

# Search Minerals Announces Results of Magnetic Separation Testing to Produce Rare Earth Concentrates

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VANCOUVER, April 12, 2021 - [Search Minerals Inc.](#) (TSXV: SMY) ("Search" or the "Company"), is pleased to announce that SGS Canada Inc. ("SGS") has reported on pre-concentration of the rare earth content of DEEP FOX, FOXTROT and FOX MEADOW mineral samples using Low Intensity Magnetic Separation (LIMS) and Wet High Intensity Magnetic Separation (WHIMS). This program was initiated following the successful use of LIMS to concentrate magnetite and WHIMS to concentrate rare earth elements prior to zirconia flotation with a channel sample of SILVER FOX deposit mineralization (see Search Minerals new release January 12, 2021).

## HIGHLIGHTS - RARE EARTH CONCENTRATION

The DEEP FOX, FOXTROT and FOX MEADOW results for WHIMS concentration of REE's are shown below.

- A sample of DEEP FOX mineralization containing 1.15% TREO/Y was treated sequentially by LIMS and WHIMS. The WHIMS concentrate was enriched to 5.55% TREO/Y containing enriched levels of the key magnet making elements (Nd/Pr/Tb/Dy). The overall recovery of TREO/Y to the WHIMS Concentrate was 78.3%
- A sample of FOXTROT mineralization containing 1.13% TREO/Y enriched to 4.81% TREO/Y in the WHIMS concentrate with an overall recovery of 78.3%.
- A sample of FOX MEADOW mineralization containing 0.92% TREO/Y enriched to 3.91% TREO/Y in the WHIMS concentrate with an overall recovery of 81.8%.
- Further work at SGS Canada is planned to investigate increases in recovery and grade of the WHIMS rare earth concentrates and to demonstrate REE recovery via the Search Direct Extraction process applied to the concentrates.

|                   |          |          |          |          |        |
|-------------------|----------|----------|----------|----------|--------|
| DEEP FOX          | Nd (g/t) | Pr (g/t) | Tb (g/t) | Dy (g/t) | TREO/Y |
| Mineral Sample    | 1633     | 419      | 44       | 266      | 1.15%  |
| WHIMS Concentrate | 8061     | 2097     | 204      | 1183     | 5.55%  |
| Recovery (%)      | 80.3     | 81.0     | 73.1     | 71.7     | 78.3   |
| FOXTROT           | Nd (g/t) | Pr (g/t) | Tb (g/t) | Dy (g/t) | TREO/Y |
| Mineral Sample    | 1553     | 418      | 35       | 223      | 1.13%  |
| WHIMS Concentrate | 6760     | 1830     | 132      | 824      | 4.81%  |
| Recovery (%)      | 80.1     | 80.9     | 70.3     | 69.4     | 78.3   |
| FOX MEADOW        | Nd (g/t) | Pr (g/t) | Tb (g/t) | Dy (g/t) | TREO/Y |
| Mineral Sample    | 1480     | 381      | 33       | 184      | 0.92%  |
| WHIMS Concentrate | 6163     | 1623     | 115      | 663      | 3.91%  |
| Recovery (%)      | 82.6     | 85.9     | 65.9     | 64.6     | 81.8   |

SGS Magnetic Separation Testing was conducted on three samples of mineralization from the DEEP FOX, FOXTROT and FOX MEADOW deposits within the Port Hope Simpson Critical Materials District. The DEEP FOX and FOX MEADOW samples were channel samples from the surface exposure of the deposits and the FOXTROT sample was a blend of three large samples of over 40 tonnes of material taken in preparation for pilot plant programs.

The samples were ground to 100% passing 270 mesh particles size to liberate the rare earth minerals from the host minerals. For each deposit type, a 10 kg sample of ground material was subjected to LIMS testing.

The LIMS concentrates bear the strongly magnetic minerals in the samples including magnetite. A 200 g portion of LIMS non-magnetic material was then passed through a WHIMS at 5000, 10,000 and 15,000 Gauss field strength. Three concentrates were recovered per deposit type and these were combined and analyzed. The results are summarized in simplified tabular format below (Table 1).

The major findings are;

1. Rare earth elements were concentrated by WHIMS at ~80% overall recovery, yielding 3.91-5.5% TREO (including Y) grade. The mass of material reporting to the WHIMS concentrates ranged from 16-19% of the original material. This will dramatically reduce the material to be processed via the Direct Extraction Process.
2. LIMS concentrates containing 92-98% Fe<sub>2</sub>O<sub>3</sub> have been produced. These concentrates may be saleable as a by-product as an iron ore concentrate.
3. The WHIMS non-magnetic product contains ~83-88% of the ZrO<sub>2</sub> from the original mineral samples. This result is consistent with the Silver Fox testing reported in a News Release dated January 12, 2021. The deportment of ZrO<sub>2</sub> to the WHIMS non-magnetic product allows the further opportunity to recover zirconium and hafnium by mineral separation (eg. flotation) processes.

