Nose Zone and completion of an updated mineral resource estimate that includes results from the new diamond drilling programs. In conjunction with the Phase I drilling programs, a metallurgical sample coring program should be undertaken to support completion of the confirmatory metallurgical studies that are required to meet the currently recognized level of detail and confidence required to support a Pre-Feasibility or Feasibility Study.

The entirety of the recommended Phase II program consists of preparation of a Pre-Feasibility or Feasibility Study for the Project, the starting points of which would be the Phase I mineral resource estimate and Phase I metallurgical study results. Expenditure estimates for completion of recommended future work programs are presented below in Table 1.4. Commitment to the recommended Phase II program would be contingent on substantively acceptable results being returned from Phase I. A proposed budget for the recommended Phase I and Phase II programs is presented Table 1.4. Each of Phase I and Phase II is expected to take 12 to 18 months to complete considering the limited winter drilling season.

#### Table 1.4: Budget for Recommended Phase I and Phase II Programs

Item	Phase	Program Component	Estimated Cost (\$CDN)	
		Deposit infill diamond drilling (5,000 m) on the North Limb Zone		
1	Phase I	including mobilization costs, and geological consultant and staff	1,100,000	
		costs to increase confidence in mineral resource categories		
		Extension diamond drilling on the Nose Zone (3,000 m)		
2	Phase I	including geological consulting and staff costs to increase	650,000	
		confidence in mineral resource categories		
3	Phase I	Metallurgical sample (large diameter core) drilling (2,000 m)	450.000	
5	Thuse T	including geotechnical consultants and demobilization costs	+50,000	
4	Phase I	Sample preparation and assay testing for all drilling programs	300 000	
-	Thase T	(independent assay laboratory)	500,000	
5	Phase I	Updated mineral resource estimate that includes new diamond	100 000	
5	drilling and metallurgical testing results			
6	Phase I	Metallurgical studies and mini-pilot plant studies to confirm and	150 000	
0	Thuse T	expand on historical study results obtained for the Project	150,000	
7	Phase I	Environmental permitting, Indigenous and community	150 000	
,	Thuse T	consultation (ongoing)		
	Subtotal		2,900,000	
		Contingency (10%)	290,000	
		Total Phase I =	3,190,000	
Item	Phase	Program Component	Estimated Cost (\$CDN)	
		Preparation of Pre-Feasibility or Feasibility Study based on the		
1	Phase II	Phase I updated mineral resource estimate and metallurgical	2 500 000	
_ <b>_</b>	Flidsell	study results (including new geotechnical drilling and	2,300,000	
		metallurgical mini-pilot plant studies)		
2	Phase II	Detailed environmental permitting, Indigenous and community	250,000	
2	Fliase li	consultations	230,000	
	Subtotal		2,750,000	
		Contingency (10%)	275,000	
		Total Phase II =	3,025,000	

Note: Completion of Phase II is contingent upon acceptable results from Phase I work program

#### 2.0 INTRODUCTION

#### 2.1 Scope of Reporting

Flying Nickel Mining Corp. ("Flying Nickel") retained Mercator Geological Services Limited ("Mercator") with respect to completing a Mineral Resource Estimate ("MRE") for the Minago Nickel Project ("Minago" or the "Project"), located within the southern part of the Thompson Nickel Belt in Manitoba, Canada, and reporting the results in a National Instrument 43-101 ("NI 43-101") Technical Report (the "Technical Report"). Flying Nickel is a Canadian mining exploration company headquartered in Vancouver, British Columbia and listed on the TSX Venture Exchange under the stock symbol "FLYN". On January 14, 2022, Silver Elephant Mining Corp. ("Silver Elephant") completed a spin-out of the Project into Flying Nickel by way of a plan of arrangement pursuant to an arrangement agreement dated November 8, 2021 among Silver Elephant, Flying Nickel and certain other entities.

The Project is comprised of 94 mining claims totaling 19,236 ha (192.36 km2) 100% owned by Flying Nickel, and two mining leases totaling 425 ha (4.25 km2) 100% owned by Silver Elephant and currently in the process of being transferred to Flying Nickel. These mining claims and leases occur over the Minago nickel deposit located in the Thompson Nickel Belt on Highway 6, approximately 225 km south of Thompson, Manitoba, Canada (Figure 2.1).

This Technical Report also summarizes historical drilling and metallurgical testing work completed on the Project by previous operators that forms the basis of the current MRE and makes recommendations for further exploration and development work on the Project.

#### 2.2 Qualified Persons

The report authors Paul Ténière, Robert Smith, Michael Cullen, John Eggert, Lawrence Elgert, and Matthew Harrington are Professional Geologists (P.Geo.) or Professional Engineers (P.Eng.) registered in the Provinces of Nova Scotia, New Brunswick, Newfoundland and Labrador, Ontario, Manitoba, and British Columbia. The report authors have prepared this technical report after reviewing historical exploration work and technical reports and completing a mineral resource estimate for the Project. In addition, report author Mr. Robert Smith completed a personal inspection (site visit) of the Project from February 26 to February 27, 2022.

The report authors are independent Qualified Person's (QP) as defined by NI 43-101 and are responsible for all sections of this report as documented summarized in each Certificate of Qualified Person that appears in Section 28 and as presented below in Table 2.1. (Table 2.1). Neither Mercator, nor the report authors of this Technical Report, have any material present or contingent interest in the outcome of this report, nor do they have any financial or other interest that could be reasonably regarded as being capable of affecting their independence in the preparation of this report. This technical report has been prepared in return for professional fees based upon agreed commercial rates and the payment of these fees is in no way contingent on the results of this report. The report authors are not a director, officer or other direct employee of Flying Nickel and do not have shareholdings in this company.



# Figure 2.1: Location map of the Minago Nickel Project

Author	Status	Date of Last Site Visit	Technical Report Section Responsibilities
P. Teniere, P.Geo.	Independent	N/A	1 except 1.3, 1.4, 1.5, 1.6, and 1.8.2, 2 except 2.3, 3 through 6, 9, 11, 12.1, 12.3, 12.5, 12.6, 23, 24, 25.1, 25.3, 26
M. Harrington, P.Geo.	Independent	N/A	1.6, 14 except for 14.3.11 and 14.3.12, 25.2
M. Cullen, P.Geo.	Independent	N/A	1.3, 7, 8, 14.3.11
R. Smith, P.Geo.	Independent	February 26-27, 2022	1.4, 2.3, 10, 12.2, 12.4
J. Eggert, P.Eng.	Independent	N/A	1.5, 1.8.2, 13, 25.4
L. Elgert, P.Eng.	Independent	N/A	14.3.12

#### 2.3 Personal Inspection (Site Visit) and Data Verification

Report author Robert Smith, P.Geo., completed a personal inspection (site visit) of the Minago Project between February 26 to 27, 2022. This site visit was completed for the purposes of site inspection, historical drill hole collar checks, review of active coring and sampling operations, examining historical core samples, and to satisfy NI 43-101 "personal inspection" and data verification requirements. During his personal inspection, Mr. Smith visited the mineral claims and leases that comprises the Project and mineral resource estimate and verified the geology, mineralization, local infrastructure, and accessibility into the project area for future exploration and development activities by Flying Nickel. Mr. Smith also reviewed core from historical drilling programs on the Project, some of which were previously collected for independent witness (IW) sampling and check assay analyses in May 2021.

Results from the IW sampling and check assay program are discussed further in Section 12 of this Technical Report (Data Verification).

During the site visit Mr. Smith completed the following tasks and inspections:

- Validated that mineralization observed during the Property investigation conforms lithologically and mineralogically to other nickel deposits observed in the Thompson Nickel Belt;
- Validated sample locations and reviewed historical core stored in the Flying Nickel core storage facility to assess the presence of nickel, platinum, and palladium across the Property; and
- Validated the locations of select historical drill hole collars.

In addition, based on a detailed review of the available historical exploration and drilling data, geophysical data, and QA/QC procedures, including exploration programs completed by previous operators, the report authors are satisfied this meets the data verification requirements under NI 43-101. The Nuinsco and Victory Nickel programs were designed according to CIM Mineral Exploration Best Practice Guidelines at the time and no issues or fatal flaws arising from the personal inspection were detected.

#### 2.4 Information Sources

Sources of information, data and reports reviewed as part of this technical report can be found in Section 27 (References). The report authors (Qualified Persons) take responsibility for the content of this report and believe the data review to be accurate and complete in all material aspects.

Exploration claim information, historical assessment and technical reports, and exploration and drilling data were either acquired by the report authors or supplied by Flying Nickel. Report author Paul Ténière acquired mineral titles information on the mining claims and leases that are the subject of this Technical Report from the Manitoba Department of Agriculture and Resource Development Integrated Mining and Quarrying System (known as "iMaQs"). This information showed the subject mining claims and leases to be in good standing as of the effective date of this report.

Historical and recent drilling data was loaded into a Surpac database and validated by report author Matthew Harrington prior to evaluation use in the mineral resource estimate.

#### 2.5 Abbreviations

Table 2.1 presents abbreviations used in this technical report.

Abbreviation Meaning 3D three-dimensional AA atomic adsorption Actlabs Activation Laboratories Ltd. ALS ALS Laboratories CALA Canadian Association for Laboratory Accreditation Canadian Institute of Mining and Metallurgy CIM digital elevation model DEM DGPS differential global positioning satellite ΕM electromagnetic FA-AA fire assay-atomic absorption Flying Nickel Mining Corp. Flying Nickel GPS global positioning satellite GSC Geological Survey of Canada grams per tonne g/t ICP-OES Inductively Coupled Plasma Optical Emission Spectrometry IP Induced Polarization Lidar light detection and ranging Mercator Geological Services Ltd. Mercator ML Mineral Lease millions of tonnes Mt Mineral Resource Estimate MRE NI 43-101 National Instrument 43-101 NSR net smelter return (royalty) oz ounce **Professional Geologist** P.Geo. ppb parts per billion parts per million ppm QAQC quality assurance and quality control QP **Qualified Person** RC reverse circulation Silver Elephant Silver Elephant Mining Corp. Stantec Stantec Inc. UTM Universal Transverse Mercator Victory Nickel Victory Nickel Inc. VLF-EM very low frequency electromagnetic o k thousand degree symbol million % Ma percent

Table 2.2: Table of abbreviations

Ga	billion	Ва	Barium
са	circa	PGE	Platinum Group Elements
et al.	and others	REE	Rare Earth Elements
С	Celsius	Pb	Lead
ha	hectare	Pd	Palladium
kg	kilogram	Au	Gold
km	kilometre	Ag	Silver
lbs	pounds	As	Arsenic
ft	foot	Cu	Copper
п	inch	Ni	Nickel
μm	micrometre	Zn	Zinc
m	metre	Fe	Iron
mm	millimetre	Mn	Manganese
cm	centimetre	К	Potassium
ml	millilitre	Th	Thorium
/	per	Со	Cobalt
g	gram (0.03215 troy oz)	Pb	Lead
OZ	troy ounce (31.04 g)	Bi	Bismuth
Oz/T to g/t	1 oz/T = 34.28 g/t	Са	Calcium
Sn	tin	In	Indium
st	short ton (2000 lb or 907.2 kg)	ppm	parts per million
ppb	parts per billion	t	tonne (1000 kg or 2204.6 lb)

#### 3.0 RELIANCE ON OTHER EXPERTS

The report authors are relying upon information provided by Flying Nickel and its legal counsel concerning any legal, environmental, or any option, joint venture or royalty matters relating to the Project. This information includes the Plan of Arrangement announced on August 26, 2021 by Silver Elephant that spun out the Project into Flying Nickel. The Plan of Arrangement closed on January 17, 2022. The Plan of Arrangement was reviewed by the report authors in order to disclose any legal, environmental liabilities, option agreements, joint ventures, and any royalty matters relating to the Project in this Technical Report. The extent of reliance on this information is limited to disclosure of option agreements, royalties, and any environmental liabilities that pertain to the Project, and disclosed in Sections 4.2 and 4.4 of this Technical Report only.

The report authors have not independently verified the status of, nor legal titles relating to, the mining claims and leases for the Project. No warranty or guarantee, be it express or implied, is made by the report authors with respect to the completeness or accuracy of the surface rights and mineral titles comprising the Project.

#### 4.0 PROPERTY DESCRIPTION AND LOCATION

#### 4.1 Property Location and Description

The Project is comprised of 94 mining claims totaling 19,236 ha (192.36 km<sup>2</sup>) 100% owned by Flying Nickel, and two mining leases totaling 425 ha (4.25 km<sup>2</sup>) 100% owned by Silver Elephant who is in the process of transferring same to Flying Nickel. These mining claims and leases occur over the Minago Nickel Deposit (or "Deposit") located in the Thompson Nickel Belt on Highway 6, approximately 225 km south of Thompson, Manitoba, Canada (Table 4.1). The Project is centred at map coordinates 485,000m Easting and 5,995,000 m Northing (UTM NAD83 Zone 14N) within NTS Map Sheet 63J/03 (Figure 4.1). The Minago Nickel Deposit is shown in relation to the mining claims and leases in Figure 4.2.

Disposition Number <sup>1</sup>	Disposition Name	Holder	Disposition/Lease Type	Issue Date	Good To Date	Area (ha)
MB10193	VIC 24	Flying Nickel Mining Corp (100%)	Mining Claim	2011-04-11	2023-04-11	256
MB10194	VIC 25	Flying Nickel Mining Corp (100%)	Mining Claim	2011-04-11	2023-04-11	256
MB10195	VIC 26	Flying Nickel Mining Corp (100%)	Mining Claim	2011-04-11	2023-04-11	256
MB10196	VIC 27	Flying Nickel Mining Corp (100%)	Mining Claim	2011-04-11	2023-04-11	256
MB10197	VIC 28	Flying Nickel Mining Corp (100%)	Mining Claim	2011-04-11	2023-04-11	256
MB10198	VIC 29	Flying Nickel Mining Corp (100%)	Mining Claim	2011-04-11	2030-04-11	256
MB10199	VIC 30	Flying Nickel Mining Corp (100%)	Mining Claim	2011-04-11	2030-04-11	130
MB11497	VIC 11497	Flying Nickel Mining Corp (100%)	Mining Claim	2013-08-30	2022-08-30	256
MB11498	VIC 11498	Flying Nickel Mining Corp (100%)	Mining Claim	2013-08-30	2022-08-30	256
MB11499	VIC 11499	Flying Nickel Mining Corp (100%)	Mining Claim	2013-08-30	2022-08-30	256
MB11500	VIC 11500	Flying Nickel Mining Corp (100%)	Mining Claim	2013-08-30	2028-08-30	102
MB11536	VIC 11536	Flying Nickel Mining Corp (100%)	Mining Claim	2013-08-30	2022-08-30	256
MB11537	VIC 11537	Flying Nickel Mining Corp (100%)	Mining Claim	2013-08-30	2022-08-30	256
MB11538	VIC 11538	Flying Nickel Mining Corp (100%)	Mining Claim	2013-08-30	2022-08-30	256
MB11539	VIC 11539	Flying Nickel Mining Corp (100%)	Mining Claim	2013-08-30	2022-08-30	256
MB11540	VIC 11540	Flying Nickel Mining Corp (100%)	Mining Claim	2013-08-30	2022-08-30	187
MB11541	VIC 11541	Flying Nickel Mining Corp (100%)	Mining Claim	2013-08-30	2022-08-30	256

 Table 4.1: Mining claims and mineral lease table for the Minago Nickel Project

Disposition Number <sup>1</sup>	Disposition Name	Holder	Disposition/Lease Type	Issue Date	Good To Date	Area (ha)
MB11542	VIC 11542	Flying Nickel Mining Corp (100%)	Mining Claim	2013-08-30	2022-08-30	256
MB11543	VIC 11543	Flying Nickel Mining Corp (100%)	Mining Claim	2013-08-30	2022-08-30	256
MB11544	VIC 11544	Flying Nickel Mining Corp (100%)	Mining Claim	2013-08-30	2022-08-30	231
MB11545	VIC 11545	Flying Nickel Mining Corp (100%)	Mining Claim	2013-08-30	2022-08-30	256
MB11546	VIC 11546	Flying Nickel Mining Corp (100%)	Mining Claim	2013-08-30	2022-08-30	256
MB11547	VIC 11547	Flying Nickel Mining Corp (100%)	Mining Claim	2013-08-30	2023-08-30	256
MB11548	VIC 11548	Flying Nickel Mining Corp (100%)	Mining Claim	2013-08-30	2023-08-30	256
MB11549	VIC 11549	Flying Nickel Mining Corp (100%)	Mining Claim	2013-08-30	2023-08-30	236
MB11550	VIC 11550	Flying Nickel Mining Corp (100%)	Mining Claim	2013-08-30	2022-08-30	256
MB5390	BARNEY 1	Flying Nickel Mining Corp (100%)	Mining Claim	2004-07-26	2023-07-26	168
MB5391	BARNEY 2	Flying Nickel Mining Corp (100%)	Mining Claim	2004-07-26	2023-07-26	242
MB5392	BARNEY 3	Flying Nickel Mining Corp (100%)	Mining Claim	2004-07-26	2023-07-26	170
MB5393	BARNEY 4	Flying Nickel Mining Corp (100%)	Mining Claim	2004-07-26	2023-07-26	184
MB5394	BARNEY 5	Flying Nickel Mining Corp (100%)	Mining Claim	2004-07-26	2030-07-26	155
MB5395	BARNEY 6	Flying Nickel Mining Corp (100%)	Mining Claim	2004-07-26	2031-07-26	76
MB7027	MIN 1	Flying Nickel Mining Corp (100%)	Mining Claim	2006-11-27	2022-11-27	235
MB7028	MIN 2	Flying Nickel Mining Corp (100%)	Mining Claim	2006-11-27	2030-11-27	214
MB7029	MIN 3	Flying Nickel Mining Corp (100%)	Mining Claim	2006-11-27	2022-11-27	252
W48594	MIN 4	Flying Nickel Mining Corp (100%)	Mining Claim	2006-08-04	2027-08-04	162
W48595	MIN 5	Flying Nickel Mining Corp (100%)	Mining Claim	2006-08-04	2027-08-04	256
MB7030	MIN 6	Flying Nickel Mining Corp (100%)	Mining Claim	2006-11-27	2022-11-27	135
MB7031	MIN 7	Flying Nickel Mining Corp (100%)	Mining Claim	2006-11-27	2030-11-27	204
MB7033	MIN 8	Flying Nickel Mining Corp (100%)	Mining Claim	2006-11-27	2022-11-27	205
MB7032	MIN 9	Flying Nickel Mining Corp (100%)	Mining Claim	2006-11-27	2022-11-27	78

Disposition Number <sup>1</sup>	Disposition Name	Holder	Disposition/Lease Type	Issue Date	Good To Date	Area (ha)
MB7066	MIN 10	Flying Nickel Mining Corp (100%)	Mining Claim	2007-01-23	2023-01-23	57
MB7067	MIN 11	Flying Nickel Mining Corp (100%)	Mining Claim	2007-01-23	2023-01-23	121
MB7141	MIN 12	Flying Nickel Mining Corp (100%)	Mining Claim	2007-01-23	2023-01-23	250
MB7142	MIN 13	Flying Nickel Mining Corp (100%)	Mining Claim	2007-01-23	2023-01-23	256
MB7143	MIN 14	Flying Nickel Mining Corp (100%)	Mining Claim	2007-01-23	2023-01-23	256
MB7144	MIN 15	Flying Nickel Mining Corp (100%)	Mining Claim	2007-01-23	2023-01-23	138
MB7145	MIN 16	Flying Nickel Mining Corp (100%)	Mining Claim	2007-01-23	2023-01-23	256
MB7146	MIN 17	Flying Nickel Mining Corp (100%)	Mining Claim	2007-01-23	2023-01-23	247
MB7147	MIN 18	Flying Nickel Mining Corp (100%)	Mining Claim	2007-01-23	2023-01-23	247
MB7148	MIN 19	Flying Nickel Mining Corp (100%)	Mining Claim	2007-01-23	2023-01-23	256
MB7149	MIN 20	Flying Nickel Mining Corp (100%)	Mining Claim	2007-01-23	2023-01-23	243
MB7150	MIN 21	Flying Nickel Mining Corp (100%)	Mining Claim	2007-01-23	2023-01-23	181
MB7151	MIN 22	Flying Nickel Mining Corp (100%)	Mining Claim	2007-01-23	2023-01-23	256
MB7152	MIN 23	Flying Nickel Mining Corp (100%)	Mining Claim	2007-01-23	2023-01-23	256
MB7153	MIN 24	Flying Nickel Mining Corp (100%)	Mining Claim	2007-01-23	2023-01-23	241
MB7154	MIN 25	Flying Nickel Mining Corp (100%)	Mining Claim	2007-01-23	2023-01-23	88
MB7155	MIN 26	Flying Nickel Mining Corp (100%)	Mining Claim	2007-01-23	2023-01-23	145
MB7156	MIN 27	Flying Nickel Mining Corp (100%)	Mining Claim	2007-01-23	2023-01-23	145
MB7157	MIN 28	Flying Nickel Mining Corp (100%)	Mining Claim	2007-01-23	2023-01-23	153
MB7158	MIN 29	Flying Nickel Mining Corp (100%)	Mining Claim	2007-01-23	2023-01-23	153
MB8497 <sup>2</sup>	DAD	Flying Nickel Mining Corp (100%)	Mining Claim	2008-05-28	2023-05-28	132
MB8549	TOM F	Flying Nickel Mining Corp (100%)	Mining Claim	2008-05-12	2028-05-12	14
MB8780	VIC 1	Flying Nickel Mining Corp (100%)	Mining Claim	2009-04-17	2023-04-17	248
MB8781	VIC 2	Flying Nickel Mining Corp (100%)	Mining Claim	2009-04-17	2023-04-17	210

Disposition Number <sup>1</sup>	Disposition Name	Holder	Disposition/Lease Type	Issue Date	Good To Date	Area (ha)
MB8782	VIC 3	Flying Nickel Mining Corp (100%)	Mining Claim	2009-04-17	2027-04-17	256
MB8783	VIC 4	Flying Nickel Mining Corp (100%)	Mining Claim	2009-04-17	2028-04-17	53
MB8784	VIC 5	Flying Nickel Mining Corp (100%)	Mining Claim	2009-04-17	2031-04-17	254
MB8785	VIC 6	Flying Nickel Mining Corp (100%)	Mining Claim	2009-04-17	2027-04-17	256
MB8786	VIC 7	Flying Nickel Mining Corp (100%)	Mining Claim	2009-04-17	2028-04-17	113
MB8787	VIC 8	Flying Nickel Mining Corp (100%)	Mining Claim	2009-04-17	2031-04-17	256
MB8788	VIC 9	Flying Nickel Mining Corp (100%)	Mining Claim	2009-04-17	2027-04-17	256
MB8789	VIC 10	Flying Nickel Mining Corp (100%)	Mining Claim	2009-04-17	2028-04-17	141
MB8790	VIC 11	Flying Nickel Mining Corp (100%)	Mining Claim	2009-04-17	2031-04-17	252
MB8791	VIC 12	Flying Nickel Mining Corp (100%)	Mining Claim	2009-04-17	2027-04-17	243
MB8792	VIC 13	Flying Nickel Mining Corp (100%)	Mining Claim	2009-12-21	2022-12-21	256
MB8935	VIC 19	Flying Nickel Mining Corp (100%)	Mining Claim	2009-12-21	2022-12-21	256
MB8936	VIC 20	Flying Nickel Mining Corp (100%)	Mining Claim	2009-12-21	2022-12-21	212
MB8937	VIC 21	Flying Nickel Mining Corp (100%)	Mining Claim	2009-12-21	2022-12-21	256
MB8938	VIC 22	Flying Nickel Mining Corp (100%)	Mining Claim	2009-12-21	2030-12-21	93
MB8939	VIC 23	Flying Nickel Mining Corp (100%)	Mining Claim	2009-12-21	2030-12-21	212
MB8947	VIC 16	Flying Nickel Mining Corp (100%)	Mining Claim	2009-12-21	2022-12-21	256
MB8948	VIC 17	Flying Nickel Mining Corp (100%)	Mining Claim	2009-12-21	2022-12-21	256
MB8949	VIC 18	Flying Nickel Mining Corp (100%)	Mining Claim	2009-12-21	2029-12-21	120
MB8979	VIC 14	Flying Nickel Mining Corp (100%)	Mining Claim	2009-12-21	2022-12-21	256
MB9000	VIC 15	Flying Nickel Mining Corp (100%)	Mining Claim	2009-12-21	2029-12-21	252
P235F <sup>2</sup>	BRY 18	Flying Nickel Mining Corp (100%)	Mining Claim	1991-04-08	2028-04-08	192
P237F <sup>2</sup>	BRY 20	Flying Nickel Mining Corp (100%)	Mining Claim	1991-04-08	2027-04-08	195
P238F <sup>2</sup>	BRY 21	Flying Nickel Mining Corp (100%)	Mining Claim	1991-04-08	2031-04-08	212

Disposition Number <sup>1</sup>	Disposition Name	Holder	Disposition/Lease Type	Issue Date	Good To Date	Area (ha)
P239F <sup>2</sup>	BRY 22	Flying Nickel Mining Corp (100%)	Mining Claim	1991-04-08	2028-04-13	256
P2527F	KON 1	Flying Nickel Mining Corp (100%)	Mining Claim	1994-03-18	2031-03-18	108
P2528F	KON 2	Flying Nickel Mining Corp (100%)	Mining Claim	1994-03-18	2030-03-18	73
P2529F	KON 3	Flying Nickel Mining Corp (100%)	Mining Claim	1994-03-18	2023-03-18	43
P2530F	KON 4	Flying Nickel Mining Corp (100%)	Mining Claim	1994-03-18	2031-03-18	105
ML-002 <sup>3</sup>		Silver Elephant Mining Corp (100%)	Mineral Lease	1992-04-01	2023-04-01	248
ML-003 <sup>3</sup>		Silver Elephant Mining Corp (100%)	Mineral Lease	1992-04-01	2023-04-01	177
Total Area in Hectares =						

<sup>1</sup>Subject to a net smelter return ("NSR") royalty held by Battery Metals Royalties Corp.

<sup>2</sup>Subject to a net smelter return ("NSR") royalty interest retained by Xstrata Nickel. <sup>3</sup>Two mineral leases are in the process of being transferred to Flying Nickel Mining Corp.









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

- The exclusive rights to the minerals, other than quarry minerals, that are the property of the Crown and are found in place on, in, or under the land covered by the lease.
- Mineral access rights that include:
  - $\circ$   $\;$  The right to open and work a shaft or mine within the limits of the lease area; and
  - The right to erect buildings or structures upon the subject land for the purpose of exploration and/or mining.

According to the same act, the holder of a mineral claim is granted:

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

In Manitoba, unpatented mineral claims require annual exploration assessment expenditures of C\$12.50 per hectare per year on claims less than 10 years from the date of registration. The amount changes to C\$25.00 per hectare per year for any claims held past 10 years from the date of registration. Previous exploration work can be banked, grouped and applied as needed to meet assessment requirements. Unpatented mineral claims include access to the mining rights only. No outstanding obligations exist with regard to the claims comprising the Project. The current required exploration assessment expenditures for the Project mining claims is approximately \$423,450.

Future exploration work conducted on the Project mining claims will require work permits from the Manitoba Department of Agriculture and Resource Development (the "Department"). The Department also has a duty to consult with First Nations, Métis communities, and other Aboriginal communities prior to granting work permits for mineral exploration and mine development projects. Flying Nickel has yet to receive work permits for mineral exploration on the Project claims.

Mineral Lease ML2 held by Silver Elephant is a renewable 21-year lease covering 248 ha in the Project area. The lease was issued by the Province of Manitoba on April 1, 1992. The lease was renewed for another 21 years on April 1, 2013 and is set to expire on April 1, 2034. The annual lease rental payment is \$2,976 (\$12/ha) and due on May 1<sup>st</sup> of each year. As of the effective date of this technical report the annual lease rental payment has been paid and the mineral lease was in good standing until May 1, 2022.

Mineral Lease ML3 held by Silver Elephant is a renewable 21-year lease covering 177 ha in the Project area. The lease was issued by the Province of Manitoba on April 1, 1992. The lease was renewed for another 21 years on April 1, 2013 and is set to expire on April 1, 2034. The annual lease rental payment is
\$2,124 (\$12/ha) and due on May 1<sup>st</sup> of each year. As of the effective date of this technical report the annual lease rental payment has been paid and the mineral lease was in good standing until May 1, 2022.

The Department's Integrated Mining and Quarrying System, known as "iMaQs" confirms that all mining claims and leases comprising the Project as described above in Table 4.1 were, at the effective date and report date, in good standing, and that no legal encumbrances were registered with the Department against these mining claims. The report author confirms that payment of claim transfer fees associated with the claims identified in Table 4.1 have been documented in iMaQs. The report author makes no further assertion concerning the legal status of the properties. None of the properties have been legally surveyed to date and there is no requirement to do so at this time.

## 4.2 Option Agreements and Royalties

Mining claim numbers MB8497, P235F, P237F, P238F, and P239F are subject to a net smelter return ("NSR") royalty interest retained by Xstrata Canada Corporation ("Xstrata") as outlined in the option agreement between Xstrata and Victory Nickel dated January 10, 2008 and assumed by Flying Nickel. The Xstrata option claims are located northeast of ML-002 and of the current mineral resource boundary (Figure 4.1).

- i. The royalty interest in respect of nickel, shall for any calendar quarter be:
  - (1) a two percent (2%) NSR royalty when the LME 3-month nickel price is equal to or greater than US\$13,227.74 per tonne in that quarter; and
  - (2) a one percent (1%) NSR royalty when the LME 3-month nickel price is less than US\$13,227.74 per tonne in that quarter
- ii. The royalty interest in respect of other metals, minerals, and concentrates, shall be a 2% NSR royalty.

In the event that the royalty interest consists of a 2% NSR royalty, Flying Nickel may purchase a portion of the royalty interest which represents in the aggregate no more than 1% of the royalty interest for \$1,000,000. Xstrata's royalty interest shall never be less than 1% NSR royalty.

In addition, Flying Nickel, as payor, has granted and agreed to pay, in each fiscal quarter where the average price per pound of nickel as reported on the Nominated Metals Exchange or Substitute Metals Exchange in the event such pricing is not reported on the Nominated Metals Exchange exceeds \$15.00, to Battery Metals Royalties Corp., a royalty equal to two per cent (2%) of returns in respect of all mineral products produced from the Minago Property.

# 4.3 Permits or Agreements Required for Exploration Activities

The holder of a mineral claim in Manitoba has the exclusive right to explore for and develop the Crown minerals, other than the quarry minerals, found in place on, in or under the lands covered by the claim [The Mines and Minerals Act, 73(1)].

The lessee of a mineral lease has the exclusive right to the Crown minerals, other than quarry minerals, that are the property of the Crown and are found in place or under the land covered by the mineral lease. Furthermore, the lessee has access rights to open and work a shaft or mine and to erect buildings or structures upon the subject land [The Mines and Minerals Act, 108(a), (b), (i), (ii)].

Prior to commencing exploration activities on mineral claims and leases, a work permit describing each work activity must be obtained from the Manitoba Agriculture and Resource Development office in Wabowden, Manitoba and a letter of advice is obtained from the Federal Department of Fisheries and Oceans. The Manitoba government has a duty to consult with First Nations, Métis communities and other Aboriginal communities when a mineral exploration permit is submitted for approval by the claim holder.

## 4.4 Other Liability and Risk Factors

The report authors are not aware of any environmental liabilities on the Project. As noted above, Flying Nickel will require permits to conduct recommended future exploration work on the property. Flying Nickel has advised the report authors that its liability, at the effective date of this report, was limited to activities carried out under any exploration permits issued by the Government of Manitoba. These permits are for site activities related to diamond drilling and general site access but do not include impacts associated with historical site use. Development of a future mining operation at the Project will require that the issue of site liabilities be addressed in the related mining and environmental permitting process.

The report authors are not aware of any other significant factors and risks that may affect access, title, or the right or ability to perform the recommended work program on the Project that is included in this Technical Report.

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

#### 5.1 Accessibility

The Project is located in northern Manitoba, Canada within the southern part of the Thompson Nickel Belt, approximately 107 km north of the Town of Grand Rapids (pop. 268) and 225 km south of the City of Thompson (pop. 13,678). Provincial Trunk Highway 6 crosses the eastern portion of the Project (Figure 5.1). The closest international airport is the Winnipeg James Armstrong Richardson International Airport (YWG) located approximately 536 km south of the Project. Regional airline service (Calm Air and Perimeter Aviation) is also available from Thompson Municipal Airport (YTH) with direct flights from Winnipeg. The Project can be easily accessed via Highway 6, a paved, two-lane highway that originates in Winnipeg and serves as a major transportation route to northern Manitoba including Thompson. The closest town to offer full services is Grand Rapids, which includes full-service accommodations, grocery stores and restaurants, tool rental, hardware stores, and gas stations.

#### 5.2 Climate and Physiography

The Project is in the humid continental climate zone of North America with vast seasonal differences. January is the coldest month of the year with a daily temperature averaging -19.7 degrees Celsius (°C). Temperatures range from +7.5°C to -43.0°C. July is the warmest month of the year with daily temperature averaging +18.6°C and a range of +36.5°C to +3.3°C. Total annual precipitation is 473.7 millimetres (mm) comprising 111.5 mm of snow and 362.2 mm of rain with 57.5% of the total precipitation occurring in the four months from June to September. Mineral exploration field programs can efficiently be undertaken from June through to late November in all areas. Programs such as drilling and geophysical surveys can also be implemented year-round but delays due to poor winter weather conditions such as heavy snow fall should be expected.

The Project is located within almost entirely swampy muskeg and topographic relief is less than 3 m. Elevations in the area vary between 220 to 225 metres above sea level. Vegetation consists of sparse black spruce and tamarack. Oakley Creek runs along the south side of the mining claims that host the Minago Deposit and drains into Lake Winnipeg.



### Figure 5.1: Location map of the Minago Nickel Project

# 5.3 Local Resources and Infrastructure

The Project is well positioned with respect to infrastructure. The City of Thompson offers motels, medical services, hardware stores, grocery stores, gas stations, commercial airport facilities, and industrial services required to support the long-time mining and processing activities that have been carried out in this region since discovery of nickel in the 1950's. Grand Rapids is served by a Royal Canadian Mounted Police (RCMP) detachment, a nursing station, daily bus and truck transportation to Winnipeg, a 1.02 km grass/turf airstrip, and a number of small supply and service businesses.

The Hudson Bay Railway line owned by Arctic Gateway Group LP connects the southern prairie region of western Canada to Churchill, Manitoba (a seasonal seaport) and crosses Provincial Highway 6 approximately 60 km north of the Project. Manitoba Hydro high voltage alternating and direct current transmission lines parallel Highway 6 and cross a portion of the Property.

The extensive surface drainage systems present in the project area provide readily accessible potential water sources for incidental exploration use such as diamond drilling. They also provide good potential as

higher volume sources of water such as those potentially required for future mining and milling operations.

Exploration staff and consultants, as well as heavy equipment and drilling contractors can be sourced from within Manitoba and surrounding provinces such as Ontario and Quebec. Mining is the dominant industry in the area. The local rural and urban economies provide a large base of skilled trades, professional, and service sector support that can be accessed for exploration and resource development purposes.

The Project is still considered early-stage (mineral resource stage only) and not yet considered an "Advanced Property" under the definition of NI 43-101. However, a future Pre-Feasibility or Feasibility Study by Flying Nickel should determine the sufficiency of surface rights for potential open-pit and underground nickel mining operations, and the sources of power, water, and mining personnel for any mining operations. In addition, these future mining studies should aid in the determination of viable sites for potential tailings and waste storage areas and a processing plant. As of the effective date of this Technical Report, surface rights, power and water requirements, and mining personnel availability are sufficient to carry out a Pre-Feasibility or Feasibility Study on the Project, which the Company plans to pursue in the short-term.

## 6.0 HISTORY

## 6.1 Summary

The Project began as Geophysical Reservation 34 (GR 34) covering an area of 19.2 km by 38.4 km that was granted to Amax Potash Ltd. ("Amax") on November 1, 1966 for a period of two years and extended in 1968 to April 30, 1969 (reference to Amax in this technical report includes the subsidiaries and successor companies of Amax Potash Limited, namely Amax of Canada Limited, 121991 Canada Limited and Canamax Resources Inc.).

In March 1969, Amax converted the most prospective area of GR 34 to 844 contiguous claims and in April 1969, an additional 18 claims were staked. In 1973, the claims covering ground deemed to have the most potential for economically viable nickel mineralization were taken to lease status as Explored Area Lease 3 (North Block) and Explored Area Lease 4 (South Block). In an agreement dated December 12, 1973, Granges Exploration Aktiebolag ("Granges") was granted an option on the Explored Area Leases. Reference to Granges in this report includes the subsidiaries and successor companies of Granges Exploration Aktiebolag namely Granges Exploration Ltd. and Granges International Ltd. In 1977, Granges became a passive partner with a 25% interest and a 0.5% NSR royalty in the leases. On May 18, 1989, Black Hawk Mining Inc. ("Black Hawk") purchased the Amax interest in the explored area leases. On August 2, 1989, Black Hawk purchased the Granges interest and NSR royalty in the explored area leases. On April 1, 1992, Explored Area Lease 3 and Explored Area Lease 4 were converted to Mineral Lease 002 and Mineral Lease 003 respectively. On March 18, 1994, a portion of Mineral Lease 002 was converted to mineral claims KON 1, KON 2 and KON 3, and a portion of Mineral Lease 003 was converted to mineral claim KON 4. On November 3, 1999, Nuinsco Resources Ltd. ("Nuinsco"), and its successor Victory Nickel purchased the Black Hawk interest in the Property subject to a graduated NSR royalty based on nickel prices.

## 6.2 Amax Exploration Work - 1966 to 1972

Amax conducted a regional scale exploration program on the southern extension of the Thompson Nickel Belt and concluded that the corporate threshold for deposit size justifying production would not be achieved on the Project. A brief summary of work conducted by Amax is as follows:

- Audio Frequency Magnetics (AFMAG) airborne survey with nominal 1,609 m line spacing;
- Helicopter airborne magnetic survey with nominal 402 m line spacing;
- Turair electromagnetic (EM) survey;
- Line-cutting at 305 m line spacing with ground geophysical surveys including magnetic (Askania magnetometer), electromagnetic (Radem Vertical Loop Electromagnetic (VLEM)), dipole-dipole induced polarization (McPhar) and gravity surveys;
- Eighteen (18) diamond drill hole plus one wedged hole were completed on the Project;
- Fourteen (14) diamond drill holes were completed on ML-002;
- Twelve (12) diamond drill holes were completed on ML-003.

