Summit to Address the Impact of the \$1.2 Trillion EV Market Demand by 2030 on the Critical Minerals Sector

written by Tracy Weslosky | November 1, 2022

CMI Presents "The Race to Achieve a Critical Minerals Supply Chain ROW" at the Critical Minerals Summit on Wednesday, November 9th

Toronto, October 31, 2022 — The <u>Critical Minerals Institute</u>, which was founded for education, collaboration, and to provide professional opportunities to meet the critical minerals supply chain challenges, is pleased to announce the inaugural Critical Minerals Summit (CMS 2022) on Wednesday, November 9, 2022, at the historic <u>National Club</u> in Toronto, Canada from 9 AM to 4 PM EST.

"With automakers planning on spending nearly \$1.2 trillion by 2030," says Critical Minerals Institute founder Tracy Weslosky, "it is equally as important to discuss not only where these battery materials are coming from and the technologies involved, but also where will we find the skilled professionals it requires."

Themed *The Race to Achieve a Critical Minerals Supply Chain*, the Chairman of the Critical Minerals Institute Jack Lifton will begin the event with opening remarks aptly titled *Scalability*, *Why the EV Timelines Simply do not Work*.

Geoff Atkins, Founder of Cheetah Resources and previously Managing Director of Vital Metals who succeeded in bringing the Nechalacho rare earths mine into production will kick off the day with his keynote speech titled *The Perfect Storm:* Prioritizing the Demand Drivers Necessary for Mission Critical Minerals Supply Chain.

A one-day, in person event, the Critical Minerals Summit is a bi-annual event designed to bring industry leaders and investors together to address scalability, resource and human capital needs, not only to meet the EV market demands, but to achieve the aggressive legislative timelines set around sustainability and climate change.

In the context of this theme, a special presentation designed by Prof. Saleem H. Ali, Ph.D., Chair, Department of Geography & Spatial Sciences, who is a Blue and Gold Distinguished Professor of Energy and the Environment from University of Delaware, will be presented during lunch. Author of a new book on environmental systems titled *How Natural Laws Define Human Life* (Oxford Univ. Press), his presentation will be followed by a Q&A style interview on the Global Critical Minerals Market with international expert and renowned market leader Constantine Karayannopoulos, President, CEO and Director of Neo Performance Materials Inc. (TSX: NEO).

Throughout the day, a series of 5 panels will be hosted by CMI Directors and the "Who's Who" of international critical minerals experts, with leading industry CEOs participating as panelists. Highlights include the following panels:

- Securing the Capital to build a Supply Chain for the ROW.
- The Extraction & Processing Timeline Advantage
- Global Challenges in Advancing the Critical Minerals Supply Chain

- Dealing with the Resource Challenge, the Critical Minerals Shortage.
- The Power of Politics: Government Investment in the Critical Minerals Market

In addition to the above, the CMI will have Ed Buiel PhD, President & CEO, Coulometrics, LLC, speak on the paradox of producing graphite in North America and competing with China, along with special guest and Acting Consul-General, Greg Quinn from the British Consulate-General Toronto, who will address the key points from the recently released UK national critical minerals strategy.

The Critical Minerals Summit will be held at the historic <u>National Club</u> in Toronto from 9 AM to 4 PM EST. Space is strictly limited. For more information go to <u>CriticalMineralsInstitute.com</u>. To purchase a delegate pass, <u>click here</u>.

About the Critical Minerals Institute: The Critical Mineral Institute (CMI) is an international organization for companies and professionals focused on battery materials, technology metals, defense metals, ESG technologies and practices, the general EV market, and the use of critical minerals for energy and alternative energy production. Offering an online site that features job opportunities that range from consulting roles to Advisory Board positions, the CMI offers a wide range of B2B service solutions. Also offering online and in-person events, the CMI is designed for education, collaboration, and to provide professional opportunities to meet the critical minerals supply chain challenges.

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June 2022 start for Vital Metals to produce mixed rare earth carbonates with feed from its own mines

written by InvestorNews | November 1, 2022

The rare earths sector has been doing very well lately, especially the highly valued magnet rare earths for which prices have doubled over the past year. Neodymium (Nd) and praseodymium (Pr) are the key magnet rare earths used commonly in electric motors. They also fall into the category of the 'light rare earths'. Another group of rare earths, known as the 'heavy rare earths', also have value. They include europium, gadolinium, terbium, dysprosium, holmium, erbium, thulium, ytterbium, lutetium and yttrium. Dysprosium (Dy) in particular is very valuable and is critically necessary for and used in alloys for neodymium based magnets subject to high temperature swings in

operation.

Today's company is working towards becoming a North American producer of both light and heavy rare earths.

