

# Rare earths expert Alastair Neill on Vital Metals

written by | August 5, 2022

“Overall Vital appears well on the way to producing commercial quantities of rare earth concentrate, a first in Canada.” – Alastair Neill, President, Critical Minerals Institute

[Vital Metals Limited](#) (ASX: VML | OTCQB: VTMXF) is an Australian listed company whose subsidiary, [Cheetah Resources](#), is developing the Nechalacho project in the Northwest Territories of Canada. The deposit was previously owned by [Avalon Advanced Materials Inc.](#) (TSX: AVL | OTCQB: AVLNF), and they sold the rights in 2019 to Cheetah for the material 150 meters above sea level. Avalon retained the rights to the basal zone deposit which is underground. The deposit is reported to have 94.7 million tonnes at 1.46% REO (0.1% Nd/Pr cutoff). The mineral hosting the rare earths is bastnaesite, which is good as this mineral has been processing successfully for many years.

Vital raised A\$45 million recently through a targeted share placement at A\$0.04 per share. According to their [press release](#) the funds will be used for:

- Finalisation of construction activities and undertake commissioning, ramp-up and operations at its Rare Earth Extraction Facility in Saskatoon, which will produce a rare earth carbonate product
- Accelerated development of Tardiff deposit at Nechalacho, Canada, including mining studies

## **A strong balance sheet for ongoing working capital requirements**

This project is the most advanced rare earth project currently in Canada. The initial focus is the North T zone which has a

resource of 101,000 metric tonnes at 9.01% contained Total Rare Earth Oxides (TREO). Based on tests run at their Saskatoon rare earth extraction plant they can get a 75% recovery to produce a 43.7% concentrate. Based on this, the deposit would produce 6,825 metric tonnes of TREO which would contain 1,600 tonnes of Neodymium (Nd) and Praseodymium (Pr). Tests have been done using X-ray Transmission (XRT) to sort the ore as the ore is hosted in quartz, which is white, and the rare earth mineral which is red. This is a simple way to upgrade the TREO content at site.

There is an offtake agreement with REEtec, a Norwegian company that is developing a new rare earth separation process. The agreement is for Vital to deliver 1,000 tonnes per year (TPY) of TREO (excluding Cerium (Ce)). Based on that Ce will be eliminated before shipping the concentrate to Norway. This is a step that has been done before by Molycorp in the 1980s. It reduces the material handling by 50% and obviously the size of downstream processing equipment. The North T zone will provide 3,400 of the 5,000 tonnes which means Cheetah will have to open the Basal zone to meet the balance of the supply contract.

Looking at today's prices on Shanghai Metal Market (SMM) the separated value of this contract is over US\$286 million. Assuming Vital gets 1/3 of the value for the concentrate this would produce revenues of over US\$95 million of which US\$92 million would come from Nd/Pr. Details of the agreement are not revealed so REEtec may be a toll arrangement which could produce more revenue for Vital though I expect the initial target would be to sell La, Nd and Pr in Europe as there are customers in Europe.

Interestingly the extraction plant is located beside the Saskatchewan Research Council (SRC) which has announced that they will be building a rare earth separation facility to

process monazite by 2024. SRC has two rare earth experts from China on staff. SRC is also putting in an Nd/Pr metal facility which takes the oxide to the next level in the supply chain.

In addition to the Nechalacho project, Vital has a project in Tanzania called Wigu Hill. Vital has signed a project development and option agreement with Montero Mining & Exploration Ltd. (TSXV: MON), to acquire and develop the Wigu Hill project. The Wigu Hill project is a light rare earth element deposit and consists of a large carbonite complex with bastnaesite mineralization with a NI 43-101 Inferred resource estimate of 3.3Mt at 2.6% light REOs. This is also a bastnaesite mineral.

Overall Vital appears well on the way to producing commercial quantities of rare earth concentrate, a first in Canada. Questions that do need to be answered are what are the costs of operating an open pit mine in Northern Canada and the costs to transport material to Saskatoon.

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## **Global changes coming in the rare earths and critical materials supply chain and EV manufacturing**

written by InvestorNews | August 5, 2022

In this InvestorIntel PDAC 2022 Panel on “Building the Rare Earths and Critical Materials’ Supply Chain to Meet EV Market

Demand”, host Byron W King is joined by “all star” guests [Ucore Rare Metals Inc.](#)’s (TSXV: UCU | OTCQX: UURAF) Chairman and CEO Pat Ryan, [Vital Metals Limited](#)’s (ASX: VML | OTCQB: VTMXF) Managing Director Geoff Atkins, [Stormcrow Capital Ltd.](#)’s President and Director Dr. Jonathan Hykawy, and Boyd Davis, Principal of [Kingston Process Metallurgy Inc.](#).

