FPX Nickel Corp.

2018 TECHNICAL (N.I. 43-101) REPORT ON THE DECAR NICKEL-IRON ALLOY PROPERTY

Located in the Omineca Mining Division, British Columbia NTS 93K083, 084, 085, 093, 094 and 095 54° 54'30.5" North latitude, 125° 21'31" West longitude

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Table 0-1: List of units and abbreviations used in this NI 43-101 report

cmcmmereAugidGendian collarRCBritish Columbic (rovince in Canada)Grama per metricomCGPcoporedeclareDCHdownole induced polarization and resistivitykmkilometeDTR NIDavis Tube recoverable nickelmmetreEMAelectomagneticmMmillinopFPAelectomagneticmMmillinopFPAelectomagneticginmillinopFPASPANckel Corp.ginmillinopGATgiolal positioning systemginparter millionGPAGelogal Survey of CanadaginmillinopGPAGiolal Survey of CanadaginmillinopGPAGiolal Survey of CanadaginmillinopIEACInternational Electrotechnical CommissionginmillinopIEACInternational Electrotechnical CommissionginmillinopIEACInternational Standards OrganizationginMillinopMical MillinopInteractioningMillinopNicNoInteractional drangingInteractionNicNoInteractional drangingInteractionNicNoInteractional drangingInteractionNicNoInteractional drangingInteractionNicNoInteractional drangingInteractionNicNoInteractional drangingInteractionNicNoInteractional drangingInteractionNicNoInteractional drangingInteractionNicNoInter	Units		Abbreviations and acronyms			
C\$ Canadian dollar BC British Columbia (province in Canada) gr grams per metric tome Cu copper ha hectare DCIP downhole induced polarization and resistivity ham kilometre DDH diamond drill hole kilometre DTR Ni Dist's Tube recoverable nickel mu metre EMPA electrom angretic mV/v millionps EMPA electrom incroprobe analysis mV/v nillioty per volt Fe ion 0'm ohm metre FPX gravity amenability test pm art per million GPS gold positioning system USS United States dollar GSCA Geological Survey of Canada ym micron IEC International Electrolechnical Commission ISO International Standards Organization ISO ISO Induced polarization ISO IAO+OS Noth American Datum (1983) NAD-83 Noth American Datum (1983) NAVB PEA QA IASO quality assurance IAO QEMCAN quality assurance IAO Quality control QA IASR Acaning electron microscope	cm	centimetre	Au	gold		
grams per metric tornCucopperhalectareCCIPdownhole induced polarization and resistivitykimkilometreDCIPdiamond dril holekilometreDDHdiamond dril holekilometreEMPADavis Tube recoverable nickelmMmillanpsEMPAelectromagneticmVmilliont per voltFeingramantretreFAischer comparisitypmantretreGPAgravity amenability testppatieapt per millionGPSgold positioning systemUSNunited States dolarICP-OESinductively coupled plasma optical emission spectrometryIPindiced polarizationICP-OESinductively coupled plasma optical emission spectrometryIRNROInternational Standards OrganizationICR-OESIRAD-83North American Datum (1983)NIAONAD-83GNAMatorant 43-101NAD-83GRAGualing systemIRAD-83GNAGualing systemIRAD-83GNAGualing systemIRAD-83GNAGualing systemIRAD-83GNAGualing systemIRAD-83GRAGualing systemIRAD-83Gualing systemIRAD-84Gualing systemIRAD-85Gualing systemIRAD-85Gualing systemIRAD-85Gualing systemIRAD-85Gualing systemIRAD-85Gualing systemIRAD-85Gualing systemIRAD-85Gu	C\$	Canadian dollar	BC	British Columbia (province in Canada)		
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XRFX-ray fluorescencewt%weight percent			XRD	X-ray diffraction		
wt% weight percent			XRF	X-ray fluorescence		
			wt%	weight percent		



1.0 SUMMARY

Equity Exploration Consultants Ltd. ("**Equity**") was engaged by FPX Nickel Corp. ("**FPX**"; formerly First Point Minerals Corp.) to manage a diamond drilling program (8 holes, 1,917 m) in August and September 2017 on the Baptiste awaruite deposit (the "**Baptiste Deposit**") of the Decar Property (or the "**Property**"), central British Columbia (BC), Canada. Awaruite is a nickel-iron alloy (formula Ni₂₋₃Fe) that is strongly magnetic and has a higher density than associated gangue minerals, mostly magnetite and serpentine. Metallurgical testing, which is further summarized below, shows that awaruite can be concentrated through a simple grinding and magnetic separation process. Since this process captures only the nickel contained within awaruite (and not nickel contained in relict olivine and sulphide minerals), nickel grades are reported as the percent (%) nickel recoverable by Davis Tube magnetic separation ("**DTR Ni**").

Results from the 2017 diamond drilling program were used to prepare an updated mineral resource estimate meeting the requirements of National Instrument 43-101 *Standards of Disclosure for Mineral Projects* ("**NI 43-101**"). The updated mineral resource estimate (Table 1-1) was prepared by GeoSim Services Inc. It includes the southeast-directed expansion drilling of relatively higher grade and near surface awaruite mineralization from the 2017 program and all prior exploration work on the Decar Property.

Category	Toppoo	Davis Tube recoverable ("DTR") nickel content				
	Tonnes	(% Ni)	(Tonnes Ni)	(Pounds Ni)		
Indicated	1,842,645,000	0.123	2,271,000	5,007,133,000		
Inferred	390,788,000	0.115	448,000	988,111,000		

Table 1-1: 2018 Baptiste Deposit pit-constrained mineral resource estimate*

*Notes:

The effective date of the 2018 mineral resource estimate is February 26, 2018. See Table 14-7 for additional notes concerning preparation of the mineral resource estimate.

Mineral resources which are not mineral reserves do not have demonstrated economic viability.

Inferred mineral resources have a high degree of uncertainty as to their existence, and a great uncertainty as to their economic and legal feasibility. It cannot be assumed that all or any part of an Inferred Resource will ever be upgraded to a higher category.

The authors of this NI 43-101 technical report ("NI 43-101 report") have not applied an economic analysis to the updated resource.

The Decar Property is situated approximately 90 km northwest of Fort St. James, BC (population 1,510) and consists of 60 mineral claims covering 24,516.961 ha that are 100% owned by FPX. The Property is road accessible from Fort St. James via a network of provincial paved and forestry gravel roads. The Canadian National Railway company ("**CN Rail**") owns an out-of-service railway line that passes through the northeastern-most part of the Property and a BC Hydro electrical substation, with the capacity to serve a mine operation, is located 90 km to the south-southeast.

The Decar Property is underlain by bedrock of the Cache Creek terrane, which includes an obducted Upper Paleozoic and Lower Mesozoic ophiolite sequence referred to as the Trembleur ultramafite unit. Other rocks underlying the Property include metasedimentary and metavolcanic rocks of the Sitlika assemblage and Sowchea succession. Ultramafic rocks of the Trembleur unit are variably serpentinized, with awaruite formed during serpentinization of nickeliferous olivine in the peridotite.

The earliest publicly available reports of exploration on and around the Property date from 1974 and were focussed on evaluating the potential of the area to contain chromite and gold-hosted listwanite mineralization. Awaruite was first discovered in the area as part of an academic thesis in 1983. The area was sporadically assessed through rock sampling and petrographic work between 1996-2005. In 2006, FPX staked 33 claims to establish the Property, focusing on awaruite mineralization in the Baptiste, Sid, B and Van showings.





From 2006-2009, FPX conducted staking, property-scale airborne geophysics, prospect-scale groundbased induced polarization and resistivity (IP) surveys, rock sampling, geological mapping, petrography and scanning electron microprobe (SEM) analysis. This work identified Baptiste as the primary exploration target, with the B, Sid and Van targets also returning compelling results.

On 12 November 2009, FPX entered into an option agreement with Cliffs Natural Resources Limited ("**Cliffs**") pursuant to which Cliffs could earn up to a 75% undivided interest in the Property. Cliffs incurred approximately US\$22 million of expenditures on or for the benefit of the Property while it was under option to Cliffs, which included preparation of a Preliminary Economic Assessment ("**PEA**") on the development of the Baptiste Deposit. Upon completion of the PEA, Cliffs acquired a 60% undivided interest in the Property. In August 2014, Cliffs informed FPX that it would divest its entire interest in Decar and, on 8 September 2015, FPX announced that it had entered into a binding agreement with Cliffs to purchase Cliffs' 60% undivided interest in the Decar Property for an acquisition price of US\$4.75 million. Following approval of the purchase by the disinterested FPX shareholders on 15 November 2015, FPX re-acquired 100% ownership of the Property effective 18 November 2015.

Work funded by Cliffs during the period it had the Decar Property under option included drilling of 80 holes for 30,223 m on the Baptiste Deposit (27,670 m), Sid Target (847 m) and B Target (305 m), as well as 1,401 m on hydrogeological monitoring wells at the Baptiste Deposit. Results from this work yielded a maiden resource for the Baptiste Deposit on 25 May 2012, an updated resource for the Baptiste Deposit on 23 January 2013 and a PEA on 22 March 2013. Other work undertaken by or on behalf of Cliffs included downhole geophysical rock property surveys as well as mineral processing and metallurgical testing.

The geochemical assay method using the Davis Tube was developed by FPX and Cliffs in 2010, with all assays done by Activation Laboratories Limited ("**Actlabs**") of Kamloops, BC, and, in 2010, Ancaster, Ontario. Thirty grams (30 g) of pulverized pulps are split into a magnetic and non-magnetic fraction via a Davis Tube magnetic separator, with the magnetic fraction then analysed by X-ray fluorescence. Grades in this magnetic fraction are typically around 2% Ni. The DTR Ni is then calculated by combining it with the non-magnetic fraction to represent DTR Ni in the 30 g, pre-Davis Tube separation, sample. Quality assurance and quality control (QA/QC) monitoring suggests that assays are uncontaminated, precise and accurate, although with a high bias of 0.5 to 1 standard deviations.

The mineral processing and metallurgical testing completed to date has been used to determine the ore mineralogy, mineralogical association and liberation characteristics of awaruite and the response of magnetic and gravity separation techniques to different grind sizes. Lab-scale gravity work done in 2010 showed that significant amounts of nickel can be recovered by gravity methods using a single stage Knelson concentration, with additional stages providing little improvement in total nickel grade or recovery. Other methods of producing higher-grade nickel concentrate include finer grinding, magnetic concentration before Knelson concentration and post-Knelson gravity concentration with a Mozley table. Mineralogical work in 2011 and 2012 suggested that 74% of total (or whole rock) nickel is hosted within awaruite and that approximately 66% of the awaruite should be magnetically recoverable. Together, this work was used to develop a mechanical processing flow sheet that includes grinding to 80% passing 600 µm followed by rougher magnetic separation, re-grinding to 80% passing 75-100 µm and then gravity separation to produce a final concentrate.

The updated mineral resource estimate for the Baptiste Deposit (Table 1-1) that is the focus of this Report includes all data from the 2017 drill campaign as well as the one 2012 hole that was not included in the 2013 resource estimate and 2,053 samples from a re-sampling program of 2010/2011 drill core that was also run in 2012. The updated estimate is geologically constrained within four mineralized domains and is reasonably comparable among different estimation methods (i.e. ordinary kriging, inverse distance squared weighting, nearest neighbour).

Recommended work includes (1) rebuilding the geochemistry database, building a master project database, and consolidating geological mapping data, (2) assessing the positive bias in CRM analyses (3) infill and expansion drilling on the Baptiste Deposit, (4 holes, 1400 m), (4) exploration and resource drilling on the Van Target (9 holes, 3150 m), (5) advanced metallurgical work and (6) continued evaluation of the potential for tailings to sequester CO_2 . The proposed work is estimated to cost C\$1.906 million.



2.0 INTRODUCTION

This NI 43-101 report on the Decar Ni-Fe alloy Property ("**Decar Property**" or "**the Property**") has been prepared for FPX to enable FPX to meet its disclosure obligations in accordance in accordance with the requirements of the Canadian Securities Administrators and the policies of the TSX Venture Exchange. An updated NI 43-101 report is warranted for material changes since the last technical reporting period in 2013 (McLaughlin et al., 2013; Ronacher et al., 2013) that include an updated resource estimate announced on 26 February 2018. Equity was engaged by FPX to operate the 2017 exploration program on the Decar Property, prepare this updated technical report, review and compile all exploration information available for the Property and make recommendations for further exploration, if warranted. This report is based on personal observations, assessment reports filed with the British Columbia ("**BC**") Ministry of Energy and Mines, publications by the BC Geological Survey, data and internal reports supplied by FPX, and news releases issued by FPX and Cliffs. A complete list of references is provided in Appendix A.

Author R. Voordouw ("**Voordouw**") is a Professional Geologist ("**P.Geo.**") and an independent Qualified Person under the meaning of NI 43-101. He examined the Decar Property on 19-21 September 2017 and is responsible for sections 2.0 to 12.0 and 15.0 to 18.0 of this report, and partly responsible for section 1.0. Voordouw is the Director, Geoscience, for Equity and is not a director, officer or significant shareholder of FPX, and has no interest in the Decar Property or any nearby properties.

Author R. Simpson ("**Simpson**"), P.Geo., is also an independent Qualified Person under the meaning of NI 43-101 and did not examine the Property. He is responsible for sections 13.0 and 14.0 of this report and partly responsible for section 1.0. Simpson is the president of GeoSim Services Incorporated ("**GeoSim**") and is not a director, officer or significant shareholder of FPX, and has no interest in the Decar Property or any nearby properties.

3.0 RELIANCE ON OTHER EXPERTS

For Section 4.0, the authors have relied on FPX, without independent investigation, for information with respect to underlying joint venture and royalty agreements that FPX could have with former option partners and/or shareholders, or the underlying interests in any of these agreements. Also for Section 4.0, the authors have relied entirely on information from the Minerals Titles Branch of the Ministry of Energy, Mines and Petroleum Resources (Government of British Columbia) regarding property status and legal title for the Project. The authors have not relied upon a report, opinion or statement of another expert concerning legal, political, environmental or tax matters relevant to the technical report.

Mr. Trevor Rabb, P.Geo., is the former Vice-President Exploration of FPX and is currently a Senior Project Geologist with Equity. Mr Rabb provided expertise on geological modelling of the Baptiste Deposit and on the historical work done by FPX on the Decar Property.

4.0 PROPERTY DESCRIPTION AND LOCATION

The Decar Property consists of 60 contiguous mineral claims that cover 24,517 hectares (245 km²) in the Omineca Mining Division of central BC, Canada (Figures 4-1, 4-2). The approximate centre of the Property is at 54° 54'30.5" north latitude and 125° 21'31" west longitude (NAD-83 UTM Zone 10N: 6,087,000 m N 350,000 m E) on NTS map-sheets 93K083, 084, 085, 093, 094 and 095.

Mineral Titles Online ("**MTO**") is a mineral claim registry maintained by the Government of BC. MTO claim boundaries are defined by latitude and longitude so that they form a seamless grid without overlap. "Legacy" mineral claims were staked on the ground prior to the introduction of the MTO system and take precedence over MTO claims.

MTO claim data for the Decar Property is summarized in Appendix B and shown in Figure 4-2. Five claims along the southern boundary of the Property overlap with Rubyrock Lake Provincial Park and 10 claims along the northeastern margin overlap with Mineral Reserve Site 326751. No exploration can occur in those



portions of claims that are overlapped by the Provincial Park whereas exploration within the mineral reserve is either restricted or not permitted. Together, these overlaps reduce the size of the Decar Property by 823.9 ha or 3.4% of the total. All known Fe-Ni alloy deposits and targets on the Property are located at least 2.5 km from overlaps with the Mineral Reserve and 5 km from the Provincial Park boundary.

Another seven claims overlap with legacy claims and 14 claims overlap with District Lots. The mineral rights within the overlapping legacy claims are held by Ursula Mowat. These overlapping claims cover 270.0 ha, or 1.1%, of the Decar Property. District Lots are surveyed land parcels that convey title (ownership) of the surface rights to the purchaser when the District Lots are sold by the Crown. Exploration on those claims overlapping District Lots is permitted but requires notification of the surface rights holder (if any). The Van Target lies within 1 km of District Lots 2036 and 2047 but the Baptiste Deposit, Sid Target and B Target are located at least 4.5 km away.



Figure 4-1: Location map for the Decar Property

EQUITY



All claims are registered in the name of, and are 100% owned by, FPX, who purchased Cliffs' 60% interest in the project in November 2015 (FPX Nickel, 2015). Cliffs had first optioned the Decar Property in November 2009, and earned a 60% interest by incurring approximately US\$22 million in explorations and related expenditures (FPX Nickel, 2014) which included completion of a PEA (McLaughlin et al., 2013). FPX acquired Cliffs' 60% ownership interest with a cash payment of US\$4.75 million, provided by a Lender who earned a 1% NSR royalty over the Decar Project (FPX Nickel, 2015). This loan is secured against the Decar Project and all related assets. To the authors' knowledge, the Decar Property has no royalties, back-in rights or other agreements and encumbrances other than those mentioned above.

No material environmental liabilities were noted by Voordouw during a visit to the Decar Property in September 2017. From 15 May to 15 June each year, exploration on the Property is restricted to protect the mountain caribou calving season (BC Ministry of Environment Order U-7-003).

Claims are registered with the Government of BC under FPX Nickel Corp. (client ID 139385). Additional information on the Registration of Documents, Claim Registration, Exploration and Development Work/Expiry Date Change, and Transfer of Ownership events are provided on the MTO website.

The claims confer title only to minerals as defined by the Mineral Tenure Act (British Columbia). Surface rights over non-overlapping MTO claims are held by the Crown, as administered by the Government of BC. The ownership of other rights (placer, timber, water, grazing, trapping, outfitting, etc.) affecting the Property was not investigated by the authors.

British Columbia law requires assessment expenditures to maintain tenure ownership past the current expiry dates. As of July 1, 2012, annual assessment requirements were set at C\$5/hectare (ha) for years 1 and 2, C\$10/ha for years 3 and 4, C\$15/hectare for years 5 and 6, and C\$20/hectare for all subsequent years. Exploration expenditure can be distributed over contiguous claims for up to 10 years into the future. Prior to the 2017 work program, the 60 claims comprising the Decar Property have had sufficient assessment credit to keep them in good standing until at least 02 September 2022, with the majority being in good standing until 14 November 2022. FPX incurred expenditures on the 2017 work program that qualify for assessment credit to be applied against the annual assessment requirements. An assessment report documenting these expenditures is currently being prepared. When filed with and accepted by the Ministry of Energy and Mines, these assessment credits will be used to extend the maturity dates on the Decar Property claims.

Exploration programs that include diamond drilling, other mechanical disturbance (e.g. trenching) and some ground-based geophysical methods require permits issued by the Ministry of Energy and Mines of the Government of BC. In 2011, FPX obtained a multi-year area-based permit valid from 15 June 2011 to 15 December 2014 (permit number MX-13-208). FPX obtained amendments to this permit on 18 November 2015 and 9 August 2017, the latter allowing for the 2017 drilling program. Cliffs obtained a Road Use Permit (RUP) on 3 May 2012 (permit file 11360-20 CNR) that authorized the use of Forest Service roads to access the Property.

The Decar Property lies within the traditional territory of the Tl'azt'en Nation. A memorandum of understanding (MOU) was signed between the Tl'atz'en Nation, FPX and Cliffs in June 2012 (FPX Nickel, 2012) that formalized protocols for the working relationship between the parties and confirms the Tl'azt'en Nation's support for exploration activities. The MOU contains specific provisions which, following the sale by Cliffs of its 60% interest in the Property to FPX in 2015, have both enabled and required FPX to assume all of the project proponent's rights and obligations under the MOU. The material impact of future agreements between the FPX, the Government of BC and local stakeholders, including First Nations, is not evaluated in this NI 43-101 report.

To the extent known there are no other significant factors and risks besides noted in the report that may affect access, title, or the right or ability to perform work on the Property.

5.0 ACCESSIBILITY, LOCAL RESOURCES, INFRASTRUCTURE, PHYSIOGRAPHY, CLIMATE

The Decar Property is road-accessible and located in central BC and is thereby reasonably proximal to resources and infrastructure required to further develop the project. There are several current- and past-producing mines in the area, including Mount Milligan, located 90 km east-northeast of the Decar Property, and Endako located 95 km to the south. Mount Milligan is a conventional truck-shovel, copper-gold, open pit operation with an on-site concentrator capable of processing 62,500 tonne per day and an estimated mine life of 22 years (Andrews et al., 2017). Endako is an open pit molybdenum operation with a concentrator that has been on care and maintenance as of July 2015 (Centerra Gold, 2018).

5.1 Accessibility

The Decar Property is road-accessible from the town of Fort St. James, BC, through a 170 km long network of paved and gravel forestry roads (Figure 5-1). The most direct routes heads 2.3 km north of Fort St. James along Stuart Lake Highway/BC-27N to Tachie Road, then follows the Tachie Road for 39 km to the Leo Creek Forestry Road (FR). The Leo Creek FR is then followed northwest for 38.5 km, followed by 48 km on the Leo-Kazcheck Forestry Road (300 Road), 2 km on the to Leo-Sakenichie FR (900 Road) to cross the Middle River and then 38 km on the Leo-Middle Forestry Road (700 Road) to reach a 1 km long road leading to the reclaimed Decar Camp site.

5.2 Local Resources and Infrastructure

The closest municipality to the Property is Fort St. James, which has a population of 1,510 people (Statistics Canada, 2017) and offers a limited range of services and supplies that include labour, gas stations, freight, rental heavy equipment, groceries and hardware. The nearby city of Prince George (population 73,000), which lies 152 km by paved roads to the southeast of Fort St. James, provides a full range of services and supplies, along with daily commercial flights to Vancouver. The town of Smithers (population 5,400) lies 120 km due west of the Property and can be accessed by Forestry Roads and a seasonal barge that crosses Babine Lake. Smithers also offers a full range of services and supplies for mineral exploration, in addition to daily commercial flights to Vancouver.

CN Rail operates a railway through Smithers and Terrace to the port of Prince Rupert (Figure 5-1). An out-of-service rail line, also owned by CN Rail, follows the east bank of Middle River and runs through the northeastern margin of the Property.

The nearest power corridor reaches to within 3 km of the Decar Property and serves the settlement of Middle River. BC Hydro's Glenannan Substation connects to a 500 kV trunk line and is located 90 km south-southeast of the Decar Property.

McLaughlin et al (2013) suggested that concentrate could be shipped to a proposed transload facility located adjacent to the CN rail line near the Middle River, a trip distance of approximately 15 km. Concentrate would then be transferred to railroad cars for shipment to the seaport of Prince Rupert, which is located 325 km west-southwest of the Property.

Surface rights over the Decar Property are mostly owned by the Crown and administered by the Government of BC and would be available for any eventual mining operation. Parts of several claims at the east end of the Property overlap with District Lots (see Section 4.0) where exploration activity by FPX would require notification of the surface rights holder (if any). No exploration can be done on those parts of the Decar Property that overlap with Rubyrock Lake Provincial Park and, possibly, Mineral Reserve Site 326751.

The Property has abundant water and water rights could be obtained for milling. Potential tailings storage areas, potential waste disposal areas and potential processing plant sites are described in the 2013 Preliminary Economic Assessment (McLaughlin et al., 2013).

