

# Canadian North Resources Reports Extraction Rates of 99% Nickel, 98% Cobalt and 90.6% Copper in the Second Set of Bioleaching Tests for the Ferguson Lake Project

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## Highlights:

- High metal extractions with 99% Ni, 98% Co and 90.6% Cu confirmed in the second set of bioleaching lab-scale tests on massive sulphides from the Ferguson Lake copper - nickel - cobalt - palladium - platinum project.
- All base metals were extracted from each bioleaching tests at low temperatures of 52 - 65°C. The unique mineralogy of the massive sulphides enables the bioleaching process to generate sufficient heat and sulfuric acid to maintain self-sustaining reactions without the addition of acid and external heat. Such a self-sustaining system can significantly simplify the metallurgical process and signals strong potential for low energy consumption development of the Ferguson Lake project.
- Copper bioleaching extraction rates reached 90.6% in new 65°C bench-scale test without compromising Ni and Co extraction efficiencies. Most of these metals (87.7% Cu, 98.6% Ni and 98.2% Co) were extracted within 28-day leach time.
- Initial treatment of the residues of the bioleaching process indicated over 80% recoveries of palladium (82%) and gold (83%). More extensive tests planned.

[Canadian North Resources Inc.](#) ("Canadian North" or the "Company") (TSXV: CNRI; OTCQX: CNRSF; FSE: E00 (E-O-zero)) is pleased to report new results from its technical evaluation of bioleaching technology for its Ferguson Lake copper, nickel, cobalt, palladium and platinum project ("the Ferguson Lake Project"), in the partnership with RPC, a global leader in bio-metallurgical technology based in Fredericton, New Brunswick.

"We are highly excited by the results from the second set of the bio-leaching tests" said Dr. Kaihui Yang, President and CEO of the Company. "These new tests confirmed high metal extraction of copper, nickel and cobalt at low temperatures that would not require external heat energy and addition of acid. We are continuing the expanded metallurgical tests to develop a low-cost, low-carbon footprint mineral processing flowsheet for the recovery of nickel, cobalt, copper and PGE using bio-leaching technology at the Ferguson Lake project. With these recent results, we are increasingly confident that bio-leaching technology is an appropriate metallurgical process for the Ferguson Lake deposit."

The bioleaching tests have been conducted by RPC at its laboratory in Fredericton, New Brunswick. Following the initial tests completed in 2024, the Company expanded bio-leaching metallurgical testing in spring 2025 (Refer to March 03, 2025, Press Release), including additional research for maximum copper extraction with nickel and cobalt, as well as PGM recoveries from a new set of massive sulphide samples from the Ferguson Lake project.

The bioleaching tests were carried out at low temperatures ranging from 52-65°C with residence time from 18-56 days. The results (Table 1) confirmed high extraction rates for copper, nickel and cobalt. In particular, the results indicate that copper extraction rates increased to 88.8% at 65°C from just 71.9% at 52°C during the same leach time of 43 days. It is also noted that the higher temperature (65°C) has decreased the leach time by 50% while maintaining the high overall extraction rates for all metals (87.7% Cu, 98.6% Ni and 98.2% Co) within 28 days.

Table 1: Results from the second set of bioleaching tests

Test ID	Massive Sulphide Head Assay Temperature				Leach Time (days)	Bioleaching Metal Extraction Rates		
	Cu (%)	Ni (%)	Co (%)	(°C)		Cu (%)	Ni (%)	Co (%)
J10228 52C				52	18	65.2	81.5	86.8
					43	71.9	99.1	96.0
					56	74.9	99.0	98.9
J10228 55C	1.08	0.97	0.095	55	18	65.2	89.6	83.0
					43	73.9	99.2	95.8
					56	78.1	99.3	99.3
J10228 60C				60	18	77.6	90.3	84.8
					43	86.5	99.2	95.7
					56	88.2	99.4	98.7
J10245 65C				65	28	87.7	98.6	98.2
					43	88.8	96.8	96.9
					55	90.6	99.0	99.3

The high metal extraction rates at low temperatures indicate a potential metallurgical process with low-energy consumption for the Ferguson Lake project. It is noted that the mineralogy of the massive sulphides from Ferguson Lake is unique and highly amendable to bioleaching, and that the bioleaching process of the massive sulphides can generate sufficient heat and sulfuric acid to the highest level to maintain a self-sustaining metal extraction process without external heat and acid needed. This self-sustaining system will be further evaluated during the on-going tests. When optimized, such a self-sustaining system will significantly simplify the bio-metallurgical process and has the potential for low-energy consumption development of the Ferguson Lake project.

