

# 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.

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# **Focusing on battery materials at #PDAC2021, Publisher starts with the rare earths experts from Search Minerals**

It's the week where the mining world usually descends in Toronto for PDAC 2021 (#PDAC2021) conference...last year I gained a business partner and 2 Board members , this year I am committed to reviewing every single battery material, critical material, technology metal and associated cleantech/greentech and EV company participating.

Often asked how I find companies, the answer is always the same – relationships. 20+ years now on Bay Street, am always seeking the story behind the deal, this one is about Newfoundland and Labrador. A deal that has not only made every local a potential shareholder, is championed by the government but is about the value of investing in people for the future good of the whole.

For #PDAC2021, I urge you to start with going to the Search Minerals Inc. (TSXV: SMY) virtual booth. Off to a good start in 2021, especially on the money side of their business. They closed an oversubscribed private placement in January (\$534,000), received another \$150,900 in warrant proceeds in early February and announced another non-brokered private placement in mid-February for maximum gross proceeds of \$1.75 million. This is expected to close on or before March 15.

Recall that the company has a 100% interest in an approximate 70 kilometer long by 8 kilometer wide region in the Fox Harbor volcanic belt located in the Port Hope Simpson area of

southeastern Labrador. Within this area is a belt 63 km long and 2 km wide which is road accessible, on tidewater, and located within 3 local communities. Search is focused on finding and developing Critical Rare Earths Elements (CREE), Zirconium (Zr) and Hafnium (Hf) resources.

Exploration commenced in 2009 and it quickly became apparent that the district was rich in rare earths. The Foxtrot deposit was discovered in 2010 followed by Deep Fox in 2014 and Fox Meadow in 2016. While all of these discoveries have significance, there are more than 20 additional exploration prospects identified in the immediate area, providing future exploration inventory. Search has completed a preliminary economic assessment report for Foxtrot and a resource estimate for Deep Fox. Search is also working on three exploration prospects along the belt which include: Fox Meadow, Silver Fox and Awesome Fox.

The company now has five major discoveries in this area with excellent road and power infrastructure with deep-water port access nearby that would support a low-cost development scenario. Foxtrot is the most advanced with a Preliminary Economic Assessment (PEA) on the prospect and an NI 43-101 report prepared in 2016. The deposit, which would be mined with both open pit and underground workings, contains the key rare earth elements neodymium, praseodymium, dysprosium and terbium, necessary for permanent magnets used in electric cars, wind turbines and many high-tech products.

In addition to being a mineral exploration company, management recognized the importance of leveraging the cost advantages provided by the physical location of Foxtrot as well as the subsequent discoveries. The company developed a patented proprietary Direct Extraction technology which has produced a 99% high purity mixed rare earth concentrate via two continuous pilot plants. Search has continued to optimize their patented Direct Extraction Process technology with the generous support from the Department of Tourism, Culture,

Industry and Innovation, Government of Newfoundland and Labrador and from the Atlantic Canada Opportunity Agency (ACOA).

Greg Andrews, President and CEO of Search Minerals commented in their February 10, 2021 news release that “Search has received internal engineering studies which outlines the capital and operating costs for constructing a 1/200th scale demonstration plant in St. Lewis Labrador (10 tonnes per day). The demonstration plant would be essential for 1) training our future workforce for plant operations, 2) producing sufficient quantities of mixed rare earth concentrate for demonstration of commercial rare earth separation, and 3) large scale validation of our Direct Extraction processing flowsheet. We are putting together our business plan for the construction of the demonstration plant with our funding partners.”

While their technology has been proven, scaling up to a plant will require significant capital and the company now needs to securing funding and/or a partner to further refine the process in a demonstration plant. In addition, the company will require further funding to continue infill drilling to take the discoveries to feasibility study stages.

We note that the company has a Memorandum of Understanding with the Saskatchewan Research Council (SRC), signed in late October 2020, for technical collaboration. The company has also entered into a Technical Collaboration Framework Agreement with USA Rare Earth, LLC to explore further separation capabilities.

