



## **CLASS 1 NICKEL PROVIDES UPDATE ON DUNDONALD SOUTH NICKEL SULPHIDE DEPOSIT AND THE ALEXO-DUNDONALD ADVANCED NICKEL SULPHIDE PROJECT, TIMMINS, CANADA**

**Toronto, Ontario (23 September 2024)** – Class 1 Nickel and Technologies Ltd. (CSE: NICO | OTCQB: NICLF) ("Class 1 Nickel" or the "Company") is pleased to provide an update on its advanced nickel sulphide project located about 45 km northeast of the City of Timmins, Ontario. Work is near-complete on the delivery of an updated Mineral Resource Estimate ("MRE") for the Dundonald South Nickel Deposit, one of 4 nickel deposits within the Alexo-Dundonald Nickel Project (the "Project") which covers about 1,895 hectares (18.95 km<sup>2</sup>) (Figure 1). Updates to the Alexo South and Alexo North nickel deposits were announced 24 April 2024 and 22 May 2024, respectively (Table 1).

To date, Caracle Creek Chile SpA ("Caracle") and their strategic partner Atticus Geoscience Consulting Ltd. ("Atticus") (together the "Consultants") have completed the first of two stages toward the delivery of an updated Mineral Resource Estimate ("MRE") for the high-grade Dundonald South Nickel Deposit ("D-S Deposit"). The second stage, completion of the updated mineral resource estimate, is expected to be completed and announced end of September. Shortly after that, work will begin on the new model and updated mineral resource estimate for the Dundonald North Nickel Deposit (D-N Deposit).

David Fitch, CEO of Class 1 Nickel, commented: "The Company is very pleased with the progress to date, having released two of the four updated nickel mineral resources and with the third from the Dundonald South deposit on its way to completion. Once we have the fourth deposit updated, the Dundonald North, we will begin work on a Preliminary Economic Assessment in order to ascertain the economic significance of the combined four nickel sulphide deposits."

With respect to the D-S Deposit, the Consultants have completed a comprehensive compilation and re-interpreted 3D geological model of the D-S Deposit (Figures 2, 4, 5 and 6). This new model provides the Company with multiple new drill target areas around the D-S Deposit which will be tested in the next drilling program. It's important to note that like the previous work completed on the Alexo South and Alexo North nickel deposits, this work represents the first detailed 3D modelling of the D-S Deposit and like the previous two models, this 3D model involved an intensive interrogation and interpretation of the lithologies, alteration, structure, and mineralization associated with the deposit and the immediate area.

Of particular importance is the interpretation of four primary faults which clearly affected the strike of the mineralized ultramafic-mafic stratigraphy; the faults have been labelled F1 to F4 in order of interpreted timing (Figures 3 and 4). In defining structural domains, this detailed interpretation gives us tremendous insight into where to conduct future geophysical surveys and where to drill in the next phase of diamond drilling, giving us more confidence in the planning of the drill holes to intersect nickel sulphide mineralization.