5.3 Physiography and Climate

The Decar Property lies in the sub-boreal spruce ecological zone, which characterizes the gently rolling terrain of British Columbia's interior plateau. Elevation across much of the Property ranges from 900-1400 m above seal level ("**ASL**"), dropping to 700 m ASL near the Middle River and reaching up to 1983 m ASL at the top of Mount Sidney Williams. The Property boundaries approach the Middle River in the northeast and Trembleur Lake in the south.

The sub-boreal spruce ecological zone comprises a rolling landscape with dense coniferous forests, with variation related to elevation as well as dry and wet micro-climates. Property-scale baseline environmental studies were done from 2011 to 2014 but were not reviewed as part of preparing this NI 43-101 report.

The climate in the Decar area is "northern temperate" or "sub-boreal spruce zone" and is characterized by cold snowy winters and warm summers. Average Environment Canada climate data for Fort St. James in the period 1981-2010 (Environment Canada, 2018) indicate daily average temperatures ranging from -9.5°C in January to 15.4°C in July. The highest average monthly accumulations are 50.6 millimetres of rain June and 43.3 cm of snow in January. Average snow depth peaks in February at 54 cm.

The physiography and climate at the Decar Property are amenable to year-round mineral exploration activities that include diamond drilling and geophysical surveys. Geological mapping and geochemical sampling can be conducted from June to October when there is no snow cover.

6.0 HISTORY

Exploration activity on or immediately adjacent to the Decar Property is summarized in Table 6-1 and began with the discovery of several chromite pods by the Geological Survey of Canada ("**GSC**") in 1942 (Armstrong, 1949). This work initiated a phase of chromite-focussed exploration between 1975-1982, which returned only sub-economic occurrences. Starting in 1987, the exploration focus shifted to listwanite-hosted gold occurrences that had also been reported by early GSC work (Armstrong, 1949) and prospector anecdotes (Mowat, 1988a), with the bulk of drilling activity occurring between 1990-1994. The strongly magnetic and high density Ni-Fe alloy "awaruite" was first described in the area by Whittaker (1983). Sporadic awaruite-focussed petrographic and metallurgical work was done between 1996 to 2006. From 2007 onwards, concerted efforts were made to quantify recoverable Ni present in awaruite, define awaruite deposits and demonstrate the economic viability of their extraction.

Chromite pods are a source of chromium (Cr) and, potentially, platinum group element (PGE) ore, and were first described in the Decar area by the GSC (Armstrong, 1949). A GSC mapping program in 1942 discovered nine chromite deposits hosted by dunite and peridotite (Armstrong, 1949) later grouped into the Trembleur ultramafite unit. The largest of these bodies was described as 5 x 25 feet in size with >50% chromite (Armstrong, 1949). In 1975, Douglas Stelling prospected for chromite on the Pauline Group of claims, near what is now the center of the Decar Property. This work found mostly disseminated chromite grading 0.2-0.4% Cr, with one select sample of massive chromite-bearing dunite returning 9.8% Cr (Stelling, 1975). Subsequent work in the same area by Mountaineer Mines re-discovered the 5 x 25 feet zone identified by Armstrong (1949) and returned assays of 17.8% and 38.9% Cr, but otherwise failed to locate larger chromite bodies (Guinet, 1980). Three year later, Northgane Minerals Ltd subcontracted Western Geophysical Aero Data Ltd to fly a 310 line-km very low frequency electromagnetic (VLF-EM) and magnetometer survey with the aim of defining the extent of ultramafic rocks and identifying trends that could be favourable for chromite mineralization (Pezzot and Vincent, 1982). This survey identified highly magnetic areas of possible serpentinized peridotite and dunite, showing that at least three chromite showings are associated with very high magnetic response (Pezzot and Vincent, 1982). However, no further chromite-focussed exploration was done.

The discovery of "listwanite" bodies with elevated gold-pathfinder elements like arsenic and antimony brought renewed exploration interest to the Decar area. Listwanite is partially silicified, carbonate-altered ultramafic rock that can be a favourable host for gold mineralization, with examples including the Cassiar deposits in northern BC and Motherlode district in California, USA. Geologist Ursula Mowat established a property that overlaps with what is now the central and western half of the Decar Property, and, in 1987, began exploration for gold-hosted listwanite through an option agreement with **Lacana Mining Corporation** (Mowat, 1988a). Highlights include a sample of rusty-weathering listwanite with 3.8 g/t Au and a soil sample with 19.9 g/t Au. The next year, surface sampling and trenching of seven listwanite zones returned channel samples with up to 40 g/t Au over 1 m (Mowat, 1988b). Coincident prospecting, in what is now the southern part of the Decar Property, returned ultramafic rocks with 80-90 ppb Au (Forbes, 1988).

Diamond drilling of listwanite prospects was done from 1990-1994, for a total of 1541 m over 22 drillholes (Mowat, 1990, 1991, 1994). Drill programs were financed through option agreements between Ursula Mowat and **Viceroy Resource Corporation** (Mowat, 1990), **Minnova Incorporated** (Mowat, 1991) and **Teryl Resources Corporation** (Mowat, 1994). The first of these drilled 305 m in seven holes, with six of these returning intercepts of 1-6 g/t Au over intervals ranging from 0.4 to 9 m (Mowat, 1990). This would turn out to be the most successful program. The next year, another five holes (for 511.4 m) were drilled on the Stibnite and Upper listwanite zones but returned mostly disappointing results (Mowat, 1991). In 1994, another 724.7 m was drilled over 10 holes to test EM conductors, soil anomalies, listwanite zones and/or IP features (Mowat, 1994). In general, drilling failed to intersect gold mineralization and explain geophysical anomalies.

Following a brief lull, exploration work resumed in 1998 to focus on the previously unexplored West Peak area as well as strongly talc-altered ultramafic rocks near Baptiste Creek (Mowat, 1998). Results were used to suggest that glacial detritus could be masking porphyry and/or gold mineralization on the property. The following year, a three-phase work program was used to define, and then follow-up on, weak Au and PGE anomalies on the Mid claim (Mowat, 1999). Mapping found additional listwanite and talc-rich alteration zones with elevated arsenic and Ni, as well as glassy volcanic rocks with weakly anomalous PGE. The following year, new outcrops of ultramafic were discovered in the West Peak area although sampling returned no elevated base or precious metals (Mowat, 2000). From 2002-2004, small surface programs outlined new listwanite occurrences with coincident Au-arsenic soil anomalies (Mowat, 2002), new outcrops of listwanite and serpentinized peridotite in clear cuts (Mowat, 2004), and soil samples with up to 2.4 g/t Au g/t (Mowat, 2005). A small-scale soil and rock sampling program done in 2006 returned negligible results (Mowat, 2007).

In 2007, **AMARC** conducted a significant silt sampling campaign on claims that lie mostly west of the current Decar Property, but also overlap with the southwestern-most of these claims. This work returned anomalous values for molybdenum, copper and zinc (Ditson et al., 2008).

Awaruite in the Decar area was first recognized by Whittaker (1983) while completing a PhD thesis on several belts of ultramafic rocks in central BC. In 1996, geochemical and petrographic work on ultramafic rocks sampled on claims lying near the centre of the present day Decar Property showed that nickel is hosted in awaruite and other low-sulphur nickel minerals, including heazlewoodite, bravoite and pentlandite (Mowat, 1997a, b). It was recognized that since awaruite, magnetite and chromite were all magnetic, ore grade material could be produced by magnetic separation. This work was followed up with a sampling and metallurgical program that showed awaruite may be economically extractable through a simple grind and magnetic separation process (Mowat, 1997c). The 1999 program included metallurgical testwork on different grind sizes, with results showing that a 150 mesh grind produces higher Ni values than 100 mesh (Mowat, 1999).

Besides rudimentary prospecting, petrographic and metallurgical work, little further work was done on Ni-Fe alloy mineralization until 2007, when First Point Minerals Corp. (now named "FPX Nickel Corp.") staked 15 claims that form what is now the core of the Decar Property (Voormeij and Bradshaw, 2008). The Decar Property then grew to 33 claims by 2009 (Britten, 2010), 37 claims by 2010 (Britten and Rabb, 2011), 59 claims by 2012 (Ronacher et al., 2012b) and then to its current 60-claim size by 2013 (Ronacher, 2013). Work done by FPX is further described in sections 9, 10 and 11. FPX optioned the Decar Property to Cliffs in November 2009 and then re-acquired 100% ownership of the Property in 2015.

Company	Year	Work Type	Commodity	Production	Reference
	1042	Brosposting	Cr	Pagianal manning	Armetrong 1040
650	1942	Flospeculig			Amstrong, 1949
D. Stelling	1975	Chip sampling	Cr	38 rocks	Stelling, 1975
Mountaineer Mines	1979	Prospecting	Cr	4 rocks	Guinet, 1980
Northgane Minerals	1982	Airborne VLF-EM and mag	Cr	310 line-km	Pezzot and Vincent, 1982
Lacana Mining Corp	1987	Surface sampling	Au, PGE, Cr	304 rocks, 95 silt, 180 soil, 9 pan	Mowat, 1987
	1988	Surface sampling	Au, PGE, Cr	276 rock, 58 silt, 2593 soil, 52 trench chip	Mowat, 1988
J.R. Forbes	1988	Surface sampling	Au	30 rock, 20 silt, 3 pan	Forbes, 1988
Viceroy Resource	1990	Drilling, surface sampling	Au	305 m in 7 DDH; 8 rock, 6 silt, 2 soil	Mowat, 1990
Minnova	1991	Drilling	Au	511 m in 5 DDH	Mowat, 1991
Teryl Resources	1994	Drilling, surface sampling	Au	725 m in 10 DDH; 58 soil	Mowat, 1995
	1996	Geochemistry, petrography	Ni	7 rock	Mowat, 1997
	1997	Geochemistry, metallurgy	Ni	262 rock, 32 silt, 1 pan	Mowat, 1997
	1998	Mapping, sampling	Au, PGE	62 rock, 1 silt, 8 soil	Mowat, 1998
	1999	Mapping, sampling	Au, PGE	63 rock, 3 silt	Mowat, 1999
U. Mowat	2000	Mapping, sampling	Au, PGE	40 rock	Mowat, 2001
	2002	Sampling	Au, PGE	46 rock	Mowat, 2002
	2003	Sampling	Au, PGE	13 rock	Mowat, 2004
	2004	Sampling	Au, PGE	8 rock, 75 soil	Mowat, 2005
	2006	Sampling	Au, PGE	291 silt	Mowat, 2007
AMARC Resources	2007	Silt sampling	Mo, Cu, zinc	60 rock	Ditson et al., 2008

Table 6-1: Overview of historical work done on and around the Decar Property

Au = gold, Cr = chromium, Mo = molybdenum, PGE = platinum group elements

7.0 GEOLOGICAL SETTING AND MINERALIZATION

Mineralization on the Decar Property is hosted in strongly altered ("serpentinized") ultramafic rocks of the Cache Creek terrane. The following sections establish the regional- to property-scale context of these ultramafic rocks and the awaruite mineralization.

7.1 Regional Geology and Mineralization

The Decar Property lies in the Paleozoic to Mesozoic Intermontane Belt (Figure 7-1), which is formed by accreted outboard components ("terranes") of oceanic affinity that include Stikine, Quesnel and Cache Creek. The Stikine and Quesnel terranes (or Stikinia, Quesnellia) are both volcanic arcs whereas the Cache Creek terrane consists of ophiolite, marine sedimentary rocks and locally developed seamount-like successions that likely formed in an oceanic and/or back-arc setting (Monger et al., 1991). The Decar Property is entirely underlain by rocks of the Cache Creek terrane.

The **Cache Creek terrane** is exposed in three main outcrop areas; north-central BC to southern Yukon, central BC near Fort St. James, and in southern BC where it serves as the type locality (Monger et al., 1991). Each of these areas is underlain by lithologies that include Carboniferous to Jurassic radiolarian chert and argillite, shallow-water carbonate, ophiolite (basalt, gabbro, ultramafic rocks) and calc-alkaline volcanic with related volcano-sedimentary rocks. The serpentinized ultramafic rocks of ophiolitic-affinity are the host for Ni-Fe alloy mineralization on the Decar Property.

Figure 7-1: Regional geological setting of the Decar Property showing the Cache Creek (CC), Stikine (ST) and Quesnel (QN) terranes.

All three outcrop areas are bound by regional-scale faults and show significant internal stratigraphic and structural disruption (Monger et al., 1991). Bounding structures include the Thibert-Kutcho-Pinchi faults that separate Cache Creek from Quesnel terrane to the east, and the King Salmon and Takla faults forming its western boundary with the Stikine terrane. An estimated 115 km of dextral movement had occurred on the Thibert-Kutcho-Pinchi fault system by the Upper Cretaceous and was followed by another 170 km of movement on the north-south trending Thudaka-Finlay-Ingenika-Takla fault system into the Eocene (Gabrielse, 1985). This protracted history of accretion and lateral transport resulted in significant faulting internal to the Cache Creek terrane, and likely channeled the fluids that caused serpentinization of ultramafic rocks as well as awaruite mineralization (Britten, 2016).

Mineral deposits in the Cache Creek terrane include several types within the ultramafic ophiolitic rocks, as well as Noranda- and Kuroko-type copper-lead-zinc volcanogenic massive sulphide (VMS), molybdenumcopper porphyry, vein-hosted gold and surficial placer gold. Deposit types formed in ultramafic rocks include the awaruite prospects described in this report (see also Britten, 2016), Alaskan-type Ni-copper-PGE, podiform chromium, jade/nephrite, listwanite-hosted gold, talc-magnesite, cryptocrystalline magnesite veins, magmatic Ni-Cu sulphide and asbestos.

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The bulk of the historical and current mineral production from Cache Creek rocks is from relatively small-scale jade/nephrite, placer gold and industrial mineral operations. The nearby Mount Milligan and Endako mines are underlain by the Quesnel and Stikine terranes respectively.

7.2 Local Geology

The Cache Creek terrane that underlies the Decar area is subdivided into (from southwest to northeast) the Rubyrock igneous complex, Sitlika assemblage, Trembleur ultramafite, Sowchea succession and Copley limestone (Figure 7-2). These subdivisions are structurally intercalated by faults internal to the Cache Creek terrane. The western margin of the Cache Creek terrane is bound by the Takla fault, which separates it from Stikine Terrane, whereas the eastern boundary with the Quesnel terrane is marked by the Pinchi fault.

The **Rubyrock igneous complex** consists of upper Paleozoic to Triassic gabbro, basalt, diabase and micrograbbro (Struik et al., 2001) that could be analogous to the upper part of a typical ophiolite succession (see Boudier and Nicolas, 1985). These rocks occur mostly immediately southwest of the Property with intercalations occurring within the Trembleur ultramafite further to the northeast (Struik et al., 2001). Quartz-carbonate veining and strong chlorite-epidote ± pyrite alteration occur locally.

The **Sitlika assemblage** underlies the southwestern portion of the Property and consists of slate, phyllite, siltstone, sandstone and conglomerate, with minor abundances of limestone and chert (Struik et al., 2001). Some sedimentary units host felsic volcanic and plutonic clasts, and bedding orientations are typically subvertical. A fault separates Sitlika rocks from the Trembleur ultramafite to the northeast. Sitlika sedimentary rocks are interpreted as a distal to proximal turbidite succession.

The **Trembleur ultramafite unit** forms the core the Decar Property with significant additional occurrences to the south and north (Figure 7-2). Rock types consist mostly of peridotite with lesser amounts of dunite, pyroxenite and gabbro (Britten, 2016; Struik et al., 2001). Most of these rocks range from partially to fully serpentinized (Britten, 2016) with other alteration minerals including Mg-Fe carbonate, talc and/or silica. The Trembleur unit is interpreted as the mantle and lower crustal portion of a typical ophiolite succession and hosts the Ni-Fe alloy mineralization that is the focus of this NI 43-101 report.

The **Sowchea succession** is subdivided into units of fine clastic and undivided sedimentary rocks (Logan et al., 2010). The fine clastic unit includes phyllite, slate, siltstone, siliceous argillite, quartzite, conglomerate and chert, with lesser amounts of recrystallized limestone. The undivided unit contains similar sedimentary rocks along with chlorite schist and metabasalt, and is cut by dikes and sills of greenstone, diabase and diorite. The Sowchea succession lies mostly northeast of the Trembleur unit although smaller fragments also occur to the southwest, presumably as fault-bounded panels. In the previous technical reports (McLaughlin et al., 2013; Ronacher et al., 2013) these rocks were referred to as the North Arm succession after Schiarizza and MacIntyre (1999). The Sowchea succession is likely equivalent to the pillow basalt and deep-sea sedimentary rocks that comprise the top of the typical ophiolite column.

Units of **Copley limestone** are mostly enveloped by Sowchea rocks and occur near the eastern boundary of the Cache Creek terrane. Rock types include mostly Permian (and possibly undifferentiated Triassic) micritic to clastic limestone, massive recrystallized limestone, lesser bedded limestone and minor amounts of marble, in addition to minor abundances of greenstone, chert and argillite (Logan et al., 2010). These limestone units are interpreted as the top parts of paleo-seamounts.

Contacts between the Rubyrock, Sitlika, Trembleur, Sowchea and Copley units are typically structural, comprising thrust and/or transform faults most likely initiated during obduction of the Cache Creek terrane and/or the long-lived transform faulting that followed obduction. The Takla and Pinchi faults, which bound the Cache Creek terrane to the west and east respectively, are both northwest trending and are cut by northeast trending dextral strike-slip faults like the Trembleur Lake and Tildesly Creek faults (Britten and Rabb, 2011). The Pinchi Fault lies 18 km northeast of the Property whereas the Takla Fault lies 10 km to the southwest.

7.3 Property Geology

7.3.1 Lithology

The core of the Decar Property is underlain by the Trembleur ultramafite unit, with Sitlika assemblage found in the southwest part of the Property and Sowchea succession in the northeast (Figure 7-3). Geological mapping and drilling has mostly focussed on the Trembleur rocks, although several holes were collared into Sitlika rocks to drill northeast into the ultramafite. The main rock types within each of these three units, as they were mapped and relogged in FPX and Equity's exploration work, are described below.

Mapping and core logging has characterized eight types of ultramafic related to the Trembleur unit. The most abundant of these is **peridotite**, which comprises 66.7% of all logged metres, and **massive peridotite** comprising 10.5% of the total metres. In this scheme, peridotite is more serpentinized than massive peridotite, although even the least altered rocks contain at least 60% serpentine. Pre-alteration mineralogy is estimated at 65-80% olivine, 20-30% orthopyroxene, <5% clinopyroxene and <0.5% chromite (Britten, 2016). The abundance of secondary serpentine is manifested in rock colour, with the least altered peridotite appearing medium grey whereas those with >95% serpentine are dark green to black-brown.

Other peridotite subtypes include cataclastic, mylonitized and hornfelsed, which collectively comprise 2.1% of all metres logged on the Property. **Mylonitized** and **cataclastic peridotite** are essentially synonymous, with both overprinted by a prominent network of hairline and brecciated fractures. It is plausible that these rocks mark the structures that channeled the hydrothermal fluids related to awaruite mineralization. **Hornfelsed peridotite** occurs next to gabbro and altered dikes, forming dark, very fine-grained and occasionally non-magnetic selvages that range from 0.1-14.4 m in core width and average of 3.7 m.

Dunite forms layers, lenses and pods within the more abundant peridotite units. It is typically finegrained, dark to medium grey and massive, and consists of >95% serpentinized olivine (Britten, 2016). Most dunite occurs along the western margin of the Baptiste Deposit and on the Mount Sidney Williams arête. Fragments of peridotite occur in pods of dunite and both rock types host awaruite, although grades within the dunite are mostly below 0.06% DTR nickel cut-off grade. Of the 32,032 m drilled on the Decar project, 3.4% was logged as dunite.

Some units were logged or mapped as altered ultramafic rock, including 2.3% of all drilled metres as FeCb_AltUM and another 2.3% as FeCb_Listwanite. Intervals logged as **FeCb_AltUM** are marked by moderately pervasive Mg-Fe carbonate ± talc alteration and are associated with fault zones and intrusive bodies. The **FeCb_Listwanite** code records listwanite units characterized by near-total replacement of ultramafic protoliths by Mg-Fe carbonate and silica. The FeCb_AltUM and FeCb_Listwanite units therefore form a continuum of Mg-Fe carbonate alteration and both types are antithetic to awaruite mineralization. Listwanite units were explored as part of early gold-focussed programs (e.g. Mowat, 1990, 1991, 1994).

The Trembleur and adjacent Sitlika units are cut by gabbro and altered dikes. **Gabbro dikes** are massive and fine- to medium-grained, and are typically northeast to east striking or stock-like in form (Ronacher et al., 2012a). Core widths total 1.8% of all drill metres with an average thickness of 3.0 m, and in several cases occur immediately adjacent to altered dikes and/or carbonate-altered ultramafic. **Altered dikes** have a wide range of inferred protoliths and contain variable abundances of garnet, serpentine, carbonate, chlorite, hematite, silica, albite and/or fuchsite. Garnet- and pyroxene-rich dikes are referred to as "rodingite". Core widths total 1.9% of all drilled metres and average 2.0 m in width. Altered dikes likewise appear to show a preferential association with carbonate-altered ultramafic rocks, gabbro dikes and fault zones.

Argillite (2.1% of all drilled metres) and volcanic (0.9%) lithologies comprise part of the Sitlika assemblage lying immediately southwest of the Trembleur ultramafic rocks. The **argillite** unit, which is referred to as mudstone and phyllite in the 2012 report (Ronacher et al., 2012a), comprises carbonaceous argillite, black phyllite, mudstone and slate with lesser abundances of limestone and chert. This unit is tectonically interleaved with Trembleur ultramafic and cut by both gabbroic and altered dikes. **Volcanic** rocks occur southwest of argillite and consist of green to medium greyish green chloritic phyllite that are locally interleaved with graphitic argillite.

AFTER:Cui, Y., Miller, D., Schiarizza, P., and Diakow, L.J., 2017. British Columbia digital geology. British Columbia Ministry of Energy, Mines and Petroleum Resources, British Columbia Geological Survey Open File 2017-8, 9p. Approximately 1.8% of all metres drilled is logged as **Fault Zone**, which includes both healed faults and fault gouge. Healed faults show cataclastic and/or mylonitic textures and are possibly related to cataclastic and mylonitized peridotite. These faults were developed under brittle to ductile conditions that resulted in localized development of penetrative deformation fabrics and serpentinized fractures. Younger faults are marked by strongly broken core and clayey gouge. Overall, geotechnical logging suggests slightly lower-than-average recovery and rock quality within intervals logged as fault zone.

Diamond drilling indicates that true **overburden** depths average 12.0 m with a maximum depth of 42.2 m. Only one of the 88 holes drilled by FPX on the Decar Property was collared on bedrock. Surficial mapping by the GSC (Plouffe, 2000) indicates that most of the Property is covered by till blanket and veneer, with bedrock outcrops, slope colluvium and talus occurring at higher elevations, and glaciolacustrine deposits occurring near Trembleur Lake and the Middle River.

7.3.2 Structure

Ultramafic rocks exhibit a gradation in deformation features that are likely syngenetic with serpentinization. The least deformed rocks on the Property are generally massive with rare, suspect, cumulate layers (Britten and Rabb, 2011). Petrographic study shows that the more deformed types appear to have undergone multiple breakage and brecciation events prior to and during serpentinization, resulting in a pseudobreccia texture that is cross-cut by serpentine-filled veins (Britten, 2016; Britten and Rabb, 2011).

