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
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.

“Our investment in resource exploration will continue to unlock the full economic, mineral and energy potential of the region, while generating new government revenues, private sector investment and jobs.”

- Prime Minister of Canada, August 2013

Exploration and mining is critical to British Columbia’s economy. In 2013, the total value of mine production in the province was nearly $8 billion, and the total expenditure for evaluation and advanced-stage metal and coal projects was $476 million.

Global equity markets have become depressed recently, and exploration companies are challenged to raise capital. The role of the British Columbia Geological Survey is becoming more important than ever in stimulating activity, attracting investment, and providing continuous research based on a corporate memory that extends back over 100 years.
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)
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.
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
The British Columbia Geological Survey maintains geochemical databases containing multi-element analyses from rock, till, stream sediment, and water surveys. Accessible to the public, these data are used to evaluate mineral deposits and to identify new exploration targets.

In 2012, the geochemical and rock archive was upgraded with a new storage library to accommodate over 600,000 geochemical samples collected by the Survey since the 1970s.

The Survey recently refurbished and modernized its geochemical laboratory. New equipment includes rock saws, disc pulverisor, fluid inclusion stage, bench top XRF, Wilfley mineral separation table, ultra pure water system, and mineral separation fume hood.

In 2012, the Province recognized Emeritus Scientist Dr. Ray Lett as a Premier’s Award Finalist in the Legacy category for his contribution in developing British Columbia’s geochemical database.
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.

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 Mineral Development Office 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
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 in the discovery of deposits and the assessment of mineral potential in British Columbia.

In 2012, thirteen Survey staff who contributed to MapPlace were selected as finalists for a Premiers Award in the Innovation category.

In 2013-2014, the Fraser Institute’s Global Ranking of Geological Databases ranked British Columbia third. Since 2005, the province has consistently been ranked in the top ten, including two number one placements.

MapPlace allows users to generate custom maps online by querying

- our mineral occurrence inventory (MINFILE)
- our mineral assessment report database (ARIS)
- our coal assessment report database (COALFILE)
- our archive of donated industry, personal, government, and university documents (Property File)
- our geochemical databases
- the Mineral Titles Online (MTO) database
- all Survey publications
- our extensive collection of bedrock and surficial geology maps
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.

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. 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 invites 2015 Mineral Exploration Roundup delegates to visit our new home in the BC Pavilion at Canada Place in the Vancouver Convention Centre.
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.
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

2014 Partners
2014 Projects

For 2014, 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: orogenic Ni-Cu-PGE deposits; specialty metals; developing new geochemical and isotopic tools for exploration; Quaternary geology studies; and province-wide coal field compilation mapping.
Porphyry Deposits in BC

Nicola Arc - North
Is the Gibralter Cu-Mo mine a Late Triassic porphyry deposit in Cache Creek terrane or a younger shear zone deposit in Quesnel terrane?
Contact: paul.schiarizza@gov.bc.ca

Nicola Arc - North
Porphyry indicator minerals in till, central British Columbia (TGI-4)
Contact: travis.ferbey@gov.bc.ca

Nicola Arc - South
Reginal Mapping and porphyry Cu-Au between Princeton and Merritt
Contact: mitch.mihalynuk@gov.bc.ca

Northwest BC
Structural and stratigraphic controls on porphyry and porphyry-related mineralization, Iskut region
Contact: joanne.nelson@gov.bc.ca

Northwest BC
Porphyry transitions and Triassic-Jurassic magmatic arc axes in Stikine terrane (GEM-2)
Contact: mitch.mihalynuk@gov.bc.ca

Mineral deposit studies

Orogenic Ni-Cu-PGE at Giant Mascot and Turnagain deposits, British Columbia (TGI-4)
Contact: graham.nixon@gov.bc.ca

Specialty metals (TGI-4)
Contact: george.simandl@gov.bc.ca

Quaternary Geology

Ice-flow indicators for the Canadian Cordilleran Ice Sheet (GEM-2)
Contact: travis.ferbey@gov.bc.ca

Methods

Trace element systematics in apatite and other resistate minerals (MEM-UVic Partnership)
Contact: alexei.rukhlov@gov.bc.ca

Lead isotopes and trace element geochemistry of till near volcanogenic massive sulphides, Chehlis River
Contact: alexei.rukhlov@gov.bc.ca

Coal Geology

British Columbia coalfield map compilation
Contact: janet.riddell@gov.bc.ca

Regional Syntheses and Map Compilation

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

Northern Vancouver Island digital geology update
Contact: graham.nixon@gov.bc.ca

Carlin-type Au in north-central British Columbia?
Contact: alexei.rukhlov@gov.bc.ca

Sylvester allochthon ophiolites of the Slide Mountain terrane (GEM-2)
Contact: joanne.nelson@gov.bc.ca
Each year in Victoria, the British Columbia Geological Survey holds an Open House. 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

Contacts:

Mailing Address:

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

Chief Geologist and Executive Director
Steve Rowins
(250) 952-0454; Stephen.Rowins@gov.bc.ca

Director, Cordilleran Geoscience Section
Adrian Hickin
(250) 953-3801; Adrian.Hickin@gov.bc.ca

Director, Resource Information Section
Larry Jones
(250) 952-0386; Larry.Jones@gov.bc.ca

Director, Mineral Development Office
Gordon Clarke
(604) 660-3332; 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