In the video, which can also be viewed in full on the InvestorIntel YouTube channel ([click here](#)), the panel discusses the race to supply North American rare earths needs and limitations on domestic production. Boyd Davis observes that over the next 10 to 12 years, “how much we want to get away from China will be dictated by the cost and supply security and the ability to get raw materials.” Dr. Jonathan Hykawy discusses China’s own domestic supply issues and how it imports lithium and heavy mineral sands for processing. Geoff Atkins also points out the risk of sole-suppliers with EV and other rare earths reliant manufacturers “needing a diversified supply chain and assessing their risks on single point of failure.” Regardless, he says EV manufacturing represents a shift from basic commodities to high technology materials. He and Pat Ryan of Vital Minerals agree that both North America and China will become increasingly reliant on automation to counter rising labor costs.

The panel also discusses whether critical materials mining permitting and processing is likely to be fast-tracked in future to meet industry demand, and whether there will be more vertical integration by EV manufacturers.

To access the full InvestorIntel interview, [click here](#)

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**About Ucore Rare Metals Inc.**

Ucore is focused on rare- and critical-metals resources, extraction, beneficiation, and separation technologies with the potential for production, growth, and scalability. Ucore has a 100% ownership stake in the Bokan-Dotson Ridge Rare Earth Element Project in Southeast Alaska, USA. Ucore's vision and plan is to become a leading advanced technology company, providing best-in-class metal separation products and services to the mining and mineral extraction industry.

Through strategic partnerships, Ucore's vision includes disrupting the People's Republic of China's control of the US REE supply chain through the development of a heavy and light rare-earth processing facility – the Alaska Strategic Metals Complex in Southeast Alaska and the long-term development of Ucore's heavy-rare-earth-element mineral-resource property located at Bokan Mountain on Prince of Wales Island, Alaska.

To learn more about Ucore Rare Metals Inc., [click here](#)

### **About Vital Metals Limited**

Vital Metals Limited (ASX: VML) is Canada's first rare earths producer following commencement of production at its Nechalacho rare earths project in Canada in June 2021. It holds a portfolio of rare earths, technology metals and gold projects located in Canada, Africa and Germany.

To know more about Vital Metals Limited, [click here](#)

### **About Stormcrow Capital Ltd.**

Stormcrow Capital Ltd. is an Exempt Market Dealer registered with the Ontario Securities Commission and the Autorité des marchés financiers (Quebec). Stormcrow has both issuer and investor clients. Stormcrow is also a financial and technical/scientific consultant that provides certain of its

clients with some or all of the following services: (i) an assessment of the client's industry, business plans and operations, market positioning, economic situation and prospects; (ii) certain technical and scientific commentary, analysis and advice that is within the expertise of Stormcrow's staff; (iii) advice regarding optimization strategies for the client's business and capital structure; (iv) due diligence investigation services; and (v) opinions regarding the future expected value of the client's or a offeror/offeree's equity securities so as to allow the client to then make capital market, capital budgeting and capital structure plans. With the consent of Stormcrow's issuer client, the client and/or its industry sector may be the subject of an investment or financial research report, newsletter, bulletin or other publication by Stormcrow where such publication is made publicly available at [www.stormcrow.ca](http://www.stormcrow.ca) or elsewhere or is otherwise distributed by Stormcrow. Any such publication is limited to generic, non-tailored advice or opinions and should not be construed as investment advice that is suitable for the reader or recipient. Stormcrow does not offer personalized or tailored investment advice to anyone (other than its current investor clients) and Stormcrow's research reports should not be relied upon by anyone in making any investment decisions. Rather, investors should speak in person with their personal financial advisor(s) to obtain suitable investment advice.

To learn more about Stormcrow Capital Ltd., [click here](#)

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### **About Kingston Process Metallurgy Inc.**

Kingston Process Metallurgy Inc. is a privately owned Canadian company located in Kingston, Ontario. Our interdisciplinary team includes engineers, scientists, chemists, technicians, and modellers, led by co-owners Boyd Davis and Alain Roy. Our clients include large multi-national mining and metallurgical

companies, as well as companies specialized in industrial chemistry, advanced materials, and energy.

To learn more about Kingston Process Metallurgy Inc., [click here](#)

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## Geoff Atkins talks about Vital Metals' transitional year from developer to producer in 2022

written by InvestorNews | August 5, 2022

In this InvestorIntel interview with host Tracy Weslosky, [Vital Metals Limited](#)'s (ASX: VML | OTCQB: VTMXF) Managing Director Geoff Atkins talks about the company moving from rare earths miner to producer in the coming months.