Strong penetrative foliation is locally developed in ultramafic rocks as well as the adjacent metavolcanic and metasedimentary units. The eastern and western extents of the Baptiste Deposit, for example, are bound by 50-100 m wide zones of subvertical, northwest-trending and strongly developed penetrative deformation fabric that trends parallel to the long axis of the Deposit (Britten, 2016). Deformation fabrics decrease gradually outwards into more massive and undeformed ultramafic. The Sid and Van targets are elongated in the same orientation and show a similar spatial association with bounding structures defined by penetrative deformation fabric. Unmineralized peridotite occurring between mineralized zones is typically blocky and massive, and appears not to have been deformed prior to serpentinization (Britten, 2016).

Post-alteration fault and shear zones are marked by slickensides, gouge, strong penetrative foliation, fault breccia and/or shear fabric. There are several significant northwest-trending, subvertical, fault zones on the Property, including the fault that separates the Trembleur and Sitlika rocks and another fault that bounds the western side of the Baptise Deposit. Previous mapping by the GSC (MacIntyre and Schiarizza, 1999) also defined a northeast trending fault that appears to have caused 1500 m of dextral offset of the Trembleur unit in the southern part of the Decar Property. Several additional structures occur in the same orientation.

7.3.3 Alteration

The two predominant types of alteration within the Trembleur ultramafic rocks are serpentinization and Mg-Fe carbonate alteration. Serpentinization is the most widespread, having affected all ultramafic rocks to some degree and with significant areas comprising >90% serpentine. On the Decar Property, serpentinization is defined by the replacement of olivine and orthopyroxene with antigorite and lizardite, which are both more abundant than chrysotile (Britten, 2016). Serpentinization also formed magnetite and awaruite. Serpentinized rocks are cut by rare, discontinuous, crack-seal carbonate micro-veinlets (Britten and Rabb, 2011).

Mg-Fe carbonate alteration forms carbonate-dominant and carbonate-silica (i.e. "listwanite") assemblages. The weak (or incipient) variety of this alteration is logged as FeCb_AltUM, which is non- to weakly magnetite destructive and characterized by selective replacement texture. More pervasive, moderate to strong, alteration is logged as FeCb_Listwanite, which is typically texturally and magnetite destructive. This alteration is spatially associated with fault and/or unit contact zones, as well as small feldspar porphyry intrusions in the southeast part of the Property. The most significant of these is a rusty-weathering, elliptical, 1000 x 1800 m, zone of Mg-Fe carbonate alteration formed around a lens-shaped, east-west trending, feldspar porphyry intrusion. This intrusion shows pervasive alteration to sericite, chlorite, Mg-Fe carbonate, and pyrite, and is cut by north to northeast trending, moderately east dipping, later stage *en echelon* quartz veins.

Near-total carbonate alteration of ultramafic rocks results in the precipitation of silica (i.e. quartz) and the formation of listwanite. Several listwanite bodies are known to occur within the Decar Property, and several of these host pyrite, rare chalcopyrite (Britten and Rabb, 2011) and trace amounts of gold.

7.4 Property Mineralization

Historical exploration on the Property has focussed on three deposit types; (1) Ni-Fe alloy in serpentinized ultramafic rock, (2) listwanite-hosted gold, and (3) chromite pods in ultramafic. Each of these is briefly described below even though, at this time, only the Ni-Fe alloy deposits are potentially economic.

Ni-Fe alloy deposits are an atypical deposit type formed by the serpentinization of magmatic olivine that leads to the liberation of nickel and iron (Britten, 2016) and subsequent formation of the alloy. Awaruite has been observed throughout the entire extent of the peridotite on the Decar Property, but four zones of more abundant mineralization and larger grain size have been delineated; Baptiste, Sid, B and Van (Figure 7-3). The Baptiste Deposit is the most advanced of these four target areas, with an NI 43-101 compliant resource that is updated in this report (see Section 14.0). The other three targets are defined through surface mapping, sampling and/or diamond drilling, with three holes drilled at Sid Target and one drilled at B Target. High-grade mineralization appears to trend NW-SE, parallel to the orientation of lithological contacts and major fault structures.

The Baptiste Deposit is currently defined for approximately 3000 m in an east-west direction and for 600-1500 m from north to south. Most holes end in mineralization at true vertical depths of 250 m below the surface, with 14 of the 2012 holes ending in mineralization at vertical depths between 436-544 m. The Deposit is fault-bound in the southwest and grades into massive peridotite with lower-grade mineralization to the north and northwest. Drilling at the Sid and B targets is sufficient only to demonstrate that Baptiste-like mineralization occurs in these targets as well, but insufficient to determine the length, width, depth and continuity of the mineralization. No drilling has been done at the Van Target.

Exploration for listwanite-hosted gold deposits peaked in 1990-1994, with 1541 m of diamond drilling over 22 m to test the most prospective zones (Mowat, 1990, 1991, 1994). By 1994, drilling had identified at least 17 listwanite zones (1994) on or around the current Decar Property, with historical samples returning assays up to 35-40 g/t Au (Mowat, 1988a). Pathfinder elements for listwanite-hosted gold occurrences include iron, arsenic, lead, copper, zinc, nickel, cobalt and antimony. Possible origins of the gold-listwanite association include (1) carbon dioxide and hydrogen sulphide immiscibility with attendant gold deposition, (2) reduction of the mineralizing fluid by gold deposition, (3) sulphide precipitation promoted by Fe-rich lithologies, and (4) precipitation of silica, pyrite, arsenide and gold when an acidic gold-bearing solution enters reduced and alkaline carbonatized rocks (Kerrich, 1989; Dussel, 1985).

Chromite pods in the Trembleur ultramafite were discovered by the GSC in 1942 (Armstrong, 1949) and drove some of the first hard-rock exploration efforts in the Decar area (Guinet, 1980; Pezzot and White, 1984; Stelling, 1975). These occurrences are examples of podiform chromite that formed in the ultramafic part of an ophiolite complex. Mapping by the GSC identified nine chromite pods in the Trembleur ultramafic rocks within or nearby the Decar Property, with follow-up work suggesting these pods are generally too small to be economic. Grab samples of Decar area chromite returned grades of 17.8% to 38.9% Cr (Guinet, 1980).

8.0 DEPOSIT TYPES

Disseminated awaruite (Ni₂Fe to Ni₃Fe) mineralization is an unusual deposit type, with occurrences on the Decar Property comprising the most advanced projects in the world (Britten, 2016). Terrestrial awaruite was first described in heavy black sand from the South Island of New Zealand (Ulrich, 1980), and has since been found as a minor component in altered ultramafic rocks all over the world. It is formed during serpentinization of peridotite whereby nickeliferous olivine is altered to serpentine minerals and awaruite + magnetite under conditions of low oxygen fugacity (Frost, 1985). A general unbalanced reaction that illustrates this mineralogical and metal exchange is as follows (from Britten, 2016):

> $4(MgFeNi)_2SiO_4 + 2H_2O \Rightarrow 2Mg_3Si_2O_5(OH)_4 + Fe_3O_4 + Ni_3Fe + H_{2(g)}$ olivine water serpentine magnetite awaruite

The alteration of olivine-rich ultramafic rocks to 60-80% serpentine results in a density decrease from 3.3-3.4 g/cm³ for olivine-rich rocks to 2.7 g/cm³ for serpentinite, and a volume increase of 18% to 55% related to a gain of 10-14 wt% H_2O (Britten, 2016).

A recent overview of the awaruite deposits hosted in Cache Creek terrane (Britten, 2016) suggested that a key part of the ore forming process was a prolonged period of post-accretionary transpression, which resulted in significant strike-slip displacement and, more importantly, ingress of relatively clean and possibly oxygenated meteoric water. Deformation generated high porosity zones up to several hundreds of metres in width that are now marked by foliation as well as crackle breccia and microfracture textures. Subsequent processes then necessary to produce awaruite included the hydration of olivine to serpentine minerals, ingress of water with low sulfur and CO₂ activity, oxidation of iron to produce magnetite, the maintenance of low oxygen fugacity and, eventually, addition of H₂ through reduction of Fe and Ni. Hydration at temperatures of <100 to 200°C is likely capable of producing fine-grained awaruite (<20 µm) in association with low-temperature serpentine minerals (e.g. lizardite, chrysotile) and brucite (Britten, 2016). More elevated temperatures (200 to >400°C) are probably necessary to form the larger grains like those on the Decar Property, which are associated with antigorite. The highest temperature (>450°C) conditions produce the highest amount of magnetically recovered awaruite, in association with the metamorphism of serpentine and magnetite to olivine and diopside (Britten, 2016).

Besides the Decar Property, other awaruite occurrences are found in the northern outcrop area of Cache Creek terrane (see Figure 7-1) and in the Dumont deposit of Québec, Canada. Prospects in the northern Cache Creek terrane include Orca, Wale, Letain and Mich, and are similar to those at Decar (see Britten, 2016). At the Dumont deposit, awaruite occurs as pervasively disseminated grains between <50 to 400 µm in size hosted in serpentinite and spatially associated with magnetite and chromite (Staples et al., 2011). Although sulfides are widespread in the Dumont deposit, there are zones where only the Ni-Fe alloy is present. Minor abundances of awaruite also occur together with nickel and copper sulfide in the Duluth complex of Minnesota, USA, and appears to be of magmatic, rather than secondary, origin.

Awaruite is highly magnetic and dense ($\rho = 8.2 \text{ g/cm}^3$) and is consequently more amenable to concentration by mechanical processes (i.e. magnetic, gravity separation). In addition the ultramafic tailings from awaruite concentrate production could potentially be used for CO₂ sequestration (e.g. Vanderzee et al., 2018), offering a significant environmental advantage over Ni-sulphide sources.

Because metallurgical properties play such a vital role in the economics of awaruite projects the grades are presented as Davis Tube Recoverable (DTR) nickel. The Davis Tube consists of an inclined water-filled tube placed between electromagnets (Svoboda, 2004) and is used to split finely-ground powder into magnetic and non-magnetic fractions. DTR nickel is calculated as follows:

weight magnetic fraction

 $DTR Ni = wt\%Ni0 * 0.7858 * \frac{1}{(weight magnetic fraction + weight nonmagnetic fraction)}$

Data required to calculate DTR Ni is provided by the analytical lab, which besides reporting weight percent nickel oxide (wt%NiO) also report the weights of the magnetic and non-magnetic fractions split with the Davis Tube. Nickel content is calculated by multiplying NiO by 0.7858, which is the ratio of molar weights for Ni/NiO.

9.0 EXPLORATION

FPX staked about half of what is currently the Decar Property in 2006, and subsequently embarked on a four-year campaign that included additional staking, geological mapping and sampling, geophysical surveys, and metallurgical testwork before optioning the project to Cliffs in 2009. Cliffs then funded exploration on the Property from 2010 to 2013, publishing a maiden resource for the Baptiste Deposit in 2012 (Ronacher et al., 2012a) followed by an updated resource (Ronacher et al., 2013) and PEA in 2013 (McLaughlin et al., 2013). Since 2013, FPX has completed additional mapping and surface sampling work, in addition to expansion drilling on the Baptiste Deposit in 2017.

This section describes geological mapping, surface sampling and geophysical surveys that have been carried out by FPX and Cliffs on the Decar Property since 2006. Descriptions include procedures and parameters used to execute the work, sampling methodology and QA/QC, as well a summary of significant results and interpretation. Diamond drilling is summarized in section 10.0 of this report.

9.1 Geological mapping and surface sampling

Geological mapping, rock sampling and petrographic work done on the Decar Property is summarized in Table 9-1, with the sample totals shown derived from the FPX database. These totals are either equal to or higher than the number submitted for assessment. Mapping and rock sampling were notably effective in defining the Baptiste, Sid, B and Van targets on the Property. Sampling locations are shown in Figure 9.1.

In 2007, FPX conducted a prospecting and rock sampling program over a 4 x 6 km area of the Decar Property that included the Van, B and Sid targets (Figure 9-1). Work was done from 10 to 24 August, 2007 and resulted in the collection of 60 rock samples between 1-2 kg in size (Voormeij and Bradshaw, 2008). Sample locations were marked with a Garmin GPS 60 unit, which typically has an accuracy of \pm 5-10 m. Samples were mostly serpentinized peridotite (N = 49), of which 42 were analyzed by Acme Analytical Laboratories (ACME) of Vancouver, BC. Total nickel in these samples averaged 0.21% Ni with a range of 0.12% to 0.28%.

The following year, FPX completed geological mapping, rock sampling and stream sediment sampling (Britten, 2009). Four bulk samples weighing 20 to 120 kilograms were also collected for metallurgical work. All sample locations were marked with a handheld Garmin GPS 60 unit. Rock samples were taken from outcrop, analyzed with a portable XRF Niton NLp 502 Analyzer ("**portable XRF**") and then slabbed with a diamond saw to help make more accurate visual estimates of awaruite content and grain size. Results showed that awaruite occurs widely across the Property and forms zones of consistently larger grain size (100-400 microns) that defined the Baptiste Deposit and Sid Target (Britten, 2009). SEM analysis of 105 awaruite grains from 13 samples indicates an average of 77% Ni and range from 68 to 85% Ni (Le Couteur, 2008).

Seventeen of the 37 sediment samples were sieved to -80 mesh and then analyzed with the portable XRF, whereas a heavy magnetic fraction was separated from the remaining 20 samples by panning overtop of a strong magnet (Britten, 2009). On average, the heavy magnetic fractions were found to contain 2-4 times more Ni than the -80 mesh sediments.

Additional geological mapping, rock sampling and stream sediment sampling was done in 2009 (Britten, 2010) using methods similar to the 2008 program, including analysis of rock samples with portable XRF, separation of magnetic fractions from sediment samples, and SEM analysis of awaruite in thin section. A total of 130 rock samples and 50 stream sediments were collected. Rock sampling focussed mostly on the Van and Baptiste areas, and helped double the size of the Baptiste Deposit to a length of 1750 m and width of 800-1300 m (Britten, 2010). Three patches of coarse-grained awaruite, separated by overburden, were mapped at the Van Target and could be linked into a single zone up to 700 m in size (Britten, 2010).

Stream sediments were dried, sieved to -60 mesh, separated with a pencil magnet and then analyzed with a portable XRF. Magnetic fractions returned 1215-4791 ppm Ni, with silts taken from the Baptiste Deposit consistently in the 3000-4800 ppm range and those taken from the Van Target between 2000-3000 ppm.

Year	Rock (N.o.)	Stream Sediment (N.o.)	Petrography (N.o.)	Geochemical Assay	Reference
2007	60			ACME	Voormeij and Britten, 2008
2008	226*	37	13	Portable XRF, some ACME	Britten, 2009; FPX database
2009	130	50	6	Portable XRF, some ACME	Britten, 2010
2010	561	24		Portable XRF, some ACME	FPX database
2013	35			Portable XRF, some Actlabs	FPX database
2014	138			Portable XRF, some Actlabs	FPX database
Total	1150	111	19		

Table 9-1: Overview of FPX surface samples from the Decar Property

*Assessment report lists only 192 samples

The most extensive rock sampling campaign was done in 2010, with 561 samples collected from the Baptiste, Sid and B target areas, as well as from elevated ground in the southeastern part of the claim block. This work was not filed for assessment. Sample descriptions record rock type, serpentinization, magnetic susceptibility and awaruite grain size. Subsequent rock sampling campaigns focussed on the Baptiste (2013), Van (2014) and Sid (2014) areas, and again were not filed for assessment. This work resulted in the successful delineation of the Baptiste Deposit as a zone of increased awaruite grain size and has demonstrated significant potential at the Van Target, where larger awaruite grains occur over approximately 2.9 km² and assays have returned DTR Ni grades similar to Baptiste (FPX Nickel, 2018).

9.2 Geophysical, televiewer and Lidar surveys

The formation of magnetite together with awaruite during serpentinization suggests that geophysical surveys (e.g. magnetic susceptibility) could delineate awaruite-rich zones. Early testwork on hand samples by Walcott (2011) suggested that awaruite-rich zones may also show high chargeability and low resistivity. As a result, several property- and prospect-scale geophysical surveys have been carried out over the Decar Property and within individual drill holes, with the aim of establishing correlation between geophysical properties and mineralization (Table 9-2). Televiewer and Lidar surveys, which are used to collect relatively high resolution geotechnical and topographic data respectively, are also summarized in this section.

Survey Type	Contractor	Survey Name	Year	Production	Reference
Airborne magnetic	Aeroquest International Ltd	Decar	2010	1638.9 line-km	Britten and Rabb, 2011
Ground IP and magnetics	DE Walcott & Associatos	Baptiste grid	2010	20.1 line-km	Britten and Rabb, 2011
		Sidney grid	2010	9.0 line-km	Britten and Rabb, 2011
Downholo IP	Caraala Craak	Vertical profile (VP)	2011	17 drillholes	Palich and Qian, 2012
	Caracie Creek	X-hole tomography	2011	8 drillhole pairs	Palich and Qian, 2012
	DGI Geoscience	Poly-electric	2011/12	47 drillholes	Ronacher et al., 2013
		Natural gamma	2011/12	46 drillholes	Ronacher et al., 2013
Rock Properties		Magnetic IC	2011/12	42 drillholes	Ronacher et al., 2013
		Focused density	2011/12	21 drillholes	Ronacher et al., 2013
		Neutron	2011/12	21 drillholes	Ronacher et al., 2013
Televiewer	DGI Geoscience	Optical	2011/12	31 drillholes	Ronacher et al., 2013
		Acoustic	2011/12	36 drillholes	Ronacher et al., 2013
Lidar	Terra Remote Sensing	Decar	2012	389 km ²	Ronacher, 2013

Table 9-2: Overview of FPX geophysical, televiewer and Lidar surveys

9.2.1 Airborne gradient magnetic survey

From 10 to 12 April 2010, an airborne gradient magnetic survey was flown over a portion of the Decar Property by Aeroquest International Limited of Mississauga, Ontario, ("**Aeroquest**"). The following description of this program is adapted from Aeroquest's logistical report (Aeroquest, 2010) that was included as an appendix with the 2010 assessment report (Britten and Rabb, 2011).

The 2010 survey was done with Aeroquest's Bluebird Heli-TAG tri-axial magnetic gradiometer, and also using a GPS navigation system, radar altimeter, laser altimeter, orientation sensor, digital video acquisition system and base station magnetometer (Aeroquest, 2010). Total survey length was 1667.8 line-km of which 1638.9 km fell within the pre-defined project area coordinates, providing coverage over a 220 km² area at 150 m line-spacing. Lines were flown at an azimuth of 038°-218°. Nominal tower-bird clearance was between 30-50 m but was periodically higher due to terrain and the capability of the aircraft. The survey speed of 100 km/hr and sampling rate of 10 Hertz produced a reading about every 1.5 to 3.0 m along the flight path.

Aeroquest (2010) delivered six 1:20,000 maps that showed total magnetic intensity ("**TMI**"), gradient enhanced TMI with line contours, measured vertical gradient, measured transverse gradient, measured longitudinal gradient and a digital terrain model. All maps were projected in NAD83 UTM Zone 10. No further interpretation was done by Aeroquest.

Britten and Rabb (2011) used the airborne data to note that much of the Decar Property shows a northwest-southeast trending pattern of magnetic highs and lows (Figure 9-2) that they interpreted as regional-scale strike-slip faults that juxtapose different stratigraphic levels of the Cache Creek terrane. They also suggested that the Baptiste, Sid and Van targets all occur within, or close to the borders of, magnetic highs that enclose irregular-shaped subdued magnetic highs.

Figure 9-2: Total magnetic intensity (TMI) from the 2010 airborne survey (Aeroquest, 2010).

9.2.2 Ground-based induced polarization (IP) and resistivity

A ground-based induced polarization and resistivity (IP) survey was done on the Decar Property from 19 June to 6 July 2010. The survey was done by Peter E. Walcott & Associates Limited of Coquitlam, BC, ("**Walcott**") and the section below is mostly summarized from their logistical report (Walcott, 2011), which is publicly filed as an appendix in the 2010 assessment report (Britten and Rabb, 2011).

The 2010 IP survey followed up on laboratory testing that showed awaruite-bearing serpentinized peridotite has elevated chargeability (Walcott, 2011). A total of 29.1 line-km was surveyed over two grids, with 20.1 km on Baptiste and 9.0 km on Sid (Figure 9-3). The survey was done with a pulse type system where the transmitter was powered with a 7.5 kW 400 Hz three phase alternator, providing up to 7.5 kW of direct current to the ground. The transmitter cycling rate was set at 2 seconds each for "current on" and "current off", with the pulses reversing continuously in polarity. Apparent chargeability (mA) is presented as a direct readout of millivolt per volt (mV/V), using a 200 millisecond delay and a 1000 millisecond sample window by the receiver.

Surveying was done with the "pole-dipole" method, where the current electrode, C_1 , and the potential electrodes, P_1 through P_{N+1} , are moved in unison along the survey lines at a set spacing ("a") while the second current electrode is kept at "infinity". The distance between C_1 and the nearest potential electrode generally controls the depth penetration. On this survey 100 m dipoles were employed and first to sixth separation readings were obtained. At each station, elevation was measured with an ADC Summit altimeter, which uses barometric pressure to an accuracy of ±3 m. Corrections for variations in atmospheric pressure were made by comparison to base station readings taken at 10 minute intervals. Horizonal control was provided using a wide area augmentation system (WAAS) equipped Garmin GPSMAP 60Cx unit.

Figure 9-3: Plan map of contoured chargeability at N = 5 separations for the Baptiste and Sidney grids. Outlines of the Baptiste Deposit and Sidney target, as based on surface sampling, are also shown.

IP data was presented as individual pseudo-section plots of apparent chargeability and resistivity at 1:10,000. In addition, the third and fifth separation readings were contoured on a plan map at 1:10,000 (Figure 9-3). Ground magnetics were also contoured at the same scale.

Strong chargeability and resistivity responses were found to correlate with major lithological breaks and/or fault contacts, with no obvious correlation between IP response and awaruite mineralization. A very strong chargeability response was inferred to reflect 3% modal magnetite masking 0.1-0.3% nickel-iron alloy, although this is not always the case (Britten and Rabb, 2011).

9.2.3 Downhole induced polarization (IP) and resistivity

Downhole induced polarization and resistivity ("**DCIP**") surveys were done from 24 September to 27 October, 2011, and comprised vertical resistivity and chargeability profiling of 17 boreholes in addition to cross-hole tomographic imagining of eight drillhole pairs (Palich and Qian, 2012). These surveys were done by Caracle Creek International Consulting Incorporated of Sudbury, Ontario, ("**Caracle Creek**") with the objectives of (1) correlating DCIP and 2010 ground IP surveys, (2) mapping DCIP anomalies between boreholes, and (3) correlating DCIP features to lithology and awaruite concentrations (Palich and Qian, 2012).

