



British Columbia Geological Survey

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





The Survey

Founded in 1895, the British Columbia Geological Survey is the oldest scientific agency in the province. The Survey conducts research to establish the geological evolution and mineral resources of the province. Drawing on continuously advancing concepts and technologies, the Survey creates knowledge to guide societal decisions centred on the Earth sciences.



Structure of the British Columbia Geological Survey

*Cordilleran
Geoscience
Section*

*Resource
Information
Section*

*Mineral
Development
Office*



The information provided by the Survey is used for sound land use management, effective mineral exploration, and responsible governance. This information benefits decisions that balance the economy, the environment, and community interests.

Survey activities serve government, the general public, First Nations, local communities, the minerals industry, public safety agencies, environmental scientists, and other research organizations.

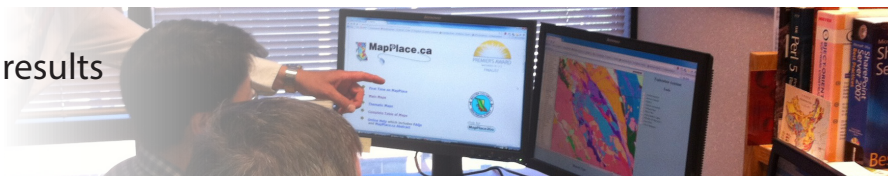


Survey activities

conducts research



delivers results
online



provides expertise



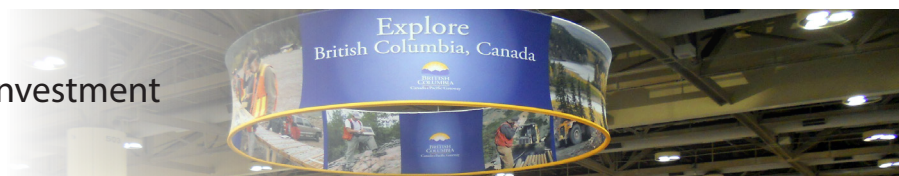
curates historical data



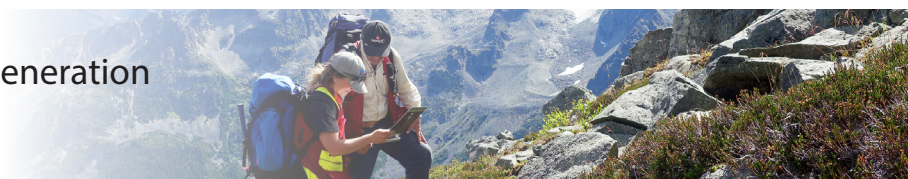
promotes mineral
exploration, monitors
industry activity



attracts global investment



trains the next generation
of geoscientists





Role of the Survey

Many societal issues centre on the Earth sciences

Similar to publically funded geological surveys worldwide, the British Columbia Geological Survey is an information organization. This information drives evidence-based policies on resource development, land use management, environmental stewardship, and public safety.



Survey maps, databases, and publications are freely available online, connecting the public, First Nations, local communities, industry, and government to geoscience information.



Cordilleran Geoscience Section

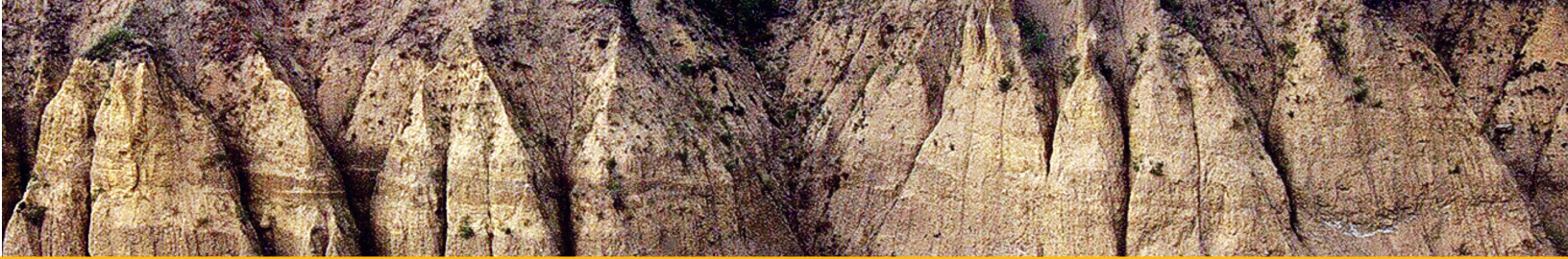
The Cordilleran Geoscience Section is responsible for generating new geoscience knowledge through field-based bedrock and surficial geology mapping programs, regional geochemical surveys, and targeted mineral deposit studies.