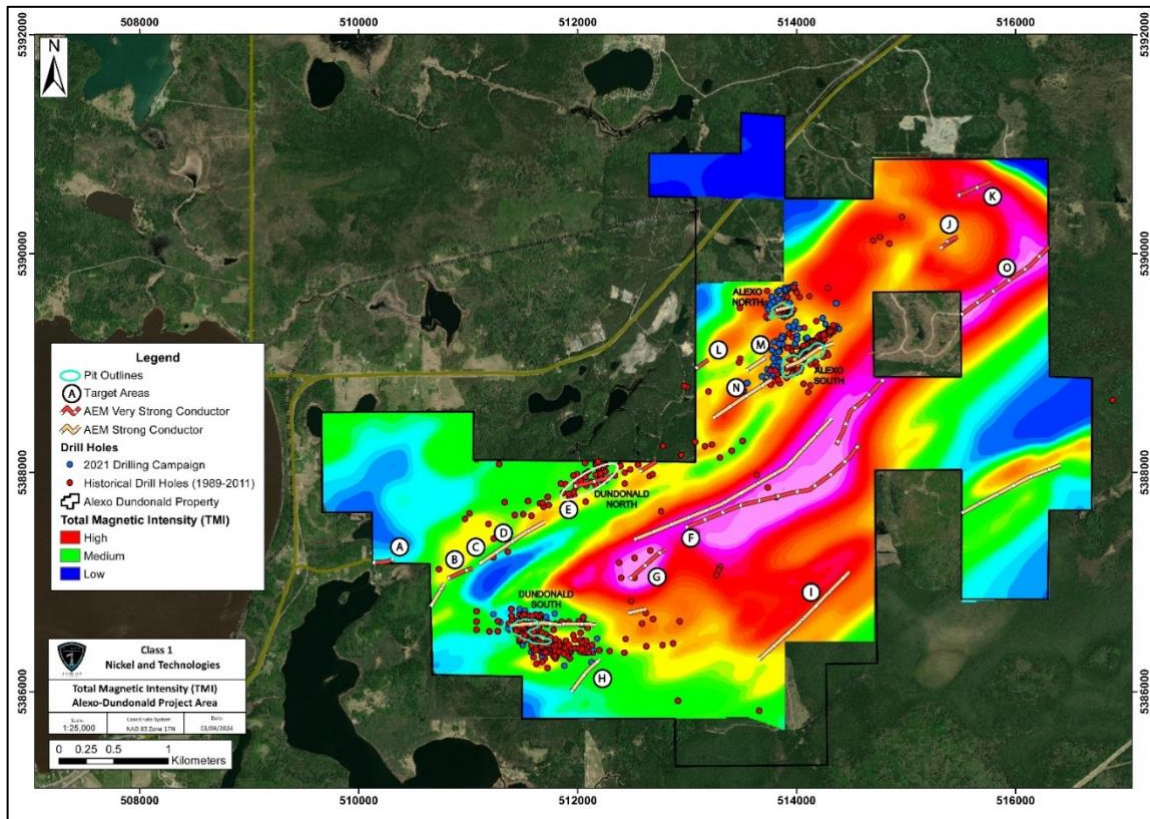


Figure 1. Alexo-Dundonald Nickel Project with regional Total Magnetic Intensity (TMI) and classified aeromagnetic (AEM) conductors from a 2020 VTEM survey. Locations of the 2024 Alexo South and Alexo North pit shells and the 2020 Dundonald South and Dundonald North pit shells (nickel deposits) are shown, along with historical drill hole collar locations.

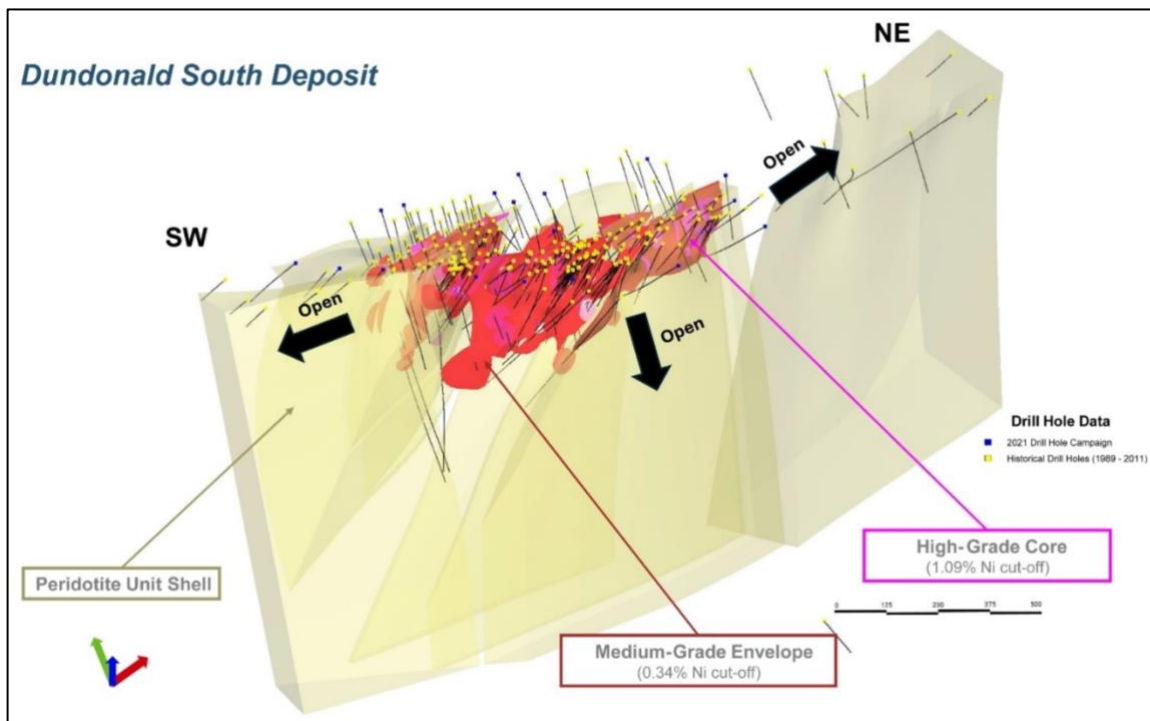


Figure 2. Newly interpreted 3D geological model (looking northwest) showing the high-grade nickel domain (core) and medium-grade nickel domain (envelope) that define the D-S Deposit, along with historical and Class 1 (2021) drill hole traces. The D-S deposit is open along strike and at depth.