Data was collected with Caracle Creek's proprietary EarthProbe DCIP system. Vertical resistivity and chargeability profiling was done by placing a standard current and potential electrode down a single borehole, with measurements taken in time-domain mode using an 8192 millisecond current injection square waveform (Palich and Qian, 2012). Based on an electrode separation ("a-spacing") of 4 m and 24 electrodes on each cable, the theoretical formation penetration is about 25 m off-hole. The EarthProbe survey down 11BAP019 was run with a longer cable (300 m) that allowed for theoretical penetration of 70 m. Cross-hole tomographic surveys were done by injecting electrical current between two electrodes across two drillholes, and then measuring the potential difference at the two electrodes immediately below the current injection electrodes (Palich and Qian, 2012). Results provide sections of resistivity and chargeability distribution between the two drillholes and can so assist in mapping conductor continuity.

IP data was presented as resistivity and chargeability strip logs and pseudosections plotted together with lithology, DTR Ni, Cr, Fe₂O₃ and magnetic susceptibility (Figure 9-4). Results indicate awaruite-bearing peridotite shows a general trend of low resistivity (<120 $\Omega \cdot m$) and high chargeability (>25 mV/V) (Palich and Qian, 2012), which is consistent with the findings of a surface IP. Higher resistivity zones, with or without chargeability, can be associated with unmineralized altered dykes and granitoid rocks.

Cross-hole tomographic data also shows that the more awaruite-enriched peridotite correlates with resistivity low and chargeability high (Palich and Qian, 2012). Low chargeability zones, with or without high resistivity, correlate with lower DTR Ni and typically do not exhibit connectivity between boreholes. The DCIP data therefore show similar resistivity and chargeability characteristics to the 2010 ground IP data.

Surface and downhole IP therefore both indicate weak positive correlation between DTR Ni and chargeability coupled with weak negative correlation between resistivity and DTR Ni (Palich and Qian, 2012). However, Palich and Qian (2012) suggest that this correlation could also be related to magnetite abundance, grain size and/or multi-element concentration as opposed to just awaruite mineralization, and so suggest caution is needed when using IP data for awaruite targeting.

Figure 9-4: Example of a downhole IP strip log generated for drillhole 11BAP003 showing (from left to right) lithology, %Ni in magnetic separate, %Cr in magnetic separate, %Fe₂O₃ in magnetic separate, magnetic susceptibility, resistivity and chargeability.

9.2.4 Downhole physical rock property surveys

From 2010 to 2012, Cliffs sub-contracted DGI Geoscience Incorporated of Toronto, Ontario, ("**DGI**") to complete downhole physical rock property surveys on 2010, 2011 and 2012 drillholes. These surveys were done after the drill rig had moved off the collar location and, consequently, a winch was used to move the various probes into and out of each drillhole. The 2010 program was a failure as all of the holes had collapsed even though they had been lined with PVC, thereby preventing entry of the probes. Out of the 67 holes drilled in 2011 and 2012, twenty-one were sufficiently open so that they could be surveyed from the top (TOH) to end of hole (EOH), 31 were partially surveyed, and 15 were either obstructed at TOH or not surveyed.

Physical property surveys are used to characterize rock types, define property-specific domains and constrain geophysical modelling. Surveys were completed from 4 July to 4 August and 15 September to 27 October 2011, and then the next year from 19 July to 25 September 2012. In total, 25 drillholes were surveyed in 2011 and 27 drillholes were surveyed in 2012. The geophysical probes used for the physical property surveys acquire *in-situ* data at 10 cm intervals while being lowered and/or raised in the drillhole, meaning the probes were in constant communication with the logging computer. A complete list of holes surveyed as part of this program is given in the previous technical report (Ronacher et al., 2013). DGI delivered the physical property data as databases and strip logs (Figure 9-5).

Poly-electric data was collected in 47 drillholes with a 2PEA-1000 PolyElectric probe, which measures normal resistivity, fluid resistivity and fluid temperature (DGI, 2012b) along a vector perpendicular to the drill string. Normal resistivity can mark lithological changes whereas fluid resistivity is needed to correct for the influence of drilling mud and borehole fluid. Changes in fluid temperature can mark zones of water movement.

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The natural gamma (γ) probe measures variations in the presence of natural radioactivity emitted by uranium, thorium and potassium, and consequently records changes in lithology. In addition, the natural gamma probe acquires spontaneous potential and single point resistance data, which provides additional data on lithology, borehole salinity and/or formational clay content (DGI, 2012b). Measurements were made on 46 drillholes using a 2PGA-1000 Natural Gamma probe.

Magnetic susceptibility and inductive conductivity was measured on 42 drillholes with a MagIC probe, and helps delineate lithology by characterizing changes in the abundance of magnetic minerals (DGI, 2012b).

Rock density was measured in 21 drillholes using a 2GDA Focussed Density probe. This probe uses a cesium-137 source to bombard wallrock with intermediate gamma ray energies that are then backscattered and received by the detectors to measure *in situ* density.

The neutron porosity probe uses an alpha emitting radioactive source, americium-241, mixed with beryllium to obtain relative neutron counts that are mostly related to hydrogen ion concentration (DGI, 2012b). Changes in these relative neutron counts could correlate with changes in lithology and/or porosity. Surveys were done on 21 holes using a 2LLP Neutron Probe. Twenty-one holes were also analysed with a sonic probe.

Cluster analysis of physical property data was used to define seven groups, two of which (PP1, PP2) show a strong correlation with high values of DTR nickel (DGI, 2012a). The PP1 group is marked only by low resistivity whereas PP2 is defined by low resistivity, natural gamma and chargeability, as well as high conductivity and magnetic susceptibility. Intermediate DTR Ni grades are associated with low natural gamma and high resistivity (PP5), or low resistivity, chargeability and natural gamma coupled to high conductivity (PP7).

Figure 9-5: Example of physical rock property strip logs provided by DGI and showing (from left to right), borehole diameter, natural gamma, neutron, near density, relative resistivity, relative resistivity repeat, magnetic susceptibility, induction, IP in 161, IP in 641, SP, SP resistance, fluid resistivity and temperature.

9.2.5 Televiewer surveys

Acoustic and optical televiewer surveys were completed by DGI together with the downhole rock property measurements (see Section 9.2.4). The acoustic televiewer ("**ATV**") probe produces acoustic images of the borehole wall that can be compared with other geological logs to measure the *in situ* (or true) orientation of structural features like bedding planes, faults and fractures (DGI, 2012b). ATV surveys were completed on 17 of the 2011 holes and 19 holes from 2012, for a total of 36 surveys.

The optical televiewer ("**OTV**") probe acquires a high-resolution digital image of the borehole wall under *in situ* stress, pressure and temperature conditions (DGI, 2012b), with the aim of identifying and characterizing structural features such as bedding, vein intersections, fractures and faults. Positional data is measured by an on-board magnetometer and inclinometer sensors, which allow the OTV data to be corrected to true azimuth and dip. OTV surveys were completed on 17 of the 2011 holes and 14 of those from 2012, for a total of 31.

FPX has summarized ATV and OTV data within spreadsheets that record the depth, true dip direction, true dip angle, width (in millimetres) and code for each structural feature. These features include major open, partially open and minor joint/fractures, bedding/banding/foliation, cleavage, water level, vein, fold, lithology contact, faults and shear zones. No publicly filed or unpublished internal reports are available that summarize the televiewer work, although the data is well-organized so that it can be effectively used for future work.

9.2.6 Lidar

A light detection and ranging (Lidar) survey was completed over most of the Property from 10-17 July 2012, by Terra Remote Sensing Incorporated of Sidney, British Columbia ("**Terra Remote**"). Data processing was completed in fall 2012 and the final report (Terra Remote Sensing Inc., 2013) is publicly filed as an appendix in the 2012 assessment report (Ronacher, 2013). The survey covered a 388.7 km² area at a line-spacing of 700 m. Terra Remote also took a digital 1:10,000 orthophoto of the Property.

The Lidar survey was flown with a Piper Navajo fixed-wing aircraft based in Burns Lake, BC, approximately 80 km southwest of the Property. The aircraft was equipped with a combined GPS/Inertial Navigation System (GPS/INS) to follow the pre-determined flight lines and maintain a nominal height of 1150 m above ground level. An average speed of 234 km/hr was maintained along with a pulse repetition frequency of 100 kHz and swath speed of 34 times/second, thereby achieving a survey density of 1-2 points/m² (Terra Remote Sensing Inc., 2013).

Quality assurance and quality control (QA/QC) of Lidar data was monitored with four control points located within the project area. The difference between known and measured elevations for these control points ranged from +8 cm to -30 cm, and averaged -13 cm (Terra Remote Sensing Inc., 2013). Relative and absolute accuracy is subsequently estimated at ±15 cm and ±20 cm respectively. Lidar points were converted to 1 m contours to provide a more accurate topographic map of the Property.

10.0 DIAMOND DRILLING

Diamond drilling for Ni-Fe alloy deposits on the Decar Property was first done in 2010, with additional campaigns in 2011, 2012 and 2017. Drilling focussed on exploration (2010, 2011), resource definition (2011,2012) and resource expansion (2017), as well as infrastructure planning (2012) for the PEA (McLaughlin et al., 2013). In total these campaigns resulted in 88 holes for 32,140 m (Table 10-1), most of which was focused on the Baptiste Deposit. Other drill-tested targets include B and Sid. Depth, collar location, azimuth and dip data for the Baptise drilling is shown on Figure 10-1 and, for all 88 holes, is attached as Appendix B.

The following sections describe the four drill campaigns done by FPX and Cliffs between 2010 and 2017. The procedures followed in all programs are broadly similar. Most holes were drilled at dips of -50° to - 60° through vertically-oriented mineralization, so that the horizontal and vertical extents of the mineralization is equal to 50-65% and 75-85%, respectively, of their downhole length. Fifty-four of the 76 holes (or 70%) drilled to delineate the Baptiste Deposit ended in mineralization (Figure 10-2), with several others mineralized to within 10 m from the end of hole.

Composites presented in Tables 10-2 to 10-5 were calculated for intervals with contiguous assays exceeding 0.06% DTR Ni and containing less than 15 m of consecutive samples with grade below 0.06% DTR Ni. When an interval of >15 m of <0.06% DTR Ni was encountered, the composite was split.

Year	Target	DDH (N.o.)	DDH (Total m)	Avg. m/DDH
2010	Baptiste	7	1,710.8	244.4
2010	Sid	3	847.3	282.4
2011	Baptiste	35	10,863.6	310.4
2011	B Target 1 304.5		304.5	304.5
2012	Baptiste	27	15,095.8	559.1
2012	Hydrogeological	7	1,401.0	200.1
2017 Baptiste		8	1,917.5	239.7
Total		88	32,140.5	

Table 10-1: Summary of drilling done by FPX on the Decar Property

10.1 2010 drilling program

The 2010 drilling program on the Decar Property comprised 10 holes for 2558.1 m, with seven drilled on the Baptiste Deposit and three drilled on the Sid Target. Drilling was done from 19 July to 22 August 2010 by Radius Drilling Corporation of Prince George, BC.

Holes were spotted using a handheld Garmin GPS 60CSx device with a nominal accuracy of 5-10 m. After completion of the hole, FPX surveyed the collar locations with the same handheld GPS unit. The ten 2010 holes were drilled off six pads, with four of these pads used for two holes. Azimuths of follow-up holes were oriented at various angles relative to the first one, including parallel, normal and in the opposite direction.

Hole lengths range from 71.0 to 398.4 m depth, with three holes ranging from 71-103 m, one at 236.8 m and six from 306.9-398.4 m. All three of the shorter holes were abandoned due to poor ground conditions whereas the 236.8 m hole was shut down due to weak mineralization. Four of the Baptiste holes were drilled to the northwest (azimuth = 330°), two were drilled northeast (050°) and one was drilled to the southeast (150°). Sid holes were drilled at an azimuth of 210°. All holes were inclined at -50°.

During drilling, boreholes were surveyed by the drill crew using a Reflex single shot instrument. Results show differences of 1.5° to 12.2° between planned azimuths and the upper-most single shot test, suggesting the magnetic nature of the rock may have offset drill alignment, single shot surveys or both. Subsequent downhole testing indicates that for every 100 m of drilling, holes steepen 0.6° and rotate 1.3° clockwise. This sort of consistency is atypical for tests affected by magnetic rocks, suggesting the 2010 single shot data may be more reliable than would be expected for surveys in magnetic rocks.

The diameter of all 2010 core is NQ (47.6 mm), with the exception of 2010DDH001 which was drilled using HQ from surface to 17.68 m. Drill core was placed in wooden core trays at the drill site, that were then labelled with the hole ID and box number and transported to the Decar Camp for logging. Each core box was labelled with an aluminum tag indicating the hole number and core interval stored in each box. All 2010 core is currently stored in a fenced compound in Fort St. James, where it is ordered in core storage racks.

Recovery averaged 90.9% for the seven holes drilled at Baptiste and was slightly higher on the three Sid holes, at 91.8%. Rock quality designation (RQD), which is measured by summing the length of all core fragments >10 cm long within each 3 metre run, is 50.6% for the Baptiste holes and 51.5% for Sid, with individual holes ranging from 43-63%. This RQD straddles the boundary between weathered (25-50%) and moderately weathered rock (50-75%). Magnetic susceptibility was measured at 1 m intervals and is very high, averaging 27-46 SI units for all 10 holes.

Drill core was logged with a focus on lithology, awaruite content and magnetic susceptibility. By logged metres, the lithology of the Baptiste holes comprised 72% serpentinized peridotite along with 14% other peridotite (i.e. massive, hornfelsed, cataclastic, mylonitized), 8% dikes and faults, and 7% overburden. Six of the seven holes hit long intervals of awaruite mineralization, with the exception being 2010DDH002. Just under 65% of the metres drilled at Sid returned serpentinized peridotite, with the balance intersecting unmineralized massive peridotite (21% of metres), listwanite (9%), dikes and faults. Long intervals of large awaruite grains were logged in two of these three holes.

Drill core sampling, assay methods and quality assurance/quality control ("**QA/QC**") data is reviewed in Section 11.0 of this report. Assay composites for the 2010 drilling are shown in Table 10-2, with the best intervals at Baptiste returned from holes 2010DDH001, 003 and 006. Hole 2010DDH001 is the central-most of these three holes, with 003 located 740 m west and 006 located 860 m to the northeast. Together with surface data, these three holes suggest contiguous awaruite mineralization over 1.5 km of strike length and to a true vertical depth of 250 m below ground surface. High-grade DTR Ni was also intersected in 2010DDH007 but the hole was abandoned in a fault zone at 70.1 m depth.

Drillhole ID	From (m)	To (m)	Length (m)	DTR Ni	Grade * L	Comments	
2010DDH001	3.1	322.2	319.1	0.123	39.337	Starts and ends in mineralization	
including	3.1	172.5	169.5	0.132	22.291		
2010DDH003	47.2	340.5	293.2	0.138	40.471	Top to bottom	
2010DDH006	13.5	337.0	323.5	0.112	36.172	Top to 3.5 m from bottom	

Table 10-2: Composites >20 DTR Ni%*m from 2010 drilling on Decar Property

10.2 2011 drilling program

The 2011 drilling program comprised 36 holes for 11,168.1 m, with 35 of these holes drilled on the Baptiste Deposit and one drilled at the B Target. Drilling took place from 1 July to 26 October 2011 and was done by three contractors; Apex Diamond Drilling Limited of Smithers, BC, Element Drilling Limited of Winnipeg, Manitoba, and Midpoint Drilling Limited of Langley, BC. These three contractors supplied four drill rigs, two of which were helicopter-portable, one skid drill rig and one heli-portable rig that was converted to a skid rig.

The 2011 drilling program was managed by Caracle Creek. Drill collar locations were measured with a differential GPS ("**DGPS**") system except for the single hole drilled at the B Target, which was surveyed with handheld GPS. DGPS uses a network of fixed ground-based and GPS satellite systems to achieve nominal accuracy of 10-15 cm. Handheld GPS uses only satellites and has nominal accuracy of 5-10 m.

The drill plan was designed to test the Baptiste Deposit on 13 sections at 200 m spacing, with each section containing one to five drillholes. Section orientation ranges from 028° at the western end of the Deposit area to 332.5° at the eastern end. Each hole from the 2011 program was drilled off its own pad.



Drillhole ID	From (m)	To (m)	Length (m)	DTR Ni	Grade * L	Comments
11B001	30.0	301.0	271.0	0.134	36.4	Starts and ends in mineralization; samples 1 every 4 m
11BAP001	86.14	275.2	189.1	0.129	24.3	Ends in mineralization
11BAP003	5.6	310.9	305.3	0.126	38.6	Starts and ends in mineralization
11BAP004	71.0	304.5	233.5	0.126	29.4	Ends in mineralization
11BAP005	45.0	304.5	259.5	0.143	37.1	Starts and ends in mineralization
11BAP007	48.0	304.5	256.5	0.150	38.5	Ends in mineralization
11BAP009	6.0	229.0	223.0	0.131	29.2	Starts in mineralization
and	249.0	400.0	151.0	0.134	20.3	
11BAP012	104.5	301.4	196.9	0.141	27.8	Ends in mineralization
11BAP013	9.0	216.0	207.0	0.135	27.9	Starts in mineralization
11BAP014	41.0	265.0	224.0	0.121	27.2	
11BAP017	17.0	304.9	287.9	0.118	34.1	Starts and ends in mineralization
11BAP018	6.3	301.0	294.8	0.117	34.5	Starts and ends in mineralization
11BAP020	7.0	288.0	281.0	0.122	34.3	Starts and ends in mineralization
11BAP021	21.0	302.0	281.0	0.122	34.2	Starts and ends in mineralization
11BAP022	109.6	301.5	191.9	0.116	22.3	Ends in mineralization
11BAP023	33.0	301.0	268.0	0.127	34.1	Starts and ends in mineralization
11BAP027	118.0	310.5	192.5	0.114	21.9	Ends in mineralization
11BAP029	11.0	298.4	287.4	0.127	36.6	Starts and ends in mineralization
11BAP030	13.0	301.5	288.5	0.127	36.7	Starts and ends in mineralization
11BAP032	6.0	258.0	252.0	0.116	29.2	Starts in mineralization
11BAP034	6.0	298.4	292.4	0.108	31.6	Starts and ends in mineralization
11BAP035	6.0	298.4	292.4	0.112	32.6	

Table 10-3: Composites >20 DTR Ni%*m from 2011 drilling on the Decar Property

Thirty-five of the 36 holes have lengths between 275-311 m, with the exception being a single hole drilled to 606 m (11BAP009). No holes were lost or abandoned prior to hitting their target depth. Hole azimuth was dependent on the collar location, with azimuths ranging from 028° for the western-most holes to 332.5° for the eastern-most, with a range of azimuths in between. Thirty-four holes were drilled at an inclination of -50° with one drilled at -55°. The B Target hole was drilled at an azimuth of 264° and dip of -60°.

Downhole surveys on the Baptiste holes were done with the Reflex Gyro (N = 22) and EZ-shot systems (N = 13). There are no downhole surveys for the B Target hole. Only four Gyro surveys were done from the top to the bottom of the hole, with the rest of them stopped anywhere from 15% to 85% down the hole. Gyro surveys suggest that for every 100 m of drilling, holes steepen by -0.1° and rotate 0.4° clockwise. EZ-shot data shows slightly higher deviation rates (-0.5°/100 m for dip; +1.6°/100 m for azimuth) that again suggests the single-shot tools performed adequately given the magnetic nature of the bedrock.

The core diameter of the first 100-150 m of each hole was drilled as HQ diameter core (63.5 mm) followed by reduction to NQ (47.6 mm) for the remainder of the hole.

Drill core was placed in wooden core trays at the drill site, labelled with the hole ID and box number and then transported to the Decar Camp for core logging. Each core box was labelled with an aluminum tag recording the hole number, box number and core interval stored in each box. All the 2011 core is currently stored in a fenced compound in Fort St. James.

Recovery averaged 91.9% for the 35 holes drilled at Baptiste and 87.5% for the one hole drilled at B Target. RQD averaged 49.8% for the Baptiste holes with a range of 32-74%, corresponding to rock mass quality of weathered to moderately weathered rock. Only 16 of the 35 Baptiste holes have magnetic susceptibility data, with 14 of these averaging 50-100 SI units and two averaging just 5 SI units. The two holes averaging 5 SI units (11BAP025, 028) intersected significant non-magnetic carbonate-altered ultramafic, dike and/or argillite.

Drill core was logged for lithology, structure and awaruite content. Lithologies intersected in the 2011 drilling are similar to the 2010 logging, with 72% comprising serpentinized peridotite, 15% comprising other types of peridotite and/or dunite, and the remaining 13% including dikes, argillite, chert, volcanic, overburden and fault zone. The hole drilled at B Target also was comprised of mostly peridotite.

Drill core sampling, assay methods and QA/QC data is reviewed in Section 11.0. Assay composites are summarized in Table 10-3. The best intervals at Baptiste were intersected in holes 11BAP003, 005, 007, 029 and 030, all of which returned 0.13-0.14% DTR Ni over 255-305 m. Another 17 holes returned composites averaging 0.11-0.13% DTR Ni over 190-295 m of core. Ten of the remaining 14 holes have intervals of >0.11% DTR Ni that are intercalated with >15 m thick intervals of unmineralized material, or mineralized intervals that start lower down the hole and continue to the end-of-hole (EOH). The four holes that returned the lowest-grade material were drilled on what is now the south margin of the Baptiste Deposit.

A composite calculated for the B Target drillhole returned 271 m of 0.134% DTR Ni, which is based on 1-metre samples taken every 4 metres.

10.3 2012 drilling program

The 2012 drilling program on the Decar Property comprised 34 holes for 16,496.8 m, with 27 of these drilled on the Baptiste Deposit (12BAP series) and seven drilled for hydrogeological purposes (12HG series). Drilling occurred from 25 June to 3 October 2012 and was done with three drill rigs contracted from Apex Diamond Drilling Limited of Smithers, BC, including two helicopter-portable rigs and one skid rig.

The 2012 drilling program was again managed by Caracle Creek and followed more-or-less the same procedures as the 2011 program, with the main change being continuous sampling of core as opposed to using regularly spaced intervals. Infill sampling of 2010 and 2011 drill core was also done to provide continuous sampling for those holes as well, although only results up to 11BAP011 (and none of the 2010 infill samples) were assayed by the cut-off date for inclusion in the 2013 resource update (Ronacher, 2013). The drill plan was designed to provide infill drilling within the western part of the Baptiste Deposit, and expand it to the west and southeast. Most holes were drilled off their own pad with the exception of 12BAP046/050 and 12BAP058/12HG08. Drill collar locations were measured with a DGPS.

The 27 holes drilled on the Baptiste Deposit have lengths between 300-603 m, with 25 of these ranging from 477-603 m. No holes were lost or abandoned due to bad drilling conditions. Hole azimuth was dependent on the collar location, with azimuths ranging from 028° (or 208°) on the west side of the Deposit to 340° (or 160°) on the east side. Twenty holes were drilled at an inclination of -50°, four were drilled at -60° and three at -65° to -70°. Six of the seven hydrogeological holes were drilled vertically (i.e. -90°) and ranged from 75 to 501 m in length.

Downhole surveys on 26 of the 27 Baptiste holes were done with the Reflex Gyro, with one hole collapsing before it could be surveyed (Ronacher et al., 2013). Only one of the seven hydrogeological holes was surveyed since six of them were drilled vertically. This survey was also done with the Gyro. All Gyro surveys were done from the top to the bottom of the hole at 10 m measurement intervals. Results suggest that for every 100 m of drilling the holes steepen by -0.2° m and show 1.3° of clockwise rotation.

