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.

Search and rare earths shall be found – Maybe in them HighREE Hills

Search Minerals Inc. (TSXV: SMY), had their stock go up 42.86% in April, and on May 12th they announced funding totalling C$50,000 from the Atlantic Canada Opportunities Agency to do a conceptual study of their proposed rare earth processing facility at their Foxtrot Project in Labrador. And as of the week ending May 15th, their stock was up 100% on the week before.

On May 20th Search had other news, regarding a $100, 000 cash payment from InCoR Technologies Ltd, for it's proprietary Starved Acid Leaching Technology (SALT). SALT extracts nickel from below cut-off grade nickel saprolite ores. It isn't used for rare earth recovery and is not part of the current process development at Foxtrot.

Search has properties with numerous deposits near the Labrador coast, and they are still finding more. A processing facility on the coast, that would be accessible by boat would be a major asset. They have properties near the coast like the Port Hope Simpson Rare Earth Element (REE) District. This is a REE belt where the company controls a dominant land position in a belt 70km long and up to 8km wide. Also on the coast is their Henley Harbour property just to the south.

Within the Port Hope Simpson deposit is the Foxtrot Project, their flagship enterprise. Their open pit mine there, will be the source of the material to be processed. Search owns 100% of the Foxtrot Project, and a recently announced Foxtrot-like prospect called Deepwater Fox, which may be three times the size. Foxtrot is in the Fox Harbour Volcanic Belt where they have 20 licenses, and 732 claims. Search has some great names for their properties and projects like Foxy Lady, Fox Pond, the Red Wine Complex, and HighREE Hills. Yes HighREE Hills is a place, that's not a typo.

Highlights from their March report

- Three new prospective belts for critical rare earths (CRE's- neodymium, europium, terbium, yttrium, and the critical magnetic metals everyone is looking for: dysprosium (Dy), and especially the Dy203 form), have been discovered in the Henley Harbour CRE District, SE Labrador;
- Best channel results Bad Bay – Iceberg: 3.55m of 280 ppm Dy (322 ppm Dy2O3) including 0.60m of 506 ppm Dy (582 ppm Dy2O3); Pleasure Pond: 0.18m of 904 Dy (1040 ppm Dy2O3);
- High grades are found in each belt: 1. Bad Bay – Iceberg reveals Dy values up to 506 ppm (Dy203 up to 582 ppm); 2. St. Peter's Bay reveals Dy values up to 1290 ppm (Dy203 up to 1484 ppm); and, 3. Pleasure Pond reveals Dy values up to 3400 ppm (Dy2O3 up to 3910 ppm); and,
- Each belt exhibits characteristics similar to the HighREE Hills and Ocean View belts found 30 – 40 km to the north in the Port Hope Simpson CRE District, where the Foxtrot Project is located.

Search will use engineering company SNC- Lavalin (SNC) to complete the study on the processing plant. They will rely on Search VP of Metallurgy Dr. David Dreisinger, and other management to facilitate and monitor the report. Greg Andrews, Search President, said the "study should validate that the

breakthrough in Search's proprietary metallurgy process, which eliminates grinding, flotation, gravity and magnetic separation, will significantly reduce capital and operating costs to develop Foxtrot. We will incorporate this new information to update the May 2013 Preliminary Economic Assessment of Foxtrot." Remarkably Search has identified more than 20 other Foxtrot-like prospects in the District. It would seem that this region could have many REE deposits, and the plans to refine both the heavy and light REE's in Labrador could put this region, accessible by both air and sea on the map.

Dr. Dreisenger spoke about their direct extraction method with publisher Tracy Weslosky in a video interview with InvestorIntel March 30th 2015. This novel method of extraction could lower the costs of both mining and refining. This could allow Search to be one of, if not the first to produce REE's in Canada.

SNC will prepare and design the processing facility with an initial production rate of 500t/day from the open pit mine at Foxtrot. The processing facility will be scalable in the event Search can obtain additional feed from other prospects discovered in the districts. The Project began in February 2015, and the report is estimated to be released near the end of May 2015.