FPX Nickel Achieves Recoveries up to 99.5% in Production of High-Grade Nickel-Cobalt Solution for the Electric Vehicle Battery Market

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VANCOUVER, Jan. 07, 2020 - FPX Nickel Corp. (FPX-TSX.V) (“FPX Nickel” or the “Company”) is pleased to report that successful leach testing of high-grade nickel concentrates from its 100%-owned Decar Nickel District (the “Project”) has confirmed nickel recoveries up to 99.5% in producing a high-concentration nickel-cobalt chemical solution suitable for the electric vehicle (“EV”) battery supply chain. The results of this test program position Decar as a potentially significant supplier of nickel for both the stainless steel and the EV battery markets.

Highlights

- Establishes high-grade Decar awaruite nickel concentrate as an excellent feedstock with potential advantages over sulphide and laterite feedstocks in the ultimate production of nickel sulphate and cobalt sulphate for the electric vehicle battery market
- Confirmation of the amenability of Decar nickel concentrate to conventional pressure leaching at moderate pressure and temperature, achieving nickel recoveries of 98.8% to 99.5% in the production of high-purity chemical solution containing 69.4 to 70.1 g/L nickel
- Rapid nickel extraction (over 98% extraction in under 60 minutes) achieved under mild pressure leaching conditions with significantly lower sizing, power consumption, pressure and temperature requirements than typical high pressure acid leach (“HPAL”) operations

“These results confirm a breakthrough for FPX Nickel, demonstrating that Decar has the potential to produce significant quantities of nickel and cobalt in a high-quality form for the fast-growing EV battery supply chain,” commented Martin Turenne, the Company’s President and CEO. “The results further confirm that the awaruite nickel ore at Decar has potential technical advantages over sulphide and laterite ores for producing nickel sulphate and cobalt sulphate. In comparison with nickel sulphide concentrates, the direct dissolution of Decar concentrate can eliminate the need for smelting prior to downstream processing to produce nickel sulphate. Furthermore, the high-grade Decar concentrate feedstock conceptually entails a smaller operational footprint and significantly lower pressure and temperature requirements than HPAL operations used in laterite operations.”

Mr. Turenne continued, “This testing confirms the potential for the production of nickel sulphate and cobalt sulphate from awaruite ore in a simple three-stage process encompassing ore beneficiation, pressure leaching, and solvent extraction. This three-stage processing route has the potential to be more efficient than the typical five-stage processes required to convert sulphide and laterite ores into nickel sulphate, as shown in Figure 1 below.”

Figure 1 – Processing Alternatives for Production of Nickel Sulphate (NiSO4) is available at https://www.globenewswire.com/NewsRoom/AttachmentNg/7541bf1a-2ecc-4034-bb53-279afb2d5c91

Source: Company reports, FPX Nickel Corp. test work

Description of Leaching Test Work

Nickel mineralization at the Decar Nickel District is present in awaruite, a nickel-iron alloy composed of 75% nickel and 25% iron, with negligible associated sulphides. As described in the Company’s news release dated August 6, 2019, metallurgical testing conducted during 2018 and 2019 confirmed that a conventional processing flowsheet using grinding, magnetic separation and flotation of awaruite ore will consistently produce clean, high-grade nickel concentrates. The Decar nickel flotation concentrate is notable

for its extremely high metal content and low level of impurities. Table 1 below provides the main elemental analysis of the concentrate utilized as feedstock for the leach testing program described herein.

Table 1 – Summary of Elements in Decar Nickel Flotation Concentrate (Feedstock for Leach Testing, %)

Ni	Fe	Al	Co	Cr
59.0	23.8	0.01	0.90	0.22
Cu	Mg	Mn	S	Si
0.75	0.62	0.03	0.70	0.51

Note: a full elemental analysis of Decar nickel flotation concentrate, including oxide content, is provided in the Company’s news release dated August 6, 2019

Two batch pressure leach tests of Decar concentrates were undertaken at Sherritt Technologies in Fort Saskatchewan, Alberta. The pressure leach tests were conducted in an autoclave (pressure chamber) with conditions designed to approximate proposed commercial conditions.