Recovery averaged 93.4% for the 27 holes drilled at Baptiste and 92.1% for the seven hydrogeological holes. Rock quality designation (RQD) averages 48.1% at Baptiste with a range of 30-75% (weathered to moderately weathered), which is almost identical to the 2011 data. Hydrogeological holes show RQD of 40.6% with a range of 14-69%.

Only 26 of 34 holes have magnetic susceptibility data, with 22 of these averaging 34-110 SI units and the remaining four averaging 0-5 SI units. Holes with low average susceptibility have higher proportions of non-magnetic lithology like Fe-carbonate altered peridotite, listwanite, mafic volcanic, argillite and dikes.



Drillhole ID	From (m)	To (m)	Length (m)	DTR Ni	Grade * L	Comments
12BAP036	31.2	600.2	569.0	0.154	87.8	Starts and ends in mineralization
12BAP037	64.0	216.0	152.0	0.147	22.3	
and	298.0	600.0	302.0	0.146	44.1	Ends in mineralization
12BAP039	38.2	594.1	555.9	0.152	84.5	Ends in mineralization
12BAP040	33.0	588.0	555.0	0.152	84.3	Ends in mineralization
12BAP041	10.0	568.0	558.0	0.136	75.9	Starts in mineralization
12BAP043	33.3	426.0	392.7	0.155	60.9	
12BAP044	240.0	477.4	237.4	0.154	36.5	
12BAP045	6.0	487.0	481.0	0.139	66.9	Starts and ends in mineralization
12BAP046	28.5	292.0	263.5	0.142	37.3	Starts in mineralization
and	308.0	494.4	186.4	0.146	27.3	
12BAP047	6.0	600.0	594.0	0.128	75.8	Starts and ends in mineralization
12BAP050	34.5	249.0	214.5	0.140	30.1	Starts in mineralization
12BAP051	182.8	386.0	203.2	0.116	23.7	
12BAP052	271.0	600.2	329.2	0.154	50.6	Ends in mineralization
12BAP053	334.0	600.0	266.0	0.105	27.9	Ends in mineralization
12BAP054	2.7	600.0	597.4	0.127	75.9	Starts and ends in mineralization
12BAP055	106.0	569.7	463.7	0.156	72.4	Ends in mineralization
12BAP056	5.7	600.0	594.3	0.134	79.7	Starts and ends in mineralization
12BAP057	2.4	554.0	551.7	0.110	60.6	Starts and ends in mineralization
12BAP059	3.8	451.0	447.3	0.136	61.0	Starts in mineralization
12BAP060	156.0	404.0	248.1	0.150	37.1	
12BAP061	332.0	532.0	200.0	0.120	24.0	
12HG02	16.0	300.0	284.0	0.131	37.1	Ends in mineralization
12HG03	5.3	300.0	294.7	0.134	39.6	Starts and ends in mineralization
12HG04	176.0	380.0	204.0	0.130	26.6	

Table 10-4: Composites >20 DTR Ni%*m from 2012 drilling on the Decar Property

Drill core was logged for lithology, structure and awaruite content. Lithology comprised significantly less peridotite (63% of all core) than in previous years, with the intersection of more massive (i.e. unmineralized) peridotite suggesting that, in places, the edge of the Baptiste Deposit was likely reached. Other kinds of peridotite and dunite averaged just 9% whereas the balance of 12% is formed by argillite, dike, volcanic, overburden and fault zone.

Drill core sampling, assay methods and quality assurance/quality control data are reviewed in Section 11.0 and assay composites are summarized in Table 10-4. The best intervals at Baptiste were intersected in holes 11BAP036, 039 and 040, all of which returned 0.15% DTR Ni over 550-570 m. Another 15 holes returned composites averaging 0.11-0.16% DTR Ni over 210-600 m of core, with higher grades (0.15-0.16% DTR Ni) occurring over shorter intervals (230-470 m). The eight holes with weak to negligible mineralization were drilled along the northern and southern margins of the Deposit.

10.4 2017 drilling program

The 2017 drilling program on the Decar Property comprised eight holes for 1,917.5 m, all of which were drilled on the southeastern extension of the Baptiste Deposit. Drilling occurred from 19 August to 17 September 2017 and was done with one drill rig contracted from Apex Diamond Drilling Limited of Smithers, BC.

The 2017 drilling program was managed by Equity and more-or-less followed the procedures set out in the 2011 and 2012 programs. The objective of the drilling program was to extend near-surface, high-grade, mineralization at the southeastern end of the Baptiste Deposit. Seven of the eight holes were drilled off their



own pad, with holes 17BAP065 and 066 drilled from the same pad but at azimuths of 014° and 194° respectively. Drill collar locations were initially spotted with a handheld GPS and then surveyed by HGH Land Surveying from Smithers, BC with a global navigation satellite system (GNSS) base station and real time kinematic (RTK) rover. This survey also verified the location of some 2011 and 2012 drillholes, as well as the Lidar base station location points.

Six of the holes were drilled from south to north (356° to 014°), with five of these drilled to 250-390 m depth. The aim of these holes was to expand the Baptiste Deposit to the southeast. The sixth hole was stopped at 141 m depth because of the strong diking present from the top to bottom of the hole. The two other holes were drilled from north to south (azimuth 194°-195°) to depths of 90-96 m, with the aim of closing off the southwestern margin of the Deposit. All holes were drilled at a dip of -50°.

Downhole surveys were done with the Champ Navigator ("**Champ Nav**"), a multifunctional solid-state gyro system with azimuth accuracy of $\pm 0.75^{\circ}$ and $\pm 0.15^{\circ}$ for dip. All Champ Nav surveys were done from the top to the bottom of the hole at 5-10 m measurement intervals. Hole deviation rates are similar to previous campaigns, averaging 0.4° m of dip steepening and 1.1° of clockwise rotation for every 100 m of drilling.

Recovery and RQD measurements were also similar to the 2012 campaign, averaging 93.8% and 46.1% respectively. Magnetic strength was measured with a KT-10 magnetic susceptibility meter, with all eight holes averaging 40-120 SI units that indicates strong magnetic susceptibility. Those holes with the highest average readings (>80 SI units) intersected long stretches of serpentinized peridotite with higher proportions of magnetite and awaruite whereas holes with lower averages contained more carbonate-altered and hornfelsed peridotite, as well as dikes.

Drill core was logged for lithology, structure and awaruite content. Lithology comprised significantly more overburden (13% of all logged core) and cataclastic peridotite (16%) than previous campaigns, and consequently less mineralized peridotite (52%). The balance is formed by hornfelsed peridotite (6%), dikes (5%), Fe-carbonate altered peridotite and listwanite (4%), dunite (2%) and fault zone (2%).

Drill core sampling, assay methods and QA/QC data are reviewed in Section 11.0 and assay composites are summarized in Table 10-5. Two holes (17BAP065 and 17BAP067) returned intercepts averaging 0.12-0.15% DTR Ni over 290-325 m. Three other holes returned higher grades over shorter intervals (i.e. 0.156% DTR Ni over 117.2 m in 17BAP063) or grades of 0.10-0.13% DTR Ni over 140-200 m of core length. Holes 17BAP064, 066 and 069 returned negligible results and so define the southeastern margin of the Baptiste Deposit.

Drillhole ID	From (m)	To (m)	Length (m)	DTR Ni	Grade * L	Comments
17BAP065	29.0	351.0	322.0	0.126	40.6	Starts and ends in mineralization
17BAP067	55.1	348.5	293.4	0.145	42.6	Starts and ends in mineralization
17BAP070	44.0	243.0	199.0	0.100	20.0	

Table 10-5: Composites >20 DTR Ni%*m from 2017 drilling on the Decar Property

11.0 SAMPLE PREPARATION, ANALYSES AND SECURITY

Drill core sampling for the Decar Project was done over six campaigns, with four of these occurring concurrent with each drill program (2010, 2011, 2012, 2017) and two comprising infill sampling programs of 2010 and 2011 drill core that was done in 2012. During the 2010 and 2011 drill programs, samples were taken at regularly spaced intervals so that only approximately 13-24% of mineralized rock was initially sampled. Another 50% of 2010 core and 71% of 2011 core was sampled later as part of the 2012 infill sampling program. Samples taken concurrent with the 2012 and 2017 drill programs typically run contiguously from the top to the bottom of the hole. Collectively, these six campaigns have sampled and assayed 94.8% of the core drilled by FPX on the Decar Property. The 5.2% of unsampled core consists of non-ultramafic rock types (e.g. dikes, volcanic, argillite) and the three holes drilled on the Sid Target in 2010.

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The following sections describe how drill core was secured and handled, prepared for analysis, analysed and monitored for QA/QC. All analyses used in the resource estimate were done by Activation Laboratories Limited of Kamloops, BC, and, in 2010, Ancaster, Ontario ("**Actlabs**"). Actlabs is an independent commercial laboratory that has ISO 17025 accreditation. Core samples analysed by Acme Labs in 2010 were re-assayed by Actlabs to generate a consistent assay database.

11.1 Core Handling and Security

Core handling and security methods used for the 2010 program are not recorded, but are probably similar to procedures used on the 2011 and 2012 programs, which are described by Ronacher et al (2013). Initial sampling of 2010 core was done as 1 m samples every 5th metre along the drill core, so that only approximately 13% of the core was sampled concurrent with drilling (Table 11-1).

	Assay Samples			External* QA/QC Samples						
Campaign	N	Ave L (m)	% of m	CRM**	Blanks	Core Dup	Crush Dup	Pulp Dup	Total	%QA/QC
2010 drilling	308	1.0	13.1%	18	8	17	nc	nc	43	12.3%
2011 drilling	2605	1.0	24.3%	222	72	144	83	216	737	22.1%
2010 resampling	330	3.7	49.8%	33	10	17	nc	nc	60	15.4%
2011 resampling	2594	2.9	70.5%	218	73	51	nc	nc	342	11.6%
2012 drilling	4153	3.7	96.5%	352	123	243	191	198	1107	21.0%
2017 drilling	460	3.4	93.9%	45	16	13	8	nc	82	15.1%
Total	10450	2.7	94.8%	888	302	485	282	414	2371	18.5%

Table 11-1: Overview of Decar drill core sampling campaigns

*External = inserted by FPX, Caracle Creek or Equity; internal lab QA/QC was not compiled

**2-3 standards inserted for one CRM sample ID for the 2010 and 2011 drilling campaigns

nc = not compiled

Core sampling done concurrent with the 2011 drill program collected 1 m samples every fourth metre along the drill core, irrespective of rock type (Ronacher et al., 2013). Drill core was split with a core saw, with one half placed into a plastic bag with a pre-numbered sample tag ("**core sample**") and the other half placed back in the core box for reference ("**reference core**"). Certified reference material ("**CRM**") and blank samples were alternately inserted as every 20th sample. One core duplicate was also inserted in every 20 samples and comprised a quarter-core sample obtained by splitting the reference core, with the core duplicate then placed in its own plastic bag with a pre-numbered sample tag. All plastic bags containing core samples were sealed into rice bags. Sample transport from camp to Smithers, BC, was handled by CJL Enterprises Ltd of Smithers, BC, and Bandstra Transportation Systems Ltd ("**Bandstra**") then shipped these samples to the Actlabs facility in Ancaster, Ontario, for analysis.

The 2012 core and infill sampling programs were done under similar operating procedures to the 2011 program, with a few exceptions that are described here. Core sampling was done in contiguous 4 m intervals, as opposed to regularly spaced intervals, so that nearly 97% of the 2012 core had been sampled by completion of the drill program. Infill sampling of 2010 and 2011 core was also done to fill in the 3-4 m gaps between the regularly spaced 1 m samples that were taken concurrent with those drill programs. Sample transport from camp to Smithers, BC, was handled by Rugged Edge Holdings Ltd of Smithers, BC, and Bandstra then transported these samples to the Actlabs facility in Kamloops, BC, for analysis.

The 2017 drill program employed similar core handling and security procedures to those used in 2012. Sampling was again done in contiguous 4 m intervals, and the core-cutting, shipment, QA/QC insertion rates were all similar to previous programs. Core samples were sealed in plastic bags, then aggregated into groups of 5-10 that were sealed into rice bags with a uniquely numbered security tag. Samples were transported to Prince George, BC, by Equity and then to Actlabs in Kamloops, BC, by Bandstra.



Reference drill core from the 2010, 2011, 2012 and 2017 programs has been transported to Fort St. James, BC, where it is stored in a fenced compound owned by Russell Transfer Ltd. Core boxes are stored in metal racks and are generally well-preserved as of October 2017.

The core cutting, bagging and transport procedures for all programs are industry standard. The authors are unaware of any security concerns related to drill core from the 2010, 2011 and 2012 programs, and none were mentioned in the preceding technical reports (McLaughlin et al., 2013; Ronacher et al., 2012a, 2013), which were written by the managers of the 2011 and 2012 exploration programs. No security concerns were reported for the 2017 program. Core sampling is comprehensive and consistent, with assays for 94.8% of all bedrock drilled and all assays done at Actlabs. The QA/QC sample insertion rate of 18.5% is within the recommended best practise range of 15-20% (Abzalov, 2008; Mendez, 2011) and does include check assays or the coarse crush and pulp duplicates analyzed by Actlabs. Adding these in would likely increase the insertion rate to >20%. It is therefore the author's opinion that the methods used to split, sample, secure and transport drill core are typical of this industry, and that the QA/QC procedures are in line with industry best practise.

11.2 Analytical Techniques

The following two sections describe the analytical methods used for assay of drill core and QA/QC samples (section 11.2), followed by summaries of the CRM, blank and core duplicate performance (section 11.3). A detailed description of the 2011 and 2012 QA/QC monitoring is found in the 2013 technical reports by Ronacher et al (2013) and McLaughlin et al. (2013)

All assay results for drill core samples are compiled into a single database, although without results for QA/QC and re-assayed samples. For the purposes of this NI 43-101 report, QA/QC data was compiled from several Excel spreadsheets and Access exports provided to Equity by FPX. The omission of re-assays from the master database was discovered through a random spot check of 100 XRF and 100 ICP analyses as part of the data validation procedure for this report. In Section 18.0, we recommend that both the QA/QC and re-assay data is integrated into the core assay database be rebuilding it directly from the original assay certificates.

Geochemical assay of samples taken concurrent to 2010 drilling were done by Acme Analytical Laboratories Ltd of Vancouver, BC ("Acme"), an ISO 9001 accredited laboratory that was purchased by Bureau Veritas Mineral Laboratories in 2012. All subsequent assays were done Actlabs, with the 2010 analyses done at their facility in Ancaster, Ontario, and the 2011 to 2017 assays done in Kamloops, BC. In addition, coarse rejects from the 2010 samples analyzed by Acme were re-analyzed by Actlabs to generate consistency among all assays. Both Actlabs facilities are ISO/IEC 17025:2005 accredited, meaning they meet the general competency requirements to carry out tests and/or calibrations using standard, non-standard and laboratory-derived methods (ISO, 2005).

All mineralized core samples were assayed for "total nickel" and "recoverable nickel" (Table 11-2), with recoverable analyses measuring only the nickel hosted in awaruite and sulphide minerals (e.g. heazlewoodite, bravoite, pentlandite) whereas the total analyses measure both recoverable and refractory nickel, the latter hosted in silicate phases like olivine and, to a lesser extent, serpentine. Sample preparation procedures comprise crushing of the entire core sample followed by pulverizing a 250 g sub-sample to 95% passing 75 μ m (or 200-mesh). Pulp for total Ni analysis is then fused with lithium metaborate/tetraborate flux and analysed by inductively coupled plasma optical emission spectrometry ("ICP-OES"). Recoverable nickel is determined by first running the pulp through a Davis Tube magnetic separator ("Davis Tube"), which splits the pulp into a magnetic and non-magnetic fraction. The magnetic fraction is then fused with lithium metaborate/tetraborate flux and analysed by X-ray fluorescence ("XRF"). Davis Tube Recoverable nickel ("DTR Ni") is calculated using the equation shown in Section 8.

In 2010, Acme determined total nickel with a 4-acid digestion and ICP-OES finish whereas recoverable nickel was assayed with a non-standardized technique that used a proprietary selective extraction for nickelin-alloy and an ICP finish (8FPX method). The selective extraction targeted metallic nickel from non-silicate phases, specifically awaruite (T. Rabb and P. Bradshaw. personal communication, 09 January 2018). The proprietary selective extraction method was used only concurrent with the 2010 drill program, after which FPX switched to Actlabs and re-assayed the 2010 coarse rejects with XRF on the Davis tube magnetic fractions.



Compoint	P		Preparation		Total Nickel		Magnetic Separation		Recoverable Nickel	
Campaign	Lab	Code	Method	Code	Method	Code	Method	Code	Method	
2010 drilling	Acme	R200- 250	250 g passing 75 μm	1E	4-acid digest, ICP	n/a	n/a	8FPX	"metallic Ni by FPX method"	
2010 re-assay										
2011 drilling										
2010 infill	Actions	RX-	237-250 g	40	LiBO ₂ -LiB ₄ O ₇ fusion, ICP- OES	8- DTMS	Davis Tube magnetic separation	4C	LiBO ₂ -LiB ₄ O ₇	
2011 infill	Actians	Actiabs 1SD	1SD passing 75 μm	40					fusion, XRF	
2012 drilling										
2017 drilling										

Table 11-2: Overview of analytical methods for drill core used by FPX

11.3 Quality Assurance and Quality Control (QA/QC)

QA/QC samples monitor analytical accuracy and precision with CRM and duplicates respectively, as well as potential cross-contamination during sample preparation (with blanks).

CRMs were used to monitor accuracy of both total and recoverable nickel assays, as well as Davis Tube magnetic separation. Total Ni assays were predominantly monitored with OREAS13b, which is certified for a 4-acid digestion whereas the Decar samples were prepared with lithium-borate fusion. This mismatch in digestion methods does not follow industry best practise of matching the digestion method of CRM and core samples and reduces the relevance of CRM performance. Calculation of "**Z-scores**" (number of standard deviations an element is from the mean) shows that only a single CRM exceeds the widely used threshold of ± 3 for quality control failure, suggesting that assays are generally accurate. On the other hand, 85% of the OREAS 13b analyses returned a Z-score >0, with an average of +0.9 (Table 11-3). These results suggest there is a positive bias in the analytical data. Assays of OREAS 72b, 74b, 75b, which were certified with the same borate fusion used by Actlabs, are similarly biased, with 74% of Z-scores >0 (Figure 11-1).

Recoverable nickel assays were done on magnetic separates generated by the Davis Tube, and were monitored with higher-grade CRMs that have certified means between 0.4 to 5.4% Ni (Table 11-3). Between 2010 and 2012 the most frequently used CRM was OREAS 73a, where 81 analyses returned an average Z-score of +0.1 that suggests accurate and unbiased analyses. OREAS 72b, 74b and 75b, on the other hand, returned average Z-scores between +0.6 to +0.9 (Table 11-3) that again is suggestive of a positive analytical bias (Figure 11-2). All of these CRMs were certified with the same lithium borate fusion and XRF finish used by Actlabs.

In 2017, recoverable nickel assays were monitored with CRMs CDN-ME-9 and CDN-ME-10, both of which were certified through methods that are different from those used by Actlabs (Table 11-3). Again, such a mismatch does not follow industry best practise. A total of 24 analyses were done on these two CRM, returning no QA/QC failures but average Z-scores that, again, suggest a positive bias in the analytical data.

Starting in 2011, the accuracy of Davis Tube magnetic separation was monitored with an internal (or non-certified) "DTR" replicate developed by Cliffs from 50 kg of pulverized, awaruite-mineralized, ultramafic rock taken from the Baptiste Deposit (Ronacher et al., 2013). The DTR replicate was used to monitor the Davis Tube magnetic separation and XRF analysis of the magnetic separate. A total of 257 analyses of the DTR replicate were found within the FPX database, with percent DTR NI values returning an average coefficient of variation (CV_{ave}) of 11%, with 95% of the data returning CV_{ave} of 7%. In comparison, the CRMs used on the Dear Project have CV_{ave} of <5% for nickel. Based on the mean and standard deviations determined from the assay data, overall failure rates (i.e. Z-score >±3) for the DTR replicate were very high at 21%. The DTR replicate therefore performed significantly worse than a CRM.

A new set of internally derived DTR Ni replicates was used for the 2017 program and was made from outcrop samples of awaruite-mineralized peridotite collected from the Decar Property in 2007 (Voormeij and Bradshaw, 2008), 2008 (Britten, 2009) and 2013. The 21 replicates assayed along with the 2017 core samples show CV_{ave} of <5% for percent DTR Ni, indicating CRM-like levels of precision.





Table 11-3: Overview of CRM details and their performance for FPX on the Decar Property

Time

Figure 11-1: Shewhart control chart showing Z-scores against time for OREAS 13b, which tracks total nickel analyses by ICP. Positive and negative bias is indicated by Z-scores >0 and <0 respectively. Red and orange lines show Z-scores of ±3 and ±2 respectively.

-4.00



Figure 11-2: Shewhart control chart of Z-scores for CRM used to track XRF analyses of magnetic separate Positive and negative bias is indicated by Z-scores >0 and <0 respectively. Red and orange lines show Z-scores of ±3 and ±2 respectively.

Cross-contamination at the crushing and/or pulverization stages was monitored with blank material. In 2011 and 2012 this material is referred to as "quartz" and "quartz sand" (here assumed to be the same material) whereas blank used for the 2017 program comprised unmineralized bedrock from the Sitlika assemblage. Quartz sand would only assess contamination in the pulverization stage. Out of the 274 blank assays in the database, 97% of the XRF and 95% of ICP-OES analyses were at or below detection. Two of the XRF assays exceeded the threshold of 10x detection limit for contamination and none did for ICP-OES. These results suggest that cross-contamination at the preparation stage is insignificant.

The Sitlika bedrock blank used in 2017 was used to monitor potential cross-contamination within the Davis Tube. Prior to sampling, outcrops were tested with a KT-10 magnetic susceptibility meter to ensure that they were non-magnetic. This blank material was then crushed and pulverized in the lab and ran through the Davis Tube magnetic separator, yielding magnetic separates weighing between 0.004-0.145 g for a 30 g parent sample. In comparison, 30 g of mineralized peridotite typically yields close to 2 g of magnetic separate, or approximately 10-500 times that within the 2017 blank material.

Duplicate samples are used to quantify the reproducibility of assays in core, coarse crush and pulp material, typically showing increased precision from core through to pulp. Core duplicates consist of quarter core collected on site, crusher duplicates are split off the parent between the coarse crushing and pulverization stages at the lab, and pulp duplicates are split after pulverization. Precision of duplicate %Ni analyses can be quantified by calculating the average coefficient of variation (CV_{ave}), which can then be compared to published values (Abzalov, 2008) to provide some context (Table 11-4). For borate fusion and ICP-OES analysis of core, crush and pulp duplicates, CV_{ave} is within the best practise ranges provided by Abzalov (2008) for Cu-Mo-Au porphyry (Table 11-4), which are comparable to Decar in that they are also bulk tonnage deposits. Likewise, all three types of duplicate XRF analyses and magnetic separations also fall within the acceptable to best practise ranges proposed by Abzalov (2008).



