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

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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.

Investor.Coffee USA (9.27.2023): JPMorgan Reshuffles its Investment

Banking Division

written by InvestorNews | November 14, 2023
As September draws to a close, the U.S. equities market has experienced some turbulence. Following a challenging Tuesday, U.S. futures seem to be ticking upwards despite all three major indices, including the Dow, witnessing significant drops. The Dow notably had its worst performance since March. The market's unsteady temperament could be attributed to several factors. August saw a steep decline in new home sales, Amazon found itself in the midst of a significant antitrust lawsuit, and the Conference Board's consumer confidence index dipped more than anticipated.

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.

In-house production key to making Energy Fuels the world's lowest cost producer of rare earth metals

written by Jack Lifton | November 14, 2023

Energy Fuels takes giant step towards complete, in-house, vertical integration in the production of rare earth permanent magnet alloys

Energy Fuels Inc. (NYSE American: UUUU | TSX: EFR) has just this week announced that it will buy, subject to due diligence, a huge Brazilian deposit of heavy mineral sands, which it will mine to produce a concentrated mineral mix that will contain zircon, ilmenite (titanium), and monazite. This concentrate is expected to be sold to partner companies, which will extract the zircon and ilmenite as payables, and the residual monazite, a waste product in zircon/ilmenite processing, will be conveyed at a nominal cost (as part of the arrangement to supply the heavy mineral sands to partners) to Energy Fuels' White Mesa, Utah, where the monazite will be cracked and leached to extract a clean rare earth content as a mixed carbonate and to extract and sell or legally dispose of its uranium and thorium content.

Energy Fuels is already buying, and processing monazite produced in the above way from the zircon/ilmenite operations of Chemours in Georgia, but the Brazilian purchase will allow Energy Fuels to diversify and lower its cost of monazite concentrates.

The in-house production of monazite rich heavy mineral sands by Energy Fuels will be the foundation of its program for the vertically integrated (in-house) production of rare earth metals and alloys from (in-house) separated and purified individual and blended rare earth salts.

Energy Fuels operates the only operating uranium processing “mill” in the United States and the only facility in the United States in the U.S. capable of processing monazite for the recovery of uranium for sale to nuclear power plants, and the recovery or legal disposal of the thorium and other radionuclides associated with monazite.

The company has already begun processing purchased monazite into a mixed rare earth carbonate, and currently has the capacity to produce thousands of tons of such mixed rare earth carbonates per year. Energy Fuels’ mixed carbonate is the most advanced rare earth product being produced at a commercial scale in the U.S. today. The company is also making major strides in producing separated and refined individual and blended rare earth products at its mill.

Comparatively, monazite contains up to 50% more of the recoverable core magnet metals, neodymium and praseodymium than the bastnaesite mined at Mountain Pass, California.

Energy Fuels is finalizing a scoping study for a dedicated, rare earths, solvent extraction separation system and is finalizing the commercialization of a new rare earth metals and alloys production process demonstration.

Within 24-36 months Energy Fuels has the potential to be the world's lowest-cost producer of separated individual rare earths and will therefore the lowest cost producer of rare earth metals and alloys. No government subsidies have been needed. Just managerial knowledge, experience, and skill.

Energy Fuels already is a major domestic supplier of uranium and vanadium In fact, the company announced at its AGM, earlier this week, that it has signed a decade long supply deal with two American utilities to provide them with more than 4,000,000 lbs of uranium. This contract will bring in more than USD$200,000,000 over its life.

Energy Fuels is a producing and growing domestic American critical metals processing hub.

Disclosure: Jack Lifton is a member of the Advisory Board for Energy Fuels Inc., and may hold securities or options in some of the companies mentioned in the above article.

Neo Performance Materials becomes the West's First Profitable Total Rare Earths' Supply Chain Company

written by InvestorNews | November 14, 2023

Investors love companies that under promise and over deliver. Today's company is a classic example as it continues to grow its highly valuable global advanced materials business that includes

rare earth alloy powders and magnets.

