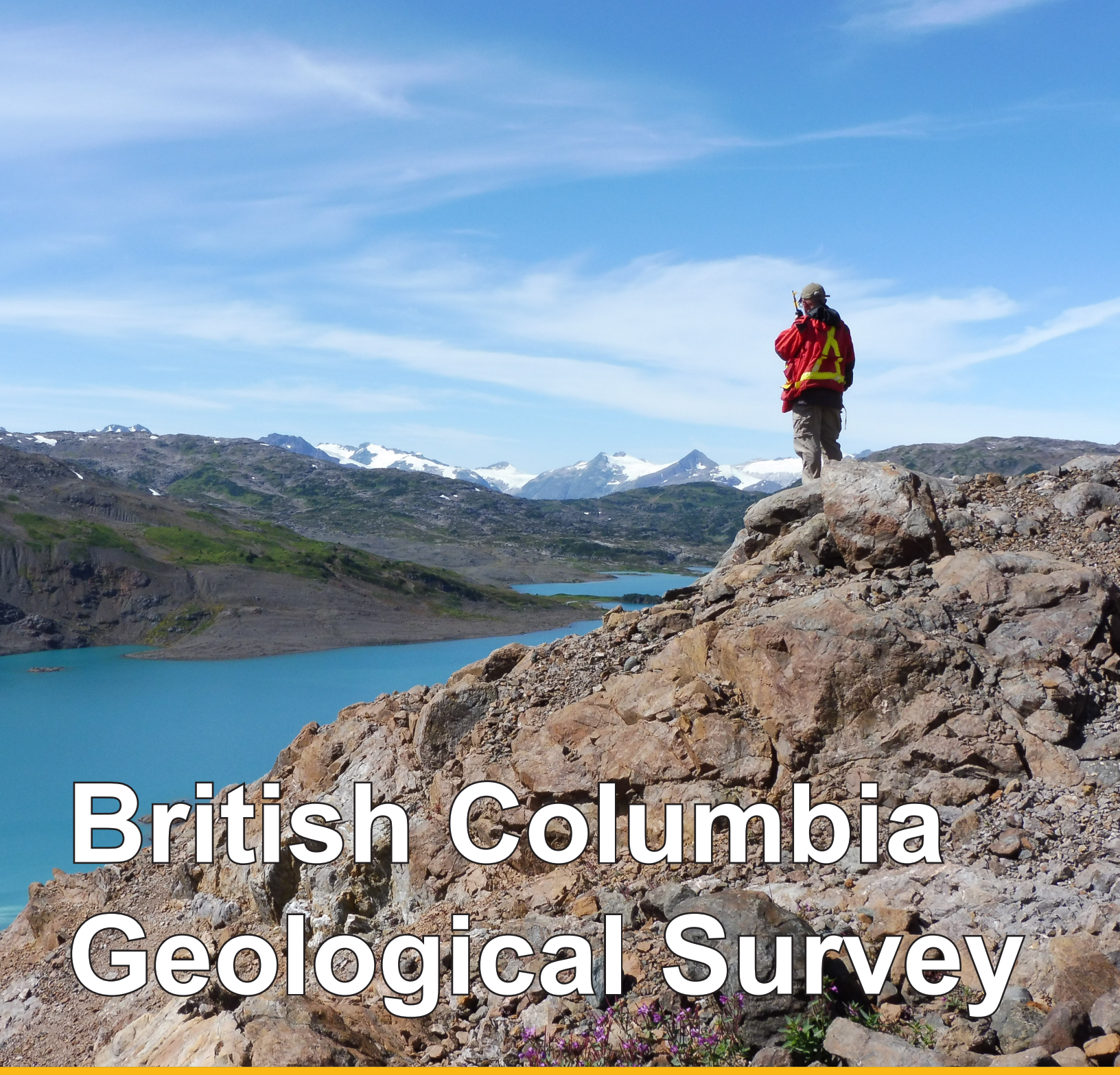


British Columbia Geological Survey

British Columbia Geological Survey
Mines and Mineral Resources Division
Ministry of Energy and Mines

www.em.gov.bc.ca/geology

The Survey

Founded in 1895, the British Columbia Geological Survey is the oldest scientific agency in the province. The Survey is responsible for assessing British Columbia's geology and related coal and mineral resources. The Survey provides pre-competitive raw data, historical information, and new concepts to guide geological, mineral resource, and environmental decisions.

