



British Columbia Coal Industry Overview 2020



Ministry of
Energy, Mines and
Low Carbon Innovation

Information Circular 2021-02

**Ministry of Energy, Mines and Low Carbon Innovation
Mines, Competitiveness, and Authorizations Division
British Columbia Geological Survey**

Front Cover:

PCI coal (pulverized coal injection) being mined at Brule mine, Peace River coalfield, northeastern British Columbia.

Photo by Dave Thompson used with permission of Conuma Coal Resources Limited.

Back Cover:

Remnant of 'upper seam', South pit, Brule mine, Peace River coalfield, northeastern British Columbia.

Photo by Paul Jago.

This publication is available, free of charge, from the British Columbia Geological Survey website:

<https://www2.gov.bc.ca/gov/content/industry/mineral-exploration-mining/british-columbia-geological-survey/publications>

Victoria
British Columbia
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British Columbia coal industry overview 2020

British Columbia Geological Survey
Ministry of Energy, Mines and Low Carbon Innovation



Introduction

Metallurgical coal prices fluctuated markedly in 2020. Coking coal prices dropped to less than \$100/tonne US per tonne because of disruptions caused by the Covid-19 pandemic and global trade tensions (Fig. 1). Coal production volumes for British Columbia are forecast to total 25.1 million tonnes, down from 30.0 million tonnes in 2019. Coal remains British Columbia's most valuable mined commodity with sales forecast at \$3.97 billion for 2020 (Fig. 2), 42.7% of the mining revenue for the province. Coking coal and PCI (pulverized coal injection) products are currently produced from four mines in the Kootenay Mountains in the southeastern part of the province and from three mines in the Peace coalfields in the northeastern part (Fig. 3). Major markets for British Columbia coal include Asian countries, especially Japan, China, and South Korea, and India. Products are also sold to steel mills in eastern Canada, and to South America and Europe.

This pamphlet provides an annual summary of the provincial coal industry. It describes the geology of British Columbia's coal regions, industry trends, coal transportation infrastructure, and mining and exploration activities. It also describes the tenure system, and lists sources of information and contacts.

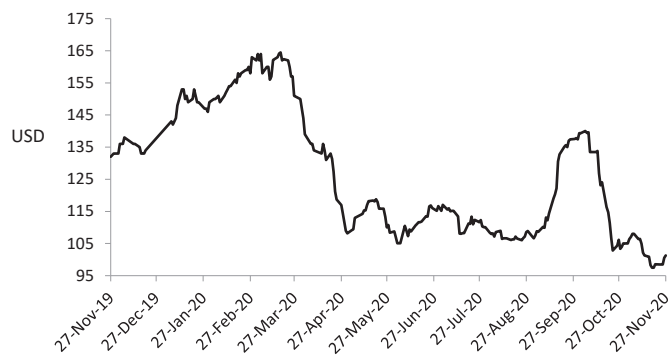


Fig. 1. Coking coal price per tonne in US dollars, November 2019 to November 2020.

British Columbia coal industry trends and news in 2020

Metallurgical coal prices fluctuated through 2020 mainly due to market disruptions caused by the Covid-19 pandemic (all prices are per tonne, \$US, West Coast port price). Prices for British Columbia hard coking coal (Fig. 1) averaged \$127/tonne for the year. At the start of 2020, the price was about \$142; as Covid-19 forced mines to close in China temporarily disrupting supply, the price rose steadily to as high as \$164 in mid-March. Prices began to decline toward the end of March

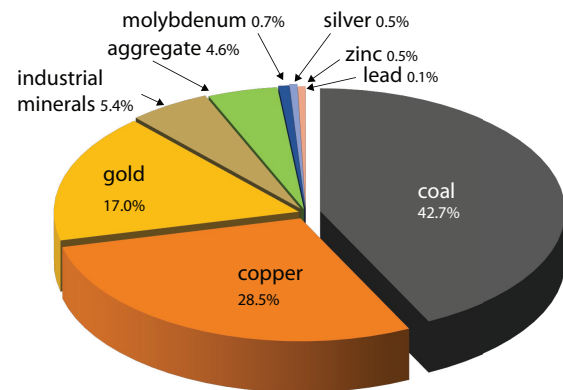


Fig. 2. Forecast production value by mined commodity for British Columbia in 2020. The value of coal production is forecast to be \$3.97 billion, representing about 42.7% of all mineral revenue in the province.

as steel production and infrastructure work were disrupted. A dispute between Australia and China affected prices through the fall, and coking coal prices fell below \$100/tonne in mid-November. PCI prices averaged between \$75 and \$80 for the year.

Production continued at four open-pit mines operated by Teck Coal Limited in the Elk Valley (Fording River, Greenhills, Line Creek, and Elkview). Combined coal production for the year from the Southeast Region is forecast to be 20.9 million tonnes. Conuma Coal Resources Limited continued production at the Brule and Wolverine (Perry Creek) mines in the Peace River coalfield in the Northeast Region; production was suspended at the Willow Creek mine in the first half of the year due to low prices. The company forecasts its 2020 total production to reach about 4.2 million tonnes. The value of coal production for the province is forecast to total \$3.97 billion for 2020, down sharply from \$4.42 billion in 2019, due to lower production and lower prices. The value of coal products constituted 42.7% of all mineral sales in the province (Fig. 2) this year.

As of November 12, new coal licence applications numbered four, for a total of 935 hectares (Fig. 4). Three new coal licences covering 768.99 hectares were issued (Fig. 5). No new leases were issued. A 'No Registration' order for the Hat Creek coal deposit was rescinded. The order, which had been in place since 1973, prohibited applications for tenure, tenure ownership, exploration and mining. Neptune bulk terminal was shut down for capacity upgrades for five months ending in September.

Coalfields of British Columbia

The distribution of Upper Jurassic to Tertiary coal coalfields follows the southeast-to-northwest tectonic and physiographic grain of the province (Fig. 3). Currently, all coal mining is in the



Fig. 3. Coalfields and operating coal mines in British Columbia.

