

201 County Court Blvd., Suite 304 Brampton, Ontario L6W 4L2 Tel: 905-595-0575 Fax: 905-595-0578 www.peconsulting.ca

#### TECHNICAL REPORT AND UPDATED MINERAL RESOURCE ESTIMATE OF THE ALEX-DUNDONALD NICKEL PROJECT, CLERGUE AND DUNDONALD TOWNSHIPS, PORCUPINE MINING DIVISION, ONTARIO

### LONGITUDE 80°49' W AND LATITUDE 48°38' N UTM NAD83 ZONE 17N 513,460 m E AND 5,387,700 m N

## FOR CLASS 1 NICKEL AND TECHNOLOGIES LIMITED

## NI 43-101 & 43-101F1 TECHNICAL REPORT

William Stone, Ph.D., P.Geo. Yungang Wu, P.Geo. Jarita Barry, P.Geo. Eugene Puritch, P.Eng., FEC, CET D. Grant Feasby, P.Eng. David Burga, P.Geo. Antoine Yassa, P.Geo.

P&E Mining Consultants Inc. Report 389

Effective Date: December 1, 2020 Signing Date: December 17, 2020

## TABLE OF CONTENTS

IMPO	RTAN	Г NOTICE	1
1.0	SUM	MARY	2
	1.1	Property Description and Location	2
	1.2	Accessibility, Climate, Local Resources, Infrastructure and Physiography	2
	1.3	History	
	1.4	Geological Setting and Mineralization	3
		1.4.1 Geological Setting	3
		1.4.2 Mineralization	4
	1.5	Deposit Type	5
	1.6	Exploration	5
	1.7	Drilling	5
	1.8	Data Verification	
	1.9	Mineral Processing and Metallurgical Testing	
	1.10	Mineral Resource Estimate	
	1.11	Conclusions and Recommendations	9
2.0	INTR	ODUCTION AND TERMS OF REFERENCE	12
	2.1	Terms of Reference	12
	2.2	Site Visits	
		2.2.1 Alexo 2010, 2011	
		2.2.2 Dundonald 2020	
	2.3	Sources of Information	
	2.4	Units and Currency	15
3.0	RELL	ANCE ON OTHER EXPERTS	20
4.0	PROP	ERTY DESCRIPTION AND LOCATION	21
	4.1	Location	21
	4.2	Property Tenure	21
	4.3	Tenure Agreements and Encumbrances	
		4.3.1 Status of Exploration Expenditures	24
	4.4	Environmental and Permitting	24
		4.4.1 Environmental Liabilities	24
		4.4.2 Required Exploration Permits	25
		4.4.2.1 Exploration Plan	25
		4.4.2.2 Exploration Permit	26
		4.4.2.3 First Nation Consultations	
		4.4.2.4 Exploration on Mining Rights Only Mining Claims	27
	4.5	Other Significant Factors and Risks	27
5.0	ACCE	ESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND	
		IOGRAPHY	28
	5.1	Access	28
	5.2	Climate	28
	5.3	Infrastructure	28
	5.4	Physiography	28
6.0	HISTO	DRY	31
	6.1	Exploration History	

		6.1.1	Alexo North-Alexo South	31
		6.1.2	Dundonald South and Dundonald North	43
		6.1.3	Terminus Zinc-Copper Zone	47
	6.2	Historical	Resource Estimates	
		6.2.1	Alexo North and Alexo South Deposits	48
		6.2.2	Dundonald South Deposit	
	6.3	Previous 1	Mineral Resource Estimate	51
	6.4	Past Produ	uction	53
7.0	GEOI	LOGICAL S	SETTING AND MINERALIZATION	54
	7.1	Regional	Geology	54
	7.2	Property (	Geology	56
	7.3	Deposit G	eology	59
		7.3.1	Alexo North and Alexo South Nickel Deposits	59
		7.3.2	Dundonald North and Dundonald South Nickel Deposits	61
		7.3.3	Terminus Zinc-Copper Zone	
	7.4	Nickel Mi	ineralization	
		7.4.1	Alexo North and Alexo South Mineralization	
		7.4.2	Dundonald South and Dundonald North Mineralization	67
8.0	DEPC	SIT TYPE	S	72
9.0	EXPL	ORATION	r	75
	9.1	2020 Geo	physics	75
10.0	DRIL	LING	· ·	79
11.0	SAM	PLE PREPA	ARATION, ANALYSIS AND SECURITY	80
1110	11.1		reparation, Analysis and Security - Prior to 2010	
		11.1.1	Outokumpu ALX Series	
		11.1.2	Hucamp HUX LAX and LOX Series	
	11.2	Sample Pr	reparation, AnalysiS and Security – 2010 to 2011	
	11.3		on Sample Preparation Analysis and Security	
12.0	DATA		ATION	
	12.1		xo North and Alexo South Database Verification	
	12.2		xo North and Alexo South Database Verification	
	12.3		donald South Database Verification	
	12.4		donald North Database Verification	
	12.5	2010 P&E	E Site Visits and Independent Sampling	84
	12.6		E Site Visit and Independent Sampling	
	12.7		020 P&E Site Visit and Independent Sampling	
	12.8	-	r 2020 P&E Site Visit and Independent Sampling	
	12.9	-	S	
13.0	MINE	RAL PRO	CESSING AND METALLURGICAL TESTING	97
	13.1		talurgical Testing	
	13.2	•	ale Testing 2011	
		13.2.1	Chemical Analyses and Mineralogical Assessment	
		13.2.2	Comminution Testing	
		13.2.3	Flotation Test Results	
		13.2.4	Acid Rock Drainage (ARD) Tests	
			- ` `	

	13.3					•	-	Metallurgical	100
14.0									
	14.1		+						
		14.1.1							
		14.1.2 14.1.3							
		14.1.3		-					
		14.1.4							
		14.1.6		11 C					
		14.1.7	-						
		14.1.8	•	1 .					
		14.1.9		•					
		14.1.10			0				
		14.1.11							
		14.1.12							
	14.2	Dundonal	ld Deposit	s					120
		14.2.1	-						
		14.2.2	Database	e					120
		14.2.3							
		14.2.4	Rock Co	de De	terminati	on			121
		14.2.5	-						
		14.2.6							
		14.2.7	U	1 2					
		14.2.8		•					
		14.2.9			•				
		14.2.10							
		14.2.11						Cut-off	
		14.2.12							
	142	14.2.13 Min anal D							
150	14.3					•			
15.0									
16.0									
17.0									
18.0	PROJ	ECT INFR.	ASTRUC	ΓURE					146
19.0	MAR	KET STUE	DIES AND	CON	TRACTS	5			148
20.0	ENVI	RONMEN	TAL STU	DIES.	PERMI	TS, AND SO	OCIAL OR (	COMMUNITY	
	IMPA	CTS		•••••	•••••				149
	20.1	Mine Clo	sure Status	5					150
	20.2	Environm	nental Stud	lies an	d Permitt	ing			150
	20.3	Social and	d Commur	nity Re	equiremen	nts			151
21.0	CAPI	TAL AND	OPERAT	ING C	OSTS				153
22.0	ECON	JOMIC AN	ALYSIS .						154
23.0	ADJA	CENT PRO	OPERTIE	S					155
24.0									
25.0									
20.0				0010			•••••	••••••	157

26.0	RECOMMENDA	TIONS	160
27.0	REFERENCES		162
28.0	CERTIFICATES.		164
APPEN	NDIX A	ALEXO SURFACE DRILL HOLE PLAN	171
APPEN	NDIX B	ALEXO PROPERTY 3-D DOMAINS	173
APPEN	NDIX C	ALEXO PROPERTY LOG NORMAL HISTOGRAMS	175
APPEN	NDIX D	ALEXO PROPERTY VARIOGRAMS	182
APPEN	NDIX E	ALEXO PROPERTY NI BLOCK MODEL CROSS SECTIONS AND PLANS	185
APPEN	NDIX F	ALEXO PROPERTY NSR BLOCK MODEL CROSS SECTIONS AND PLANS	196
APPEN	NDIX G	ALEXO PROPERTY CLASSIFICATION BLOCK MODEL CROSS SECTIONS AND PLANS	
APPEN	NDIX H	ALEXO PROPERTY OPTIMIZED PIT SHELL	
APPEN		DUNDONALD SOUTH SURFACE DRILL HOLE PLAN	
APPEN	NDIX J	DUNDONALD SOUTH 3-D DOMAINS	
APPEN	NDIX K	DUNDONALD SOUTH LOG NORMAL HISTOGRAMS	224
APPEN	NDIX L	DUNDONALD SOUTH VARIOGRAMS	228
APPEN	NDIX M	DUNDONALD SOUTH NI BLOCK MODEL CROSS SECTIONS AND PLANS	232
APPEN	NDIX N	DUNDONALD SOUTH NSR BLOCK MODEL CROSS SECTIONS AND PLANS	244
APPEN	NDIX O	DUNDONALD SOUTH CLASSIFICATION BLOCK MODEL CROSS SECTIONS AND PLANS	256
APPEN	NDIX P	DUNDONALD SOUTH OPTIMIZED PIT SHELL	268
APPEN	NDIX Q	DUNDONALD NORTH SURFACE DRILL HOLE PLAN	270
APPEN	NDIX R	DUNDONALD NORTH 3-D DOMAINS	272
APPEN	NDIX S	DUNDONALD NORTH LOG NORMAL HISTOGRAMS	274
APPEN	NDIX T	DUNDONALD NORTH NI BLOCK MODEL CROSS SECTIONS AND PLANS	275
APPEN	NDIX U	DUNDONALD NORTH NSR BLOCK MODEL CROSS SECTIONS AND PLANS	285
APPEN	NDIX V	LAND TENURE RECORDS	

# LIST OF TABLES

Table 1.1 Updated Alexo-Dundonald Mineral Resource Estimate (1-9)	8
Table 1.2 Updated Alexo-Dundonald Mineral Resource Estimate	
Table 1.3 Recommended Exploration Program and Budget	
Table 2.1 Authors and Coauthors of the Technical Report	
Table 2.2 Terminology and Abbreviations (NI 43-101)	
Table 6.1 Previous Exploration at Alexo-Dundonald Project	34
Table 6.2 Significant Nickel Intersections from Previous Canadian Arrow Drilling at the	
Alexo-Dundonald Project	35
Table 6.3 Significant Nickel Intersections from 2004 to 2005 FNI Drilling at Dundonald	
South	45
Table 6.4       Puritch et al. (2010)       Historical Mineral Resource Estimate of Alexo And Kelex	
Deposits <sup>(1-4)</sup>	49
Table 6.5 Puritch et al. (2012) Historical Mineral Resource Estimate of Alexo and Kelex	
Deposits (1-4)	50
Table 6.6 Harron (2009) Historical Inferred Mineral Resource Estimate of Dundonald South	
Deposit	51
Table 6.7 Previous Mineral Resource Estimate of the Alexo And Kelex Deposits (1-6)	52
Table 13.1 Alexo South Composite Head Sample Analyses	97
Table 13.2 Rougher Flotation Recovery Results for Alexo South Composite With Silicate	
Depressant Montcalm Flowsheet	98
Table 13.3 Rougher Flotation Recovery Results for Alexo South Composite Without	
Silicate Depressant Montcalm Flowsheet	99
Table 13.4 Open Circuit Cleaner Results For Alexo South Composite Using Montcalm	
Flowsheet	00
Table 13.5 Open Circuit Cleaner Results for Kelex Composite Using Strathcona Flowsheet 1	
Table 14.1 Alexo Statistics of Constrained Raw Assays	
Table 14.2 Alexo South Capping Values	
Table 14.3 Alexo South Basic Statistics of Capped Assays    1	
Table 14.4 Alexo Composite Basic Statistics	
Table 14.5 Alexo Deposits Block Model Definition 1	
Table 14.6 Alexo Block Model Interpolation Parameters 1	
Table 14.7 Alexo Deposits Mineral Resource Estimate (1-6)       1	
Table 14.8 Alexo Deposits Average Grade Comparison of Assays, Composites and Block	
Model	
Table 14.9 Alexo Deposits Volume Comparison of Block Model with Geometric Solids 1	
Table 14.10 Dundonald Deposits Basic Statistics of All Raw Assays 1	
Table 14.11 Dundonald Domain Rock Codes and Geometric Volume	
Table 14.12 Dundonald Statistics of The Constrained Raw Assays 1	
Table 14.13 Dundonald Basic Statistics of Composites and Lengths 1	
Table 14.14 Dundonald Ni Capping Values	
Table 14.15 Dundonald Basic Statistics of Capped Composites       1	
Table 14.16 Dundonald Deposits Block Model Definitions	
Table 14.17 Dundonald Block Model Interpolation Parameters       1	
Table 14.18       Dundonald Deposits Mineral Resource Estimate (1-5)         1	32
Table 14.19 Dundonald Average Grade Comparison of Composites and Block Models 1	
Table 14.20 Dundonald Volume Comparison of Block Model with Geometric Solids	

Table 14.21 Alexo and Dundonald Indicated Mineral Resource Estimates Summary	<sup>1-5)</sup> 140
Table 14.22 Alexo and Dundonald Inferred Mineral Resource Estimates Summary (1-	<sup>.5)</sup> 142
Table 26.1 Recommended Exploration Budget	161

## LIST OF FIGURES

Figure 4.1	Location of the Alexo-Dundonald Property Near Timmins, Ontario	21
Figure 4.2	Alexo-Dundonald Property Mineral Tenure and Mineral Resource	
e	Locations	22
Figure 5.1	Access and Infrastructure Setting of the Alexo-Dundonald Project	
Figure 5.2	Physiography of the Alexo-Dundonald Property	
Figure 6.1	Alexo and Dundonald Projects – Location and Historical Land Tenure	
Figure 6.2	Location of the 2004–2005 Canadian Arrow Drill Holes on the Alexo North	
C	Deposit	39
Figure 6.3	Location of the 2004–2005 Canadian Arrow Drill Holes on the Alexo South	
C	Deposit	40
Figure 6.4	Location of the 2010–2011 Canadian Arrow Drill Holes on the Alexo South	
C	Deposit	41
Figure 6.5	Location of the Dundonald South and Dundonald North Nickel Deposits	
C	and the Terminus Cu-Zn Zone	44
Figure 7.1	Regional Geological Setting of the Alexo-Dundonald Project Area in the	
C	Abitibi Subprovince, Ontario	55
Figure 7.2	Property Scale Geological Map of the Alexo-Dundonald Project Area	
Figure 7.3	Cross Section Projection Through the Alexo North Deposit	
Figure 7.4	Plan View of the Dundonald South Deposit	
Figure 7.5	Cross Section Projection 511,515 m E Through Dundonald South, Looking	
0	East	63
Figure 7.6	Longitudinal Projection Through the Dundonald North deposit	
Figure 7.7	Longitudinal Projection Through the Alexo South Deposit	
Figure 7.8	Longitudinal Projection of the Dundonald South A Zone	
Figure 7.9	Longitudinal Projection Through the Dundonald South F Zone	
Figure 7.10	Longitudinal Projection Through the Dundonald South G Zone	
Figure 8.1	Komatiite Flow Facies and Prospective Environments for Nickel-Copper-	
0	Cobalt Sulphide Formation.	73
Figure 9.1	Plan View of the Alexo-Dundonald Property Showing the A-O VTEM <sup>TM</sup>	
C	Anomalies and the Four Known Nickel Sulphide Deposits on Airborne	
	Magnetics Image	77
Figure 9.2	Plan View Showing the Four Priority 1 VTEM <sup>TM</sup> Anomalies on Interpreted	
8	Geology and the Four Known Nickel Sulphide Deposits	78
Figure 12.1	2010 Site Visits 1 and 2 Results for Nickel	
Figure 12.2	2010 Site Visits 1 and 2 Results for Copper	
Figure 12.3	2010 Site Visits 1 and 2 Results for Cobalt	
Figure 12.4	2010 Site Visits 1 and 2 Results for Gold	
Figure 12.5	2010 Site Visits 1 and 2 Results for Palladium	
Figure 12.6	2010 Site Visits 1 and 2 Results for Platinum	
Figure 12.7	2011 Site Visit Results for Nickel	
Figure 12.8	2011 Site Visit Results for Copper	
Figure 12.9	2011 Site Visit Results for Cobalt	
Figure 12.10	2011 Site Visit Results for Gold	
Figure 12.11	2011 Site Visit Results for Palladium	
Figure 12.12	August 2020 Site Visit Results for Nickel	
Figure 12.13	August 2020 Site Visit Results for Copper	
8	<i>c rr</i>	

August 2020 Site Visit Results for Cobalt	92
August 2020 Site Visit Results for Gold	93
August 2020 Site Visit Results for Palladium	93
August 2020 Site Visit Results for Platinum	94
September 2020 Site Visit Results for Nickel	95
September 2020 Site Visit Results for Copper	95
September 2020 Site Visit Results for Cobalt	96
Alexo Deposits Ni Grade-Tonnage Curve for ID <sup>2</sup> and NN Interpolation	. 116
Alexo Deposits Ni Grade Swath Easting Plot	. 117
Alexo Deposits Ni Grade Swath Northing Plot	
Alexo Deposits Ni Grade Swath Elevation Plot	. 119
Dundonald South and North Ni Grade-Tonnage Curve for ID <sup>2</sup> and NN	[
Interpolation	. 134
Dundonald South and North Ni Grade Swath Easting Plot	. 136
Dundonald South and North Ni Grade Swath Northing Plot	. 137
Dundonald South and North Ni Grade Swath Elevation Plot	. 138
Location of Historical Infrastructure at Alexo North Mine Site	. 147
Alexo North and Alexo South Closed-Out Mine Sites	. 149
Flooded Alexo North Pit	. 150
	August 2020 Site Visit Results for Gold August 2020 Site Visit Results for Palladium August 2020 Site Visit Results for Platinum September 2020 Site Visit Results for Nickel September 2020 Site Visit Results for Copper

#### **IMPORTANT NOTICE**

This Technical Report was prepared as a National Instrument 43-101 Technical Report, in accordance with Form 43-101F1, for Class 1 Nickel and Technologies Limited ("C1N") by P&E Mining Consultants Inc. ("P&E"). The quality of information, conclusions and estimates contained herein is consistent with the level of effort involved in P&E's services and based on:

- i) information available at the time of preparation;
- ii) data supplied by outside sources; and
- iii) the assumptions, conditions, and qualifications set forth in this Technical Report, which is intended to be used by C1N, subject to the terms and conditions of its contract with P&E. This contract permits C1N to file this report as a Technical Report with Canadian Securities Regulatory Authorities pursuant to National Instrument 43-101, Standards of Disclosure for Mineral Projects. Any other use of this Technical Report by any third party is at that party's sole risk.

#### 1.0 SUMMARY

#### **1.1 PROPERTY DESCRIPTION AND LOCATION**

The Alexo-Dundonald Property is located approximately 45 km northeast of the City of Timmins, northeastern Ontario, Canada. The Property consists of 30 patented claims, 14 leased claims, 21 single cell mining claims and five boundary cell mining claims, which collectively cover an area totalling approximately 1961 ha. As of the effective date of this Technical Report, all the Property claims are in good standing.

The claims are held by Legendary Ore Mining Corporation ("Legendary"). 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 Property comprising the Alexo-Dundonald Project ("the Project"), subject to tenure agreements and royalty agreements.

# **1.2** ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

The Property is located within 2 km of Highway 67, a paved road that connects Highway 101 from Timmins to Highway 11. The Property area itself is accessible via gravel roads and cut trails. Regional powerlines are located <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.

The Timmins area has cold winters and warm summers. Average daily temperatures vary from -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. Mineral exploration can be conducted year-round. Swampy areas and lakes/ponds are best accessed for drilling and ground geophysical surveys during the winter. Mines in the region operate year-round with supporting infrastructure.

The full range of equipment, supplies and services required for any mining development is available in the City of Timmins, 45 km southwest of the Property. Timmins 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 from northeast of Timmins to close proximity to the Project. Mineral processing facilities are located nearby at the Kidd Creek and Redstone processing plants.

The Property area comprises glaciated terrain with stream, lake and swamp filled valleys separated by low-level ridges and platform topographic highs of either bedrock foundation or eskers. The Property has 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 forests. Much of the Project area has been recently logged. Outcrop exposure overall averages locally <5% and is 0% over many large areas.

Abundant water resources are present in the lakes, rivers, creeks, and ponds throughout the area. There is sufficient space on the Property to build a mine, processing plant and tailings facility and supporting infrastructure, if a mineable mineral deposit is delineated.

## 1.3 HISTORY

The majority of exploration in the last 30 years consisted of shallow drilling of the Alexo North (formerly Alexo), Alexo South (formerly Kelex), Dundonald South and Dundonald North formerly Dundeal) deposits for estimation of Mineral Resources. Most of the drill holes penetrated to <100 m vertical depth below surface on approximate 15 metre-spaced drill sections. There has only been limited regional geophysical surveys, and very little drilling outside the immediate proximity of the four Alexo-Dundonald Deposits. The bulk of the drilling was completed by Canadian Arrow Mines Ltd. ("Canadian Arrow") from 2004 to 2011 on the Alexo North and Alexo South Deposits and by First Nickel Inc. ("FNI") from 2004 to 2005 on the Dundonald North and South Deposits. C1N possesses all the drill core from those drill programs.

The Alexo North and Alexo South Deposits were 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 from Alexo North;
- 1943–1944: Mining of remnants and pillars from previous 1913–1919 mine workings; exact figures unknown from Alexo North; and
- 2004–2005: Open pit mining of 26,224 tonnes at 1.97% Ni, 0.20% Cu from Alexo North and 3,900 t at 1.68% Ni and 0.18% Cu from Alexo South.

The Dundonald South and Dundonald North Deposits have never been mined.

## 1.4 GEOLOGICAL SETTING AND MINERALIZATION

#### 1.4.1 Geological Setting

The Alexo-Dundonald Project area occurs within the Archean Abitibi Sub-Province of the Southern Superior Province. The 2.75–2.67 Ga "granite-greenstone" dominated Abitibi Sub-Province extends 700 km along the south-eastern edge of the Superior Craton.

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

- 1. Pre-2,750 Ma unnamed assemblage.
- 2. 2,750–2,735 Ma Pacaud Assemblage.
- 3. 2,734–2,724 Ma Deloro Assemblage.
- 4. 2,723–2,720 Ma Stoughton–Roquemaure Assemblage.

- 5. 2,719–2,711 Ma Kidd–Munro Assemblage.
- 6. 2,710–2,704 Ma Tisdale Assemblage.
- 7. 2,704–2,695 Ma Blake River Assemblage.

The Alexo-Dundonald Project area occurs within the Kidd-Munro Assemblage (2,719 Ma to 2,717 Ma), which is subdivided into lower and upper parts. The lower part of the Kidd-Munro Assemblage includes localized, regionally discontinuous depositional centres of predominantly intermediate to felsic calc-alkaline volcanic rocks. The upper part of the Assemblage (2,717 Ma to 2,711 Ma) consists of tholeiitic and komatiitic volcanic rocks with interflow graphitic meta-sedimentary rocks and localized felsic volcanic centres. The upper part of the Kidd-Munro Assemblage is regionally extensive and reflects the impact of widespread mantle plume-related magmatism on localized lower Kidd-Munro arc-magmatism volcanic centres.

The ultramafic rocks range in composition from komatiitic basalt to dunite. The komatiitic sequences contain multiple flows that range from several hundreds of metres to <2 m thick and have brecciated flow-tops, spinifex-textured zones, pyroxene and olivine orthocumulate, mesocumulate and adcumulate textured rocks. Thin layers of graphitic argillite occur between thin komatiitic flows in some areas. Basalt and pyroxenite flows altered to chlorite-tremolite mineral assemblages, whereas olivine-dominated flows altered to serpentine-magnetite mineral assemblages. Large accumulations of olivine mesocumulate to adcumulate rocks occur within the komatiitic sequence locally as prospective channelized flows within footwall embayments.

Structurally, the Alexo and Dundonald Deposits occur along the southern margin of the Dundonald dome structure, to the north of the Destor-Porcupine Fault Zone. The Alexo North Deposit occurs on the northeast arm of a large "Z"-shaped fold in the Kidd-Munro Assemblage, whereas the Dundonald South Deposit occurs on the southwest arm of the fold. The northeast trending fold has an apparent wavelength of 2.5 km and amplitude of 6 km.

The rocks have been metamorphosed to greenschist facies with minor isolated areas of prehnitepumpellyite 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.

## **1.4.2** Mineralization

The nickel sulphide deposits occur at approximately the same stratigraphic level where komatiitic flows overlie a sequence of calc-alkaline volcanic rocks with variable amounts of pyrite and pyrrhotite and <1 m thick interflow layers of black graphic argillite. The Alexo North and South Deposits consist 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. Massive to semi-massive sulphide lenses are distributed 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 Deposits consist of massive, veined and disseminated pyrrhotite and pentlandite with minor chalcopyrite.

The Dundonald North and Dundonald South Deposits are composed of many zones and pods of massive, net-textured and disseminated sulphide mineralization. Such mineralized zones are designated A to H in the Dundonald South Deposit. Here, the zones consist of 10 m to 20 m wide and 0.5 m to 10 m thick keels, or "shoots" of net-textured, semi-massive to minor massive sulphide in the basal layer of stacked channelized komatiite flows, surrounded by envelopes of overlying and flanking blebby and disseminated sulphide. The lateral extent of some zones is 100 m to 200 m in down-plunge extent, but several are small, isolated sulphide pods within the channelized flow sequence. The A Zone consists of vertical high-grade nickel shoots that are open below 260 m. The F Zone was traced in drilling for 200 m and contains two shallow westerly-plunging high-grade nickel shoots. 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.

## 1.5 **DEPOSIT TYPE**

Alexo North, Alexo South, Dundonald South and Dundonald North are komatiite-associated magmatic nickel sulphide deposits hosted in the Kidd-Munro Assemblage in the southern Abitibi Subprovince of Ontario. In terms of metal content, the Deposits are dominated by nickel, reflecting the komatiitic magma affinity of the host rocks.

The nickel sulphide deposits are interpreted to have formed from komatiite lava flows that melted and assimilated sulphidic material in the floor of lava channels. Incorporation of the sulphur into the hot, flowing komatiite lava leads to sulphide liquid separation and accumulation on the floor of the lava channel and the build-up of massive sulphide deposits.

## 1.6 **EXPLORATION**

A major exploration program has not been carried out on the Alexo-Dundonald Project since 2011 at Alexo and 2005 at Dundonald. However, C1N has carried out core re-logging, re-sampling, data compilation and geophysics review activities since May 2019 on the Alexo-Dundonald Project.

In addition, a state-of-the-art VTEM<sup>TM</sup> plus time-domain airborne electromagnetic survey was completed in October 2020 over the 20 km<sup>2</sup> square land package, the first modern geophysical survey of this kind over the Property. On completion of expert analysis and targeting, the Company will plan its near-term surface exploration program to include a diamond drilling program aimed at testing priority EM targets. In addition, the Company will plan step-out and expansion drilling programs to potentially increase the size of the current Mineral Resources and advance the Project toward an eventual Preliminary Economic Assessment ("PEA"), in order to examine the possibility of direct shipping nickel production.

# 1.7 DRILLING

Drilling has not been performed 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 of this Technical Report.

#### **1.8 DATA VERIFICATION**

For Alexo North and Alexo South, verification of assay data entry was performed by P&E on 737 assay intervals for Ni, Cu, Co, Au, Pt and Pd. 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 44% of the data to be used for the Mineral Resource Estimate and approximately 23% of the entire database.

For Dundonald South, assay data ranging from 2004 and 2005 were verified. Exactly 79% (1,683 out of 2,141 samples) of the constrained database was checked for nickel, copper and cobalt and 77% (140 out of 182) of the constrained database was checked for gold, palladium and platinum. Very few minor errors were encountered during the verification process, which were subsequently corrected.

Assay data ranging from the 1980s and 2004 through 2005 were verified for the Dundonald North database. Exactly 23% (64 out of 274 samples) of the constrained database was checked for nickel, copper and cobalt and 100% (11 out of 11) of the constrained database was checked for gold, palladium and platinum. No errors were encountered during the verification process.

Mr. Eugene Puritch P. Eng., and Mr. David Burga P. Geo., of P&E, conducted the first visit to the Alexo site on May 5, 2010, and collected nine samples by quarter sawing the half core remaining in the core box. The holes sampled were drilled in 2004. After being on site and discussing the Project with Canadian Arrow (project operator at the time), it was decided a second site visit was necessary for an extensive core re-sampling program. The decision was made to resample 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 Alexo on May 17 to 18, 2010. During Mr. Yassa's visit, 62 samples were collected by quarter sawing the half drill core remaining in the core box. The 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 the 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 from the first site visit back 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 transported them directly to AGAT. AGAT is accredited by the Standards Council of Canada ("SCC"), the Canadian Association for Laboratory Accreditation ("CALA") and SAI Global, and is ISO/IEC 17025:2017 accredited and ISO 9001:2015 certified. Nickel, copper and cobalt were analyzed using four-acid digest and AAS finish. Gold, platinum and palladium were analyzed using lead collection fire assay with ICP-OES finish.

Subsequently, Mr. Antoine Yassa, P. Geo., of P&E, visited the Alexo site on April 29, 2011, and collected nine samples by quarter sawing the half drill core remaining in the core box. The holes sampled were drilled in 2010 and 2011. Samples were selected through a range of grades from high to low. At no time were any officers or employees of Canadian Arrow notified 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 transported them directly to AGAT Laboratories in Mississauga. Nickel, copper and cobalt were analyzed using four-acid digest and AAS finish. Gold, platinum and palladium were analyzed using lead collection fire assay with ICP-OES finish.

Mr. Antoine Yassa, P. Geo., and Mr. Eugene Puritch, P.Eng., of P&E, visited the Dundonald South site on August 25, 2020, and Mr. Yassa collected 45 samples from ten drill holes for independent data verification. The samples were taken from holes drilled in 2004 and 2005. Samples were selected through a range of grades from high to low. At no time were any officers or employees of C1N notified as to the identification of samples to be selected. During the site visit, samples were tagged with unique sample numbers and bagged. Mr. Puritch delivered the samples directly to AGAT Laboratories in Mississauga. Nickel, copper and cobalt were analyzed using four-acid digest and ICP-MS finish. Nickel and copper results >10,000 ppm were also analyzed by sodium peroxide fusion with ICP-OES finish. Gold, platinum and palladium were analyzed using lead collection fire assay with ICP-OES finish.

Mr. Antoine Yassa, P. Geo., of P&E, visited the Dundonald North site on September 22, 2020, and collected 45 samples from eight drill holes for independent data verification. The holes selected for sampling were drilled in the 1980s and 2005. Samples were selected through a range of grades from high to low. At no time were any officers or employees of C1N 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 utilized Dicom, a commercial courier service, to deliver the samples to P&E's offices in Brampton and from there, the samples were taken directly to AGAT Laboratories in Mississauga by P&E. Nickel, copper and cobalt were analyzed using four-acid digest and ICP-MS finish. Nickel and copper results >10,000 ppm were also analyzed by sodium peroxide fusion with ICP-OES finish.

Considering that the independent data verification samples from the Alexo and Dundonald site visits were quarter-core, and therefore weighed less than the original half-core (i.e. difference in sample volume), and that the core duplicates cannot be expected to have excellent precision due to inherent geologic variability, the comparison between the original results and the P&E verification results are similar. Based upon the evaluation of P&E's multiple due diligence sampling and database verification, it is the opinion of the authors of this Technical Report that the data are robust and suitable for use in the current Mineral Resource Estimate.

## 1.9 MINERAL PROCESSING AND METALLURGICAL TESTING

Mineralogical and metallurgical testwork has not been conducted on the Alexo North and Alexo South Deposits in almost a decade, and never on the Dundonald North and Dundonald South Deposits. Historically, there was never any mineral processing on-site at Alexo. Small and larger bulk samples had been shipped off-site to Sudbury for testing and processing.

#### **1.10 MINERAL RESOURCE ESTIMATE**

The Alexo North, Alexo South, Dundonald South and Dundonald North Deposits collectively contain an updated total estimated Indicated Mineral Resource of 1.25 Mt with an average grade of 1.03% Ni and a total estimated Inferred Mineral Resource of 2.01 Mt with an average grade of 1.01% nickel (Table 1.1). Details of the current pit-constrained and out-of-pit Mineral Resources are provided in Table 1.2.

Table 1.1         Updated Alexo-Dundonald Mineral Resource Estimate (1-9)							
Classification	Tonnes (M)	Ni (%)	Cu (%)	Co (%)	Contained Ni (Mlbs)	Contained Cu (Mlbs)	Contained Co (Mlbs)
Indicated	1.25	0.99	0.04	0.02	27.35	1	0.66
Out-of-Pit Inferred	2.01	1.01	0.03	0.02	44.51	1.29	0.89

NI 43-101 disclosure:

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 Mineral Resource Estimate.

6) 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%

7) Pit constrained Mineral Resource NSR cut-off considers ore crushing, transport, processing and general and administration (G&A) costs that respectively combine for a total of (\$2 + \$6 + \$20 + \$2) = CAD\$30/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) = CAD\$90/tonne processed.

9) The out-of-pit Mineral Resource grade blocks were quantified above the \$90/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 longhole stoping with backfill mining method was assumed for the out-of-pit Mineral Resource Estimate calculation.

Table 1.2         Updated Alexo-Dundonald Mineral Resource Estimate									
Scenario	Classification	Cut-off NSR (C\$/t)	Tonnes (k)	Ni (%)	Ni (Mlb)	Cu (%)	Cu (Mlb)	Co (%)	Co (Mlb)
Pit Constrained	Indicated	30	593.4	0.8	10.22	0.04	0.53	0.03	0.34
Out-of-Pit	Indicated	90	661	1.2	17.13	0.03	0.47	0.02	0.32
Out-of-Pit	Inferred	90	2,007.5	1.01	44.51	0.03	1.29	0.02	0.89
Total	Indicated	30+90	1,254	0.99	27.35	0.04	1.00	0.02	0.66
	Inferred	90	2,008	1.01	44.51	0.03	1.29	0.02	0.89

The October 24, 2020 NI 43-101 compliant Updated Mineral Resource Estimate was prepared by Yungang Wu, P.Geo. 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*. The Updated Mineral Resource Estimate was done for pit constrained and out-of-pit nickel, copper, and cobalt Mineral Resources. The total Indicated Mineral Resource Estimate is based on NSR cut-off values of CDN\$30 per tonne for the pit constrained Mineral Resource and CDN\$90 per tonne for the out-of-pit Mineral Resource. The total Indicated Mineral Resource is 1.25 Mt at 0.99%, 0.04% Cu and 0.02% Co for a total of 27.35 Mlbs of contained nickel. An additional 2.01 Mt at 1.01% Ni, 0.03% Cu and 0.02% Co for a total of 44.51 Mlbs of contained nickel were calculated as the Inferred Mineral Resource.

## 1.11 CONCLUSIONS AND RECOMMENDATIONS

An NI 43-101 compliant Updated Mineral Resource Estimate was prepared by Yungang Wu, P.Geo. 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. The Alexo North, Alexo South, Dundonald South and Dundonald North Deposits collectively contain: 1) An updated total estimated Indicated Mineral Resource of 1.25 Mt with an average grade of 0.99% Ni; and 2) a total estimated Inferred Mineral Resource of 2.01 Mt with an average grade of 1.01% Ni

The Updated Mineral Resource Estimate was undertaken for pit constrained and out-of-pit nickel, copper, and cobalt Mineral Resources. The total Indicated Mineral Resource Estimate is based on NSR cut-off values of CDN\$30/t for the pit constrained Mineral Resources and CDN\$90/t for the out-of-pit Mineral Resources. The total Indicated Mineral Resource based on a Net Smelter Return (NSR) for the out-of-pit Mineral Resource is 1.25 Mt at 0.99%, 0.04% Cu and 0.02% Co for a total of 27.35 Mlbs of contained nickel. An additional 2.01 Mt at 1.01% Ni, 0.03% Cu and 0.02 Co for a total of 44.51 Mlbs of contained nickel were calculated as the Inferred Mineral Resource. Compared to the previous Mineral Resource Estimate reported in the NI 43-101 compliant Technical Report dated June 30, 2020, the total estimated Indicated Mineral Resource has increased by 119% and the Inferred Mineral Resource has increased by 2,800%.

The Alexo-Dundonald Project has exploration upside potential for discovery of extensional and additional magmatic nickel sulphide mineralization by C1N. Although there has been past mining and drilling activity on the Project, the effective depth of exploration from the previous drilling is generally about 100 m below surface in the vicinity of the known deposits. The majority of the Property remains untested or under-tested by drilling below that depth, and there is almost no drilling outside the known deposits. Prior to September 2020, the Project area had not been surveyed by modern airborne geophysical techniques.

A Versatile Time Domain Electromagnetic ("VTEM<sup>™</sup>") airborne survey was flown over the entire Property for C1N in September 2020, including the known Alexo-Dundonald Deposits and the favourable komatiitic peridotite unit. The aim of the survey was to provide the Company's technical team with data to map conductors of potential significance in subsurface areas that may be associated with magmatic semi-massive to massive Ni-Cu-Co (PGE) sulphides, to an initial depth below surface of approximately 300 m. It is recommended that targets from the airborne survey be followed-up using surface time-domain EM surveys and (or) drilling with borehole time-domain EM surveys, as appropriate, in future exploration programs.

The proposed exploration and development program for the Alexo-Dundonald Project is a two-phase program with a total budget of \$6M. Phases 1 (\$2M) and 2 (\$4M) should be completed before the end of 2021, in accordance with the underlying purchase agreements for the Alexo-Dundonald Properties. The proposed Phase 1 work includes compilation/evaluation of historical data, modelling and interpretation of the VTEM<sup>TM</sup> anomalies, follow-up ground geophysical surveys and a diamond drilling program to expand resources at the known deposits and advance Inferred to Indicated Resources. The Phase 2 work consists of drill testing the highest priority targets for potential new Mineral Resources.

Proposed expenditures are presented in Tables 1.3.

TABLE 1.3         Recommended Exploration Program and Budget						
Program	Activity	Proposed Expenditures (CDN\$)				
		Phase 1	Phase 2			
	Core drilling	1,500,000	2,500,000			
	Borehole/surface EM surveys	100,000	200,000			
	Miscellaneous Expenses (rentals, etc.)	50,000	100,000			
	Updated Mineral Resource Estimate	80,000	100,000			
	Mineralogical and Metallurgical Testing*		320,000			
	Mineralized Material Sorting		25,000			
	Community Consultations		100,000			
	Preliminary Economic Assessment		350,000			
Duciant Maintanana	Renewal fees/taxes	20,000	20,000			
Project Maintenance	-	-				
Subtotal	1,750,000	3,715,000				
Contingency (10%)	175,000	371,500				
Total		1,925,000	4,086,500			

Notes: \* Includes cost of drilling fresh core

#### 2.0 INTRODUCTION AND TERMS OF REFERENCE

#### 2.1 TERMS OF REFERENCE

This Technical Report was prepared by P&E Mining Consultants Inc. ("P&E") at the request of Mr. Benjamin H. Copper, President of Class 1 Nickel and Technologies Limited ("C1N" or the "Company"). C1N is a public, CSE listed company trading under the symbol "NICO", with its head office located at: 82 Richmond Street East, Toronto, ON M5C 1P1. This Technical Report has an effective date of December 1, 2020. There has been no material change to the Alexo-Dundonald Project (the "Project") between the effective date of this Technical Report and the signature date.

This Technical Report has been prepared to provide a fully compliant NI 43-101 Technical Report and Updated Mineral Resource Estimate of the existing mineralization at the Alexo-Dundonald Project (or the "Alexo-Dundonald Deposits" or the "Alexo-Dundonald Property"), located in the Province of Ontario, Canada. The Project is held 100% by C1N, who executed a purchase agreement for the Project with Legendary Ore Mining Corporation on September 24, 2019. Pursuant to the agreement, C1N acquired 100% interest in the Project and approximately 1,895 ha of property from Legendary. The Updated Mineral Resource Estimate reported herein is based on up-to-date drilling results and appropriate metal pricing, and is fully conformable to the "CIM Standards on Mineral Resources and Reserves – Definitions and Guidelines", as referred to in National Instrument ("NI") 43-101 and Form 43-101F, Standards of Disclosure for Mineral Projects.

C1N accepts that the qualifications, expertise, experience, competence and professional reputation of P&E's Principals and Associate Geologists and Engineers are appropriate and relevant for the preparation of this Technical Report. The Company also accepts that P&E's Principals and Associates are members of professional bodies that are appropriate and relevant for the preparation of this Technical Report. P&E understands that this Technical Report will support the public disclosure requirements of C1N and will be filed on SEDAR as required under NI 43-101 disclosure regulations.

#### 2.2 SITE VISITS

Since 2010, several site visits have been made separately to the Alexo and Dundonald areas of the Alexo-Dundonald Property.

#### 2.2.1 Alexo 2010, 2011

Mr. Eugene Puritch P. Eng. and Mr. David Burga P. Geo., of P&E and Qualified Persons under the terms of NI 43-101, conducted a site visit to the Alexo area of the Property on May 5, 2010. A data verification sampling program was conducted on-site (see Section 12). Nine verification samples from selected drill core intervals were taken from holes drilled in 2004 and submitted to AGAT Laboratories ("AGAT") in Mississauga, Ontario for analysis. Mr. Antoine Yassa, P. Geo., of P&E and a Qualified Person under the terms of NI 43-101, conducted a second visit to the Alexo area from May 17 to 18, 2010. A more extensive data verification sampling program was conducted on-site (see Section 12). Sixty-two additional verification samples from selected drill core intervals were taken from holes drilled in 1997, 2001 and 2004 and submitted to AGAT Laboratories ("AGAT") in Mississauga, Ontario for analysis.

Subsequently, Mr. Antoine Yassa, P. Geo., of P&E, visited the Alexo site on April 29, 2011, and collected nine samples by quarter sawing the half drill core remaining in the core box. The holes sampled were drilled in 2010 and 2011. Samples were selected through a range of grades from high to low. At no time were any officers or employees of Canadian Arrow notified 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 transported to the offices of P&E, who then delivered them directly to AGAT Laboratories in Mississauga. Nickel, copper and cobalt were analyzed using four-acid digest and AAS finish. Gold, platinum and palladium were analyzed using lead collection fire assay with ICP-OES finish.

## 2.2.2 Dundonald 2020

Mr. Antoine Yassa, P. Geo. and Mr. Eugene Puritch, P.Eng., of P&E and Qualified Persons under the terms of NI 43-101, conducted a site visit to the Dundonald South area of the Alexo-Dundonald Property on August 25, 2020. A data verification sampling program was conducted on-site (see Section 12). Mr. Yassa collected 45 samples from ten Dundonald South holes drilled in 2004-2005. The samples were delivered by Mr. Puritch directly to AGAT Laboratories in Mississauga, Ontario for analysis.

Mr. Antoine Yassa, P.Geo., of P&E and a Qualified Person under the terms of NI 43-101, conducted a site visit to the Dundonald North area of the Alexo-Dundonald Project on September 22, 2020. A data verification sampling program was conducted on-site (see Section 12). Confirmation samples from selected drill core intervals were taken by Mr. Yassa and submitted to AGAT Laboratories ("AGAT") in Mississauga, Ontario for analysis.

The Qualified Persons are not aware of any material changes to the Alexo-Dundonald Project since the Alexo and Dundonald site visits.

#### 2.3 SOURCES OF INFORMATION

P&E completed the scope of work largely based on information provided by C1N. This Technical 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 (Section 27) of this Technical Report. Several sections from reports authored by other consultants have been directly quoted or summarized in this Technical Report, and are cited where appropriate.

The authors of this Technical Report 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 (www.sedar.com):

- An NI 43-101 Technical Report dated June 30, 2020, prepared by CSA Global Pty Ltd., titled "Amended NI 43-101 Technical Report on the Alexo-Dundonald Nickel Project: Dundonald, Clergue, German and Stock Townships, Ontario, Canada" (Donaghy and Puritch, CSA Global, 2020).
- An NI 43-101 Technical Report dated August 10, 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).
- An NI 43-101 Technical Report dated November 3, 2010, prepared by P&E Mining Consultants Inc. for Canadian Arrow Mines Ltd, titled "Technical Report and Resource Estimate on the Alexo and Kelex Deposits, Alexo Property, Timmins Area, Ontario, Canada" (Puritch *et al.*, 2010).
- An NI 43-101 Technical Report dated January 30, 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 drilling has been carried out on the Project since the work documented by Harron (2009) on the Dundonald Deposits and by Puritch *et al.* (2012) on the Alexo Deposits. This Technical Report herein represents the second conjoined reporting of these two now amalgamated project areas (after Donaghy and Puritch, 2020).

P&E has undertaken its own review of the technical aspects contained in this Technical Report. Based on the drill hole and assay database provided by C1N, P&E has prepared an update of the Harron (2009) Mineral Resource Estimate for the Dundonald Deposits (Section 14 herein), which is reported with the Donaghy and Puritch (2020) update for the Alexo Deposits. P&E has made all reasonable endeavours to confirm the authenticity and completeness of the technical data on which this Technical Report is based.

Table 2.1 presents the authors and co-authors of each section of the Technical Report, who acting as Qualified Persons as defined by NI 43-101, take responsibility for those sections of the Technical Report as outlined in Section 28 "Certificate of Author" of this Technical Report. The authors acknowledge the helpful cooperation of C1N's management and consultants, who addressed all data and material requests and responded openly and helpfully to all questions.

Table 2.1           Authors and Coauthors of the Technical Report							
Qualified Person	Employer	Sections of Technical Report					
Mr. William Stone, Ph.D., P.Geo.	P&E Mining Consultants Inc.	2-8, 15-19, 21-24 and Co-author 1, 25, 26					
Mr. Yungang Wu, P.Geo.	P&E Mining Consultants Inc.	Co-author 1, 14, 25, 26					
Ms. Jarita Barry, P.Geo.	P&E Mining Consultants Inc.	Author 11 and Co-author 1, 12, 25, 26					
Mr. Eugene Puritch, P.Eng., FEC, CET	P&E Mining Consultants Inc.	Co-author 1, 12, 14, 25, 26					
Mr. D. Grant Feasby, P.Eng.	P&E Mining Consultants Inc.	13, 20 and Co-author 1, 25, 26					
Mr. David Burga, P.Geo.	P&E Mining Consultants Inc.	9, 10 and Co-author 1, 25, 26					
Mr. Antoine Yassa, P.Geo.	P&E Mining Consultants Inc.	Co-author 1, 12, 14, 25, 26					

## 2.4 UNITS AND CURRENCY

In this Technical Report, all currency amounts are stated in Canadian dollars ("\$") unless otherwise stated. At the time of this Technical Report the 24-month trailing average exchange rate between the US dollar and the Canadian dollar is 1 US = 1.33 CDN\$ or 1 CDN = 0.75 US\$.

Commodity prices are typically expressed in US dollars ("US\$") and will be so noted where appropriate. Quantities are generally stated in Système International d'Unités ("SI") metric units including metric tons ("tonnes", "t") and kilograms ("kg") for weight, kilometres ("km") or metres ("m") for distance, hectares ("ha") for area, grams ("g") and grams per tonne ("g/t") for metal grades. Platinum group metal ("PGM"), gold and silver grades may also be reported in parts per million ("ppm") or parts per billion ("ppb"). Copper metal values are reported in percentage ("%") and parts per billion ("ppb"). Quantities of PGM, gold and silver may also be reported in troy ounces ("oz"), and quantities of copper in avoirdupois pounds ("lb"). Abbreviations and terminology are summarized in Table 2.2.

Grid coordinates for maps are given in the UTM NAD 83 Zone 17N or as latitude/longitude, unless indicated otherwise.

TABLE 2.2         Terminology and Abbreviations (NI 43-101)				
Abbreviation Meaning				
" <b>\$</b> "	dollar(s)			
···0))	degree(s)			
"°С"	degrees Celsius			
<	less than			
>	greater than			
···0/0''	percent			
"3-D"	three-dimensional			
"AAS"	atomic absorption spectrometry			
"AEM"	airborne electromagnetic			
"Ag"	silver			
"AGAT"	AGAT Laboratories Ltd.			
"AgEq"	silver equivalency			
"AMAG"	aeromagnetic			
"amsl"	above mean sea level			
"ARD"	acid rock drainage			
"ARD/ML"	acid rock drainage and metal leaching			
"asl"	above sea level			
"Au"	gold			
"AVLF-EM"	azimuthal very low frequency–electromagnetic			
"°C"	degree Celsius			
"CAD\$"	Canadian Dollar			
"CALA"	Canadian Association for Laboratory Accreditation			
"Canadian Arrow"	Canadian Arrow Mines Ltd.			
"CIM"	Canadian Institute of Mining, Metallurgy, and Petroleum			
"C1N"	Class 1 Nickel and Technologies Limited			
"cm"	centimetre(s)			
"Company"	the Class 1 Nickel and Technologies Inc. company that the report is			
"Company"	written for			
"CSA"	Canadian Securities Administrators			
"Cu"	copper			
"\$M"	dollars, millions			
"ЕМ"	electromagnetic			
"Falconbridge"	Falconbridge Limited			
"FNI"	First Nickel Inc.			
"Ga"	Giga annum or billions of years			
"g"	gram			
"g/t"	grams per tonne			
"ha"	hectare(s)			
"HLEM"	horizontal loop electromagnetic survey			
"Hucamp"	Hucamp Mines Ltd.			

TABLE 2.2         Terminology and Abbreviations (NI 43-101)				
Abbreviation Meaning				
"ICP-OES"	inductively coupled plasma - optical emission spectrometry			
"ID"	identification			
"ID <sup>2</sup> "	inverse distance squared			
"ISO"	International Organization for Standardization			
"k"	thousand(s)			
"kg"	kilograms(s)			
"km"	kilometre(s)			
"L"	litre(s)			
"lb"	pound (weight)			
"Legendary"	Legendary Ore Mining Corporation			
"M"	million(s)			
"m"	metre(s)			
"m <sup>3</sup> "	cubic metre(s)			
"Ma"	millions of years			
"max."	maximum			
"MENDM"	Ontario Ministry of Energy, Northern Development and Mines			
"min."	minimum			
"ML"	mining lease			
"MLAS"	Mining Lands Administration System			
"mm"	millimetre			
"MOECC"	Ontario Ministry of Environment and Climate Change			
"MPH"	MPH Consulting Limited			
"m RL"	metres relative level			
"MS"	mass spectrometer			
"Mt"	mega tonne or million tonnes			
"NAD"	North American Datum			
"NE"	northeast			
"Ni"	nickel			
"NI"	National Instrument			
"NN"	nearest neighbour			
"Noranda"	Noranda Mines Limited			
"NSR"	net smelter return			
"NW"	northwest			
"OGS"	Ontario Geological Survey			
"OSC"	Ontario Securities Commission			
"oz"	ounce			
"Р&Е"	P&E Mining Consultants Inc.			
"Pb"	lead			
"PEA"	Preliminary Economic Assessment			

TABLE 2.2				
TERMINOLOGY AND ABBREVIATIONS (NI 43-101)				
Abbreviation	Meaning			
"PEM-SQUID"	Pulse EM-Squid magnetometer			
"P.Eng."	Professional Engineer			
"PGE" or "PGM"	platinum group element or platinum group metal			
"P.Geo."	Professional Geoscientist			
"Pn"	pentlandite			
"Ро"	pyrrhotite			
"Project"	Alexo-Dundonald Project			
"Property"	the Alexo-Dundonald Property that is the subject of this Technical Report			
"Q1, Q2, Q3, Q4"	first quarter, second quarter, third quarter, fourth quarter of the year			
"QA/QC"	quality assurance/quality control			
"SCC"	Standards Council of Canada			
"SE"	southeast			
"SEDAR"	System for Electronic Document Analysis and Retrieval			
"SGS"	SGS Canada Inc.			
"SW"	southwest			
"Swastika"	Swastika Laboratories Limited			
"t"	metric tonne(s)			
"Tartisan"	Tartisan Nickel Corp.			
"TDEM"	time-domain electromagnetics			
"Technical Report"	this NI 43-101 Technical Report			
"t/m <sup>3</sup> "	tonnes per cubic metre			
"tpd"	tonnes per day			
"Transition"	Transition Metals Corp.			
"US\$"	United States dollar(s)			
"UTM"	Universal Transverse Mercator grid system			
"VaniCom"	VaniCom Resources Ltd.			
"VLF"	very low frequency			
"VTEM <sup>TM</sup> "	Versatile Time Domain Electromagnetic			
"XPS"	Xtrata Process Support			

Table 2.3         Unit Measurement Abbreviations					
Abbreviation	Meaning	Abbreviation	Meaning		
μm	microns, micrometer	m <sup>3</sup> /s	cubic metre per second		
\$	dollar	m <sup>3</sup> /y	cubic metre per year		
\$/t	dollar per metric tonne	mØ	metre diameter		
%	percent sign	m/h	metre per hour		
% w/w	percent solid by weight	m/s	metre per second		
¢/kWh	cent per kilowatt hour	Mt	million tonnes		
0	degree	Mtpy	million tonnes per year		
°C	degree celsius	min	minute		
cm	centimetre	min/h	minute per hour		
d	day	mL	millilitre		
ft	feet	mm	millimetre		
GWh	Gigawatt hours	MV	medium voltage		
g/t	grams per tonne	MVA	mega volt-ampere		
h	hour	MW	megawatts		
ha	hectare	OZ	ounce (troy)		
hp	horsepower	Ра	Pascal		
k	kilo, thousands	pН	Measure of acidity		
kg	kilogram	ppb	part per billion		
kg/t	kilogram per metric tonne	ppm	part per million		
km	kilometer	S	second		
kPa	kilopascal	t or tonne	metric tonne		
kV	kilovolt	tpd	metric tonne per day		
kW	kilowatt	t/h	metric tonne per hour		
kWh	kilowatt-hour	t/h/m	metric tonne per hour per metre		
kWh/t	kilowatt-hour per metric tonne	t/h/m <sup>2</sup>	metric tonne per hour per square metre		
L	litre	t/m	metric tonne per month		
L/s	litres per second	t/m <sup>2</sup>	metric tonne per square metre		
lb	pound(s)	t/m <sup>3</sup>	metric tonne per cubic metre		
М	million	Т	short ton		
m	metre	tpy	metric tonnes per year		
$m^2$	square metre	V	volt		
m <sup>3</sup>	cubic metre	W	Watt		
m <sup>3</sup> /d	cubic metre per day	wt%	weight percent		
m <sup>3</sup> /h	cubic metre per hour	yr	year		

#### **3.0 RELIANCE ON OTHER EXPERTS**

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

Copies of the land tenure documents, operating licenses, permits, and work contracts were not reviewed. Information on land tenure was obtained from C1N. P&E has relied on tenure information from C1N and has not undertaken an independent detailed legal verification of title and ownership of the Alexo-Dundonald Project. P&E has not verified the legality of any underlying agreement(s) that may exist concerning the land tenure, or other agreement(s) between third parties, however, has relied on and considers it has a reasonable basis to rely upon C1N to have conducted the proper legal due diligence.

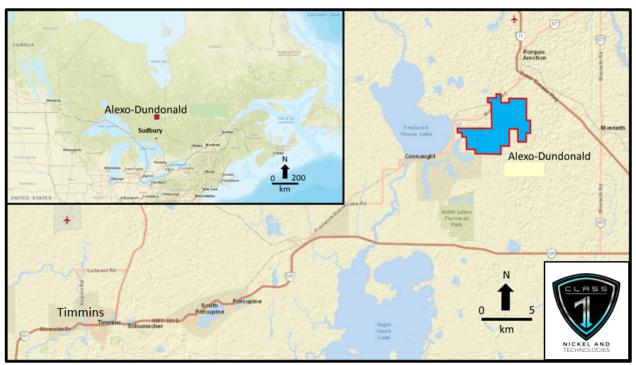
Select technical data, as noted in the Technical Report, were provided by C1N and P&E has relied on the integrity of such data. A draft copy of the Technical Report has been reviewed for factual errors by C1N, and P&E has relied on C1N's knowledge of the Property in this regard. All statements and opinions expressed in this document are given in good faith and in the belief that such statements and opinions are not false and misleading at the effective date of this Technical Report.

#### 4.0 PROPERTY DESCRIPTION AND LOCATION

#### 4.1 LOCATION

The Alexo-Dundonald Property is located approximately 45 km northeast of the City of Timmins, in the Townships of Clergue, Dundonald, German and Stock (Figure 4.1). The centre of the Property is located at approximately longitude 80°49' W and latitude 48°38' N and UTM NAD83 Zone 17N 513,460 m E and 5,387,700 m N.

#### FIGURE 4.1 LOCATION OF THE ALEXO-DUNDONALD PROPERTY NEAR TIMMINS, ONTARIO

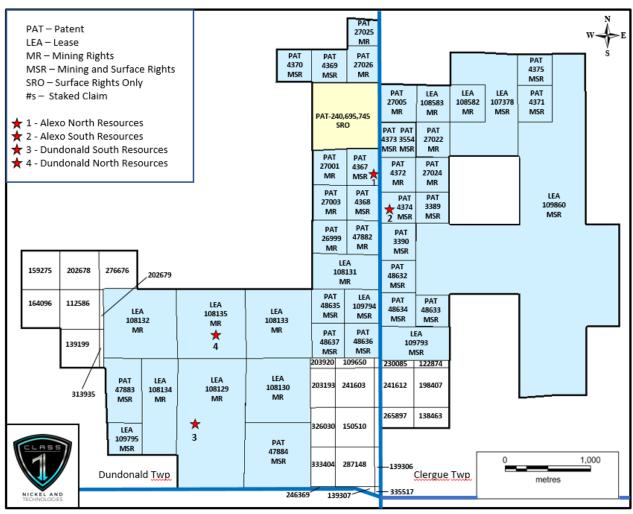


Source: Donaghy and Puritch (2020); P&E (2020)

#### 4.2 **PROPERTY TENURE**

The mineral tenure for the Alexo-Dundonald Project is shown in Figure 4.2 and tabulated in Appendix V. The mineral tenure was verified via the Ontario Ministry of Energy, Northern Development and Mines ("MENDM") Mining Lands Administration System ("MLAS") – online Map Viewer on November 24, 2020: https://www.mndm.gov.on.ca/en/mines-and-minerals/applications/mining-lands-administration-system-mlas-map-viewer.

#### FIGURE 4.2 ALEXO-DUNDONALD PROPERTY MINERAL TENURE AND MINERAL Resource Locations



Source: P&E (2020)

The Alexo-Dundonald Property consists of:

- 30 patented claims;
  - o 9 claims with mining rights only;
  - o 20 claims with mining and surface rights;
  - o 1 claim with surface rights only;
- 14 leased claims;
  - o 10 claims with mining rights only;
  - 4 claims with mining and surface rights;
- 21 single cell mining claims; and
- 5 boundary cell mining claims.

The claims are held by Legendary Ore Mining Corporation ("Legendary"). 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 Property comprising the Alexo-Dundonald Project, subject to tenure agreements and royalty agreements outlined in Section 4.3. The Alexo-Dundonald Property covers an area of approximately 1,961 ha.

In Ontario, tenure to a staked claim is maintained by a minimum expenditure of \$400 of eligible "assessment work" annually per 21.33 ha claim unit, or \$200 per partial claim unit (<21.33 ha), 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 a period of 21 years and 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 subject to annual property taxes payable to the Municipality of Iroquois Falls.

At the time of Donaghy and Puritch (2020), lease 107173 (which includes mining and surface rights 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) was in the process of being renewed by MENDM as lease LEA-109860. The renewal application for that Lease was submitted 10 April 2019. On completion of the renewal process, the lease received a new lease number and expiry date (normally 21 years), specially LEA-109860 and expiry date April 30, 2040. Leases LEA-107103, LEA-107105 and LEA-107108 were similarly renewed as leases LEA-109794, LEA-109793 and LEA-109795, respectively, with the new expiry dates listed in Table V.1 of Appendix V. As of the date of this Technical Report, the renewals have not been entered into the MLAS, but were confirmed verbally and in email correspondence on September 17, 2020 with the MENDM Mining Lands Administrator. On the other hand, leases L58444 and L58445 have been renewed in MLAS as LEA-108582 and LEA-108583, respectively with the expiry dates listed in Table V.1 of Appendix V. PAT 1281 appears in MLAS currently as 240695745.

C1N management warrants that all tax payments and rent payments 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 legal challenges to ownership of the lands.

## 4.3 TENURE AGREEMENTS AND ENCUMBRANCES

As announced on SEDAR on August 28, 2018, VaniCom Resources Ltd. ("VaniCom") (a private company headquartered in Perth, Western Australia) paid \$150,000 in cash, issued 1,750,000 shares of its common stock worth \$350,000 and must incur \$750,000 in exploration expenditures over a 36-month period from the date of the agreement to acquire a 100% interest in the Alexo Property from Tartisan Nickel Corp. ("Tartisan"). In the event that the expenditure commitment met prior the expiry date, Tartisan will have is not to the option to re-acquire the Property for a purchase price of \$1.00 within 30 days of the expiry date. In addition, Tartisan received a 0.50% net smelter return (NSR) royalty on any future production from the Project, which can be purchased by VaniCom for \$1.0M. Tartisan will also be entitled to receive a cash rebate from the Financial Assurance associated with the Reclamation Bond proceeds of up to approximately \$230,000, through a formal application process with the MENDM. A condition precedent on the agreement was an additional 1.5% NSR payable on minerals produced from the Property and 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-Dundonald tenements.

As also announced to SEDAR on August 28, 2018, VaniCom (through its recently acquired wholly owned subsidiary, Legendary) paid \$150,000, issued common shares worth \$350,000 and must incur \$750,000 in exploration expenditures over a 36-month period from the date of the agreement to acquire a 100% interest in the Dundonald Property from Transition Metals Corp. ("Transition"). In the event the expenditure commitment is not met prior to the expiry date, 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 September 24, 2019, C1N completed a business combination with Legendary, resulting in the reverse takeover by Legendary's shareholders.

## **4.3.1** Status of Exploration Expenditures

As of the effective date of this Technical Report, the accumulated total exploration expenditures incurred since May 2019 to the effective date of this Technical Report on the Alexo-Dundonald Project were \$1.082M (excluding HST). This total includes expenditures on the following exploration activities: drill core re-logging and re-sampling; review, modelling and interpretation of historical exploration data, including geophysical and drilling data; review, modelling and interpretation of the 2020 VTEM<sup>TM</sup> airborne geophysical survey; and calculation of the Mineral Resource Estimate described in Section 14 of this Technical Report.

# 4.4 ENVIRONMENTAL AND PERMITTING

## 4.4.1 Environmental Liabilities

A certified Closure Plan has been approved by the MENDM pursuant to the Mining Act in connection with the Alexo Property, location of the former Alexo and Kelex Mines. The Alexo Project Revised Production Closure Plan was prepared for Legendary and dated and approved by the MENDM on January 24, 2005 and amended and approved in March 2011.

