

The Critical Minerals Institute's Jack Lifton on Vital Metals, the SRC and Ionic Clays and Rare Earths

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In this InvestorIntel interview, Tracy Weslosky talks with Critical Minerals Institute's (CMI) Co-Chairman Jack Lifton attempts to explain what Vital Metals Limited's recent announcement about "pausing all construction-related activities at the Saskatoon processing facility" means. Clarifying and reinforcing what the Saskatoon Research Council (SRC) has stated online, we would like to redirect our audience to the SRC website where they state: "SRC wants to clarify that its Rare Earth Processing Facility currently under construction is on schedule and on budget and will be fully operational by the end of 2024."

The Saskatchewan Rare Earths industry has the Prime Minister's attention

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Canadian Prime Minister Justin Trudeau recently toured [Vital Metals Limited's](#) (ASX: VML l OTCQB: VTMXF) rare earths

processing plant in Saskatoon's northern industrial area. Vital Metals' site is next door to another rare earths processing facility built and operated by the Saskatchewan Research Council (SRC) which, in a test run back in August, created the first rare earth element ingots produced in Canada. The fact that the Prime Minister was in Saskatoon and stated that there is a support system for rare earth element mining in Saskatchewan is very encouraging. Readers may recall the [Critical Minerals series](#) we ran in July, 2022 where one of my greatest concerns was how effective our Federal Government would be in doing anything useful to advance the cause of critical materials. However, I suggested that as long as the topic remained at the forefront and politically in vogue, my hope was that they would stay out of the way and let smart, innovative people get on with doing what's best for Canada and its allies.

It appears the Government is heeding my concerns (for now) and that the rare earth industry should be able to continue to progress without too much interference. That is certainly good news if you are developing a rare earth prospect in Saskatchewan. One company that falls into that category is [Appia Rare Earths & Uranium Corp.](#) (CSE: API | OTCQX: APAAF), a Canadian publicly listed company in the rare earth element and uranium sectors. The Company is currently focusing on delineating high-grade critical rare earth elements and gallium on the Alces Lake property, as well as exploring for high-grade uranium in the prolific Athabasca Basin on its Otherside, Loranger, North Wollaston, and Eastside properties. The Company holds the surface rights to exploration for 110,997 hectares (274,280 acres) in Saskatchewan.

Appia's [Alces Lake project](#) encompasses some of the highest-grade total and critical REEs and gallium mineralization in the world, hosted within several surface and near-surface monazite occurrences that remain open at depth and along strike. In early

December, the Company [announced results](#) from the 2022 prospecting program that included:

- 36.11 wt.% TREO returned from samples of massive to semi-massive monazite in outcrop at the West Limb anomaly, first discovered in 2022.
- 3.34 wt.% TREO returned from a mineralized biotite shear zone at the West Limb anomaly
- 4.34 wt.% TREO returned from visible monazite in a shear zone at a previously unexplored and un-named radiometric prospect south of the Magnet Ridge zone
- 2.03 wt.% TREO returned from visible monazite discovered in the Western Anomaly

Still to come are assays from the record 2022 drilling program at Alces Lake where the Company completed 17,481 m over 100 drill holes. Appia's 2022 drilling program at Alces was designed to drill significantly deeper holes compared to the 100 holes (approximately 8,076 m) drilled in 2021 to allow Appia to determine continuity at depth and along the identified REE mineralization trends as the company works towards a maiden resource estimate to be prepared in accordance with NI 43-101 for the area. With high-grade REE mineralization now identified in many locations within an area covering approximately 27 km² of the Alces Lake block, the Company believes the project has the potential to be a world-class source of high-grade critical rare earth bearing monazite.