Analysis	Duplicate	N @100%	CVave @ 100%	N @95%	CVave @ 95%	CVave Practice
	Core	426	8.7%	405	5.6%	Best
Ni by borate fusion, ICP	Crusher	79	7.6%	75	6.1%	Best
	Pulp	406	5.2%	386	3.7%	Best
	Core	390	13.9%	371	10.6%	Acceptable
Ni by borate fusion, XRF	Crusher	229	6.6%	218	4.3%	Best
	Pulp	189	3.6%	180	2.9%	Best
	Core	393	14.7%	373	11.5%	Acceptable?
Magnetic separation (>0.1 g)	Crusher	237	14.6%	225	9.4%	Acceptable?
	Pulp	181	7.0%	172	3.1%	Best?

Table 11-4: Average coefficient of variation for Decar duplicates by different analytical methods

12.0 DATA VERIFICATION

Data verification done by the first author included (1) a visit to the Decar Property from 19 September to 21 September 2018, (2) 100 spot-checks of assays in the database against lab certificates, (c) re-calculation of composite intervals presented in sections 10.1, 10.2, 10.3 and 10.4 of this report, and (d) compilation and review of QA/QC data. In addition, the 2017 exploration program on the Decar Property was managed by the first author's employer (Equity), which is independent of FPX as defined in NI 43-101. The 2011 and 2012 exploration programs were also managed by independent consultants.

The first day of the 2017 site visit occurred two days after the completion of the 2017 drill program, although core processing was still on-going for drillhole 17BAP070. The first author liaised with the Equity project geologist who had been on site since 6 September 2018, and had directly overseen the drilling, logging and sampling of holes 17BAP067, 068, 069 and 070. Several poly-ethylene sample bags with core and QA/QC samples were examined (Figure 12-1a). Samples comprised serpentinized peridotite with visible awaruite mineralization that subsequently assayed 0.099% DTR Ni over 90 m. All reference core for 17BAP068 was examined and found to host relatively abundant visible awaruite mineralization from 26 m to 174 m core depth (Figure 12-1b). This interval assayed 0.127% DTR Ni over 148 m.

The Baptiste Deposit was traversed on 20 September 2018 to confirm the location of 2017 and historical drill collars (Figure 12-1c), as well as outcrops of Trembleur ultramafite mapped by FPX. Collar locations were measured with a handheld Garmin GPSMAP62. Offsets between 15 collar locations measured by the first author and their surveyed locations in the database range from 0.4-4.1 m and average 2.3 m, which is within the \pm 5-10 m error typical for handheld GPS. Elevations are within 6 m of those surveyed with DGPS. The collar azimuth and dip measured on the drill casings were also comparable to those recorded in the database.

Several outcrops examined at the northwestern end of the Baptiste Deposit were found to consist of peridotite and dunite (Figure 12-1d). Other outcrops found along the road include argillite and mafic volcanic of the Sitlika assemblage, the distribution of which is consistent with property-scale mapping.

The historical core yard in Fort St. James was visited on 21 September (Figure 12-1e), with the aim of cataloguing the inventory and reviewing some key intervals of drill core. The inventory was verified at approximately 30,200 m of core, which is consistent with the sum of metres drilled in 2010, 2011 and 2012. Historical core is clearly labeled and well-preserved. Historical core intervals that were reviewed include 18-64 m from 11BAP008, 22-39 m in 11BAP027 and 45-125 m in 12BAP043. The interval in 11BAP008 included the Sitlika argillite and mafic volcanic that bound the Baptiste Deposit to the southwest, 11BAP027 included an internal of (low-grade) mineralized dunite, and 12BAP043 comprised one of the higher-grade DTR nickel intervals intersected at Baptiste (Figure 12-1f).

The 2017 site visit, review of FPX data and management of the 2017 drill program by Equity has provided the necessary level of confidence that data from the Decar Project is adequate for the purposes of this report.





Figure 12-1: Photos from Voordouw's 2017 site visit that show (a) poly-ethylene bags with samples from 17BAP070, (b) awaruite mineralization in serpentinized peridotite, 17BAP067 at approximately 125 m depth, (c) reclaimed drill pad and casing for 17BAP068, with camp in the background, (d) outcrop of peridotite at northwest end of Baptiste Deposit, (e) part of the historical core storage yard in Fort St. James, and (f) serpentinized peridotite with high-grade awaruite mineralization at 85 m depth.



13.0 MINERAL PROCESSING AND METALLURGICAL TESTING

Cliffs and FPX engaged SGS Canada Incorporated of Lakefield, Ontario, (SGS) and the Knelson Research and Technology Centre ("**KRTC**") of Langley, BC, between 2010 and 2012 to characterize the mineralization and the metallurgical response of the awaruite ore from the Baptiste Deposit. Tests were conducted to determine the ore mineralogy, mineralogical association and liberation characteristics of awaruite, and the response of magnetic and gravity separation techniques to different grind sizes. KRTC conducted early gravity beneficiation tests (Card, 2010a, b), which were later confirmed by SGS during a bench-scale process simulation (SGS, 2012). SGS was also responsible for determining the mineralogical characteristics of the Decar samples (SGS, 2011). Summaries of this work are provided in this section.

13.1 2010 phase I metallurgical testing

KRTC was commissioned to perform Gravity Amenability Tests ("**GATs**") on a 20 kg outcrop sample taken from the Sid Target (sample ID 08RMB241). The parent outcrop was believed to be representative of the below ground mineralization, as it hosts significant coarse-grained awaruite, was not significantly weathered and lacked rusty stains expected for rocks with significant sulphide minerals. While weathering may influence crushing and grinding tests, it has minimal effect on magnetic and gravity separation tests. In addition, two nearby diamond drillholes (2010DDH009, 010) host significant disseminated, coarse-grained, awaruite that suggests the surface sample is representative of the below ground mineralization.

KRTC conducted its metallurgical testing in June 2010 on grind sizes of 80% passing (P80) 270 μ m and P80 89 μ m (Card, 2010a). Results for P80 270 μ m show that most of the recovery occurs in the first stage of the Knelson concentration, which contains 36.3% of the nickel in the head and assays 2.91% Ni (Table 13-1). When the sample is ground to a P80 of 89 μ m, the recovery and grade of total nickel in the first stage increase to 43.8% and 3.26% respectively (Table 13-2). Finer grinding therefore results in improved total nickel recovery and grade by lab-scale Knelson concentration (Figure 13-1).

The concentrates from the five stages of the lab-scale Knelson concentration were split into coarse (100-2000 μ m) and fine (<100 μ m) fractions, which were then further upgraded on "V" and flat profile Mozley tables respectively. The Mozley concentrates, middlings, and tailings for the coarse and fine fractions were each assayed for total nickel grade. For the P80 270 μ m, the Mozley tables were able to upgrade the first stage Knelson concentrate from 2.91% total nickel. to 9.98% whereas the P80 89 μ m grind was upgraded from 3.26% total Ni to 11.86%.

The results of the GAT indicate total nickel is likely recoverable by gravity separation and that finer grinding results in improved recovery and grade of total nickel. However, adding additional stages of Knelson concentration does not produce significant improvements in total nickel grade or recovery.

	м	ass	Tota	al Nickel	Stage Upgrade Ratio
	(g)	(%)	Assay %	Distribution %	(Concentrate: Head)
Stage 1 concentrate	74.8	3.1	2.91	36.3	11.5
Stage 2 concentrate	70.7	3.0	0.46	5.4	1.8
Stage 3 concentrate	69.5	2.9	0.31	3.6	1.2
Stage 4 concentrate	69.0	2.9	0.47	5.4	1.9
Stage 5 concentrate	66.9	2.8	0.21	2.4	0.8
Sub-total Knelson concentrate	351.0	14.8	0.91	53.0	3.6
Final Tails	2023.0	85.2	0.14	47.0	
Head (= concentrate + tails)	2374.0	100.0	0.25	100.0	

Table 13-1: GAT total nickel recovery and grade for P80 = 270 µm (from Card, 2010a)



	Mass		Tot	al Nickel	Stage Upgrade Ratio
	(g)	(%)	Assay %	Distribution %	(Concentrate: Head)
Stage 1 concentrate	66.3	2.8	3.26	43.8	15.9
Stage 2 concentrate	54.7	2.3	0.28	3.1	1.3
Stage 3 concentrate	55.1	2.3	0.20	2.2	1.0
Stage 4 concentrate	53.9	2.2	0.16	1.8	0.8
Stage 5 concentrate	55.1	2.3	0.15	1.7	0.7
Sub-total Knelson concentrate	285.0	11.8	0.91	52.5	4.4
Final Tails	2127.0	88.2	0.11	47.5	
Head (= concentrate + tails)	2412.0	100.0	0.21	100.0	





Figure 13-1 Cumulative gravity amenability test (GAT) recovery versus concentrate mass yield for total nickel (from Card, 2010a). Chart is derived from data in tables 13-1 and 13-2.

13.2 2010 phase II metallurgical testing

The August 2010 KRTC testwork (Card, 2010b) was conducted on a 1 kg magnetic concentrate derived from the same outcrop material as the June 2010 work (i.e. sample 08RMB241), with the concentrate sample named "Decar 3 pass Sala CN". The concentrate was made by passing sample material through a Sala CN Magnetic Concentrator at the Cliffs laboratory in Ishpeming, Michigan. Three passes of magnetic concentration were used to upgrade the total nickel grade from 0.252 to 1.534%. The first pass of magnetic concentration was conducted on material with a P80 of 652 μ m, which was then reground to 60 μ m. A small quantity of magnetically recoverable material was lost due to mechanical difficulties with the magnetic concentrator, but this is unlikely to have affected the subsequent gravity testwork done by KRTC. The 1 kg sample provided by Cliffs to KRTC is believed to represent typical Decar magnetic concentrate.



KRTC's gravity amenability testing on the Decar 3 pass Sala CN sample was done in five stages, with the maximum grade of 12.3% total nickel occurring with recovery of 79.2% total nickel after only one stage of Knelson concentration (Table 13-3). This result compares favorably to grades of 3.26% total Ni and recovery of 43.8% obtained on non-concentrated material as part of the June 2010 testwork by KRTC (see Table 13-2). Supplying the Knelson concentrator with magnetically concentrated feed seemed to result in significantly improved total nickel recovery. The plot of cumulative total nickel recovery versus concentrate mass yield (Figure 13-2) illustrates that only a marginal improvement in total nickel recovery was gained with additional stages of Knelson concentration.

	Mass		Tota	al Nickel	Stage Upgrade Ratio
	(g)	(%)	Assay %	Distribution %	(Concentrate: Head)
Stage 1 concentrate	98.2	9.3	12.30	79.2	8.79
Stage 2 concentrate	75.9	7.2	0.68	3.4	0.49
Stage 3 concentrate	74.0	7.0	0.44	2.1	0.31
Stage 4 concentrate	63.2	6.0	0.31	1.3	0.22
Stage 5 concentrate	71.8	6.8	0.35	1.6	0.25
Sub-total Knelson concentrate	383.0	36.2	3.50	87.6	2.50
Final Tails	674.0	63.8	0.28	12.4	
Head (= concentrate + tails)	1057.0	100.0	1.40	100.0	

 Table 13-3: Total nickel recovery and grade for 6 August 2010 KRTC testwork



Figure 13-2: Cumulative recovery versus concentrate mass yield for the "Decar 3 Pass Sala CN" sample (from Card, 2010b). Total nickel data is also shown in Table 13-3. Alloy nickel is for Ni contained within awaruite only.



The concentrates from each stage of the laboratory-scale Knelson concentrator were separated into coarse and fine particles and further upgraded on a "V" or flat profile Mozley table respectively. The "V" profile Mozley table was used for particles between 2 mm and 100 μ m, while the flat profile Mozley table was used for particles with a diameter less than 100 μ m. The Mozley concentrates, middlings, and tailings for the coarse and fine fraction were combined and assayed for total nickel grade. The Mozley tables were able to upgrade the first stage Knelson concentrate from 12.3% total nickel to 27.2% total Ni.

The results of this GAT seemed to indicate significantly improved total nickel grades and recovery when the feed to the Knelson concentrator has been magnetically concentrated. Most of the total nickel was recovered in the first stage of Knelson concentration, and as a result, there is limited benefit to additional stages of upgrading.

13.3 2011 mineralogical characterization

A mineralogical characterization program was conducted by SGS in Lakefield, Ontario, on one master composite and five variability composites. Each composite weighed approximately 200 kg. Results of this work are summarized below.

The 2010 Master Composite sample was selected to be representative of the mineable material from a potential starter pit at the Baptiste Deposit and was derived from 42.5 m of drill core from diamond drillhole 2010DDH001 as well as 6 m from 2010DDH007, for a total of 48.5 m. The location of these drill collars is shown in Figure 10-1 and coordinates are listed in Appendix B. Material from 2010DDH001 falls within the 319.1 m interval grading 0.123% DTR Ni (see Table 10-2) whereas the 2010DDH007 material was collected over a 25 m interval grading 0.143% DTR Ni.

X-ray diffraction (XRD) shows that the 2010 Master Composite consists mostly of serpentine with minor magnetite, olivine and brucite and trace amounts of awaruite and pentlandite. This mineralogy was confirmed and quantified (Table 13-4) with Quantitative Evaluation of Minerals by Scanning Electron Microscopy (QEMSCAN). Electron microprobe analysis (EMPA) was used to determine the proportions of total nickel in the various mineral species, with results indicating that awaruite hosts 74.5% of total Ni in the sample whereas pentlandite and heazlewoodite host an additional 14.6% (Table 13-4).

Mineral	Abbreviation	Modal abundance (%)	Total Ni content (%)
Serpentine	Srp	85.3	6.3
Magnetite	Mag	5.0	3.4
Clinopyroxene	Срх	3.1	0.3
Olivine	OI	2.9	0.9
Brucite	Brc	1.3	
Cr minerals		0.9	
Calcite	Cal	0.5	
Awaruite	Aw	0.3	74.5
Chlorite	Chl	0.3	
Quartz	Qtz	0.1	
Feldspars	Fsp	0.08	
Pentlandite	Pn	0.05	4.6
Heazlewoodite		0.04	10.0
Other minerals		<0.1	
Total		99.9	100.0

Table 13-4: Mineralogy and nickel deportment for the 2010 Master Composite (from SGS, 2011)



QEMSCAN was also used to quantify mineral fraction particle sizes, liberation and association. The 90% passing (P90) value is 508 µm for the average particle and 110 µm for awaruite (SGS, 2011). Roughly 23% of the awaruite is present as liberated grains and <1% occurs in binary associations with either magnetite or nickel sulphide (SGS, 2011). Awaruite also forms binary associations with serpentine (34% of all awaruite), ternary or more complex associations that include magnetite (30%) and ternary associations of awaruite-serpentine-magnetite (7%). Liberated awaruite particles and specific composite particles of awaruite and magnetite, where both species form >5% of the overall particle mass, may be recoverable by magnetic means, with approximately 66% of the awaruite in the 2010 Master Composite meeting this description. The remaining 1/3 of awaruite is unlikely to be recoverable by magnetic concentration.

The 2010 variability composites include 2010 Baptiste 3, 2010 Sidney 10, 2010 Grain Size A, 2010 Grain Size B and 2010 Grain Size C. The Baptiste 3 sample was derived from drillhole 2010DDH003, which was drilled into the western half of the Baptiste Deposit (see Figure 10-1). This area is notable for showing relatively homogenous mineralization. QEMSCAN analysis indicates that 65.7% of particles may be magnetically recoverable (Table 13-5) because they consist of liberated awaruite or contain >5% by mass awaruite and magnetite. This result is similar to that obtained for the 2010 Master Composite.

The Sidney 10 sample was collected from drillhole 2010DDH010, which was collared on the northeast margin of the Sid Target and drilled towards the interpreted centre of mineralization. This drillhole is notable for hosting some of the largest awaruite grains seen during the 2010 drilling campaign. The proportion of awaruite expected to be magnetically recoverable is similar to the 2010 Master and Baptiste 3 composites (Table 13-5).

The Grain Size A composite contains a high proportion of awaruite grains between 100 to >400 μ m in size, corresponding to FPX field-based classifications of 3 (100-200 μ m), 4 (200-300 μ m) and 5 (300 to >400 μ m). Liberation characteristics are similar to the 2010 Master, Baptiste 3 and Sidney 10 composites, with 69.4% of awaruite expected to be recovered by magnetic separation (Table 13-5). The Grain Size B composite an even wider range of grain sizes, including 1 (<50 μ m) and 2 (50-100 μ m) in addition to 3, 4 and 5. QEMSCAN analysis shows this composite has the highest proportion of potentially magnetically recoverable awaruite (Table 13-5). The Grain Size C composite consists mostly of finer-grained awaruite corresponding to FPX field classifications of grain size 1, 2 and 3, and returned the lowest proportion of liberated awaruite (Table 13-5).

Sample	Liberated Aw (%)	Liberated Aw + Mag (%)*	Total Aw in magnetic con. (%)
2010 Baptiste 3	40.2	25.5	65.7
2010 Sidney 10	10.4	54.9	65.3
2010 Grain Size A	36.3	33.1	69.4
2010 Grain Size B	17	60.6	77.6
2010 Grain Size C	22.6	35.7	58.3

Table 13-5: Magnetically recoverable associations of awaruite (from SGS, 2011)

*Testwork suggests that particles where >5% of the overall mass is Aw or Mag may be magnetically recoverable.

13.4 2012 bench-scale investigation

The 2012 bench-scale test program was conducted by SGS in Lakefield, Ontario, using the same material used in the 2010 and 2011 testwork. Five of these composites (2010 Master, Baptiste 3, Grain Size A, B, C) were combined into a 50 kg "General Composite" with a head grade of 0.25% Ni (SGS, 2012) whereas the sixth (2010 Sidney 10) was excluded so as to restrict the focus of bench-scale tests on the Baptiste Deposit.

The aims of the 2012 bench-scale investigation were to determine the optimum grind sizes for rougher and/or cleaner magnetic concentration, as well as cleaner and/or re-cleaner gravity concentration. The magnetic separation tests were carried out using Davis Tube magnetic separators.

The total nickel recovery in a rougher magnetic separation was evaluated at grind sizes ranging from a P80 of 150 μ m to 600 μ m. These tests showed that the overall recovery of total nickel and magnetite changes from 62% to 79% for grind sizes of 150 μ m to 600 μ m, suggesting that the recovery of total Ni and Fe is not

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significantly affected by finer grinding. In lieu of this result, 10 kg of material was ground to approximately 600 µm to provide feed for the cleaning and re-cleaning tests. This sample was named "MS-1".

Some of the magnetically roughed material from MS-1 was re-ground to between 23 and 114 μ m to determine the performance of cleaner gravity separation. The total nickel recovery ranged from 47.8% to 65.1% respectively, and total Ni grade ranged from 14.1% to 21.4%. Some tests produced a product in excess of the target grade of 13.5% total nickel. To ease comparison between grind sizes, the overall DTR Ni recovery was interpolated for a 13.5% product (Table 13-6). The highest overall DTR nickel recovery of 85.3% occurred with a regrind size of 46 μ m although this is not substantially higher than the 84.7% recover obtained with a grind size of 70 μ m. The final regrind size was therefore specified as 70 μ m. The process will be assumed to match the results of the SP-1 test; however, the equipment will be sized to handle DTR nickel recovery in the range of 75 to 85%. A simplified process flow diagram is presented in Figure 13-3.

Total nickel refers to all the elemental nickel in a sample, regardless of its source. DTR nickel refers to all the nickel recovered by a Davis tube after being ground to P95 74 μ m. DTR nickel is a fraction of the total nickel in the sample, but most of the DTR nickel is recovered by magnetic means. As a result, the overall DTR nickel recovery is greater than the overall total nickel recovery.

Table 13-6: Calculated overall Ni recoveries for a 13.5% total Ni concentrate (from McLaughlin et al.,2013)

Test	Flow Sheet Description	Grind P80	Rougher Magnetic Total Ni recovery	Cleaner Magnetic Total Ni recovery	Gravity Recovery Total Ni to 13.5% Ni	Overall Total Ni recovery	Overall DTR Ni recovery
No.	(see Figure 13-3)	(µm)	(%)	(%)	(%)	(%)	(%)
SP-8	Two Piece Concentration	114	61.4	-	49.5	30.4	60.8
SP-7	Two Piece Concentration	90	61.4	-	48.5	29.8	59.5
SP-1	Two Piece Concentration	70	61.4	-	69	42.3	84.7
SP-2	Two Piece Concentration	46	61.4	-	69.5	42.7	85.3
SP-3	Two Piece Concentration	23	61.4	-	63.5	39	77.9



Figure 13-3: Two flowsheet considerations based on laboratory testing with (a) showing only rougher magnetic and gravity separation whereas (b) also includes cleaner magnetic separation (from SGS, 2012). Non-Mags = non-magnetic; Clnr NM = cleaner non-magnetic

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14.0 MINERAL RESOURCE ESTIMATES

This section describes the methods used to produce an updated resource estimate for the Baptiste Deposit on the Decar Property. No estimates of mineral resources or mineral reserves have been made for the Van, Sid and B targets.

14.1 Key assumptions and basis of estimate

The sample database supplied for the Baptiste Deposit contains results from 83 surface drillholes completed since 2010 (Table 14-1) or 96% of all metres drilled as shown in Table 10-1. In comparison to the 2013 resource estimate (Ronacher et al., 2013), the 2018 resource estimate incorporates an additional eight diamond drillholes (totaling 1,917 metres) completed during the summer of 2017, one hole drilled during the 2012 drilling campaign (which was not included in the 2013 resource estimate), and an additional 2,053 samples from core re-sampling of 2010 and 2011 drillholes completed in 2012. The average drillhole spacing in the Baptiste Deposit is 150 metres.

Year	Holes	Metres	Samples	Assayed m	Comments
2010	7	1,710.8	638	1,533.5	Samples include 2012 re-sampling program
2011	35	10,863.6	5199	10,176.5	Samples include 2012 re-sampling program
2012	32	16,346.8	4153	15,410.9	
2017	8	1,917.5	460	1,565.1	
Total	83	30,838.7	10450	28,685.9	

Table 14-1: Summary of drillhole and sample totals used in 2018 resource estimate

The 2018 resource model comprises a large, delta shaped volume that measures approximately 3.0 km in length and 150 to 1,080 m in width and extends to a depth of 540 m below the surface. The Baptiste Deposit remains open at depth over the entire system and is covered by an average of 12 metres of overburden.

Davis Tube magnetically-recovered ("**DTR**") nickel is the nickel content recovered by magnetic separation using a Davis Tube, followed by fusion with lithium borate and an XRF finish to determine the nickel content of the magnetic fraction; in effect a mini-scale metallurgical test. The Davis Tube method is the industry standard for the quantitative analysis of magnetic minerals (e.g. SGS, 2009).

14.2 Geological model

The updated geological interpretation was initially compiled in Micromine software using 26 section lines drawn parallel to the drillhole fences (Figure 14-1) and therefore ranging from an orientation of 030° at the western end of the Deposit to 330° in the northeast and 015° in the southeast. Reconciliation of the sectional interpretations was carried out on level plans at 200 m vertical intervals. String files of lithological contacts generated in Micromine were imported into Leapfrog software to generate solid models.