Data are captured digitally in the field. This enables rapid map production, efficient integration of previous maps, and prompt web delivery.

MapPlace 2, the Survey's online geospatial platform, provides easy access to these data and the tools to use them.

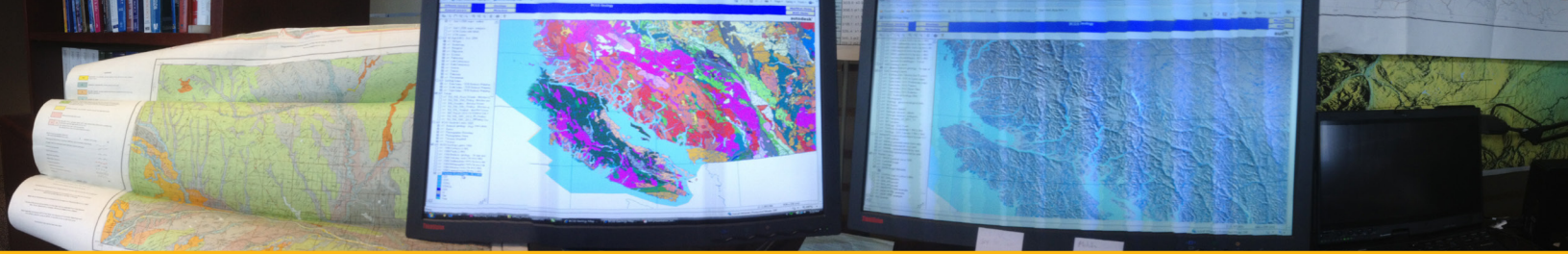




Cordilleran Geoscience Section geologists conduct field-based projects

- regional bedrock mapping
- stratigraphy
- Quaternary and surficial geology
- geochronology
- geochemistry and isotopic studies
- tectonic evolution
- mineral deposits and mineral potential
- drift prospecting, till geochemistry, and indicator minerals
- exploration methods, models, and predictive tools





Resource Information Section

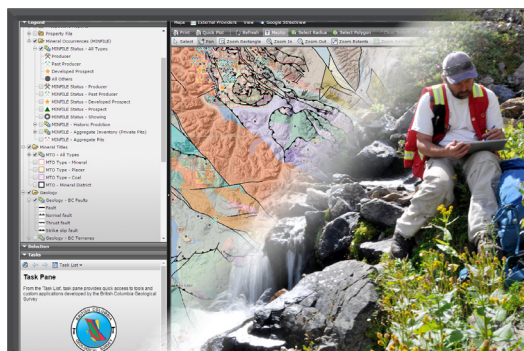
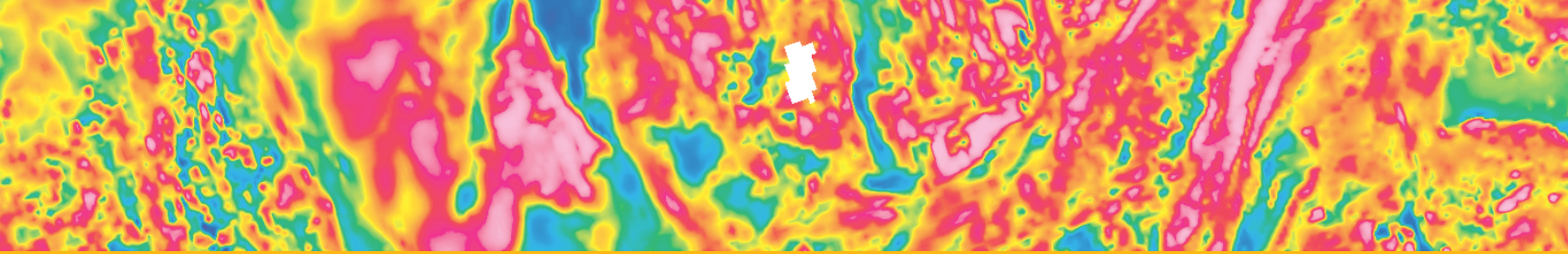
The British Columbia Geological Survey is the custodian of all provincial public geoscience data. It preserves, archives, and provides free web-based access to more than a century's worth of information. Since 1995, MapPlace, our database-driven geospatial web service, has provided open geoscience data and custom map-making tools to help decision makers from diverse disciplines reduce the costs of accessing and analyzing information.