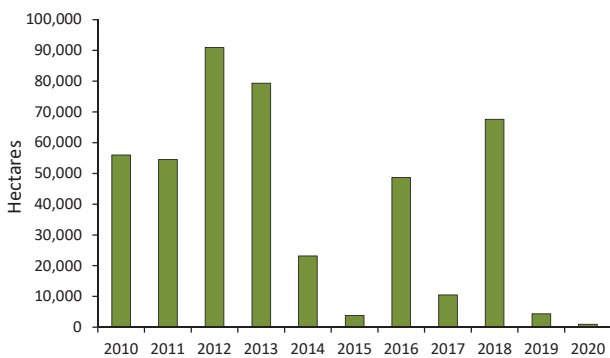


Fig. 4. New coal licence applications in hectares, 2010 to 2020, as of November 12, 2020. This chart includes applications made in 2020 that were converted to licences before November 12.

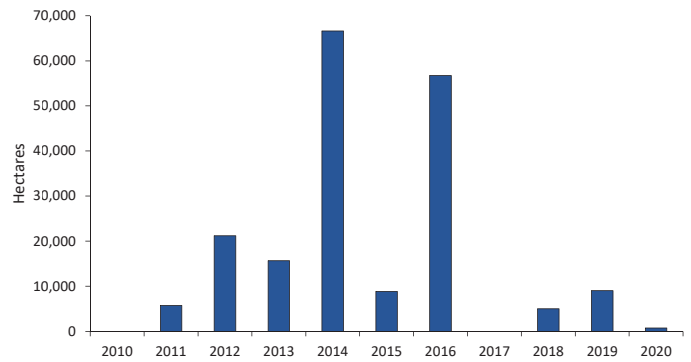


Fig. 5. Coal licences issued in hectares, 2010 to 2020, as of November 12, 2020.

Rocky Mountain belt of eastern British Columbia. Coalfields are also in the interior of the province and on Vancouver Island and Haida Gwaii.

In **southeastern British Columbia**, deposits are in the Elk River, Crowsnest, and Flathead coalfields, which extend from the Canada-USA border to the northwest for 175 km along the Rocky Mountains (Figs. 3, 6). Economic coal seams are hosted by the Mist Mountain Formation of the Kootenay Group (Jurassic to Lower Cretaceous; Fig. 7). Most of the known resource is metallurgical (coking and PCI) coal, ranging mainly from high-volatile bituminous to low-volatile bituminous, with some semi-anthracite in southern Crowsnest coalfield. Southeastern British Columbia coals are characterized by low total sulphur contents. Potentially mineable coal resources are estimated at 8.0 billion tonnes. Provincial legislation enacted in 2011 prohibits subsurface resource exploration and development in the Flathead River watershed (Fig. 6), so parts of the Flathead and Crowsnest coalfields are excluded from coal mining activity.

The **northeastern British Columbia** deposits are in the Foothills and Plains coalfields, together known as the Peace River coalfields. The Foothills coalfield extends for 400 km along the eastern flank of the Rocky Mountains (Figs. 3, 8). The coals are distributed through a stratigraphic interval of more than 3000 m, and are hosted by five Lower Cretaceous units, the most important of which are the Gates Formation (Fort St. John Group) and the Gething Formation (Bullhead Group; Fig. 9). Coals in the Gething and Gates formations are bituminous in rank, ranging from high to low volatile. Metallurgical (coking and PCI) coals are predominant, and total sulphur contents are typically low.

The Minnes Group (Lower Cretaceous) hosts coal. However, mineable thicknesses and continuity have not been documented, and the Minnes Group coals are not current exploration targets.

Deposits of weak coking coal are recognized in the Boulder Creek Formation (Upper Cretaceous) but are not mined. Potentially mineable coal resources in northeastern British Columbia coalfields have been estimated at 4.9 billion tonnes.

In **northwestern British Columbia**, the Groundhog coalfield (Fig. 3) extends across an area of approximately 2300 km² and hosts Canada's only significant anthracite deposits. The estimated potential of the greater Groundhog region is more than 9 billion tonnes of semi-anthracite to meta-anthracite coal. The coal is hosted by Jurassic to Cretaceous deltaic deposits in the Bowser Lake Group. Coal is found in several other smaller Mesozoic basins in the northwestern part of the province, including the Telkwa coalfield south of Smithers and the Tuya River deposit (Fig. 3).

In the **southern interior**, Paleocene to Eocene basins host coals in the Similkameen, Merritt, and Hat Creek coalfields. These coals range in rank from lignite to high-volatile bituminous and are generally low in sulphur.

On **Vancouver Island**, coal in the Nanaimo and Comox coalfields is hosted by several units in the Nanaimo Group (Upper Cretaceous). Coal ranks are generally high-volatile bituminous in rank; ash and sulphur contents vary.

Coal mining and exploration in 2020

Coal production in British Columbia in 2020 is forecast to reach 25.1 million tonnes. Production from Teck Resources Limited's four mines in the southeast part of the province is forecast to be about 20.9 million tonnes. Conuma Coal Resources Limited produced about 4.2 million tonnes from the Perry Creek, Brule, and Willow Creek mines in the Peace River coalfield (Table 1). Please refer to the Provincial Overview of Exploration and Mining in British Columbia (British Columbia Geological Survey Information Circular 2021-1) for coal exploration expenditure numbers.

Table 1. Coal mines in British Columbia. Production forecast for 2020 is based on Q3 reporting.