An interesting company with good assets, Search has a nice, compact area of operations and have had good exploration success under the helm of some of the most respected rare earths experts such as Dr. David Dreisinger. They are in the right resource space at the right time (in my opinion\*) – and with the critical piece of business in the market (always) being leadership, Greg Andrews has been at the helm since 2014

and is evidence that indeed, investing in relationships in the community is a long term strategy for the wise.

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## **Search Minerals' Greg Andrews on the electrification of vehicles and the "push" for rare earth magnets**

In a recent InvestorIntel interview, Tracy Weslosky speaks with Greg Andrews, President, CEO, and Director of Search Minerals Inc. (TSXV: SMY), about the electrification of vehicles and their collaboration agreements with the Saskatchewan Research Council (SRC) and USA Rare Earth.

In this InvestorIntel interview, which may also be viewed on YouTube ([click here to subscribe to the InvestorIntel Channel](#)), Greg started, "The recent Canadian government's, the US government's, the EU government's rule on electrification and reducing internal combustion vehicles is a push in the right space for electrification which of course uses rare

earth magnets.” He continued by saying that in the last year the OEMs have been investing a lot of capital in electrification of vehicles which again requires a secure supply chain of rare earths to make their business plans operable.

“The collaboration agreements with both SRC and USA Rare Earth is a critical next step for us to turn our product into oxides.” Greg said. He added that Search Minerals is exploring the proven Solvent Extraction Process with SRC and Continuous Ion Exchange process with USA Rare Earth to get their projects off the ground.

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

### **About Search Minerals Inc.**

Led by a proven management team and board of directors, Search is focused on finding and developing Critical Rare Earths Elements (CREE), Zirconium (Zr) and Hafnium (Hf) resources within the emerging Port Hope Simpson – St. Lewis CREE District of South East Labrador. The Company controls a belt 63 km long and 2 km wide and is road accessible, on tidewater, and located within 3 local communities. Search has completed a preliminary economic assessment report for **FOXTROT**, and a resource estimate for **DEEP FOX**. Search is also working on three exploration prospects along the belt which include: **FOX MEADOW**, **SILVER FOX** and **AWESOME FOX**.

Search has continued to optimize our patented Direct Extraction Process technology with the generous support from the Department of Tourism, Culture, Industry and Innovation, Government of Newfoundland and Labrador, and from the Atlantic Canada Opportunity Agency. We have completed two pilot plant operations and produced highly purified mixed rare earth carbonate concentrate and mixed REO concentrate for separation and refining.

To learn more about Search Minerals Inc., [click here](#)

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## **MOU with the Saskatchewan Research Council signals another milestone for Search Minerals on their quest to produce rare earths in NA**

A likely Biden victory in the USA is positive for all the rare earths miners. This is because one of Biden's key policies is a massive \$2 trillion green infrastructure and jobs plan over his first term in office that aims to have a US carbon pollution-free power sector by 2035. This would be a huge tailwind for the US renewable energy sector (solar and wind) as well as supportive to the US electric vehicle (EV) industry. Any North American rare earths suppliers who can potentially supply the USA and/or Canada with rare earths would be likely to benefit as North America embraces the green revolution.

One rare earth miner worth considering is Search Minerals Inc. (TSXV: SMY) ("Search"). Search is focused on finding and developing critical rare earth element mineral assets in Labrador, Canada.

In some very exciting recent news Search has signed a Memorandum of Understanding (MOU) with the Saskatchewan Research Council (SRC). The MOU outlines a collaboration with SRC as they build their Rare Earth Processing Facility in



Saskatchewan, Canada.

Search Minerals President and CEO, Greg Andrews, commented: "We anticipate using the (SRC) conventional solvent extraction process to enable Search to validate the ability to produce the individual rare earth oxides necessary to enter the rare earth supply chain.

Recent announcements regarding building electric cars in Canada and other government led initiatives for clean and green technology provides the framework for industry access to a secure rare earth supply chain in Canada. We believe Search is well positioned to capitalize on these opportunities."