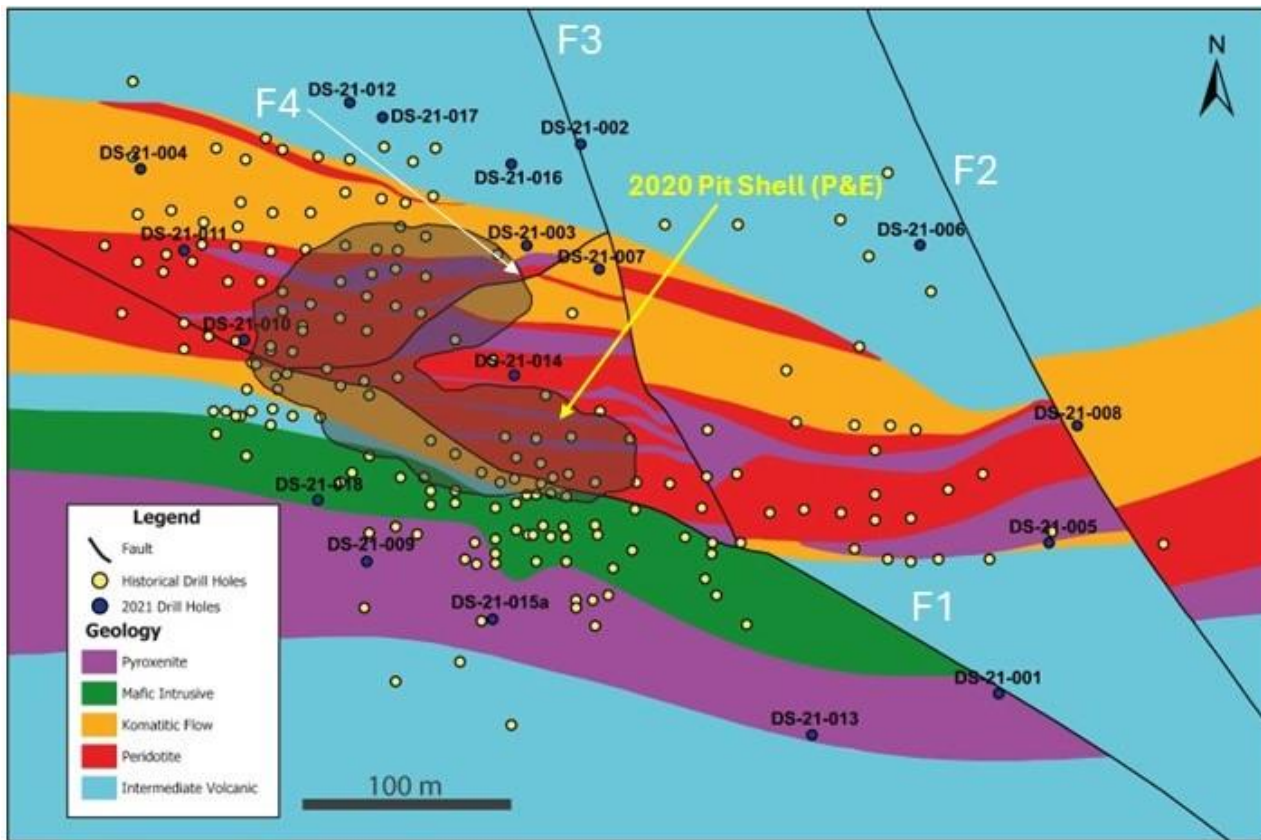


Figure 3. Generalized geology of the Dundonald South Property with 2020 optimized pit shell (Stone et al., 2020) and newly interpreted geology and structure, including the 4 main faults (F1 to F4) that dissect the D-S Deposit. This new geological and structural interpretation offer numerous new drill targets for expanding current resources and targeting high-grade nickel.