Mine	Operator	Commodity	Forecast 2020 Production	Reserves as of December 31, 2019 (Proven + Probable)
Brule	Conuma Coal Resources Limited	PCI	2.1 Mt	12.26 Mt
Elkview	Teck Coal Limited	HCC	6.672 Mt	265.1 Mt
Fording River	Teck Coal Limited	HCC	6.156 Mt	387.9 Mt
Greenhills	Teck Coal Limited	HCC	4.918 Mt	165.1 Mt
Line Creek	Teck Coal Limited	HCC and thermal coal	3.170 Mt	60.2 Mt HCC 10.5 Mt thermal
Willow Creek	Conuma Coal Resources Limited	HCC and PCI	700,000 t	11.04 Mt
Wolverine (Perry Creek) including Hermann	Conuma Coal Resources Limited	HCC	1.4 Mt	26.99 Mt

HCC = hard coking coal; PCI = pulverized coal injection

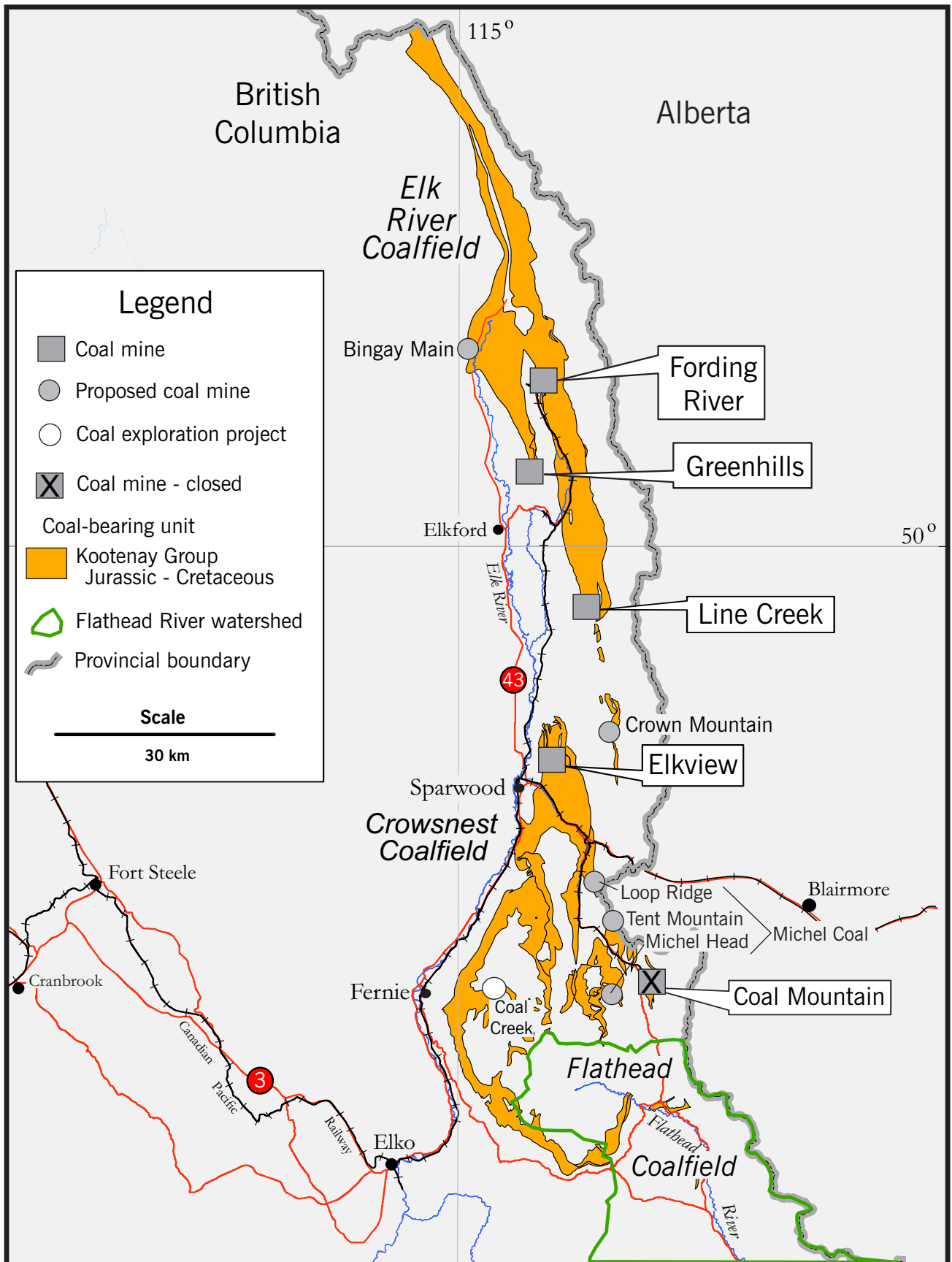


Fig. 6. Coal mines, proposed mines, and selected exploration projects, southeastern British Columbia.

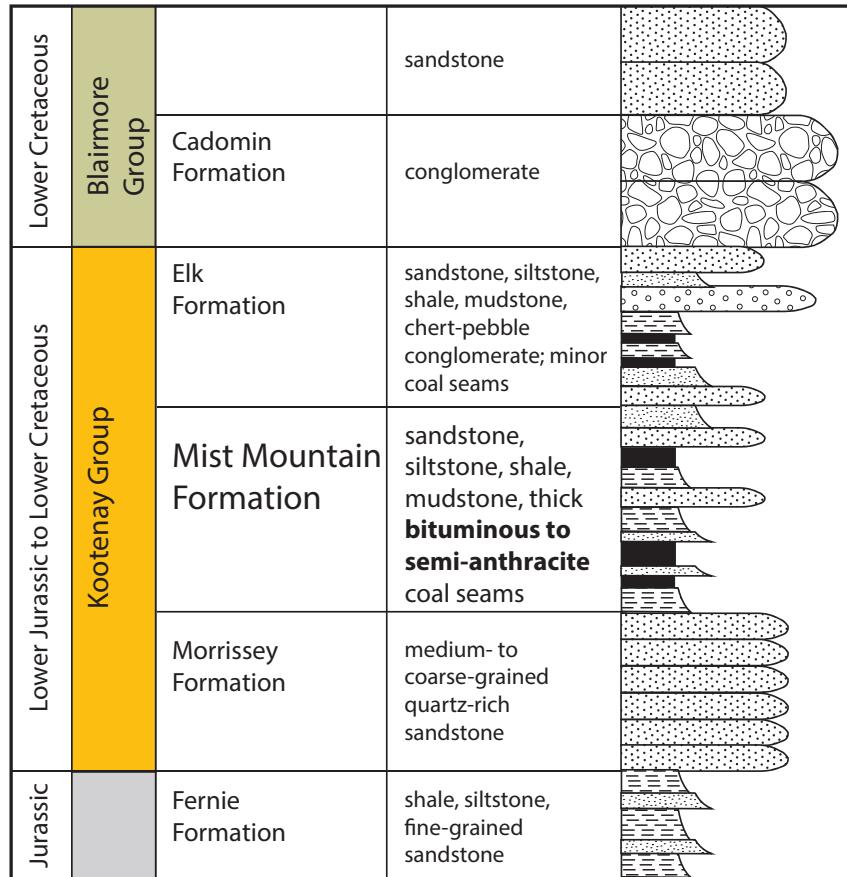


Fig. 7. Coal stratigraphy of southeastern British Columbia.

