

Search Minerals are setting themselves apart in the critical materials pack

As industrial nations continue to shift towards a greener future and explosive demand for EVs and the associated demand for magnetic materials shows no signs of abating it's time to take another look at Search Minerals Inc. (TSXV: SMY). Search holds a 100% interest in a rare earths deposit within the Port Hope Simpson – St. Lewis District of South East Labrador that is road accessible and on tidewater, which is a leg up on a lot of their North American counterparts. The company already has a favourable Preliminary Economic Assessment (PEA) for their FOXTROT deposit, a resource estimate for Deep Fox and a third discovery has been identified at Fox Meadow. There are also more than 20 additional exploration prospects identified along the 70 km long and 8 km wide region controlled by Search including Silver Fox and Awesome Fox.

The PEA highlights a 14 year mine lifespan on Foxtrot (8 years open pit, 6 years underground) that would recover approximately 7.4 million tonnes of Indicated and 2.0 million tonnes of Inferred Resources. Mineralized zones typically show high concentrations of many of the magnetic materials in demand (Nd, Pr), and some of the most revered critical materials including but not limited to: Dysprosium (Dy) Neodymium (Nd), Praseodymium (Pr), Terbium (Tb) and Yttrium (Y). However, the newest prospect at Silver Fox hosts significantly higher grades of Zirconium (Zr) and Hafnium (Hf).

But this is only the start of the story. What makes Search different from most other critical materials' explorers is the development of its breakthrough Patented Direct Extraction Metallurgical Process. With the mining of many commodities,

it's not as simple as taking the rock from the ground, crushing it up and sending it to market. Think back to Imperial Metals Mount Polly tailings pond breach in 2014. Mining rare earths are no exception and can have their own environmental nightmare lurking if not addressed properly, just ask China. Fortunately, Search has found an elegant answer for an environmentally conscientious solution for managing waste residue that also significantly reduces CAPEX and operational costs. Without getting into the details (you can read more about it [here](#)), this is a big deal.

To further the development of this proprietary process, Search signed an MOU with the Saskatchewan Research Council (SRC) on Oct 29, 2020. The MOU outlines a collaboration with SRC as they build their Rare Earths Processing Facility in Saskatchewan, Canada. It is anticipated that using the SRC conventional solvent extraction process will enable Search to validate the ability to produce the individual rare earth oxides necessary to enter the rare earths supply chain.

Another intriguing development in progressing this patented process is the Nov 10, 2020 entry into a Technical Collaboration Framework Agreement with USA Rare Earth, LLC. This will involve technical assistance through joint technical meetings, sharing of data, site visits and reviews and collaboration around the engineering and development of Critical Material projects. Subsequent to this agreement on March 11, 2021 USA Rare Earth participated in a Search Minerals private placement with a strategic investment of C\$630,000.

Search Minerals is a company that has identified an optimally located, economic resource in a commodity that is likely to continue to see increasing demand, has exploration upside and a proprietary process to get its product cost-effectively to market in an environmentally conscious way. This has obviously attracted the interest of others in the industry. That's how you set yourself apart from the rest of the pack.

The Top 5 Rare Earths Companies for 2021

Looking ahead into 2021 ([click here](#) for the 2020 Year-in-Review in the Rare Earths market), first a quick review of 2020. Year-end 2020 market capitalization for the rare earths companies in the table below shows combined across all 26 companies listed, there was a total of almost CAD\$17 billion of market value at year-end. Three companies (MP Materials, Lynas Rare Earths and Iluka Resources Limited) dominated this statistic and accounted for almost CAD\$13 billion (approximately 75%) of the total value, making them all 600-pound gorillas – you can see the breakdown below:

