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NI 43-101 Technical Report on the

ALEXO-DUNDONALD NICKEL PROJECT

Dundonald, Clergue, German and Stock Townships, Ontario

Canada

By CSA Global Pty Ltd

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For:

Class 1 Nickel and Technologies Inc. Suite 401 / 216 Queen St West Toronto Ontario Canada M5V OR2 CSA Global Authorization

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Principal Geologist, Manager–Corporate



Date: 6 November 2019 Report No: R303.2019



Date and Signature Page

This Report titled "NI 43-101 Technical Report on the Alexo-Dundonald Nickel Project, Dundonald, Clergue, German and Stock Townships, Ontario Canada" for Class 1 Nickel and Technologies Inc., and dated 6 November 2019 was prepared and signed by the following authors:

["SIGNED and SEALED"]

{Tony Donaghy}

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Tony Donaghy, B.Sc. (Hons), P.Geo (ON,) Principal Geologist CSA Global Pty Ltd

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{Eugene Puritch}

Dated at Brampton, Ontario, 6 November 2019

Dated at Hobart, Australia

6 November 2019

Eugene Puritch, P.Eng., FEC, CET, President P&E Mining Consultants Inc. CSA Global Pty Ltd

Report Effective Date: 6 November 2019



Certificates of Qualification

Certificate of Qualification of Co-Author – Mr Tony Donaghy, B.Sc. (Hons), P.Geo

I, Tony Donaghy, B.Sc. (Hons), P.Geo, do hereby certify that:

- I am employed as a Principal Consultant with the firm of CSA Global Pty Ltd located at Level 2, 3 Ord Street, West Perth, Western Australia, 6005 Australia.
- I was admitted to the Degree of Bachelor of Science with Honours (Geology), from the University of Tasmania, Hobart, Australia in 1995.
- I am registered as a Professional Geoscientist (P.Geo) with the association of Professional Geoscientists of Ontario (PGO), registration number 0971.
- I have worked as a geologist since my graduation 24 years ago, and I have over 20 years' experience with nickel mineral projects globally and in Canada.
- I have read the definition of "Qualified Person" set out in National Instrument 43-101 ("NI 43-101") and certify that because of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "Qualified Person" for the purposes of NI 43-101.
- I have visited the Alexo-Dundonald Project many times between 2000 and 2005.
- I am a co-author of the technical report titled: "NI 43-101 Technical Report on the Alexo-Dundonald Nickel Project, Dundonald, Clergue, German and Stock Townships, Ontario Canada" for Class 1 Nickel and Technologies Inc., Effective Date 6 November 2019 (the "Technical Report"). I am responsible for Sections 1 to 13 inclusive, and Sections 15 to 27 inclusive.
- I have had no prior formal involvement with the Property that is the subject of the Technical Report other than informal guided technical visits as part of reviews of geological academic study between 2000 and 2005.
- As of the Effective Date of the Technical Report (6 November 2019), to the best of my knowledge, information, and belief, the technical report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.
- I am independent of the Issuer applying all the tests in section 1.5 of NI 43-101.
- I have read NI 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.
- I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them, including electronic publication in the public company files on their websites accessible by the public, of the Technical Report.

Effective Date: 6 November 2019

SIGNED and DATED this 6th day of November 2019 at Hobart, Australia

["SIGNED and SEALED"]

{Tony Donaghy}

Tony Donaghy, B.Sc. (Hons), P.Geo



Certificate of Qualification of Co-Author – Mr. Eugene Puritch, P. ENG., FEC, CET

I, Eugene J. Puritch, P. Eng., FEC, CET, residing at 44 Turtlecreek Blvd., Brampton, Ontario, L6W 3X7, do hereby certify that:

- I am an independent mining consultant and President of P&E Mining Consultants Inc.
- This certificate applies to the Technical Report titled "NI 43-101 Technical Report on the Alexo-Dundonald Nickel Project, Dundonald, Clergue, German and Stock Townships, Ontario", (the "Technical Report") with an effective date of 6 November 2019.
- I am a graduate of The Haileybury School of Mines, with a Technologist Diploma in Mining, as well as obtaining an additional year of undergraduate education in Mine Engineering at Queen's University. In addition, I have also met the Professional Engineers of Ontario Academic Requirement Committee's Examination requirement for Bachelor's Degree in Engineering Equivalency. I am a mining consultant currently licensed by the: Professional Engineers and Geoscientists New Brunswick (Licence No. 4778); Professional Engineers, Geoscientists Newfoundland and Labrador (Licence No. 5998); Association of Professional Engineers and Geoscientists Saskatchewan (Licence No. 16216); Ontario Association of Certified Engineering Technicians and Technologists (Licence No. 45252); Professional Engineers of Ontario (Licence No. 100014010); Association of Professional Engineers and Geoscientists Or Professional Engineers and Geoscientists (No. L3877). I am also a member of the National Canadian Institute of Mining and Metallurgy.
- I have read the definition of "Qualified Person" set out in National Instrument 43-101 ("NI 43-101") and certify that, by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "Qualified Person" for the purposes of NI 43-101.
- I have practised my profession continuously since 1978. My summarized career experience is as follows:
 - Mining Technologist H.B.M.& S. and Inco Ltd (1978 to 1980)
 - Open Pit Mine Engineer Cassiar Asbestos/Brinco Ltd (1981 to 1983)
 - Pit Engineer/Drill and Blast Supervisor Detour Lake Mine (1984 to 1986)
 - Self-Employed Mining Consultant Timmins Area (1987 to 1988)
 - Mine Designer/Resource Estimator Dynatec/CMD/Bharti (1989 to 1995)
 - o Self-Employed Mining Consultant/Resource-Reserve Estimator (1995 to 2004)
 - President P&E Mining Consultants Inc. (2004 to present).
- I have visited the Property that is the subject of this Technical Report on 4 May 2010.
- I am responsible for authoring Section 14 and co-authoring Sections 1, 25, 26 of this Technical Report.
- I am independent of the Issuer applying the test in Section 1.5 of NI 43-101.
- I have had prior involvement with the Project that is the subject of this Technical Report. I was a "Qualified Person" for a Technical Report titled "Technical Report and Updated Resource Estimate on the Alexo and Kelex Deposits, Alexo Property, Timmins, Ontario, Canada" with an effective date of 10 August 2012. I was also a "Qualified Person" for a Technical Report titled "Technical Report titled "Technical Report and Resource Estimate on the Alexo and the Alexo and Kelex Deposits, Alexo Property, Timmins, Ontario, Canada" with an effective date of 5 September 2010.
- I have read NI 43-101 and Form 43-101F1. This Technical Report has been prepared in compliance therewith.



• As of the effective date of this Technical Report, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Effective Date: 6 November 2019 Signed Date: 6 November 2019 {SIGNED AND SEALED} [Eugene Puritch]

Eugene Puritch, P.Eng., FEC, CET



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1 Summary

1.1 Location

The Alexo-Dundonald Nickel Project ("the Project") is located approximately 45 km northeast of the town of Timmins, Ontario, Canada. It covers an area of approximately 1,895 hectares and comprises 95 Boundary Cell Mining Claims, Single Cell Mining Claims, Leased Claims and Patented Claims (see Section 4). The historical Alexo Shaft is located on the Project at approximately 513800E and 389450N (NAD 27, UTM Zone 17N).

1.2 Geology

The Project area is within the Abitibi Sub-Province of the Southern Superior Province (see Section 7). The 2.75–2.67 Ga "granite-greenstone" dominated Abitibi Sub-Province extends some 700 km along the south-eastern edge of the Archaean Superior craton.

The volcanic stratigraphy of the Abitibi Sub-Province is divided into seven episodes, based on similarity of age intervals, stratigraphy and geochemistry:

- Pre-2750 Ma unnamed assemblage
- 2750–2735 Ma Pacaud assemblage
- 2734–2724 Ma Deloro assemblage
- 2723–2720 Ma Stoughton–Roquemaure assemblage
- 2719–2711 Ma Kidd–Munro assemblage
- 2710–2704 Ma Tisdale assemblage
- 2704–2695 Ma Blake River assemblage.

The geological setting of the Alexo-Dundonald Project area corresponds to the depositional equivalent environment of the Kidd-Munro assemblage. The Kidd-Munro assemblage is subdivided into lower and upper parts. The lower part of the Kidd-Munro assemblage (2719–2717 Ma) includes localised, regionally discontinuous depositional centres of predominantly intermediate to felsic calc-alkaline volcanic rocks. The upper part of the Kidd-Munro assemblage (2717–2711 Ma) extends across the Abitibi greenstone belt. It consists of tholeiitic and komatiitic volcanic rocks with minor centimetre- to metre-scale graphitic metasedimentary rocks and localised felsic volcanic centres. It has been interpreted that the upper Kidd-Munro assemblage reflects the impact of widespread mantle plume-related magmatism on localised lower Kidd-Munro arc-magmatism volcanic centres.

The Dundonald dome structure is located north of the Dester Porcupine Fault Zone. The Alexo and Dundonald deposits occur along the southern margin of this domal structure, which is predominantly composed of Kidd-Munro assemblage mafic and ultramafic volcanic rocks. The Kidd-Munro assemblage in the area is a sequence of volcanic rocks including: komatiitic dunite; peridotite; pyroxenite; basalts which range from high-magnesium iron-rich tholeiitic picrites to high-aluminium basalts; and intermediate to felsic andesite and rhyolite. Sedimentary rocks are commonly thin interflow layers of graphitic argillite with varying amounts of chert and sulphide minerals. Intrusive rocks into the Kidd-Munro assemblage include:

- Differentiated syn-volcanic tholeiitic and komatiitic sills
- Late to post-tectonic intermediate to felsic plutons
- Proterozoic dolerite dykes.



Ultramafic rocks range in composition from komatiitic basalt to dunite. The komatiitic sequences contain multiple flows that range from several hundreds of metres to less than 2 m in thickness and have brecciated flow tops, spinifex-textured zones, pyroxene and olivine orthocumulate, mesocumulate and adcumulate rocks. Thin layers of graphitic argillite occur between thin komatiitic flows in some areas. Flows with a basaltic or pyroxenite composition tend to alter to chlorite-tremolite whereas flows rich in olivine are altered to serpentine and magnetite. Large accumulations of olivine mesocumulate to adcumulate occur within the komatiitic sequence locally where they are prospective channelized flows within footwall embayments.

The komatiite nickel sulphide deposits are at approximately the same stratigraphic level where komatiitic flows overlie a sequence of calc-alkaline volcanic rocks ranging in composition from rhyolite to basalt containing variable amounts of pyrite and pyrrhotite, komatiitic basalt and thin (<1 m) intercalated layers of black graphic argillite (Figure 9). The volcanic sequence is a mixture of flows with pillowed, hyaloclastic and massive textures with individual flows that can be traced for tens to hundreds of metres.

The Alexo deposit sits on the northeast arm of a large "Z"-shaped fold in the Kidd-Munro assemblage, while the Dundonald deposit sits on the southwest arm of the fold. The northeast trending fold has a wavelength of 2.5 km and amplitude of 6 km.

The rocks have been metamorphosed to greenschist facies with minor isolated areas of prehnite-pumpellyite facies and local amphibolite facies at the contract of intrusions. Ultramafic rocks may have abundant secondary metamorphic talc/serpentine with or without magnetite, calcite, tremolite and chlorite.

1.3 Mineralization

The primary mineralization style of principal relevance to the Project, and the target focus of Class 1 Nickel and Technologies Inc.'s (C1N's) planned exploration activity, is komatiite volcanic-hosted nickel-copper-cobalt sulphides associated with ultramafic lava channels in the Kidd-Munro and equivalent assemblages (see Section 8).

Nickel-copper-cobalt sulphides are interpreted to form in-situ within the lava flow by a process of contamination of the ultramafic magma by incorporating external sulphur. As the komatiite lava moved across the Earth's surface, the high temperature lava melted and incorporated substrate lithologies into the lava. This melting of substrate was achieved in long-lived lava channels where prolonged high-heat input into the substrate from the channelized lava flow lead to thermomechanical erosion and incorporation of substrate fragments into the lava. If this substrate comprised sulphide-bearing material, the injection of external sulphur into the komatiite drove the magmatic system to sulphur saturation. The nickel, copper and cobalt within the magmatic system combined with the sulphur and precipitates as sulphide droplets within the magma. Once formed, the dense sulphide phase settled within the lava channel to the channel floor, where it accumulated as nickel-copper-cobalt sulphide.

The Alexo-Dundonald Project contains the Alexo, Kelex, Dundonald South and Dundeal nickel deposits. The Alexo and Kelex deposits are composed of massive to semi-massive nickel sulphide accumulations in basal embayments along the footwalls of two parallel, but separate, steeply dipping komatiitic peridotite volcanic channels identified as the "Alexo" and "Kelex" flows respectively. Massive to semi-massive sulphide lenses are strung along the footwall contacts of channels. They are overlain by stringer, net-textured, blebby and lower grade disseminated sulphide haloes extending upwards and away from the contact. The zones are composed of massive, veined and disseminated pyrrhotite and pentlandite with trace chalcopyrite.

The Dundonald deposits are characterized by thin sinuous layers of massive sulphide, overlain by thicker layers of net-textured sulphides, and succeeded by disseminated sulphides with vein type mineralization of sulphide penetrating locally into the footwall rocks. They comprise eight east-west nickel-enriched horizons,



A to H, in the Dundonald South komatiitic volcanic sequence. The zones consist of relatively narrow (10–20 m wide), thin (0.5–10 m thick) keels, or "shoots", of net-texture, semi-massive to minor massive sulphide in the basal layers of a series of a stacked channelized komatiite flows, surrounded by envelopes of overlying and flanking blebby and disseminated sulphide. The lateral extent of some of the lenses is on the order of 100–200 m down plunge extent, but several are apparently small, isolated sulphide pods within the channelized flow sequence. The G zone was traced for a strike length of 600 m and is open to the east. It contains four westerly plunging high-grade nickel shoots that are open to depth. The A zone consists of vertical high-grade nickel shoots.

1.4 Historical Exploration

Majority of exploration in the past 30 years has consisted of shallow drilling (most drillholes penetrating less than 100 m vertical depth below surface – see Section 6) on tight-spaced (15 m) drill sections on the known near-surface mineralised deposits (Alexo, Kelex, Dundondald South and Dundeal), with the aim of gaining enough information to estimate shallow-depth resources for these deposits. There has only been limited regional geophysics, and very little drilling, outside the immediate environment of the known deposits. The bulk of drilling has been conducted by Canadian Arrow between 2004 and 2011 on the Alexo and Kelex deposits and First Nickel between 2004 and 2005 on the Dundonald Project. C1N has all the core from these drilling programs.

The Alexo deposit has been mined during three periods:

- 1913–1919: Surface and underground mining for production of 51,857 tons at 4.4% Ni, 0.6% Cu between surface and 38 m depth.
- 1943–1944: Mining of remnants and pillars from previous 1913–1919 mine workings; exact figures unknown.
- 2004–2005: Open pit mining of 26,224 tonnes at 1.97% Ni, 0.20% Cu from Alexo and 3,900 tonnes at 1.68% Ni and 0.18% Cu from Kelex.

1.5 Exploration

No exploration has been carried out on the Project since 2011 on the Alexo and Kelex deposits, and since 2005 on the Dundonald deposit. C1N has not carried out any exploration activity on the Project.

1.6 Mineral Resource Estimates

This Mineral Resource estimate (MRE) was undertaken by Eugene Puritch, P.Eng. FEC, CET, and Yungang Wu, P.Geo. of P&E Mining Consultants Inc. of Brampton, Ontario with an effective date of 6 November 2019 (see Section 14). Mr Puritch is the Qualified Person and author of Section 14. Mineral Resources were estimated in two zones on the Project, the Alexo and the Kelex deposits, using all drillhole data available. This MRE supersedes a previous MRE conducted in 2011.

All drilling data was provided by former project operator, Canadian Arrow Mines Ltd (Canadian Arrow) in the form of Microsoft Excel files, drill logs and assay certificates. A total of 42 drill cross-sections were developed on a local grid looking northeast on an azimuth of 600 on a 15-m spacing named from 135-NE to 750-NE. A Gemcom database was developed that contained 227 diamond drillholes, of which 119 were intersected in the updated resource wireframes.

The MRE workflow was as follows:



1.6.1 Input Database Validation

Verification of assay data entry was performed on 737 assay intervals for Ni, Cu, Co, Au, Pt and Pd during the 2011 MRE. A few very minor data entry errors were observed and corrected. The 737 verified intervals were checked against assay lab certificates from SGS Canada. The checked assays represented 100% of the data to be used for this MRE update and approximately 23% of the entire database.

1.6.2 Review of the Interpretation of the Geology and Mineralization Domains

Domain boundaries were determined from lithology, structure and net smelter revenue (NSR) boundary interpretation from visual inspection of drillhole sections. Two domains were developed and named Alexo and Kelex. These domains were created with computer screen digitizing on drillhole sections in Gemcom by or under the direction of the author and Qualified Person of Section 14 of this Technical Report. The outlines were influenced by the selection of mineralized material that demonstrated NSR value above C\$30/t, and zonal continuity along strike and down dip. In some cases, some mineralization below the NSR cut-off was included for the purpose of maintaining zonal continuity and 2 m minimum core length.

On each section, polyline interpretations were digitized from drillhole to drillhole but not extended more than 50 m into untested territory. Minimum constrained width for interpretation was 2.0 m of core length. The interpreted polylines from each section were "wireframed" in Gemcom into three-dimensional (3D) domains. The wireframes were then truncated with topography and overburden surfaces and the historical open pit mined portions were removed. The resulting solids (domains) were used for statistical analysis, grade interpolation, rock coding and resource reporting purposes.

1.6.3 Compositing

Length weighted composites were generated for the drillhole data that fell within the constraints of the above-mentioned domains. These composites were calculated for Ni, Cu, Co, Au, Pt and Pd over 1.0 m lengths starting at the first point of intersection between assay data hole and hangingwall of the 3D zonal constraint. The compositing process was halted upon exit from the footwall of the aforementioned constraint. Unassayed intervals were given 0.001 value. Any composites calculated that were less than 0.3 m in length, were discarded so as to not introduce a short sample bias in the interpolation process. The composite data were transferred to Gemcom extraction files for the grade interpolation as X, Y, Z, Ni, Cu, Co, Au, Pt, Pd files.

1.6.4 Grade Capping

Grade capping was investigated on the raw assay values in the mineralized domains to ensure that the possible influence of erratic high values did not bias the database. Extraction files were created for constrained Ni, Cu, Co, Au, Pt and Pd data within each mineralized domain. From these extraction files, log-normal histograms were generated. Grade capping was not required for the Alexo domain. The Kelex domain grade capped values of Ni, Cu, Pt and Pd, but not Co and Au.

1.6.5 Variography

Variography was carried out on the constrained composites within the mineralized domains of the deposit model. Kelex variography yielded discernible Ni variograms, which enabled the classification of Indicated and Inferred Mineral Resources. Due to the low grades for the Cu, Co, Au, Pt and Pd, variography on these elements was not successful and resulted in the use of the Ni variograms to inform the Cu, Co, Pt and Pd search ellipse ranges.



1.6.6 Density

The bulk density used for the resource model was derived from measurements performed by Agat Laboratories on 62 representative samples collected by Antoine Yassa (P.Geo). The resulting average bulk density model within the constraining domain created from these samples was calculated to be 3.11 tonnes per cubic metre (t/m^3). Overburden was assigned a bulk density of 1.8 t/m^3 .

1.6.7 Block Modelling and Interpolation

The block models of the Alexo-Kelex were constructed using Geovia Gems V6.8 modelling software. The 5 m x 1 m x 5 m cell size block model was rotated 30° counter-clockwise. Separate block models were created for rock type, bulk density, percent, class, Ni, Cu, Co, Au, Pt, Pd and NSR.

The volume percent block model was set up to accurately represent the volume and subsequent tonnage that was occupied by each block inside each constraining domain. As a result, the domain boundaries were properly represented by the percent model ability to measure infinitely variable inclusion percentages within a particular domain.

The Ni, Cu, Co Au, Pt and Pd composites were extracted from the Microsoft Access database composite table into separate files for each mineralized zone. Inverse distance squared (ID²) grade interpolation was utilized for all elements. There were two interpolation passes performed on each domain for each element for the Indicated and Inferred classifications.

1.6.8 Model Validation

The block models were validated using a number of industry standard methods including visual and statistical methods.

Visual examination of composites and block grades on successive plans and sections were performed onscreen in order to confirm that the block models correctly reflect the distribution of composite grades.

The comparisons show the average grades of the block models are almost same as that of composites used for the grade estimation.

A volumetric comparison was performed with the block model volume versus the geometric calculated volume of the domain solids. Nickel local trends were evaluated by comparing the ID² and Nearest Neighbour (NN) estimate against nickel composites. Nickel grade interpolations with ID² and NN agreed well for both Alexo and Kelex.

1.6.9 Mineral Resource Classification and Reporting

For the purposes of this resource, Indicated and Inferred classifications of all interpolated grade blocks were determined from the nickel interpolations due to nickel being the dominant revenue producing element in the NSR calculation. The Indicated Resources were classified for the blocks interpolated with at least three composites from a minimum of two holes; and Inferred Resources were categorized for all remaining grade populated blocks within all mineralised domains. The classifications have been adjusted to reasonably reflect the distribution of each category.

The MRE was derived from applying an NSR cut-off grade to the block model and reporting the resulting tonnes and grade for potentially mineable areas. Calculations are provided that demonstrate the rationale supporting the NSR cut-off grade that determines the potentially economic portion of the mineralized domains.



In the anticipated open pit portion of the Alexo-Kelex deposit, the ore crushing, transport, processing and general and administration (G&A) costs combine for a total of (\$2 + \$6 + \$20 + \$2) = CAD\$30/tonne processed, which became the open pit NSR cut-off value. For the constrained mineralization in the Alexo-Kelex Deposit model to be considered as an open pit Mineral Resource which is potentially economic, a first pass pit optimization was carried out.

In the anticipated underground portion of the Alexo-Kelex deposit, the ore mining, crushing, transport, processing and G&A costs combine for a total of (\$28 + \$2 + \$6 + \$20 + \$4) = CAD\$60/tonne processed which became the underground NSR cut-off value.

Resource Tonnes Ni Cu Со Pt Pd Contained Contained Contained Au Ni (Mlb) classification (kt) % % % g/t g/t g/t Cu (Mlb) Co (Mlb) Indicated Alexo open pit 0.03 23.3 1.43 0.17 0.06 0.04 0.16 0.40 0.73 0.09 0.76 0.03 0.01 0.02 0.04 4.72 0.19 0.19 Kelex open pit 281.8 0.03 **Total Pit Constrained** 305.1 0.81 0.01 0.03 0.07 0.22 0.04 0.03 5.46 0.27 Indicated Alexo Underground 5.0 0.77 0.10 0.04 0.02 0.08 0.19 0.08 0.01 0.00 **Kelex Underground** 261.6 0.72 0.03 0.03 0.01 0.03 0.05 4.15 0.17 0.17 Total Underground -0.03 266.6 0.72 0.03 0.03 0.01 0.05 4.24 0.18 0.18 Indicated 571.7 0.01 0.46 TOTAL INDICATED 0.77 0.04 0.03 0.03 0.39 0.06 9.69 Inferred 0.03 Kelex Underground 67.2 0.63 0.03 0.02 0.01 0.01 0.02 0.93 0.04 Total Underground -67.2 0.63 0.03 0.02 0.01 0.01 0.02 0.93 0.04 0.03 Inferred

The resulting open pit and underground MRE can be seen in Table 1.