These results will be the basis for further process optimization and engineering trade off studies. The process optimization work will focus on obtaining increased grade of WHIMS magnetic concentrate and increasing the overall recovery. Engineering trade off studies will compare the cost of whole of ore treatment by the Direct Extraction Process versus pre-concentration by magnetic separation followed by WHIMS concentrate treatment by the Direct Extraction Process.

Greg Andrews, President/CEO states; "This test work demonstrates the potential to use LIMS and WHIMS to recover magnetite concentrate for potential sale and, most importantly, to recover a REE concentrate for processing to recover a high grade REE product for refining and separation. The treatment of a REE concentrate from any of our deposits would dramatically reduce the size of a Direct Extraction process plant for REE recovery. Similarly, the use of acids and bases and other reagents would be significantly reduced. Search Minerals has now confirmed that magnetic concentration can be applied to DEEP FOX, FORTROT AND FOX MEADOW mineralization. Search Minerals thanks ACOA and InnovateNL for their continued support received to undertake this study."

Corporate Developments:

The Company has put into effect an internal blackout on trading of the Company's shares with immediate effect. This policy covers the management and board of directors of the Company and InCoR Holdings (the Company's controlling shareholder).

Table 1. Summary of LIMS and WHIMS Testing of DEEP FOX, FOX TROT and FOX MEADOW Samples at SGS Canada

DEEP FOX

LIMS + WHIMS Combined Products

| Product        | Weight Assays, %, or g/t |      |      |      |      |        |        |        |        |        |        |        |        |        |        |       |        |       |        |
|----------------|--------------------------|------|------|------|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|--------|-------|--------|
|                | %                        | Ce % | Nd % | La % | Pr % | Sm g/t | Eu g/t | Gd g/t | Tb g/t | Dy g/t | Ho g/t | Er g/t | Tm g/t | Yb g/t | Lu g/t | Y g/t | TREO % | U g/t | Th g/t |
| WHIMS Mags     | 16.0                     | 1.73 | 0.81 | 0.74 | 0.21 | 1524   | 82.0   | 1244   | 204    | 1183   | 234    | 639    | 88.9   | 526    | 67.0   | 5499  | 5.55   | 58    | 43     |
| WHIMS Non-Mags | 77.5                     | 0.08 | 0.04 | 0.03 | 0.01 | 72     | 5.5    | 78     | 15     | 91     | 20     | 62     | 8.8    | 63     | 10.5   | 486   | 0.30   | 19.4  | 24     |
| LIMS Mags      | 6.5                      | 0.05 | 0.05 | 0.02 | 0.01 | 57     | 2.5    | 57     | 11     | 70     | 16     | 44     | 6.3    | 40     | 5.7    | 387   | 0.20   | 7.9   | 13     |
| Head (calc.)   | 100                      | 0.34 | 0.16 | 0.15 | 0.04 | 324    | 17     | 267    | 44     | 266    | 54     | 154    | 22     | 141    | 18.4   | 1297  | 1.15   | 25    | 89     |
| Product        | Weight Distribution %    |      |      |      |      |        |        |        |        |        |        |        |        |        |        |       |        |       |        |
|                | %                        | Ce % | Nd % | La % | Pr % | Sm %   | Eu %   | Gd %   | Tb %   | Dy %   | Ho %   | Er %   | Tm %   | Yb %   | Lu %   | Y %   | TREO % | U %   | Th %   |
| WHIMS Mags     | 16.0                     | 81.5 | 80.3 | 81.4 | 81.0 | 80     | 74.8   | 76     | 73     | 72     | 70     | 67     | 66.3   | 62     | 55.7   | 68.7  | 78.3   | 37    | 78     |
| WHIMS Non-Mags | 77.5                     | 17.6 | 18.9 | 17.7 | 18.0 | 18     | 24.3   | 23     | 25     | 27     | 29     | 31     | 31.8   | 36     | 42.3   | 29.4  | 20.6   | 60.7  | 20     |
| LIMS Mags      | 6.5                      | 0.9  | 0.9  | 0.9  | 0.9  | 1.1    | 0.9    | 1.4    | 1.6    | 1.7    | 1.9    | 1.9    | 1.8    | 1.8    | 2.0    | 1.9   | 1.14   | 2.0   | 1.0    |