Companies Ranked by Market Capitalization

		Ticker Symbol	Currency	Share price (local) Dec. 31, 2019	Share price (local) Dec. 31, 2020	Change in share price (%)	Market Cap (local) \$ millions	Market Cap (\$CAD) \$ millions
1	MP Materials Corp.	NYSE: MP	USD	\$9.910	\$32.170	225%	\$5,240	\$6,672
2	Lynas Rare Earths Limited	ASX: LYC	AUD	\$2.370	\$3.980	68%	\$3,580	\$3,521
3	Iluka Resources Limited	ASX: ILU	AUD	\$9.300	\$6.490	-30%	\$2,740	\$2,695
4	Australian Strategic Materials Ltd	ASX: ASM	AUD	\$1.250	\$6.410	413%	\$763	\$751
5	Energy Fuels Inc.	NYSE American: UUUU	USD	\$1.910	\$4.260	123%	\$540	\$688
		TSX: EFR	CAD	\$2.480	\$5.400	118%		
6	Neo Performance Materials Inc.	TSX: NEO	CAD	\$12.350	\$13.780	12%	\$514	\$514
7	Pensana Rare Earths PLC	ASX: PM8	AUD	\$0.175	\$1.940	1009%	\$394	\$387
		LSE:PRE	GBP	\$0.240	\$1.100	358%		
8	Greenland Minerals Limited	ASX: GGG	AUD	\$0.125	\$0.265	112%	\$355	\$349
9	Hastings Technology Metals Corp	ASX: HAS	AUD	\$0.115	\$0.170	48%	\$205	\$201
10	Texas Mineral Resources Corp	OTCQB: TMRC	USD	\$1.220	\$1.770	45%	\$130	\$166
11	Northern Minerals Ltd	ASX: NTU	AUD	\$0.061	\$0.035	-43%	\$155	\$153
12	Rare Elements Resources Ltd	OTCQB: REEMF	USD	\$0.920	\$1.075	17%	\$117	\$149
13	Arafura Resources Limited	ASX: ARU	AUD	\$0.091	\$0.125	37%	\$146	\$144
14	Peak Resources Ltd	ASX: PEK	AUD	\$0.040	\$0.067	68%	\$104	\$102
15	Rainbow Rare Earths Limited	LSE: RBW	GBP	\$3.150	\$10.750	241%	\$53	\$92
16	Vital Metals Limited	ASX: VML	AUD	\$0.013	\$0.032	146%	\$84	\$83
17	Leading Edge Materials Corp	TSXV: LEM	CAD	\$0.085	\$0.370	335%	\$57	\$57
18	Ucore Rare Metals Inc	TSXV: UCU	CAD	\$2.300	\$1.180	-49%	\$49	\$49
19	RareX Limited	ASX:REE	AUD	\$0.043	\$0.115	167%	\$47	\$46
20	Ionic Rare Earths Limited	ASX:IXR	AUD	\$0.009	\$0.017	89%	\$47	\$46
21	Avalon Advanced Materials Inc.	TSX: AVL	CAD	\$0.050	\$0.110	120%	\$38	\$38
		OTCQB: AVLNF	USD	\$0.042	\$0.088	110%		
22	Mkango Resources Ltd	TSXV: MKA	CAD	\$0.130	\$0.275	112%	\$37	\$37
		LSE: MKA	GBP	\$0.086	\$0.175	103%		
23	Appia Energy Corp.	CSE: API	CAD	\$0.155	\$0.405	161%	\$30	\$30
		OTCQB: APAAF	USD	\$0.124	\$0.313	152%		
24	Canada Rare Earth Corp.	TSXV: LL	CAD	\$0.065	\$0.100	54%	\$20	\$20
25	Search Minerals Inc.	TSXV: SMY	CAD	\$0.040	\$0.065	63%	\$17	\$17
26	Medallion Resources Ltd	TSXV: MDL	CAD	\$0.090	\$0.285	217%	\$17	\$17

Top Five Rare Earths for 2021

It would be too easy to simply pull off the top five companies by market cap from the table above. However, it is not just about market capitalization, despite one commonly held belief (the “efficient market hypothesis”) that market capitalization is the sum total of all factors and accounts for everything known and unknown.