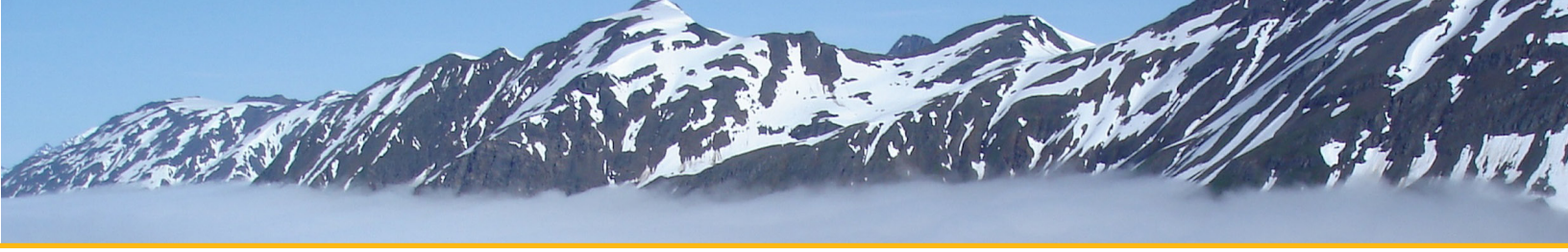
Structure of the British Columbia Geological Survey

Cordilleran Geoscience Section

Resource Information Section

Mineral Development Office

The British Columbia Geological Survey strives to be a leader in public government geoscience, providing data and knowledge to diverse stakeholders. MapPlace, the Survey's online digital delivery system, enables easy access to public geoscience data, ensuring that British Columbia remains a preferred destination for investment in mineral exploration.



Survey Activities

Generates pre-competitive geoscience data

Custodian of geoscience data for BC

Advises government

Provides confidential expertise

Monitors industry activity

Attracts global investment

BRITISH COLUMBIA GEOLOGICAL SURVEY

Role of Public Government Geoscience

Developed nations around the world have publically funded geological surveys that provide geoscience information to support responsible resource development and encourage investment, thus stimulating economic growth. Geoscience information is used by government to make informed decisions and create effective policy on resource development, land use, and environmental stewardship.

Exploration and mining are critical to the economy of British Columbia. For example, in 2015, the total value of mine production was $6.9 billion and production remains strong. Despite challenging equity markets, exploration companies continue to persevere, making significant investments that benefit the province.

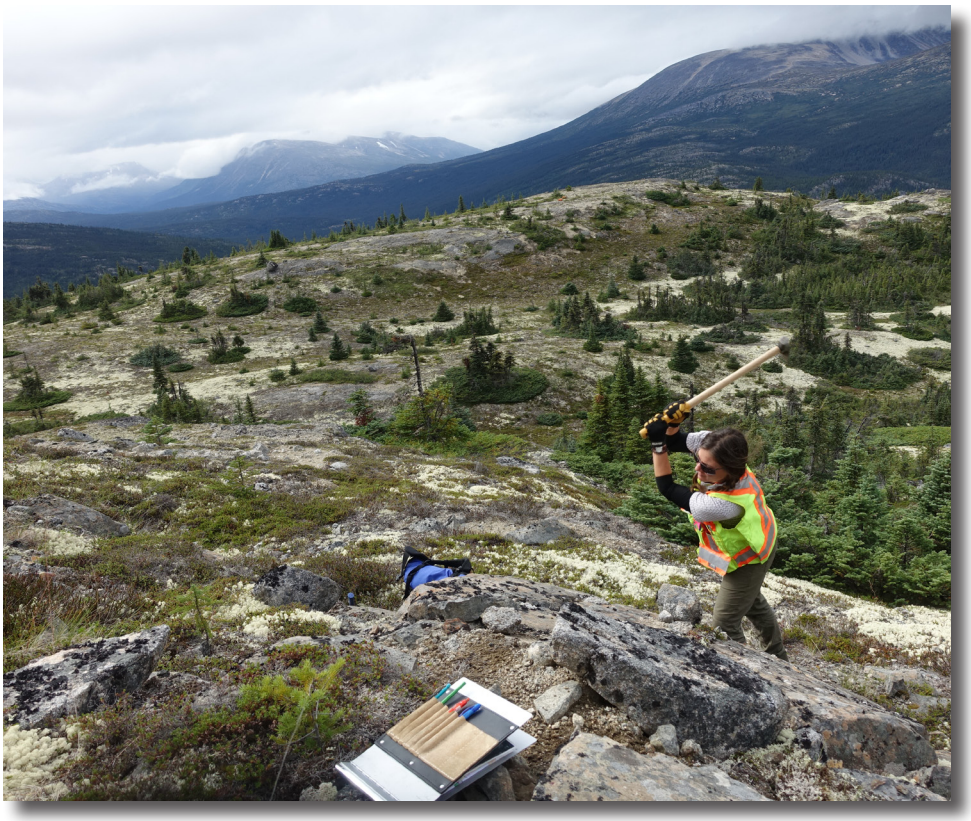
The British Columbia Geological Survey has an important role in stimulating activity, attracting investment, and providing continuous research based on a corporate memory that extends back over 100 years.