Our new version, MapPlace 2, allows anyone with an Internet connection to mine multiple, regularly updated, provincial geoscience databases.




MapPlace 2 is more than just a viewing platform: through MapPlace 2, databases talk to each other. With a simple interface, MapPlace 2 is easy to use.






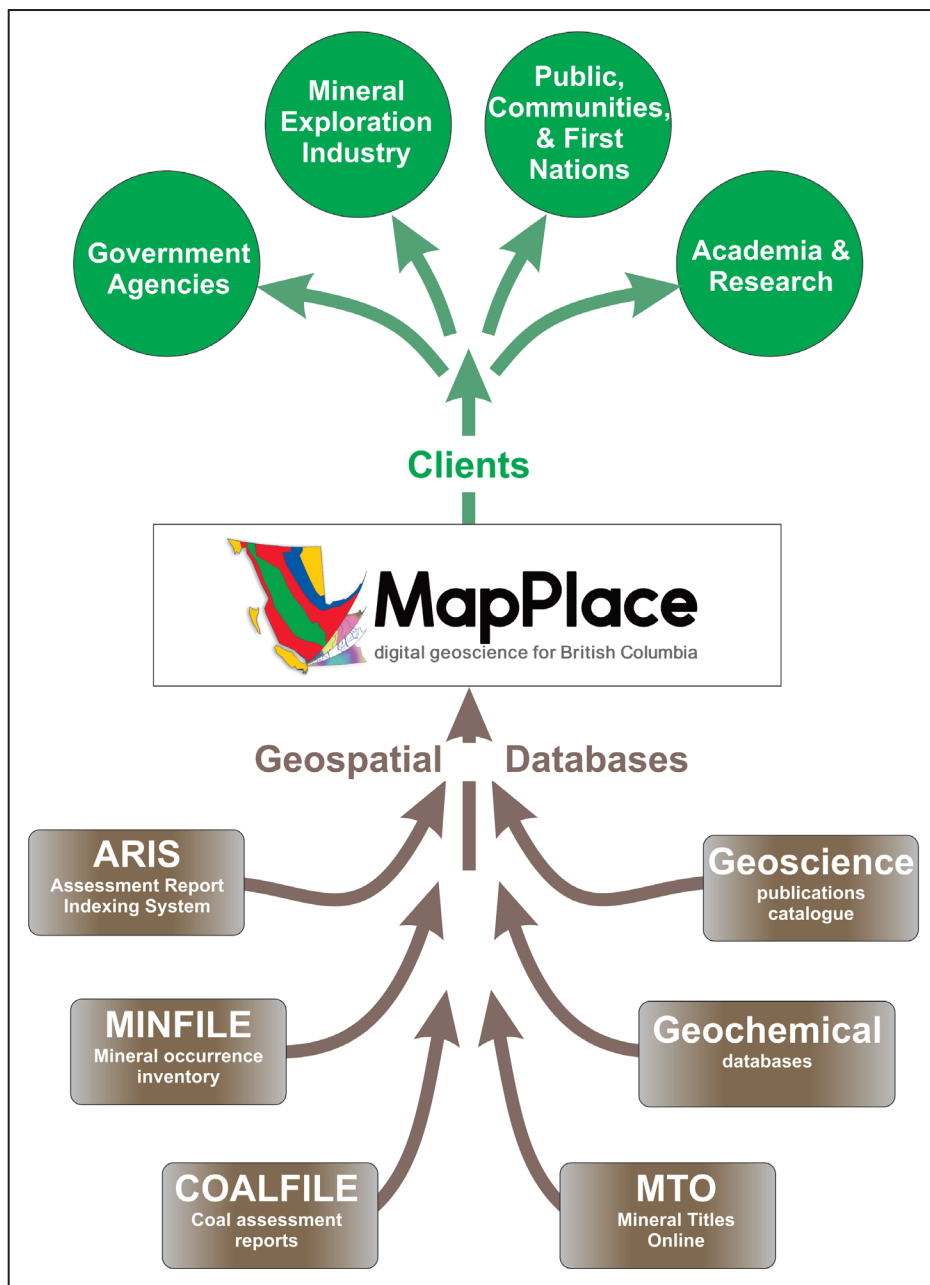
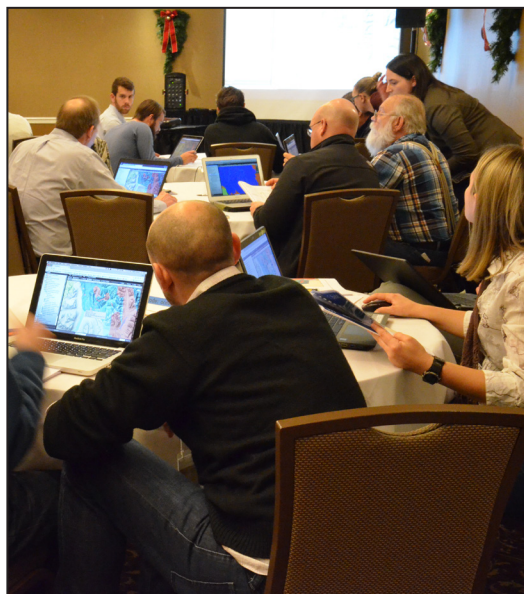
MapPlace 2 (beta) Workshop

Yao Cui, Gabe Fortin, Sarah Meredith-Jones, Steven Zhao, and Larry Jones

 **Ministry of Energy, Mines and Petroleum Resources**



British Columbia Geological Survey Information Circular 2017-3



The British Columbia Geological Survey offers workshops that use scenario-based exercises to help users get the most out of MapPlace 2.





