

Search Minerals Providing 80 Tonnes of Bulk Sample Material for Magnetic Pilot Plant Testing

written by Igor Makarov | September 29, 2021

September 29, 2021 ([Source](#)) – Search Minerals Inc. (TSXV: SMY | OTCQB: SHCMF) (“Search” or the “Company”) is pleased to announce that approximately 80 tonnes of bulk sample material is being prepared at our facilities in St. Lewis, NL to be delivered to our testing partner SGS Canada (Lakefield), ON. The bulk sample from our Critical Rare Earth Element District in SE Labrador will consist of 40 tonnes each from our Deep Fox resource and from our Foxtrot resource. The bulk sample will be used to scale up our successful bench scale results using Low Intensity Magnetic Separation (“LIMS”) along with Wet High Intensity Magnetic Separation process (“WHIMS”) to produce a Rare Earth Element concentrate for further testing of the Direct Extraction Process. (see Search Minerals news release dated April 12, 2021).

The use of magnetic separation for rare earth ore processing is uniquely suited to our deposits in SE Labrador. The 80 tonnes bulk sample is expected to demonstrate that a continuous process involving crushing, grinding, and magnetic separation (LIMS and WHIMS) can treat large samples of mineralization from Foxtrot and Deep Fox and achieve the potential recoveries and quality of concentrates suggested by the small scale testing.

The magnetic pilot plant testing is the first phase of a four phase sequentially planned program.

The four phases are outlined below with the ultimate goal of producing Neodymium metal. Search is working with our testing and government partners to finalize proposals and potential co-funding for the four-phase program.

PHASE 1 Magnetic Separation (SGS Canada)

- 80 t of Deep Fox and Foxtrot material
 - Stage 1 – the material will be crushed and ground to 270 mesh particle size;
 - Stage 2 – the material goes through Low Intensity Magnetic Separation (LIMS), which will capture the highly magnetic magnetite, to produce an enriched iron concentrate, suitable for sale;
 - Stage 3 – the remaining material will be processed through a Wet High Intensity Magnetic Separation (WHIMS), to produce an enriched REE concentrate to be further processed using our patented Direct Extraction technology (Phase 2). Approximately 21 tonnes of concentrate should be produced;
 - Stage 4 – the balance of the material will be stored for future testing for Zirconium and Hafnium recovery and waste characterization for environmental permitting.

PHASE 2 Direct Extraction

- 21 tonnes of magnetic concentrate, expected from Phase 1, will be processed through a Demonstration Plant operation to produce a concentrated mixed rare earth carbonate containing an expected 0.7 tonnes of REE's for refining and separation into individual oxides.

PHASE 3 Rare Earth Separation

- The mixed rare earth carbonate from Phase 3 will be

processed in a solvent extraction pilot plant to produce individual oxides of the magnet making elements Neodymium and Praseodymium.

PHASE 4 Rare Earth Metal Production

- A large sample of Neodymium oxide from Phase 3 will be processed to Neodymium metal of suitable quality and quantity to qualify for the production of Neodymium based magnets.

Greg Andrews, President/CEO states: “We are excited to complete our processing flowsheet from mining to magnet making metals as part of our ‘Sprint to Production’. The advantage of including the magnetic separation process is expected to be a smaller footprint for our Direct Extraction processing facility with lower capital and operating costs. The flowsheet also provides for a potential revenue stream for iron concentrate and zircon concentrate. The mining and production of a rare earth concentrate by WHIMS magnetic separation can be set up at each resource and the higher-grade concentrate transported to a centrally located Direct Extraction process plant with access to a deep water port, chemical and reagent supply, technical work force and shipping routes for finished products.”

Dr. David Dreisinger added: “Our physical separation and chemical processing will each produce a dry-stackable waste residue, which is an important design philosophy Search has maintained with the changed flowsheet. The volume of material being treated by our Direct Extraction Process will be reduced by over 70%, which will greatly reduce the size of facility, with an associated reduction in reagents and other operating costs.”

Search is following the COVID protocols which are currently in place within the Province of Newfoundland & Labrador to ensure

the safety of our employees and the communities where we work.

Qualified Persons:

Dr. David Dreisinger, Ph.D., P.Eng, is the Company's Vice President, Metallurgy, and Qualified Person (as defined by National Instrument 43-101) who has supervised the preparation of and approved the technical information reported herein. 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 Critical Rare Earths Elements (CREE), Zirconium (Zr) and Hafnium (Hf) resources within the emerging Port Hope Simpson – St. Lewis CREE District of South East Labrador. The Company controls a belt 63 km long and 2 km wide and is road accessible, on tidewater, and located within 3 local communities. Search has completed a preliminary economic assessment report for **FOXTROT**, and a resource estimate for **DEEP FOX**. Search is also working on three exploration prospects along the belt which include: **FOX MEADOW**, **SILVER FOX** and **AWESOME FOX**.

Search has continued to optimize our patented Direct Extraction Process technology with the generous support from the Department of Tourism, Culture, Industry and Innovation, Government of Newfoundland and Labrador, and from the Atlantic Canada Opportunity Agency. We have completed two pilot plant operations and produced highly purified mixed rare earth carbonate concentrate and mixed REO concentrate for separation and refining.

For further information, please contact:

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Cautionary Statement Regarding “Forward-Looking” Statements:

Except for the statements of historical fact, this news release contains “forward-looking information” within the meaning of the applicable Canadian securities legislation that is based on expectations, estimates and projections as at the date of this news release. “Forward-looking information” in this news release includes information about the Company’s proposed exploration programs described herein, and other forward-looking information. Factors that could cause actual results to differ materially from those described in such forward-looking information include, but are not limited to, the inability to obtain the necessary resources to complete the exploration programs and poor exploration results.

The forward-looking information in this news release reflects the current expectations, assumptions and/or beliefs of the Company based on information currently available to the Company. In connection with the forward-looking information contained in this news release, the Company has made assumptions about the Company’s financial condition and development plans do not change as a result of unforeseen events, and that the Company will receive all required regulatory approvals.

Although the Company believes that the assumptions inherent in the forward-looking information are reasonable, forward-looking

information is not a guarantee of future performance and accordingly undue reliance should not be put on such information due to the inherent uncertainty therein. The Company does not assume any obligation to update the forward-looking statements, or to update the reasons why actual results could differ from those reflected in the forward-looking statements, unless and until required by applicable securities laws. Additional information identifying risks and uncertainties is contained in the Company's filings with the Canadian securities regulators, which filings are available at www.sedar.com.