• Completion of a now historical mineral resource estimate. This historical estimate is not considered relevant or reliable and was completed prior to the implementation of NI 43-101 and CIM standards.

#### 6.3 Granges Exploration Work – 1973 to 1976

Granges focused their efforts on the Minago Nickel Deposit and completed now historical resource estimates, and mining, metallurgical and milling studies. These historical estimates are not considered relevant or reliable and were completed prior to the implementation of NI 43-101 and CIM standards. Eight diamond drill holes and 9 wedge holes were completed by Granges with limited in-hole surveys completed.

Granges concluded that the deposit was sufficiently confirmed and that further delineation and exploration should be conducted from underground workings.

#### 6.4 Black Hawk Exploration Work – 1989 to 1991

Black Hawk conducted a deep penetrating ground electromagnetic survey, mineral resource estimates, and mining, metallurgical and milling studies. A helicopter-borne electromagnetic and magnetic survey covering the Project was obtained from Falconbridge Limited and interpreted by Black Hawk. Blackhawk also completed a now historical resource estimate. This historical estimate is not considered relevant or reliable and was completed prior to the implementation of NI 43-101 and CIM standards.

Forty-five core holes were drilled in the vicinity of the Project. Collars were surveyed for location and inhole orientation surveys were conducted on the majority of holes.

## 6.5 Nuinsco and Victory Nickel – 2005 to 2012

Nuinsco Resources Ltd. ("Nuinsco") and its successor company Victory Nickel Corp. ("Victory Nickel") completed numerous exploration and diamond drilling programs on the Project from 2005 to 2012. Details on these exploration and drilling programs are discussed in Section 10 of this Technical Report. Nuinsco and Victory Nickel completed several now historical resource estimates between 2006 and 2009 and historical mining studies in 2006 and 2010. These historical estimates and historical mining studies are no longer considered relevant or reliable and are not available in an existing technical report. A Qualified Person has not done sufficient work to classify these historical estimates as current mineral resources. The current mineral resource estimates disclosed in Section 14 of this Technical Report supersede all prior historical estimates for the Project.

A tabulation of the major programs carried out by Nuinsco and Victory Nickel during the 2005 to 2012 period is presented below in Table 6.1. This work includes completion of a comprehensive VTEM airborne geophysical survey in 2007, a summary of which is included below in section 6.6.

Company	Period	Activity Completed
Nuinsco	Jan to Apr 2005	6 diamond drill holes (2,948.1 m)
Nuinsco	Mar to April 2006	2 diamond drill holes (1,533.6 m)
Nuinsco	October 2006	Historical resource estimate
Nuinsco	November 2006	Historical mining study (PEA)
Victory Nickel	March 2007	Airborne VTEM and magnetics survey
Victory Nickel	Jan to Mar 2007	44 diamond drill holes (13,284.2 m)
Victory Nickel	Jan to May 2008	18 diamond drill holes (9,082 m)
Victory Nickel	2007 to 2008	Comprehensive metallurgical testing program by SGS
Victory Nickel	Jan to May 2010	26 diamond drill holes (9,647.7 m)
Victory Nickel	February 2009	Historical resource estimate
Victory Nickel	March 2010	Historical mining study (FS)
Victory Nickel	Feb to April 2011	20 diamond drill holes (8,873.4 m)
Victory Nickel	Feb to April 2012	10 diamond drill holes (4,137.1 m)

# Table 6.1: Exploration and evaluation programs by Nuinsco and Victory Nickel on the Minago Deposit –2005 to 2012

Note: The historical mineral resource estimates and historical mining studies noted above are no longer considered relevant or reliable. A Qualified Person has not done sufficient work to classify these historical estimates as current mineral resources and Flying Nickel is not treating these historical estimates as current mineral resources. The current mineral resource estimates disclosed in Section 14 of this Technical Report supersede all prior historical estimates for the Project.

## 6.6 VTEM Survey

In 2007, Victory Nickel contracted Condor Consulting Inc. (Condor) to process and analyze VTEM 30 Hz electromagnetic (EM) and magnetics data over the South Block property within the Minago Project. The VTEM survey was carried out between March 25-30, 2007 by Geotech Ltd. The principal task of this VTEM survey was to identify other zones of potential nickel mineralization which could then be followed up by detailed ground geophysical work, soil sampling, geological mapping and/or by drilling. The nominal line spacing was 100 m with an average EM bird height of 40 m. The magnetometer was mounted in a separate bird flown at an average height of 67 m above ground. A total of 767-line km of data were processed and analyzed.

The ultramafic (UM) unit that hosts the Minago Deposit shows up as a clear magnetic source. The UM is also an early-mid time EM responder but overall is interpreted as a relatively weak conductor and does not show as either a late-time amplitude response or AdTau feature. The magnetic response shows the deposit to be located at what appears to be the nose of a fold or flexure. An approximate outline of this horizon is indicated as an orange line in the TMI-1stVD image (Figure 6.1). This suggests that there was both a folding (drag fold due to compression?) and a break in the horizon.

The EM shows a different, somewhat more complex pattern. At early time, there is a close correspondence between the EM and magnetic responses over the North Limb Zone and Nose Zone

deposit areas. At mid-time (channel 10) however, the EM collapses into two highs, one over the main deposit and the other centered near DDH N-5. As well, at both early and mid-time, the just described "hooked" magnetic feature appears to be attached to a massif of conductivity to the west; an area that is non-magnetic. A MultiPlot section (Figure 6.2) through the deposit (L1530) showing the EM results (dB/dT and Bfield) in profile form and CDSs. While the large conductor to the west is quite apparent (located at approximately 486 000E) it is clear there is very little EM response over the deposit apart from early times.

In summary, the Condor assessment showed that the geophysical signature of the Minago deposit is not diagnostic in terms of an EM response and that the weak conductivity response over the deposit is likely due to serpentinized ultramafic rocks and not the sulfide mineralization associated with the deposit. A 3D magnetic model was generated over the Project area but the EM response over the deposit lacked sufficient character to warrant producing a 3D conductivity model.

The Condor assessment identified 10 zones as targets for future exploration and these target zones were ranked according to how well they fit one of two target models developed for the property, a (1) low conductance-magnetic model styled after the Minago Deposit, and a (2) high conductance-high magnetic target based on the traditional Thompson-style deposit.

Condor concluded the IP-resistivity technique might be better suited for follow-up rather than ground EM in the Project area, requiring a calibration survey over the Minago Deposit. The EM and magnetic data sets showed significant character that is attributed to the regional geology and a better understanding of the property scale geology was recommended to assist in defining the mineralization potential of the area.



Figure 6.1: Magnetics 1stVD, EM Channel 1 and EM Channel 10 responses over the Minago Deposit

(taken from Victory Nickel)



Figure 6.2: MultiPlot for L1530 over the Minago Deposit for both the dB/dT and Bfield outcomes

# 6.7 Historical Estimates

Some of the previous operators listed above prepared historical resource estimates for the Minago Deposit prior to the introduction of NI 43-101 standards and guidelines and the 2014 CIM Definition Standards for Mineral Resources and Mineral Reserves. The most recent historical resource estimate was completed by Wardrop for Victory Nickel in 2009 prior to the completion of a historical mining study for the Project in 2010. Details on the 2009 Victory Nickel historical estimate for nickel sulphide are shown below in Table 6.2.

Table 6.2: Victory Nickel 200	9 nickel sulphide historical es	stimate for the Project (0.2% NiS% cutoff)

Resource Classification	Cutoff grade (NiS%)	Volume (m³x1000)	Density (t/m³)	Tonnes (x1000)	NiS (%)
Measured	0.2	3,452	2.62	9,053	0.47
Indicated	0.2	13,406	2.64	35,333	0.42
Inferred	0.2	4,435	2.66	11,812	0.44

<sup>(</sup>taken from Victory Nickel)

#### Source of Historical Estimate Disclosure and Cautionary Statements:

The 2009 historical estimate was referenced from a NI 43-101 technical report for the Minago Project completed by Wardrop for Victory Nickel Inc. with an effective date of February 20, 2009 (Victory Nickel, 2009). This historical NI 43-101 technical report is currently available for download under Victory Nickel's SEDAR profile. Ordinary kriging interpolation was used for the historical estimate for the Minago deposit and mineral resources were determined using a 0.2% NiS cutoff grade.

This historical estimate is considered relevant as it demonstrates the three-dimensional continuity of the Minago Deposit that hosts nickel sulphide mineralization. However, the Company cautions readers that this historical estimate was completed prior to the introduction of the May 10, 2014 CIM Definition Standards on Mineral Resources and Reserves (CIM 2014). A Qualified Person has not done sufficient work to classify this historical estimate as current mineral resources. Flying Nickel is not treating this historical estimate as current mineral resources. Flying Nickel is not treating this historical estimate has been superseded by the current mineral resource estimate disclosed in Section 14 of this Technical Report.

#### 7.0 GEOLOGICAL SETTING AND MINERALIZATION

#### 7.1 Regional Geology

The regional geology comprises the eastern edge of the Phanerozoic sediments of the Western Canada Sedimentary Basin that unconformably overlie Precambrian crystalline basement rocks that include the Thompson Nickel Belt. The Western Canada Sedimentary Basin tapers from a maximum thickness of approximately 6,000 m in Alberta to zero to the north and east where it is bounded by the Canadian Shield. The Property is located near the northeast corner of the Western Canada Sedimentary Basin where it comprises approximately 50 m of Ordovician dolomite underlain by approximately 10 m of Ordovician sandstone.

The Precambrian basement rocks of the Thompson Nickel Belt form a northeast-southwest trending 10 to 35 km wide belt of variably reworked Archean age basement gneisses and Early Proterozoic age cover rocks along the northwest margin of the Superior Province. Lithotectonically, the Thompson Nickel Belt is part of the Churchill-Superior boundary zone. The Archean age rocks to the southeast of the Thompson Nickel Belt include low to medium grade metamorphosed granite-greenstone and gneiss terranes and the high grade metamorphosed Pikwitonei Granulite Belt. The Pikwitonei Granulite Belt is interpreted to represent exposed portions of deeper level equivalents of the low to medium grade metamorphosed granite-greenstone and gneiss terranes. The Superior Province Archean age rocks are cut by mafic to ultramafic dikes of the Molson swarm dated at 1,883 million annum (Ma). Dikes of the Molson swarm occur in the Thompson Nickel Belt, but not to the northwest in the Kisseynew domain. The early Proterozoic rocks of the Kisseynew domain are interpreted to represent the metamorphosed remnants of a back arc or inter arc basin.

The Early Proterozoic rocks that occur along the western margin of the Thompson Nickel Belt are a geologically distinguishable stratigraphic sequence of rocks termed the Opswagan Group that hosts most of the economic nickel mineralization defined to date in the Thompson Nickel Belt.

#### 7.2 Stratigraphy of the Thompson Nickel Belt

The Ospwagan Group hosts the nickel deposits of the Thompson Nickel Belt. Within the Ospwagan Group almost all of the nickel deposits of the are found within lower Pipe Formation sequences.

Bleeker (1990) proposed a stratigraphic nomenclature for the Proterozoic rocks within the Thompson Nickel Belt that is summarized in the stratigraphic column shown in Figure 7.1.

FORMATION	MEMBER	FORMATION	Proterozoic Ospwagan Group Stratigraphic Column
BAH LAKE FORMATION Mafic to ultramafic volcanic rocks	01,2,3		
SETTING	S2		LEGEND
FORMATION Upperclastic sediments	S1		Mafi oto ultramafic metavokanics Rare felsic metavobanics Metamorphosed conglomerates, greywackes
PIPE FORMATION Pelific sediments and iron formation	P3		and minor pelitic sediments Interlayered quartzites and schists Pelitic schists Silicate facies iron formation Sulphide facies iron
	P2		T Dolomitic mable Impure calcareous P Semipelitic schists or gneiss
THOMPSON FORMATION Calcareoussediments	T3 -T2 - T1		Basal quartzite Local basal conglo merate
MANASAN FORMATION Lowerclastic sediments	M2 M1		Angular unconformity with local relics of a regolith Archean basement gneisses
ARCHEAN BASEMENT	А		T – Thompson deposit P – Pipe deposit

Figure 7.1: Stratigraphic column for Thompson Nickel Belt (after Bleeker, 1990)

The rocks of the Thompson Nickel Belt have been complexly folded and three major periods of folding are commonly recognized. The earliest structures due to compressional tectonism are isoclinal F1 folds that may be of regional extent. F1 preceded the emplacement of Molson dikes. The metamorphic regime during F1 is unknown. F1 is overprinted by F2 isoclinal folds that developed under high temperature and caused folding of the Molson dikes. The thermal peak of regional metamorphism overprinted F2. At least 30 million years later, and at much lower temperatures intense sinistral transpression produced high amplitude, nearly upright, doubly plunging F3 folds that transposed the pre-existing recumbent fold pile into a steep gneiss and schist belt.

## 7.3 Property Geology

Underlying the surficial cover are flat lying Ordovician dolomite and sandstone (Figure 7.2). The dolomite is fine grained, massive to stratified and varies in color from creamy white to tan brown to bluish grey. Dolomite thickness ranges from approximately 40 to 60 meters with thickness increasing southward. The upper part of the sequence is stratified with horizontal clay/organic beds 1.0 to 5 mm in thickness at intervals ranging from millimetres to a meter. A stratified zone of dolomite breccia and microfracturing characterized by dolomite clasts in a carbonate clay matrix and varying in thickness from 0.3 to 3.0 m is located between depths of approximately 15 and 20 m below the surface of the unit. Scattered throughout the dolomite are occasional soft clay seams ranging from 1 to 2 cm in thickness. The seams may contain dolomite fragments and sand grains and vary in orientation from semi horizontal to semi vertical.

The Ordovician sandstone occurs stratigraphically below the dolomite and occurs approximately 45 to 75 m below surface. The constituent sandstone units range in thickness from 5.0 to about 15 m. Cohesiveness varies from consolidated and carbonate cemented to semi consolidated, friable and clay/silt rich to unconsolidated sand. Clay/silt rich zones are brown grey in color while white zones are carbonate cemented. Core recovery of the sandstone ranges from 15% to 98%.

Below the Paleozoic sandstone the Precambrian rocks are intensely weathered below the unconformity, typically over distances ranging from about 0.5 to 35 m, sometimes with complete obliteration of original textures. Alteration minerals include kaolin, sericite, chlorite, biotite and carbonate. The alteration is whitish green to bluish green in color, soft, and can be semi consolidated, friable and/or unconsolidated. Weathering persists along zones of intense fracturing down to depths of 60 m below the Paleozoic-Precambrian unconformity. At depth, the weathering is most apparent in granitic rocks where fracture cleavage is prominent, resulting in alternating zones of altered fractured rock, and unaltered rock that vary in width from about .15 m to greater than 3 m. The alteration varies from weak to intense with intensely altered rock being poorly consolidated.



#### Figure 7.2: Minago Nickel Project surface geology map

The Precambrian basement comprises a variety of lithologies that are briefly described and listed below in decreasing order of abundance:

- Granitic rocks include granite, granitic gneiss (foliated granite) and pegmatite sills and dikes. Typically grey to pink, the granitic rocks range from almost white to almost red in colour. Grain size ranges from fine to coarse with medium to coarse grain size predominating. Textures vary from massive to strongly foliated. The granitic rocks are mostly potassium (K) feldspar rich, may contain up to 15% biotite and appear to intrude all other rock types.
- 2. The fine to coarse grained ultramafic rocks that host the Minago Deposit include serpentinized dunite, peridotite (harzburgite, lherzolite, wehrlite) and pyroxenite (orthopyroxenite, websterite, clinopyroxenite). The ultramafic rocks dip vertically to near vertically with individual bodies having strike lengths up to 1,525 m and widths up to 457.2 m. Serpentinization varies from intense to weak and appears to decrease with depth, most markedly a change is observed at approximately 400 m below surface. Scoates et. al (2017) attribute the change in serpentinization to a change from retrograde metamorphism (serpentine-talc-tremolite-calcite) in the upper part of the ultramafic to prograde metamorphism (tremolite- hornblende-phlogopite) at depth. Zoned

contact alteration on a centimetre to metre scale occurs adjacent to granite and some fractures. From most intense (adjacent to granite or fracture) to least intense (furthest from granite or fracture) the alteration typically comprises biotite/phlogopite-chlorite-tremolite. Varying abundances (<1% to >50%) of fine to coarse grain pseudomorphs of olivine, orthopyroxene and clinopyroxene occur over core intervals ranging from several centimetres to several tens of meters. Magnetite concentrations up to 50% occur locally. Sulphide content is usually <15%.

- 3. Metavolcanic rocks, interpreted to be Bah Lake Formation, include chlorite-biotite schist and amphibolite. Amphibolite is dark green to black, fine to medium grained, foliated and lineated.
- 4. Metasedimentary rocks, interpreted to be Pipe Formation, comprise sillimanite paragneiss, siliceous sediments, skarn, iron formation, graphitic sediments, semi-pelite and calcsilicate. Distinctive minerals include graphite, sillimanite, garnet, diopside, carbonate, muscovite and very fine grain quartz. Sulphide facies iron formation comprises semi-massive to massive pyrite and pyrrhotite, sometimes nodular, and associated with detrital metasediments often containing siliceous fragments and includes sulphide breccia in zones of cataclastic deformation.
- 5. Molson dykes and sills (mafic) that are olivene rich.

The Precambrian lithologies have undergone complex multiphase ductile and brittle deformation. Interpretations of magnetic data suggest that the ultramafic rocks containing the Minago Deposit have undergone dextral strike slip fault movement which resulted in a large Z shaped drag fold and that the deposit is located on an eastern limb. Vertical longitudinal sections of the mineralized zones indicate that the fold plunges steeply towards the southeast.

Observations of the mineralized lenses indicate lateral/vertical displacement resulting in the development of drag folds and boudins. In some cases, the mineralization has been folded, creating mineralized zones of economic interest with true widths of up to approximately 25 m, or has been apart, creating parallel zones of the same lens.

Cataclastic deformation with lateral and vertical displacement is indicated by fault gouge and fault breccia zones in both ultramafic rocks and granitic rocks. These zones range in width from 1 mm to 10 cm, are subvertical to vertical, and parallel the trend of the ultramafic rocks. Fault gouge is characterized by clay rich seams with or without fragments. Fault breccia is characterized by angular fragments in a matrix of serpentine, carbonate and clay minerals.

Cataclastic zones in serpentinitized ultramafic rocks are grey in color, soft, and associated with massive and fine grained units, whereas in granitic rocks they are red to brown in color and associated with fracture cleavage. Cataclastic deformation confined to relatively fresh ultramafic rocks has a ground appearance, is brittle and poorly consolidated. Mylonite has an aphanitic to vitreous texture and is light to dark in color. Mylonitization in granitic rocks is proximal to contacts between the granitic rocks and serpentinized ultramafic rocks. Fracture cleavage occurs adjacent to zones of cataclastic deformation and folding. More readily observed in granitic rocks, the fractures also occur in serpentinites as open fractures and minor shears that are schistose and contain talc, chlorite, phlogopite and biotite. Two fracture cleavage orientations are indicated: parallel to foliation; and acute to approximately perpendicular to foliation. Fractures filled with carbonate and serpentine are cohesive. Fractures filled with sericite and clay minerals lack cohesion and possess slickensides.

## 7.4 Mineralization

The dominant geological feature with mineralization potential underlying the Project area is a series of boudinaged, nickeliferous ultramafic bodies folded in a large Z-shaped pattern. The ultramafic bodies contain intraparental magmatic nickel sulphide mineralization and intrude mafic metavolcanic and metasedimentary host rocks interpreted to be lower Pipe Formation stratigraphy. Within the ultramafic rocks, the nickel sulphides are concentrated in tabular lenses that parallel the trend of the ultramafic bodies. Two main, drilling-defined areas of nickel mineralization comprise the current Minago Deposit, these being the Nose Zone and Limb Zone. The Nose Zone has been most extensively investigated by drilling to date. The combined strike length of the mineralized zones is approximately 2500 metres and mineralization has been defined to a depth of at least 925 metres in the Nose Zone and to at least 450 metres in the Limb Zone.

Lower grade nickel occurs between and adjacent to the higher-grade lenses. Typically, nickel sulphides are fine grained, varying in grainsize from <0.5 to 4 mm (generally 1 to 2 mm) and range in volume from 2 to 15% (generally 2 to 7%). The nickel sulphides predominantly occur as disseminated crystals, small aggregates (<5mm) and occasionally are net textured. The dominant sulphide species are nickel bearing pentlandite with lessor violarite and millerite. Minor amounts of pyrite, pyrrhotite and chalcopyrite are present. Graphitic, coarse grained and sometimes nodular sedimentary and extraparental nickeliferous sulphide mineralization occurs sporadically along the southeast margin of the Minago deposit.

Diamond drilling in the North Limb Zone has intersected a number of boudinaged ultramafic bodies that contain nickel mineralization similar to that at the Nose Zone area. These form part of the current mineral resource estimate. The southern part of the Project area has not had any significant work since the 1970s period. A number of other intersections of nickel-bearing ultramafics have been encountered elsewhere on the Project area and described in historical reporting, but have also not been followed up in detail to date.

#### 8.0 DEPOSIT TYPES

Nickel sulphide mineralization hosted by sedimentary or intrusive rocks are recognized as the two main forms of economically important deposit types in the Thompson Nickel Belt. These are often closely related spatially and can be distinguished on the basis of field observations, structural, textural, mineralogical and chemical criteria.

The nickel mineralization of the Thompson Nickel Belt is hosted almost exclusively within lower Pipe Formation sequences. All mineralization of potential economic interest is considered to have a magmatic origin, and is associated with evolution of the large volumes of ultramafic and mafic intrusive rocks that are present in this area. Magmatic nickel sulphide mineralization can be intraparental or extraparental, based on whether it occurs within, or external to, the magmatic, commonly ultramafic, parent rocks. Typically, massive extraparental sulphide mineralization occurs as pods and lenses of variable size within host pelitic schist units adjacent to source ultramafic intrusions that have been deformed into large boudins by regional deformation processes. The interpretation of the magmatic affinity of the extraparental mineralization is based on certain shared chemical characteristics with the intraparental mineralization. Intraparental mineralization occurs as lower abundances of disseminated, interstitial sulphide and semi massive to massive concentrations of sulphide in veins and breccias, all of which occur within their source ultramafic intrusions.

For current purposes, the Minago Project nickel mineralization is classified as being of magmatic origin and associated with emplacement of large ultramafic intrusions. The intrusions were preferentially emplaced into the lower Pipe Formation and then subjected to multi-phase deformation that resulted in development of extraparental styles of nickel sulphide mineralization in addition to widespread intraparental styles.

## 9.0 EXPLORATION

Flying Nickel has not completed any exploration on the Project as of the effective date of this Technical Report. Refer to Section 6 of this Technical Report for a summary of exploration work completed by previous operators of the Project.

#### 10.0 DRILLING

Flying Nickel has not completed any drilling on the Project as of the effective date of this Technical Report. The drilling program descriptions provided below are based on historical drilling completed by Amax, Granges Exploration, Blackhawk Mining Inc., Nuinsco, and Victory Nickel between 1966 and 2012, all previous operators of the Project. Brief descriptions of these historical drilling programs are also included in Section 6 of this Technical Report. Detailed data from all of the historical drilling programs described below have been incorporated into the validated drilling database that supports the current mineral resource estimate described in Section 14 of this Technical Report. Figure 10.1 provides a summary collar location plan for the referenced drill holes and identifies the Nose Zone and North Limb Zone areas of the Deposit.

The report author has investigated and verified, where possible, the drilling, core logging, sampling, and QAQC procedures used during the 1966 to 2012 drilling programs on the Project and is of the opinion that field staff used procedures meeting the exploration best practice guidelines at the respective times. On that basis, the validated assay results obtained from these drilling programs are considered suitable for use in the current mineral resource estimate discussed in Section 14. Further discussion on the QAQC results and any associated issues from the historical drilling programs are appears in Section 11 of this Technical Report.

## 10.1 Amax, Granges, and Black Hawk Drilling - 1966 to 1991

Between 1966 and 1972, Amax completed 44 drill holes on the Project focused on the ML-002 and ML-003 areas. A reported 18 diamond drill holes plus 1 wedge hole were initially completed in the project area, with an additional 14 holes completed on ML-002 (Figure 10.2 through Figure 10.6) and 12 diamond drill holes completed on ML-003 (10.7). These drilling programs resulted in the discovery of the Nose Zone, which forms a significant part of the "Minago Deposit" as addressed in this Technical Report. A total of 29 diamond drill holes, including wedge holes, for a total of 11,581 m are compiled in the Project drill hole database from the Amax drill programs.

Eight diamond drill holes plus nine 9 wedge holes were completed by Granges between 1973 to 1976 (Figure 10.2 through 10.6). Limited in-hole surveys were completed for the drill program. A total of 11 diamond drill holes, including wedge holes, for a total of 6,440 m are compiled in the project drill hole database from the Granges drill program. Drill holes excluded from project database were either lost or abandoned prior to intersecting the deposit or occur outside of the deposit peripheral limits.

Forty-five holes plus 1 wedge hole were completed by Black Hawk between 1989 to 1991 in the Project area (Figure 10.2 through 10.6). Collars were surveyed for location and in-hole orientation surveys were conducted on the majority of holes. A total of 52 diamond drill holes, including wedge holes and abandoned holes intersect or partial intersect the Deposit, for a total of 23,292 m are compiled in the Project drill hole database from the Black Hawk drill program.



Figure 10.1: Summary collar location map for Minago Project drilling database holes



#### Figure 10.2: Collar location Map 1 for Amax, Granges, and Black Hawk drill holes on ML-002



Figure 10.3: Collar location Map 2 for Amax, Granges, and Black Hawk drill holes on ML-002



Figure 10.4: Collar location Map 3 for Amax, Granges, and Black Hawk drill holes on ML-002



Figure 10.5: Collar location Map 4 for Amax, Granges, and Black Hawk drill holes on ML-002



Figure 10.6: Collar location Map 5 for Amax, Granges, and Black Hawk drill holes on ML-002





Due to the Minago Deposit having been the subject of several periods of work over the years by various project operators since its discovery in the late 1960's, the paper records concerning the Project have passed through many hands. Consequently, some original drilling and assay information appears to have been lost from the records. For example, there are no certified laboratory analytical reports available for "G-coded" drill holes completed on the project by Granges Exploration from 1974 to 1976, making data verification difficult. Some resampling of this G-coded drill core was attempted by Victory Nickel and these updated results are included in the current Project drillhole database. Down-hole survey techniques have varied between 1966 to 2005, but the Blackhawk Mining drill holes (B- and BHK-coded holes), which constitute the bulk of the pre-Nuinsco/Victory Nickel drill hole database content, appear to have been routinely surveyed by means of either Sperry Sun or Fotobar gyroscopic surveys.

Each prior operator conducted their sampling and analyses in a slightly different manner, but each employed a program of QAQC procedures involving check and duplicate analyses intended to assess the accuracy and reproducibility of nickel value determinations. For example, during the Amax period it was identified that not all of the nickel determined by a "total nickel" analysis would be recoverable metal. This conclusion was confirmed in a subsequent study by Blackhawk Mining and both showed that recoverable nickel was primarily sourced from nickel present in sulphides. This topic is further discussed in Section 11.

Amax geologists typically sampled the drill core continuously through, or across an entire core intersection where nickel mineralization was believed to be present. Individual sample lengths ranged from a few feet up to 20 to 25 feet (6.1 to 7.6 m), in some cases, with the division point between adjacent samples determined either by the abundance of sulphide mineralization or by contacts with non-mineralized lithologies. In contrast, Granges Exploration typically did not sample core determined from visual inspection to be non-mineralized or those portions of a mineralized intersection suspected to contain only sub-economic nickel values. Consequently, there are numerous small to large (15 cm to 6 m) sample gaps within assayed intervals. These unsampled sections were assigned assay values of zero within the current digital project database. For the most part they represented granitic dykes with minimal nickel content, however, some represented hybrid lithologies and fractured altered units which could contain minor nickel. The consequence of arbitrarily assigning zero grade to these unsampled intervals at the time is that for an intersection within a particular Granges Exploration (G-coded) drillhole the overall nickel grade may be understated.

Blackhawk Mining was focused on defining a deposit which could be mined by underground methods. Sampling was undertaken continuously across mineralized intersections, employing, almost without exception, a standard five-foot (1.52 m) sample length. Subsequent to hole B-10-89, Blackhawk Mining began using XRF determined total nickel rather than the geochemical assays employed in their earlier work. As Amax had determined during their earlier study, the two methods produced comparable values, but XRF numbers frequently showed better reproducibility.

Nuinsco and Victory Nickel made several attempts to resample any remaining Amax, Granges Exploration, and Blackhawk Mining drill core and these check assay results have been incorporated into the validated

drillhole/assay database used to produce the current mineral resource estimate that is described in Section 14 of this Technical Report. These QAQC program results are also summarized in Section 11 of this Technical Report.

## 10.2 Nuinsco Diamond Drilling - 2005

Between January and April 2005, Nuinsco drilled 6 diamond drill holes or 2,948.1 metres (N-05-01 to N-05-06) on Mineral Lease ML-002 using Major Drilling Group International Inc. ("Major Drilling") (Table 10.1 and Figure 10.8). All holes, except N-05-05, were drilled in the Minago Deposit to verify earlier diamond and Figure 10.2). All holes, except N-05-05, were drilled in the Minago Deposit to verify earlier diamond

Hole ID	Northing (m) UTM NAD83 (Zone 14N)	Easting (m) UTM NAD83 (Zone 14N)	Elevation (m - asl)	Hole Length (m)	Inclination (deg)	Azimuth (deg)
N-05-01	5993484.4	487284.5	246.3	404.0	-53	176
N-05-02	5993616.4	487439.7	246.6	696.0	-58	185
N-05-03	5993736.9	487556.6	246.9	296.9	-50	123
N-05-04	5993804.1	487477.6	246.7	456.0	-50	132
N-05-05	5994697.5	488028.2	246.6	455.4	-53	269
N-05-06	5993622.2	487494.4	246.3	639.8	-58	187
			Total =	2,948.1 m		

Table 10.1: Collar table for 2005 diamond drilling program

drill results, provide infill data and extend previously intersected mineralization. Hole N-05-05 was drilled 900 m northeast of the Minago Deposit to explore the North Limb. The holes were collared with NW casing and drilled through the overburden to the limestone. Thereafter, the hole was drilled with NQ size rods through the dolomite and sandstone and into the Precambian basement at which point the hole was reduced to BQ size and drilled to the required depth. During the BQ drilling phase, the NQ rods were left in the hole to act as casing and thereby prevent the unconsolidated sandstone flowing into the hole. Upon completion of the hole, both the BQ and NQ rods were removed but the NW casing was left in place and capped with an aluminum plug stamped with the hole number. A BQ size safety plug was installed below the Ordovician-Precambrian unconformity and an NQ safety plug was installed in the dolomite above the sandstone. The only exception to this procedure occurred in hole N-6A where all casing and drill rods were removed and the hole was abandoned when the rods became stuck in sandstone at a depth of 80 m.

During the drilling of each hole Major Drilling collected Reflex EZ-Shot data approximately every 50 m down hole. Reflex EZ-Shot measures six parameters in one single shot; azimuth, inclination, magnetic tool face angle, gravity roll angle, magnetic field strength and temperature. The azimuth data are not reliable due to the magnetic properties of the rocks. Reflex Instrument North America personnel traveled to the property on three occasions to conduct surveys using the Reflex Maxibor. The Reflex Maxibor calculates the spatial coordinates every 3 m along the drill hole path based on optical measurements of dip and direction changes. All holes except N-3 were surveyed. Holes were not surveyed in their entirety due to considerable difficulty in getting the instrument down the hole (inside the BQ rods).





Drill hole collars were surveyed for location, azimuth and dip by Pollock and Wright, Land Surveyors utilizing a Trimble RTK5700 dual frequency Global Positioning Survey (GPS) instrument. The survey was performed in NAD 83 Universal Transverse Mercator (UTM) co-ordinates (Zone 14N) and converted to both geodetic and local grid co-ordinates. Dip values for the drill holes are not valid due to droop in the survey rod however, location co-ordinates and azimuths are considered reliable.

Drill supervision, core logging and sample selection was performed by a qualified person hired on a contract basis by Nuinsco. Upon completion of each hole, all of the drill core except for hole N-6A was transported by Nuinsco personnel to the company's facility near Black Hawk, in northwest Ontario where the core was logged, split and stored. Hole N-6A was examined but not logged and is stored on the property. Each hole was also logged for rock quality designation (RQD). Samples were shipped by commercial trucking to the ALS Chemex laboratory to Thunder Bay, Ontario for sample preparation and thereafter the pulps were shipped by ALS Chemex to their laboratory for analysis.

## 10.2.1 Drilling Results

**Drill hole N-05-01** was drilled to a depth of 404 metres to extend and verify the mineralization intersected in Amax drill hole 70-48 on mine grid Section 10,000E (Imperial). Significant assay intervals stated in weighted averages (distances are core length, true width was unknown at the time) include:

From 143.67 m to 179.18 m (35.51 m) grading 1.07% Ni (in serpentinite)

o Includes: 145.53 m to 174.50 m (28.97 m) grading 1.20% Ni (in serpentinite)

From 191.34 m to 251.00 m (59.66 m) grading 0.80% Ni (in serpentinite)

- o Includes: 209.40 m to 225.50 m (16.10 m) grading 1.78% Ni (in serpentinite)
- From 320.34 m to 391.22 m (70.88 m) grading 1.03% Ni (in serpentinite)
  - o Includes: 330.16 m to 391.22 m (61.06 m) grading 1.15% Ni (in serpentinite)

**Drill hole N-05-02** was drilled to a depth of 696 metres to verify and extend the mineralization intersected in Granges drill hole G4-W3 plotted on mine grid section 10,500E (Imperial). Substantial intervals of serpentinite, peridotite and highly altered ultramafic rocks were encountered however nickel values are less than reported for drill hole G4-W3. Significant assay intervals, weighted average (distances are core length) include:

From 630.65 m to 659.32 m (28.67 m) grading 0.25% Ni (in peridotite)

From 665.95 m to 687.06 m (21.11 m) grading 0.57% Ni (in peridotite)

**Drill Hole N-05-03** was drilled to a depth of 296.94 metres to explore up dip the mineralization intersected in Black Hawk hole B-19. Significant assay intervals, weighted average (distances are core length) include:

From 148.66 m to 171.50 m (22.84 m) grading 0.34% Ni (in serpentinite)

o Includes: 158.00 m to 163.83 m (5.83 m) grading 0.74% Ni (in serpentinite)

From 176.61 m to 193.82 m (17.21 m) grading 0.46% Ni (in serpentinite)

- o Includes: 180.50 m to 186.91 m (6.41 m) grading 0.91% Ni (in serpentinite)
- o and 189.50 m to 193.82 m (4.32 m) grading 0.88% Ni (in serpentinite)

From 201.42 m to 278.12 m (76.70 m) grading 0.40% Ni (in serpentinite)

o Includes: 252.40 m to 274.63 m (22.23 m) grading 0.72% Ni (in serpentinite)

**Drill Hole N-05-04** was drilled to a depth of 456.03 metres to explore down dip the mineralization intersected in Black Hawk hole B-19. Significant assay intervals, weighted average (distances are core length) include:

From 277.53 m to 284.35 m (6.82 m) grading 0.75% Ni (in serpentinite)

o Includes: 280.69 m to 282.95 m (2.26 m) grading 1.54% Ni (in serpentinite)

**Drill Hole N-05-05** was drilled to a depth of 455.40 m to explore the North Limb ultramafic rocks. Significant assay intervals, weighted average (distances are core length) include:

From 98.27 m to 436.20 m (337.93 m) grading 0.33% Ni (in serpentinite)

- o Includes: 179.00 m to 215.18 m (36.18 m) grading 0.36% Ni (in serpentinite)
- o Includes: 221.00 m to 302.34 m (81.34 m) grading 0.59% Ni (in serpentinite)
- o Includes: From 428.58 m to 436.20 m (7.62 m) grading 0.65% Ni (in serpentinite)

**Drill hole N-05-06** was drilled to a depth of 639.81 metres to extend and verify nickel values intersected in serpentinite and peridotite by Granges drill hole G4-W3 plotted on mine grid section 10,500E. Significant assay intervals, weighted average (distances are core length) include:

From 83.14 m to 108.50 m (25.36 m) grading 0.33% Ni (in serpentinite)
From 128.00 m to 199.49 m (71.49 m) grading 0.34% Ni (in serpentinite)
From 358.75 m to 374.00 m (15.25 m) grading 0.30% Ni (in serpentinite)
From 524.00 m to 603.60 m (79.60 m) grading 0.43% Ni (in peridotite)
Includes: From 567.29 m to 603.60 m 36.31 m grading 0.66% Ni (in peridotite)

#### 10.3 Nuinsco Diamond Drilling - 2006

Between March 4 to April 21, 2006, Nuinsco completed two diamond drill holes (NM-06-01 and NM-06-02) totaling 1,533.6 metres using Major Drilling (Table 10.2 and Figure 10.9). The drilling was undertaken in order to: (1) confirm and upgrade resource estimates of the deposit, (2) enable geotechnical observations and measurements to revise preliminary open pit shell designs, (3) and provide additional material for metallurgical testing. Drill holes were collared with NW casing that was drilled through the overburden to the dolomite. Thereafter, the holes were drilled with NQ size rods through the dolomite, sandstone and into the Precambian basement at which point drill rods were reduced to BQ size and drilled to the required depth. During the BQ drilling phase, the NQ rods were left in the hole to act as casing and thereby prevent the unconsolidated sandstone collapsing into the hole. Upon completion of the hole the BQ and NQ rods were removed but the NW casing was left in place, capped with an aluminum plug stamped with the hole number. A BQ-size safety plug was installed below the Ordovician-Precambrian unconformity and an NQ safety plug was installed in the limestone above the sandstone.