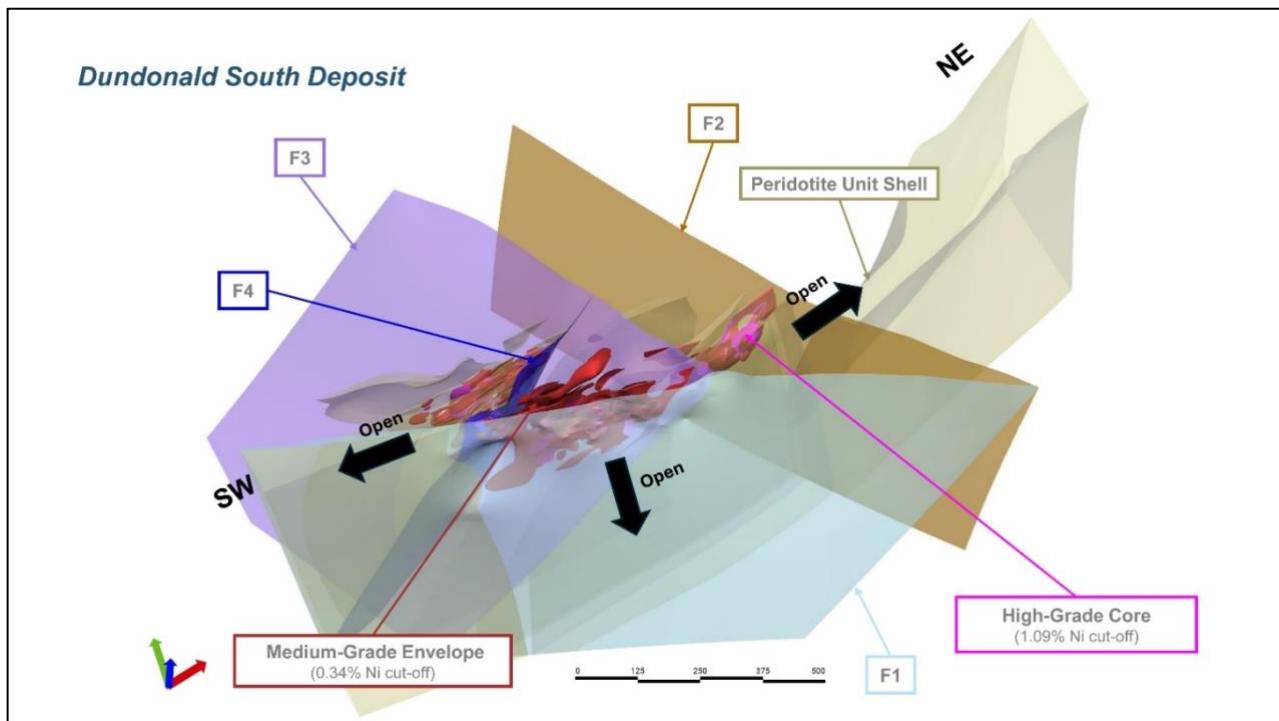


Figure 4. Isometric view of the D-S Deposit with 4 interpreted faults (F1 to F4) resulting in 3 primary target areas in which future drilling will aim to build additional mineralized high-grade nickel tonnes.

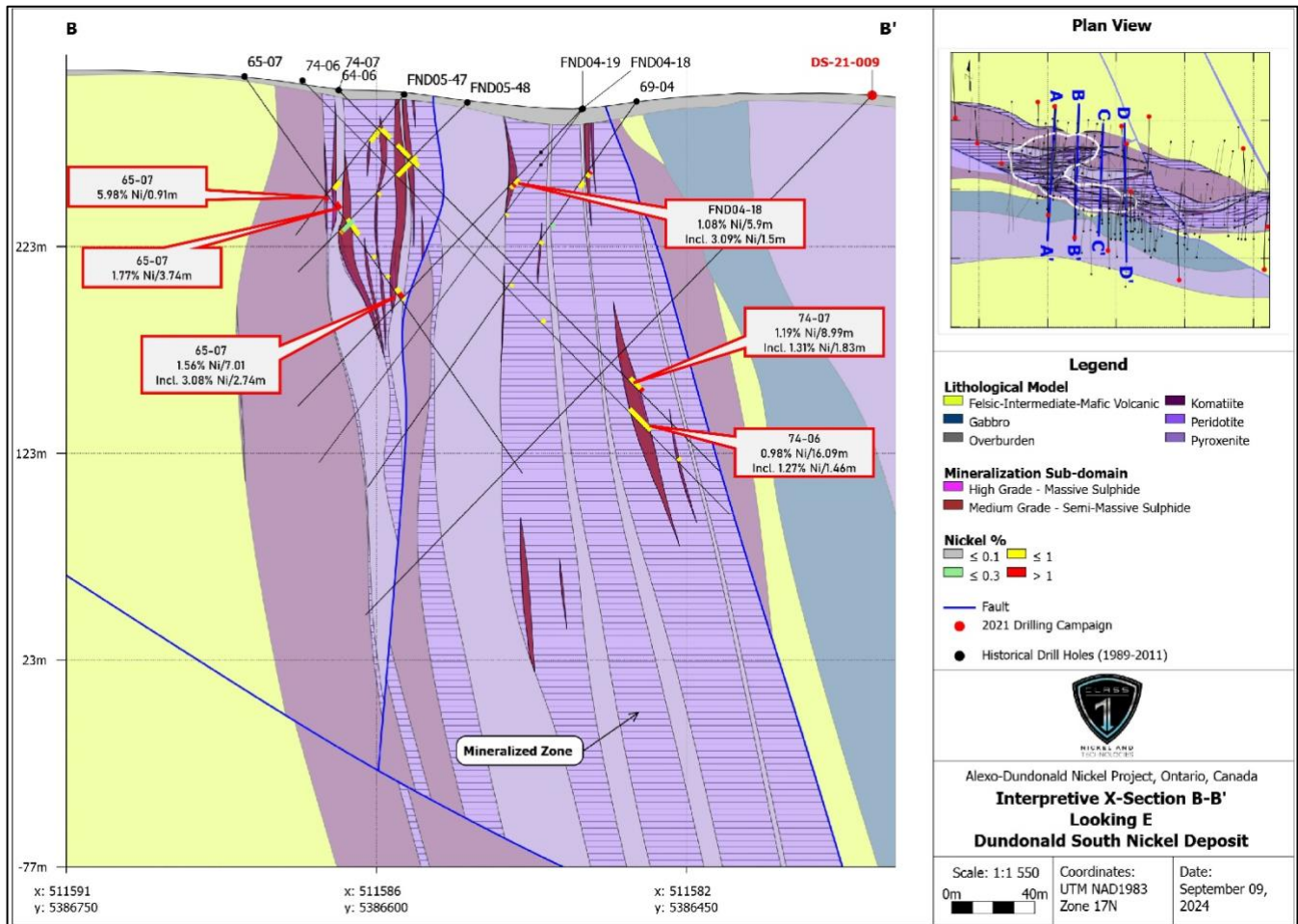


Figure 5. Cross-section (B-B' looking east) through the central Dundonald South Deposit showing the principal high-grade nickel zones. The newly modelled and interpreted geology, structures, and alteration provides numerous target areas for future drilling which will be aimed at building additional high-grade nickel tonnes. Reported intervals are not necessarily true widths and should be considered core lengths.

