

# Jack Lifton interviews Mark Chalmers on Energy Fuels Strategic Path to Dominance in the North American Rare Earths Market

written by InvestorNews | November 14, 2023

In a recent interview with Jack Lifton, Co-Chairman of the Critical Minerals Institute (CMI), Mark Chalmers, President, CEO and Director of Energy Fuels Inc. (NYSE American: UUUU | TSX: EFR) discussed the company's pivotal role in North America's rare earth production landscape. Lifton opened the conversation by highlighting the scarcity of rare earth producers in North America, noting that Energy Fuels Inc. and MP Materials Corp. (NYSE: MP) are the only two companies currently active in this space. Chalmers elaborated on Energy Fuels' unique approach to this market, particularly its focus on monazite, a mineral essential for producing magnet rare earths.

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## Energy Fuels Leverages Strategic Opportunities in the Critical Minerals Sector: A

# Comprehensive Interview with CEO Mark Chalmers

written by InvestorNews | November 14, 2023

In a recent engaging discussion with Brandon Colwell, President of the Critical Minerals Institute (CMI), Mark Chalmers, President, CEO and Director of Energy Fuels Inc. (NYSE American: UUUU | TSX: EFR), shed light on the company's latest achievements and future strategies in the critical mineral supply chain, especially focusing on uranium, rare earth elements (rare earths), and vanadium.

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## Malaysia's Decision is a Game Changer for Lynas Rare Earths

written by Tracy Weslosky | November 14, 2023

Lynas Rare Earths Ltd. (ASX: LYC), the Australian mining giant, recently breathed a sigh of relief. Malaysia's government granted the firm a pivotal extension on their operating license, allowing them to continue importing and processing raw materials laden with naturally occurring radioactive elements until March 2026.

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# Jack Lifton Spotlights Energy Fuels: A Game-Changer for the American Critical Minerals Market

written by Tracy Weslosky | November 14, 2023

In a recent InvestorIntel interview, host Jack Lifton caught up with Mark Chalmers, CEO of [Energy Fuels Inc.](#) (NYSE American: UUUU | TSX: EFR), a company that he boldly terms as the “single most underrated critical minerals company on the NYSE.”

In this interview, Chalmers elucidated that Energy Fuels stands unparalleled in its production capacity, especially in the uranium sector. With a global thrust towards carbon-free energy, he said that the uranium business is experiencing a renaissance. Following a dormant phase post-Fukushima, utilities are now vying for long-term contracts. This renewed interest aligns perfectly with Energy Fuels’ strategic moves to re-engage multiple mines.

Shifting gears to rare earths, Chalmers emphasized their pioneering status as the solitary producer in the US. Their successful alliance with domestic American heavy rare earths miner, Chemours, has ushered them into processing monazite and making strides in the rare earth carbonate sector. Energy Fuels’ Bahia heavy mineral sands project in Brazil, and its phase one separation plant in Utah stand as testaments to its rapid advancement.

A notable moment in the interview was when Lifton pointed out the vast disparity in construction costs between Energy Fuels and the recent US Department of Defense’s \$300 million contract

awarded to Lynas. Chalmers attributed Energy Fuels' economic advantage to leveraging existing infrastructure, in-house expertise, and its unique ability to oversee everything internally.

In wrapping up, Lifton commended Energy Fuels for its unmatched potential and trajectory in critical minerals. Chalmers graciously responded, hinting at more exciting updates in the coming months.

With both uranium and rare earths witnessing global demand surges, Energy Fuels, under Chalmers' aegis, is poised to redefine industry paradigms. To access the full Investor Coffee Interview, [click here](#)

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## About Energy Fuels Inc.

Energy Fuels is a leading US-based critical minerals company. The Company, as the leading producer of uranium in the United States, mines uranium and produces natural uranium concentrates that are sold to major nuclear utilities for the production of carbon-free nuclear energy. Energy Fuels recently began production of advanced rare earth element ("REE") materials, including mixed REE carbonate, and plans to produce commercial quantities of separated REE oxides in the future. Energy Fuels also produces vanadium from certain of its projects, as market conditions warrant, and is evaluating the recovery of radionuclides needed for emerging cancer treatments. Its corporate offices are in Lakewood, Colorado, near Denver, and substantially all its assets and employees are in the United States. Energy Fuels holds two of America's key uranium production centers: the White Mesa Mill in Utah and the Nichols