Southeastern British Columbia

Mining

Teck Coal Limited, the world’s second-largest exporter of metallurgical coal, operates four open-pit coal mines in the Elk River valley area (Fig. 6). The mines at **Fording River, Greenhills, Line Creek, and Elkview** produced more than 80% of Canada’s total annual metallurgical coal exports. The main product is coking coal, and pulverized coal injection (PCI) coal; small amounts of thermal coal are also produced. All four are open-pit, truck and shovel mines. Teck Coal forecasts clean coal production totalling about 20.9 million tonnes from southeastern British Columbia in 2020.

At **Fording River**, production from the Eagle Mountain and Swift areas is forecast to be 6.16 million tonnes. Production continued from the Cougar pit at the **Greenhills** mine; the total forecast for 2020 is 4.92 million tonnes. In 2020, production at the **Line Creek** mine was mainly from the Burnt Ridge extension (BRX), Mount Michael (MTM), and Mine Services extension (MSX) pits and is forecast to reach 3.17 million tonnes by year end. The **Elkview** mine is forecast to produce 6.67 million tonnes of clean coal product for the year from the Baldy Ridge, Natal Ridge and Adit Ridge areas. In 2020, Elkview received approval to expand their pilot saturated rock fill project after successful trials. The project uses biological

processes to sequester selenium and other contaminants.

Pit operations at **Coal Mountain** mine were suspended in 2018 because it reached the end of its mine life. The wash plant (with an annual capacity of approximately 3.5 Mt) and load out facilities will be kept operational to process materials from the other four Teck mines. Reclamation of the mine is underway, with the final lifts of the dry stacked tailings and waste dump spoils.

All mining in the Elk Valley watershed is subject to conditions laid out in the trans-border Elk Valley Water Quality Plan, which addresses the management of substances released by mining activities in the Elk River watershed. All producing and proposed mine projects are engaged in research and development to improve technologies for active water treatment facilities and develop alternative and passive treatment methods.

Teck Coal Limited expects that the active water treatment facility at Fording River will also incorporate a combination of saturated rock fill and passive technologies. Teck is currently working on two more saturated rock fill facilities at the north end of the Elk Valley (expected to be operational in 2021) and at Line Creek. Other water quality trials are underway, including capping and reclamation techniques and methods for calcite management. Jameson Resources Ltd. (Crown Mountain) and