Momentum is certainly there for critical minerals comprising the battery supply chain. Being relatively close to Canada's first rare earth processing facility is an added bonus for Appia Rare Earths. The Company's [newly appointed President](#), Mr. Stephen Burega, is stepping in at a pretty exciting time, with drill results pending and a resource estimate looming. Additionally,

Appia added C\$3.7 million to its treasure in December with a [non-brokered private placement](#) that provides the Company with plenty of dry powder to pursue its 2023 exploration program at Alces Lake, as well as its various uranium properties. At a market cap of C\$39 million, Appia is currently trading near its lowest levels in over two years. A decent NI 43-101 resource estimate for Alces Lake could go a long way towards changing the look of this stock chart.

Vital Metals stock is up 308% the past year as they commence rare earths production in NWT Canada

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It is always interesting to look back and see if what was written comes true. About 9 months ago I wrote an article here describing how [Vital Metals was on track to become a rare earths carbonate producer in 2021](#). Fast forward to today and Vital Metals has delivered on their plan.

On July 6 [Vital Metals Limited](#) (ASX: VML) ("Vital") [announced](#) that the Company has commenced rare earth production at Nechalacho. This is a tremendous achievement and means Vital joins an elite group of only 2 or 3 North American rare earths producers (includes MP Materials and for rare earths processing Energy Fuels). It also means Vital has become the first Canadian rare earths producer. Congratulations to Vital Metals from the

team at InvestorIntel!

Mining at Vital's Nechalacho's North T Zone in Canada's Northwest Territories (NWT) is underway as part of Stage 1 production strategy. Vital is now crushing and sorting ore before sending it to a Saskatoon cracking and leaching facility later in 2021. Vital has also commenced drilling to define a mine plan for Stage 2 at Nechalacho as it works to develop a larger scale, longer life rare earths project.

Vital Metal's Nechalacho Rare Earths Mine in NWT Canada location and key zones



[Source](#): Vital Metals

Nechalacho hosts a world-class resource of **94.7Mt at 1.46% REO** (measured, indicated and inferred). Nechalacho's North T Zone hosts **a high-grade resource of 101,000 tonnes at 9.01% LREO (2.2% NdPr)**, making it one of the highest grade rare earths deposits in the world. The resource has the potential to grow further as shown in recent drilling results that [reported](#) "broad high grade REO in near surface drilling at Tardiff Zone...thickness in excess of 60m in width and with grades up to 13.8% intersected". Vital stated in the release that high value Nd/Pr content was an impressive 24.2% of TREO and that Zone 1 was open in all directions. These results will form part of a new resource upgrade to be part of the Stage 2 expansion plans at Nechalacho.

The metallurgy is a simple process involving a 35%+ initial beneficiation via ore sorting and 97% recovery into solution via hydrochloric acid using an industry standard process.

In more good news, in May 2021 it was [announced](#) that Vital's

offtake partner REEtec has formally accepted Vital's rare earth carbonate sample. Vital will provide REEtec with 1,000 tonnes REO (ex-cerium) per year for five years with the option to increase volume by up to 5,000 tonnes REO per year over 10 years.

Mid-term strategy and goals

Vital aims to become the lowest cost producer of mixed rare earth oxide outside of China by developing one of the highest grade rare earth deposits in the world and the only rare earth project capable of beneficiation solely by ore sorting. Vital also aims to be the largest independent supplier of clean mixed rare earth feedstock outside China.

More than \$120 million has been spent by previous owners on drilling, permitting and project development at Nechalacho, which includes a 40-person camp and airstrip.

Vital aims to produce a minimum of 5,000 tonnes of contained REO at Nechalacho by 2025, or earlier.

Closing remarks

Achieving rare earths production in the West is no easy task. The process towards production, including permitting, can take over a decade. Vital has now achieved a low scale small CapEx rare earths production start-up operation, with big plans to expand in the years ahead. Given management's exceptional track record to date, it is looking good for Vital to achieve their expansion plans in the years ahead.

The production of rare earths on North American soil is not only a great step forward for Vital Metals, but it is also a significant step forward for the West to secure a safe rare earths supply.

Vital Metals now trades on a market cap of A\$208 million after a great past 1 year return of [308%](#).