In fact, there are many other factors to consider. Inefficiencies in the market have demonstrated this point, as

have other unknowns, which when brought to light, can cause a material change in share price (up or down). For example, despite the significant size of Iluka, their demerger of the company's former royalty business, Deterra Royalties, resulted in a significant reduction in share price and valuation.

So who do we really, really like for 2021? Our top five is below. Your picks may differ:

Number 1: (tied) Lynas Rare Earths (LYC: ASX) and MP Materials (NYSE: MP)

Number 2: Australian Strategic Materials (ASX: ASM)

Number 3: Neo Performance Materials (TSX: NEO)

Number 4: Energy Fuels Inc. (NYSE American: UUUU | TSX: EFR)

Number 1 (tied): Lynas Rare Earths (LYC: ASX) and MP Materials (NYSE: MP)

Lynas Rare Earths is only one of two companies in the world who have rare earth processing capacity that is not located in China. Other companies are looking at significant investments to build more global processing capacity, but this will take time and hundreds of millions (if not billions) of dollars, never mind that ore supplies that are currently under contract to be processed in China. Lynas also recognizes this and has announced construction of additional rare earths processing centre in western Australia. Note that all of the Lynas processing capacity is currently located in Malaysia. Recall the issues that Lynas had before the facility was fully commissioned. While there is no reason to suspect future problems, we all know of the ongoing societal unrest in the country.

MP Materials is a recent return of the Mountain Pass rare earths mine to the space. The only rare earths mine in the US was recommissioned in 2017 after a storied history (anyone remember Molycorp?) of corporate intrigue and insolvency. Clearly, the public markets love the idea of Mountain Pass and

management's Stage II and Stage III plans, as the share price has rocketed to levels at which some analysts are calling a massive short. However, let your runners run, as MP Materials is one beneficiary of the US Government's determination to create a strategic critical metals reserve and MP Materials is in the game. A significant knock on the Mountain Pass mine however is that it produces none of the heavy rare earths, which are so critical for all of our technology nowadays. Secondly, the company is currently sending its' production to China for processing – problematic until the company can fund and deliver on their stated future expansion plans.

Number 2: Australian Strategic Materials Limited (ASX: ASM)

Created by a corporate demerger completed in July 2020, ASM came out of Alkane Resources as the company's directors sought to unlock shareholder value in the then-combined gold/rare earths company. The value creation has been very successful, with ASM's share price up by 400+% at year-end. The 100%-owned Dubbo rare earths project has been progressing very well, first under Alkane's guidance and recently in the stand-alone entity. With a resurging interest in the rare earths, investors are really getting interested.

A differentiating and key success factor for ASM is their strategy to take a larger part of the value chain to include production by ASM and partners of specific metals. It is more of a "mines to manufacturer" of critical metals than some other rare earths companies are targeting. Recent milestones include successfully producing a neodymium iron boron (NdFeB) alloy from a ferro-neodymium (FeNd) permanent magnet alloy which was also produced by ASM – no small feat. The company is certainly proving their technological capabilities! ASM is moving along a well-planned timeline to have the Dubbo rare earths mine in production in later 2023, including project financing which is expected to be concluded around mid 2021.

Number 3: Neo Performance Materials (TSX: NEO)

You can have the best project in the world, the cheapest extraction costs and be in the best markets, but the secret of every successful company boils down to just one thing – it is only ever about the people. In the case of Neo, I am of course referring to the fact that world-renowned rare earths executive, Constantine Karayannopoulos, took the helm as President and CEO at Neo in July 2020.

Notwithstanding, Neo has many things going for it, including the only other rare earths processing facility in the world that is not in China (it is located in Estonia). In addition, the company has 11 manufacturing facilities around the world and is a world leader in innovation and the production of permanent magnet powders, through its Magnaquench business unit. Neo has also been touted as a takeover target for MP Materials, as several Neo assets were once part of Molycorp, but with Neo's prospects, it is likely that the shareholder base would demand a massive premium to approve that transaction.