Neo Performance Materials Inc. (TSX: NEO) ("Neo") is a profitable processor and manufacturer of advanced industrial materials including rare earth metals, alloys, and "bonded" rare earth permanent magnets, specialty chemicals, technology metals, and alloys. These are all critical to the performance of many everyday products and emerging technologies such as the high-powered magnets used in electric vehicles and in direct drive wind turbine electric generators. Neo operates globally with sales and production across 10 countries including Japan, China, Thailand, Estonia, Singapore, Germany, the United Kingdom, Canada, the United States, and South Korea.

Neo is the only company in the world that operates dual supply chains inside and outside of China for rare earths, rare earths separation and the commercial production of rare earths advanced materials. Neo owns and operates the only operating commercial rare earth separation facility in Europe.

Furthermore, Neo's Magnequench unit is the global leader in bonded neodymium-iron-boron (NdFeB) alloy powder based magnets and their applications. Its powders and magnets are used in high-performance components for the OEM automotive, factory automation, high-efficiency motors, residential appliances, and in many other applications.

Neo Performance Materials global operations that manufacture advanced materials that incorporate rare earths and other rare element metals

Source: Company presentation

Establishing a new Western rare earths supply chain

incorporating USA and Europe

As a reminder, in July 2021 Neo announced the commencement of commercial shipments of mixed rare earth carbonates produced from monazite from which the uranium and thorium had been removed by Energy Fuels Inc. (NYSE American: UUUU | TSX: EFR) in the USA, to Neo's rare earth separations facility in Estonia, Europe. This first shipment was a landmark for establishing a new non-Chinese Western rare earths supply chain. Energy Fuels has been sourcing ore from third parties such as from Chemours' (NYSE: CC) heavy minerals sands operations in Georgia, USA; then processing the monazite residue at their White Mesa Mill in Utah, USA, to extract the rare earths, remove the radioactive elements, and then process the rare earths into a solid mixed carbonate form ready for delivery, in this case, to Neo's operation in Estonia according to its specification. The news stated:

"This new supply chain will initially produce rare earth products from monazite that is processed into mixed RE Carbonate at Energy Fuels' Mill in Utah. This RE Carbonate is then further processed by Neo at its Silmet rare earth processing facility in Sillamäe, Estonia ("Silmet") into separated rare earth oxides and other value-added rare earth compounds. Neo is the only commercial producer of separated rare earth oxides in Europe."

Neo's CEO, Constantine Karayannopoulos, stated: "This innovative U.S.-to-Europe supply chain will supplement Neo's existing rare earth supply from our long-time Russian supplier. It will enable Neo to expand value-added rare earth production in Estonia to meet growing demand in Europe for these materials."

Neo's financials keep getting stronger

As announced on August 12, 2021, Neo produced another stellar financial result in Q2, 2021. Highlights included production

volumes increasing 59.6% YoY, revenue reaching US$135.1 million and up 99.5% YoY, adjusted EBITDA of US$22.2 million massively up YoY (an increase of $21.0 million), and adjusted net income of US$14.1 million, or US$0.37 per share. The chart below highlights the financial improvement in Neo's financials over the past year.

Neo's consolidated revenue and adjusted EBITDA keep rising due to a very strong operational performance

Neo's revenue by segment and geography is led by Magnequench and China

Source: Company presentation

Neo's CEO, Constantine Karayannopoulos, stated: "We had an outstanding second quarter that exceeded our expectations, with record revenue and robust profitability, while our plants operated at near-record output…….With the organic growth we are seeing across all business units, the significant macro tailwinds boosting the entire rare earths sector, and a number of strategic growth opportunities on the radar screen, we remain confident in the sustainability of our long term vision and growth strategy."

Looking ahead to the rest of the calendar year 2021 analyst's forecasts remain strong with CY2021 revenue forecast at US$503 million, net income US$39 million, and 7.82% net profit margin. These estimates may soon need to be increased given Neo has already achieved US$266 million in H1 2021. In terms of multiples, they are also appealing with Neo trading on a 2021 PE of 16.7x and an EV/Revenue multiple of 0.92x.

