

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.

The Search for North American Rare Earths

Since the last update we provided on Search Minerals Inc. (TSXV: SMY) (“Search Minerals” or “Search”), big steps have been taken towards perfecting their proprietary direct extraction process, which is expected to significantly reduce capital and operating costs by eliminating several stages of separation. As a result, the company’s FOXTROT prospect is now expected to achieve competitive low-cost production beyond even the 14-year mine life slated by its PEA.

Led by a proven management team and board of directors, including the recent addition of Leo Power as an independent director, Search is focused on finding and developing resources within the emerging Port Hope Simpson district of Southeast Labrador. The company controls a belt of land on Canada’s most easterly point measuring 70 km in length and 8 km wide, including its 100% interest in the FOXTROT Project. Although perfecting their extraction process is currently key, additional exploration efforts have revealed two other significant Rare-Earth Element deposits, “Deepwater Fox” and “Fox Meadow”.

The highly anticipated direct extraction process involves several stages, but can be summarised in two phases. Primarily, a finely crushed material is treated to produce a concentrated rare earth carbonate. This carbonate concentrate is re-dissolved and re-leached to produce a high quality mixed rare earth oxide concentrate product ready for shipping and refinement.

Identified as Neodymium (Nd), Europium (Eu), Terbium (Tb),

Dysprosium (Dy) and Yttrium (Y), this valuable subset of the complete series of 17 rare earth elements is listed as critical (“CREEs”) due to high demand and/or constrained domestic supply. Possessing unique properties, which enhance the performance of a range of innovative technologies; CREEs are essential components in the development of permanent magnets and a variety of other components used in renewable energy, green technology automobiles, medical devices, electronics and agricultural production.

All bench testing of the bulk sample has now been completed during the pilot plant’s first ever continuous operation, providing additional insight into the steps of the extraction process. For example, Search has been able to demonstrate the ability to reduce, or even remove, the already small amounts of uranium and zinc in the rare earth material to levels that will permit it to be refined. The initial test processing also confirmed that sulfuric acid can be used in place of hydrochloric acid in the second phase treatment, which simplifies operations and further reduces extraction costs as sulfuric acid is cheaper than hydrochloric acid.

The Pilot Plant testing, including the second phase of the Direct Extraction Process, is expected to be completed early in February, with formal reporting of final results to follow soon afterwards. The company has arrived at a program with SGS Minerals for testing and assessing the contents of the residues and barren solutions associated with the direct extraction process. These tests will be conducted during Pilot Plant testing and directly after it concludes in order to answer questions that are likely to arise during the environmental assessment phase of the project.

The Pilot Plant is being funded through the Atlantic Canada Opportunities Agency (“ACOA”) and the Research & Development Corporation of Newfoundland and Labrador (“RDC”) for up to \$1.25M of the \$1.9M program cost. The Pilot Plant is using the patent-pending proprietary technology breakthrough developed

by Search Minerals, which has eliminated grinding, flotation, and both magnetic and gravity separation from the process flow-sheet. The FOXTROT Project has a low capital cost of \$152m to bring the initial project into production, a short payback period and enjoys scalability due to Search's sustained efforts to arrive at a cutting edge proprietary processing technology.