Ranch in-situ recovery (“**ISR**”) Project in Wyoming. The White Mesa Mill is the only conventional uranium mill operating in the US today, has a licensed capacity of over 8 million pounds of  $U_3O_8$  per year, has the ability to produce vanadium when market conditions warrant, as well as REE products, from various uranium-bearing ores. The Nichols Ranch ISR Project is on standby and has a licensed capacity of 2 million pounds of  $U_3O_8$  per year. The Company recently acquired the Bahia Project in Brazil, which is believed to have significant quantities of titanium (ilmenite and rutile), zirconium (zircon) and REE (monazite) minerals. In addition to the above production facilities, Energy Fuels also has one of the largest NI 43-101 compliant uranium resource portfolios in the US and several uranium and uranium/vanadium mining projects on standby and in various stages of permitting and development.

To learn more about Energy Fuels Inc., [click here](#)

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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](mailto:info@investorintel.com).

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## **Mark Chalmers of Energy Fuels talks about acquiring a major rare earths project in Brazil**

written by InvestorNews | November 14, 2023

In this InvestorIntel interview with host Jack Lifton, [Energy Fuels Inc.](https://www.energyfuels.com)'s (NYSE American: UUUU | TSX: EFR) President and CEO Mark Chalmers talks about returning from Brazil with a signed agreement for the acquisition of the major rare earths Bahia

Project.

In the interview, which can also be viewed in full on the InvestorIntel YouTube channel ([click here](#)), Mark discusses the 60 square mile acquisition of the very high quality heavy mineral sand deposit by Energy Fuels north of Rio de Janeiro. “This is a big step for our company,” Mark explained, “as it could supply ultimately because of its size between 3,000 to 10,000 tons a year of monazite sand.” This could translate into between “1500 to 5 000 tons of REO per year,” he continued, making it “important as a base load for the White Mesa mill.”

Mark also talks about how the Bahia Project, expected to close in 90 days subject to due diligence, is a step towards Energy Fuels’ vertical integration plan for producing rare earth products, which is already shipping high purity mixed rare earth carbonate from its White Mesa mill in Utah to customers. He also discussed a recent announcement that Energy Fuels has signed three material contracts with two major U.S. nuclear utilities to supply uranium products.

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

Don’t miss other InvestorIntel interviews. Subscribe to the InvestorIntel YouTube channel by [clicking here](#).

### **About Energy Fuels Inc.**

Energy Fuels is a leading U.S.-based uranium mining company, supplying  $U_3O_8$  to major nuclear utilities. Energy Fuels also produces vanadium from certain of its projects, as market conditions warrant, and is ramping up commercial-scale production of rare earth element (“**REE**”) carbonate. Its corporate offices are in Lakewood, Colorado, near Denver, and all its assets and employees are in the United States. Energy Fuels holds three of America’s key uranium production centers:

the White Mesa Mill in Utah, the Nichols Ranch in-situ recovery (“**ISR**”) Project in Wyoming, and the Alta Mesa ISR Project in Texas. The White Mesa Mill is the only conventional uranium mill operating in the U.S. today, has a licensed capacity of over 8 million pounds of  $U_3O_8$  per year, and has the ability to recycle alternate feed materials from third parties, to produce vanadium when market conditions warrant, and to produce REE carbonate from various uranium-bearing ores. Energy Fuels is also evaluating the potential to recover medical isotopes for use in targeted alpha therapy cancer treatments. The Nichols Ranch ISR Project is on standby and has a licensed capacity of 2 million pounds of  $U_3O_8$  per year. The Alta Mesa ISR Project is also on standby and has a licensed capacity of 1.5 million pounds of  $U_3O_8$  per year. In addition to the above production facilities, Energy Fuels also has one of the largest SK-1300/NI 43-101 compliant uranium resource portfolios in the U.S. and several uranium and uranium/vanadium mining projects on standby and in various stages of permitting and development.

To learn more about Energy Fuels Inc., [click here](#)

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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 14, 2023

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.

[Vital Metals Limited](#) (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 [94.7Mt at 1.46% REO](#) 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 [C\\$5 million of funding/reimbursement was recently achieved](#) 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 [stated](#): "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 [announced](#) 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 hard-rock mineral, at Nechalacho's North T pit, targeting a 10-year operation from the zone. [Xenotime](#), 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 [stated](#): "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**



Source: [Vital Metals March 2022 quarterly report](#)

### **Closing remarks**

Vital Metals continues to march forward at a rapid pace. In [late June 2021](#) 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 [A\\$204 million](#). Exciting times ahead.