As per correspondence dated October 21, 2019, the compliance section of the MENDM confirmed that 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 MENDM and the amount required for the remaining closure works as indicated in a letter provided to the MENDM by Tartisan representatives by email dated October 17, 2019, specifically:

- 1. Repairs to Revegetation of Waste Rock Pile at Alexo North. Projected cost \$7,000;
- 2. Increase the height of the Alexo South Pit Berm. Projected cost \$7,000;
- 3. Revegetate the Alexo South 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; and
- 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 (<\$68,530 held by the MENDM to cover the above works) was refunded to Tartisan. C1N management warrants that there are no other environmental liabilities on the Project.

## 4.4.2 **Required Exploration Permits**

C1N does not currently hold any exploration plans or permits for exploration work proposed in this Technical Report (see 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; and
- Other baseline data acquisition such as taking photos, measuring water quality, etc.

#### 4.4.2.1 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 m<sup>2</sup> within a 200-m radius; and
- Pitting and trenching (of rock), where the total volume of rock is between 1 m<sup>3</sup> and 3 m<sup>3</sup> 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 MENDM and have an opportunity to provide feedback before the proposed activities can be carried out.

## 4.4.2.2 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 m<sup>2</sup> and up to advanced exploration thresholds, within a 200 m radius; and
- Pitting and trenching (rock), where the total volume of rock is greater than 3 m<sup>3</sup> 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 MENDM. 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.

#### 4.4.2.3 First Nation Consultations

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

#### 4.4.2.4 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.

## 4.5 OTHER SIGNIFICANT FACTORS AND RISKS

To the extent known to the Qualified Person, there are no other significant factors and risks that may affect access, title, or the right or ability to perform work on the Alexo-Dundonald Property that have not been discussed in this Technical Report.

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

#### 5.1 ACCESS

The Property is located within 2 km of Highway 67, a paved road that connects Highway 101 to Highway 11 (Figure 5.1). The Property area is accessed via gravel roads and cut trails. Hydro-lines are located <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.

#### 5.2 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.

#### 5.3 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 from northeast of Timmins to close proximity to the Project. Mineral processing facilities are located nearby at the Kidd Creek and Redstone process plants (Figure 5.1).

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, process plant and tailings facility and supporting infrastructure if required should a mineable mineral deposit be delineated.

#### 5.4 PHYSIOGRAPHY

The Project area comprises recently glaciated terrain with stream, lake and swamp filled valleys separated by low-level ridges and platform topographic highs of either bedrock foundation or eskers (Figure 5.2). 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 locally averages <5% and is 0% over large areas.

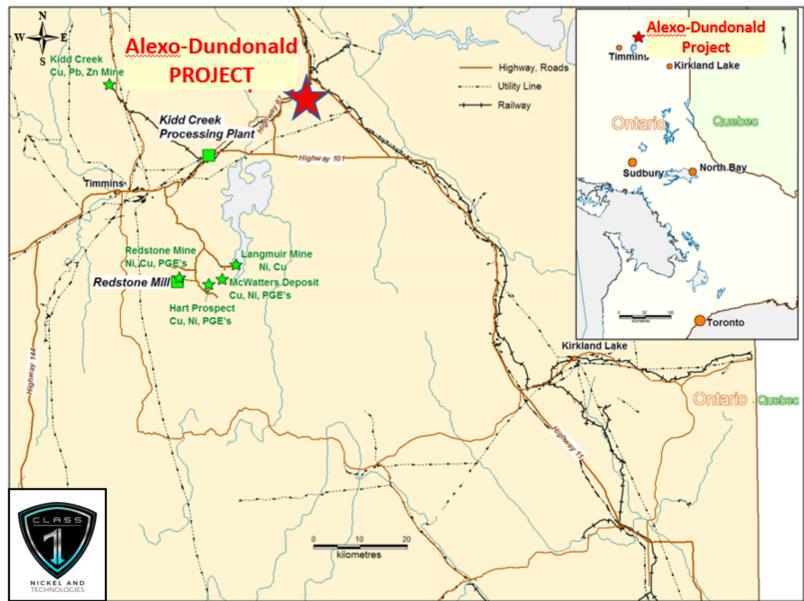


FIGURE 5.1 ACCESS AND INFRASTRUCTURE SETTING OF THE ALEXO-DUNDONALD PROJECT

*Source: P&E* (2010)

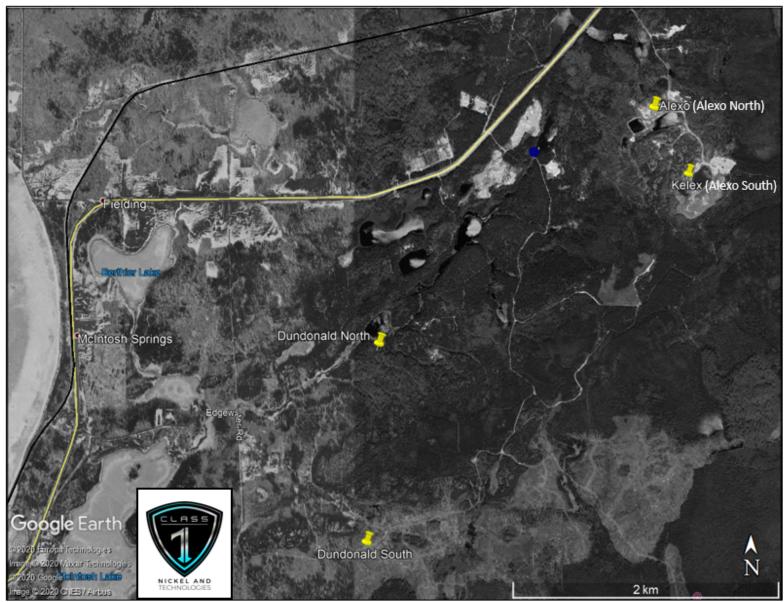


FIGURE 5.2 PHYSIOGRAPHY OF THE ALEXO-DUNDONALD PROPERTY

Source: P&E (2020)

#### 6.0 HISTORY

#### 6.1 EXPLORATION HISTORY

Prior to C1N consolidating the tenements under single ownership as the Alexo-Dundonald Project, the Project area was previously divided into the Alexo-Kelex Project and the Dundonald Project (Figure 6.1). With the consolidation, the Alexo and Kelex Mines have been renamed Alexo North and Alexo South, respectively. The Dundeal Zone has been renamed Dundonald North.

Previous exploration activity and results in the Alexo-Dundonald Project area (Table 6.1) have been extensively reviewed and documented in NI 43-101 technical reports prepared by Montgomery (2004), Harron (2009), and Puritch *et al.* (2010, 2012). Drilling has not been carried out on the Deposits since the work reported by Puritch *et al.* (2012) on the Alexo Deposits and Harron (2009) on the Dundonald Deposits. Significant drill hole intersections by previous operators (Falconbridge at Dundonald North in 1989; First Nickel ("FNI") at Dundonald South in 2004–2005; Canadian Arrow at Alexo North in 2004–2005 and 2010–2011) are summarized below as indications of nickel grade and continuity of mineralization typical of the Project (Table 6.2).

#### 6.1.1 Alexo North-Alexo South

The Alexo Mine Deposit (Alexo North) was discovered by Alexo-Kelso in 1907. The Alexo North Deposit was subsequently 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; and
- **2004–2005:** Open pit mining of 26,224 t at 1.97% Ni, 0.20% Cu from Alexo North and 3,900 t at 1.68% Ni and 0.18% Cu from Kelex (Alexo South).

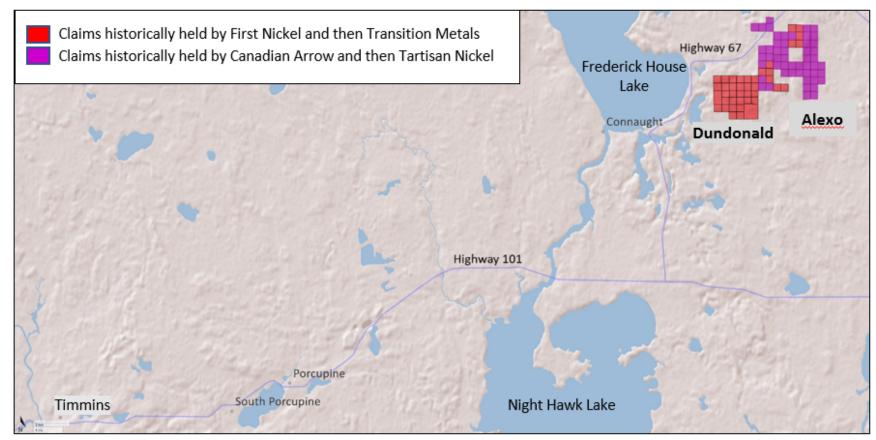
In 1952, the Property was purchased from Alexo Mining by Noranda Mines Limited ("Noranda"). Noranda drilled numerous diamond holes and completed a ground magnetometer survey in 1976. However, the survey results are unavailable.

The Ontario Geological Survey ("OGS") completed airborne EM and total field magnetic surveys in 1984 and 1988 over the general project area (OGS, 1984; 1988). 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 detected by the survey.

Outokumpu optioned the Alexo Property in 1996. Exploration work completed on the Project during 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.

# FIGURE 6.1 ALEXO AND DUNDONALD PROJECTS – LOCATION AND HISTORICAL LAND TENURE



*Source:* Donaghy and Puritch (2020)

	Table 6.1           Previous Exploration at Alexo-Dundonald Project									
Year(s)	Company	Area/Deposit	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	Dundonald North	Discovery of nickel sulphide							
1960–2000	Falconbridge Limited	Dundonald South, Dundonald North	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	Outokumpu	Alexo North, Alexo South	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 Alexo South Deposit							
2000–2001	Hucamp Mines Ltd	Alexo North, Alexo South, Dundonald North, Dundonald	Drilling 42 holes, stripping and sampling of surface showings. Downhole pulse EM surveys on 10 holes drilled. Downhole mise-a-la- masse							

Table 6.1           Previous Exploration at Alexo-Dundonald Project									
Year(s)	Company	Area/Deposit	Description						
		South							
2004–2005	First Nickel Inc.	Dundonald South	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 North, Alexo South	Mining, diamond drilling (132 holes totalling 12,710.2 m), line cutting, high-resolution magnetometer surveys, PEM-SQUID survey						
2010–2011	Canadian Arrow	Alexo North, Alexo South	Drilling 17 holes						

SIGNIFICANT	TABLE 6.2         SIGNIFICANT NICKEL INTERSECTIONS FROM PREVIOUS CANADIAN ARROW DRILLING AT         THE ALEXO-DUNDONALD PROJECT											
Hole ID	Year	From (m)	To (m)	Downhole Width (m)	Ni (%)	Deposit/Zone						
LAX-01-04	2004	40.4	42.8	2.4	1.7	Alexo North						
LAX-05-04	2004	64.6	69.5	4.9	2.3	Alexo North						
Including	2004	64.6	65.5	0.9	6.5	Alexo North						
LAX-08-04	2004	75.9	77.5	1.6	1	Alexo North						
LAX-09-04	2004	82.9	84.7	1.8	1.7	Alexo North						
LAX-13-04	2004	62.2	66.7	4.5	2.2	Alexo North						
Including	2004	62.8	64.1	1.3	4.7	Alexo North						
LAX-24-04	2004	72.6	72.8	0.2	2.13	Alexo North - East Zone						
LAX-26-04	2004	130.5	131	0.5	3.79	Alexo North - East Zone						
LOX-01-04	2004	34	35.9	1.9	4.1	Alexo South - West Zone						
LOX-03-04	2004	31.2	32.2	1	2.74	Alexo South - West Zone						
LOX-08-04	2004	38.7	40.6	1.9	2.79	Alexo South - West Zone						
Including	2004	39.9	40.6	0.7	7.8	Alexo South - West Zone						
LOX-47-04	2004	58.9	80	21.1	1.3	Alexo South - West Zone						
Including	2004	58.9	61.9	3	5.67	Alexo South - West Zone						
LOX-48-04	2004	72.3	83.2	10.9	0.5	Alexo South - West Zone						
LOX-49-04	2004	74.2	92.4	18.2	1.4	Alexo South - West Zone						

SIGNIFICANT	TABLE 6.2         SIGNIFICANT NICKEL INTERSECTIONS FROM PREVIOUS CANADIAN ARROW DRILLING AT THE ALEXO-DUNDONALD PROJECT											
Hole ID	Year	From (m)	To (m)	Downhole Width (m)	Ni (%)	Deposit/Zone						
Including	2004	74.2	78.9	4.7	3.6	Alexo South - West Zone						
LOX-52-04	2004	82.9	87.9	5	1	Alexo South - West Zone						
Including	2004	82.9	83.5	0.6	5.3	Alexo South - West Zone						
LOX-53-04	2004	125.7	144	18.3	0.8	Alexo South - West Zone						
Including	2004	127	136	8.5	1.1	Alexo South - West Zone						
LOX-56-04	2004	133.3	158	24.7	0.9	Alexo South - West Zone						
Including	2004	135.3	139	3.2	1.2	Alexo South - West Zone						
And	2004	149.6	157	7.5	1.1	Alexo South - West Zone						
LOX-56-04	2004	164.4	166	1.1	1.1	Alexo South - West Zone						
2010-01	2010	78	91	13	0.55	Alexo South - West Zone						
Including	2010	79.3	81	1.7	1.34	Alexo South - West Zone						
2010-02	2010	95	120	24.5	2.79	Alexo South - West Zone						
Including	2010	97.3	102	4.7	1.22	Alexo South - West Zone						
2010-03	2010	134.3	151	32.3	0.45	Alexo South - West Zone						
Including	2010	137	141	4	0.63	Alexo South - West Zone						
2010-10	2010	218	221	3	0.48	Alexo South - West Zone						
2010-11	2010	249	253	3.7	1.37	Alexo South - West Zone						
Including	2010	249	249	0.3	2.51	Alexo South - West Zone						
And	2010	252.1	253	0.6	5.89	Alexo South - West Zone						
2010-12	2010	247.2	256	1.3	0.48	Alexo South - West Zone						
2011-13	2011	225	228	3	0.61	Alexo South - West Zone						
2011-15	2011	155.3	182	26.9	1.91	Alexo South - West Zone						
LOX-12-04	2004	28.6	29.8	1.2	2.56	Alexo South - Central West Zone						
LOX-13-04	2004	32.2	33	0.8	3.59	Alexo South - Central West Zone						
LOX-14-04	2004	31.9	41.5	9.6	2.38	Alexo South - Central West Zone						
Including	2004	38	41.5	3.5	5.35	Alexo South - Central West Zone						
Including	2004	39.5	40.5	1	7.97	Alexo South - Central West Zone						
LOX-15-04	2004	44.4	45.5	1.1	2.47	Alexo South - Central West Zone						
LOX-16-04	2004	47.2	48.9	1.7	1.9	Alexo South - Central West Zone						
LOX-17-04	2004	41.2	46.2	5	2	Alexo South - Central West Zone						
Including	2004	44.1	46.2	2.1	3.4	Alexo South - Central West Zone						
LOX-18-04	2004	33.6	37.7	4.1	3.7	Alexo South - Central West Zone						
Including	2004	34.6	37.7	3.1	4.5	Alexo South - Central West Zone						
LOX-19-04	2004	31.1	32.8	1.7	3.3	Alexo South - Central West Zone						

SIGNIFICANT	TABLE 6.2         SIGNIFICANT NICKEL INTERSECTIONS FROM PREVIOUS CANADIAN ARROW DRILLING AT         THE ALEXO-DUNDONALD PROJECT										
Hole ID	Year	From (m)	To (m)	Downhole Width (m)	Ni (%)	Deposit/Zone					
LOX-22-04	2004	56.4	69.1	12.7	1.1	Alexo South - Central West Zone					
Including	2004	66.1	69.1	3	3.1	Alexo South - Central West Zone					
LOX-23-04	2004	62	65	3	0.66	Alexo South - Central West Zone					
And	2004	69.8	72.1	2.3	1.7	Alexo South - Central West Zone					
LOX-24-04	2004	77.4	81.4	4	1	Alexo South - Central West Zone					
LOX-25-04	2004	32.4	33.8	1.4	4.3	Alexo South - Central West Zone					
LOX-26-04	2004	63.1	65	1.9	1.6	Alexo South - Central West Zone					
LOX-27-04	2004	65	66.3	1.3	1.8	Alexo South - Central West Zone					
LOX-30-04	2004	50.6	51	0.4	3.2	Alexo South - Central West Zone					
LOX-31-04	2004	103.5	110	6.2	1.1	Alexo South - Central West Zone					
Including	2004	108.5	110	1.2	3	Alexo South - Central West Zone					
2010-04	2010	68.3	70.1	1.8	0.62	Alexo South - Central West Zone					
2010-05	2010	85.9	86.3	0.4	2.21	Alexo South - Central West Zone					
2010-07	2010	80.3	81.5	1.2	0.61	Alexo South - Central West Zone					
Including	2004	81.3	81.5	0.2	2.5	Alexo South - Central West Zone					
2010-08	2010	101.9	103	1.3	1.81	Alexo South - Central West Zone					
LOX-32-04	2004	65.6	66.7	1.1	2.3	Alexo South - Central Zone					
LOX-34-04	2004	81.2	84.4	3.2	1.18	Alexo South - Central Zone					
LOX-35-04	2004	101.8	103	1	6.7	Alexo South - Central Zone					
LOX-64-04	2004	101.5	106	4.2	2	Alexo South - Central Zone					
Including	2004	104.3	106	1.4	4.9	Alexo South - Central Zone					
LOX-66-04	2004	76.8	77.7	0.9	2.6	Alexo South - Central Zone					
LOX-69-04	2004	55.2	57.8	2.6	3.9	Alexo South - Central Zone					
LOX-74-04	2004	89	89.4	0.4	1.4	Alexo South - Central Zone					
LOX-103-05	2005	114.9	118	2.9	1.63	Alexo South - Central Zone					
Including	2005	117.2	118	0.6	5.2	Alexo South - Central Zone					
2011-16	2011	56.4	61.3	4.9	2.13	Alexo South - Central Zone					
Including	2011	59	61.3	2.3	3.75	Alexo South - Central Zone					
LOX-38-04	2004	88.2	90.3	2.1	1.4	Alexo south - Central East Zone					
LOX-41-04	2004	61.6	62.3	0.7	1.7	Alexo South - East Zone					
LOX-46-04	2004	88.2	90.5	2.3	0.7	Alexo South - East Zone					
LOX-54-04	2004	146	148	1.5	1.3	Alexo South - East Zone					
LOX-77-04	2004	82.4	84.5	2.2	4.9	Alexo South - East Zone					
LOX-85-04	2004	72.1	75.1	3	0.56	Alexo South - East Zone					

TABLE 6.2SIGNIFICANT NICKEL INTERSECTIONS FROM PREVIOUS CANADIAN ARROW DRILLING AT THE ALEXO-DUNDONALD PROJECT										
Hole IDYearFrom (m)To (m)Downhole Width (m)Ni (%)Deposit/Zone										
LOX-95-05	2005	63	70.8	7.8	0.63	Alexo South - East 1700 Zone				
Including	2005	70.3	70.8	0.5	2.46	Alexo South - East 1700 Zone				
LOX-96-05	2005	60.4	64.2	3.8	0.98	Alava South East 1700 Zana				
Including	2005	62	63.2	1.2	2.74	Alexo South - East 1700 Zone				
LOX-99-05	2005	86	90.8	4.8	0.6	Alexo South - East 1700 Zone				

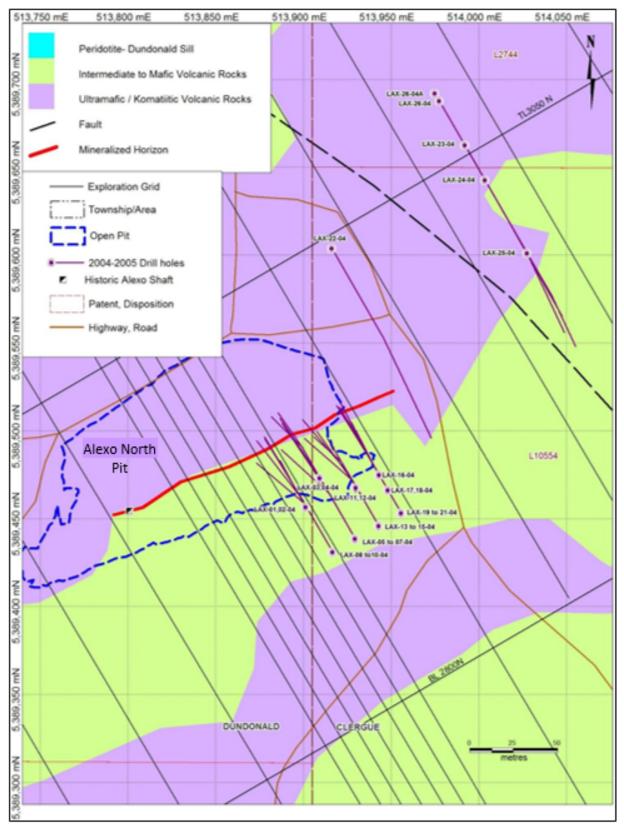
*Note:* Downhole core length does not equate to true thickness (width) which is unknown but will be less than or equal to downhole core length.

Hucamp Mines Ltd. ("Hucamp") completed 2,802 m in 29 diamond drill holes on the Project in 2001 and assayed 348 drill core samples for nickel, copper, cobalt, platinum, palladium and gold. Twenty-one holes were drilled on the old Alexo North Mine horizon, seven on the Alexo South Deposit, and one to test an EM anomaly. Hucamp also stripped approximately 5,000 m<sup>2</sup> of overburden along the eastern and western extensions of the Alexo North Mine horizon and exposed massive sulphides. The stripped area was mapped and channel sampled at regular intervals. Hucamp also completed 1,321 m of downhole pulse EM surveys of 10 holes drilled at Alexo North and Alexo South.

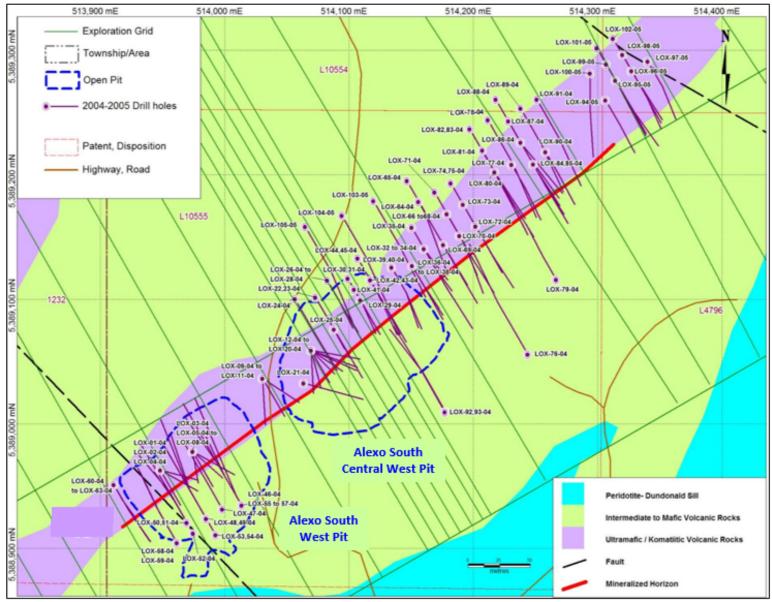
Canadian Arrow completed 40 km of line cutting and a high-resolution magnetometer survey in 2004 on a 50 m line interval on the prospective komatiitic flows. Crone Geophysics & Exploration Ltd, of Mississauga, Ontario was contracted to complete a surface PEM-SQUID survey in 2004. Six transmitter loops 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 Alexo South Deposit extending along strike and approximately 200 m to the east of known massive sulphide. The anomalies were interpreted to represent an eastern extension of the Alexo South Deposit as defined in 2004.

Previous Canadian Arrow diamond drilling locations are depicted in Figure 6.2 to Figure 6.4. Significant nickel intersections are tabulated in Table 6.2. A total of 12,710.2 m of drilling in 132 diamond drill holes was completed in 2004–2005 at the Alexo Deposits by Canadian Arrow, including drilling on the Alexo North (2,581.4 m of drilling in 27 holes; Figure 6.2) and Alexo South (8,749.8 m of drilling in 93 holes; Figure 6.3).

# FIGURE 6.2 LOCATION OF THE 2004–2005 CANADIAN ARROW DRILL HOLES ON THE ALEXO NORTH DEPOSIT



Source: Donaghy and Puritch (2020)





*Source: Donaghy and Puritch (2020)* 

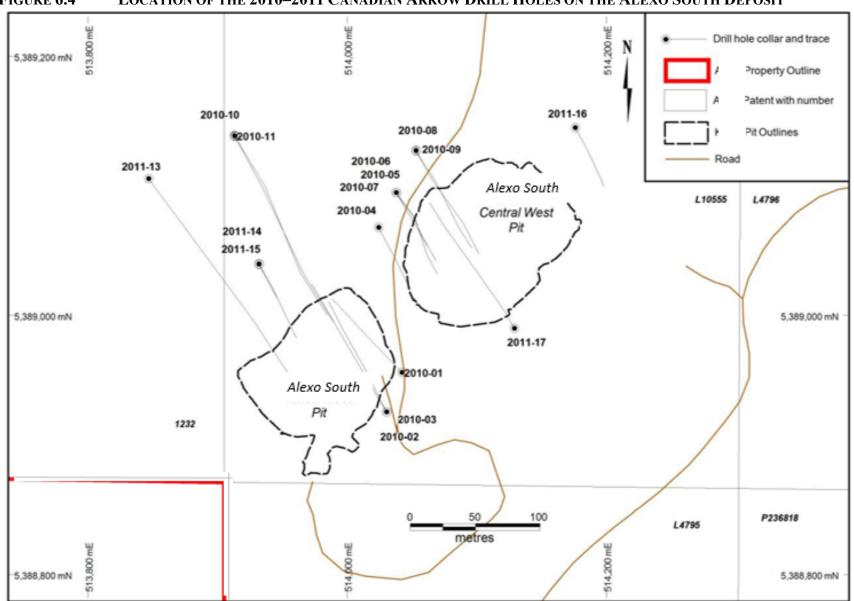


FIGURE 6.4 LOCATION OF THE 2010–2011 CANADIAN ARROW DRILL HOLES ON THE ALEXO SOUTH DEPOSIT

*Source: Donaghy and Puritch (2020)* 

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

- The down-plunge extension of the Alexo North Deposit around a known drill intersection from Hucamp drill hole 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 North 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, drill hole 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 holes was completed on the Alexo South 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 6.3). The Canadian Arrow drill program tested off-hole and surface EM anomalies associated with the Alexo South 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 Alexo South 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 Alexo South west lens around the 1997 Outokumpu drill hole, 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 komatiitic peridotite and the footwall andesites.

Holes drilled on the central west lens of the Alexo South Deposit (Figure 6.3) include: LOX-22-04 intersected 12.7 m of 1.1% Ni, including 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) systematically drilled on the central lens of the Alexo South Deposit, around Outokumpu drill hole ALX-09-97, 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 Alexo South Deposit. Drilling in late-2004 focused on the upper 100 m of the Deposit, in order to define the extent of the near-surface nickel sulphide mineralization.

A total of 1,379 m of drilling in 12 drill holes was completed on the Alexo South Deposit by Canadian Arrow in 2005 (Figure 6.3). 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 Alexo South 1700 East Zone.

In 2010 to 2011, Canadian Arrow completed a 17-drill hole program totalling 2,802 m on the Alexo South Deposit (Figure 6.4). The purpose of the drill program was to identify and extend mineralization outwards from the existing drill defined areas. Several deeper holes were advanced to test for mineralization below the then drill limit of 100 m vertical depth. Mineralization was found up to approximately 250 m vertical depth in holes 2011-11 through 2011-15.

#### 6.1.2 Dundonald South and Dundonald North

Falconbridge Limited ("Falconbridge"), (now Glencore Nickel), explored for nickel and base metals on and in the vicinity of their Dundonald Project intermittently following the discovery of nickel mineralization in what is now termed the Dundonald South area in 1960 (Figure 6.5). The Dundonald North Deposit (known then as Dundeal), 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 Deposit area. The Terminus base metals zone was discovered in 1990 during drilling at the Dundonald North 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, HLEM, 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 Dundonald North Deposit and Terminus zone. 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 Dundonald North 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 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. HWY 67 HWY 67 Control Contro

**Mighty PGE Showing** 

UF-13 PGE

Crise

s PGE Showin

FIGURE 6.5 LOCATION OF THE DUNDONALD SOUTH AND DUNDONALD NORTH NICKEL DEPOSITS AND THE TERMINUS CU-ZN ZONE

Source: Donaghy and Puritch (2020)

Lithological Legend

Gabbro

Pyroxenite

Peridotite

Rhyolite Dacite to Andesite Komatitic Pyroxenite Komatitic Peridotte **Dundonald South** 

FIRST NICKEL INC.

DUNDONALD PROPERTY, TIMMINS, ONTARIO

**PROPERTY GEOLOGY &** 

MINERAL OCCURRENCES

Mining Consultants

Hucamp completed a total of 13 diamond drill holes 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 Alexo South Deposit 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 in 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 and 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 are listed in Table 6.3.

TABLE 6.3         SIGNIFICANT NICKEL INTERSECTIONS FROM 2004 TO 2005 FNI DRILLING AT         DUNDONALD SOUTH										
Hole ID	Year	From (m)	To (m)	Downhole Width (m)	Ni (%)	Zone				
D04-4	2004	72.6	74	1.4	4.66	А				
Including	2004	73.5	74	0.5	10.95	A				
D04-7	2004	172.5	177	4.3	4.42	А				
Including	2004	172.6	175	2	6.83	A				
D04-17	2004	201.8	204	1.7	11.84	А				
Including	2004	203	204	0.5	17.14	A				
D04-29	2004	215	230	15.2	5.26					
Including	2004	219	221	1.7	14.46	А				
And	2004	224.7	227	2.1	11.04					
D04-30	2004	221.5	224	2.6	5.2	А				
Including	2004	222.3	224	1.8	6.66	A				
D04-31	2004	285.3	287	1.7	3.87	А				
D04-33	2004	249.7	251	1.3	3.3	А				
D04-38	2004	274.1	276	1.4	3.62	А				
D05-39	2005	249.1	250	1.3	6.17	А				
D05-47	2005	62	64	2	2.48	А				
D05-49	2005	111.8	115	2.7	2.42	А				
D04-14	2004	136.5	138	1.5	3.77	р				
Including	2004	136.5	137	0.3	14.78	В				
D04-16	2004	98.7	101	2.6	2.24	D				

Significan	TT NICKEL II	NTERSECTI	<sup>°</sup> able 6.3 ons from 2 onald Sou	2004 то 2005 JTH	5 FNI Dril	LING AT
Hole ID	Year	From (m)	To (m)	Downhole Width (m)	Ni (%)	Zone
D04-18	2004	49	51	2	2.49	Е
Including	2004	49	49.7	0.7	5.68	Ľ
S04-9	2004	222.5	225	2	2.84	E
S05-30	2005	221.5	224	2.5	2.4	Е
S05-70	2005	269.7	271	1.3	1.3	Е
S05-76	2005	234.8	236	1.4	2.64	Е
S05-77	2005	233.4	235	1.4	3.65	Е
S04-8	2004	146.5	150	3	2.25	F
S04-17	2004	155.8	158	2.1	5.22	F
S04-21	2004	170.5	173	2.1	3.67	Г
Including	2004	171.4	173	1.2	5.77	F
S05-30	2005	195.5	197	1.6	8.46	F
S05-31	2005	193.5	195	1.2	4.1	F
S05-41	2005	114	116	1.7	4.17	F
S05-48	2005	136	138	1.5	6.03	F
S05-72	2005	188	192	4	2.37	F
S04-10	2004	92.1	94	2	3.11	G
S05-28	2005	118	120	2	2.69	G
S05-30	2005	123.5	127	3	11.19	G
Including	2005	125.2	127	1.3	23.74	G
S05-37	2005	82	83.2	1.2	5.3	G
S05-40	2005	85.9	90.8	4.9	5.99	G
Including	2005	85.9	87.2	1.3	11.79	G
S05-45	2005	74.8	75.8	1	13.1	G
S05-60	2005	78	79.7	1.7	4.67	G
S05-68	2005	56	56.8	0.8	9.91	G
S05-73	2005	162.9	164	1.1	18.71	G
S05-75	2005	149	153	3.6	5.91	~
Including	2005	151.5	152	0.8	20.9	G
S05-78	2005	149.5	152	2.5	2.52	G
S05-79	2005	156	162	5.7	7.63	C
Including	2005	160.9	162	0.8	25.6	G
S05-86	2005	101.7	104	2	3.81	G

TABLE 6.3 Significant Nickel Intersections from 2004 to 2005 FNI Drilling at Dundonald South										
Hole IDYearFrom (m)To (m)Downhole Width (m)Ni (%)Zone										
S05-89	2005	127	130	3.2	2.1	G				
S05-91	2005	129	132	3.1	5.29	G				
Including	2005	129.9	132	2.3	6.66	G				
S05-98	2005	167.6	169	1.8	4.37	G				
S05-104	S05-104 2005 173.2 175 1.9 2.98 G									
Note: Downhole c than or equ	ore length doe al to downhold	-	true thickne	ss (width) which i	is unknown b	ut will be less				

A total of 3,397 m of diamond drilling (13 holes) was completed in the Dundonald North-Terminus area in 2004 and 2005 by FNI. Four holes (FNT05-04 to FNT-05-07) were drilled above the steep westward, up-plunge projection of the Dundonald North Zone in an old Falconbridge hole DUN25-05 (2.58% Ni over 2 m). Farther 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 completed on each of the eight drill holes (1,200 m). The Dundonald North 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 Dundonald North 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 Dundonald North Zone. FNT05-12 was drilled 150 m west and 70 m above hole DUN25-04 (2.41% Ni over 4.25 m) and returned 1.11% Ni over 9.5 m (~5.8 m true width), including 1.80% Ni over 3 m (~1.9 m true width) from the Dundonald North Zone at a vertical depth of 300 m. This nickel intercept led to a second hole (FNT05-13) being drilled 45 m to the west. Hole FNT05-13 intersected the Dundonald North Zone and returned 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 Dundonald North Zone is open to the west.

# 6.1.3 Terminus Zinc-Copper Zone

The Terminus base metals zone was discovered by Falconbridge in 1990 while drilling deeper holes on the Dundonald North nickel deposit. Subsequently, 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 intersection 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 Terminus Zone consisted of a pyrite-pyrrhotite stringer network and local massive veins over a core length of 18.2 m hosted in silicified komatiitic basalt. No significant nickel values were returned and true thickness (width) of the mineralization is unknown.

#### 6.2 HISTORICAL 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. P&E and C1N are not treating the historical estimates as current Mineral Resources or Mineral Reserves. They are instead presented for informational purposes only. The historical resource estimates are superseded by the 2020 Mineral Resource Estimates presented in Section 14 of this Technical Report.

#### 6.2.1 Alexo North and Alexo South Deposits

Puritch *et al.* (2010) prepared a Mineral Resource Estimate for the Alexo North and Alexo South Deposits (known then as Alexo and Kelex) (Table 6.4). The definitions of Indicated and Inferred Mineral Resources were in accordance with the Canadian Institute of Mining, Metallurgy and Petroleum ("CIM") Definitions and Standards on Mineral Resources and Mineral Reserves, December 11, 2005.

Indicated and Inferred Mineral Resource 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 (Table 6.4) for Alexo North and Alexo South was compiled using a \$35/t NSR cut-off value for the open pit portions and a \$85/t NSR cut-off value for the underground portions of the two Deposits.

Puritch *et al.* (2012) updated the Mineral Resource Estimate (Table 6.5) of Puritch *et al.* (2010). The definitions of Indicated and Inferred Mineral Resources were in accordance with the CIM Definitions and Standards on Mineral Resources and Mineral Reserves, December 11, 2005. Indicated and Inferred Mineral Resource 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 Alexo North and Alexo South was compiled using a \$35/t NSR cut-off value for the open pit portion and a \$70/t NSR cut-off value for the underground portion of the two Deposits.

PURITCH	Table 6.4           Puritch et al. (2010) Historical Mineral Resource Estimate of Alexo And Kelex Deposits <sup>(1-4)</sup>									
Historical Classification	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	3,177,000	116,000	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	0.04	0.04	0.01	0.03	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
<b>Total Indicated</b>	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

*Notes:* \* *designates historical Mineral Resources defined within an optimized pit shell.* 

1) 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.

2) The quantity and grade of reported Inferred Mineral Resources in this estimation are uncertain in nature and there has been insufficient exploration to define these Inferred Mineral Resources as 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 classification.

3) 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.

4) Alexo and Kelex Deposits now known as the Alexo North and Alexo South Deposits.

TABLE 6.5 Puritch et al. (2012) Historical Mineral Resource Estimate of Alexo and Kelex Deposits <sup>(1-4)</sup>										
Historical Classification	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	0.1	0.04	0.03	0.1	0.22	0.1	0.01	0.01
Kelex underground	251,000	0.96	0.04	0.03	0.01	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
Inferred										
Kelex underground	66,000	0.82	0.04	0.02	0.01	0.01	0.02	1.19	0.06	0.03

*Notes:* \* *designates historical Mineral Resources defined within an optimized pit shell.* 

- 1) 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.
- 2) The quantity and grade of reported Inferred Mineral Resources in this estimation are uncertain in nature and there has been insufficient exploration to define these Inferred Mineral Resources as 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 classification.
- 3) The Mineral Resources in this Technical 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.

4) Alexo and Kelex Deposits now known as the Alexo North and Alexo South Deposits.

# 6.2.2 Dundonald South Deposit

Harron (2009) reported a Mineral Resource Estimate for the Dundonald South Deposit (Table 6.6). The methodology employed followed the CIM Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines adopted by CIM on November 23, 2003.

The Mineral 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 or exceeded the cut-off grade (>1.5% Ni) and thickness (>2.0 m) parameters were small and isolated. This result suggested that geological and grade continuity were not strong features of the historical Mineral Resource Estimate and only warranted an Inferred Mineral Resource classification. The estimated Inferred Mineral Resource for the Dundonald South nickel zones was 116,000 t grading 3.16% Ni, with the A, F and G zones contributing 67% of the Mineral Resource tonnage (Table 6.6).

TABLE 6.6 Harron (2009) Historical Inferred Mineral Resource Estimate of Dundonald South Deposit								
Zone	TonnesAverage 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						

#### 6.3 PREVIOUS MINERAL RESOURCE ESTIMATE

The previous Mineral Resource Estimate for the Alexo North and Alexo South Deposits 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 June 30, 2020 (Table 6.7) (Donaghy and Puritch, 2020). Mr. Puritch was the Qualified Person and author of Section 14 in that technical report. Mineral Resources were estimated for the Alexo North Deposit and the Alexo South Deposit, using all available drill hole data.

Table 6.7           Previous Mineral Resource Estimate of the Alexo And Kelex Deposits <sup>(1-6)</sup>										
Mineral Resource Classification	Tonnes (kt)	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	0.4	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	0.77	0.1	0.04	0.02	0.08	0.19	0.08	0.01	0
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
<b>Total Indicated</b>	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

#### 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.

6) Alexo and Kelex Deposits now known as the Alexo North and Alexo South Deposits.

All drilling data was provided by the 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 on 15-m spaced cross-sections (named 135-NE to 750-NE) were developed on a local grid looking northeast on an azimuth of 60°. A GEOVIA GEMS<sup>TM</sup> database was developed that contained 227 diamond drill holes, of which 119 were intersected in the updated Mineral Resource wireframes. That Mineral Resource Estimate is superseded by the Mineral Resource reported in Section 14 of this Technical Report.

### 6.4 **PAST PRODUCTION**

The Alexo North 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; and
- 2004–2005: Open pit mining of 26,224 t at 1.97% Ni and 0.20% Cu.

Small-scale open pit mining of the Alexo South Deposit in 2004-2005 produced 3,900 t at 1.68% Ni and 0.18% Cu.

The Dundonald Deposits have never been mined.

#### 7.0 GEOLOGICAL SETTING AND MINERALIZATION

#### 7.1 **REGIONAL GEOLOGY**

The regional geologic setting of the Alexo-Dundonald Project area is described in 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). The following is a synopsis of this large body of work.

The Alexo-Dundonald 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 7.1):

- Pre-2,750 Ma unnamed assemblage.
- 2,750–2,735 Ma Pacaud Assemblage.
- 2,734–2,724 Ma Deloro Assemblage.
- 2,723–2,720 Ma Stoughton–Roquemaure Assemblage.
- 2,719–2,711 Ma Kidd–Munro Assemblage.
- 2,710–2,704 Ma Tisdale Assemblage.
- 2,704–2,695 Ma Blake River Assemblage.

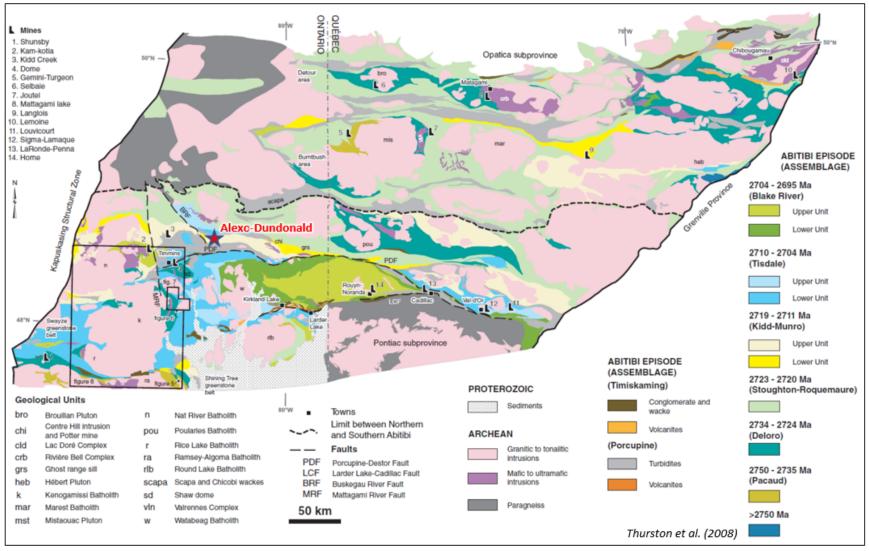
Whereas the assemblages are age and geochemically correlated across the Abitibi Sub-Province, the local lithological packages that comprise the correlated volcanic episodes in individual areas are commonly laterally discontinuous. The volcanic assemblages mainly do not contain marker horizons traceable from one region to the next, but rather result from local deposition around separate volcanic centres across the belt in similar tectonic settings, due to interaction of contemporaneous pulses of 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 rock units consisting 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 up to 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 rock types in submarine correlative conformities, disconformities, or unconformities separating the equivalent of group level volcano-sedimentary stratigraphic and lithotectonic units.

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

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

FIGURE 7.1 REGIONAL GEOLOGICAL SETTING OF THE ALEXO-DUNDONALD PROJECT AREA IN THE ABITIBI SUBPROVINCE, ONTARIO



*Source:* Donaghy and Puritch (2020)

In general, penetrative tectonic fabric and structures 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 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 age 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 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 (2,719 Ma to 2,717 Ma) includes localised, regionally discontinuous depositional centres of predominantly intermediate to felsic calc-alkaline volcanic rocks. The upper part of the Kidd-Munro Assemblage (2,717 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. The upper Kidd-Munro Assemblage has been interpreted to reflect the impact of widespread mantle plume-related magmatism on localized lower Kidd-Munro arc-magmatism volcanic centres.

# 7.2 **PROPERTY GEOLOGY**

The local geology is extensively described 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 work.

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 composed predominantly of upper Kidd-Munro Assemblage volcanic rocks including: komatiitic dunite, peridotite, and 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 sulphides. Intrusive rocks into the Kidd-Munro Assemblage include:

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

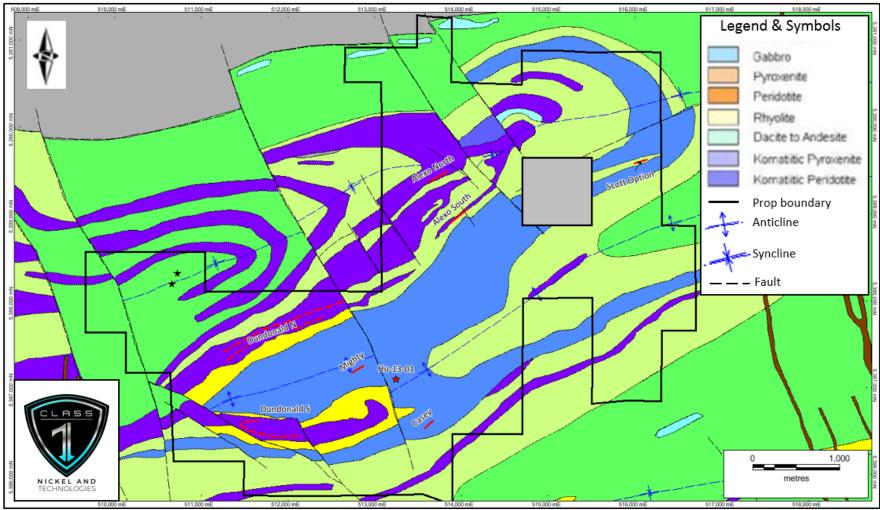
Ultramafic rocks range in composition from komatiitic basalt to dunite. The komatiitic sequences contain multiple flows that range from several hundreds of metres to less than 2 m in thickness and have brecciated flow tops, spinifex-textured zones and pyroxene and olivine orthocumulate, mesocumulate and adcumulate zones. Large accumulations of olivine mesocumulate to adcumulate occur within the komatiitic sequence locally where they are prospective channelized flows within footwall embayments. Thin layers of graphitic argillite occur between thin komatiitic flows locally.

The komatiite nickel sulphide deposits occur at 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 (Figure 7.2). The volcanic sequence also contains komatiitic basalt and thin (<1 m) intercalated layers of black graphic argillite. The sequence is a mixture of flows with pillowed, hyaloclastic and massive textures. 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 intruding a sequence of komatiitic and calc-alkaline felsic volcanic rocks. The sill comprises basal peridotite which grades upwards to dunite olivine mesocumulate, adcumulate to pyroxenitic cumulate with diopside and olivine phenocrysts, and a thick sequence of fine- to coarse-grained gabbro. The gabbro portion of the sill is the thickest part.

The Alexo Deposit occurs on the northeast arm of a large "Z"-shaped fold in the Kidd-Munro Assemblage, whereas the Dundonald Deposit sits on the southwest arm of the fold (Figure 7.2). The northeast-trending fold has a wavelength of 2.5 km and amplitude of 6 km, as defined by the mapped extents 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 intrusive contacts. Ultramafic rocks altered to talc or serpentine with or without magnetite, calcite, tremolite and chlorite. Mafic rocks altered to chlorite-tremolite.



#### FIGURE 7.2 PROPERTY SCALE GEOLOGICAL MAP OF THE ALEXO-DUNDONALD PROJECT AREA

Source: P&E (2020)

### 7.3 **DEPOSIT GEOLOGY**

The Alexo-Dundonald Project contains the Alexo North, Alexo South, Dundonald South and Dundonald South nickel sulphide deposits. The mineralization on the Project is described 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 those works.

#### 7.3.1 Alexo North and Alexo South Nickel Deposits

The Alexo North and Alexo South Deposits consist of massive to semi-massive nickel sulphide accumulations in basal embayments along the footwalls of two parallel, steeply-dipping komatiitic peridotite volcanic channels named the "Alexo" and "Kelex" flows, respectively. Massive to semi-massive sulphide lenses occur along the footwall contact of channels. The lenses are overlain by stringer, net-textured, blebby and lower grade disseminated sulphide zones. 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 7.3).

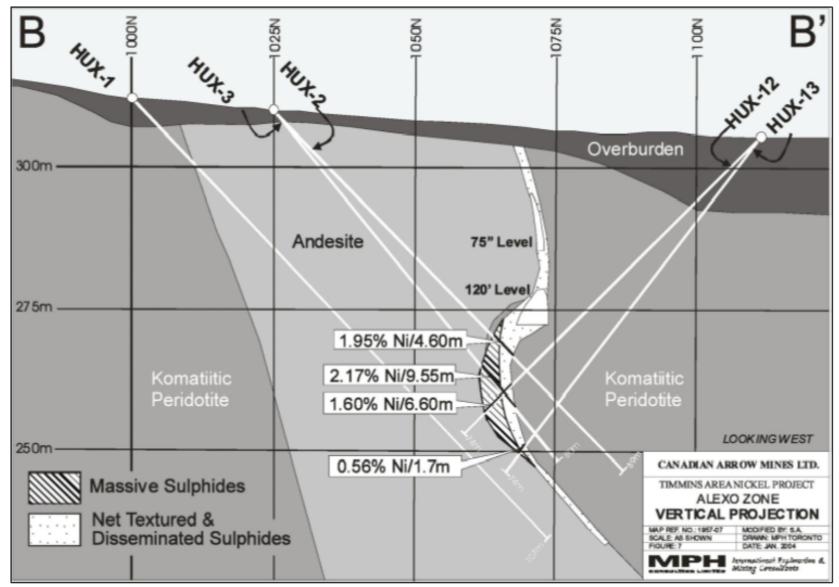


FIGURE 7.3 CROSS SECTION PROJECTION THROUGH THE ALEXO NORTH DEPOSIT

*Source:* Donaghy and Puritch (2020)

The Alexo South Deposit is located at the footwall contact of the lowermost komatiitic peridotite in the volcanic sequence. A series of massive sulphide lenses with aureoles of disseminated and net-textured sulphides extend laterally along strike for >600 m, as indicated in HLEM and Pulse EM geophysical surveys and diamond drilling. Interpretation of the drill results indicate the massive sulphides sub-crop at the bedrock overburden interface. The sulphides are composed of 10% to 20% pentlandite, 80% to 90% pyrrhotite and trace chalcopyrite. Some of the sulphides have been replaced by magnetite. The massive sulphide appears to plunge to the northeast in Pulse EM surveys, but to the channels appear to plunge to the north or northwest in magnetic surveys.

The laterally extensive disseminated sulphides can be separated into two groups. The first group is the net-textured to heavily disseminated sulphides. The nickel tenor of the sulphides range between 4% and 15% Ni in 100% sulphide, and generally averages 6%. The second type of sulphide mineralization is blebby, disseminated and vein sulphide located 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 (possibly millerite) with minor pyrrhotite. These sulphides appear to have been enriched in nickel during the serpentinization process.

# 7.3.2 Dundonald North and Dundonald South Nickel Deposits

The Dundonald Deposits are characterized by thin sinuous layers of massive sulphide, overlain in turn by thicker layers of net-textured sulphides and then disseminated sulphides with vein-type mineralization penetrating locally into the footwall rocks. The Deposits consist of eight east-west nickel-enriched zones, A to H, in the Dundonald South komatiitic volcanic sequence (Figure 7.4). 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 zones is on the order of 100 m to 200 m down-plunge, but several are apparently small, isolated sulphide pods within the channelized flow sequence (Figure 7.5). The G Zone was traced for 600 m along strike, is open to the east, and 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. Sulphide assemblages vary between the different zones, but are generally dominated by pentlandite dominant over pyrrhotite, with significant copper and PGE grades in some of the shoots (e.g. A, F and G zones).

The Dundonald North Deposit is located 1.3 km north of the Dundonald South Deposit (Figure 7.2), on the north side of a west-plunging antiform, 2.2 km southeast and along strike from the Alexo North and South Deposits. The Dundonald South Deposit occurs at the base of the Empire Komatiite Flow and is apparently controlled by a channel or depression in the footwall volcanic rocks. The Deposit has been traced along strike for 800 m and to a depth of 700 m below surface (Figure 7.6). The volcanic channel appears to plunge moderately to the northeast near surface and steepen with increasing depth, parallel to that at the Alexo Deposits. Average true width of the Dundonald North Deposit is 2.4 m, with the best mineralized drill intersections (with grades up to 3.04% Ni) in the centre of the channel.

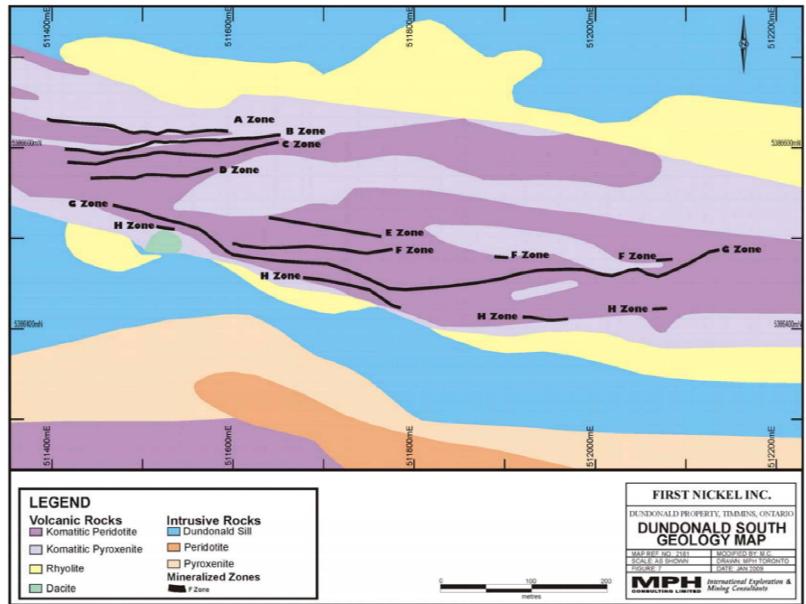
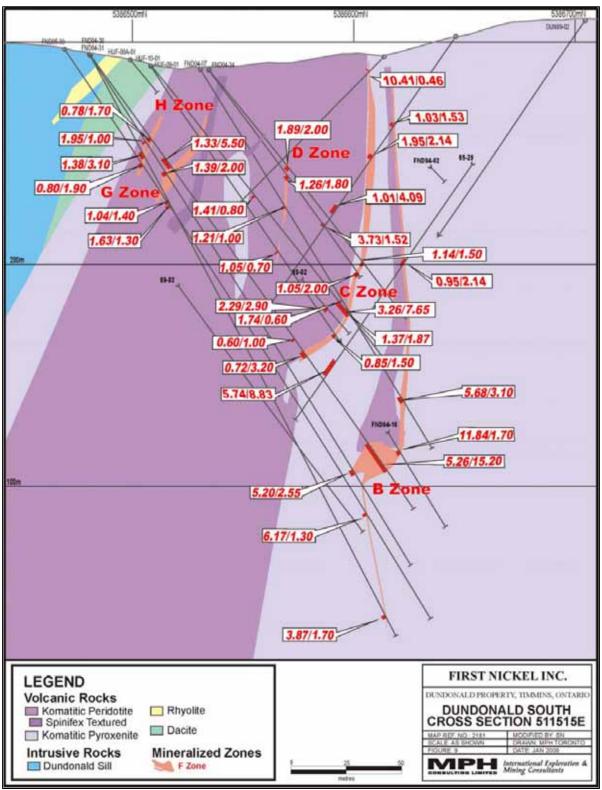


FIGURE 7.4 PLAN VIEW OF THE DUNDONALD SOUTH DEPOSIT

Source: Donaghy and Puritch (2020)

FIGURE 7.5 CROSS SECTION PROJECTION 511,515 M E THROUGH DUNDONALD SOUTH, LOOKING EAST



*Note:* Percent Ni/interval length in metres *Source:* Donaghy and Puritch (2020)

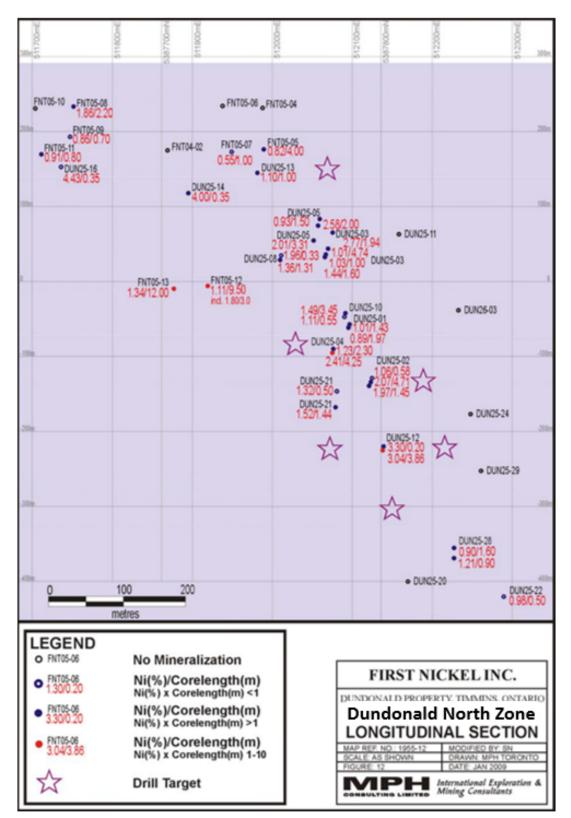


FIGURE 7.6 LONGITUDINAL PROJECTION THROUGH THE DUNDONALD NORTH DEPOSIT

Source: Donaghy and Puritch (2020)

# 7.3.3 Terminus Zinc-Copper Zone

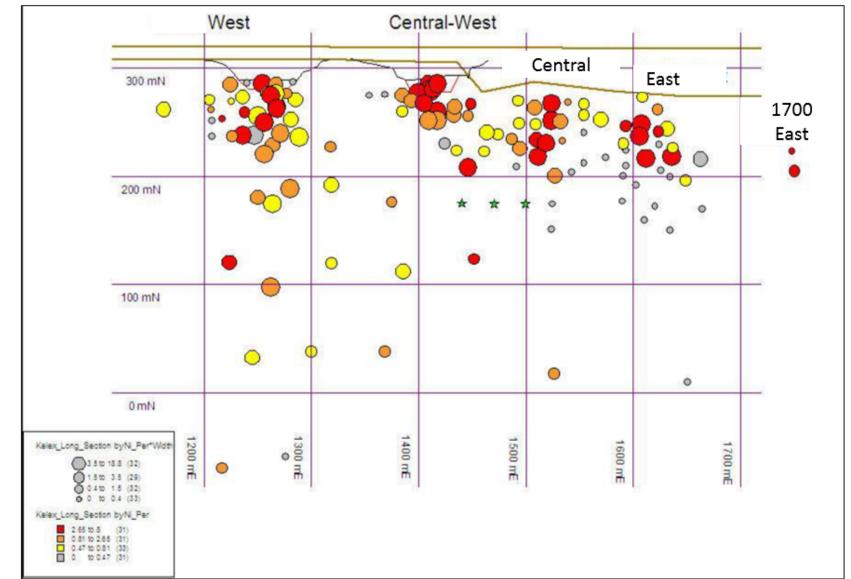
The Terminus zinc-copper zone is located approximately 140 m stratigraphically above the Dundonald North Deposit (Figure 7.2). Terminus is hosted by a sequence of predominantly komatiitic basalt with smaller amounts of argillite and pyroxenite. The host stratigraphy is up to 56 m thick and thins rapidly to the west. Although proximal volcanic facies have not been observed, some 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. The mineralization occurs as banded (bedded?) semi-massive to massive pyrrhotite with variable amounts of sphalerite and chalcopyrite hosted in argillite, and as disseminated to fracture-controlled chalcopyrite and pyrrhotite mainly in the volcanic rocks. The Terminus Zone is considered to be zone a small, low-grade example of a volcanogenic massive sulphide system developed locally in the volcanic sequence on or near the seafloor. Terminus does not represent a priority target for future exploration activity on the Alexo-Dundonald Project.

# 7.4 NICKEL MINERALIZATION

# 7.4.1 Alexo North and Alexo South Mineralization

At Alexo North Deposit, massive and semi-massive sulphide lenses range in thickness from a few centimetres to >12 m and are surrounded by 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% to 20% pentlandite and 80% to 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. Nickel tenor is the theoretical maximum nickel content of the rock if the rock volume contained 100% sulphide. Nickel grade refers to the whole-rock nickel content of the rock where the sulphide content is typically diluted by silicate material and minerals. Only in massive sulphide does nickel grade approach the theoretical nickel tenor content. The Alexo Deposit is further enhanced in areas such as the eastern extension by significant grades of copper, cobalt, platinum and palladium.

The Alexo South Deposit consists of five mineralized zones of massive sulphides within a broader and more continuous halo of stringer and disseminated sulphides (Figure 7.7): 1) West, 2) Central-West, 3) Central, 4) East, and 5) 1700 East. The West Zone extends over a strike length of 70 m, with a down-dip length ranging from 60 m to 260 m, and true widths ranging from 0.5 m to 12.5 m. The West Zone displays a wide, pervasive, low-grade halo around a higher-grade massive sulphide core. The Central-West Zone is located about 100 m east of the West Zone. Central-West Zone mineralization extends for a strike length of 60 m, down-dip component ranging from 42 m to 120 m, and true widths ranging from 1.3 m to 10.0 m. Central Zone mineralization extends over a strike length of 76 m, a down-dip length ranging from 10 m to 43 m, and true widths ranging from 1.5 m to 8.5 m. East Zone mineralization extends over a strike length of 25 m to 62 m, and true widths of 1.5 m to 3.0 m. he 1700 East Zone is located approximately 80 m beyond the eastward strike extension of the East Zone. The poorly defined zone comprises narrow intersections of massive sulphide flanked by disseminated, blebby and stringer-style sulphide mineralization.



# FIGURE 7.7 LONGITUDINAL PROJECTION THROUGH THE ALEXO SOUTH DEPOSIT

Source: Donaghy and Puritch (2020)

# 7.4.2 Dundonald South and Dundonald North Mineralization

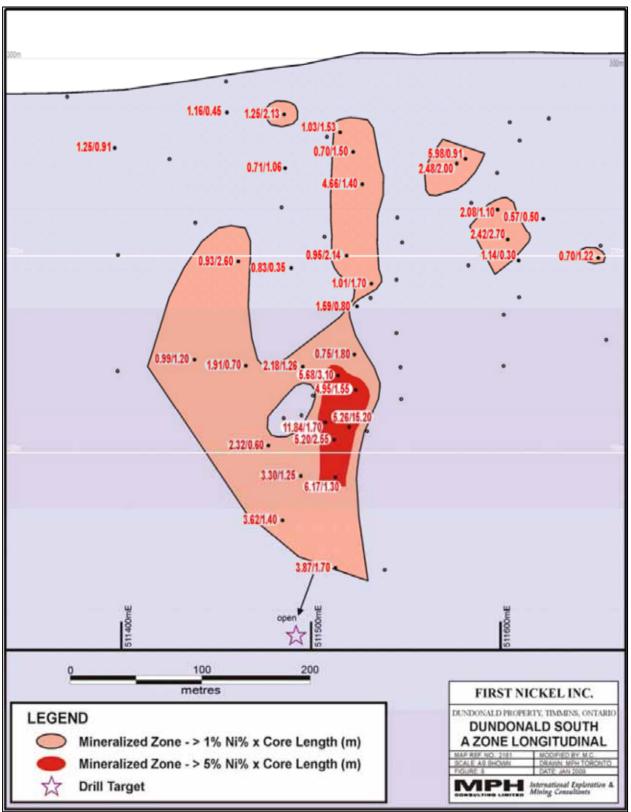
The A Zone of the Dundonald South is a fracture system with brassy pentlandite and pyrrhotite mineralization consisting of thin fracture fillings, patches and semi-massive to massive zones. The main portion of the A Zone is a very steep west-plunging to vertical high-grade nickel lens below a vertical depth of 150 m (Figure 7.8). This lens is 20 m to 25 m wide and open 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, which returned 11.84% Ni and 17.55 g/t PGE over 1.7 m.