Search controls properties in three areas of Labrador, Canada. These are:

- The Port Hope Simpson (PHS) Critical Rare Earth Element District in SE Labrador
- The Henley Harbour Area in Southern Labrador
- The Red Wine Complex located in Central Labrador

**Search Minerals has nearby infrastructure in place at St. Lewis, Labrador, Canada**

## Community of St. Lewis

- Diesel power plant (expandable)
- Ice-free deep sea port: reagents & other supplies
- 12km from Foxtrot
- 2km from Deep Fox
- Small aircraft airstrip
- Fox Harbour House: housing, office, core shack, workshop

## Trans-Labrador Highway

- All season paved highway – transport REE Concentrate



Source

Within the Port Hope Simpson District Search's main discoveries are the **Foxtrot Resource, Deep Fox, Fox Meadow, Silver Fox, and Awesome Fox deposits** which contain rare earths including dysprosium (Dy), neodymium (Nd), praseodymium (Pr), terbium (Tb), yttrium (Y), zirconium (Zr), and hafnium (Hf).

The district covers a 63 km long and 2 km wide belt. At Foxtrot the total Indicated Resource is 7.392 million tonnes with grades of neodymium oxide (1,732ppm), neodymium (1,485ppm), praseodymium (397ppm), and dysprosium (191ppm). The 14 year Life of Mine (LOM) Foxtrot Project offers an IRR of 16.7% on an after tax Net Present Value (NPV) 10% of \$48M, with a CapEx of only \$152M. The NPV quoted above is only for the Foxtrot Project, so once the other projects are combined

into a bigger project the NPV should improve.


At Fox Meadow, 2020 channel assay results outlined two mineralized zones on the surface: The NW zone is up to 175m wide and the SE zone is up to 116m wide. Combined, the mineralization is at least 790m long and contains similar grades of the REE magnet materials (Nd, Pr, Tb and Dy) as Foxtrot and Deep Fox. This is a good result as it means Search is continuing to find more REE mineralization to potentially further grow their resource.

At Silver Fox, Search has recently successfully expanded the Silver Fox high grade zirconium-hafnium (REE) mineralized zone. In the news release Search commented: "This surface expression is significantly longer, but thinner, than the surface expressions of the nearby and related Foxtrot and Deep Fox Resources. The mineralization is similarly hosted by peralkaline volcanic rocks and contains lower grades of the REE magnet materials (Nd, Pr, Tb and Dy) but significantly higher grades of Zr and Hf."

At Awesome Fox, the 2020 channel program (7 new channels) along with previous channels has outlined a REE mineralized zone ranging from about 4-43m thick and 850m long.

## Why Invest in Search Minerals?

SMY: TSX-V

-  Lowest CAPEX project in North America - \$ 152M (\$Cdn), 1000 tonnes per day scalable processing technology to align production rate with CAPEX
-  Patented Processing Technology – produced 99% high purity mixed REO concentrate during \$1.9M pilot plant operation
-  100% owned Foxtrot and Deep Fox Resources: Fox Meadow and Silver Fox Advanced Prospects; Multigenerational opportunity
-  Strong support from Federal/Provincial governments, NunatuKavut Community Council (Indigenous) and Local Communities
-  Macro Developments – US/China trade war, Defense Production Act Title III – Create North American rare earth supply chain, Possible future supply constraints
-  Led by a proven management and Board of Directors. Insider ownership greater than 38%

Source

### Closing remarks

Earlier in 2020, rare earths expert Jack Lifton stated about Search Minerals: “I think it may well be Canada’s first commercial rare earth producer.” Given Search has completed a Resource estimate (Foxtrot, Deep Fox), a PEA (Foxtrot), has successfully produced 99% purity REO concentrate from their pilot plant and patented process, and now has a potential larger scale processing option with SRC; this all combines to suggest that Search Minerals is well on the way towards commercial production. Next steps would involve a BFS and potentially some trial production with SRC once their facility is built.

Search Mineral’s current market cap is only C\$10.5M suggesting there may be plenty of upside potential ahead, especially if they continue to successfully advance towards production.