The quality of the nickel chemical solution generated from the batch tests was excellent, with the low acid and iron content confirming relatively low downstream requirements for neutralization and iron removal. Detailed analysis of the Decar nickel solution produced in Test 2 is provided in Table 2, below:

Table 2 – Summary of Elements in Decar Nickel Solution (Test 2 Pregnant Leach Solution, g/L)

Ni	Fe	Co	Cu
70.1	0.77	1.08	0.97
Mg	S	Si	Zn
0.50	45.3	0.10	0.03

It is expected that the nickel-cobalt solution produced from Decar concentrate will be an ideal feedstock for the production of nickel sulphate and cobalt sulphate. Downstream processing of the Decar nickel-cobalt solution would conceptually entail neutralization (to remove acid and other impurities) and solvent extraction to produce nickel sulphate and cobalt sulphate as two separate products. The low levels of impurities (such as acid and iron) in the Decar nickel-cobalt solution suggest that downstream refinement into sulphate products is achievable within conventional operating parameters. Confirmation of these downstream processing steps is subject to future testing.

The leach tests described herein were conducted at a moderate temperature of 150°C with the pressure controlled to a modest 750 kPa (g) with oxygen addition. Recovery of nickel was rapid in the batch tests, with over 98% extraction achieved in 60 minutes toward ultimate extractions of 98.8% and 99.5% in 180 minutes. The iron (Fe) in the concentrate feedstock was almost entirely precipitated, resulting in low iron content in the pregnant leach solution (0.77 g/L in the Test 2 product). The conditions and results of the batch tests are summarized in Table 3, below:

Table 3 – Summary of Batch Leach Testing Conditions and Results

	Test 1	Test 2
Charge		
Nickel concentrate (g)	40	40
Retention time (minutes)	180	180
Discharge (Pregnant Leach) Solution Analyses (g/L)		
H_2SO_4	21.5	12.1
Ni	69.4	70.1
Co	1.14	1.08
Fe	2.45	0.77

Nickel extraction (recovery)	99.5% 98.8%

Additional test work is required to further evaluate the optimization of any downstream hydrometallurgical processing requirements.

The operating parameters for the leaching of Decar concentrates into nickel-cobalt solution are potentially favourable because they are based on significantly lower sizing, power consumption, pressure and temperature requirements than typical HPAL operations treating laterite ore, such as the Ramu Nickel Cobalt Operation in Papua New Guinea (“Ramu”). Table 4 below provides a comparison of pressure leaching autoclave parameters for the treatment of Decar concentrate (based on the scoping test work described herein) and laterite ore at Ramu (which has been in operation since 2012).

Table 4 – Pressure Leaching Autoclave Parameters for Decar Concentrate and Ramu Nickel Cobalt Operation

Autoclave Parameter	Decar Concentrate (Conceptual Based on Test Work)	Ramu Nickel Cobalt Operation (Note 1)
Feedstock type	Flotation concentrate	Whole ore
Feedstock grade	59-65% Ni	1.09% Ni
Pressure	750 kPa	4,300 kPa
Temperature	150°C	250°C
Target extraction rate (recovery)	>98%	>95%
Target residence time	60 minutes	60 minutes

Note 1 – Source: Design parameters for Ramu Nickel Cobalt Project in Cobalt 27 Capital Corp., NI 43-101 Technical Report (July 19, 2019)

Furthermore, it is expected that utilizing a high-grade Decar concentrate feed with a consistent specification for mineral content, moisture and particle size would entail lower potential operational risk than a typical HPAL plant accepting “whole ore” with inconsistent grades sourced from inherently variable run-of-mine laterite deposits, ranging from 0.7% to 1.7% nickel content.