In the interview, which can also be viewed in full on the InvestorIntel YouTube channel ([click here](#)), Geoff talks about production from Vital's Nechalacho rare earths project in the Northwest Territories going to its Saskatoon extraction plant, with production of high purity rare earth carbonate forecast to commence in June 2022, and its rare earths product to be sold to Vital's take off partner in Norway later this year. Geoff goes in to explain, for Vital "this year is that transformational process from developer through to operator."

Being an Australian company with both its cornerstone project and processing facility in North America, Geoff also discusses increasing the company's presence in the North American markets in the coming months as it moves to producer.



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## **Jack Lifton, Byron King and Vital Metals' Geoff Atkins on the global rare earths market**

written by InvestorNews | August 5, 2022

In this episode of the Critical Minerals Corner, Critical Materials' industry expert and InvestorIntel Editor-in-Chief Jack Lifton is joined by Critical Minerals Corner Co-Host & InvestorIntel Columnist Byron King, and Geoff Atkins, Managing Director of [Vital Metals Limited](https://www.vitalmetals.com) (ASX: VML) to discuss how Vital Metals plans to guarantee feedstock to the non-Chinese rare earths supply chain and about how a rare earths project is different from any other mining project.

In this InvestorIntel interview, which may also be viewed on

YouTube ([click here to subscribe to the InvestorIntel Channel](#)), the panel discussed the high grades of neodymium and praseodymium found at Vital Metals' Nechalacho Rare Earths Project in Canada. With a growing push from the governments globally to establish rare earths supply chains outside of China, Geoff provided an update on Vital's off-take agreements signed with new separation facilities entering Europe and North America.

To watch the full interview, [click here](#).

### **About Vital Metals Limited**

Vital Metals Limited is Canada's first rare earths producer following commencement of production at its Nechalacho rare earths project in Canada in June 2021. It holds a portfolio of rare earths, technology metals and gold projects located in Canada, Africa and Germany.

### **Nechalacho Rare Earth Project – Canada**

The Nechalacho project is a high grade, light rare earth (bastnaesite) project located at Nechalacho in the Northwest Territories of Canada and has potential for a start-up operation exploiting high-grade, easily accessible near surface mineralisation. The Nechalacho Rare Earth Project hosts within the Upper Zone, a JORC Resource of **94.7MT at 1.46% TREO** comprised of a Measured Resource of 2.9MT at 1.47% TREO, an Indicated Resource of 14.7MT at 1.5% TREO, and an Inferred Resource of 77.1MT at 1.46% TREO.

To learn more about Vital Metals Limited, [click here](#)

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# Jack Lifton with Geoff Atkins on Vital Metals' expected 2021 rare earths production start at Nechalacho

written by InvestorNews | August 5, 2022

The Technology Metals Show host Jack Lifton talks with Geoff Atkins, Managing Director of [Vital Metals Limited](#) (ASX: VML), about Vital Metals' planned production at its Nechalacho rare earths project in Canada. "In terms of the time frame, we are currently working on a schedule to commence production next year," Geoff said.

In the interview Geoff provided an update on Vital Metal's offtake agreements and business model. Vital Metals has a management team with experience in building and operating rare earth plants. He also explained what the company is doing to ensure reduced capital cost and time to market.

To access the complete interview [subscribe](#) to the [Technology Metals Show](#) and get exclusive access to member-only content through this exclusive site. Or [Log-In Here](#) for the latest conversations, debates, updates and interviews with the leaders, thought leaders and investors focused on issues relating to sustainability in the critical materials sector.

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# Geoff Atkins on Vital Metals' 2021 rare earths production and new extraction facility

written by InvestorNews | August 5, 2022

InvestorIntel's Tracy Weslosky speaks with Geoff Atkins, Managing Director of [Vital Metals Limited](#) (ASX: VML), about Vital Metals' Nechalacho rare earths project in Canada.

"Nechalacho is on track to be in production next year," Geoff said. "We are constructing an extraction facility with SRC [Saskatchewan Research Council] and that will take our product from Nechalacho and produce a mixed rare earth carbonate product."

Geoff went on to provide an update on Vital Metals' management team. "Our entire team has been involved in Lynas and some of them have also been involved in Northern Minerals' Browns Range Project," he said. "We have 10-15 years' experience in building and operating rare earth plants."

Commenting on the competitive advantages of Vital Metals Geoff said, "The bottom line is about being low cost. From a capital cost perspective, we are looking at under AU\$20 million to build this plant. The second is near term operation. We are going to be operation within 12 months."

To watch the complete interview, [click here](#)

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