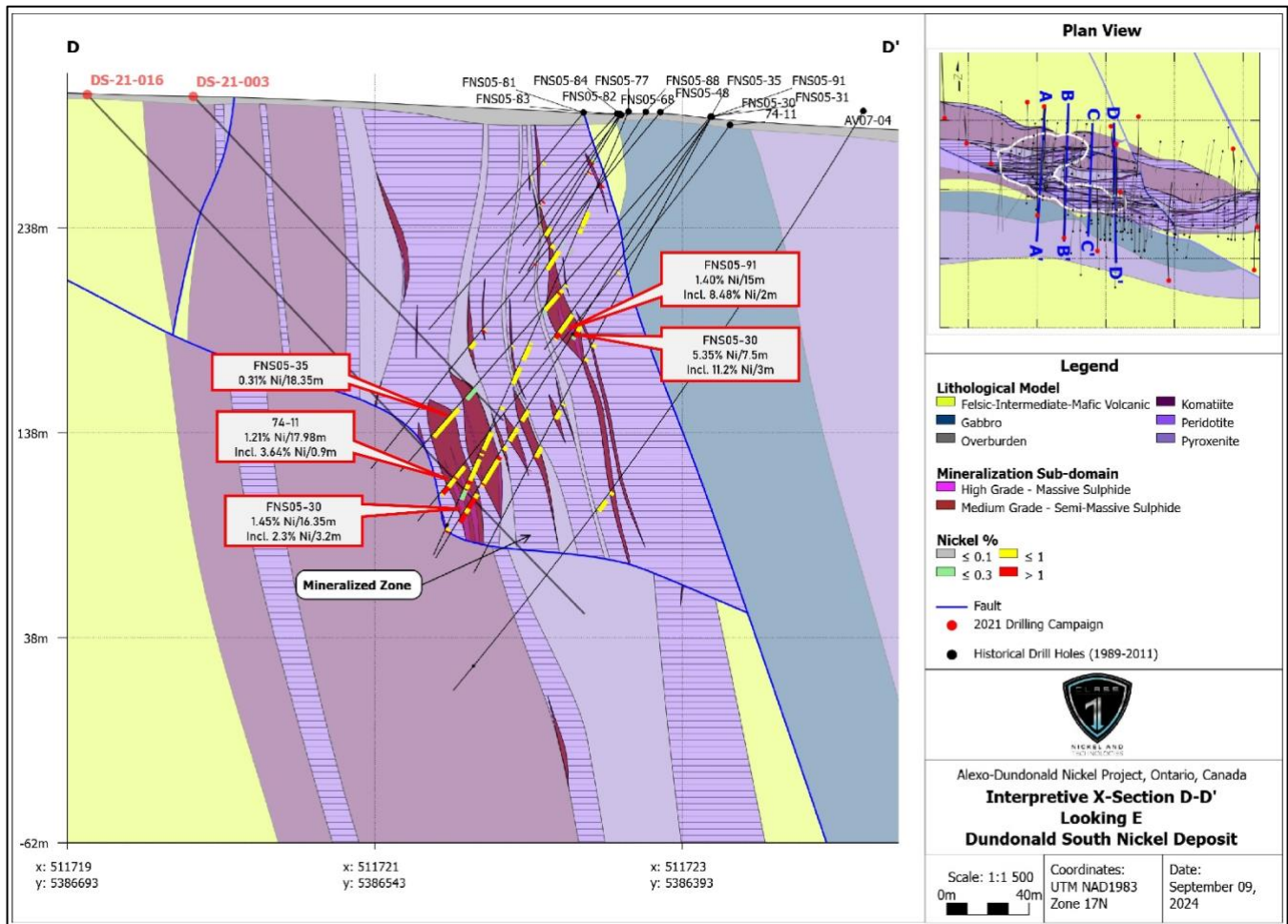


Figure 6. Cross-section (D-D' looking east) through the eastern Dundonald South Deposit showing the principal high-grade nickel zones. The newly modelled and interpreted geology, structures, and alteration provides numerous target areas for future drilling which will be aimed at building additional high-grade nickel tonnes. Reported intervals are not necessarily true widths and should be considered core lengths.

### Exploration Programs

The Company is planning an exploration program, mainly using the 2020 VTEM airborne survey results (see Figure 1) and new surface and borehole geophysics, to examine these new target areas at Dundonald South and to also target the as yet underexplored areas of the Project, which includes numerous nickel sulphide occurrences outside of the 4 known deposit areas.