(1) Mineral Resources which are not Mineral Reserves do not have demonstrated economic viability.

(2) The estimate of Mineral Resources may be materially affected by environmental, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues.

(3) The Inferred Mineral Resource in this estimate has a lower level of confidence than that applied to an Indicated Mineral Resource and must not be converted to a Mineral Reserve. It is reasonably expected that the majority of the Inferred Mineral Resource could be upgraded to an Indicated Mineral Resource with continued exploration.

(4) The Mineral Resources in this report were estimated using the Canadian Institute of Mining, Metallurgy and Petroleum (CIM), CIM Standards on Mineral Resources and Reserves, Definitions and Guidelines prepared by the CIM Standing Committee on Reserve Definitions and adopted by the CIM Council (2014).

(5) The historical open pit mined areas were removed from the MRE.

1.7 Conclusions and Recommendations

Based on all exploration work completed to date, two geological block models and Mineral Resources were estimated for the Alexo and Kelex deposits in accordance with CIM Standards on Mineral Resources and Reserves, Definitions and Guidelines (2014) as per NI 43-101. The 2019 resource estimates contain 571,700 tonnes of Indicated Resources grading 0.77% Ni, 0.04% Cu, 0.03% Co, 0.03 g/t Pt and 0.06 g/t Pd and 67,200 tonnes of Inferred Resources grading 0.63% Ni, 0.03% Cu and 0.02% Co.

The study included an open pit optimization that defined 305,100 tonnes of the Indicated Resources grading 0.81% Ni, 0.04% Cu, 0.03% Co, 0.03 g/t Pt, and 0.07 g/t Pd are amenable to open pit mining at an NSR cut-off of C\$30/t. The study concluded that an additional 266,600 tonnes grading 0.72% Ni, 0.03% Cu, 0.03% Co of



Indicated Resources and 67,200 tonnes grading 0.63% Ni, 0.03% Cu and 0.02% Co of Inferred Resources were amenable to underground mining at an NSR cut-off of C\$60/t.

Previous small-scale mining on the property between 2004 and 2005 (30,138 tonnes of ore averaging 1.93% Ni containing 1.3 million pounds (Mlb) of nickel from open pit mining of the Alexo and Kelex deposits) demonstrates the potential for near-term production from the shallow resources estimated above.

The Project has good exploration potential for further discovery of magmatic nickel sulphide mineralization. Although there has been past mining and drilling activity on the Project, the effective depth of exploration from the previous drilling is limited to a depth of 100 m below surface in the vicinity of the known deposits. The great bulk of the property remains untested by drilling below that depth, and there is almost no drilling elsewhere away from the known deposits. The property has never been surveyed using modern geophysical techniques. Previous surveys such as surface electromagnetic (EM) or borehole EM that have been used in the past would not be considered industry standard by modern criteria given advances in technology over the time period since the work was completed.

International exploration for similar komatiite-hosted nickel sulphide systems in Australia, as well as within systems such as Thompson and Raglan in Canada, has demonstrated that there is good potential for exploration and discovery of continued and/or additional sulphide mineralization along strike/plunge within mineralized channelized flow. Similarly, potential parallel channelized environments within the same volcanic flow field offer good exploration targets for additional sulphide systems. The shallow nature of previous exploration and the tight focus on the near-surface known mineralization at Alexo-Dundonald means that these possibilities have not been adequately tested on the Project. At Kelex, deeper holes are still within sulphide mineralization down plunge on the deposit and have not closed out the potential for further mineralization at depth below the current known sulphides.

Diamond drilling outlined four high-grade nickel shoots on the Dundonald South G zone nickel-enriched horizon that are open down plunge, below a vertical depth of 150 m below surface. The A zone high-grade nickel shoot is open below a vertical depth of 260 m below surface. Other secondary target areas in the Dundonald South area include the up and down plunge trends of the upper F zone shoot. Another secondary area of interest is the western portion of the G zone below a vertical depth of 100 m below surface.

The highest-grade nickel intersections of the Dundeal nickel zone occur at vertical depths of 400–525 m below surface. Although deep, there still exists very good potential to expand the Dundeal nickel zone with several drillholes into open space around these intersections.

The interpretations and conclusions reached in this report are based on current scientific understanding and the best evidence available to the authors at the time of writing. It is the nature of all scientific conclusions that they are founded on an assessment of probabilities and, however high these probabilities might be, they make no claim for absolute certainty.

As with most early exploration prospects, the key technical risk is that further exploration may not result in the discovery of an economic resource. Although significant mineralization has been discovered on the projects and a small-scale Mineral Resource has been estimated, the Project is still at an early stage of exploration outside the limited immediate environment of the shallow mineralization identified to date. Significant exploration is still required to determine the likelihood of discovery of additional mineralization to further increase potential to host sustainable long-term mining operations.

Outside the immediate area of the known deposits, exploration has been limited. The airborne EM surveys flown in 1984 and 1988 would not be considered an adequate test of the regional potential given recent advances in the understanding of the geophysical response of nickel sulphide mineralization, and the



development of the technical capabilities of airborne geophysical survey systems. Flying a modern helicopterborne EM system should be a priority of exploration.

The proposed exploration budget for the Alexo-Dundonald Project is proposed as a phased program subject to continued advancement due to success of the previous phase of work. The total budget proposal would total \$2,375,000. Phase 1 and 2 are proposed to be completed before the end of 2020 in accordance with the underlying purchase agreements for the Alexo and Dundonald properties. The proposed work includes preliminary compilation/evaluation, airborne EM and magnetics and some follow up ground geophysical surveys on the highest priority targets. This would be followed up by a diamond drilling program to assess targets and expand resources at the Kelex and Alexo Zones.

1.7.1 Phase 1

This phase would provide a basis to interpret drill targets for Phase 2. An 800 line kilometre airborne survey is proposed which would cover the entire consolidated land package at 50 m-spaced lines.

Additional monies should be budgeted to allow for resource evaluation, interpretation, ground truthing and geological/ground geophysical follow-up of newly identified targets from the airborne survey.

1.7.2 Phase 2

This phase of work would be mainly focused on diamond drilling and is not contingent on Phase 1 results, although any targets determined from Phase 1 would be added to the drill target matrix as work progresses in an evolving exploration program. Drilling on the Kelex and Alexo zones would be designed to extend the zones along strike and to depth. Drilling on the Dundonald South area would focus on extending high-grade lenses down plunge. A total of 10,000 m of diamond drilling is proposed. Additional monies are allotted for surface and borehole geophysical surveys, resource and engineering evaluation and geological interpretation.

1.7.3 Proposed Expenditures

An outline of the proposed expenditures is presented in the table below.

Dregram	Assistan	Proposed expenditures		
Program	Activity	Phase 1	Phase 2	
	Airborne EM/magnetic survey	160,000	nil	
	Surface EM surveys	70,000	50,000	
	Core drilling	-	1,600,000	
Exploration Alexo-	Borehole EM surveys	-	150,000	
Dunuonalu	Miscellaneous expenses (rentals etc)	10,000	50,000	
	Resource evaluation	80,000	160,000	
	Subtotal	320,000	2,010,000	
Dreiget maintenance	Renewal fees/taxes	20,000	25,000	
Project maintenance	Option payments	-	-	
Subtotal		20,000	25,000	
TOTAL FUNDS ALLOCATED FOR EACH PHASE		340,000	2,035,000	

Table 2:	Proposed exploration budget (C\$)
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2 Introduction

2.1 Issuer

CSA Global Pty Ltd (CSA Global), an ERM Company, has prepared this Technical Report on the Alexo-Dundonald Project ("the Project" or "the Property"), located in the Province of Ontario, at the request of Class 1 Nickel and Technologies Inc. formerly Lakefield Marketing Corp. (Lakefield or "the Company"), which is a reporting issuer in the province of Ontario.

On 24 September 2019, the Company announced that it had completed a business combination with Legendary Ore Mining Corporation (Legendary) and owner of Alexo-Dundonald Project, by way of a "three-cornered amalgamation", resulting in the reverse takeover of the Company by Legendary's shareholders.

The Transaction was completed in accordance with the terms of an amalgamation agreement between the Company, Legendary and Bloom Retail Management Inc. ("Lakefield Subco"), a wholly owned subsidiary of the Company. On closing of the Transaction, Legendary amalgamated with Lakefield Subco to form a new corporation, which became a wholly owned subsidiary of the Company. In exchange for all the issued and outstanding common shares of Legendary, the Company issued 80 million common shares of the Company to the former Legendary shareholders. As a result, on closing, the former Legendary shareholders held approximately 89% of the 90,046,090 total outstanding shares of the Company. Immediately prior to the Transaction taking effect, the Company changed its name to "Class 1 Nickel and Technologies Inc."

Following this transaction, the resulting issuer, Class 1 Nickel and Technologies Inc. (C1N), owns all the outstanding equity of Legendary, and Legendary continues hold the option to earn a 100% interest in the mining claims, leases and properties comprising the Alexo-Dundonald Project subject to agreements outlined in Section 4.4.

The purpose of this report is to provide a technical summary of the Alexo-Dundonald Project in support of applicable securities law disclosure requirements and a proposed application by C1N ("the Issuer") to list its common shares on the Canadian Securities Exchange. C1N is headquartered in Toronto, Ontario. CSA Global is a privately-owned consulting company that has offices around the world and has been operating from Perth, Western Australia for more than 30 years.

2.2 Terms of Reference

This report is in accordance with disclosure and reporting requirements set forth in National Instrument 43-101 – Standards for Disclosure for Mineral Projects (NI 43-101), Companion Policy 43-101CP, and Form 43-101F1. This Technical Report discloses material changes to the Property including a revised MRE for the Alexo-Kelex deposits.

The Mineral Resource update has been prepared in accordance with CIM Definition Standards for Mineral Resources and Mineral Reserves (10 May 2014) as per NI 43-101 requirements. Only Mineral Resources are estimated – no Mineral Reserves are defined. The report is intended to enable the Issuer and potential partners to reach informed decisions with respect to the Project.

The principal author of this report is Mr Tony Donaghy, CSA Global Principal Consultant. Mr Donaghy has more than 20 years' experience in the field of nickel mineral exploration and is a Qualified Person according to NI 43-101 standards. Mr Donaghy is responsible for Sections 1 to 13 inclusive, and Sections 15 to 27 inclusive of this report.



The co-author of this report is Mr Eugene Puritch, an independent mining consultant and President of P&E Mining Consultants Inc. Mr Puritch has more than 40 years' experience in the fields of mining and resource estimation and is a Qualified Person according to NI 43-101 standards. Mr Puritch is responsible for Section 14, and co-author of Sections 1, 24 and 25 of this report.

The Effective Date of this report is 6 November 2019. The report is based on technical information known to the authors and CSA Global at that date.

The Issuer reviewed draft copies of this report for factual errors. Any changes made because of these reviews did not include alterations to the interpretations and conclusions made. Therefore, the statements and opinions expressed in this document are given in good faith and in the belief that such statements and opinions are not false and misleading at the date of this report.

2.3 Independence

Neither CSA Global, P&E Mining Consultants Inc., nor the authors of this report, has any material present or contingent interest in the outcome of this report, nor do they have any pecuniary or other interest that could be reasonably regarded as being capable of affecting their independence in the preparation of this report. The 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. No member or employee of CSA Global and P&E Mining Consultants Inc. is, or is intended to be, a director, officer or other direct employee of C1N. No member or employee of CSA Global and P&E Mining in C1N.

2.4 Notice to Third Parties

CSA Global has prepared this report having regard to the particular needs and interests of C1N, and in accordance with their instructions and in accordance with NI 43-101 technical reporting. This report is not designed for any other person's particular needs or interests. Third party needs, and interests may be distinctly different to C1N's needs and interests, and the report may not be sufficient, fit or appropriate for the purpose of the third party, other than its prescription in relation to NI 43-101.

2.5 Sources of Information

CSA Global has completed the scope of work largely based on information provided by the Issuer (C1N). This report is based, in part, on internal company technical reports, and maps, published government reports, company letters and memoranda, and public information as listed in the references at the conclusion of this report. Several sections from reports authored by other consultants have been directly quoted or summarized in this report and are so indicated where appropriate.

It should be noted that the authors have used selected portions or excerpts from material contained in the following NI 43-101 compliant technical reports. These reports are publicly available on SEDAR (<u>www.sedar.com</u>):

- A NI43-101 Technical Report dated 10 August 2012, prepared by P&E Mining Consultants Inc. for Canadian Arrow Mines Ltd, titled Technical Report and Updated Resource Estimate on the Alexo and Kelex Deposits, Alexo Property, Timmins Area, Ontario, Canada. (Puritch *et al.*, 2012).
- A NI43-101 Technical Report dated 3 November 2010, prepared by P&E Mining Consultants Inc. for Canadian Arrow Mines Ltd, titled Technical Report and Resource Estimate on the Alexo and Kalex Deposits, Alexo Property, Timmins Area, Ontario, Canada. (Puritch *et al.*, 2010).



- A NI 43-101 Technical Report dated 30 January 2009, prepared by MPH Consulting Limited for First Nickel Inc., titled Technical Report on the Dundonald Project, Dundonald & Clergue Townships Porcupine Mining Division, Ontario (Harron, 2009).
- A Technical Report dated March 2004, prepared by J. Kevin Montgomery (P.Geo) for First Nickel Inc., titled A Report to NI43-101 Standards on the Western Abitibi Nickel Properties of First Nickel Inc., Ontario, Canada (Montgomery, 2004).

No exploration or mining activity has been carried out on the Project since the work documented by Harron (2009) on the Dundonald project deposits, and the work documented by Puritch *et al* (2012) on the Alexo-Kelex project deposits. This report herein represents the first conjoined reporting of these two now amalgamated project areas.

CSA Global has undertaken its own review of the technical aspects contained in this report. Based on the drillhole and assay database provided by C1N, P&E Mining Consultants Inc. has prepared an update of its 2012 MRE for the Alexo-Kelex deposits, contained in Section 14 herein. CSA Global has made all reasonable endeavours to confirm the authenticity and completeness of the technical data on which this report is based.

2.6 Qualified Person Property Inspection

The lead author and Qualified Person, Mr Tony Donaghy has sufficient knowledge of this Project from previous site visits to both Alexo-Kelex and Dundonald as parts of informal guided technical visit reviews of geological academic study between 2000 and 2005, and more than 20 years' professional experience in assessing the relevant mineralisation styles. Co-author and Qualified Person, Mr Eugene Puritch of P&E Mining Consultants Inc. conducted a site visit to the Alexo property on 5 May 2010 (Puritch *et al.*, 2010).

No further work has been conducted on the Project since 2011, and no further material information would be gained by a return site visit. The authors and Qualified Persons of this report consider Mr Puritch's 2010 site visit and supervision of work completed for the 2012 technical reporting to NI 43-101 standard (Puritch *et al.*, 2012) current with respect to NI 43-101 requirements. The authors currently have sufficient information to assess the Project.



3 Reliance on Other Experts

CSA Global has not reviewed the status of C1N's tenure agreements pertaining to the Property and has relied on information provided by C1N with regard to the legal title to the mineral concessions (Section 4) via email communications received from Mr Dean MacEachern (Technical Director of C1N) dated 27 August 2019, 1 November 2019, 5 November 2019, and 6 November 2019.

Neither CSA Global, nor the authors of this report, is qualified to provide comment on any legal issues associated with the Project (Section 4). Assessment and reporting of these legal aspects rely on information provided by C1N and has not been independently verified by CSA Global.

The Property description presented in this report is not intended to represent a legal, or any other opinion as to title.



4 Property Description and Location

4.1 Area of Property

The Alexo-Dundonald project covers approximately 1895 Hectares.

4.2 Location of Property

The Alexo-Dundonald Project is in the townships of Clergue, Dundonald, German and Stock, approximately 45 km northeast of the town of Timmins, in the Porcupine Mining Division of Ontario, Canada (Figure 1). The historical Alexo Shaft is located on the Project at approximately 513800E and 389450N (NAD 27, UTM Zone 17N – Figure 2).



Figure 1: C1N's Alexo-Dundonald Project location





Figure 2: Location of historical mining infrastructure, Alexo

4.3 Mineral Tenure

The mineral tenure for the Project is depicted in Figure 3 and detailed in Table 3. The Project consists of:

- 29 patented claims:
 - One claim with surface rights only (SRO)
 - Nine claims with mining rights only (MRO)
 - o 19 claims with both mining and surface rights (MSR).
- 40 leased claims:
 - \circ Nine claims with MRO
 - \circ 31 claims with both MSR
- 21 single cell mining claims.
- Five boundary cell mining claims.

C1N owns all the outstanding equity of Legendary, and Legendary continues to hold the option to earn a 100% interest in the mining claims, leases and properties comprising the Alexo-Dundonald Project, subject to tenure agreements and royalty agreements outlined in Section 4.4.





Figure 3: Plan of mineral tenure and encumbrances, Alexo-Dundonald Project with main deposit locations

Table 3:	Alexo-Dundonald Project tenements	

Tenure ID	Tenure type	Recorded holder	Area (ha)	Anniversary date	Amount of work required (C\$)	Work credits (C\$)	Claim lapse date	Status
335517	Boundary Cell Mining Claim	Legendary	0.99	3-May-21	\$200	\$0	3-May-21	Active
122874	Boundary Cell Mining Claim	Legendary	3.64	3-May-23	\$200	\$0	3-May-23	Active
138463	Boundary Cell Mining Claim	Legendary	10.93	3-May-23	\$200	\$0	3-May-23	Active
139306	Boundary Cell Mining Claim	Legendary	3.65	3-May-23	\$200	\$0	3-May-23	Active
198407	Boundary Cell Mining Claim	Legendary	19.83	3-May-23	\$200	\$0	3-May-23	Active
139307	Single Cell Mining Claim	Legendary	2.21	3-May-21	\$200	\$0	3-May-21	Active
246369	Single Cell Mining Claim	Legendary	0.77	3-May-21	\$200	\$0	3-May-21	Active
230085	Single Cell Mining Claim	Legendary	4.23	3-May-23	\$200	\$0	3-May-23	Active
287148	Single Cell Mining Claim	Legendary	21.33	3-May-23	\$400	\$0	3-May-23	Active
326030	Single Cell Mining Claim	Legendary	13.34	3-May-23	\$200	\$0	3-May-23	Active
333404	Single Cell Mining Claim	Legendary	13.30	3-May-23	\$200	\$0	3-May-23	Active
159275	Single Cell Mining Claim	Legendary	0.01	13-Sep-23	\$200	\$0	13-Sep-23	Active
164096	Single Cell Mining Claim	Legendary	12.00	13-Sep-23	\$200	\$0	13-Sep-23	Active
112586	Single Cell Mining Claim	Legendary	20.64	30-Oct-23	\$200	\$0	30-Oct-23	Active
139199	Single Cell Mining Claim	Legendary	12.09	30-Oct-23	\$200	\$0	30-Oct-23	Active
202678	Single Cell Mining Claim	Legendary	0.18	30-Oct-23	\$200	\$0	30-Oct-23	Active
202679	Single Cell Mining Claim	Legendary	2.17	30-Oct-23	\$200	\$0	30-Oct-23	Active



Tenure ID	Tenure type	Recorded holder	Area (ha)	Anniversary date	Amount of work required (C\$)	Work credits (C\$)	Claim lapse date	Status
276676	Single Cell Mining Claim	Legendary	0.03	30-Oct-23	\$200	\$0	30-Oct-23	Active
313935	Single Cell Mining Claim	Legendary	1.77	30-Oct-23	\$200	\$0	30-Oct-23	Active
109650	Single Cell Mining Claim	Legendary	5.39	20-Nov-23	\$200	\$0	20-Nov-23	Active
150510	Single Cell Mining Claim	Legendary	21.33	20-Nov-23	\$400	\$0	20-Nov-23	Active
203193	Single Cell Mining Claim	Legendary	13.36	20-Nov-23	\$200	\$259	20-Nov-23	Active
203920	Single Cell Mining Claim	Legendary	3.41	20-Nov-23	\$200	\$0	20-Nov-23	Active
241612	Single Cell Mining Claim	Legendary	21.33	20-Nov-23	\$400	\$0	20-Nov-23	Active
241613	Single Cell Mining Claim	Legendary	21.33	20-Nov-23	\$400	\$0	20-Nov-23	Active
265897	Single Cell Mining Claim	Legendary	13.39	20-Nov-23	\$200	\$0	20-Nov-23	Active
L58444	Lease	Legendary	16.59	31-Oct-31	N/A	N/A	31-Oct-31	MRO
L58445	Lease	Legendary	16.24	31-Oct-31	N/A	N/A	31-Oct-31	MRO
LEA-108129	Lease	Legendary	123.43	30-Sep-28	N/A	N/A	30-Sep-28	MRO
LEA-108130	Lease	Legendary	55.04	30-Sep-28	N/A	N/A	30-Sep-28	MRO
LEA-108131	Lease	Legendary	32.38	30-Sep-28	N/A	N/A	30-Sep-28	MRO
LEA-108132	Lease	Legendary	68.39	30-Sep-28	N/A	N/A	30-Sep-28	MRO
LEA-108133	Lease	Legendary	60.70	30-Sep-28	N/A	N/A	30-Sep-28	MRO
LEA-108134	Lease	Legendary	48.80	30-Sep-28	N/A	N/A	30-Sep-28	MRO
LEA-108135	Lease	Legendary	64.76	30-Sep-28	N/A	N/A	30-Sep-28	MRO
L2554	Patent	Legendary	16.59	Yearly taxes due	N/A	N/A	Yearly taxes due	MRO
L2555	Patent	Legendary	16.59	Yearly taxes due	N/A	N/A	Yearly taxes due	MRO
L4337	Patent	Legendary	16.59	Yearly taxes due	N/A	N/A	Yearly taxes due	MRO
L2556	Patent	Legendary	16.19	Yearly taxes due	N/A	N/A	Yearly taxes due	MRO
L2557	Patent	Legendary	16.19	Yearly taxes due	N/A	N/A	Yearly taxes due	MRO
L2657	Patent	Legendary	16.19	Yearly taxes due	N/A	N/A	Yearly taxes due	MRO
L4338	Patent	Legendary	16.19	Yearly taxes due	N/A	N/A	Yearly taxes due	MRO
L4339	Patent	Legendary	16.19	Yearly taxes due	N/A	N/A	Yearly taxes due	MRO
PAT-47882	Patent	Legendary	15.39	Yearly taxes due	N/A	N/A	Yearly taxes due	MRO
107173	Lease	Legendary	16.24	30-Apr-19	N/A	N/A	30-Apr-19	MSR
107173	Lease	Legendary	16.24	30-Apr-19	N/A	N/A	30-Apr-19	MSR
107173	Lease	Legendary	16.24	30-Apr-19	N/A	N/A	30-Apr-19	MSR
107173	Lease	Legendary	16.24	30-Apr-19	N/A	N/A	30-Apr-19	MSR
107173	Lease	Legendary	16.19	30-Apr-19	N/A	N/A	30-Apr-19	MSR
107173	Lease	Legendary	16.19	30-Apr-19	N/A	N/A	30-Apr-19	MSR
107173	Lease	Legendary	16.19	30-Apr-19	N/A	N/A	30-Apr-19	MSR
107173	Lease	Legendary	16.19	30-Apr-19	N/A	N/A	30-Apr-19	MSR



