

#### **NEWS RELEASE**

## SEARCH MINERALS INC. PROVIDES PILOT PLANT PROGRAM UPDATE

Vancouver, B.C. December 20, 2016 – (TSXV: SMY) Search Minerals Inc. ("Search" or the "Company") is pleased to provide an update on the pilot plant program (the "Pilot Plant") which is being conducted by SGS Canada Inc. ("SGS") on bulk material from the Company's FOXTROT deposit in SE Labrador. 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 the Company (the "Search Direct Extraction Process"), which has eliminated grinding, flotation, and magnetic and gravity separation from the process flow-sheet. Eliminating these processes is expected to significantly reduce capital and operating costs for processing material to a mixed rare earth oxide concentrate product.

The Search Direct Extraction Process involves several steps but can be simply described in two phases. In the first phase, a finely crushed material is treated to produce a rare earth carbonate concentrate. In the second and final phase, the carbonate concentrate is re-dissolved and re-leached to produce a high quality mixed rare earth oxide concentrate product ready for shipping to a refinery.

#### Work to Demonstrate the Search Minerals Direct Extraction Process

All bench testing of the bulk sample has now been completed providing additional insight into each of the steps involved in each phase of the overall extraction process. More specifically, Search has been able to demonstrate the ability to remove/reduce the already small amounts of uranium and zinc in the rare earth material to levels acceptable to refineries. The bench scale testing also confirmed that sulfuric acid can be used in place of hydrochloric acid in the second phase treatment of the mixed rare earth carbonate. This simplifies operations and further reduces extraction costs as sulfuric acid is less expensive than hydrochloric acid.

All these insights were carried forward and incorporated into the final Pilot Plant design with a view to maximizing the overall recovery of rare earths from the FOXTROT material. We are pleased to report that the additional work at bench scale has been successfully incorporated into the first 5 days of continuous operation of the first phase of the Pilot Plant. The 5-day continuous operation comprised the following steps:

- Acid and material mixing through a continuous pug mill (intensive mixing device)
- Acid and material heating through a pilot scale METSO Holoflite reactor
- Water leaching of the acid treated material
- Removal of iron, aluminum and other minor impurities through precipitation
- Filtration and washing of the leach residue and impurity precipitate (combined)
- Removal of small amounts of uranium from the leach solution using ion exchange
- Precipitation of a mixed rare earth carbonate using sodium carbonate addition
- Thickening, filtration and washing of the mixed rare earth carbonate precipitate

As noted earlier, the mixed rare earth carbonate precipitate is the feed to the second phase of the Search Direct Extraction Process. The Pilot Plant testing, including the second phase of the Direct Extraction Process, will



continue in January, and is expected to be completed by the first week of February with formal reporting of final results to follow thereafter.

In anticipation of questions during the FOXTROT environmental assessment process, the Company has defined 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. By conducting these tests at this time Search and its stakeholders will have timely access to important decision making information as we work together to move the FOXTROT project forward in a safe, environmentally respectful manner.

#### **Qualified Person**:

Dr. David Dreisinger, Ph.D., P.Eng., is the Company's Vice President, Metallurgy and Qualified Person for the purposes of NI 43-101. Dr. Dreisinger has reviewed and approved the technical disclosure contained in this news release as applicable. The company will endeavour to meet high standards of integrity, transparency, and consistency in reporting technical content, including geological and assay (e.g., REE) data.

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

Led by a proven management team and board of directors, Search is focused on finding and developing resources within the emerging Port Hope Simpson Critical Rare Earth Element (CREE) District of SE Labrador. The Company controls a belt 70 km long and 8 km wide including its 100% interest in the FOXTROT Project which is road accessible and at tidewater. Exploration efforts have advanced "Deepwater Fox" and "Fox Meadow" as significant new CREE prospects very similar and in close proximity to the FOXTROT discovery. While the Company has identified more than 20 other prospects in the District, its primary objective remains development of FOXTROT by confirming proprietary direct extraction metallurgy processing technology at the pilot plant level (in progress) and delineation of prospects that will ensure competitive-low cost production beyond the 14-year mine life contemplated in the preliminary economic assessment of FOXTROT completed in April 2016. The FOXTROT Project has a low capital cost to brig the initial project into production (\$152 M), a short payback period, and is scalable due to Search's proprietary processing technology.

All material information on the Company may be found on its website at <a href="www.searchminerals.ca">www.searchminerals.ca</a> and on SEDAR at <a href="www.sedar.com">www.sedar.com</a>

#### **About CREEs**

Identified as Neodymium (Nd), Europium (Eu), Terbium (Tb), Dysprosium (Dy) and Yttrium (Y) this valuable subset of the complete series of seventeen rare earth elements is considered critical due to high demand and/or constrained domestic supply. Containing 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.

Neither the TSX Venture Exchange nor its Regulation Services Provider (as that term is defined in the policies of the TSX Venture Exchange) accepts responsibility for the adequacy or accuracy of this release.



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# Cautionary Statement Regarding "Forward-Looking" Information.

This news release includes certain "forward-looking information" and "forward-looking statements" (collectively "forward-looking statements") within the meaning of applicable Canadian and United States securities legislation including the United States Private Securities Litigation Reform Act of 1995. All statements, other than statements of historical fact, included herein, without limitation, statements relating the future operating or financial performance of the Company, are forward-looking statements.

Forward-looking statements are frequently, but not always, identified by words such as "expects", "anticipates", "believes", "intends", "estimates", "potential", "possible", and similar expressions, or statements that events, conditions, or results "will", "may", "could", or "should" occur or be achieved. Forward-looking statements in this news release relate to, among other things future events or the Company's future performance, business prospects or opportunities. Actual future results may differ materially. There can be no assurance that such statements will prove to be accurate, and actual results and future events could differ materially from those anticipated in such statements. Forward-looking statements reflect the beliefs, opinions and projections on the date the statements are made and are based upon a number of assumptions and estimates that, while considered reasonable by the respective parties, are inherently subject to significant business, economic, competitive, political and social uncertainties and contingencies. Many factors, both known and unknown, could cause actual results, performance or achievements to be materially different from the results, performance or achievements that are or may be expressed or implied by such forward-looking statements and the parties have made assumptions and estimates based on or related to many of these factors. Such factors include, without limitation, general business, economic and social uncertainties; litigation, legislative, environmental and other judicial, regulatory, political and competitive developments; and those additional risks set out in Search's public documents filed on SEDAR at www.sedar.com. Although Search believes that the assumptions and factors used in preparing the forward-looking statements are reasonable, undue reliance should not be placed on these statements, which only apply as of the date of this news release and no assurance can be given that such events will occur in the disclosed time frames or at all. Except where required by law, Search disclaims any intention or obligation to update or revise any forward-looking statement, whether as a result of new information, future events, or otherwise.