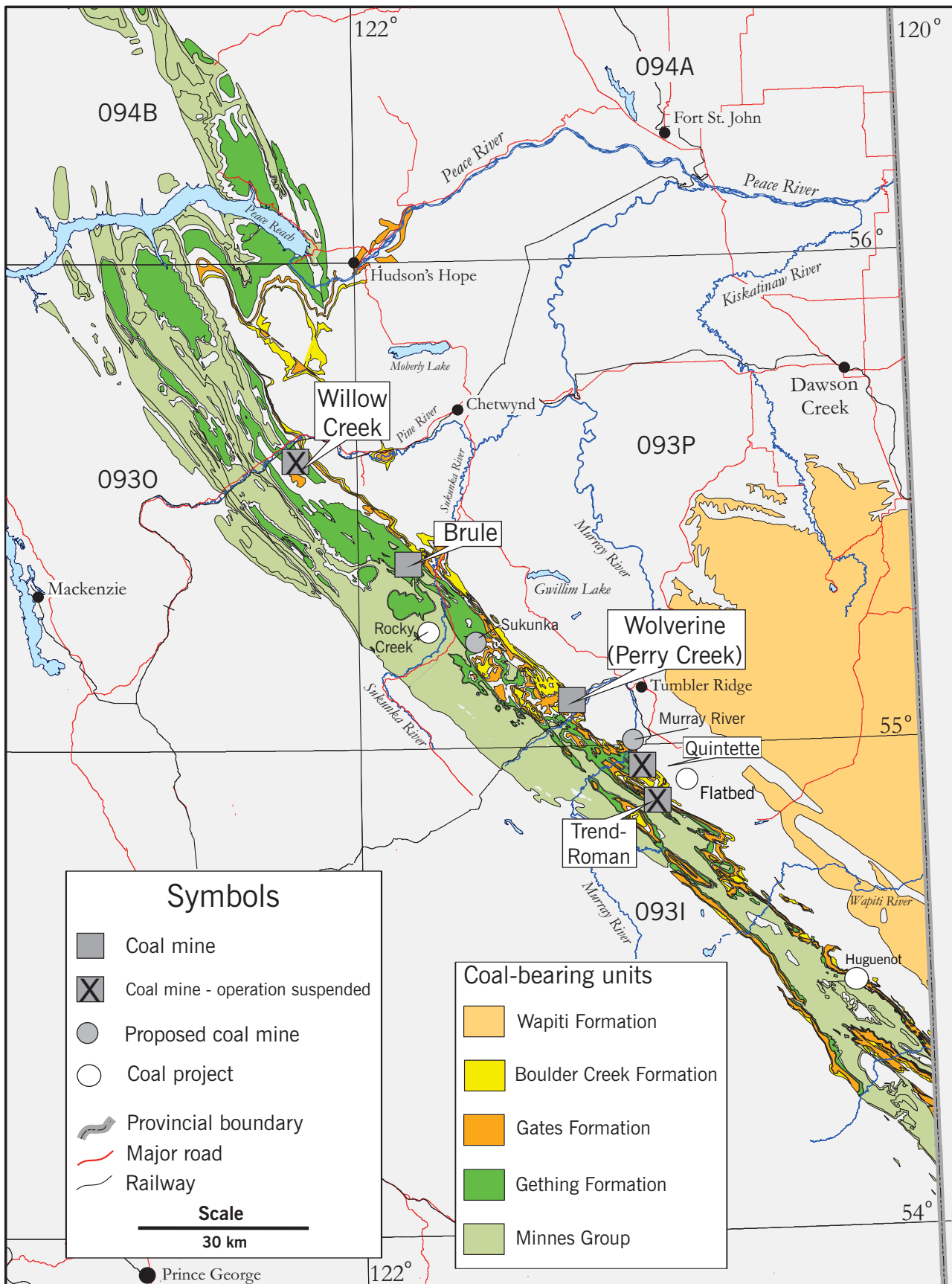


Fig. 8. Coal mines, proposed mines, and selected exploration projects, northeastern British Columbia.

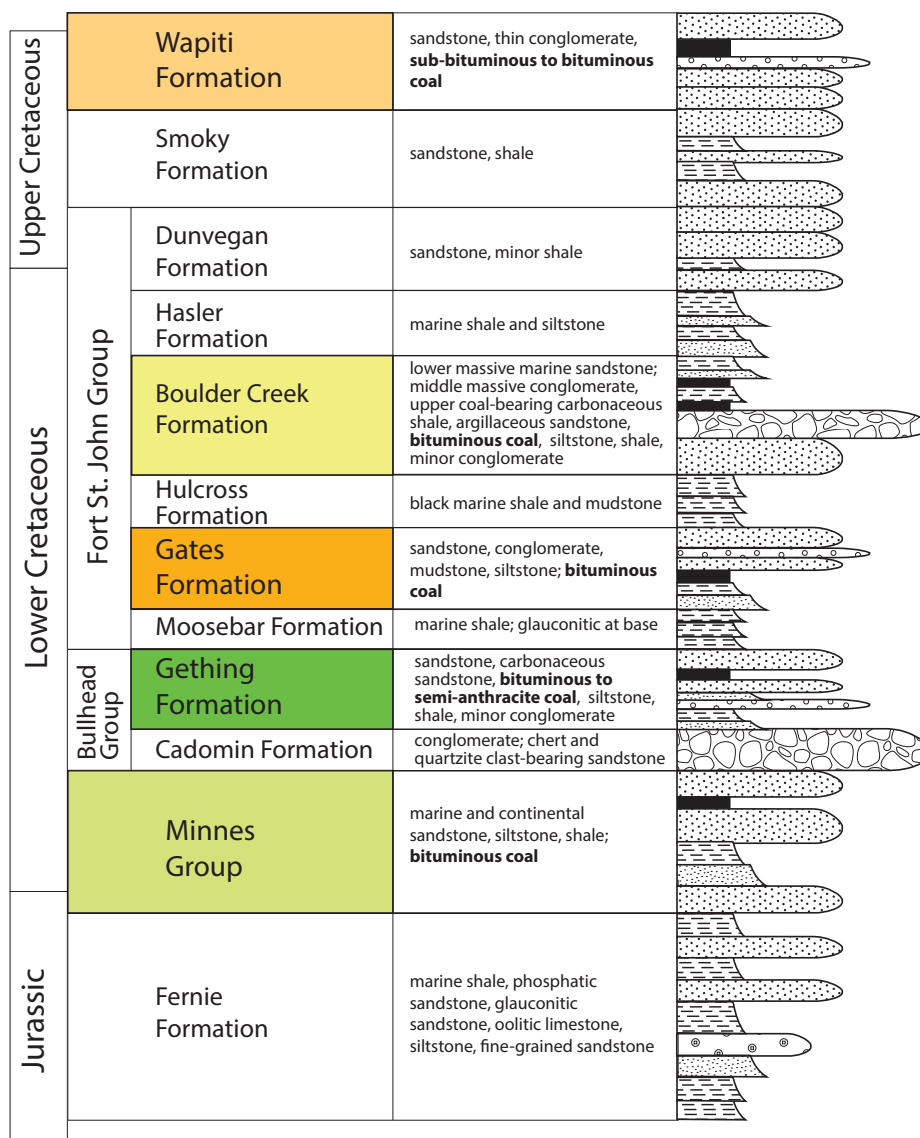


Fig. 9. Coal stratigraphy of northeastern British Columbia.

North Coal Ltd. (Michel Coal) are independently designing and testing water treatment methods for their proposed mine projects.

Exploration

It was an active exploration year at all four active Teck Coal Limited operations, and several other companies continued with early- and advanced-stage exploration projects (Table 2). At **Fording River**, exploration drilling was concentrated in producing pits and the Castle Mountain area. The Castle Mountain expansion, southeast of the main Fording River area, requires an extension of the existing Fording mine boundary of approximately 2550 ha. The expansion would use the existing Fording plants, transmission lines, and rail load out facilities, with proposed construction beginning in 2023. Teck Coal Limited submitted an initial project description to the British Columbia Environmental Assessment Office in April and to the

Impact Assessment Agency of Canada in October. Exploration continued at the Cougar Pit Extension (CPX) of the **Greenhills** mine, with in-pit drilling to update structural and seam quality models, and step-out drilling in the permitted extension areas. At **Line Creek**, exploration work proceeded at the Burnt Ridge North extension area and in active pits. At the **Elkview** mine, drilling continued in active pits and expansion areas.

Jameson Resources Limited continued work on an Environmental Assessment application and environmental baseline surveys for their **Crown Mountain** project, including water quality and treatment studies, engineering, and mine design. A bankable feasibility study was completed in 2020.