<u>Vital Metals Limited</u> (ASX: VML | OTCQB: VTMXF) (Vital) is a rare earths ore producer from their Nechalacho Rare Earths Mine in the Northwest Territories (NWT), Canada. Nechalacho has a measured, indicated and inferred resource of <u>94.7Mt at 1.46% REO</u> for 1.3Mt contained TREO. The focus to date has been on the high-grade, light rare earths, found in the bastnaesite mineralization there.

Vital has off-take agreements with REEtec in Norway and with Ucore Rare Metals Inc. (TSXV: UCU | OTCQX: UURAF) in the USA. In both cases, Vital is working with them to develop a qualified feed stock for them end at commercial scale. In some good recent news, offtake buyer, REEtec, signed a supply agreement with Germany's large OEM automotive supplier, Schaeffler, thereby potentially securing Vital's revenue from the sale of its product to REEtec.

Vital is currently constructing a Saskatoon, Saskatchewan, based cracking and leaching facility, with first feed to the facility expected in June 2022. An additional <u>C\$5 million of funding/reimbursement was recently achieved</u> to help support the commissioning and ramp-up stage. Vital aims to produce a minimum of 5,000 tons annually of contained REO by 2025 at the Nechalacho Mine.

Vital Metals' Managing Director Geoff Atkins <u>stated</u>: "With production forecast to commence in June 2022, this will make Vital North America's only producer of high purity rare earth carbonate with feed from its own mines providing security of supply for the global rare earths supply chain."

Expansion into heavy rare earths

As <u>announced</u> on April 29, 2022, Vital is now planning to expand their existing light rare earths mine operation to also include heavy rare earths. Vital plans to investigate developing a zone of xenotime mineralization, the principle heavy rare earth hardrock mineral, at Nechalacho's North T pit, targeting a 10-year operation from the zone. <u>Xenotime</u>, is an yttrium phosphate mineral, and is the only known commercially feasible hard-rock source of dysprosium and terbium, which are the critical magnet rare earth additives for high temperature operations. As Vital <u>stated</u>: "Tardiff contains elevated heavy rare earths mineralization which may complement North T's xenotime deposit as part of Vital's strategy to produce heavy and light rare earths."

Next steps

In 2022, in addition to commencing production at the Saskatoon facility and working on expanding into heavy rare earths, Vital plans further drilling at the Tardiff zone to define a maiden Ore Reserve.

Vital Metals 3 stage strategy to become a North American producer of both light & heavy rare earths

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Source: <u>Vital Metals March 2022 quarterly report</u>

Closing remarks

Vital Metals continues to march forward at a rapid pace. In <u>late June 2021</u> the Nechalacho mine came into production, notably being Canada's first-ever producing rare earths mine. Then only a year later in June 2022, the Saskatoon cracking and leaching facility's first production of a mixed rare earth carbonate is

set to commence.

If that wasn't good enough the Company is now planning to also produce heavy rare earths, also from the Nechalacho Mine. Once achieved Vital announced that they would become the "the world's first producer of both heavy and light rare earth oxides."

Vital Metals trades on a market cap of <u>A\$204 million</u>. Exciting times ahead.

Geoff Atkins discusses exceeding expectations in Vital Metals' output of rare earths with Peter Clausi

written by InvestorNews | November 1, 2022
In a recent InvestorIntel interview, Peter Clausi spoke with Geoff Atkins, Managing Director of <u>Vital Metals Limited</u> (ASX: VML) about Vital Metals' recent <u>news release</u> on redesigning the North T Pit at Vital's Nechalacho Rare Earths Mine after the ore sorter exceeded expectations.

In this InvestorIntel interview, which may also be viewed on YouTube (click here to subscribe to the InvestorIntel Channel), Geoff Atkins went on to say that Vital Metals' Nechalacho ore sorter is now able to sort even lower grade materials allowing Vital to process significant quantities of material previously identified as waste. He went on to explain the unique nature of mineralization at the North T Deposit allowing Vital to classify

ore and waste visually without having to send materials to a lab for assaying.

To watch the full interview, <u>click here</u>.

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, <u>click here</u>

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If you have any questions surrounding the content of this interview, please contact us at +1 416 792 8228 and/or email us direct at info@investorintel.com.

Vital Metals stock is up 308%

the past year as they commence rare earths production in NWT Canada

written by InvestorNews | November 1, 2022

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 <u>Vital Metals was on track to become a rare earths</u> <u>carbonate producer in 2021</u>. Fast forward to today and Vital Metals has delivered on their plan.

On July 6 <u>Vital Metals Limited</u> (ASX: VML) ("Vital") <u>announced</u> 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 <u>announced</u> 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%.