Closing remarks

Neo is currently riding a wave of demand for its advanced materials as we move to a greener economy, especially for the high-value rare earth alloy powders and magnets made with neodymium. These magnets are key to achieving greater power and efficiency from electric motors, the demand for which in the large drive motors for electric vehicles is surging.

Neo Performance Materials trades on a market cap of C$670 million and a very reasonable 16.7x PE. One to definitely consider.

Canada's entry point to a domestic North American rare earths products production center

written by Jack Lifton | November 14, 2023

Why is Appia Energy Corp.'s (CSE: API | OTCQB: APAAF) Alces Lake discovery of an accessible extensive hard rock deposit of the rare earth bearing mineral, monazite, so very important to the non-Chinese world's demand for magnet rare earths? It is because Appia's monazite is, in fact, the neodymium rich variant, which is the most desirable for the production of rare earth permanent magnets. it is not only rich in neodymium (Nd) and praseodymium (Pr), but also contains 1% of xenotime, the best heavy rare earth bearing hard rock mineral.

Monazites are typically up to 50% higher in contained Nd and Pr than bastnaesite, the ore mined at Mountain Pass by MP Materials Corp. (NYSE: MP) and the residual mineral from China's Baotou region iron mining, which up until recently was the world's most-produced source mineral for light rare earths. Lynas Rare Earths Limited (ASX: LYC) is currently the world's largest producer of rare earths derived from monazite deposits at Mt. Weld in a remote area of northern Australia.

Monazites are produced today as a byproduct of the processing of heavy mineral sands to recover zircon and ilmenite, respectively the ores of zirconium and titanium. Until recently processing monazite for rare earths was inhibited by the fact that monazites always contain radioactive thorium and sometimes uranium. The monazites were thus returned to the tailings from these operations and in the USA the environmental regulations required that they be returned to the worked-out deposits and distributed so that the residual background radiation was equal to or less than it was before the deposit was worked.

In the last five years as Chinese bastnaesite deposit grades have declined and mining created pollution has become a big problem in China the Chinese rare earth industry has begun to import very large quantities of monazites from the USA, Madagascar, South Africa, Brazil, and Australia. All of this material was produced as a byproduct of heavy mineral sands processing for zircon and ilmenite.

In order to solve the thorium/uranium problem, China requires that all imports of monazite go first to China Nuclear Corporation, which removes the thorium and uranium, and then ships a clean mixed rare earth carbonate to the Chinese refiner that ordered the material. China nuclear is licensed to process up to 50,000 tons of monazite containing up to 30,000 tons of total rare earths a year.

In the USA the only licensed uranium mill, Energy Fuels Inc.'s (NYSE American: UUUU | TSX: EFR) White Mesa Utah facility, has replaced China as the destination for monazite produced from its heavy mineral sands operations in Georgia by US Chemical Group, Chemours. Energy Fuels removes the uranium, which is a payable for Energy Fuels, and is storing, legally, the thorium, which has been committed to a medical radioisotope group. The first clean mixed rare earth carbonate produced by Energy Fuels from the Chemours' monazite has already been sold to and shipped to Neo Performance Materials Inc.'s (TSX: NEO) European solvent extraction rare earth separation facility.

Appia is working with Canada's and the world's most attractive (Report's the Fraser Institute) mining investment jurisdiction, the Province of Saskatchewan. The Province's Saskatchewan (Mining and Refining) Research Center, the SRC, has agreed to develop a hydrometallurgy for Appia's monazite and the SRC has already designed and begun the construction of a 3000 ton per annum rare earth solvent extraction separation facility, where the separation and purification of Appia's monazite will be proven and piloted in what will be Canada's anchor for a total rare earth permanent magnet supply chain. Saskatchewan is the home of Canada's uranium mining industry and so the sale of any recovered uranium and the storage (or use) of any recovered thorium is not a problem.

North America is well on its way to becoming a world center of monazite processing, and Appia is Canada's entry point to a domestic North American rare earth products production center.

