Electra Battery Materials

NASDAQ : ELBM | TSX.V : ELBM

News Release

Electra Begins Testing North American Feedstock for Cobalt Refinery

Toronto, Ontario – (July 31, 2025) – **Electra Battery Materials Corporation (NASDAQ: ELBM; TSX-V: ELBM)** ("Electra" or the "Company") announces the start of metallurgical testing on cobalt feedstock from two strategic North American sources: the historic Cobalt Camp in Ontario and home to Electra's refinery, and the Company's Iron Creek cobalt and copper project in Idaho.

The objective of this initiative is to strengthen and diversify Electra's cobalt refinery feedstock pipeline by integrating domestic sources alongside existing global supply partners. This program supports the development of a robust, flexible, and resilient North American critical minerals supply chain while maintaining strategic relationships with partners such as Glencore and ERG. These domestic sources are intended to supplement Electra's existing international feedstock agreements, enhancing long-term security and operational flexibility.

Preliminary results from Electra's North American feedstock program are expected by the end of 2025 and will inform potential front-end flowsheet modifications, such as the proposed addition of a pressure oxidation (POX) circuit to enable processing of a broader range of complex concentrates. Electra's in-house laboratory is in the process of installing equipment required to evaluate these new feedstocks. Backed by a highly experienced technical team, the lab will conduct bench-scale testing and analytical work to validate and refine proposed flowsheet enhancements to the leach circuit designed to process North American materials at the Company's hydrometallurgical refinery, including arsenic-bearing polymetallic sulfide materials.

"These tests will give us a clearer picture of how North American cobalt-bearing concentrates can be processed using Electra's hydrometallurgical technology," said Dr. George Puvvada, Electra's Vice President, Metallurgy & Technology. "North American concentrates often contain elevated levels of arsenic and other impurities, which have made them difficult to process using conventional methods. Building on the successful completion of the Company's black mass recycling test program, I believe we can responsibly recover critical metals from North American feeds and significantly expand the range of materials our refinery can process."

"Many North American cobalt-bearing mineral resources have remained undeveloped due to mineralogy that is incompatible with conventional smelting and refining," said Trent Mell, CEO of Electra. "Our hydrometallurgical process offers a potential domestic solution to that challenge, aligned with the battery market and geopolitical imperatives."

"With critical minerals independence now a clear policy priority, we are focused on developing localized midstream solutions that support both the U.S. and Canadian supply chains. Our facility is designed to evolve alongside market needs, and this initiative positions Electra to play a leading role in that transformation."

Initial testwork includes feed from legacy deposits in the historic Cobalt mining camp near the refinery, as well as cobalt-bearing material from the Iron Creek project in the Idaho Cobalt Belt, one of the few known primary cobalt resources in the United States.

Test results will guide potential front-end modifications to Electra's leach circuit that would allow for broader acceptance of arsenic-bearing polymetallic sulfide concentrates. While the current focus is on cobalt-copper and cobalt-silver feedstocks, Electra believes its proposed flowsheet enhancements may also be applied to custom treatment of gold concentrates with elevated arsenic levels, an area of growing interest among North American miners at a time of record high gold prices.

This initiative comes at a pivotal time, as U.S. and Canadian governments continue to accelerate efforts to localize critical mineral supply chains and reduce reliance on foreign processing, particularly from China. Electra's refinery represents a foundational element of the North American battery ecosystem, with the flexibility to evolve as regional feedstock and market needs change.

Electra's refinery project is backed by a long-term offtake agreement with LG Energy Solution for up to 80% of output over the first five years. The facility is designed to process cobalt hydroxide feedstock from the Democratic Republic of Congo and convert it into battery-grade cobalt sulfate for use in lithium-ion batteries and energy storage.

Early site work is currently underway to prepare for a resumption of full-scale construction, with future growth phases targeting battery recycling and expanded feedstock sourcing opportunities.

Electra's Iron Creek project is located in the Idaho Cobalt Belt, a prolific mineral district with a long history of cobalt and copper production. The region includes the historic Blackbird Mine, once the only significant domestic source of cobalt in the United States, which operated intermittently through much of the 20th century. Iron Creek is a partially developed underground project, situated on patented property south of the Blackbird Mine with year-round road access. In addition to Iron Creek, Electra holds nearby exploration prospects known as Ruby and CAS, which are considered prospective for additional cobalt resources based on geological work and historic drilling.

