



## Geoscience BC Background

December 9<sup>th</sup>, 2022

Geoscience BC is a not-for-profit society providing public, independent and peer-reviewed research that makes valuable contributions to identifying deposits of critical minerals and metals, geological carbon capture and storage opportunities, generating cleaner energy (including geothermal, hydrogen and low carbon intensity natural gas) and monitoring and mitigating greenhouse gas emissions. Established in 2005, our research and data are public, incorporate robust engagement strategies and support supply chain security, reconciliation with Indigenous peoples, mitigating climate change, attracting investment and creating diverse job opportunities.

### Current Critical Minerals Research Examples

- Lithium: [\*NEBC Lithium - Formation Water Database\*](#): This project is assessing concentrations of lithium and other important elements in saltwater (brines) in the north eastern BC formations by taking samples from existing natural gas and oil wells. Project partners are Geoscience BC, LithiumBank and Northern Development. The Geological Survey of Canada is also providing sampling analysis support. Canadian Discovery Ltd. and Matrix Solutions Inc. are leading the research.
- Rare Earth Elements: [\*Characterization and Extraction of Rare Earth Elements from East Kootenay Coalfields – REE BC Coal Project\*](#): This project is examining how a group of important metals used in personal electronics, renewable energy generation and defense technologies, known as Rare Earth Elements (REE), could be extracted from British Columbia's coal deposits and coal tailings facilities. Results are expected in early 2023. The research is being led by Maria Holuszko at the University of British Columbia's Norman Keevil Institute of Mining Engineering.
- Copper and other minerals and metals: [\*Undercover and Deep Geology from QUEST Electromagnetic and Gravity Data\*](#). This project is using existing geophysical data to help identify new mineral exploration target areas in BC's North Central Region. Led by the University of British Columbia's Mineral Deposit Research Unit, researcher Dianne Mitchinson is using existing electromagnetic and gravity data from the 2007 Geoscience BC QUEST project to help define the nature of the bedrock and distinguish between volcanic domains while identifying intrusive bodies and structures that could potentially host mineralized zones.



### **The Future of Geoscience BC**

- Geoscience BC is building a suite of Project Concepts – ideas for new earth science research with a focus on critical minerals and metals; cleaner energy; carbon capture and storage; and monitoring and geohazards.
  - Example: [\*Critical Minerals and Metals in BC Mine Tailings and Waste Rock Facilities\*](#). Tailings and waste rock from many of British Columbia’s earlier mining operations may host economic concentrations of critical minerals and metals. This project will assess the physical, mineralogical and geochemical properties of select historic mine tailings and waste rock across the province, providing new data which can support updated interpretations of the resource and improve their environmental and social legacies.
- In January 2022, Geoscience BC launched new classes of membership and now has more than 135 members from industry, business, communities, Indigenous groups and academia – with many interested in contributing to future research. Some examples of Geoscience BC members can be seen at <https://www.geosciencebc.com/membership/>
- To learn more about Geoscience BC’s transition, visit our recent Digging Deep blog: [\*Geoscience BC’s Evolution - An Update\*](#).

### **For more information, please contact:**

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