In-hole surveys were performed by Major Drilling personnel utilizing a Reflex EZ-Shot instrument. During the drilling of each hole the drill crew collected Reflex EZ-Shot data approximately every 50 m down the hole. Reflex EZ-Shot measures six parameters in one single shot; azimuth, inclination, magnetic tool face angle, gravity roll angle, magnetic field strength and temperature. The azimuth data are not reliable due to the magnetic properties of the rocks. The BGO-01 probe and operating software, a down hole gyroscopic survey system, was utilized to obtain a continuous record of drill hole dip and azimuth orientation. The down hole surveys were performed by the project geologist.

Drill hole collars were surveyed for location, azimuth and dip by Pollock and Wright, Land Surveyors, with a Trimble RTK5700 dual frequency Global Positioning System (GPS) survey instrument. The survey was performed in NAD83 UTM co-ordinates (Zone 14N) and converted to both geodetic and local grid coordinates. Dip values for the drill holes are not valid due to droop in the survey rod however location coordinates and azimuths are considered reliable.

Hole ID	Northing (m) UTM NAD83 (Zone 14N)	Easting (m) UTM NAD83 (Zone 14N)	Elevation (m)	Hole Length (m)	Inclination (deg)	Azimuth (deg)
NM-06-01	5993696	487137	246.3	678	-74°	172°
NM-06-02	5993684	487599	246.2	855.6	-61°	191°
			Total =	1,533.6 m		

 Table 10.2: Collar table for 2006 diamond drilling program

#### 10.3.1 Drilling Results

Drill hole NM-06-01 was drilled to a depth of 678 m to probe beneath the westerly terminus of the Minago Hinge Zone. No ultramafic rock was encountered, and the hole was stopped well short of its intended depth. The drill hole failed to intersect the first of two expected mineralized ultramafic horizons, which had been anticipated to occur near 500 m depth. Beneath the Ordovician cover rocks, the drill hole intersected intermixed granitic units and amphibolites to 490 m and then remained in a rather uniform, fresh, and non-foliated granitic body to the point at which the hole was stopped. The deposit body may be a late to post tectonic intrusion disrupting or displacing the downdip projection of the ultramafic zone, or alternatively a sub-concordant large dyke dipping subparallel to the steeply inclined drillhole.

Drill hole NM-06-02 was drilled to a depth of 855.6 m at an oblique angle to the strike of the mineralized horizons targeted, in order to maximize the amount of material recovered from the hole suitable for use in metallurgical studies. The drill hole encountered Ordovician sedimentary rocks to 83 m followed by sporadically lightly mineralized serpentinite-dominated ultramafic rocks to about 485 m. This is followed by a transitional zone of frequently coarse grained altered pyroxenite consisting of talc-altered pigeonite interstitial to early dark coloured pyroxenes, with frequent grayish to whitish gneiss segments, which extends to 635 m. Below this point the altered ultramafic material becomes well mineralized, containing from about 2-12% mm-sized disseminated sulphides.

Analytical values returned from the uppermost portion of the drill hole typically ranged from 0.15% to 0.30% weight percent nickel in serpentinite, with a few samples returning lower values near 0.10% and others higher values of about 0.4%. Copper, silver and cobalt values were negligible, and non-ultramafic lithologies are barren of elevated values in all of the elements analysed for. The midportion of the drill hole returned nickel values typically in the 0.30% to 0.40% range, with isolated higher values up to 0.60%. The better mineralized ultramafic material within the lowermost portion of the drill hole returned values generally ranging from 0.85% nickel up to a maximum value of 2.50% over a sample length of 0.87 m. Samples composed of altered ultramafic and intermixed small granitic dykes, and a section from about 717 m to 747 m which resembles the midportion of the hole returned variable nickel values ranging generally from 0.20% to 0.40%.



#### Figure 10.9: Collar location of 2006 Nuinsco diamond drill holes

Weighted average nickel grades for the two well mineralized sections within the lowermost portion of the hole are shown below in Table 10.3, as well as an average grade for the two intervals combined, including the lower grade intervening material between the zones. True widths were unknown at the time.

#### Table 10.3: Significant intercepts for NM-06-02

NM-06-02	From (m)	To (m)	*Core	Weighted Average
			Length (m)	Nickel (%)
	632.2	829.8	197.6	0.82
including	632.2	694.8	62.6	1.08
and	749.0	829.8	80.8	1.04

\*Sampled core length - true widths were not provided in reporting

#### 10.4 Victory Nickel Diamond Drilling - 2007

Between January and May 2007, Victory Nickel completed 44 diamond drill holes on Mineral Lease 2 (ML-2) in the Project area for a total of 13,284.2 m (Table 10.4 and Figure 10.10). The drill holes were drilled to add to and increase confidence in the resource for the Minago Deposit. Drilling was carried out by Major Drilling from a drill camp located immediately to the east of Highway 6, about 10 km south of the drill sites.

Hole ID	Northing (m) UTM NAD83 (Zone 14N)	Easting (m) UTM NAD83 (Zone 14 N)	Azimuth (deg)	Inclination (deg)	Hole Length (m)
N-07-01	5993573	487532	122°	-50°	260
N-07-02	5993523	487502	122°	-50°	155
N-07-03	5993469	487468	122°	-50°	248
N-07-04	5993684	487599	122°	-50°	212
N-07-05	5993728	487631	122°	-50°	170
N-07-06	5993625	487566	122°	-50°	194
N-07-07	5993360	487302	167°	-50°	308
N-07-08A	5993779	487664	122°	-50°	200
N-07-09	5993367	487253	209°	-50°	323
N-07-10	5993500	487704	302°	-50°	313.8
N-07-11	5993479	487176	209°	-50°	362
N-07-12	5993325	487383	167°	-50°	254
N-07-13	5993195	487307	347°	-50°	455
N-07-14	5993465	487365	220°	-45°	506
N-07-15	5993503	487403	171°	-45°	377
N-07-16	5993593	487294	220°	-45°	542
N-07-17	5993640	487412	128°	-45°	392
N-07-18	5993736	487494	128°	-45°	341
N-07-19	5993740	487438	185°	-45°	518
N-07-20	5993425	487145	209°	-50°	280
N-07-21	5993259	487071	029°	-50°	200
N-07-22	5993110	487038	029°	-50°	502
N-07-23	5993301	487615	317°	-50°	247
N-07-24	5993725	487214	175°	-60°	304
N-07-25	5993300	487036	029°	-50°	200
N-07-26	5993372	486933	095°	-60°	410
N-07-27	5993215	487099	029°	-50°	239
N-07-28	5993205	487366	347°	-50°	458.38
N-07-29	5993599	486961	126°	-60°	298
N-07-30	5993217	487175	029°	-50°	203
N-07-31	5993076	487167	017°	-63°	376
N-07-32	5993670	487042	146°	-60°	300
N-07-33	5993147	487201	029°	-50°	200.07

Table 10 4. Collar	table for 2007	diamond	drilling program
			urning program
mercator

Hole ID	Northing (m) UTM NAD83 (Zone 14N)	Easting (m) UTM NAD83 (Zone 14 N)	Azimuth (deg)	Inclination (deg)	Hole Length (m)
N-07-34	5993427	487113	209°	-50°	269
N-07-35	5993375	487361	167°	-50°	296
N-07-36	5993360	487692	296°	-60°	320
N-07-37	5993395	487201	209°	-50°	303.5
N-07-38	5993266	487545	329°	-59°	186.48
N-07-39	5993520	487774	280°	-60°	299
N-07-40	5993485	486911	098°	-60°	299
N-07-41B	5993199	487547	329°	-59°	311
N-07-42	5993688	487777	255°	-59°	284
N-07-43	5993233	487486	347°	-50°	203
N-07-44	5993222	487426	347°	-50°	165
				Total =	13,284.23 m





Drill holes were collared with NW casing that was drilled through the overburden to the dolomite. Thereafter the hole was drilled with NQ size rods through the dolomite, sandstone and into the Precambrian basement, at which point the hole was reduced to BQ size and drilled to the required depth. During the BQ drilling phase, the NQ rods were left in the hole to act as casing and thereby prevent the unconsolidated sandstone from flowing into the hole. Upon completion of the hole, the BQ and NQ rods were removed but the NW casing was left in place, capped with an aluminum plug stamped with the hole number. A BQ size safety plug was installed below the Ordovician-Precambrian unconformity and an NQ safety plug was installed in the dolomite above the sandstone. The hole was cemented between the plugs. Downhole orientation surveys were completed by Major Drilling using a Reflex EZ-Shot® approximately every 50 metres down the hole. The drill collars were surveyed for location, azimuth and inclination by Pollock and Wright (land surveyors) with a Trimble RTK5700 dual frequency GPS survey instrument.

The drill core was transported to Victory Nickel's core storage facility in Grand Rapids, Manitoba and securely stored indoors for processing and logging/sampling. The core was photographed, logged initially for geotechnical data the core was subsequently logged for lithology, alteration and mineralization. Sample intervals were selected and the core was split using a diamond saw. Each sample was uniquely identified with a sample number and placed in a plastic sample bag that was stapled shut. The samples were placed in large, addressed fabrene bags that were wired shut and palletized for shipment. Drill supervision, lithologic core logging and sample selection was performed by qualified persons hired on a contract basis and supervised by Paul Jones, Vice President - Exploration for Victory Nickel.

Five drill holes completed for metallurgical test work were logged for geology, sample intervals, and tagged but the core was not split. After logging, lids were placed on the core boxes that were then palletized, strapped and shipped to SGS Lakefield in Lakefield, Ontario, where the core was whole sampled, crushed and riffle split prior to assaying.

### 10.4.1 Drilling Results

A total of 5,407 samples, including drill core, reference standards and blanks, were submitted for analysis. All were analyzed for Ni (Total or aqua-regia extractable, or both) and most were also analyzed for Cu. Selected samples were subjected to sulphide-held Ni analysis, as well as Au, Pt, Pd, Ag, As, Co, multielement ICP-MS, Whole-Rock and Specific-Gravity Determinations.

Drill holes N-07-13 and N-07-37 are the best-mineralized of this campaign, with the former intersecting 54 m of exceeding 1% sulphide-held Ni (28% of total ultramafic rock intersected in the hole) and a 31m continuous intersection exceeding 1% total Ni (Table 10.5). The highest Cu assay of the program (0.44%) was also returned for a sample from this hole. The latter hole intersected 78.6 m of exceeding 1% total Ni (41% of total ultramafic rock) and returned one individual Ni assay of 3.09%. Table 10.5 presents significant intercepts and true widths were unknown at the time.

Hole ID	Total m >1% Total Ni (% of total ultramafic)	Total m >1% Total Ni in sulphide (% of total ultramafic)	* Longest Intersection >1% Total Ni (m)	Max. Ni (%)	Max. Ni/S (%)	Max. Cu (%)
N-07-01	1.50 (2%)	0	1.5	1.02	0.86	0.17
N-07-02	1.1 (4%)	0	1.1	1.21	0.53	0.11
N-07-03	0.75 (1%)	0	0.8	3.21	2.18	0.13
N-07-04	0	0	0	0.95	0.50	0.10
N-07-05	0	0	0	0.06		0.03
N-07-06	0.93 (2%)	0	0.9	1.02	0.22	0.14
N-07-07	19.5 (20%)	0	10.7	1.82	1.38	0.09
N-07-08A	0	0	0	0.01		0.02
N-07-09	30.3 (16%)	1.08 (1%)	19.8	2.58	1.55	0.13
N-07-10	17.0 (10%)	1.8 (1%)	9.0	1.99	1.66	0.14
N-07-11	0.80 (0.5%)	0	0.8	1.38	0.56	0.10
N-07-12	11.0 (20%)	0	11.0	1.22	0.98	0.08
N-07-13	55.7 (29%)	53.6 (28%)	31.0	2.72	2.28	0.44
N-07-14	69.0 (24%)	28.9 (10%)	15.7	2.79	2.17	
N-07-15	19.0 (12%)	8.0 (5%)	11.0	2.11	1.38	
N-07-16	54.0 (28%)	1.7 (1%)	18.7	1.88	1.48	
N-07-17	25.4 (14%)	7.9 (4%)	17.5	2.54	1.93	
N-07-18	8.2 (8%)	3.0 (3%)	5.2	1.35	1.19	
N-07-19	3.4 (18%)	0	3.4	1.60	1.22	0.09
N-07-20	1.3 (1%)	0	1.3	1.06	0.14	0.02
N-07-21	0	0	0	0.32	0.08	0.02
N-07-22	20.4 (12%)	16.2 (10%)	7.4	1.51	1.45	0.12
N-07-23	0	0	2.8	3.28	3.00	0.32
N-07-24	0	0	0	0.02		0.01
N-07-25	0	0	0	0.28	0.03	0.01
N-07-26	0	0	0	0.43	0.36	0.05
N-07-27	25.2 (22%)	14.3 (13%)	13.5	1.60	1.53	0.16
N-07-28	7.7 (11%)	0	7.7	1.69	1.54	0.08
N-07-29	0		0			
N-07-30	0	0	0	0.32	0.15	0.03
N-07-31	8.0 (10%)	7.3 (10%)	5.8	1.32	1.24	0.23
N-07-32	0	0	0	0.69	0.61	0.02
N-07-33	0	0	0	1.46	1.50	0.10
N-07-34	0	0	0	0.74	0.65	0.06
N-07-35	24.6 (19%)	18.1 (14%)	18.1	1.68	1.85	0.13
N-07-36	0	0	0	0.92	0.79	0.15
N-07-37	78.6 (41%)	35.7 (18%)	14.5	3.09	1.66	0.21
N-07-38	0	0	0	0.92	0.86	0.09
N-07-39	10.1 (26%)	8.7 (22%)	8.7	1.55	1.33	0.06
N-07-40	0		0			

# Table 10.5: Significant intercepts including >1% Ni intervals for 2007 drilling program

Hole ID	Total m >1% Total Ni (% of total ultramafic)	Total m >1% Total Ni in sulphide (% of total ultramafic)	* Longest Intersection >1% Total Ni (m)	Max. Ni (%)	Max. Ni/S (%)	Max. Cu (%)
N-07-41B	22.9 (26%)	22.9 (26%)	14.1	1.62	1.59	0.15
N-07-42	3 (3%)	3 (3%)	3.0	1.67	1.16	0.19
N-07-43	2.4 (4%)	0.7 (1%)	1.4	1.58	1.26	0.28
N-07-44	21.0 (35%)	0	21.0	1.79	1.72	0.21

\*Sampled core length - true widths were not provided in reporting

### 10.5 Victory Nickel Diamond Drilling - 2008

Between January and May 2008, Victory Nickel completed 18 diamond drill holes for a total of 9,082 m, on Mineral Lease 2 and the adjacent claims in the Project area (Table 10.6 and Figure 10.11). Ten of the holes (V-08-01 to V-08-10) were drilled to increase confidence in the previous historical estimates of Victory's Minago Deposit, while the remaining eight (VC-08-01 to VC-08-08) were condemnation holes put in to confirm the absence of potentially minable material in areas where construction of surface facilities was contemplated.

Hole ID	Northing (m) UTM NAD83 (Zone 14N)	Easting (m) UTM NAD83 (Zone 14N)	Azimuth (deg)	Inclination (deg)	Hole Length (m)
V-08-01	5993163	487531	329.5°	-70.9°	578
V-08-02A	5993061	487095	017.8°	-63.4°	620
V-08-03	5993598	487430	219.6°	-57.1°	713
V-08-04B	5993188	487054	039.1°	-69.3°	890
V-08-05	5993322	487979	271.0°	-50.6°	737
V-08-06	5993611	487486	167.5°	-62.6°	769
V-08-07	5993159	487764	308.3°	-59.4°	683
V-08-08	5993524	487222	128.8°	-61.0°	865
V-08-09	5993551	487258	135.3°	-61.2°	867
V-08-10	5993029	487349	358.1°	-68.2°	875
VC-08-01	5992890	485969	238.2°	-53.0°	200
VC-08-02	5993002	488868	301.0°	-55.3°	167
VC-08-03	5993267	488440	327.5°	-53.2°	166
VC-08-04	5994340	489148	278.1°	-54.4°	167
VC-08-05	5994734	488889	263.8°	-54.2°	173
VC-08-06	5993185	486209	234.6°	-53.3°	200
VC-08-07	5993461	486082	257.0°	-49.8°	200
VC-08-08	5994090	485800	327.5°	-53.2°	166
VX-08-01	5997169	486027	255.5°	-59.0°	360.5
VX-08-02	5997389	485500	241.6°	-54.8°	328

### Table 10.6: Collar table for 2008 diamond drilling program

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Hole ID	Northing (m) UTM NAD83 (Zone 14N)	Easting (m) UTM NAD83 (Zone 14N)	Azimuth (deg)	Inclination (deg)	Hole Length (m)
VX-08-03	5997909	487087	255.4°	-66.4°	300
VX-08-04	5997806	487085	260.7°	-67.1°	302
VX-08-05	5997725	487172	252.9°	-53.8°	273
VX-08-06	5997647	487263	252.6°	-49.0°	320
VX-08-07	5997631	487600	268.4°	-50.2°	302
VX-08-08	5997713	487872	259.8°	-49.8°	332
				Total =	11,599.5 m





In addition, Victory Nickel completed 8 diamond drill holes (VX-08-01 to VX-08-08) for a total of 2,517.5 m on the Xstrata optioned claims in the area, specifically claim numbers P235F, P237F, P238F, P239F, MB8497, and MB8549. The main goals of the Xstrata drilling program were to test EM anomalies detected in the 2007 airborne geophysical survey and to extend and assist in the interpretation of previously-intersected mineralization. Drilling was completed between March 15 and May 6, 2008.

Drilling was carried out by Major Drilling from a drill camp located immediately to the east of Highway 6, about 10 km south of the drill sites. Drill holes were collared with HW casing that was drilled through the overburden to the dolomite. Thereafter the hole was drilled with HQ size rods through the dolomite, sandstone and into the Precambrian basement, at which point the hole was reduced to NQ size and drilled to the required depth. During the NQ drilling phase, the HQ rods were left in the hole to act as casing and thereby prevent the unconsolidated sandstone from flowing into the hole. Upon completion of the hole, the HQ and NQ rods were removed but the HW casing was left in place, capped with an aluminum plug and stamped with the hole number. A NQ size safety plug was installed below the Ordovician-Precambrian unconformity and an HQ safety plug was installed in the dolomite above the sandstone. The hole was cemented between the plugs. The drill collars were surveyed for location, azimuth and inclination by Pollock and Wright (land surveyors) with a Trimble RTK5700 dual frequency GPS survey instrument.

The drill core was transported to Victory Nickel's core storage facility in Grand Rapids, Manitoba and securely stored indoors for processing and logging/sampling. The core was photographed, logged initially for geotechnical data the core was subsequently logged for lithology, alteration and mineralization. Sample intervals were selected and the core was split using a diamond saw. Each sample was uniquely identified with a sample number and placed in a plastic sample bag that was stapled shut. The samples were placed in large, addressed fabrene bags that were wired shut and palletized for shipment. Drill supervision, lithologic core logging and sample selection was performed by qualified persons hired on a contract basis and supervised by Paul Jones, Vice President - Exploration for Victory Nickel.

All intervals of ultramafic and/or sulphide-bearing core, and the rocks on the margins of such intervals, were sampled for assay testing. The maximum sample interval for the former was 1.5 metres, and for the latter, 3.0 metres. As per industry norms, each hole was logged and sample intervals were based on the following hierarchy:

- 1. Rock type
- 2. Alteration (style and intensity)
- 3. Sulphide content (type and abundance)

Core splitting was performed by local contractors. Each sample was placed in a plastic bag along with a tag with a unique identifying number and stapled shut. Samples were shipped by Gardewine transport truck to TSL Laboratories in Saskatoon, Saskatchewan.

### 10.5.1 Drilling Results

A total of 2,462 samples, including drill core, reference standards and blanks, were submitted for nickel and copper analysis. Of these, in addition to total Ni analysis, 1,278 were also subjected to nickel-in-sulphide determinations, 1,572 to specific gravity determinations and 171 to Au/Pt/Pd determinations.

All of the drill holes intersected significant nickel mineralization, with V-08-04B being the best-mineralized in terms of total meterage of core exceeding 1% total nickel (112 m). This hole is also the second-best mineralized in terms of meterage of core exceeding 1% total Ni as a percentage of total intersected ultramafic rock (25%), and the third-best mineralized in terms of meterage of core exceeding 1% Ni in

sulphide as a percentage of total intersected ultramafic rock (15%). The hole also intersected high-grade ultramafic rock including 6.6 metres exceeding 2% total Ni, at a depth of more than 700 metres.

No significant nickel mineralization was intersected in any of the condemnation holes and only one intersected ultramafic rock. Significant intercepts are shown below in Table 10.7. True widths were unknown at the time.

	Total m >1% Total	Total m >1% Total	Longest			
	Ni	Ni in sulphide	Intersection	Max.	Max.	Max. Cu
noie ib	(% of total	(% of total	> 1% Total Ni	Ni (%)	NiS (%)	(%)
	ultramafic)	ultramafic)	(m)			
V-08-01	41.22 (25%)	41.22 (25%)	31.39	2.11	1.65	0.16
V-08-02A	2.35 (1%)	0	1.3	1.47	0.91	0.20
V-08-03	26.5 (19%)	13.69 (10%)	12.13	2.31	2.08	0.11
V-08-04B	112.17 (25%)	66.4 (15%)	24.34	3.52	3.2	0.23
V-08-05	17.99 (25%)	0	14.6	1.48	1.07	0.16
V-08-06	93.87 (22%)	29.12 (7%)	23.95	2.42	2.11	0.68
V-08-07	1.79 (3%)	1.79 (3%)	1.79	5.86	5.29	0.23
V-08-08	8.72 (61%)	7.49 (52%)	7.49	2.28	1.89	0.15
V-08-09	19.69 (14%)	6.94 (5%)	10.83	1.93	1.36	0.23
V-08-10	17.55 (9%)	0	12.93	1.83	1.18	0.11
VC-08-01				0.01		0.02
VC-08-02						
VC-08-03						
VC-08-04				0.01		0.01
VC-08-05						
VC-08-06				0.02		0.02
VC-08-07						
VC-08-08				0.07		0.02

#### Table 10.7: Significant intercepts including >1% Ni intervals for 2008 drilling program

\*Sampled core length - true widths were not provided in reporting

The best assay results from the Xstrata diamond drilling program were obtained in Hole VX-08-03, which was drilled to follow up and confirm encouraging results from three previously drilled Falconbridge holes, and intersected 55.45 m of serpentinite averaging 0.54% Ni, immediately below the Paleozoic cover.

Of the eight holes drilled on the Xstrata option, four holes (VX-08-03 to VX-08-06 inclusive) were drilled in the vicinity of previously known nickel mineralization and four holes (VX-08-01, VX-08-02, VX-08-07 and VX-08-08) were targeted at weak electromagnetic anomalies.

• VX-08-01 - Predominantly granite, mafic metavolcanic with minor intervals of semi pelite and calcsilicate metasediment. Very low sulphide tenor with no nickel enrichment.

- VX-08-02 Predominantly granite, mafic metavolcanic, serpentinite with intervals of semi politic, calc-silicate and sulphide facies iron formation metasediment. Assays indicated no nickel enrichment.
- VX-08-03 Serpentinite containing 0.54% Ni over 55.45 metres core length.
- VX-08-04 Mafic metavolcanic, semi pelite, calc-silicate, marble metasediment. Minor sulphide with no nickel enrichment.
- VX-08-05 Mafic metavolcanic, semi pelite, calc-silicate, marble metasediment. Nil sulphide.
- VX-08-06 Mafic metavolcanic, semi pelitic, metasediment. Nil sulphide.
- VX-08-07 Mafic metavolcanic, semi pelite, calc-silicate, marble metasediment. Minor sulphide with no nickel enrichment.
- VX-08-08 Multiple intervals of serpentinite with minor sulphide and no nickel enrichment.

### 10.6 Victory Nickel Diamond Drilling - 2010

Between January and May 2010, Victory Nickel completed 23 diamond drill holes in the Nose area of the Deposit, within a proposed pit shell, and 3 drill holes in the North Limb of the Minago Deposit for a total of 9,647.7 m (Table 10.8 and Figure 10.12).

The purpose of the 2010 drilling program was to:

- Upgrade Inferred mineral resources within the then-current pit limits to the Indicated or Measured categories so that they could be incorporated in a future mine plan;
- Incorporate areas at the top of the Deposit near the sandstone contact that were excluded from the resource and reserve estimates completed in the 2010 Tetra Tech feasibility study Technical Report due to a perceived lack of drill coverage;
- Obtain additional geological information to improve the predictability of the geological model;
- Further evaluate the potential of the North Limb Zone mineralization and potentially define an exploration target estimating the potential tonnage and grade of North Limb mineralization.

Drilling was carried out by Cyr Drilling International Ltd. from a drill camp located immediately to the east of Highway 6, about 10 km south of the drill sites. Drill holes were collared with HW casing that was drilled through the overburden to the dolomite.

Hole ID	Northing (m) UTM NAD83 (Zone 14N)	Easting (m) (UTM NAD83) (Zone 14N)	Azimuth (deg)	Inclination (deg)	Hole Length (m)
V-10-01	5993710	487540	129	-44	267.6
V-10-02	5993660	487745	310	-49	159.4
V-10-03	5993524	487389	130	-49	338.5
V-10-04	5993525	487720	305	-60	349.3
V-10-05	5993470	487367	179	-46	455.1
V-10-06	5993546	487695	313	-50	260.6
V-10-07	5993082	487381	356	-59	611.2
V-10-08	5993350	487603	305	-56	330.7
V-10-09	5993268	487610	311	-45	339.2
V-10-10	5993213	487498	322	-58	313.0
V-10-11	5993176	487377	0	-61	422.8
V-10-12	5993123	487457	342	-47	233.8
V-10-13	5994669	488027	274	-55	502.0
V-10-14	5993086	487295	12	-54	293.7
V-10-15	5993174	487098	39	-50	337.4
V-10-16	5993356	487016	41	-48	324.3
V-10-17	5993151	487311	12	-50	326.2
V-10-18	5993102	487097	41	-49	513.0
V-10-19	5993080	487209	30	-48	425.8
V-10-20	5993363	487002	40	-46	324.3
V-10-21	5994730	488026	267	-55	502.0
V-10-22	5993291	486942	37	-46	438.9
V-10-23	5993086	487336	3	-55	239.9
V-10-24	5993199	487021	44	-46	478.1
V-10-25	5994700	487683	93	-51	502.0
V-10-26	5993355	486973	43	-47	358.8
Total =					9,647.7 m

#### Table 10.8: Collar table for 2010 diamond drilling program

Thereafter the hole was drilled with HQ size rods through the dolomite, sandstone and into the Precambrian basement, at which point the hole was reduced to NQ size and drilled to the required depth. During the NQ drilling phase, the HQ rods were left in the hole to act as casing and thereby prevent the unconsolidated sandstone from flowing into the hole. Upon completion of the hole, the HQ and NQ rods were removed but the HW casing was left in place, capped with an aluminum plug and stamped with the hole number. An NQ size safety plug was installed below the Ordovician-Precambrian unconformity and an HQ safety plug was installed in the dolomite above the sandstone. The hole was cemented between the plugs. The drill collars were surveyed for location, azimuth and inclination by Pollock and Wright (land surveyors) with a Trimble RTK5700 dual frequency GPS survey instrument.





The drill core was transported to Victory Nickel's core storage facility in Grand Rapids, Manitoba and securely stored indoors for processing and logging/sampling. The core was photographed, logged initially for geotechnical data the core was subsequently logged for lithology, alteration and mineralization.

Sample intervals were selected and the core was split using a diamond saw. Each sample was uniquely identified with a sample number and placed in a plastic sample bag that was stapled shut. The samples were placed in large, addressed fabrene bags that were wired shut and palletized for shipment. Drill supervision, lithologic core logging and sample selection was performed by qualified persons hired on a contract basis and supervised by Paul Jones, Vice President - Exploration for Victory Nickel.

All intervals of ultramafic and/or sulphide-bearing core, and the rocks on the margins of such intervals, were sampled for assay testing. The maximum sample interval for the former was 1.5 metres, and for the latter, 3.0 metres. As per industry norms each hole was logged and sample intervals were based on the following hierarchy:

1. Rock type

- 2. Alteration (style and intensity)
- 3. Sulphide content (type and abundance)

Core splitting was performed by local contractors. Each sample was placed in a plastic bag along with a tag with a unique identifying number and stapled shut. Samples were shipped by truck to TSL Laboratories Ltd. in Saskatoon, Saskatchewan or Acme Analytical Laboratories in Vancouver, British Columbia.

#### 10.6.1 Drilling Results

A total of approximately 4,500 samples, including drill core, reference standards and blanks, were submitted for nickel and copper analysis. The drill holes were located on sections adjacent to or within the fold hinge at the centre of the Nose Zone area of the Deposit. Significant intervals for each drill hole are shown below in Table 10.9. Results reported below are total nickel values over core lengths as true widths were not established at that time.

Hole ID	From (m)	To (m)	* Interval (m)	Ni (Total %)
V-10-01	111.27	121.82	10.55	0.47
	151.03	178.92	27.89	0.60
	204.53	209.45	4.92	0.38
	214.33	227.80	13.47	0.66
	243.40	249.23	5.83	0.97
V-10-02		No signifi	cant results	
V-10-03	135.73	144.41	6.88	0.61
	245.92	284.74	38.82	0.55
including	245.92	253.71	7.79	1.24
and	270.96	284.74	13.78	0.85
	135.73	144.41	6.88	0.61
	245.92	284.74	38.82	0.55
V-10-04	186.70	191.32	4.62	0.47
	201.60	213.75	12.15	0.64
	287.09	297.27	10.18	0.33
	310.90	317.52	6.62	0.69
	338.29	342.23	3.94	0.63
V-10-05	129.02	140.91	11.89	0.69
	220.92	285.7	64.78	0.74
including	253.00	285.7	32.7	0.86
and	253.00	261.85	8.85	1.35
V-10-06	94	143.1	49.1	0.35
including	119.66	140.43	20.77	0.39
	198	213.33	15.13	0.36
	224.18	243.9	19.72	0.47
including	236.7	243.9	7.2	1.04

#### Table 10.9: Significant intercepts reported in total Ni for 2010 drilling program

Hole ID	From (m)	To (m)	* Interval (m)	Ni (Total %)
V-10-07	351.79	358.10	6.31	0.67
	376.31	379.55	3.24	1.15
	502.23	513.35	11.12	1.55
	523.34	544.74	21.40	0.42
V-10-08	124.69	132.55	7.86	0.4
	177.59	187.22	9.63	0.61
	255.19	259.79	4.6	1.09
V-10-09	176.36	233.96	57.60	0.47
including	220.23	233.96	13.73	0.80
and	311.60	318.32	6.72	0.76
V-10-10	147.42	248.40	100.98	0.95
including	150.98	192.30	41.32	1.10
including	206.86	248.40	41.54	1.09
V-10-11	161.50	353.15	191.65	0.51
including	192.90	285.69	92.79	0.81
V-10-12	193.89	233.78	39.89	0.41
including	227.11	233.78	6.67	0.62
V-10-13	98.49	103.72	5.23	1.65
	180.77	314.63	133.86	0.50
including	259.12	311.95	52.83	0.60
including	221.00	249.00	28.00	0.64
V-10-14	249.16	259.41	10.25	0.27
V-10-15	111.67	315.00	203.33	0.63
including	126.00	228.00	102.00	0.90
including	142.00	200.74	58.74	1.11
V-10-16	180.62	320.34	139.72	0.87
including	215.09	233.84	18.75	0.86
and	239.96	310.00	70.04	1.08
V-10-17	173.30	222.95	49.60	0.40
including	208.63	222.95	14.30	1.00
V-10-18	207.56	512.98	305.42	0.48
including	283.36	319.19	35.83	1.07
and	351.00	383.30	32.30	1.48
and	494.25	512.98	18.73	1.04
V-10-19	292.25	336.40	44.15	0.60
V-10-20	100.04	153.30	53.26	0.91
	227.83	318.61	90.78	0.76
including	280.54	301.70	21.16	1.28
V-10-21	173.00	225.24	52.24	0.57
including	186.00	222.66	36.66	0.65

Hole ID	From (m)	To (m)	* Interval (m)	Ni (Total %)
and	259.56	277.81	18.25	0.54
including	259.56	268.00	8.44	0.70
and	283.40	405.00	121.6	0.33
and	482.56	486.77	4.21	1.39
V-10-22	260.70	282.60	21.90	0.96
	391.26	412.20	20.94	1.34
V-10-23		No signifi	cant results	
V-10-24	206.02	216.70	10.68	0.95
	228.87	247.24	18.37	1.14
	271.01	276.40	5.30	0.86
	392.00	441.00	49.00	0.86
V-10-25		No signifi	cant results	
V-10-26	157.03	202.83	45.80	0.86
including	171.20	196.09	24.89	1.04
	269.24	358.75	89.51	0.86
including	277.23	295.98	18.75	0.98
and	306.77	317.64	10.87	1.19
and	327.54	358.75	31.21	1.02

\*Sampled core length - true widths were not provided in reporting

#### 10.7 Victory Nickel Diamond Drilling - 2011

Between February 5, 2011 and April 28, 2011, Victory Nickel completed 20 diamond drill holes (V-11-01 to V-11-14 and V-11-20 to V-11-24) in the Nose Zone and North Limb Zone of the Project for a total of 8,673.4 m (Table 10.10 and Figure 10.13).

The purpose of the 2011 drilling program was to:

- Complete deep holes targeting the down-plunge extension of the significant nickel resource within the Nose Zone. The deep drill holes were meant to target a large magnetic mass shown to extend to a depth in excess of 1.5 km vertically and over 2 km in length incorporating the Nose Zone and the North Limb Zone;
- Define a resource estimate in the North Limb Zone and demonstrate continuity and significant thickness of nickel-mineralized rock similar in character to that which comprises the Nose Zone; and
- Complete several drill holes in the local area of the Nose Deposit to examine the geology and assess local conditions with regard to future mining infrastructure placement.

Hole ID	Northing (m) UTM NAD83 (Zone 14N)	Easting (m) (UTM NAD83) (Zone 14N)	Azimuth (deg)	Inclination (deg)	Hole Length (m)
V-11-01	5994070	487911	270	-50	339.1
V-11-02	5994120	487912	270	-49	206.7
V-11-02A	5994120	487912	270	-56	392.4
V-11-03	5994170	487947	270	-50	429.0
V-11-04	5994220	487905	270	-50	313.1
V-11-05	5994270	487932	270	-50	392.4
V-11-06	5994370	487976	271	-48	337.5
V-11-07	5994420	487988	270	-50	361.9
V-11-08	5994470	487993	269	-49	450.3
V-11-09	5994520	488022	270	-54	400.0
V-11-10	5994570	488060	269	-50	477.6
V-11-11	5994825	488077	271	-50	430.2
V-11-12	5995072	487856	96	-50	361.9
V-11-13	5995150	488169	92	-50	396.7
V-11-14	5995180	487858	101	-49	380.2
V-11-20	5995670	487920	40	-45	383.2
V-11-21	5993373	486951	267	-49	401.5
V-11-22	5992977	487010	9	-66	1,526.5
V-11-23	5993364	486963	38	-45	389.3
V-11-24	5993428	487028	39	-44	304.0
				Total =	8,673.4 m

# Table 10.10: Collar table for 2011 diamond drilling program



Figure 10.13: Collar location of 2011 Victory Nickel diamond drill holes

Drilling was carried out by Cyr Drilling International Ltd. from a drill camp located immediately to the east of Highway 6, about 10 km south of the drill sites. Drill holes were collared with HW casing that was drilled through the overburden to the dolomite. Thereafter the hole was drilled with HQ size rods through the dolomite, sandstone and into the Precambrian basement, at which point the hole was reduced to NQ size and drilled to the required depth. During the NQ drilling phase, the HQ rods were left in the hole to act as casing and thereby prevent the unconsolidated sandstone from flowing into the hole. Upon completion of the hole, the HQ and NQ rods were removed but the HW casing was left in place, capped with an aluminum plug and stamped with the hole number. An NQ size safety plug was installed below the Ordovician-Precambrian unconformity and an HQ safety plug was installed in the dolomite above the sandstone. The hole was cemented between the plugs. The drill collars were surveyed for location, azimuth and inclination by Pollock and Wright (land surveyors) with a Trimble RTK5700 dual frequency GPS survey instrument.

The drill core was transported to Victory Nickel's core storage facility in Grand Rapids, Manitoba and securely stored indoors for processing and logging/sampling. The core was photographed, logged initially for geotechnical data the core was subsequently logged for lithology, alteration and mineralization.

Sample intervals were selected and the core was split using a diamond saw. Each sample was uniquely identified with a sample number and placed in a plastic sample bag that was stapled shut. The samples were placed in large, addressed fabrene bags that were wired shut and palletized for shipment. Drill supervision, lithologic core logging and sample selection was performed by qualified persons hired on a contract basis and supervised by Paul Jones, Vice President - Exploration for Victory Nickel.

All intervals of ultramafic and/or sulphide-bearing core, and the rocks on the margins of such intervals, were sampled for assay testing. The maximum sample interval for the former was 1.5 metres, and for the latter, 3.0 metres. As per industry norms each hole was logged and sample intervals were based on the following hierarchy:

- 1. Rock type
- 2. Alteration (style and intensity)
- 3. Sulphide content (type and abundance)

Core splitting was performed by local contractors. Each sample was placed in a plastic bag along with a tag with a unique identifying number and stapled shut. Samples were shipped by truck to TSL Laboratories Ltd. in Saskatoon, Saskatchewan and Acme Analytical Laboratories in Vancouver, British Columbia.

#### 10.7.1 Drilling Results

A total of approximately 2,925 samples, including drill core, reference standards and blanks, were submitted for nickel and copper analysis. Significant intervals for each drill hole are shown below in Table 10.11. Results reported below are total nickel values over core lengths as true widths were not established.