Tenure ID	Tenure type	Recorded holder	Area (ha)	Anniversary date	Amount of work required (C\$)	Work credits (C\$)	Claim lapse date	Status
107173	Lease	Legendary	16.19	30-Apr-19	N/A	N/A	30-Apr-19	MSR
107173	Lease	Legendary	16.19	30-Apr-19	N/A	N/A	30-Apr-19	MSR
107173	Lease	Legendary	16.19	30-Apr-19	N/A	N/A	30-Apr-19	MSR
107173	Lease	Legendary	16.09	30-Apr-19	N/A	N/A	30-Apr-19	MSR
107173	Lease	Legendary	16.19	30-Apr-19	N/A	N/A	30-Apr-19	MSR
107173	Lease	Legendary	16.19	30-Apr-19	N/A	N/A	30-Apr-19	MSR
107173	Lease	Legendary	16.19	30-Apr-19	N/A	N/A	30-Apr-19	MSR
107173	Lease	Legendary	16.09	30-Apr-19	N/A	N/A	30-Apr-19	MSR
107173	Lease	Legendary	16.19	30-Apr-19	N/A	N/A	30-Apr-19	MSR
107173	Lease	Legendary	16.19	30-Apr-19	N/A	N/A	30-Apr-19	MSR
107173	Lease	Legendary	16.09	30-Apr-19	N/A	N/A	30-Apr-19	MSR
107173	Lease	Legendary	16.19	30-Apr-19	N/A	N/A	30-Apr-19	MSR
107173	Lease	Legendary	16.19	30-Apr-19	N/A	N/A	30-Apr-19	MSR
107173	Lease	Legendary	16.09	30-Apr-19	N/A	N/A	30-Apr-19	MSR
107173	Lease	Legendary	16.09	30-Apr-19	N/A	N/A	30-Apr-19	MSR
107173	Lease	Legendary	16.54	30-Apr-19	N/A	N/A	30-Apr-19	MSR
107173	Lease	Legendary	16.19	30-Apr-19	N/A	N/A	30-Apr-19	MSR
107173	Lease	Legendary	16.54	30-Apr-19	N/A	N/A	30-Apr-19	MSR
107173	Lease	Legendary	16.19	30-Apr-19	N/A	N/A	30-Apr-19	MSR
LEA-109794	Lease	Legendary	16.19	31-Oct-39	N/A	N/A	31-Oct-39	MSR
LEA-109793	Lease	Legendary	33.08	30-Sep-39	N/A	N/A	30-Sep-39	MSR
LEA-109795	Lease	Legendary	15.59	31-Oct-39	N/A	N/A	31-Oct-39	MSR
LEA-107378	Lease	Legendary	81.09	31-Jul-21	N/A	N/A	31-Jul-21	MSR
L2744	Patent	Legendary	16.59	Yearly taxes due	N/A	N/A	Yearly taxes due	MSR
L4361	Patent	Legendary	16.24	Yearly taxes due	N/A	N/A	Yearly taxes due	MSR
L4362	Patent	Legendary	14.27	Yearly taxes due	N/A	N/A	Yearly taxes due	MSR
L10554	Patent	Legendary	16.59	Yearly taxes due	N/A	N/A	Yearly taxes due	MSR
L10555	Patent	Legendary	16.59	Yearly taxes due	N/A	N/A	Yearly taxes due	MSR
L8545	Patent	Legendary	16.19	Yearly taxes due	N/A	N/A	Yearly taxes due	MSR
L8546	Patent	Legendary	16.19	Yearly taxes due	N/A	N/A	Yearly taxes due	MSR
1231 SEC	Patent	Legendary	16.19	Yearly taxes due	N/A	N/A	Yearly taxes due	MSR
1232 SEC	Patent	Legendary	16.19	Yearly taxes due	N/A	N/A	Yearly taxes due	MSR
L4795	Patent	Legendary	16.59	Yearly taxes due	N/A	N/A	Yearly taxes due	MSR
L4796	Patent	Legendary	16.54	Yearly taxes due	N/A	N/A	Yearly taxes due	MSR



Tenure ID	Tenure type	Recorded holder	Area (ha)	Anniversary date	Amount of work required (C\$)	Work credits (C\$)	Claim lapse date	Status
Pcl1282	Patent	Legendary	16.54	Yearly taxes due	N/A	N/A	Yearly taxes due	MSR
Pcl1283	Patent	Legendary	16.54	Yearly taxes due	N/A	N/A	Yearly taxes due	MSR
Pcl1284	Patent	Legendary	16.54	Yearly taxes due	N/A	N/A	Yearly taxes due	MSR
Pcl1285	Patent	Legendary	16.19	Yearly taxes due	N/A	N/A	Yearly taxes due	MSR
Pcl1286	Patent	Legendary	16.19	Yearly taxes due	N/A	N/A	Yearly taxes due	MSR
Pcl1287	Patent	Legendary	16.19	Yearly taxes due	N/A	N/A	Yearly taxes due	MSR
PAT-47883	Patent	Legendary	31.86	Yearly taxes due	N/A	N/A	Yearly taxes due	MSR
PAT-47884	Patent	Legendary	64.74	Yearly taxes due	N/A	N/A	Yearly taxes due	MSR
1282	Patent	Legendary	63.58	Yearly taxes due	N/A	N/A	Yearly taxes due	SRO

In Ontario, tenure to a staked claim is maintained by an expenditure of \$400 of "assessment work" annually per 21.33 ha claim unit, and \$200 per partial claim unit less than the full 21.33 ha unit, commencing in the second year after recording. Excess work credits can be "banked" and applied to subsequent annual work requirements. Staked claims can be converted to lease claims. In Ontario, leases are issued for periods of 21 years and are maintained by annual rents payable to the province (Crown). Leases are renewable for additional 21-year periods. Patented claims are held as fee simple titles and are subject to annual property taxes payable to the Municipality of Iroquois Falls.

Lease 107173 (which include both MSR covering former mining claims P236685, P236686, P236687, P236688, P236689, P236690, P236691, P236692, P236693, P236694, P236695, P236696, P236777, P236778, P236779, P236780, P236781, P236782, P236783, P236784, P236785, P236786, P236787, P236818, P236819, P236820, P236821) is currently in the process of being renewed with the Ontario Ministry of Energy, Northern Development and Mines (ENDM). The renewal application was submitted 10 April 2019. Once that process is completed, the lease will receive a new lease number and expiry date (normally 21 years). C1N management warrants that there is no reason to believe the lease will not be renewed and discussions with the ENDM have indicated that the renewal process is almost complete as of the report date.

C1N management warrants that all tax payments and rents are current with regard to patented and leased claims, and all staked claims are in good standing. C1N management also warrants that there are no current or pending challenges to ownership of the lands.

4.4 Tenure Agreements and Encumbrances

Figure 3 depicts the current and historical encumbrances on the tenements.

As announced on SEDAR on 28 August 2018, VaniCom Resources Ltd (VaniCom) (a private company headquartered in Perth, Western Australia) paid C\$150,000 in cash, issued 1,750,000 shares of its common stock worth C\$350,000 and must incur C\$750,000 in exploration expenditures over a 36-month period from the date of the agreement to acquire a 100% interest in the Alexo-Kelex project from Tartisan Nickel Corp.



(Tartisan). In the event that the expenditure commitment is not met prior to the expiry date, then Tartisan will have the option to re-acquire the property for a purchase price of \$1.00 within 30 days of the expiry date. In addition to this, Tartisan received a 0.50% net smelter return (NSR) royalty on any future production from the project, which can be purchased by VaniCom for C\$1.0 million. Tartisan will also be entitled to receive a cash rebate from the Financial Assurance associated with the Reclamation Bond proceeds of up to approximately C\$230,000 through a formal application process with the ENDM. A condition precedent on the agreement was an additional 1.5% NSR payable on minerals produced from the Property, payable to the royalty holder pursuant to a prior agreement between third parties.

As part of this transaction, VaniCom purchased the company, Legendary Ore Mining Corporation (Legendary – a wholly owned subsidiary of Tartisan) that holds the Alexo-Kelex tenements.

As also announced to SEDAR on 28 August 2018, VaniCom (through its recently acquired wholly owned subsidiary, Legendary) paid C\$150,000, issued common shares of worth C\$350,000 and must incur C\$750,000 in exploration expenditures over a 36-month period from the date of the agreement to acquire a 100% interest in the Dundonald project from Transition Metals Corp. (Transition). In the event the expenditure commitment is not met prior to the expiry date, then Transition will have the option to re-acquire the property for a purchase price of \$1.00 within 30 days of the expiry date. In addition to this, Transition has received a 2.50% NSR royalty on any future production from the project.

As announced on SEDAR on 24 September 2019, C1N completed a business combination with Legendary, resulting in the reverse takeover of C1N by Legendary's shareholders.

4.5 Environmental Liabilities

A certified Closure Plan has been approved by the ENDM pursuant to the Mining Act in connection with the Alexo Kelex property (Figure 4). The Alexo Project Revised Production Closure Plan was prepared for Legendary and dated and approved by the ENDM on 24 January 2005 and amended and approved in March 2011.

As per correspondence dated 21 October 2019, the compliance section of the ENDM confirmed that it was satisfied the rehabilitation measures as per the 2011 Closure Plan have been satisfactorily completed or are satisfactorily in train to be completed. The compliance section supported the return of the difference between the total amount of Financial Assurance held by the ENDM and the amount required for the remaining closure works as indicated in a letter that was provided to the ENDM by Tartisan representatives by email dated 17 October 2019, namely:

- 1. Repairs to Revegetation of Waste Rock Pile at Alexo. Projected cost \$7,000.
- 2. Increase the height of the Kelex Pit Berm. Projected cost \$7,000.
- 3. Revegetate the Kelex waste rock pile. Projected cost \$11,300.
- 4. Site water quality monitoring for an additional 3 years. Projected cost \$15,100.
- 5. Sediment sample collection and analysis of the settling pond. Projected cost \$900
- 6. Breach of the berm of the settling pond. Projected cost \$3,600.
- 7. 10% Contingency of \$6,230.

Apart from the ongoing water monitoring, Tartisan represented that the remaining remedial works outlined above would be completed by the end of 2019. C1N is now responsible for the remainder of the Closure Plan works. The remainder of the Financial Assurance (less the \$68,530 held by the ENDM to cover the above works) was refunded to Tartisan.



C1N management warrants that there are no other environmental liabilities on the Project.

4.6 Required Exploration Permits

C1N does not currently hold any exploration plans or permits for exploration work proposed in this report (Section 26). C1N warrants that it will acquire any and all government permits required to execute the proposed early exploration activities on the Project properties.

Ontario Mining Act regulations require exploration plans and permits, with graduated requirements for early exploration activities of low to moderate impact undertaken on mining claims, mining leases and licenses of occupation. Exploration plans and permits are not required on patented mining claims.

There are a number of exploration activities that do not require a plan or permit and may be conducted while waiting for a plan or permit is effective. These may include the following:

- Prospecting activities such as grab/hand sampling, geochemical/soil sampling, geological mapping
- Stripping/pitting/trenching below thresholds for permits
- Transient geophysical surveys such as radiometric, magnetic
- Other baseline data acquisition such as taking photos, measuring water quality, etc.

4.6.1 Exploration Plan

Those proposing to undertake minimal to low impact exploration plan activities (early exploration proponents) must submit an Exploration Plan. Early exploration activities requiring an Exploration Plan include:

- Geophysical activity requiring a power generator
- Line cutting, where the width of the line is 1.5 m or less
- Mechanized drilling for the purposes of obtaining rock or mineral samples, where the weight of the drill is 150 kg or less
- Mechanized surface stripping (overburden removal), where the total combined surface area stripped is less than 100 m² within a 200-m radius
- Pitting and trenching (of rock), where the total volume of rock is between 1 m³ and 3 m³ within a 200-m radius.

In order to undertake the above early exploration activities, an Exploration Plan must be submitted, and any surface rights owners must be notified. Aboriginal communities potentially affected by the Exploration Plan activities will be notified by the ENDM and have an opportunity to provide feedback before the proposed activities can be carried out.

4.6.2 Exploration Permit

Those proposing to undertake moderate impact exploration permit activities (early exploration proponents) must apply for an Exploration Permit. Early exploration activities that require an Exploration Permit include:

- Line cutting, where the width of the line is more than 1.5 m
- Mechanized drilling, for the purpose of obtaining rock or mineral samples, where the weight of the drill is greater than 150 kg
- Mechanized surface stripping (overburden removal), where the total combined surface area stripped is greater than 100 m² and up to advanced exploration thresholds, within a 200-m radius.



• Pitting and trenching (rock), where the total volume of rock is greater than 3 m³ and up to advanced exploration thresholds, within a 200-m radius.

The above activities will only be allowed to take place once the permit has been approved by the ENDM. Surface rights owners must be notified when applying for a permit. Aboriginal communities potentially affected by the exploration permit activities will be consulted and have an opportunity to provide comments and feedback before a decision is made on the permit.

4.6.3 First Nation Consultations

C1N warrants that it will consult with the appropriate First Nation and Metis communities as required per the Ontario Mining Act.

4.6.4 Exploration on Mining Rights Only Mining Claims

Under Ontario's Mining Act, surface rights owners must be notified prior to conducting exploration activities. Where there is a surface rights holder of land, a person who:

- 1. prospects, stakes or causes to be staked a mining claim;
- 2. formerly held a mining claim that has been cancelled, abandoned or forfeited;
- 3. is the holder of a mining claim and who performs assessment work; or
- 4. is the lessee or owner of mining lands and who carries on mining operations,

on such land, shall compensate the surface rights holder for damages sustained to the surface rights by such prospecting, staking, assessment work or operations.

4.7 Other Significant Factors and Risks

Environmental, permitting, legal, title, taxation, socio-economic, marketing, and political or other relevant issues could potentially materially affect access, title or the right or ability to perform the work recommended in this report on the Property. However, at the time of this report, the Qualified Person and CSA Global are unaware of any such potential issues affecting the Property.



5 Accessibility, Climate, Local Resources, Infrastructure and Physiography

5.1 Topography, Elevation and Vegetation

The area comprises recently glaciated terrain with stream, lake and swamp filled valleys separated by lowlevel ridges and platform topographic highs of either bedrock foundation or eskers. The Project has a subdued relief which is typically low lying and boggy. The area in general is poorly drained, a reflection of the low relief. Mean elevation in the area is on the order of 300 m above sea level. The Project area is underlain by sandy glacio-fluvial outwash material, which supports mature jack pine forest. Much of the Project area has been recently logged. Outcrop exposure overall averages less than 5% and is 0% over large areas.

5.2 Access to Property

The Property is located within 2 km of Highway 67, a paved road that connects Highway 101 to Highway 11. The Project area is accessed via gravel roads and cut trails. Hydro-lines are located less than 2 km north of the Project running parallel to Highway 67. In addition, a spur of the Ontario Northland Railway, which services the Kidd Creek metallurgical complex, passes 2 km north of the Project and joins the main line approximately 5 km to the east.

5.3 Climate

The Timmins area has a typical continental climate characterized by cold, dry winters and warm, dry summers. Average daily temperatures in the Timmins area vary from a low of -24°C in the winter to +24°C in the summer. Average annual precipitation is 581 mm of rain and 352 cm of snow. Most of the rainfall precipitation occurs between June and November.

Season specific mineral exploration may be conducted year-round. Swampy areas and lakes/ponds may be best accessed for drilling and ground geophysical surveys during the winter months when the ground and water surfaces are frozen. Mine operations in the region operate year-round with supporting infrastructure.

5.4 Local Resources and Infrastructure

The full range of equipment, supplies and services required for any mining development is available in Timmins that has a population of approximately 50,000 people. The general Timmins area also possesses a skilled mining workforce from which personnel could be sourced for any new mine development.

Regional powerlines extend northeast of Timmins in close proximity to the Project.

Abundant water resources are present in the lakes, rivers, creeks, and beaver ponds throughout the area. There is sufficient space on the Project to build a mine, mill and tailings facility and supporting infrastructure if required should a mineable mineral deposit be delineated.



6 History

6.1 Project Results – Previous Owners

Prior to C1N amalgamating the tenements under one ownership, the projects were previously divided (Figure 4) into the Dundonald project and the Alexo-Kelex project.

Previous exploration activity and results in the Project area (Table 4) have been extensively reviewed and documented by the NI 43-101 technical reports prepared by Montgomery (2004), Harron (2009) and Puritch *et al* (2010, 2012). The following is a synopsis of their reports. Significant drill intersections reported herein represent the latest rounds of drilling by the last companies to drill on the various target areas within the Project (Canadian Arrow at Alexo-Kelex in 2004–2005 and 2010–2011; First Nickel at Dundonald in 2004–2005; and Falconbridge at Dundeal in 1989) and are presented as an indication of nickel grade and continuity of mineralisation typical of the Project. Readers are referred to the reports listed above for more detailed summaries of previous historical drilling activity.



 Figure 4:
 C1N's Alexo-Dundonald Project – previous tenure and location

 Red – Alexo-Kelex tenements previously held first by Canadian Arrow (cf. Puritch et al., 2012), then Tartisan. Purple –

 Dundonald project previously held first by First Nickel Inc.
 (cf. Harron, 2009) then Transition.

 Source: S&P Global Market Intelligence, 2019



Year(s)	Company	Area	Description
1907	Alexo Kelso	Alexo	Discovery of nickel sulphide at surface.
1912–1919	Alexo Mining Company	Alexo	Mining to 38 m depth.
1943–1944	Harlin Nickel Mines Limited	Alexo	Mining of remnants, drilled 26 holes for 380 m drilling.
1952	Ontario Nickel Mines Limited	Alexo	"Exploration", type unknown presumed to be drilling.
1960	Falconbridge Limited	Dundonald South	Discovery of nickel sulphide at surface.
1952–1976	Noranda Mines Limited	Alexo	Drilling "numerous holes", magnetometer surveys.
1984 and 1988	Ontario Geological Survey	Abitibi Belt	Regional airborne EM surveys were flown of the project area.
1989	Falconbridge Limited	Dundeal	Discovery of nickel sulphide.
1960–2000	Falconbridge Limited	Dundonald South, Dundeal	Geological mapping, magnetic and HLEM surveys, as well as AEM, AMAG, and AVLF-EM surveys over the entire property. During the 40-year period Falconbridge drilled 168 holes totalling 40,515 m. Selective borehole and surface TDEM and mise-a-la masse surveys.
1991	Noranda Mines Limited	Alexo- Dundonald boundary	Drilled three holes. No significant intercepts
1996-1999	Outokumpo	Alexo-Kelex	Exploration work completed on the property in the period from November to February 1999 included: line cutting (79.02 km); ground magnetometer, HLEM, pulse EM, and mise a la masse geophysical surveys; downhole pulse EM surveys; geological mapping; whole rock analysis; enzyme leach and mobile metal ion soil geochemical survey; and 10,859 m of diamond drilling in 49 holes. Discovery of Kelex deposit.
2000–2001	Hucamp Mines Ltd	Dundonald Alexo-Kelex	Drilling 42 holes, stripping and sampling of surface showings. Downhole pulse EM surveys on 10 holes drilled. Downhole mise a la masse.
2004–2005	First Nickel Inc.	Dundonald	Diamond drilling program (179 holes totalling 30,452.5 m), borehole geophysics, geological mapping, ground geophysical surveys, minor surface mechanical stripping and environmental work.
2004–2005	Canadian Arrow	Alexo-Kelex	Mining, diamond drilling (132 holes totalling 12,710.2 m), line cutting, high-resolution magnetometer surveys, PEM-SQUID survey.
2010–2011	Canadian Arrow	Alexo-Kelex	Drilling 17 holes.

Tahle 1.	Previous evoloration	– Alexo-Dundonald	Project
TUDIE 4.	Previous exploration	i – Alexo-Dunuonulu	Project

The Alexo-Dundonald Project contains the Alexo, Kelex, Dundonald South and Dundeal nickel deposits. Majority of exploration in the past 30 years has consisted of shallow drilling (most drillholes penetrating less than 100 m vertical depth below surface) on tight-spaced (15 m) drill sections on the known near-surface mineralised deposits (Alexo, Kelex, Dundondald South and Dundeal), with the aim of gaining information to estimate shallow-depth resources for these deposits. There has been only limited regional geophysics, and very little drilling, outside the immediate environment of the known deposits. No work has been carried out on the Project since the work documented by Harron (2009) on the Dundonald project deposits, and the work documented by Puritch *et al* (2012) on the Alexo-Kelex project deposits.



6.1.1 Alexo-Kelex

Alexo-Kelso discovered what became the Alexo Mine in 1907.

The Alexo deposit has been mined during three periods (Puritch et al., 2010; 2012):

- 1913–1919: Surface and underground mining for production of 51,857 tons at 4.4% Ni, 0.6% Cu between surface and 38 m depth.
- 1943–1944: Mining of remnants and pillars from previous 1913–1919 mine workings; exact production figures are unknown.
- 2004–2005: Open pit mining of 26,224 tonnes at 1.97% Ni, 0.20% Cu from Alexo and 3,900 tonnes at 1.68% Ni and 0.18% Cu from Kelex.

In 1952, the property was purchased from Alexo Mining by Noranda Mines Limited (Noranda). Noranda drilled numerous diamond drillholes and completed a ground magnetometer survey in 1976; however, the results were unavailable.

The Ontario Geological Survey (OGS) completed airborne EM and total field magnetic surveys in 1984 and 1988 (OGS, 1984; 1988) over the general project area. The airborne surveys identified several magnetic anomalies associated with komatiitic sequences and a magnetic anomaly identified as the Dundonald Sill. Several EM conductors, parallel to the stratigraphy, were also identified by the survey.

Outokumpu optioned the Alexo property in 1996. Exploration work completed on the project during the period from 1996 to 1999 included: line cutting (79.02 km); ground magnetometer, horizontal loop EM, pulse EM, and mise a la masse geophysical surveys; downhole pulse EM surveys; geological mapping; whole rock analysis; enzyme leach and mobile metal ion soil geochemical surveys; and 10,859 m of diamond drilling in 49 holes.

