

# Rare earths developer Search Minerals on track to produce a very robust PEA

The rare earth industry has become a centerpiece of discussion, especially given the US' reliance on China to supply rare earths (and products containing rare earths) due to the ongoing US-China trade war. A poor trade war outcome could send rare earth prices skyrocketing again as they did in 2010/11 when China halted rare earth exports to Japan. In fact, prices quadrupled in 2010, then doubled again over a 4 month period in H1, 2011.

Rare earths have become essential for modern day technology

	<b>Green Energy</b> <ul style="list-style-type: none"><li>• Hybrid and Electric Vehicles</li><li>• Wind Energy</li><li>• Energy Efficient Lighting</li></ul>	<i>The Toyota Prius is estimated to contain:</i> <ul style="list-style-type: none"><li>1 kg Neodymium Metal</li><li>15 kg Lanthanum Metal</li><li>0.1 kg Dysprosium Metal</li></ul> <i>Sales exceed 1 million units per annum</i>
	<b>Military and Defense</b> <ul style="list-style-type: none"><li>• Communications</li><li>• Aeronautical engineering and Jet Engines</li><li>• Guidance, Lasers, Sonar, Optics, and Electronic Counter Measures</li></ul>	<i>Each F35 fighter aircraft requires 417 kg of REEs</i> <i>Each US nuclear submarine requires about 4,000 kg of REEs</i>
	<b>Modern Technologies</b> <ul style="list-style-type: none"><li>• Cell Phones and Digital Cameras</li><li>• LCD and Plasma Televisions</li><li>• MRI machines, X-Ray, and PET Medical imaging</li></ul>	

The US is looking to allies such as Canada and Australia for rare earths supply

U.S. President Trump and Canada Prime Minister Trudeau have discussed the need to ensure reliable supplies of rare earths and critical minerals. Trudeau told journalists: "It is in our

interests to ensure that we have reliable supplies of these important minerals for technology, and it's a conversation that our government is leading on. Canada has many of the rare earth minerals that are so necessary for modern technologies."

### **Search Minerals Inc.**

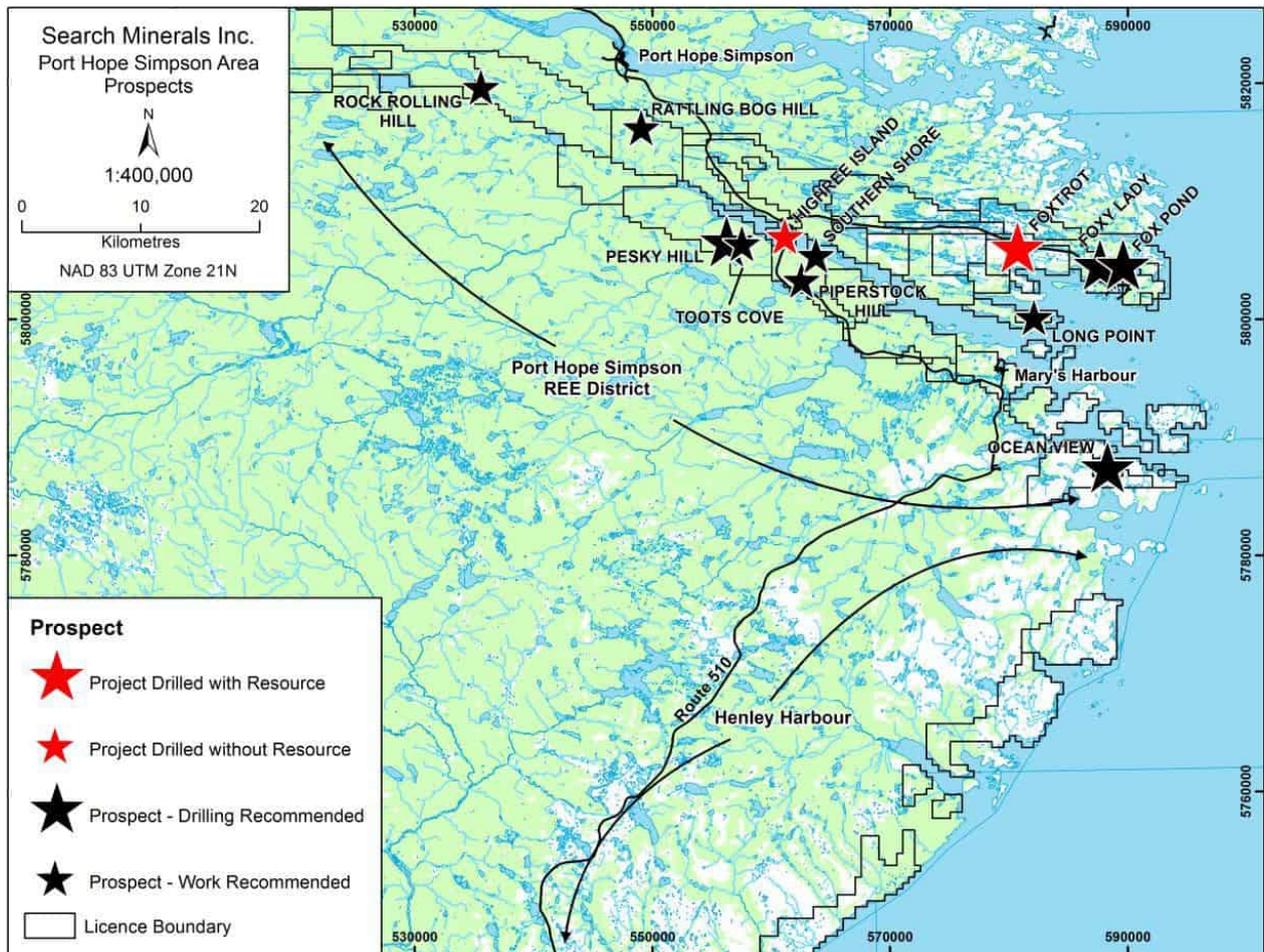
One company that may benefit is Canadian rare earths developer Search Minerals Inc. (TSXV: SMY). Search Minerals is developing critical rare earth element mineral assets in Labrador, Canada.