Hole ID	From (m)	To (m)	*Interval (m)	Ni (Total %)
V-11-01	165.1	182.0	16.9	0.32
	220.8	223.9	3.1	0.29
V-10-02	116.9	121.6	4.7	0.41
	142.0	202.3	60.3	0.45
including	184.8	201.0	16.2	0.80
including	189.6	196.3	6.7	1.08
V-10-02A	162.5	255.0	92.5	0.31
	282.0	289.0	7.0	0.77
including	285.0	287.6	2.6	1.82
	294.5	296.5	2.0	0.50
V-10-03	199.7	228.1	28.44	0.42
	237.8	259.7	21.9	0.31
	291.0	301.9	10.9	0.70
	364.9	367.9	3.0	0.70
V-10-04	203.0	255.0	52	0.63
including	206.0	236.5	30.5	1.01
including	209.0	218.8	9.8	1.56

Table 10.11: Significant intercepts reported in total Ni (1	%) for 2011 drilling program
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#### mercator GEOLOGICAL SERVICES

Hole ID	From (m)	To (m)	*Interval (m)	Ni (Total %)		
including	210.0	212.0	2.0	2.61		
	263.0	292.0	29.0	0.56		
including	270.0	281.0	11.0	1.08		
V-10-05	171.9	200.4	28.5	0.29		
	280.9	298.5	17.6	0.73		
including	282.0	298.5	9.5	1.07		
V-11-06	136.0	147.4	11.4	0.41		
	175.0	214.5	39.5	0.35		
	233.0	247.0	14.0	0.38		
	267.1	277.9	10.8	0.35		
V-11-07	169.3	194.8	25.5	0.32		
	247.0	294.1	47.1	0.33		
	333.0	347.4	14.4	0.44		
	352.7	361.9	9.2	0.51		
V-11-08	141.8	159.0	17.2	0.34		
	162.6	184.3	21.7	0.34		
	210.7	228.1	17.4	0.32		
	248.4	293.2	44.8	0.37		
	301.5	327.8	26.3	0.51		
	339.1	359.4	20.3	0.91		
V-11-09	102.1	107.2	5.1	1.84		
	185.7	206.4	20.7	0.32		
	215.0	223.0	8.0	0.31		
	228.5	245.5	17.0	0.38		
	266.0	361.5	95.5	0.72		
V-11-10	218.1	240.5	22.4	0.36		
	260.0	380.5	120.5	0.52		
including	292.5	324.0	31.5	0.75		
	387.3	418.0	30.7	0.31		
	423.5	442.0	18.5	0.33		
V-11-11	217.9	235.0	17.1	0.58		
	238.0	246.0	8.0	0.61		
	255.0	304.0	49.0	0.56		
including	259.0	295.0	36.0	0.64		
V-11-12		No signific	ant results			
V-11-13	194.2	255.2	61.0	0.46		
Incl.	208.0	237.0	29.0	0.60		
	261.6	275.2	13.6	0.32		
	280.8	289.2	8.4	0.33		
	333.3	336.0	2.7	0.70		
V-11-14	209.4	218.6	9.2	0.32		
	226.0	231.1	5.1	0.32		
	302.4	338.7	36.3	0.68		
	345.6	355.4	9.8	0.34		
	369.6	372.0	2.4	0.53		

Hole ID	From (m)	To (m)	*Interval (m)	Ni (Total %)	
V-11-20	369.2	383.2	14	0.24	
V-11-21	99.2	103.3	4.1	0.77	
	116.1	122.5	6.4	0.39	
V-11-23	111.5	122.0	10.5	0.65	
	142.8	152.0	9.2	1.17	
	157.5	165.0	7.5	0.55	
	173.0	205.5	32.5	0.73	
including	176.1	187.5	11.4	1.11	
V-11-24	196.3	199.8	3.5	0.45	
	230.0	233.9	3.9	0.64	

\*Sampled core length - true widths were not provided in reporting

### 10.8 Victory Nickel Diamond Drilling - 2012

Between February 17, 2012 and April 27, 2012, Victory Nickel completed a 10-hole diamond drill program (V-12-01 to V-12-10) at the Minago Project totaling 4,137.1 metres (Table 10.12 and Figure 10.14. The purpose of this drilling program was to complete:

- Six drill holes (V-12-01, V-12-02, V-12-04, V-12-06, V-12-08 and V-12-10) to test geophysical anomalies;
- Two drill holes (V-12-03 and V-12-05) on ML-2 to test for extensions of the Nose Zone; and
- Two drill holes (V-12-07 and V-12-09) on ML-3 to further explore and delineate a known occurrence of nickeliferous serpentinite not included in the Deposit.

Drilling was carried out by Element Drilling Ltd. ("Element Drilling") of Gimli, Manitoba from a drill camp established at the Manitoba Hydro substation located south of the William River and east of Highway 6. Drill holes were collared with HW casing that was drilled through the overburden to the dolomite. Thereafter the hole was drilled with HQ size rods through the dolomite, sandstone and into the Precambrian basement, at which point the hole was reduced to NQ size and drilled to the required depth. During the NQ drilling phase, the HQ rods were left in the hole to act as casing and thereby prevent the unconsolidated sandstone from flowing into the hole. Upon completion of the hole, the HQ and NQ rods were removed but the HW casing was left in place, capped with an aluminum plug stamped with the hole number. An NQ size safety plug was installed below the Ordovician-Precambrian unconformity and a HQ safety plug was installed in the dolomite above the sandstone. The hole was cemented between the plugs.

Hole ID	Northing (m) UTM NAD83 (Zone 14N)	Easting (m) UTM NAD83 (Zone 14N)	Azimuth (deg)	Inclination (deg)	Hole Length (m)
V-12-01	5996706	482866	212.9	-56	401.0
V-12-02	5996061	482672	226.4	-60	401.0
V-12-03	5993314	486901	36.9	-55	471.0
V-12-04	5993967	482144	226.4	-60	302.0
V-12-05	5993023	487016	4.3	-55	281.0
V-12-06	5994357	482715	233.5	-61	452.0
V-12-07	5987421	487349	225.1	-55	423.2
V-12-08	5995839	484618	257.4	-50	452.0
V-12-09	5987357	487425	232.4	-55	552.9
V-12-10	5995250	485200	235.0	-50	401.0
				Total =	4,137.1 m

#### Table 10.12: Collar table for 2012 diamond drilling program





The drill collars were surveyed for location, azimuth and inclination by Pollock and Wright (land surveyors) with a Trimble RTK5700 dual frequency GPS survey instrument. In-hole surveys were performed by Element Drilling using a Reflex EZ-Shot single shot and gyro instrument.

The drill core was transported to Victory Nickel's core storage facility in Grand Rapids, Manitoba and securely stored indoors for processing and logging/sampling. The core was photographed, logged initially for geotechnical data the core was subsequently logged for lithology, alteration and mineralization. Sample intervals were selected and the core was split using a diamond saw. Each sample was uniquely identified with a sample number and placed in a plastic sample bag that was stapled shut. The samples were placed in large, addressed fabrene bags that were wired shut and palletized for shipment. Drill supervision, lithologic core logging and sample selection was performed by qualified persons hired on a contract basis and supervised by Paul Jones, Vice President - Exploration for Victory Nickel.

All intervals of ultramafic and/or sulphide-bearing core, and the rocks on the margins of such intervals, were sampled for assay testing. The maximum sample interval for the former was 1.5 metres, and for the latter, 3.0 metres. As per industry norms each hole was logged and sample intervals were based on the following hierarchy:

- 1. Rock type
- 2. Alteration (style and intensity)
- 3. Sulphide content (type and abundance)

Core splitting was performed by local contractors. Each sample was placed in a plastic bag along with a tag with a unique identifying number and stapled shut. Samples were shipped by truck to TSL Laboratories Ltd. in Saskatoon, Saskatchewan. The Quality Assurance/Quality Control ("QAQC") program consisted of the random and blind insertion of Certified Reference Standards by the core logger at a frequency of one in twelve, and blanks (Paleozoic dolomite) at a frequency of one in 20.

### 10.8.1 Drilling Results

A total of 599 samples including drill core and QAQC materials were submitted for nickel and copper analysis. Of these, 458 core samples were subjected to specific gravity determinations and 261 core samples were assayed for gold, platinum, and palladium. The majority of the drill holes did not intersect significant nickel values. True widths were unknown at the time.

**Drill hole V-12-01** was drilled to test a northwest-southeast trending magnetic high. Drill hole V-12-01 intersected Precambrian basement rocks at a depth of 94.20m. The Precambrian rocks comprise: migmatized quartzofeldspathic gneiss (metagranite); mafic rocks (amphibolite with lesser metahornblendite, metagabbro); and minor pegmatite. The magnetic high was attributed to local concentrations of magnetite. Minor disseminated and fracture filling pyrrhotite and pyrite were present, but there were no significant nickel values.

**Drill hole V-12-02** was drilled to test a northwest-southeast trending magnetic high. Drill hole V-12-02 hole intersected Precambrian basement rocks at a depth of 95.2 m. The Precambrian rocks comprise:

migmatized quartzofeldspathic gneiss (metagranite); mafic rocks (amphibolite with lesser metahornblendite, metagabbro); and minor pegmatite. The magnetic high was attributed to local concentrations of magnetite. Minor disseminated and fracture filling pyrrhotite and pyrite were present, but there were no significant nickel values.

**Drill hole V-12-03** was drilled to more accurately locate the west boundary of the nickel bearing serpentinite of the Nose deposit. Drill hole V-12-03 intersected Precambrian basement rocks at a depth of 85.8 m. The Precambrian rocks comprise: migmatized quartzofeldspathic gneiss (metagranite); mafic rocks (amphibolite with lesser metahornblendite, metagabbro); and minor pegmatite. Minor disseminated and fracture filling pyrrhotite and pyrite were present, but there were no significant nickel values.

**Drill hole V-12-04** was drilled to test a northwest-southeast trending magnetic high. Drill hole V-12-04 hole intersected Precambrian basement rocks at a depth of 92 m. The Precambrian rocks comprise: migmatized quartzofeldspathic gneiss (metagranite); mafic rocks (amphibolite with lesser metahornblendite, metagabbro); and minor pegmatite. The magnetic high was attributed to local concentrations of magnetite. Minor disseminated and fracture filling pyrrhotite and pyrite were present, but there were no significant nickel values.

**Drill hole V-12-05** was drilled to explore the nickel bearing serpentinite located south of the Nose deposit that was previously intersected in drill hole V-11-22. Drill hole V-12-05 intersected Precambrian basement rocks at a depth of 84.9 m. The Precambrian rocks comprise: migmatized quartzofeldspathic gneiss (metagranite); metasediment (undivided Ospwagan Group); serpentinite (from 180.3 m to 183.8 m and from 201.9 m to 269.6 m); and minor pegmatite. The serpentinite contained low but elevated nickel values with the best interval from 218 m to 246 m (28 metres in core length) grading 0.356% total Ni.

**Drill hole V-12-06** was drilled to test a northwest-southeast trending magnetic high. Drill hole V-12-06 intersected Precambrian basement rocks at a depth of 88.5 m. The Precambrian rocks comprise: migmatized quartzofeldspathic gneiss (metagranite); mafic rocks (amphibolite with lesser metahornblendite, metagabbro); and minor pegmatite. The magnetic high was attributed to local concentrations of magnetite. Minor disseminated and fracture filling pyrrhotite and pyrite were present, but there were no significant nickel values.

**Drill hole V-12-07** intersected Precambrian basement rocks at a depth of 65.3 m. The Precambrian rocks comprise: serpentinite (from 65.3 m to 121.3 m, from 168.5 m to 294.9 m and from 298.8 m to 423.2 m); and mafic dyke. The drill hole was stopped in serpentinite at 423.2 m due to caving. The serpentinite typically contained low nickel values ranging from 0.15% to 0.25% total Ni.

**Drill hole V-12-08** was drilled to test a northwest-southeast trending poorly defined electromagmetic conductor. Drill hole V-12-08 intersected Precambrian basement rocks at a depth of 107.00m. The Precambrian rocks comprise: migmatized quartzofeldspathic gneiss (metagranite); metasediment (undivided Ospwagan Group); mafic rocks (amphibolite with lesser metahornblendite, metagabbro), and

minor pegmatite. The electromagnetic conductor is attributed to local narrow concentrations of up to 60% pyrrhotite. There were no significant nickel values.

**Drill hole V-12-09** intersected Precambrian basement rocks at a depth of 65.8 m. The Precambrian rocks comprise: serpentinite (from 96.50 m to 97.30 m, from 100.00 m to 104.00 m, from 130.50 m to 234.10 m and from 257.19 m to 511.80 m); metasediment (undivided Ospwagan Group); mafic dyke; and granite. The serpentinite typically contained low nickel values ranging from 0.15% to 0.30% total Ni with scattered assays up to 0.61% total Ni over intervals of 2.0 m.

**Drill hole V-12-10** was drilled to test a northwest-southeast trending poorly defined electromagnetic conductor. Drill hole V-12-10 intersected Precambrian basement rocks at a depth of 104.4 m. The Precambrian rocks comprise: migmatized quartzofeldspathic gneiss (metagranite); mafic rocks (amphibolite with lesser metahornblendite, metagabbro); and minor pegmatite. The electromagnetic conductor was attributed to local narrow concentrations of up to 15% pyrite and pyrrhotite. There were no significant nickel values.

### 10.9 Flying Nickel Diamond Drilling – 2020

Between March 13, 2020 and April 2, 2020, Flying Nickel completed a 2 hole diamond drill program (V-20-01 and V-20-02) on the Project totaling 496 metres (Table 10.13). The drilling was not carried out in the Deposit area. Its purpose was to assess exploration targets elsewhere in the Project area and also to meet government assessment expenditure requirements. Due to Covid Pandemic restrictions, core logging, sampling and analytical programs have not yet been carried out on core from these holes. Flying Nickel intends to complete these necessary work programs later in 2021.

Hole ID	Northing (m) UTM NAD83 (Zone 14N)	Easting (m) UTM NAD83 (Zone 14N)	Azimuth (deg)	Inclination (deg)	Hole Length (m)	
V-20-01	5,995,961	482,871	180	50	251	
V-20-02	5,997,770	485,100	270	50	245	
				Total	496	

#### Table 10.13: Collar table for 2020 diamond drilling program

#### 11.0 SAMPLE PREPARATION, ANALYSES AND SECURITY

#### 11.1 Introduction

Flying Nickel have not carried out any core sampling or other sampling programs on the Project as of the effective date of this Technical Report. The sample preparation, analyses, security, and Quality Control and Quality Assurance (QAQC) descriptions below are based on historical drilling completed by previous operators, and Nuinsco and Victory Nickel between 2005 and 2012. Validated results associated with the programs discussed below support the current mineral resource estimate.

Various levels of documentation were available for the historical programs, including historical technical reports and Government of Manitoba assessment reporting available through the online portal (iMaQs). Detailed information is not consistently present for work carried out prior to Nuinsco and Victory Nickel's work (pre-2005), with respect to the reporting of drill logs, sample records, laboratory assay certificates, QAQC procedures, verifiable location data, sample preparation, analysis and security. Detailed support documentation for historical drilling in the 1970's to 1990's is largely available. The absence of laboratory certificates for "G" series holes drilled by Granges in 1975 is a notable exception. Nuinsco and Victory Nickel drilling programs, carried out between 2005 and 2012 include good descriptions of procedures and associated protocols. No samples have been analysed from the 2020 Flying Nickel drilling program.

#### 11.2 Pre-Nuinsco and Victory Nickel Sampling Program Summary

Amax drilled both AQ and BQ size core. Sample intervals were selected by the geologist logging the core based on the maximum core interval for any sample, which was typically 6.1 m and serpentinite samples intervals were selected on the basis of texture, rock type, rock colour and extent of mineralization. After June 1971, Amax reduced the maximum sample length of visibly barren serpentinite to 3.0 m and mineralized serpentinite to 1.5 m. Amax collected 1,294 samples from 3,558.3 m of core. The sample lengths range from 0.15 to 14.2 m with 73% of the sample lengths equal to or less than 3.0 m. Material submitted for analysis consisted of approximately 3 wt% of each specified core interval collected by abrading the core against a diamond wheel machine, a practice described as "filleting". Based on the stated criteria for sampling, the samples were considered representative and unbiased. Selective sampling of the core for assay purposes may have resulted in sampling that is not representative.

Granges did not describe their sampling method or approach. The following is inferred from the Granges drill logs and miscellaneous documents. The BQ size core was sampled with focus on ultramafic units. Sample intervals were selected based on rock type, alteration, texture, colour and sulphide type and abundance. A total of 791 samples were selected from 1,461.2 m of core. Sample lengths ranged from 0.21 to 6.22 m with 95.1% of the samples less than or equal to 3.0 m. Core recovery of Precambrian basement rocks averaged 94.2%.

Black Hawk drilled BQ size core with only very minor intervals of NQ size core. Sampling was conducted on all visibly mineralized ultramafic units. The standard sample interval was 1.5 m. In zones of mixed granite and ultramafic rocks the two rock units were sampled separately. An attempt was made to sample

3.0 to 4.5 m of the granitic wall rocks and poorly mineralized ultramafic units. A total of 5,632.2 m of core was split and 3,891 samples were assayed. Sample intervals ranged from 0.09 to 5.39 m with 99.8% of the sample intervals being less than or equal to 3.0 m.

### 11.3 Nuinsco and Victory Nickel Sampling and QAQC Program Summary

### 11.3.1 Nuinsco Program

All Nuinsco sample preparation and analysis of diamond drill core, handling, transport and sampling and splitting of the core was performed by Nuinsco contractors and employees who took reasonable measures to ensure that the core and samples in their possession were secure. There are no reports, indications or suspicions that any core or samples were tampered with or altered in any manner.

ALS Chemex prepared all samples analysed by weighing, crushing, splitting and pulverizing each sample, as follows:

- Each sample was weighted in kilograms.
- Each sample was assigned a unique bar core identifier.
- The entire sample was crushed to 70% < 2 mm.
- The sample was split with a riffle splitter (standard procedure).
- Up to 250 g of the split for each sample was pulverized to 85% <75 microns in a low chrome steel pulverizer.

The pulps were shipped by ALS Chemex to their analytical laboratory in North Vancouver, British Columbia for analyses as follows:

- In the 2004 re-sampling program, trace element analyses for nickel, copper, cobalt and silver were performed by atomic absorption spectrometry (AAS) using aqua regia digestion of a 0.50 g sample. Results are reported in parts per million.
- Gold (Au), platinum (Pt) and palladium (Pd) were determined in the 2004 re-sampling program by fire assay with an induction coupled plasma-atomic emission spectroscopy finish. Results are reported in parts per billion.
- Analyses in 2005 and 2006 for trace element nickel, copper, cobalt (Co) and silver (Ag) were performed by atomic absorption spectrometry (AAS) using four acid digestion of a 0.25 g sample. Results are reported in parts per million.
- Trace element nickel determinations >10,000 ppm were re-assayed using ore grade techniques with four acid digestion of a 0.40 g sample and atomic absorption spectrometry. Results were reported in percent.

Internal ALS Chemex standard operating procedures include the analysis of quality control samples (reference materials, duplicates, and blanks) with all sample batches.

ALS Chemex is ISO 9001:2000 registered and independent of Nuinsco. ISO 9001:2000 requires evidence of a quality management system covering all aspects of the registrant. To ensure compliance with this

system regular internal audits are undertaken by staff members specially trained in auditing techniques. ALS Chemex Vancouver laboratory is also accredited ISO 17025 by Standards Council of Canada for a number of specific test procedures including fire assay Au by AA, inductively coupled plasma (ICP) and gravimetric finish, multi-element ICP and AA Assays for Ag, Cu, lead (Pb), and zinc (Zn). In addition to twice yearly proficiency tests, auditors experienced in minerals analysis perform detailed technical reviews at the laboratory.

For the 2005 drilling program, the drill core was logged and sampled at Black Hawk, Ontario by ½ core splitting. The core was split by sawing or knife splitting each sample interval lengthwise and taking continuous samples for the footage specified by the geologist. Intervals of core not suitable for sawing were knife split or alternatively in cases of highly broken core a representative number of pieces of core were selected from that interval for assay. Each sample was placed in a plastic bag along with a tag with a unique identifying number and stapled shut. The plastic bags were packed in plastic pails with lids for shipment. The samples were transported by Nuinsco personnel from Black Hawk, Ontario, to Fort Francis, Ontario, and shipped by commercial trucking company to the ALS Chemex sample preparation laboratory in Thunder Bay, Ontario.

The pulps for 126 of the samples assayed by ALS Chemex were sent first to Activation Laboratories and then to SGS for check assaying. The ALS Chemex assays were higher compared to assays by Activation Laboratories. This trend becomes more pronounced as nickel content increases. ALS Chemex assays compare favourably with SGS assays. SGS assays are lower compared to Activation Laboratories assays. Duplicate analysis of the same sample provided by SGS indicate virtually no difference. Ninety percent of the sample pairs have relative differences of 16% or less, indicating acceptable levels of variation for same pulp check assays.

For the 2006 drilling program the core was periodically picked up at the drill site by the project geologist and transported by pickup truck to a rented core logging facility in Grand Rapids, Manitoba. There, the core was securely stored indoors, logged and ½ split by sawing. Splitting was performed by residents of Grand Rapids hired by Nuinsco on a casual basis. The water for the core saw was changed once for every 6 to 10 core boxes cut. Sample material was rinsed with clean water prior to being bagged for analysis. Each sample was placed in a plastic bag along with a tag with a unique identifying number and stapled shut. Samples were shipped by bus to the ALS sample preparation laboratory in Thunder Bay, Ontario.

CANMET Canadian Certified Reference Material, standard WPR-1, was inserted into the sample stream five times. The standard is certified for Au, Cu, iron oxide ( $Fe_2O_3$ ), iridium (Ir), potassium oxide ( $K_2O$ ), manganese oxide (MnO), Pd, Pt, rhodium (Rh), ruthenium (Ru), and titanium dioxide ( $TiO_2$ ). The certified mean concentration of copper for WPR-1 is 0.164% with a 95% confidence limit of ± 0.008%. The provisional mean concentration of nickel for WPR-1 is 0.29% with a 95% confidence limit of ± 0.02%. The five determinations performed by ALS Chemex for copper and nickel on standard WPR-1 were within acceptable limits.

A total of 28 half core blank samples from NM-06-02 were inserted into the sample stream along with additional blanks obtained from the central part of a long granitic interval in drill hole NM-06-01. Intervals

were chosen for uniformity and absence of sulphide mineralization, fracturing and infillings. In addition, 52 samples of in situ granitic or gneissic material from within NM-06-02 were sampled for use as blanks by the project geologist for quality control purposes.

The 28 blanks from NM-06-01 that were inserted into the sample stream and all returned values of 0.01% Ni or less except for one sample that assayed 0.31% Ni. The 52 samples that were deemed blanks all returned values of 0.06% Ni or less except for one sample that assayed 0.24% Ni. The source of the nickel in the two blanks that assayed anomalously high for nickel is unknown but review of the data set did not show any evidence of systematic, preparation stage cross-contamination of samples.

Sampling, sample preparation, security and analytical procedures described herein were conducted using accepted industry standard practices at the time that the work was performed. Shortfalls in documentation of procedures relating to the earliest exploration programs are noted but it is also observed that: (1) check assays and analysis, where available, indicate that the data is within acceptable limits, and (2) each successive phase of work supported and substantiated prior period results.

## 11.3.2 Victory Nickel Program

During the Victory Nickel drilling programs, the core was periodically picked up at the drill site by the project geologist and transported by pickup truck to a rented core logging facility in Grand Rapids, Manitoba. There, the core was securely stored indoors, logged and ½ split by sawing. Sawing was performed by residents of Grand Rapids hired by Victory Nickel on a casual basis. The water for the core saw was changed once for every six to ten core boxes cut. Sample material was rinsed with clean water prior to being bagged for analysis. Each sample was placed in a plastic bag along with a uniquely numbered tag, and stapled shut. Samples were shipped by truck to the TSL Laboratory in Saskatoon, Saskatchewan. Victory subsequently requested TSL to forward the sample pulps to ACME Laboratory service in Vancouver for sulphide nickel (NiS) analysis. Samples for metallurgical testing were assayed by SGS Lakefield (SGS) exclusively.

All samples were treated as follows at the TSL Laboratory (TSL) where the majority of the core samples were taken:

- Samples were crushed in oscillating jaw crushers to 70% passing 10 mesh (1.70mm). Samples were riffle split; typically a 250g sub sample is pulverized, the remaining was stored as reject. Ring-mill pulverizers ground samples to 95% passing 150 mesh (106 micron);
- 2. Geochemical analysis: All samples were subjected to TSL's Procedure A2: Aqua Regia (1 x Nitric Acid / 3 x Hydrochloric Acid ) extraction with Atomic Absorption Finish;
- Assay analysis: Samples exceeding 5,000 ppm (0.5%) Ni or Cu were subjected to Procedure E26: Hydrochloric-Nitric-Perchloric-Hydrofluoric Acid digestion with Atomic Absorption Finish;

- 4. Samples containing >2000 ppm nickel were fire assayed (30 grams) with ICP (Inductively Coupled Plasma) finish for Au, Pt and Pd by fire assay; and
- 5. Specific-gravity (SG) determinations were done on all core samples submitted for assay testing.

The three different standards used in Victory Nickel's QAQC program were CANMET Canadian Certified Reference Material, standard WPR-1, Geostats Pty Ltd. GBM999-1, and the British Geological Survey's IGS 22. Standards were inserted into the sample stream every 20 samples.

The standard WPR-1 is certified for Au, Cu, Fe<sub>2</sub>O<sub>3</sub>, Ir, K<sub>2</sub>O, MnO, Pd, Pt, Rh, Ru, and TiO<sub>2</sub>. The certified mean concentration of copper for WPR-1 is 0.164% with a 95% confidence limit of  $\pm 0.008\%$ . The provisional mean concentration of nickel for WPR- 1 is 0.29% with a 95% confidence limit of  $\pm 0.02\%$ . The mean concentration of copper for GBM999-1 is 1.11728% with a 95% confidence limit of  $\pm 0.01836\%$ . The mean concentration of nickel for IGS 22 is 1.255% with a 95% confidence limit of  $\pm 0.01\%$ .

Blanks were inserted into the sample stream once every 20 samples. The blanks were obtained from dolomite horizon above the Minago deposit. Dolomite that was used for blanks was chosen for its uniformity and absence of sulphide mineralization, fracturing and infillings.

Sampling, sample preparation, security and analytical procedures described herein were conducted using accepted industry standard practices at the time. TSL and SGS are both nationally accredited assay laboratories that use widely accepted quality control procedures and are independent of Victory Nickel. ACME in Vancouver is an ISO 17025 accredited lab that regularly participates in CANMET and Geostats round robin proficiency tests. The report author believes the sample data collected to be fair and unbiased, and adequate for mineral resource estimation.

# 11.4 QAQC Results and Comments

### 11.4.1 General Comments

The report author has completed a thorough review of the QAQC procedures and results for the historical drilling programs completed by previous operators including Nuinsco and Victory Nickel and have noted the following points:

- No certified laboratory analytical reports are available for "G- coded" drillholes completed on the project by Granges Exploration from 1974 to 1976;
- The Amax sampling method was not "industry standard" and involved "filleting" (abrading) the drill core with a "diamond wheel machine" which removed approximately 3% of the core by weight. However, comparison of results with adjacent half-core sampled holes showed reasonable correlation of nickel results;
- During the work undertaken on the deposit by Granges, unmineralized rock types and portions of a mineralized intersection suspected to contain only sub-economic nickel values were typically

left unsampled. Consequently, there are numerous small to large (6 inch to 20 foot) gaps within assayed intervals;

- In 2007 and 2008, Victory Nickel whole-sampled the drill core, therefore no half core remains for archive and resampling purposes;
- The analytical procedures employed by Nuinsco and Victory Nickel during the 2007, 2008, 2010, 2011, and 2012 drilling programs involved digestion by aqua regia and atomic absorption finish. For samples returning values over 5,000 ppm follow-up analysis was done using four-acid digestion and atomic absorption. Discrepancies were noted between these methods that reflect variable digestion of nickel from sulphide mineral phases and nickel-bearing silicate minerals.
- A 2008 QAQC report for Victory Nickel noted that the incomplete digestion of samples using the aqua regia digestion method created disparities in the analytical results. As a QAQC check, samples whose results were originally included in Lab Report S27738 were resubmitted for analysis using the aqua regia digestion method, since the original results for included Certified Standard WPR-1 indicated a deviation from expected values. The opportunity was also taken to analyze the same samples using a multi-acid digestion method so that the results for the two digestion methods could be directly compared. Results of the analyses were reported in Lab Report S31022 and indicated that sample results from the aqua regia digestion method had assay results consistently lower than those for the multi-acid digestion method, with the average discrepancy being -20.7%. This was identified as being potentially relevant to higher than expected nickel analyses for Standard GBM999-1 during the 2007 drilling program.
- A 2011 QAQC review for Victory Nickel noted significant issues with the 2010 drilling program nickel sulphide determinations and that entire year's pulps were re-analyzed at Acme Labs. The report noted that for sulphide-held nickel values in excess of about 0.25%, Acme Labs' 2010 determinations were consistently 10% higher than those of 2011. In addition, the 2010/2011 ratio rose to greater than 1.5 at the low end of the concentration range.

Table 11.1 below summarizes the various sampling and laboratory procedures used by previous operators and the various QAQC items noted are based on a review of historical reports and the drill hole database. Prior to the Nuinsco-Victory Nickel period, some shortfalls in documentation and procedures relating to the earliest exploration programs by Amax and Granges are noted but it is also observed that:

- Check assays and analysis, where possible, indicate that the data is within acceptable limits;
- Each successive phase of work has supported and substantiated prior period results.

During the Nuinsco and Victory Nickel period substantial efforts were made to understand the relationship between analysis in core samples of total nickel, which includes nickel fixed in both sulphide and silicate phases, and sulphide nickel alone. Particular focus was placed on sample digestion, with the multi-acid leach approach recognized as being most appropriate for total nickel determination. In contrast, weaker leaches specific to sulphide minerals were found to be most appropriate for sulphide nickel determinations. The distinction is important, because metallurgical studies carried out concurrently with

Previous Drilling	Sampling Method	Laboratory Used	Purpose	Ni Association Tested	Laboratory Method	QAQC Comments	General Comments
Programs	methou	0000					
Amax (1970)	ground fillets of core	X-Ray Labs	primary	total Ni	Four-acid AA	"filleting" method removed approximately 3% of the core by weight	Poor records on sampling and laboratory methods used and QAQC procedures
			primary	total Ni	X-ray Fluoresence (XRF)		
Granges Exploration (1975)	Half core sampled BQ			total Ni	XRF?	Certificates, missing 2007 re-sampling, poor density	Incomplete records on sampling and laboratory methods used and QAQC procedures
Blackhawk (1989)	Half core sampled (splitter) BQ	Lynn Gold mine site	primary	total Ni	XRF?		
		X-Ray Labs	Re-assay	Ni in Sulphide	XRF		resampled and infill sampled in 2004
		Climax Moly Mining Co.	Re-assay	Ni in Sulphide	Atomic Absorption (AA)	mine site lab	
Victory Nickel/	Whole core	TSL	primary	Ni<5000ppm	Aqua regia with AA	incomplete digestion	Issues noted in QAQC report
Nuinsco (2007)	sampled TSL primary Ni>5000ppm Four-acid with AA BQ total Ni				Four-acid with AA	non- comparable to aqua regia	
		SGS	check	Ni	Three-acid with FAA		
		SGS	primary	NiS if Ni>0.2	H2O2 + NH4 leach, FAA finish		
		Acme Labs	check	NiS if Ni>0.2	H2O2 + NH4 + HCL leach, ICP Finish		
Victory Nickel/	Whole core	TSL	primary	Ni<5000ppm	Aqua regia with AA	incomplete digestion	
Nuinsco (2008)	sampled BQ	TSL	primary	Ni>5000ppm total Ni	Four-acid with AA	non- comparable to aqua regia	
		SGS	check	total Ni	Four-acid with AA		
		SGS	primary	NiS if Ni>0.2	H2O2 + NH4 leach, FAA finish		
Victory Nickel	Half core sampled	TSL	primary	Ni<5000ppm	Aqua regia with AA	incomplete digestion	
(2010)	NQ	TSL	primary	Ni>5000ppm total Ni	Four-acid with AA	non- comparable to aqua regia	

# Table 11.1: QAQC summary of historical drill hole programs

Previous Drilling Programs	Sampling Method	Laboratory Used	Purpose	Ni Association Tested	Laboratory Method	QAQC Comments	General Comments
		Acme	primary	NiS if Ni>0.2	H2O2 + NH4 leach	poor laboratory QAQC resutls	100% re-analysis completed in 2011
		Actlabs	check	NiS check	NH4 leach followed by H2O2 + NH4		
Victory Nickel	Half core sampled	TSL	primary	Ni<5000ppm	Aqua regia with AA	incomplete digestion	
(2011)	NQ	TSL	primary	Ni>5000ppm total Ni	Four-acid with AA	non- comparable to aqua regia	
		Acme	primary	NiS if Ni>0.2	H2O2 + NH4 leach		
Victory Nickel	Half core sampled	TSL	primary	Ni<5000ppm	Aqua regia with AA	incomplete digestion	
(2012)	NQ	TSL	primary	Ni>5000ppm total Ni	Four-acid with AA	non- comparable to aqua regia	

the later-period drilling programs showed that most of the economically recoverable nickel in the Deposit resides in sulphide mineral phases.

### 11.4.2 Nuinsco QAQC Program

For the Nuinsco drilling programs, CANMET Canadian Certified Reference Material, standard WPR-1, was inserted into the sample stream. The standard is certified for Au, Cu, iron oxide (Fe2O3), iridium (Ir), potassium oxide (K2O), manganese oxide (MnO), Pd, Pt, rhodium (Rh), ruthenium (Ru), and titanium dioxide (TiO2). The certified mean concentration of copper for WPR-1 is 0.164% with a 95% confidence limit of  $\pm$  0.008%. The provisional mean concentration of nickel for WPR-1 is 0.29% with a 95% confidence limit of  $\pm$  0.02%. The five determinations performed by ALS Chemex for copper and nickel on standard WPR-1 are within acceptable limits, two standard deviations control limits (Table 11.2).

Determination	Nuinsco Sample Number	Cu (%)	Ni (%)
1	B762750	0.159	0.281
2	B762805	0.17	0.3
3	B762888	0.17	0.31
4	B763016	0.16	0.3
5	B757652	0.16	0.31
	0.164	0.3	
Sta	0.005784	0.011841	
95%	Confidence Limit	0.000162	0.000332

Table 11.2: ALS Chemex assay results for Standard WPR-1

A total of 28 blanks were inserted into the sample stream for drill hole NM0602. The blanks were obtained from the central part of a long granitic interval in drill hole NM0601 that was chosen for its uniformity and absence of sulphide mineralization, fracturing and infillings. In addition, 52 samples of in situ granitic or

gneissic material from within NM0602 were deemed blanks by the project geologist for quality control purposes.

The 28 blanks from MN0601 that were inserted into the sample stream all returned values of 0.01% Ni or less except for one sample that assayed 0.31% Ni. The 52 samples that were deemed blanks all returned values of 0.06% Ni or less except for one sample that assayed 0.24% Ni. The source of the nickel in the two blanks that assayed anomalously high for nickel was not determined but no evidence of systematic preparation-stage cross-contamination was identified.

Sampling, sample preparation, security and analytical procedures described for the Nuinsco period were conducted using accepted industry standard practices at the time that the work was performed.

## 11.4.3 Victory Nickel QAQC Program

For the Victory Nickel drilling programs, three different standards were used including CANMET Canadian Certified Reference Material, standard WPR-1, Geostats Pty Ltd. GBM999-1 and the British Geological Survey's IGS 22. Standards were inserted into the sample stream every 20 samples. The standard WPR-1 is certified for Au, Cu, Fe2O3, Ir, K2O, MnO, Pd, Pt, Rh, Ru, and TiO2. The certified mean concentration of copper for WPR-1 is 0.164% with a 95% confidence limit of  $\pm 0.008\%$ . The provisional mean concentration of nickel for WPR-1 is 0.29% with a 95% confidence limit of  $\pm 0.01836\%$ . The mean concentration of nickel for GBM999-1 is 1.11728% with a 95% confidence limit of  $\pm 0.01836\%$ . The mean concentration of nickel for IGS 22 is 1.255% with a 95% confidence limit of  $\pm 0.01\%$ .

Blanks were inserted into the sample stream approximately once in every 20 samples. The blanks were obtained from dolomite horizon above the Minago deposit. Dolomite that was used for blanks was chosen for its uniformity and absence of sulphide mineralization, fracturing and infillings.

Certified reference material and blank sample results applicable to the first half of Victory Nickel's 2012 drilling program appear in Figure 11.1 through Figure 11.7 and are included below as examples of the associated QAQC standard monitoring program protocol applied by the company.





Figure 11.2: Victory Nickel 2012 Certified Reference Material (Standard) Ni results (N=14– from Victory Nickel files)



Figure 11.3: Victory Nickel 2012 Certified Reference Material (Standard) Ni Results (N=12– from Victory Nickel files)



Sampling, sample preparation, security and analytical procedures described above were conducted using accepted industry standard practices at the time. TSL, SGS and ALS were nationally accredited assay laboratories that used widely accepted quality control procedures. They were all independent of Victory Nickel at the times that they provided analytical services for the Minago Project. The report author believes that the Victory Nickel sample data collected to be fair and unbiased, and adequate for resource estimation.

### 11.5 Report Author's Opinion on Sample Preparation, QAQC Protocols, and Analytical Methods

The report author is of the opinion that sample preparation, analysis and security methodologies employed during the 2005 to 2012 drilling programs by Nuinsco and Victory Nickel are consistent with exploration best practice guidelines at the respective times. This determination recognizes that certain QAQC issues noted in Section 11.5 were systematically identified and addressed.

Additional to the above, the report author considers the 1970 through 2012 drilling dataset, as validated by report authors P. Teniere and M. Harrington, to be of acceptable quality for use in resource estimation programs. However, it is recommended that consideration be given to continued third party check sampling for future drilling programs and that additional check sampling of the 2010 to 2012 drill core also be carried out to further assess historical total Ni and Ni in sulphide assay results.