Hucamp Mines Ltd (Hucamp) completed 2,802 m in 29 diamond drillholes on the project in 2001 and assayed 348 core samples for nickel, copper, cobalt, platinum, palladium and gold. Holes were drilled on the old Alexo Mine horizon (21 drillholes), on the Kelex deposit (seven drillholes) and one hole was drilled to test an EM anomaly. Hucamp also stripped approximately 5,000 m² of overburden along the eastern and western extensions of the Alexo Mine horizon and succeeded in exposing massive sulphide material. The stripped area was mapped and channel sampled at regular intervals. Hucamp also completed 1,321 m of downhole pulse EM surveys on 10 holes drilled at the Alexo Mine and Kelex deposit.

Canadian Arrow completed 40 km of line cutting and a high-resolution magnetometer survey in 2004 on a 50 m line interval on the prospective komatiitic flows on the project.

Crone Geophysics & Exploration Ltd, of Mississauga, Ontario was contracted to complete a surface PEM-SQUID survey in 2004. Six transmitter loops were completed over the project at variable currents between 16 Amps and 20 Amps and time base intervals between 50 ms and 150 ms. Results from the PEM-SQUID survey indicated a conductor with similar characteristics to the known Kelex deposit extending along strike and approximately 200 m east of the nearest known lens of the Kelex massive sulphide. The anomalies were interpreted to represent an eastern extension of the known sulphide mineralization as defined in 2004.

Previous Canadian Arrow diamond drilling locations are depicted in Figure 5 to Figure 7, with significant nickel intersections tabulated in Table 5.

A total of 12,710.2 m of drilling in 132 diamond drillholes was completed in 2004–2005 on the Alexo property by Canadian Arrow, including drilling on both the Alexo (2,581.4 m of drilling in 27 holes; Figure 5) and Kelex (8,749.8 m of drilling in 93 holes; Figure 6) deposits.



Drilling was designed to define potentially minable mineralization at 15 m sections in the upper 100 m of the depth extent of the surface deposits. The drill program also tested:

- The down-plunge extension of the Alexo deposit around a known drill intersection from Hucamp drillhole HUX-4-01, which intersected a 1.3 m core length grading 1.7% Ni approximately 125 m to the east of the previously drilled massive nickel sulphide mineralization. Nickel-bearing massive sulphides were successfully intercepted around the HUX-04-01 intersection.
- The eastern extent of the Alexo deposit below the 40 m level. Drilling intersected massive and net-texture sulphide mineralization extending an additional 45 m to the east of the previously defined sulphide mineralization. LAX-13-04, located approximately 45 m to the west of drilling completed in 2001, intersected 4.5 m of 2.2% Ni including 1.3 m of 4.7% Ni. LAX-05-04, located approximately 30 m to the east, intersected 4.9 m of 2.3% Ni including 0.9 m of 6.5% Ni. Hole LAX-26-04 intersected 0.6 m of 3.8% Ni approximately 125 m east of the Alexo open pit at a vertical depth of 100 m. Similarly, drillhole LAX-24-04 intersected 0.2 m of 2.1% Ni approximately 40 m above LAX-26-04. Reported intersections are downhole core lengths, the true thicknesses (widths) of mineralization are unknown.

A total of 8,749.8 m of drilling in 93 diamond drillholes was completed on the Kelex deposit by Canadian Arrow in 2004, to define the extent of the nickel sulphide mineralization identified in the near-surface holes drilled by previous operators (Figure 6). The Canadian Arrow drill program was designed to test off-hole and surface EM anomalies associated with the Kelex deposit. Drilling was also completed on a nominal 15 m section spacing and 30 m down dip spacing in order to define mineralization for potential production.

Drilling at the Kelex deposit outlined a nickel sulphide lens to a depth of 125 m from surface. Holes LOX-01-04, LOX-03-04 and LOX-08-04 were drilled in order to expand the known nickel sulphide mineralization on the Kelex west lens around a 1997 Outokumpu diamond drillhole, ALX-24-97 that intersected 2.0 m of 6.4% Ni. The drilling intersected near surface high-grade massive sulphides with associated disseminated sulphides.

Holes LOX-12-04, LOX-13-04, LOX-14-04 and LOX-15-04 were targeted on an untested previously identified EM anomaly. All four holes intersected massive sulphide mineralization at the basal contact of the host komatilitic peridotite and the footwall andesites.

Holes drilled on the central west lens of the Kelex deposit (Figure 6) include: LOX-22-04 intersected 12.7 m of 1.1% Ni which includes a high-grade intersection of 3.0 m of 3.1% Ni; LOX-18-04 intersected 4.1 m of 3.7% Ni; and LOX-17-04 intersected 2.1 m of 3.4% Ni.

Five holes (LOX-32-04, LOX-35-04, LOX-64-04, LOX-66-04 and LOX-69-04) were systematically drilled on the central lens at the Kelex deposit around Outokumpu drillhole ALX-09-97 that intersected two zones of massive sulphide that graded 3.1% Ni over 2.6 m and 3.1% Ni over 1.9 m.

High-grade nickel sulphide mineralization was intersected at the newly discovered west lens of the Kelex deposit. Drilling in late 2004 focused on the upper 100 m of the deposit to define the extent of the near surface nickel sulphide mineralization.

A total of 1,379 m of drilling in 12 drillholes was completed on the Kelex deposit by Canadian Arrow in 2005 (Figure 6). The program was principally designed to follow up on the results of the PEM-SQUID geophysical survey completed in January 2005 and confirmed the existence of nickel sulphide mineralization at the Kelex 1700 East zone.

In 2010 to 2011, Canadian Arrow completed a 17-drillhole program totalling 2,802 m of drilling on the Kelex deposit (Figure 7). The purpose of the drill program was to identify and extend mineralisation outwards from the existing drill defined areas. Several deeper holes were advanced to test for mineralization at depth, below


the then drill limit of 100 m vertical depth. Mineralization was found up to approximately 250 m vertical depth in boreholes 2011-11 through 2011-15.



Figure 5: Location of the 2004–2005 Canadian Arrow drillholes on the Alexo deposit Source: Puritch et al., 2012





Figure 6: Location of the 2004–2005 Canadian Arrow drillholes on the Kelex deposit Source: Puritch et al., 2012





Figure 7: Location of the 2010–2011 Canadian Arrow drillholes on the Kelex deposit Source: Puritch et al., 2012



Hole ID	Year drilled	From (m)	To (m)	Downhole width (m)	Ni (%)	Zone
LAX-01-04	2004	40.4	42.8	2.4	1.70	Alexo Main
LAX-05-04	2004	64.6	69.5	4.9	2.30	
Including		64.6	65.5	0.9	6.50	Alexo Main
LAX-08-04	2004	75.9	77.5	1.6	1.00	Alexo Main
LAX-09-04	2004	82.9	84.7	1.8	1.70	Alexo Main
LAX-13-04	2004	62.2	66.7	4.5	2.20	Alove Main
Including	2004	62.8	64.1	1.3	4.70	Alexo Iviain
LAX-24-04	2004	72.6	72.8	0.2	2.13	Alexo East
LAX-26-04	2004	130.5	131.0	0.5	3.79	Alexo East
LOX-01-04	2004	34.0	35.9	1.9	4.10	Kelex West
LOX-03-04	2004	31.2	32.2	1.0	2.74	Kelex West
LOX-08-04	2004	38.7	40.6	1.9	2.79	Kolov West
Including		39.9	40.6	0.7	7.80	Relex West
LOX-47-04	2004	58.9	80.0	21.1	1.30	Kolov West
Including		58.9	61.9	3.0	5.67	Relex West
LOX-48-04	2004	72.3	83.2	10.9	0.50	Kelex West
LOX-49-04	2004	74.2	92.4	18.2	1.40	Kelov Mest
Including		74.2	78.9	4.7	3.60	Kelex West
LOX-52-04	2004	82.9	87.9	5.0	1.00	Kelov Mest
Including		82.9	83.5	0.6	5.30	Kelex West
LOX-53-04	2004	125.7	144.0	18.3	0.80	Kelov Mest
Including		127.0	135.5	8.5	1.10	Kelex West
LOX-56-04	2004	133.3	158.0	24.7	0.90	
Including		135.3	138.5	3.2	1.20	Kelex West
And		149.6	157.1	7.5	1.10	
LOX-56-04	2004	164.4	165.5	1.1	1.10	Kelex West
2010-01	2010	78.0	91.0	13.0	0.55	Kolov West
Including		79.3	81.0	1.7	1.34	Relex West
2010-02	2010	95.0	119.5	24.5	2.79	Keley West
Including		97.3	102.0	4.7	1.22	Kelex West
2010-03	2010	134.3	151.0	32.3	0.45	Keley West
Including		137.0	141.0	4.0	0.63	Kelex West
2010-10	2010	218.0	221.0	3.0	0.48	Kelex West
2010-11	2010	249.0	252.7	3.7	1.37	
Including		249.0	249.3	0.3	2.51	Kelex West
And		252.1	252.7	0.6	5.89	
2010-12	2010	247.2	256.0	1.3	0.48	Kelex West
2011-13	2011	225.0	228.0	3.0	0.61	Kelex West
2011-15	2011	155.3	182.2	26.9	1.91	Kelex West
LOX-12-04	2004	28.6	29.8	1.2	2.56	Kelex Central West
LOX-13-04	2004	32.2	33.0	0.8	3.59	Kelex Central West
LOX-14-04	2004	31.9	41.5	9.6	2.38	
Including		38.0	41.5	3.5	5.35	Kelex Central West
Including		39.5	40.5	1.0	7.97	
LOX-15-04	2004	44.4	45.5	1.1	2.47	Kelex Central West
LOX-16-04	2004	47.2	48.9	1.7	1.90	Kelex Central West

Table 5:	Significant nickel intersections from previous Canadian Arrow drilling – Alexo-Dundonald Project
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Hole ID	Year drilled	From (m)	To (m)	Downhole width (m)	Ni (%)	Zone
LOX-17-04	2004	41.2	46.2	5.0	2.00	
Including		44.1	46.2	2.1	3.40	Kelex Central West
LOX-18-04	2004	33.6	37.7	4.1	3.70	
Including		34.6	37.7	3.1	4.50	Kelex Central West
LOX-19-04	2004	31.1	32.8	1.7	3.30	Kelex Central West
LOX-22-04	2004	56.4	69.1	12.7	1.10	
Including		66.1	69.1	3.0	3.10	Kelex Central West
LOX-23-04	2004	62.0	65.0	3.0	0.66	
And		69.8	72.1	2.3	1.70	Kelex Central West
LOX-24-04	2004	77.4	81.4	4.0	1.00	Kelex Central West
LOX-25-04	2004	32.4	33.8	1.4	4.30	Kelex Central West
LOX-26-04	2004	63.1	65.0	1.9	1.60	Kelex Central West
LOX-27-04	2004	65.0	66.3	1.3	1.80	Kelex Central West
LOX-30-04	2004	50.6	51.0	0.4	3.20	Kelex Central West
LOX-31-04	2004	103.5	109.7	6.2	1.10	Kalaw Cantual Maat
Including		108.5	109.7	1.2	3.00	Kelex Central West
2010-04	2010	68.3	70.1	1.8	0.62	Kelex Central West
2010-05	2010	85.9	86.3	0.4	2.21	Kelex Central West
2010-07	2010	80.3	81.5	1.2	0.61	Kalau Cantual Maat
Including		81.3	81.5	0.2	2.50	Kelex Central West
2010-08	2010	101.9	103.2	1.3	1.81	Kelex Central West
LOX-32-04	2004	65.6	66.7	1.1	2.30	Kelex Central
LOX-34-04	2004	81.2	84.4	3.2	1.18	Kelex Central
LOX-35-04	2004	101.8	102.8	1.0	6.70	Kelex Central
LOX-64-04	2004	101.5	105.7	4.2	2.00	Kalaw Cantual
Including		104.3	105.7	1.4	4.90	Kelex Central
LOX-66-04	2004	76.8	77.7	0.9	2.60	Kelex Central
LOX-69-04	2004	55.2	57.8	2.6	3.90	Kelex Central
LOX-74-04	2004	89.0	89.4	0.4	1.40	Kelex Central
LOX-103-05	2005	114.9	117.8	2.9	1.63	Kolov Control
Including		117.2	117.8	0.6	5.20	Kelex Central
2011-16	2011	56.4	61.3	4.9	2.13	Kolov Control
Including		59.0	61.3	2.3	3.75	Kelex Central
LOX-38-04	2004	88.2	90.3	2.1	1.40	Kelex Central East
LOX-41-04	2004	61.6	62.3	0.7	1.70	Kelex East
LOX-46-04	2004	88.2	90.5	2.3	0.70	Kelex East
LOX-54-04	2004	146.0	147.5	1.5	1.30	Kelex East
LOX-77-04	2004	82.4	84.5	2.2	4.90	Kelex East
LOX-85-04	2004	72.1	75.1	3.0	0.56	Kelex East
LOX-95-05	2005	63.0	70.8	7.8	0.63	Kolox East 1700
Including		70.3	70.8	0.5	2.46	NEIEX EdSL 1/UU
LOX-96-05	2005	60.4	64.2	3.8	0.98	Kolox East 1700
Including		62.0	63.2	1.2	2.74	NEIEX EDSU 1700
LOX-99-05	2005	86.0	90.8	4.8	0.60	Kelex East 1700

Note: Downhole core length does not equate to true thickness (width) which is unknown but will be less than or equal to downhole core length.



6.1.2 Dundonald-Dundeal

Falconbridge Limited (Falconbridge), (now Glencore Nickel), explored for nickel and base metals on and in the vicinity of the Dundonald project intermittently following the discovery of nickel mineralization in what is now termed the Dundonald South area in 1960. The Dundeal nickel zone, in the northern portion of the property, was discovered by testing an HLEM anomaly in 1989. The small but very high grade Dundonald Beach lens was also discovered at this time in the Dundonald South area. The Terminus base metals zone was discovered in 1990 during drilling at the Dundeal nickel zone. In 1991, Falconbridge prospecting discovered a platinum group element (PGE) occurrence in the Dundonald Sill, which was named "Casey's Showing".

The Falconbridge exploration work consisted of geological mapping, magnetic and HLEM surveys, as well as AEM, AMAG, and AVLF-EM surveys over the entire property. During the 40-year period from 1960 to 2000, Falconbridge drilled 168 holes totalling 40,515 m. Selective borehole and surface TDEM and Mise-a-la Masse surveys were conducted by Quantec Geoscience mainly focused on the Dundeal and Terminus zones. A more complete history of the Falconbridge work is summarized by Montgomery (2004).

In 2000, Falconbridge optioned the property to Hucamp. Four areas were stripped of overburden by Hucamp during 2000. These areas included the eastern extension of the Dundonald Beach high-grade nickel lens; the "Casey's PGE Showing" area; the Dundeal nickel zone, and the Hucamp discovered "Mighty" PGE Showing area. All areas were mapped and channel sampled. Three trenches were blasted into the Dundonald Beach showing exposing fresh, high grade nickel-copper-PGE sulphide mineralization. A selected Hucamp grab sample of the mineralization from the blasted trench returned 34.82% Ni, 0.30% Co, 3.7 g/t Pt, 5.8 g/t Pd, 0.90 g/t Au, 0.44 g/t Os, 0.47 g/t Ir, 0.84 g/t Rh and 2.4 g/t Ru.

Hucamp completed a total of 13 diamond drillholes representing 2,043 m of drilling on the Dundonald project in 2001. Two of these holes were drilled to test the potential extension of the Kelex nickel-copper zone onto the Dundonald property from the adjoining Alexo property; four were drilled to test a potential western extension of the Dundonald South zone; four were drilled on the Dundonald South zone itself and three were drilled on the Dundonald Sill. All four holes at Dundonald South contained nickel values of potential interest; the best result being 3.26% Ni over a downhole core length of 7.65 m from HUF01-10. In 2001, the Dundonald property reverted to Falconbridge ownership.

First Nickel Inc. (FNI) entered into an agreement with Falconbridge in 2004 for the Dundonald project. FNI conducted surface exploration work on the property during 2004 to 2005. The exploration work consisted of a major diamond drilling program (178 holes totalling 30,452.5 m), borehole geophysics, geological mapping, ground geophysical surveys, minor surface mechanical stripping and environmental work.

Significant nickel intersections from the 2004–2005 FNI diamond drilling are tabulated in Table 6.



Hole ID	Year drilled	From (m)	To (m)	Downhole width (m)	Ni (%)	Zone
D04-4	2004	72.6	74.0	1.4	4.66	
Including		73.5	74.0	0.5	10.95	A
D04-7	2004	172.5	176.8	4.3	4.42	
Including		172.6	174.6	2.0	6.83	A
D04-17	2004	201.8	203.5	1.7	11.84	
Including		203.0	203.5	0.5	17.14	A
D04-29	2004	215.0	230.2	15.2	5.26	
Including		219.0	220.7	1.7	14.46	А
And		224.7	226.8	2.1	11.04	
D04-30	2004	221.5	224.0	2.6	5.20	
Including		222.3	224.0	1.8	6.66	A
D04-31	2004	285.3	287.0	1.7	3.87	А
D04-33	2004	249.7	250.9	1.3	3.30	А
D04-38	2004	274.1	275.5	1.4	3.62	А
D05-39	2005	249.1	250.4	1.3	6.17	А
D05-47	2005	62.0	64.0	2.0	2.48	А
D05-49	2005	111.8	114.5	2.7	2.42	А
D04-14	2004	136.5	138.0	1.5	3.77	_
Including		136.5	136.8	0.3	14.78	В
D04-16	2004	98.7	101.3	2.6	2.24	D
D04-18	2004	49.0	51.0	2.0	2.49	-
Including		49.0	49.7	0.7	5.68	E
S04-9	2004	222.5	224.5	2.0	2.84	E
S05-30	2005	221.5	224.0	2.5	2.40	E
S05-70	2005	269.7	271.0	1.3	1.30	E
S05-76	2005	234.8	236.2	1.4	2.64	E
S05-77	2005	233.4	234.8	1.4	3.65	E
S04-8	2004	146.5	149.5	3.0	2.25	F
S04-17	2004	155.8	157.9	2.1	5.22	F
S04-21	2004	170.5	172.6	2.1	3.67	F
Including		171.4	172.6	1.2	5.77	Г
S05-30	2005	195.5	197.1	1.6	8.46	F
S05-31	2005	193.5	194.7	1.2	4.10	F
S05-41	2005	114.0	115.7	1.7	4.17	F
S05-48	2005	136.0	137.5	1.5	6.03	F
S05-72	2005	188.0	192.0	4.0	2.37	F
S04-10	2004	92.1	94.0	2.0	3.11	G
S05-28	2005	118.0	120.0	2.0	2.69	G
S05-30	2005	123.5	126.5	3.0	11.19	C
Including		125.2	126.5	1.3	23.74	
S05-37	2005	82.0	83.2	1.2	5.30	G
S05-40	2005	85.9	90.8	4.9	5.99	G
Including		85.9	87.2	1.3	11.79	3
S05-45	2005	74.8	75.8	1.0	13.10	G
S05-60	2005	78.0	79.7	1.7	4.67	G
S05-68	2005	56.0	56.8	0.8	9.91	G

 Table 6:
 Significant nickel intersections from 2004–2005 FNI drilling – Alexo-Dundonald Project



Hole ID	Year drilled	From (m)	To (m)	Downhole width (m)	Ni (%)	Zone
S05-73	2005	162.9	164.0	1.1	18.71	G
S05-75	2005	149.0	152.6	3.6	5.91	C
Including		151.5	152.3	0.8	20.90	6
S05-78	2005	149.5	152.0	2.5	2.52	G
S05-79	2005	156.0	161.7	5.7	7.63	C
Including		160.9	161.7	0.8	25.60	9
S05-86	2005	101.7	103.6	2.0	3.81	G
S05-89	2005	127.0	130.1	3.2	2.10	G
S05-91	2005	129.0	132.1	3.1	5.29	C
Including		129.9	132.1	2.3	6.66	6
S05-98	2005	167.6	169.4	1.8	4.37	G
S05-104	2005	173.2	175.1	1.9	2.98	G

Note. Downhole core length does not equate to true thickness (width) which is unknown but will be less than or equal to downhole core length.

A total of 3,397 m of diamond drilling (13 holes) was completed in the Dundeal/Terminus area in 2004–2005 by FNI. Four holes (FNT05-04 to FNT-05-07) were drilled above the steep westward, up-plunge projection of the Dundeal zone in an old Falconbridge hole DUN25-05 (2.58% Ni over 2 m). Further to the west, four holes FNT05-08 to FNT-05-11 were drilled above DUN25-16 (4.43% Ni over 0.35 m). Borehole pulse EM surveying was conducted on all eight drillholes (1,200 m). The Dundeal zone horizon returned weak responses in the holes. Moderate off-hole or in-hole conductors were detected in the footwall andesite volcanics. These were the result of concentrations of pyrrhotite stringers/patches. Weak pyrrhotite-pentlandite mineralization was encountered in each hole at the target basal komatiite horizon. The most significant nickel intercept returned from the near surface Dundeal zone in these holes was 1.86% Ni over 2.2 m in hole FNT05-08. The other holes returned low nickel values. Reported intersections are downhole core lengths, the true thicknesses (widths) of mineralization are unknown.

Two holes (FNT05-12 and FNT05-13) were drilled to test a deeper portion of the Dundeal zone. FNT05-12 was drilled 150 m west and 70 m above hole DUN25-04 (2.41% Ni over 4.25 m). It returned 1.11% Ni over 9.5 m (~5.8 m true width) which included 1.80% Ni over 3 m (~1.9 m true width) from the Dundeal zone at a vertical depth of 300 m. This nickel intercept led to a second hole (FNT05-13) being drilled 45 m west of hole FNT05-12. Hole FNT05-13 intersected the Dundeal zone returning 1.34% Ni over 12.0 m (~7.6 m true width) including 1.61% over 8.0 m (~5.0 m true width). The FNT05-13 intersection is 210 m west and 70 m above Falconbridge hole DUN25-04 (2.41% Ni over 4.25 m). The two FNI intersections indicate that the Dundeal nickel system is open to the west. Unless otherwise noted, reported intersections are downhole core lengths, the true thicknesses (widths) of mineralization are unknown.

6.1.3 Terminus Zinc-Copper Zone

The Terminus base metals zone was discovered by Falconbridge in 1990 while attempting to drill some deeper holes on the Dundeal nickel zone. One hole (FNT04-1) of the FNI 2004–2005 diamond drilling program intersected the Terminus zone target horizon at a vertical depth of 600 m. This was approximately 175 m below previous Falconbridge hole DUN25-20 which returned a 10.1 m core length of 1.37% Cu, 7.53% Zn, 0.13% Co, 1.1 g/t Au, and 2.9 g/t Ag. The zone consisted of a pyrite-pyrrhotite stringer network and local massive veins over a core length of 18.2 m hosted by silicified komatiitic basalt. No significant gold, zinc, copper or nickel values were returned from the horizon intersected. True thicknesses (widths) of mineralization are unknown.