BRITISH COLUMBIA GEOLOGICAL SURVEY

Public Government Geoscience in the Exploration Industry

Public government geoscience from the British Columbia Geological Survey benefits the exploration industry by

- providing the geological framework to identify areas with high mineral potential and reduce the cost of exploring unprospective ground
- increasing exploration efficiency by gathering regional information useful for property-scale evaluation
- archiving exploration results and activities so that explorationists can advance projects without duplicating previous work

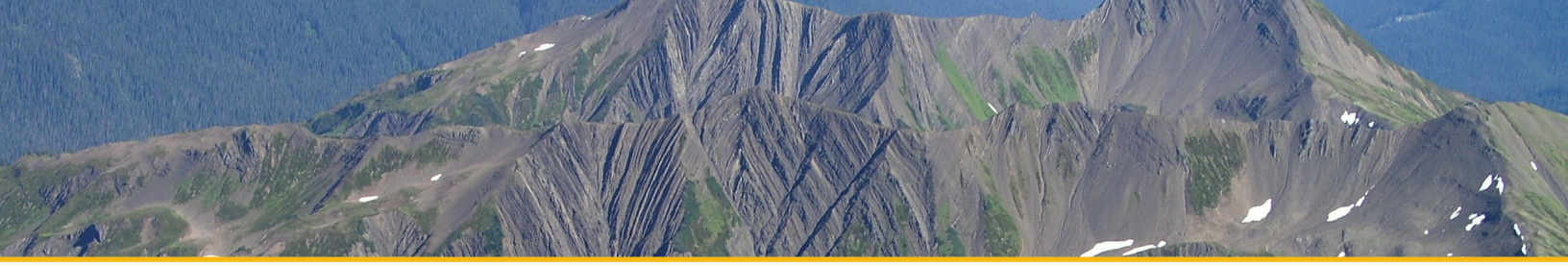


Impact of Public Government Geoscience

"On balance, the evidence indicates that the "Rule of Thumb" that $1 spent on government geoscience will stimulate $5 in private sector exploration is reasonable..."

- J.M. Duke (Prospectors and Developers Association of Canada presentation, 2010)

BRITISH COLUMBIA GEOLOGICAL SURVEY



Cordilleran Geoscience Section

The Cordilleran Geoscience Section is responsible for generating new, pre-competitive geoscience knowledge through regional, field-based geological mapping programs.

This information provides the geological framework that reduces investment risk.

BRITISH COLUMBIA GEOLOGICAL SURVEY

Cordilleran Geoscience Section geologists conduct field-based projects directed at

- regional bedrock mapping, stratigraphy, lithogeochemistry, and geochronology
- mineral deposit studies
- establishing the tectonic evolution of the Cordillera
- developing exploration methods
- Quaternary and surficial geology
- drift prospecting, till geochemistry, and indicator minerals

BRITISH COLUMBIA GEOLOGICAL SURVEY

Laboratory and Sample Archive

The British Columbia Geological Survey maintains geochemical databases containing multi-element analyses from rock, till, stream-sediment, and water surveys. Accessible to partners, these data are used to evaluate mineral deposits and to identify new exploration targets.

The geochemical and rock archive has been upgraded with a new storage library to accommodate over 600,000 geochemical samples collected by the Survey since the 1970s. The Survey also maintains a geochemical laboratory that includes sample preparation and mineral separation facilities, rock saws, a benchtop portable XRF, and a Linkam fluid inclusion stage.