#### 12.0 DATA VERIFICATION

#### 12.1 Overview

Data verification procedures carried out by the report authors for the Project consisted of three main components:

- (1) Review, data validation, and data verification of public record and internal source documents cited by previous operators with respect to key geological interpretations, previously identified geochemical or geophysical anomalies, and historical and current diamond drilling results that support the current mineral resource estimate for the Project. Validation of these datasets was completed using QGIS software, Microsoft Excel, and Surpac data management, QAQC, and geostatistical tools; and
- (2) Completion of a site visit to the Project between February 26 and February 27, 2022 by report author Mr. Robert Smith, P.Geo.; details of site visit activities carried out by Mr. Smith are presented below. No issues were identified as a result of the site visit that would negatively impact the findings and conclusions of this Technical Report.
- (3) Review, data validation, and data verification of the historical metallurgical testing programs completed for the Project by previous operators by report author Mr. John Eggert, P.Eng., a mining engineer with significant experience in mineral processing, metallurgical testing, and mill design of nickel deposits similar to the Minago Nickel Project.

Report authors P. Teniere and M. Harrington were responsible for drilling database review and validation of the historical drilling programs and interpreting data sets for future exploration targeting using current industry standards and CIM Mineral Exploration Best Practice Guidelines. These report authors also completed a review of QAQC procedures and results, as described in Section 11 of this Technical Report.

### **12.2** Site Visit (Personal Inspection) Details

The purpose of the site visit investigation by Mr. Smith was:

- To validate that mineralization observed during the Project investigation conforms lithologically and mineralogically to other nickel deposits observed in the Thompson Nickel Belt;
- To validate sample locations and review select historical core intervals previously sampled in May 2021 to independently assess the presence of nickel, platinum, and palladium across the Property; and
- To validate the locations of accessible historical drill hole collars on the Project and confirm the site infrastructure.

The Project investigation was completed between February 26 and February 27, 2022. The Project is accessible by road; however, due to the Project being dominated by muskeg and winter conditions at the time, many drill collar locations were inaccessible by road and only by foot.

Mineralized rock observed by the Mr. Smith during the historical core review from the Project are consistent with other magmatic Ni-Cu-Platinum-Group Element deposits located in the Thompson Nickel Belt (Layton-Matthews et al., 2007).

Observations of the mineralized intervals from the Property include:

- Association of ultramafic units with mineralization, where observed;
- Common serpentinization of the ultramafic units; and
- Mineralization is commonly associated with intervals containing moderate to abundant magnetite.

The Flying Nickel core storage facility was visited by Mr. Smith during his personal inspection and is located approximately 1.5 km to the northwest of the Grand Rapids townsite. The core storage facility contains racked core, palletized core, two sea-cans, and material returned from laboratories that are contained in large, sealed barrels and two Atco trailers (Figure 12.1). Although access to the area is not restricted, the area is not observable from main roadways and remains undisturbed.

Mineralized sections of the core are racked in permanent core storge structures that have metal roofs and are raised off the ground with cement blocks (Figure 12.2). Unmineralized carbonate core, which is stratigraphically above the mineralized units, is palletized.

As part of the Project inspection and validation, Mr. Smith also reviewed stacked historical core intervals that were previously check sampled in May 2021 (Table 12.1) including drill hole V-11-06 (Figure 12.3).

Hole	Hole		Historical Drilling Program Information / Standards							May 2021 Site Investigation Information						
Collar	Collar	Sample	Hole		From		Ni	Nis	Pd	Pt	Sample		NIS	Pd	Pt	Bulk
Northing (NAD 83)	Easting (NAD 83)	Туре	Name	Sample Name	(m)	To (m)	(%)	(%)	(ppb)	(pp b)	Number Ni (%)	Ni (%)	(%)	(ppb)	(ppb)	Density (g/cm³)
		Blank									SE210501	0.00	0.00	1	5	
5994370	487976	Core	V-11-06	194665	204.0	205.5	0.43	0.16	15	10	SE210502	0.37	0.17	7	5	
5994370	487976	Core	V-11-06	194700	242.5	244.0	0.51	0.36	140	45	SE210503	0.46	0.32	140	38	
5994270	487932	Core	V-11-05	194484	289.0	289.9	2.02	1.96	720	370	SE210504	1.78	1.60	745	367	2.58
5994270	487932	Core	V-11-05	194485	289.9	291.0	0.95	0.79	340	180	SE210505	1.00	0.85	398	211	
5994825	488077	Core	V-11-11	198927	259.0	260.0	0.93	0.67	140	55	SE210506	1.01	0.73	204	76	
		Standard		CND-ME-9			0.91		1,286	664	SE210507	0.91		1,240	639	
5994825	488077	Core	V-11-11	198928	260.0	261.0	1.06	0.75	160	60	SE210508	1.16	0.94	248	87	
5994825	488077	Core	V-11-11	198909	244.0	245.0	0.75	0.65	770	190	SE210509	0.69	0.56	1,140	257	2.31
5995670	487920	Core	V-11-20	197456	325.0	326.3	0.28	0.22	220	150	SE210510	0.32	0.24	189	108	
5995670	487920	Core	V-11-20	197451	319.5	321.0	0.32	0.28	200	130	SE210511	0.35	0.30	277	125	
5993395	487201	Core	N-07-37	929776	141.1	142.1	0.76				SE210512	0.67	0.22	386	126	2.44
5993395	487201	Core	N-07-37	929784	149.5	150.5	3.09				SE210513	0.80	0.43	305	118	
		Standard		CND-ME-1309			0.19		363	707	SE210514	0.19		347	712	
5993188	487054	Core	V-08-4B	199673	511.8	512.9	0.73	0.48			SE210515	0.73	0.60	139	44	
5993217	487175	Core	N-07-30	929417	115.5	117.0	0.30	0.10			SE210516	0.30	0.08	2	5	
5993670	487042	Core	N-07-32	926781	275.0	276.1	0.69	0.60			SE210517	0.62	0.56	115	56	
5993029	487349	Core	V-08-10	198160	589.3	590.8	1.67	1.18			SE210518	1.66	1.35	505	194	
5993684	487599	Core	NM-06-02	UN	280.4	281.9	1.32				SE210519	1.24	0.96	485	231	2.47
5993231	486936	Core	B-11A-89	UN	447.1	448.7	0.75				SE210520	0.57	0.51	130	58	2.43
5993633	487380	Core	BHK52-90	49862	285.0	286.0	0.77				SE210521	0.64	0.04	171	74	2.36
		Standard		CND-ME-1310			0.38		563	433	SE210522	0.39		530	423	
5993389	487500	Core	BHK50-90	365794	305.4	306.9	0.26				SE210523	0.32	0.19	7	5	

#### Table 12.1: Sample locations and May 2021 IW check assay results
# Figure 12.1: Minago Core Storage Facility







# Figure 12.3: Historical drill hole V-11-06 representative core box



#### 12.3 Discussion of May 2021 IW Check Sample Results

During the May 2021 IW check sampling program, a total of 19 quarter core samples plus 3 certified reference material samples and one blank sample were submitted for analysis at AGAT Laboratories ("AGAT") in Calgary. After standard crushing and pulverizing, sample pulp splits were subjected to sodium peroxide fusion preparatory to multi-element analysis using ICP-OES and ICP-MS methods. Separate pulp splits were analyzed for gold, platinum and palladium using fire assay pre-concentration methods followed by analysis using ICP-OES methods. Bulk density analysis was carried out on six samples using water immersion methods. Grain size analysis was carried out on three samples of coarse crush fraction material and on two samples of pulverized material. All laboratory results were reported in a signed, secure certificate and also in digital spreadsheet format.

In addition to the total nickel analysis obtained using the fusion approach at AGAT, a pulp split for each quarter core sample submitted to AGAT was forwarded to SGS Canada Inc. (SGS) in Lakefield ON for analysis of nickel in sulphide by ICP-OES methods after ascorbic acid-hydrogen peroxide digestion. Laboratory results from SGS were reported in a signed, secure certificate and also in digital spreadsheet format. Both AGAT and SGS are commercial analytical services firms accredited by the Canadian Association for Laboratory Accreditation (CALA) and are certified to the ISO/IEC 17025 standard. Both firms are also fully independent of Flying Nickel.

Check assay analytical results of primary importance to the current Technical Report appear above in Table 12.1 and include total nickel, sulphide nickel, platinum and palladium. Corresponding values from the project drill hole database also appear in Figures 12.4 through 12.7 which provide charted comparisons of the analytical results from the May 2021 IW check sampling program.

With the exception of one nickel result, nickel, sulphide nickel and palladium values show good correlation between original and check sample datasets. The exception consists of one original sample nickel value that is substantially higher than the check sample result (Figure 12.4). An explanation for this discrepancy has not yet been identified but the high original nickel result was confirmed as reflecting the corresponding sample number's database nickel entry. As reflected in Figure 12.7, original platinum values are consistently lower than check sample values and this may be a reflection of differing analytical techniques. Further investigation of the discrepancy is recommended.





Figure 12.5: Comparison of original and check sample Sulphide Ni% results





Figure 12.6: Comparison of original and check sample Pd (ppb) results





# 12.4 Historical Drill Hole Collar Coordinate Verification and Core Processing Facility

During the site investigation of the Project, Mr. Smith located four historical drill collars from the previous drilling campaigns and obtained an independent location reading with a handheld GPS. All drill hole locations observed in the field were well-marked (Figures 12.8 to Figure 12.10). Table 12.2 compares the drill hole GPS collar locations observed by Mr. Smith relative to the drill hole collar locations documented in the Project database. Mr. Smith proposes that the location of the reviewed drill holes in the field are reasonable, when considering the accuracy of the handheld GPS.

Collected With	h Hand Held G	SPS Feb 26	, 2022	A	Actual From Database				
# Entered in GPS	Easting	Northing	Elevation	Hole #	Easting	Northing	Elevation	Zone	
V 11-06	487975	5994374	244	V-11-06	487976.1	5994370	245.53	North Limb	
003	487662	5993781	245	N-07-08A	487664	5993779	246.04	Nose	
N0717	487411	5993645	245	N-07-17	487412.4	5993640	246.6	Nose	
006	487161	5993628	240	MXB-71-94	487161.9	5993624	246.39	Nose	

# Table 12.2: Property investigation hole locations

# Figure 12.8: Historical drill hole V-11-06







#### Figure 12.10: Historical drill hole N-07-17



Mr. Smith also visited the Flying Nickel Core Processing Facility located in Grand Rapids, Manitoba on February 26, 2022 during active diamond drilling, core logging, and sampling activities on the Project. The core processing facility consists of two attached metal and wood buildings (Figure 12.11). Core is logged in the larger building and cut and sampled in the smaller building which is currently under renovation (Figure 12.12).

# Figure 12.11: Minago core processing facility







Limitations to the data verification by Mr. Smith are listed below:

- Mr. Smith only visited 4 out of 323 unique drill hole locations due to winter conditions and heavy snow limiting road access to historical drill hole sites;
- Mr. Smith was not involved in the Project prior to 2022, and did not complete a site visit until 2022, and therefore cannot validate the field procedures used during drilling and sample collection prior to the involvement by Flying Nickel; and
- Laboratory inspections were not completed by Mr. Smith.

# 12.5 Review of Supporting Documents, Databases, and Assessment Reports

As mentioned above, the report authors also obtained copies of relevant historical assessment work as part of their data validation procedures. Additional documents such as historical assessment reports and NI 43-101 technical reports summarizing historical drilling program and metallurgical testing results were also reviewed and validated. The drill hole database used for the current mineral resource estimate was thoroughly verified by comparing a select group of drill hole database results with the original assay certificates from previous operators. Surpac and Microsoft Excel software were used to identify any discrepancies in data and to ensure the collar, survey, logging, and sampling/assay data was transcribed

correctly from the original logs and assay certificates. Key aspects of this historical reporting are in part referenced in this technical report and were obtained through Flying Nickel or through online searching of historical assessment reports available through the provincial government online report database and previous technical reporting files. Results of the reference documentation checking program showed that in all instances considered, digital and hard copy records accurately reflect content of referenced source documents.

The report authors validated and verified project database entries for the 1966 to 2012 drilling campaigns to support their use in the current mineral resource estimate for the Project. This validation and verification process included systematic checking of database entries against original source documents, with correction of deficiencies where necessary using Surpac or Microsoft Excel software. Checking of database content consisted of collar coordination checks for all drill holes against original source records, where available, spot checks of core sample record entries, and checking of assay results entries against source laboratory reports and original assay certificates. In addition to these manually coordinated checks, routine digital assessment of the drill hole datasets for issues such as end of hole errors, conflicting sample records, survey record errors, etc., were carried out using scripts run within the GEOVIA Surpac<sup>™</sup> 2021 software.

The data verification and validation program undertaken by report author M. Harrington included a 30% validation on collar, survey, and lithology intervals data which returned acceptable results. A subsequent 50% validation was completed on drill core analytical values with acceptable results obtained except for several obvious deficiencies that were addressed. For example, a re-sampling program completed by Nuinsco on the Black Hawk drill core was observed to be not properly compiled by previous workers and 124 corrections to nickel values and 179 corrections to sample intervals were completed. In addition, several sulphide nickel values throughout the various drill programs were observed to be unreasonable in respect to the associated total nickel value. On this basis, a 100% validation of sulphide nickel values was carried out by the report author and resulted in 345 corrections. This issue was identified to be related to improper compilation of re-assay datasets due to QAQC issues noted by the respective operators. The project drill hole database contains 22,239 core samples with a nickel analytical result, including 9,104 core samples with a corresponding sulphide nickel result, and 9,000 specific gravity determinations. A compilation program of core sample identification numbers was also completed.

Report author J. Eggert completed data verification and validation procedures for the historical metallurgical test results completed by previous operators of the Project, which provide a good basis for evaluating the flotation results from those studies. For the purposes of this Technical Report and current MRE for the Project, the grade – recovery curve generated from the historical metallurgical testing is suitable for an estimate of metallurgical performance. This is based on the report author's full assessment and data verification and validation of the historical metallurgical test results and historical reports. The historical Sulphidic Nickel Head Grade-Recovery Curve asserted that the sulphidic nickel assay "was significantly lower than the total nickel assay in the concentrate which is unlikely to be the case". However, in the report author's opinion, this assertion does not consider the possibility that some of the nickel in

the concentrates is associated with higher grade serpentine. These have been reported as high as 12% nickel in previous internal reports completed by Victory Nickel. Presence of this as gangue in the nickel concentrate would cause the nickel assay to exceed the sulphidic nickel assay. This will require further testing to quantify if this is the case and how much it impacts the grade recovery curve. This discrepancy does not significantly impact the estimates from historical testing for the purposes of this Technical Report.

## 12.6 Report Authors Opinion on Data Verification

The report authors are of the opinion that respective results of their data validation and verification program components discussed above indicate that industry standard levels of technical documentation and detail are evident in the drilling results for the Project that support the current mineral resource estimate. The report authors conclude that the associated validated digital database is considered acceptable for use in the current mineral resource estimate and confirm that the database used has been generated with proper procedures and has been accurately transcribed from the original source material.

#### 13.0 MINERAL PROCESSING AND METALLURGICAL TESTING

#### 13.1 Introduction

Flying Nickel has not yet completed any mineral processing and metallurgical testing programs for the Project as of the effective date of this Technical Report. This section summarizes the results of historical metallurgical testing programs ("test programs") completed by previous operators of the Project. This technical information has been validated and verified by report author J. Eggert and includes recommendations for further metallurgical testing work based on the results of these historical test programs. The disclosure of these historical test programs is considered important as this data has been used in determining reasonable prospects for eventual economic extraction assumptions for the current MRE and can be used as a basis for future metallurgical testing programs by Flying Nickel as part of a future Pre-Feasibility or Feasibility Study. In addition, the report author is of the opinion that the historical test program information summarized in this section is considered relevant and reliable for the purposes of disclosure in this Technical Report.

The recoveries of metals to concentrate and concentrate/grade assumptions described below are based on historical metallurgical testing programs conducted between 2004 and 2008. Lakefield Research (now SGS Lakefield) conducted the laboratory scale testing for previous operators of the Project including Victory Nickel.

This section does not introduce any new work or testing results, rather it summarizes this historical test work and comments on the validity and verification of this work by report author, J. Eggert. Mr. Eggert has verified to the extent possible the data disclosed in this section including all sampling, analytical, and test data underlying the information disclosed. A description of how the data was verified and any limitations in this verification process are described below.

The historical test programs evaluated the effects of the following:

- Grind size
- Flotation performance with some variability testing
- Dewatering of concentrates and tailings

The test programs generated the process design criteria. The was used to provide a grinding circuit design, a flotation flowsheet, dewatering of flotation products for sale, and a head grade versus recovery curve for economic evaluation.

The testing work completed by SGS in 2007 and 2008 was originally part of a historical mining study and will need to be augmented with further metallurgical testing to qualify for use in a future Pre-Feasibility or Feasibility Study by Flying Nickel.

Historical metallurgical tests include:

Flotation development tests and locked cycle tests carried out on a master composite sample. The sample was intended to be representative of the sulphidic nickel block model. The sample contained 0.54% total nickel and 0.36% sulphidic nickel. Nickel in sulphide was reported as occurring as pentlandite and millerite. Waste mineralization was described as serpentine, 34.7%, talc, 30.2% and phlogopite, 11.2%. The concentrate was projected to contain 22.27% nickel with 10.43% MgO. Overall nickel recovery was estimated at 52.3% with 77.2% of the sulphidic nickel recovered to the concentrate. No indication is provided in the historical test program regarding how much of the nickel recovery to concentrate was included in the MgO fraction of the concentrate.

Variability testing was reported on a time basis representing the first two years of potential open pit production. The variability testing was reported as having better metallurgical performance than the composite sample.

Testing results were used to generate a sulphidic nickel grade recovery curve. Historical reports stated that "Using the total nickel head grade in the head grade-recovery curve would be misleading since a portion of the total head grade is unrecoverable". It would be more accurate to state that a known portion of the contained nickel, based on mineralogy, has low recovery to concentrate. The report author recommends that future work should include two grade recovery curves, one for total nickel and one for sulphidic nickel. A portion of the material reporting to the sulphide concentrates are silicate minerals. Some of these have significant nickel content. The presence of magnesium oxide (MgO) minerals that decrease the value of the concentrate, means that these high nickel silicate minerals must be minimized, but cannot be eliminated.

The testing was also used to develop a flowsheet that can be summarized as:

- A primary gyratory crusher to generate SAG mill feed at 130 mm.
- A SAG mill circuit, including a pebble crusher
- A ball mill circuit to produce flotation feed at 80% passing (P80) of 68 um.
- A flotation circuit, including a rougher circuit, two stage cleaning and a scavenger circuit
- A concentrate dewatering circuit, including a thickener and pressure filter
- A tailings thickener to produce final tails for deposition.

Based on a detailed verification of the historical test work, the report author recommends that the SAG circuit be re-configured to eliminate the need for a pebble crusher. This can be achieved by increasing the size of the SAG mill and using a variable frequency drive (VFD) on the SAG mill. This may increase the cost of a mill, but eliminates the pebble crusher and associated conveyor belts, feed systems, magnets and dust collection. A slightly oversized SAG mill can be effective in achieving required grinding with mineralized material of different hardnesses and with differing feed rates, when equipped with a VFD. An increase in SAG capacity by 10% does not significantly increase the capital cost, as items such as foundations, piping, etc., will not significantly change. The increase could have a positive impact on operating costs.

# 13.2 SGS Lakefield Historical Testing Program of 2007 and 2008

The following is a summary of historical metallurgical test work completed by SGS between 2007-2008 with recommendations from the report author for further testing summarized at the end of this section.

#### 13.2.1 Sample Preparation

#### 13.2.1.1 INTERVAL CRUSHING AND TOTAL NICKEL ASSAYING

Five new metallurgical drill holes numbered N-07-14, N-07-15, N-07-16, N-07-17, and N-07-18 were drilled in February 2007 to collect samples for the potential open-pit metallurgy program. The holes were located roughly evenly along the strike of the deposit to represent the mineralization from the entire open pit. A total of 1,117 drill core intervals selected and delivered to SGS for the grindability study and flotation testing. The total weight of the delivered drill core was 4,174 kg.

The core intervals were inspected, weighed, and bagged separately and stored in SGS's onsite cold room. Samples for grindability tests were taken and the remaining intervals were then crushed in a jaw crusher to a nominal 25.4 mm (1"). The crushed interval was riffled in half with one half bagged and placed in storage, and the other crushed further in a cone crusher to a nominal 2 mm (10 mesh), bagged, and stored in the SGS's cold room. A sub-sample was taken for total nickel assaying before bagging.

### 13.2.1.2 SULPHIDIC NICKEL ASSAYING

A comparison of the total nickel grade assays with the available sulphidic nickel assay recoveries from initial flotation work indicated that a portion of the nickel in the Minago deposit was unrecoverable. Further mineralogical analyses determined that a significant portion of the total nickel was in the form of nickel silicates, which are not recoverable by conventional froth flotation technology. Since a portion of the deposit was unrecoverable, the geological block model based on the total nickel assays would neither be a reliable means of defining the mineable sections of the deposit, nor would it be a reliable tool for economic analyses of the mine.

A new geological block model was based on sulphidic nickel assays of the drill core intervals. SGS provided the sulphidic nickel assays of the drill core intervals of the five metallurgical drill holes. Other drill hole intervals from the 2007 drill program were assayed for sulphidic nickel by SGS, and by ACME Analytical Laboratories Ltd. of Vancouver. Historical drill core samples stored at the Manitoba Geological Survey (Precambrian Division) were split and assayed for sulphidic nickel. Amax Exploration Inc. supplied further historical sulphidic nickel assays from the Minago Deposit. All of the sulphidic nickel assays (a total of 3,298) were used to develop the geological nickel sulphide block model. This new block model provided more accurate accounting of the recoverable nickel, and was used for the mine model and mill design.

### 13.2.1.3 SAMPLE SELECTION AND PREPARATION

#### **Grindability Testing Samples**

Victory Nickel selected the grindability samples based on the lithology types, sample locations, and distribution within the Minago deposit. These samples were selected from the three lithologies present, namely serpentinite, altered ultramafic/low granite, and high granite, to form representative samples for the grindability testwork. Representative samples were collected from each of the drill holes. A sub-sample was taken from the grindability samples for interval total nickel assaying.

### **Drill Hole Composites**

Composite recipes for each individual drill hole were created. For the purpose of testing the flotation performance of each hole and therefore, the different mineralized zones of the deposit represented by each hole. Table 13.1 lists the results of the sulphidic nickel assay of the five drill hole composite samples.

The flotation testwork revealed that drill hole N-07-18 showed poor flotation performance and the total nickel and sulphidic nickel assaying indicated that the concentration of recoverable sulphidic nickel in this hole composite was very low. Further analysis of the interval sulphidic nickel assays from hole 18 led to the conclusion that this hole could not be considered "mineralized material". For this reason, hole 18 was not included in the compositing recipe for Open Pit Master Composite No. 1, which was formed from holes N-07-14, N-07-15, N-07-16, and N-07-17. This first master composite was based on the total nickel assay for the selected holes.

	-			
Hole	Ni Total	Ni as	Ni as Non	Recoverable
Composite	(%)	Sulphide (%)	Sulphide	Ni in Sample (%)
			(%)	
14	0.6	0.51	0.09	85
15	0.42	0.26	0.16	61.9
16	0.64	0.47	0.17	73.4
17	0.51	0.28	0.23	54.9
18*	0.29	0.061	0.23	21

 Table 13.1: Total nickel and sulphidic nickel assay of the five metallurgical drill holes (from Victory Nickel)

\* Not included in the first master composite

#### **Open Pit Master Composite No. 1**

The master composite is that composite which is representative of the entire deposit. Open Pit Master Composite No. 1 was based on the total nickel assays and the geological total nickel block model. This composite was used for the initial batch flotation tests undertaken to develop the process flowsheet.

The volume of influence of each drill hole on the blocks of mineralization surrounding it, and whether the blocks of such were mineable or waste, was calculated from the geological total nickel block model and the designed open pit used in historical mining studies. The quantity of sample required from a drill hole

interval to form a portion of the master composite was derived from the volume of influence of each interval. Open Pit Master Composite No. 1 assayed 0.61% total Ni and 0.37% sulphidic Ni.

### Sulfidic Nickel Grade Composites

By using the same volume of influence concept used in the master composite formation and the sulphidic nickel assays, five composites were formed - 0.20%, 0.30%, 0.50%, 0.80%, and 1.15% sulphidic Ni. Intervals that had sulphidic nickel assays within range of the targeted composite head grade were combined based on their volume of influence to form the individual grade composites. These composites were subjected to flotation tests in order to generate the head grade-recovery curve.

### **Open Pit Master Composite No. 2**

The geological sulphidic nickel block model was used to form a second open pit master composite based on sulphidic nickel. The same volume of influence methodology was employed to create the recipe for this composite. Open Pit Master Composite No. 2 was used in the flowsheet development testing to collect data for mill design and economic assessments.

### Variability Flotation Samples

The samples for variability flotation testing were selected by Victory Nickel based on rock type and location of the drill core intervals. The objectives for these variability flotation tests were to investigate the robustness of the designed flowsheet and the effect of mineralogy on the flotation performance of the sample.

# **13.2.2 GRINDABILITY TESTS**

Grindability samples were subjected to standard Bond BWI tests, Bond RWI tests, Bond Abrasion Work Index (AI) tests, and SPI tests. Three samples were subjected to JK Drop Weight (DW) tests. These tests were carried out at SGS, and generated the data used by SGS in JKSimMet and their Comminution Economic Evaluation Tool (CEET) grinding simulation studies.

# 13.2.2.1 GRINDABILITY TESTING RESULTS

The grindability test results indicate that the test samples were soft or in the easy to average range of grindability based on the SGS database of grinding operations (Table 13.2). Samples containing granite are above average in both SAG and ball mill grindability and are very abrasive. The RWIs indicated the test samples were close to the averages in the SGS database.

The CEET and JKSimMet grinding simulation studies were completed based on a throughput of 14,000 t/d. The CEET simulation indicated that a SAG mill with 2,681 kW power draw at shell and a ball mill with 6,069 kW power draw at shell would be required for processing the Minago mineralized material at a mill throughput of 10,000 t/d. The JKSimMet study suggested a SAG mill with 2,749 kW power installation and a ball mill with 6,318 kW power installation for the same application.

Sample	Specific	DW Para	ameters	SPI	RWI	BWI (kWh/t)		AI	
Name	Gravity	Axb	DWI	(min)	(kWh/t)	150 mesh	200 mesh	(g)	
DW 1	2.31	107	2.14	27.5	9.2	13.2	15	0	Serpentinite with minor magnetite & granite
DW 2	2.57	67.4	3.81	59.9	11.6	19.7	19.6	0.192	Granite with 45% serpentinite
DW 3	2.5	84.1	2.97	40.4	10.1	15.6	17.3	0.016	Serpentinite + minor granite
G1	-	-	-	25.2	9.4	12.6	-	0.003	Serpentinite, fine grain
G2	-	-	-	21.4	9.6	13.1	-	0.001	Serpentinite, fine grain
G3	-	-	-	88.4	13.8	16.5	-	0.689	Granite, relative fresh
G4	-	-	-	19.1	8	11.7	-	0.019	Altered Ultramafic
G5	-	-	-	17.9	8.8	11	-	0.009	Serpentinite, tremolite + talc up to 10%
G6	-	-	-	87.1	13.4	17.8	-	0.629	Granite/granite gneiss
G7	-	-	-	78.3	12.9	17.9	-	0.511	Granite, weakly to strongly hematized
G8	-	-	-	57.4	11.1	17	-	0.388	Altered granite, 5-30% kaolin-chlorite
G9	-	-	-	34.3	9.6	14.9	-	0.095	Mafic metabasalt/molson dyke
G10	-	-	-	27.4	10.2	18.7	-	0.002	Serpentinite + minor granite
G11	-	-	-	10.2	5.7	11.7	-	0.002	Serpentinite, Variable minor granite
G12	-	-	-	25.8	9.5	14.3	-	0	Serpentinite
G13	-	-	-	28.5	9.1	11.1	-	0.036	Serpentinite
G14	-	-	-	22.4	8.4	12.8	-	0.003	Serpentinite
G15	-	-	-	26.9	9.5	16.1	-	0.005	Serpentinite
G16	-	-	-	72.2	13.6	17	-	0.581	Granite/granite gneiss
G17	-	-	-	46.6	11.3	18.9	-	0.083	Altered Ultramafic

# Table 13.2: Summary of grindability test results (from Victory Nickel)

## 13.2.3 Mineralogical Study

### 13.2.3.1 QEMSCAN® ANALYSIS ON THE HOLE COMPOSITE SAMPLES

SGS carried out various mineralogical analyses of different Victory Nickel samples at its Advanced Mineralogy Facility over the course of the historical test program in order to:

- gather mineralogical knowledge of the flotation feed
- understand the flotation performance of the samples
- facilitate the flotation optimization.

A bulk modal analysis was conducted on the hole composite samples to quantify the minerals contained in those samples. The results of mineral abundances in the five drill hole composites are presented in Figure 13.1.





<sup>(</sup>Taken from Wardrop, 2010)

Figure 13.1 shows that the most abundant mineral in the hole composites is serpentine followed by talc and phlogopite. These three minerals account for 70% of the mass in each composite. The hole composites also contain percentages of feldspars, quartz, olivine and amphibole. The nickel sulfides in the composites are pentlandite and millerite with minor quantities of violarite.

## 13.2.3.2 QEMSCAN® ANALYSIS ON OPEN PIT MASTER COMPOSITE NO. 2

SGS also conducted a bulk modal analysis on four fractions of Open Pit Master Composite No. 2. The results of mineral abundances in Open Pit Master Composite No. 2 are presented in Table 13.3. The elemental deportment of nickel is shown in Figure 13.2, and the nickel sulphide liberation data is shown in Figure 13.3.

The data in Table 13.3 shows that Open Pit Master Composite No. 2 contains 34.7% serpentine, 30.2% talc, 11.2% phlogopite, 5.8% amphibole, 4.9% feldspars, and other minor minerals.

Figure 13.2 indicates that millerite, pentlandite, and violarite represent 55.4%, 27.6%, and 0.9% respectively of the nickel in the composite. The remaining nickel is contained in silicate minerals. The percentage of nickel content in sulphides (84%) determined by QEMSCAN<sup>®</sup> is significantly higher than the result (67%) obtained by chemical nickel sulphide assay using ammonium nitrate leach. It is believed that the results by chemical analysis are more reliable since it is very difficult to obtain accurate nickel contents in each mineral in the composite and this will in turn affect the reliability of nickel deportment in the QEMSCAN<sup>®</sup> results.

The liberation of nickel sulphides at a grind size of P80 = 68  $\mu$ m is 79% as shown in Figure 13.3.

# 13.2.3.3 QEMSCAN® ANALYSIS OF THE VARIABILITY AND FLOTATION TAILS SAMPLES

Bulk modal analysis was conducted on three variability samples - V6, V11, and V12, along with some flotation tails samples.

The mineral abundance analysis indicates that the gangue mineral compositions of the variability samples are quite similar. The sulphide mineral abundance and elemental nickel deportment results indicate that the compositions of nickel sulphides in the variability samples differ significantly. V11 dominantly contains millerite while V6 contains more millerite than pentlandite and V12 contains slightly more pentlandite.

In terms of nickel deportment, millerite is the most dominant mineral which contains the most significant portion of nickel as a single mineral in each variability sample. The liberation data from QEMSCAN<sup>®</sup> indicate that the nickel sulphide minerals are well liberated at the targeted grind (P80 = 68  $\mu$ m). The elemental deportment of the tails from LCT-7 on the Open Pit Master Composite No. 2 indicates that 70% of the total nickel is in the form of nickel silicates. Liberation of the nickel sulphides in the tails is poor and only about 20% of the sulphides were liberated.

100% -						
90% -						Phlogopite
80% -	_		_		_	■ Chlorite
70% -						□ Serpentine
60% -						Talc
50%						■ Millerite-Silicate Tex
50% -						Millerite Group
40% -						Violarite
30% -	╶					■ Pnt-MgSil Tex
20% -				┥┣	— <mark>—</mark> —	Pnt-FeSul Tex
10% -	_				_	Pentlandite
<u> П%</u> -						
	Combined	300/+53un	153/+38um	-38/+20um	-20/+3um	
Phlogopite	4.12	9.59	2.72	4.39	3.03	
Chlorite	0.35	0.72	0.34	0.41	0.26	
Serpentine	5.35	6.02	3.92	5.63	5.27	
Talc	6.27	15.08	7.18	6.83	4.31	
Millerite-Silicate Tex	12.75	15.91	12.10	11.91	12.16	
Millerite Group	42.63	26.71	39.19	31.27	46.78	
■ Vio larite	0.93	1.87	3.64	1.22	0.55	
Pnt-MgSil Tex	3.07	6.30	4.26	3.64	2.29	
Pnt-FeSul Tex	0.89	0.19	0.44	0.63	1.07	
Pentlandite	23.65	17.60	26.21	34.06	24.27	

# Figure 13.2: Elemental deportment of nickel in Open Pit Master Composite No. 2 (from Victory Nickel)

(Taken from Wardrop, 2010)

100					
90 -					
80 -					
5 70					
E 00 1					
s 50 -					
Z 40 ∽2					
<b>ž</b> 30 -					
20					
10					
0					
v	Sec Master Comp	-300/+53um	<b>-5</b> 3/+38um	-38/+20um	-20/+3um
Locked Ni S=	7.4	32.4	8.4	5.1	4.9
Ni S= Sub-Midds	5.4	9.5	8.8	6.5	4.7
🗖 Ni S= Midds	8.0	14.5	10.8	12.9	6.8
∎Lib Ni S=	23.1	13.0	16.5	15.6	25.0
Free Ni S=	35.1	18.4	32.1	34.7	37.0
Free Mi	14.6	8.1	12.2	12.7	15.5
Free Vi	0.0	0.0	0.0	0.0	0.0
Free Pn	6.5	4.1 SA	11.3 MPLE (Calculated	12.5 Head)	6.1

Figure 13.3: Liberation of nickel sulphide minerals (from Victory Nickel)

(Taken from Wardrop, 2010)

# Table 13.3: Mineral abundance in Open Pit Master Composite No. 2 (from Victory Nickel)

Minerals	Combined Sample (%)	-300/+53	um (%)	-53/+38 u	m (%)	-38/+20 µ	m (%)	-20/+3 μn	n (%)
		Sample	Fraction	Sample	Fraction	Sample	Fraction	Sample	Fraction
Pentlandite	0.51	0.06	0.22	0.03	0.62	0.03	0.64	0.39	0.62
Pentlandite-Iron Sulfides Texture	0.03	0	0	0	0.01	0	0.02	0.02	0.04
Pentlandite-Magnesium Silicates Texture	0.09	0.03	0.11	0.01	0.14	0	0.09	0.05	0.08
Violarite	0.02	0.01	0.02	0	0.08	0	0.02	0.01	0.01
Millerite Group	0.48	0.05	0.18	0.02	0.49	0.01	0.31	0.4	0.63
Millerite-Silicate Texture	0.36	0.07	0.26	0.02	0.38	0.01	0.29	0.26	0.41
Chalcopyrite	0.11	0.01	0.03	0	0.07	0	0.07	0.09	0.15
Pyrite	0.3	0.05	0.19	0.01	0.3	0.02	0.44	0.22	0.34
Pyrrhotite	0.01	0	0.01	0	0.01	0	0.02	0	0
Other Sulphides	0.03	0.01	0.02	0	0.08	0	0.03	0.02	0.03
Quartz	1.52	0.36	1.32	0.09	2.13	0.12	2.85	0.94	1.48
Feldspars	4.9	1.47	5.3	0.25	5.99	0.28	6.63	2.91	4.55
Talc	30.21	10.81	39.07	1.49	36.02	1.27	29.62	16.64	26.04
Serpentine	34.7	6.28	22.71	1.15	27.89	1.37	31.87	25.9	40.52
Olivine	2.03	1	3.61	0.13	3.08	0.1	2.32	0.81	1.26
Amphibole	5.84	1.59	5.77	0.25	6.15	0.29	6.71	3.71	5.8
Chlorite	2.41	0.81	2.92	0.11	2.57	0.11	2.48	1.39	2.18
Phlogopite	11.19	4.19	15.14	0.33	8.09	0.45	10.41	6.22	9.73
Other Micas/Clays	0.04	0.02	0.07	0	0.07	0.01	0.14	0.01	0.02
Iron Oxides	2.56	0.26	0.95	0.1	2.4	0.08	1.97	2.11	3.31
Other Oxides	0.88	0.06	0.21	0.03	0.66	0.03	0.69	0.76	1.19
Carbonates	1.77	0.52	1.87	0.11	2.78	0.1	2.33	1.04	1.62
Other	0.01	0.01	0.02	0	0.01	0	0.06	0	0.01
Total	100	27.66	100	4.13	100	4.29	100	63.92	100

The mineralogical examination of the first cleaner tails and the rougher tails from LCT-2 on the 0.2% NiS Grade Composite indicate that nickel losses in the flotation tails can be attributed to the fineness of the nickel-bearing minerals and to the middling/locked occurrences with the non-sulphide gangue minerals and rimming of nickel sulphides by silicate minerals.

# 13.2.4 Flotation Tests

## 13.2.4.1 METALLURGICAL DRILL HOLE COMPOSITE FLOTATION TESTS

The SGS historical testwork was carried out to determine the flotation performance of each individual drill hole. Based on the flotation performance, a decision could then be made whether to include the drill hole in a Composite or to exclude it. The results indicate that the floatability of the drill hole composite from N-07-18 were poor. Hole 18 was deemed to not represent mineable mineralization and, as discussed above, was not included in any composite.

### 13.2.4.2 FLOTATION TESTS ON OPEN PIT MASTER COMPOSITE NO. 1

The original objective of the flotation testwork on Open Pit Master Composite No. 1 was to optimize the nickel recovery through adjustments of flotation parameters and for the design criteria required engineering the concentrator. However, subsequent sulphidic nickel assays indicated that a portion of the nickel from the five metallurgical drill holes was present in an unrecoverable nickel silicate mineralization. Open Pit Master Composite No. 1 contained material which would be deemed waste and was therefore not representative of the mineralized material from the potential open pit. After this discovery, the testwork on Open Pit Master Composite No. 1 focused on developing an understanding of the composite's response to changes in flotation parameters and on optimizing them.