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# Search Minerals' Greg Andrews on the return of the rare earths market

Greg Andrews, President and CEO of Search Minerals Inc. (TSXV: SMY), sat down for an interview with InvestorIntel's Tracy Weslosky to talk about the resurgence of the rare earths market. Recent deals in the rare earths space indicate to Greg that "investors are investing in companies for the long term as an industry," but the secret is "getting in early and capturing undervalued companies ahead of the market."

If anything, Greg says that Search Minerals is almost more of "a technology play because of the time and work effort that has to go into taking the resource." Greg also spoke on Search Minerals' patent pending Direct Extraction technology which he said eliminates unnecessary steps, lowering capital and operating cost.

Search Minerals "never stopped working in 2013 when rare earths were out of flavor," he explained. "We continued and completed two pilot plants in that time, we produced carbonates and concentrates, we are testing for separation plant...We are working to be ready for the market that is coming now."

Search Minerals is focused on developing and continued exploration within the emerging Critical Rare Earth Element (CREE) District of SE Labrador with 2 resources and 5 projects, with strong community and indigenous support, as well as provincial and federal government support to help finance demonstration and pilot plants.

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

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## As Chinese rare earths' stock prices rally, pressure rises for the rest of the world...

Rising US-China tension has resulted in some rare earths' stock prices rising sharply, particularly those in China. Given the recent US moves to introduce critical materials legislation it seems likely that the non-Chinese rare earth stocks will also rally strongly this year, particularly if the new bills and financial support are passed.

Let's start with a recap of the recent US support highlights for rare earths:

- May 18, 2018 – The US declared a list of 35 critical materials. A large part of the list includes rare earths.
- May 2, 2019 – U.S. Sen. Lisa Murkowski and others submitted the American Mineral Security Act
- In mid May, 2020, Senator Ted Cruz submitted the Onshoring Rare Earths Act – the 'ORE Act'
- On May 28, 2020 US Representative Michael Waltz submitted the American Critical Mineral Exploration and Innovation Act of 2020

The ORE Act focuses on six critical materials – **Rare earths**, scandium, lithium, cobalt, graphite, and manganese. The

Critical Mineral Exploration and Innovation Act directs the U.S.G.S. to complete updated resource assessments for each critical mineral. It has been reported that there will be a focus on **rare earths** and other so-called strategic minerals.

Then just last week rare earths expert and Technology Metals Show host Jack Lifton stated exclusively to InvestorIntel: "The US Defense Department has announced last week that it will seek \$1.7 billion for rare earths purchases in the 2021 National Defense Authorization Act that means the budget for fiscal 2021. In addition they will ask for another \$300 million (**a total of \$2 billion**), for rare earths for specialized weapons which they name as hypersonic missiles..."

Given all of the above proposed support to the rare earths sector, it is abundantly clear that the US is now finally moving rapidly to secure critical rare earths supply, particularly from US deposits, where possible. Current rare earths producers and listed rare earths stocks stand to be beneficiaries. Especially if they have US rare earths projects, but quite likely any non-Chinese rare earth juniors that can achieve funding and production should find very strong western demand for their products. Most of the western world is now looking to diversify their supply chains especially after the trade war and COVID-19 problems of the past 2 years.

Some rare earth miners with US projects include:

- MP Materials (private)
- Rare Element Resources Ltd. (OTCQB: REEMF)
- Texas Mineral Resources Corp. (OTCQB: TMRC)
- Ucore Rare Metals Inc. (TSXV: UCU | OTCQX: UURAF)

Some miners with US rare earth processing potential include:

- Energy Fuels Inc. (NYSE: UUUU | TSX: EFR) recently stated their White Mesa Mill in the USA could be used in future for rare earths processing.

- Lynas Corporation (ASX: LYC) has received US support for a planned US rare earths processing facility.
- Peak Resources (ASX: PEK) plan to have a US rare earths processing facility.