BRITISH COLUMBIA GEOLOGICAL SURVEY

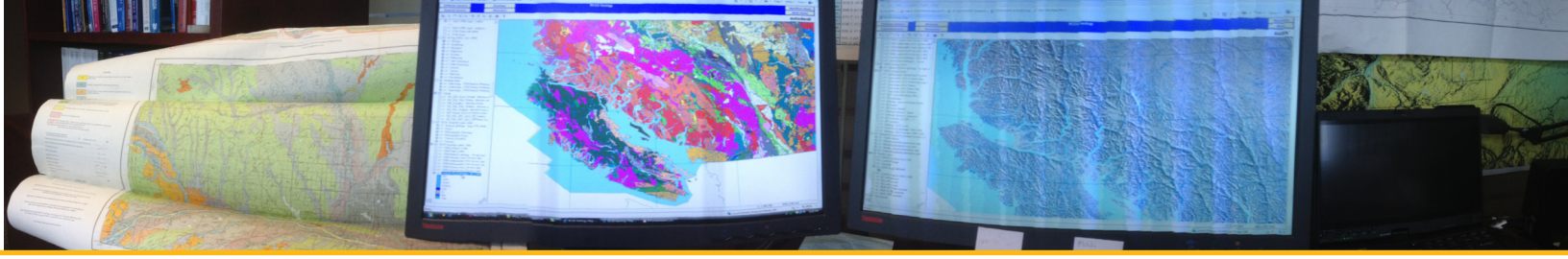
Mineral Development Office (MDO)

The Mineral Development Office (MDO) is the Vancouver base of the British Columbia Geological Survey. The MDO links the Survey with the more than 800 global exploration and mining companies headquartered in Vancouver.

The MDO distributes British Columbia Geological Survey data and provides technical information and expertise about mineral opportunities to the investment community. It also coordinates the exploration and mining reviews produced each year by the Regional Geologists.

Regional Geologists Program

Regional Geologists are based in Smithers, Prince George, Kamloops, Cranbrook, and Vancouver. They monitor exploration and mining activities, and provide expertise to prospectors and mineral exploration companies. They also work in their communities to enhance understanding of local geoscience and to foster a healthy and prosperous minerals sector.



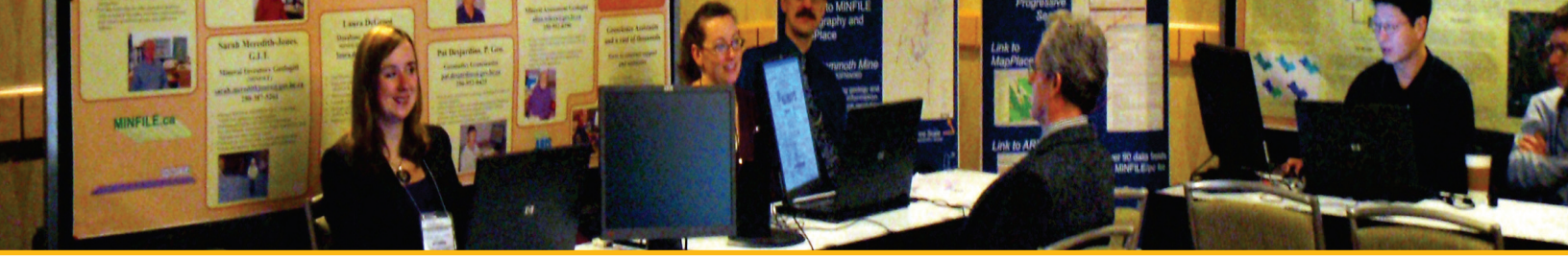
Resource Information Section

The British Columbia Geological Survey preserves, archives, and provides free web-based access to over a century's worth of geoscience information. Since 1995, MapPlace, our database-driven web service, has provided open geoscience data and custom map-making tools to aid discovering deposits and assessing mineral potential in British Columbia. Building on MapPlace, MapPlace 2 allows anyone with an Internet connection to mine multiple geoscience databases.

MapPlace is more than just a viewing platform: through MapPlace, databases talk to each other. *With a simpler interface, MapPlace 2 is easier to use, faster, handles larger datasets, and provides access to third-party base maps and imagery.*