The flotation parameters investigated in the Open Pit Master Composite No. 1 test program and the conclusions drawn from the testing are listed below.

- Size does not have a significant impact on the nickel rougher recovery in the range tested. A finer grind resulted in a slightly lower nickel recovery in the final cleaner concentrate with lower magnesium oxide content.
- Regrind of the first cleaner concentrate had a negative impact on the final cleaner recovery.
- The MF2 flowsheet did not improve the nickel rougher recovery.
- MF2 flowsheet with a short period of coarse primary grinding (21 minutes vs. 30 minutes) did not improve the nickel rougher recovery.
- The talc pre-float was unacceptable as it resulted in a 6.5% to 6.8% loss in nickel recovery.
- Potassium Amyl Xanthate (PAX) was the preferred collector. Other collectors tested were Potassium Emyl Xanthate (PEX), AERO 407, and AERO 5100, none of which resulted in any better selectivity than PAX.
- Doubling the PAX dosage had a negative effect on the nickel rougher flotation recovery.
- Adding PAX to the grind with or without carboxymethylcellulose (CMC) did not improve the final cleaner nickel recovery.
- Low dosages of CMC (i.e. 100 to 200 g/t) did not improve the rougher flotation selectivity.

- Adding sodium hexametaphosphate (Calgon) in the grind with a small dosage of Depramin C (Dep. C) in the cleaner improves the flotation results.
- The addition of sodium silicate (Na2SiO3), and sodium hexametaphosphate (NaPO3)6 with or without soda ash improved the rougher flotation selectivity. Combining Na2SiO3, Na2CO3 and CMC should improve nickel selectivity in the cleaner.
- The addition of soda ash with CMC did not improve the flotation selectivity.
- Reducing the slurry pH below 4 had a negative impact on the nickel sulphide flotation.
- Adjustment of the slurry pH close to neutral (pH = 7.5) with sulphuric and oxalic acid did not improve the flotation performance.
- An additional observation was that the rougher concentrate was cleaned relatively well even when the mass pull into the rougher concentrate was as high as 46.2%.
- •

# 13.2.5 Qualified Person (Report Author) Comments on Historical Test Programs

The historical metallurgical test results completed by previous operators of the Project provide a good basis for evaluating the flotation results from those studies. For the purposes of this Technical Report and current MRE for the Project, the grade – recovery curve generated from the historical metallurgical testing is suitable for an estimate of metallurgical performance. This is based on the report author's full assessment and data verification and validation of the historical metallurgical test results and historical reports. The historical Sulphidic Nickel Head Grade-Recovery Curve asserted that the sulphidic nickel assay "was significantly lower than the total nickel assay in the concentrate which is unlikely to be the case". However, in the report author's opinion, this assertion does not consider the possibility that some of the nickel in the concentrates is associated with higher grade serpentine. These have been reported as high as 12% nickel in previous internal reports completed by Victory Nickel. Presence of this as gangue in the nickel concentrate would cause the nickel assay to exceed the sulphidic nickel assay. This will require further testing to quantify if this is the case and how much it impacts the grade recovery curve. This discrepancy does not significantly impact the estimates from historical testing for the purposes of this Technical Report.

In summary, the grade recovery relationship for the Minago Deposit can be estimated as:

Nickel Recovery =  $(61.375X^3 - 198.87X^2 + 218.02X + 9.435)\%$  for  $0.1 \le X \le 1.25$ 

Nickel Recovery = 91.1%; for X >1.25

Nickel Recovery = 0%; for X<0.1

where X = sulphidic nickel grade %.

# 13.3 Qualified Person (Report Author) Recommendations for Further Metallurgical Testing

To advance the Project to a Pre-Feasibility or Feasibility Study, it will be necessary to complete further laboratory testing of metallurgical test samples collected from the Project. Prior to completing this new testing program, a detailed analysis of previous testing should be completed to determine if there are

alternatives to the flowsheet derived from the historical test work. The new metallurgical testing should include:

- Geo-metallurgical mapping of the Minago deposit using historical data;
- Obtaining appropriate metallurgical samples this will almost certainly involve further drilling. If
  existing core is to be used, it will need to first be evaluated for storage history and potential
  oxidation;
- Confirmatory bench scale testing to determine reagent schedules;
- Comminution testing suitable for obtaining the crushing, SAG milling and ball milling parameters;
- Pilot plant testing of the flowsheet derived from historical metallurgical studies a 'Mini-Pilot' will provide this information while minimizing the mass of material necessary;
- Pilot plant testing of alternatives to the historical flowsheets, if this is determined as potentially beneficial;
- Confirmatory testing on Mini-Pilot products to determine settling rates for dewatering and water characteristics of pertinent streams, particularly tailings;
- Analysis of final concentrates from the Mini-Pilot to determine saleability and potential penalties;
- Coarse particle flotation this technology is currently available from Eriez Flotation. In the event that this testing is performed, it will be necessary to determine if other suppliers have developed a competitive product.

If a new diamond drilling program, independent of the new metallurgical testing program described above is proposed, metallurgical core samples can be obtained as part of such a diamond drilling program. If this is considered, core for testing needs to be stored properly, preferably at below 0° C and possibly under nitrogen.

Though not necessary to complete a Pre-feasibility or Feasibility Study, it is advised that a trade off study be undertaken to evaluate alternatives to SAG milling, such as:

- High Pressure Grinding Rolls (HPGR);
- Microwave comminution this is new and non-commercialized technology, but is quickly evolving;
- Primary ball milling this could be accomplished by eliminating the pebble crusher and installing a larger cone crusher ahead of the primary mill and using it as a secondary crusher, allowing for a finer feed to grinding and a more consistent grind;

The historical metallurgical studies indicated that pre-flotation of talc was not successful. This should be re-evaluated with a short evaluation of the potential for the sale of the talc. Talc is used extensively as a filler in plastics and rubber and has commercial value.

A full review of previous testing may also provide insight into potentially beneficial changes to the flowsheet developed by previous operators. Technology has evolved since these historical studies were completed and changes may, or may not, improve the project economics.

#### 14.0 MINERAL RESOURCE ESTIMATES

### 14.1 General

The definition of mineral resource and associated mineral resource categories used in this report are those recognized under National Instrument 43-101 and set out in the Canadian Institute of Mining, Metallurgy and Petroleum Standards on Mineral Resources and Reserves Definitions and Guidelines (the CIM Standards – May 2014). Assumptions, metal threshold parameters and deposit modeling methodologies associated with the current Minago deposit resource estimate are discussed below in report sections 14.2 through 14.3.

The mineral resource estimate for the Project was prepared by Mr. Matthew Harrington, P.Geo., with assistance from Mr. David Murray, P.Geo. and Mr. Michael Cullen, P. Geo. of Mercator. Report author M. Harrington takes full responsibility for the Minago Project mineral resource estimate with an effective date of July 2, 2021. Report author Mr. L. Elgert of AGP Mining Consultants ("AGP") provided pit optimization expertise and associated services and takes responsibility for this portion of the Technical Report.

A tabulation of the mineral resources for the Minago Nickel Project is presented in Table 14.1, with contributing mineral resources presented in Table 14.2 and Table 14.3 for the Nose Zone and North Limb Zone respectively. Open Pit mineral resources were defined within optimized pit shells developed using Hexagon Mine Plan 3D version 15.4, MineSight<sup>®</sup> Economic Planner version 4.00-11. Pit optimization parameters include mining at US\$1.77 per tonne, processing at US\$7.62 per tonne processed and General and Administration (G&A) at US\$3.33 per tonne processed. A metal price of US\$7.80/lb Ni and an average sulphide nickel (NiS) recovery above the cut-off grade of 78% (ranging from 40% to 90%), based on previous metallurgical test programs, was used.

Open Pit mineral resources are reported at a cut-off grade of 0.18 % NiS within the optimized pit shell. The 0.18 % NiS cut-off grade approximates a 0.25 % Ni grade when applying the average ratio of NiS to total Ni for the mineral resource. The cut-off grade reflects total operating costs used in pit optimization to define reasonable prospects for eventual economic extraction by open pit mining methods.

Underground mineral resources are reported at a cut-off grade of 0.36 % NiS. The 0.36 % NiS cut-off grade approximates a 0.50 % Ni grade when applying the average ratio of NiS to total Ni for the mineral resource. The cut-off grade reflects total operating costs of US\$41.72/t processed to define reasonable prospects for eventual economic extraction by underground mining methods.

Туре	Ni % Cut-off	Category	Rounded Tonnes	Ni %	Ni Lbs (million)
		Measured	11,490,000	0.73	184.92
		Indicated	12,450,000	0.69	189.39
Open Pit	0.25	Measured and			
		Indicated	23,940,000	0.71	374.30
		Inferred	Rounded Tonnes         Ni %           11,490,000         11,490,000           12,450,000         23,940,000           23,940,000         20,070,000           610,000         19,680,000           12,450,000         11,490,000           11,490,000         11,490,000           112,100,000         12,100,000           32,130,000         44,230,000           19,550,000         19,550,000	0.57	26.01
Open Pit Underground Combined	0.5	Measured	610,000	0.81	10.89
		Indicated	19,680,000	0.77	334.08
		Measured and			
		Indicated	20,290,000	0.77	344.97
		Inferred	17,480,000	0.76	292.88
		Measured	12,100,000	0.73	194.73
		Indicated	32,130,000	0.74	524.17
Combined	0.25/0.50	Measured and			
		Indicated	44,230,000	0.74	721.58
Open Pit Underground Combined		Inferred	19,550,000	0.74	318.94

Mineral Resource Estimate Notes:

1. Mineral resources were prepared in accordance with the CIM Definition Standards for Mineral Resources and Mineral Reserves (MRMR) (2014) and CIM MRMR Best Practice Guidelines (2019).

- 2. Open Pit mineral resources are defined within an optimized pit shell with average pit slope angles of 40° and overall 13.3:1 strip ratio (waste : mineralized material). The 13.3:1 strip ratio is comprised of a 6.2:1 pre-strip component and a 7.1:1 deposit component.
- 3. Pit optimization parameters include: metal pricing at US\$7.80/lb Ni, mining at US\$1.77/t, processing at US\$7.62/t processed, G&A at US\$3.33/t processed, and an average sulphide Ni (NiS) recovery above the cut-off grade of 78% (ranging from 40% to 90%), based on previous metallurgical test programs. An average Ni recovery of 56% can be calculated using the average NiS recovery and the average ratio of NiS to Ni (72%) reported above the cut-off grade. Concentrate by-product credits were applied at metal prices of US\$3.25/lb (Cu), US\$2,000/oz Pd and US\$ 1,000/oz Pt. A potential frac-sand overburden unit was assigned a value of US \$20/t, a recovery factor of 68.8 %, mining cost of US \$1.77/t, and processing cost of US \$6.55/t processed.
- 4. Open Pit mineral resources are reported at a cut-off grade of 0.18 % NiS within the optimized pit shell. The 0.18 % NiS cut-off grade approximates a 0.25 % Ni grade when applying the average ratio of NiS to total Ni for the mineral resource. The cut-off grade reflects total operating costs used in pit optimization to define reasonable prospects for eventual economic extraction by open pit mining methods.
- 5. Underground mineral resources are reported at a cut-off grade of 0.36 % NiS. The 0.36 % NiS cut-off grade approximates a 0.50 % Ni grade when applying the average ratio of NiS to total Ni for the mineral resource. The cut-off grade reflects total operating costs of US\$41.72/t processed to define reasonable prospects for eventual economic extraction by underground mining methods.
- 6. Ni % deposit grade was estimated using Ordinary Kriging methods applied to 2 m downhole assay composites. No grade capping was applied. NiS % block values were calculated from Ni % block values using a regression curve based on Ni and NiS drilling database assay values. Model block size is 6 m (x) by 6 m (y) by 6 m (z).
- 7. Bulk density was applied on a lithological model basis and reflects averaging of bulk density determinations for each lithology.

- 8. Mineral resources may be materially affected by environmental, permitting, legal, title, taxation, sociopolitical, marketing, or other relevant issues.
- 9. Mineral resources are not mineral reserves and do not have demonstrated economic viability.
- 10. Mineral resource tonnages are rounded to the nearest 10,000.

Туре	Ni % Cut-off	Category	Rounded Tonnes	Ni %	Ni Lbs (million)
Open Pit		Measured	11,490,000	0.73	184.92
		Indicated	10,310,000	0.70	159.11
	0.25	Measured and			
		Indicated	21,800,000	0.72	344.02
		Inferred	1,410,000	0.51	15.85
Underground 0.5	0.5	Measured	610,000	0.81	10.89
		Indicated	13,870,000	0.80	244.62
		Measured and			
		Indicated	14,480,000	0.80	255.52
		Inferred	10,610,000	0.80	187.13
		Measured	12,100,000	0.73	194.73
Combined		Indicated	24,180,000	0.76	405.14
	0.25/0.50	Measured and			
		Indicated	36,280,000	0.75	599.88
		Inferred	12,020,000	0.77	204.05

Table 14.2: Minago Nose Zone Mineral Resource Estimate – Effective Date: July 2, 2021\*

\* The Minago Nose Zone mineral resource forms part of the total Minago Project mineral resource. See detailed notes on mineral resources in Table 14.1 of Section 14.1

Туре	Ni % Cut-off	Category	Rounded Tonnes	Ni %	Ni Lbs (million)
		Measured			
		Indicated	2,140,000	0.65	30.67
Open Pit Underground	0.25	Measured and			
		Indicated	2,140,000	0.65	30.67
		Inferred	660,000	0.70	10.19
	0.5	Measured			
		Indicated	5,810,000	0.68	87.10
		Measured and			
		Indicated	5,810,000	0.68	87.10
		Inferred	6,870,000	0.68	102.99
		Measured			
Combined		Indicated	7,950,000	0.67	117.43
	0.25/0.50	Measured and			
		Indicated	7,950,000	0.67	117.43
		Inferred	7,530,000	0.68	112.89

	Table 14.3: Minago	North Limb Zone	e Mineral Resource	Estimate – Effective	Date: July 2	. 2021*
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\* The Minago North Limb Zone mineral resource forms part of the total Minago Project mineral resource. See detailed notes on mineral resources in Table 14.1 of Section 14.1

## 14.2 Geological Interpretation Used In Resource Estimation

The Minago Deposit is hosted by the same geological sequence, the Opswagan Group, in which the Thompson Nickel Belt deposits occur. Thompson-style nickel mineralization consists of magmatic nickel sulphide originally associated with mafic and ultramafic intrusions that commonly has been remobilization by regional metamorphism and deformation into favourable structural settings such as fold noses and limbs in host sequences. Nickel sulphides of economic importance also occur as disseminated to massive phases within and adjacent to the mafic and ultramafic intrusions themselves, with this setting best characterizing the Minago Deposit. The mafic and ultramafic rocks are cut by granitic clasts, dikes, and sills that are predominantly barren of nickel sulphide mineralization and form intervals of dilution to the overall mineralized body.

### 14.3 Methodology of Resource Estimation

### 14.3.1 Overview of Estimation Procedure

The Minago Deposit mineral resource estimate is comprised of two zones of nickel mineralization, the Nose Zone and North Limb Zone. The mineral resource estimate is based on the validated results of 202 historical diamond drill holes (86,118 m), including 29 drill holes (11,581 m) completed between 1966 and 1972 by Amax, 11 drill holes (6,440 m) completed between 1973 and 1976 by Granges, 52 drill holes (23,292 m) completed between 1989 and 1991 by Black Hawk, and 110 drill holes (44,304 m) completed between 2005 and 2012 by Nuinsco-Victory Nickel. Solid modelling was performed using GEOVIA Surpac<sup>™</sup> 2021 (Surpac) and Seequent Leapfrog<sup>™</sup> Geo 6 (Leapfrog) modeling software. Block model volume, grade, and density modeling was performed using Surpac with nickel percent values for the block model estimated using ordinary krigging (OK) interpolation methodology from 2 m down hole assay composites. Block density values were applied on a lithological model was set up with a block size of 6 m (x) by 6 m (y) by 6 m (z).

Grade domain solids models were created using Surpac and Leapfrog from two sets of downhole intercepts that define distributions of higher grade nickel mineralization enveloped by lower grade nickel mineralization. Intercepts defining higher grade distributions of nickel were developed at a minimum width of 10 downhole meters and a minimum average grade of 0.40 % nickel. Intercepts defining lower grade distributions of nickel mineralization from included granite intervals, with an acceptable minimum width of an assay sample length. The 0.20 % nickel grade domain modelling strategy was used to define a maximum envelop of mineralized serpentinite and ultramafic rocks and represents a contact between serpentinite and the main granitic unit. Intercepts defining lower grade nickel mineralization, termed "Low Grade", were developed into implicit intrusion solid models that were extended laterally 80 m, vertically 120 m, or half the distance to a constraining drill hole. Surface resolution for the solid models is 2 to 5 m for the Low Grade nickel domains and 5 m for the High Grade nickel domains.

In the Nose Zone, a total of 2 separate solid models were developed for definition of Low Grade nickel mineralization and a total of 2 separate solid models were developed for definition of High Grade nickel mineralization. Nickel mineralization solid models for the Nose Zone support an upright fold nose geometry with a southeast axial plunge. The west limb of the main Low Grade nickel domain extends along an azimuth of 290° for 400 m, averages 200 m in thickness and has a vertical extent of 950 m. The east limb of the main Low Grade nickel domain extends along an azimuth of 290° for 400 m, averages 200 m in thickness and has a vertical extent of 950 m. The east limb of the main Low Grade nickel domain extends along an azimuth of 32° for 450 m, averages 150 m in thickness and ranges between 300 m and 700 m in vertical extent. A second Low Grade nickel domain occurs 125m south of the west limb and forms a discrete tabular zone measuring 400 m east-west, averaging 30 m in thickness, and 450 m in vertical extent. The 2 High Grade nickel domains occur along the hanging wall and footwall of the main Low Grade domain, supporting thicknesses of several meters to a few tens of meters and similar vertical and lateral extents.

In the North Limb Zone, a total of 2 separate solid models were developed for definition of lower grade nickel mineralization and a total of 3 separate solid models were developed for definition of higher grade nickel mineralization. The North Limb Zone orients as the extension of the Nose Zone east limb approximately 350 m to the north. The first Low Grade North Limb Zone nickel domain extends along an azimuth of 010° for 900 m, averages 200 m in thickness and has a vertical extent of 500 m. The second Low Grade North Limb Zone nickel domain occurs 125 m beyond the first and extends along an azimuth of 010° for 650 m, averages 175 m in thickness and has a vertical extent of 350 m. The first North Limb Zone Low Grade domain hosts two tabular High Grade nickel domains located along the center and are separated by a local discontinuity in nickel mineralization of approximately 125 m. The second North Limb Zone Low Grade domain hosts a single tabular High Grade nickel domain along the east side. The High Grade nickel domains support thickness of several meters to a few tens of meters and have similar vertical and lateral extents as the enveloping Low Grade domains.

A digital terrain model was developed for the topographic surface from drill hole collars and lithological solid models were created for the cover units of overburden, dolomite, sandstone, and regolith from the drill hole database litho-codes. The Phanerozoic cover sequence is approximately 60 to 70 m in depth from the base of overburden. An implicit solid model using a surface resolution of 2 m was developed for an ultramafic unit, differentiated in drill logs from the predominate serpentinite lithology, near the base of the Nose Zone. The ultramafic solid model was constrained by the peripheral extents of the Nose Zone Low Grade domain or half the distance to a constraining drill hole. A sub-horizontal sulphide nickel percent (NiS %) digital terrain model (DTM), separating zones of low and high ratios of sulphide nickel to total nickel (NiS:Ni), was developed in Leapfrog from interpreted sulphide nickel analytical results. A low NiS:Ni domain occurs at the top of deposit and ranges from a few meters to 125 m in depth. A high NiS:Ni domain occurs beneath the low NiS:Ni domain and extents to base of the Deposit.

Interpolation ellipsoid ranges developed through assessment of variography, using Surpac's ZXY LRL axes of rotation convention, conform to a bearing of 130°, a plunge of -70°, and a dip -70° for the Nose Zone west limb and conform to a bearing of 35°, a plunge of -80°, and a dip of 60° for the Nose Zone east limb. The major axis of continuity aligns with the vertical down-dip direction, the semi-major axis of continuity

aligns with the limb strike direction, and the minor axis of continuity aligns with the direction perpendicular to the drill holes. Nickel grade interpolation was constrained to block volumes using a 3-interpolation pass approach and dynamic anisotropy. Interpolation passes, implemented sequentially from pass 1 to pass 3, progress from being restrictive to more inclusive in respect to ellipsoid ranges, composites available, and the number of composites required to assign block grades. Grade domain boundaries were set as hard boundaries for grade estimation. Grade interpolation was restricted to the 2 m assay composites associated with the drill hole intercepts assigned to each deposit area solid.

A regression curve was developed between sulphide nickel and total nickel analytical values for both the low and high NiS:Ni zones. A sulphide nickel block value was calculated for each block using the appropriate regression curve equation and the interpolated nickel precent value.

Open Pit mineral resources were defined within optimized pit shells developed using Hexagon Mine Plan 3D version 15.4, MineSight<sup>®</sup> Economic Planner version 4.00-11. Pit optimization parameters include mining at US\$1.77 per tonne, processing at US\$7.62 per tonne processed and General and Administration (G&A) at US\$3.33 per tonne processed. A metal price of US\$7.80/lb Ni and an average sulphide nickel recovery above the cut-off grade of 78% (ranging from 40% to 90%), based on previous metallurgical test programs, was used. Open Pit mineral resources are reported at a cut-off grade of 0.18 % NiS within the optimized pit shell. The cut-off grade reflects total operating costs used in pit optimization to define reasonable prospects for eventual economic extraction by open pit mining methods. The optimized pit shell supports average pit slope angles of 40° and an overall 13.3:1 strip ratio (waste to mineralized material). The 13.3:1 strip ratio is comprised of a 6.2:1 pre-strip component and a 7.1:1 deposit component. Underground mineral resources are reported at a cut-off grade of 0.36 % NiS. The cut-off grade reflects total operating costs of US\$41.72/t processed to define "reasonable prospects for eventual economic extraction at a cut-off grade of 0.36 % NiS. The cut-off grade reflects total operating costs of US\$41.72/t processed to define "reasonable prospects for eventual economic extraction by open pit mineral resources for eventual economic extraction by open pit grade of 0.36 % NiS. The cut-off grade reflects total operating costs of US\$41.72/t processed to define "reasonable prospects for eventual economic extraction by open for "reasonable prospects for eventual economic extraction" by underground mining methods.

Measured, Indicated, and Inferred mineral resources are defined as all blocks with interpolated nickel grades from the first, second or third interpolation pass, respectively, that meet the specified cut-off grade and demonstrate reasonable continuity. Orphan blocks and discontinuous zones of mineral resource categorization were refined through application of categorization solid models.

# 14.3.2 Data Validation

The mineral resource estimate is based on the validated results of 202 historical diamond drill holes (86,118 m), including 29 drill holes (11,581 m) completed between 1966 and 1972 by Amax, 11 drill holes (6,440 m) completed between 1973 and 1976 by Granges, 52 drill holes (23,292 m) completed between 1989 and 1991 by Black Hawk, and 110 drill holes (44,304 m) completed between 2005 and 2012 by Nuinsco-Victory Nickel. The project drill hole database also includes 132 geotechnical drill holes (1,460 m) completed by the various operators that were omitted for inclusion in the mineral resource estimate.

Drill hole coordinates are located in UTM NAD83 Zone 14 coordination. Flying Nickel provided the report author access to a project data room that contained project drill hole databases, original drill hole data and analytical records, documentation for past work programs, and historical project reporting. The report author brought forward the most current Microsoft Access database of the project drill hole data and subsequently completed a 30 % validation on collar, survey and lithology intervals data with acceptable results. The report author subsequently completed a 50% validation on drill core analytical values with acceptable results except for several deficiencies. For example, a re-sampling program completed by Nuinsco on the Black Hawk drill core was observed to be not properly compiled by previous operators and the report author subsequently completed 124 corrections to nickel values and 179 corrections to sample intervals. In addition, several sulphide nickel values throughout the various drill programs were observed to be unreasonable in respect to the associated total nickel value. On this basis, the report author completed a 100% validation of sulphide nickel values that resulted in 345 corrections. This issue was identified to be related to improper compilation of re-assay datasets due to QAQC issues noted by the respective operator. The project drill hole database contains 22,239 core samples with a nickel analytical result, including 9,104 core samples with a corresponding sulphide nickel result, and 9,000 specific gravity determinations.

Validation checks on overlapping intervals, inconsistent drill hole identifiers, improper lithological assignment, unreasonable assay value assignment, and missing interval data were performed using Leapfrog and Surpac in addition to data validation procedures discussed above. The additional validation procedures identified that analytical sample numbers were absence for a series of drill core sample intervals, which were subsequently compiled where available.

# 14.3.3 Modelling: Topographic, Lithological, and Grade

# 14.3.4 Topographic Surface

A digital terrain model (DTM) was developed for the project area from the drill collar elevation points. The project area topography is flat lying with no significant variance in elevation. The topographic DTM and is applied as the topographic constraint for mineral resource modelling (Figure 14.1).

Figure 14.1: Isometric view to the Northwest of the Deposit area topographic surface DTM (250 m grid spacing)



# 14.3.4.1 Overburden and Phanerozoic Cover Units Solid Models

An overburden solid model was developed in Leapfrog at a surface resolution of 10 m from drill hole lithocodes and the topography surface (Figure 14.2). Overburden thickness averages approximately 5 m, with maximum thicknesses of approximately 10 m, in the deposit area.



Figure 14.2: Isometric view to the Northwest of the Deposit overburden solid model (250 m grid spacing)

Solid models were developed in Leapfrog for the dolomite, sandstone, and regolith units from the drill hole database litho-codes at a surface resolution of 10m. The Phanerozoic cover sequence is flat lying and approximately 60 to 70 m in depth from the base of overburden. The dolomite unit occurs below the overburden and is approximately 50 m in thickness in the deposit area (Figure 14.3).



Figure 14.3: Isometric view to the Northwest of the Deposit area dolomite solid model (250 m grid spacing)

The sandstone unit occurs below the dolomite and is approximately 10 to 20 m in thickness in the Deposit area (Figure 14.4). The sandstone unit, belonging to the Winnipeg Sandstone Formation, supported an Indicated mineral resource and reserve estimate for frac sand that was prepared by Wardrop Engineering Inc. in 2010 (Wardrop, 2010). The 2010 frac sand mineral resource and reserve are historical in nature and Flying Nickel is not considering the 2010 frac sand mineral resource and reserve current, nor has a qualified person completed the work necessary to consider it current. Mineral resources for frac sand have not been defined for the current Deposit mineral resource estimate.

A regolith unit sometimes occurs between the sandstone unit and the underlying Precambrian basement rocks, ranging from not being present to a few meters in thickness (Figure 14.5).

The overburden and Phanerozoic cover sequence solid models were used to constrain the surface projections of the grade domain solid models.
Figure 14.4: Isometric view to the Northwest of the Deposit area sandstone solid model (250 m grid spacing)



Figure 14.5: Isometric view to the Northwest of the Deposit area regolith solid model (250 m grid spacing)



# 14.3.4.2 Grade Domain Models

Nickel mineralization of economic importance consists of magmatic nickel sulphide originally associated with mafic and ultramafic intrusions that commonly has been remobilization by regional metamorphism and deformation into favourable structural settings such as fold noses and limbs in host sequences. Nickel sulphides of economic importance also occur as disseminated to massive phases within and adjacent to

the mafic and ultramafic intrusions themselves. The mafic and ultramafic rocks are cut by granitic clasts, dikes, and sills that are predominantly barren of nickel sulphide mineralization and form intervals of dilution to the overall mineralized body.

Grade domain solids models were created using Surpac and Leapfrog from two sets of downhole intercepts that define distributions of higher grade nickel mineralization enveloped by lower grade nickel mineralization. Intercepts defining higher grade distributions of nickel were developed at a minimum width of 10 downhole meters and a minimum average grade of 0.40 % nickel. Intercepts defining lower grade distributions of nickel mineralization from included granite intervals, with an acceptable minimum width of an assay sample length. The 0.20 % nickel grade domain modelling strategy was used to define a maximum envelop of mineralized serpentinite and ultramafic rocks and represents a contact between and serpentinite and the main granitic unit. Intercepts defining lower grade nickel mineralization, termed "Low Grade", were developed into implicit intrusion solid models that were extended laterally 80 m, vertically 120 m, or half the distance to a constraining drill hole. Surface resolution for the solid models is 2 to 5 m for the Low Grade nickel domains and 5 m for the High Grade nickel domains.

In the Nose Zone, a total of 2 separate solid models were developed for definition of Low Grade nickel mineralization and a total of 2 separate solid models were developed for definition of High Grade nickel mineralization. Nickel mineralization solid models for the Nose Zone support an upright fold nose geometry with a southeast axial plunge. The west limb of the main Low Grade nickel domain extends along an azimuth of 290° for 400 m, averages 200 m in thickness and has a vertical extent of 950 m. The east limb of the main Low Grade nickel domain extends along an azimuth of 290° for 400 m, averages 200 m in thickness and has a vertical extent of 950 m. The east limb of the main Low Grade nickel domain extends along an azimuth of 32° for 450 m, averages 150 m in thickness and ranges between 300 m and 700 m in vertical extent. A second Low Grade nickel domain occurs 125m south of the west limb and forms a discrete tabular zone measuring 400 m east-west, averaging 30 m in thickness, and 450 m in vertical extent. The two High Grade nickel domains occur along the hanging wall and footwall the main Low Grade domain, supporting thickness of several meters to a few tens of meters and have similar vertical and lateral extents as the Low Grade. The Nose Zone Low Grade 0.20 % nickel solid models are presented in Figures 14.6 and 14.7 and High Grade 0.40 % nickel solid models are presented in Figures 14.8.

Figure 14.6: Isometric view to the Southeast (left) and the Northwest (right) of the Deposit Nose Zone Low Grade solid models (50 m grid spacing – Gold: Nose Main Low Grade, Blue: Nose South Low Grade)



Figure 14.7: Plan view (left) and isometric view to the Southeast (right) of the Nose Zone main Low Grade solid model and High Grade solid models (200 m / 50 m grid spacing – Gold: Nose Main Low Grade, Cyan and Green: Nose Zone High Grade)







In the North Limb Zone, a total of 2 separate solid models were developed for definition of lower grade nickel mineralization and a total of 3 separate solid models were developed for definition of higher grade nickel mineralization. The North Limb Zone orients as the extension of the Nose Zone east limb approximately 350 m to the north. The first Low Grade North Limb Zone nickel domain extends along an azimuth of 010° for 900 m, averages 200 m in thickness and has a vertical extent of 500 m. The second Low Grade North Limb Zone nickel domain occurs 125 m beyond the first and extends along an azimuth of 010° for 650 m, averages 175 m in thickness and has a vertical extent of 350 m. The first North Limb Zone Low Grade domain hosts two tabular High Grade nickel domains located along the center and are separated by a local discontinuity in mineralization of approximately 125 m. The second North Limb Zone Low Grade domain hosts a single tabular High Grade nickel domain along the east side. The High Grade nickel domains support thickness of several meters to a few tens of meters and have similar vertical and lateral extents as the enveloping Low Grade domains. The North Limb Zone Low Grade 0.20 % nickel solid models are presented in Figures 14.9 and 14.10 and High Grade 0.40 % nickel solid models are presented in Figure 14.12.





Figure 14.10: Plan view (left) and isometric view to the Southeast (right) of the North Limb Zone Low Grade solid models and High Grade solid models (500 m / 50 m grid spacing - Gold: North Limb Low Grade, Red: North Limb High Grade)



Figure 14.11: Isometric view to the Southeast (left) and to the Northwest (right) of the North Limb Zone High Grade solid models (50 m grid spacing - Red: North Limb High Grade)



Figure 14.12: Plan view of the Nose Zone and North Limb Zone grade domain solid models (500 m grid spacing)



# 14.3.4.3 Ultramafic Solid Model

Ultramafic host rocks at Minago range from relatively fresh (preserved olivine and orthopyroxene) to completely recrystalized (serpentine(s)  $\pm$  talc  $\pm$  tremolite  $\pm$  anthophyllite  $\pm$  phlogopite  $\pm$  dolomite). Serpentinization varies from intense to weak and appears to decrease with depth, most markedly a change is observed at approximately 400 m below surface. Scoates et. al (2017) attribute the change in

serpentinization to a change from retrograde metamorphism (serpentine-talc-tremolite-calcite) in the upper part of the ultramafic to prograde metamorphism (tremolite- hornblende-phlogopite) at depth.

An ultramafic unit at the base of the Nose Zone mineralization solids is described in drill core as having little to no serpentinization. An implicit solid model using a surface resolution of 2 m was developed in Leapfrog from the drill hole lithocodes for the ultramafic unit to differentiate it from the predominate serpentinite lithology (Figure 14.13). The ultramafic solid model was constrained by the peripheral extents of the Nose Zone Low Grade domain or half the distance to a constraining drill hole. Nickel mineralization is observed to be continuous across the serpentinite-ultramafic boundary.

Figure 14.13: Isometric view to the Northwest (left) and Southeast (right) of the Nose Zone ultramafic solid model (250 m grid spacing – Gold: Nose Main Low Grade, Pink: Ultramafic)



# 14.3.4.4 Sulphide Nickel Surface and Solid Models

A sub-horizontal sulphide nickel percent (NiS %) digital terrain model (DTM), separating zones of low and high ratio of sulphide nickel to total nickel (NiS:Ni), was developed in Leapfrog from interpreted sulphide nickel analytical results. A surface resolution of 10 m was applied to the DTM. The low ratio NiS:Ni zone occurs at the top of deposit and ranges from a few meters to 125 m in depth. The high ratio NiS:Ni zone occurs below and extends to the depth limit of the deposit. Zones of low and high NiS:Ni ratios transect both the Low Grade and High Grade domains defined on total nickel values. Figures 14:14 and 14:15 demonstrate the zonation of the low and high NiS:Ni with respected to the modelled total nickel mineralization.

Figure 14.14: Isometric view looking Northwest of the Deposit zonation of low and high ratio of NiS:Ni (250 m grid spacing – Yellow : Low Ratio NiS:Ni, Gold: High Ratio NiS:Ni)



Figure 14.15: Isometric view looking Southeast of the Deposit zonation of low and high ratio of NiS:Ni (250 m grid spacing – Yellow : Low Ratio NiS:Ni, Gold: High Ratio NiS:Ni)



#### 14.3.5 Assay Sample Assessment and Down Hole Composites

The drill core analytical dataset used in the mineral resource estimate contains 22,239 core samples with a nickel analytical result. A total of 19,005 sample records occur within the peripheral solid models. Sample length statistics for the solid constrained sample records support a sample length range of 0.001 m to 12.19 m and an average sample length of 1.44 m, with 75 % of samples measuring 1.5 meters or less.

A contact plot evaluating mean assay nickel percent between the High Grade and Low Grade domains demonstrates a sharp grade break between the two grade domains (Figure 14.16). Mean average nickel percent is consistent throughout the various distance intervals of the Low Grade and a transitional grade zone is not present near the Low Grade and High Grade contact. This grade relationship indicates that the Low Grade and High Grade domain contacts should be treated as hard boundaries in compositing and block model interpolation.





The sample frequency for each era of core drilling was assessed to determine if a sampling bias is present and to determine potential effect of diluting unsampled serpentinite intervals (Table 14.4). Project operators Granges and Black Hawk were focused on the definition of higher grade nickel mineralization amenable to bulk underground mining scenarios and support a low frequency of sampling in lower grade areas of the deposit. Operators Amax, Nuinsco, and Victory Nickel were focused on definition of nickel mineralization amenable to open pit mining scenarios and have almost 100 % sampling frequency for both the lower and higher grade areas of the deposit.

Operator	Solid Grade Domain	Serpentinite Core Length	% of Serpentinite Sampled	Mean Assay Length Weighted Ni %
Amax	High Grade	1776 m	98 %	0.88 %
Amax	Low Grade	2511 m	97 %	0.29 %
Granges	High Grade	317 m	98 %	0.86 %
Granges	Low Grade	650 m	72 %	0.29 %
Black Hawk	High Grade	2257 m	98 %	0.88 %
Black Hawk	Low Grade	3846 m	47 %	0.27 %
Nuinsco	High Grade	1996 m	99 %	0.77 %
Nuinsco	Low Grade	3429 m	100 %	0.26 %
Victory	High Grade	2579 m	100 %	0.83 %
Victory	Low Grade	4808 m	100 %	0.29 %

Table	14.4:	Core	sampling	r frec	uencv	for the	various	Minago	Project	operators
TUNIC	T-11-11	COIC	Jumping	,	1461169	ioi uic	Various	14 minugo	110,000	operators

Based on the frequency of sampling the Amax-Nuinsco-Victory drill programs provide a better assessment and definition of nickel grade for the lower grade areas of the Minago deposit. However, the variance in nickel percent in low grade areas is negligible between the Amax-Nuinsco-Victory drill programs, with almost a 100 % sample frequency over the intersected length, and the Granges-Black Hawk drill programs, with a 47 % to 72 % sample frequency over the intersected length, indicating that the grade characteristics of unsampled intervals should be similar in nature to the comparable sampled intervals. While few true twins are present between the Granges-Black Hawk drill programs and the Amax-Nuinsco-Victory drill programs, sectional assessment of nickel percent distribution demonstrated that areas unsampled by the Granges-Black Hawk drill programs correlate on strike and dip with intervals of above cut-off mineralization intersected by the Amax-Nuinsco-Victory drill programs. Low Grade intercepts for Black Hawk drill hole B-12A-89 and Victory Nickel drill hole V-10-18 are separated on strike by 25 m or less and demonstrate the nickel grade relationship between sampled and unsampled intervals (Table 14.5).