To date, Electra has completed over 30,000 metres of drilling at Iron Creek, outlining an Indicated mineral resource of 4.4 million tonnes grading 0.19% cobalt and 0.73% copper, and an Inferred resource of 2.2 million tonnes grading 0.08% cobalt and 1.34% copper. The deposit remains open along strike and at depth, with additional exploration targets identified nearby.

The current mineral resource estimate is based on an updated technical report titled "NI 43-101 Technical Report and Mineral Resource Estimate for the Iron Creek Cobalt-Copper Property, Lemhi County, Idaho, USA", prepared by Martin Perron, P.Eng., Marc R. Beauvais, P.Eng., and Eric Kinnan, P.Geo. The report is dated effective January 27, 2023, and was filed on March 10, 2023. A copy is available under the Company's profile on www.sedarplus.ca.

Iron Creek is a key component of Electra's strategy to establish a fully integrated North American supply chain for battery-grade cobalt, from resource development through to refining.

Company Update

Electra also announces that it has entered into an At The Market Offering Agreement with H.C. Wainwright & Co., LLC ("Wainwright"), pursuant to which the Company, at its discretion, may offer and sell, from time to time, through Wainwright, common shares in the capital of the Company

(the “Common Shares”) having an aggregate offering price of up to US$5,500,000 (the “ATM Offering”). A cash commission of up to 3.0% on the aggregate gross proceeds raised under the ATM Offering will be paid to Wainwright in connection with its services.

The ATM Offering is being made in the United States pursuant to a registration statement (the “Registration Statement”) on Form F-3 (File No. 333-288364) filed under the Securities Act of 1933, as amended (the “Securities Act”), with the Securities and Exchange Commission, and the related Prospectus (the “Base Prospectus”) and Prospectus Supplement (“Prospectus Supplement”, together with the Base Prospectus, the “Prospectus”). Sales under the Prospectus if any, will be made in transactions that are deemed to be pursuant to an “at-the-market offering” as defined in Rule 415(a)(4) under the Securities Act, and prices may vary as between purchasers and during the period of distribution. No Common Shares in the ATM Offering will be sold on the TSX Venture Exchange (“TSXV”) or any other trading market in Canada. The ATM Offering remains subject to final approval of the TSXV and Securities Exchange Commission.

Qualified Person Statement

The scientific technical content of this press release that relates to mineral exploration has been reviewed and approved by Dr. Frank Santaguida, P.Geo., who is a Qualified Person as defined by National Instrument 43-101. Dr. Santaguida is employed as Lead Geoscientist by Electra.

About Electra Battery Materials

Electra is a leader in advancing North America’s critical minerals supply chain for lithium-ion batteries. Currently focused on developing North America’s only cobalt sulfate refinery, Electra is executing a phased strategy to onshore critical minerals refining and reduce reliance on foreign supply chains. In addition to establishing the cobalt sulfate refinery, Electra’s strategy includes nickel refining and battery recycling. Growth projects include integrating black mass recycling at its existing refining complex, evaluating opportunities for cobalt production in Bécancour, Quebec, and exploring nickel sulfate production potential in North America. For more information, please visit www.ElectraBMC.com.

Contact
Heather Smiles
Vice President, Investor Relations & Corporate Development
Electra Battery Materials
info@ElectraBMC.com
1.416.900.3891

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Economic Assessment as defined under NI 43-101. Readers are cautioned not to assume that further work on the stated resources will lead to mineral reserves that can be mined economically. An Inferred Mineral Resource as defined by the CIM Standing Committee is "that part of a Mineral Resource for which quantity and grade or quality are estimated on the basis of limited geological evidence and sampling". Geological evidence is sufficient to imply but not verify geological and grade or quality continuity. An Inferred Mineral Resource has a lower level of confidence than that applying to an Indicated Mineral Resource and must not be converted to a Mineral Reserve. It is reasonably expected that the majority of Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration. United States investors are cautioned that CIM and NI 43-101 standards for resource classification and public disclosure differ from the requirements of the U.S. Securities and Exchange Commission (SEC) and resource information contained in this news release may not be comparable to similar information disclosed by domestic United States companies subject to the SEC's reporting and disclosure requirements.

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