**FOXTROT**  
**LIMS + WHIMS Combined Products**

| Product        | Weight | Assays, %, g/t |      |      |      |      |        |        |        |        |        |        |        |        |        |        |       |        |       |
|----------------|--------|----------------|------|------|------|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|--------|-------|
|                |        | %              | Ce % | Nd % | La % | Pr % | Sm g/t | Eu g/t | Gd g/t | Tb g/t | Dy g/t | Ho g/t | Er g/t | Tm g/t | Yb g/t | Lu g/t | Y g/t | TREO % | U g/t |
| WHIMS Mags     | 19.3   | 1.58           | 0.68 | 0.72 | 0.18 | 1195 | 61.6   | 900    | 132    | 824    | 157    | 449    | 59.5   | 364    | 49.9   | 4199   | 4.81  | 86     | 560   |
| WHIMS Non-Mags | 73.9   | 0.09           | 0.04 | 0.04 | 0.01 | 92   | 5.5    | 83     | 14     | 89     | 17     | 50     | 7.0    | 48     | 8.2    | 452    | 0.33  | 24.5   | 48    |
| LIMS Mags      | 6.8    | 0.05           | 0.05 | 0.02 | 0.01 | 50   | 2.5    | 55     | 10     | 67     | 14     | 41     | 5.2    | 31     | 5.1    | 345    | 0.19  | 16.7   | 24    |
| Head (calc.)   | 100    | 0.36           | 0.16 | 0.16 | 0.04 | 283  | 15     | 229    | 35     | 223    | 42     | 123    | 17     | 107    | 15.0   | 1114   | 1.13  | 36     | 145   |

| Product        | Weight | Distribution % |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |        |      |
|----------------|--------|----------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|--------|------|
|                |        | %              | Ce % | Nd % | La % | Pr % | Sm % | Eu % | Gd % | Tb % | Dy % | Ho % | Er % | Tm % | Yb % | Lu % | Y %  | TREO % | U %  |
| WHIMS Mags     | 19.3   | 81.0           | 80.1 | 80.8 | 80.9 | 76   | 73.7 | 73   | 70   | 69   | 69   | 69   | 67.6 | 65   | 60.0 | 69.4 | 78.3 | 46     | 74.4 |
| WHIMS Non-Mags | 73.9   | 18.1           | 19.0 | 18.3 | 18.2 | 22   | 25.1 | 26   | 28   | 29   | 29   | 29   | 30.3 | 33   | 37.7 | 28.5 | 20.5 | 50.5   | 24.5 |
| LIMS Mags      | 6.8    | 0.9            | 0.9  | 0.9  | 0.9  | 1.2  | 1.2  | 1.6  | 2.0  | 2.1  | 2.3  | 2.2  | 2.1  | 2.0  | 2.3  | 2.1  | 1.15 | 3.2    | 1.1  |

**FOX MEADOW**  
**LIMS + WHIMS Combined Products**

| Product        | Weight | Assays, %, g/t |      |      |      |      |        |        |        |        |        |        |        |        |        |        |       |        |       |
|----------------|--------|----------------|------|------|------|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|--------|-------|
|                |        | %              | Ce % | Nd % | La % | Pr % | Sm g/t | Eu g/t | Gd g/t | Tb g/t | Dy g/t | Ho g/t | Er g/t | Tm g/t | Yb g/t | Lu g/t | Y g/t | TREO % | U g/t |
| WHIMS Mags     | 18.2   | 1.34           | 0.62 | 0.53 | 0.16 | 1034 | 50.3   | 738    | 115    | 663    | 129    | 346    | 46.3   | 281    | 38.7   | 2633   | 3.91  | 48     | 96    |
| WHIMS Non-Mags | 75.6   | 0.04           | 0.03 | 0.01 | 0.01 | 82   | 4.9    | 80     | 13     | 81     | 17     | 46     | 6.8    | 40     | 5.9    | 351    | 0.20  | 9.9    | 8     |
| LIMS Mags      | 6.2    | 0.04           | 0.04 | 0.02 | 0.01 | 72   | 5.5    | 78     | 14     | 81     | 15     | 40     | 5.7    | 32     | 3.4    | 321    | 0.18  | 13.8   | 6     |
| Head (calc.)   | 100    | 0.28           | 0.15 | 0.12 | 0.04 | 269  | 14     | 206    | 33     | 184    | 39     | 104    | 14     | 85     | 12.0   | 733    | 0.92  | 18     | 25    |

| Product        | Weight | Distribution % |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |        |      |
|----------------|--------|----------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|--------|------|
|                |        | %              | Ce % | Nd % | La % | Pr % | Sm % | Eu % | Gd % | Tb % | Dy % | Ho % | Er % | Tm % | Yb % | Lu % | Y %  | TREO % | U %  |
| WHIMS Mags     | 18.2   | 88.1           | 82.6 | 89.9 | 85.9 | 74   | 69.5 | 68   | 66   | 65   | 63   | 63   | 60.6 | 61   | 60.2 | 62.6 | 81.8 | 51     | 73.5 |
| WHIMS Non-Mags | 75.6   | 11.0           | 16.6 | 9.3  | 13.2 | 24   | 28.1 | 30   | 31   | 33   | 35   | 35   | 36.9 | 36   | 38.1 | 34.6 | 16.9 | 44.1   | 25.0 |
| LIMS Mags      | 6.2    | 0.9            | 0.9  | 0.8  | 0.9  | 1.7  | 2.4  | 2.3  | 2.6  | 2.7  | 2.4  | 2.4  | 2.5  | 2.3  | 1.7  | 2.7  | 1.25 | 4.8    | 1.5  |

**Qualified Person:**

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.

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