The B Zone mineralization consists of disseminations and blebs to weak net-textured pyrrhotite and pentlandite with local massive sulphide veins. The B Zone is lower grade (1.0% to 3.8% Ni over 1.0 m to 1.5 m) than the A Zone and has lower PGE values (<1 g/t.). The more significant B Zone drill intersections occur as a shoot, in the keel area of the host komatilitic peridotite flow. The shoot (10 m wide) is open to the west along a shallow plunge of 15°.

The C Zone is situated approximately 10 m to 20 m stratigraphically above the B Zone. Sulphide mineralization consists of fine-grained pyrrhotite and 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 D Zone is sporadic and discontinuous. Sulphide mineralization consists of fine-grained pyrrhotite and pentlandite disseminations and blebs in komatiitic peridotite flow rocks. The D Zone nickel grades range from 1% to 3% Ni over 0.5 m to 2.6 m thick intersections.

The E Zone is situated within a trough at the base of the Central komatiitic peridotite flow sequence, at approximately 200 m below surface. To the west, The E Zone may be correlated with the C Zone. The E Zone consists of at least two stacked nickel mineralized zones (E and E2) that dip 15° to 20° to the south. The E and E2 zones have been traced in limited drilling for 130 m to the east where they are truncated at section 511,755 m E, whereas to the west the two zones are open down-plunge. Sulphide mineralization consists of 3% to 10% very finely disseminated fine-grained brassy pentlandite and smaller amounts of brown pyrrhotite. The higher sulphide content sections of 5% to 10%, and locally up to 20%, contain blebs and fine stringers to microfractures of pentlandite and pyrrhotite.



#### FIGURE 7.8 LONGITUDINAL PROJECTION OF THE DUNDONALD SOUTH A ZONE

Source: Donaghy and Puritch (2020)

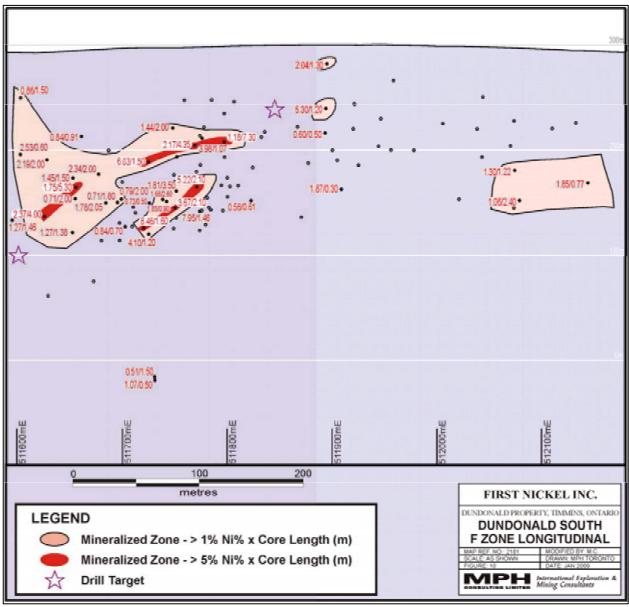
The F Zone occurs between 100 m and 200 m below surface and dips  $40^{\circ}$  to  $70^{\circ}$  to the south. It is continuous westward from sections 511,780E to 511,600E and disappears west of 511,600E, but is possibly open to the east, as it was encountered at 512,070E (Figure 7.9). The F Zone is principally located stratigraphically 20 m to 70 m below the G Zone in two shoots plunging west. The F Zone mineralization consists of blebs, fine stringers, semi-massive and massive brassy fine-grained pentlandite and pyrrhotite. Contents of PGE range from 1 g/t to 2 g/t, and are generally lower than those of the G Zone.

The G Zone is located in the upper portion of the main komatiitic peridotite flow sequence and sub-parallel to the Dundonald Sill situated 30 m to 50 m to the south. The G Zone has four high-grade nickel shoots plunging southwest and open down-plunge (Figure 7.10). The eastern shoot (512,000 m E to 512,100 m E) plunges 25° to the west, starts at a vertical depth of 65 m below surface, and is open below a vertical depth of 100 m. The central east shoot (511900 m E) begins below a vertical depth of 65 m below surface, plunges 45° and is open up- and downplunge. The central west shoot (511,780 m E to 511,800 m E) is 15 m wide and begins at a vertical depth of 100 m below surface, plunges 45° to the southwest, and is open below a vertical depth of 160 m. The west shoot (511,680 m E to 511,780 m E) is the most continuous and the longest of the four shoots. 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 it remains open. The typical G Zone mineralization sequence begins with 0.5% scattered brassy pentlandite and pyrrhotite blebs (two to five per metre) that grade into 3%-5% larger blebs and fine fractures. The blebby halo is typically 5 m to 10 m thick (locally up to 18 m) and averages 0.25% to 0.30% Ni. Contents of nickel in the blebby-fracture section range from 1% to 5%. The blebby-fracture section grades into small massive patches to rarer net textured brassy pentlandite-pyrrhotite (5% to 15%) that grade 3% to 7% Ni. This section is followed locally by semi-massive (10% to 15% Ni) to massive (15% to 25% Ni) pentlandite and pyrrhotite at the base. There appears to be an underlying zone below the main G Zone from 511,680 m E to 511,800 m E with a couple of massive sulphide sections.

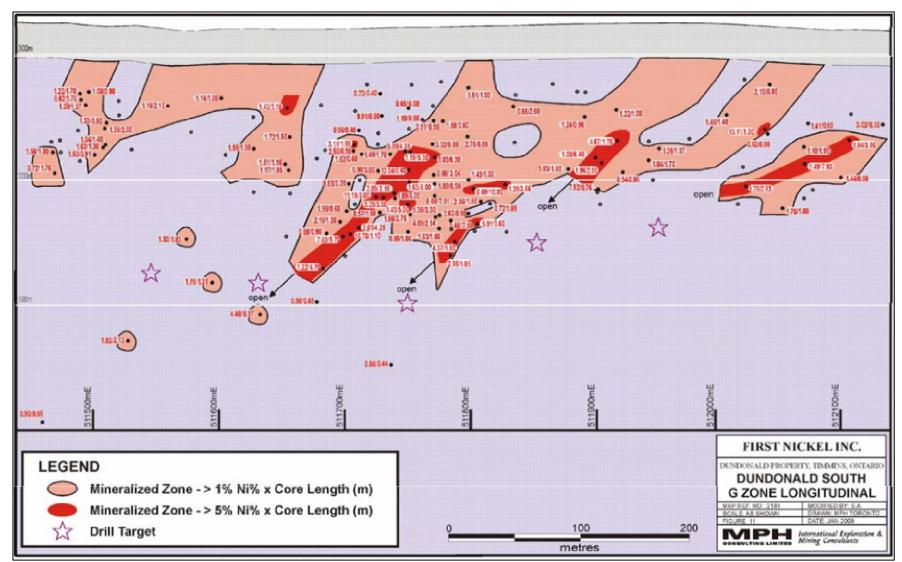
The H-one is the stratigraphic highest of the nickel sulphide zones. It is a discontinuous zone typically located 30 m north of the southern Dundonald Sill. The H Zone consists of fine-grained disseminations to blebs of pyrrhotite/pentlandite within the upper spinifex-textured thin peridotite flows (m-scale) of the Central komatiitic peridotite flow rocks. Nickel grades typically range from 1.00% to 2.76% and are lower than in the F and G zones.

In the Dundonald North Deposit, blebby and disseminated sulphides are the most common forms of nickel mineralization, followed by minor net-textured intervals and rare massive sulphide veinlets in the footwall. Pyrrhotite and pentlandite occur in roughly equal amounts, along with minor chalcopyrite and rare sphalerite.





Source: Donaghy and Puritch (2020)



# FIGURE 7.10 LONGITUDINAL PROJECTION THROUGH THE DUNDONALD SOUTH G ZONE PERCENT NI/INTERVAL LENGTH IN METRES

Source: Donaghy and Puritch (2020)

## 8.0 **DEPOSIT TYPES**

The primary mineralization style of principal relevance to the Alexo-Dundonald Project is komatiite-hosted nickel-copper-cobalt sulphides associated with lava channels of the Kambalda type (Naldrett, 2010). Regional target mineralization styles relevant to exploration on the Project, in the Kidd-Munro assemblage, and in regionally and globally equivalent assemblages have been described by Clark (1968), Graterol and Naldrett (1971), Green and Naldrett (1981), Imreh (1991), Pilote (2000), Houle *et al.* (2002), Naldrett (2004, 2010), Fornier and Burden (2013), Adair (2015, 2017a, 2017b), Zhou and Lafrance (2017), Shirriff *et al.* (2018), and Zhou *et al.* (2018). The following is a synopsis of this body of works.

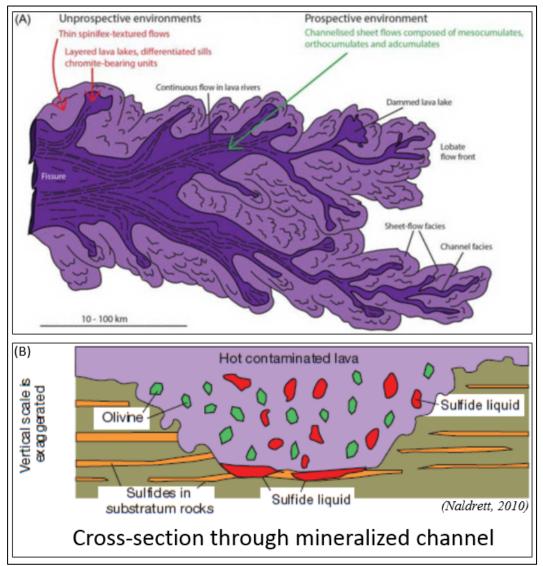
Within the Abitibi Sub-Province, komatiite-hosted mineralization occurs in:

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

The komatiite lavas represent high-temperature ultramafic magmas derived from the Earth's mantle and erupted onto the Earth's surface. They are largely restricted in the geological record to the Archean and Paleoproterozoic age terrains. This temporal restriction reflects cooling of the Earth's mantle over time, prohibiting formation of such high-temperature magmas in the mantle following the Paleoproterozoic period.

Nickel-copper-cobalt sulphides are interpreted to have formed in-situ within the komatiite flows by contamination of the ultramafic lava through melting of the underlying rock and assimilation of any released sulphur. As the komatiite lava flowed, the high temperature lava melted and assimilated substrate lithologies. 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 thermo-mechanical erosion and assimilation of substrate fragments into the lava (Figure 8.1A). If the substrate contained sulphide-bearing sedimentary or volcanic units, 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 immiscible sulphide droplets within the magma (Figure 8.1B).

#### FIGURE 8.1 KOMATHITE FLOW FACIES AND PROSPECTIVE ENVIRONMENTS FOR NICKEL-COPPER-COBALT SULPHIDE FORMATION



Source: Donaghy and Puritch (2020)

When formed, the dense sulphide phase settled within the lava and accumulated on the channel floor as nickel-copper-cobalt sulphide. At the same time, the ultramafic magma began to crystallize olivine, which settled and accumulated on the channel floor. The process of settling sulphide liquid and olivine crystals within the lava channel is somewhat analogous to stream sediment dynamics. The dense sulphide and olivine crystal phases accumulated in parts of the channel floor where the flow dynamic changed, due to changes in flow speed, direction and ponding, which reduced flow capability to transport the dense phases.

Komatiite lava-channels favourable for sulphide accumulation also accumulated olivine-crystals from the melt under the same gravitational settling model. These lava channels have experienced serpentinization of the olivine in the presence of metamorphic, hydrothermal or meteoric water, which 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 instead precipitates 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. On the other hand, subsequent talc-carbonate alteration of serpentinized lava channels destroys magnetite and enhances large rheology contrasts during structural deformation, metamorphism and intrusion for potential remobilization of the sulphides (Stone *et al.*, 2005).

In regard to exploration, high-MgO content in soil or rock geochemistry is a reliable proxy for high-olivine content and is used as an exploration vector for channelized lava environments rich in olivine that may be favourable for nickel sulphide accumulation. 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 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 potential leakage of metal-bearing fluids along faults or penetrative deformation fabrics that intersect the sulphide deposits. Electromagnetic surveys remain the preferred tool for direct detection of nickel sulphide mineralization of sufficient quantity and quality for economic extraction, because favourable conductive responses require 18% to 20% sulphide content by volume.

# 9.0 EXPLORATION

Mineral exploration conducted by previous operators within the Alexo-Dundonald Project area is described in Section 6 (History) of this Technical Report.

Since May 2019, exploration activities undertaken on the Alexo-Dundonald Project consisted of the following:

- Drill core re-logging to identify potential mineralogical and lithological intervals for the purpose of future drill program targeting;
- Drill core re-sampling to identify previously missed potentially economic Mineral Resource expansion areas and future drill program targets;
- Review of past geophysical data to target expansion opportunities of current Mineral Resource and identify nearby targets on the Property;
- Data interpretation for the purpose of better understanding Deposit genesis and mineralized trends for future drill program targets;
- Geological modelling to attain a better understanding of deposit mineralized tenor, orientation and geometry; and
- VTEM<sup>TM</sup> time-domain electromagnetic airborne geophysical survey.

# 9.1 **2020 GEOPHYSICS**

The Company contracted Geotech Ltd to fly a Versatile Time Domain Electromagnetic (VTEM<sup>TM</sup>) and time-domain electromagnetic airborne survey with additional horizontal magnetic gradiometry over the entire Property, including the known Alexo-Dundonald Deposits and interpreted Z-folded favourable komatiitic peridotite unit (see C1N press release dated September 16, 2020). The aim of the survey was to provide the Company's technical team with data to map conductors of significance in subsurface areas that may be associated with magmatic semi-massive to massive Ni-Cu-Co (PGE) sulphides, to an initial depth of approximately 300 m below surface.

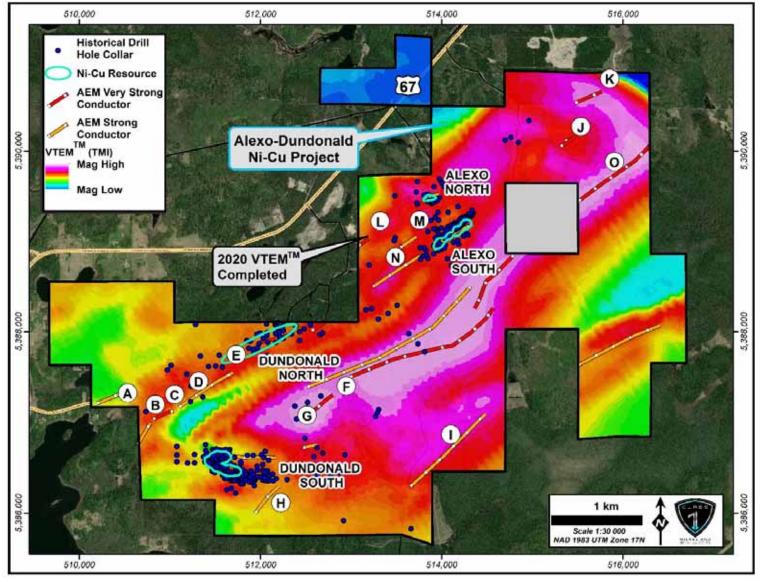
The VTEM<sup>™</sup> survey was successfully flown in September 2020 (see C1N press release dated September 24, 2020). A total of 1,012 line-km was flown. Several new strong to very strong AEM anomalies were detected by the VTEM<sup>™</sup> survey, including anomalies over known deposits (Dundonald North, Dundonald South, Alexo North and Alexo South), which provide reliable airborne electromagnetic ("AEM") and magnetic signatures of the known massive and net-textured nickel sulphide mineralization. The better-quality AEM anomalies were classified as strong and very strong conductors (see C1N press releases dated November 10, 2020 and November 24, 2020). These anomalies have been correlated with geology, mineralization, and all known historical drilling. A total of 14 good-quality AEM anomalies or parts of anomalies (labelled A to N in Figure 9.1) that appear to have either not been tested, or that have been under-tested by known drilling were selected as priority targets for further investigation. These

priority targets will be checked by field crews for evidence of previous work (e.g. drilling) and any cultural interference effects.

Several of these priority targets show similarities to the known deposits, particularly strong to very strong conductance with limited strike extent, and as such are considered to be top priority targets (Figure 9.2). The VTEM<sup>TM</sup> survey also shows conductive trends in some areas along-strike from known deposits, which may assist in extending the strike length of known nickel sulphide mineralization.

The VTEM<sup>TM</sup> interpretation was still undergoing quantitative modelling at the time of this Report and will rank the anomalies by geological and geophysical priority. Quantitative interpretation of the VTEM<sup>TM</sup> results will produce 3-D conductor models suitable for follow-up, ground time-domain EM surveys and direct drill testing with follow-up borehole time-domain EM surveys, as appropriate.

FIGURE 9.1 PLAN VIEW OF THE ALEXO-DUNDONALD PROPERTY SHOWING THE A-O VTEM<sup>TM</sup> ANOMALIES AND THE FOUR KNOWN NICKEL SULPHIDE DEPOSITS ON AIRBORNE MAGNETICS IMAGE

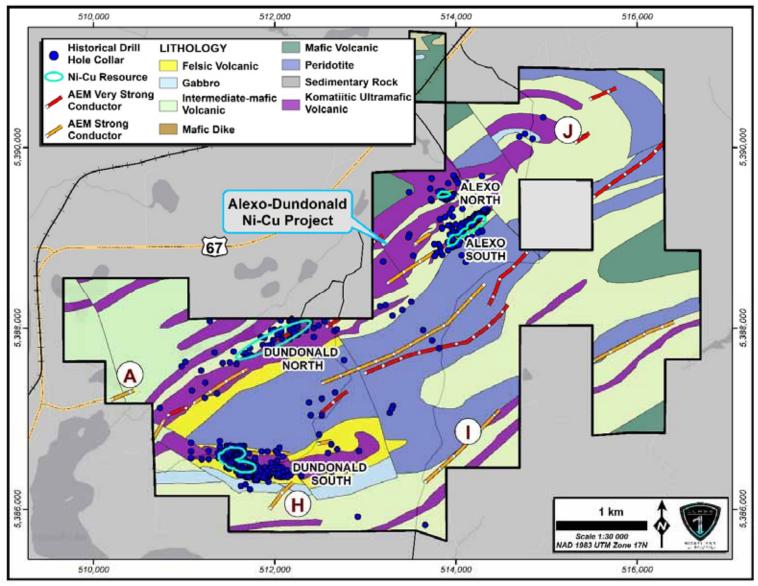


Source: C1N press release dated November 24, 2020

## P&E Mining Consultants Inc.

Class 1 Nickel and Technologies, Alexo-Dundonald Nickel Project, Report No. 389

FIGURE 9.2 PLAN VIEW SHOWING THE FOUR PRIORITY 1 VTEM<sup>TM</sup> ANOMALIES ON INTERPRETED GEOLOGY AND THE FOUR KNOWN NICKEL SULPHIDE DEPOSITS



Source: C1N press release dated November 24, 2020

# P&E Mining Consultants Inc.

Class 1 Nickel and Technologies, Alexo-Dundonald Nickel Project, Report No. 389

### 10.0 DRILLING

Drilling conducted by previous operators within the Alexo-Dundonald Project area is discussed in Section 6 (History) of this Technical Report. No drilling has been conducted on the Project since that reported by Harron (2009) and Puritch *et al.* (2012). The Company has not completed any drilling on the Project to the effective date of this Technical Report.

## 11.0 SAMPLE PREPARATION, ANALYSIS AND SECURITY

#### 11.1 SAMPLE PREPARATION, ANALYSIS AND SECURITY - PRIOR TO 2010

The drilling data reviewed for P&E's 2010 report (Puritch *et al.*, 2010) on the Alexo Property for Canadian Arrows Mines Ltd., and used for geological modelling and Mineral Resource estimation, were generated in multiple phases of historical exploration by various companies. The drill core handling, logging and sampling procedures implemented for the Outokumpu (ALX series) and Hucamp (HUX series) were reviewed by P&E in discussions with former Outokumpu and Hucamp personnel. Summaries follow below.

### 11.1.1 Outokumpu ALX Series

Outokumpu drilled the ALX series holes from 1996 to 1999 and transferred the drill core to a secure storage facility in Timmins, Ontario. The ALX series drill holes were logged and the sampling supervised by Paul Davis, M.Sc., P.Geo., who also supervised protocols for the HUX (drilled in 2001), LAX and LOX series programs (drilled in 2004 and 2005), thus maintaining continuity and consistency throughout all the programs. Packaged samples were directly transported to laboratory receiving centres.

Drill core sampling criteria were based on observed sulphide content and host lithology. Nominal sample lengths ranged from 1.0 m to 1.5 m in disseminated style mineralization and to as small as 5 cm across massive stringer mineralization. Higher grade intervals were sampled at shorter lengths, consistent with mineralization style and (or) sulphide content. Sampling was terminated at lithological or mineralization style boundaries. The estimated sulphide species and content of each sample interval were recorded in the drill core logs. The protocol used a three-tag common number system: One tag went into the sample bag, one tag stayed in the drill core box, and one tag stayed in the sample tag book for storage in the office. Drill core hole depth markers were placed at 3 m intervals.

The ALX series samples were shipped to the Chimitec-Bondar Clegg Laboratory (now ALS Chemex) in Val d'Or, Québec for assay. Analyses consisted of acid digestion with an atomic absorption finish for nickel, copper and cobalt. Precious metals were not assayed. No sample standards or blanks were utilized. ALS Chemex is an independent laboratory and is ISO/IEC 17025:2017 accredited.

Assay certificates for the ALX series have not been located, due to a number of changes in ownership, management and office changes over the years. All logs, assays and survey data were recorded in the Dhlogger<sup>TM</sup> drill core data management system, from which data for the Mineral Resource Estimate reported in this Technical Report were derived.

# 11.1.2 Hucamp HUX LAX and LOX Series

Regarding the Hucamp HUX 2001 drill program, the drill core was logged and sawn in half by MPH Consulting Limited ("MPH") at a secure facility outside of Porcupine, Ontario. Most of the drill core was returned to the Alexo site, however, the remainder was lost. On the other hand,

the LAX and LOX 2004 and 2005 programs, the holes were logged and sampled on-site, under the supervision of Mr. Davis. The drill core was sawn in half with one-half retained in the drill core box and stored on-site. The other half was placed in plastic sample bags with tags and sent directly to the assay laboratory receiving centre in Timmins. All drill core is currently stored onsite, with the exception of the lost HUX series hole materials. The site is secured by a locked gate at the entrance to the Property off Highway 67.

For the HUX series, half of the drill core was retained at the MPH facility and half was sent to ALS Chemex for assay. Nickel, copper and cobalt were determined by atomic absorption after aqua regia digestion and Au, Pt and Pd by nickel fire assay with ICP finish. 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 utilized. Swastika is an independent laboratory that has been accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) in meeting the requirements of ISO-IEC 17025 for a select range of analyses.

The LAX and LOX series drill core samples were placed in plastic sample bags with the respective tag and transferred to the SGS Canada Inc. ("SGS") facility in Rouyn-Noranda, Quebec. Each sample was crushed to -10 mesh, and then a 200 g split was ring pulverized to 85% passing 75 microns. Gold, platinum and palladium were assayed with a full 30 g sample lead fire assay with ICP-ES finish. Nickel, copper and cobalt were assayed by sodium peroxide fusion ICP-ES finish. QA/QC consisted of inserting blanks and standards every 50 samples (Paul Davis, pers. comm.). Every 10<sup>th</sup> sample was re-assayed for the duplicate. The drill core was also photographed. SGS is an independent laboratory and a Standards Council of Canada (SCC) accredited laboratory conforming to the requirements of CAN-P-1579 and CAN-P-1579 (ISO/IEC 17025:2005).

Assay certificates for the HUX series assays have not been located, due to a number of changes in ownership, management and office changes over the years. All drill logs, assays and survey data were recorded in the Dhlogger<sup>TM</sup> drill core data management system, from which data for the Mineral Resource Estimate reported in this Technical Report were derived.

# 11.2 SAMPLE PREPARATION, ANALYSIS AND SECURITY – 2010 TO 2011

During the 2010 and 2011 drill program, all aspects of sample preparation were under the direction of Mr. Kim Tyler, P. Geo. The drill core was logged and sampled on-site by Mr. Tyler. The core was sawn in half with one-half retained in the drill core box and stored on-site. The other half of the drill core was placed in plastic sample bags with tags and sent directly to the assay laboratory receiving centre in Timmins.

Criteria for the drill core sampling were based on observed sulphide content and host lithology. Nominal sample lengths ranged from 1.0 m to 1.5 m in the 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. Sampling intervals were terminated at lithologic and mineralization style boundaries. The estimated sulphide species and content correlating to each sample interval were recorded in the drill core logs. The drill core was also photographed.

The drill core sampling protocol used a three-tag system: One tag went into the sample bag; one tag stayed in the drill core box; and one tag remained in the sample book for storage in the office. The entire drill core from the 2010-2011 drill programs is stored on-site. The site is secured by a locked gate at the entrance to the Property off Highway 67. Drill core markers were placed at 3 m down-hole intervals.

Quality assurance/quality control ("QA/QC") consisted of inserting blanks and standards every 25 samples. Every 10<sup>th</sup> sample was re-assayed as a duplicate. Canadian Arrow used granite for their blanks. Standard LBE#3 was prepared by WCM Minerals of Burnaby B.C. The author has not reviewed the QA/QC data for Canadian Arrow's 2010/2011 drilling.

The drill core samples were prepared and assayed at ALS Chemex, an independent and ISO/IEC 17025:2017 accredited analytical laboratory. Each entire sample was crushed to -10 mesh, and then a 200 g split was ring pulverized to 85% passing 75 microns. Analyses consisted of acid digestion with an atomic absorption finish for nickel, copper and cobalt. Platinum, palladium and gold were analyzed in 30 g aliquots by lead fire assay with ICP-AES finish.

# 11.3 COMMENT ON SAMPLE PREPARATION ANALYSIS AND SECURITY

It is the opinion of the authors of this Technical Report that sample preparation, security and analytical procedures used by Outokumpu, Hucamp and Canadian Arrow are adequate for the purposes of this Mineral Resource Estimate, and that there are no factors that materially impact the reliability or accuracy of the dataset employed in the calculation of this Mineral Resource Estimate.

P&E conducted duplicate sampling audits during five separate site visits completed from 2010 to 2020 to support the QA/QC verification discussed in Section 12 of this Technical Report.

# **12.0 DATA VERIFICATION**

#### 12.1 2010 ALEXO NORTH AND ALEXO SOUTH DATABASE VERIFICATION

In 2010, verification of assay data entry was performed by P&E on 430 Alexo North and South assay intervals for nickel, copper, cobalt, gold, platinum and palladium. A few very minor data entry errors were observed and corrected. The 430 verified intervals were checked against assay laboratory certificates from SGS. The checked assays represented 68% of the data to be used for the Mineral Resource Estimate and approximately 15% of the entire database.

### 12.2 2012 ALEXO NORTH AND ALEXO SOUTH DATABASE VERIFICATION

In 2012, verification of assay data entry was performed by P&E on 737 Alexo North and South assay intervals for Ni, Cu, Co, Au, Pt and Pd. 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 44% of the data to be used for the Mineral Resource Estimate and approximately 23% of the entire database.

### 12.3 2020 DUNDONALD SOUTH DATABASE VERIFICATION

P&E conducted verification of the Dundonald South drill hole assay database for nickel, copper, cobalt, gold, palladium and platinum, by comparison of the database entries with assay certificates, from Laboratoire Expert Industriel, Quebec, Canada, in comma-separated values (csv) file format.

Assay data ranging from 2004 and 2005 were verified for the Dundonald South database. Exactly 79% (1,683 out of 2,141 samples) of the constrained database was checked for nickel, copper and cobalt and 77% (140 out of 182) of the constrained database was checked for gold, palladium and platinum. Very few minor errors were encountered during the verification process, which were subsequently corrected.

#### 12.4 2020 DUNDONALD NORTH DATABASE VERIFICATION

P&E also conducted verification of the Dundonald North drill hole assay database for nickel, copper, cobalt, gold, palladium and platinum, by comparison of the database entries with assay certificates, from Laboratoire Expert Industriel, Quebec, Canada, in comma-separated values (csv) file format.

Assay data ranging from the 1980s and 2004 through 2005 were verified for the Dundonald North database. Exactly 23% (64 out of 274 samples) of the constrained database was checked for nickel, copper and cobalt and 100% (11 out of 11) of the constrained database was checked for gold, palladium and platinum. No errors were encountered during the verification process.

### 12.5 2010 P&E SITE VISITS AND INDEPENDENT SAMPLING

Mr. Eugene Puritch P. Eng., and Mr. David Burga P. Geo., of P&E, conducted the first site visit to the Alexo site on May 5, 2010, at which time they collected nine samples by quarter sawing the half core remaining in the core box. The 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 for an extensive core re-sampling program. The decision was made to resample 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, 62 samples were collected by quarter sawing the half drill core remaining in the core box. The 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 the 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 to the offices of P&E in Brampton, Ontario and sent them via courier to AGAT Laboratories Ltd. ("AGAT") in Toronto.

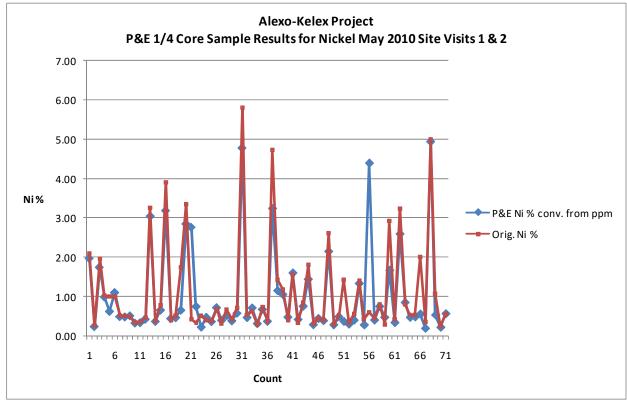
Mr. Yassa brought the samples from the second site visit to Dicom courier in Rouyn-Noranda, Québec. From there they were shipped to the offices of P&E, who took them to AGAT.

AGAT is accredited by the Standards Council of Canada (SCC), the Canadian Association for Laboratory Accreditation (CALA) and SAI Global, and is ISO/IEC 17025:2017 accredited and ISO 9001:2015 certified.

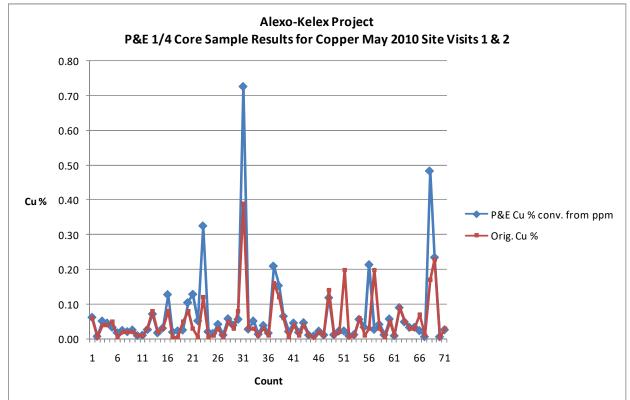
Nickel, copper and cobalt were analyzed using four-acid digest and AAS finish. Gold, platinum and palladium were analyzed using lead collection fire assay with ICP-OES finish.

Graphs of all values for samples taken during the site visits (shown combined) versus the original sample values can be seen in Figures 12.1 through 12.6.

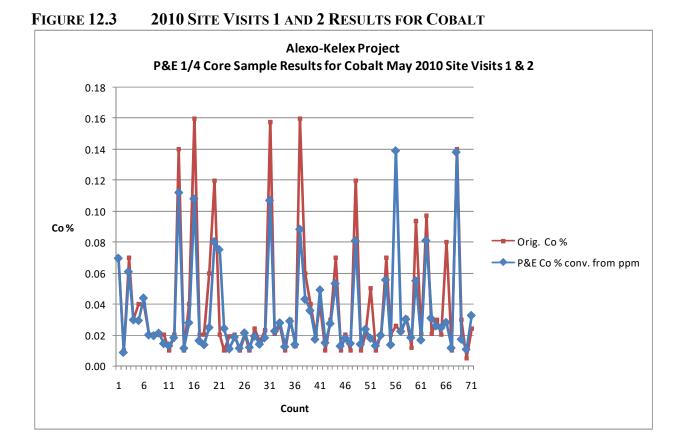




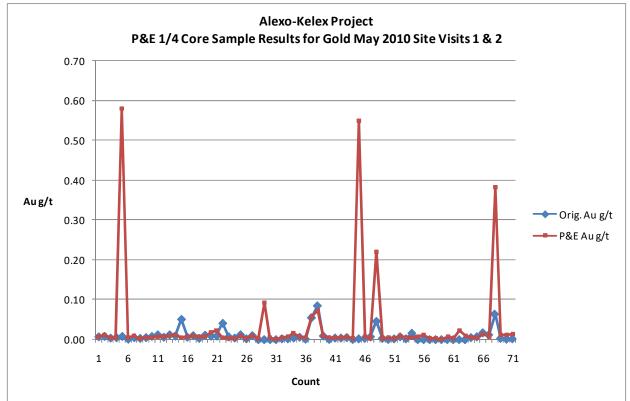
#### FIGURE 12.2 2010 SITE VISITS 1 AND 2 RESULTS FOR COPPER



Page 85 of 297

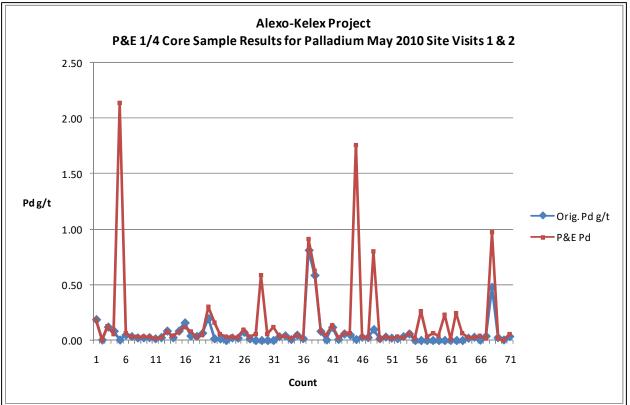




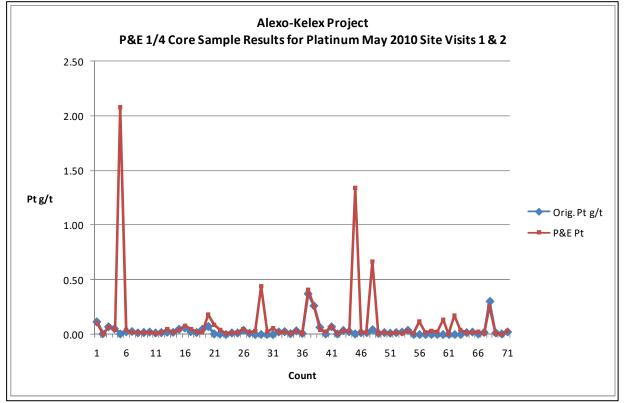


Page 86 of 297









# 12.6 2011 P&E SITE VISIT AND INDEPENDENT SAMPLING

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

Samples were selected through a range of grades from high to low. At no time were any officers or employees of Canadian Arrow notified 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 in Mississauga.

AGAT is accredited by the Standards Council of Canada (SCC), the Canadian Association for Laboratory Accreditation (CALA) and SAI Global, and is ISO/IEC 17025:2017 accredited and ISO 9001:2015 certified.

Nickel, copper and cobalt were analyzed using four-acid digest and AAS finish. Gold, platinum and palladium were analyzed using lead collection fire assay with ICP-OES 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 Figures 12.7 through Figure 12.11.

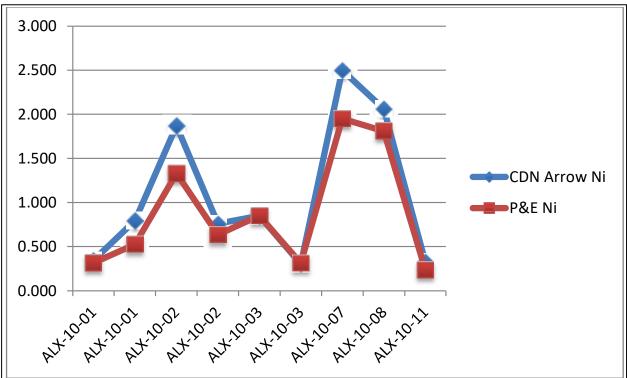
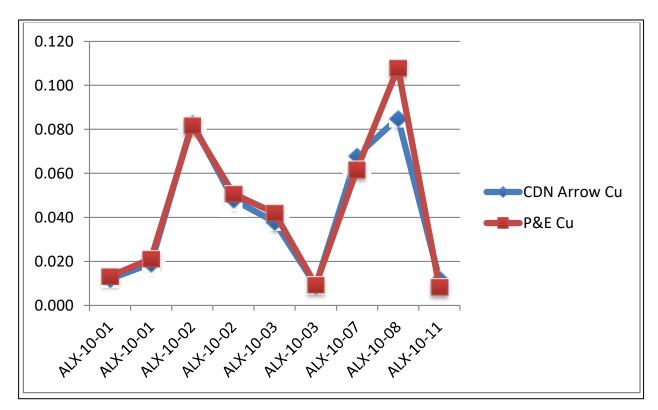
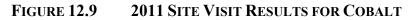
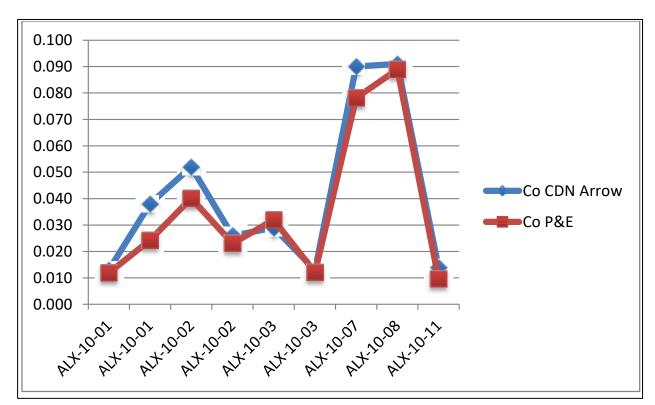


FIGURE 12.7 2011 SITE VISIT RESULTS FOR NICKEL



# FIGURE 12.8 2011 SITE VISIT RESULTS FOR COPPER





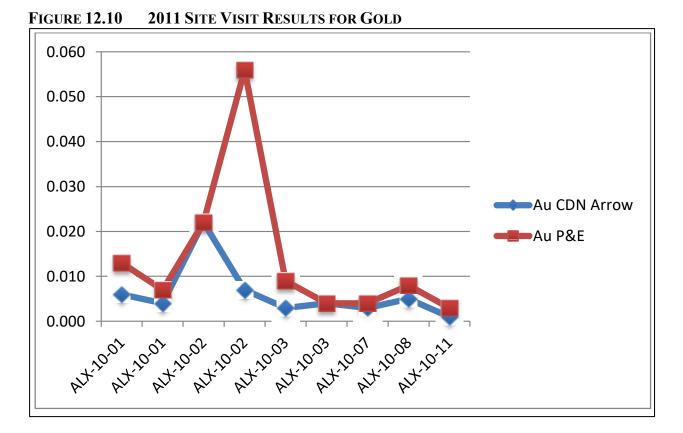
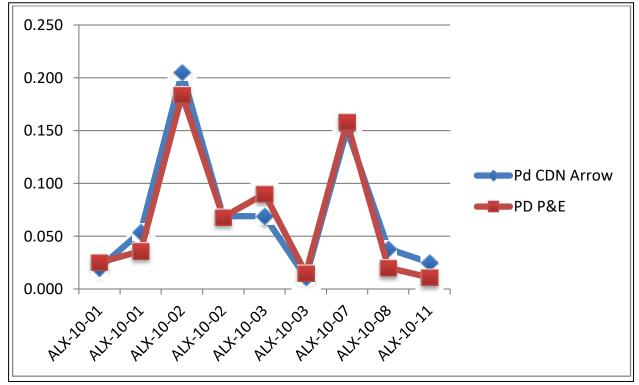


FIGURE 12.11 2011 SITE VISIT RESULTS FOR PALLADIUM



Page 90 of 297

# 12.7 AUGUST 2020 P&E SITE VISIT AND INDEPENDENT SAMPLING

Mr. Antoine Yassa, P. Geo., and Mr. Eugene Puritch, P.Eng., of P&E, conducted a site visit to the Dundonald South area on August 25, 2020, at which time Mr. Yassa collected 45 samples from ten drill holes. The drill holes sampled were taken from the 2004-2005 drill program.

Samples were selected through a range of grades from high to low. At no time were any officers or employees of C1N notified as to the identification of samples to be selected.

During the site visit, samples were tagged with unique sample numbers and bagged. Mr. Puritch delivered the samples directly to AGAT Laboratories in Mississauga.

AGAT is accredited by the Standards Council of Canada (SCC), the Canadian Association for Laboratory Accreditation (CALA) and SAI Global, and is ISO/IEC 17025:2017 accredited and ISO 9001:2015 certified.

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 ICP-MS finish. Nickel and copper results >10,000 ppm were also analyzed by sodium peroxide fusion with ICP-OES finish.

Dundonald South site visit sample results are presented in Figures 12.12 through Figure 12.17.

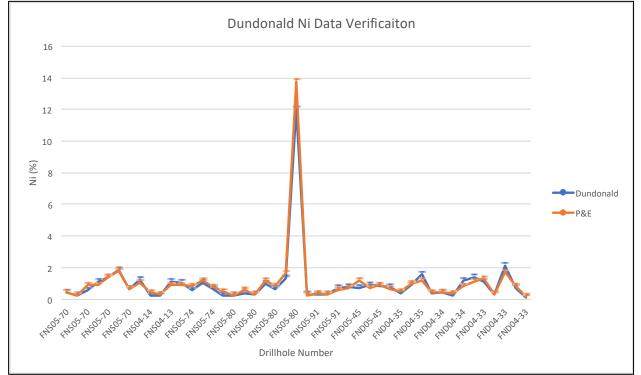


FIGURE 12.12 AUGUST 2020 SITE VISIT RESULTS FOR NICKEL

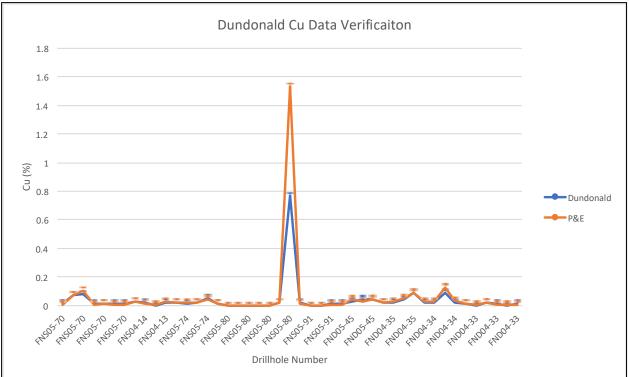
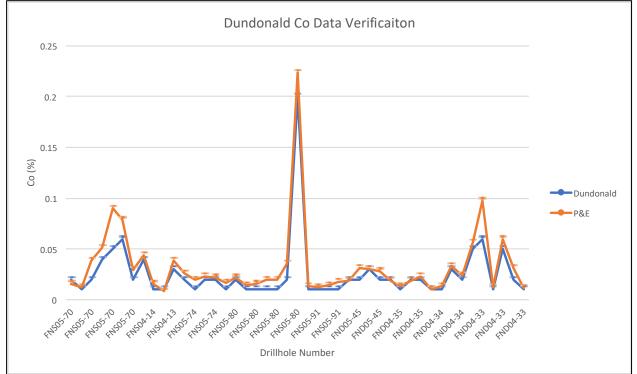
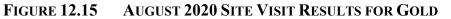
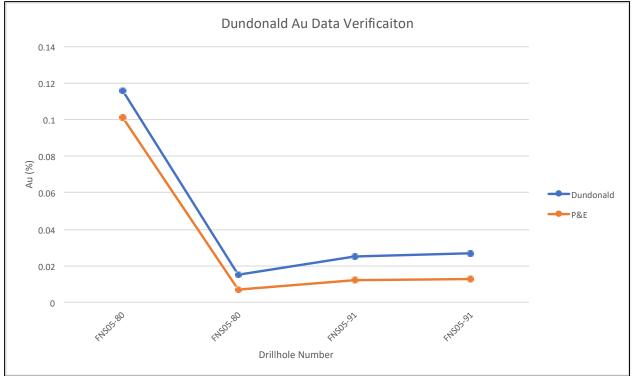


FIGURE 12.13 AUGUST 2020 SITE VISIT RESULTS FOR COPPER

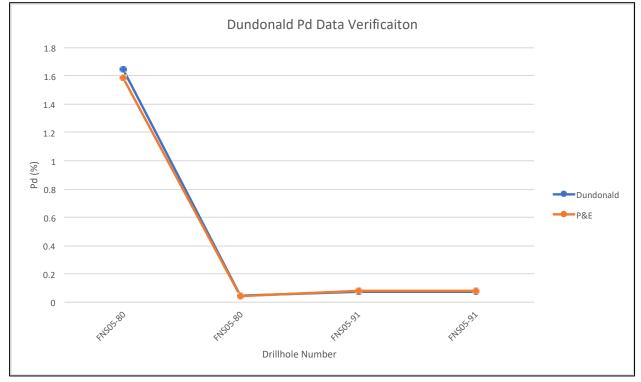




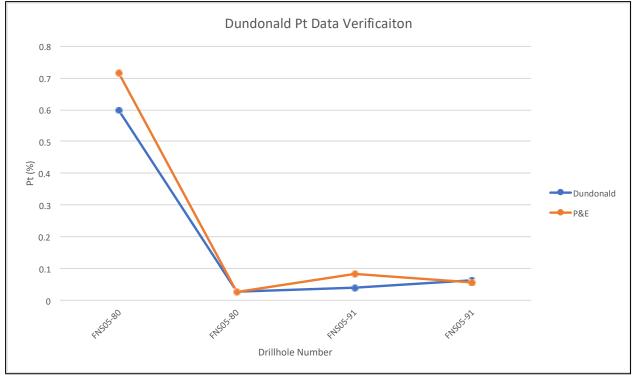




## FIGURE 12.16 AUGUST 2020 SITE VISIT RESULTS FOR PALLADIUM







## 12.8 SEPTEMBER 2020 P&E SITE VISIT AND INDEPENDENT SAMPLING

Mr. Antoine Yassa, P. Geo., of P&E, conducted a site visit to the Dundonald North area on September 22, 2020, at which time he collected 45 samples from eight drill holes. The holes selected for sampling were drilled in the 1980s and 2005.

Samples were selected through a range of grades from high to low. At no time were any officers or employees of C1N 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 utilized Dicom, a commercial shipping service, to deliver the samples to P&E's offices in Brampton and from there, the samples were taken to AGAT in Mississauga by P&E.

AGAT is accredited by the Standards Council of Canada (SCC), the Canadian Association for Laboratory Accreditation (CALA) and SAI Global, and is ISO/IEC 17025:2017 accredited and ISO 9001:2015 certified.

Nickel, copper and cobalt were analyzed using four-acid digest and ICP-MS finish. Nickel and copper results >10,000 ppm were also analyzed by sodium peroxide fusion with ICP-OES finish.

Dundonald North site visit sample results are presented in Figures 12.18 through Figure 12.20.

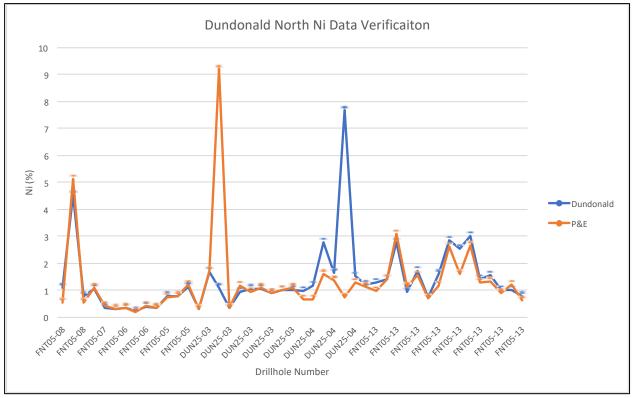
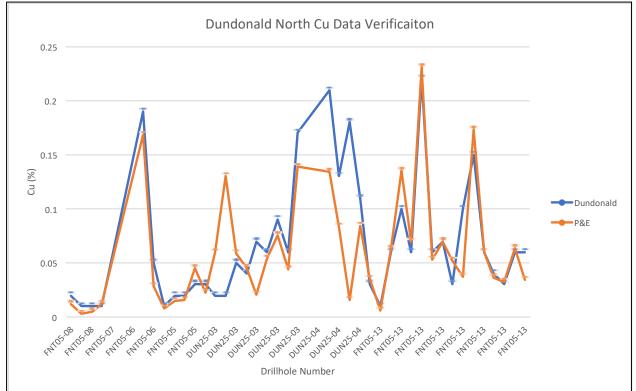
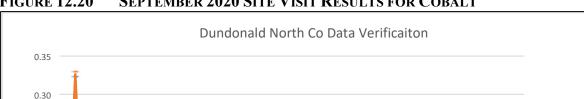


FIGURE 12.18 SEPTEMBER 2020 SITE VISIT RESULTS FOR NICKEL







#### **FIGURE 12.20** SEPTEMBER 2020 SITE VISIT RESULTS FOR COBALT

#### 0.25 0.20 Co (%) 0.15 Dundonald - P&E 0.10 0.05 0.00 DUN25-03 DUN25-03 DUN25-03 DUN25-03 DUN25:04 DUN25-04 DUN25:04 FNT05-08 ENTO5-08 ENTOPOI ENT05-06 FN105.06 FNIOSOS FNTOSOS DUN25-03 FN105-13 FN105-13 FN105-13 FN105-13 FN105-13 FN105-13 FN105-13 ENTOS Drillhole Number

#### 12.9 **COMMENTS**

Considering that the site visit samples were quarter-core, and therefore weighed less than the original half-core (i.e. difference in sample volume), and that the core duplicates cannot be expected to have excellent precision due to inherent geologic variability, the comparison between the original results and the P&E verification results are similar.

Based upon the evaluation of P&E's multiple due diligence sampling and database verification, it is the opinion of the authors of this Technical Report that the data are robust and suitable for use in the current Mineral Resource Estimate.

# 13.0 MINERAL PROCESSING AND METALLURGICAL TESTING

Mineralogical and metallurgical testwork has not been conducted on the Alexo North and Alexo South Deposits in almost a decade and never on the Dundonald North and South Deposits. Historically there was never any mineral processing on-site at Alexo. Small and larger bulk samples had been shipped off-site to Sudbury for testing and processing.

## **13.1 EARLY METALURGICAL TESTING**

Prior to 2004, a 10,000 t Alexo bulk sample had been transported to Falconbridge, Sudbury. Part of the sample (6,000 t) assayed 2.46% Ni, 0.32% Cu and 0.07% Co. Despite suggestions that mining and shipping mineralized material to Sudbury for toll processing would be economic, no results of the bulk sample processing are available for review.

### **13.2 BENCH-SCALE TESTING 2011**

In 2011, XPS (Xtrata Process Support, formerly Falconbridge, now Glencore) conducted qualitative mineralogy and scoping level metallurgical testing on an Alexo South composite sample.

### **13.2.1** Chemical Analyses and Mineralogical Assessment

TABLE 13.1           Alexo South Composite Head Sample Analyses										
		g/t								
Ni	Cu	Со	Co S		Pt	Pd				
2.13	0.09	0.08	14.54	11.96	0.05	0.12				

The composite chemical analyses are shown in Table 13.1.

Mineralogical analyses were performed using an Electron Microprobe. It was determined that:

- The pyrrhotite (Po) contained 0.21% Ni and pentlandite (Pn) 31% Ni. These Ni levels are lower than in typical nickel sulphide ores;
- Silicate gangue contained on average 700 ppm (0.07%) Ni; and
- It was reported by the test report authors that unrecoverable nickel would be attributable to Po and silicates.

# **13.2.2** Comminution Testing

A single grinding test was performed. The Bond Ball Mill Index was determined to be 23.7 kWh/t. This test indicated that the Alexo South mineralized material would be very hard to grind.

## **13.2.3** Flotation Test Results

Duplicate rougher flotation tests were conducted on finely ground ( $K_{80}$  53µm) Alexo South composite samples. In one test, a silicate depressant (Dep C) was applied using a custom (Montcalm<sup>1</sup>) flowsheet (the exact flowsheet outline is unknown). The rougher flotation results are shown in Table 13.2.

Table 13.2           Rougher Flotation Recovery Results for Alexo South Composite With           Silicate Depressant Montcalm Flowsheet												
Product	Wt %	Grade %						Recovery %				
		Ni	Cu	S	Ni+Cu	Co	MgO	Ni	Cu	S	Co	MgO
Rougher Conc.	7.9	19.0	0.8	33.1	19.8	0.7	1.2	67.8	62.1	17.4	68.9	0.8
Rougher Scavenger Conc.	12.3	4.0	0.1	28.6	4.1	0.1	4.9	22.1	13.3	23.6	21.3	5.0
Total	20.1	9.8	0.4	30.3	10.2	0.4	3.4	89.9	75.5	41.0	90.2	5.8

*Note: Wt* % = *weight percent.* 

Without Dep C, the results are summarized in Table 13.3. Concentrate grades and recoveries were slightly lower without the silicate depressant.

<sup>&</sup>lt;sup>1</sup> The Montcalm Mine is a former Falconbridge (later Glencore) mine located 65 km NW of Timmins. The mine closed in 2009 following ground instability issues. Four Mt of ore grading 1.25% Ni had been processed.

Table 13.3Rougher Flotation Recovery Results for Alexo South CompositeWithout Silicate Depressant Montcalm Flowsheet												
Product	Wt	Grade %						Recovery %				
Product	%	Ni	Cu	S	Ni+Cu	Со	MgO	Ni	Cu	S	Co	MgO
Rougher Conc.	7.3	14.6	0.6	33.4	15.2	0.6	1.2	56.2	62.4	17.3	57.5	0.9
Rougher Scavenger Conc.	10.6	5.3	0.1	31.0	5.4	0.2	3.1	29.9	15.9	23.5	29.7	2.7
Total	17.9	9.0	0.3	32.0	9.4	0.3	2.5	86.0	78.2	40.8	87.2	3.6

*Note: Wt* % = *weight percent.* 

An open circuit cleaner test was performed, and the results are shown in Table 13.4.

Similar tests were performed using what was termed to be the Strathcona flowsheet, results are summarized in Table 13.5. The total concentrate Ni grade was slightly higher, but recovery was significantly lower. The Montcalm flowsheet was assumed by the test report authors to be superior.

TABLE 13.4 Open Circuit Cleaner Results For Alexo South Composite Using Montcalm Flowsheet													
Wt         Grade %         Recovery %													
Product	%	Ni	Cu	S	Ni+Cu	Со	MgO	Ni	Cu	S	Ni+Cu	Со	MgO
Rougher Conc.	11.3	12.1	0.5	32.2	12.6	0.4	2.4	61.7	60.8	24.2	61.7	62.1	2.4
Sec Rougher Cleaner Conc.	6.5	7.7	0.2	33.3	7.9	0.4	1.9	22.5	12.9	15.1	22.1	23.1	0.5
Cleaner Scavenger Conc.	1.7	2.4	0.1	33.0	2.5	0.1	2.3	1.8	1.2	3.7	1.8	1.8	0.3
Final Conc.	19.5	9.8	0.4	33.4	10.3	0.4	1.9	86.1	74.9	43.0	85.6	86.9	3.2

*Note: Wt* % = *weight percent.* 

TABLE 13.5 Open Circuit Cleaner Results for Kelex Composite Using Strathcona Flowsheet													
Duo du ot	Wt			Gr	ade %					Rec	overy %		
Product		Ni	Cu	S	Ni+Cu	Со	MgO	Ni	Cu	S	Ni+Cu	Co	MgO
Rougher Conc.	4.9	14.6	0.6	27.6	15.2	0.5	4.1	31.5	30.7	9.2	31.5	32.7	1.7
Sec Rougher Cleaner Conc.	3.2	16.4	0.5	33.1	16.9	0.6	1.0	23.2	14.9	7.2	22.9	23.9	0.3
Po Scavenger Conc.	2.3	3.9	0.1	35.7	4.0	0.1	1.5	4.2	2.7	5.9	4.1	3.9	0.3
Po Cleaner Conc.	4.4	8.5	0.3	35.9	8.9	0.3	0.7	16.6	13.7	10.7	16.5	16.6	0.3
Final Conc.	14.7	11.5	0.4	32.5	11.9	0.4	2.0	75.6	61.9	33.0	75.0	77.1	2.5

The preliminary results indicated that a smelter-acceptable, low Cu, low MgO, 10% Ni concentrate could be obtained.

It is considered that instead of building and operating a process plant on the Alexo-Dundonald site, mineralized material would be direct shipped to a toll processing operator. In advance of a toll processing agreement, the toll processing operator is expected to request that metallurgical testing should mirror a flowsheet that the toll operator uses. In addition, toll milling operators would sample for metal content each shipment and if the Alexo Dundonald is blended in with other mineralized feeds at the process plant, bench testing of each shipment may be needed to assist in determining the actual metallurgical performance.

# 13.2.4 Acid Rock Drainage (ARD) Tests

Two tests by XPS in 2011 indicated that Alexo South flotation tails would be strongly acid generating. ARD of flotation tailings should not be a major concern for the Project or the toll processor. Long term storage of low-grade stockpiles and mineralized zone associated waste rock are expected to need assessment of ARD and metal leaching potential.

#### **13.3 RECOMMENDATIONS FOR MORE ACCURATELY PREDICTING METALLURGICAL PERFORMANCE**

Mineralized material is being considered to be sourced from multiple sources, such as dewatered and re-developed Alexo North and Alexo South open pits, newly developed underground and open pit mines at Dundonald South and underground at Dundonald north. Overall nickel grade is anticipated to range from 0.8% to 1.5%, which is lower that the Alexo South composite sample tested by XPS in 2011 (2.1% Ni). The mineralized material would be shipped to a processor's plant for toll processing.

The very preliminary tests suggest that recoveries of Ni and Cu would be >80% and >75%, respectively at 10% Ni grade or higher. However, recoveries may be modified by the predicted lower mined grades for the Project and the toll processing operator's specific flowsheet.

If available, stored drill core representative of the to-be-mined mineralized zones should be subject to the following testing:

- QEMSCAN modal and liberation analyses, and
- A range of comminution tests.

Fresh drill core samples from each distinct mineralized zone should be obtained for additional investigations. These samples should be stored in freezers (to prevent Po oxidation) in advance of testing. The investigations should include:

- Rougher, cleaner and locked-cycle flotation tests using the recommended flowsheet of the potential toll processing customer on representative composites of mineralized material. The PGM content and distribution in flotation products should be followed; and
- Acid rock drainage and metal leaching (ARD/ML) tests on flotation tailings and on waste rock from open pits.

In addition,

- If mineralized material is to be transported a considerable distance by truck or by rail (e.g. to Sudbury), preliminary material sorting characteristics could be considered;
- Alternatively, if the material is to be transported to the nearby Kidd Creek facility for custom processing, preliminary material sorting characteristics would be less important.

#### 14.0 MINERAL RESOURCE ESTIMATES

The Alexo-Dundonald Project Mineral Resource Estimate is comprised of two areas and four deposits, as follows: Alexo North, Alexo South, Dundonald North and Dundonald South. Mineral Resource Estimates for the Alexo North and Alexo South Deposits are presented in Section 14.1 and for Dundonald North and Dundonald South Deposits are presented in Section 14.2 A summary of the total Mineral Resource Estimate is presented in Section 14.3.

#### 14.1 ALEXO DEPOSITS

#### 14.1.1 Introduction

The purpose of this Technical Report section is to update the Alexo Property (Alexo North and Alexo South [formerly Kelex]) Mineral Resource Estimate in compliance with NI 43-101 and CIM standards. The update to the 2011 Mineral Resource Estimate is mainly based on the metal price variations, since all drill hole data remains unchanged since 2011. This Mineral Resource Estimate 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 December 1, 2020.

#### 14.1.2 Database

All drilling data was provided by former Project operator Canadian Arrow Mines Ltd. in the form of Excel files, drill logs and assay certificates. Forty-two (42) drill cross sections were developed on a local grid looking northeast at an azimuth of 60°, on 15-metre spacing, and named from 135-NE to 750-NE. A GEOVIA GEMS<sup>TM</sup> database was developed that contained 227 diamond drill holes, of which 119 were intersected in the updated Mineral Resource wireframes. A surface drill hole plan is shown in Appendix A.

The database was validated in GEOVIA GEMS<sup>™</sup> with minor corrections required. The assay table of the database contained 3,146 assays for Ni, Cu and 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.

#### 14.1.3 Domain Interpretation

Domain boundaries were determined from lithology, structure and NSR boundary interpretation from visual inspection of drill hole cross-sections. Two domain wireframes were developed and named Alexo North and Alexo South. These wireframes were created with computer screen digitizing on drill hole cross-sections in GEOVIA GEMS<sup>TM</sup> by the authors of this Technical Report. The outlines were influenced by the selection of mineralized material that demonstrated NSR value >C30/t, and zonal continuity along strike and down-dip. The NSR value was calculated with the formula below:

NSR C\$/t = [(Ni % x 161.28) + (Cu % x 64.09) + (Co % x 99.94) + (Au g/t x 25.55) + (Pt g/t x 15.26) + (Pd g/t x 28.12)-20.83] x 0.98

In some cases, mineralization less than the NSR cut-off was included to maintain zonal continuity and a 2 m minimum drill core intercept length.

On each cross-section, polyline interpretations were digitized from drill hole to drill hole, but not extended more than 50 m into untested territory. The interpreted polylines from each section were "wireframed" in GEOVIA GEMS<sup>TM</sup> into 3-dimensional domains. The wireframes were then clipped against topography and overburden surfaces, and the historical open pits were removed. The resulting wireframes (domains) were used for statistical analysis, grade interpolation, rock coding and Mineral Resource reporting purposes, see Appendix B.