Laboratory, sample archive, geochemical databases

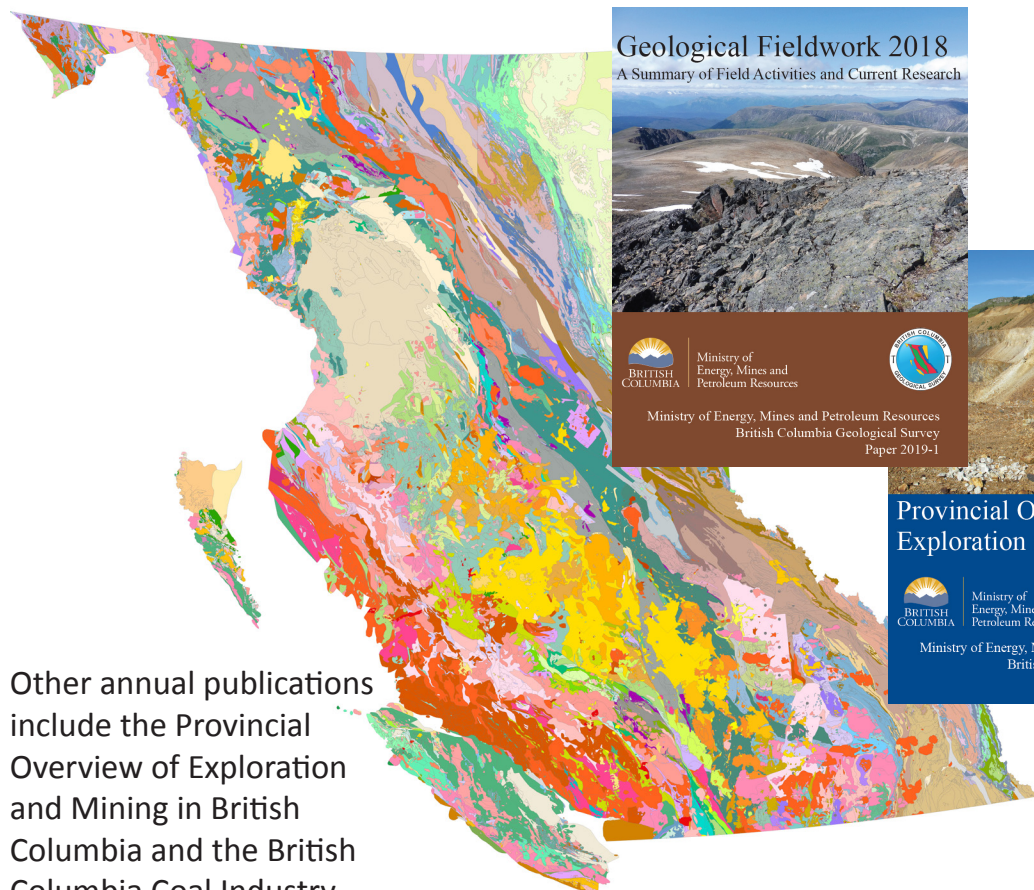
Survey staff work with field samples at our in-house laboratory, and our upgraded storage library contains more than 600,000 samples collected since the 1970s. The Survey maintains geochemical databases that include about 5 million determinations from more than 85,000 samples.



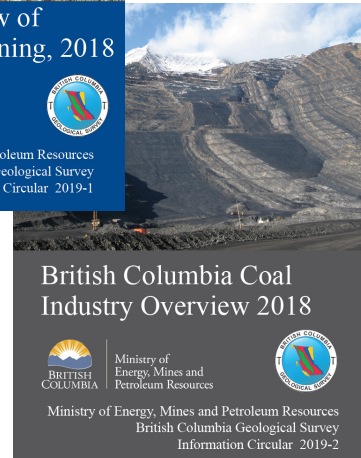
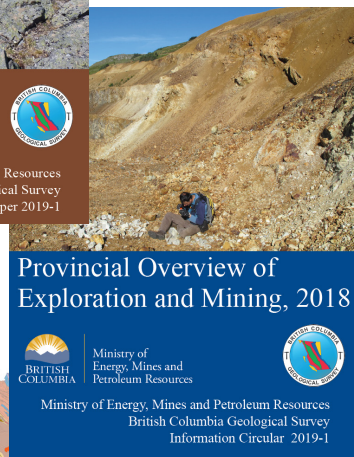
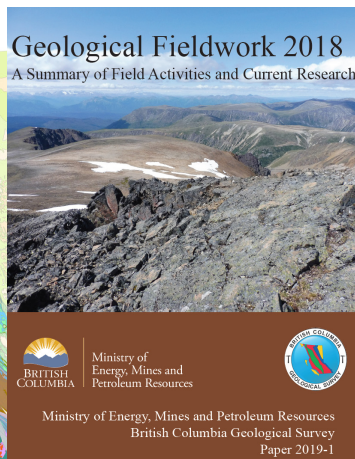


Publications

The British Columbia Geological Survey publishes Papers, Geoscience Maps, Information Circulars, Open Files, and GeoFiles. All publications are available online, free of charge. Geological Fieldwork, published each January, includes papers highlighting current activities.