6.2 Historical Mineral Resource Estimates

The estimates noted in this section are "historical" in nature and a Qualified Person has not done the work necessary to verify the historical estimates as current estimates under NI 43-101. As such they should not be relied upon. The authors, CSA Global and C1N are not treating the historical estimates as current Mineral Resources or Mineral Reserves and they are instead presented for informational purposes only. The historical resource estimates for Alexo-Kelex are superseded by the 2019 MRE presented in Section 14 of this report.

Puritch *et al* (2010) prepared an MRE for the Alexo and Kelex deposits (Table 7). The definitions of Indicated and Inferred Resources were in accordance with the Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Definitions and Standards on Mineral Resources and Mineral Reserves, 11 December 2005.

Indicated and Inferred classifications of all interpolated grade blocks were determined from the nickel interpolations due to nickel being the dominant revenue producing element in the NSR calculation. The mineral resource estimate tabulated below for the Alexo and Kelex deposits was compiled using a \$35/t NSR cut-off value for the open pit portion of the Alexo and Kelex deposits and a \$85/t NSR cut-off value for the underground portion of the Alexo and Kelex deposits.

Resource category	Tonnes	Ni (%)	Cu (%)	Co (%)	Au (g/t)	Pt (g/t)	Pd (g/t)	Contained Ni (lb)	Contained Cu (lb)	Contained Co (lb)
Indicated										
Alexo open pit*	18,000	1.36	0.16	0.06	0.04	0.16	0.41	540,000	63,000	24,000
Kelex open pit*	131,000	1.1	0.04	0.04	0.01	0.03	0.06	0.06 3,177,000		115,000
Total open pit* - Indicated	149,000	1.13	0.05	0.04	0.01	0.05	0.1	3,717,000	179,000	139,000
Alexo underground	4,000	0.84	0.11	0.04	0.03	0.01	0.25	74,000	10,000	4,000
Kelex underground	90,000	1.00	0.04	0.04	0.01	0.03	3 0.07 1,984,000		79,000	79,000
Total underground – Indicated	94,000	0.99	0.04	0.04	0.01	0.03	0.08	2,058,000	89,000	83,000
TOTAL INDICATED	243,000	1.08	0.05	0.04	0.01	0.04	0.08	5,775,000	268,000	222,000
Inferred										
Kelex underground	54,000	0.84	0.04	0.03	0.01	0.02	0.03	1,000,000	48,000	36,000

 Table 7:
 Puritch et al (2010) historical MRE – Alexo and Kelex deposits

Notes:

• * designates resources defined within an optimized pit shell.

• Mineral resources which are not mineral reserves do not have demonstrated economic viability. The estimate of mineral resources may be materially affected by environmental, permitting, legal, title, socio-political, marketing, or other relevant issues.

• The quantity and grade of reported Inferred Resources in this estimation are uncertain in nature and there has been insufficient exploration to define these Inferred Resources as an Indicated or Measured Mineral Resource and it is uncertain if further exploration will result in upgrading them to an Indicated or Measured Mineral Resource category.

• The mineral resources were estimated using the CIM) Standards on Mineral Resources and Reserves, Definitions and Guidelines prepared by the CIM Standing Committee on Reserve Definitions and adopted by CIM Council, 11 December 2005.

Puritch *et al* (2012) updated the MRE (Table 8) of Puritch *et al.* (2010). The definitions of Indicated and Inferred Resources were in accordance with the CIM Definitions and Standards on Mineral Resources and Mineral Reserves, 11 December 2005.

Indicated and Inferred classifications of all interpolated grade blocks were determined from the nickel interpolations due to nickel being the dominant revenue producing element in the NSR calculation. The mineral resource estimate presented below for the Alexo and Kelex deposits was compiled using a \$35/t NSR



cut-off value for the open pit portion of the Alexo and Kelex deposits and a \$70/t NSR cut-off value for the underground portion of the Alexo and Kelex deposits.

Resource category	Tonnes	Ni (%)	Cu (%)	Co (%)	Au (g/t)	Pt (g/t)	Pd (g/t)	Contained Ni (Mlb)	Contained Cu (Mlb)	Contained Co (Mlb)
Indicated										
Alexo open pit*	18,000	1.36	0.16	0.06	0.04	0.16	0.41	0.54	0.06	0.02
Kelex open pit*	198,000	0.91	0.04	0.04	0.01	0.03	0.05	3.97	0.17	0.17
Total open pit* - Indicated	216,000	0.95	0.05	0.04	0.01	0.04	0.08	4.51	0.23	0.19
Alexo underground	6,000	0.75 0.10		0.04	0.03 0.10		0.22	0.10	0.01	0.01
Kelex underground	251,000	0.96	0.04	0.03	0.01	01 0.03 0.06 5.31		0.22	0.17	
Total underground – Indicated	257,000	0.96	0.04	0.03	0.01	0.03	0.06	5.41	0.23	0.18
TOTAL INDICATED	473,000	0.96	0.04	0.03	0.01	0.03	0.07	9.92	0.46	0.37
Resource category	Tonnes	Ni (%)	Cu (%)	Co (%)	Au (g/t)	Pt (g/t)	Pd (g/t)	Contained Ni (lb)	Contained Cu (lb)	Contained Co (lb)
Inferred										
Kelex underground	66,000	0.82	0.04	0.02	0.01	0.01	0.02	1.19	0.06	0.03

Table 8: Puritch et al (2012) historical MRE – Alexo and Kelex deposits

Notes:

• * designates resources defined within an optimized pit shell.

• Mineral resources which are not mineral reserves do not have demonstrated economic viability. The estimate of mineral resources may be materially affected by environmental, permitting, legal, title, socio-political, marketing, or other relevant issues.

• The quantity and grade of reported inferred resources in this estimation are uncertain in nature and there has been insufficient exploration to define these inferred resources as an indicated or measured mineral resource and it is uncertain if further exploration will result in upgrading them to an indicated or measured mineral resource category.

• The mineral resources in this report were estimated using the CIM Standards on Mineral Resources and Reserves, Definitions and Guidelines prepared by the CIM Standing Committee on Reserve Definitions and adopted by CIM Council, 11 December 2005.

Harron (2009) reported an MRE for the Dundonald South deposit. The methodology employed followed the CIM Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines adopted by CIM on 23 November 2003.

The resources estimated in the Dundonald South area were classified as Inferred Mineral Resources as defined by the CIM Standards on Mineral Resources and Reserves 2003. Overall, the mineralized zones that met the grade (>1.5% Ni) and thickness (>2.0 m) cut-off parameters were small and isolated. This observation suggested that both geological and grade continuity were not strong features of the resource estimate and only warranted an Inferred Resource categorization at that time.

The estimated Inferred Mineral Resource for the Dundonald South nickel zones was 116,000 tonnes grading 3.16% Ni, with the A, F and G zones contributing 67% of the resource tonnage (Table 9).



Table 9:	Harron (2009) historical Inferred MRE – Dundonald South deposit
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Zone	Tonnes	Average Ni grade (%)
А	18,300	4.47
В	14,200	2.77
С	2,000	1.72
D	3,400	2.45
E/E2	17,800	2.07
F	24,000	2.62
G	35,100	3.73
Н	1,300	1.88
Total	116,000	3.16



7 Geological Setting and Mineralisation

7.1 Regional Geology

Jackson and Fyon (1992), Pilote (2000), Montgomery (2004), Ayer *et al* (2005), Thurston *et al* (2008), Harron (2009), Puritch *et al* (2010, 2012), Zhou and Lafrance (2017) and Zhou *et al* (2018) give the most detailed account of the regional geology. The following is a synopsis of their work. In the following, Ga and Ma refer to billion years and million years before present, respectively.

The Project area is lies within the Abitibi Sub-Province of the Southern Superior Province. The 2.75–2.67 Ga "granite-greenstone" dominated Abitibi Sub-Province extends some 700 km along the south-eastern edge of the Archaean Superior craton. The volcanic stratigraphy of the Abitibi Sub-Province is divided into seven episodes or assemblages, based on similarity of age intervals, stratigraphy and geochemistry (Figure 8):

- Pre-2750 Ma unnamed assemblage
- 2750–2735 Ma Pacaud assemblage
- 2734–2724 Ma Deloro assemblage
- 2723–2720 Ma Stoughton–Roquemaure assemblage
- 2719–2711 Ma Kidd–Munro assemblage
- 2710–2704 Ma Tisdale assemblage
- 2704–2695 Ma Blake River assemblage.

While the assemblages are age and geochemically correlated across the Abitibi Sub-Province, the local lithological packages that comprise the correlated volcanic episodes in individual areas are often laterally discontinuous. The volcanic assemblages mostly do not contain marker horizons that persist from one region to the next, but rather result from local deposition around separate volcanic centres across the belt in similar tectonic settings, resulting from interaction of contemporaneous pulses of both convergent margin arc and mantle plume derived magmas.

Many of the volcanic episodes are intercalated with and capped by a relatively thin "sedimentary interface zone" dominated by chemical sedimentary rocks of up to 200 m of iron formation, chert breccia, heterolithic debris flows of volcanic provenance, sandstone and/or argillite and conglomerate, representing discontinuous deposition with localized gaps of 2–27 million years between volcanic episodes. The sedimentary interface zones are interpreted as condensed sections, zones with very low rates of sedimentation in a basinal setting, or zones with negligible rates of sedimentation marked by silicification of existing rock types in submarine correlative conformities, disconformities, or unconformities separating the equivalent of group level volcanosedimentary stratigraphic and lithotectonic units.

Granitoid intrusive rocks that penetrate the Abitibi Sub-Province sequences include:

- 2.74–2.69 Ga tonalite-trondhjemite-granodiorite batholiths
- Smaller 2.70– 2.68 Ga granodiorite intrusions
- 2.69–2.67 Ga syenitic stocks.

In general, penetrative tectonic fabric and structures parallel, and are best developed adjacent to, regional faults and large granite batholiths. Early structures include "pre-cleavage" folds, thrust faults, and structures related to granite batholith emplacement. Regional shear zones and folds that developed during and following batholith emplacement strike west, northwest to west-northwest, and northeast to east-northeast.



Thrust faults and/or steep reverse faults are also associated with these later structures. The above structures are interpreted to have formed during protracted NeoArchaean, north-south sub-horizontal compression.

The Alexo-Dundonald Project area is underlain by depositional units of the Kidd-Munro assemblage. Units in this age range include the type Kidd-Munro assemblage of the southern Abitibi greenstone belt in Ontario; and directly correlated units of the La Motte-Vassan and Dubuisson Formations of the Malartic Group in Québec.

The Kidd-Munro assemblage is subdivided into lower and upper parts. The lower part of the Kidd-Munro assemblage (2719–2717 Ma) includes localised, regionally discontinuous depositional centres of predominantly intermediate to felsic calc-alkaline volcanic rocks. The upper part of the Kidd-Munro assemblage (2717–2711 Ma) extends across the Abitibi greenstone belt. It consists of tholeiitic and komatiitic volcanic rocks with minor centimetre-to-metre scale graphitic metasedimentary rocks and localised felsic volcanic centres. It has been interpreted that the upper Kidd-Munro assemblage reflects the impact of widespread mantle plume-related magmatism on localized lower Kidd-Munro arc-magmatism volcanic centres.





Figure 8: Regional geology of the Abitibi Subprovince and Alexo-Dundonald (*) project area. Source: Thurston et al. (2008)



7.2 Prospect and Local Geology

The local geology is extensively reviewed by Green and Naldrett (1981), Houle *et al* (2002), Montgomery (2004), Harron (2009) and Puritch *et al* (2010, 2012). The following is a synopsis of their reports.

The Dundonald dome structure is located north of the Dester Porcupine Fault Zone. The Alexo and Dundonald deposits occur along the southern margin of this domal structure, which is predominantly composed of upper Kidd-Munro assemblage volcanic rocks including: komatiitic dunite; peridotite; pyroxenite; basalts which range from high-magnesium iron-rich tholeiitic picrites to high-aluminium basalts; and intermediate to felsic andesite and rhyolite. Sedimentary rocks are commonly thin interflow layers of graphitic argillite with varying amounts of chert and sulphide minerals. Intrusive rocks into the Kidd-Munro assemblage include:

- Differentiated syn-volcanic tholeiitic and komatiitic sills
- Late to post-tectonic intermediate to felsic plutons
- Proterozoic dolerite dykes.

Ultramafic rocks range in composition from komatiitic basalt to dunite. The komatiitic sequences contain multiple flows that range from several hundreds of metres to less than 2 m in thickness and have brecciated flow tops, spinifex-textured zones, pyroxene and olivine orthocumulate, mesocumulate and adcumulate rocks. Thin layers of graphitic argillite occur between thin komatiitic flows in some areas. Flows with a basaltic or pyroxenite composition tend to alter to chlorite-tremolite whereas flows rich in olivine are altered to serpentine and magnetite. Large accumulations of olivine mesocumulate to adcumulate occur within the komatiitic sequence locally where they are prospective channelized flows within footwall embayments.

The komatiite nickel sulphide deposits are at approximately the same stratigraphic level where komatiitic flows overlie a sequence of calc-alkaline volcanic rocks ranging in composition from rhyolite to basalt containing variable amounts of pyrite and pyrrhotite, komatiitic basalt and thin (<1 m) intercalated layers of black graphic argillite (Figure 9). The volcanic sequence is a mixture of flows with pillowed, hyaloclastic and massive textures with individual flows that can be traced for tens to hundreds of metres.

The Dundonald sill (not related to the Dundonald nickel deposit) is a differentiated tholeiitic intrusion which intrudes a sequence of komatiitic volcanic rocks and calc-alkaline felsic volcanic rocks. The sill comprises basal peridotite which grades upwards to dunite olivine mesocumulate to adcumulate to pyroxenitic cumulate with diopside and olivine phenocrysts into a thick sequence of fine to coarse grained gabbro. The gabbroic portion of the sill is the thickest part.

The Alexo deposit sits on the northeast arm of a large "Z"-shaped fold in the Kidd-Munro assemblage, while the Dundonald deposit sits on the southwest arm of the fold (Figure 9). The northeast trending fold has a wavelength of 2.5 km and amplitude of 6 km and is defined by the mapped distribution of the Dundonald sill.

The rocks have been metamorphosed to greenschist facies with minor isolated areas of prehnite-pumpellyite facies and local amphibolite facies at the contract of intrusions. Ultramafic rocks may have abundant secondary metamorphic talc/serpentine with or without magnetite, calcite, tremolite and chlorite.





Figure 9: Local geology of the Alexo-Dundonald Project area Source: Harron (2009)



8 Deposit Types

8.1 Target Mineralization Conceptual Model

The primary mineralization style of principal relevance to the Project, and the target focus of C1N's planned exploration activity, is komatiite volcanic-hosted nickel-copper-cobalt sulphides associated with ultramafic lava channels in the Kidd-Munro and equivalent assemblages.

Regional target mineralization styles relevant to exploration on the Project have been extensively summarized by Clark (1968), Graterol and Naldrett (1971), Green and Naldrett (1981), Imreh (1991), Pilote (2000), Houle *et al* (2002), Naldrett (2004, 2010), Montgomery (2004), Harron (2009), Barnes and Fiorentini (2012), Puritch *et al* (2010, 2012), Fornier and Burden (2013), Adair (2015, 2017a, 2017b), Shirriff *et al* (2018), Zhou and Lafrance (2017) and Zhou *et al* (2018). The following is a synopsis of their reports.

Within the Abitibi Sub-Province, komatiite-hosted mineralisation occurs in:

- The 2750–2735 Ma Pacaud assemblage
- The 2723–2720 Ma Stoughton-Roquemaure assemblage
- The 2719–2711 Ma Kidd-Munro assemblage (the Alexo, the Dundonald and Dundeal deposits in Ontario; the Dumont and Marbridge deposits in Quebec)
- The 2710–2704 Ma Tisdale assemblage (Hart, Langmuir, McWatters, Redstone, Texmont, Sothman, and Bannockburn deposits in Ontario).

The komatiite lavas represent high-temperature ultramafic magmas sourced from the Earth's mantle and erupted onto the Earth's surface. They are restricted in the geological record to the Archean and Paleoproterozoic. This is due primarily to the cooling of the Earth's mantle over time prohibiting the formation of such high-temperature melts of the mantle post the Paleoproterozoic period.

Nickel-copper-cobalt sulphides are interpreted to have formed in-situ within the lava flow by contamination of the ultramafic magma by incorporating external sulphur. As the komatiite lava moved across the Earth's surface, the high temperature lava melted and incorporated substrate lithologies into the lava. This melting of substrate was achieved in long-lived lava channels where prolonged high-heat input into the substrate from the channelized lava flow lead to thermomechanical erosion and incorporation of substrate fragments into the lava (Figure 10). If this substrate comprised sulphide-bearing material, the injection of external sulphur into the komatiite drove the magmatic system to sulphur saturation. The nickel, copper and cobalt within the magmatic system combined with the sulphur and precipitated as sulphide droplets within the magma (Figure 10).

Once formed, the dense sulphide phase settled within the lava channel to the channel floor, where it accumulated as nickel-copper-cobalt sulphide. At the same time, the ultramafic magma began to crystallize olivine, which as it is also denser than the surrounding magma began to settle to the floor of the lava channel. The process of settling sulphide and olivine crystals within the lava channel is directly analogous to stream sediment dynamics. The dense sulphide and olivine crystal phases accumulated in parts of the channel floor where the flow dynamic changed and reduced the lava streams capability to carry and transport the dense phases, such as changes in flow direction, areas where the flow ponded, depressions and embayments in the lava channel floor etc.

Komatiite lava-channels favourable for sulphide accumulation also accumulated olivine-crystals from the melt under the same gravitational settling model. High MgO content in soil or rock geochemistry is a good proxy for high-olivine content and is used as an exploration vector for channelized lava environments rich in olivine



that are favourable for nickel sulphide accumulation. These ultramafic lava channels have often experienced serpentinization of the olivine in the presence of metamorphic, hydrothermal or meteoric water, that breaks down the olivine crystal structure to the hydrous mineral serpentine. Iron present in the olivine mineral lattice is not readily incorporated into the serpentine mineral lattice and the excess iron that results from serpentinization is precipitated as magnetite. Thus, originally olivine-rich channelized environments favourable for nickel sulphide accumulation contain significant secondary magnetite after the serpentinization of the olivine. This secondary magnetite results in a high magnetic susceptibility of the rock and a prominent magnetic anomaly response to magnetic survey techniques.



Figure 10: Komatiite flow facies and prospective environments for nickel-copper-cobalt sulphide formation Source: Naldrett (2010)

Soil geochemistry is effective for detection of magmatic nickel-copper sulphide mineralization if it is outcropping to sub-cropping, and the soil profile does not contain a substantial proportion of transported material. If the host volcanic channel is buried below surface and is not intersected by the Earth's surface, then nickel-copper magmatic sulphide systems are often geochemically blind to surface. They are closed systems bound within the confines of the volcanic channel, with little to no alteration halo or geochemical exchange with the surrounding wall rock, except for minor possible structural leakage of metal-bearing fluids



along faults or penetrative deformation cleavage planes that intersect the pre-deformation sulphide. Targeted use of EM surveys remains the preferred tool for direct detection of nickel sulphide mineralization of sufficient quantity and quality for economic extraction, as typical magmatic sulphide assemblages become electrically connected and conductive at 18–20% sulphide content by volume.

8.2 Local Mineralized Zones

The Alexo-Dundonald Project contains the Alexo, Kelex, Dundonald South and Dundeal nickel deposits. The mineralization on the Project has been summarised by Green and Naldrett (1981), Houle *et al* (2002), Montgomery (2004), Harron (2009) and Puritch *et al* (2010, 2012). The following is a synopsis of their reports.

8.2.1 Alexo and Kelex

The Alexo and Kelex deposits are composed of massive to semi-massive nickel sulphide accumulations inhabiting basal embayments along the footwalls of two parallel, but separate, steeply dipping komatiitic peridotite volcanic channels identified as the "Alexo" and "Kelex" flows respectively. Massive to semi-massive sulphide lenses are strung along the footwall contacts of channels. They are overlain by stringer, net-textured, blebby and lower grade disseminated sulphide haloes extending upwards and away from the contact. The zones are composed of massive, veined and disseminated pyrrhotite and pentlandite with trace chalcopyrite.

At Alexo, massive and semi-massive sulphides also extend into the footwall andesite (Figure 11). Massive and semi-massive lenses of sulphide minerals range in thickness from a few centimetres to greater than 12 m with an aureole of net-textured and disseminated sulphides. The disseminated sulphides extend laterally and vertically from the massive zones for several tens of metres. The massive sulphide mineralization consists of approximately 15–20% pentlandite, 80–85% pyrrhotite, with trace chalcopyrite unevenly distributed throughout. The nickel content of the sulphides (nickel tenor) ranges between 7% and 10% nickel in 100% sulphide. Although there is a direct relationship between nickel tenor and nickel grade, the two should not be confused. Nickel tenor is the theoretical maximum nickel content of the rock if the rock volume comprised 100% sulphide with no other silicate or other material, whereas nickel grade refers to the whole-rock nickel content of the rock where the sulphide content is typically diluted by barren silicate material and minerals. Only at the end member stage of the spectrum of disseminated to massive sulphide development does nickel grade approach the theoretical nickel tenor content. The Alexo deposit is further enhanced in areas such as the eastern extension by significant copper, cobalt, platinum and palladium values.

The Kelex deposit is located at the footwall contact of the lowermost known komatiitic peridotite in the sequence. There are a series of massive sulphide lenses that have aureoles of disseminated and net-textured sulphides extending laterally along strike for greater than 600 m as indicated by HLEM and Pulse EM geophysical surveys and recent drilling. Interpretation of drill results indicates the massive sulphides sub-crop at the bedrock overburden interface. The sulphides are composed of 10–20% pentlandite, 80–90% pyrrhotite and trace chalcopyrite. Some of the sulphides have been replaced by magnetite. Based on the Pulse EM surveys, the massive sulphide appears to plunge to the northeast, but magnetic interpretations indicate that the channels may plunge more north or northwest.





Figure 11: Cross section through the Alexo deposit Source: Puritch et al. (2012)

The laterally extensive disseminated sulphides can be separated into two groups. The first group is the nettextured to heavily disseminated sulphides. The nickel tenor of the sulphides range between 4% and 15% Ni in 100% sulphide, and usually averages 6%.

The second type of sulphide mineralization is blebby, disseminated and vein sulphide west of and stratigraphically above the Kelex zone. These sulphides have a high nickel tenor that ranges between 25% and 35% Ni in 100% sulphides and are composed primarily of pentlandite and a grey nickel mineral, potentially millerite, with minor pyrrhotite. These sulphides appear to have been enriched in nickel during the serpentinization process.

The Kelex deposit comprises five mineralized zones of massive sulphides within a broader and more continuous halo of stringer and disseminated sulphides (Figure 12): Kelex west, Kelex central-west, Kelex central, Kelex east and Kelex 1700 east zones.

Kelex west mineralization extends over a strike length of 70 m, a down-dip length ranging between 260 m and 60 m and true widths ranging between 0.5 m and 12.5 m. The Kelex west zone displays a wide, pervasive, low-grade halo around a higher-grade massive sulphide core.