 Table 14.5: Comparison of sampling and grade characteristics between Low Grade intercepts of drill

 holes B-12A-89 and V-10-89

					% of	
			% of Length	% of Length	Serpentinite	
Hole Id	Intercept	Length (m)	Serpentinite	Granite	Sampled	Diluted Ni %*
B-12A-89	LG 1	88.02	81 %	19 %	25 %	0.03
V-10-18	LG 1	77.47	70 %	30 %	100 %	0.23
B-12A-89	LG 2	98.82	73 %	27 %	38 %	0.03
V-10-18	LG 2	101.55	70 %	30 %	100 %	0.23

\* Diluted Ni % reflects a 0 % nickel value inserted for unsampled serpentinite and granite intervals

On this basis, the report author determined that a single dilution methodology for unsampled serpentinite would not be appropriate. Consideration was given to excluding complete drill holes with poor sampling frequency in the Low Grade domains from the mineral resource estimate, however, the Granges-Black Hawk drill programs support almost a 100 % sampling frequency of higher grade intervals and provide

important spatial and grade definition of the High Grade domain for the Deposit. Exclusion of these High Grade intercepts on the basis of poorly sampled adjacent Low Grade intercepts was also determined to not be appropriate. It was assessed that intercepts supporting less than 50 % sampling frequency of serpentinite in the Low Grade domains are providing inadequate definition of nickel grade and were omitted from down-hole assay compositing. Intercepts supporting 50 % or more sampling frequency of serpentinite in the Low Grade domains are assessed to provide adequate definition of nickel grade and were accepted for down-hole assay compositing. All High Grade intercepts were accepted for compositing. All unsampled intervals, including serpentinite, ultramafic, and granite lithologies, of accepted intercepts were diluted to a nickel percent value of "0" prior to compositing.

Downhole assay composites over 2 m intervals were developed for nickel percent using the Surpac 'best fit" option set to a 2 m target value. Assay composites generated outside of a 25% tolerance interval of the nominal length were either manually re-generated or merged with adjacent composites to meet the selection conditions. Compositing was constrained based on the drillhole intersections with the respective solid models. Descriptive statistics were calculated for nickel percent from the 2 m composite datasets within each deposit area and for the global composite population and are presented in Table 14.6.

Area		Nose Zone		North Limb Zone		
Domain	Global	High Grade	Low Grade	Global	High Grade	Low Grade
Value	Ni %	Ni %	Ni %	Ni %	Ni %	Ni %
Number of samples	13,345	4,692	8,653	3,369	870	2,499
Minimum value	0	0	0	0	0	0
Maximum value	3.45	3.19	3.45	2.53	2.53	1.92
Mean	0.35	0.69	0.17	0.28	0.56	0.19
Variance	0.18	0.26	0.03	0.07	0.11	0.02
Standard Deviation	0.42	0.51	0.18	0.26	0.33	0.14
Coefficient of variation	1.21	0.75	1.12	0.94	0.59	0.79

Table 14.6: Minago Deposit Ni % Statistics for the 2 m Assay Composites

Mean grades for the Low Grade domains are lower than the targeted 0.20 % nickel value due to included dilution from granite intervals. No high-grade capping factors were applied to the 2 m assay downhole composites or the contributing drill core sample analytical results. Through analysis of metal grade distribution, by means of frequency histogram, cumulative frequency plots, probability plots, rank/percentile, and decile analysis, it was concluded that maximum grade values that occur in the dataset are consistent with the mineralization styles present and do not represent high grade outliers. Higher grade values lay within zones where drill log descriptions of lithology and mineralogy support presence of spatially correlative higher-grade material, as demonstrated by the Low Grade and High Grade domain solid modeling methodology.

### 14.3.6 Variography and Interpolation Ellipsoids

Manually derived models of geology and grade distribution provided definition of trends that parallel the orientation of the fold limbs and hinge. To assess spatial aspects of grade distribution within the Minago Nickel Deposit, downhole and directional variograms were developed for nickel percentage based on the 2.0 m down hole composite dataset defined by the peripheral solid models. Variogram assessment was completed independently for both the west and east limbs of the Nose Zone, subjectively determined to be west and east of section line 487,350 East. Variogram assessment was not completed for the North Limb Zone due to a drill hole spacing bias where most drill holes evaluate the deposit at the same elevation datum.

Downhole variograms provided definition of a normalized nugget of 0.15 (Figure 14.17) and spherical model results with two structures. The first structure supported a normalized sill of 0.20 and a range of 20 m and the second structure supported a normalized sill of 0.65 and a range of 67 m. The downhole variogram provided guidance and definition of nugget values and minor axis ranges for the directional variogram assessment.



Figure 14.17: Downhole nickel variogram for the total Deposit

Best directional experimental variogram results for the Nose Zone west limb were developed within a plane trending towards an azimuth of  $40^{\circ}$  and a plunge of  $-90^{\circ}$  using a spread angel of  $15^{\circ}$  and a spread limit of 30°. The plane orientation corresponds to the down-dip trend of the Nose Zone west limb and assesses grade continuity along strike and in the down-dip direction. Application of spherical models provided definition of an anisotropy ellipsoid along an azimuth of 130° with a plunge of -70° and a dip of -70° using Surpac's ZXY LRL axes of rotation convention. Two structures were modelled for the primary axis trend supporting a normalized sill of 0.55 and a range of 20 m for the first structure and a normalized sill of 0.30 and a range of 120 m for the second structure. Maximum ranges of continuity of 90 m for the secondary axis trend and 20 m for the third axis trend were defined. Figure 14.18 presents results of the

primary variogram assessment, Figure 14.19 presents results of the secondary variogram assessment, and Figure 14.20 presents variogram results along all axes.



Figure 14.18: Nickel variogram model for the major axis of continuity for the Nose Zone west limb

Figure 14.19: Nickel variogram model for the semi-major axis of continuity for the Nose Zone west limb







Best directional experimental variogram results for the Nose Zone east limb were developed within a plane trending towards an azimuth of 305° and a plunge of -90° using a spread angel of 15° and a spread limit of 30°. The plane orientation corresponds to the down-dip trend of the Nose Zone east limb and assesses grade continuity along strike and in the down-dip direction. Application of spherical models provided definition of an anisotropy ellipsoid along an azimuth of 35° with a plunge of -80° and a dip of 60° using Surpac's ZXY LRL axes of rotation convention. Two structures were modelled for the primary axis trend supporting a normalized sill of 0.43 and a range of 40 m for the first structure and a normalized sill of 0.42 and a range of 126 m for the second structure. Maximum ranges of continuity of 85 m for the secondary axis trend and 20 m for the third axis trend were defined. Figure 14.21 presents results of the primary variogram assessment, Figure 14.22 presents results of the secondary variogram assessment, and Figure 14.23 presents variogram results along all axes.



Figure 14.21: Nickel variogram model for the major axis of continuity for the Nose Zone east limb









Variogram results from the Nose Zone west limb were assessed to be the most robust based on experimental variogram structure and agreement with deposit interpretations of geology and grade distribution. On this basis, results of for the Nose Zone west limb were applied to all areas of the Nose Zone and North Limb Zone. This includes application of interpolation ellipsoid ranges and nugget and sill values. Variogram assessment demonstrated primary continuity in the down dip or vertical direction and secondary continuity in the strike or limb trend direction. To account for minor variances in local deposit geometry and orientation these principals of continuity were applied to a dynamic anisotropy interpolation methodology. Maximum ranges of 120 m, 90 m, and 20 m were derived for the major, semi-major and minor axes, respectively, from the variogram assessment.

# 14.3.7 Setup of the Three-Dimensional Block Model

The block model extents are presented below in Table 14.7 and were defined using UTM NAD83 (Zone 14) coordination and elevation relative to sea level. No rotation was applied to the block model. Standard block size for the model is 6 m by 6 m by 6 m (X, Y, Z) with no units of sub-blocking allowed.

Туре	Y (Northing m)	X (Easting m)	Z (Elevation m)
Minimum Coordinates	5,992,700	486,400	-800
Maximum Coordinates	5,995,904	488,500	352
User Block Size	6	6	6
Minimum Block Size	6	6	6
Rotation	0	0	0

 Table 14.7: Summary of Minago Project block model parameters

\* UTM NAD83 Zone 14 coordination and sea level datum

#### 14.3.8 Mineral Resource Estimate

Minago Deposit block model volumes were estimated from the project solid models. Blocks were assigned a deposit lithology code of air, overburden, dolomite, sandstone, regolith, mineralized (and ultramafic), or country based on their spatial relationship with the DTM of topography, lithology solid models, and grade domain solid models. Eligible blocks intersecting the grade domain solids were accepted for nickel block grade interpolation and coded with the respective solid model identifier to correspond with the appropriate 2 m assay composite dataset and interpolation parameters. A NiS:Ni ratio code of High or Low was assigned to eligible blocks based on the NiS:Ni solid models.

Ordinary kriging (OK) grade interpolations was used to assign block nickel grades within the Minago Deposit block model from the 2 m assay composite datasets. Interpolation ellipsoid orientation and range values used in the estimation reflect a combination of trends determined from the nickel variography assessment and interpretations of geology and grade distribution for the deposit. Variogram assessment demonstrated primary continuity in the down dip or vertical direction and secondary continuity in the strike or limb trend direction. To account for minor variances in local deposit geometry and orientation, these principals of continuity were applied to a dynamic anisotropy interpolation methodology. An ellipsoid bearing and plunge were assigned to each block from DTM surfaces that represent the trends and orientations of the grade domain solid models. The block bearing and plunge value inform the interpolation ellipsoid orientation for that specific block during block grade interpolation.

A 3-interpolation pass approach was applied, implemented sequentially from pass 1 to pass 3, that progresses from being restrictive to more inclusive in respect to ellipsoid ranges, composites available, and number composites required to assign block grades. Interpolation pass ranges reflect 50 %, 100 %, and 150 % of the ranges defined from variogram assessment for the first pass, second pass, and third pass, respectively. Block discretization was set at 2 (Y) x 2 (X) x 2 (Z). Interpolation parameters for the Deposit are summarized in Table 14.8.

		Range		Contributing Composites		
Interpolation						Maximum Per
Pass	Major (m)	Semi-Major (m)	Minor (m)	Minimum	Maximum	Drill Hole
1	60	45	10	11	15	5
2	120	90	20	5	12	4
3	180	135	30	1	6	4

Table 14.8: Summary of Minago Project interpolation parameters

Grade domain boundaries were set as hard boundaries for grade estimation purposes and grade interpolation was restricted to the 2 m assay composites associated with the drill hole intercepts assigned to each deposit area solid.

# 14.3.9 Density

A total of 9,000 specific gravity determinations are available in the project drill hole database. Determinations were completed by SGS laboratories during the 2008, 2010, and 2011 Nuinsco-Victory Nickel drilling programs. An additional 234 SGS laboratory determinations are available for the dolomite lithology, which was used as a blank material in the 2010 drilling program. The specific gravity determinations are accepted to represent a density determination of the rock measured.

Complete coverage of specific gravity determinations over the deposit area is not available and therefore there is insufficient data to support an interpolated density model. Specific gravity determination values were assessed based on lithology, grade domains, and NiS:Ni zonation, with the most significant results returned for a grouping of lithology and NiS:Ni zonation (Table 14.9).

NiS:Ni Zone/Ultramafic	Lithology	Count	Average Specific Gravity
High	Serpentinite	4,262	2.50
півн	Granite	1,117	2.60
High Illtramatic Lithology	Ultramafic	828	3.02
High - Ohi amanc Lithology	Granite	122	2.69
low	Serpentinite	1,073	2.40
LOW	Granite	273	2.54
	Dolomite	235	2.69
Othor	Sandstone	45	2.63
Other	Regolith	89	2.72
	Country rock*	513	2.58

 Table 14.9: Average specific gravity values for each lithology in each NiS:Ni zone

\* Amphibolite (12), granite (161), mafic metavolcanic (41), metasediment (231), serpentinite (68)

Average specific gravity values were assigned to each block based on the combined NiS:Ni zone and lithology coding. Blocks supporting an average nickel percent grade of less than 0.14 % are assumed to be more than 50 % granite lithology and were assign average granite specific gravity values. Blocks supporting an average nickel precent grade of 0.14 % or more are assumed to be more than 50 % serpentinite or ultramafic and were assign average serpentinite or utramafic specific gravity values.

# 14.3.10 Sulphide Nickel

Nickel bound in silicate minerals is not readily recoverable and total nickel values may misrepresent the amount of recoverable nickel if a significant amount of nickel enriched silicates are present. An assessment of sulphide nickel for the Deposit, therefore, represents an assessment of recoverable nickel. A total of 9,104 core samples are available with both a total nickel and sulphide nickel result, which represents 41 % of the total core sample dataset.

In general, as the percentage of total nickel increases so does the percentage of nickel sulphide, however, there is zonation of the ratio of sulphide nickel to total nickel in the deposit. The ratio changes with depth

and the top 125 m zone of the entire deposit shows lower ratios than the remaining deposit at depth. This zonation is reflected in the NiS:Ni solid models, which separated the low and high ratio zones.

Regression curves were developed between sulphide nickel and total nickel percentages for various areas of the deposit in both the low and high ratio zones. Drill hole spacing in the North Limb Zone is biased towards a single datum of elevation and does not provide a significant dataset for the upper low ratio zone of that area. The most robust regression curves reflect the Nose Zone for the low ratio zone and the entire deposit, combining both the Nose Zone and North Limb Zone, for the high ratio zone. The regression curves for these two areas are expressed with the following equations:

Low Ratio NiS:Ni Zone : NiS = (0.485 \* Ni %) - 0.1034 (R<sup>2</sup> = 0.58)

High Ratio NiS:Ni Zone : NiS = (0.8702 \* Ni %) - 0.0936 (R<sup>2</sup> = 0.89)

Block sulphide nickel values were calculated using the appropriate regression curve equation and the interpolated block nickel percent values. Calculated negative values were re-assigned a "0" % value. The average percentage of sulphide nickel to total nickel in the high ratio domain is 70 %. The average percentage of sulphide nickel to total nickel in the low ratio domain is 20 %.

# 14.3.11 Metal Price

Nickel pricing assessment for the current mineral resource estimate was addressed using the following sources of information:

- London Metal Exchange (LME) historical official price data for calculation of 3 year trailing averages and other comparative interval averages;
- The LME daily nickel official price at the effective date of the mineral resource estimate;
- A nickel pricing and commodity study prepared in February, 2021 by McKinsey & Company (MineSpans) for Silver Elephant Flying Nickel;
- TD Economics publicly available nickel forecast data.

At the effective date of the current mineral resource estimate, the LME official daily price for nickel was \$US 8.24 /lb and the average for 2021 to that date was \$US 8.85/lb. In contrast, the three year trailing average to July of 2021 of only \$US6.45/lb registers the recent Covid Pandemic's economic impact. The Minespans pricing and commodity study noted above forecasts a long term average nickel price of \$9.20/lb for the 2021 to 2030 period and includes a near-term 3 year forecast of \$US7.92/lb. The TD Economics forecast summary predicts \$US8.00/lb by Q4 of 2022, which is generally comparable to the near-term Minespans figure. Based on review of all nickel pricing information available to support the current mineral resource estimate, a value of \$US7.80/lb was selected for use in defining mineral resource estimate cut-off grades for both open pit and underground mineral resources defined in this Technical Report. Notably, this value is less than both the current market price of \$US8.24/lb and the Minespans \$US9.20/lb average forecast price for the 2021 through 2030 period.

# 14.3.12 Mineral Resource Cut-off Grade and Pit Optimization

The "reasonable prospects for eventual economic extraction" requirement set out in the CIM Standards (2014) was addressed for the Minago Deposit by means of developing an optimized pit shell to constrain mineral resources amenable to open-pit mining methods and developing a reasonable cut-off grade to define mineral resources amenable to underground mining methods.

The pit shell was based on the mineral deposit block model and developed by report author L. Elgert of AGP Mining Consultants Inc. (AGP) through application of operating and recovery parameters deemed appropriate for the style of mineralization present. Hexagon Mine Plan 3D version 15.4, MineSight<sup>®</sup> Economic Planner version 4.00-11 was used to carry out the program. Report authors M. Harrington and L. Elgert determined after their initial review of the deposit model that good potential exists for future development of the Project using open-pit mining methods.

To define mineralization within the block model that has "reasonable prospects for eventual economic extraction" by open pit mining, report author L. Elgert provided current cost estimates and applied these in combination with the average nickel pricing accepted by report author M. Harrington and processing cost and recovery estimates developed from historical metallurgical testing results (as discussed in Section 13 of this Technical Report). The reader is cautioned that the results from the pit optimization are used solely for the purpose of addressing "reasonable prospects for eventual economic extraction" by an open pit mining scenario and do not represent an attempt to estimate mineral reserves. The results are used as a guide to assist in the preparation of a mineral resource estimate and to select an appropriate mineral resource reporting cut-off grade. Mineral resource cut-off grade parameters are summarized in Table 14.10.

Parameter	Units	Value
Mining Cost – Rock	US\$/t	1.77
Mining Cost – Overburden	US\$/t	1.77
Processing Recovery	NiS %	78 %*
Processing	US\$/t processed	7.62
General and Administrative (G&A)	US\$/t processed	3.33
Metal Price	US\$/lb Ni	7.80
Smelter and Refining Charges	US\$/lb	1.44
Transportation	US\$/lb	0.16
Exchange Rate	Cdn\$ to US\$	1.30:1.00
Average Pit Slope Angle	Degrees	40

Table 14.10: Summary	of Minago Pro	iect pit optimiz	ation parameters
	01 101111111111111111111111111111111111	jeet pit optimiz	action parameters

\*The average NiS recovery above the cut-off grade is 78% (ranging from 40% to 90%), based on previous metallurgical test programs. An average Ni recovery of 56% can be calculated using the average NiS recovery and the average ratio of NiS to Ni (72%) reported above the cut-off grade. Actual NiS recovery is calculated on a block basis by a grade recovery equation detailed in section 13.2.5.

In addition to the parameters described in Table 14.10, concentrate by-product credits were applied at metal prices of US\$3.25/lb (Cu), US\$2,000/oz Pd and US\$ 1,000/oz Pt and a potential frac-sand overburden unit was assigned a value of US \$20/t, with a recovery factor of 68.8 %, mining cost of US \$1.77/t, and processing cost of US \$6.55/t processed. The average pit slope angle approximates 40°. Actual pit slope angles for each lithology are presented in Table 14.11. Country rock pit slopes vary on a spatial sector basis (Figure 14.24).

Lithology	Pit Slope Angle (Degrees)
Overburden	8.9
Mineralized	40.0
Sandstone	16.6
Dolomite	50.2
Regolith	16.6
Country Rock Sector A	46.0
Country Rock Sector B	45.0
Country Rock Sector C	42.0
Country Rock Sector D	50.2

# Table 14.11: Summary of pit slope angles of the optimized pit shell

#### Figure 14.24: Spatial sectors of country rock pit slope angle assignment (UTM NAD83 Zone 14)



Open Pit mineral resources are reported at a cut-off grade of 0.18 % NiS within the optimized pit shell. The 0.18 % NiS cut-off grade approximates a 0.25 % Ni grade when applying the average ratio NiS to total Ni for the mineral resource. The cut-off grade reflects total operating costs used in pit optimization to define "reasonable prospects for eventual economic extraction" by open pit mining methods. Results of pit optimization are presented in Figure 14.25 and 14.26. The optimized pit supports an overall 13.3:1 strip ratio (waste to mineralized material) comprised of a 6.2:1 pre-strip component and a 7.1:1 deposit component.

Figure 14.25: Oblique view looking Northwest of the Deposit optimized pit shell (Ni % Block Values: Blue 0.10 – 0.20 %; Green 0.20 – 0.40 %, Yellow 0.40 – 0.75 %, Red 0.75 – 1.0 %, Pink > 1.0 %)



Figure 14.26: Sectional view looking Northwest of the Deposit optimized pit shell (Ni % Block Values: Blue 0.10 – 0.20 %; Green 0.20 – 0.40 %, Yellow 0.40 – 0.75 %, Red 0.75 – 1.0 %, Pink > 1.0 %)



Underground mineral resources are reported at a cut-off grade of 0.36 % NiS. The 0.36 % NiS cut-off grade approximates a 0.50 % Ni grade when applying the average ratio of NiS to total Ni for the mineral resource. The cut-off grade reflects total operating costs of US\$41.72/t processed to define "reasonable prospects for eventual economic extraction" by bulk underground mining methods.

# 14.3.13 Reasonable Prospects for Eventual Economic Extraction

The report author is of the opinion that the combined open pit and underground operating scenario, associated general cost assumptions, metal pricing and market assessment information presented above in this report section combine to meet the requirement of "reasonable prospects for eventual economic extraction" referenced in the CIM Standards (2014) as it applies to the current Minago Deposit mineral resource estimate.

### 14.3.14 Resource Category Parameters Used in Current Mineral Resource Estimate

Definitions of mineral resources and associated mineral resource categories used in this report are those set out in the CIM Standards (2014). Measured, Indicated, and Inferred categories have been assigned to the Minago Deposit.

Several factors were considered in defining resource categories, including drill hole spacing, geological interpretations and number of informing assay composites and average distance of assay composites to block centroids. Specific definition parameters for each resource category applied in the current estimate are set out below.

<u>Measured Resource</u>: Measured mineral resources are defined as all blocks with interpolated nickel grades from the first interpolation passes that meet the specified pit-constrained or underground cut-off grade.

<u>Indicated Resource</u>: Indicated mineral resources are defined as all blocks with interpolated nickel grades from the first and second interpolation passes that were not previously assigned to the Measured category and meet the specified pit-constrained or underground cut-off grade.

<u>Inferred Resources</u>: Inferred mineral resources are defined as all blocks with interpolated nickel grades from the first, second, and third interpolation passes that were not previously assigned to the Measured or Indicated category and meet the specified pit-constrained or underground cut-off grade.

Application of the selected Mineral Resource categorization parameters specified above defined distribution of Measured, Indicated and Inferred mineral resource estimate blocks within the block model. To minimize isolated and irregular Indicated and Inferred category assignment artifacts, the peripheral limits of blocks in close proximity to each other that share the same category designation and demonstrate reasonable continuity were wireframed and developed into discrete solid models. All blocks within these "category" solid models were re-classified to match that model's designation. This process resulted in more continuous zones of Indicated and Inferred mineral resource estimate categories and limited occurrences of orphaned blocks of one category as imbedded patches in other category domains. Inferred

category solid models were also applied to specific deposit areas where drill hole intervals were excluded from downhole compositing on the basis of sample frequency.

#### 14.3.15 Statement of Mineral Resource Estimate

Block grade, block density and block volume parameters for the Minago Deposit were estimated using methods described in preceding sections of this report. Subsequent application of resource category parameters set out above resulted in the Minagao Deposit mineral resource estimate presented in Table 14.12. Open Pit mineral resources are reported at a cut-off grade of 0.18 % NiS within the optimized pit shell. The 0.18 % NiS Open Pit cut-off grade approximates a 0.25 % Ni grade when applying the average ratio of total NiS to Ni to NiS for the mineral resource. Underground mineral resources are reported at a cut-off grade of 0.36 % NiS. The 0.36 % NiS cut-off grade approximates a 0.50 % Ni grade when applying the average ratio of total Ni to NiS to Ni for the mineral resource. Results are reported in accordance with CIM Standards (2014). Mineral resources assigned to the Nose Zone and North Limb Zone that are combined to comprise the Minago Deposit allocated to each deposit area are presented in Table 14.13 and Table 14.14. A cut-off grade sensitivity tabulation is presented in Table 14.15 for comparative purposes but does not constitute part of the mineral resource statement. Figure 14.27 illustrates the relationship of nickel percent grade to deposit tonnage and also does not constitute part of the mineral resource statement. Sulphide nickel cut-off grades are based on the parameters discussed in section 14.3.12 above and reflect "reasonable prospects for eventual economic extraction" using conventional open pit and underground mining methods.

Туре	NiS % Cut-off	Ni % Cut-off	Category	Rounded Tonnes	Ni %	NiS %
			Measured	11,490,000	0.73	0.52
			Indicated	12,450,000	0.69	0.45
Open Pit	0.18	0.25	Measured and			
			Indicated	23,940,000	0.71	0.48
			Inferred	2,070,000	0.57	0.34
	0.36	0.5	Measured	610,000	0.81	0.61
			Indicated	19,680,000	0.77	0.57
Underground			Measured and			
			Indicated	20,290,000	0.77	0.57
			Inferred	17,480,000	0.76	0.56
			Measured	12,100,000	0.73	0.52
			Indicated	32,130,000	0.74	0.52
Combined	0.18/0.36	0.25/0.50	Measured and			
			Indicated	44,230,000	0.74	0.52
			Inferred	19,550,000	0.74	0.54

 Table 14.12: Minago Nickel Project Mineral Resource Estimate – Effective Date: July 2, 2021\*

Mineral Resource Estimate Notes:

1. Mineral resources were prepared in accordance with the CIM Definition Standards for Mineral Resources and Mineral Reserves (MRMR) (2014) and CIM MRMR Best Practice Guidelines (2019).

- Open Pit mineral resources are defined within an optimized pit shell with average pit slope angles of 40° and overall 13.3:1 strip ratio (waste : mineralized material). The 13.3:1 strip ratio is comprised of a 6.2:1 pre-strip component and a 7.1:1 deposit component.
- 3. Pit optimization parameters include: metal pricing at US\$7.80/lb Ni, mining at US\$1.77/t, processing at US\$7.62/t processed, G&A at US\$3.33/t processed, and an average sulphide Ni (NiS) recovery above the cut-off grade of 78% (ranging from 40% to 90%), based on previous metallurgical test programs. An average Ni recovery of 56% can be calculated using the average NiS recovery and the average ratio of NiS to Ni (72%) reported above the cut-off grade. Concentrate by-product credits were applied at metal prices of US\$3.25/lb (Cu), US\$2,000/oz Pd and US\$ 1,000/oz Pt. A potential frac-sand overburden unit was assigned a value of US \$20/t, a recovery factor of 68.8 %, mining cost of US \$1.77/t, and processing cost of US \$6.55/t processed.
- 4. Open Pit mineral resources are reported at a cut-off grade of 0.18 % NiS within the optimized pit shell. The 0.18 % NiS cut-off grade approximates a 0.25 % Ni grade when applying the average ratio of NiS to total Ni for the mineral resource. The cut-off grade reflects total operating costs used in pit optimization to define reasonable prospects for eventual economic extraction by open pit mining methods.
- 5. Underground mineral resources are reported at a cut-off grade of 0.36 % NiS. The 0.36 % NiS cut-off grade approximates a 0.50 % Ni grade when applying the average ratio of NiS to total Ni for the mineral resource. The cut-off grade reflects total operating costs of US\$41.72/t processed to define reasonable prospects for eventual economic extraction by underground mining methods.
- 6. Ni % deposit grade was estimated using Ordinary Kriging methods applied to 2 m downhole assay composites. No grade capping was applied. NiS % block values were calculated from Ni % block values using a regression curve based on Ni and NiS drilling database assay values. Model block size is 6 m (x) by 6 m (y) by 6 m (z).
- 7. Bulk density was applied on a lithological model basis and reflects averaging of bulk density determinations for each lithology.
- 8. Mineral resources may be materially affected by environmental, permitting, legal, title, taxation, sociopolitical, marketing, or other relevant issues.
- 9. Mineral resources are not mineral reserves and do not have demonstrated economic viability.
- 10. Mineral resource tonnages are rounded to the nearest 10,000.

Туре	NiS % Cut-off	Ni % Cut-off	Category	<b>Rounded Tonnes</b>	Ni %	NiS %
			Measured	11,490,000	0.73	0.52
			Indicated	10,310,000	0.70	0.46
Open Pit	0.18	0.25	Measured and			
			Indicated	21,800,000	0.72	0.49
			Inferred	1,410,000	0.51	0.34
	0.36	0.5	Measured	610,000	0.81	0.61
			Indicated	13,870,000	0.80	0.61
Underground			Measured and			
			Indicated	14,480,000	0.80	0.61
			Inferred	10,610,000	0.80	0.61
			Measured	12,100,000	0.73	0.52
			Indicated	24,180,000	0.76	0.55
Combined	0.18/0.36	0.25/0.50	Measured and			
			Indicated	36,280,000	0.75	0.54
			Inferred	12,020,000	0.77	0.58

Table 14.13: Minago Nose Zone Mineral Resource Estima	ate – Effective Date: July 2, 2021*
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\* The Minago Nose Zone mineral resource forms part of the total Minago Project mineral resource. See detailed notes on mineral resources in Table 14.12 of Section 14.3.15

Fable 14.14: Minago North Lim	o Zone Mineral Resource Estimate -	- Effective Date: July 2, 2021*
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Туре	NiS % Cut-off	Ni % Cut-off	Category Rounded Tonnes		Ni %	NiS %
			Measured			
			Indicated	2,140,000	0.65	0.40
Open Pit	0.18	0.25	Measured and			
			Indicated	2,140,000	0.65	0.40
			Inferred	660,000	0.70	0.34
	0.36	0.5	Measured			
			Indicated	5,810,000	0.68	0.50
Underground			Measured and			
			Indicated	5,810,000	0.68	0.50
			Inferred	6,870,000	0.68	0.50
		0.25/0.50	Measured			
			Indicated	7,950,000	0.67	0.47
Combined	0.18/0.36		Measured and			
			Indicated	7,950,000	0.67	0.47
			Inferred	7,530,000	0.68	0.49

\* The Minago Nose Zone mineral resource forms part of the total Minago Project mineral resource See detailed notes on mineral resources in Table 14.12 of Section 14.3.15

Туре	NiS % Cut-off	Ni % Cut-off	Category	Category Rounded Tonnes		NiS %
			Measured 14,330,000		0.65	0.44
			Indicated	19,420,000	0.55	0.33
Open Pit	0.10	0.15	Measured and			
			Indicated	33,750,000	0.59	0.38
			Inferred	3,610,000	0.45	0.25
	0.21	0.30	Measured	880,000	0.69	0.51
			Indicated	31,030,000	0.65	0.47
Underground			Measured and			
			Indicated	31,910,000	0.65	0.47
			Inferred	33,640,000	0.60	0.42
			Measured	15,210,000	0.65	0.44
			Indicated	50,450,000	0.61	0.42
Combined	0.10/0.21	0.15/0.30	Measured and			
			Indicated	65,660,000	0.62	0.42
			Inferred	37,250,000	0.59	0.40

Table 14.15: Minago Project Cut-off Grade Sensitivity Analysis

# Table 14.15 continued: Minago Project Cut-off Grade Sensitivity Analysis

Туре	NiS % Cut-off	Ni % Cut-off	Category Rounded Tonnes		Ni %	NiS %
			Measured	12,560,000	0.70	0.49
			Indicated	15,250,000	0.63	0.39
Open Pit	0.14	0.20	Measured and			
			Indicated	27,810,000	0.66	0.44
			Inferred	2,710,000	0.51	0.30
	0.28	0.40	Measured	740,000	0.75	0.56
			Indicated	25,880,000	0.70	0.51
Underground			Measured and			
			Indicated	26,620,000	0.70	0.51
			Inferred	25,090,000	0.67	0.49
			Measured	13,300,000	0.70	0.49
			Indicated	41,130,000	0.67	0.47
Combined	0.14/0.28	0.20/0.40	Measured and			
			Indicated	54,430,000	0.68	0.47
			Inferred	27,800,000	0.65	0.47

Туре	NiS % Cut-off	Ni % Cut-off	Category Rounded Tonnes		Ni %	NiS %
			Measured	11,490,000	0.73	0.52
Onen Pit			Indicated	12,450,000	0.69	0.45
Open Pit	0.18	0.25	Measured			
			and Indicated	23,940,000	0.71	0.48
			Inferred	2,070,000	0.57	0.34
	0.36	0.50	Measured	610,000	0.81	0.61
			Indicated	19,680,000	0.77	0.57
Underground			Measured			
			and Indicated	20,290,000	0.77	0.57
			Inferred	17,480,000	0.76	0.56
			Measured	12,100,000	0.73	0.52
			Indicated	32,130,000	0.74	0.52
Combined	0.18/0.36	0.25/0.50	Measured			
			and Indicated	44,230,000	0.74	0.52
			Inferred	19,550,000	0.74	0.54

# Table 14.15 continued: Minago Project Cut-off Grade Sensitivity Analysis

# Table 14.15 continued: Minago Project Cut-off Grade Sensitivity Analysis

Туре	NiS % Cut-off	Ni % Cut-off	Category	Category Rounded Tonnes		NiS %
			Measured	10,770,000	0.75	0.54
			Indicated	10,840,000	0.73	0.48
Open Pit	0.22	0.30	Measured and			
			Indicated	21,610,000	0.74	0.51
			Inferred	1,550,000	0.63	0.39
	0.43	0.60	Measured	470,000	0.88	0.67
			Indicated	15,180,000	0.83	0.63
Underground			Measured and			
			Indicated	15,650,000	0.83	0.63
			Inferred	12,850,000	0.83	0.63
			Measured	11,240,000	0.76	0.55
			Indicated	26,020,000	0.79	0.57
Combined	0.22/0.43	0.30/0.60	Measured and			
			Indicated	37,260,000	0.78	0.56
			Inferred	14,400,000	0.81	0.60

Туре	NiS % Cut-off	Ni % Cut-off	Category	Rounded Tonnes	Ni %	NiS %
			Measured	10,090,000	0.77	0.56
			Indicated	9,690,000	0.75	0.51
Open Pit	0.26	0.35	Measured and			
			Indicated	19,780,000	0.76	0.54
			Inferred	1,240,000	0.66	0.43
	0.51	0.70	Measured	370,000	0.95	0.73
			Indicated	11,100,000	0.90	0.69
Underground			Measured and			
			Indicated	11,470,000	0.90	0.69
			Inferred	8,740,000	0.92	0.70
			Measured	10,460,000	0.78	0.57
			Indicated	20,790,000	0.83	0.61
Combined	0.26/0.51	0.35/0.70	Measured and			
			Indicated	31,250,000	0.81	0.59
			Inferred	9,980,000	0.89	0.67

# Table 14.15 continued: Minago Project Cut-off Grade Sensitivity Analysis

Notes:

This table shows sensitivity of the July 2, 2021 mineral resource estimate to cut-off grade. The base case at a cut-off value of 0.18% / 0.36% NiS is bolded for reference. See detailed notes on mineral resources in Table 14.12 of Section 14.3.15



Figure 14.27: Minago Project Ni % and Tonnage Relationship

Notes:

This figure shows the relationship between deposit tonnage and Ni % cut-off grade and does not constitute part of July 2, 2021 mineral resource estimate. See detailed notes on mineral resources in Table 14.12 of Section 14.3.15

# 14.3.16 Model Validation

Block volume estimates for each mineral resource solid were compared with corresponding solid model volume reports generated in Surpac and results show good correlation, indicating consistency in volume capture and block volume reporting. Results of block modeling were reviewed in three dimensions and compared with deposit interpretations for geology and grade distribution. Block grade distribution was shown to have acceptable correlation with the grade distribution of the underlying drill hole data (Figures 14.28 to 14.33). Mineral resource category distribution demonstrates acceptable continuity of each category designation (Figures 14.34 to 14.39). Measured mineral resources are restricted to the Nose Zone that is supported by a higher density of core drilling.

Figure 14.28: Plan view of the Minago Project Ni % values above the mineral resource open pit and underground cut-off grade with pit shell in grey (Ni % Block Values: Blue 0.10 - 0.20 %; Green 0.20 - 0.40 %, Yellow 0.40 - 0.75 %, Red 0.75 - 1.0 %, Pink > 1.0 %)



Figure 14.29: Oblique view to the Northwest of the Minago Project Ni % values above the mineral resource open pit and underground cut-off grade with pit shell in grey (Ni % Block Values: Blue 0.10 - 0.20 %; Green 0.20 - 0.40 %, Yellow 0.40 - 0.75 %, Red 0.75 - 1.0 %, Pink > 1.0 %)



Figure 14.30: Oblique view to the Southeast of the Minago Project Ni % values above the mineral resource open pit and underground cut-off grade with pit shell in grey (Ni % Block Values: Blue 0.10 - 0.20 %; Green 0.20 - 0.40 %, Yellow 0.40 - 0.75 %, Red 0.75 - 1.0 %, Pink > 1.0 %)



Figure 14.31 Section 487275E (looking East) of the Minago Project Ni % values above the mineral resource open pit and underground cut-off grade with pit shell in grey (Ni % Block Values: Blue 0.10 - 0.20 %; Green 0.20 - 0.40 %, Yellow 0.40 - 0.75 %, Red 0.75 - 1.0 %, Pink > 1.0 %)



Figure 14.32 Section 5993500N (looking North) of the Minago Project Ni % values above the mineral resource open pit and underground cut-off grade with pit shell in grey (Ni % Block Values: Blue 0.10 - 0.20 %; Green 0.20 - 0.40 %, Yellow 0.40 - 0.75 %, Red 0.75 - 1.0 %, Pink > 1.0 %)



Figure 14.33 Section 5995175N (looking North) of the Minago Project Ni % values above the mineral resource open pit and underground cut-off grade with pit shell in grey (Ni % Block Values: Blue 0.10 - 0.20 %; Green 0.20 - 0.40 %, Yellow 0.40 - 0.75 %, Red 0.75 - 1.0 %, Pink > 1.0 %)

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Figure 14.34: Plan view of the Minago Project mineral resource categorization with pit shell in grey (Category: Blue - Inferred, Green – Indicated, Red – Measured)

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Figure 14.35: Oblique view to the Northwest of the Minago Project mineral resource categorization with pit shell in grey (Category: Blue - Inferred, Green – Indicated, Red – Measured)





Figure 14.36: Oblique view to the Southeast of the Minago Project mineral resource categorization with pit shell in grey (Category: Blue - Inferred, Green – Indicated, Red – Measured)

Figure 14.37: Section 487275E (looking East) of the Minago Project mineral resource categorization with pit shell in grey (Category: Blue - Inferred, Green – Indicated, Red – Measured)



Figure 14.38: Section 5993500N (looking North) of the Minago Project mineral resource categorization with pit shell in grey (Category: Blue - Inferred, Green – Indicated, Red – Measured)



Figure 14.39: Section 5995175N (looking North) of the Minago Project mineral resource categorization with pit shell in grey (Category: Blue - Inferred, Green – Indicated, Red – Measured)


Descriptive statistics were calculated for the drill hole composite values used in block model grade interpolations and these were compared to values calculated for the individual blocks (Table 14.16 and 14.17). The mean weighted average drill hole composite grades for the Minago Deposit areas compare well with the respective block values.