MapPlace 2 beta is now available at www.MapPlace.ca

BRITISH COLUMBIA GEOLOGICAL SURVEY



Mineral Exploration Industry

Public, Communities, & First Nations

Government Agencies

Academia & Research

Clients

MapPlace

digital geoscience for British Columbia

Geospatial Databases

ARIS
Assessment Report Indexing System

Geoscience
publications catalogue

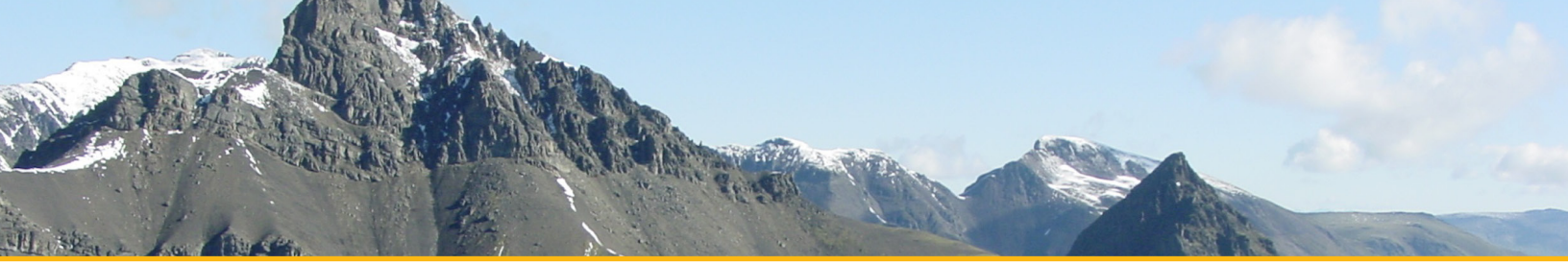
MINFILE
Mineral occurrence inventory

Geochemical
databases

COALFILE
Coal assessment reports

MTO
Mineral Titles Online

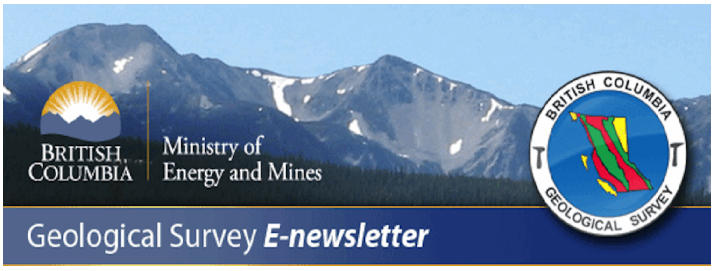
BRITISH COLUMBIA GEOLOGICAL SURVEY



Publications

The British Columbia Geological Survey publishes geological Papers, Open Files, GeoFiles, and Information Circulars that are available online free of charge. Geological Fieldwork, published annually in January, includes technical papers that highlight current Survey activities.

Other annual publications include the Provincial Overview of Exploration and Mining in British Columbia and the British Columbia Coal Industry Overview.



All our publications can be downloaded at:
www.empr.gov.bc.ca/Geology

To receive notification of our latest releases email: **Geological.Survey@gov.bc.ca**

Meetings

The British Columbia Geological Survey distributes maps and reports at regional, national, and international meetings, including our Open House held each November in Victoria.

Survey staff regularly give presentations highlighting new developments in Cordilleran geology. Look for the BCGS booth at the Kamloops Exploration Group (KEG) meeting in Kamloops, the Minerals South meeting in Nelson or Cranbrook, the Mineral Exploration Roundup in Vancouver, and the Prospectors and Developers Association of Canada (PDAC) meeting in Toronto.

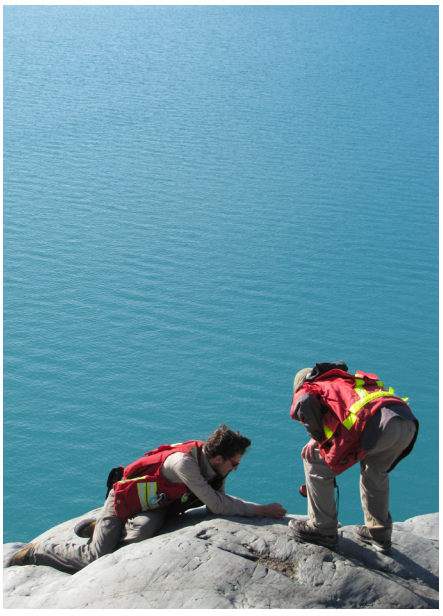
The British Columbia Geological Survey hosts the BC Pavilion on the Passport to Explore floor at Roundup 2017. The floor features the provincial, territorial, and national geological surveys, and provides rooms for delegates to discuss exploration with government geoscientists from across the country.

At the Passport to Explore and New Geoscience technical sessions, delegates have the opportunity to hear about new Cordilleran research and initiatives by government and university geoscientists.

Skills Training

The British Columbia Geological Survey invests in the next generation of exploration geologists by hiring and training student assistants, supporting graduate students, and mentoring student research.

The Survey helps exploration geoscientists, prospectors, and professionals learn new exploration skills and better understand Cordilleran Geology by providing presentations, short courses, workshops, and field trips.



BRITISH COLUMBIA GEOLOGICAL SURVEY



Partnerships

The British Columbia Geological Survey is a collaborative agency.

We partner with federal, provincial, and territorial governments, other national and international organizations, and the mineral exploration and mining industry to develop and deliver geoscience projects.