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



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





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 the understanding of local geoscience and to foster a healthy and prosperous minerals sector.





Exploration and mining

Exploration and mining are important to the provincial economy. In 2017 total exploration expenditures were \$250 million and the total value of mine production was \$9.82 billion.

The Survey is responsible for assessing British Columbia's geology and related coal and mineral resources. We help reduce the cost of exploration by

- providing the geological framework to identify areas with high mineral potential
- 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

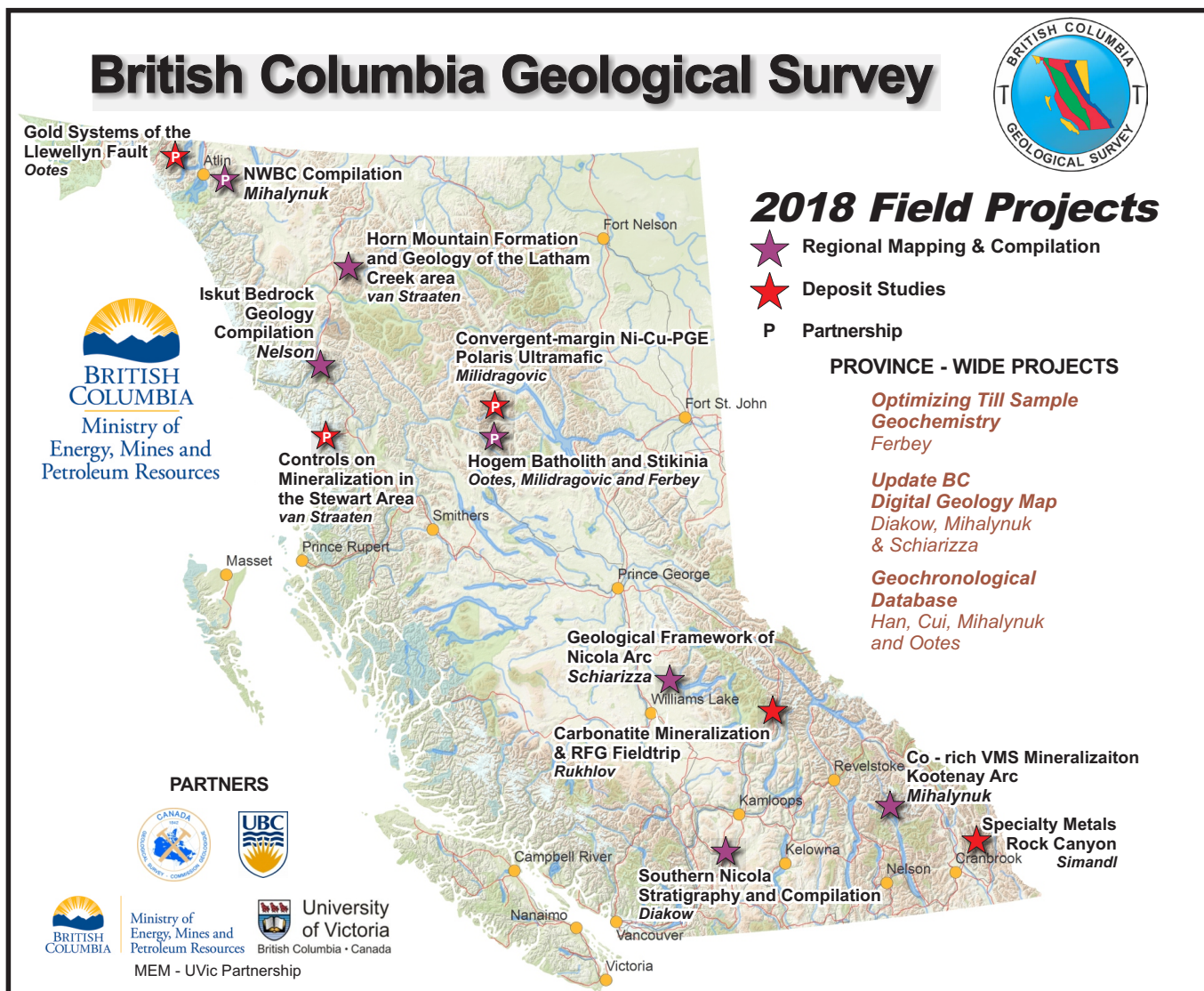


As the steward of mineral and coal resources in the province, the Survey has an important role in stimulating activity, attracting investment, and providing continuous research based on a corporate memory that extends back more than 125 years.



2018 Projects

For 2018, the Survey's core program included geological mapping and mineral deposit studies (porphyry Cu-Au-Mo, epithermal and orogenic Au, orogenic Ni-Cu-PGE, carbonatite mineralization, specialty metals); updating province-wide compilations and BC digital geology; updating province-wide geochemical databases; and creating a new geochronologic database.