In 2020, work continued at North Coal Limited's **Michel Coal** project, which includes the Loop Ridge, Tent Mountain, and Michel Head areas. The project entered the pre-application phase of the British Columbia Environmental Assessment in 2015 and received its Application Information Requirements in

Table 2. Selected coal exploration and development projects in British Columbia 2020.

Property name	Operator name	Status	2020 activity	Region
Brule	Conuma Coal Resources Limited	Producing mine	Exploration drilling on Dillon and Brule leases	Northeast
Bingay Main	Centermount Coal Limited	Pre-application EA*	Letter submitted requesting that project remain in EA process	Southeast
Crown Mountain	Jameson Resources Limited	Pre-application EA	Mine design Spoil pile design Water quality and treatment design Engineering Bankable feasibility	Southeast
Coal Creek	Crows Nest Pass Coal Mining Limited	Exploration	Baseline studies Geological modelling	Southeast
Elkview-Baldy Ridge Extension (BRE)	Teck Coal Limited	Approved EA	Drilling Coal quality	Southeast
Flatbed	Colonial Coal	Exploration	Database development	Northeast
Fording-Swift	Teck Coal Limited	Approved EA	Drilling Coal quality Water treatment construction	Southeast
Greenhills-Cougar Pit Extension (CPX)	Teck Coal Limited	Approved EA	Drilling Coal quality	Southeast
Huguenot	Colonial Coal International Corporation	Exploration	Permitting Database development	Northeast
Line Creek Phase II	Teck Coal Limited	Approved EA	Drilling Coal quality Water treatment improvements	Southeast
Michel Coal	North Coal Limited	Pre-application EA	Geotechnical Coal quality Environmental baseline monitoring Mine design	Southeast
Murray River	HD Mining International Ltd.	Approved EA	EA extension application made. Granted to October 2025.	Northeast
Quintette	Teck Coal Limited	Mining permit in place	Development on hold	Northeast
Telkwa	Allegiance Coal	Pre-application EA	Community engagement Permitting	Northwest
Trend-Roman	Anglo American plc (Peace River Coal Inc.)	Mining permit in place	Drilling Coal quality	Northeast
Willow Creek	Conuma Coal Resources Limited	Producing mine	Exploration on-lease	Producing mine
Wolverine (Perry Creek)	Conuma Coal Resources Limited	Producing mine	Exploration on-lease	Northeast

*EA Environmental Assessment.

September of 2020. Work focussed on collecting environmental baseline data, mine and water treatment design, and coal quality testing.

Centermount Coal Limited submitted a letter requesting that the **Bingay Main** project stay in the Environmental Assessment process after several years of inactivity.

Crowsnest Pass Coal Mining Limited continued baseline studies and geological modeling at the Coal Creek project.

Northeastern British Columbia

Mining

In 2020, Conuma Coal Resources Limited produced about 4.2 million tonnes of coal from their three mines in the Peace River coalfield, including 2.1 million tonnes from **Brule** and 1.4 million tonnes from **Wolverine (Perry Creek)**. **Willow Creek** mine produced 700,000 tonnes before suspending operations in the summer due to low prices. Conuma Coal Resources Limited conducted drilling on its **Brule**, **Willow Creek** and **Wolverine** lease areas. Anglo American plc's **Trend** mine (operated by Peace River Coal Incorporated) suspended operations in 2014 and remained idle throughout 2020. The planned reopening of the **Quintette** mine (Teck Resources Limited) at Mount Babcock remains on hold.

Exploration

CTI Plus Resources Ltd. began a new exploration project at its **Rocky Creek** coking coal property. Trenching, mapping, and 75 drill holes were completed, including HQ coring, PQ coring, and rotary drilling. The company collected samples for coal quality and geotechnical testing, in preparation for a planned feasibility study and reserve and resource estimates. Peace River Coal Incorporated, wholly owned by Anglo American plc, conducted a small exploration program inside the current **Trend-Roman** mine permit area. Six diamond core boreholes were completed for a total of 3204 m. Colonial Coal International Corporation continued with database development and permitting activities at the **Huguenot** and **Flatbed** projects.

Northwestern and north-central British Columbia Exploration

Allegiance Coal continued with community engagement activities as part of the pre-application process for the environmental assessment of the **Tenas** project at **Telkwa**. The company expects to submit the environmental assessment application in early 2021.

Vancouver Island

Mining and exploration

The **Quinsam** thermal coal mine near Campbell River suspended operations in 2019 and is now for sale. The Bowra Group of Vancouver was appointed as Receiver and is taking enquiries from parties interested in purchasing the mine and its assets.

Transportation infrastructure

Most coal produced in the Elk River and Crowsnest coalfields in southeastern British Columbia is transported for export by rail to Westshore Terminals in Delta and Neptune Bulk Terminals in North Vancouver (Fig. 2). Lesser volumes are transported by rail to steel mills in eastern Canada. The Westshore facility has a capacity of 33 million tonnes per year. Neptune Terminals shut down as planned for five months in 2020, ending in September, for capacity expansion work. A new stacker-reclaimer (Fig. 10) was assembled in Victoria and delivered to the terminal in August. Capacity after improvements will increase from 12.5 to 18.5 million tonnes by 2021. The coalfields of northeastern British Columbia are connected by rail to Ridley Island Terminals near Prince Rupert (Fig. 3). Current coal capacity at Ridley Island is 12 million tonnes per year.

Coal titles

The Mineral Titles Branch of the British Columbia Ministry of Energy, Mines and Low Carbon Innovation maintains a website that provides information about Coal Titles regulations and resources for researching and acquiring coal tenures in the



Fig. 10. New coal stacker-reclaimer being assembled at the Point Hope Shipyard in Victoria in the summer of 2020.

province (Table 3). Coal tenure in British Columbia is held in two forms: coal licence or coal lease. The coal licence is the initial stage of coal tenure and is appropriate for exploration. It is analogous to a mineral claim. Acquisition is initiated by a coal licence application; a Free Miner Certificate is not required to acquire a coal licence. Coal licence holders have the exclusive right to explore and develop Crown-owned coal resources as defined in the Coal Act. Production is limited to a 100,000-tonne sample for testing purposes. A coal lease is the appropriate tenure to hold when a mineable resource has been proven and the project is ready to switch from exploration to production of coal. Coal licences and leases will not be issued on coal land reserves, which are closed to exploration, development, and production of coal. Spatial data and maps

showing active coal tenure, applications, and coal reserves are available online at the Mineral Titles Online site (Table 3) and on MapPlace, the geospatial web service of the British Columbia Geological Survey (Table 4).