The Company controls properties in three distinct areas of the Labrador region; the Port Hope Simpson (PHS) Critical Rare Earth Element District in SE Labrador; the Henley Harbour Area in Southern Labrador; and the Red Wine Complex located in Central Labrador.

The Company's focus, for now, is the Foxtrot deposit in the Port Hope Simpson (PHS) district located on the south-eastern Labrador coast. The Foxtrot deposit has a total indicated resource of 7,390,200 tonnes of ore with neodymium grades of 1,485 ppm. In 2017 Search Minerals completed a \$2 million pilot plant using a breakthrough hydro-metallurgical process. The plant produced a 99% high purity mixed rare earth oxide concentrate from over three tonnes of Foxtrot material.

Other promising rare earth discoveries are at Deep Fox, Fox Meadow, and Silver Fox.

**Search Minerals projects in Labrador Canada**



## Direct Extraction Metallurgical Process

With investment from Federal and Provincial Government programs, Search has developed its breakthrough Direct Extraction Metallurgical Process. The processing of over 3.0 tonnes of material from the Foxtrot Deposit has clearly demonstrated the ability to produce a high purity mixed rare earth oxide (REO) concentrate. The pilot plant has successfully demonstrated the ability to bring uranium, thorium, zinc, and iron levels below those thresholds expected by refineries that separate mixed REO concentrates into individual rare earth elements (REEs). What is significant is the proprietary process reduces the CapEx and operational costs while offering a more environmentally conscientious solution for managing waste residue.

InvestorIntel reached out to Search Minerals for a quote on

their progress and this is what the Company had to say:

*We spent approx \$ 1,000,000 for 5000m of drilling on Deep Fox and was able to get significant resource, and the resource was only prepared to the 100m level. Every drill hole hit mineralization as Dr. Randy Miller had expected, and the key measurement we wanted to confirm was the increased width up 30m width of the resource. We drilled 3 holes at 150m and 200m levels, and the resource is still open at depth. Another 3000m and \$ 600,000 will be completed to capture more resource to the 200m level in 2020. The new Deep Fox resource providing an extended mine life, and higher grades, along with the updated optimized pilot plant information with increased recoveries, should provide a very robust PEA.*

## Search Minerals development timeline

<b>Business Strategy – Timeline to Production</b> SMY: TSX-V				
<b>Description</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>
<b>RESOURCE</b>	<ul style="list-style-type: none"> <li>✓ Resource for Deep Fox</li> <li>✓ Advance prospects in District</li> </ul>	<ul style="list-style-type: none"> <li>➢ Advance prospects in District</li> <li>➢ Deep Fox - Phase 3 drill program</li> <li>➢ Update PEA for the District</li> </ul>	<ul style="list-style-type: none"> <li>Bankable feasibility Study</li> <li>➢ Infill drilling – Foxtrot</li> <li>➢ Infill drilling – Deep Fox</li> <li>➢ Permitting</li> </ul>	<ul style="list-style-type: none"> <li>➢ Measured Resources for Foxtrot and Deep Fox</li> <li>➢ Development permits approved</li> </ul>
<b>ENVIRONMENTAL AND PERMITTING</b>	<ul style="list-style-type: none"> <li>➢ Continue baseline studies</li> </ul>	<ul style="list-style-type: none"> <li>➢ Advance Environmental Impact Statement</li> </ul>	<ul style="list-style-type: none"> <li>➢ Continued stakeholder engagement</li> <li>➢ Initiate Permitting process</li> </ul>	<ul style="list-style-type: none"> <li>➢ Continued stakeholder engagement</li> <li>➢ Permits to build</li> </ul>
<b>PROCESSING AND REFINING</b>	<ul style="list-style-type: none"> <li>✓ Complete pilot plant work with assistance of government programs</li> <li>➢ Prepare application for Demonstration plant funding</li> </ul>	<ul style="list-style-type: none"> <li>➢ Build/operate demonstration plant in St. Lewis</li> <li>➢ Evaluate / test various refining options</li> </ul>	<ul style="list-style-type: none"> <li>➢ Demonstration plant operating in St. Lewis</li> <li>➢ Engineering plans</li> <li>➢ Evaluate / test / determine refining options</li> </ul>	<ul style="list-style-type: none"> <li>➢ Engineering complete – Ready to build</li> <li>➢ Confirm refining process</li> </ul>
<b>STRATEGIC PARTNERS</b>	<ul style="list-style-type: none"> <li>➢ Secure funding for demonstration plant</li> </ul>	<ul style="list-style-type: none"> <li>➢ Secure funding for bankable feasibility studies</li> </ul>	<ul style="list-style-type: none"> <li>➢ Continued funding for bankable feasibility studies</li> </ul>	<ul style="list-style-type: none"> <li>➢ Secure funding – Decision to build</li> </ul>

For now, Search Minerals is working on their Demonstration Plant cost/funding options and pilot plant optimization. By February 2020 the Company hopes to have the assays results from the 2019 exploration work at Fox Meadow and Silver Fox.

For investors looking at the rare earths space, and wanting a company not far from the US that has some rare earths resource already, an updated PEA in 2020, and plenty of potential resource upgrades to come, then Search Minerals ticks all the boxes.