Regional mapping and compilation

Northwest BC

Iskut bedrock geology compilation

Contact: joanne.nelson@gov.bc.ca

Northwest BC

*Stikinia magmatism: Horn Mountain Formation;
Latham Creek*

Contact: bram.vanStraaten@gov.bc.ca

Northwest BC

Porphyry transitions: magmatic belts of Stikinia

Contact: mitch.mihalynuk@gov.bc.ca

Central BC

Hogem batholith and Stikinia

Contact: luke.ootes@gov.bc.ca

South-central BC

Geological framework, Nicola arc and basin

Contact: paul.schiarizza@gov.bc.ca

South-central BC

Southern Nicola arc region

Contact: larry.diakow@gov.bc.ca

Southeastern BC

Co-rich VMS mineralization, Kootenay arc

Contact: mitch.mihalynuk@gov.bc.ca

Deposit studies

Gold systems of the Llewellyn fault

Contact: luke.ootes@gov.bc.ca

Convergent margin Ni-Cu-PGE; Polaris ultramafic

Contact: dejan.milidragovic@gov.bc.ca

Carbonatites, Blue River

Contact: alexei.rukhlov@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

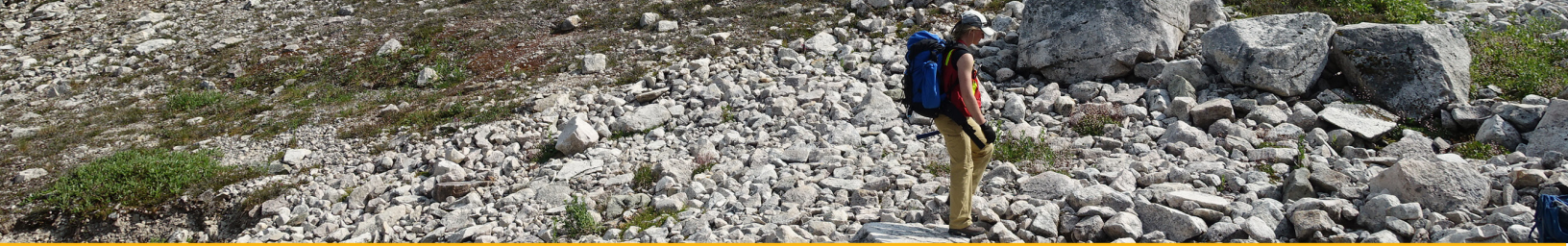
Optimizing till sample geochemistry

Contact: travis.ferbey@gov.bc.ca

Geochronologic database

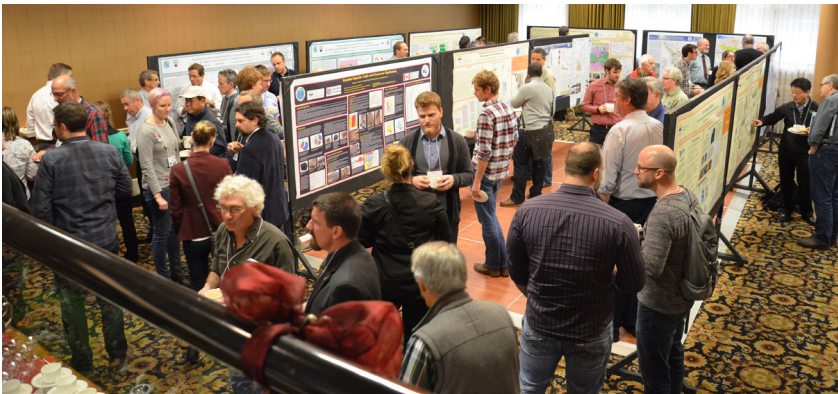
Contact: tian.han@gov.bc.ca





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.





Other meetings

The British Columbia Geological Survey distributes maps and reports at regional, national, and international meetings. Survey staff regularly give presentations highlighting new developments in Cordilleran geology.