An application for a coal licence is made to the Minister and must be accompanied by: the prescribed application fee; the prescribed rent in respect of location; and a plan and description of the location under Section 11 of the Coal Act. The application fee is \$25 plus \$7 per hectare first year rental. Coal licences must be renewed annually by the anniversary date of the tenure acquisition. Annual renewal requirements include remitting annual rental fees and submitting a technical report on all exploration work during the previous year. Before carrying out exploration that involves mechanized ground disturbance, the

Table 3. Websites to access coal tenure information.

To access	click
Coal titles	http://www2.gov.bc.ca/gov/content/industry/mineral-exploration-mining/mineral-titles/coal-titles
Coal and mineral tenure: Online viewer map and downloadable spatial data	https://www.mtonline.gov.bc.ca/mtov/home.do
Coal licence application and other forms	http://www2.gov.bc.ca/gov/content/industry/mineral-exploration-mining/mineral-titles/coal-titles/forms-maps-publications/coal-titles-forms
Coal Act and Regulation	http://www2.gov.bc.ca/gov/content/industry/mineral-exploration-mining/mineral-titles/coal-titles/legislation
Annual technical report requirements	https://www2.gov.bc.ca/gov/content/industry/mineral-exploration-mining/british-columbia-geological-survey/assessmentreports/submissioncoal
Permitting and Reclamation, and Notice of Work submissions	http://www2.gov.bc.ca/gov/content/industry/mineral-exploration-mining/permitting
Environmental Assessment Office	https://www2.gov.bc.ca/gov/content/environment/natural-resource-stewardship/environmental-assessments

Table 4. Websites to access British Columbia Geological Survey publications and databases.

To access	click
British Columbia Geological Survey	https://www2.gov.bc.ca/gov/content/industry/mineral-exploration-mining/british-columbia-geological-survey
British Columbia Geological Survey publication catalogue	https://www2.gov.bc.ca/gov/content/industry/mineral-exploration-mining/british-columbia-geological-survey/publications
British Columbia Geological Survey coal geology page	https://www2.gov.bc.ca/gov/content/industry/mineral-exploration-mining/british-columbia-geological-survey/geology/coal-overview
British Columbia coal assessment reports and COALFILE	https://www2.gov.bc.ca/gov/content/industry/mineral-exploration-mining/british-columbia-geological-survey/assessmentreports#COALFILE
MINFILE	https://www2.gov.bc.ca/gov/content/industry/mineral-exploration-mining/british-columbia-geological-survey/mineralinventory
MapPlace	https://www2.gov.bc.ca/gov/content/industry/mineral-exploration-mining/british-columbia-geological-survey/mapplace

licence holder must possess a permit under the Mines Act. The application for approval of exploration activities is termed a Notice of Work. A Notice of Work can be submitted at the same time as the coal licence application, but work cannot begin until tenure is granted. A coal lease gives the holder the exclusive right to explore for, develop, and produce a coal resource on the lease location. The tenure holder must first have held a coal licence over the same location. The initial term for a coal lease is up to 30 years and can be renewed for periods of up to 15 years. All appropriate approvals and authorizations must be in place before commencing work on a coal lease.

An environmental assessment is required for proposed major mine construction and expansion projects; please visit the website of the British Columbia Environmental Assessment Office (EAO), an independent agency of the Government of British Columbia (Table 3).

British Columbia Geological Survey information sources

Established in 1895, the British Columbia Geological Survey is the oldest scientific organization in the province. The Survey conducts research to establish the geological evolution and mineral resources of the province, partnering with federal, provincial, and territorial geoscience agencies, and other national and international organizations. Drawing on continuously advancing concepts and technologies, the Survey creates knowledge to guide societal decisions centred on the Earth sciences, connecting government, the coal and minerals industries, and communities to the province's geology and mineral resources. Each year in January, the British Columbia

Geological Survey releases its summary of field activities and current research (Geological Fieldwork volume), summaries of exploration and mining at the provincial and regional levels (Exploration and Mining in British Columbia volume), and the present British Columbia Coal Industry Overview.

MapPlace is the British Columbia Geological Survey geospatial web service that allows users to mine information in the: industry and government document archive (Property File); online mineral inventory (MINFILE); mineral assessment report database (ARIS); coal assessment report database (COALFILE); regional geochemistry survey (RGS); Mineral Titles Online (MTO) tenure database; digital geology of British Columbia database; the British Columbia Geological Survey publication catalogue; and extensive collections of bedrock and surficial geology maps.

MINFILE is a mineral inventory database that contains geological, location, and economic information on more than 15,000 metallic, industrial mineral, and coal occurrences. COALFILE is the database of coal reports. It contains a collection of more than 1030 assessment reports dating from 1900, many of which were submitted by exploration companies in compliance with the Coal Act. COALFILE contains details of coal exploration reports including data for about 16,100 boreholes, 550 bulk samples, 5400 maps, 3650 trenches, and 480 coal ash analyses. A search engine leads clients to a summary page for each coal assessment report.

Industry contacts

The corporate websites of coal exploration and mining groups active in British Columbia are listed in Table 5.

Table 5. Industry contacts.