The Kelex central west zone is located about 100 m east of the Kelex west zone. Kelex central west mineralization extends over a strike length of 60 m, a down-dip component ranging between 120 m and 42 m and true widths ranging between 1.3 m and 10.0 m.

Kelex central mineralization extends over a strike length of 76 m, a down-dip length ranging between 43 m and 10 m and true widths ranging between 1.5 m and 8.5 m.



Kelex east mineralization extends over a continuous strike length of 43 m, a down-dip length ranging between 62 m and 25 m and true widths ranging between 1.5 m and 3.0 m.

Kelex 1700 east zone is located approximately 80 m beyond the eastward strike extension of the Kelex east zone. The poorly defined zone comprises narrow intersections of massive sulphide flanked by disseminated, blebby and stringer-style sulphide mineralization.



Figure 12: Longitudinal section through the Kelex deposit Source: Puritch et al (2012)

8.2.2 Dundonald and Dundeal

The Dundonald deposits are characterized by thin sinuous layers of massive sulphide, overlain by thicker layers of net-textured sulphides, and succeeded by disseminated sulphides with vein type mineralization of sulphide penetrating locally into the footwall rocks. They comprise eight east-west nickel-enriched horizons, A to H, in the Dundonald South komatiitic volcanic sequence (Figure 13). The zones consist of relatively narrow (10–20 m wide), thin (0.5–10 m thick) keels, or "shoots", of net-texture, semi-massive to minor massive sulphide in the basal layers of a series of a stacked channelized komatiite flows, surrounded by envelopes of overlying and flanking blebby and disseminated sulphide. The lateral extent of some of the lenses is on the order of 100–200 m down plunge, but several are apparently small, isolated sulphide pods within the channelized flow sequence (Figure 14). The G zone was traced for a strike length of 600 m and is open to the east. It contains four westerly plunging high-grade nickel shoots that are open to depth. The A zone consists of vertical high-grade nickel shoots open below 260 m. The F zone was traced for 200 m and contains two shallow westerly plunging high-grade nickel shoots.





Figure 13: Plan view of the Dundonald deposit Source: Harron (2009)





Figure 14: Cross section through Dundonald South on grid 511515E, looking east (% Ni/interval length in metres) Source: Harron (2009)

Sulphide assemblages vary between the different zones, but are generally pentlandite dominant over pyrrhotite, with significant copper and PGE grades in some of the shoots (e.g. A, F and G zones).

The A zone is a fracture system with brassy pentlandite/pyrrhotite mineralization consisting of thin fracture fillings, patches, and semi-massive to massive zones. The main portion of the A zone is a very steep west plunging to vertical high-grade nickel lens below a vertical depth of 150 m (Figure 15). This lens is 20–25 m



wide and is open to depth, below a vertical depth of 260 m. The A zone PGE values are typically 1.5 g/t to 2.8 g/t, except for hole FND04-16 that returned 11.84% Ni and 17.55 g/t PGEs over 1.7 m. A petrographic study of this section revealed the PGEs to be controlled by the nickel arsenic sulphide minerals gersdorffite and nickelline.



Figure 15: Longitudinal section through the Dundonald South A zone (% Ni/interval length in metres) Source: Harron (2009)



B zone mineralization consists of disseminations and blebs to weak net-textured pyrrhotite/pentlandite with local massive sulphide veins. The B zone is lower grade (1–3.8% Ni over 1–1.5 m) than the A zone and has low PGE values (<1 g/t.). The more significant B zone drill intersections occur as a shoot, in the keel area of the peridotite flow. The shoot (10 m wide) is open to the west along a shallow plunge of 15°.

The C zone is situated about 10–20 m stratigraphically above the B zone. Sulphide mineralization consists of fine-grained pyrrhotite/pentlandite disseminations and blebs. The zone is sporadic and discontinuous. A possible nickel mineralized shoot plunges 10° westerly and is open to the west.

The D zone occurs at the top of the E zone komatiite flow. The zone is sporadic and discontinuous. Sulphide mineralization consists of fine-grained pyrrhotite/pentlandite disseminations and blebs in peridotite flow rocks. The D zone nickel grades range from 1% to 3% Ni over narrow intersections 0.5 m to 2.6 m.

The E zone is situated within a trough at the base of the Central komatiitic peridotite flow sequence at about 200 m below surface. To the west it may be correlated with the C zone. The E zone is comprised of at least two stacked nickel mineralized horizons (E and E2) that dip very shallowly 15° to 20° to the south. The E and E2 horizons have been traced by limited drilling for 130 m. They are cut off to the east at 511755E and are open down plunge to the west. Sulphide mineralization consists of 3–10% very finely disseminated fine-grained brassy pentlandite and lesser brown pyrrhotite. The higher sulphide content sections of 5–10% and locally 20% contain blebs and fine stringers to microfractures of pentlandite/pyrrhotite.

The F zone occurs between 100 m and 200 m below surface. It has a shallow variable dip 40–70° to the south. It is continuous from 511600 to 511780E and disappears west of 511600E, but is possibly open to the east as it was encountered at 512070E (Figure 16). The zone is principally located stratigraphically 20–70 m below the G zone in two shoots both plunging west. F zone mineralization is comprised of blebs, fine stringers, semi-massive and massive brassy fine-grained pentlandite/pyrrhotite. The F zone PGE values lie in the range of 1–2 g/t and are generally lower than the G zone values.





Figure 16: Longitudinal section through the Dundonald South F zone (% Ni/interval length in metres) Source: Harron (2009)

The G zone is located in the upper portion of the main komatiitic peridotite flow sequence and sub-parallels the Dundonald Sill situated 30–50 m to the south. The G zone has four high-grade nickel shoots all plunging southwest and open down plunge (Figure 17). The eastern shoot (512000–512100E) plunges 25° to the west. It starts at a vertical depth of 65 m and is open below a vertical depth of 100 m. The central east shoot (511900E) begins below a vertical depth of 65 m and has a moderate plunge of 45°. It is open both up and down plunge. The central west shoot (511780–511800E) is 15 m wide and begins at a vertical depth of 100 m. It has a moderate southwest plunge of 45° and is open below a vertical depth of 160 m. The west shoot (511680–511780E) is the most continuous and the longest shoot of the four. It is 120 m long and plunges 45° to the southwest. The west shoot starts at a vertical depth of 75 m and has been traced to a vertical depth of 170 m, where the zone remains open. The typical G horizon mineralization sequence begins with 0.5% scattered brassy pentlandite/pyrrhotite blebs (two to five per metre) that grades into 3–5% larger blebs and



fine fractures. The blebby halo is typically 5–10 m thick locally up to 18 m and averages 0.25% to 0.3% Ni. The nickel content of the blebby/fracture section is from 1% to 5%. The blebby/fracture section grades into small massive patches to rarer net textured brassy pentlandite/pyrrhotite (5–15%) that has a nickel grade of 3–7%. This occasionally is followed by semi-massive (10–15% Ni) to massive (15–25% Ni) pentlandite/pyrrhotite at the base. There appears to be an underlying zone below the main G horizon from 511680 to 511800E with a couple of massive sulphide sections.

The H zone is the stratigraphic highest of the nickel sulphide zones. It is a discontinuous zone typically located 30 m north of the southern Dundonald Sill. It is comprised of fine-grained disseminations to blebs of pyrrhotite/pentlandite within the upper spinifex textured thin peridotite flows (m-scale) of the Central komatilitic peridotite flow rocks. Nickel values typically range from 1% to 2.76% and are lower than the F and G zones.

The Dundeal nickel zone is located 1.3 km north of the Dundonald South area (Figure 9). This nickel zone is located on the north side of a west-plunging antiform, 2.2 km southeast and along strike from the Alexo deposit. The mineralisation occurs at the base of the Empire Komatiite Flow and is apparently controlled by a channel or depression in the footwall volcanic rocks. The zone has been traced along strike for 800 m and to a depth of 700 m below surface (Figure 18). It is presently unclear what the exact orientation of this channel is, but it is indicated to plunge moderately to the northeast near surface and steepen with increasing depth, parallel to that at the Alexo deposit to the north. Average true width of the mineralised interval is 2.4 m with the best mineralised intersections in the centre of the channel (with grades up to 3.04% Ni).

Blebby and disseminated sulphides are the most common forms of nickel mineralization followed by occasional net-textured intervals and finally as rare massive veinlets in the footwall. Pyrrhotite and pentlandite occur in sub-equal amounts along with minor chalcopyrite and rarely sphalerite.





Figure 17: Longitudinal section through the Dundonald South G zone (% Ni/interval length in metres) Source: Harron (2009)





Figure 18: Longitudinal section through the Dundeal deposit (% Ni/interval length in metres) Source: Harron (2009)



8.2.3 Terminus Zinc-Copper Zone

The Terminus zinc-copper zone is located approximately 140 m stratigraphically above the Dundeal nickel zone. It is hosted by a sequence of predominantly komatiitic basalt with lesser argillite and pyroxenite. The host stratigraphy is up to 56 m thick and thins rapidly to the west. Although proximal volcanic facies have not been observed, a fair amount of paleorelief is present, suggesting a chaotic environment possibly proximal to a volcanic vent. Significant zinc-copper mineralization has been outlined over a strike length of 200 m with an indicated plunge to the southeast (Figure 19). The mineralization occurs as banded (bedded?) semi-massive to massive pyrrhotite with variable sphalerite and chalcopyrite hosted by the argillite, and as lower grade, disseminated to fracture controlled chalcopyrite and pyrrhotite that occurs primarily in the volcanic rocks. It is presumed that the Terminus zone represents a small, low grade example of a volcanogenic massive sulphide system locally developed in the volcanic sequence on or near the seafloor at the time of deposition of the sequence. This occurrence does not represent a priority target for future exploration activity on the Project.

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Figure 19: Longitudinal section through the Terminus zinc-copper zone Source: Harron (2009)



9 Exploration

Mineral exploration conducted by previous operators within the Project area is discussed in Section 6 (History). No exploration has been conducted on the Project since that reported by Harron (2009) and Puritch *et al* (2012). C1N has not conducted any exploration on the Project to the Effective Date.



10 Drilling

Drilling conducted by previous operators within the Project area is discussed in Section 6 (History). No drilling has been conducted on the Project since that reported by Harron (2009) and Puritch *et al* (2012). C1N has not conducted any drilling on the Project to the Effective Date.



11 Sample Preparation, Analyses and Security

No sampling has been conducted on the Project since that reported by Harron (2009) and Puritch *et al* (2012). C1N has not conducted any sampling on the Project to the Effective Date.

11.1 Previous Third-Party Work

The data reviewed for this report and used for geological modelling and resource estimation combined various phases of historical exploration by various companies. The core handling, logging and sampling procedures implemented for the Outokumpu (ALX series), Hucamp (HUX series), and Canadian Arrow (LAX and LOX series) sampling are summarized by Puritch *et al* (2010). The core handling, logging and sampling procedures implemented for the Canadian Arrow (2010 and 2011 series) sampling are summarized by Puritch *et al* (2012).

The Qualified Person and CSA Global have no reason to believe that the data as presented is not an accurate representation of facts at this stage of exploration on the Project. The following are direct extracts from those reports.

Puritch et al (2010):

SAMPLING METHOD AND APPROACH

The data reviewed for this Report and used for geological modelling and resource estimation were the product of various phases of historical and recent exploration by various companies. The core handling, logging and sampling procedures implemented for the Outokumpu, (ALX series) and Hucamp (HUX series) were reviewed through discussions with former Outokumpu and Hucamp personnel.

The ALX series core was transferred to the Outokumpu secure office facility located in Timmins, Ontario. The ALX series holes were logged and the sampling supervised by Paul Davis, M.Sc., P. Geo., who also supervised protocols for the HUX, LAX and LOX series programs thus maintaining continuity/consistency throughout all programs. Packaged samples were directly transported to laboratory shipping centres.

Criteria for core selected for sampling were based on observable sulphide content and host lithology. Nominal sample lengths ranged from 1.0 to 1.5 m in the broader, more homogeneous disseminated style mineralization to as small as 5 cm across massive stringer mineralization. Higher grade intervals were sampled at shorter lengths consistent with mineralization style and/or content. Care was taken not to have sample intervals cross lithologic or mineralization style boundaries. The estimated sulphide species and content correlating to each sample interval were recorded in the core logs. The protocol used a three tag/common number system. One tag went into the sample bag, one tag stayed in the core box and the sample book with the third tag was stored in the office. Core markers were placed at 3 m intervals.

With respect to the Hucamp HUX drill program, the core was logged and sawn in half at a secure facility outside of Porcupine, Ontario by MPH Consulting Limited ("MPH"). Most of the core was returned to the Alexo site, the rest was lost.

The LAX and LOX series holes were logged and sampled onsite. Logging was done by Brian Rigg under the supervision of Mr. Davis. The core was sawn in half with one half retained in the core box and stored onsite. The other half was placed in plastic sample bags with tags and sent directly to the assay laboratory shipping centre in Timmins.



All core is currently stored onsite with the exception of the lost HUX series holes. The site is secured by a locked gate at the entrance to the Property off highway 67.

SAMPLE PREPARATION, ANALYSES AND SECURITY

All aspects of the ALX, HUX, LAX and LOX series sample preparation were under the direction of Paul Davis, M.Sc., P. Geo. All programs prepared the core by sawing in half with one half placed in plastic sample bags and immediately shipped to a laboratory for assay.

The ALX series samples were shipped to the Chimitec-Bondar Clegg Laboratory (now ALS Chemex) in Val d'Or, Québec ("C-BC") for assay. Analyses consisted of acid digestion with an atomic absorption finish for nickel copper and cobalt (Paul Davis, pers. comm.). Precious metals were not assayed. No sample standards or blanks were used. ALS Chemex is a Standards Council of Canada accredited laboratory conforming to the requirements of CAN-P-1579 and CAN-P-4E (ISO/IEC 17025:2005).

With respect to the HUX series, half of the core was retained at the MPH facility and half was sent to C-BC for assay. Nickel, copper and cobalt were determined by atomic absorption after HCL: HNO3 digestion and Au, Pt and Pd by fire assay-ICP. Hucamp had a check assay protocol whereby a representative number of sample pulps were checked by Swastika Laboratories Limited ("Swastika") for the above elements. Samples checked within reasonable limits in all cases. No sample standards or blanks were used (K. Montgomery, pers. comm.). Swastika is a Standards Council of Canada accredited laboratory conforming to the requirements of ISO 17043 (CAN-P-43), CAN-P-1579.

The LAX and LOX series samples were sawn in half with one half retained in the core box and stored onsite and the other half placed in plastic sample bags with the respective tag and transferred to the SGS Canada Inc. ("SGS") in Rouyn Noranda, Quebec. Each entire sample was crushed to -10 mesh then a 200 g split was ring pulverized to 85 % passing 75 microns. Gold, platinum and palladium were assayed with a full 30 g assay ton lead collection fire assay-ICP-ES finish. Nickel, copper and cobalt were assayed by sodium peroxide fusion ICP-ES finish. Quality assurance/quality control ("QA/QC") consisted of inserting blanks and standards every 50 samples (Paul Davis, pers. comm.). Every 10th sample was re-assayed for the duplicate. The core was also photographed.

SGS is a Standards Council of Canada accredited laboratory conforming to the requirements of CAN-P-1579 and CAN-P-1579 (ISO/IEC 17025:2005).

Assay certificates of the ALX series and most of the HUX series assays have not been located due to a number of changes in ownership, office moves and changes in management over the years. All logs, assays and survey data were recorded in the Dhloggertm drill core data management system however, from which the data used in this resource estimate were derived.

P&E conducted a duplicate sampling audit during two site visits in 2010 to facilitate the QA/QC component that is discussed in Section 13 of this Report.

It is the author's opinion that the sample preparation, security and analytical procedures used in these programs are adequate.

Puritch et al (2012):

SAMPLE PREPARATION, ANALYSES AND SECURITY

The data reviewed for this Report and used for geological modelling and resource estimation combined various phases of historical exploration by various companies with the most recent drill results. The core



handling, logging and sampling procedures implemented for the Outokumpu, (ALX series) and Hucamp (HUX series) are summarized in the Puritch et al. (2010) report.

All aspects of the sample preparation were under the direction of Mr. Kim Tyler, P. Geo. The drill core was logged and sampled onsite. Logging was done by Kim Tyler. The core was sawn in half with one half retained in the core box and stored onsite. The other half was placed in plastic sample bags with tags and sent directly to the assay laboratory shipping centre in Timmins.

Criteria for core selected for sampling were based on observable sulphide content and host lithology. Nominal sample lengths ranged from 1.0 to 1.5 m in the broader, more homogeneous disseminated style mineralization to as small as 10 cm across massive stringer mineralization. Higher grade intervals were sampled at shorter lengths consistent with mineralization style and/or content. Care was taken not to have sample intervals cross lithologic or mineralization style boundaries. The estimated sulphide species and content correlating to each sample interval were recorded in the core logs. The protocol used a three tag/common number system. One tag went into the sample bag, one tag stayed in the core box and the sample book with the third tag was stored in the office. Core markers were placed at 3 m intervals.

The entire core from the 2010-2011 drill programs is stored onsite. The site is secured by a locked gate at the entrance to the Property off highway 67.

Analyses consisted of acid digestion with an atomic absorption finish for nickel copper and cobalt. Precious metals (platinum, palladium and gold) are fire assayed with an ICP-AES finish. ALS Chemex is a Standards Council of Canada accredited laboratory conforming to the requirements of CAN-P-1579 and CAN-P-4E (ISO/IEC 17025:2005).

Each entire sample was crushed to -10 mesh then a 200 g split was ring pulverized to 85 % passing 75 microns. Gold, platinum and palladium were assayed with a full 30 g assay ton lead collection fire assay-ICP-ES finish. Nickel, copper and cobalt were analyzed by acid digestion with an atomic absorption finish for nickel copper and cobalt.

Quality assurance/quality control ("QA/QC") consisted of inserting blanks and standards every 25 samples. Every 10th sample was re-assayed as a duplicate. The core was also photographed. Canadian Arrow used granite as their blanks. Standard LBE#3 was prepared by WCM Minerals of Burnaby B.C.

It is the author's opinion that the sample preparation, security and analytical procedures used by Canadian Arrow are adequate.

11.2 Summary Opinion of Qualified Person

Based on review of available documentation, the Qualified Person is of the opinion that the historical sample preparation, security and analytical procedures utilized are appropriate for the sample media and mineralization type and conform to industry standards. All archived core for both Alexo and Dundonald Project drilling are stored on site and available for inspection.



12 Data Verification

No new data has been collected on the Project since that reported by Harron (2009) and Puritch *et al* (2012). C1N has not collected any new data on the Project to the Effective Date.

12.1 Site Visit

The lead author and Qualified Person, Mr Tony Donaghy, has sufficient knowledge of this Project from previous site visits to both Alexo-Kelex and Dundonald between 2000 and 2005 to assess the Project on behalf of third parties, and more than 20 years' professional experience in assessing the relevant mineralization styles. Co-author and Qualified Person, Mr Eugene Puritch of P&E Mining Consultants Inc. conducted a site visit to the Alexo Property on 5 May 2010 (Puritch *et al.*, 2010).

No further work has been conducted on the Project since 2011, and no further material information would be gained by a return site visit. The authors and Qualified Persons of this report consider Mr Puritch's 2010 site visit and supervision of work completed for the 2012 technical reporting to NI 43-101 standard (Puritch *et al.*, 2012) current with respect to NI 43-101 requirements. The authors currently have sufficient information to assess the Project.

12.2 Previous Data Validation

Full descriptions of data validation as applied to the data used for geological modelling and resource estimation from the combined various phases of historical exploration have been previously summarised and reported as follows:

- Outokumpu (ALX series), Hucamp (HUX series), and Canadian Arrow (LAX and LOX series) are summarized and reported by Puritch *et al* (2010)
- Canadian Arrow (2010 and 2011 series) are summarised and reported by Puritch et al (2012).

CSA Global has no reason to believe that the data as presented is not an accurate representation of facts at this stage of exploration on the Project. The following are direct extracts from those reports.

Puritch et al (2010):

Mr. Eugene Puritch P. Eng., and Mr. David Burga P. Geo. of P&E, conducted the first site visit to the Alexo Property on May 5, 2010 at which time they collected nine samples by quarter sawing the half core remaining in the core box. The drill holes sampled were drilled in 2004.

After being on site and discussing the project with Canadian Arrow, it was decided a second site visit was necessary in order to do an extensive core re-sampling program. The decision was made to re-sample a representative 10 % of the samples comprised in the constrained model due to the fact that there had been no quality control ("QC") procedures in place for the drill programs.

Mr. Antoine Yassa, P. Geo. of P&E, made a second visit to the Property on May 17 to 18, 2010. During Mr. Yassa's visit a total of 62 samples were collected by quarter sawing the half core remaining in the core box. The drill holes sampled were drilled in 1997, 2001 and 2004.

Samples were selected through a range of grades from high to low. At no time were any officers or employees of Canadian Arrow advised as to the identification of samples to be selected.


During both site visits, samples were tagged with unique sample numbers and bagged. Mr. Puritch and Mr. Burga brought the samples back with them to the offices of P&E in Brampton, Ontario and sent them via courier to AGAT Laboratories Ltd. ("AGAT") in Toronto.

Mr. Yassa brought the samples from the second site visit to Dicom courier in Rouyn-Noranda, Québec. From there they were shipped to the offices of P&E, who took them to AGAT.

AGAT is accredited by the Standards Council of Canada, and conforms to the requirements of CAN-P-1579: Requirements for the Accreditation of Mineral Analysis Testing Laboratories. The latest certificate for proficiency testing was issued on October 21, 2010.

Gold, platinum and palladium were analyzed using lead collection fire assay with ICP-OES finish. Nickel, copper and cobalt were analyzed using four-acid digest and AAS finish.

Graphs of all values for samples taken during the site visits (shown combined) versus the original sample values can be seen in Figures 13-1 through 13-6.

Considering the site visit samples were quarter core and therefore weighed less than the original half core, (i.e. difference in sample volume) and considering the fact that core duplicates can't be expected to have excellent precision due to inherent geologic variability, the comparison between the original results and the P&E results demonstrates that the tenor for the six metals are similar.





Figure 13-2: Site Visits 1 and 2 Results for Copper











An examination of the core and review of the core logs by the authors assessed that the quality of the samples was excellent, they were representative and there was no indication that core recovery or any other factor that may have resulted in sample bias was present. Rock quality designation ("RQD") of the core in general was quite good.



Puritch et al (2012):

Mr. Antoine Yassa, P. Geo. of P&E, conducted the site visit to the Alexo Property on April 29, 2011 at which time he collected nine samples by quarter sawing the half core remaining in the core box. The drill holes sampled were taken from the 2010-2011 program.

Samples were selected through a range of grades from high to low. At no time were any officers or employees of Canadian Arrow advised as to the identification of samples to be selected.

During the site visit, samples were tagged with unique sample numbers and bagged. Mr. Yassa brought the samples to Dicom courier in Rouyn-Noranda, Québec. From there they were shipped to the offices of P&E, who took them to AGAT Laboratories in Mississauga.