The Survey is collaborative and continues to develop partnerships with industry, academia, and other geoscience agencies. If you are interested in the British Columbia Geological Survey - Industry Partnership Program please contact:

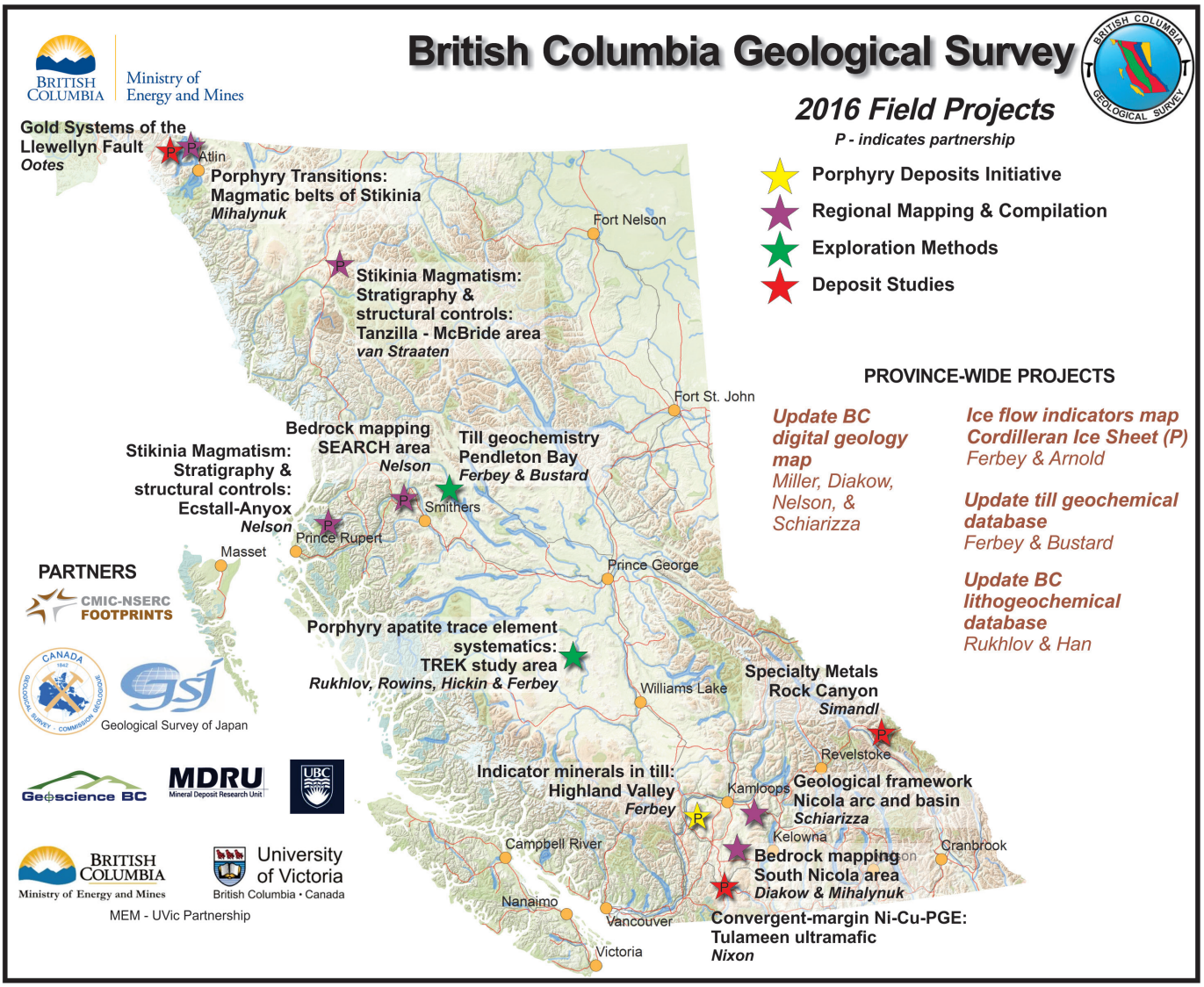
Adrian Hickin, Director, Cordilleran Geoscience
Adrian.Hickin@gov.bc.ca

2016 Partners

MEM-UVic Partnership Energy and Minerals Projects

2016 Projects

For 2016, the British Columbia Geological Survey's core program focuses on porphyry Cu-Au ± Ag-Mo deposits, which make up a significant component of the province's mineral wealth. Other important themes include: deposit studies (epithermal Au, orogenic Ni-Cu-PGE); developing exploration methods (indicator minerals, Pb isotopes); generating province-wide compilations (ice-flow indicators, digital map of BC, coal); and updating geochemical databases.