The updated geological model of the Baptiste Deposit was drafted by Equity and consists of four mineralized and six unmineralized (or barren) domains (Figure 14-2). The mineralized domains are:

- **Peridotite Mineralized**: main host of nickel mineralization, logged as "peridotite" (see Section 7.3.1), includes variably brecciated cataclastic and/or mylonitized peridotite;
- **Dunite**: grade is variable but typically lower than Peridotite Mineralized, logged as "dunite", forms layers in Peridotite Mineralized domain (Figure 14-2), marked by relatively fine grain size, locally brecciated.
- **Peridotite Massive**: weakly mineralized, logged as "massive peridotite" or possibly "peridotite", forms transition from Peridotite Mineralized to Low Grade domains (Figure 14-2),



more vein-controlled serpentinization as opposed to pervasive serpentinite alteration in Peridotite - Mineralized domain;

• Fe-Carbonate Altered Ultramafic: weakly mineralized, logged as "FeCb_AltUM", weak to moderate ("incipient") Fe-carbonate altered peridotite, forms gradation from Peridotite - Mineralized to barren Listwanite & Fe-Cb altered domains, occurs mostly along southern margin of Baptiste Deposit and around the Listwanite ellipse bounding most of the eastern margin;

The six domains modelled as unmineralized (i.e. very low grade to barren) are:

- **Peridotite Low Grade**: very low grade to barren, logged as "massive peridotite" (see Section 7.3.1), separated from Peridotite Mineralized by Peridotite Massive, more vein-constrained serpentinization relative to Peridotite Mineralized domain;
- Listwanite and Fe-Carbonate Altered Ultramafic: very low grade to barren, logged as "FeCb_Listwanite" and possibly the most altered examples of "FeCb_AltUM", pervasively altered peridotite consisting mostly of Fe-carbonate ± silica, separated from Peridotite - Mineralized domain by incipient Fe-Carbonate Altered Ultramafic domain;
- Altered dikes: barren, logged as "altered dikes", interpretation based on 2012 model (Ronacher et al., 2012a) extended into 2017 drilling area, sharp contacts with host rocks;
- **Metavolcanic**: barren, logged as volcanic, part of Sitlika succession bounding the southern margin of Baptiste Deposit, fine-grained, mafic to intermediate composition;
- **Metasediments**: barren, logged as argillite, part of Sitlika succession bounding the southern margin of Baptiste Deposit, fine-grained, black;
- Sitlika Metasediments: barren, not intersected in any drillholes, distribution based on outcrop mapping, part of Sitlika succession, heterolithic siltstone to sandstone, variably disrupted with bedding-concordant sulphide.



Figure 14-1: Plan map showing drill collar locations and section lines 1-26 on the Baptiste Deposit.





Figure 14-2: Geological model of the Baptiste Deposit showing the 10 lithological domains. Highest awaruite grades are hosted in the light green Peridotite - Mineralized domain.

14.3 Exploratory data analysis

Nominal sample lengths varied from 0.12 to 9.73 m for the various drill programs, with 36% of the samples exactly 4 m in length and only 1.7% of samples exceeding 4 m in length. Four metres was the targeted sample length for the 2012 and 2017 drilling campaigns, and also matches the 1 m original plus 3 m infill sampling done on the 2011 core. Data was therefore composited at 4 m intervals prior to statistical analysis

Statistical analysis of the grade distribution within the mineralized domains shows that the peridotite and dunite are the dominant hosts for the DTR Ni mineralization (Table 14-2, Figures 14-3, 14-4).

Statistic	Peridotite - Mineralized	Dunite	Peridotite - Massive	Fe-Carbonate Altered Ultramafic
Sample count	5226	305 453		404
Minimum % DTR Ni	0.000	0.000 0.004 0.000		0.000
Maximum % DTR Ni	n % DTR Ni 0.254 0.190 0.139		0.132	
Mean % DTR Ni	0.128	0.108	0.049	0.045
Median % DTR Ni	0.133	0.110	0.041	0.042
Standard deviation	0.034	0.030	0.029	0.024
Variance	0.001	0.001	0.001	0.001
Coefficient of variation	0.269	0.277	0.597	0.524
Kurtosis	1.486	-0.020	0.676	0.602
Skewness	-0.981	-0.154	1.050	0.569

Table 14-2: Descriptive statistics of 4 m composites from mineralized domains





Figure 14-3: Box plots showing the % DTR nickel grade distribution within mineralized domains. Prd_Min = Peridotite - Mineralized, Fe-Carb = Fe-Carbonate Altered Ultramafic, Prd_MM = Peridotite - Massive.



Figure 14-4: Frequency distribution of % DTR Ni grade within mineralized domains. Domain abbreviations are summarized in the caption for Figure 14-3.

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14.4 Density assignment

A total of 978 specific gravity measurements were used to assign bulk density values to the lithologic domains (Table 14-3). The median value of the readings for each rock type were used except in the case of the metavolcanics where the single result of 2.23 was deemed unreliable.

The median density for the four ultramafic domains ranges from 2.7 to 2.8 g/ cm³, which is closer to the typical densities for serpentine (2.2-2.9 g/cm³) than it is to olivine (3.2-4.5 g/ cm³). Median domain densities are therefore consistent with the pervasive serpentinization of all ultramafic rocks of the Baptiste Deposit.

Lithological domain	Lithological code	Specific gravity measurements (N.o.)	Median density (g/cm3)
Dunite	1	55	2.66
Peridotite - Mineralized	2	638	2.67
Peridotite - Massive	3	69	2.79
Peridotite - Low Grade	4	33	2.79
Fe-Carbonate Altered Ultramafic	5	57	2.68
Listwanite and Fe-Carbonate Altered Ultramafic	6	65	2.69
Metavolcanic	7	1	2.71*
Sitlika Metasediment	8	1	2.71
Metasediment	9	6	2.71
Altered Dikes	10	53	2.92
Total		978	

 Table 14-3: Density assignments for each lithological domain

*Actual median density is 2.23 g/cm3 but is considered unrepresentative

14.5 Grade capping and outlier restrictions

Grade distribution in the composited data was examined to determine if grade capping or special treatment of high outliers was warranted. Cumulative probability plots were examined for outlier populations and decile analyses was performed for percent DTR Ni within the mineralized domains. Generally, the cutting or restriction of high grades is warranted if the last decile (upper 10% of samples) contains >40% of the metal or more than 2.3 times the metal of the previous decile, or if the last centile (upper 1%) contains >10% of the metal or >1.75 times the metal of the next highest centile.

For the mineralized domains, the last decile contained only 15% of the metal and the last centile contained 1.7% (Figure 14-5). It is therefore concluded that no capping or restriction of higher grade composites is warranted.







14.6 Variography

Kriging parameters, search parameters and anisotropy were determined with semi-variograms for percent DTR Ni, using composites falling within the mineralized domains. Nested spherical models showed a maximum range of 540 m (Figure 14-6). The resulting search ellipsoid has a major axis trending at an azimuth of 114° with the semi-major axis plunging steeply to the north-northeast.



Figure 14-6: Variogram models for different plunges and azimuths of search windows.

14.7 Estimation and interpolation methods

A block model was created in Geovia-Surpac Vision software using a block size with dimensions of 10 m x 10 m x 10 m. Model extents are presented in Table 14-4.

The model blocks were first coded by the partial percent and below topography and the overburden surface. Lithologic domain codes and density values were then assigned.

	Easting (NAD83, Zone 10)	Northing (NAD83, Zone 10)	Elevation (m above sea level)
Minimum	346000	6081500	200
Maximum	351000	6085500	2000
Extent (m)	5000	4000	1800
Block size (m)	10	10	10
Blocks (N.o.)	500	400	180

Table 14-4:	Block mod	del extents
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DTR Ni grades within the corresponding lithologic domains were estimated in three passes using ordinary kriging (OK) and the inverse distance squared weighting method (ID2). A single pass nearest-neighbour (NN) estimate was also carried out for use in model validation. Search parameters are outlined in Table 14-5. The anisotropy conforms to the search ellipsoids derived from the variogram models.

Soft boundaries were used between the Peridotite - Mineralized and Dunite domains. Semi-soft boundaries (\pm 50 m) were used between the Peridotite - Mineralized, - Massive and - Low Grade domains as these contacts are gradational. A narrower semi-soft boundary (\pm 25m) was used between the Fe-Carbonate Altered Ultramafic and adjacent ultramafic domains, as those contacts are gradational in all directions.

Mineralized domains of the Baptiste Deposit are cut by 34 steeply dipping, non-mineralized dikes, comprising approximately 3% of the rock mass in the classified resource blocks. These dikes are all >5 m thick and were identified as rock units that could be selectively mined as waste; the volume represented by these dikes was subtracted from the resource blocks based on the partial percent of the block within the dyke. Dikes <5 m thick were treated as rock units that are internally dilutive and account for approximately 1% of the rock mass in the classified resource blocks.

Block model grade distribution is illustrated in Figure 14-7 to Figure 14-10.

Baca	Search Distances			Compos	ites Used	Maximum par bala	
FdSS	Major axis	Semi-major axis	Minor axis	Minimum	Maximum	waximum per noie	
1	150	118	90	12	36	11	
2	300	236	181	12	48	11	
3	500	394	301	12	48		

 Table 14-5: Grade model search parameters



Figure 14-7: Block grade distribution for the Baptiste Deposit in (clockwise from top left) plan view, eastwest section looking north, tilted view looking north and north-south section looking west.





Figure 14-8: Block grade distribution for the Baptiste Deposit on cross section 38400E



Figure 14-9: Block grade distribution for the Baptiste Deposit on cross section 349200E



Figure 14-10: Block grade distribution for the Baptiste Deposit on longitudinal section

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14.8 Block model validation

Block model validation included visual inspection, global bias check and a check for local bias. Each of these is summarized below.

Visual inspection comprised a visual comparison of blocks and composite grades in plan and section views. The estimated block grades showed reasonable correlation with adjacent composite grades.

A global bias check was done by comparing the mean percent DTR Ni grades obtained for indicated and inferred resources through the different estimation methods (Table 14-6). These results show a reasonably close relationship to each other and with composite values.

The local bias check was done with swath plots that were generated to compare OK, ID2 and nearest neighbour estimates on panels through the Deposit. Results show a reasonable comparison between the methods, as indicated by the bar charts on Figures 14-11 to 14-13, particularly in the main portions of the Deposit.

Population	% DTR Ni in indicated blocks	% DTR Ni in inferred blocks		
Kriged Blocks	0.120	0.096		
ID2 Blocks	0.121	0.096		
NN Blocks	0.122	0.099		

Table 14-6 Global mean grade comparison



Figure 14-11: East-west trending swath plot at 6083670-3730N



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Figure 14-13: South to north oriented swath plot at 348870-8930E

14.9 Classification of mineral resources

Resource classifications used in this study conform to the CIM Definition Standards for Mineral Resources and Mineral Reserves (CIM, 2010). In order to be classified as an indicated mineral resource a block had to meet the following conditions:

- Restricted to the one of the four mineralized lithologic domains (i.e. all ultramafic domains except for Peridotite Low Grade and Listwanite & Fe-Carbonate Alteration);
- Within a 200 m drill spacing

Blocks not classified as indicated mineral resources were assigned to the inferred mineral resource category if they fell within a 300 m drill spacing (Figure 14-14).

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Figure 14-14: Plan view of resource classification for the Baptiste Deposit

14.10 Reasonable prospects of economic extraction

Mineral resources were constrained by an optimized pit shell based on an exchange rate of C = US\$0.80 and a nickel price of US\$6.00 per pound. Mining costs were assumed to be US\$2.72 per tonne and processing costs US\$5.32 per tonne. A mining recovery of 97% and process recovery of 82% were used in the optimization. A US\$1.00 per tonne minimum profit was also imposed to exclude material close to the break-even cut-off. Pit slope was 45°.

A base case cut-off grade of 0.06% DTR Nickel represents an in-situ metal value of approximately US\$7.00 per tonne, which is believed to provide a reasonable margin over operating and sustaining costs for open-pit mining and processing.



14.11 Mineral resource statement

Table 14-7 presents the mineral resource estimate for the Baptiste Deposit at a range of cut-off grades with the base case, at a cut-off grade of 0.06% DTR Ni, in bold face.

INDICATED						IN	FERRED	
% DTR Ni cut-off	Tonnes 000's	% DTR Ni grade	Contained Ni (Tonnes)		% DTR Ni Cut-off	Tonnes 000's	% DTR Ni grade	Contained Ni (Tonnes)
0.02	1,906,630	0.121	2,300,600		0.02	504,880	0.097	491,000
0.04	1,889,612	0.121	2,295,400		0.04	434,287	0.108	469,800
0.06	1,842,645	0.123	2,271,200		0.06	390,788	0.115	448,200
0.08	1,746,351	0.126	2,203,100		0.08	334,757	0.122	408,900
0.1	1,526,532	0.131	2,002,500		0.1	272,280	0.13	353,000

Table 14-7: Indicated and inferred resources for the Baptiste Deposit

Notes:

1. Mineral resource estimate prepared by GeoSim Services Inc. with an effective date of Feb 26, 2018.

2. Indicated mineral resources are drilled on approximate 200 x 200 metre drill spacing and confined to mineralized lithologic domains. Inferred mineral resources are drilled on approximate 300 x 300 metre drill spacing.

- 3. An optimized pit shell was generated using the following assumptions: US\$6 per pound nickel Price; a 45° pit slope; assumed mining recovery of 97% DTR Ni and process recovery of 82% DTR Ni, an exchange rate of US\$1.00=C\$0.80; and mining costs of US\$2.72 per tonne, processing costs of US\$5.32 per tonne. A US\$1.00 per tonne minimum profit was also imposed to exclude material close to the break-even cut-off.
- 4. A base case cut-off grade of 0.06% DTR Ni represents an in-situ metal value of approximately US\$7.00 per tonne which is believed to provide a reasonable margin over operating and sustaining costs for open-pit mining and processing.
- 5. Totals may not sum due to rounding.
- 6. Mineral resources are not mineral reserves and do not have demonstrated economic viability.

14.12 Factors that may affect the mineral resource estimate

Areas of uncertainty that may materially impact the mineral resource estimate include:

- Commodity price assumptions;
- Pit slope angles;
- Metal recovery assumptions; and
- Mining and Process cost assumptions.

There are no other known factors or issues that materially affect the estimate other than normal risks faced by mining projects in British Columbia in terms of environmental, permitting, taxation, socio-economic, marketing and political factors. GeoSim is not aware of any legal or title issues that would materially affect the mineral resource estimate.

15.0 ADJACENT PROPERTIES

There is no information on adjacent properties that is necessary to make the technical report understandable and not misleading.

16.0 OTHER RELEVANT DATA AND INFORMATION

No other information or explanation is necessary to make this technical report understandable and not misleading.



17.0 INTERPRETATION AND CONCLUSIONS

This NI 43-101 report on the Decar Ni-Fe alloy Property has been prepared for FPX Nickel Corp. to satisfy its disclosure requirements under applicable Canadian securities laws and the rules of the TSX Venture Exchange. An updated NI 43-101 report is warranted for an updated mineral resource estimate announced on 26 February 2018.

The Decar Property hosts the Baptiste Ni-Fe alloy Deposit plus three other Ni-Fe alloy targets in ultramafic rocks of the Cache Creek terrane in central British Columbia. The Property consists of 60 claims that cover 24,517 ha and is 100% owned by FPX after re-purchase of the Decar Property from option partner Cliffs in 2015. This purchase was made with a loan granting the lender a 1% NSR over the Property. FPX has signed a MOU with the Tl'azt'en Nation that formalized protocols for the working relationship between the parties and confirms the Tl'azt'en Nation's support for exploration activities.

The centre of the Property is road accessible from the town of Fort St. James (population 1,510) via a network of provincial asphalt and forestry gravel roads. CN Rail owns an out-of-service railway line that passes through the northeastern-most claims of the Property. Electrical infrastructure reaches to within 5 km of the Property and a hydro substation capable of powering a mine operation is located 90 km to the south. The Mount Milligan copper-gold open pit mine is the nearest current producer to the Decar Property and is located 90 km to the northeast.

Awaruite is hosted in the Trembleur ultramafic unit ("ultramafite") and was first discovered as part of an academic thesis in 1983, then sporadically assessed through rock sampling and petrographic work from 1996-2005. In 2006, FPX staked 33 claims to establish the Decar Property and delineated the Baptiste, Sidney, B and Van awaruite targets. AN overview of this work (Britten, 2016) has suggested that awaruite most likely developed through serpentinization of peridotite within broad fault and/or shear zones, with the hydrolysis of olivine forming serpentine, magnetite and awaruite.

Awaruite is strongly magnetic and has a higher density (8.2 g/cm³) than magnetite (5.2 g/cm³) and serpentine (2.2-2.9 g/cm³). Because magnetic and gravity separation form such a key part of the economics for this project, grades are reported as the percent (%) nickel recoverable by Davis Tube magnetic separation (% DTR Ni). These grades therefore exclude nickel contained in silicate and other non-magnetic minerals.

From 2006-2009, FPX conducted staking, airborne geophysics, ground-based IP surveys, rock sampling, geological mapping, petrography and SEM analysis. Mapping and outcrop sampling proved to be effective exploration tools and were used to identify Baptiste as the primary exploration target.

In 2009, FPX entered an option agreement that allowed Cliffs to earn an increased interest in the Property through completion of NI 43-101 compliant PEA, prefeasibility and feasibility studies. In 2010, Cliffs completed seven diamond drill holes for 1,711 m on the Baptiste Deposit and another three holes for 847 m on Sid Target. In 2011 and 2012, 70 holes for 27,665 m of diamond drilling were completed, focussed mostly on the Baptiste Deposit (25,959 m) with one hole drilled on B Target (305 m). In addition, seven hydrogeological monitoring wells, for 1,401 m, were drilled in the Baptiste area. These programs provided the necessary data for a maiden resource estimate on the Baptiste Deposit in 2012 (Ronacher et al., 2012a) followed by an updated resource (Ronacher et al., 2013) and then PEA in 2013 (McLaughlin et al., 2013). Additional drilling on the Baptiste Deposit, in 2017 necessitated an update to the resource estimate as described in Section 14.0 of this technical report.

The geochemical assay method using the Davis Tube was developed by FPX and Cliffs in 2010, with all assays done by Actlabs. This method involves running 30 g of pulverized pulps through a Davis Tube magnetic separator to split it into magnetic and non-magnetic fractions. The magnetic fraction is then analysed by XRF and typically returns approximately 2% Ni. DTR Ni is then calculated by including the weight of the non-magnetic fraction in the grade calculation (see Section 8.0). Reviews of QA/QC data suggests that assays are uncontaminated, precise and accurate, but likely biased high. Review of the geochemical database suggests the re-assay certificates were not integrated prior to resource estimation. Neither issue is believed to have a significant effect on the resource estimate for the Baptiste Deposit, although we do recommend rectifying them before the next estimate is updated for the fourth time.



Metallurgical testwork has been used to determine the ore mineralogy, mineralogical association and liberation characteristics of awaruite, and the response of magnetic and gravity separation techniques to different grind sizes. Lab-scale gravity work done in 2010 showed that significant amounts of nickel are recovered by single stage Knelson concentration, with additional stages providing little improvement in total nickel grade or recovery. Additional methods of producing higher-grade nickel concentrate include finer grinding, magnetic concentration before Knelson concentration, and post-Knelson gravity concentration with a Mozley table. Mineralogical work in 2011 and 2012 suggested that 74% of total nickel is hosted within awaruite and that approximately 66% of awaruite should be magnetically recoverable. Together, this work was used to develop a mechanical processing flow sheet that includes grinding to 80% passing 600 μ m, rougher magnetic separation, re-grinding to 80% passing 75-100 μ m and then gravity separation to produce a final concentrate.

An updated resource estimate for the Baptiste Deposit includes all data from the 2017 drill campaign (8 holes, 1,917 m) as well as the data from the 2012 campaign that missed the cut-off date for the preparation of the previous resource estimate (Ronacher et al., 2013), including one 2012 hole and 2,053 samples from infill sampling 2010 and 2011 drill core. The 2018 estimate is geologically constrained within four mineralized domains and is reasonably comparable among different estimation methods. Results provide an Indicated Resource of 1.843 billion tonnes at 0.123% DTR Ni at a cut-off grade of 0.06% DTR Ni, in addition to an Inferred Resource of 0.391 billion tonnes at 0.115% DTR Ni at a cut-off grade of 0.06% DTR Ni.

18.0 RECOMMENDATIONS

Recommended work for the Decar project includes database maintenance and an investigation into the positive bias shown by CRM, as well as more infill and expansion drilling on the Baptiste Deposit, exploration and definition drilling at the Van Target, advanced metallurgical work and continued research into the potential for tailings to sequester carbon dioxide (" CO_2 "). Details on each of these recommendations are provided in Section 18.1 and their estimated cost, which totals C\$1.906 million, is broken down in Section 18.2.

18.1 Program

Review of the Decar Project data for the purposes of this NI 43-101 report recognized that the geochemical database is missing QA/QC and re-assay results for drill core, as well as surface rock samples. An effective way to integrate this data is to rebuild the database from the original certificates and cross-reference that against the various manual compilations, including those generated for the preparation of this report. This database could then form the backbone of the Project and can be built out to host as much of the project data as possible (i.e. drilling data, geotechnical measurements, metallurgical testwork). Outcrop maps should also be compiled into a single GIS polygon file, with lithology coded in a consistent manner.

A re-assay program is recommended to evaluate the effect of the positive bias in CRM assays on the core analyses. Assays of CRM used on the Project averaged 0.5 to 1 standard deviations higher than their certified mean, suggesting that grades for the Baptiste Deposit could be over-estimated by 1-4%. The proposed re-assay program would be done in two phases, with each comprising the re-assay of 75 CRM and 100 core pulps for 350 assays. The aim of both phases is to generate an average Z-score of 0 for the CRM analyses and then evaluate the affect (if any) on the associated core re-assays. Two phases are proposed to reduce the probability of all re-assays returning a positive bias as well.

Additional drilling on the Decar Property is recommended for the Baptiste Deposit and the Van Target. At Baptiste, four holes are proposed with an average depth of 350 m for 1,400 m of drilling. Two of these holes are expansion holes on the northern-most extent of the Baptiste Deposit, one collared on the same pad as 12HG09 but drilled to the northeast (azimuth 045°) and a second, contingent, hole collared 200 m north and also drilled at 045°. Another step-out hole is proposed for the southeast extent of the Deposit, to be collared 175 m southeast of pad 17BAP070 and 064. Hole 070 is currently the most southeasterly hole on the Deposit and returned 199 m of 0.100% DTR Ni, indicating the Deposit is still open in that direction. An infill hole is proposed for section 23 (see Figure 14-1), to fill in the 400 m gap between the high-grade intercept in 17BAP067 and the lower-grade one in 17BAP068.



Nine holes are recommended for the Van Target, each running 350 m in length for 3,150 m in drilling. The proposed holes fall on four sections spaced 400 m apart, with holes falling on the same section also spaced at 400 m. All holes are planned at an azimuth of 020° and dip of -50°. This drill plan would test a 1.2 km by 1.6 km target area to a true vertical depth of 225 m, essentially testing the target's potential to exceed 1 billion tonnes and comprise a stand-alone project.

Additional metallurgical work is recommended to test awaruite recoveries at industrial scales, with the program design developed through collaboration with a qualified metallurgist. The evaluation of tailings to sequester CO₂ should also continue, as this process could play an important role in stabilizing tailings and rendering the project carbon-neutral.

