

First Cobalt Studies Battery Recycling for Nickel, Copper and Cobalt Recovery

TORONTO, ON — (February 17, 2021) – First Cobalt Corp. (TSX-V: FCC; OTCQX: FTSSF) (the “Company”) today announced that it has begun a study of black mass material from recycled batteries as a supplemental source of feed for its hydrometallurgical refinery located north of Toronto. The Company believes the Refinery could recover cobalt, nickel, copper and potentially lithium and manganese, in addition to planned cobalt production from primary feed. Discussions are underway with several producers of black mass.

First Cobalt is currently in preconstruction of a refinery expansion project that will result in annual production of 5,000 tonnes of cobalt contained in a battery-grade cobalt sulfate starting in Q4 2022. The Refinery previously recovered nickel, copper and cobalt and this study will leverage these processes and existing infrastructure. Incremental capital costs to modify the flow sheet to treat black mass and recover other battery raw materials are expected to be substantially lower than a greenfield project.

Highlights

- First Cobalt’s battery recycling circuit would be integrated into the Company’s primary cobalt sulfate refinery and operated by the same team. Additional capital expenditure is expected to be modest under a base case scenario.
- The Company’s hydrometallurgical refinery is expected to provide higher yields at a lower cost and at significantly lower energy intensity, compared to traditional pyrometallurgical facilities.
- First Cobalt’s refinery is 100% powered by clean, hydroelectric power from Ontario Power Generation, resulting in nearly zero greenhouse gas (GHG) emissions.
- Closed loop recycling of lithium-ion batteries will serve the electric vehicle market in North America and Europe and in the short term will benefit from higher availability of cobalt-rich consumer electronics.

Trent Mell, President & Chief Executive Officer, commented:

“This initiative advances our vision of producing the world’s most sustainable cobalt while broadening the potential revenue streams to include other battery materials. Automakers are looking for a closed loop supply chain for their batteries and the proposed recycling process at the First Cobalt Refinery presents a compelling solution to move to a circular model for recycling end-of-life batteries and battery manufacturing scrap.

“Pursuing this project in tandem with the current cobalt sulfate production circuit would yield much lower capital and operating costs than a standalone greenfield recycling plant. Our hydrometallurgical process is expected to be more efficient and better for the environment than many of the established recycling processes.”

Lithium-ion Battery Recycling

End-of-life lithium-ion batteries are initially discharged before being disassembled. Battery cells are then typically subject to a mechanical process involving crushing, sorting and sieving to produce a powder substance referred to as “black mass”. Black mass contains a variety of

valuable metals including cobalt, nickel, copper, lithium, manganese, aluminum and graphite. Outside China, the predominant means of recovering metal from black mass is through an energy-intensive pyrometallurgical process that involves calcining, roasting and smelting.

Metal recovery from black mass through a hydrometallurgical process such as that owned by First Cobalt, whereby metals are dissolved and separated, is more efficient and environmentally friendlier than a pyrometallurgical process. The hydrometallurgical process is expected to become the preferred approach to recycling as electric vehicle penetration rates continue to climb.

Scope of Work

The scoping study will initially consider two scenarios. Under a base case scenario, Ausenco Engineering Canada Inc. will consider existing infrastructure as well as equipment currently installed at the Refinery. Prior to 2015, the existing flow sheet could process 4,200 tonnes of feed per annum to produce cobalt carbonate, nickel carbonate and a copper intermediate product. This scenario will utilize existing infrastructure and equipment that is not required for the cobalt sulfate expansion process that is currently underway.

The second phase of the study will consider additional equipment required to take all material streams to a battery-grade product. Under this scenario, opportunities for lithium, manganese, aluminum and graphite as revenue streams will be explored. In each phase, the Company will seek to utilize existing equipment and infrastructure to the greatest extent possible.

SGS Lakefield will conduct metallurgical test work on black mass feed material. Preferred feed material are cathodes from lithium cobalt oxide (LCO), nickel manganese cobalt (NMC) and nickel cobalt aluminum (NCA) batteries.

ESG Commitment

Batteries have an essential role in the world's transition to renewable energy. However, IHS Markit forecasts that more than 1.2 million tonnes of batteries will reach end of life in 2025, increasing to 3.5 million tonnes in 2030. Recycling processes to close the loop and improve the environmental profile of batteries even further will also provide a steady, domestic source of critical minerals that are projected to be in short supply in the future.

As electric vehicle sales continue to increase, thousands of tonnes of end-of-life batteries could end up in landfill sites or shipped to pyrometallurgical refineries. The opportunity that First Cobalt is pursuing would offer a low cost, high yield, and environmentally friendly recycling solution for end-of-life batteries.

First Cobalt is committed to producing the world's most sustainable cobalt and we will apply these same rigorous principles to all our operations. The mines providing the Refinery's cobalt hydroxide feedstock and the Refinery itself are powered by hydroelectric energy, which generates emissions that are 50 times lower than natural gas, 70 times lower than coal and 5 times lower than solar (source: Hydro Quebec).

Closed-loop solutions for the recycling of cathode materials used in lithium-ion batteries is good for the environment and is good public policy. By 2027, the European Union will require that all batteries have recycled content declarations, with mandatory recycled content in 2035 of 20% cobalt, 10% lithium and 12% nickel. It is expected that North America will follow suit and impose regulations on battery recycling.

About the First Cobalt Refinery

The First Cobalt Refinery is a hydrometallurgical cobalt refinery located north of Toronto, in the community of Temiskaming Shores. The facility was permitted in 1996 and operated intermittently until 2015, producing cobalt, nickel and silver products. In May 2020, the

Company completed an engineering study that confirmed the Refinery's suitability to treat cobalt hydroxide at an expanded throughput to produce battery grade cobalt sulfate. Feed arrangements have been concluded with Glencore AG and IXM SA, a fully owned subsidiary of CMOG. In December 2020, the Government of Canada and the Government of Ontario announced a joint C\$10 million investment, which will help accelerate the commissioning and expansion. Once operational, the Refinery will produce 5,000 tonnes of cobalt per year and will be North America's only producer of cobalt sulfate for the electric vehicle market.

Long Term Incentive Grants

The Company has issued certain directors and employees 30,864 Deferred Share Units (DSUs), 148,456 Restricted Share Units (RSUs) and options granting the rights to purchase 100,000 common shares of First Cobalt exercisable at yesterday's closing price of \$0.405 for a period of four years. The options will vest over a two-year period. The grants of long-term incentives remain subject to the approval of the TSX Venture Exchange.

About First Cobalt

First Cobalt owns North America's only permitted primary cobalt refinery. Cobalt refining is a critical component to the development and manufacturing of batteries for electric vehicles and forms a foundational piece of the next generation of the North American auto sector and other electrified consumer and industrial applications. First Cobalt owns the Iron Creek cobalt project in Idaho, USA and controls significant silver and cobalt assets in the Canadian Cobalt Camp, including more than 50 past producing mines.

On behalf of First Cobalt Corp.

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President & Chief Executive Officer

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