



## NEWS RELEASE

**FOR IMMEDIATE RELEASE: February 2, 2015**

### **SEARCH MINERALS ANNOUNCES SUCCESSFUL SCALE UP OF PROPRIETARY METALLURGICAL PROCESS TO PRODUCE 98.9% PURITY RARE EARTH OXIDE PRODUCT**

**VANCOUVER, February 2, 2015** - /CNW/ - Search Minerals Inc. ("Search" or the "Company") (TSXV: SMY) and its wholly-owned subsidiary, Alterra Resources Inc., are pleased to announce the completion of a scale up test of the Search Minerals Direct Extraction Process on Foxtrot resource (*May 09, 2013: Technical Report on the Foxtrot Project - updated Preliminary Economic Assessment (NI 43-101 Report)*), to produce a high grade REE product for refining. The scale up test was performed at SGS Minerals, Canada ("SGS") with funding support provided by the Research & Development Corporation ("RDC") of Newfoundland and Labrador and from the Atlantic Canada Opportunities Agency ("ACOA").

#### *Highlights of the process:*

- A channel sample of Foxtrot resource was crushed to 6 mesh (~3.45 mm) size and treated in a scaled up test of Search's Metallurgical Process for rare earth recovery (*Jul 23, 2014 Search Minerals Announces Metallurgical Breakthrough for Rare Earth Recovery*)
- The channel sample contained 1.12% Total Rare Earth Oxide (TREO) including 0.183% Nd<sub>2</sub>O<sub>3</sub>, 0.0262% Dy<sub>2</sub>O<sub>3</sub>, and 0.151% Y<sub>2</sub>O<sub>3</sub>.
- The crushed 6 mesh material was mixed with 100 kg/t of H<sub>2</sub>SO<sub>4</sub> in a rotary contactor and then passed continuously through a pilot plant kiln for heating to 200 °C. The acid/ore mixture was easily handled and did not stick on the kiln internals. The material appeared as a dry sand product at the kiln discharge
- The kiln product was water leached at 10% solids and 90 °C for 24 hours to extract the rare earth elements into solution.
- The leach slurry was filtered to recover the leachate solution and produce a washed solid residue (waste product from the process).
- The leachate was purified through simple pH adjustment with magnesium carbonate (MgCO<sub>3</sub>) to reject key impurities (Fe, Al, Si, Th, U).
- The rare earth elements were recovered from the purified solution by addition of sodium carbonate (Na<sub>2</sub>CO<sub>3</sub>).
- The (unoptimized) recovery of the rare earths to the carbonate precipitate were:
  - 71% Nd
  - 68% Dy
  - 64% Y
  - An average recovery of 65% TREE/LREE/HREE

There is scope for increasing recoveries through optimization of the acid dosage, temperature and time of heating and particle size of the crushed material. Recovery optimization will be undertaken at the demonstration pilot plant stage of development planned for 2015.

- The rare earth carbonate precipitate was purified using Search's process of acid re-leaching, pH adjustment to reject impurities, rare earth oxalate precipitate and calcination.

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#### **SEARCH MINERAL INC.**

**# 211, 901 West Third Street, North Vancouver, B.C. V7P 3P9 T (604) 998-3432 . F (604) 608-5717  
W [searchminerals.ca](http://searchminerals.ca) . E [info@searchminerals.ca](mailto:info@searchminerals.ca)**



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- The final rare earth oxide product (the calcine) analyzed 98.9% TREO+Y and only 2.4 g/t of Th. This calcine would be refined at a rare earth refinery into separate rare earth elements products for sale. The REE analysis of the calcine is listed below:

La <sub>2</sub> O <sub>3</sub>	14.07
CeO <sub>2</sub>	38.57
Pr <sub>6</sub> O <sub>11</sub>	4.68
Nd <sub>2</sub> O <sub>3</sub>	17.96
Sm <sub>2</sub> O <sub>3</sub>	2.93
Eu <sub>2</sub> O <sub>3</sub>	0.17
Gd <sub>2</sub> O <sub>3</sub>	2.46
Tb <sub>4</sub> O <sub>7</sub>	0.40
Dy <sub>2</sub> O <sub>3</sub>	2.30
Ho <sub>2</sub> O <sub>3</sub>	0.47
Y <sub>2</sub> O <sub>3</sub>	12.45
Er <sub>2</sub> O <sub>3</sub>	1.22
Tm <sub>2</sub> O <sub>3</sub>	0.18
Yb <sub>2</sub> O <sub>3</sub>	0.80
Lu <sub>2</sub> O <sub>3</sub>	0.10

Jim Clucas, Interim President and CEO states, “These metallurgy results from the Foxtrot resource confirm that the crucial metallurgical process has been successfully simplified. This success is due to the financial support of ACOA and RDC, the technical support of SGS and the leadership and conceptual ideas of Dr. David Dreisinger. The new process is simple and cost effective, it should lead to the lower capital and operating costs necessary to develop our REE resources”.

From these results, the Company anticipates engaging an engineering firm to provide Search with a conceptual study, detailing the initial capital costs and operating costs which will be used to update the Preliminary Economic Assessment report. In conjunction with the conceptual study, Search will continue to work with SGS to scope and cost the design and operation of a demonstration pilot plant. This will provide critical design data for feasibility study evaluation of the Foxtrot Project and provide a mixed rare earth product necessary for refineries to test the next stage of separation.

### 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.

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**About Search:**

Search Minerals Inc. (TSXV: SMY) is a TSX Venture Exchange listed company focused on creating value through finding and developing mineral assets with growing demand and constrained or restricted supply, and with increasing use of innovative technologies.

Search is the discoverer of the Port Hope Simpson REE District, a highly prospective light and heavy REE belt located in southeast Labrador, where the Company controls a dominant land position in a belt 70 km long and up to 8 km wide. In addition, Search holds a number of additional mineral prospects in Newfoundland and Labrador in its portfolio, including claims in the Strange Lake Complex (where Quest Rare Minerals has a Joint Venture with Search); and at the Red Wine Complex (where Great Western Minerals Group has a Joint Venture with Search).

All material information on the Company may be found on its website at [searchminerals.ca](http://searchminerals.ca) and on SEDAR at [sedar.com](http://sedar.com).

*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 of the adequacy or accuracy of this release.*

**For further information, please contact:**

James (Jim) Clucas  
Interim President & Chief Executive Officer

T: 604-998-3432; M: 604-608-5717  
E: [info@searchminerals.ca](mailto:info@searchminerals.ca)

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This news release contains forward-looking statements that are not historical facts. Forward-looking statements involve risks, uncertainties and other factors that could cause actual results, performance, prospects, and opportunities to differ materially from those expressed or implied by such forward-looking statements. Factors that could cause actual results to differ materially from these forward-looking statements include those risks set out in Search's public documents filed on SEDAR at [www.sedar.com](http://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.

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