#### 14.1.4 Rock Code Determination

The rock codes used for the Mineral Resource model were derived from the mineralized domain wireframes that were developed to constrain grade block modelling limits. The list of rock codes used was as follows:

#### **Rock Code Description**

0 A	.ir
10 A	lexo North Domain
20 A	lexo South Domain
99 V	Vaste Rock
100 C	Verburden

# 14.1.5 Grade Capping

The basic statistics of the Mineral Resource Estimate wireframe constrained raw assays are presented in Table 14.1.

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 (refer to Appendix C for graphs).

Grade capping was not required for the Alexo North Domain. The capped values for the Alexo South Domain are presented in Table 14.2. The basic statistics of capped assays of Alexo South are summarized in Table 14.3.

TABLE 14.1         Alexo Statistics of Constrained Raw Assays												
Domain			Alex	o North				Alexo	South			
Variable	Ni (%)	Cu (%)	Co (%)	Au (g/t)	Pt (g/t)	Pd (g/t)	Ni (%)	Cu (%)	Co (%)	Au (g/t)	Pt (g/t)	Pd (g/t)
Number of Samples	146	146	146	146	146	146	938	938	938	938	938	938
Minimum Value	0.030	0.005	0.005	0.001	0.002	0.003	0.005	0.002	0.002	0.000	0.000	0.000
Maximum Value	6.540	0.490	0.230	0.231	0.712	1.498	7.980	0.530	0.210	0.154	0.639	1.410
Mean	1.290	0.170	0.060	0.040	0.140	0.360	0.810	0.030	0.030	0.010	0.030	0.040
Median	1.020	0.150	0.050	0.020	0.100	0.260	0.460	0.020	0.020	0.000	0.020	0.020
Variance	1.540	0.010	0.000	0.000	0.020	0.130	1.130	0.000	0.000	0.000	0.000	0.010
Standard Deviation	1.240	0.120	0.040	0.040	0.140	0.360	1.070	0.050	0.030	0.010	0.040	0.090
Coefficient of Variation	0.960	0.730	0.740	1.120	0.940	0.990	1.310	1.440	1.160	2.000	1.680	1.980
Skewness	1.875	0.460	1.043	1.633	1.162	1.203	3.460	4.477	3.057	6.553	6.462	7.242
Kurtosis	6.670	2.346	3.832	6.283	4.168	3.704	16.665	32.044	12.451	62.624	67.114	82.250

	TABLE 14.2         ALEXO SOUTH CAPPING VALUES											
Element	Capping Value	No. of Assays 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					
Со	No Cap	0	0.03	0.03	1.16	1.16	100.0					
Au	No Cap	0	0.01	0.01	2.00	2.00	100.0					
Pt	0.4	2	0.03	0.03	1.68	1.57	99.8					
Pd	0.7	3	0.04	0.04	1.98	1.75	99.7					

TABLE 14.3       Alexo South Basic Statistics of Capped Assays											
Variable	Ni (%)	Cu (%)	Co (%)	Au (g/t)	Pt (g/t)	Pd (g/t)					
Number 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	0.300	0.210	0.154	0.400	0.700					
Mean	0.811	0.032	0.030	0.006	0.025	0.044					
Median	0.460	0.020	0.020	0.003	0.016	0.024					
Variance	1.093	0.002	0.001	0.000	0.002	0.006					
Standard Deviation	1.046	0.043	0.035	0.011	0.040	0.077					
Coefficient of Variation	1.289	1.332	1.161	1.997	1.566	1.750					
Skewness	3.308	3.373	3.057	6.553	4.973	4.794					
Kurtosis	14.949	17.088	12.451	62.624	36.969	32.476					

# 14.1.6 Composites

Length weighted composites were generated for the drill hole data that fell within the constraints of the above-mentioned wireframed 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 hanging wall of the 3-D wireframe constraint. The compositing process was halted on exit from the footwall of the wireframe constraint. Un-assayed intervals were given 0.001 values. Any composites calculated that were <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 GEOVIA GEMS<sup>TM</sup> point area files for the grade interpolation. The basic statistics of the composites are shown in Table 14.4.

TABLE 14.4         Alexo Composite Basic Statistics												
Domain			Alexo	North					Alexo	South		
Variable	Ni (%)	Cu (%)	Co (%)	Au (g/t)	Pt (g/t)	Pd (g/t)	Ni (%)	Cu (%)	Co (%)	Au (g/t)	Pt (g/t)	Pd (g/t)
Number 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	0.45	0.17	0.21	0.66	1.41	6.62	0.30	0.21	0.15	0.39	0.68
Mean	1.08	0.14	0.05	0.03	0.12	0.31	0.66	0.03	0.02	0.00	0.02	0.03
Median	0.78	0.12	0.04	0.02	0.08	0.18	0.44	0.02	0.02	0.00	0.01	0.02
Variance	1.08	0.01	0.00	0.00	0.02	0.10	0.76	0.00	0.00	0.00	0.00	0.00
Standard Deviation	1.04	0.11	0.04	0.04	0.12	0.32	0.87	0.04	0.03	0.01	0.03	0.06
Coefficient of Variation	0.96	0.81	0.75	1.11	0.98	1.03	1.32	1.30	1.21	1.90	1.53	1.79
Skewness	1.70	0.63	1.01	1.72	1.26	1.20	3.78	3.27	3.69	7.63	5.08	5.09
Kurtosis	6.22	2.57	3.83	6.86	4.66	3.77	19.14	17.06	18.02	90.34	40.49	35.76

# 14.1.7 Variography

Variography was carried out on the constrained composites within the mineralized domains. Only Alexo South variography yielded discernible Ni variograms (Appendix D), which enabled the classification of Indicated and Inferred Mineral Resources. The low grades for Cu, Co, Au, Pt and Pd did not allow the creation of meaningful variograms, and therefore the Ni variograms were utilized to interpolate Cu, Co, Au, Pt and Pd grades.

# 14.1.8 Bulk Density

The bulk density used for the Mineral Resource model was derived from analyses performed by AGAT Laboratories on sixty-two (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  $3.11 \text{ t/m}^3$ . Overburden was assigned a bulk density of  $1.8 \text{ t/m}^3$ .

# 14.1.9 Block Modelling

The block models for the Alexo North and Alexo South deposits were constructed using GEOVIA GEMS<sup>TM</sup> V6.8 modelling software, and the block model origin and block size are tabulated in Table 14.5. The block model was rotated 30° counter-clockwise. Separate block models were created for rock type, bulk density, volume percent, class, Ni, Cu, Co Au, Pt, Pd and NSR.

TABLE 14.5         Alexo Deposits Block Model Definition									
Direction	Origin	No. of Blocks	Block Size (m)						
Х	513,909.603	140	5						
Y	5,388,757	800	1						
Ζ	330	60	5						
Rotation	Counter-clockwise 30°								

The volume percent block model was set up to accurately represent the volume and subsequent tonnage 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 ( $ID^2$ ) 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 E and F. The grade blocks within the domain were interpolated using the parameters listed in Table 14.6.

	Table 14.6         Alexo Block Model Interpolation Parameters										
Domain	Dip Dir. (°)	Strike (°)	Dip (°)	Dip Range (m)	Strike Range (m)	Across Dip Range (m)	Max No. per Hole	Min. No. Samples	Max. No. Samples		
	Ni, Cu, Co, Au, Pt and Pd for Indicated Mineral Resources										
Alexo	350	80	-90	20	20	5	2	3	12		
Kelex	330	60	-70	30	30	5	2	3	12		
Ni, Cu, Co, Au, Pt and Pd for Inferred Mineral Resources											
Alexo	350	80	-90	40	40	10	2	1	12		
Kelex	330	60	-70	60	60	10	2	1	12		

# 14.1.10 Mineral Resource Classification

For the purposes of this Mineral Resource Estimate, classifications of all interpolated grade blocks were determined from the Ni interpolations for Indicated and Inferred, due to Ni being the dominant revenue producing element in the NSR calculation. The Indicated Mineral Resources were classified for the blocks interpolated with at least three composites from a minimum of two drill holes and Inferred Mineral Resources were classified for all remaining grade blocks within all mineralized domains. The classifications have been adjusted to reasonably reflect the distribution of each classification. The block model classification cross-sections and plans are presented in Appendix G.

#### 14.1.11 Mineral Resource Estimate

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

#### NSR Cut-off value Parameters (all currency \$C unless stated otherwise)

\$C/\$US (Exchange Rate	0.75
Ni Price	US \$7.35/lb (Consensus Economics long-term lowest)
Cu Price	US \$3.00/lb (Aug 31/20 approx. two-year trailing average)
Co Price	US \$20/lb (Aug 31/20 approx. two-year trailing average)
Au Price	US \$900/oz (Aug 31/20 approx. two-year trailing average)
Pt Price	US \$900/oz (Aug 31/20 approx. two-year trailing average)
Pd Price	US \$1,650/oz (Aug 31/20 approx. two-year trailing
	average)
Ni Flotation Recovery	
Cu Flotation Recovery	90%
Co Flotation Recovery	40%

Au Flotation Recovery	50%
Pt Flotation Recovery	50%
Pd Flotation Recovery	50%
Concentration Ratio	16:1
Ni Smelter Payable	90%
Cu Smelter Payable	85%
Co Smelter Payable	50%
Au Smelter Payable	80%
Pt Smelter Payable	80%
Pd Smelter Payable	80%
Ni Refining Charges	US \$0.50/lb
Cu Refining Charges	US \$0.15/lb
Co Refining Charges	US \$3.00/lb
Au Refining Charges	US \$10.00/oz
Pt Refining Charges	US \$10.00/oz
Pd Refining Charges	US \$10.00/oz
Ni Smelter Treatment Charges	US \$250/t

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

NSR C\$/t = [(Ni % x 161.28) + (Cu % x 64.09) + (Co % x 99.94) + (Au g/t x 25.55) + (Pt g/t x 15.26) + (Pd g/t x 28.12)-20.83] x 0.98

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

In order for the constrained mineralization in the Alexo Deposits to be considered as an open pit Mineral Resource Estimate that is potentially economic, a first pass pit optimization was carried out utilizing the following criteria:

Waste mining cost per tonne	\$2.75
Mineralized material mining cost per tonne	\$3.50
Overburden mining cost per tonne	\$2.00
Mineralized material crushing cost per tonne	\$2.00
Mineralized material transport to process plant cost per tonne	\$6.00
Process cost per tonne	\$20.00
General & Administration cost per processed tonne	\$2.00
Process production rate (tonnes per year)	250,000
Pit slopes (inter ramp angle)	50°
Sulphide Bulk Density	3.11 $t/m^3$
Waste Rock Bulk Density	2.80 t/m <sup>3</sup>
Overburden Bulk Density	1.80 t/m <sup>3</sup>

Constrained Alexo Deposits pit shells are shown in Appendix H.

In the anticipated out-of-pit portion of the Alexo Deposits, the mineralized material mining, crushing, transport, processing and G&A costs combine for a total of (\$58 + \$2 + \$6 + \$20 + \$4) = C\$90/t processed which became the underground NSR cut-off value.

The resulting open pit and underground Mineral Resource Estimate is presented in Table 14.7.

	TABLE 14.7         Alexo Deposits Mineral Resource Estimate (1-6)										
Indicated Classification	NSR Cut-off (C\$/t)	Tonnes (k)	Ni (%)	Cu (%)	Co (%)	Au (g/t)	Pt (g/t)	Pd (g/t)	Contained Ni (Mlb)	Contained Cu (Mlb)	Contained Co (Mlb)
Alexo North Pit Constrained	30	23.3	1.43	0.17	0.06	0.04	0.16	0.40	0.73	0.09	0.03
Alexo South Pit Constrained	30	281.8	0.76	0.03	0.03	0.01	0.02	0.04	4.72	0.19	0.19
Total Pit Constrained Indicated	30	305.1	0.81	0.04	0.03	0.01	0.03	0.07	5.45	0.28	0.22
Alexo North Out-of-Pit	90	2.9	0.97	0.13	0.05	0.03	0.10	0.23	0.06	0.01	0.00
Alexo South Out-of-Pit	90	114.1	0.92	0.04	0.03	0.01	0.04	0.07	2.31	0.10	0.08
Total Out-of-Pit Indicated	90	117.0	0.92	0.04	0.03	0.01	0.04	0.07	2.37	0.11	0.08
Total Indicated	30 + 90	422.1	0.84	0.04	0.03	0.01	0.03	0.07	7.83	0.38	0.30
Inferred Classification	NSR Cut-off (C\$/t)	Tonnes (k)	Ni (%)	Cu (%)	Co (%)	Au (g/t)	Pt (g/t)	Pd (g/t)	Contained Ni (Mlb)	Contained Cu (Mlb)	Contained Co (Mlb)
Alexo South Out-of-Pit	90	15.8	0.91	0.04	0.03	0.01	0.02	0.03	0.32	0.01	0.01
Total Out-of-Pit Inferred	90	15.8	0.91	0.04	0.03	0.01	0.02	0.03	0.32	0.01	0.01

(Notes below)

Notes:

- 1) Mineral Resources, which are not Mineral Reserves, do not have demonstrated economic viability.
- 2) The estimate of Mineral Resources may be materially affected by environmental, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues.
- 3) The Inferred Mineral Resource in this estimate has a lower level of confidence than that applied to an Indicated Mineral Resource and must not be converted to a Mineral Reserve. It is reasonably expected that the majority of the Inferred Mineral Resource could be upgraded to an Indicated Mineral Resource with continued exploration.
- 4) The Mineral Resources in this report were estimated using the Canadian Institute of Mining, Metallurgy and Petroleum (CIM), CIM Standards on Mineral Resources and Reserves, Definitions and Guidelines prepared by the CIM Standing Committee on Reserve Definitions and adopted by the CIM Council.
- 5) The historical open pit mined areas were removed from the Mineral Resource Estimate.
- 6) The out-of-pit Mineral Resource grade blocks were quantified above the \$90/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 longhole stoping with backfill mining method was assumed for the out-of-pit Mineral Resource Estimate calculation.

# 14.1.12 Confirmation of Mineral Resource Estimate

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 on-screen 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 drill holes used for estimation;
  - Mean distance to sample used;
  - Number of passes used to estimate grade; and
  - Mean value of the composites used.
- Comparisons of mean grade of composites within the block models at a Ni 0.001% cut-off are presented in Table 14.8.

ALEXO I	TABLE 14.8 Alexo Deposits Average Grade Comparison of Assays, Composites and Block Model							
Domain	Data Type	Ni (%)	Cu (%)	Co (%)	Au (g/t)	Pt (g/t)	Pd (g/t)	
	Assays	1.29	0.17	0.06	0.04	0.14	0.36	
Alexo	Composites	1.08	0.14	0.05	0.03	0.12	0.31	
North	Block Model ID <sup>2</sup> *	1.04	0.13	0.05	0.03	0.12	0.28	
	Block Model NN**	1.04						
	Capped Assays	0.81	0.03	0.03	0.01	0.03	0.04	
Alexo	Composites	0.66	0.03	0.02	0.00	0.02	0.03	
South	Block Model ID <sup>2</sup> *	0.64	0.03	0.02	0.00	0.02	0.04	
	Block Model NN**	0.65						

Notes:

\* block model grades were interpolated using Inverse Distance Squared.

\*\* block model grades were interpolated using Nearest Neighbour.

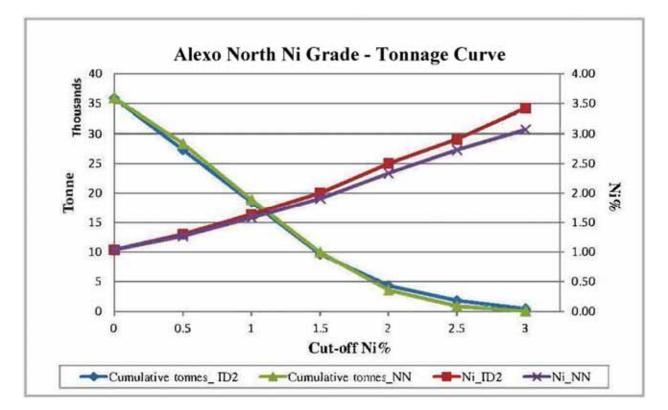
The comparisons above show the average grades of the block models are almost same as that of composites used for the grade estimation.

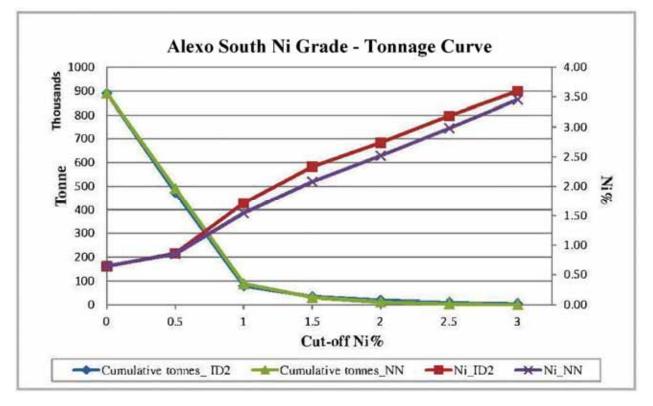
• A volumetric comparison was performed with the block model volume versus the geometric calculated volume of the domain solids and the differences are shown in Table 14.9.

TABLE 14.9 Alexo Deposits Volume Comparison of Block Model with Geometric Solids							
Domain         Alexo North         Alexo South							
Geometric Volume of Wireframes m <sup>3</sup>	11,572	286,588					
Block Model Volume m <sup>3</sup>	11,558	286,487					
Difference %	0.12%	0.04%					

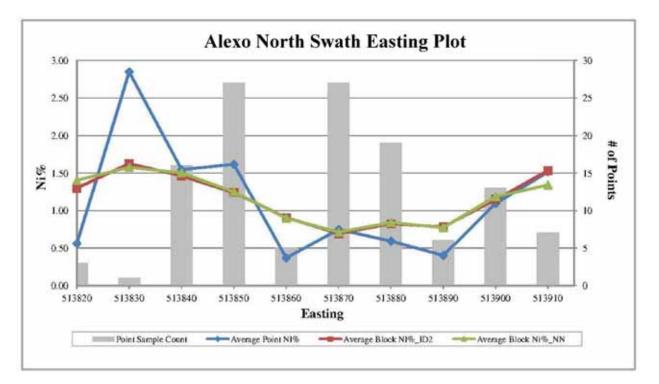
- Comparisons of the grade-tonnage curve of the Ni grade model interpolated with Inverse Distance Squared ("ID<sup>2</sup>") and Nearest Neighbour ("NN") on a global resource basis for both Alexo North and Alexo South are presented in Figure 14.1.
- Local trends for Ni were evaluated by comparing the ID<sup>2</sup> and NN estimate against Ni Composites. As shown in Figures 14.2 to 14.4, Ni grade interpolations with ID<sup>2</sup> and NN agreed well for both Alexo North and Alexo South.

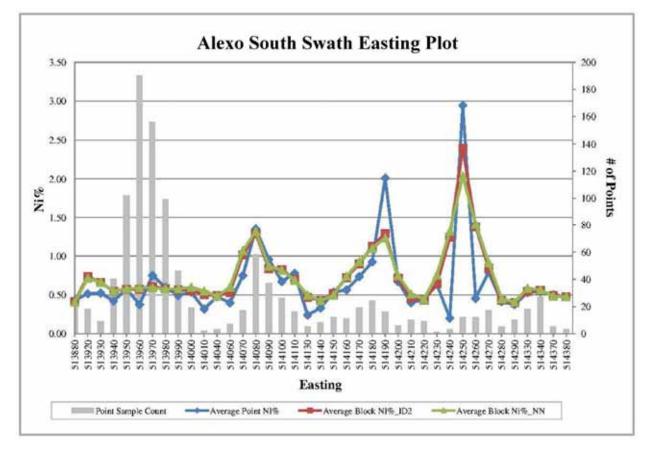
FIGURE 14.1 ALEXO DEPOSITS NI GRADE-TONNAGE CURVE FOR ID<sup>2</sup> AND NN INTERPOLATION



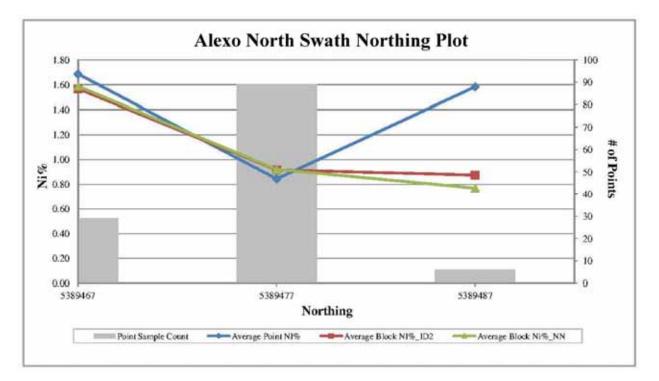


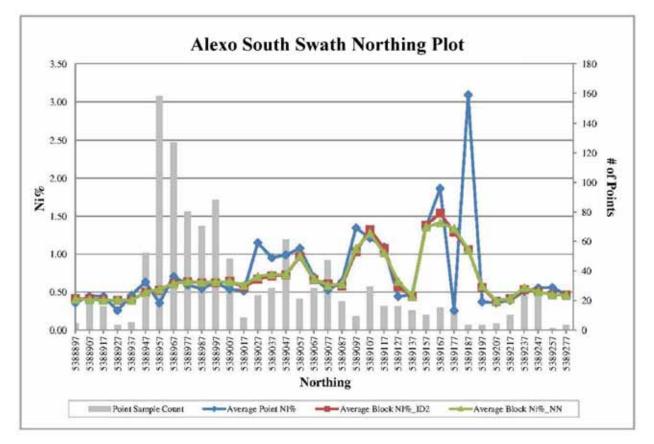


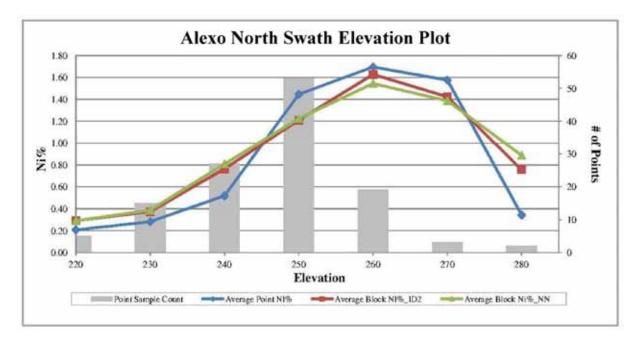




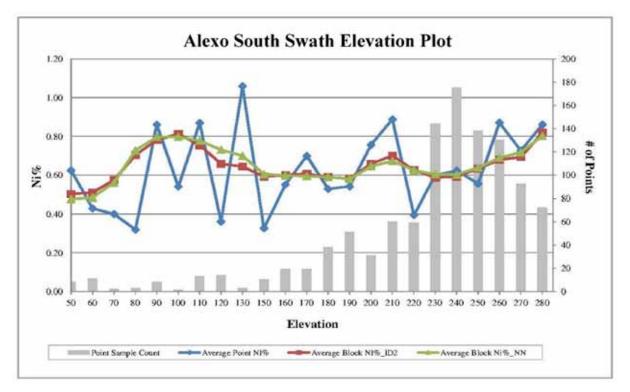








#### FIGURE 14.4 ALEXO DEPOSITS NI GRADE SWATH ELEVATION PLOT



#### **14.2 DUNDONALD DEPOSITS**

#### 14.2.1 Introduction

The purpose of this Technical Report section is to summarize the Mineral Resource Estimates of the Dundonald South and Dundonald North Deposits in compliance with NI 43-101 and CIM standards. This Mineral Resource Estimate was undertaken by Eugene Puritch, P.Eng. FEC, CET, Yungang Wu, P.Geo. and Antoine Yassa, P.Geo. of P&E Mining Consultants Inc. of Brampton, Ontario with an effective date of December 1, 2020.

#### 14.2.2 Database

All drilling data on the Dundonald Deposits was provided by C1N in the form of Excel files. A GEOVIA GEMS<sup>TM</sup> V6.8.2 database for this Mineral Resource Estimate, compiled by P&E, consisted of 392 drill holes totalling 79,360 m, of which a total of 201 drill holes (totalling 36,308 m) and 38 drill holes (totalling 15,184 m) intersected the South and North mineralization wireframes, respectively. Twelve (12) unassayed drill holes were not utilized for this estimate. A drill hole plan is shown in Appendix I for Dundonald South and Appendix Q for Dundonald North.

TABLE 14.10           Dundonald Deposits Basic Statistics of All Raw Assays							
Variable	Ni (%)	Cu (%)	Co (%)	Au (g/t)	Pt (g/t)	Pd (g/t)	Length (m)
Number of samples	14,771	14,771	14,771	462	395	395	14,771
Minimum value	0.00	0.00	0.00	0.00	0.00	0.00	0.04
Maximum value	42.80	3.56	0.58	0.73	2.75	6.21	28.35
Mean	0.30	0.03	0.01	0.04	0.16	0.28	1.03
Median	0.11	0.01	0.01	0.01	0.02	0.03	1.00
Variance	1.37	0.01	0.00	0.01	0.12	0.47	0.27
Standard Deviation	1.17	0.11	0.02	0.09	0.35	0.69	0.52
Coefficient of Variation	3.88	4.46	2.17	2.18	2.17	2.44	0.51
Skewness	15.22	15.83	12.46	5.01	3.86	4.76	14.20
Kurtosis	325.76	334.12	251.71	33.81	21.18	31.10	613.53

The drill hole database contained assays for Ni, Cu, Co, Au, Pt and Pd and other lesser elements of non-economic importance. The basic statistics of all raw assays for the elements of economic interest are presented in Table 14.10.

All data are expressed in metric units and grid coordinates are in the UTM NAD83 Zone 17U system, unless indicated otherwise.

# 14.2.3 Domain Interpretation

Domain boundaries were determined from lithology, structure and NSR boundary interpretation from visual inspection of drill hole cross-sections. Thirteen (13) and two (2) domains were developed for Dundonald South and North, respectively. These domains were created with computer screen digitizing on drill hole cross-sections in GEMS<sup>TM</sup> by the authors of this Technical Report. The outlines were influenced by the selection of mineralized material that demonstrated NSR value >C30/t, and zonal continuity along strike and down-dip. In some cases, mineralization less than the NSR cut-off was included to maintain zonal continuity and 2 metre minimum core length. The NSR value was calculated with the formula below.

# NSR C\$/t = [(Ni % x 161.28) + (Cu % x 64.09) + (Co % x 99.94) + (Au g/t x 25.55) + (Pt g/t x 15.26) + (Pd g/t x 28.12)-20.83] x 0.98

On each cross-section, polyline interpretations were digitized from drill hole to drill hole, 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 cross-section were "wireframed" in GEMS<sup>TM</sup> into 3-dimensional wireframe domains. The wireframes were then clipped against topography and overburden surfaces. The resulting domains were used for statistical analysis, grade interpolation, rock coding and Mineral Resource reporting purposes. The 3-D model domains are presented in Appendix J for Dundonald South and Appendix R for Dundonald North.

The topography and overburden surfaces were created using drill hole collars and geology logs from the drill holes.

#### **14.2.4** Rock Code Determination

The rock codes used for the Mineral Resource model were assigned to each mineralized domain that was developed to constrain grade block model limits. The rock codes are presented in Table 14.11.

TABLE 14.11 Dundonald Domain Rock Codes and Geometric Volume								
Deposit	Domain	Rock Code	Volume (m <sup>3</sup> )					
	Zone 01	10	96,633					
	Zone 02	20	193,251					
	Zone 03	30	40,622					
	Zone 04	40	40,620					
	Zone 05	50	97,079					
D 1 11	Zone 06	60	15,344					
Dundonald South	Zone 07	70	58,491					
South	Zone 08	80	19,592					
	Zone 09	90	26,856					
	Zone 10	100	18,899					
	Zone 11	110	60,086					
	Zone 12	120	39,339					
	Zone 13	130	23,897					
Dundonald	Main	140	1,252,486					
North	FW	150	856,008					

#### 14.2.5 Composites

The basic statistics of the Mineral Resource wireframe constrained raw assays are presented in Table 14.12. The average sample length was 0.88 m and 0.87 m for the Dundonald South and North Deposits, respectively. There were only 182 out of 2,142 constrained samples analyzed for Au, Pt and Pd for Dundonald South and only 11 out of 274 constrained samples were analyzed Au, Pt and Pd for Dundonald North.

Length-weighted composites were generated for the drill hole data that fell within the constraints of the above-mentioned wireframed 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 hanging wall of the 3-D wireframe constraint. The compositing process was halted on exit from the footwall of the wireframe constraint. Un-assayed intervals were given a 0.001 value. For any composites <0.25 m in length, the composite length was adjusted to make all intervals of the hole equal in length, in order to not introduce any short sample bias in the grade interpolation process. The average composite length was 1.01 m with range of 0.75 m to 1.50 m for Dundonald South and 1 m with range of 0.83 m to 1.25 m for Dundonald North. The composite data were transferred to GEMS<sup>TM</sup> extraction files for the grade interpolation. The basic statistics of the composites are shown in Table 14.13.

	TABLE 14.12 Dundonald Statistics of The Constrained Raw Assays							
Deposit	Variable	Ni (%)	Cu (%)	Co (%)	Au (g/t)	Pt (g/t)	Pd (g/t)	Length (m)
	Number of Samples	2,131	2,142	2,142	182	182	182	2,142
	Minimum Value	0.010	0.000	0.000	0.000	0.000	0.000	0.13
	Maximum Value	42.800	23.620	0.580	0.730	2.750	6.210	12.50
	Mean	1.240	0.050	0.020	0.080	0.310	0.560	0.88
Dundonald	Median	0.470	0.010	0.010	0.040	0.110	0.180	1.00
South	Variance	7.780	0.270	0.000	0.020	0.210	0.860	0.19
	Standard Deviation	2.790	0.520	0.040	0.120	0.460	0.930	0.44
	Coefficient of Variation	2.250	10.010	1.900	1.510	1.480	1.670	0.500
	Skewness	6.627	43.367	6.874	3.243	2.578	3.301	9.26
	Kurtosis	60.316	1,960.609	68.774	15.019	10.714	15.932	234.98
	Number of Samples	270	274	274	11	11	11	274
	Minimum Value	0.010	0.000	0.000	0.010	0.059	0.127	0.15
	Maximum Value	7.670	2.920	0.320	0.044	0.286	0.646	3.05
	Mean	0.883	0.130	0.023	0.022	0.116	0.248	0.87
Dundonald	Median	0.550	0.010	0.010	0.017	0.085	0.181	0.97
North	Variance	1.083	0.142	0.001	0.000	0.005	0.024	0.13
	Standard Deviation	1.041	0.377	0.034	0.011	0.072	0.155	0.36
	Coefficient of Variation	1.178	2.890	1.464	0.489	0.618	0.624	0.41
	Skewness	3.579	4.185	3.959	0.687	1.428	1.653	0.81
	Kurtosis	19.587	22.149	25.834	2.286	3.575	4.377	6.75

	TABLE 14.13 Dundonald Basic Statistics of Composites and Lengths							
Deposit	Variable	Ni Composite	Cu Composite	Co Composite	Au Composite	Pt Composite	Pd Composite	Length (m)
	Number of Samples	2,145	2,145	2,145	2,145	2,145	2,145	2,145
	Minimum Value	0.010	0.000	0.001	0.001	0.001	0.001	0.75
	Maximum Value	24.050	0.880	0.345	0.406	1.254	2.849	1.50
	Mean	0.828	0.029	0.015	0.005	0.016	0.026	1.01
South	Median	0.410	0.010	0.010	0.001	0.001	0.001	1.00
South	Variance	2.398	0.003	0.001	0.001	0.008	0.027	0.01
	Standard Deviation	1.548	0.058	0.024	0.022	0.092	0.166	0.07
	Coefficient of Variation	1.870	1.979	1.606	4.844	5.748	6.294	0.07
	Skewness	6.774	6.726	5.104	10.364	8.685	9.920	0.90
	Kurtosis	68.633	62.258	43.364	138.864	89.063	120.524	11.04
	Number of Samples	282	282	282	282	282	282	282
	Minimum Value	0.010	0.010	0.001	0.001	0.001	0.001	0.83
	Maximum Value	5.030	2.440	0.167	0.037	0.202	0.422	1.25
	Mean	0.635	0.124	0.018	0.002	0.005	0.009	1.00
N 41.	Median	0.455	0.010	0.010	0.001	0.001	0.001	1.00
North	Variance	0.466	0.135	0.001	0.000	0.000	0.002	0.00
	Standard Deviation	0.683	0.367	0.027	0.004	0.021	0.044	0.06
	Coefficient of Variation	1.075	2.955	1.497	2.316	4.500	5.037	0.06
	Skewness	2.382	3.844	3.230	6.577	6.697	6.556	0.50
	Kurtosis	11.314	17.384	14.570	49.163	52.182	50.166	7.76

# 14.2.6 Grade Capping

Grade capping was investigated on the 1 m composite values in the mineralized domains to ensure that the possible influence of erratic high values did not bias the database. Point area files were created for constrained Ni, Cu, Co, Au, Pt and Pd data within each mineralized domain. From these files, log-normal histograms were generated (refer to Appendix K for Dundonald South and Appendix S for Dundonald North for the appropriate graphs).

Grade capping was not required for Cu, Co, Au, Pt and Pd for all domains. The capped values for Ni are presented in Table 14.14.

			Γ	TA Dundonald	ABLE 14.14 NI CAPPIN	G VALUES				
Deposit	Domains	Rock Code	Total No. of Com- posites	Capping Value Ni (%)	No. of Capped Com- posites	Mean of Com- posites	Mean of Capped Com- posites	CoV of Com- posites	CoV of Capped Com- posites	Capping Percentile
	Zone 01	10	258	4	3	0.72	0.70	1.24	1.14	98.8
	Zone 02	20	569	10.5	3	0.82	0.78	1.97	1.54	99.5
	Zone 03	30	103	3	3	0.88	0.70	1.82	0.93	97.1
	Zone 04	40	113	5	3	1.16	0.96	1.99	1.22	97.3
	Zone 05	50	291	6	2	0.66	0.63	1.70	1.40	99.3
D 1 11	Zone 06	60	19	No cap	0	0.72	0.72	0.62	0.62	100.0
Dundonald South	Zone 07	70	66	No cap	0	0.78	0.78	1.22	1.22	100.0
South	Zone 08	80	20	1	1	0.56	0.33	2.07	0.72	95.0
	Zone 09	90	80	No cap	0	0.64	0.64	0.94	0.94	100.0
	Zone 10	100	47	6	1	0.90	0.86	1.69	1.54	97.9
	Zone 11	110	236	10	2	1.15	1.12	1.81	1.68	99.2
	Zone 12	120	173	3	1	0.55	0.55	1.07	1.04	99.4
	Zone 13	130	170	8	2	1.03	0.94	2.16	1.81	98.8
Dundonald	Main	140	190	No cap	0	0.53	0.53	1.02	1.02	100.0
North	FW	150	92	3.5	1	0.86	0.84	1.01	0.95	98.9

*Note: CoV* = *coefficient of variation* 

	TABLE 14.15         Dundonald Basic Statistics of Capped Composites						
Deposit	Variable	Ni Cap	Cu Cap	Co Cap	Au Cap	Pt Cap	Pd Cap
	Number of Samples	2,145	2,145	2,145	2,145	2,145	2,145
	Minimum Value	0.01	0.01	0.001	0.001	0.001	0.001
	Maximum Value	10.5	0.88	0.345	0.406	1.254	2.849
	Mean	0.778	0.029	0.015	0.005	0.016	0.026
Dundonald	Median	0.41	0.01	0.01	0.001	0.001	0.001
South	Variance	1.405	0.003	0.001	0.001	0.008	0.027
South	Standard Deviation	1.185	0.058	0.024	0.022	0.092	0.166
	Coefficient of Variation	1.524	1.974	1.606	4.844	5.748	6.294
	Skewness	4.305	6.733	5.104	10.364	8.685	9.92
	Kurtosis	27.037	62.345	43.364	138.864	89.063	120.524
	Number of Samples	282	282	282	282	282	282
	Minimum Value	0.01	0.01	0.001	0.001	0.001	0.001
	Maximum Value	3.5	2.44	0.167	0.037	0.202	0.422
	Mean	0.63	0.124	0.018	0.002	0.005	0.009
Dundonald	Median	0.455	0.01	0.01	0.001	0.001	0.001
North	Variance	0.427	0.135	0.001	0.000	0.000	0.002
norui	Standard Deviation	0.653	0.367	0.027	0.004	0.021	0.044
	Coefficient of Variation	1.037	2.955	1.497	2.316	4.5	5.037
	Skewness	1.963	3.844	3.23	6.577	6.697	6.556
	Kurtosis	7.609	17.384	14.57	49.163	52.182	50.166

The basic statistics of capped composites are summarized in Table 14.15.

# 14.2.7 Variography

Variography was attempted on each mineralized domain of the deposit model using the capped Ni composites. Analysis of some Dundonald South domains 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, Au Pt and Pd grade blocks. Selected variograms are presented in Appendix L for Dundonald South.

# 14.2.8 Bulk Density

The bulk density used for the Mineral Resource model was derived from measurements performed by AGAT Laboratories on Ninety (90) representative samples collected by Antoine Yassa, P.Geo. The resulting average bulk density was 2.85 t/m<sup>3</sup>.

#### 14.2.9 Block Modelling

The Dundonald South and Dundonald North block models were constructed using Geovia Gems<sup>TM</sup> V6.8.2 modelling software, and the block model origin and block size are tabulated in Table 14.16. Separate block models were created for rock type, bulk density, volume percent, class, Ni, Cu, Co Au, Pt, Pd and NSR.

TABLE 14.16         Dundonald Deposits Block Model Definitions							
Deposit	Direction	Origin	No. of Blocks	Block Size (m)			
	Х	511,145	586	2			
Dundonald South	Y	5,386,210	650	1			
Dundonald South	Ζ	320	156	2			
	Rotation		No rotation				
	Х	511,224	996	2			
Dundonald North	Y	5,386,864	990	1			
	Ζ	330	400	2			
	Rotation	Counter	c-clockwise 25 de	egrees			

The volume percent block model was set up to accurately represent the volume and subsequent tonnage occupied by each block inside each constraining domain. As a result, the domain boundaries were properly represented by the volume 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 a point areas file that represented each Mineralized Zone. Inverse Distance Squared  $(ID^2)$  grade interpolation was utilized for all elements. Multiple passes were executed for the grade interpolation to progressively capture the sample points, in order to avoid over-smoothing and preserve local grade variability. The resulting Ni and NSR blocks can be seen on the block model cross-sections and plans in Appendix M and N for Dundonald South and Appendix T and U for Dundonald North. The grade blocks within the domain were interpolated using the parameters listed in Table 14.17.

Table 14.17           Dundonald Block Model Interpolation Parameters								
Deposit	Pass	Strike Range (m)	Down Dip Range (m)	Across Dip Range (m)	Max No. of Samples per Hole	Min No. of Samples	Max No. of Samples	
	Ι	30	30	10	3	10	15	
Dundonald	II	45	45	15	3	7	15	
South	III	90	90	30	3	4	15	
	IV	90	90	30	3	2	15	
Dundonald	Ι	45	45	15	2	4	12	
North	II	180	60	180	2	2	12	

# 14.2.10 Mineral Resource Classification

For the purposes of this Mineral Resource, classifications of all interpolated grade blocks were determined from the Ni interpolations for Indicated and Inferred due to Ni being the dominant revenue producing element in the NSR calculation. Indicated and Inferred Resources were classified for the Dundonald South, whereas Dundonald North was categorized as Inferred Resources. The Indicated Mineral Resources were classified for blocks interpolated with at least seven composites from a minimum of three holes; and Inferred Mineral Resources were categorized for all remaining grade populated blocks within all mineralized domains. The classifications have been adjusted to reasonably reflect the distribution of each category. Block model classification cross-sections and plans for Dundonald South are presented in Appendix O.

#### 14.2.11 Mineral Resource Estimate, NSR Calculation and Cut-off

The Mineral Resource Estimate was derived from applying an NSR cut-off value 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 value that determines the potentially economic portion of the mineralized domains.

#### NSR Calculation Parameters (all currency \$C unless stated otherwise)

\$C/\$US (Exchange Rate	0.75
Ni Price	US \$7.35/lb (Consensus Economics long-term lowest)
Cu Price	US \$3.00/lb (Aug 31/20 approx. two-year trailing average)
Co Price	US \$20/lb (Aug 31/20 approx. two-year trailing average)
Au Price	US \$900/oz (Aug 31/20 approx. two-year trailing average)
Pt Price	US \$900/oz (Aug 31/20 approx. two-year trailing average)
Pd Price	US \$1,650/oz (Aug 31/20 approx. two-year trailing
	average)
Ni Flotation Recovery	89%
Cu Flotation Recovery	90%

Co Flotation Recovery	40%
Au Flotation Recovery	50%
Pt Flotation Recovery	50%
Pd Flotation Recovery	50%
Concentration Ratio	16:1
Ni Smelter Payable	90%
Cu Smelter Payable	85%
Co Smelter Payable	50%
Au Smelter Payable	
Pt Smelter Payable	80%
Pd Smelter Payable	80%
Ni Refining Charges	US \$0.50/lb
Cu Refining Charges	US \$0.15/lb
Co Refining Charges	US \$3.00/lb
Au Refining Charges	US \$10.00/oz
Pt Refining Charges	US \$10.00/oz
Pd Refining Charges	
Ni Smelter Treatment Charges	US \$250/t

The above data were derived from other projects similar to the Dundonald South and North Deposits.

NSR Cf = [(Ni % x 161.28) + (Cu % x 64.09) + (Co % x 99.94) + (Au g/t x 25.55) + (Pt g/t x 15.26) + (Pd g/t x 28.12)-20.83] x 0.98

# In the anticipated open pit portion of the Dundonald Deposits, the mineralized material crushing, transport, processing and G&A costs combine for a total of (\$2 + \$6 + \$20 + \$2) = C\$30/t processed which became the pit constrained NSR cut-off value.

In order for the constrained mineralization in the Dundonald North and South Deposits to be considered as an open pit Mineral Resource that is potentially economic, a first-pass pit optimization was carried out utilizing the following criteria:

Waste mining cost per tonne	\$2.75
Mineralized material mining cost per tonne	
Overburden mining cost per tonne	\$2.00
Mineralized material crushing cost per tonne	\$2.00
Mineralized material transport to process plant cost per tonne	\$6.00
Process cost per tonne	\$20.00
General & Administration cost per processed tonne	\$2.00
Process production rate (tonnes per year)	250,000
Pit slopes (inter ramp angle)	50°
Sulphide Bulk Density	$3.11 \text{ t/m}^3$
Waste Rock Bulk Density	2.80 $t/m^3$
Overburden Bulk Density	1.80 t/m <sup>3</sup>

See constrained Dundonald South Deposit pit shell in Appendix P.

The Dundonald North Deposit was not capable of supporting a potentially economic constrainedpit. However, out-of-pit Mineral Resources are reportable for the Dundonald South and North Deposits.

In the anticipated out-of-pit portion of the Dundonald South and North Deposits, the mineralized material mining, crushing, transport, processing and G&A costs combine for a total of (\$58 + \$2 + \$6 + \$20 + \$4) = C\$90/t processed, which became the underground NSR cut-off value.

### 14.2.12 Mineral Resource Estimate

The resulting pit-constrained and out-of-pit Mineral Resource Estimate can be seen in Table 14.18.

Table 14.18         Dundonald Deposits Mineral Resource Estimate (1-5)											
Classification	NSR Cut-off (C\$/t)	Tonnes (k)	Ni (%)	Cu (%)	Co (%)	Au (g/t)	Pt (g/t)	Pd (g/t)	Contained Ni (Mlb)	Contained Cu (Mlb)	Contained Co (Mlb)
Dundonald South Pit Constrained 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	544.0	1.23	0.03	0.02	0.01	0.03	0.05	14.75	0.36	0.24
Total Indicated	30 + 90	832.3	1.06	0.03	0.02	0.01	0.02	0.04	19.52	0.61	0.37
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	1,821.0	1.01	0.03	0.02	0.01	0.01	0.01	40.55	1.20	0.80
Total Inferred	90	1991.7	1.01	0.03	0.02	0.01	0.01	0.01	44.20	1.28	0.88

#### Notes:

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

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

- 3) The Inferred Mineral Resource in this estimate has a lower level of confidence than that applied to an Indicated Mineral Resource and must not be converted to a Mineral Reserve. It is reasonably expected that the majority of the Inferred Mineral Resource could be upgraded to an Indicated Mineral Resource with continued exploration.
- 4) The Mineral Resources in this report were estimated using the Canadian Institute of Mining, Metallurgy and Petroleum (CIM), CIM Standards on Mineral Resources and Reserves, Definitions and Guidelines prepared by the CIM Standing Committee on Reserve Definitions and adopted by the CIM Council.
- 5) The out-of-pit Mineral Resource grade blocks were quantified above the \$90/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 longhole stoping with backfill mining method was assumed for the out-of-pit Mineral Resource Estimate calculation.

# **14.2.13** Confirmation of the Mineral Resource Estimate

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 on-screen 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 drill holes used for estimation;
  - Mean distance to sample used;
  - Number of passes used to estimate grade; and
  - Mean value of the composites used.
- Comparisons of mean grades of composites with the block models at a Ni 0.001% cut-off are presented in Table 14.19.

TABLE 14.19 Dundonald Average Grade Comparison of Composites and Block Models					
Deposit	Data Type	Ni (%)	Cu (%)	Co (%)	
Dundonald South	Composites	0.83	0.03	0.015	
	Capped Composites	0.78	0.03	0.015	
	Block Model ID <sup>2</sup> *	0.75	0.03	0.015	
	Block Model NN**	0.75	-	-	
Dundonald North	Composites	0.64	0.12	0.018	
	Capped Composites	0.63	0.12	0.018	
	Block Model ID <sup>2</sup> *	0.61	0.06	0.014	
	Block Model NN**	0.61	-	-	

Notes:

\* block model grades were interpolated using Inverse Distance Squared.

\*\* block model grades were interpolated using Nearest Neighbour.

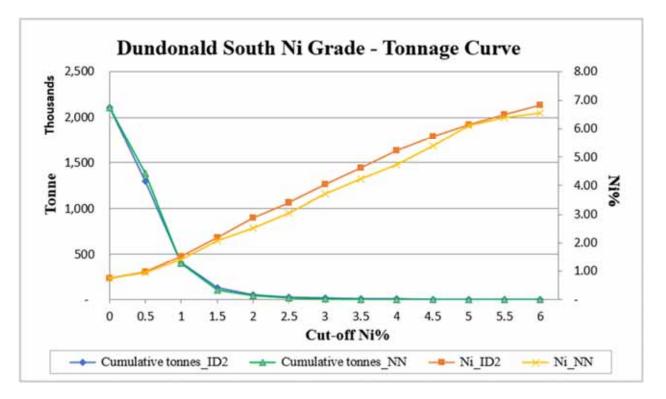
The differences of the average grades between block models and capped composites used for the grade interpolations are most likely due to the smoothing by the grade interpolation process. The block model values will be more representative than the composites due to 3-D spatial distribution characteristics of the block models.

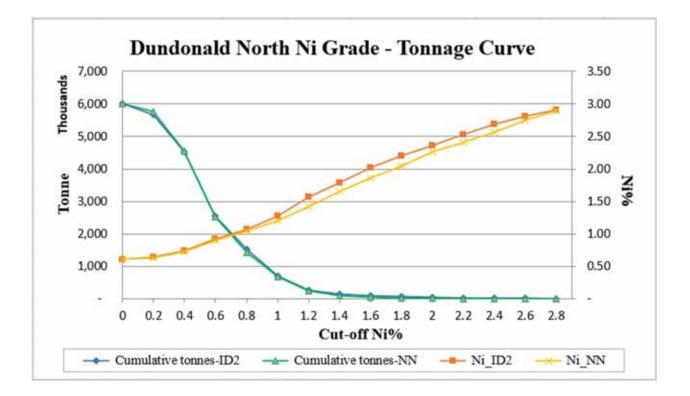
• A volumetric comparison was performed with the block model volume versus the geometric calculated volume of the domain solids and the differences are shown in Table 14.20.

TABLE 14.20Dundonald Volume Comparison of Block Model with Geometric Solids						
Deposit	Dundonald South	Dundonald North				
Geometric Volume of Wireframes m <sup>3</sup>	730,709	2,108,494				
Block Model Volume m <sup>3</sup>	720,973	2,108,482				
Difference %	1. 33%	0.00%				

• Comparisons of the grade-tonnage curve of the Ni grade model interpolated with Inverse Distance Squared ("ID<sup>2</sup>") and Nearest Neighbour ("NN") on a global resource basis for Dundonald South and Dundonald North are presented in Figure 14.5.

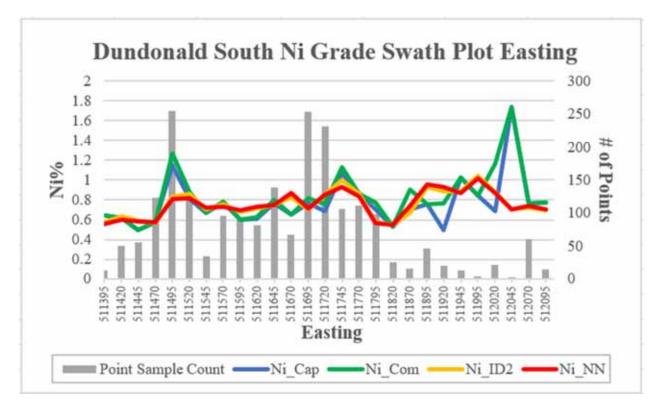
# FIGURE 14.5 DUNDONALD SOUTH AND NORTH NI GRADE-TONNAGE CURVE FOR ID<sup>2</sup> AND NN INTERPOLATION

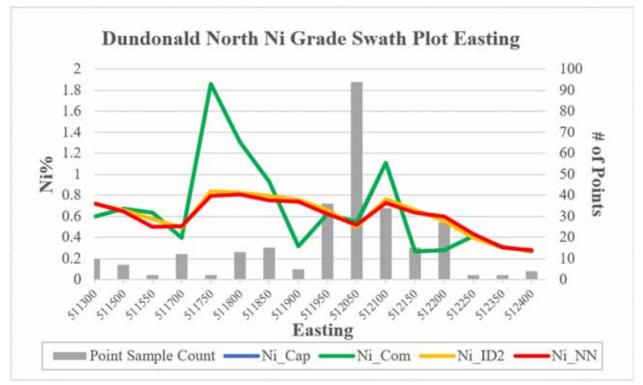




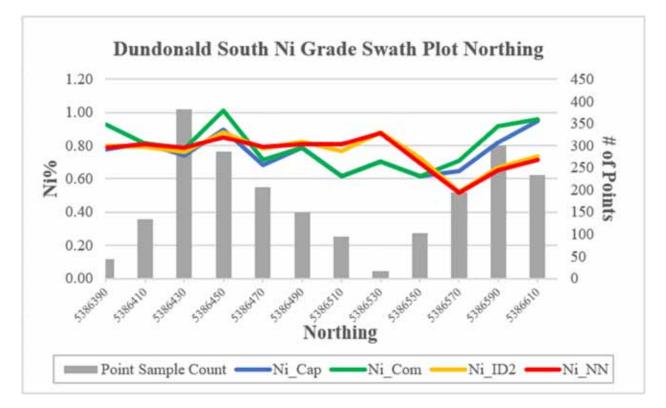
• Ni local trends were evaluated by comparing the ID<sup>2</sup> and NN estimate against Ni Composites. As shown in Figures 14.6 to 14.8, Ni grade interpolations with ID<sup>2</sup> and NN agreed well for both Dundonald South and Dundonald North.

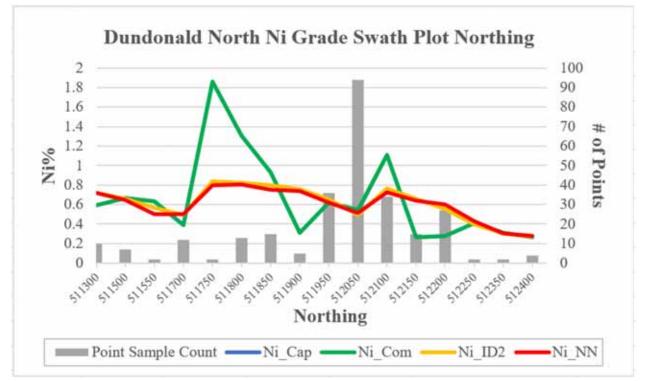




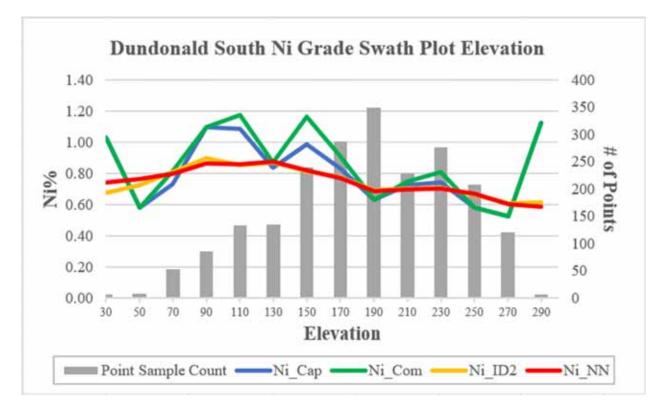


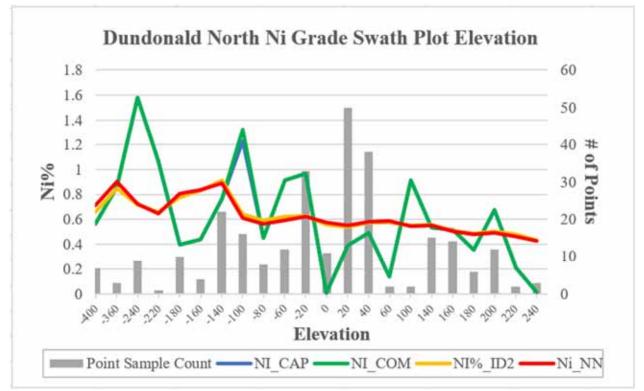












## 14.3 MINERAL RESOURCE ESTIMATE SUMMARY

The Mineral Resource Estimate summary for the Alexo North and Alexo South Deposits and the Dundonald North and Dundonald South Deposits is presented in Tables 14.21 and 14.22.

Table 14.21         Alexo and Dundonald Indicated Mineral Resource Estimates Summary <sup>(1-5)</sup>											
Indicated Classification	NSR Cut-off (C\$/t)	Tonnes (k)	Ni (%)	Cu (%)	Co (%)	Au (g/t)	Pt (g/t)	Pd (g/t)	Contained Ni (Mlb)	Contained Cu (Mlb)	Contained Co (Mlb)
Alexo North Pit Constrained	30	23.3	1.43	0.17	0.06	0.04	0.16	0.4	0.73	0.09	0.03
Alexo South Pit Constrained	30	281.8	0.76	0.03	0.03	0.01	0.02	0.04	4.72	0.19	0.19
Dundonald South Pit Constrained	30	288.3	0.75	0.04	0.02	0.01	0.01	0.01	4.77	0.25	0.13
Total Pit Constrained Indicated	30	593.4	0.78	0.04	0.03	0.01	0.02	0.04	10.22	0.53	0.34
Alexo North Out-of- Pit	90	2.9	0.97	0.13	0.05	0.03	0.10	0.23	0.06	0.01	0.00
Alexo South Out-of- Pit	90	114.1	0.92	0.04	0.03	0.01	0.04	0.07	2.31	0.10	0.08
Dundonald South Out-of-Pit	90	544.0	1.23	0.03	0.02	0.01	0.03	0.05	14.75	0.36	0.24
Total Out-of-Pit Indicated	90	661.0	1.18	0.03	0.02	0.01	0.03	0.05	17.13	0.47	0.32
Total Indicated	30 + 90	1,254.4	0.99	0.04	0.02	0.01	0.03	0.05	27.35	1.00	0.66

#### Notes:

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

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

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

- 4) The Mineral Resources in this report were estimated using the Canadian Institute of Mining, Metallurgy and Petroleum (CIM), CIM Standards on Mineral Resources and Reserves, Definitions and Guidelines prepared by the CIM Standing Committee on Reserve Definitions and adopted by the CIM Council.
- 5) The out-of-pit Mineral Resource grade blocks were quantified above the \$90/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 longhole stoping with backfill mining method was assumed for the out-of-pit Mineral Resource Estimate calculation.

Table 14.22         Alexo and Dundonald Inferred Mineral Resource Estimates Summary <sup>(1-5)</sup>											
Inferred Classification	NSR Cut-off (C\$/t)	Tonnes (k)	Ni (%)	Cu (%)	Co (%)	Au (g/t)	Pt (g/t)	Pd (g/t)	Contained Ni (Mlb)	Contained Cu (Mlb)	Contained Co (Mlb)
Alexo South Out-of- Pit	90	15.8	0.91	0.04	0.03	0.01	0.02	0.03	0.32	0.01	0.01
Dundonald North Out-of-Pit	90	1,821.0	1.01	0.03	0.02	0.01	0.01	0.01	40.55	1.20	0.80
Dundonald South Out-of-Pit	90	170.7	0.97	0.02	0.02	0.01	0.01	0.02	3.65	0.08	0.08
Total Inferred	90	2,007.5	1.01	0.03	0.02	0.01	0.01	0.01	44.52	1.29	0.89

Notes:

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

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

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

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

5) The out-of-pit Mineral Resource grade blocks were quantified above the \$90/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 longhole stoping with backfill mining method was assumed for the out-of-pit Mineral Resource Estimate calculation.

#### **15.0 MINERAL RESERVE ESTIMATES**

No National Instrument 43-101 Mineral Reserve Estimates currently exist for the Alexo-Dundonald Project. Any reference to historic non-compliant reserve estimates is summarized in Section 6 of this Technical Report. This section is not applicable to this Technical Report.

# **16.0 MINING METHODS**

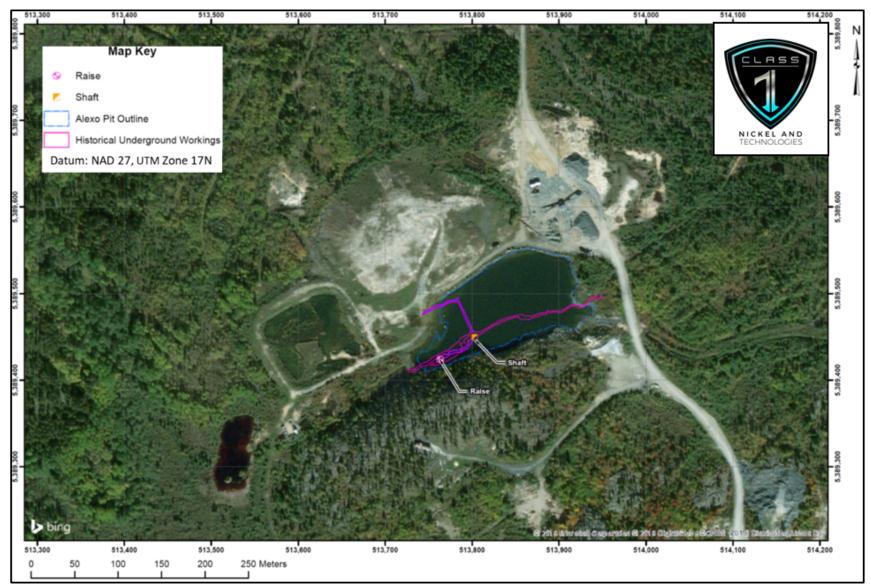
This section is not applicable to this Technical Report.

# **17.0 RECOVERY METHODS**

This section is not applicable to this Technical Report.

#### **18.0 PROJECT INFRASTRUCTURE**

Existing infrastructure at the Alexo-Dundonald Project includes access roads and, in the Alexo area, flooded historical open pits, underground workings, a raise and a shaft. The historical infrastructure at Alexo North is shown in Figure 18.1.



#### FIGURE 18.1 LOCATION OF HISTORICAL INFRASTRUCTURE AT ALEXO NORTH MINE SITE

Source: Donaghy and Puritch (2020)

## **19.0 MARKET STUDIES AND CONTRACTS**

This section is not applicable to this Technical Report.

# 20.0 ENVIRONMENTAL STUDIES, PERMITS, AND SOCIAL OR COMMUNITY IMPACTS

The Alexo-Dundonald Project site can be described as partially a "brownfield" project, in particular the Alexo North and Alexo South components. A small amount of mining had occurred in three phases: 1) 48,000 t between 1913 and 1919 to a depth of 38 m; 2) subsequent mining of pillars and remnants from the 1913 to 1919 activity; and 3) the mining of 24,000 t and 3,500 t, respectively from Alexo North and Alexo South in 2004-05.

The 2020 Alexo North and Alexo South site conditions are clearly outlined in the Figure 20.1. The Alexo North pit and the two Alexo South pits are naturally flooded, and a passive water treatment pond has been developed immediately west of the Alexo pit.

#### FIGURE 20.1 ALEXO NORTH AND ALEXO SOUTH CLOSED-OUT MINE SITES



Source: Google Earth (2020)

Four mineralized sites are being considered for mining activity, namely Alexo North, Alexo South, Dundonald North and Dundonald South. The Alexo North and Alexo South pits would be dewatered, and a new pit developed at Dundonald South and underground mining accessed by ramps at both Dundonald North and South.

The Dundonald sites are south south-east of Alexo North and Alexo South, and are essentially "greenfields" locations. Surface disturbance has been limited to diamond drilling and surface stripping.

## **20.1 MINE CLOSURE STATUS**

An initial, funded Closure Plan was submitted to the Ontario Ministry of Energy, Northern Development and Mines in 2004. This Plan was approved in 2005, amended and reapproved in 2011. As of 2019, several small items, costing approximately \$50k were outstanding. However, with mining being considered to be revived, these items are considered to be on hold.

Recent August 2020 site photos taken by P&E (Figure 20.2), indicate that the site is in very good condition as a result of extensive reclamation measures. Disturbed areas are profiled and revegetated, safety barriers of large rock were installed, and some wildlife was observed inhabiting the flooded pits. No safety hazards, scrap or mechanical wastes were observed.

## FIGURE 20.2 FLOODED ALEXO NORTH PIT



*Source: P&E* (2020)

#### 20.2 ENVIRONMENTAL STUDIES AND PERMITTING

Extensive baseline environmental studies were conducted in 2004-2005 by BZ Environmental Consulting. It is expected that the results of those studies will be the basis for updating new baseline conditions for surface and groundwater hydrology, pit water quality and quantity, aquatic plant, benthos, and animal life. Soil and terrestrial plant and animal life in the area will not have significantly changed since 2004-2005.