In addition to the high-grade nickel sulphide (>1.0% Ni) potential we see in the 4 known Alexo-Dundonald deposits, immense potential exists to target and explore for large tonnage, low-grade komatiite-hosted deposits such as those being developed in the Timmins area by Canada Nickel Company Inc. (*i.e.*, Crawford, Deloro, and Reid projects), EV Nickel Inc. (CarLang A Deposit) and Aston Minerals Limited (Boomerang Project). The Company is currently planning a targeted diamond drilling program to outline this deposit type within the Alexo-Dundonald Project.

This two-pronged approach – develop “traditional” high-grade nickel sulphide resources and in parallel large-tonnage, low grade nickel deposits – brings together the best of both nickel deposit types which are actively and aggressively being explored for and developed within the Timmins Mining Camp.

## Highlights of the Alexo-Dundonald Nickel Sulphide Project:

- Four underpinning nickel deposits (Alexo North and South and Dundonald North and South) of which the Alexo North and Alexo South (aka Kelex) were small-scale past producers of nickel (*i.e.*, 1957; 2004-2005).
- **Indicated Resources of 614,442 tonnes at 0.63% Ni (0.68% NiEq) and Inferred Resources of 125,691 tonnes at 0.54% Ni (0.58% NiEq)** in the current (2024) combined mineral resource estimates for the Alexo South and Alexo North deposits (Table 1).
- **Indicated Resources of 832,000 tonnes at 1.06% Ni (Dundonald South) and Inferred Resources of 2.0M tonnes at 1.01% Ni (Dundonald South + North combined)** in the current (2020) mineral resource estimates for Dundonald South and North deposits (Table 2).
- Near to infrastructure including major provincial highways and roads, power and mining labour (*i.e.*, City of Timmins).
- Large Property covering about 19 km<sup>2</sup> over prospective geology (>16 km cumulative strike length of underexplored ultramafic-mafic rocks) and multiple underexplored Ni-Cu sulphide showings outside of the 4 known Ni sulphide deposits.
- Over 14 km of cumulative strike of underexplored ultramafic-mafic rocks that are host to the 4 known nickel deposits and several Ni-Cu-PGE showings.
- Recent (2020) high-resolution magnetic-electromagnetic (Mag-EM) VTEM survey which has been interpreted but has yet to be followed up on with ground truthing and drill testing of the AEM anomalies.
- Blue Heron Environmental, based in Timmins, Ontario, has been engaged to support and lead the company with necessary environmental work to maintain current permits and acquire new permits as potential future production is considered.
- An exploration program consisting of diamond drilling (Phase 2) and surface exploration (geological mapping and sampling and geophysics) is being planned.

The current Mineral Resource Estimates and supporting technical reports for the Alexo South and North nickel sulphide deposits (Table 1) were prepared by Simon Mortimer (P.Geo, FAIG) of Atticus and Scott Jobin-Bevans (P.Geo.) of Caracle, both Qualified Persons as defined by NI 43-101 Standards of Disclosure for Mineral Projects. These 2024 updated mineral resource estimates and technical reports are available on SEDAR+.

Table 1. Current (2024) Alexo North and Alexo South within-pit and out-of-pit Mineral Resource Estimates.

Deposit	Resource Category	Tonnage (t)	Grade					Contained Metal		
			Ni (%)	Cu (%)	Co (%)	NiEq (%)	NSR (C\$/t)	Ni (klbs)	Cu (klbs)	Co (klbs)
<b>Within-Pit (\$52.5/t NSR Cut-off)</b>										
Alexo North	Indicated	35,053	0.98	0.11	0.04	1.08	206	759	83	33
	Inferred	465	0.32	0.04	0.02	0.36	68	3	0	0
Alexo South	Indicated	275,047	0.58	0.02	0.02	0.62	123	3,493	133	133
	Inferred	0	0.00	0.00	0.00	0.00	0	0	0	0
<b>Total:</b>	Indicated	310,100	0.62	0.03	0.02	0.67	133	4,252	216	167
<b>Total:</b>	Inferred	465	0.32	0.04	0.02	0.36	68	3	0	0
<b>Out-of-Pit (C\$96/t NSR Cut-off)</b>										
Alexo North	Indicated	7,543	0.63	0.08	0.03	0.70	134	105	12	5

Deposit	Resource Category	Tonnage (t)	Grade					Contained Metal		
			Ni (%)	Cu (%)	Co (%)	NiEq (%)	NSR (C\$/t)	Ni (klbs)	Cu (klbs)	Co (klbs)
	Inferred	0	0.00	0.00	0.00	0.00	0	0	0	0
Alexo South	Indicated	296,799	0.65	0.03	0.02	0.69	139	4,240	190	157
	Inferred	125,226	0.54	0.03	0.02	0.58	116	1,502	75	52
<b>Total:</b>	Indicated	304,341	0.65	0.03	0.02	0.69	139	4,345	202	162
<b>Total:</b>	Inferred	125,226	0.54	0.03	0.02	0.58	116	1,502	75	52
<b>Combined Within-Pit and Out-of-Pit Resources</b>										
<b>Total:</b>	Indicated	614,442	0.63	0.03	0.02	0.68	136	8,597	418	329
<b>Total:</b>	Inferred	125,691	0.54	0.03	0.02	0.58	116	1,505	75	53