Next Steps

FPX Nickel will undertake internal trade-off studies to define the optimal product mix to be derived from the Decar project for the stainless steel and EV battery markets. Further bench-scale testing is required to evaluate and refine the process for pressure leaching of Decar concentrates, including additional tests under diverse conditions to determine optimal parameters for acid consumption, pressure and temperature, among other considerations. Additional test work would generate nickel products for testing with potential offtakers, with this market evaluation expected to generate collaborative opportunities with a variety of nickel market participants.

Qualified Person

The metallurgical information in this news release has been prepared in accordance with Canadian regulatory requirements set out in National Instrument 43-101 Standards of Disclosures for Minerals Projects of the Canadian Securities Administrators (“NI 43-101”) and supervised, reviewed and verified by Jeffrey B. Austin, P.Eng., President of International Metallurgical and Environmental Inc., a “Qualified Person” as defined by NI 43-101 and the person who oversees metallurgical developments for FPX Nickel.

About the Decar Nickel District

The Company’s Decar Nickel District claims cover 245 square kilometres of the Mount Sidney Williams ultramafic/ophiolite complex, 90 km northwest of Fort St. James in central British Columbia. The District is a two hour drive from Fort St. James on a high-speed logging road. A branch line of the Canadian

National Railway is less than 5 kilometres east from Decar’s Baptiste Deposit and the BC Hydro power grid comes within 110 kilometres south of the property.

Decar hosts a greenfield discovery of nickel mineralization in the form of a naturally occurring nickel-iron alloy called awaruite, which is amenable to bulk-tonnage, open-pit mining. Awaruite mineralization has been identified in four target areas within this ophiolite complex, being the Baptiste Deposit, the B Target, the Sid Target and Van Target, as confirmed by drilling in the first three plus petrographic examination, electron probe analyses and outcrop sampling on all four. Since 2010, approximately $25 million has been spent on the exploration and development of Decar.

Of the four targets in the Decar Nickel District, the Baptiste Deposit has been the main focus of diamond drilling since 2010, with a total of 82 holes and over 31,000 metres of drilling completed. The Sid Target was tested with two holes in 2010 and the B Target had a single hole drilled into it in 2011; all three holes intersected nickel-iron alloy mineralization over wide intervals with DTR nickel grades comparable to the Baptiste Deposit. The Van Target was not drill-tested at that time as rock exposure was very poor prior to logging activity by forestry companies.

As reported in a NI 43-101 resource estimate prepared on February 26, 2018, the Baptiste deposit contains 1.843 billion tonnes of indicated resources at an average grade of 0.123% DTR nickel, for 2.3 million tonnes of DTR nickel, and 391 million tonnes of inferred resources with an average grade of 0.115% DTR nickel, for 0.4 million tonnes of DTR nickel, reported at a cut-off grade of 0.06%. Mineral resources are not mineral reserves and do not have demonstrated economic viability.

About FPX Nickel Corp.

FPX Nickel Corp. is focused on the exploration and development of the Decar Nickel-Iron Alloy Project, located in central British Columbia, and other occurrences of the same unique style of naturally occurring nickel-iron alloy mineralization known as awaruite. For more information, please view the Company’s website at www.fpxnickel.com or contact Martin Turenne, President and CEO, at (604) 681-8600.

On behalf of FPX Nickel Corp.

"Martin Turenne"
Martin Turenne, President, CEO and Director

Forward-Looking Statements
Certain of the statements made and information contained herein is considered “forward-looking information” within the meaning of applicable Canadian securities laws. These statements address future events and conditions and so involve inherent risks and uncertainties, as disclosed in the Company's periodic filings with Canadian securities regulators. Actual results could differ from those currently projected. The Company does not assume the obligation to update any forward-looking statement.

Neither the TSX Venture Exchange nor its Regulation Services Provider accepts responsibility for the adequacy or accuracy of this release.