18.2 Budget

Estimated budgets for each of the work components described in Section 18.1 are provided in Table 18-1, and total C\$1.906 million. The cost for data maintenance is based on 50 days of work at C\$500/day. The cost estimate for the QA/QC program is based on 350 re-assays at an average cost of C\$61/sample, plus another C\$6,150 in preparation, interpretation, reporting and contingency costs.

Diamond drilling estimates are based on an all-inclusive drilling cost of C\$375 per metre, which was the cost for the 2017 drilling program.

Cost estimates for advanced metallurgical testing and CO₂ sequestration estimates are token figures for advanced studies and should be refined with input from experts in these fields.

Work type	Target	Description	Holes	Ave Depth (m)	Total m	Cost (C\$)
Data maintenance Project-scale		Rebuild geochemistry database, build out project DB, consolidate outcrop maps				\$25,000
QA/QC Baptiste Deposit		Assess positive bias in CRM				\$27,500
Drilling	rilling Baptiste Deposit Infill and expansion drilling		4	350	1400	\$525,000
Drilling	Van Target	Exploration and resource drilling	9	350	3150	\$1,181,250
Metallurgical	Baptiste Deposit	Advanced testwork				\$100,000
Tailings engineering Baptiste Deposit Evalu		Evaluate CO2 sequestration				\$100,000
Total						\$1,906,250

Table 18-1: Outline and cost estimate of recommended work for the Decar Project

Respectfully submitted,

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Appendix A: References



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Appendix B: Claims list



Tenure Number	Claim Name	Owner	Issue Date	Good To Date	Area (ha)	Overlap Description
559615	WILL 1	FPX (100%)	31-May-07	14-Nov-22	464.76	Legacy claim
559616	WILL 2	FPX (100%)	31-May-07	14-Nov-22	464.76	Legacy claim
559617	WILL 3	FPX (100%)	31-May-07	14-Nov-22	464.76	
559618	WILL 4	FPX (100%)	31-May-07	14-Nov-22	446.35	
575674	WILL 5	FPX (100%)	8-Feb-08	14-Nov-22	446.49	
575675	WILL 6	FPX (100%)	8-Feb-08	14-Nov-22	446.63	
575677	WILL 7	FPX (100%)	8-Feb-08	14-Nov-22	465.19	
575678	WILL 8	FPX (100%)	8-Feb-08	14-Nov-22	464.95	
575679	WILL 9	FPX (100%)	8-Feb-08	14-Nov-22	464.72	
575680	WILL 10	FPX (100%)	8-Feb-08	14-Nov-22	465.19	
575681	WILL 11	FPX (100%)	8-Feb-08	14-Nov-22	446.38	
575682	WILL 12	FPX (100%)	8-Feb-08	14-Nov-22	297.65	Legacy claim
575683	WILL 13	FPX (100%)	8-Feb-08	14-Nov-22	390.40	
575684	WILL 14	FPX (100%)	8-Feb-08	14-Nov-22	223.37	
575686	WILL 15	FPX (100%)	8-Feb-08	14-Nov-22	316.24	
594247	BAP 1	FPX (100%)	14-Nov-08	14-Nov-22	446.78	
594248	BAP 2	FPX (100%)	14-Nov-08	14-Nov-22	335.14	
594249	BAP 3	FPX (100%)	14-Nov-08	14-Nov-22	465.43	
594250	BAP 4	FPX (100%)	14-Nov-08	14-Nov-22	446.70	
594251	BAP 5	FPX (100%)	14-Nov-08	14-Nov-22	390.88	
594252	KAR 1	FPX (100%)	14-Nov-08	14-Nov-22	464.53	
594254	KAR 2	FPX (100%)	14-Nov-08	14-Nov-22	464.29	
594255	KAR 3	FPX (100%)	14-Nov-08	14-Nov-22	464.29	Mineral reserve, district lot
594256	KAR 4	FPX (100%)	14-Nov-08	14-Nov-22	427.27	Mineral reserve, district lot
594257	KAR 5	FPX (100%)	14-Nov-08	14-Nov-22	371.63	Mineral reserve, district lot
594258		FPX (100%)	14-Nov-08	14-Nov-22	464.52	
594259	KAR 7	FPX (100%)	14-Nov-08	14-Nov-22	445.97	Legacy claim
594260	KAR 8	FPX (100%)	14-Nov-08	14-Nov-22	297.19	
594262	KAR 9	FPX (100%)	14-Nov-08	14-Nov-22	408.72	
594263	KAR 10	FPX (100%)	14-Nov-08	14-Nov-22	389.92	
602564		FPX (100%)	14-Apr-09	14-Nov-22	18.58	
602566		FPX (100%)	14-Apr-09	14-Nov-22	148.66	
603803	VAN 1	FPX (100%)	3-May-09	14-Nov-22	464.51	District lot
669586	BAP 6	FPX (100%)	16-Nov-09	14-Nov-22	260.51	Legacy claim
669625	BAP 7	FPX (100%)	16-Nov-09	14-Nov-22	446.96	
669645	BAP 8	FPX (100%)	16-Nov-09	14-Nov-22	446.94	
669665	BAP 9	FPX (100%)	16-Nov-09	14-Nov-22	446.91	
839601	MID 1	FPX (100%)	3-Dec-10	3-Dec-22	74.40	
839604	MID 2	FPX (100%)	3-Dec-10	3-Dec-22	446.66	District lot
839607	MID 3	FPX (100%)	3-Dec-10	3-Dec-22	427.88	District lot
839610	MID 4	FPX (100%)	3-Dec-10	3-Dec-22	465.28	Mineral reserve, district lot
839615	MID 5	FPX (100%)	3-Dec-10	3-Dec-22	427.90	Mineral reserve, district lot
839617	MID 6	FPX (100%)	3-Dec-10	3-Dec-22	464.90	Mineral reserve, district lot

Table B-1: List of claims comprising the Decar Property



Tenure Number	Claim Name	Owner	Issue Date	Good To Date	Area (ha)	Overlap Description
839618	MID 7	FPX (100%)	3-Dec-10	3-Dec-22	464.75	Mineral reserve, district lot
839620	MID 8	FPX (100%)	3-Dec-10	3-Dec-22	427.39	Mineral reserve, district lot
839621	MID 9	FPX (100%)	3-Dec-10	3-Dec-22	464.33	Mineral reserve, district lot
839622	MID 10	FPX (100%)	3-Dec-10	3-Dec-22	148.55	Mineral reserve, district lot
895893	NEY 1	FPX (100%)	2-Sep-11	2-Sep-22	446.56	Legacy claim
895899	NEY 2	FPX (100%)	2-Sep-11	2-Sep-22	465.29	Legacy claim
895902	NEY 3	FPX (100%)	2-Sep-11	2-Sep-22	446.92	
895904	NEY 4	FPX (100%)	2-Sep-11	2-Sep-22	465.52	
895905	NEY 5	FPX (100%)	2-Sep-11	2-Sep-22	390.91	
895907	NEY 6	FPX (100%)	2-Sep-11	2-Sep-22	465.54	
895909	NEY 7	FPX (100%)	2-Sep-11	2-Sep-22	447.11	Provincial Park
895910	NEY 8	FPX (100%)	2-Sep-11	2-Sep-22	447.16	Provincial Park
895911	NEY 9	FPX (100%)	2-Sep-11	2-Sep-22	465.76	Provincial Park
895912	NEY 10	FPX (100%)	2-Sep-11	2-Sep-22	465.74	Provincial Park
895913	NEY 11	FPX (100%)	2-Sep-11	2-Sep-22	335.31	Provincial Park
895914	NEY 12	FPX (100%)	2-Sep-11	2-Sep-22	446.56	
1013225		FPX (100%)	26-Sep-12	26-Sep-23	632.34	District lot



Appendix C: Drillhole collar data



Table C-1: D	Table C-1: Diamond drillhole collar details for all holes drilled by FPX on the Decar Property le Length (m) Prospect Grid Easing Northing Elevation_m Azimuth Dip 10DDH001 322.2 Baptiste UTMz10N NAD83 349025.0 6093325.0 970.0 330 -50 10DDH002 306.9 Baptiste UTMz10N NAD83 348175.0 6083375.0 978.0 330 -50 10DDH003 340.5 Baptiste UTMz10N NAD83 348175.0 6083475.0 1142.0 330 -50 10DDH005 236.8 Baptiste UTMz10N NAD83 34970.0 608365.0 1018.0 50 -50 10DDH006 340.5 Baptiste UTMz10N NAD83 34970.0 6083205.0 970.0 150 -50 10DDH007 71.0 Baptiste UTMz10N NAD83 347891.0 6086702.0 1580.0 210 -60 10DDH010 398.4 Sid UTMz10N NAD83 348185.1 6083205.1 1027.5 0 <td< th=""></td<>							
Hole	Length (m)	Prospect	Grid	Easting	Northing	Elevation_m	Azimuth	Dip
2010DDH001	322.2	Baptiste	UTMz10N NAD83	349025.0	6083205.0	970.0	330	-50
2010DDH002	306.9	Baptiste	UTMz10N NAD83	348870.0	6083375.0	978.0	330	-50
2010DDH003	340.5	Baptiste	UTMz10N NAD83	348135.0	6083475.0	1142.0	50	-50
2010DDH004	93.0	Baptiste	UTMz10N NAD83	348135.0	6083475.0	1142.0	330	-50
2010DDH005	236.8	Baptiste	UTMz10N NAD83	349700.0	6083653.0	1018.0	50	-50
2010DDH006	340.5	Baptiste	UTMz10N NAD83	349700.0	6083653.0	1018.0	330	-50
2010DDH007	71.0	Baptiste	UTMz10N NAD83	349025.0	6083205.0	970.0	150	-50
2010DDH008	103.0	Sid	UTMz10N NAD83	347891.0	6086702.0	1580.0	210	-50
2010DDH009	346.0	Sid	UTMz10N NAD83	347891.0	6086702.0	1580.0	210	-60
2010DDH010	398.4	Sid	UTMz10N NAD83	348120.0	6086474.0	1628.0	210	-60
11B001	304.5	В	UTMz10N NAD83	346398.0	6087268.0	1657.0	180	-60
11BAP001	275.2	Baptiste	UTMz10N NAD83	349185.1	6083271.1	965.9	332.5	-50
11BAP002	309.0	Baptiste	UTMz10N NAD83	348670.8	6083305.4	1027.5	0	-50
11BAP003	310.9	Baptiste	UTMz10N NAD83	348419.0	6083209.8	1072.1	332.5	-50
11BAP004	304.5	Baptiste	UTMz10N NAD83	348247.6	6083206.5	1086.2	10	-50
11BAP005	304.5	Baptiste	UTMz10N NAD83	348847.0	6083109.9	995.2	332.5	-50
11BAP006	304.0	Baptiste	UTMz10N NAD83	348965.6	6083636.8	1020.1	332.5	-50
11BAP007	304.5	Baptiste	UTMz10N NAD83	348666.2	6083091.4	1026.3	332.5	-50
11BAP008	302.0	Baptiste	UTMz10N NAD83	348069.5	6083273.6	1141.9	25	-50
11BAP009	606.3	Baptiste	UTMz10N NAD83	348462.0	6083344.7	1050.1	20	-50
11BAP010	302.0	Baptiste	UTMz10N NAD83	349264.0	6083555.5	1015.6	333	-50
11BAP011	302.0	Baptiste	UTMz10N NAD83	349091.8	6083443.2	1025.5	330	-50
11BAP012	301.5	Baptiste	UTMz10N NAD83	348282.7	6083398.3	1092.4	28	-50
11BAP013	302.0	Baptiste	UTMz10N NAD83	348354.4	6083591.4	1117.4	25	-50
11BAP014	301.4	Baptiste	UTMz10N NAD83	349346.3	6083393.4	998.5	332.5	-50
11BAP015	304.6	Baptiste	UTMz10N NAD83	349516.9	6083485.7	1036.7	1	-50
11BAP016	304.0	Baptiste	UTMz10N NAD83	348796.8	6083555.4	1038.5	345	-50
11BAP017	305.0	Baptiste	UTMz10N NAD83	348524.1	6083551.9	1080.2	10	-50
11BAP018	301.5	Baptiste	UTMz10N NAD83	347807.1	6083637.0	1252.8	28	-50
11BAP019	300.5	Baptiste	UTMz10N NAD83	347703.3	6083452.1	1256.7	28	-50
11BAP020	300.0	Baptiste	UTMz10N NAD83	348218.0	6083661.3	1182.6	25	-50
11BAP021	302.0	Baptiste	UTMz10N NAD83	349173.0	6083735.7	1027.6	332.5	-50
11BAP022	302.0	Baptiste	UTMz10N NAD83	347891.3	6083371.7	1205.9	28	-55
11BAP023	301.1	Baptiste	UTMz10N NAD83	349403.2	6083709.4	1018.9	333	-50
11BAP024	302.0	Baptiste	UTMz10N NAD83	349084.3	6083911.2	1065.2	345	-50
11BAP025	301.5	Baptiste	UTMz10N NAD83	347532.3	6083557.7	1254.7	28	-50
11BAP026	305.0	Baptiste	UTMz10N NAD83	348901.7	6083815.7	1064.8	333	-50
11BAP027	301.5	Baptiste	UTMz10N NAD83	347722.5	6083897.3	1316.3	28	-50
11BAP028	298.4	Baptiste	UTMz10N NAD83	347355.2	6083639.9	1268.8	28	-50
11BAP029	298.4	Baptiste	UTMz10N NAD83	347988.1	6083558.7	1199.3	28	-50
11BAP030	301.5	Baptiste	UTMz10N NAD83	349346.1	6083851.7	1041.2	332.5	-50
11BAP031	302.0	Baptiste	UTMz10N NAD83	348739.9	6083740.7	1079.2	345	-50
11BAP032	304.8	Baptiste	UTMz10N NAD83	348082.9	6083738.8	1239.1	28	-50
11BAP033	301.5	Baptiste	UTMz10N NAD83	349587.5	6083808.5	1035.8	332.5	-50
11BAP034	298.4	Baptiste	UTMz10N NAD83	347623.3	6083733.2	1292.7	28	-50



Hole	Length (m)	Prospect	Grid	Easting	Northing	Elevation_m	Azimuth	Dip
11BAP035	298.4	Baptiste	UTMz10N NAD83	347940.2	6083795.1	1270.5	28	-50
12BAP036	600.2	Baptiste	UTMz10N NAD83	348567.2	6082992.8	1021.6	355.5	-50
12BAP037	603.0	Baptiste	UTMz10N NAD83	348966.4	6083051.1	975.5	345	-50
12BAP038	525.0	Baptiste	UTMz10N NAD83	348045.6	6083831.2	1260.9	28	-50
12BAP039	594.1	Baptiste	UTMz10N NAD83	348752.3	6082920.4	1009.1	0	-50
12BAP040	588.0	Baptiste	UTMz10N NAD83	348909.7	6082897.6	995.3	345	-50
12BAP041	600.0	Baptiste	UTMz10N NAD83	348192.8	6083750.0	1203.4	208	-50
12BAP042	301.7	Baptiste	UTMz10N NAD83	348575.6	6082890.6	1022.3	10	-60
12BAP043	600.0	Baptiste	UTMz10N NAD83	349251.3	6082810.0	960.8	342	-50
12BAP044	579.0	Baptiste	UTMz10N NAD83	348765.1	6082724.5	1031.9	0	-50
12BAP045	489.5	Baptiste	UTMz10N NAD83	348361.5	6083767.5	1163.3	208	-70
12BAP046	600.2	Baptiste	UTMz10N NAD83	349104.4	6082945.8	969.1	345	-50
12BAP047	600.0	Baptiste	UTMz10N NAD83	347680.5	6084050.4	1345.2	208	-65
12BAP048	300.0	Baptiste	UTMz10N NAD83	348301.3	6083815.4	1195.6	28	-60
12BAP049	600.0	Baptiste	UTMz10N NAD83	348264.3	6084030.4	1309.5	208	-60
12BAP050	539.2	Baptiste	UTMz10N NAD83	349100.0	6082940.0	969.9	158	-50
12BAP051	528.6	Baptiste	UTMz10N NAD83	347560.2	6084030.8	1345.2	28	-50
12BAP052	600.2	Baptiste	UTMz10N NAD83	348948.1	6082707.3	998.6	350	-50
12BAP053	600.0	Baptiste	UTMz10N NAD83	348002.1	6084159.8	1392.0	205	-60.69
12BAP054	600.0	Baptiste	UTMz10N NAD83	347526.5	6084186.9	1374.0	207	-50
12BAP055	569.7	Baptiste	UTMz10N NAD83	349091.6	6082789.5	983.2	340	-50
12BAP056	600.0	Baptiste	UTMz10N NAD83	347848.5	6083924.1	1320.3	208	-65
12BAP057	600.0	Baptiste	UTMz10N NAD83	347472.1	6083840.1	1316.3	34.4	-48
12BAP058	600.2	Baptiste	UTMz10N NAD83	349132.2	6082600.8	975.9	340	-50
12BAP059	600.0	Baptiste	UTMz10N NAD83	347288.5	6083928.9	1286.3	28	-50
12BAP060	600.0	Baptiste	UTMz10N NAD83	347069.3	6083965.8	1248.7	28	-50
12BAP061_12HG01	600.0	Baptiste/hydro	UTMz10N NAD83	347173.4	6083741.0	1220.7	28	-50
12BAP062	477.5	Baptiste	UTMz10N NAD83	346976.7	6083808.4	1208.7	28	-50
12HG02	300.0	Hydrogeological	UTMz10N NAD83	347804.9	6083639.9	1247.6	0	-90
12HG03	300.0	Hydrogeological	UTMz10N NAD83	348222.7	6083652.5	1176.1	0	-90
12HG04	501.0	Hydrogeological	UTMz10N NAD83	348416.7	6083066.1	1056.8	0	-50
12HG05	75.0	Tailings/hydro	UTMz10N NAD83	345615.8	6082186.9	1044.7	0	-90
12HG07	75.0	Tailings/hydro	UTMz10N NAD83	347521.3	6081797.3	961.2	0	-90
12HG08	75.0	Hydrogeological	UTMz10N NAD83	349132.2	6082600.8	975.9	0	-90
12HG09	75.0	Hydrogeological	UTMz10N NAD83	349073.6	6084150.5	1148.6	0	-90
17BAP063	390.0	Baptiste	UTMz10N NAD83	349521.0	6082794.8	936.0	12	-50
17BAP064	141.0	Baptiste	UTMz10N NAD83	349893.9	6082689.5	930.9	14	-50
17BAP065	351.0	Baptiste	UTMz10N NAD83	349667.2	6082596.3	948.7	14	-50
17BAP066	96.0	Baptiste	UTMz10N NAD83	349664.7	6082598.6	948.5	194	-50
17BAP067	348.5	Baptiste	UTMz10N NAD83	349385.1	6082678.4	959.0	356	-50
17BAP068	252.0	Baptiste	UTMz10N NAD83	349377.0	6083084.8	944.1	1.48	-49.45
17BAP069	90.0	Baptiste	UTMz10N NAD83	349767.5	6083084.3	936.8	194.6	-50.9
17BAP070	249.0	Baptiste	UTMz10N NAD83	349874.1	6082538.0	955.1	13.8	-50.4

Appendix D: Qualified Person's Certificate



QUALIFIED PERSON'S CERTIFICATE

- I, Ronald Voordouw, P.Geo., do hereby certify:
- THAT I am a Professional Geologist employed by Equity Exploration Consultants Ltd with offices at 1510-250 Howe Street, and residing at 1155 Judd Road, Brackendale, British Columbia, Canada.
- THAT I am the author of the Technical Report entitled "2018 Technical (N.I. 43-101) Report on the Decar Nickel Iron Alloy Project" and with an effective date of February 26, 2018, relating to the Decar Property (the "Technical Report"). I am responsible for sections 2.0 to 12.0 and 15.0 to 18.0 of the Technical Report, and partly responsible for Section 1.0.
- THAT I am a member in good standing (#06962) of the Professional Engineers and Geoscientists of Newfoundland and Labrador (PEGNL).
- THAT I graduated from the University of Calgary with a Bachelor of Science (Honours) degree in geology in 2000 and from the Memorial University of Newfoundland with a Doctor of Philosophy in 2006. I have practiced my profession continuously since 2006.
- THAT since 2006, I have been involved in mineral exploration and research for gold, silver, copper, lead, zinc, platinum group elements and uranium in Canada, South Africa and Brazil. I have done research projects on the regional setting of the Voisey's Bay nickel deposit, Labrador (Canada), and on the geometallurgy of a PGE-Ni-Cu deposit in the Bushveld Igneous Complex, South Africa.
- THAT I am a Director of Geoscience with Equity Exploration Consultants Ltd., a geological consulting and contracting firm, and have been so since April 2011.
- THAT I have read the definition of "independence" set out in Part 1.5 of National Instrument 43-101 ("NI 43-101") and certify that I am independent of FPX Nickel Corp.
- THAT I personally visited and examined the property which is the subject of the Technical Report in the field between 21-23 September 2018 and that I have had no prior involvement with such property.
- THAT 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.
- THAT as of the effective date of the Technical Report, to the best of my knowledge, information and belief, sections 1.0 to 12.0 and 15.0 to 18.0 of this Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.
- THAT I have read National Instrument 43-101 and Form 43-101F1, and the portions of the Technical Report for which I am responsible or partly responsible have been prepared in compliance with that instrument and form. I am entirely responsible for sections 2.0 to 12.0 and 15.0 to 18.0 of this report, and partly responsible for section 1.0.

Dated at Vancouver, British Columbia, with an effective date of February 26, 2018:

"signed and sealed"

Ronald Voordouw, P.Geo.



QUALIFIED PERSON'S CERTIFICATE

I, Ronald G. Simpson, P.Geo., do hereby certify:

THAT I am employed as a Professional Geoscientist with GeoSim Services Inc.

- THAT this certificate applies to the technical report titled "2018 Technical (N.I. 43-101) Report on the Decar Nickel Iron Alloy Project" with an effective date of February 26, 2018 (the "Technical Report"). I am responsible for Sections 13.0 and 14.0 of the Technical Report, and partly responsible for Section 1.0.
- THAT I am a Professional Geoscientist (19513) in good standing with the Association of Professional Engineers and Geoscientists of British Columbia. I graduated with a Bachelor of Science in Geology from the University of British Columbia, May 1975.
- THAT I have practiced my profession continuously for 42 years. I have been directly involved in mineral exploration, mine geology and resource estimation with practical experience from feasibility studies.
- THAT as a result of my experience and qualifications, I am a qualified person as defined in National Instrument 43-101 *Standards of Disclosure for Mineral Projects* ("NI 43-101").
- THAT I have not visited the Property that tis the subject of this Technical Report
- THAT I have read the definition of "independence" set out in Part 1.5 of National Instrument 43-101 ("NI 43-101") and certify that I am independent of FPX Nickel Corp.
- THAT I have had no prior involvement with the Property that is the subject of this Technical Report.
- THAT I have read NI 43-101 and the Technical Report has been prepared in compliance with NI 43-101. I am entirely responsible for Sections 13.0 and 14.0 of the Technical Report and partly responsible for section 1.0.
- THAT as of the effective date of the Technical Report, to the best of my knowledge, information and belief, sections 13.0 and 14.0 of the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated at Vancouver, British Columbia, with an effective date of February 26, 2018:

"signed and sealed"

Ronald G. Simpson, P.Geo.