A uranium company making waves in the rare earths space

written by InvestorNews | November 14, 2023

“One Ring to rule them all” is a central plot element in J. R. R. Tolkien’s fictional novel ***The Lord of the Rings***, as well as Peter Jackson’s movie trilogy, both of which I highly recommend. The One Ring was one of the most powerful artifacts ever created and was crafted by Lord Sauron. Sauron’s intent was to enhance his own power, and to exercise control over the other Rings of Power as he hoped to gain lordship over the Elves and all of the other races in Middle-earth. A pretty powerful theme for a fictional story, but where might I be going with this in real life today? Bear with me, it’ll take a bit to follow the tangled way my brain works.

At the recently concluded G7 meeting there was seeming consensus to chastise both China and Russia for various assorted reasons. It’s a reasonable bet that those nations may not be as cooperative with their abundant natural resources on a go forward basis as a result of being singled out. The G7 communique noted the need for supply chain resilience and technology standards so that democracies are aligned and supporting each other. I read into that, rare earths that the developing world requires to meet its climate objectives, amongst other things. Right now China basically owns that space between control of resources and the processing of those resources into useable products. Assuming the West isn’t already too late in light of what InvestorIntel’s Jack Lifton wrote about in this article, we shall soldier on.

The West needs its One Ring, albeit not to rule them all, but to control its destiny. The leading North American candidate to

craft that ring (so to speak) is Energy Fuels Inc. (NYSE American: UUUU | TSX: EFR). To quote President and CEO, Mark Chalmers "Without a doubt, Energy Fuels is making major strides toward restoring critical U.S. rare earth supply chains. In late-March, we began to ramp up production of an intermediate rare earth product at our White Mesa Mill in Utah using monazite from Chemours. This is expected to be a high-value product ready to be separated and refined into value-added rare earth products at Neo Performance Materials Inc's (TSX: NEO) plant in Europe. At this time, no other U.S. company is producing a product this far down the rare earth value chain. However, we have much bigger rare earth plans, and the momentum is building rapidly as we execute our purposeful strategy. We are now taking real steps toward designing and building fully integrated, U.S. rare earth production capabilities."

The 800 pound gorilla in North American rare earths right now is MP Materials Corp. (NYSE: MP) but they are focused on their own production at Mountain Pass and have an offtake agreement with Chinese based entities. Additionally, they are still in their Stage 2 development process which would only get them to where Energy Fuels is capable of today. The other differentiator with Energy Fuels is that many, if not most, rare earths ores contain low levels of radioactive materials, including uranium and thorium, necessitating extensive radioactive materials licensing requirements. Energy Fuels 100% owned White Mesa Mill has existing infrastructure (licensed, constructed and in operation) with a 40 year history of "responsibly managing low-level radioactive materials". Energy Fuels is in a unique, industry-leading position with this asset to process monazite ores into rare earth carbonate. In other words, a recipe for success in light of the current political environment.

The Company has several collaborations with the U.S. government and national laboratories on various rare earth initiatives,

including being granted a $1.75 million contract by the U.S. Department of Energy to perform studies that complement work to develop rare earth separation capabilities at their White Mesa Mill. As well, Energy Fuels has deals with The Chemours Company and Hyperion Metals Limited to process ore from their respective mines at the Offerman Mineral Sand Plant in Georgia and the Titan project in Tennessee. Energy Fuels will process the monazite sands into a mixed rare earth carbonate for use as feed material for Neo Performance's separated rare earth production plant in Europe.

Energy Fuels and its White Mesa Mill are uniquely situated as the only North American facility to be able to process an intermediate rare earth product. The company is flush with cash, with approximately $57 million having finished Q1/21 with $44 million plus raising $13 million throughout April and May via an at the market share issuance. Additionally, the Company has an available inventory of saleable uranium and vanadium with a market value of approximately $28 million. The fact that it is also a uranium company is responsible for the wash out in the stock price yesterday (down 9.4%) on news of a potential issue at a Chinese nuclear facility. This news caused a broad brush destruction of market cap across the whole uranium sector. However, if you see the rare earth side of the Energy Fuels business being the potential future of the company then perhaps this is a buying opportunity.