As EV battery metal makers crash and burn, First Cobalt aims to open new refinery

The project would open a new chapter in the quest to build out an electric vehicle supply chain in North America

A local geologist's collection of core samples in Cobalt, Ont. First Cobalt’s refinery is located in North Cobalt. *Cole Burston/Bloomberg files*

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On Monday, Trent Mell, chief executive of First Cobalt Corp., travelled to his office in downtown Toronto for the first time in weeks to tell the world he hopes to open North America's first cobalt sulfate refinery — a key metal used in the batteries that power electric vehicles — by the end of the year.

The opening, years in the making, arrives at an awkward moment as social distancing policies keep people out of their cars, and the economic fallout from COVID-19 creates great uncertainty about the demand for electric vehicles, or EVs.

"There's obviously the immediate pause" on EV adoption, Mell told the Financial Post on Monday.

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But he quickly added, "If we electrify our fleet, we could have an immediate impact on the planet in terms of just blue skies. I don't know how many people like me were taken aback by how quickly the air got clean by keeping everybody home and whether that helps change attitudes."

His update came as the company released a feasibility study on the economics of operating its proposed cobalt sulfate refinery, and analysts greeted it with enthusiasm but also skepticism. The feasibility study, for example, uses a cobalt price of US$25 per pound, when the current price is below US$17 per pound.

Raw cobalt at a plant in the Democratic Republic of Congo. *Samir Tounsi/AFP/Getty Images files*

The company would also need to raise US$56 million to expand the refinery to desired levels, of around 5,000 tonnes of cobalt sulfate per year.

Mell said he is in discussion with various third-parties and suggested there could be possible funding from the government, or loan guarantees.

“The issue is we’re all distracted” by COVID-19 right now, he said.

Still, the company’s stock has bounced up from 14.5 cents last week to 17 cents on Tuesday.

One of the chief attractions of the refinery is that it’s already built and permitted. Located in North Cobalt, Ont., it was commissioned in the late 1990s as a refinery for cobalt carbonate, which was used in animal feed for horses, according to Mell.

In 2017, First Cobalt was searching for a cobalt deposit in the old mining town and instead noticed the refinery, which had stopped operating in 2015. Mell said its location, about a six-hour drive north of Toronto, makes it proximate to the major mining operations in Sudbury, where Glencore Plc and Vale S.A., some of the world’s largest metal companies, process nickel, copper, cobalt and other metals. That makes it easy to obtain some of the chemical reagents needed to operate a cobalt sulfate refinery.

Frank Santaguida, vice president of exploration for First Cobalt Corp., holds rocks with malachite deposits during a tour of the company's facilities outside of Cobalt, Ontario, Canada, on Thursday, Oct. 12, 2017. *Cole Burston/Bloomberg files*

First Cobalt wound up purchasing the facility in 2017 for what Mell estimated to be about $5 million, a pivot that moved the company closer to becoming a chemical company.

But it also raised questions about where First Cobalt will get its feedstock for the refinery. For a solution, Mell turned to Glencore Plc.

Last year, Glencore loaned the company US$5 million to commission a study of whether the refinery could be ramped up eventually to process 5,000 tonnes per annum of cobalt sulfate. It also said it could advance US$40 million to recommission and expand the plant.

Mell said Monday he is hoping to strike a "tolling" arrangement, whereby initially his company will refine cobalt mined by Glencore — likely from the Democratic Republic of Congo, where it operates one of the largest cobalt mines in the world — for a fee. Initially, the company will aim to refine around 1,000 tonnes of cobalt sulfate per annum at its refinery and eventually expand to 5,000 tonnes.

First Cobalt is also hoping to develop its own mine in Idaho, where it has been exploring a copper-cobalt deposit, which could eventually provide feedstock for the mine, and also bring in feedstock from other companies.

A Glencore spokesman declined to comment on its plans or potential arrangements with First Cobalt.

A Glencore cobalt mine in the Democratic Republic of Congo. *Simon Dawson/Bloomberg files*

David Talbot, an analyst at Eight Capital Securities, wrote on Monday, that there are questions about how First Cobalt will finance the project, and where it will get all its feed from if Glencore only supplies a portion of what is necessary.

“We suspect that (First Cobalt’s) actual business plan will rely on toll milling for third parties and the economics were not provided in the feasibility study,” Talbot wrote.

The project would open a new chapter in the quest to build out an electric vehicle supply chain in North America.

Already, many companies have crashed and burned along the way. Earlier this year, Quebec-based Nemaska Lithium filed for insolvency under the Companies’ Creditor Arrangement Act after its costs to build a lithium mine — another key battery metal — and an electrochemical conversion plant in Quebec ran hundreds of millions of dollars over budget.

Now, the mine and plant are each partially built, but work has stopped while the company’s assets and ultimate fate are adjudicated in a Quebec courtroom.

Mell said one lesson from Nemaska’s failure is that less is more. He’s not building a mine yet, but instead relying on Glencore, which already did so. In fact, as First Cobalt’s refinery is already built and permitted, there’s less capital required and less risk.

All he needs is a little money to prove it works, Mell said, adding that the expected recession could perk up government interest.

“This does become from the government’s perspective an interesting opportunity to stimulate the economy,” he said. “This is truly a shovel-ready project and we could be going very quickly, in a matter of months.”

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