AGAT is accredited by the Standards Council of Canada, and conforms to the requirements of CAN-P-1579: Requirements for the Accreditation of Mineral Analysis Testing Laboratories. The latest certificate for proficiency testing was issued on June, 2012.

Gold, platinum and palladium were analyzed using lead collection fire assay with ICP-OES finish. Nickel, copper and cobalt were analyzed using four-acid digest and AAS finish.

Although the values of gold, platinum and palladium were low, the graphs are still presented below. Graphs of all values for samples taken during the site visit versus the original sample values can be seen in Figure 12.1 through Figure 12.6.

Considering the site visit samples were quarter core and therefore weighed less than the original half core, (i.e. difference in sample volume) and considering the fact that core duplicates can't be expected to have excellent precision due to inherent geologic variability, the comparison between the original results and the P&E results demonstrates that the tenor for the six metals are similar.















An examination of the core and review of the core logs by the authors assessed that the quality of the samples was excellent, they were representative and there was no indication that core recovery or any other factor that may have resulted in sample bias was present. Rock quality designation ("RQD") of the core in general was quite good.

P&E considers the data to be of good quality and satisfactory for use in a resource estimate.

12.3 2019 Mineral Resource Estimate Data Verification

Verification of assay data entry was performed on 737 assay intervals for Ni, Cu, Co, Au, Pt and Pd during the 2011 MRE. A few very minor data entry errors were observed and corrected. The 737 verified intervals were checked against assay lab certificates from SGS Canada. The checked assays represented 100% of the data to be used for this 2019 MRE update and approximately 23% of the entire database.

12.4 Summary Opinion of Qualified Person

Based on review of available documentation, the Qualified Person is of the opinion that the dataset is acceptable for the purposes used in this report, including Mineral Resource estimation.



13 Mineral Processing and Metallurgical Testing

C1N has not conducted any metallurgical testwork on the Project. Historically, there have not been any mineral processing or tailings facilities constructed on the Project.

Puritch *et al* (2012) details previous metallurgical testwork that has been conducted on the Alexo and Kelex deposits. The following is based on an extract of that report.

13.1 Past Metallurgical Testwork

Prior to 2004, a 10,000-tonne bulk sample taken from the Alexo deposit confirmed that mining and custom milling of the mineralized zone was economic at that time. The grade of the first 6,000 tonnes of the bulk sample assayed 2.46% Ni, 0.31% Cu and 0.07% Co. During the mining of the Alexo bulk sample, all the low-grade and high-grade ore mined was shipped to Sudbury for metallurgical testing and processing by Falconbridge through its mill and smelter facilities.

13.2 Most Recent 2011 Testwork

In 2011, Xstrata Process Support (Xstrata) – formerly Falconbridge, now Glencore Nickel – at its laboratories in Falconbridge near Sudbury, Ontario, performed scoping level metallurgical testing and quantitative mineralogy for Canadian Arrow on its Kelex composite (Table 10). The scope included a custom flowsheet assessment and quantitative mineralogy using EPMA microprobe assessment.

13.2.1 Mineralogy and Head Analyses

Xstrata found that the mineral pyrrhotite contained 2,100 ppm (0.21 wt%) Ni on average and pentlandite contained 31% Ni on average. These values were lower than typical nickel levels observed in comparable nickel ores from elsewhere that they had previously tested. Silicate gangue species contained low levels of nickel in solution. Orthopyroxene had the highest nickel levels (700 ppm on average) while biotite and serpentine had lower levels (600 ppm and 400 ppm, respectively). Xstrata stated that it is expected that a proportion of nickel loss will be due to nickel in pyrrhotite and silicate gangue, and that modal mineralogical analysis (QEMSCAN) is required to complete a nickel deportment analysis.

Table 10: Composite head analyses, Kelex deposit

Ni %	Cu %	S %	Со %	MgO %	Pt ppm	Pd ppm
2.13	0.09	14.54	0.08	11.96	0.05	0.12

Source: Puritch et al (2012)

13.2.2 Grinding

The Bond Ball Mill Work Index was 23.7 kWh/tonne, indicating that it was a very hard ore to grind.

13.2.3 Metallurgical Testwork

Duplicate rougher flotation tests at a grind (K80) of 53 microns were carried out on 2.2 kg charges of Kelex composite using a selected flowsheet (Table 11).



Dreduct	Mass			Grade %				R	ecovery 9	%	
Product	%	Ni	Cu	S	Со	MgO	Ni	Cu	S	Со	MgO
Custom Rougher Flowsheet											
with Dep C											
Ro bypass concentrate	7.9	19.0	0.8	33.1	0.7	1.2	67.8	62.1	17.4	68.9	0.8
Ro-Scav concentrate	12.3	4.0	0.1	28.6	0.1	4.9	22.1	13.3	23.6	21.3	5.0
Total Concentrate	20.1	9.8	0.4	30.3	0.4	3.4	89.9	75.5	41.0	90.2	5.8
Custom Rougher Flowsheet											
without Dep C											
Ro-bypass concentrate	7.3	14.6	0.6	33.4	0.6	1.2	56.2	62.4	17.3	57.5	0.9
Ro-Scav concentrate	10.6	5.3	0.1	31.0	0.2	3.1	29.9	15.9	23.5	29.7	2.7
Total Concentrate	17.9	9.0	0.3	32.0	0.3	2.5	86.0	78.2	40.8	87.2	3.6
Open Circuit Metallurgical											
Results for Custom Flowsheet											
Ro-bypass concentrate	11.3	12.1	0.5	32.3	0.4	2.4	61.7	60.8	24.2	62.1	2.4
Ro-Scav concentrate	6.5	7.7	0.2	33.3	0.4	1.9	22.5	12.9	15.1	23.1	0.5
Total Concentrate	19.5	9.8	0.4	33.4	0.4	1.9	86.1	74.9	43.0	86.9	3.2

 Table 11:
 Grade recovery results, Kelex deposit composite

Source: Puritch et al. (2012)

Xstrata concluded the following:

- In the first test, Dep C was used. The rougher nickel and copper recovery was similar to the recovery typically obtained from other nickel ores with similar head grades and pyrrhotite-to-pentlandite ratio. Nickel and copper recovery could be improved with optimization.
- In the second rougher test for the custom flowsheet, no Dep C was used. The rougher nickel and copper recovery was somewhat lower than was obtained with a depressant.
- An open circuit cleaning flotation test was carried out on the Kelex composite sample using the custom flowsheet.

It was concluded that the MgO grade did not pose a risk for the then Xstrata Falconbridge smelter complex in Sudbury. These results were similar to the metallurgical results obtained from other nickel ores with similar nickel head grades and pyrrhotite-to-pentlandite ratio.

At the time, Xstrata recommended the following:

- Further replicate tests be conducted on new ore samples from the Kelex deposit using the same custom flowsheet
- Modal and liberation analyses using QEMSCAN should be performed on a representative sample to assess the liberation characteristics at the custom grind size
- Canadian Arrow should proceed to locked cycle tests to simulate the custom flowsheet to final concentrate
- Grinding throughput modelling of the tested ore should be conducted using appropriate software
- Pre-concentration followed by flotation for the lower-grade portion of the Kelex deposit should be assessed.

Subsequently, these recommendations are still outstanding, and no further metallurgical testwork has been carried out.

CSA Global has no reason to believe that the data as presented is not an accurate representation of facts at that stage of metallurgical testing on the Project.



14 Mineral Resources Estimates

14.1 Introduction

The purpose of this report section is to update the Alexo-Kelex deposit resources in compliance with NI 43-101 and CIM standards. This update to the 2011 MRE mainly is based on the metal price variations as all drillhole data has remained unchanged since 2011. This MRE was undertaken by Mr Eugene Puritch (P.Eng. FEC, CET) and Yungang Wu (P.Geo.) of P&E Mining Consultants Inc. of Brampton, Ontario with an Effective Date of 6 November 2019. Mr Puritch is the responsible Qualified Person and author for this section.

14.2 Database

All drilling data was provided by former Project operator, Canadian Arrow, in the form of Microsoft Excel files, drill logs and assay certificates. A total of 42 drill cross-sections were developed on a local grid looking northeast on an azimuth of 60° on a 15-m spacing named from 135-NE to 750-NE. A Gemcom database was developed that contained 227 diamond drillholes, of which 119 were intersected in the updated resource wireframes. A surface drillhole plan is shown in Appendix B.

The database was validated in Gemcom with minor corrections required. The assay table of the database contained 3,146 assays for Ni, Cu, Co and 2,117 assays for Au, Pt and Pd. All data are expressed in metric units and grid coordinates are in the NAD83 UTM system. All dollar ("\$") amounts are Canadian dollars (C\$) unless otherwise stated.

14.3 Data Verification

Verification of assay data entry was performed on 737 assay intervals for Ni, Cu, Co, Au, Pt and Pd during the 2011 MRE. A few very minor data entry errors were observed and corrected. The 737 verified intervals were checked against assay lab certificates from SGS Canada. The checked assays represented 100% of the data to be used for this MRE update and approximately 23% of the entire database.

14.4 Domain Interpretation

Domain boundaries were determined from lithology, structure and NSR boundary interpretation from visual inspection of drillhole sections. Two domains were developed and named Alexo and Kelex. These domains were created with computer screen digitizing on drillhole sections in Gemcom by or under the direction of the author and Qualified Person of this Technical Report section. The outlines were influenced by the selection of mineralized material that demonstrated NSR value above \$30/t, and zonal continuity along strike and down dip. In some cases, some mineralization below the NSR cut-off was included for the purpose of maintaining zonal continuity and 2 m minimum core length.

On each section, polyline interpretations were digitized from drillhole-to-drillhole but not extended more than 50 m into untested territory. Minimum constrained width for interpretation was 2.0 m of core length. The interpreted polylines from each section were "wireframed" in Gemcom into 3D domains. The wireframes were then truncated with topography and overburden surfaces and the historical open pit mined portions were removed. The resulting solids (domains) were used for statistical analysis, grade interpolation, rock coding and resource reporting purposes (Appendix C).



14.5 Rock Code Determination

The rock codes used for the Mineral Resource model were derived from the mineralized domain solids that were developed to control grade block model limits. The list of rock codes used is shown in Table 12.

Table 12:Rock codes and descriptions

Rock code	Description
0	Air
10	Alexo Domain
20	Kelex Domain
99	Waste Rock
100	Overburden

14.6 Grade Capping

The basic statistics of the Mineral Resource wireframe constrained raw assays are presented in Table 13.

Domain			А	Kelex								
Variable	Ni %	Co %	Cu %	Au g/t	Pd g/t	Pt g/t	Ni %	Co %	Cu %	Au g/t	Pd g/t	Pt g/t
No. of samples	146	146	146	146	146	146	938	938	938	938	938	938
Minimum value	0.030	0.005	0.005	0.001	0.003	0.002	0.005	0.002	0.002	0.000	0.000	0.000
Maximum value	6.540	0.230	0.490	0.231	1.498	0.712	7.980	0.210	0.530	0.154	1.410	0.639
Mean	1.290	0.060	0.170	0.040	0.360	0.140	0.810	0.030	0.030	0.010	0.040	0.030
Median	1.020	0.050	0.150	0.020	0.260	0.100	0.460	0.020	0.020	0.000	0.020	0.020
Variance	1.540	0.000	0.010	0.000	0.130	0.020	1.130	0.000	0.000	0.000	0.010	0.000
Standard deviation	1.240	0.040	0.120	0.040	0.360	0.140	1.070	0.030	0.050	0.010	0.090	0.040
Coefficient of variation	0.960	0.740	0.730	1.120	0.990	0.940	1.310	1.160	1.440	2.000	1.980	1.680
Skewness	1.875	1.043	0.460	1.633	1.203	1.162	3.460	3.057	4.477	6.553	7.242	6.462
Kurtosis	6.670	3.832	2.346	6.283	3.704	4.168	16.665	12.451	32.044	62.624	82.250	67.114

Table 13:Statistics of the constrained raw assays

Grade capping was investigated on the raw assay values in the mineralised domains to ensure that the possible influence of erratic high values did not bias the database. Extraction files were created for constrained Ni, Cu, Co, Au, Pt and Pd data within each mineralised domain. From these extraction files, log-normal histograms were generated. Refer to Appendix D for graphs.

Grade capping was not required for the Alexo domain. The capped values of Kelex are presented in Table 14.

Element	Capping No. of assays value capped		Mean of raw assays	Mean of capped assays	Raw coefficient of variation	Capped coefficient of variation	Capping percentile
Ni (%)	7	4	0.81	0.81	1.31	1.29	99.6%
Cu (%)	0.3	5	0.03	0.03	1.44	1.33	99.5%
Pt (g/t)	0.4	2	0.03	0.03	1.68	1.57	99.8%
Pd (g/t)	0.7	3	0.04	0.04	1.98	1.75	99.7%
Co (%)	No capping	0	0.03	0.03	1.16	1.16	100.0%
Au (g/t)	No capping	0	0.01	0.01	2.00	2.00	100.0%

Table 14: Kelex capping values



Variable	Ni %	Co %	Cu %	Au g/t	Pd g/t	Pt g/t
No. of samples	938	938	938	938	938	938
Minimum value	0.005	0.002	0.002	0.000	0.000	0.000
Maximum value	7.000	0.210	0.300	0.154	0.700	0.400
Mean	0.811	0.030	0.032	0.006	0.044	0.025
Median	0.460	0.020	0.020	0.003	0.024	0.016
Variance	1.093	0.001	0.002	0.000	0.006	0.002
Standard deviation	1.046	0.035	0.043	0.011	0.077	0.040
Coefficient of variation	1.289	1.161	1.332	1.997	1.750	1.566
Skewness	3.308	3.057	3.373	6.553	4.794	4.973
Kurtosis	14.949	12.451	17.088	62.624	32.476	36.969

The basic statistics of capped assays of Kelex are summarized in Table 15.

Table 15:Basic statistics of capped assays of Kelex

14.7 Composites

Length weighted composites were generated for the drillhole data that fell within the constraints of the above-mentioned domains. These composites were calculated for Ni, Cu, Co, Au, Pt and Pd over 1.0-m lengths starting at the first point of intersection between assay data hole and hangingwall of the 3D zonal constraint. The compositing process was halted upon exit from the footwall of the afore-mentioned constraint. Unassayed intervals were given 0.001 value. Any composites calculated that were less than 0.3 m in length, were discarded so as to not introduce a short sample bias in the interpolation process. The composite data were transferred to Gemcom extraction files for the grade interpolation as X, Y, Z, Ni, Cu, Co, Au, Pt, Pd files. The basic statistics of the composites are shown in Table 16.

Domain			Ale	exo					Ke	lex		
Variable	Ni %	Co %	Cu %	Au g/t	Pd g/t	Ptg/t	Ni %	Co %	Cu %	Au g/t	Pd g/t	Pt g/t
No. of samples	124	124	124	124	124	124	1101	1101	1101	1101	1101	1101
Minimum value	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum value	5.18	0.17	0.45	0.21	1.41	0.66	6.62	0.21	0.30	0.15	0.68	0.39
Mean	1.08	0.05	0.14	0.03	0.31	0.12	0.66	0.02	0.03	0.00	0.03	0.02
Median	0.78	0.04	0.12	0.02	0.18	0.08	0.44	0.02	0.02	0.00	0.02	0.01
Variance	1.08	0.00	0.01	0.00	0.10	0.02	0.76	0.00	0.00	0.00	0.00	0.00
Standard deviation	1.04	0.04	0.11	0.04	0.32	0.12	0.87	0.03	0.04	0.01	0.06	0.03
Coefficient of variation	0.96	0.75	0.81	1.11	1.03	0.98	1.32	1.21	1.30	1.90	1.79	1.53
Skewness	1.70	1.01	0.63	1.72	1.20	1.26	3.78	3.69	3.27	7.63	5.09	5.08
Kurtosis	6.22	3.83	2.57	6.86	3.77	4.66	19.14	18.02	17.06	90.34	35.76	40.49

Table 16:Composite basic statistics

14.8 Variography

Variography was carried out on the constrained composites within the mineralised domains of the deposit model. Kelex variography yielded discernible Ni variograms, which enabled the classification of Indicated and Inferred Mineral Resources. Due to the low grades for the Cu, Co, Au, Pt and Pd, variography on these



elements was not successful and resulted in the use of the Ni variograms to inform the Cu, Co, Pt and Pd search ellipse ranges (Appendix E).

14.9 Bulk Density

The bulk density used for the resource model was derived from measurements performed by Agat Laboratories on 62 representative samples collected by Antoine Yassa (P.Geo.). The resulting average bulk density model within the constraining domain created from these samples was calculated to be 3.11 t/m^3 . Overburden was assigned a bulk density of 1.8 t/m^3 .

14.10 Block Modelling

The block models of the Alexo-Kelex were constructed using Geovia Gems V6.8 modelling software, and the block model origin and block size are tabulated in Table 17. The block model was rotated 30° counterclockwise. Separate block models were created for rock type, bulk density, percent, class, Ni, Cu, Co Au, Pt, Pd and NSR.

Direction	Origin	No. of blocks	Block size (m)		
Х	513,909.603	140	5		
Y	5,388,757	800	1		
Z	330	60	5		
Rotation		Counter-clockwise 30)°		

Table 17: Block model definition of Alexo-Kelex

The volume percent block model was set up to accurately represent the volume and subsequent tonnage that was occupied by each block inside each constraining domain. As a result, the domain boundaries were properly represented by the percent model's ability to measure infinitely variable inclusion percentages within a particular domain.

The Ni, Cu, Co Au, Pt and Pd composites were extracted from the Microsoft Access database composite table into separate files for each Mineralised Zone. Inverse Distance Squared (ID²) grade interpolation was utilized for all elements. There were two interpolation passes performed on each domain for each element for the Indicated and Inferred classifications. The resulting Ni and NSR blocks can be seen on the block model cross-sections and plans in Appendix F and Appendix G. The grade blocks within the domain were interpolated using the following parameters (Table 18):

Domain	Dip direction	Strike	Dip	Dip range	Strike range	Across dip range	Maximum no. per hole	Minimum no. of sample	Maximum no. of sample			
Ni, Cu, Co, Au, Pt and Pd Indicated												
Alexo	350°	80°	-90°	20 m	20 m	5 m	2	3	12			
Kelex	330°	60°	-70°	30 m	30 m	5 m	2	3	12			
Ni, Cu, Co, A	Ni, Cu, Co, Au, Pt and Pd Inferred											
Alexo	350°	80°	-90°	40 m	40 m	10 m	2	1	12			
Kelex	330°	60°	-70°	60 m	60 m	10 m	2	1	12			

Table 18: Block model interpolation parameters



14.11 Mineral Resource Classification

For the purposes of this resource, Indicated and Inferred classifications of all interpolated grade blocks were determined from the nickel interpolations due to nickel being the dominant revenue producing element in the NSR calculation. The Indicated Resources were classified for the blocks interpolated with at least three composites from a minimum of two holes; and Inferred Resources were categorized for all remaining grade populated blocks within all mineralised domains. The classifications have been adjusted to reasonably reflect the distribution of each category. See block model classification cross-sections and plans in Appendix H.

14.12 Mineral Resource Estimate

The MRE was derived by applying an NSR cut-off grade to the block model and reporting the resulting tonnes and grade for potentially mineable areas. The following calculations demonstrate the rationale supporting the NSR cut-off grade that determines the potentially economic portion of the mineralized domains.

NSR cut-off grade calculation components (all currency C\$ unless stated otherwise):

• C/	AD/US\$ exchange rate:	\$0.77
• N	i price:	US\$7.42/lb (CIBC long term consensus forecast)
• Cu	u price:	US\$3.00/lb (Aug 31/19 approx. two-year trailing average)
• Co	o price:	US\$250/lb (Aug 31/19 approx. two-year trailing average)
• A	u price:	US\$1,300/oz (Aug 31/19 approx. two-year trailing average)
• Pt	t price:	US\$900/oz (Aug 31/19 approx. two-year trailing average)
• Po	d price:	US\$1,100/oz (Aug 31/19 approx. two-year trailing average)
• N	i flotation recovery:	90%
• Ci	u flotation recovery:	90%
• Co	o flotation recovery:	40%
• A	u flotation recovery:	50%
• Pt	t flotation recovery:	50%
• Po	d flotation recovery:	50%
• Co	oncentration ratio:	16:1
• N	i smelter payable:	85%
• Ci	u smelter payable:	90%
• Co	o smelter payable:	50%
• A	u smelter payable:	80%
• Pt	t smelter payable:	80%
• Po	d smelter payable:	80%
• N	i refining charges:	US\$0.50/lb
• Ci	u refining charges:	US\$0.15/lb
• Co	o refining charges:	US\$3.00/lb
• A	u refining charges:	US\$10.00/oz
• Pt	t refining charges:	US\$10.00/oz
• Po	d refining charges:	US\$10.00/oz
• N	i smelter treatment charges:	US\$250/t.

The above data were derived from other projects similar to Alexo-Kelex.



In the anticipated open pit portion of the Alexo-Kelex deposit, the ore crushing, transport, processing and G&A costs combine for a total of (\$2 + \$6 + \$20 + \$2) = C\$30/tonne processed which became the open pit NSR cut-off value.

For the constrained mineralization in the Alexo-Kelex Deposit model to be considered as an open pit Mineral Resource which is potentially economic, a first pass pit optimization was carried out utilizing the following criteria:

•	Waste mining cost per tonne	\$2.75
•	Ore mining cost per tonne	\$3.50
•	Overburden mining cost per tonne	\$2.00
•	Ore crushing cost per tonne	\$2.00
•	Ore transport to process plant cost per tonne	\$6.00
•	Process cost per tonne	\$20.00
•	General & Administration (G&A) cost per ore tonne	\$2.00
•	Process production rate (ore tonnes per year)	100,000
•	Pit slopes (inter ramp angle)	50°
•	Sulphide bulk density	3.11 t/m ³
•	Waste rock bulk density	2.80 t/m ³
•	Overburden bulk density	1.80 t/m ³

See optimized pit shell in Appendix I.

In the anticipated underground portion of the Alexo-Kelex deposit, the ore mining, crushing, transport, processing and G&A costs combine for a total of (\$28 + \$2 + \$6 + \$20 + \$4) = C\$60/tonne processed which became the underground NSR cut-off value.

The resulting open pit and underground MRE can be seen in Table 19.