A significant number of Provincial Permits and Certificates of Approval will be required to restart mining and mineralized material. It is anticipated that the Federal Environmental Assessment process will not be applicable since the following "trigger" items will not apply to the Project:

- Fish, fish habitat and other aquatic species;
- Migratory birds;
- Federal lands and effects of crossing interprovincial boundaries;
- Effects on Aboriginal peoples such as their use of traditional lands and resources; or
- A physical activity that is designated by the Federal Minister of Environment that can cause adverse environmental effects or result in public concerns.

It is also anticipated that the Ontario Environmental Assessment process will not apply to the Alexo Dundonald Project, unless:

- There is a transfer of Crown resources including land;
- Electric power generation facilities or major transmission lines are built;
- New roads and transport facilities and built; or
- A tailings management facility is to be constructed, operated and closed out.

Provincial authorizations, permits and Certificates of Approval for the Project are numerous and include:

- Approvals for emissions, discharges and waste management;
- Permit to take and distribute water;
- Work permits for construction of mine facilities;
- Pit dewatering, water quality monitoring and possibly treatment;
- Building and land use permits;
- Bulk fuel, domestic waste water treatment permits;
- Waste rock, ARD/ML management plans;
- Forest license allowance for clearances;
- Approval of health and safety procedures and management, as well as emergency provisions; and
- Approval of a financed Closure Plan.

## **20.3 SOCIAL AND COMMUNITY REQUIREMENTS**

The Alexo-Dundonald Project is within the area that may affect a number of Ontario First Nations, and Tribal Councils, which will probably include:

- Matatchewan First Nation, Matachewan.
- Moose Cree First Nation, Moose Factory.
- Mushkegowuk Tribal Council, Moose Factory and Timmins.
- Taykwa Tegamou First Nation, Cochrane.
- Wabun Tribal Council, Timmins.
- Wahgoshig First Nation, Matheson.

Consultations had been initiated with these First Nations and Councils in 2004-05 by the previous mine owner. Appropriate consultations will be re-initiated and carried out by the Project. Other organized communities in the Project region that may be affected by the Project development, operation and transportation of mineralized material will be consulted as well.

## 21.0 CAPITAL AND OPERATING COSTS

This section is not applicable to this Technical Report.

# 22.0 ECONOMIC ANALYSIS

This section is not applicable to this Technical Report.

## 23.0 ADJACENT PROPERTIES

There are currently no other significant adjacent third-party exploration or mineral development properties in the immediate area of Alexo-Dundonald Project.

# 24.0 OTHER RELEVANT DATA AND INFORMATION

This section is not applicable to this Technical Report.

#### **25.0 INTERPRETATION AND CONCLUSIONS**

The NI 43-101 compliant Updated Mineral Resource Estimate was prepared by Yungang Wu, P.Geo. 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*.

The Alexo North, Alexo South, Dundonald South and Dundonald North Deposits collectively contain:

- 1. An updated total estimated Indicated Mineral Resource of 1.25 Mt with an average grade of 0.99% Ni; and
- 2. A total estimated Inferred Mineral Resource of 2.01 Mt with an average grade of 1.01% Ni.

The Updated Mineral Resource Estimate was undertaken for pit constrained and out-of-pit nickel, copper, and cobalt Mineral Resources. The total Indicated Mineral Resource Estimate is based on NSR cut-off values of CDN\$30 per tonne for the pit constrained Mineral Resource and CDN\$90 per tonne for the out-of-pit Mineral Resource. The total Indicated Mineral Resource based on a Net Smelter Return (NSR) for the out-of-pit Mineral Resource is 1.25 Mt at 0.99%, 0.04% Cu and 0.02% Co for a total of 27.35 Mlbs of contained nickel. An additional 2.01 Mt at 1.01% Ni, 0.03% Cu and 0.02 Co for a total of 44.51 Mlbs of contained nickel were calculated as the Inferred Mineral Resource.

Compared to the previous Mineral Resource Estimate reported in the NI 43-101 compliant Technical Report dated June 30, 2020, the total estimated Indicated Mineral Resource has increased by 119% and the Inferred Mineral Resource has increased by 2,800%.

Previous small-scale mining on the Property between 2004 and 2005 (30,138 t of mineralized material averaging 1.93% Ni containing 1.3 Mlb of nickel from open pit mining of the Alexo North and Alexo South Deposits) demonstrates the potential for near-term production from the shallow Mineral Resources estimated above.

The Project has positive exploration potential for further discovery of magmatic nickel sulphide mineralization. Although there has been past mining and drilling activities on the Project, the effective depth of that exploration from the previous drilling is limited to 100 m below surface in the vicinity of the known deposits. The majority 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 only recently been surveyed using modern airborne geophysical technique. Modelling and interpretation of airborne anomalies is underway.

Global exploration for komatiite-associated nickel sulphide systems in Australia, and within systems such as Thompson and Raglan in Canada, has demonstrated high potential for exploration and discovery of continued and (or) additional sulphide mineralization along strike or down-plunge within mineralized channelized flows. Similarly, potential parallel channelized environments within the same volcanic flow field offer reliable exploration targets for additional sulphide systems. The shallow nature of historical exploration and focus on the near-surface known mineralization at Alexo-Dundonald means that these possibilities have not been adequately tested on the Project.

In the Alexo area, only about 10% of the holes drilled extend below 100 m from surface. At Alexo South, these deeper holes remained within sulphide mineralization down-plunge on the deposit and did not close-off the potential for further mineralization at depth below the currently known sulphides. This potential depth extension is within the detection depth of modern ground EM surveys. Opportunities exist to increase the known zones at Alexo with a targeted approach of surface EM, further diamond drilling below and along strike of the deposits, and borehole EM of the deeper drill holes.

The Alexo North Deposit area drill programs and past production have defined a potential eastern plunge extension of the Alexo North Zone sulphide lens to 120 m vertical depth below surface. Nickel-bearing massive sulphide mineralization was intercepted in drill hole HUX-04-01 on the East Zone, approximately 125 m east of the 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 completed in 2001 indicated the two zones were possibly connected.

Drill hole HUX-04-01 is the deepest hole drilled on the potential down-plunge extension of the Alexo North mineralization; other drill holes in the area pass above the projected trend of the potential extension zone. No drilling or exploration has been conducted below this elevation and drilling beyond the East Zone is limited.

The Alexo South 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 extends for 600 m along strike and to a vertical depth of 100 m below surface. Below that 100 m vertical depth, additional mineralization was intersected to 350 m vertical depth below surface in drilling that averages 75 m between drill holes. Potential within and below this horizon remains unexplored at depth and along strike. If still be open, the deeper holes here would make excellent platforms for borehole EM to detect potential sulphide accumulations at depth below the Alexo South Deposit.

Diamond drilling outlined four high-grade nickel shoots on the Dundonald South G Zone nickel-enriched horizon that remain 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, because 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 opportunity of intersecting additional nickel sulphide mineralization.

The highest-grade nickel intersections of the Dundonald North Deposit occur at vertical depths of 400 m to 525 m below surface. Although deep, there still exists very high potential to expand the Dundonald North with several drill holes into open space around these intersections.

The nickel mineralization is open to the west and there remains room for further expansion to the east and at depth.

#### 26.0 **RECOMMENDATIONS**

P&E recommends that C1N continue with exploration and development activities on the Alexo-Dundonald Property followed by a Preliminary Economic Assessment ("PEA") in 2021. In conjunction with the PEA, metallurgical testwork, geotechnical drilling and analysis, and consultation/environmental studies should be undertaken and continued as part of the Project exploration and development programs.

Specific recommendations are as follows:

- Accelerate ongoing exploration activities, including resource expansion and drill testing of geophysical anomalies on the Alexo-Dundonald Property for new discoveries. All historical geological, geochemical and geophysical data should be compiled and integrated into the targeting model, by an experienced in-house technical team.
- At the Alexo-Dundonald Property, the four Alexo and Dundonald nickel sulphide deposits remain open to expansion by drilling along strike and at depth. In a Phase 1 exploration program, P&E proposes drilling 7,500 m to expand the known resources and to upgrade the Mineral Resource classification.
- For a Phase 2 exploration program, P&E proposes drilling 12,500 m to test undrilled and under-drilled priority geophysical anomalies outside of the four known deposits for presence of nickel sulphide mineralization.
- To advance the Alexo-Dundonald Project and initiate a Preliminary Economic Assessment (PEA), P&E recommends additional metallurgical testwork (including mineralogical studies and comminution, process recovery and mineralized material sorting tests), geotechnical studies (open pit and potential underground), infrastructure, community, environmental, hydrogeological and economic studies.

P&E considers that the recommended Project exploration and development Phase 1 and Phase 2 programs will cost approximately \$6M (Table 26.1) and require approximately 12 months to complete, in accordance with the underlying purchase agreements for the Alexo-Dundonald Properties.

Table 26.1         Recommended Exploration Budget							
Program	Activity	Proposed Expenditures (CDN\$)					
	-	Phase 1	Phase 2				
	Core Drilling	1,500,000	2,500,000				
	Borehole/surface EM surveys	100,000	200,000				
	Miscellaneous Expenses (rentals, etc.)	50,000	100,000				
	Updated Mineral Resource Estimate	80,000	100,000				
	Mineralogical and Metallurgical Testing*		320,000				
	Mineralized Material Sorting		25,000				
	Community Consultations		100,000				
	Preliminary Economic Assessment		350,000				
Decidat Maintanasaa	Renewal fees/taxes	20,000	20,000				
Project Maintenance	Option payments	-	-				
Subtotal		1,750,000	3,715,000				
Contingency (10%)		175,000	371,500				
Total		1,925,000	4,086,500				

Notes: \* Includes cost of drilling fresh core

#### **27.0 REFERENCES**

- Ayer, J.A., Thurston, P.C., Bateman, R., Dubé, B., Gibson, H.L., Hamilton, M.A., Hathway, B., Hocker, S.M., Houlé, M., Hudak, G.J., Ispolatov, V., Lafrance, B., Lesher, C.M., MacDonald, P.J., Péloquin, A.S., Piercey, S.J., Reed, L.E. and Thompson, P.H. 2005. Overview of Results from the Greenstone Architecture Project: Discover Abitibi Initiative: Ontario Geological Survey Open File Report 6154, 125 pp.
- Barnes, S. and Fiorentini, M. 2012. Komatiite Magmas and Sulfide Nickel Deposits: A Comparison of Variably Endowed Archean Terranes. Economic Geology 107, 755-780.
- Donaghy, T. and Puritch, E. 2020. Amended 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 Limited, CSA Global Pty Ltd., NI 43-101 Report, 158, www.sedar.com.
- Frieman, B.M., Kuiper, Y.D., Kelly, N.M., Monecke, T., and Kylander-Clark, A. 2017. Constraints on the Geodynamic Evolution of the Southern Superior Province: U-Pb LA-ICP-MS Analysis of Detrital Zircon in Successor Basins of the Archaean Abitibi and Pontiac Subprovinces of Ontario and Quebec, Canada. Precambrian Research 292, 398-416.
- Green, A.H. and Naldrett, A.J. 1981. The Langmuir Volcanic Peridotite-Associated Nickel Deposits: Canadian Equivalents of the Western Australian Occurrences. Economic Geology 76, 1503-1523.
- Harron, G.A. 2009. Technical Report on the Dundonald Project, Dundonald & Clergue Townships, Porcupine Mining Division, Ontario, for First Nickel Inc. NI 43-101 Report, 92p. (www.sedar.com.)
- Houle, M.G., Davis, P.C., Lesher, C.M. and Arndt, N.T. 2002. Extrusive and Intrusive Komatiites and Komatiitic Basalts, Peperites, and Ore Genesis at the Dundonald Ni-Cu-(PGE) Deposits, Abitibi Greenstone Belt, Canada in Abstracts, 9th International Platinum Symposium. July 21-25, 2002, Billings, Montana, USA.
- Huber, M. 2018. Alexo-Dundonald Cu-Ni±PGE±Co Presentation. Unpublished company presentation provided by Vanicom Resources Limited.
- Jackson, S.L. and Fyon, J.A. 1992. The Western Abitibi Subprovince in Ontario. In Thurston, P. C., et al. (eds.), Geology of Ontario, Ontario Geological Survey Special Volume 4, Part 1, 405–483.
- Montgomery, J. K. 2004. A Report to NI43-101 Standards on the Western Abitibi Nickel Properties of First Nickel Inc., Ontario, Canada. Technical Report prepared for First Nickel Inc., 85p. (www.sedar.com.)

- Naldrett, A.J. 2004. Magmatic Sulphide Deposits. Geology, Geochemistry and Exploration. Springer-Verlag Berlin. 727p.
- Naldrett A.J. 2010. Secular Variation of Magmatic Sulfide Deposits and Their Source Magmas. Economic Geology 105, 669–688.
- Puritch, E., Ewert, W., Armstrong, T., Yassa, A. and Burga, P. 2010. Technical Report and Resource Estimate on the Alexo and Kelex Deposits, Alexo Property, Timmins Area, Ontario, Canada, for Canadian Arrow Mines Ltd. NI43-101 Report, 131 pp. www.sedar.com.
- Puritch, E., Hayden, A., Yassa, A., and Burga, P. 2012. Technical Report and Updated Resource Estimate on the Alexo and Kelex Deposits, Alexo Property, Timmins Area, Ontario, Canada, for Canadian Arrow Mines Ltd. NI43- 101 Report, 143 pp. www.sedar.com.
- Stone, W.E., Beresford, S.W and Archibald, N.J. 2005. Structural Setting and Shape Analysis of Nickel Sulfide Shoots at the Kambalda Dome, Western Australia: Implications for Deformation and Remobilization. Economic Geology 100, 1441-1455.
- Thurston, P., Ayer, J.A., Goutier, J., and Hamilton, M.A. 2008. Depositional Gaps in Abitibi Greenstone Belt Stratigraphy: a Key to Exploration for Syngenetic Mineralization. Economic Geology 103, 1097–1134.

#### **28.0 CERTIFICATES**

#### **CERTIFICATE OF QUALIFIED PERSON**

#### WILLIAM STONE, PH.D., P.GEO.

I, William Stone, Ph.D., P.Geo., residing at 4361 Latimer Crescent, Burlington, Ontario, do hereby certify that:

- 1. I am an independent geological consultant working for P&E Mining Consultants Inc.
- 2. This certificate applies to the Technical Report titled "Technical Report and Updated Mineral Resource Estimate of the Alex-Dundonald Nickel Project", (The "Technical Report") with an effective date of December 1, 2020.
- 3. I am a graduate of Dalhousie University with a Bachelor of Science (Honours) degree in Geology (1983). In addition, I have a Master of Science in Geology (1985) and a Ph.D. in Geology (1988) from the University of Western Ontario. I have worked as a geologist for a total of 35 years since obtaining my M.Sc. degree. I am a geological consultant currently licensed by the Professional Geoscientists of Ontario (License No 1569).

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

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

•	Contract Senior Geologist, LAC Minerals Exploration Ltd.	1985-1988
٠	Post-Doctoral Fellow, McMaster University	1988-1992
٠	Contract Senior Geologist, Outokumpu Mines and Metals Ltd.	1993-1996
٠	Senior Research Geologist, WMC Resources Ltd.	1996-2001
٠	Senior Lecturer, University of Western Australia	2001-2003
٠	Principal Geologist, Geoinformatics Exploration Ltd.	2003-2004
٠	Vice President Exploration, Nevada Star Resources Inc.	2005-2006
٠	Vice President Exploration, Goldbrook Ventures Inc.	2006-2008
٠	Vice President Exploration, North American Palladium Ltd.	2008-2009
٠	Vice President Exploration, Magma Metals Ltd.	2010-2011
٠	President & COO, Pacific North West Capital Corp.	2011-2014
٠	Consulting Geologist	2013-2017
٠	Senior Project Geologist, Anglo American	2017-2019
٠	Consulting Geoscientist	2020-Present

- 4. I have not visited the Property that is the subject of this Technical Report.
- 5. I am responsible for authoring Sections 2-8, 15-19, and 21-24 and co-authoring Sections 1, 25 and 26 of this Technical Report.
- 6. I am independent of the Issuer applying the test in Section 1.5 of NI 43-101.
- 7. I have had no prior involvement with the Property that is the subject of this Technical Report.
- 8. I have read NI 43-101 and Form 43-101F1 and this Technical Report has been prepared in compliance therewith.
- 9. As of the effective date of this Technical Report, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Effective Date: December 1, 2020 Signed Date: December 17, 2020 *{SIGNED AND SEALED} [William Stone]* 

Dr. William E. Stone, P.Geo.

# CERTIFICATE OF QUALIFIED PERSON YUNGANG WU, P.GEO.

I, Yungang Wu, P. Geo., residing at 3246 Preserve Drive, Oakville, Ontario, L6M 0X3, do hereby certify that:

- 1. I am an independent consulting geologist contracted by P&E Mining Consultants Inc.
- 2. This certificate applies to the Technical Report titled "Technical Report and Updated Mineral Resource Estimate of the Alex-Dundonald Nickel Project", (The "Technical Report") with an effective date of December 1, 2020.
- 3. I am a graduate of Jilin University, China, with a Master's degree in Mineral Deposits (1992). I have worked as a geologist for 25 plus years since graduating. I am a geological consultant and a registered practising member of the Association of Professional Geoscientists of Ontario (Registration No. 1681).

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

My relevant experience for the purpose of the Technical Report is as follows:	
<ul> <li>Geologist –Geology and Mineral Bureau, Liaoning Province, China</li> </ul>	1992-1993
• Senior Geologist – Committee of Mineral Resources and Reserves of Liaoning, China	1993-1998
• VP – Institute of Mineral Resources and Land Planning, Liaoning, China	1998-2001
<ul> <li>Project Geologist–Exploration Division, De Beers Canada</li> </ul>	2003-2009
Mine Geologist – Victor Diamond Mine, De Beers Canada	2009-2011
Resource Geologist– Coffey Mining Canada	2011-2012
Consulting Geologist	2012-Present

- 4. I have not visited the Property that is the subject of this Technical Report.
- 5. I am responsible for co-authoring Sections 1, 14, 25 and 26 of this Technical Report.
- 6. I am independent of the Issuer applying the test in Section 1.5 of NI 43-101. I am independent of the Vendor and the Property.
- 7. I have had prior involvement with the Project that is the subject of this Technical Report. I was a "Qualified Person" for a Technical Report titled "Alexo-Dundonald Nickel Project: Dundonald, Clergue, German and Stock Townships, Ontario, Canada" by CSA Global dated June 20, 2020.
- 8. I have read NI 43-101 and Form 43-101F1 and the Technical Report has been prepared in compliance therewith.
- 9. As of the effective date of this Technical Report, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Effective Date: December 1, 2020 Signed Date: December 17, 2020

{SIGNED AND SEALED} [Yungang Wu]

Yungang Wu, P.Geo.

## JARITA BARRY, P.GEO.

I, Jarita Barry, P.Geo., residing at 4 Creek View Close, Mount Clear, Victoria, Australia, 3350, do hereby certify that:

- 1. I am an independent geological consultant contracted by P&E Mining Consultants Inc.
- 2. This certificate applies to the Technical Report titled "Technical Report and Updated Mineral Resource Estimate of the Alex-Dundonald Nickel Project", (The "Technical Report") with an effective date of December 1, 2020.
- 3. I am a graduate of RMIT University of Melbourne, Victoria, Australia, with a B.Sc. in Applied Geology. I have worked as a geologist for over 15 years since obtaining my B.Sc. degree. I am a geological consultant currently licensed by Engineers and Geoscientists British Columbia (License No. 40875), Professional Engineers and Geoscientists Newfoundland & Labrador (License No. 08399) and Northwest Territories and Nunavut Association of Professional Engineers and Geoscientists (License No. L3874). I am also a member of the Australasian Institute of Mining and Metallurgy of Australia (Member No. 305397);

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

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

Geologist, Foran Mining Corp.	2004
Geologist, Aurelian Resources Inc.	2004
Geologist, Linear Gold Corp.	2005-2006
Geologist, Búscore Consulting	2006-2007
Consulting Geologist (AusIMM)	2008-2014
Consulting Geologist, P.Geo. (APEGBC/AusIMM)	2014-Present

- 4. I have not visited the Property that is the subject of this Technical Report.
- 5. I am responsible for authoring Sections 11 and co-authoring Sections 1, 12, 25 and 26 of this Technical Report.
- 6. I am independent of the Issuer applying the test in Section 1.5 of NI 43-101. I am independent of the Vendor and the Property.
- 7. I have had no prior involvement with the Project that is the subject of this Technical Report.
- 8. I have read NI 43-101 and Form 43-101F1 and the Technical Report has been prepared in compliance therewith.
- 9. As of the effective date of this Technical Report, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Effective Date: December 1, 2020 Signed Date: December 17, 2020

{SIGNED AND SEALED} [Jarita Barry]

Jarita Barry, P.Geo.

#### 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:

- 1. I am an independent mining consultant and President of P&E Mining Consultants Inc.
- 2. This certificate applies to the Technical Report titled "Technical Report and Updated Mineral Resource Estimate of the Alex-Dundonald Nickel Project", (The "Technical Report") with an effective date of December 1, 2020.
- 3. 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 a Bachelor's degree in Engineering Equivalency. I am a mining consultant currently licensed by the: Professional Engineers and Geoscientists New Brunswick (License No. 4778); Professional Engineers, Geoscientists Newfoundland and Labrador (License No. 5998); Association of Professional Engineers and Geoscientists Saskatchewan (License No. 16216); Ontario Association of Certified Engineering Technicians and Technologists (License No. 45252); Professional Engineers of Ontario (License No. 100014010); Association of Professional Engineers and Geoscientists of British Columbia (License No. 42912); and Northwest Territories and Nunavut Association of 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 practiced my profession continuously since 1978. My summarized career experience is as follows:

	1
<ul> <li>Mining Technologist - H.B.M.&amp; S. and Inco Ltd.,</li> </ul>	1978-1980
• Open Pit Mine Engineer – Cassiar Asbestos/Brinco Ltd.,	1981-1983
• Pit Engineer/Drill & Blast Supervisor – Detour Lake Mine,	1984-1986
<ul> <li>Self-Employed Mining Consultant – Timmins Area,</li> </ul>	1987-1988
• Mine Designer/Resource Estimator – Dynatec/CMD/Bharti,	1989-1995
• Self-Employed Mining Consultant/Resource-Reserve Estimator,	1995-2004
• President – P&E Mining Consultants Inc,	2004-Present

- 4. I have visited the Alexo Property that is the subject of this Technical Report on May 5, 2010 and visited the Dundonald South area of the Property on August 25, 2020.
- 5. I am responsible for co-authoring Sections 1, 12, 14, 25 and 26 of this Technical Report.
- 6. I am independent of the Issuer applying the test in Section 1.5 of NI 43-101.
- 7. I have had prior involvement with the Project that is the subject of this Technical Report. I was a "Qualified Person" for a Technical Report titled "Alexo-Dundonald Nickel Project: Dundonald, Clergue, German and Stock Townships, Ontario, Canada" by CSA Global dated June 20, 2020; a Technical Report titled "Technical Report and Updated Resource Estimate on the Alexo and Kelex Deposits, Alexo Property, Timmins Area, Ontario, Canada," for Canadian Arrow Mines Ltd. with an effective date of May 1, 2011; and a Technical Report titled "Technical Report titled" (Technical Report and Resource Estimate on the Alexo and Kelex Deposits, Alexo Property, Timmins Area, Ontario, Canada", for Canadian Arrow Mines Ltd. with an effective date of September 5, 2010.
- 8. I have read NI 43-101 and Form 43-101F1. This Technical Report has been prepared in compliance therewith.
- 9. As of the effective date of this Technical Report, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Effective Date: December 1, 2020 Signed Date: December 17, 2020 *{SIGNED AND SEALED} [Eugene Puritch]* 

Eugene Puritch, P.Eng., FEC, CET

#### **D. GRANT FEASBY, P. ENG.**

I, D. Grant Feasby, P. Eng., residing at 12,209 Hwy 38, Tichborne, Ontario, K0H 2V0, do hereby certify that:

- I am currently the Owner and President of: FEAS - Feasby Environmental Advantage Services 38 Gwynne Ave, Ottawa, K1Y1W9
- 2. This certificate applies to the Technical Report titled "Technical Report and Updated Mineral Resource Estimate of the Alex-Dundonald Nickel Project", (The "Technical Report") with an effective date of December 1, 2020.
- 3. I graduated from Queens University in Kingston Ontario, in 1964 with a Bachelor of Applied Science in Metallurgical Engineering, and a Master of Applied Science in Metallurgical Engineering in 1966. I am a Professional Engineer registered with Professional Engineers Ontario. I have worked as a metallurgical engineer for over 50 years since my graduation from university.

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

My relevant experience for the purpose of the Technical Report has been acquired by the following activities:

- Metallurgist, Base Metal Processing Plant.
- Research Engineer and Lab Manager, Industrial Minerals Laboratories in USA and Canada.
- Research Engineer, Metallurgist and Plant Manager in the Canadian Uranium Industry.
- Manager of Canadian National Programs on Uranium and Acid Generating Mine Tailings.
- Director, Environment, Canadian Mineral Research Laboratory.
- Senior Technical Manager, for large gold and bauxite mining operations in South America.
- Expert Independent Consultant associated with several companies, including P&E Mining Consultants, on mineral processing, environmental management, and mineral-based radiation assessment.
- 4. I have not visited the Property that is the subject of this Technical Report.
- 5. I am responsible for authoring Sections 13 and 20, and co-authoring Sections 1, 25 and 26 of this Technical Report.
- 6. I am independent of the issuer applying the test in Section 1.5 of NI 43-101.
- 7. I have had no prior involvement with the Project that is the subject of this Technical Report.
- 8. I have read NI 43-101 and Form 43-101F1 and the Technical Report has been prepared in compliance therewith.
- 9. As of the effective date of this Technical Report, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Effective Date: December 1, 2020 Signed Date: December 17, 2020

{SIGNED AND SEALED} [D. Grant Feasby]

D. Grant Feasby, P.Eng.

# CERTIFICATE OF QUALIFIED PERSON DAVID BURGA, P.GEO.

I, David Burga, P. Geo., residing at 3884 Freeman Terrace, Mississauga, Ontario, do hereby certify that:

- 1. I am an independent geological consultant contracted by P & E Mining Consultants Inc.
- 2. This certificate applies to the Technical Report titled "Technical Report and Updated Mineral Resource Estimate of the Alex-Dundonald Nickel Project", (The "Technical Report") with an effective date of December 1, 2020.
- 3. I am a graduate of the University of Toronto with a Bachelor of Science degree in Geological Sciences (1997). I have worked as a geologist for over 20 years since obtaining my B.Sc. degree. I am a geological consultant currently licensed by the Association of Professional Geoscientists of Ontario (License No 1836).

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

My relevant experience for the purpose of the Technical Report is:	
Exploration Geologist, Cameco Gold	1997-1998
Field Geophysicist, Quantec Geoscience	1998-1999
Geological Consultant, Andeburg Consulting Ltd.	1999-2003
Geologist, Aeon Egmond Ltd.	2003-2005
Project Manager, Jacques Whitford	2005-2008
Exploration Manager – Chile, Red Metal Resources	2008-2009
Consulting Geologist	2009-Present

- 4. I have visited the Alexo Property that is the subject of this Technical Report on May 5, 2010.
- 5. I am responsible for authoring Sections 9 and 10, and co-authoring Sections 1, 25 and 26 of this Technical Report.
- 6. I am independent of the Issuer applying the test in Section 1.5 of NI 43-101.
- 7. I have had prior involvement with the Project that is the subject of this Technical Report. I was a "Qualified Person" and for a Technical Report titled "Technical Report and Updated Resource Estimate on the Alexo and Kelex Deposits, Alexo Property, Timmins Area, Ontario, Canada," for Canadian Arrow Mines Ltd. with an effective date of May 1, 2011; and a Technical Report titled "Technical Report and Resource Estimate on the Alexo and Kelex Deposits, Alexo Property, Timmins Area, Ontario, Canada," for Canadian Arrow Mines Ltd. with an effective date of May 1, 2011; and a Technical Report titled "Technical Report and Resource Estimate on the Alexo and Kelex Deposits, Alexo Property, Timmins Area, Ontario, Canada", for Canadian Arrow Mines Ltd. with an effective date of September 5, 2010.
- 8. I have read NI 43-101 and Form 43-101F1 and this Technical Report has been prepared in compliance therewith.
- 9. As of the effective date of this Technical Report, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Effective Date: December 1, 2020 Signed Date: December 17, 2020

{SIGNED AND SEALED} [David Burga]

David Burga, P.Geo.

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

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

- 1. I am an independent geological consultant contracted by P&E Mining Consultants Inc.
- 2. This certificate applies to the Technical Report titled "Technical Report and Updated Mineral Resource Estimate of the Alex-Dundonald Nickel Project", (The "Technical Report") with an effective date of December 1, 2020.
- 3. I am a graduate of Ottawa University at Ottawa, Ontario with a B. Sc (HONS) in Geological Sciences (1977) with continuous experience as a geologist since 1979. I am a geological consultant currently licensed by the Order of Geologists of Québec (License No 224) and by the Association of Professional Geoscientist of Ontario (License No 1890);

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

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

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

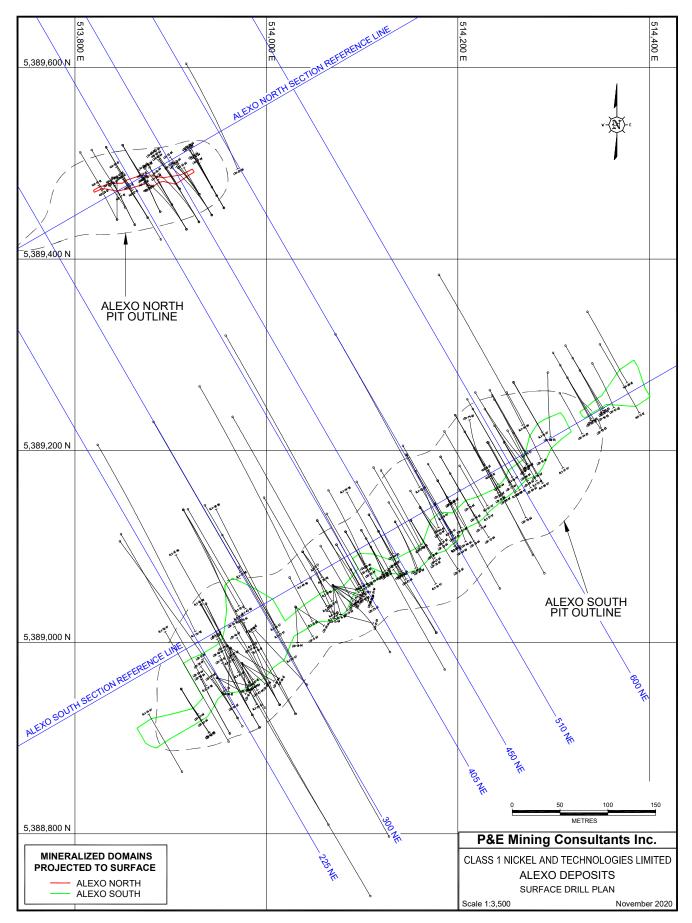
- 4. I have visited the Alexo Property that is the subject of this Technical Report from May 17 to 18, 2010 and April 29, 2011, visited the Dundonald South area of the Property on August 25, 2020, and the Dundonald North area on September 22, 2020.
- 5. I am responsible for co-authoring Sections 1, 12, 14, 25 and 26 of this Technical Report.
- 6. I am independent of the Issuer applying the test in Section 1.5 of NI 43-101. I am independent of the Vendor and the Property.
- 7. I have had prior involvement with the Project that is the subject of this Technical Report. I was a "Qualified Person" for a Technical Report titled "Technical Report and Updated Resource Estimate on the Alexo and Kelex Deposits, Alexo Property, Timmins Area, Ontario, Canada," for Canadian Arrow Mines Ltd. with an effective date of May 1, 2011; and a Technical Report titled "Technical Report and Resource Estimate on the Alexo and Kelex Deposits, Alexo Property, Timmins Area, Ontario, Canada," for Canadian Arrow Mines Ltd. with an effective date of May 1, 2011; and a Technical Report titled "Technical Report and Resource Estimate on the Alexo and Kelex Deposits, Alexo Property, Timmins Area, Ontario, Canada", for Canadian Arrow Mines Ltd. with an effective date of September 5, 2010.
- 8. I have read NI 43-101 and Form 43-101F1. This Technical Report has been prepared in compliance therewith.
- 9. As of the effective date of this Technical Report, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Effective Date: December 1, 2020 Signed Date: December 17, 2020

{SIGNED AND SEALED} [Antoine R. Yassa]

Antoine R. Yassa, P.Geo.

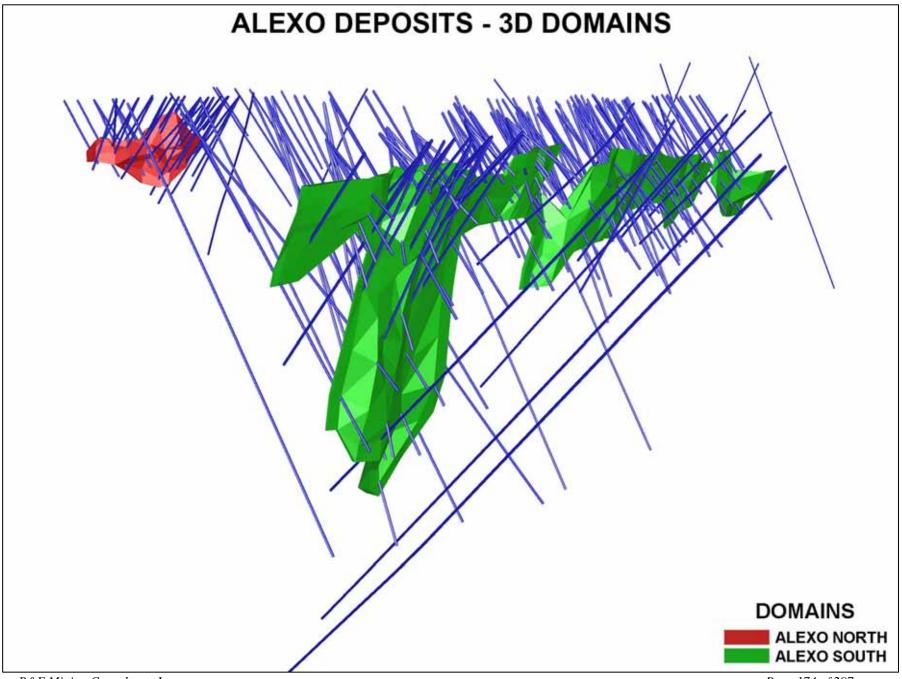
# APPENDIX A ALEXO SURFACE DRILL HOLE PLAN



*P&E Mining Consultants Inc. Class 1 Nickel and Technologies, Alexo-Dundonald Nickel Project, Report No. 389* 

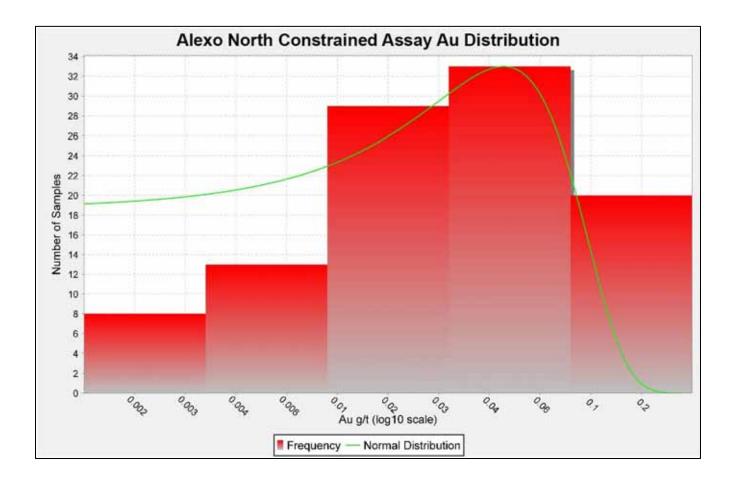
Page 172 of 297

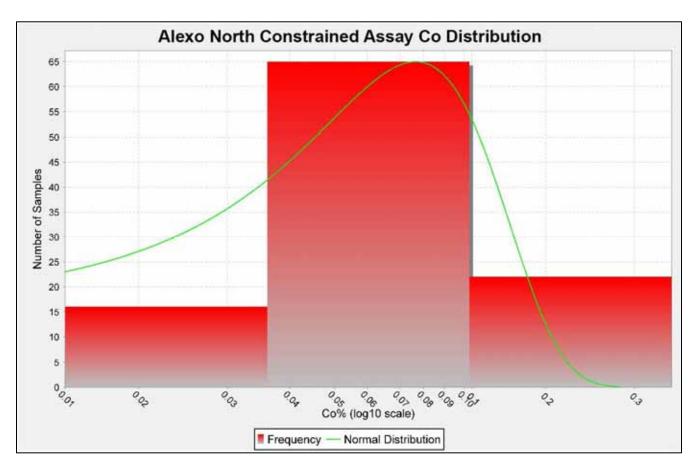
## APPENDIX B ALEXO PROPERTY 3-D DOMAINS

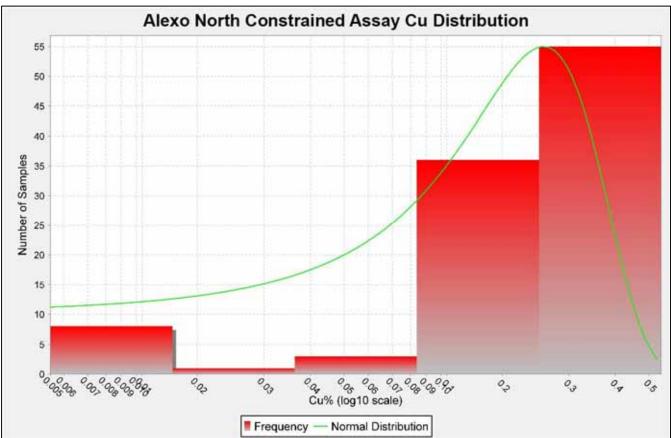


Page 174 of 297



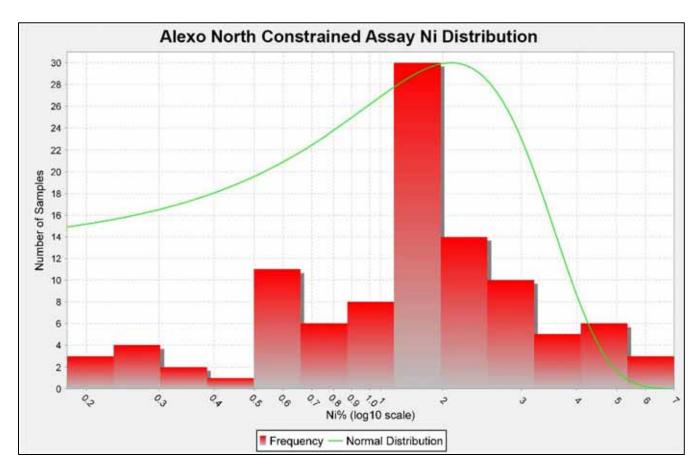


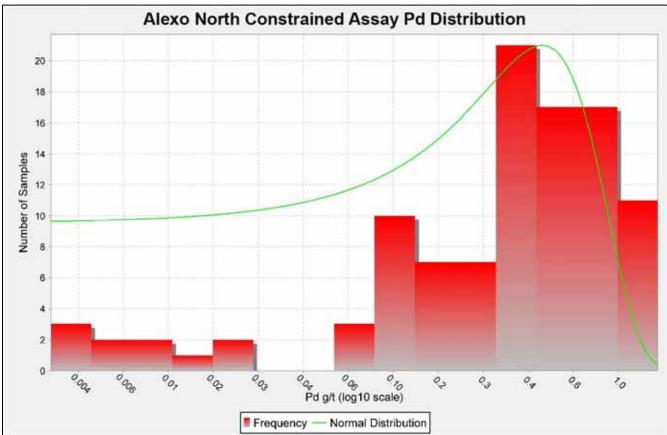




*P&E Mining Consultants Inc. Class 1 Nickel and Technologies, Alexo-Dundonald Nickel Project, Report No. 389* 

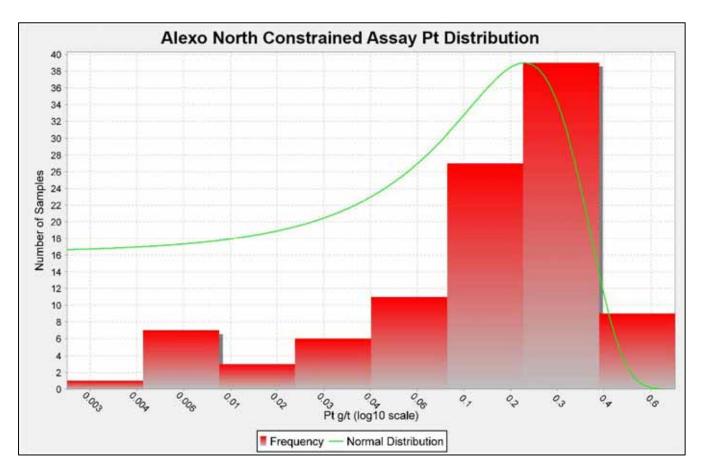
Page 176 of 297

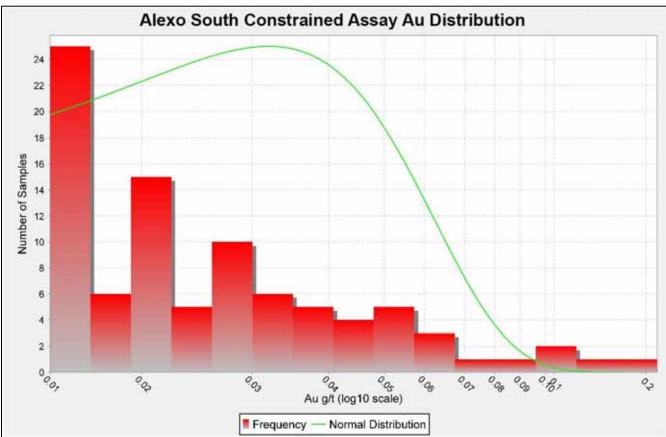




*P&E Mining Consultants Inc. Class 1 Nickel and Technologies, Alexo-Dundonald Nickel Project, Report No. 389* 

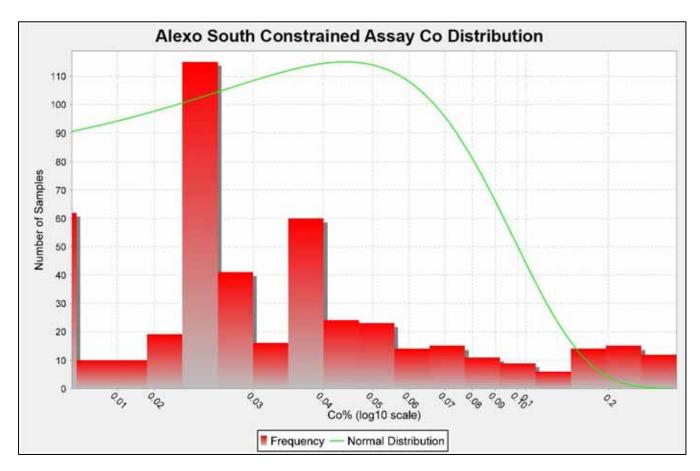
Page 177 of 297

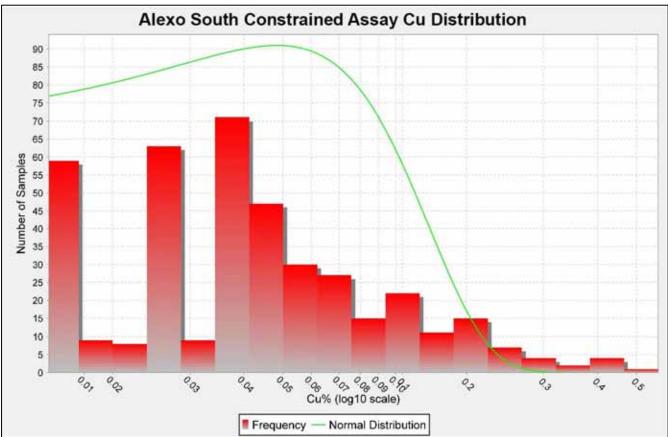




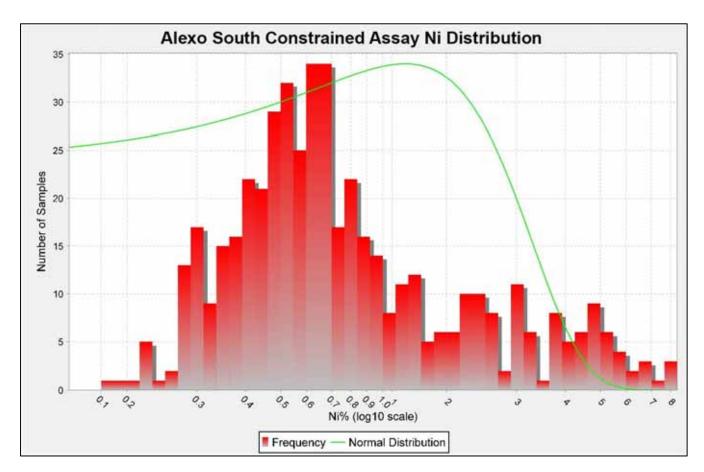
*P&E Mining Consultants Inc. Class 1 Nickel and Technologies, Alexo-Dundonald Nickel Project, Report No. 389* 

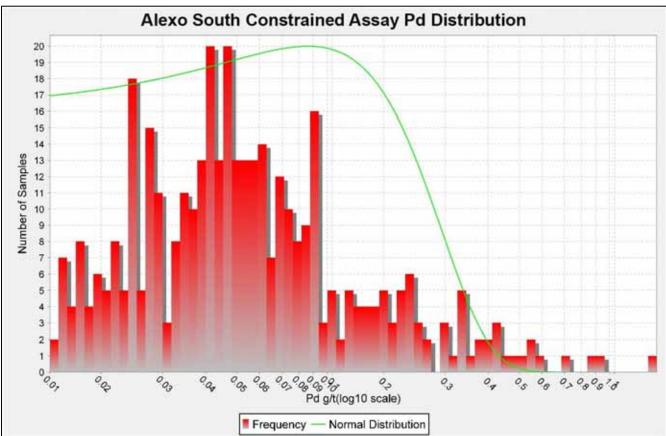
Page 178 of 297



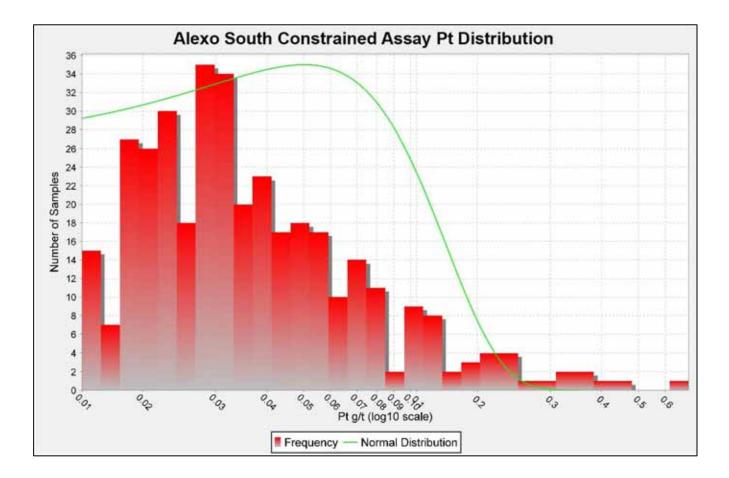


Page 179 of 297

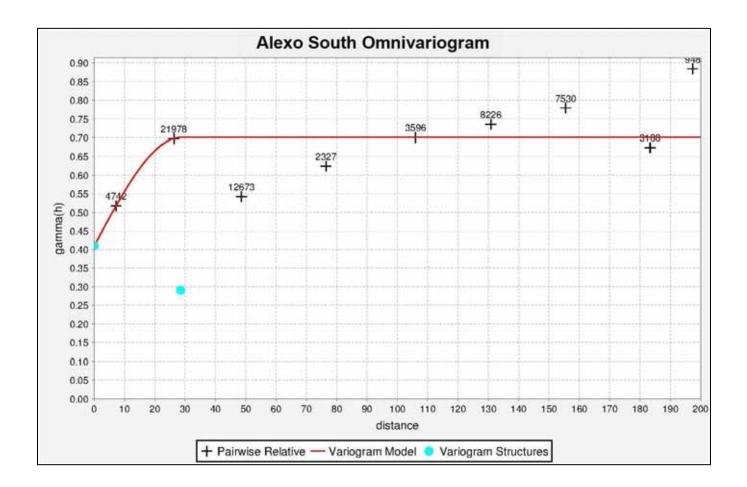


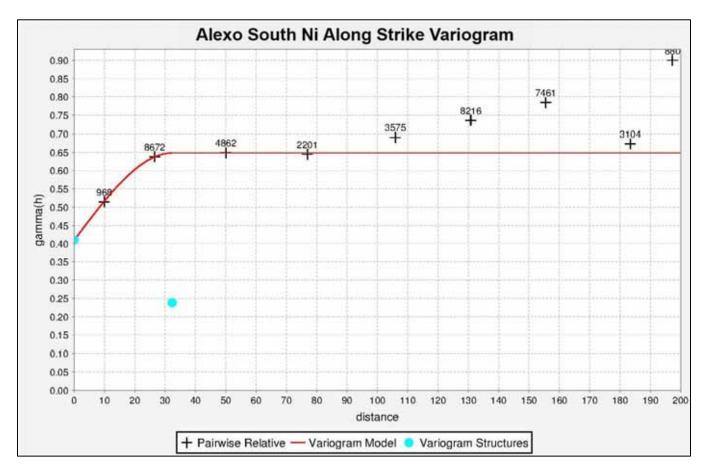


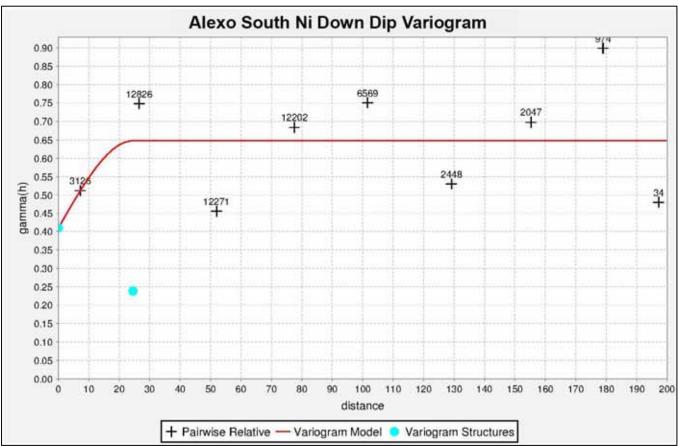
Page 180 of 297





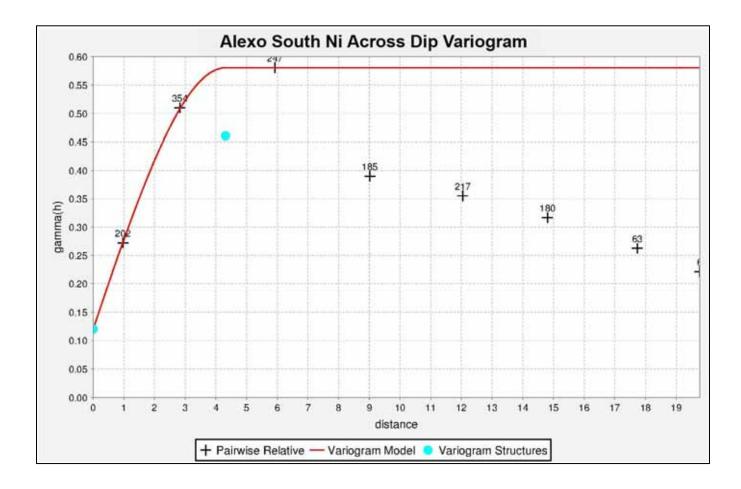




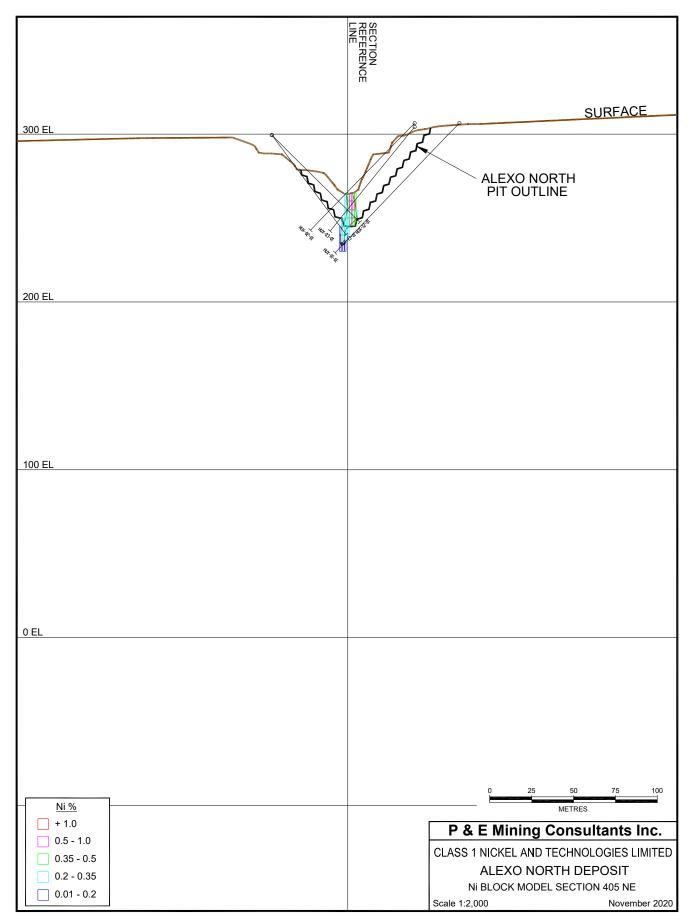


*P&E Mining Consultants Inc. Class 1 Nickel and Technologies, Alexo-Dundonald Nickel Project, Report No. 389* 

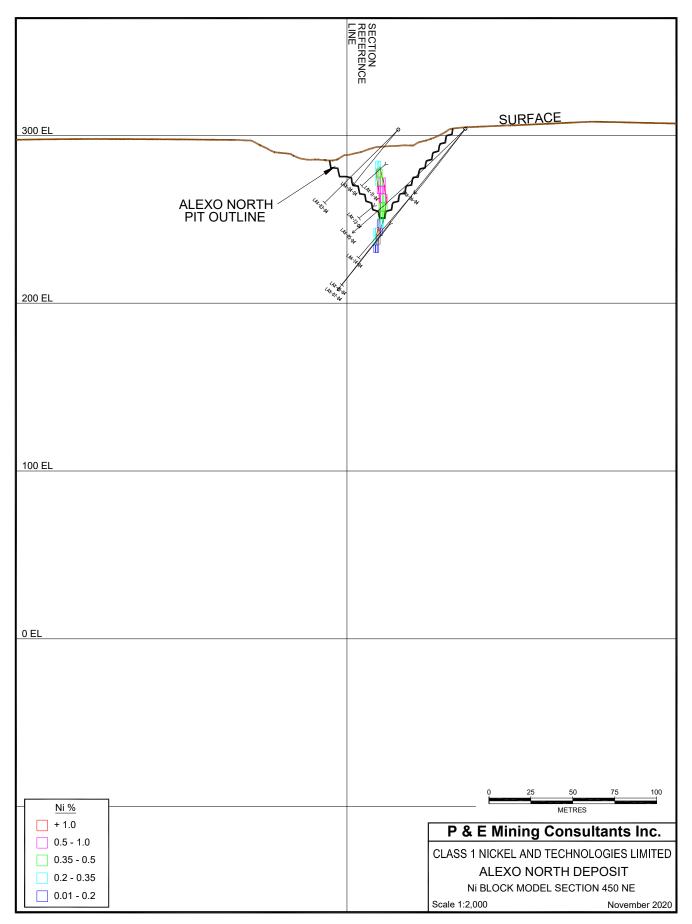
Page 183 of 297



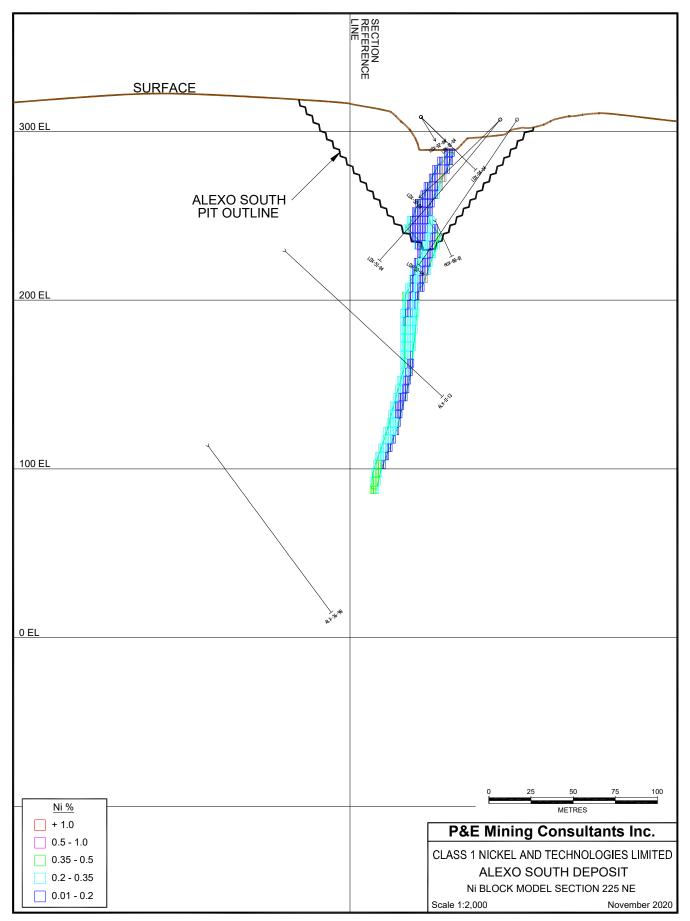
## APPENDIX E ALEXO PROPERTY NI BLOCK MODEL CROSS SECTIONS AND PLANS



Page 186 of 297

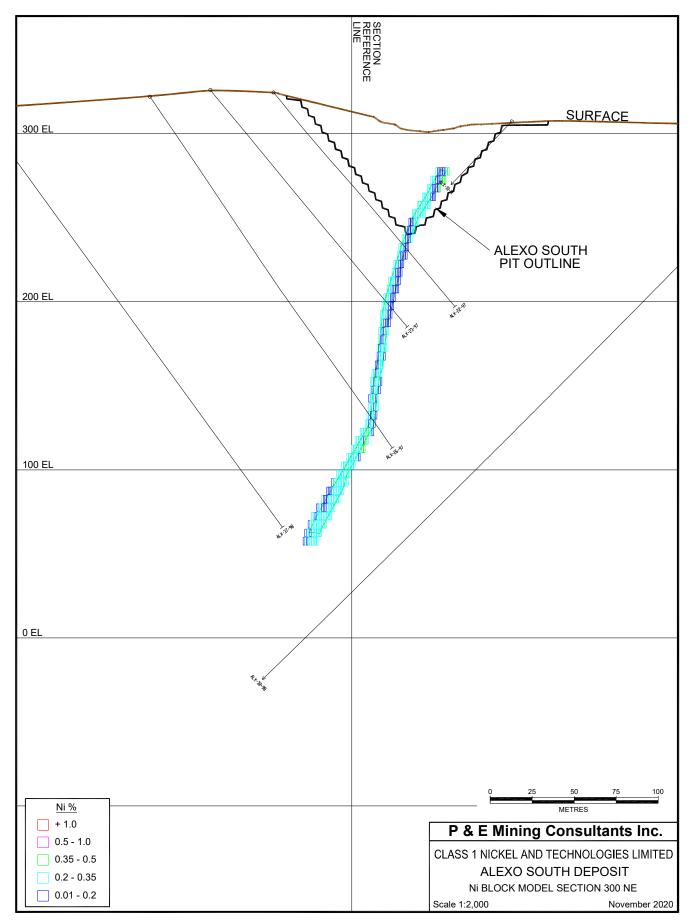


Page 187 of 297



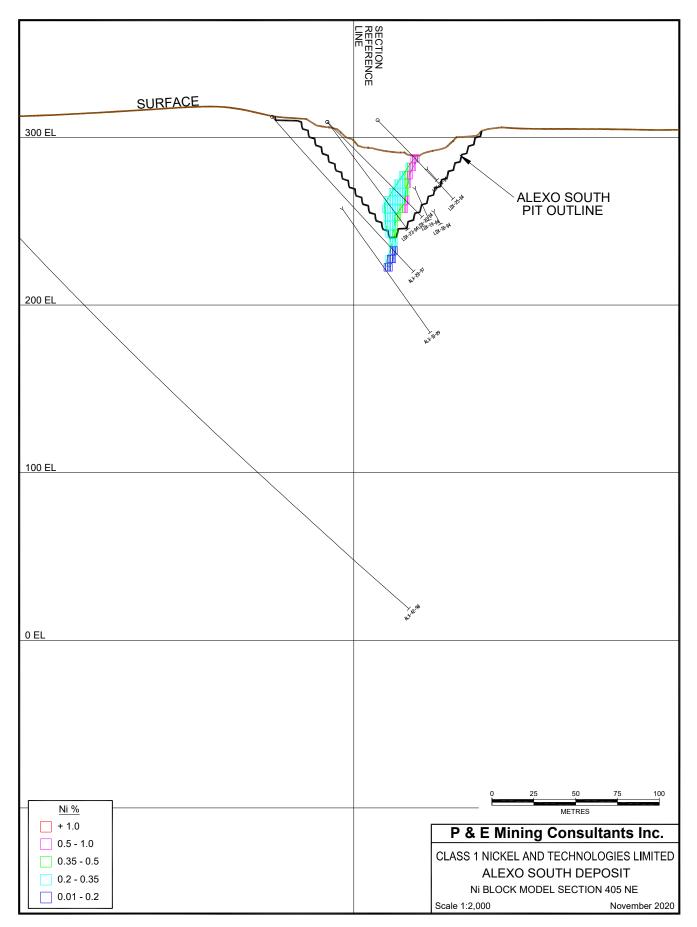
*P&E Mining Consultants Inc. Class 1 Nickel and Technologies, Alexo-Dundonald Nickel Project, Report No. 389* 