**Notes to Table 1 (Class 1 news releases 24 April and 9 July 2024):**

- 1) The independent Qualified Person for the MRE, as defined by NI 43-101, is Mr. Simon Mortimer (FAIG #4083) of Atticus Geoscience Consulting S.A.C., working with Caracle Creek International Consulting Inc. The effective date of the MRE is 19 April 2024.
- 2) Mineral Resources, which are not Mineral Reserves, do not have demonstrated economic viability.
- 3) The estimate of Mineral Resources may be materially affected by environmental, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues.
- 4) 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.
- 5) The Mineral Resources were estimated following the 2019 CIM Estimation of Mineral Resources & Mineral Reserves Best Practice Guidelines prepared by the CIM Mineral Resource & Mineral Reserve Committee and the 2014 CIM Definition Standards for Mineral Resources & Mineral Reserves prepared by the CIM Standing Committee on Reserve Definitions.
- 6) Geological and block models for the MRE used core assays (2,254 samples from 2021 drilling and 178 samples from 2024 in-fill core sampling) and data and information from 181 surface diamond drill holes (29 from Class 1 Nickel and 152 historical). The drill hole database was validated prior to resource estimation and QA/QC checks were made using industry-standard control charts for blanks, core duplicates and commercial certified reference material inserted into assay batches by Class 1 Nickel.
- 7) The block model was prepared using Micromine 2020. A 6 m x 6 m x 6 m block model was created, with sub blocks to 0.5 m x 0.5 m x 0.5 m. Drill composites of 1.0 m intervals were generated within the estimation domains, and subsequent grade estimation was carried out for Ni, Cu and Co using Ordinary Kriging interpolation method.
- 8) Grade estimation was validated by comparison of input and output statistics (Nearest Neighbour and Inverse Interpolation methods), swath plot analysis, and by visual inspection of the assay data, block model, and grade shells in cross-sections.
- 9) As a reference, the average estimated density value (specific gravity) within the mineralised domain is 2.89 g/cm<sup>3</sup> (t/m<sup>3</sup>).
- 10) Estimates have been rounded to 3 significant figures for Indicated resources and 2 significant figures for Inferred resources.
- 11) The historical open pit mined areas were removed from the MRE and the MRE considers a geological dilution of 5% and a mining recovery of 95%.
- 12) US\$ metal prices of \$8.00/lb Ni, \$3.25/lb Cu, \$13.00/lb Co were used in the NSR calculation with respective process recoveries of 85%, 70%, and 80%; gold, platinum and palladium are not considered in the current NSR calculation.
- 13) Within-Pit (pit constrained) Mineral Resource NSR cut-off considers processing, and G&A costs, applying a factor of 5% for mining dilution, that respectively combine for a total of  $((\$45.00 + \$5.00) * (1 + 5\%)) = C\$52.5/\text{tonne}$  processed.
- 14) Out-of-pit Mineral Resource (underground) NSR cut-off considers ore mining, processing, and G&A costs that respectively combine for a total of  $(\$46.00 + \$45.00 + \$5.00) = C\$96.0/\text{tonne}$  processed.
- 15) The out-of-pit Mineral Resource grade blocks were quantified above the \$96.0/t cut-off, below the constraining pit shell and within the constraining mineralized wireframes. Additionally, only groups of blocks that exhibited

continuity and reasonable potential stope geometry were included. All orphaned blocks and narrow strings of blocks were excluded. The long-hole stoping with backfill mining method was assumed for the out-of-pit (underground) MRE calculation.

16) The NSR calculation is as follows:  $NSR\ C\$/t = ((Ni\% \times 199.89) + (Cu\% \times 66.87) + (Co\% \times 305.71)) \times 95\%$ .

17) The NiEq% calculation is as follows:  $NiEq\% = (Ni\% \times 1) + (Cu\% \times 0.33) + (Co\% \times 1.53)$ .

The current Mineral Resource Estimates for the Dundonald South and North nickel sulphide deposits (Table 2) were prepared by Yungang Wu (P.Geol.) and Eugene Puritch (P.Eng., FEC, CET) of P&E Mining Consultants Inc, both Independent Qualified Persons as defined by NI 43-101 Standards of Disclosure for Mineral Projects. These 2020 mineral resource estimates and technical reports are available on SEDAR+.

Table 2. Current (2020) Dundonald South and North within-pit and out-of-pit Mineral Resource Estimates.