Resource classification	Tonnes (k)	Ni %	Cu %	Co %	Au g/t	Pt g/t	Pd g/t	Contained Ni (Mlb)	Contained Cu (Mlb)	Contained Co (Mlb)
Indicated										
Alexo Open Pit	23.3	1.43	0.17	0.06	0.04	0.16	0.40	0.73	0.09	0.03
Kelex Open Pit	281.8	0.76	0.03	0.03	0.01	0.02	0.04	4.72	0.19	0.19
Total Pit Constrained – Indicated	305.1	0.81	0.04	0.03	0.01	0.03	0.07	5.46	0.27	0.22
Alexo Underground	5.0	0.77	0.10	0.04	0.02	0.08	0.19	0.08	0.01	0.00
Kelex Underground	261.6	0.72	0.03	0.03	0.01	0.03	0.05	4.15	0.17	0.17
Total Underground – Indicated	266.6	0.72	0.03	0.03	0.01	0.03	0.05	4.24	0.18	0.18
Total Indicated	571.7	0.77	0.04	0.03	0.01	0.03	0.06	9.69	0.46	0.39
Inferred										
Kelex Underground	67.2	0.63	0.03	0.02	0.01	0.01	0.02	0.93	0.04	0.03
Total Underground – Inferred	67.2	0.63	0.03	0.02	0.01	0.01	0.02	0.93	0.04	0.03

Table 19:Alexo-Kelex MRE (1-5)

Notes:

(1) Mineral Resources which are not Mineral Reserves do not have demonstrated economic viability.



- (2) The estimate of Mineral Resources may be materially affected by environmental, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues.
- (3) The Inferred Mineral Resource in this estimate has a lower level of confidence than that applied to an Indicated Mineral Resource and must not be converted to a Mineral Reserve. It is reasonably expected that the majority of the Inferred Mineral Resource could be upgraded to an Indicated Mineral Resource with continued exploration.
- (4) The Mineral Resources in this report were estimated using the CIM Standards on Mineral Resources and Reserves, Definitions and Guidelines prepared by the CIM Standing Committee on Reserve Definitions and adopted by the CIM Council (2014).
- (5) The historical open pit mined areas were removed from the Mineral Resource Estimate.

14.13 Confirmation of Mineral Resource Estimate

The block models were validated using industry standard methods including visual and statistical methods.

Visual examination of composites and block grades on successive plans and sections were performed onscreen in order to confirm that the block models correctly reflect the distribution of composite grades. The review of estimation parameters included:

- Number of composites used for estimation
- Number of drillholes used for estimation
- Mean distance to sample used
- Number of passes used to estimate grade
- Mean value of the composites used.

Comparisons of mean grades of composites with the block models at Ni 0.001% are presented in Table 20.

Domain	Data type	Ni %	Cu %	Co %	Au g/t	Pt g/t	Pd g/t
Alexo	Assays	1.29	0.17	0.06	0.04	0.14	0.36
	Composites	1.08	0.14	0.05	0.03	0.12	0.31
	Block Model ID2*	1.04	0.13	0.05	0.03	0.12	0.28
	Block Model NN**	1.04	-	-	-	-	-
Kelex	Capped Assays	0.81	0.03	0.03	0.01	0.03	0.04
	Composites	0.66	0.03	0.02	0.00	0.02	0.03
	Block Model ID2*	0.64	0.03	0.02	0.00	0.02	0.04
	Block Model NN**	0.65	-	-	-	-	-

 Table 20:
 Average grade comparison of assays, composites and block models

*Block model grades were interpolated using Inverse Distance Squared. **Block model grades were interpolated using Nearest Neighbour.

The comparisons above show the average grades of the block models are almost same as that of composites used for the grade estimation.

A volumetric comparison was performed with the block model volume versus the geometric calculated volume of the domain solids and the differences are shown in Table 21.

Table 21:Volume comparison of block model with geometric solids

Domain	Alexo	Kelex	
Geometric volume of wireframes (m ³)	11,572	286,588	
Block model volume (m ³)	11,558	286,487	
Difference (%)	0.12%	0.04%	

Comparisons of the grade-tonnage curve of the nickel grade model interpolated with ID² and Nearest Neighbour (NN) on a global resource basis for both Alexo and Kelex are presented in Figure 20.





Figure 20: Alexo and Kelex nickel grade-tonnage curve for ID² and NN interpolation

Ni local trends were evaluated by comparing the ID² and NN estimate against nickel composites. As shown in Figures 12 to 14, nickel grade interpolations with ID² and NN agreed well for both Alexo and Kelex.







Figure 21: Alexo and Kelex nickel grade swath easting plots







Figure 22: Alexo and Kelex nickel grade swath northing plots







Figure 23: Alexo and Kelex nickel grade swath elevation plots



15 Mineral Reserve Estimates

No Mineral Reserve has been estimated for the Project.



16 Mining Methods



17 Recovery Methods



18 Project Infrastructure



19 Market Studies and Contracts



20 Environmental Studies, Permitting and Social or Community Impact



21 Capital and Operating Costs



22 Economic Analysis



23 Adjacent Properties

This report represents the first combined reporting of the Alexo-Kelex and Dundonald-Dundeal property areas under single Project ownership. There are currently no other significant adjacent third-party exploration or development properties in the immediate area of Alexo-Dundonald Project.



24 Other Relevant Data and Information

No additional information or explanation is necessary to make the technical report understandable and not misleading.



25 Interpretation and Conclusions

Based on all exploration work completed to date, two geological block models and Mineral Resources were estimated for the Alexo and Kelex deposits in accordance with CIM Standards on Mineral Resources and Reserves, Definitions and Guidelines (2014) as per NI 43-101. The 2019 MREs contain 571,700 tonnes of Indicated Resources grading 0.77% Ni, 0.04% Cu, 0.03% Co, 0.03 g/t Pt and 0.06 g/t Pd and 67,200 tonnes of Inferred Resources grading 0.63% Ni, 0.03% Cu and 0.02% Co.

The study included an open pit optimization that defined 305,100 tonnes of the Indicated Resources grading 0.81% Ni, 0.04% Cu, 0.03% Co, 0.03 g/t Pt and 0.07 g/t Pd are amenable to open pit mining at an NSR cut-off of \$30/tonne. The study concluded that an additional 266,600 tonnes grading 0.72% Ni, 0.03% Cu and 0.03% Co of Indicated Resources and 67,200 tonnes grading 0.63% Ni, 0.03% Cu and 0.02% Co of Inferred Resources were amenable to underground mining at an NSR cut-off of \$60/tonne.

Previous small-scale mining on the property between 2004 and 2005 (30,138 tonnes of ore averaging 1.93% Ni containing 1.3 million pounds (Mlb) of nickel from open pit mining of the Alexo and Kelex deposits) demonstrates the potential for near-term production from the shallow resources estimated above.

The Project has good exploration potential for further discovery of magmatic nickel sulphide mineralization. Although there has been past mining and drilling activity on the Project, the effective depth of exploration from the previous drilling is limited to a depth of 100 m below surface in the vicinity of the known deposits. The great bulk of the Property remains untested by drilling below that depth, and there is almost no drilling elsewhere away from the known deposits. The Property has never been surveyed using modern geophysical techniques. Previous surveys such as surface EM or borehole EM that have been used in the past would not be considered industry standard by modern criteria given advances in technology over the time period since the work was completed.

International exploration for similar komatiite-hosted nickel sulphide systems in Australia, as well as within systems such as Thompson and Raglan in Canada, has demonstrated that there is good potential for exploration and discovery of continued and/or additional sulphide mineralisation along strike/plunge within mineralized channelized flow. Similarly, potential parallel channelized environments within the same volcanic flow field offer good exploration targets for additional sulphide systems. The shallow nature of previous exploration and the tight focus on the near-surface known mineralization at Alexo-Dundonald means that these possibilities have not been adequately tested on the Project.

Of the 227 diamond drillholes used in the Alexo-Kelex mineral inventory calculation, only 22 (10%) extended below 100 m from surface. At Kelex, these deeper holes are still within sulphide mineralization down plunge on the deposit and have not closed out the potential for further mineralization at depth below the currently known sulphides. This potential depth extension is within the search depth of ground EM surveys. Opportunities exist to increase the known zones at Alexo-Kelex with a targeted approach of surface EM, further diamond drilling below and along strike of the deposits, and borehole EM of the deeper drillholes.

Alexo drill programs and past production have defined a potential eastern plunge extension of the Alexo Main zone sulphide lens to 120 m vertical depth below surface. Nickel-bearing massive sulphide mineralization was intercepted in drillhole HUX-04-01 on the Alexo East zone located approximately 125 m east of the Alexo Main zone. The 125 m plunge interval between the Main zone extension and the East zone remains untested by drilling and a downhole geophysical survey conducted in 2001 indicated the two zones were possibly conductively connected. Drillhole HUX-04-01 is the deepest drillhole on the potential down-plunge extension of the Alexo mineralization, other drillholes in the area pass above the projected trend of the potential



extension zone. No drilling or exploration has been conducted below this elevation. Drilling beyond the East zone is limited.

The Kelex deposit zones discovered to date are defined by a string of five lenses of higher-grade massive sulphides within a broader lower-grade nickel sulphide halo that extend along a 600 m strike length and to a vertical depth of 100 m below surface. Below that 100 m vertical depth level, additional mineralisation has been intercepted to 350 m vertical depth below surface in drilling that averages 75 m between drillholes. Potential within and below this horizon remains unexplored at depth and along strike. Should they still be open, deeper holes in the area would make excellent platforms for borehole EM to detect potential sulphide accumulations at depth below the Kelex deposit.

Diamond drilling outlined four high-grade nickel shoots on the Dundonald South G zone nickel-enriched horizon that are open down plunge, below a vertical depth of 150 m below surface. The A zone high-grade nickel shoot is open below a vertical depth of 260 m below surface. Other secondary target areas in the Dundonald South area include the up and down plunge trends of the upper F zone shoot. Another secondary area of interest is the western portion of the G zone below a vertical depth of 100 m below surface. This area has had very limited drilling of the G zone host stratigraphy, as the focus in this western portion of the Dundonald South area was the A to C zones. Drilling along the trend and down-plunge of these shoots coupled with borehole EM offers the best chance of intersecting additional nickel sulphide mineralisation.

The highest-grade nickel intersections of the Dundeal nickel zone occur at vertical depths of 400–525 m below surface. Although deep, there still exists very good potential to expand the Dundeal nickel zone with several drillholes into open space around these intersections. The nickel mineralization is open to the west and there is some room for further expansion to the east and at depth.

The interpretations and conclusions reached in this report are based on current scientific understanding and the best evidence available to the authors at the time of writing. It is the nature of all scientific conclusions that they are founded on an assessment of probabilities and, however high these probabilities might be, they make no claim for absolute certainty.

The ability of any person to achieve forward-looking production and economic targets is dependent on numerous factors that are beyond CSA Global's control and that CSA Global cannot anticipate. These factors include, but are not limited to, site-specific geological conditions, management and personnel capabilities, availability of funding to properly operate and capitalize the operation, variations in cost elements and market conditions, developing and operating the Project in an efficient manner, unforeseen changes in legislation and new industry developments. Any of these factors may substantially alter the performance of any exploration operation.

As with most early exploration prospects, the key technical risk is that further exploration may not result in the discovery of an economic resource. Although significant mineralization has been discovered on the projects and a small-scale Mineral Resource has been estimated, the Projects are still at an early stage of exploration outside the limited immediate environment of the shallow mineralization identified to date. Significant exploration is still required to determine the likelihood of discovery of additional mineralization to further increase potential to host sustainable long-term mining operations. Thereafter, there is risk that no economic levels of mineralization will be defined.



26 Recommendations

The possibility of other, yet unknown, komatiite lava channels potentially hosting mineralization within the Alexo-Kelex and Dundonald-Dundeal areas must be tested. Similarly, the potential down-plunge extent of existing, known mineralized lava channel environments must also be tested. A program of deep-penetrating ground EM surveys, stratigraphic drilling and drilling below the current workings down plunge of known mineralisation, both coupled with borehole EM, will help to delineate any such potential unknown channelized environments.

Outside the immediate area of the known deposits, exploration has been limited. The airborne EM surveys flown in 1984 and 1988 would not be considered an adequate test of the regional potential given recent advances in the understanding of the geophysical response of nickel sulphide mineralization, and the advancement in the technical capabilities of airborne geophysical survey systems. Flying a modern helicopterborne EM system should be an exploration priority. Utilising the combined magnetic and airborne EM data gathered from such a survey will allow rapid focus of ground exploration into potential serpentinized (magnetic) ultramafic lava channel environments with either sedimentary sulphides in the immediate vicinity, or potential direct detection of the target nickel sulphide.

Hole ALX-01-96, located 200 m west along strike and 240 m vertical depth below the Alexo deposit, intersected a narrow interval of magmatic nickel sulphide. Significantly, it is the only hole drilled west of, or below, the Main Alexo mineralized horizon. This isolated intersection requires follow-up drilling and borehole EM.

The proposed exploration budget for the Alexo-Dundonald Project is proposed as a phased program subject to continued advancement due to success of the previous phase of work. The total budget proposal would total \$2,375,000. Phases 1 and 2 are proposed to be completed before the end of 2020 in accordance with the underlying purchase agreements for the Alexo and Dundonald properties. The proposed work includes preliminary compilation/evaluation, airborne EM and magnetics and some follow-up ground geophysical surveys on the highest priority targets. This would be followed up by a diamond drilling program to assess targets and expand resources at the Kelex and Alexo zones.

To this end, the following is recommended for the first two phases of exploration on the Alexo-Dundonald Project:

- Complete a modern airborne EM and magnetic survey over the entire merged Alexo-Dundonald Project. The intent would be to generate magmatic nickel sulphide targets within komatiite flows and ultramafic intrusions on the Property.
 - o Generated targets will be followed up with focused fixed loop EM surveys and then diamond drilling.
- One area of focus would be designed to expand the Kelex and Alexo estimated Mineral Resources outlined in this report. Both mineralized zones have potential for expansion both along strike and to depth. Since these resources have been previously drilled to a certain degree, they would present the best opportunity to fast track a small mining operation if metal prices were deemed favourable in the short to medium term. The proposed airborne EM/magnetic survey would add to the understanding of the potential to expand the resource in the vicinity of the Kelex and Alexo zones. Opportunities exist to increase the known zones at Alexo-Kelex with a targeted approach of surface EM, further diamond drilling below and along strike of the deposits (below 100 m depth), and borehole EM of the deeper drillholes.
- Another area of focus would be to further evaluate the high-grade mineralization found on the Dundonald portion of the project area, particularly in the Dundonald South area where several identified komatiite-



hosted zones have high grade nickel values, particularly in the "A" and "G" zones. Careful structural analysis needs to be completed in order follow these higher-grade zones to depth to see if potential exists for additional high-grade lenses. Opportunities exist to increase known mineralized horizons in the Dundonald South target (e.g. G zone). Further diamond drilling below and along strike of the deposits, and borehole EM of the deeper drillholes.

Exploration should thus be split into two phases, parts of which may run concurrently, depending on results as the programs continue.

26.1 Phase 1

This phase would give a basis of knowledge to interpret drill targets for Phase 2. An 800 line-km airborne survey is proposed which would cover the entire consolidated land package at 50 m spaced lines as outlined in Figure 24 below.



Figure 24: Outline of proposed Phase 1 airborne EM/magnetic survey highlighted in red box

Additional monies should be budgeted to allow for resource evaluation, interpretation, ground truthing and geological/ground geophysical follow-up of newly identified targets from the airborne survey. The total proposed expenditure for Phase 1 is \$340,000. No contingency has been added.



26.2 Phase 2

This phase of work would be mainly focused on diamond drilling and is not contingent on Phase 1 results, although any targets determined from Phase 1 would be added to the drill target matrix as work progresses in an evolving exploration program. Drilling on the Kelex and Alexo zones would be designed to extend the zones along strike and to depth. Drilling on the Dundonald South area would focus on extending high-grade lenses down plunge. A total of 10,000 m of diamond drilling is proposed at an average cost of \$160/m for \$1,600,000 total. This would include all costs associated with the drilling (i.e. contractor costs, assay analysis, salaries, miscellaneous expenses). Additional monies are allotted for surface and borehole geophysical surveys, resource and engineering evaluation and geological interpretation.

26.3 Recommended Exploration Budget

An outline of the proposed expenditures is presented in the table below.

Dragram		Proposed Expenditures			
		Phase 1	Phase 2		
	Airborne EM/magnetic survey	160,000	-		
	Surface EM surveys	70,000	50,000		
	Core drilling	-	1,600,000		
Exploration Alexo-	Borehole EM surveys	-	150,000		
Bundonala	Miscellaneous expenses (rentals etc)	10,000	50,000		
	Resource evaluation	80,000	160,000		
	Subtotal	320,000	2,010,000		
Project maintenance	Renewal fees/taxes	20,000	25,000		
TOTAL FUNDS ALLOCA	ATED FOR EACH PHASE	340,000	2,035,000		


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Appendix A: Glossary of Technical Terms and Abbreviations

For brevity, the reader is referred to internet sources such as Wikipedia (www.wikipedia.org).

%	percent
°C	degrees Celsius
o	degrees
3D	three-dimensional (model or data)
Ag	silver
Au	gold
azimuth	Drillhole azimuth deviation (from north)
C\$	Canadian dollars
C1N	Class 1 Nickel and Technologies Inc.
Canadian Arrow	Canadian Arrow Mines Ltd
CIM	Canadian Institute of Mining, Metallurgy and Petroleum
clipping window	In case of display of three-dimensional data at the plane, plus-minus the distance, within which the data is projected perpendicular to the image plane
cm	centimetre(s)
Со	cobalt
coefficient of correlations	Statistical measure of the degree of similarity between two parameters
coefficient of variation (CV)	In statistics, the normalized variation value in a sample population
collar	Geographical coordinates of the collar of a drillhole or a working portal
compositing	In sampling and resource estimation, process designed to carry all samples to certain equal length
core sampling	In exploration, a sampling method of obtaining ore or rock samples from a drillhole core for further assay
CSA Global	CSA Global Pty Ltd
CSV	Digital computer file containing comma-separated text data
Cu	copper
cut-off grade	The threshold value in exploration and geological resources estimation above which ore material is selectively processed or estimated
d	Diameter
de-clustering	In geostatistics, a procedure allowing bounded grouping of samples within the octant sectors of a search ellipse
dip	Angle of drilling of a drillhole
ENDM	(Ontario Ministry of) Energy, North Development and Mines
EM	electromagnetic



Falconbridge	Falconbridge Limited
flagging	Coding of cells of the digital model
FNI	First Nickel Inc.
FROM	Beginning of intersection
g	gram(s)
g/t	grams per tonne
G&A	general and administration
geochemical sampling	In exploration, the main method of sampling for determination of presence of mineralisation. A geochemical sample usually unites fragments of rock chipped with a hammer from drillhole core at a specific interval
geometric mean	The antilog of the mean value of the logarithms of individual values. For a logarithmic distribution, the geometric mean is equal to the median. For a logarithmic distribution, the geometric mean is equal to the median
group sampling	In exploration and mining, method of sampling by means of union of the material of individual samples characterizing an independent orebody
histogram	Diagrammatic representation of data distribution by calculating frequency of occurrence
Hucamp	Hucamp Mines Ltd
ID ²	inverse distance squared
kg	kilogram(s)
km	kilometre(s)
Kriging	Method of interpolating grade using variogram parameters associated with the samples' spatial distribution. Kriging estimates grades in untested areas (blocks) such that the variogram parameters are used for optimum weighting of known grades. Kriging weights known grades such that variation of the estimation is minimised, and the standard deviation is equal to zero (based on the model)
lag	The chosen spacing for constructing a variogram
Lakefield	Lakefield Marketing Corp.
Lakefield Subco	Legendary and Bloom Retail Management Inc.
lb	pound(s)
Legendary	Legendary Ore Mining Corporation
lognormal	Relates to the distribution of a variable value, where the logarithm of this variable is a normal distribution
m	metre(s)
m²	square metre(s)
m ³	cubic metre(s)
Μ	million or mega (10 ⁶)
mean	Arithmetic mean
median	Sample occupying the middle position in a database
ml	millilitre(s)



ml/l	millilitres per litre
Mlb	million pounds
mm	millimetre(s)
MRE	Mineral Resource estimate
MRO	mining rights only
MSR	mining and surface rights
Mt	million tonnes
Ni	nickel
NI 43-101	National Instrument 43-101
NN	nearest neighbour
Noranda	Noranda Mines Limited
NSR	net smelter return
nugget effect	Measure of the variability during repeat analysis of a sample due to a measurement error or the presence of natural, small-scale variability. Although the variogram value at 0 spacing should be equal to zero, these factors may affect the values of samples taken at a very short distance from each other such that their values may vary. A vertical jump from the zero value at the origin of a variogram with very small spacing is called the nugget effect.
OGS	Ontario Geological Survey
omni	In all directions
overburden	All material above mineralisation
Pd	Palladium
percentile	In statistics, one one-hundredth of the data. It is generally used to break a database down into equal hundredths
PGE	platinum group element(s)
population	In geostatistics, a population formed from grades having identical or similar geostatistical characteristics. Ideally, one given population is characterized by a linear distribution
probability curve	Diagram showing cumulative frequency as a function of interval size on a logarithmic scale
Pt	Platinum
quantile plot	Diagrammatic representation of the distribution of two variables. It is one of the control tools (e.g. when comparing grades of a model with sampling data). It is one of the control tools (e.g. for comparing model grades with sampling data)
quantile	In statistics, a discrete value of a variable for the purposes of comparing two populations after they have been sorted in ascending order.
range	Same as Influence Zone; as the spacing between pairs increases, the value of corresponding variogram as a whole also increases. However, the value of the mean square difference between pairs of values does not change from the defined spacing value, and the variogram reaches its plateau. The horizontal spacing at which a variogram reaches its plateau is called the range. Above this spacing there is no correlation between samples.



reserves	Mineable geological resources
resources	Geological resources (both mineable and unmineable)
RL	Elevation of the collar of a drillhole, a trench or a pit bench above the sea level
run m	run metre(s)
sample	Specimen with analytically determined grade values for the components being studied
scatter plot	Diagrammatic representation of measurement pairs about an orthogonal axis
SG	specific gravity
sill	Variation value at which a variogram reaches a plateau
standard deviation	Statistical value of data dispersion around the mean value
state of reserves	Officially registered reserves and resources estimated on the basis of a large amount of data for the intersections in drill holes or workings, or both
string	Series of 3D points connected in series by straight lines
t	tonne(s)
t/m³	tonnes per cubic metre
Tartisan	Tartisan Nickel Corp.
то	end of intersection
Transition	Transition Metals Corp.
unfolding	Computer program function allowing data of folded structures to be unfolded onto a plane using control frames and strings
US\$	United States dollars
VaniCom	VaniCom Resources Ltd
variation	In statistics, the measure of dispersion around the mean value of a data set
variogram	Graph showing variability of an element by increasing spacing between samples
variography	The process of constructing a variogram
wireframe model	3D surface defined by triangles
х	Coordinate of the longitude of a drillhole, a trench collar, or a pit bench
Xstrata	Xstrata Process Support
Y	coordinate of the latitude of a drillhole, a trench collar, or a pit bench
у	year
Zn	zinc



Appendix B: Surface Drill Plan





Appendix C: 3D Domains





Appendix D: Log Normal Histograms











Appendix E: Variograms































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Appendix F: Nickel Block Model Cross Sections and Plans









































Appendix G: NSR Block Model Cross Sections and Plans








































Appendix H: Classification Block Model Cross Sections and Plans









































Appendix I: Optimized Pit Shell





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