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

# Canada

written by InvestorNews | November 14, 2023

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%](#).

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# **Vital Metals new Rare Earths Extraction Plant planned adjacent to SRC's Separation Plant**

written by InvestorNews | November 14, 2023

# **Vital Metals on track to become a rare earths carbonate producer in 2021**

In news out today rare earths carbonate developer Vital Metals Limited (ASX: VML) ('Vital'), through its 100% owned subsidiary Cheetah Resources, has [signed a binding Term Sheet](#) with the Saskatchewan Research Council ('SRC') to negotiate definitive agreements for the construction and operation of a Rare Earth Extraction Plant to produce a mixed rare earth carbonate product. The capital cost estimate of the Rare Earth Extraction Plant is A\$5.25m.

The Rare Earth Extraction Plant is planned to be located adjacent to a recently [announced](#) Rare Earth Separation Plant in Saskatchewan, Canada, and could provide a rare earth carbonate feedstock to produce a commercial grade separated rare earth oxide. The proximity makes it natural for SRC's Separation Plant to be a potential customer of Vital/Cheetah's mixed rare earth carbonate product from their planned Extraction Plant.

## **Vital Metals' Managing Director Geoff Atkins comments**

"The signing of this Term Sheet with SRC marks an important milestone for Vital and the development of the Nechalacho Project," said Vital Metals' Managing Director Geoff Atkins. "Whilst the Definitive Agreements continue to be finalised in line with the Term Sheet, the Company is excited about the prospect of the construction and operation of a rare earth demonstration extraction plant, as well as it being co-located with SRC's recently announced rare earth separation plant. Being the only rare earth project in Canada with near term production capability, co-located with Canada's only Separation Facility, provides Vital the opportunity to be a cornerstone of the North America Critical Minerals Strategy."



## **Vital Metals low CapEx strategy to become a rare earths carbonate producer in Canada**

Traditionally rare earth miners would look to build a huge plant to make a rare earths end product, however Vital Metals has a different strategy to reach production quicker and with a much lower CapEx, as well as supporting a much needed **non-China rare earths supply chain**.

Vital is an explorer and developer with highly prospective mineral projects, focusing on their world-class rare earth Nechalacho Project in Canada. **Their strategy is to be the largest independent supplier of clean mixed rare earth feedstock outside of China**, with a goal to produce a minimum 5,000 tonnes of contained rare earth oxide (REO) by 2025. A key component to the plan is a much smaller scale plant with an extremely low CapEx of just A\$20m to produce rare earth carbonate. Subject to the various hurdles such as funding, Vital Metals hopes to begin production at their Nechalacho Project in 2021. Once in production, Vital's strategy is to generate low cost near-term cash flow to fund the development of large-scale operations.

### **Vital Metals Nechalacho Project and Stage 1 strategy**



#### [Source](#)

Vital owns two world class rare earth projects – Nechalacho in Canada with [~95mt at 1.46% TREO](#), and Wigu Hill in Tanzania with 3.3mt at 2.6% TREO.

#### **The Nechalacho Project (Canada)**

The Nechalacho Project is a rare earth project located in Northwest Territories, Canada. The current resource estimate is [94.7mt at 1.46% REO](#) (measured, indicated and inferred). The

North T Zone at Nechalacho hosts a high-grade resource of 101,000 tonnes at 9.01% LREO ([2.2% NdPr](#)). Vital is targeting production of rare earth oxide in 2021 with early production from the North T starter pit.

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. The Project is **fully permitted for a 600kt mining and ore sorting operation** and is 100km from Yellowknife. The local infrastructure is well established with access to the Canadian National Railway at Hay River. Access to the site is via barge in summer and ice road in winter.

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.

Vital has already completed detailed engineering for the ore sorting plant, defined capital and operating costs, and begun site preparation works. Off-take negotiations are reported to be progressing well with a number of non-China buyers.

### **Vital Metals next steps and map showing the Tardiff Zones**



[Source: company presentation](#)

Management [is highly experienced](#). For example, Managing Director Geoff Atkins has 25 years of project and corporate development experience, including four years as Corporate Planning Manager at Lynas Corporation where he oversaw the strategic planning process and the development of the Mt Weld Concentration Plant and Lynas Advance Materials Plant in Malaysia.

Today's news from Vital suggests that, assuming progress

continues successfully, the SRC will support Vital in its construction and operation of their Nechalacho Project. Subject to execution of definitive agreements, processing operations are planned to start in the third quarter of 2021.

The current market cap of Vital Metals is A\$52m.