Page 188 of 297



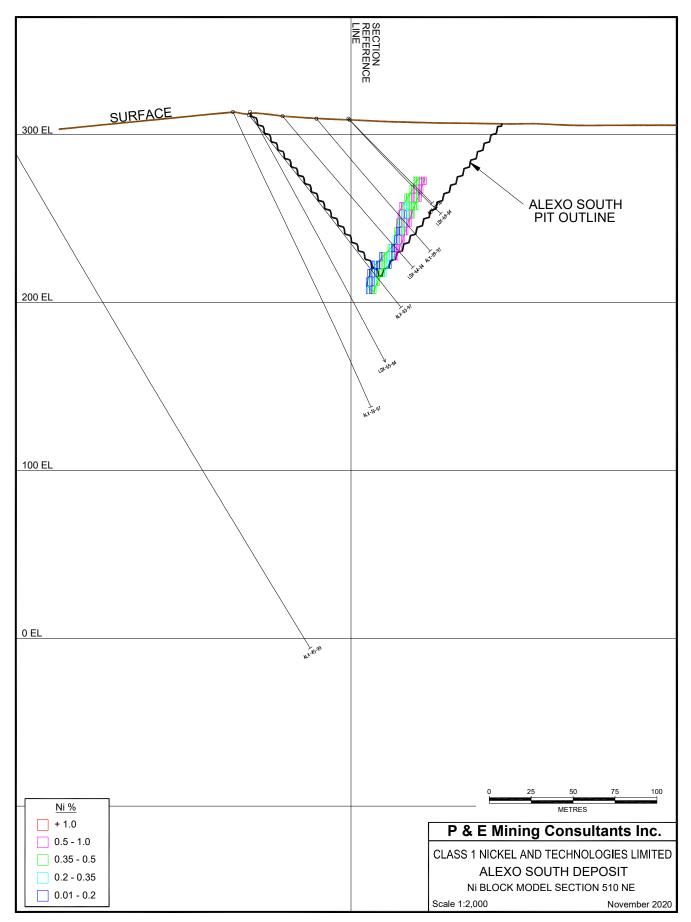
*P&E Mining Consultants Inc. Class 1 Nickel and Technologies, Alexo-Dundonald Nickel Project, Report No. 389* 

Page 189 of 297



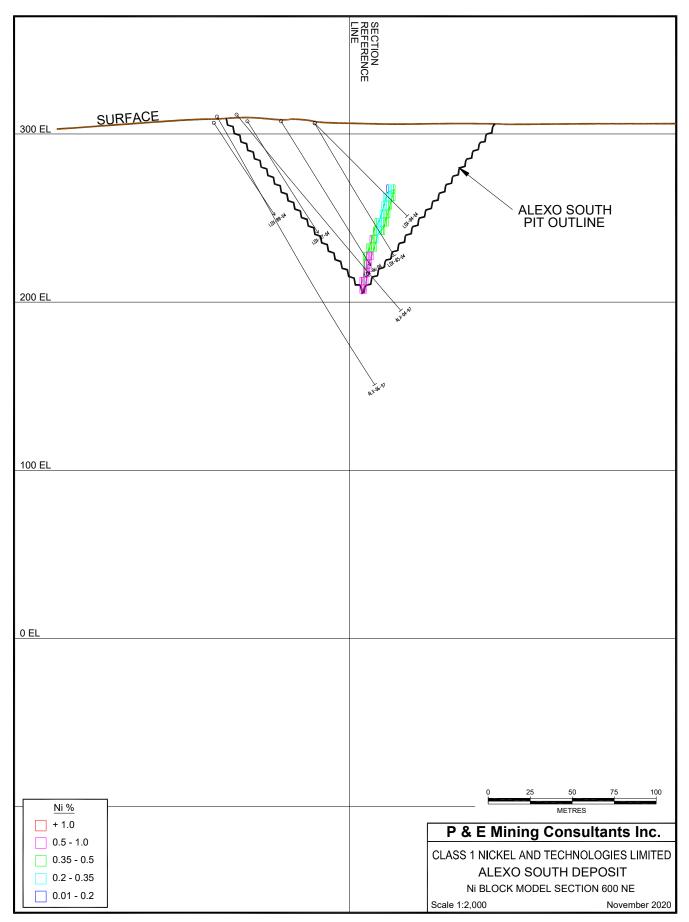
*P&E Mining Consultants Inc. Class 1 Nickel and Technologies, Alexo-Dundonald Nickel Project, Report No. 389* 

Page 190 of 297

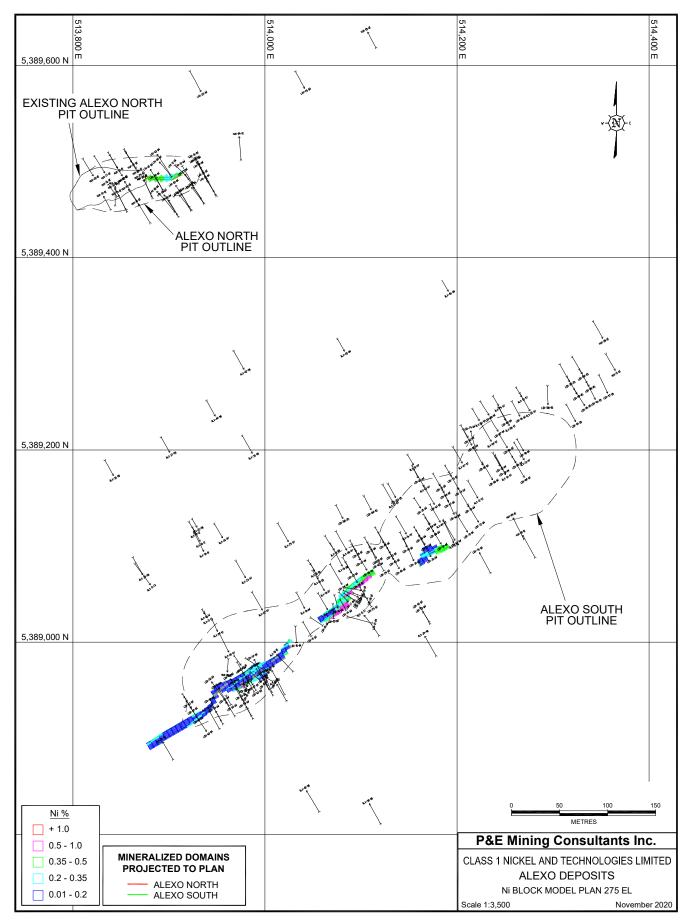


*P&E Mining Consultants Inc. Class 1 Nickel and Technologies, Alexo-Dundonald Nickel Project, Report No. 389* 

Page 191 of 297

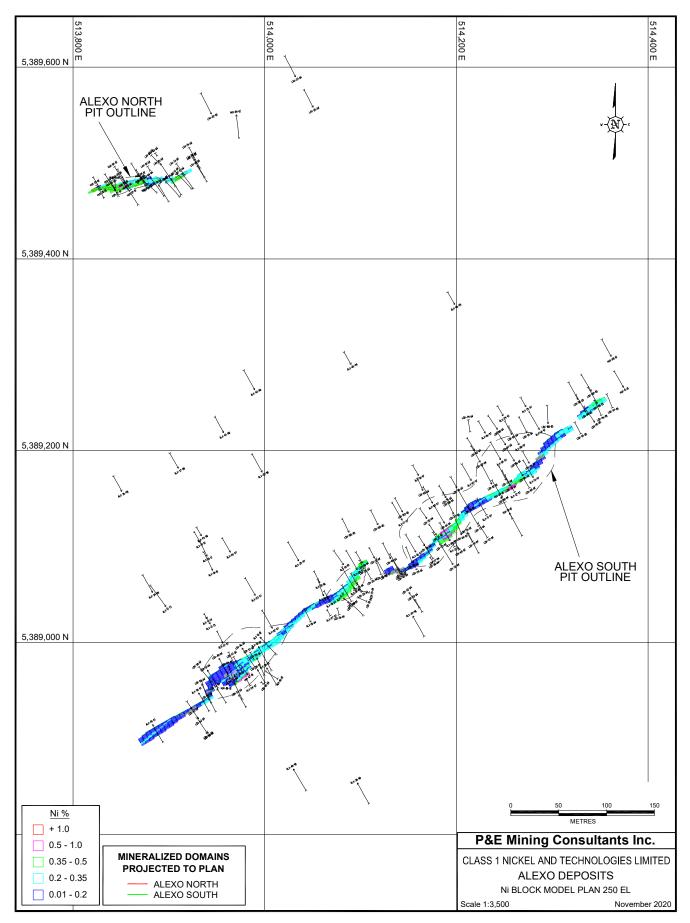


Page 192 of 297

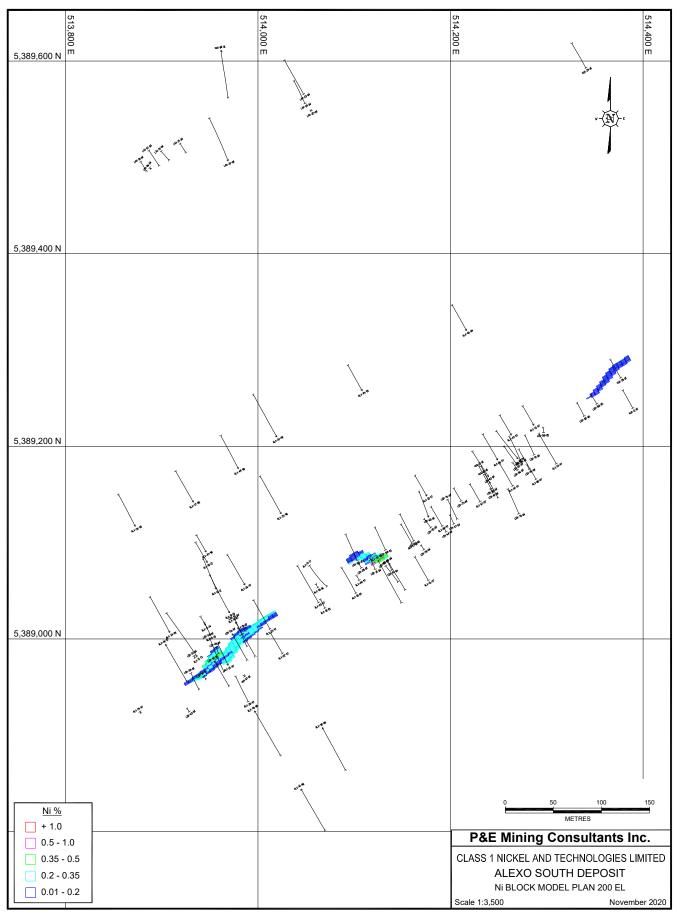


*P&E Mining Consultants Inc. Class 1 Nickel and Technologies, Alexo-Dundonald Nickel Project, Report No. 389* 

Page 193 of 297

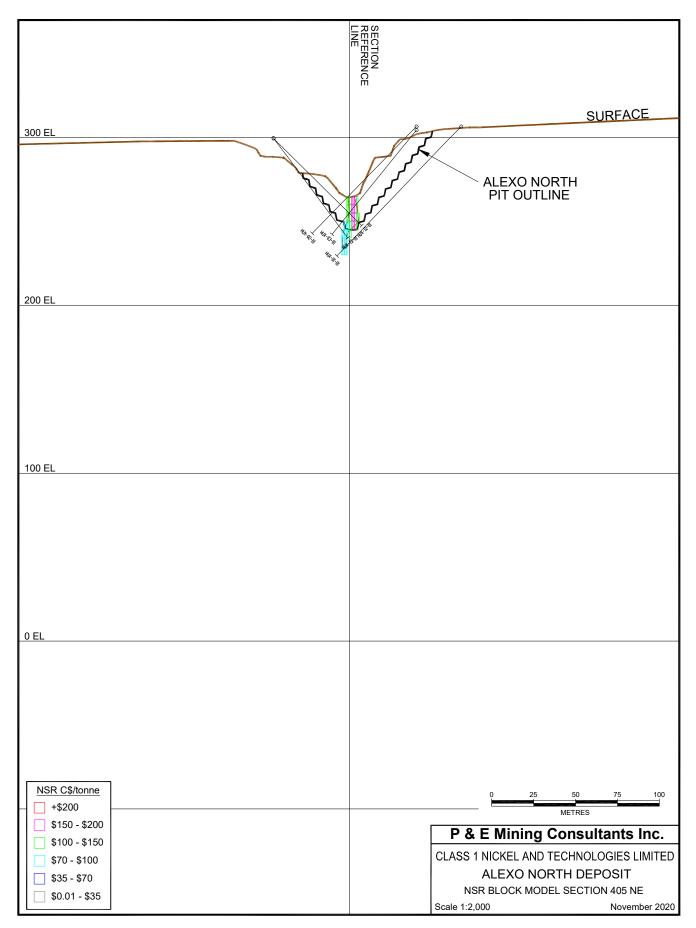


Page 194 of 297

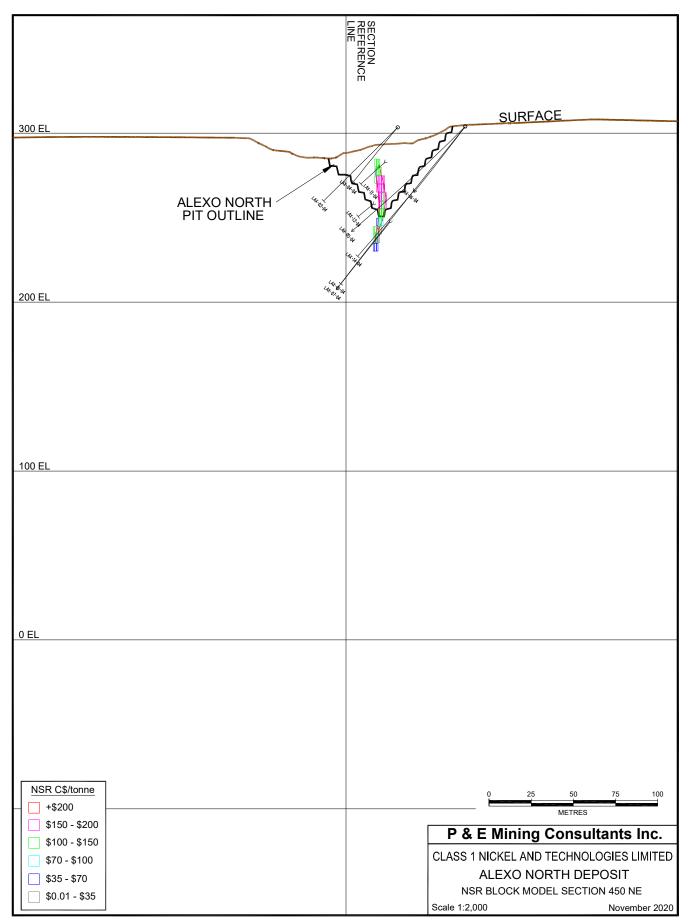


Page 195 of 297

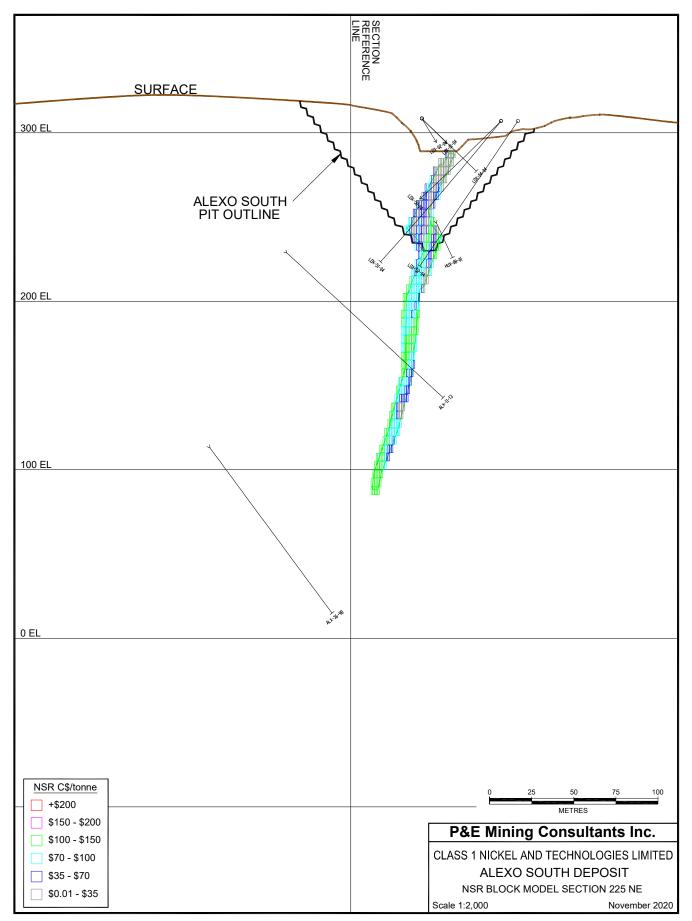
## APPENDIX F ALEXO PROPERTY NSR BLOCK MODEL CROSS SECTIONS AND PLANS



Page 197 of 297

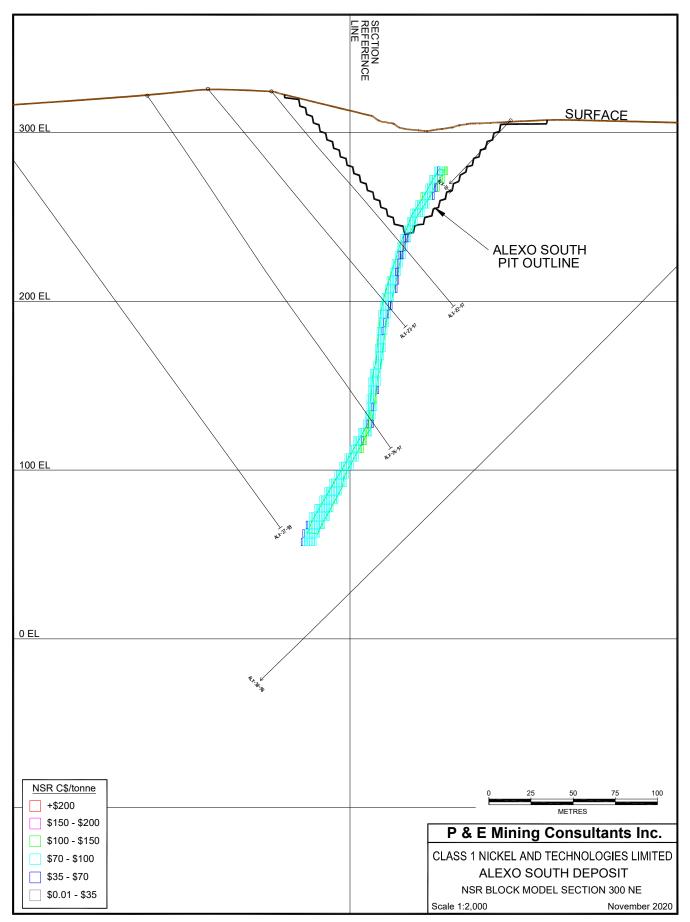


Page 198 of 297



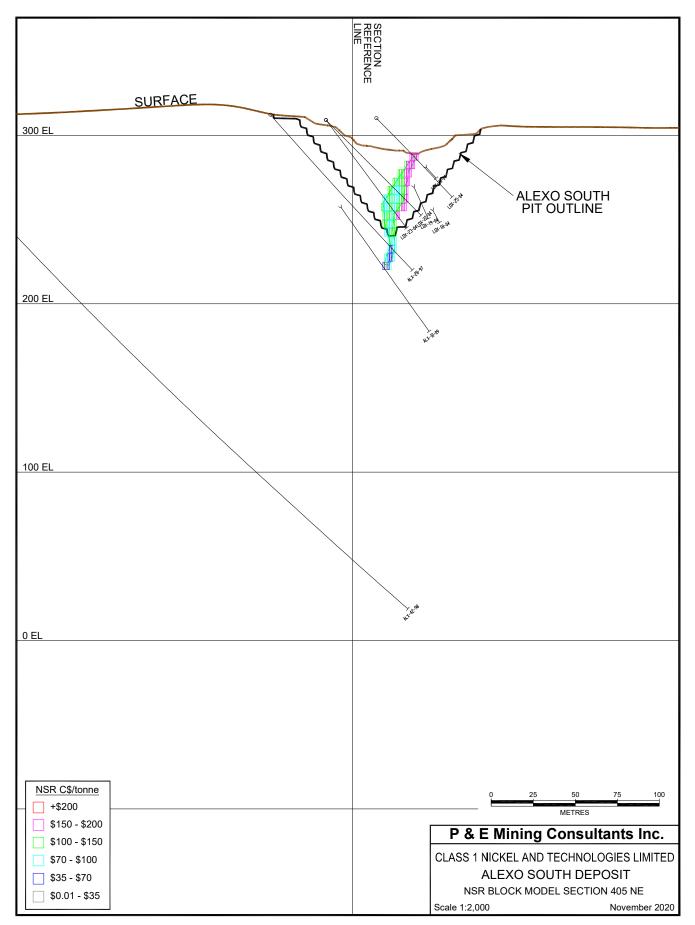
*P&E Mining Consultants Inc. Class 1 Nickel and Technologies, Alexo-Dundonald Nickel Project, Report No. 389* 

Page 199 of 297

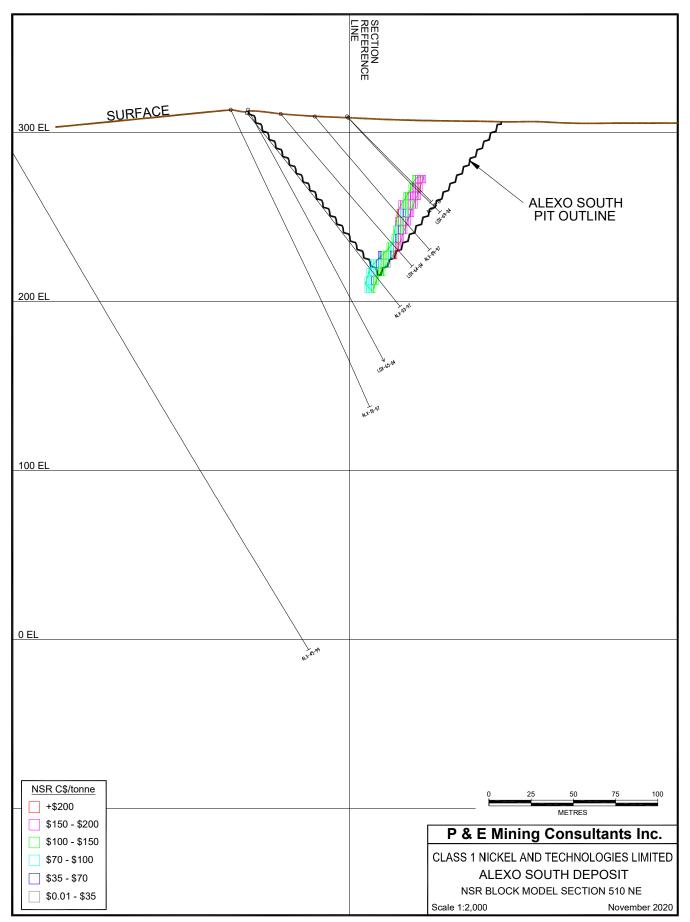


*P&E Mining Consultants Inc. Class 1 Nickel and Technologies, Alexo-Dundonald Nickel Project, Report No. 389* 

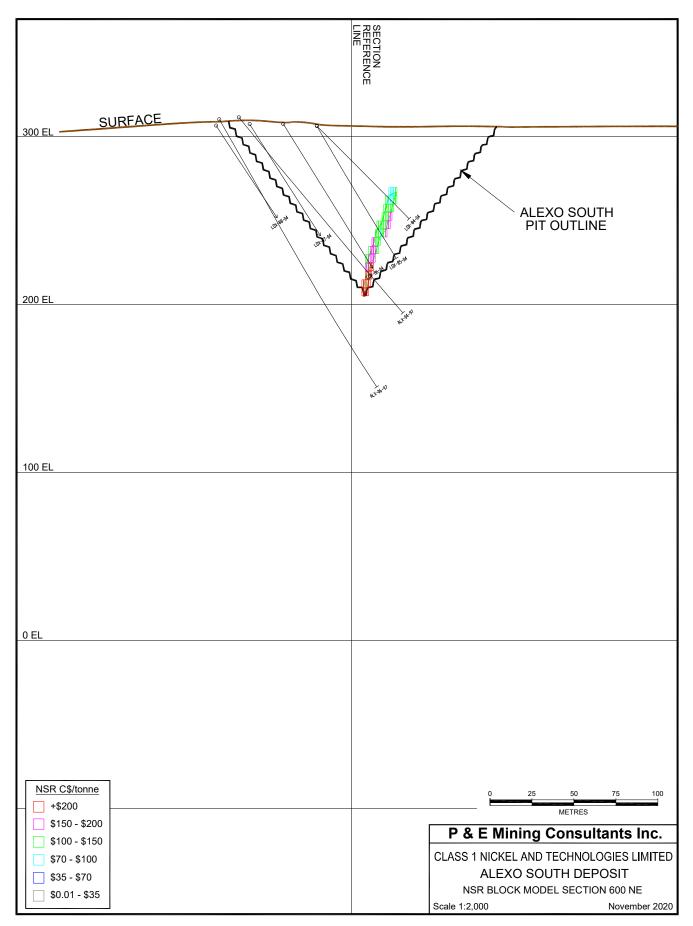
Page 200 of 297



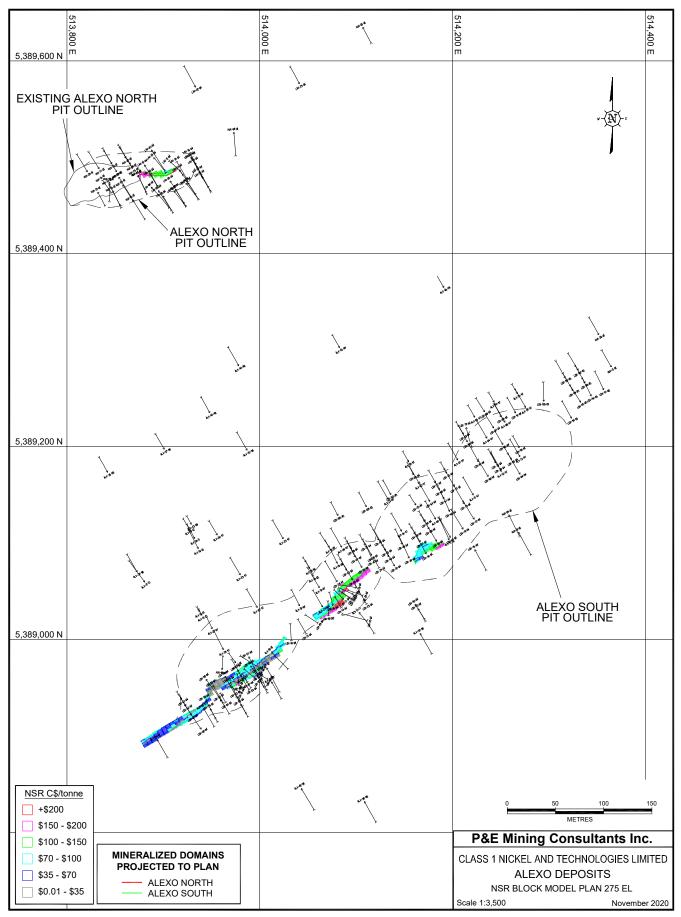
Page 201 of 297



Page 202 of 297

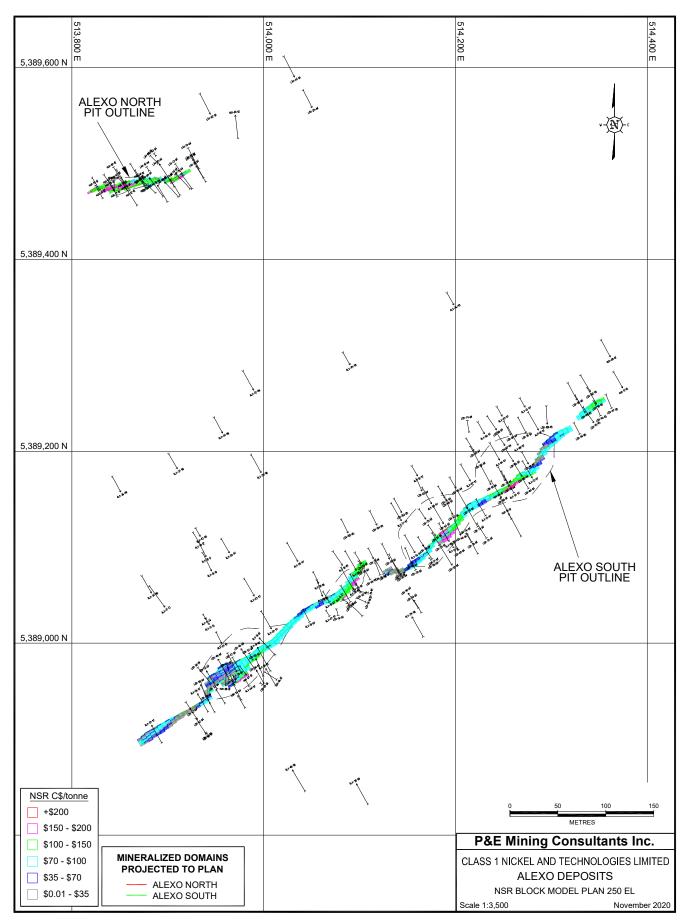


Page 203 of 297



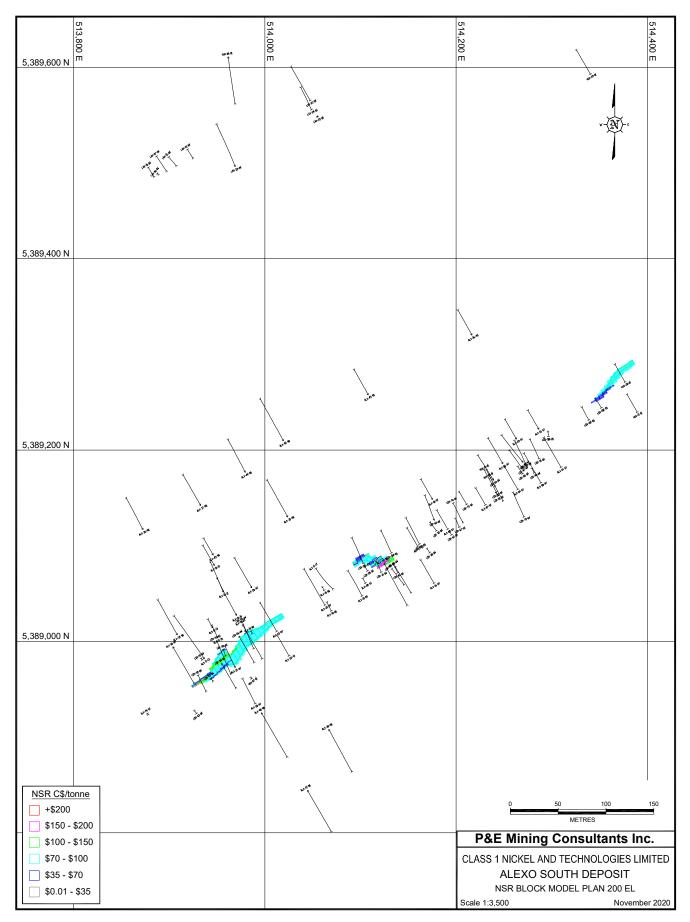
*P&E Mining Consultants Inc. Class 1 Nickel and Technologies, Alexo-Dundonald Nickel Project, Report No. 389* 

Page 204 of 297



*P&E Mining Consultants Inc. Class 1 Nickel and Technologies, Alexo-Dundonald Nickel Project, Report No. 389* 

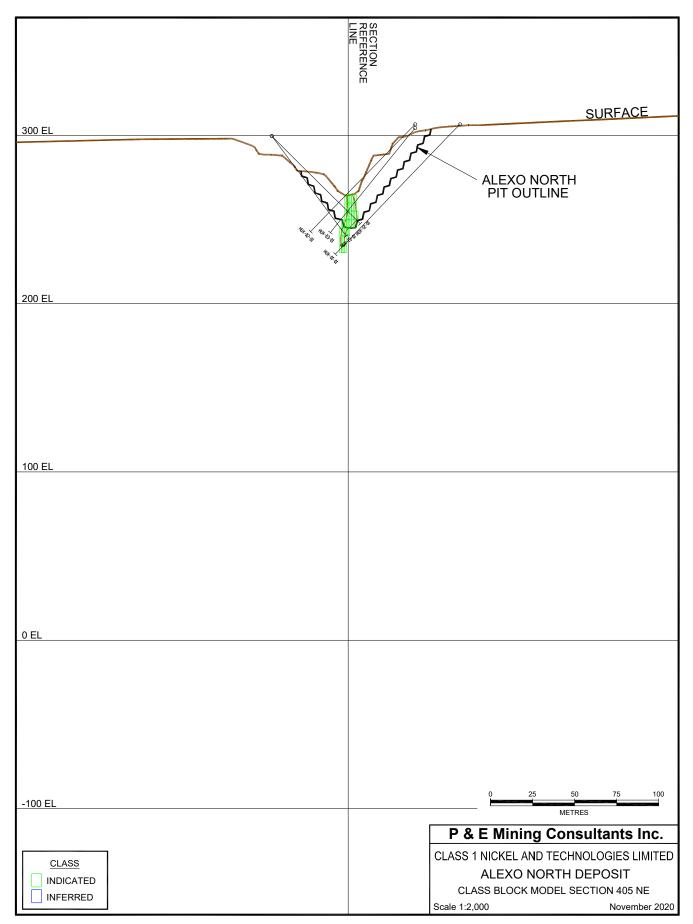
Page 205 of 297



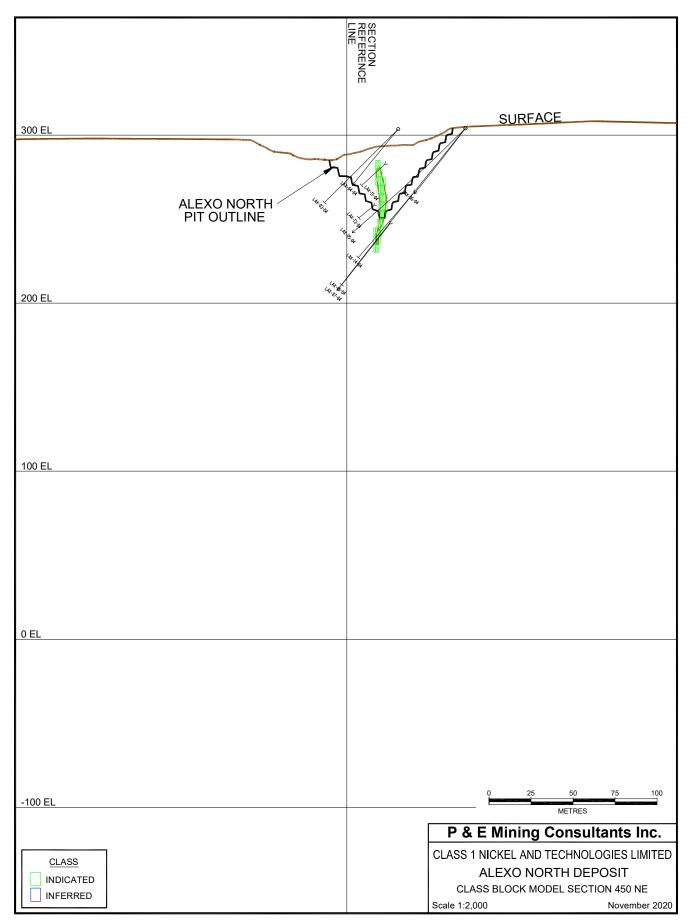
*P&E Mining Consultants Inc. Class 1 Nickel and Technologies, Alexo-Dundonald Nickel Project, Report No. 389* 

Page 206 of 297

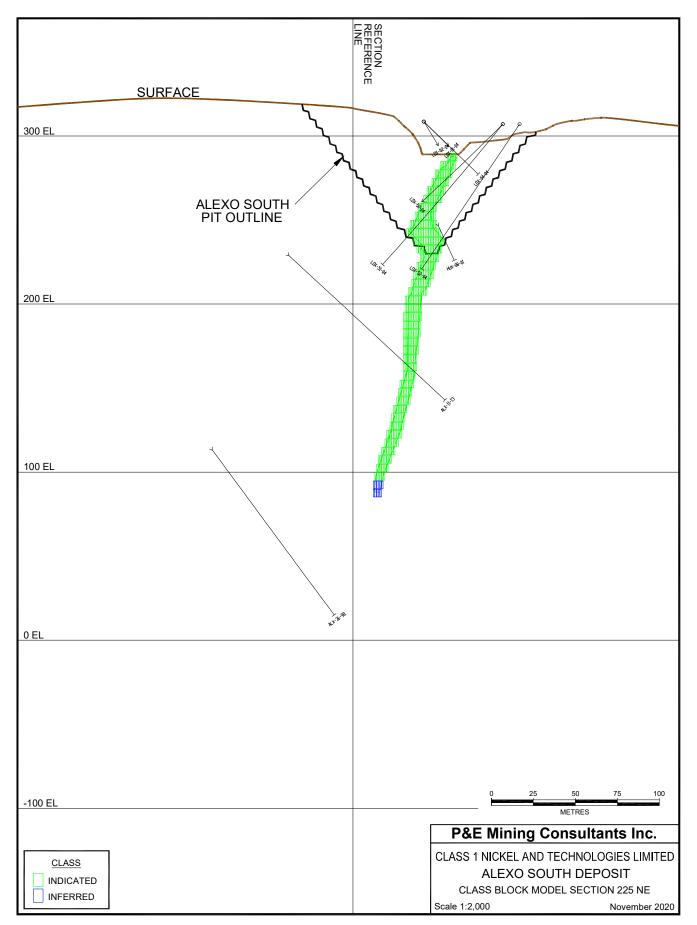
## APPENDIX G ALEXO PROPERTY CLASSIFICATION BLOCK MODEL CROSS SECTIONS AND PLANS



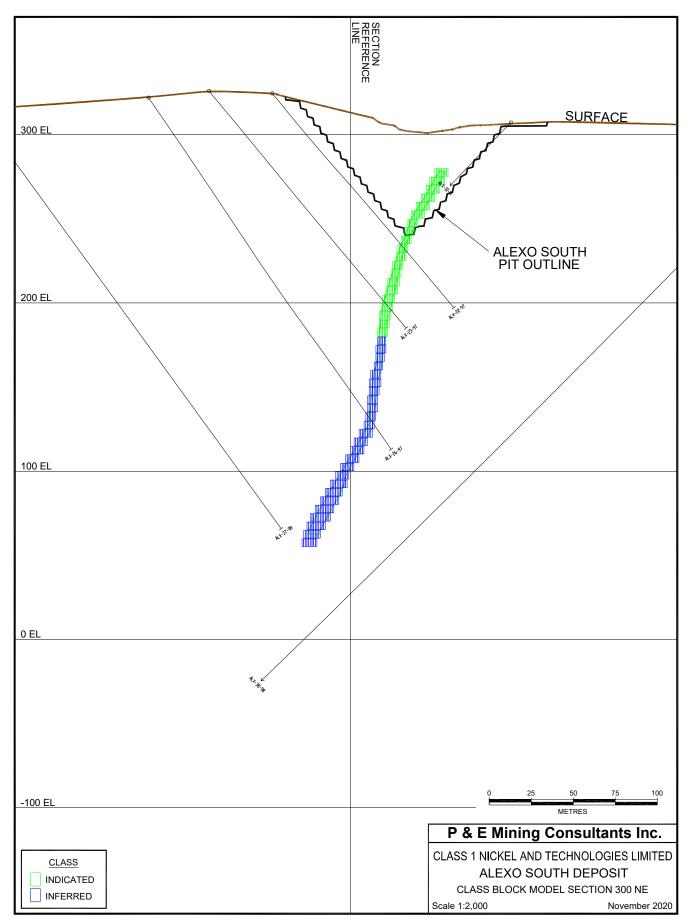
Page 208 of 297



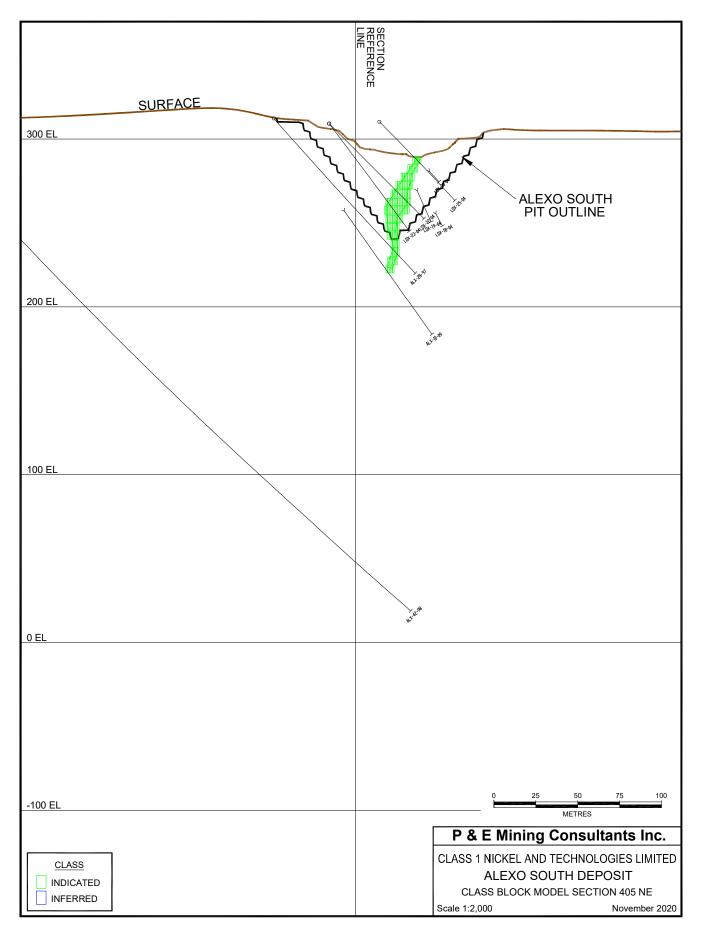
Page 209 of 297



Page 210 of 297

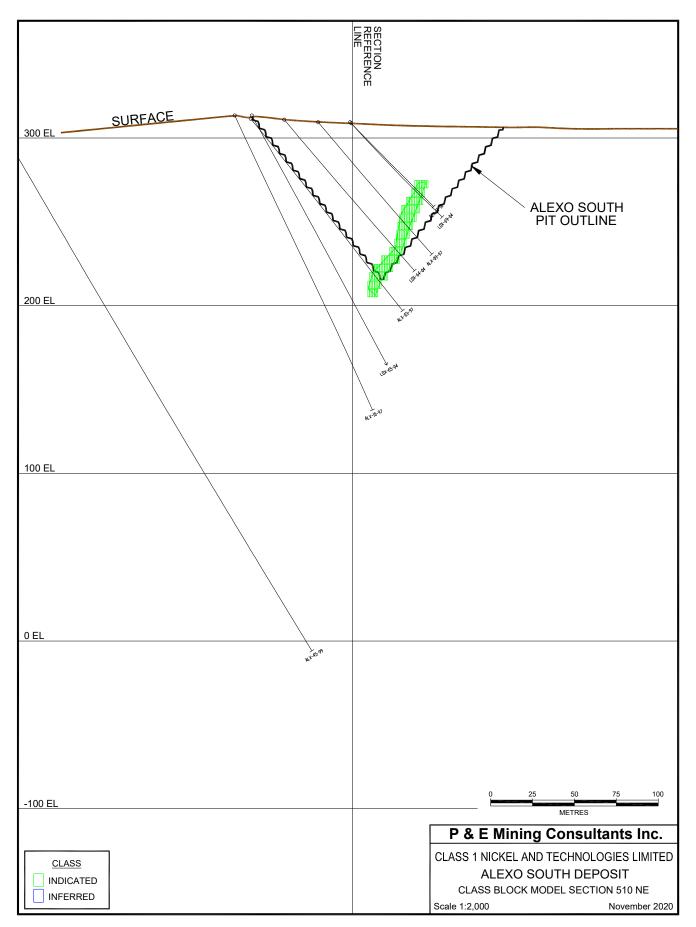


Page 211 of 297

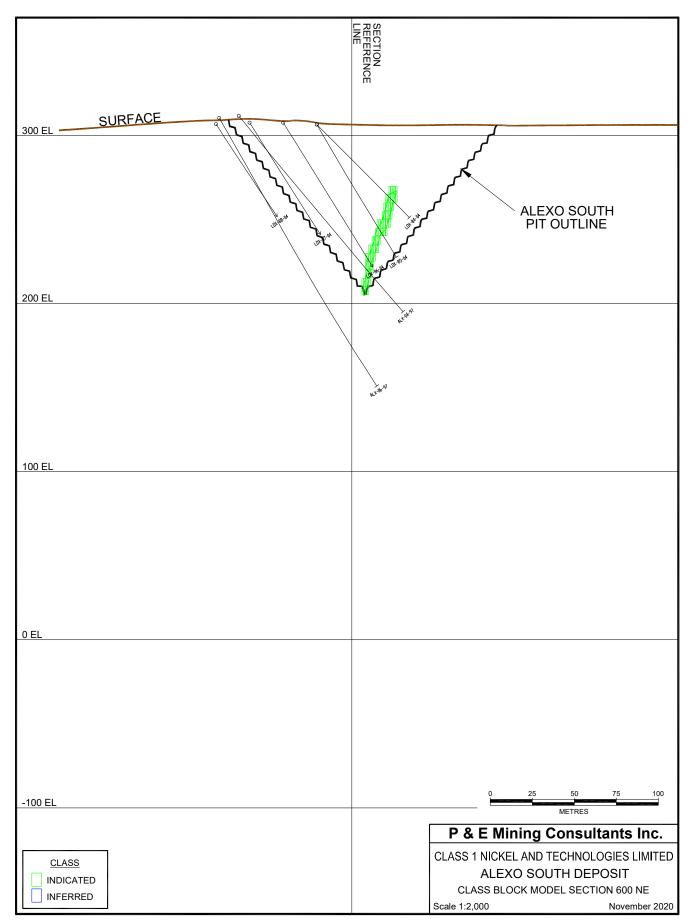


*P&E Mining Consultants Inc. Class 1 Nickel and Technologies, Alexo-Dundonald Nickel Project, Report No. 389* 

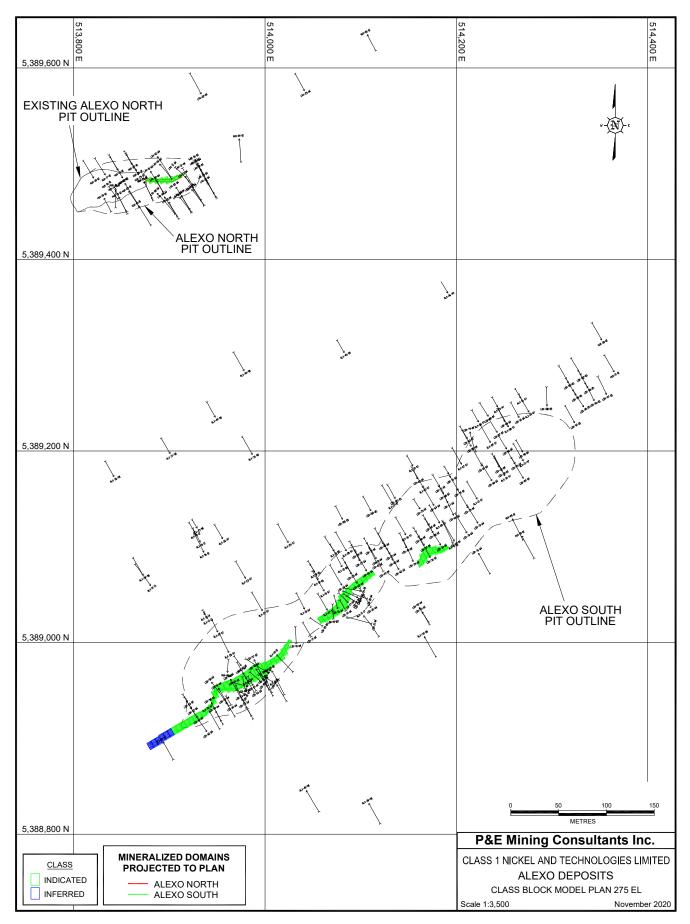
Page 212 of 297



Page 213 of 297

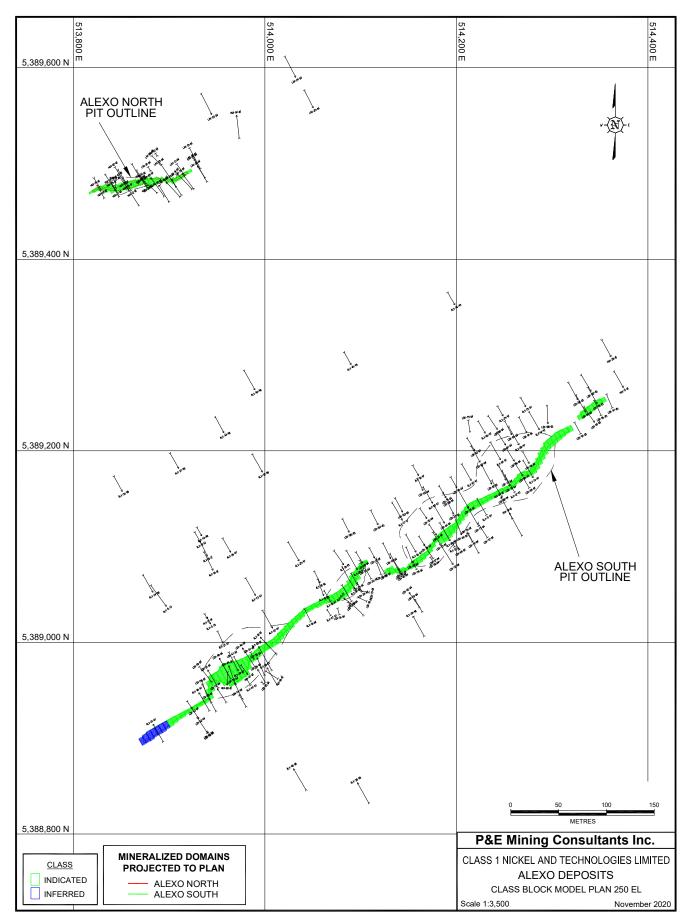


Page 214 of 297

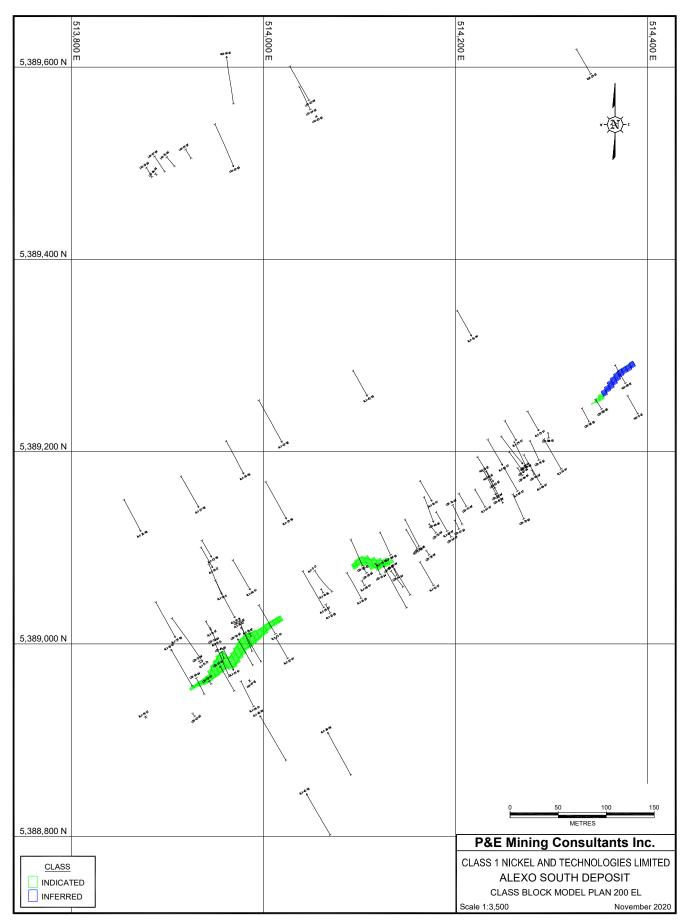


*P&E Mining Consultants Inc. Class 1 Nickel and Technologies, Alexo-Dundonald Nickel Project, Report No. 389* 

Page 215 of 297



Page 216 of 297

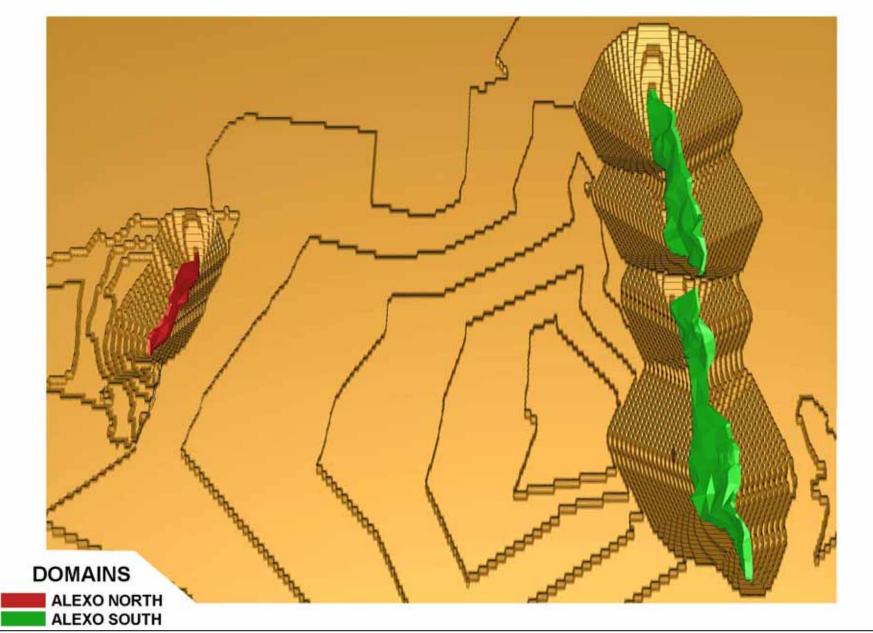


*P&E Mining Consultants Inc. Class 1 Nickel and Technologies, Alexo-Dundonald Nickel Project, Report No. 389* 

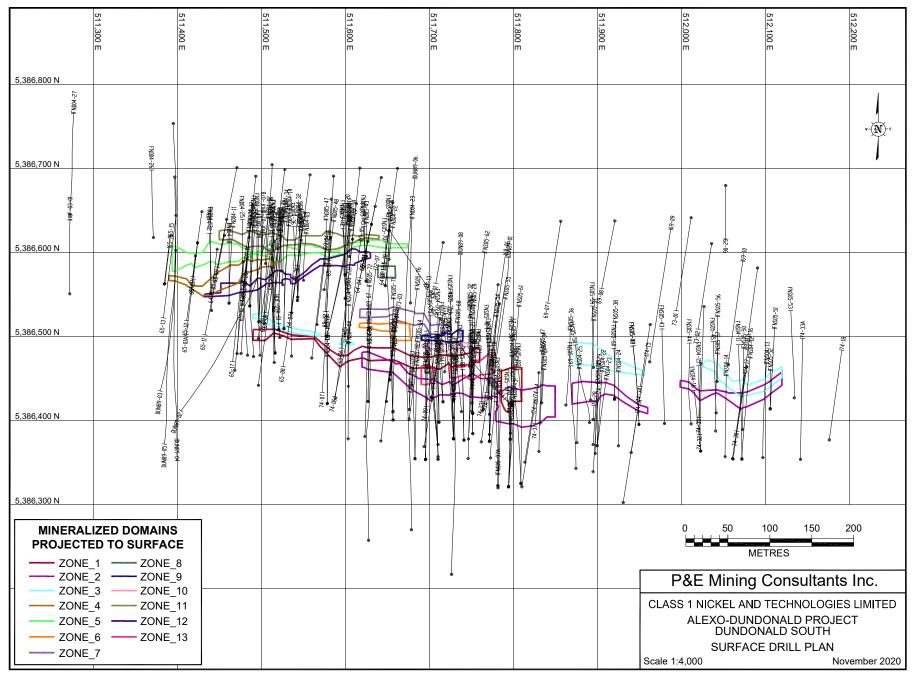
Page 217 of 297

### APPENDIX H ALEXO PROPERTY OPTIMIZED PIT SHELL

## **ALEXO DEPOSITS - OPTIMIZED PIT SHELL**

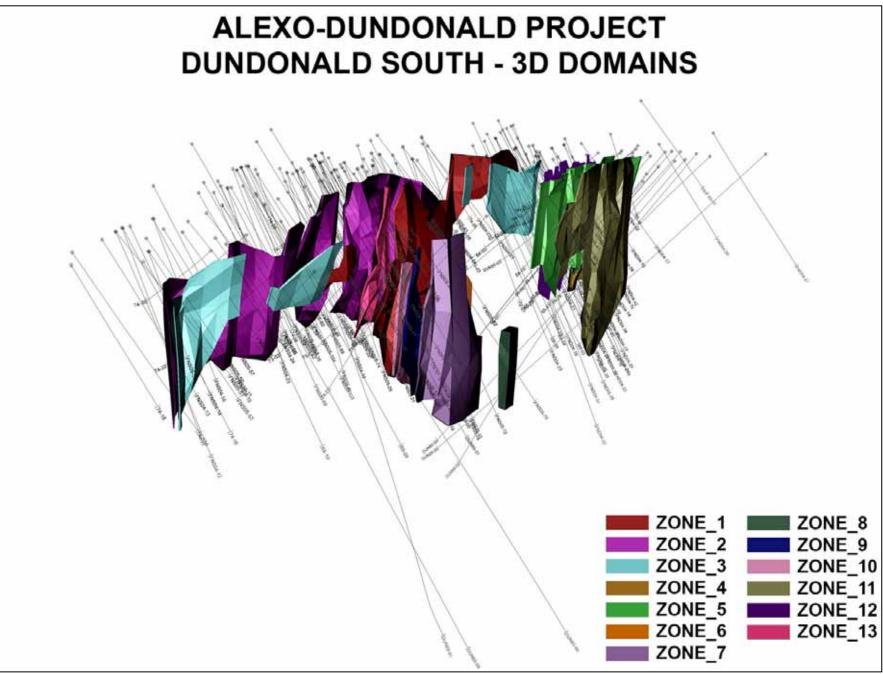


### APPENDIX I DUNDONALD SOUTH SURFACE DRILL HOLE PLAN



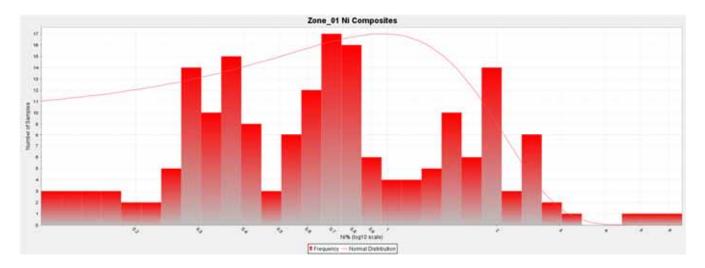
Page 221 of 297

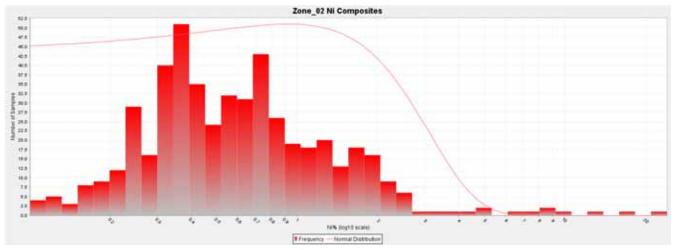
### APPENDIX J DUNDONALD SOUTH 3-D DOMAINS

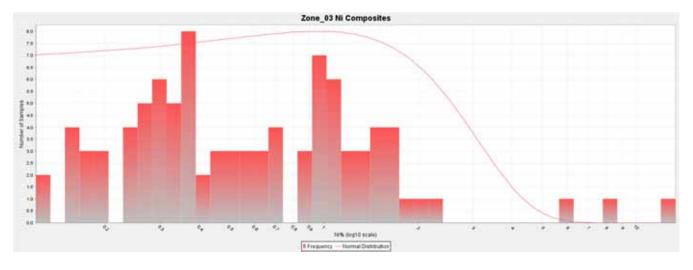


Page 223 of 297

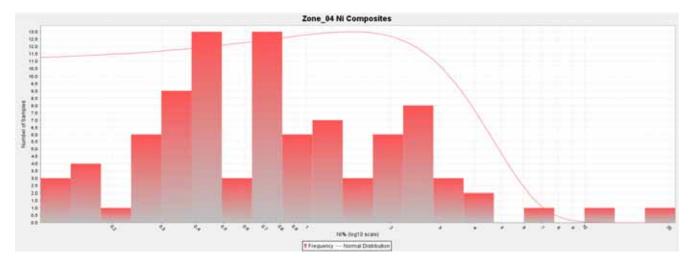
### APPENDIX K DUNDONALD SOUTH LOG NORMAL HISTOGRAMS

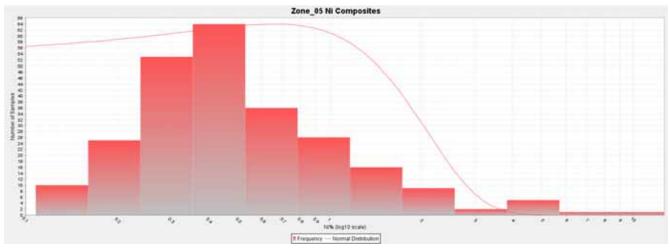




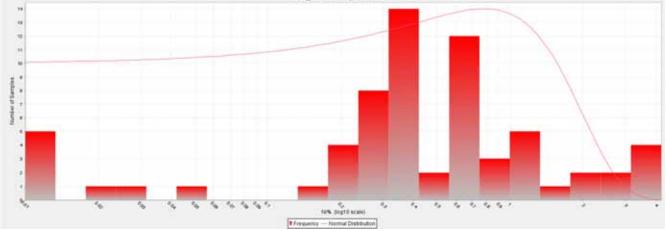


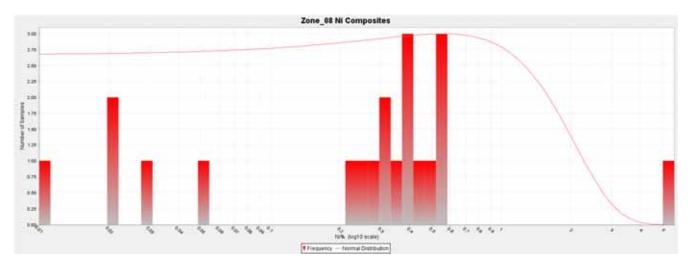
*P&E Mining Consultants Inc. Class 1 Nickel and Technologies, Alexo-Dundonald Nickel Project, Report No. 389*  Page 224 of 297

