NWT Rare Earth Elements: the beginning of a new and exciting journey

Nechalacho Project a celebration of "firsts"

In late April of this year, the journey for a new NWT resource to international markets began when 500 tonnes of rare earth mineral concentrate was shipped south for further processing. Mined last summer at Nechalacho, Canada's first rare earth element mine on the north shore of Great Slave Lake, the high value bastnaesite ore had been stockpiled in Hay River after a 200-kilometre journey by barge last fall.

With a customer supply chain now in place, and with Canada's first REE extraction facility nearing completion in Saskatoon, Australia-based owner Vital Metals Corporation (ASX:VML, OTCQB: VTMXF) expects to begin shipping mixed rare earth carbonate to a Norwegian customer by the third quarter of 2022.

The brown REE mineral bastnaesite is mined and separated from the white quartz matrix into a mineral concentrate at Nechalacho mine.

The project is unique in many ways, with a First Nation mining company unlocking the ore from the ground. The ore is concentrated at site without water, chemicals or a conventional tailings pond, through the innovative application of X-ray sorting technology.

Additional highlights include:

- With the addition of its extraction facility in Saskatoon, Nechalacho will be the first such miner/processor adding value to rare earth products in Canada.
- Vital's mining subsidiary, Cheetah Resources Corp., has applied a number of innovative strategies to the Nechalacho Project. The open pit mining and crushing was contracted to the Yelllowknives Dene's Deton Cho Corporation, the first time in Canada an Indigenous business has conducted mining on its own traditional territory.
- Cheetah has also achieved strong social benefits across the North and South Slave regions. 85 per cent of its workforce last summer was Northern, with 75 per cent Indigenous. 162 Northern businesses supported the project, with 90 percent of procurement coming from NWT suppliers.
- Another first application for REE concentrating at site was the use of clean, X-ray sorting technology (similar to the final stages of diamond recovery), in a compact, portable TOMRA sorter.
- Mining and concentrating the REE ore from the host quartz rock at site are just the first two steps in the complex REE process. The next step is more difficult. That is to remove residual impurities and create a 98.5% pure mixed rare earth carbonate at Vital's new, $20 million Rare Earth Extraction Facility in Saskatchewan.
- The Saskatoon facility will bake and leach the concentrate to the carbonate product that offshore customers will refine into the pure, separated rare earth metals. Demand is rapidly escalating in global green-tech and high-industries, especially as China's long-standing dominance in the supply and processing of REEs has become costly and unreliable.
- Vital's Rare Earth Extraction Facility will be commissioned this summer, enabling Canada's entry in to the international REE supply chain outside of China.

- Cheetah has secured the supply chain for NWT-mined and Saskatchewan-processed rare earths for the next five years to REETec of Norway. That company recently announced it has a contract to supply separated REE oxides to a German electric vehicle motor manufacturer, Schaeffler, and their magnet manufacturers.

One tonne tote bags of Nechalacho mineral concentrate arrived by barge in Hay River. Credit: Marine Transportation GNWT Marine Transportation Services

- So we are seeing a number of firsts here to move NWT minerals all the way through to electric vehicles in Germany.

This summer, Nechalacho plans to produce 5,000 tonnes of rare earth mineral concentrates to ship to Saskatoon for processing. That's 10 times more than 2021.

Longer term, Cheetah is preparing to develop the massive, 94 million tonne Tardiff Zone, which they expect can support more than 50 years of year-round mining. An arrangement has already been put in place to sell another portion of its rare earth carbonate to Ucore, which is constructing a strategic metals complex near Ketchikan, Alaska.

The work by Cheetah to create an entirely new mineral supply chain comes at a good time, with NWT diamond mining maturing. Call the NWT blessed perhaps, as rare earth development is similar to the discovery and development of an entirely new diamond mining industry 25 years ago, just when the NWT gold mines matured and closed. We might remember that those diamond discoveries also catapulted the NWT to third place globally in under 10 years. We may be on a similar critical mineral trajectory now, thanks to the risk and belief and investment Vital Metals has put into this brand new, untried, untested mining of rare earth elements.

Along with the confluence of supportive critical minerals strategies and a very bullish and supportive Federal budget, the future is looking brighter.

Thank you Cheetah/Vital!

Learn more at: www.cheetahreources.com and www.vitalmetals.au.com.