

# FPX Nickel Reports Positive Field Tests Demonstrating Potential for Significant Carbon Capture at Baptiste Nickel Project

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VANCOUVER, Feb. 16, 2021 - [FPX Nickel Corp.](#) (TSXV: FPX) ("FPX" or the "Company") is pleased to report the results of initial field tests which demonstrate the potential for significant direct air carbon capture in tailings at its Baptiste Project in the Decar Nickel District in central British Columbia. The field tests, conducted by researchers from the University of British Columbia ("UBC") funded by FPX and the Government of Canada, demonstrate that the Baptiste Project's tailings can sequester significant quantities of carbon dioxide ("CO<sub>2</sub>") when exposed to air through a natural process of mineral carbonation.

## Highlights

- Carbon sequestration rates observed during the 24-day field program in August 2020 are consistent with and, under certain conditions, improve upon the rates achieved in previous laboratory-based testing
- Significant rates of carbon sequestration were noted on a continuous basis throughout the program under all test conditions, with the highest rates of sequestration occurring in tailings subjected to churning at daily intervals to encourage greater exposure of the crushed material to air
- Measurements during the 24-day field program last August indicate capture of a total of 2 grams of CO<sub>2</sub> for each kilogram of crushed Baptiste tailings exposed to air by churning on a daily basis to a depth of 12 centimetres
- The experimental results indicate reaction with only 15-30% of the available carbon-reactive mineral (brucite) in the tailings, suggesting promising future opportunities to optimize the reaction between tailings and CO<sub>2</sub> in air to achieve even higher rates of carbon capture

**Cautionary Statement:** The test results described herein are preliminary in nature and may not be representative of conditions or results in an operating environment, particularly as it pertains to the representativeness of mineralization, moisture content, changes in weather conditions, process water chemistry and tailings emplacement configuration, including the rate at which tailings are covered with fresh material, among other parameters. There is no certainty that the results reported herein will be realized in an operating environment. Further studies are recommended to expand the scale of testing to better understand the potential for carbon sequestration to be realized in an operating environment.

"These exciting results mark an important step in our objective to develop Baptiste as the world's first large-scale, carbon-neutral nickel operation," commented Martin Turenne, FPX Nickel's President and CEO. "Having previously established that Baptiste has the potential to be the world's lowest-carbon source of refined nickel (see FPX's news release dated January 12, 2021), we will continue to advance our understanding of the Project's carbon sequestration potential, with further results of the 2020 test program anticipated in the second quarter of 2021, and a new, larger field trial planned for this later this year."

The test program, conducted at a site approximating the climactic conditions of an eventual operation at the Decar Nickel District, builds on more than a decade of research on technologies that maximize the reaction between CO<sub>2</sub> and brucite (mineral form of magnesium hydroxide) present in the Baptiste mine tailings. In a natural process called carbon mineralization, CO<sub>2</sub> reacts with brucite in the tailings, binding the CO<sub>2</sub> in a benign, solid magnesium carbonate.

The test work summarized herein was completed at an outdoor site in Prince George from August 5-29, 2020 on a representative Baptiste mineralized composite of approximately 300 kilograms comprised of core sample reject material crushed to 50-360 µm, consistent with the tailings size anticipated during mine operation. Chemical analysis of the core material indicated 1-2 wt% content of brucite, a range consistent with the average brucite content of the Baptiste deposit.

The tailings sample was divided into splits of 37 kilograms loaded to a depth of 12 centimeters into eight cells in two large containers, with local water added to achieve a moisture content of approximately 15 wt%. One container was exposed to local weather conditions (including precipitation and solar radiation), while the second was placed under a shade tent to control the water content of the tailings, which was maintained approximately constant by the manual addition of water from time to time.

Two physical manipulations, churning and aeration, were each applied to four of the eight cells, with the four remaining cells left undisturbed as controls. In the churned cells, the tailings were manually overturned once per day to a depth of 12 centimetres. In the aerated cells, narrow holes with a diameter of 1 cm were bored on a 5 cm grid from the surface to the bottom of the cell to encourage a greater exposure of air to the crushed material.

