

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.