Look for the Survey booth at the Kamloops Exploration Group (KEG) meeting in Kamloops, the Minerals South meeting in Nelson, Cranbrook, or Trail, the Mineral Exploration Roundup in Vancouver, and the Prospectors and Developers Association of Canada (PDAC) meeting in Toronto.





Partnerships

The British Columbia Geological Survey is a collaborative agency.

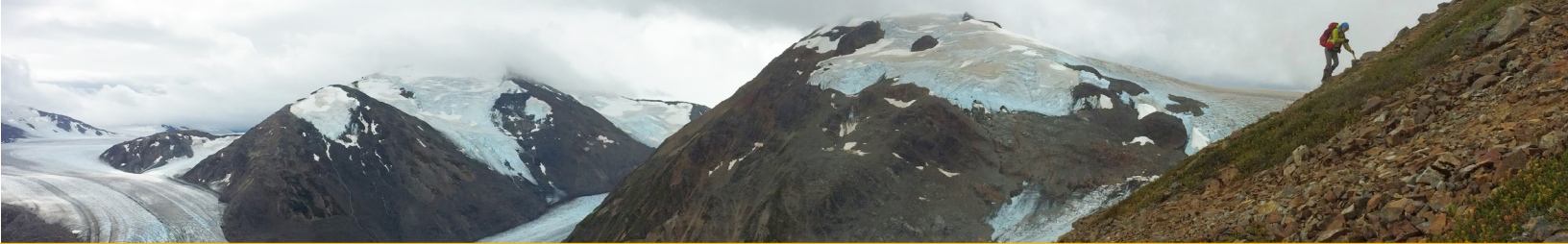
We partner with federal, provincial, and territorial governments, universities, other national and international geoscience organizations, and the mineral exploration and mining industry.



Skills training

The Survey invests in the next generation of geoscientists by hiring and training student assistants, supporting graduate students, and mentoring student research. It helps geoscientists learn new skills and better understand Cordilleran geology by providing presentations, short courses, workshops, and field trips.





British Columbia Geological Survey

Mailing Address

British Columbia Geological Survey
PO Box 9333 Stn Prov Gov't
Victoria, BC V8W 9N3

Chief Geologist and Executive Director

Adrian Hickin
(250) 953-3801; Adrian.Hickin@gov.bc.ca

Director, Cordilleran Geoscience Section

Fil Ferri
(778) 698-3692; Fil.Ferri@gov.bc.ca

Director, Resource Information Section

Larry Jones
(778) 698-7215; Larry.Jones@gov.bc.ca

Director, Mineral Development Office

Gordon Clarke
(604) 660-2094; Gordon.Clarke@gov.bc.ca

Main Office

5th floor, 1810 Blanshard Street
Victoria, BC
Canada V8T 4J1

Mineral Development Office

300-865 Hornby Street
Vancouver, BC
Canada V6Z 2G3



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