Porphyry deposits initiative

Porphyry indicator minerals in till: Highland Valley
Contact: travis.ferbey@gov.bc.ca

Regional mapping and compilation

Northwest BC
Stikinia magmatism: Stratigraphic and structural controls: Ecstall-Anyox
Contact: joanne.nelson@gov.bc.ca

Northwest BC
Stikinia magmatism: Stratigraphic and structural controls: Tanzilla-McBride
Contact: bram.vanStraaten@gov.bc.ca

Northwest BC
Bedrock mapping SEARCH area
Contact: joanne.nelson@gov.bc.ca

Northwest BC
Porphyry transitions: magmatic belts of Stikinia
Contact: mitch.mihalynuk@gov.bc.ca

South-central BC
Geological framework, Nicola arc
Contact: paul.schiarizza@gov.bc.ca

South-central BC
Bedrock mapping, south Nicola region
Contact: larry.diakow@gov.bc.ca

Exploration methods

Indicator Minerals
Porphyry apatite trace element systematics: TREK study area
Contact: alexei.rukhlov@gov.bc.ca

Till geochemistry, Pendleton Bay
Contact: travis.ferbey@gov.bc.ca

Deposit studies

Gold systems of the Llewellyn fault
Contact: luke.ootes@gov.bc.ca

Convergent margin Ni-Cu-PGE
Contact: graham.nixon@gov.bc.ca

Specialty metals, Rock Canyon Creek
Contact: george.simandl@gov.bc.ca

Province-wide projects

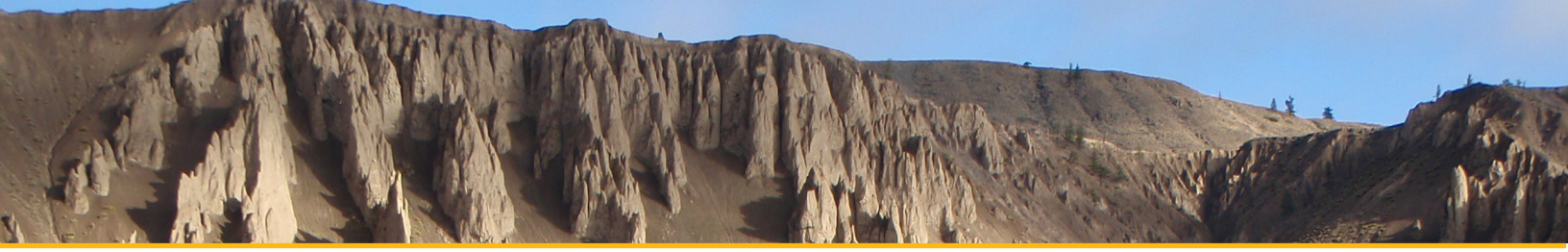
BC Digital Geology
Contact: yao.cui@gov.bc.ca

Ice-flow indicators for the Canadian Cordilleran Ice Sheet
Contact: travis.ferbey@gov.bc.ca

Lithogeochemical database updating
Contact: alexei.rukhlov@gov.bc.ca

Till geochemical database updating
Contact: travis.ferbey@gov.bc.ca

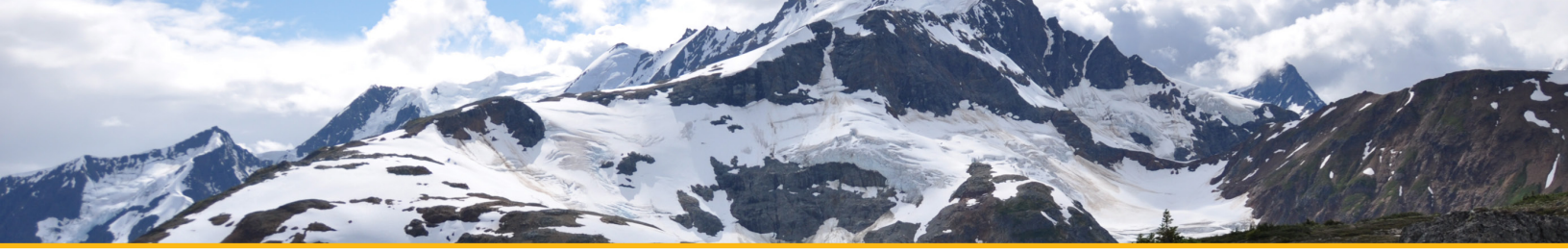
BRITISH COLUMBIA GEOLOGICAL SURVEY



British Columbia Geological Survey Open House

Each November, the British Columbia Geological Survey holds an Open House in Victoria. Co-sponsored with the Pacific Section of the Geological Association of Canada, the Open House features talks, posters, and fieldtrips devoted to Cordilleran geoscience.