Туре		Composite			Block	
Domain	Global	High Grade	Low Grade	Global	High Grade	Low Grade
Value	Ni %	Ni %	Ni %	Ni %	Ni %	Ni %
Number of samples	13,345	4,692	8,653	375,367	97,222	278,145
Minimum value	0	0	0	0.00	0.01	0.00
Maximum value	3.45	3.19	3.45	2.19	2.13	2.19
Mean	0.35	0.69	0.17	0.31	0.69	0.18
Variance	0.18	0.26	0.03	0.08	0.07	0.02
Standard Deviation	0.42	0.51	0.18	0.28	0.27	0.13
Coefficient of variation	1.21	0.75	1.12	0.92	0.39	0.72

Table 14.16: Minago Project – Nose Zone Ni % statistics for block value	s and 2 meter composites
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Table 14.17: Minago Project – North Limb Zone NI % statistics for block values and 2 meter composites
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Туре		Composite Block	Block			
Domain	Global	High Grade	Low Grade	Global	High Grade	Low Grade
Value	Ni %	Ni %	Ni %	Ni %	Ni %	Ni %
Number of samples	3,369	870	2,499	319,403	67,623	251,780
Minimum value	0	0	0	0.00	0.01	0.00
Maximum value	2.53	2.53	1.92	1.61	1.61	0.87
Mean	0.28	0.56	0.19	0.26	0.54	0.18
Variance	0.07	0.11	0.02	0.04	0.03	0.01
Standard Deviation	0.26	0.33	0.14	0.19	0.17	0.10
Coefficient of variation	0.94	0.59	0.79	0.74	0.32	0.55

Swath plots in the easting, northing, and vertical directions comparing average composite grades and global volume weighted block grades were prepared for each deposit area (Figures 14.40 to 14.44). Swath plots show an acceptable correlation between the two grade populations. Areas of higher variance between composite grades and OK block grades are typically related to low composite density and/or low tonnages.

Swath plots include results of comparative interpolation models of nickel percent using inverse distance (ID2) and nearest neighbor (NN) methods. A strong agreement is present between the preferred OK nickel values and the comparative ID2 and NN nickel values, providing an acceptable check on the OK interpolation results.



Figure 14.40: Nose Zone South-North swath plot of block and 2.0 meter composite Ni % Grades



Figure 14.41: Nose Zone West-East swath plot of block and 2.0 meter composite Ni % Grades



Figure 14.42: Nose Zone Elevation swath plot of block and 2.0 meter composite Ni % Grades



Figure 14.43: North Limb Zone South-North swath plot of block and 2.0 meter composite Ni % Grades



Figure 14.44: North Limb Zone Elevation swath plot of block and 2.0 meter composite Ni % Grades

# 14.3.17 Project Risks that Pertain to the Mineral Resource Estimate

All mineral projects are subject to risks arising from various sources. These include, but are not limited to, the following:

- (1) Political instability of the host country or region;
- (2) Site environmental conditions that affect deposit access;
- (3) Issues associated with legal access to sufficient land areas to support development and mining;
- (4) Lack of certainty with respect to mineral tenure and development regulatory regimes;
- (5) Lack of social licence for project development;
- (6) Unforeseen negative market pricing trends;
- (7) Inadequacy of deposit modelling and grade estimation programs with respect to actual metal grades and tonnages contained within the deposit;
- (8) Metallurgical recoveries that fall within economically acceptable ranges cannot be attained.

A socioeconomic assessment was conducted earlier by Victory Nickel that resulted in signing of a Memorandum of Understanding (MOU) with each of the Pimichikamak Cree Nation (Cross Lake), Mosakahiken First Nation (Moose Lake), and Misipawistik Cree Nation (Grand Rapids). Flying Nickel is reengaging the First Nations with traditional territories that include the Project site, and now including the Norway House Fist Nation, to work toward inclusion and renewal of the MOUs. At this time, the report authors do not foresee any significant risks and uncertainties that could reasonably be expected to affect the reliability or confidence in the drilling information, mineral resource estimate and metallurgical study conclusions disclosed in this technical report.

## 14.3.18 Comparison with Previous Mineral Resource Estimates

Previous operators Amax, Granges, and Black Hawk completed 7 historical resource evaluations for the Minago deposit between 1972 to 1991 period. These historical assessments were completed prior to the introduction of NI 43-101 and CIM definition standards and guidelines and therefore do not conform to current disclosure standards and are considered unreliable. These historical evaluations are no longer relevant as they have been superseded by the mineral resource estimate disclosed in Section 14 of this Technical Report.

Wardrop completed a historical resource estimate in 2009 for the Project for previous operator Victory Nickel (Victory Nickel, 2009) as discussed in Section 6.7 of this Technical Report. The historical estimate was completed in accordance with the CIM Definition Standards and Best Practice Guidelines current at that time. The 2009 historical estimate has been superseded by the current mineral resource estimate disclosed in Section 14 of this Technical Report. The 2009 historical estimate assessment prior to the current mineral resource estimate.

The current mineral resource estimate and the historical estimate apply similar methodologies. The changes in methodology between the current mineral resource and the historical geological model can be summarized as follows:

- The current resource model defines mineral resources for both the Nose Zone and North Limb Zone of the Minago Deposit. The historical estimate defined mineral resources only for the Nose Zone.
- The current model applies high grade corridors within lower grade envelops, as opposed to application of only larger low-grade shells as in the historical estimate. Grade domain solid models control sample selection and block grade assignment during interpolation and the application of a high grade / low grade domain model distributes total nickel content more appropriately.
- The current resource model excludes specific low-grade intervals from downhole assay compositing on the basis of poor sampling frequency. This pertains to drill holes completed during the Black Hawk historical drilling programs that were focused on definition of higher-grade nickel mineralization. Intercepts <u>accepted</u> for compositing in the current model were assigned a "0" % nickel value for unsampled intervals. This approach differs from historical estimates that assigned "0" % nickel values for <u>all</u> unsampled intervals inside the low-grade shells. Not all low grade shell hole intercepts were accepted for the current estimation program due to irregular sampling density.
- The current resource model estimates block sulphide nickel values from regression equations derived from modelled Low and High NiS:Ni zones. The historical estimate applied regression

equations to back-flagged core assays missing sulphide nickel values and completed an interpolated sulphide nickel model using total nickel interpolation parameters. The current approach is viewed to be more adherent to the sulphide nickel distribution interpreted from drill core results.

- The current resource model assigns block specific gravity based on a combination of interpreted lithology and NiS:Ni ratio solid models. The historical estimate assigned specific gravity based on a statistically derived lithology model. The current model returned an average specific gravity of 2.52 for the block model above a 0.20 % nickel cut-off and 2.56 above the mineral resource cutoff. These values compare more favorably with the global average serpentinite specific gravity of 2.51 than the average specific gravity of 2.62 in the historical estimate (above a 0.25 % nickel cutoff).
- The current mineral resource applies "reasonable prospects for eventual economic extraction" to define mineral resources for the Minago Deposit. This reflects application of operating, recovery, and cost parameters deemed appropriate for the deposit and proposed mining scenarios. Mineral resources potentially amenable to conventional open pit and bulk underground mining methods were defined in the current estimate using cutoffs and parameters appropriate with each approach, including an optimized pit shell for open pit mineral resources. In addition, current mineral resources are reported using a sulphide nickel cut-off value. The historical estimate reported overall tonnage, average nickel grade, and average sulphide nickel grade using a 0.25 % nickel cut-off without application of an optimized pit shell and without assessment of appropriate cutoffs for mineral resources amenable to conventional open pit or bulk underground methods.
- The current mineral resource reports higher tonnage and average nickel and sulphide nickel grades than the historical estimate. The increase in tonnage reflects the inclusion of both the Nose Zone and North Zone in the current mineral resource estimate. Increase in average grades reflects application of open pit and underground sulphide nickel cut-off grades and parameters. The current mineral resource estimate reflects an increase of approximately 30% in mineral resources for the Project compared to the historical estimate.

# 23.0 ADJACENT PROPERTIES

There are no adjacent properties to the Minago Nickel Project.

# 24.0 OTHER RELEVANT DATA AND INFORMATION

This section is not applicable.

## 25.0 INTERPRETATION AND CONCLUSIONS

## 25.1 Introduction

This Technical Report reports a current mineral resource estimate for the Minago Project completed in accordance with the CIM Standards (2014) and to meet reporting requirements set out in NI 43-101. It is understood that the mineral titles associated with this property were in good standing as of the effective date of the mineral resource estimate described in this Technical Report.

# 25.2 Mineral Resource Estimate

The Minago Project mineral resource estimate is comprised of two constituent zones of nickel mineralization, the Nose Zone and North Limb Zone. The mineral resource estimate completed by the report author for the Project is based on validated results of 16,118 m of diamond drilling in 202 diamond drill holes and is presented below in Table 25.1 through Table 25.3. The mineral resource estimate has an effective date of July 2, 2021.

Туре	Ni % Cut-off	Category	Rounded Tonnes	Ni %	Ni Lbs (million)
		Measured	11,490,000	0.73	184.92
Open Pit 0.25		Indicated	12,450,000	0.69	189.39
Open Pit	0.25	Measured and Indicated	23,940,000	0.71	374.30
		Inferred	2,070,000	0.57	26.01
		Measured	610,000	0.81	10.89
Underground	0.5	Indicated	19,680,000	0.77	334.08
Underground	0.5	Measured and Indicated	20,290,000	0.77	344.97
		Inferred	17,480,000	0.76	292.88
		Measured	12,100,000	0.73	194.73
Combined		Indicated	32,130,000	0.74	524.17
Combined	0.25/0.50	Measured and Indicated	44,230,000	0.74	721.58
		Inferred	19,550,000	0.74	318.94

Table 25.1: Minago Nickel Project Mineral Resource Estimate – Effective Date: July 2, 2021\*

# Mineral Resource Estimate Notes:

- 1. Mineral resources were prepared in accordance with the CIM Definition Standards for Mineral Resources and Mineral Reserves (MRMR) (2014) and CIM MRMR Best Practice Guidelines (2019).
- Open Pit mineral resources are defined within an optimized pit shell with average pit slope angles of 40° and overall 13.3:1 strip ratio (waste : mineralized material). The 13.3:1 strip ratio is comprised of a 6.2:1 pre-strip component and a 7.1:1 deposit component.
- 3. Pit optimization parameters include: metal pricing at US\$7.80/lb Ni, mining at US\$1.77/t, processing at US\$7.62/t processed, G&A at US\$3.33/t processed, and an average sulphide Ni (NiS) recovery above the cut-off grade of 78% (ranging from 40% to 90%), based on previous metallurgical test programs. An average Ni recovery of 56% can be calculated using the average NiS recovery and the average ratio of NiS to Ni (72%) reported above the cut-off grade. Concentrate by-product credits were applied at metal prices of US\$3.25/lb (Cu), US\$2,000/oz Pd and US\$ 1,000/oz Pt. A potential frac-sand overburden unit was assigned a value of US \$20/t, a recovery factor of 68.8 %, mining cost of US \$1.77/t, and processing cost of US \$6.55/t processed.

- 4. Open Pit mineral resources are reported at a cut-off grade of 0.18 % NiS within the optimized pit shell. The 0.18 % NiS cut-off grade approximates a 0.25 % Ni grade when applying the average ratio of NiS to total Ni for the mineral resource. The cut-off grade reflects total operating costs used in pit optimization to define reasonable prospects for eventual economic extraction by open pit mining methods.
- 5. Underground mineral resources are reported at a cut-off grade of 0.36 % NiS. The 0.36 % NiS cut-off grade approximates a 0.50 % Ni grade when applying the average ratio of NiS to total Ni for the mineral resource. The cut-off grade reflects total operating costs of US\$41.72/t processed to define reasonable prospects for eventual economic extraction by underground mining methods.
- 6. Ni % deposit grade was estimated using Ordinary Kriging methods applied to 2 m downhole assay composites. No grade capping was applied. NiS % block values were calculated from Ni % block values using a regression curve based on Ni and NiS drilling database assay values. Model block size is 6 m (x) by 6 m (y) by 6 m (z).
- 7. Bulk density was applied on a lithological model basis and reflects averaging of bulk density determinations for each lithology.
- 8. Mineral resources may be materially affected by environmental, permitting, legal, title, taxation, sociopolitical, marketing, or other relevant issues.
- 9. Mineral resources are not mineral reserves and do not have demonstrated economic viability.
- 10. Mineral resource tonnages are rounded to the nearest 10,000.

	<u>v</u>				
Туре	Ni % Cut-off	Category	Rounded Tonnes	Ni %	Ni Lbs (million)
		Measured	11,490,000	0.73	184.92
		Indicated	10,310,000	0.70	159.11
Open Pit	0.25	Measured and Indicated	21.800.000	0.72	344.02
		Inferred	1,410,000	0.51	15.85
		Measured	610,000	0.81	10.89
		Indicated	13,870,000	0.80	244.62
Underground	0.5	Measured and Indicated	14,480,000	0.80	255.52
		Inferred	10,610,000	0.80	187.13
		Measured	12,100,000	0.73	194.73
		Indicated	24,180,000	0.76	405.14
Combined	0.25/0.50	Measured and Indicated	36,280,000	0.75	599.88
		Inferred	12,020,000	0.77	204.05

Table 25.2: Minago Nose Zone Mineral Resource Estimate – Effective Date: July 2, 2021\*

\* The Minago Nose Zone mineral resource forms part of the total Minago Project mineral resource. See detailed notes on mineral resources in Table 25.1 of Section 25.2

Туре	Ni % Cut-off	Category	Rounded Tonnes	Ni %	Ni Lbs (million)
		Measured			
		Indicated	2,140,000	0.65	30.67
Open Pit	0.25	Measured and			
		Indicated	2,140,000	0.65	30.67
		Inferred	660,000	0.70	10.19
		Measured			
		Indicated	5,810,000	0.68	87.10
Underground	0.5	Measured and			
		Indicated	5,810,000	0.68	87.10
		Inferred	6,870,000	0.68	102.99
		Measured			
		Indicated	7,950,000	0.67	117.43
Combined	0.25/0.50	Measured and			
		Indicated	7,950,000	0.67	117.43
		Inferred	7,530,000	0.68	112.89

Table 25.3: Minago	o North Limb Zone	e Mineral Resource	e Estimate – Effective	Date: July 2, 2021*
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\* The Minago North Limb Zone mineral resource forms spart of the total Minago Project mineral resource. See detailed notes on mineral resources in Table 25.1 of Section 25.2

# 25.3 Future Opportunities

This Technical Report reports a current mineral resource estimate for the Project that includes an increase in mineral resources compared to the historical mineral resource estimates completed for the Project by previous operators. The main factor contributing to the increase in mineral resources for the Project is the inclusion of North Limb Zone mineralization in the current mineral resource estimate. This is based on the results of infill core drilling completed in this area of the deposit in 2011 by previous operator Victory Nickel. The mineralized strike length of the entire drilling-defined deposit, measured continuously around the Nose Zone fold and then northward to the North Limb Zone, is approximately 2,500 m, and good potential exists to define strike extensions to this trend beyond its current limits. An opportunity also exists to define additional mineralization in the drilling gap that exists between the two zones at present. The Nose Zone has been defined by drilling to a maximum depth of approximately 925 m below surface and remains open down dip along its entire modelled length. The North Limb Zone has not been as thoroughly defined by drilling as the Nose Zone but similarly remains open down dip below the limit of current modelling, that occurs at a depth below surface of approximately 450 m. Successful future testing of these direct deposit extension areas by diamond core drilling may result in substantial additions to the current mineral resource estimate. Based on current results and market conditions, such an assessment of resource expansion potential is warranted.

An extensive amount of historical metallurgical testing has been carried out on the Project. In combination with analytical results present in the core drilling database, historical metallurgical testing results indicate that nickel associated with sulphide mineralization in the deposit represents the most important potential

source of recoverable nickel. Nickel is also present throughout the deposit in various silicate mineral phases from which very low recoveries by conventional processing have been documented.

The ratio of sulphide and silicate associated nickel varies spatially within the deposit and bears directly on definition of mineralization having potential for categorization within a mineral resource estimate. To address this important distribution relationship, the current mineral resource estimate is based on modelling of the sulphide-associated nickel content as well as the total nickel content. The cut-off value is directly based on sulphide-associated nickel grades plus pit optimization recoveries applied to each model block that reflect application of a sulphide-associated nickel recovery regression equation. This approach ensured that mineralization included in the mineral resource estimate was restricted to material with demonstrated potential for recovery by conventional processing methods. It also contributed to qualification of mineral resources as having reasonable prospects for eventual economic extraction. A sulphide-nickel approach to mineral resource estimation and associated modelling also formed the basis of historical mineral resource estimates and mining studies for the Project.

Open-pit mineral resources defined at a 0.18% sulphide nickel cut-off grade account for approximately 40% of the current mineral resource estimate. The remaining 60% of the current mineral resource estimate is defined at a sulphide nickel cut-off grade of 0.36% and is considered to have reasonable prospects for eventual economic extraction using conventional underground bulk mining methods.

# 25.4 Metallurgical Testing

The review of historical metallurgical testing and processing results completed by the report author to support this Technical Report was focused in particular on evaluating the flotation results from historical metallurgical testing completed for Victory Nickel. These historical results indicate that the grade – recovery curve generated from the testing is suitable for an estimate of metallurgical performance and also highlighted that additional research related to further definition of the sulphide-nickel head grade recovery curve is required. Investigation of the possibility that some of the nickel in the concentrates generated is associated with higher grade serpentine requires particular attention, since presence of this as gangue in the nickel concentrate would cause an associated total nickel assay to exceed the sulphide-nickel assay. That said, the discrepancy does not significantly impact the results from historical studies.

In summary, the grade recovery relationship for the Project can be estimated as:

Nickel Recovery =  $(61.375X^3 - 198.87X^2 + 218.02X + 9.435)\%$  for  $0.1 \le X \le 1.25$ 

Nickel Recovery = 91.1%; for X >1.25

Nickel Recovery = 0%; for X<0.1

where X = sulphidic nickel grade %.

To advance the Minago Project on the metallurgical front to a stage sufficient to support a Pre-Feasibility or Feasibility Study it will be necessary to complete further laboratory metallurgical testing. Definition of

the scope of such testing will require a detailed analysis of previous testing to determine if there are alternatives to the flowsheet derived from historical metallurgical studies.

A full review of previous testing may also provide insight into potentially beneficial changes to the flowsheet presented in the historical studies. Technology has evolved since that time and changes may, or may not, improve the project economics. It is probable that a new drilling program will be required to obtain metallurgical sample cores for future metallurgical studies and such core needs to be stored properly, preferably at a temperature below 0° C and possibly under nitrogen. In addition to the obvious nickel and related concentrate metals (eg. Cu, Pt, Pd) interest, re-evaluation of potential for flotation concentration of talc is appropriate. This reflects its potential positive effect on concentrate quality and its potential for sale of the recovered material as a filler product within the plastics and rubber industries. Additional specific programs that will serve to address the goal of preparation for a future Pre-Feasibility or Feasibility Study include:

- Geo-metallurgical mapping of the deposits using historical data;
- Obtaining appropriate samples for future studies this will almost certainly involve further drilling. If existing core is to be used, it will need to be evaluated for storage history and potential oxidation;
- Confirmatory bench scale testing to determine reagent schedules;
- Comminution testing suitable for obtaining the crushing, SAG milling and ball milling parameters;
- Pilot plant testing of the flowsheet derived from historical metallurgical studies a 'Mini-Pilot' will provide this information while minimizing the mass of material necessary;
- Pilot plant testing of alternatives to the historical metallurgical study flowsheets, if this is determined as potentially beneficial;
- Confirmatory testing on Mini-Pilot products to determine settling rates for dewatering and water characteristics of pertinent streams, particularly tailings;
- Analysis of final concentrates from the Mini-Pilot to determine saleability and potential penalties;
- Coarse particle flotation this technology is currently available from Eriez Flotation. In the event that this testing is performed, it will be necessary to determine if other suppliers have developed a competitive product.

Although it is not entirely necessary to support completion of a future Pre-Feasibility or Feasibility Study, results of the historical metallurgical studies review for this Technical Report indicate that completion of a trade off study to evaluate alternatives to SAG milling could be beneficial. Alternatives to be considered include:

- High pressure grinding rolls (HPGR);
- Microwave comminution this is new and non-commercialized technology, but is quickly evolving; and
- Primary ball milling this could be accomplished by eliminating the pebble crusher and installing a larger cone crusher ahead of the primary mill and using it as a secondary crusher, allowing for a finer feed to grinding and a more consistent grind.

### 25.5 **Project Risks and Uncertainties**

All mineral projects are subject to risks and uncertainties arising from various sources. These include, but are not limited to, the following items:

- (1) Political instability of the host country or region;
- (2) Site environmental conditions that affect deposit access;
- (3) Issues associated with legal access to sufficient land areas to support development and mining;
- (4) Lack of certainty with respect to mineral tenure and development regulatory regimes;
- (5) Lack of social licence for project development;
- (6) Unforeseen negative market pricing trends;
- (7) Inadequacy of deposit modelling and grade estimation programs with respect to actual metal grades and tonnages contained within the deposit;
- (8) Metallurgical recoveries that fall within economically acceptable ranges cannot be attained.

However, at this time the report authors do not foresee any significant risks and uncertainties that could reasonably be expected to affect the reliability or confidence in the exploration and drilling information, mineral resource estimate, and metallurgical study conclusions disclosed in this Technical Report for the Project. The existing drill hole database for the Project has been thoroughly validated by the report authors and is acceptable for use in the current mineral resource estimate. However, prior to commencing a Pre-Feasibility or Feasibility study the report authors do recommend further infill and expansion drilling, and metallurgical core testing of the Minago deposit to meet the currently recognized level of detail and confidence required to support a Pre-Feasibility or Feasibility Study. Full details on the report author's recommendations are discussed in Section 26 of this Technical Report.

In addition, there are currently no environmental concerns, or permitting and surface rights issues that prevent Flying Nickel from completing their planned exploration and drilling programs on the Project. A socioeconomic assessment was conducted previously by Victory Nickel that resulted in signing of a Memorandum of Understanding (MOU) with each of the Pimichikamak Cree Nation (Cross Lake), Mosakahiken First Nation (Moose Lake), and Misipawistik Cree Nation (Grand Rapids). Flying Nickel is currently re-engaging the First Nations with traditional territories that include the Project site, and now including the Norway House Fist Nation, to work toward inclusion and renewal of the MOU's.

### 26.0 **RECOMMENDATIONS**

## 26.1 Introduction

Recommended future work programs for the Minago Project are centered on the completion of a Pre-Feasibility or Feasibility Study. A two-phase approach is proposed to meet this objective, with Phase I consisting of completion of deposit infill and expansion drilling on the North Limb Zone, deposit extension drilling on the Nose Zone and completion of an updated mineral resource estimate that includes results of the new diamond drilling programs. In conjunction with the Phase I drilling programs, a metallurgical sample coring program should be undertaken to support completion of the confirmatory metallurgical studies that are required to meet the currently recognized level of detail and confidence required to support a Pre-Feasibility or Feasibility Study.

The entirety of the recommended Phase II program consists of preparation of a Pre-Feasibility or Feasibility Study for the Project, the starting points of which would be the Phase I mineral resource estimate and Phase I metallurgical study results. Expenditure estimates for completion of recommended future work programs are presented below in Table 26.1. Commitment to the recommended Phase II program would be contingent on substantively acceptable results being returned from Phase I. A proposed budget for the recommended Phase I and Phase I and Phase II programs is presented below in Table 26.1. Each of Phase I and Phase II is expected to take 12 to 18 months to complete considering the limited winter drilling season.

# 26.2 Recommended Phase I and II Budget

Estimated expenditures for the recommended Phase I and Phase II work programs are presented in Table 26.1.

Item	Phase	Program Component	Estimated Cost (\$CDN)
		Deposit infill diamond drilling (5,000 m) on the North Limb Zone	
1	Phase I	including mobilization costs, and geological consultant and staff	1,100,000
		costs to increase confidence in mineral resource categories	
		Extension diamond drilling on the Nose Zone (3,000 m)	
2	Phase I	including geological consulting and staff costs to increase	650,000
		confidence in mineral resource categories	
3	Phase I	Metallurgical sample (large diameter core) drilling (2,000 m)	450 000
	i nase i	including geotechnical consultants and demobilization costs	130,000
4	Phase I	Sample preparation and assay testing for all drilling programs	300 000
· ·	i nase i	(independent assay laboratory)	300,000
5	Phase I	Updated mineral resource estimate that includes new diamond	100.000
	1 11050 1	drilling and metallurgical testing results	200,000
6	Phase I	Metallurgical studies and mini-pilot plant studies to confirm and	150.000
	1 11050 1	expand on historical study results obtained for the Project	
7	Phase I	Environmental permitting, Indigenous and community	150.000
		consultation (ongoing)	,
	Subtotal		2,900,000
		Contingency (10%)	290,000
		Total Phase I =	3,190,000
Item	Phase	Program Component	Estimated Cost (\$CDN)
		Preparation of Pre-Feasibility or Feasibility Study based on the	
1	Bhaco II	Phase I updated mineral resource estimate and metallurgical	2 500 000
1	Flidsell	study results (including new geotechnical drilling and	2,300,000
		metallurgical mini-pilot plant studies)	
2	Phace II	Detailed environmental permitting, Indigenous and community	250.000
2	Fliase li	consultations	230,000
	Subtotal		2,750,000
		Contingency (10%)	275,000
		Total Phase II =	3,025,000

Table 26.1: Budget for Recommended Phase I and Phase II Program
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Note: Completion of Phase II is contingent upon acceptable results from Phase I work program

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# 28.0 CERTIFICATES OF QUALIFIED PERSONS

## Certificate of Qualified Person Paul J. Ténière, P.Geo.

#### I, Paul J. Ténière, M.Sc., P.Geo., do hereby certify that:

- I am currently employed as a Senior Associate Geologist with: Mercator Geological Services Limited 65 Queen Street, Dartmouth, NS B2Y 1G4
- 2. The Technical Report to which this certificate applies is titled "*NI 43-101 Technical Report on the Mineral Resource Estimate for the Minago Nickel Project, Manitoba, Canada*" with an effective date of February 28, 2022.
- 3. I hold a M.Sc. in Geology from Acadia University (2002) and a B.Sc. (Honours) degree in Earth Sciences (1998) from Dalhousie University. I have worked as a geologist in Canada, USA, and internationally since my graduation nearly 25 years ago and I have been a registered Professional Geologist (P.Geo.) continuously since 2006. My relevant experience with respect to this project includes extensive professional experience within geology, mineral deposit styles, and exploration activities in base metal projects in Canada and internationally including copper, nickel, zinc, and lead deposits.
- 4. I am a member in good standing with the Association of Professional Geoscientists of Ontario (Registration Number: 2493), the Association of Professional Engineers and Geoscientists of New Brunswick (Registration Number: M8502), and the Association of Professional Engineers and Geoscientists of Newfoundland and Labrador (Registration Number 06620).
- I have read the definition of a "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, and past relevant work experience, I fulfill the requirements to be a "Qualified Person" for the purposes of NI 43-101.
- 6. I have not completed a personal inspection of the Minago Project.
- 7. I am responsible for Sections 1 except 1.3, 1.4, 1.5, 1.6, and 1.8.2, 2 except 2.3, 3 through 6, 9, 11, 12.1, 12.3, 12.5, 12.6 23, 24, 25.1, 25.3, and 26 of this Technical Report. I have no prior involvement with the Minago Project that is the subject of this Technical Report.
- 8. I am independent of Flying Nickel Mining Corp. as described in Section 1.5 of NI 43-101.
- 9. I have read NI 43-101 and this Technical Report has been prepared in compliance with NI 43-101 and Form 43-101F1.
- 10. As of the effective date of this Technical Report, to the best of my knowledge, information and belief, this Technical Report contains all scientific and technical information that is required to be disclosed to make this Technical Report not misleading.

Effective Date: February 28, 2022 Signing Date: September 22, 2022

[Original signed and sealed "Paul Ténière"]

## Certificate of Qualified Person Matthew D. Harrington, P.Geo.

#### I, Matthew D. Harrington, P.Geo., do hereby certify that:

- I am currently employed as a Senior Resource Geologist with: Mercator Geological Services Limited 65 Queen Street, Dartmouth, NS B2Y 1G4
- 2. The Technical Report to which this certificate applies is titled "*NI 43-101 Technical Report on the Mineral Resource Estimate for the Minago Nickel Project, Manitoba, Canada*" with an effective date of February 28, 2022.
- 3. I hold a Bachelor of Science degree (Honours, Geology) in 2004 from Dalhousie University and I have worked as a geologist in Canada and internationally since my graduation. My relevant experience with respect to this Project includes extensive professional experience within geology, mineral resource estimation, mineral deposit evaluation, and exploration activities in Canada and internationally. I also have specific previous experience in magmatic nickel deposit resource modelling.
- 4. I am a member in good standing of the Association of Professional Geoscientists of Nova Scotia (Registration Number 0254) and the Association of Professional Engineers and Geoscientists of Newfoundland and Labrador (Member Number 09541).
- 5. I have read the definition of a "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, and past relevant work experience, I fulfill the requirements to be a "Qualified Person" for the purposes of NI 43-101.
- 6. I have not completed a personal inspection of the Minago Project.
- 7. I am responsible for Sections 1.6, 14 except for 14.3.11 and 14.3.12, and 25.2 of the Technical Report. I have no prior involvement with the Minago Project that is the subject of this Technical Report.
- 8. I am independent of Flying Nickel Mining Corp. as described in Section 1.5 of NI 43-101.
- 9. I have read NI 43-101 and this Technical Report has been prepared in compliance with NI 43-101 and Form 43-101F1.
- 10. As of the effective date of this Technical Report, to the best of my knowledge, information and belief, this Technical Report contains all scientific and technical information that is required to be disclosed to make this Technical Report not misleading.

Effective Date: February 28, 2022 Signing Date: September 22, 2022

### [Original signed and sealed "Matthew Harrington"]

Matthew Harrington, B.Sc., P.Geo. Senior Resource Geologist, Mercator Geological Services Ltd.

## Certificate of Qualified Person Michael Cullen, P.Geo.

#### I, Michael Cullen, M.Sc., P.Geo., do hereby certify that:

- I am currently employed as a Chief Geologist with: Mercator Geological Services Limited 65 Queen Street, Dartmouth, NS B2Y 1G4
- 2. The Technical Report to which this certificate applies is titled "*NI 43-101 Technical Report on the Mineral Resource Estimate for the Minago Nickel Project, Manitoba, Canada*" with an effective date of February 28, 2022.
- 3. I hold a M.Sc. degree in Geology from Dalhousie University (1984) and a B.Sc. (Honours) degree in Geology (1981) from Mount Allison Univesity. I have worked as a geologist in Canada, the USA and internationally since graduation. My relevant experience with respect to this project includes extensive professional experience with respect to mineral resource estimation programs and exploration activities for base and precious metals in Canada and internationally. This includes exploration for magmatic nickel sulphide deposits in the Thompson Nickel Belt of Manitoba as well in the Voiseys Bay district of Newfoundland and Labrador. I have additional experience with respect to exploration for komatilitic nickel deposits in Canada and Australia.
- 4. I am a member in good standing of the Association of Professional Geoscientists of Nova Scotia (Registration Number 064), the Association of Professional Engineers and Geoscientists of Newfoundland and Labrador (Member Number 05058), and the Association of Professional Engineers and Geoscientists of New Brunswick (Registration Number L4333).
- 5. I have read the definition of a "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, and past relevant work experience, I fulfill the requirements to be a "Qualified Person" for the purposes of NI 43-101.
- 6. I have not completed a personal inspection of the Minago Project.
- 7. I am responsible for Sections 1.3, 7, 8, and 14.3.11 of the Technical Report. I have no prior involvement with the Minago Project that is the subject of this Technical Report.
- 8. I am independent of Flying Nickel Mining Corp. as described in Section 1.5 of NI 43-101.
- 9. I have read NI 43-101 and this Technical Report has been prepared in compliance with NI 43-101 and Form 43-101F1.
- 10. As of the effective date of this Technical Report, to the best of my knowledge, information and belief, this Technical Report contains all scientific and technical information that is required to be disclosed to make this Technical Report not misleading.

Effective Date: February 28, 2022 Signing Date: September 22, 2022

### [Original signed and sealed "Michael Cullen"]

Michael Cullen, M.Sc., P.Geo. Chief Geologist, Mercator Geological Services Ltd.

## Certificate of Qualified Person John Eggert, P.Eng.

#### I, John Eggert, P.Eng., do hereby certify that:

- 1. I am currently employed as the President of Eggert Engineering Inc. whose office is at 158 David Street, Sudbury, Ontario, P3E 1T4.
- 2. The Technical Report to which this certificate applies is titled "*NI 43-101 Technical Report on the Mineral Resource Estimate for the Minago Nickel Project, Manitoba, Canada*" with an effective date of February 28, 2022.
- 3. I am a graduate of Queen's University at Kingston with a B.Sc. in Mining Engineering (1990). I have practiced my profession continuously since 1990. I have worked in operations, technical and managerial positions in Canada. I have been an independent engineer for twelve years. I have performed mill designs, metallurgical accounting, cost estimations, operations management, due diligence reviews and report writing for mining projects in Canada, the USA and Mexico. I have experience in mineral processing, metallurgical testing, and mill design of nickel deposits similar to the Minago Nickel Project.
- 4. I am a Registered Professional Engineer in Ontario (licence number 90397597).
- 5. I have read the definition of a "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, and past relevant work experience, I fulfill the requirements to be a "Qualified Person" for the purposes of NI 43-101.
- 6. I have not completed a personal inspection of the Minago Project.
- 7. I am responsible for Section 1.5, 1.8.2, 13, and 25.4 of the Technical Report. I have no prior involvement with the Minago Project that is the subject of this Technical Report.
- 8. I am independent of Flying Nickel Mining Corp. as described in Section 1.5 of NI 43-101.
- 9. I have read NI 43-101 and this Technical Report has been prepared in compliance with NI 43-101 and Form 43-101F1.
- 10. As of the effective date of this Technical Report, to the best of my knowledge, information and belief, this Technical Report contains all scientific and technical information that is required to be disclosed to make this Technical Report not misleading.

Effective Date: February 28, 2022 Signing Date: September 22, 2022

### [Original signed and sealed by "John Eggert"]

John Eggert, B.Sc., P.Eng. President, Eggert Engineering Inc.

## Certificate of Qualified Person Lawrence Elgert, P.Eng.

### I, Lawrence Elgert, P.Eng., do hereby certify that:

- I am currently employed as a Principal Mining Engineer with: AGP Mining Consultants Inc. Suite 246-132K Commerce Park Dr. Barrie, ON L4N 0Z7, Canada
- 2. The Technical Report to which this certificate applies is titled "*NI 43-101 Technical Report on the Mineral Resource Estimate for the Minago Nickel Project, Manitoba, Canada*" with an effective date of February 28, 2022.
- 3. I am a graduate of the Montana College of Mineral Science and Technology with a B.S. in Mining Engineering in 1989. I have practiced my profession in the mining industry continuously since graduation. My relevant experience includes over 30 years where I have been directly involved in mine planning and design, ore control, geomechanics, production forecasting and management, slope stability monitoring and operations, mainly for open-pit precious and base metal and coal mines. I have previous experience with respect to pit optimization studies.
- 4. I am a member in good standing of Engineers and Geoscientists BC (Registration Number: 29807).
- 5. I have read the definition of a "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, and past relevant work experience, I fulfill the requirements to be a "Qualified Person" for the purposes of NI 43-101.
- 6. I have not completed a personal inspection of the Minago Project.
- 7. I am responsible for Section 14.3.12 of the Technical Report. I have no prior involvement with the Minago Project that is the subject of this Technical Report.
- 8. I am independent of Flying Nickel Mining Corp. as described in Section 1.5 of NI 43-101.
- 9. I have read NI 43-101 and this Technical Report has been prepared in compliance with NI 43-101 and Form 43-101F1.
- 10. As of the effective date of this Technical Report, to the best of my knowledge, information and belief, this Technical Report contains all scientific and technical information that is required to be disclosed to make this Technical Report not misleading.

Effective Date: February 28, 2022 Signing Date: September 22, 2022

# [Original signed and sealed "Lawrence Elgert"]

Lawrence Elgert, B.S., P.Eng. Principal Mining Engineer, AGP Mining Consultants Inc.

## Certificate of Qualified Person Robert Smith, P.Geo.

#### I, Robert Smith, P.Geo., do hereby certify that:

- 1. I am currently employed as an Independent Geological Consultant based at 41 Village Line Ave., Bible Hill, Nova Scotia, B2N 6R7 Canada.
- 2. The Technical Report to which this certificate applies is titled "NI 43-101 Technical Report on the Mineral Resource Estimate for the Minago Nickel Project, Manitoba, Canada" with an effective date of February 28, 2022.
- 3. I am a member in good standing of the Association of Professional Engineers and Geoscientists of Manitoba (P.Geo. Registration No. 22702).
- 4. I graduated with a Bachelor of Science degree in Geology from the Dalhousie University in 1981. I worked for Inco / Vale in various geological roles at their nickel mining operation in Thompson, Manitoba from 1981 until 2011 including as Manager for Mines Geology. I have since worked as a geological consultant focused on exploring and developing nickel deposits across Canada and within the Thompson Nickel Belt. This includes designing and supervising diamond drilling programs, core logging and sampling, and geological and structural interpretation of nickel deposits.
- 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 meet the requirements to be a "Qualified Person" for the purposes of NI 43-101.
- 6. I am responsible for Sections 1.4, 2.3, 10, 12.2 and 12.4 of this Technical Report.
- 7. I have read NI 43-101 and this Technical Report has been prepared in compliance with NI 43-101 and Form 43-101F1.
- 8. I have had no prior involvement with the Property that is subject to this Report. I am independent of Flying Nickel Mining Corp. as described in Section 1.5 of NI 43-101.
- 9. I completed a personal inspection of the Minago Property between February 26 and 27, 2022.
- 10. As of the effective date of this Technical Report, to the best of my knowledge, information and belief, this Technical Report contains all scientific and technical information that is required to be disclosed to make this Technical Report not misleading.

Effective Date: February 28, 2022 Signing Date: September 22, 2022

### [Original signed and sealed "Robert Smith"]

Robert Smith, P.Geo. Independent Geological Consultant