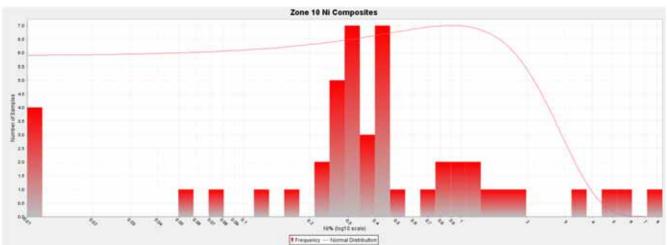


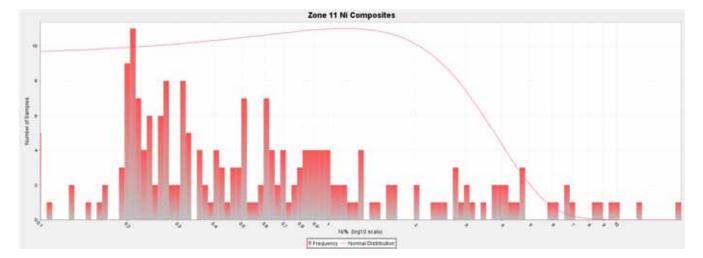


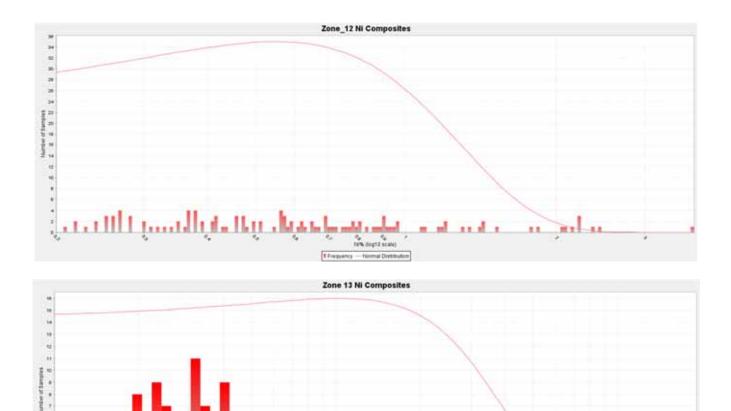












۴,

۰,

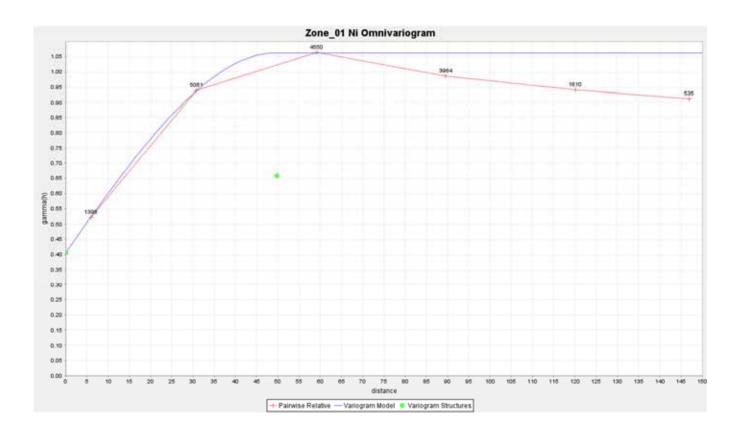
5

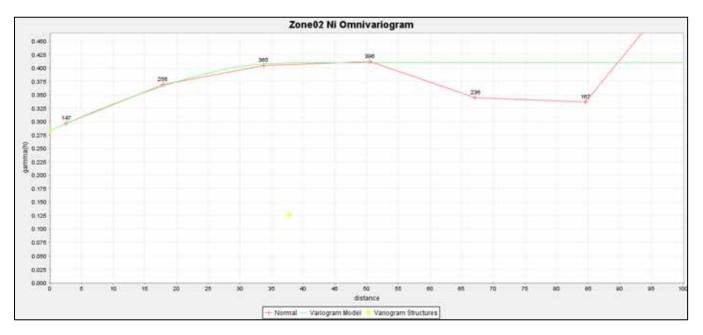
N/%- (log10 scale)

\* \* \*

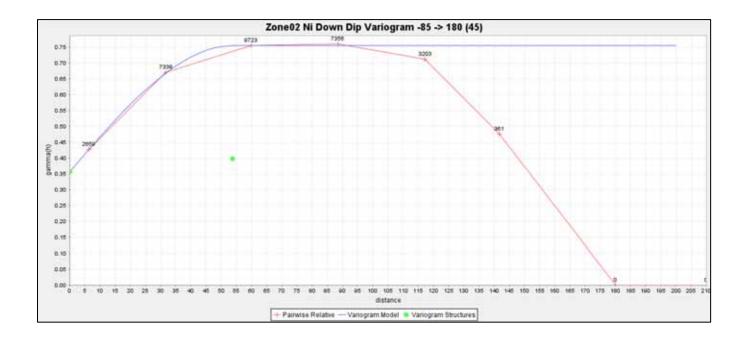
アフトな

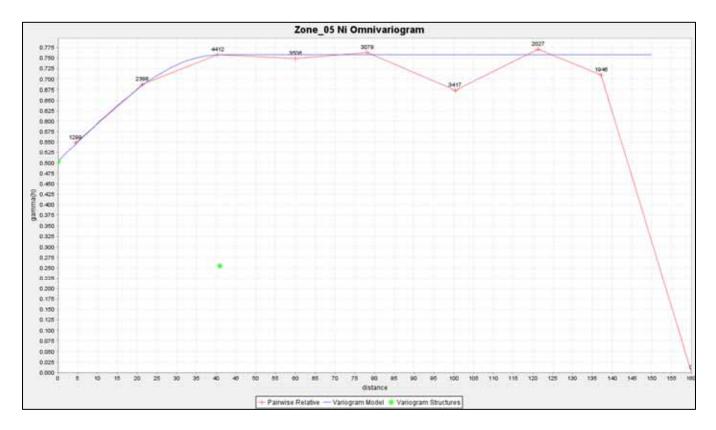
#### APPENDIX L DUNDONALD SOUTH VARIOGRAMS

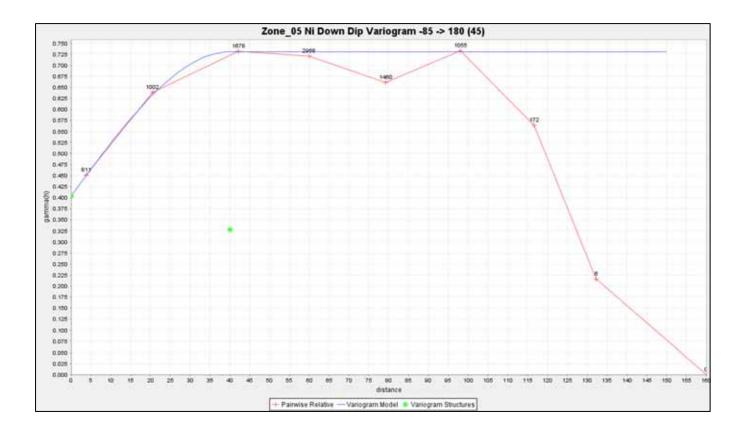


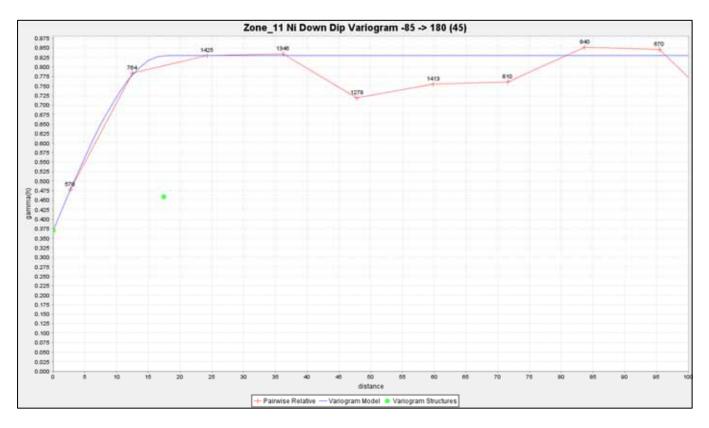


Page 228 of 297

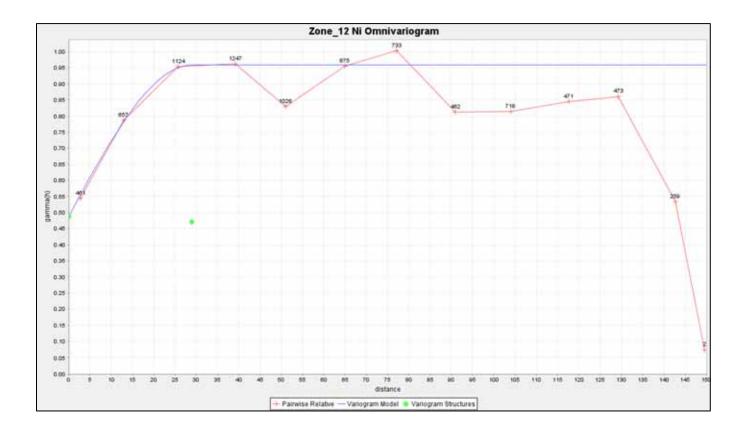


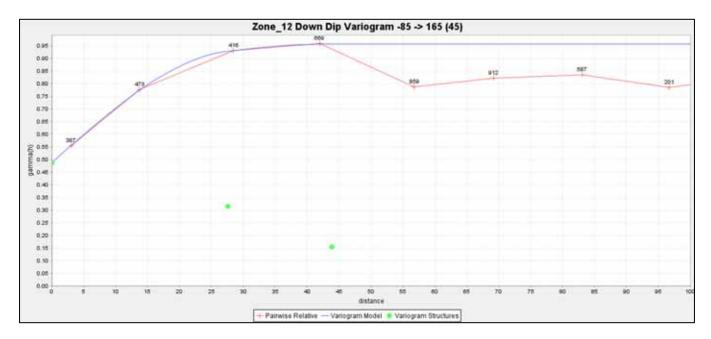




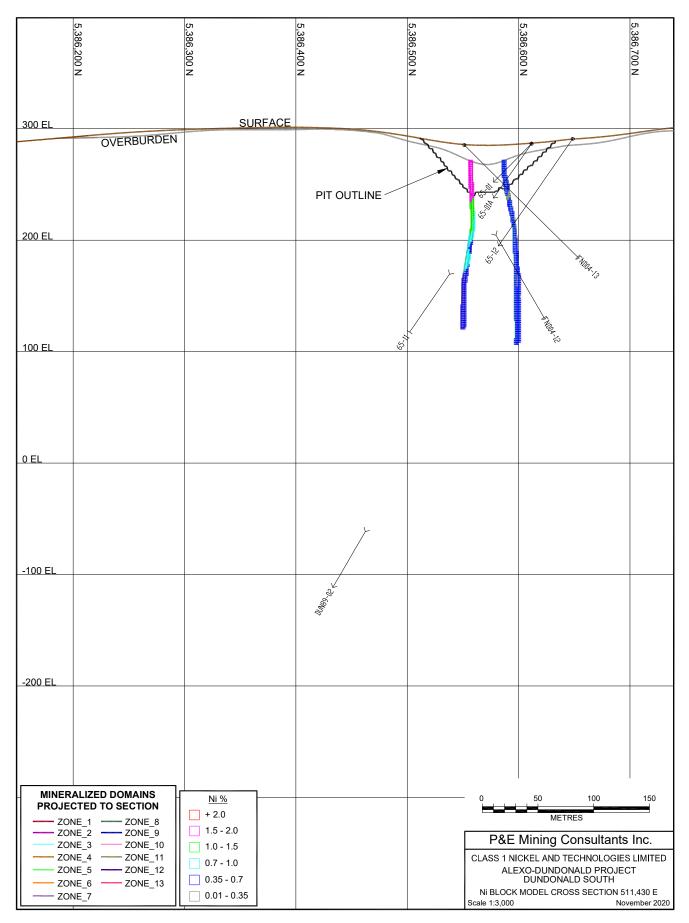


Page 230 of 297

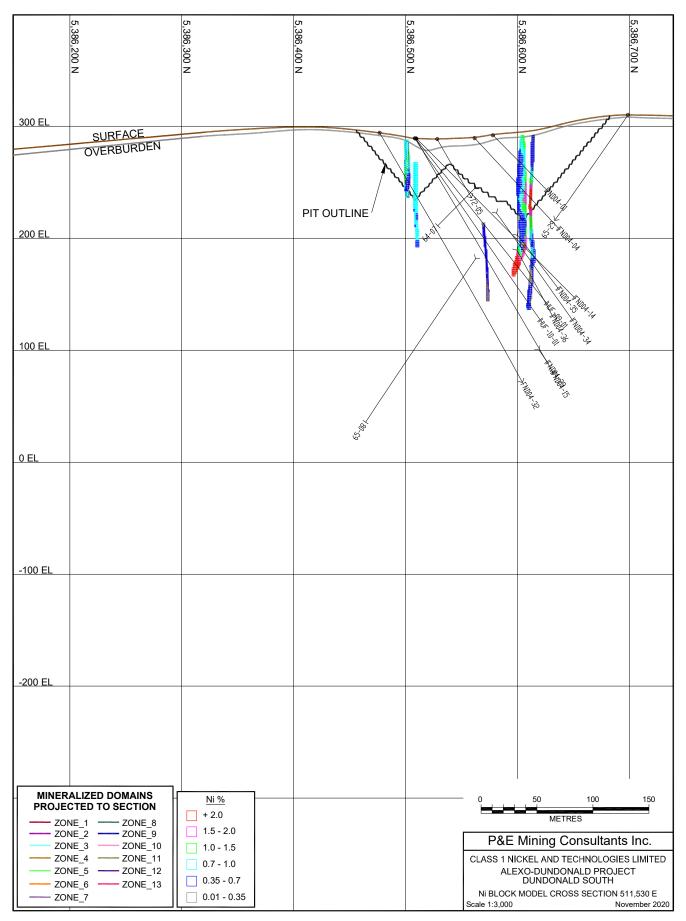




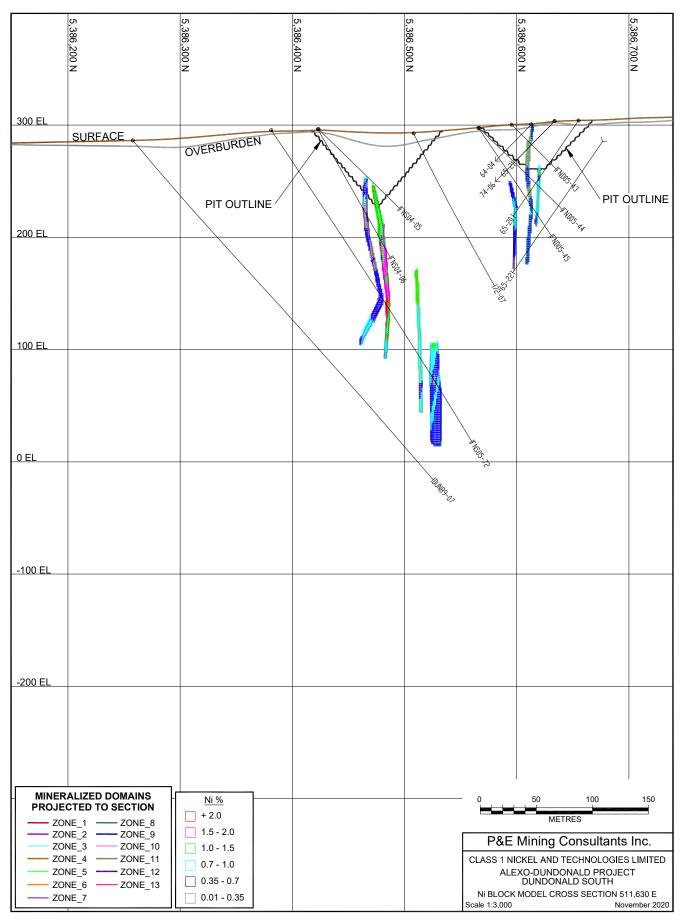
# APPENDIX M DUNDONALD SOUTH NI BLOCK MODEL CROSS SECTIONS AND PLANS



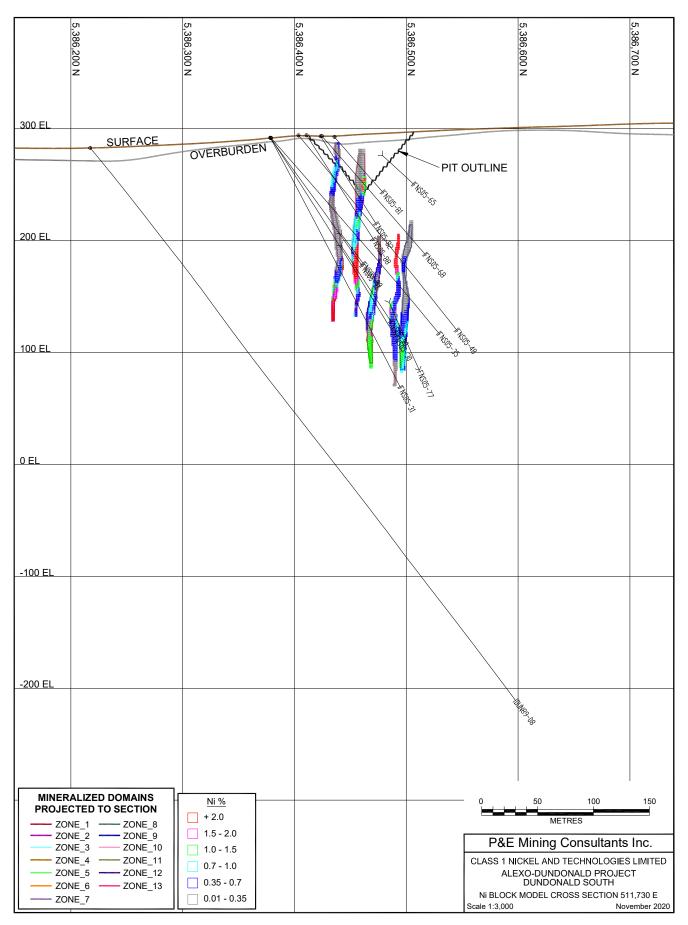
Page 233 of 297



Page 234 of 297



Page 235 of 297



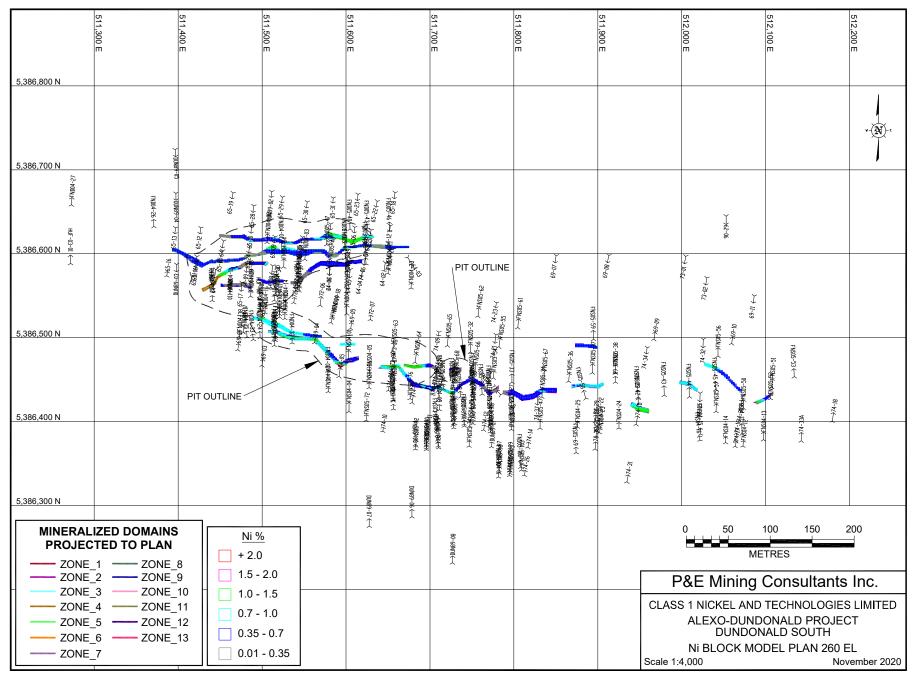
Page 236 of 297

	5,386,200 N	5,386,300 N	5,386,400 N	5,386,500 N	5,386,600 N	5,386,700 N
	Z	Z	z	Z	z	
300 EL						
200 EL	OVERBURDEN	The second se	Thomas of the second se			
			111-14 111-14 111-15			
100 EL						
<u>0 EL</u>						
-100 EL						
-200 EL						
-200 EL						
$\begin{array}{c c c c c c c c c c c c c c c c c c c $					50 METRE P&E Mining Col INICKEL AND TEC	
📗 — zor	NE_4 ZONE_11 NE_5 ZONE_12 NE_6 ZONE_13 NE_7	0.7 - 1.0 0.35 - 0.7 0.01 - 0.35			ALEXO-DUNDONA DUNDONALE BLOCK MODEL CROSS	LD PROJECT ) SOUTH

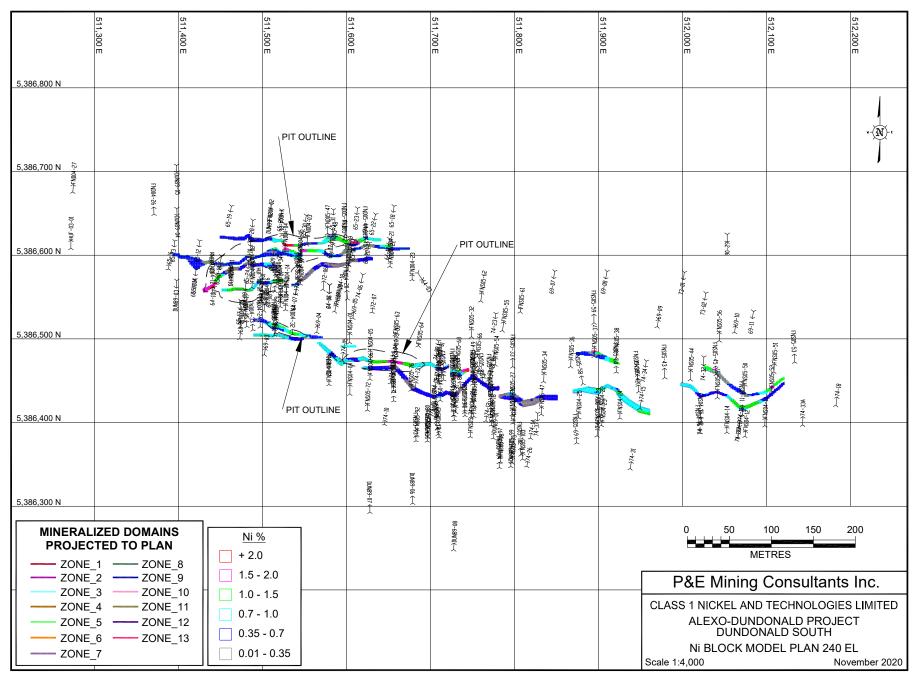
Page 237 of 297

	511,300 E	511,400 E	511,500 E	511,600 E	511,700 E	511,800 E	511,900 E	512,000 E	512,100 E	512,200 E
5,386,800 N		· · · · · · · · · · · · · · · · · · ·								v-( <b>X</b> )-t
5,386,500 N 5,386,500 N 5,386,500 N		01144-4	→ 10:-93 → 10:-93, control = 1, control = 1	10-2-59 ->-2-59 -	24-69-4 		8-69 24-82-69 24-82-69	73-41 ← 73-42 ← 73-42 ← 73-42 ← 73-42 ← 73-42 ← 73-42 ← 73-42 ← 73-42 ← 73-42 ← 73-42 ← 73-42 ← 74 ← 74 ← 74 ← 74 ← 74 ← 74 ← 74 ←		
<u>5,386,400 N</u> 5,386,300 N		PIT OUTLINE	So-rect	рания ( , , , , , , , , , , , , , , , , , ,	никального и продакти на продакти По продакти на про			Cryonary → 08.962 5351444638449844444 344 Frixos-43 Head-57 44 → 92-74 Frixos-43 444 Frixos-44 44	8-121-4 FNGE-53 ← < VEE-121-4	
MINERAL	_2 ZONE_ _3 ZONE_ _4 ZONE_ _5 ZONE_ _6 ZONE_	$\begin{bmatrix} 1 \\ 0 \\ 0 \\ 0 \\ 10 \\ 11 \\ 12 \\ 13 \end{bmatrix} = \begin{bmatrix} 1 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\$	2.0 1.5 1.0	D0489-05	80-63NDT(++			KE Mining ( S 1 NICKEL AND ALEXO-DUND NI BLOCK MO	TRES Consultants TECHNOLOGIES ONALD PROJEC IALD SOUTH DEL PLAN 280 B	S LIMITED CT

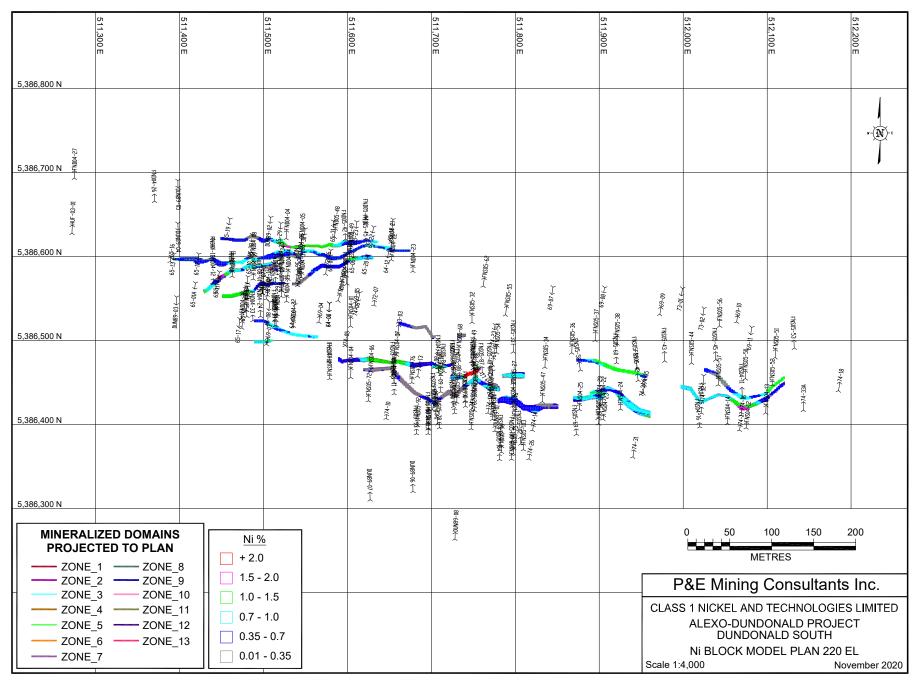
Page 238 of 297



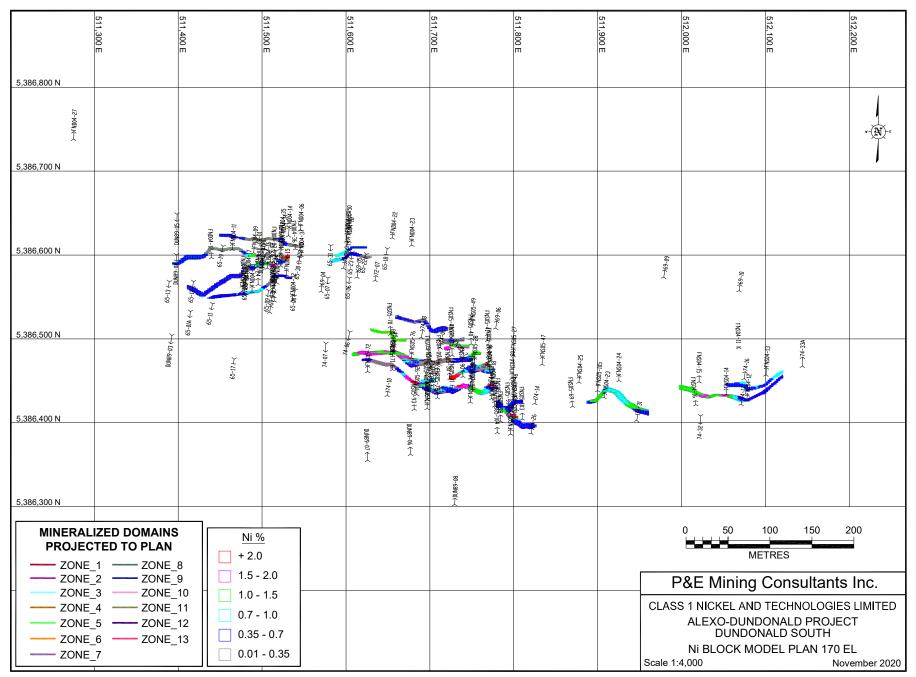
Page 239 of 297



Page 240 of 297



Page 241 of 297

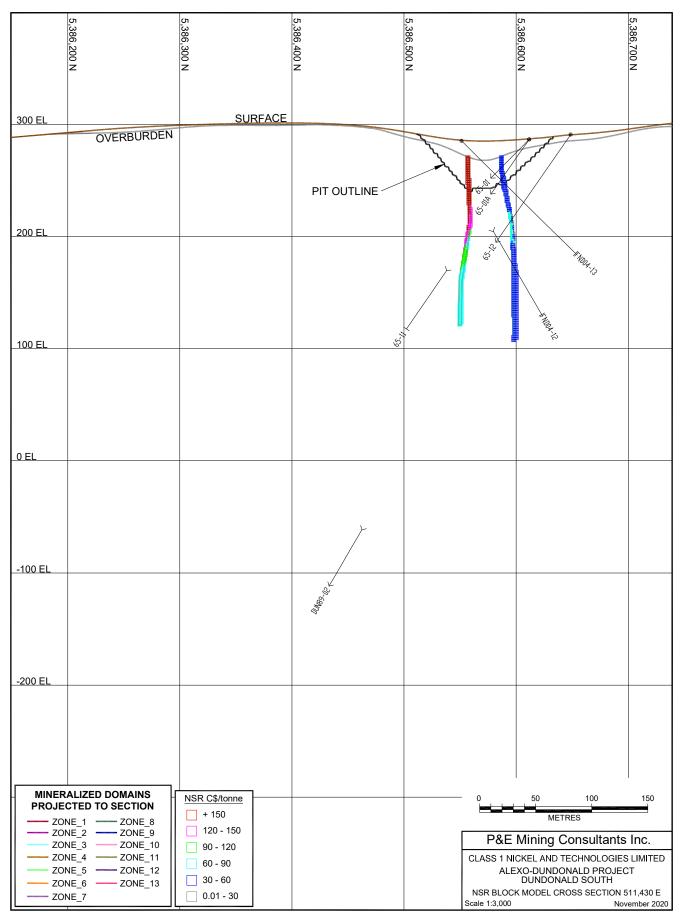


Page 242 of 297

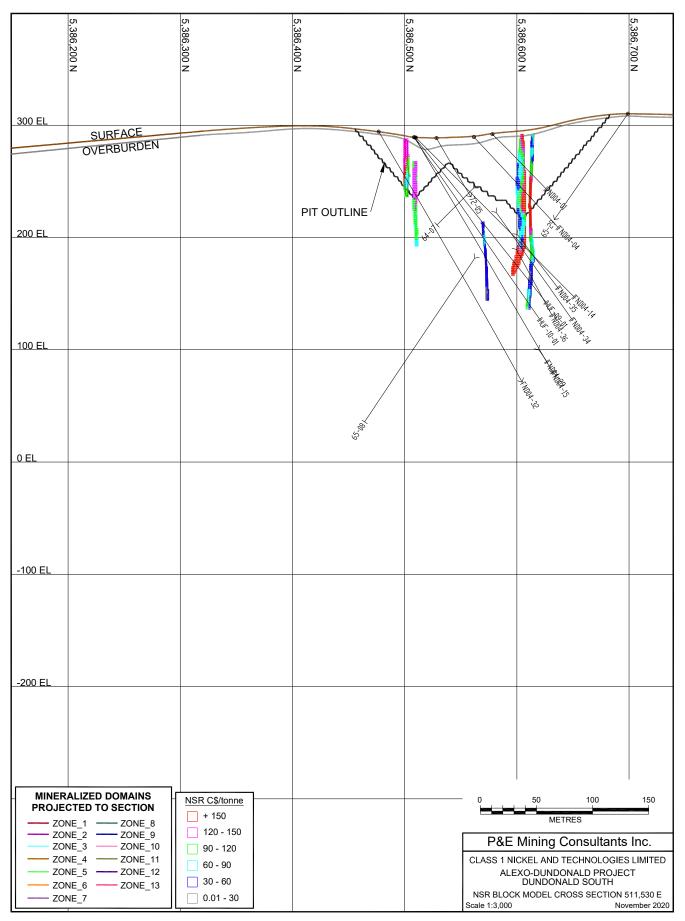
	511,300 E	511,400 E	511,500 E	511,600 E	511,700 E	511,800 E	511,900 E	512,000 E	512,100 E	512,200 E
5,386,800 N										
FND04-27	- - -									v- <b>(₹)</b> -¢
5,386,700 N	F ND04-26			90-6 <b>8</b> Nn0						)
후 우 날 5,386,600 N	st-sg-sg-sg-sg-sg-sg-sg-sg-sg-sg-sg-sg-sg-	FUNDATE FUNDATE FUNDATE FUNDATE FUNDATE	33-5, 15, 15, 15, 15, 15, 15, 15, 15, 15, 1	RV663974944	IUNES-08 PKISIS-62 PKISIS-62		日本	62-76 65		
<u>5,386,500 N</u>	→ 55883 → 55883	65-04/65454.12 < 64-1055-68-19 65-10 14-050-685-28 65-10 14-050-685-28 65-10 14-050-685-28 65-20 12-12-12-12-12-12-12-12-12-12-12-12-12-1	0.644308 ←√ 65-684687 ←√ 65-684687 ←√	нкогос от тукиенов 2-2 ни от тукиенов 2-2 и от от тукие и от	A Contraction of the contraction	B85347 65	-2 43 5 5 5 60 5 60 5 60	91-54, pgav FNSR-111 95-505NJ FNSR5-55 56-505NJ FNSR5-45 FNSR5-42	81-22 FNS05-53 IS-505NJ FS	
5,386,400 N	>> creancemon	29 27 27	65-08 74-07 ← F1KDH- 74-16 ← 65-16	روب 10,49,407 دوم - 1764 دوم - 1764 ۲- 103 - 196 - 196 - 196 - 196 - 196	And Program and Pr	74-26 74	25-2021-24 1-24-24 1-24-24 1-24-24-24		INTEREST	
	20-69MUQ 2017	2			90900 FNSIG97A	14-37		74-32 74-3 74-30		
5,386,300 N										
PROJEC	$\begin{tabular}{ c c c c c c c c c c c c c c c c c c c$						0 50 100 150 200 METRES			
ZONE_ ZONE_ ZONE_ ZONE_ ZONE_ ZONE_ ZONE_	2.0 1.5 1.0 - 0.7 - 0.35					S 1 NICKEL AND ALEXO-DUND DUNDON Ni BLOCK MO	Consultants TECHNOLOGIES ONALD PROJEC IALD SOUTH DEL PLAN 120 E Nov	S LIMITED		

Page 243 of 297

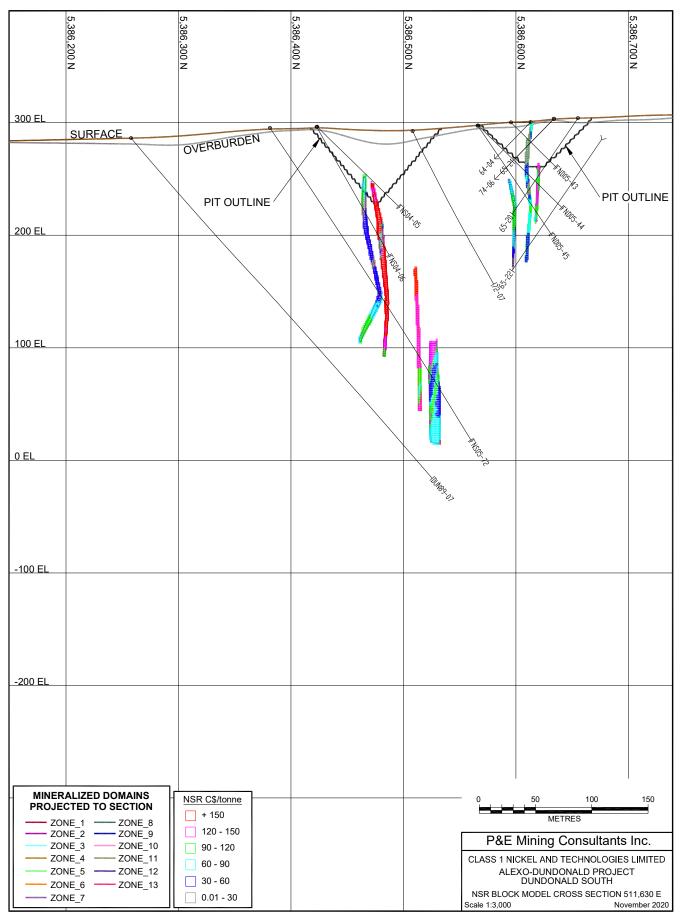
# APPENDIX N DUNDONALD SOUTH NSR BLOCK MODEL CROSS SECTIONS AND PLANS



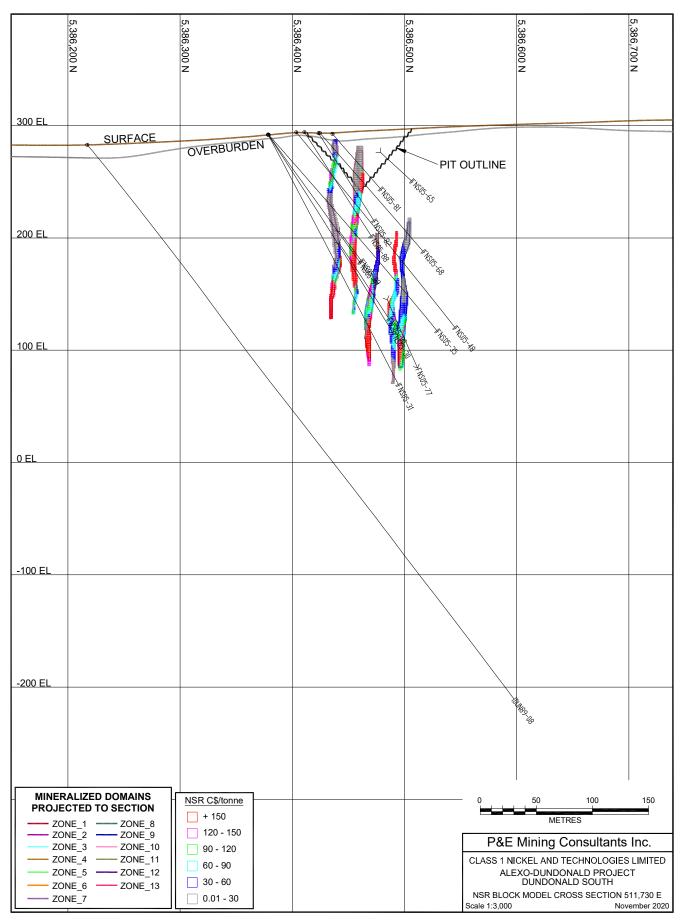
Page 245 of 297



Page 246 of 297



*P&E Mining Consultants Inc. Class 1 Nickel and Technologies, Alexo-Dundonald Nickel Project, Report No. 389*  Page 247 of 297



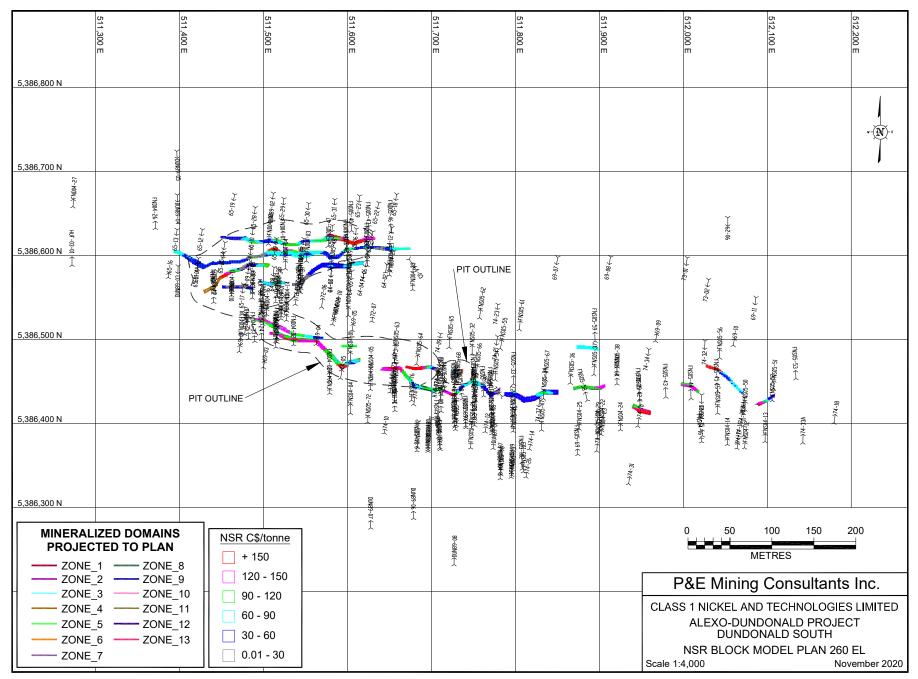
Page 248 of 297

	5,386,200 N	5,386,300 N	5,386,400 N	5,386,500 N	5,386,600 N	5,386,700 N		
	Z	Z	Z	z	z SURFACE	z		
300 EL								
200 EL	OVERBURDEN	The second se	1035 65. M035.33					
			HALL HARDS IN					
100 EL								
0 EL								
100 EL								
200 EL								
PROJEC 	ALIZED DOMAINS CTED TO SECTION NE_1 ZONE_8 NE_2 ZONE_9 NE_3 ZONE_10 NE_4 ZONE_11 NE_5 ZONE_12	NSR C\$/tonne + 150 120 - 150 90 - 120 60 - 90 30 - 60		CLASS 11	50 100 METRES E Mining Consultants NICKEL AND TECHNOLOGIES EXO-DUNDONALD PROJEC DUNDONALD SOUTH	S LIMITED		
	NE_6 ZONE_13 NE_7	0.01 - 30		NSR BLO Scale 1:3,00	DUNDONALD SOUTH R BLOCK MODEL CROSS SECTION 511,830 E 1:3,000 November 2020			

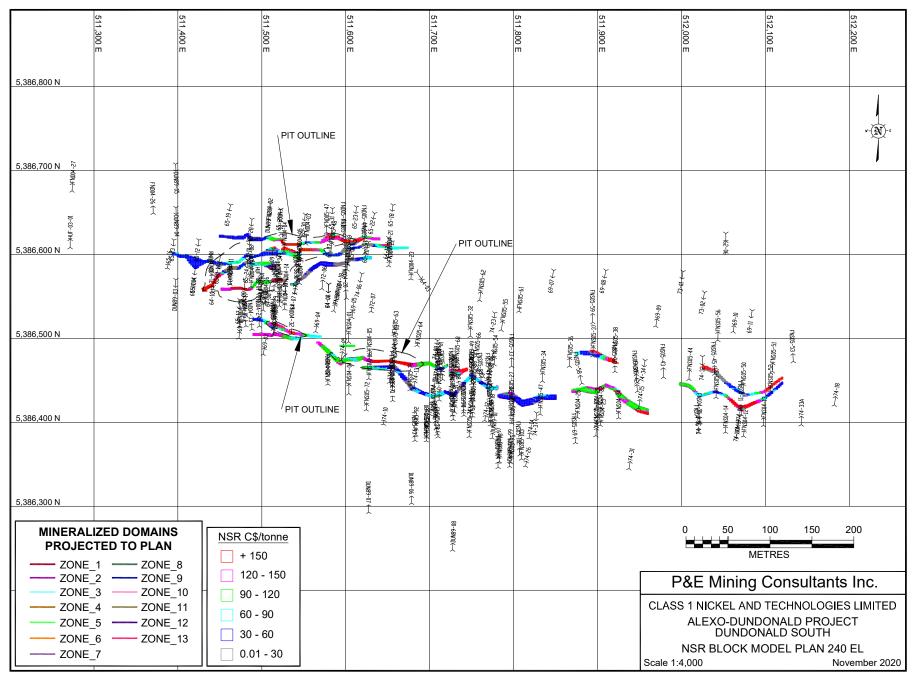
Page 249 of 297

5,386,800 N	511,300 E	511,400 E	511,500 E	511,600 E	511,700 E	511,800 E	511,900 E	512,000 E	512,100 E	512,200 E
	- June Participation Participa									v-(N)-t
5,386,700 N 5,386,600 N 5,386,500 N 5,386,500 N		->82-23-01359) 03-551 60-923 8860-00084-4 FMU	Particular         Description         Description <thdescription< th=""> <thdescription< th=""></thdescription<></thdescription<>	- 19-92 - 22-52 -	409 rt 65 2 - 24 - 23 - 4 551 - 6- 24 - 23 - 6- 551 - 6- 24 - 23 - 6- 551 - 6- 24 - 23 - 6-	->> c0+69 ->> 19-50014	<u>у</u> *	22 + 11 + 12		
<u>5,386,400 N</u>		PIT OUTLINE	Port		и по			L - PPANTA- - 200 662 010 U.4 mk0 01-1 m 600 H 400 H	R(505-53 ← < R +2/-(	
<u>5,386,300 N</u>				a du			Ĩ€-₽ረ← <u>/</u>			
MINERALIZED DOMAINS PROJECTED TO PLAN       NSR C\$/tonne         ZONE_1       ZONE_8         ZONE_2       ZONE_9			0 - 150	89-06 ← ( DUNG9-07 ← (	C 50 100 11 METRES P&E Mining Consul			TRES	200 ∎ Inc.	
ZONE_3       ZONE_10       90 - 120         ZONE_4       ZONE_11       60 - 90         ZONE_5       ZONE_12       30 - 60         ZONE_7       0.01 - 30							CLAS	S 1 NICKEL AND ALEXO-DUNDO DUNDON NSR BLOCK MO	TECHNOLOGIES ONALD PROJEC IALD SOUTH ODEL PLAN 280	S LIM <b>I</b> TED CT

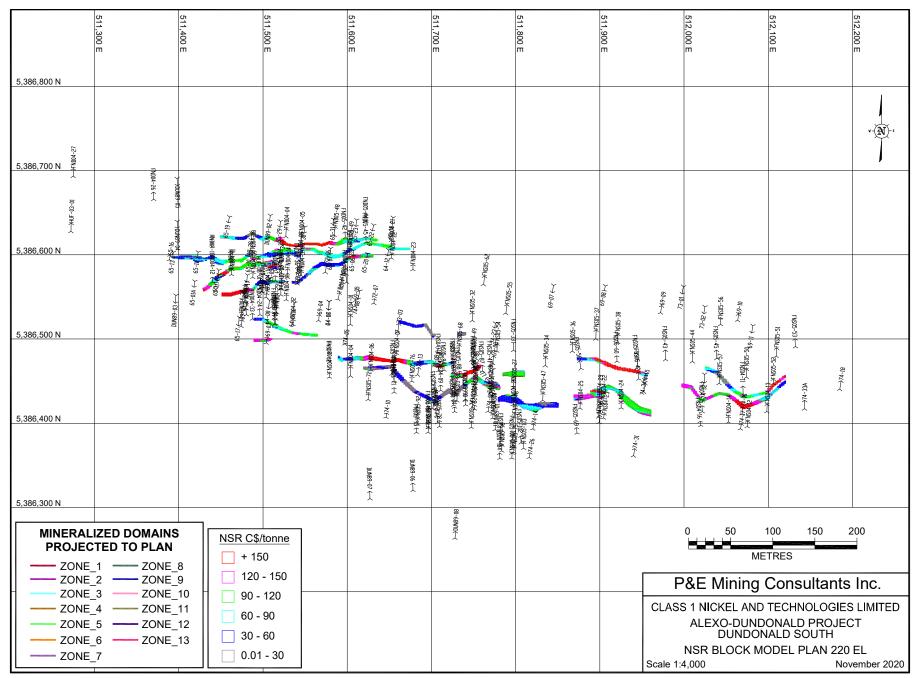
Page 250 of 297



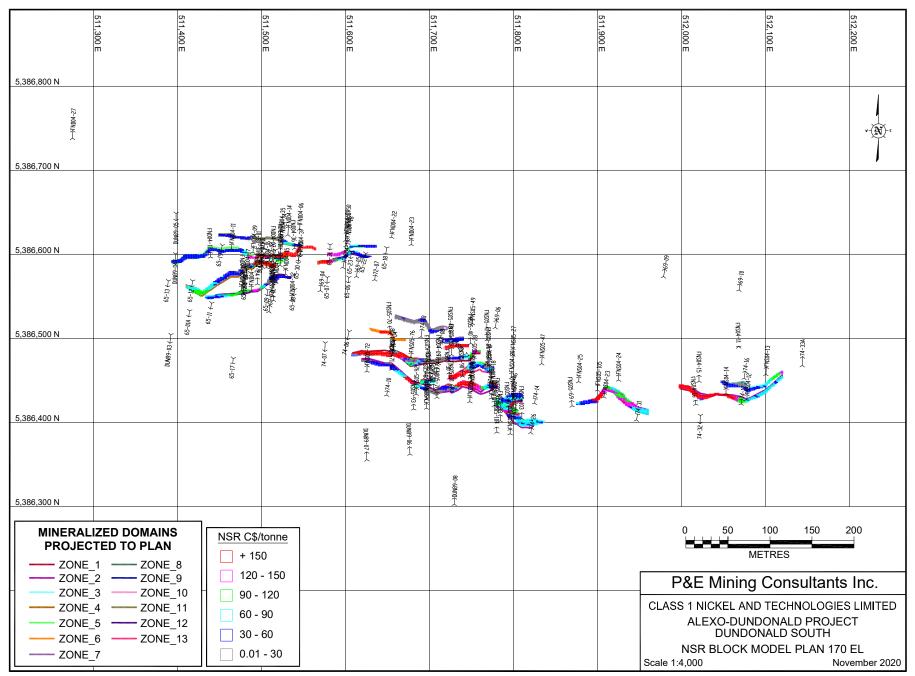
Page 251 of 297



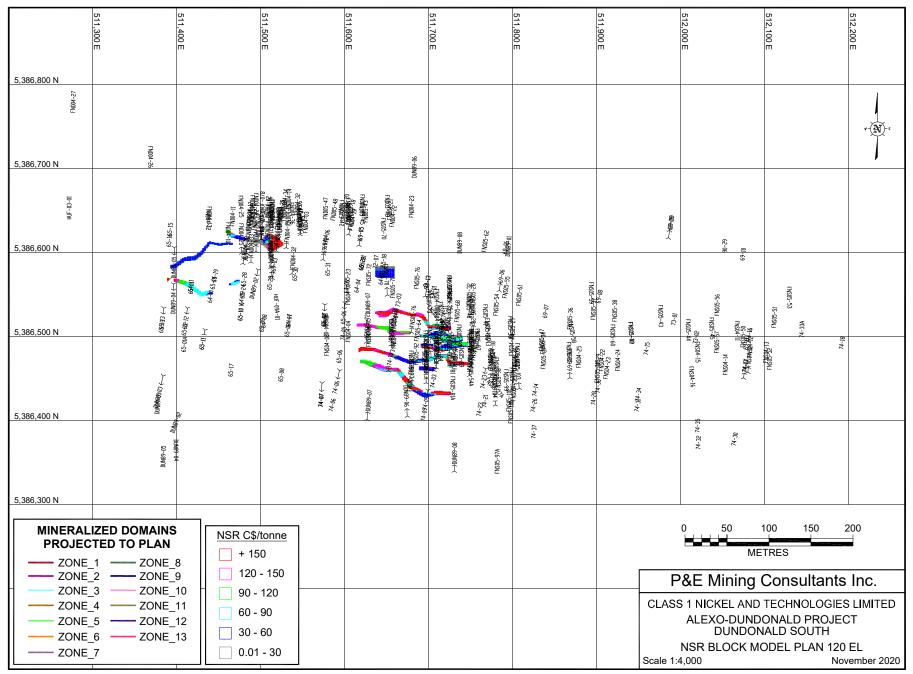
Page 252 of 297



Page 253 of 297

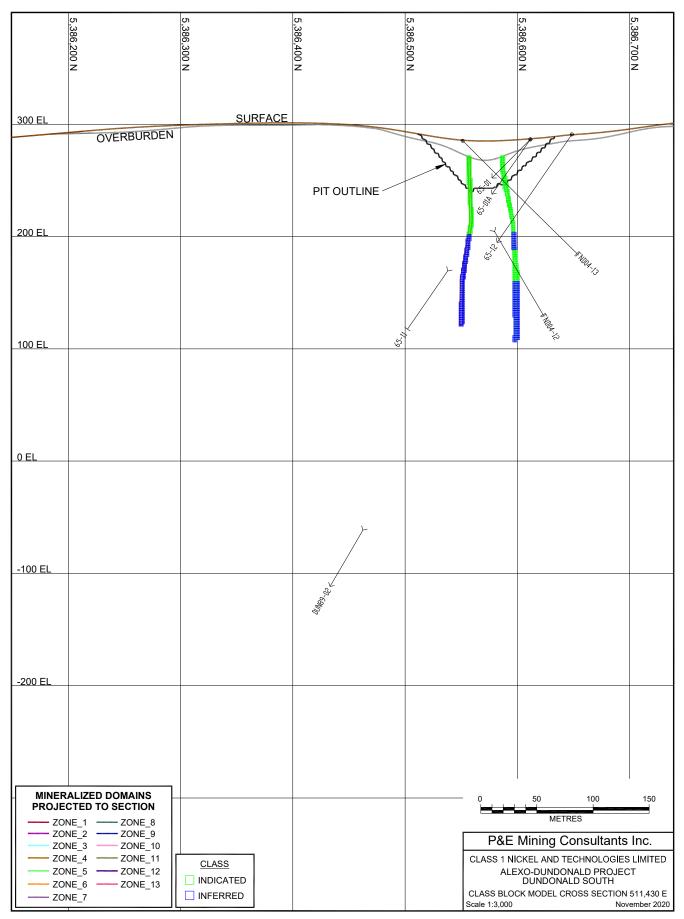


Page 254 of 297

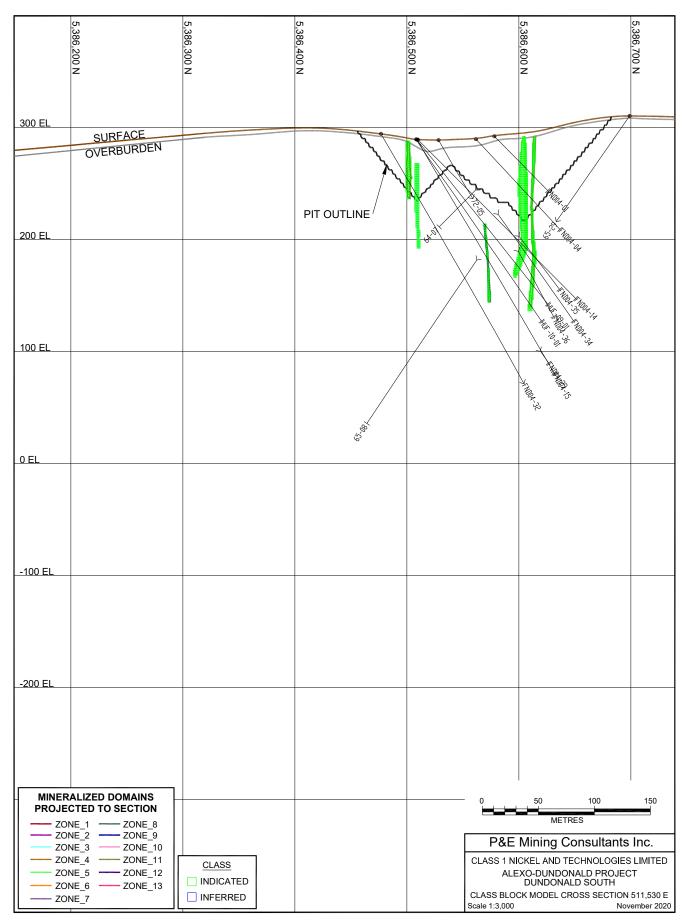


Page 255 of 297

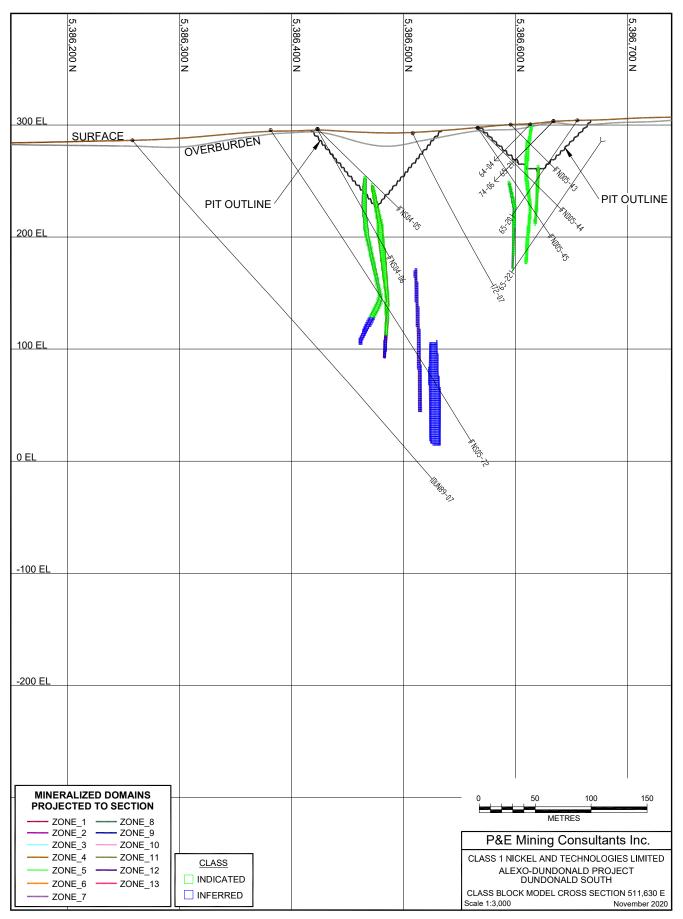
## APPENDIX O DUNDONALD SOUTH CLASSIFICATION BLOCK MODEL CROSS SECTIONS AND PLANS



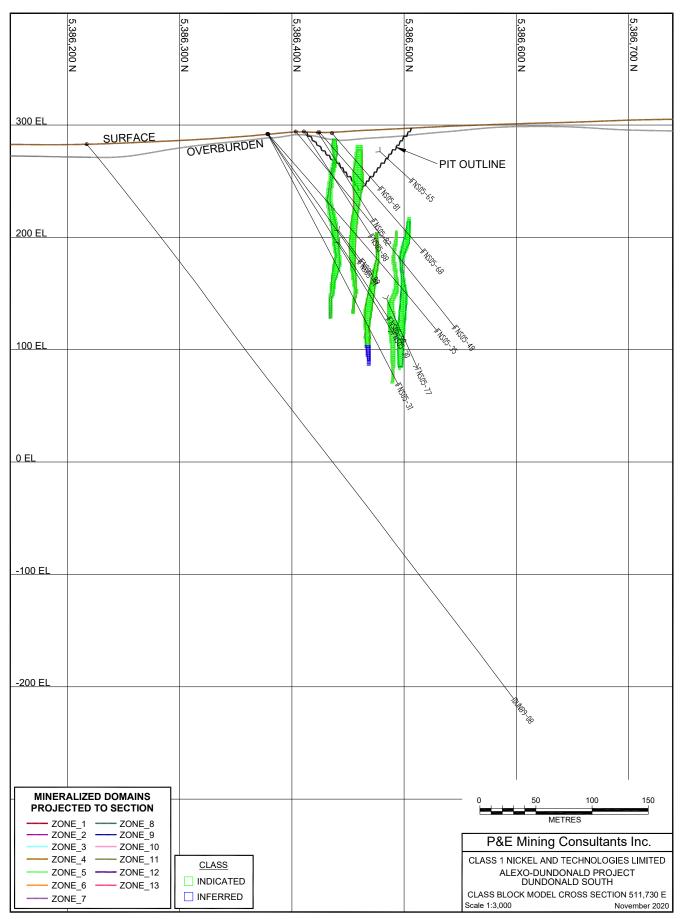
*P&E Mining Consultants Inc. Class 1 Nickel and Technologies, Alexo-Dundonald Nickel Project, Report No. 389*  Page 257 of 297



*P&E Mining Consultants Inc. Class 1 Nickel and Technologies, Alexo-Dundonald Nickel Project, Report No. 389*  Page 258 of 297



Page 259 of 297



*P&E Mining Consultants Inc. Class 1 Nickel and Technologies, Alexo-Dundonald Nickel Project, Report No. 389* 