Number 4: Energy Fuels Inc. (NYSE American: UUUU | TSX: EFR)

Similarly a big picture thinker, CEO Mark Chalmers was a key participant in the drive for the establishment of a critical materials reserve of up to 35 strategic metals to be created in the US. Part and parcel of this is the company's 100% owned White Mesa Mill, which is licensed for 8 million pounds U308 per year and can process 2,000 tons of ore per day and is the only conventional uranium plus vanadium processing facility in the US. More importantly, in just nine months, the company pivoted to the rare earths sector and will be producing a rare earths concentrate from monazite ore sourced in the US. This will require only minor processing adjustments within the White Mesa Mill with relatively minimal capital costs, with first product expected to be produced in Q1/21.

Going forward, Energy Fuels is engaged with a number of leading rare earths industry experts across a broad spectrum

to advise the company on the rare earths segments including a technical agreement with Neo Performance Materials, a US Department of Energy contract (along with Penn State University) for the recovery of rare earths from coal. The company is also working with noted rare earths industry expert Jack Lifton.

Your next top companies are.....?

It is going to be very interesting to see what happens outside of the top five. Names to watch include Arafura Resources, Vital Metals and especially Pensana Rare Earths, with a shout-out to Appia Energy, Search Minerals and RareX Limited for reasons I will be writing about shortly. We are not a fan of Greenland Minerals for a couple of obvious reasons...both country related.

Good luck and hang on – it's going to be a very interesting year!

Jack Lifton with Tom Drivas on the Saskatchewan Research Council's Rare Earths Processing Facility

InvestorIntel's Tracy Weslosky moderates a discussion with the Technology Metals Show host Jack Lifton and Appia Energy Corp.'s (CSE: API | OTCQB: APAAF) CEO, President and Director Tom Drivas on the Saskatchewan Research Council's (SRC) plans to develop a "first-of-its-kind" Rare Earth Processing Facility in Saskatchewan, Canada.

In an InvestorIntel interview that can also be viewed on our InvestorIntel YouTube channel, Jack started, “This is the first time it has been done in North America,” he continued, “The Canadian companies that are associated with the SRC are going to be the leading companies in Canada in the rare earths space.”

Tom went on to say that Appia has a high-grade rare earths project in Saskatchewan. “Having a rare earths processing plant in Saskatchewan, in the same area where we are and in the same jurisdiction, is a game changer,” he added. Tom also explained how the processing facility is going to benefit Appia Energy and its shareholder.

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

To learn more about Appia Energy Corp., [click here](#)

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InvestorChannel’s Rare Earths Watchlist Update for Thursday, May 28, 2020, 16:03 EST

InvestorChannel’s Rare Earths Stocks Watchlist Update video includes the Top 5 Performers of the Day, and a performance review of 20 companies InvestorChannel is following in the sector. Source: AlphaVantage.

InvestorChannel's Rare Earths Watchlist Update for Wednesday, May 27, 2020, 13:28 EST

InvestorChannel's Rare Earths Stocks Watchlist Update video includes the Top 5 Performers of the Day, and a performance review of 20 companies InvestorChannel is following in the sector. Source: AlphaVantage.

InvestorChannel's Rare Earths Watchlist Update for Monday, May 25, 2020, 16:03 EST

InvestorChannel's Rare Earths Stocks Watchlist Update video includes the Top 5 Performers of the Day, and a performance review of 20 companies InvestorChannel is following in the sector. Source: AlphaVantage.

InvestorChannel's Rare Earths Watchlist Update for Friday, May 22, 2020, 16:03 EST

InvestorChannel's Rare Earths Stocks Watchlist Update video includes the Top 5 Performers of the Day, and a performance review of 20 companies InvestorChannel is following in the sector. Source: AlphaVantage.