Some rare earth miners with Canadian projects include:

- Avalon Advanced Materials Inc. (TSX: AVL | OTCQB: AVLNF)
- Appia Energy Corp. (CSE: API | OTCQB: APAAF)
- Search Minerals Inc. (TSXV: SMY)

Some rare earth miners with Australian projects include:

- Alkane Resources Ltd. (ASX: ALK | OTCQX: ALKEF)
- Scandium International Mining Corp. (TSX: SCY)

### Rare earths are vital ingredients for modern technology



### Closing remarks

The massive recent news of two new rare earth/critical materials related Acts and a proposed “US\$2 billion towards rare earths in 2021”, appears to have been somewhat missed by the market. The Chinese rare earths stocks have already bounced leaving the potential rest of the world rare earth miners to play catch up.



News flow in future months should continue to be extremely promising for the rare earths sector following on from the tremendous news from the last few weeks.

Investors should not wait too long as any further increased US-China tensions, threats of China supply loss, or passing of rare earths related Bills, will likely send non-Chinese rare earth miners stock prices higher.

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## **The Perfect Market Storm: Critical Materials, Cleantech and COVID-19**

There seems to be a misguided notion (with some) that isolation means we have more time to waste. Far from reality, I am certain that many of you, like me are looking at your inbox wondering where or how to wade into the depth of quality deals and opportunities upon us...

Would like to kick your morning coffee off with a special nod to our longstanding friends from Avalon Advanced Materials Inc. (TSX: AVL | OTCQB: AVLNF) whose \$AVL soared 50% yesterday. We have been supporters of #Avalon since Don Bubar first did an interview with me in 2009 (with Jack Lifton) and introduced me to rare earths. And indeed, there is news flow in the rare earths a-n-d throughout the critical materials sector that is literally ricocheting from source-to-source online...

How to follow?

Jack Lifton, Clint Adam Smyth and I just launched the

TechnologyMetals.com site to manage the influx of critical materials' news (and experts) we are communicating with regularly. Jack's interview with Dr. David Dreisinger on Search Minerals Inc. (TSXV: SMY) last week was purely outstanding (in my opinion) as he describes David as "the leading authority on solvent extraction process". This is a hot topic that we touch on in our weekly update that we just started...[click here](#) to access a preview

And associated technologies relating to cleantech? We saw Exro Technologies Inc. (CSE: XRO | OTCQB: EXROF) stock move up 30% yesterday! Interviewing CEO Sue Ozdemir on how Exro makes "electric motors faster, stronger and greener" for InvestorIntel on Wednesday: we will get this up live as fast as we can!

Uranium continues to maintain a much-deserved interest, let me point you in the right direction for a quick update – Matt Bohlsen's piece from last week titled, The DoE's plan to rebuild the uranium sector and 'pull America's nuclear industrial base back from the brink of collapse'... reinforces the sustainability themes we are touting on the Technology Metals Show. Arranging interviews as we speak with Mark Chalmers of Energy Fuels Inc. (NYSE: UUUU | TSX: EFR) and Jeff Klenda of Ur-Energy Inc. (NYSE: URG | TSX: URE) as they "stand to be the major beneficiaries, especially given they started the whole S232 petition back in January 2018" you should see those live on InvestorIntel next week.

And yes, we are following the biotech and life sciences market. If you subscribe to our AI driven market updates on InvestorChannel.com – you can catch the 20 companies, we are following in the race for vaccinations...[click here](#)

Speaking of AI technology, we would like to ensure that you are aware of the news that was put out by Predictmedix Inc. (CSE: PMED | OTCQB: PMEDF) yesterday titled – Predictmedix Files Patent for Mass Screening for Infectious Diseases Such

As #COVID19



1 YR stock Chart for Predictmedix Inc. (CSE: PMED) – Source: TD Waterhouse

And speaking on the war against the COVID-19, StageZero Life Sciences Ltd. (TSX: SZLS) put out the following news on April 20<sup>th</sup> StageZero Life Sciences Initiates Testing for COVID-19 In the USA

Remember, click [here](#) to subscribe to the InvestorChannel for daily market updates on the Canadian, US and Hong Kong markets – and to follow InvestorIntel's stock watchlist for Gold, Uranium, Rare Earths and of course, COVID-19...