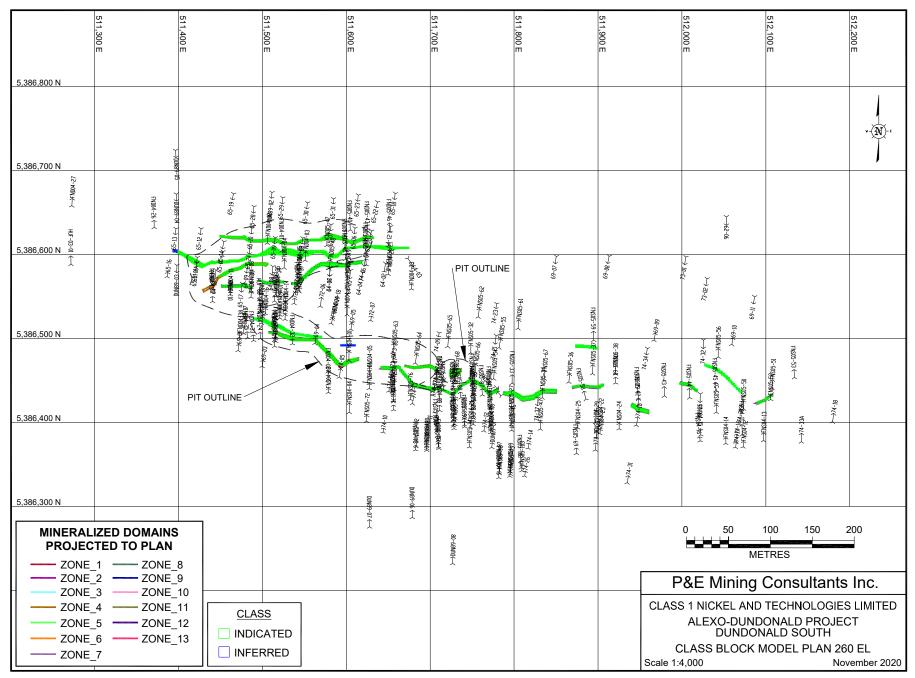
Page 260 of 297

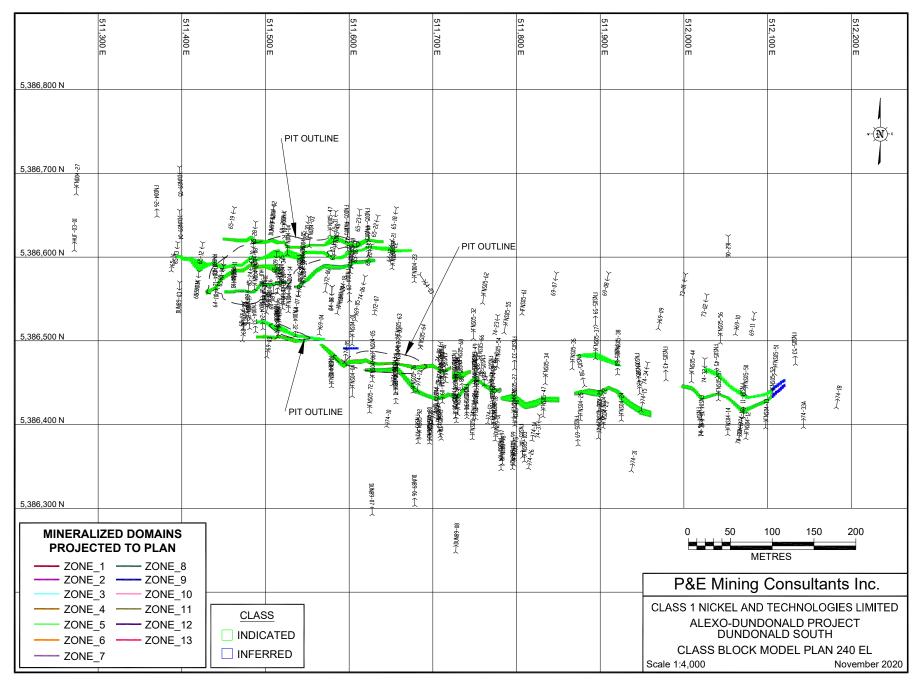
	5,386,200 N	5,386,300 N	5,386,400 N	5,386,500 N		5,386,600 N		5,386,700 N
	Z	z	Z	z		z SURF		z
300 EL			• /					
200 EL	OVERBURDEN	fra,	TROSS 61 TROSS 61 TRO					
100 EL								
0 EL								
100 EL								
200 EL								
PROJE	ALIZED DOMAINS CTED TO SECTION					50 	100	150
P&E Mining Consultants Ir         ZONE_2       ZONE_0         ZONE_3       ZONE_10         ZONE_4       ZONE_11         ZONE_5       ZONE_12         ZONE_6       ZONE_13         ZONE_7       INDICATED         UNDONALD SOUTH       CLASS BLOCK MODEL CROSS SECTION 51							LIMITED T	

Page 261 of 297

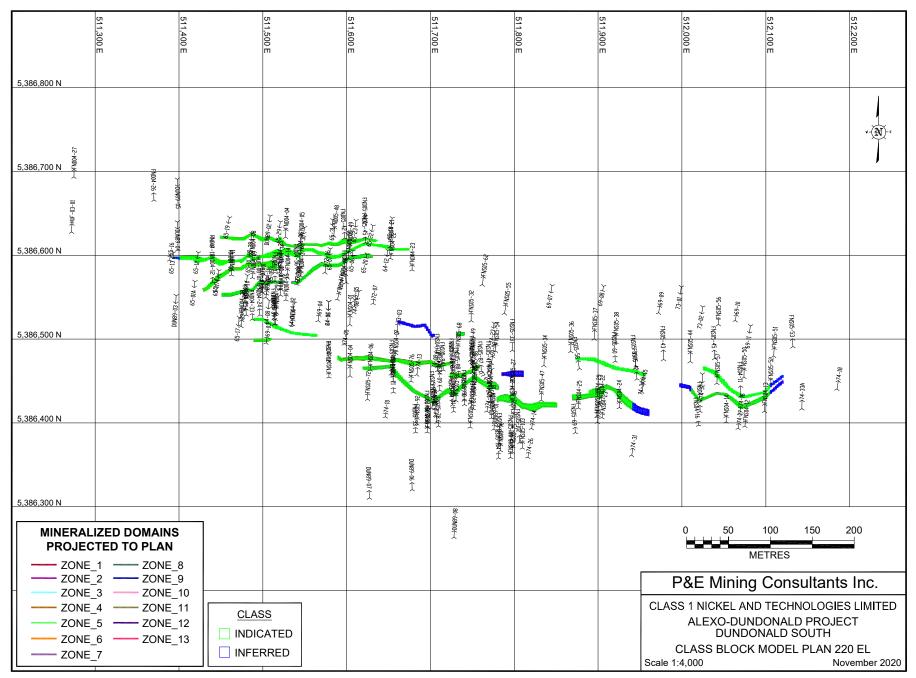
	511,300 E	511,400 E	511,500 E	511,600 E	511,700 E	511,800 E	511,900 E	512,000 E	512,100 E	512,200 E
5,386,800 N										
5,386,700 N										v-(N)-e
<sup>(2-</sup>	FND04-26 ←●	+< 153-12 + 1 1544 + 1 1 55-19 + 1 560 468 10 + 55-88 + 1	1000-02 115 <sup>6</sup> -30 115 <sup>6</sup> -30 11	1996 BULL 15-23+		20 <sup>20</sup> 40	<u>} area</u>	) → *5:8:		
÷÷- 1 ←	265-16	201-95 10-95 11-100004044-10 12-900040444-10 11-100040444-10 11-100040444444444444444444444444444444			1094 55 >->11005-62 521 < 74-234	19-50 69-69	59 **	,2-42 ←< 13-42 ←< 13-42 ←		
5,386,500 N 5,386,400 N		PIT OUTLINE	Stortector	1944 AND		47-14 (1028-67) 47-14 (1028-54) 55-26 (1028-14) 55-26 (1028-14) 55-14	FINOID-43 ← 54/59- 77/16-72 88: 480:500 H+K-( 88: 480:500 H+K-( 72-52)	01-69← 95-5034/€ {NSI5-45 N635-57 9-82-1/ →>52-1/ F FNSI5-44 ←		
5,386,300 N				MAC A	And	ISNAF4(505-69-6) 		1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	HEE-F/((	
MINERALIZED DOMAINS PROJECTED TO PLAN ZONE_1 ZONE_8				00489-05	80684MI(←				100 150 2	200
					 		F	&E Mining	Consultants	Inc.
	_6 ZONE_	11 <u>CLAS</u>	ATED				CLAS	S 1 NICKEL AND ALEXO-DUND DUNDON CLASS BLOCK N	TECHNOLOGIES ONALD PROJEC IALD SOUTH IODEL PLAN 28	S LIMITED CT

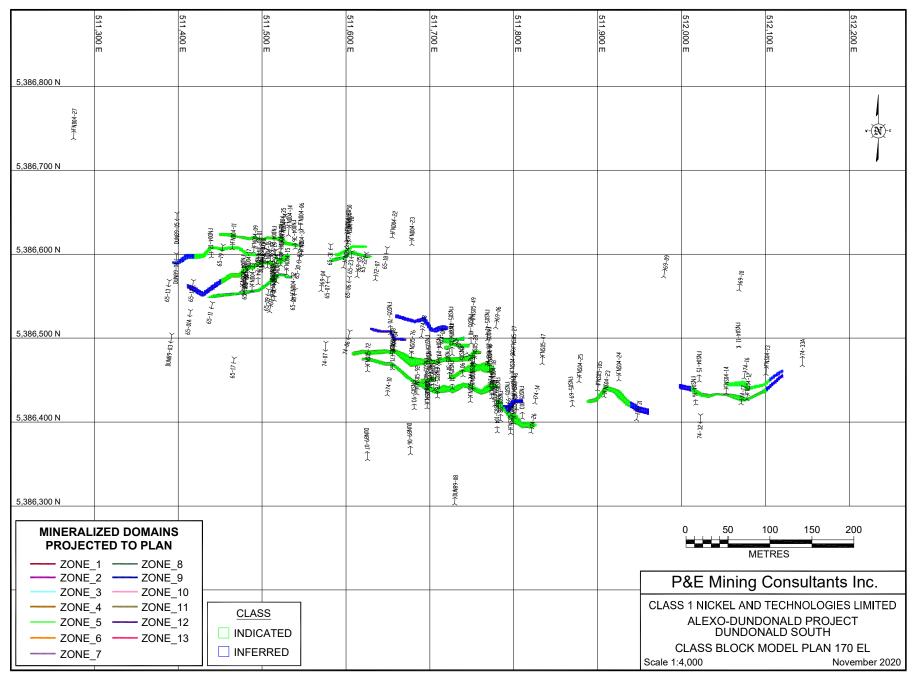
Page 262 of 297



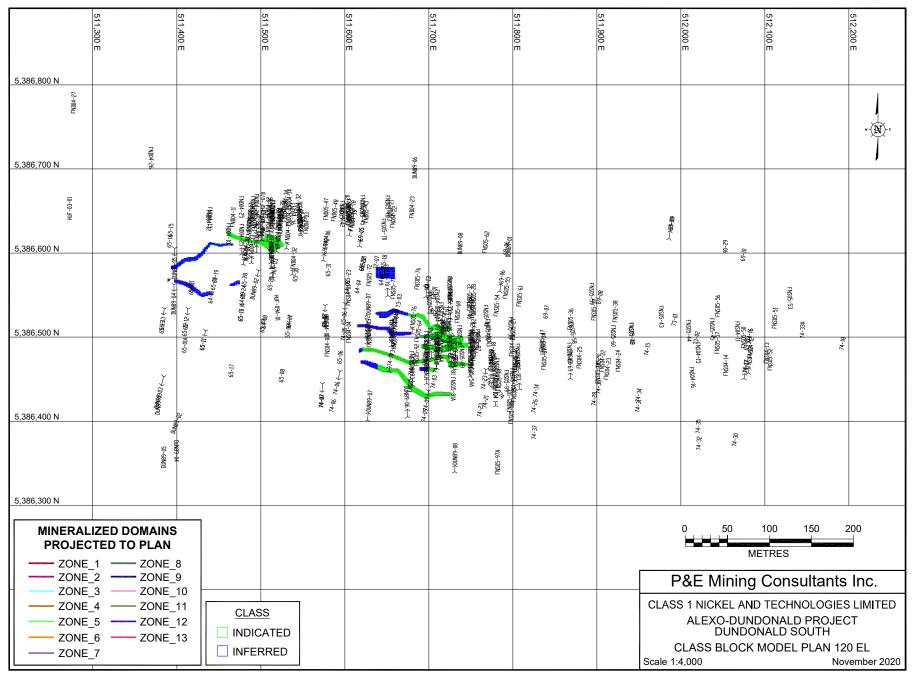


Page 264 of 297





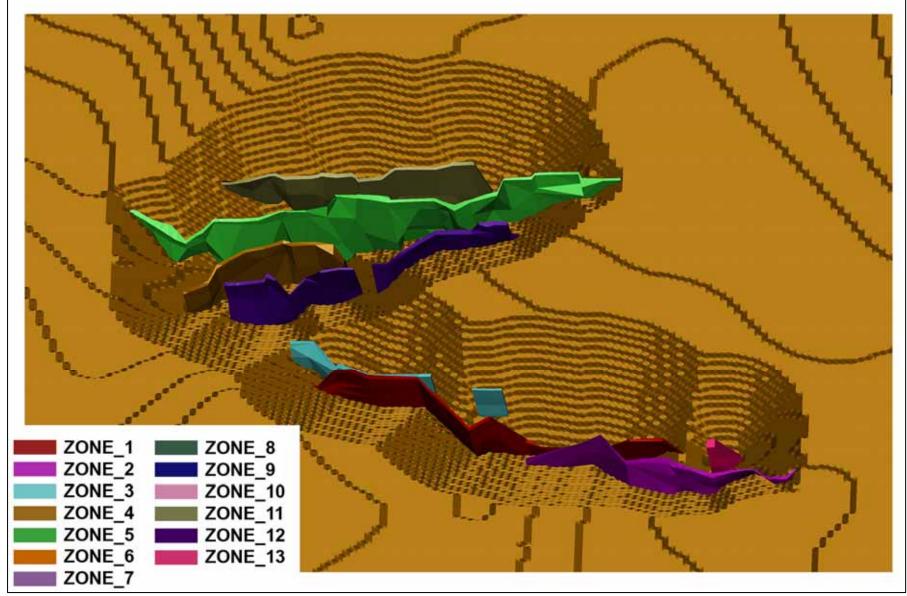
Page 266 of 297



Page 267 of 297

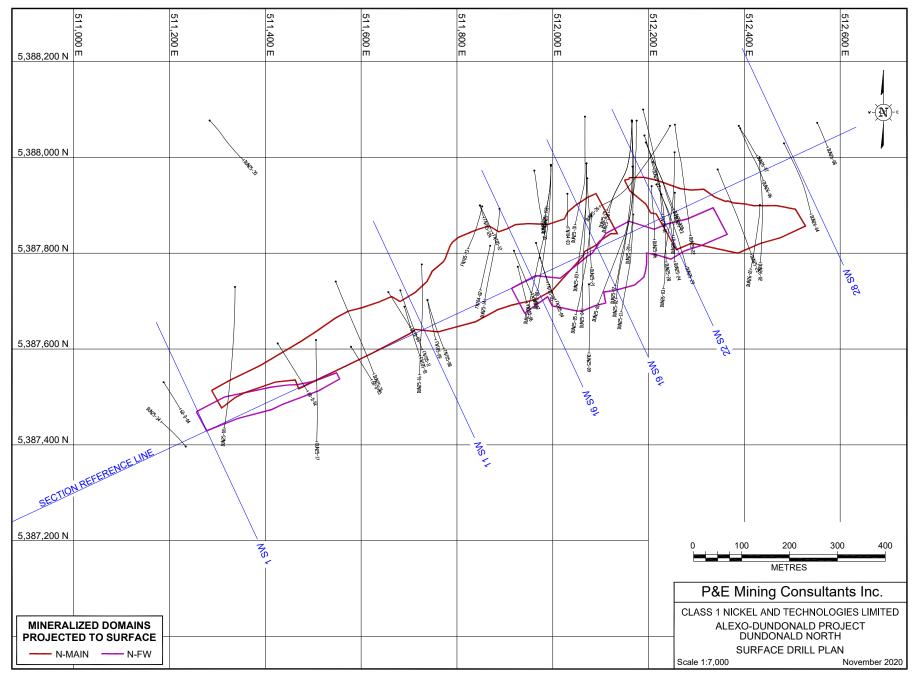
#### APPENDIX P DUNDONALD SOUTH OPTIMIZED PIT SHELL

### ALEXO-DUNDONALD PROJECT DUNDONALD SOUTH - OPTIMIZED PIT SHELL



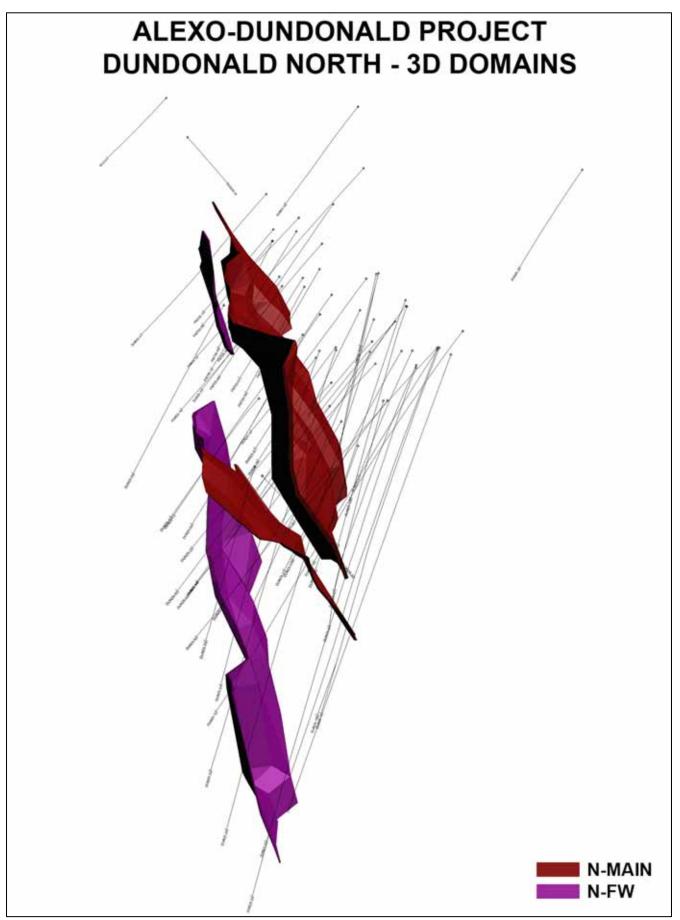


#### APPENDIX Q DUNDONALD NORTH SURFACE DRILL HOLE PLAN



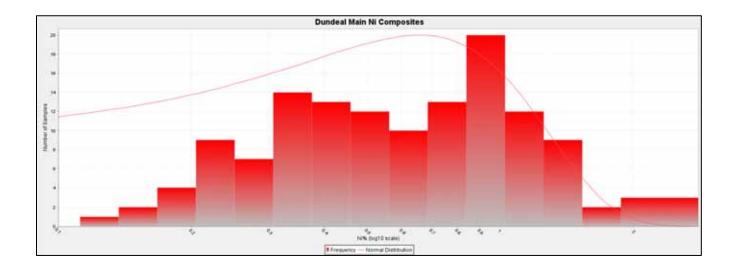
Page 271 of 297

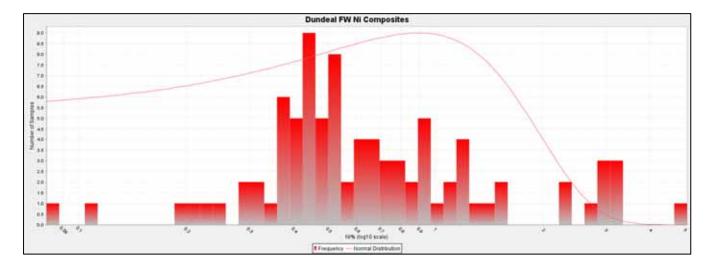
#### APPENDIX R DUNDONALD NORTH 3-D DOMAINS



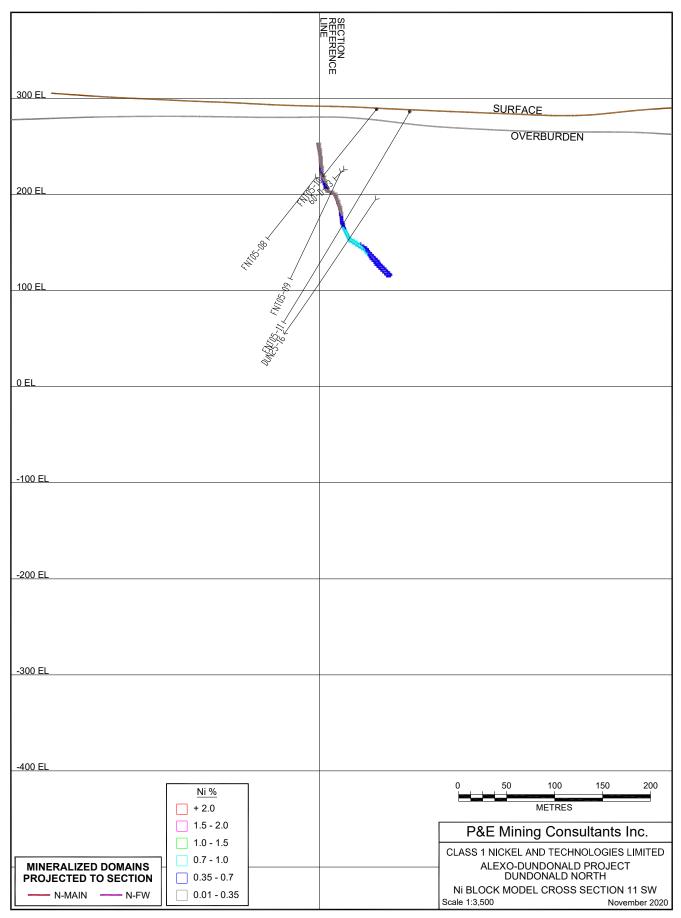


#### APPENDIX S DUNDONALD NORTH LOG NORMAL HISTOGRAMS

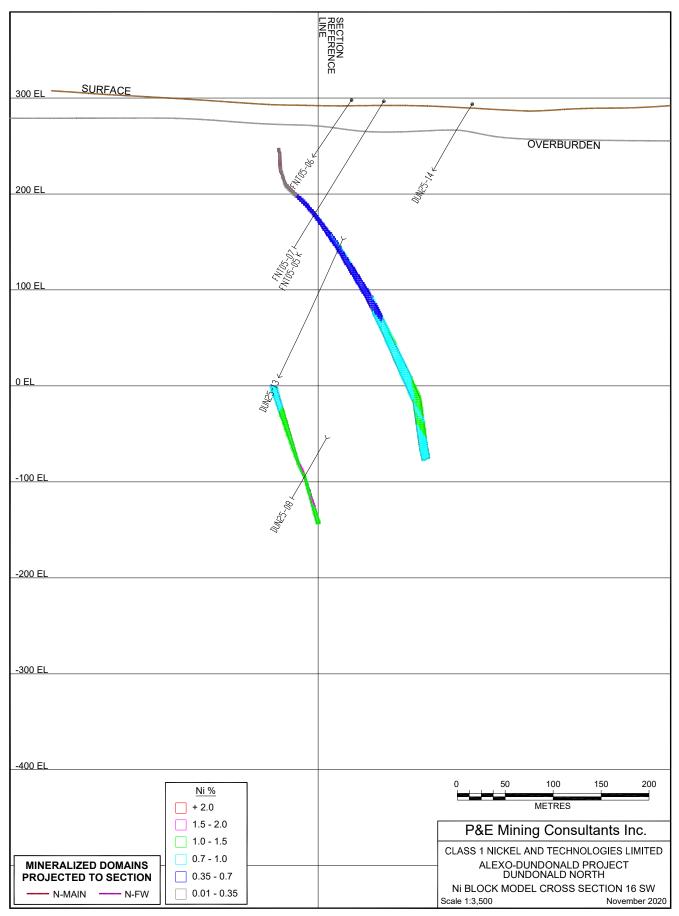




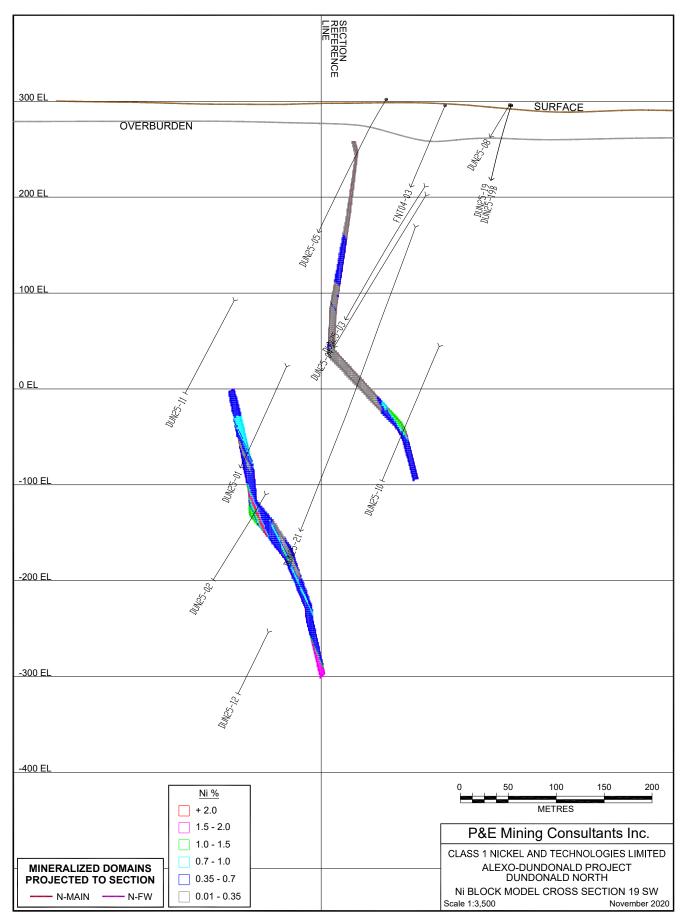
# APPENDIX T DUNDONALD NORTH NI BLOCK MODEL CROSS SECTIONS AND PLANS



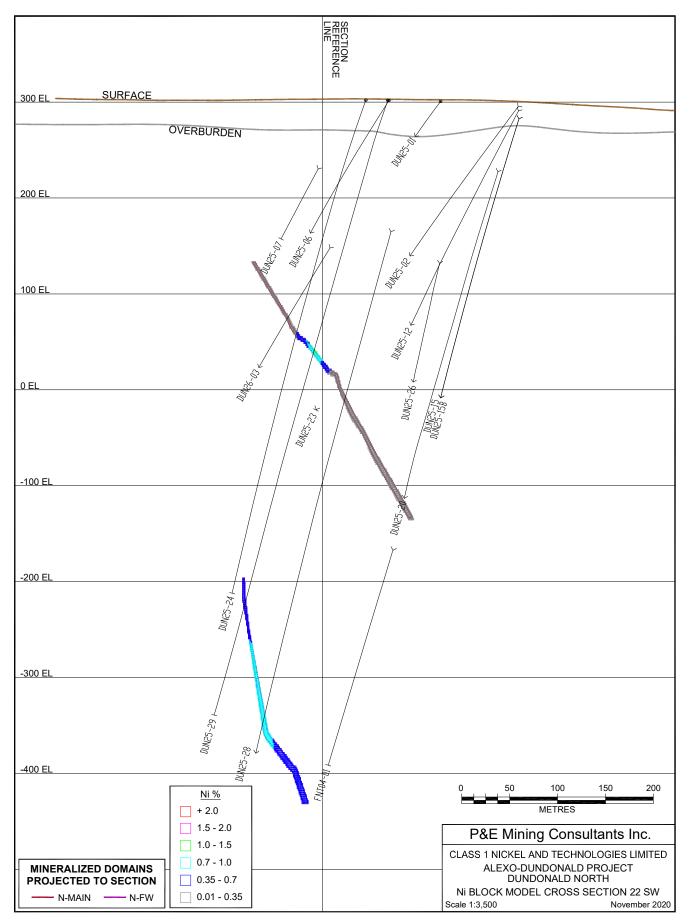
Page 276 of 297



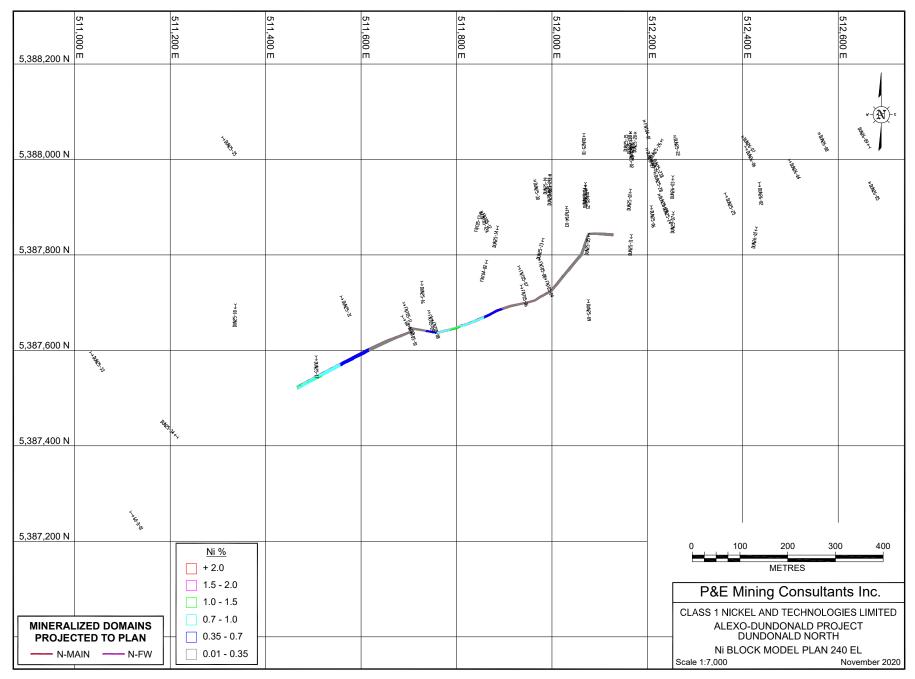
Page 277 of 297



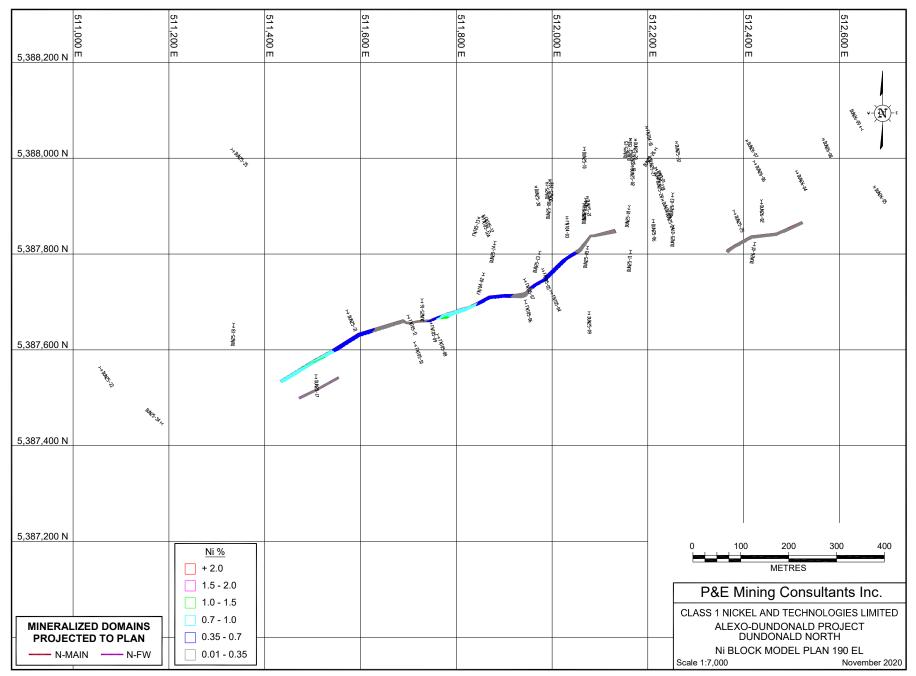
*P&E Mining Consultants Inc. Class 1 Nickel and Technologies, Alexo-Dundonald Nickel Project, Report No. 389*  Page 278 of 297



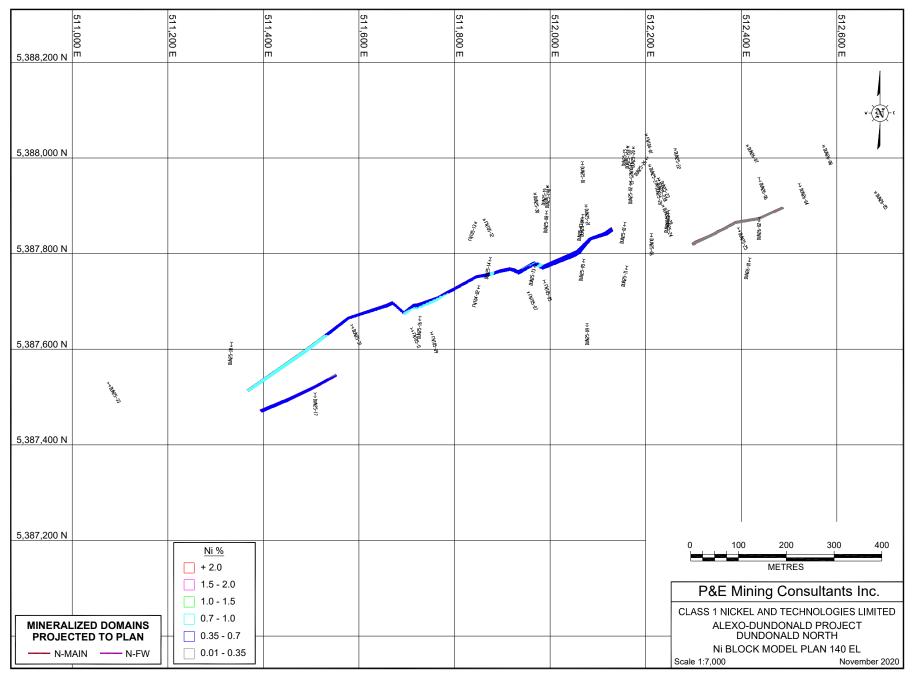
Page 279 of 297



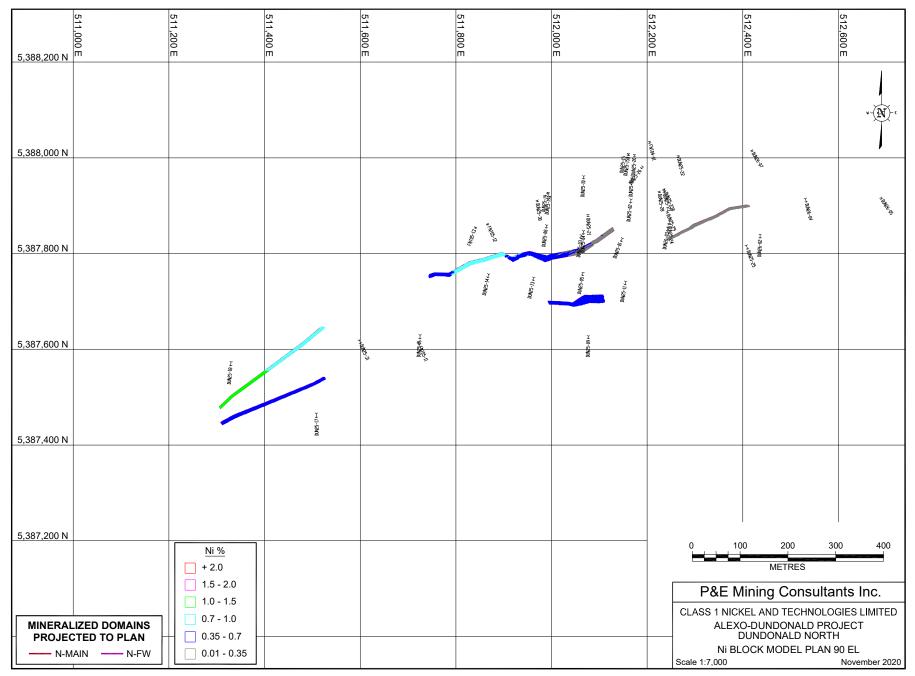
Page 280 of 297



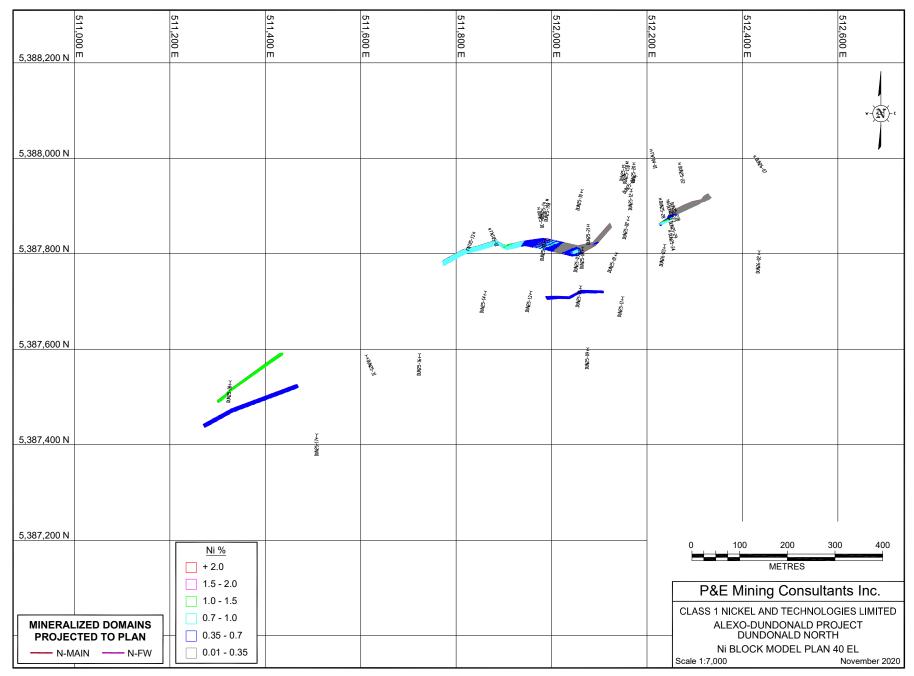
*P&E Mining Consultants Inc. Class 1 Nickel and Technologies, Alexo-Dundonald Nickel Project, Report No. 389*  Page 281 of 297



Page 282 of 297

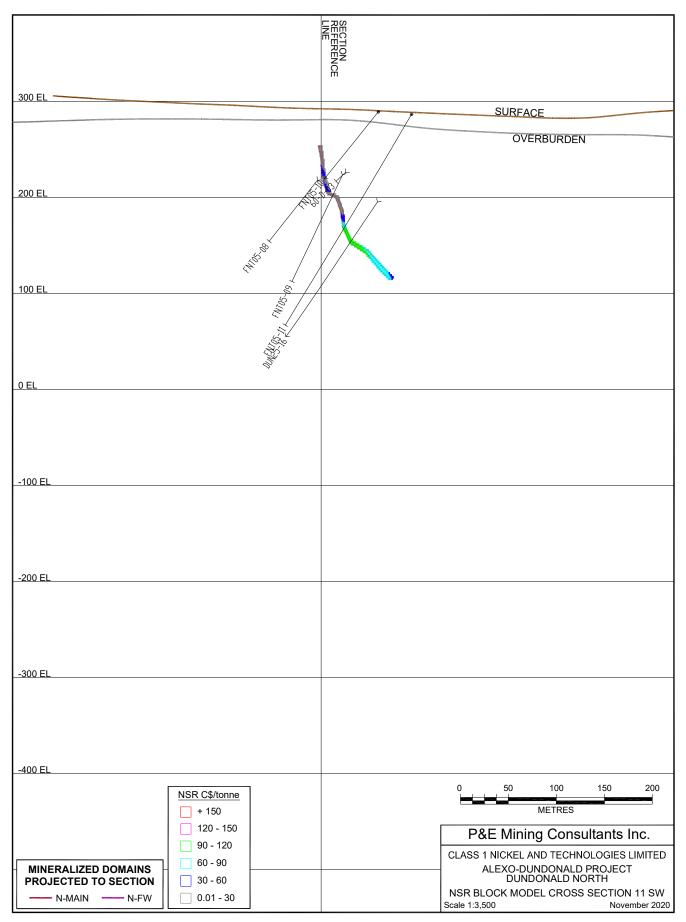


Page 283 of 297

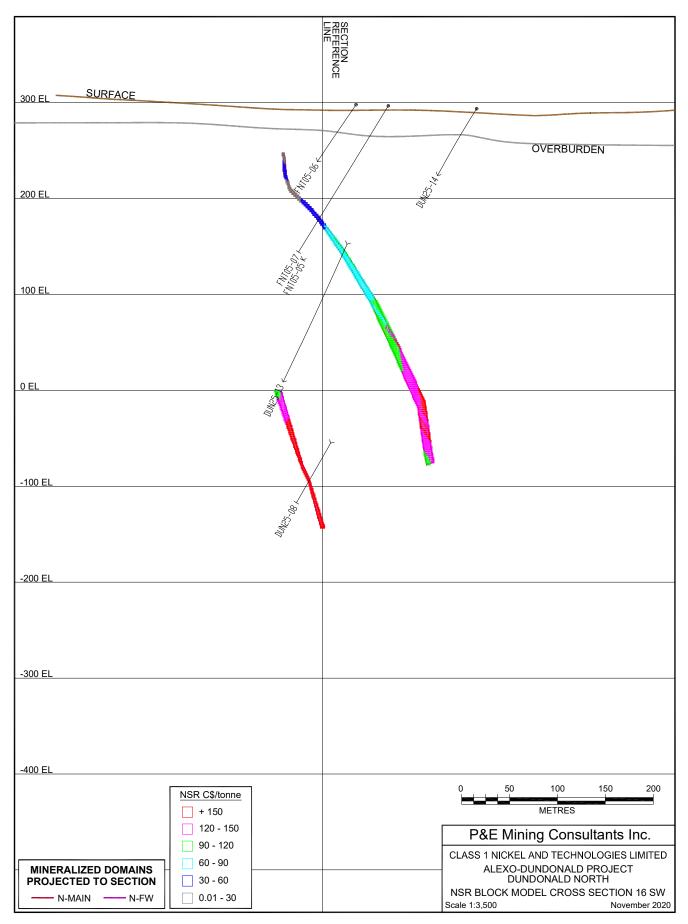


Page 284 of 297

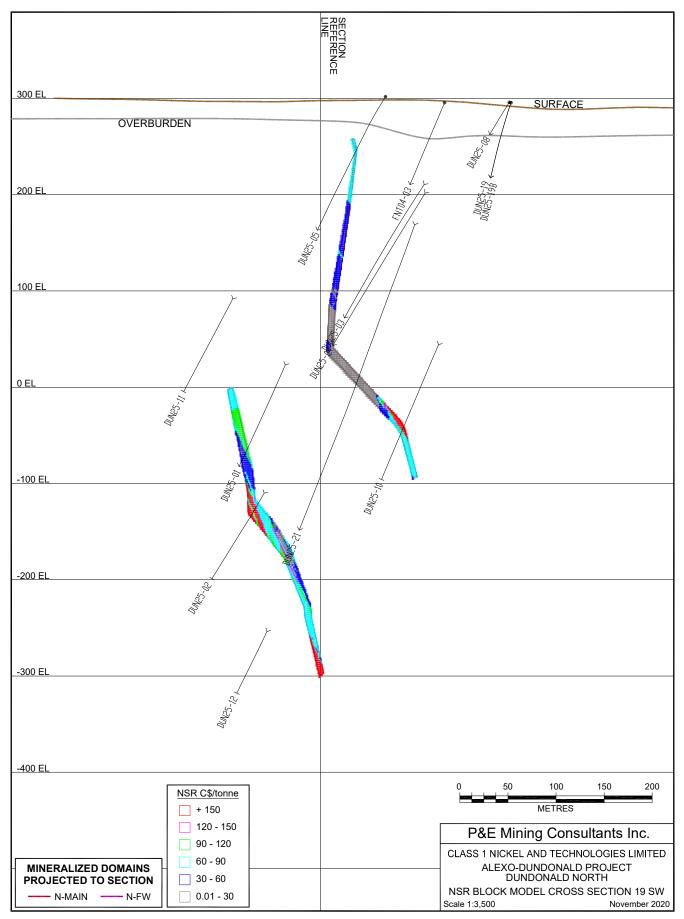
## APPENDIX U DUNDONALD NORTH NSR BLOCK MODEL CROSS SECTIONS AND PLANS



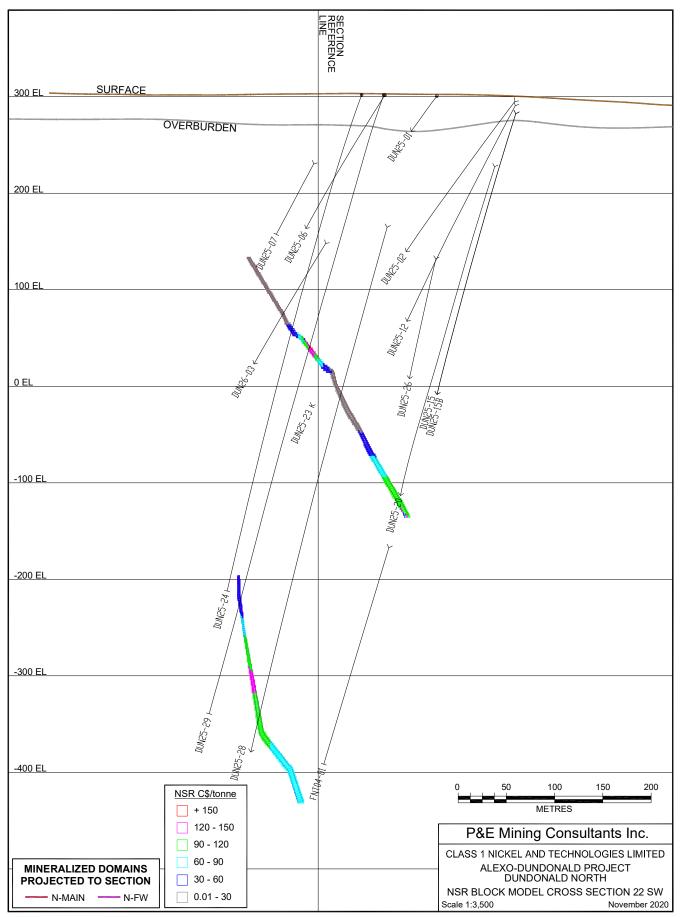
Page 286 of 297



Page 287 of 297

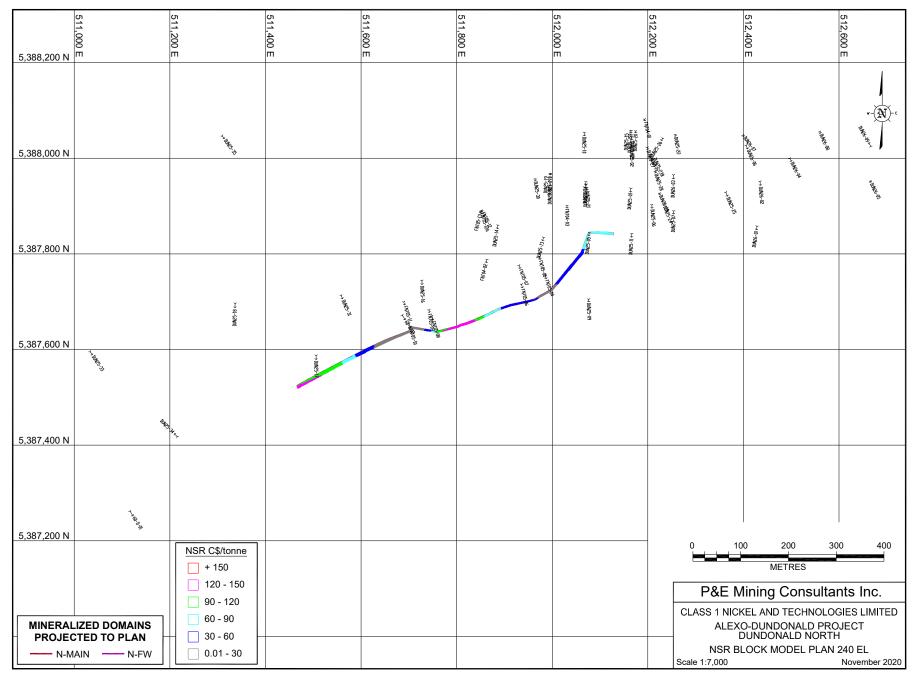


*P&E Mining Consultants Inc. Class 1 Nickel and Technologies, Alexo-Dundonald Nickel Project, Report No. 389*  Page 288 of 297

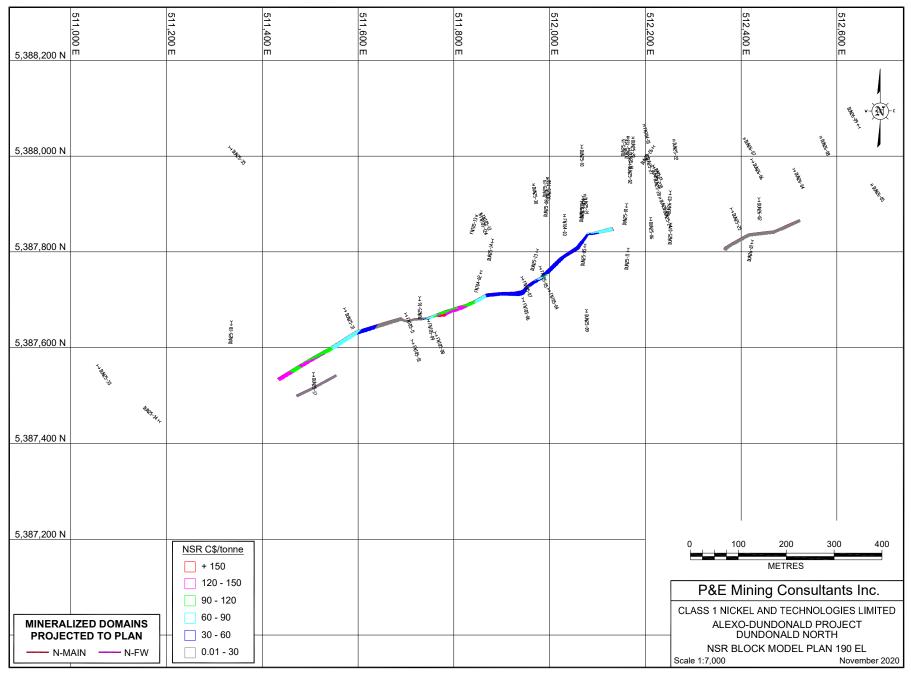


*P&E Mining Consultants Inc. Class 1 Nickel and Technologies, Alexo-Dundonald Nickel Project, Report No. 389* 

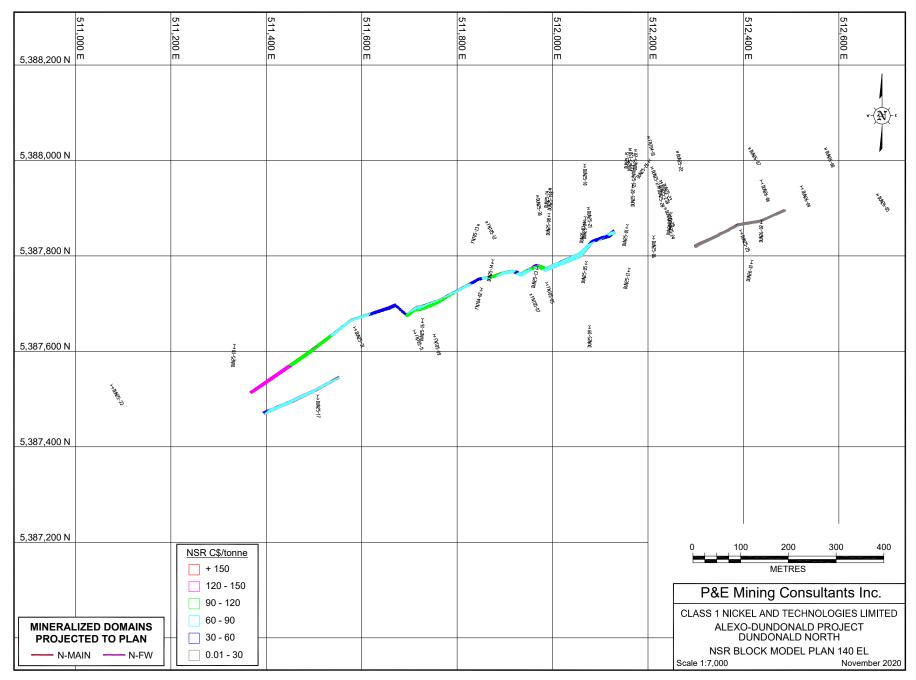
Page 289 of 297



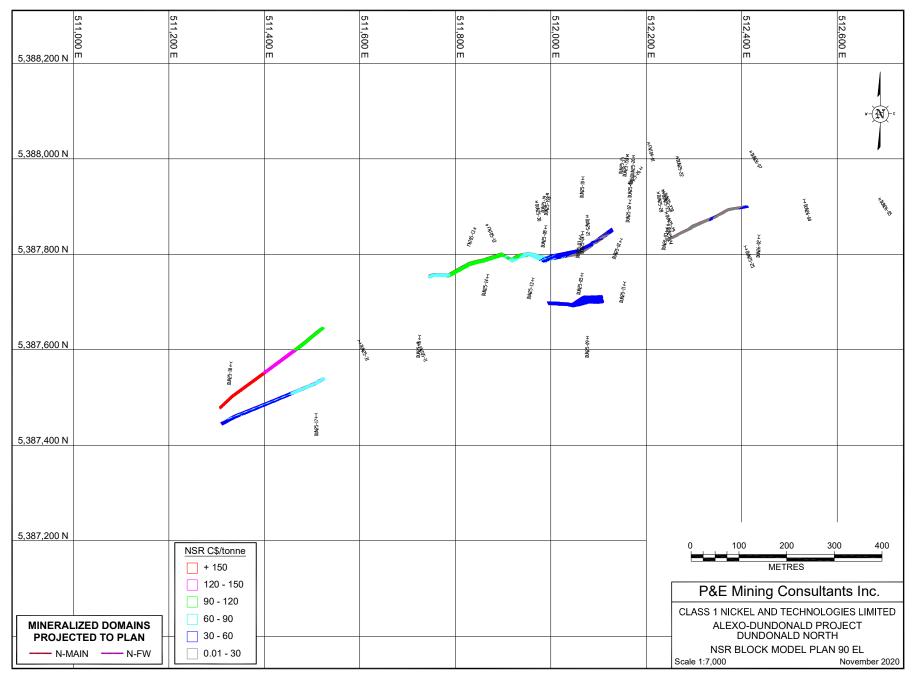
Page 290 of 297



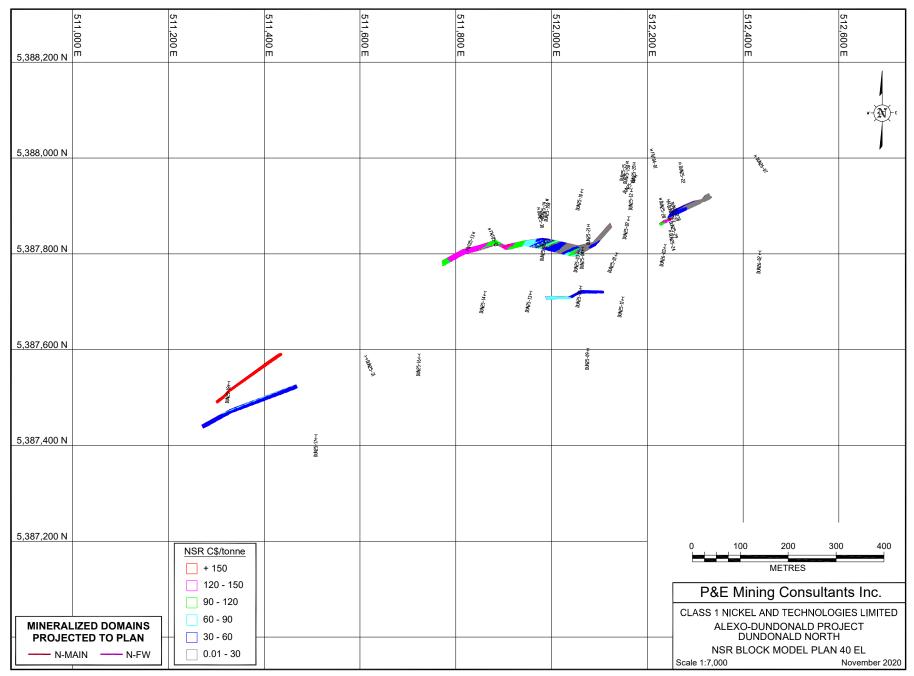
P&E Mining Consultants Inc. Class 1 Nickel and Technologies, Alexo-Dundonald Nickel Project, Report No. 389 Page 291 of 297



Page 292 of 297



Page 293 of 297



Page 294 of 297

## APPENDIX V LAND TENURE RECORDS

TABLE V.1 Alexo-Dundonald Property Land Tenure								
Tenure ID	Holder	Туре	Area (ha)	Status	Work Required	Anniversary Date		
109650	Legendary	Single Cell Mining Claim	5.39	Active	\$200	20231120		
112586	Legendary	Single Cell Mining Claim	21.33	Active	\$200	20231030		
139199	Legendary	Single Cell Mining Claim	12.09	Active	\$200	20231030		
139307	Legendary	Single Cell Mining Claim	2.21	Active	\$200	20210503		
150510	Legendary	Single Cell Mining Claim	21.33	Active	\$400	20231120		
159275	Legendary	Single Cell Mining Claim	21.33	Active	\$200	20230913		
164096	Legendary	Single Cell Mining Claim	12.00	Active	\$200	20230913		
202678	Legendary	Single Cell Mining Claim	21.33	Active	\$200	20231030		
202679	Legendary	Single Cell Mining Claim	2.17	Active	\$200	20231030		
203193	Legendary	Single Cell Mining Claim	13.36	Active	\$200	20231120		
203920	Legendary	Single Cell Mining Claim	3.41	Active	\$200	20231120		
230085	Legendary	Single Cell Mining Claim	4.23	Active	\$200	20230503		
241612	Legendary	Single Cell Mining Claim	21.33	Active	\$400	20231120		
241613	Legendary	Single Cell Mining Claim	21.33	Active	\$400	20231120		
246369	Legendary	Single Cell Mining Claim	0.77	Active	\$200	20210503		
265897	Legendary	Single Cell Mining Claim	13.39	Active	\$200	20231120		
276676	Legendary	Single Cell Mining Claim	21.33	Active	\$200	20231030		
287148	Legendary	Single Cell Mining Claim	21.33	Active	\$400	20230503		
313935	Legendary	Single Cell Mining Claim	1.77	Active	\$200	20231030		
326030	Legendary	Single Cell Mining Claim	13.34	Active	\$200	20230503		
333404	Legendary	Single Cell Mining Claim	13.30	Active	\$200	20230503		

TABLE V.1 Alexo-Dundonald Property Land Tenure							
Tenure ID	Holder	Туре	Area (ha)	Status	Work Required	Anniversary Date	
122874	Legendary	Boundary Cell Mining Claim	3.64	Active	\$200	20230503	
138463	Legendary	Boundary Cell Mining Claim	10.93	Active	\$200	20230503	
139306	Legendary	Boundary Cell Mining Claim	3.65	Active	\$200	20230503	
198407	Legendary	Boundary Cell Mining Claim	19.83	Active	\$200	20230503	
335517	Legendary	Boundary Cell Mining Claim	0.99	Active	\$200	20210503	
PAT-3389	Legendary	Patent	16.59	Mining & Surface Rights	not applicable	not applicable	
PAT-3390	Legendary	Patent	16.54	Mining & Surface Rights	not applicable	not applicable	
PAT-3554	Legendary	Patent	12.63	Mining & Surface Rights	not applicable	not applicable	
PAT-4367	Legendary	Patent	16.19	Mining & Surface Rights	not applicable	not applicable	
PAT-4368	Legendary	Patent	16.19	Mining & Surface Rights	not applicable	not applicable	
PAT-4369	Legendary	Patent	16.19	Mining & Surface Rights	not applicable	not applicable	
PAT-4370	Legendary	Patent	16.69	Mining & Surface Rights	not applicable	not applicable	
PAT-4371	Legendary	Patent	16.29	Mining & Surface Rights	not applicable	not applicable	
PAT-4372	Legendary	Patent	16.59	Mining & Surface Rights	not applicable	not applicable	
PAT-4373	Legendary	Patent	16.59	Mining & Surface Rights	not applicable	not applicable	
PAT-4374	Legendary	Patent	16.59	Mining & Surface Rights	not applicable	not applicable	
PAT-4375	Legendary	Patent	14.27	Mining & Surface Rights	not applicable	not applicable	
PAT-26999	Legendary	Patent	16.19	Mining Rights only	not applicable	not applicable	
PAT-27001	Legendary	Patent	17.01	Mining Rights only	not applicable	not applicable	
PAT-27003	Legendary	Patent	16.19	Mining Rights only	not applicable	not applicable	
PAT-27005	Legendary	Patent	16.59	Mining Rights only	not applicable	not applicable	
PAT-27022	Legendary	Patent	16.59	Mining Rights only	not applicable	not applicable	
PAT-27024	Legendary	Patent	16.59	Mining Rights only	not applicable	not applicable	
PAT-27025	Legendary	Patent	12.73	Mining Rights only	not applicable	not applicable	
PAT-27026	Legendary	Patent	17.14	Mining Rights only	not applicable	not applicable	
PAT-47882	Legendary	Patent	16.19	Mining Rights only	not applicable	not applicable	

Page 296 of 297

TABLE V.1 Alexo-Dundonald Property Land Tenure							
Tenure ID	Holder	Туре	Area (ha)	Status	Work Required	Anniversary Date	
PAT-47883	Legendary	Patent	32.80	Mining & Surface Rights	not applicable	not applicable	
PAT-47884	Legendary	Patent	60.61	Mining & Surface Rights	not applicable	not applicable	
PAT-48632	Legendary	Patent	16.54	Mining & Surface Rights	not applicable	not applicable	
PAT-48633	Legendary	Patent	16.54	Mining & Surface Rights	not applicable	not applicable	
PAT-48634	Legendary	Patent	16.54	Mining & Surface Rights	not applicable	not applicable	
PAT-48635	Legendary	Patent	16.19	Mining & Surface Rights	not applicable	not applicable	
PAT-48636	Legendary	Patent	16.19	Mining & Surface Rights	not applicable	not applicable	
PAT-48637	Legendary	Patent	16.19	Mining & Surface Rights	not applicable	not applicable	
LEA-109794	Legendary	Lease	16.19	Mining & Surface Rights	not applicable	20391031	
LEA-109793	Legendary	Lease	32.35	Mining & Surface Rights	not applicable	20390930	
LEA-109795	Legendary	Lease	16.18	Mining & Surface Rights	not applicable	20391031	
LEA-109860	Legendary	Lease	437.80	Mining & Surface Rights	not applicable	20400430	
LEA-107378	Legendary	Lease	81.09	Mining Rights only	not applicable	20210731	
LEA-108129	Legendary	Lease	122.50	Mining Rights only	not applicable	20280930	
LEA-108130	Legendary	Lease	57.58	Mining Rights only	not applicable	20280930	
LEA-108131	Legendary	Lease	33.36	Mining Rights only	not applicable	20280930	
LEA-108132	Legendary	Lease	69.92	Mining Rights only	not applicable	20280930	
LEA-108133	Legendary	Lease	63.05	Mining Rights only	not applicable	20280930	
LEA-108134	Legendary	Lease	47.29	Mining Rights only	not applicable	20280930	
LEA-108135	Legendary	Lease	65.92	Mining Rights only	not applicable	20280930	
LEA-108582	Legendary	Lease	16.24	Mining Rights only	not applicable	20280930	
LEA-108583	Legendary	Lease	16.59	Mining Rights only	not applicable	20280930	
PAT-240,695,745	Legendary	Patent	62.32	Surface Rights only	not applicable	not applicable	