Coal Association of Canada	www.coal.ca
Teck Coal Limited	www.teck.com
Conuma Coal Resources Limited	www.conumacoal.com
Anglo American Canada plc	www.angloamerican.ca
Atrum Coal NL	http://atrumcoal.com/
Bowra Group (Receiver for Quinsam Coal Corporation)	https://www.bowragroup.com/quinsam-coal-corporation
Centermount Coal Limited	http://www.centerpointcanada.com/
Colonial Coal International Corporation	http://ccoal.ca
Crowsnest Pass Coal Mining Limited	http://www.crowsnestpasscoal.com
CTI Plus Resources Limited	Email: vincent.li@ctiplusres.com
Glencore Canada Corporation	www.sukunkaproject.ca
HD Mining International Limited	http://www.hdminingintl.com/
Jameson Resources Limited	http://www.jamesonresources.com.au/
North Coal Limited	www.northcoal.ca

Contacts at the Ministry of Energy, Mines and Low Carbon Innovation and the British Columbia Geological Survey

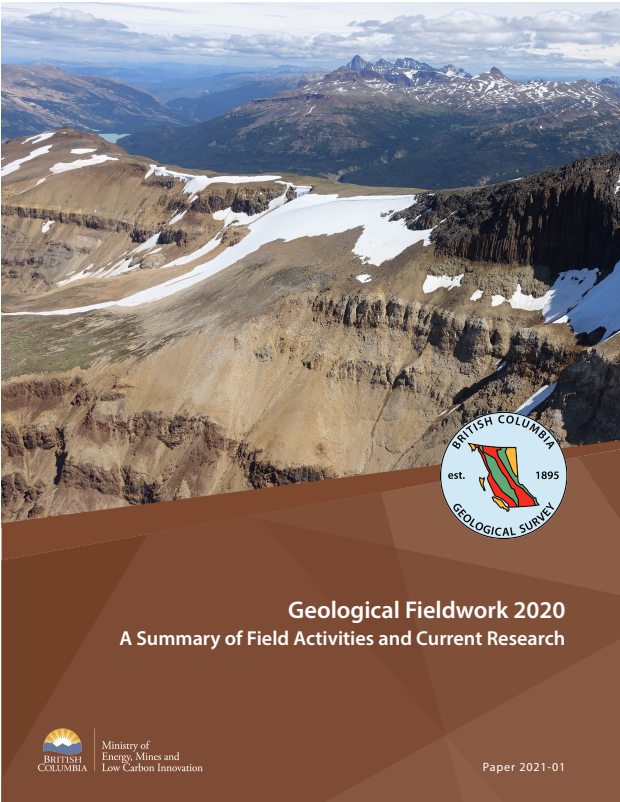
Personnel from the Ministry of Energy, Mines and Low Carbon Innovation and the British Columbia Geological Survey are available for consultation (Table 6). Should you wish to receive notification of British Columbia Geological Survey publications released throughout the year, please subscribe to our newsletter by emailing Geological.survey@gov.bc.ca.



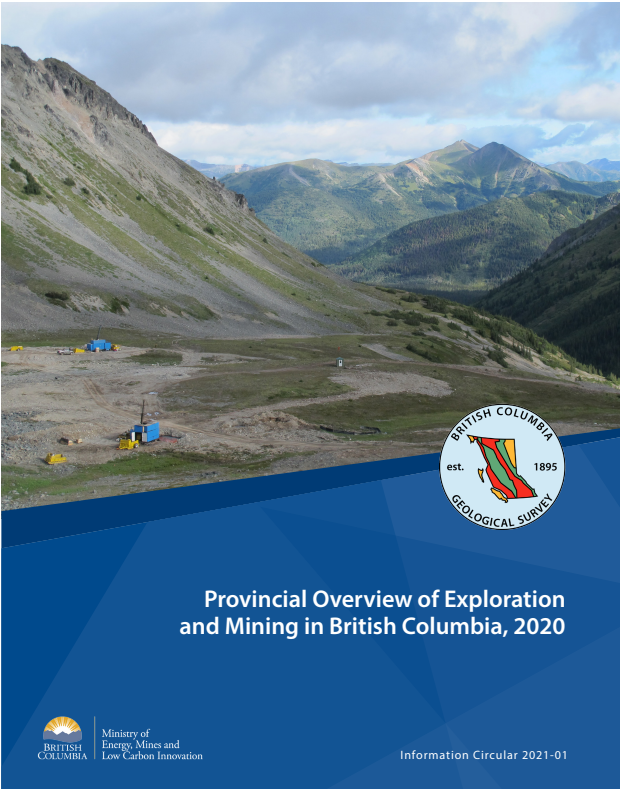
Table 6. British Columbia Ministry of Energy, Mines and Low Carbon Innovation contacts.

Gordon Clarke Director, Mineral Development Office British Columbia Geological Survey, Vancouver	604-660-2094 gordon.clarke@gov.bc.ca
Janet Riddell Coal Geologist British Columbia Geological Survey, Victoria	778-698-8064 janet.riddell@gov.bc.ca
Rhonda Marshall Senior Advisor Mineral and Coal Titles, Victoria	236-468-3323 rhonda.marshall@gov.bc.ca
Jessica Norris Coal Assessment Report Geologist British Columbia Geological Survey, Victoria	778-698-7223 jessica.norris@gov.bc.ca
Fiona Katay Regional Geologist, Southeast British Columbia Geological Survey, Cranbrook	250-919-4724 fiona.katay@gov.bc.ca
Sean Tombe Regional Geologist, Northwest British Columbia Geological Survey, Smithers	250-877-2649 sean.tombe@gov.bc.ca
Bruce Northcote Regional Geologist, Southwest British Columbia Geological Survey, Vancouver	604-660-2713 bruce.northcote@gov.bc.ca
Vacant Regional Geologist, South Central Kamloops	
Vacant Regional Geologist, North Central and Northeast Prince George	

Each year, the British Columbia Geological Survey publishes Geological Fieldwork, a Summary of Fieldwork and Current Research, and the Provincial Overview of Mining and Exploration in British Columbia. All British Columbia Geological Survey publications can be downloaded, at no cost, from www.BCGeologicalSurvey.ca



Geological Fieldwork volume, British Columbia Geological Survey Paper 2021-01



Provincial Overview of Mining and Exploration in British Columbia volume, British Columbia Geological Survey Paper Information Circular 2021-01



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