Moreover, initial treatment with cyanide (CN) acid leach on the limited amounts of residues from the 55°C bioleaching tests indicated CN leach extraction rates of 82.2% palladium, 40.8% platinum and 83.5% gold (Table 2). The on-going tests will further determine the recoveries of PGM and other by-products.

Table 2: CN leach testing results on the bio-leaching residues

Sample ID	Assay Grade			CN Leach Extraction Rates		
	Au (g/t)	Pd (g/t)	Pt (g/t)	Au (%)	Pt (%)	Pd (%)
J10227 MS55 Res	0.018	1.360	0.407	-	-	-
J10227 MS55 Res CN Leach Residue	0.004	0.325	0.324	83.5	40.8	82.2

About the Company's expanded bio-leaching metallurgical tests:

Phase 1: Continued extensive bio-leaching metal testing for the extractions of Ni, Co and Cu. This first phase of the program will focus on testing various conditions for whole ore bio-leaching treatment as the Ferguson Lake massive sulphide is highly amenable to such process. Various processing methods will be used to establish leach extraction rates. Testing will include various ore and grind sizes up to ¾ inch sized crushed massive sulphides to evaluate effect of crush size. The extracted bio-leaching solution from semi-continuous testing will be put through scoping precipitation tests to better understand the mobility of various metals under controlled conditions. RPC will then design a new conceptual flowsheet by incorporating the optimal operating conditions found, process flowsheets, operating conditions, and reagent consumptions where possible.

Phase 2: Evaluating various metal recovery options from the pregnant bio-leaching solution and the residual product. These tests will focus on recovering copper, nickel and cobalt as metals, Mixed Hydroxide Precipitate (MHP) and/or as battery grade sulphates from solution, as well as PGE metals, gold and rhodium from residual tail products. Testing can include the removal of impurities and treatment of tailings.

About RPC:

RPC is a respected research and technology organization with global leading bioleaching technologies, providing specialized engineering, scientific and laboratory-based services, based in New Brunswick, Canada. RPC's engineers and technologists are supported by world-class analytical chemistry, air quality and material-testing laboratories and a wide variety of pilot facilities for the development and improvement of industrial and environmental processes and products.

Qualified Person:

Dr. Trevor Boyd, P.Geo. and Technical Advisor for Canadian North Resources, a qualified person as defined by Canadian National Instrument 43-101 standards and has reviewed the technical content of this news release and has approved its dissemination.

About Canadian North Resources Inc.

Canadian North Resources Inc. is an exploration and development company focusing on the critical metals for the clean-energy, electric vehicles, battery and high-tech industries. The company is advancing its 100% owned Ferguson Lake nickel, copper, cobalt, palladium, and platinum project in the Kivalliq Region of Nunavut, Canada.

The Ferguson Lake mining property contains a substantial National Instrument 43-101 compliant Mineral Resource Estimate announced on March 19 2024, which include Indicated Mineral Resources of 66.1 million tonnes (Mt) containing 1,093 million pounds (Mlb) copper at 0.75%, 678Mlb nickel at 0.47%, 79.3Mlb cobalt at 0.05%, 2.34 million ounces (Moz) palladium at 1.10g/t and 0.419Moz platinum at 0.19g/t; and Inferred Mineral Resources of 25.9Mt containing 558Mlb copper at 0.98%, 333Mlb nickel at 0.58%, 39.6Mlb cobalt at 0.07%, 1.192Moz palladium at 1.43g/t and 0.205Moz platinum at 0.25g/t. In particular, 80% of the Indicated Mineral Resources is Open Pit with 52.7Mt at 0.65% Cu, 0.43% Ni, 0.05% Co, 0.97g/t Pd and 0.17g/t Pt, which provides a solid Mineral Resource base for the initial development of a potential large mine. The Mineral Resource model indicates significant potential for resource expansion along strike and at depth over the 15 km long mineralized belt and a number of undefined mineralization zones and prospective areas. (Refer to "Independent Technical Report on the Mineral Resource Estimate for the Ferguson Lake Project, Nunavut, Canada ("the Technical Report")", prepared by SRK Consulting and Ronacher McKenzie Geoscience Inc., effective March 19, 2024, filed by the Company to SEDAR at <http://www.sedar+.com> on May 3, 2024. The Technical Report has also been posted on the Company's website at [www.cnresources.com](http://www.cnresources.com).)

Further information please visit the website at [www.cnresources.com](http://www.cnresources.com),

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