BRITISH COLUMBIA GEOLOGICAL SURVEY



British Columbia Geological Survey

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Director, Mineral Development Office
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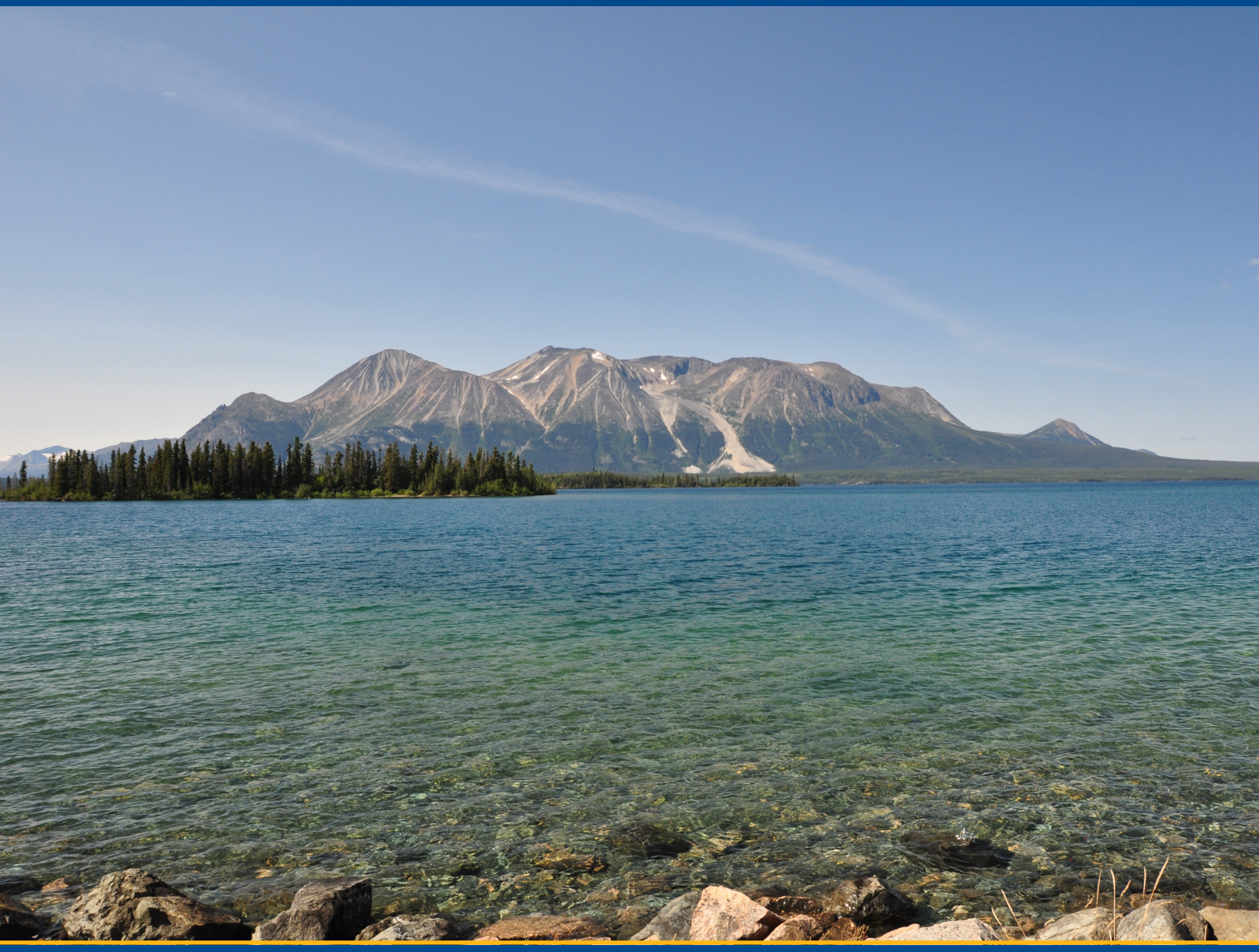
Mineral Development Office
300-865 Hornby Street
Vancouver, BC
Canada V6Z 2G3

British Columbia Geological Survey
Ministry of Energy and Mines
www.em.gov.bc.ca/geology



British Columbia Geological Survey Information Circular 2016-6