Two methodologies were employed to confirm the amount of carbon sequestered during the test program. In the field, CO<sub>2</sub> fluxes were quantified using a dynamic closed system CO<sub>2</sub> flux chamber, which measures the concentration of CO<sub>2</sub> in the headspace above the tailings. These measurements are taken on a regular basis throughout the test period. A decrease in headspace CO<sub>2</sub> concentration measures the influx of CO<sub>2</sub> into the tailings. Core samples collected at the end of the experiment were submitted for analysis of total inorganic carbon ("TIC") together with blind standards. Comparison of total captured CO<sub>2</sub> shows good agreement between the flux and TIC measurement methodologies and provides greater assurance regarding the measured rate of carbon capture.

In the cells churned to a depth of 12 centimetres once per day, carbon absorption measurements demonstrate capture of 2 grams of CO<sub>2</sub> for each kilogram of crushed Baptiste tailings in the cell over the course of the 24-day trial period in August, and with no deposition of new tailings on top. Based on this amount of carbon sequestration, it is estimated that only 15-30% of the brucite reacted with carbon dioxide, leaving 70-85% of the brucite available for reaction.

In the control and aerated cells, an average of 1 gram of CO<sub>2</sub> was captured for each kilogram of crushed Baptiste tailings in the cells over the course of the field trial, representing approximately 50% of the sequestration rate observed in the churned cells. The aeration techniques employed during the field trial showed negligible benefit on the rates of carbon sequestration as compared to the control samples.

Rates of carbon capture in the churned cells exceed the rates achieved in undisturbed tailings during previous laboratory-based testing, as documented in a study published in the International Journal of Greenhouse Gas Control ("Prospects for CO<sub>2</sub> mineralization and enhanced weathering of ultramafic mine tailings from the Baptiste nickel deposit in British Columbia, Canada", Power et al., 2020).

Consistent with previous lab testing, these field test results confirm that the principal rate-limiting factor for the Baptiste tailings on the amount of carbon sequestration is the delivery of CO<sub>2</sub> to the brucite contained in the tailings. Further work on a larger sample is being planned to investigate engineering options to increase the rate and duration of contact between air and the surface area of the tailings to achieve a greater rate of sequestration.

## Next Steps

The results summarized herein are from the first of two phases of this initial UBC field program conducted in 2020. On completion of the first phase of testing in Prince George in August, the tailings were moved to Vancouver and a second extended stage was conducted outdoors in Vancouver from September to November. Testing during this second stage assessed the rate and quantity of carbon capture by exposure of Baptiste material to air. Additional testing assessed the rate and quantity of carbon capture from injection of concentrated CO<sub>2</sub> gas. The Company expects to report the final findings of the entire 2020 test program in the second quarter of 2021.

The Company will expand the scope of carbon sequestration testing in 2021, and expects to announce the details of those planned activities in connection with the publication of the final 2020 field test results in the second quarter.

## Webinar

The Company will be participating in Renmark Financial Communications Inc.'s live Virtual Non-Deal Roadshow Series to provide a Company overview and discuss its 2021 plans on Wednesday, February 24<sup>th</sup> at 4:00 pm Eastern time (1:00 pm Pacific time). FPX welcomes stakeholders, investors, and other individual followers to register and attend this live event using the following registration link:  
<https://talk-deck.com/info/live-register/?292!ut9dx30v1dy>

Dr. Peter Bradshaw, P. Eng., FPX's Qualified Person under NI 43-101, has reviewed and approved the technical content of this news release.

#### 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.

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 US \$24 million has been spent on the exploration and development of Decar.

Of the four targets in the Decar Nickel District, the Baptiste Deposit, which was initially the most accessible and had the biggest known surface footprint, 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 the current NI 43-101 resource estimate, having an effective date of September 9, 2020, the Baptiste Deposit contains 1.996 billion tonnes of indicated resources at an average grade of 0.122% DTR nickel, containing to 2.4 million tonnes of nickel, plus 593 million tonnes of inferred resources with an average grade of 0.114% DTR nickel, containing 0.7 million tonnes of nickel, both reported at a cut-off grade of 0.06% DTR nickel. 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 District, located in central British Columbia, and other occurrences of the same unique style of naturally occurring nickel-iron alloy mineralization known as awaruite.

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.

SOURCE [FPX Nickel Corp.](#)

#### Contact

please view the Company's website at [www.fpxnickel.com](http://www.fpxnickel.com) or contact Martin Turenne, President and CEO, at (604) 681-8600 or [ceo@fpxnickel.com](mailto:ceo@fpxnickel.com).

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