Deposit	NSR Cut-off (C\$/t)	Tonnage (k)	Ni (%)	Cu (%)	Co (%)	Au (g/t)	Pt (g/t)	Pd (g/t)	Contained Ni (Mlbs)	Contained Cu (Mlbs)	Contained Co (Mlbs)
Dundonald South Within-Pit Indicated	30	288.3	0.75	0.04	0.02	0.01	0.01	0.01	4.77	0.25	0.13
Dundonald South Out-of-Pit Indicated	90	544	1.23	0.03	0.02	0.01	0.03	0.05	14.75	0.36	0.24
<b>Total Indicated:</b>	<b>30+90</b>	<b>832.3</b>	<b>1.06</b>	<b>0.03</b>	<b>0.02</b>	<b>0.01</b>	<b>0.02</b>	<b>0.04</b>	<b>19.52</b>	<b>0.61</b>	<b>0.37</b>
Dundonald South Out-of-Pit Inferred	90	170.7	0.97	0.02	0.02	0.01	0.01	0.02	3.65	0.08	0.08
*Dundonald North Out-of-Pit Inferred	90	1821	1.01	0.03	0.02	0.01	0.01	0.01	40.55	1.2	0.8
<b>Total Inferred:</b>	<b>90</b>	<b>1,991.7</b>	<b>1.01</b>	<b>0.03</b>	<b>0.02</b>	<b>0.01</b>	<b>0.01</b>	<b>0.01</b>	<b>44.2</b>	<b>1.28</b>	<b>0.88</b>

\*to date, there has been no optimized pit shell modelled for Dundonald North

**Notes to Table 2 (after Stone et al., 2020):**

- 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 were estimated following the 2019 CIM Estimation of Mineral Resources & Mineral Reserves Best Practice Guidelines prepared by the CIM Mineral Resource & Mineral Reserve Committee and the 2014 CIM Definition Standards for Mineral Resources & Mineral Reserves prepared by the CIM Standing Committee on Reserve Definitions.
- 5) US\$ metal prices of \$7.35/lb Ni, \$3/lb Cu, \$20/lb Co, \$1,500/oz Au, \$900/oz Pt and \$1,650/oz Pd were used in the NSR calculation with respective process recoveries of 89%, 90%, 40%, 50%, 50% and 50%.
- 6) Pit constrained Mineral Resource NSR cut-off considers ore crushing, transport, processing and general



- 7) and administration (G&A) costs that respectively combine for a total of  $(\$2 + \$6 + \$20 + \$2) = \text{CAD}\$30/\text{tonne}$  processed.
- 8) Out-of-pit Mineral Resource NSR cut-off considers ore mining, crushing, transport, processing and G&A costs that respectively combine for a total of  $(\$58 + \$2 + \$6 + \$20 + \$4) = \text{CAD}\$90/\text{tonne}$  processed.
- 9) The out-of-pit Mineral Resource grade blocks were quantified above the  $\$90/\text{t}$  cut-off, below the constraining pit shell and within the constraining mineralized wireframes. Additionally, only groups of blocks that exhibited continuity and reasonable potential stope geometry were included. All orphaned blocks and narrow strings of blocks were excluded. The long-hole stoping with backfill mining method was assumed for the out-of-pit (underground) Mineral Resource Estimate calculation.

### **Qualified Person**

Technical information and data in this news release has been reviewed and approved by Dr. Scott Jobin-Bevans (P.Geol., PGO #0183), a geological consultant to the Company, and a Qualified Person under the definitions established by National Instrument 43-101.

### **About Class 1 Nickel**

**Class 1 Nickel and Technologies Limited (CSE: NICO | OTCQB: NICLF)** is a Mineral Resources Company focused on the exploration and development of its 100% owned komatiite-hosted nickel sulphide projects: the Alexo-Dundonald Project, near Timmins, Ontario (4 nickel sulphide deposits) and the Somanike Project, near Val-d'Or, Quebec (includes the historical Marbridge Ni-Cu Mine). Both projects comprise extensive property packages covering past-producing nickel mines, offering near-term production opportunity and excellent exploration upside.

Class 1's current focus is to advance the Alexo-Dundonald Project back into production and at the same time continue brownfield and greenfield exploration on its large property package to aggregate additional nickel resources. The A-D Project sits on a 14+ km strike-length, folded komatiite unit containing several nickel-copper-cobalt and PGE Mineral Resources plus numerous underexplored sulphide occurrences. Decades of successful capital expenditure and investment into the Project has resulted in the discovery and delineation of four main nickel Mineral Resources that occur along the folded komatiite unit. The A-D Project was previously mined (ca. 2005) via a direct shipping model, and the Company will soon commence a Preliminary Economic Assessment (PEA) study to determine the best path forward.

In addition, the Company also holds 100% interest in its River Valley PGE Project located about 65 km northeast of the City of Sudbury, the world's largest and longest operating nickel-copper-cobalt-PGE mining camp. See the Company's 13 December 2023 new release for additional information.

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For additional information please visit our website at [www.class1nickel.com](http://www.class1nickel.com) and our Twitter feed: [@Class1Nickel](https://twitter.com/Class1Nickel).

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*This news release contains forward-looking information which is not comprised of historical facts. Forward-looking information is characterized by words such as "plan", "expect", "project", "intend",*

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