



British Columbia Coal Industry Overview 2017



Ministry of
Energy, Mines and
Petroleum Resources



Ministry of Energy, Mines and Petroleum Resources
British Columbia Geological Survey
Information Circular 2018-2



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

Front Cover: Folded coal beds in the Mist Mountain Formation, Elk River coalfields.

Back Cover: Stacker-reclaimer in operation at the coal port at Neptune Bulk Terminals, North Vancouver, B.C. Photo courtesy of Neptune Bulk Terminals.

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

www.empr.gov.bc.ca/geology

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British Columbia coal industry overview 2017

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Introduction

Coal prices stabilized in 2017 following a price spike in the second half of 2016. Coal production volumes for the province are forecast to total 31.5 million tonnes, the highest volume since 2013. Coal remains British Columbia's most valuable mined commodity in terms of annual sales (Fig. 1). Coking coal and PCI (pulverized coal injection) products are currently produced from five mines in the Kootenay Mountains in the southeastern part of the province, and from two mines in the Peace coalfield in the northeastern part (Fig. 2). Thermal coal is produced from the Quinsam mine on Vancouver Island. Major markets for British Columbia coal include Asian countries, especially Japan, China, South Korea and India, and countries in South America and Europe.

This pamphlet provides an annual summary of the provincial coal industry. It describes British Columbia's coal regions, industry trends, coal transportation infrastructure, and mining and exploration activities for the past year. It also describes the tenure system, and lists sources of information and contacts. This publication complements more detailed British Columbia Geological Survey annual publications (see **British Columbia Geological Survey Information Sources** below).

British Columbia coal industry trends and news in 2017

At the start of 2017, global coal prices were at the high levels reached in late 2016, which followed five years of low prices. Prices dropped slightly, but then spiked again to more than \$300 per tonne for premium coking coal in late March, when Cyclone Debbie struck the coal-producing regions of Australia. Prices re-stabilized over the summer to about \$150 per tonne. The average prices for the year (as of mid-November 2017) were \$178 for hard coking coal and \$141 for PCI. (All prices are per tonne, \$US, West Coast port price.)

The five Teck Resources Limited mines in the Southeast Region operated continuously in 2017 and their combined production for the year is forecast to come to 28 million tonnes. Conuma Coal Resources Limited returned the Brule and Perry Creek mines to full production and is forecast to produce about 3.5 million tonnes in 2017. The Quinsam thermal coal mine on Vancouver Island was sold and resumed production in October, following 20 months of operation suspension long due to low prices. In December, the Murray River mining project (HD Mining International Limited) in northeastern British Columbia received federal Cabinet approval to proceed following a federal environmental assessment.

The value of coal production for the province is forecast

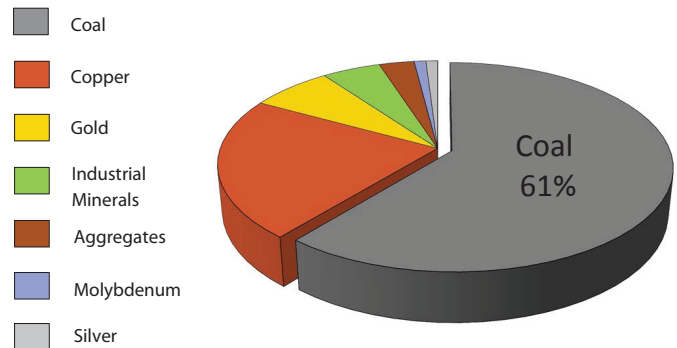


Fig. 1. Forecast production value by mined commodity for British Columbia in 2017. The value of coal production is forecast to be \$5.96 billion this year, representing about 61% of all mineral revenue in the province.

at \$5.96 billion for 2017, up sharply relative to \$2.63 billion in 2016. Most of this increase was due to higher prices. The addition of mined volume also contributed. The value of coal products constitutes about 61% of all mineral sales in the province (Fig. 1).

As of November 9, 2017, new coal license applications numbered 24 in 2017, for a total of 28,280 hectares (Fig. 3). Thirty-four new coal licenses covering 48,118 hectares were issued (Fig. 4). One new lease application was made; no new leases were issued.

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. 2). Currently, most coal mining is in the Rocky Mountain belt of eastern British Columbia. There are also coalfields in the interior of the province, and on west coast islands (Vancouver Island and Haida Gwaii).

In **southeastern British Columbia**, coal 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. 2, 5). Economic coal seams are hosted by the Mist Mountain Formation of the Kootenay Group (Jurassic to Lower Cretaceous; Fig. 6). 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 the 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

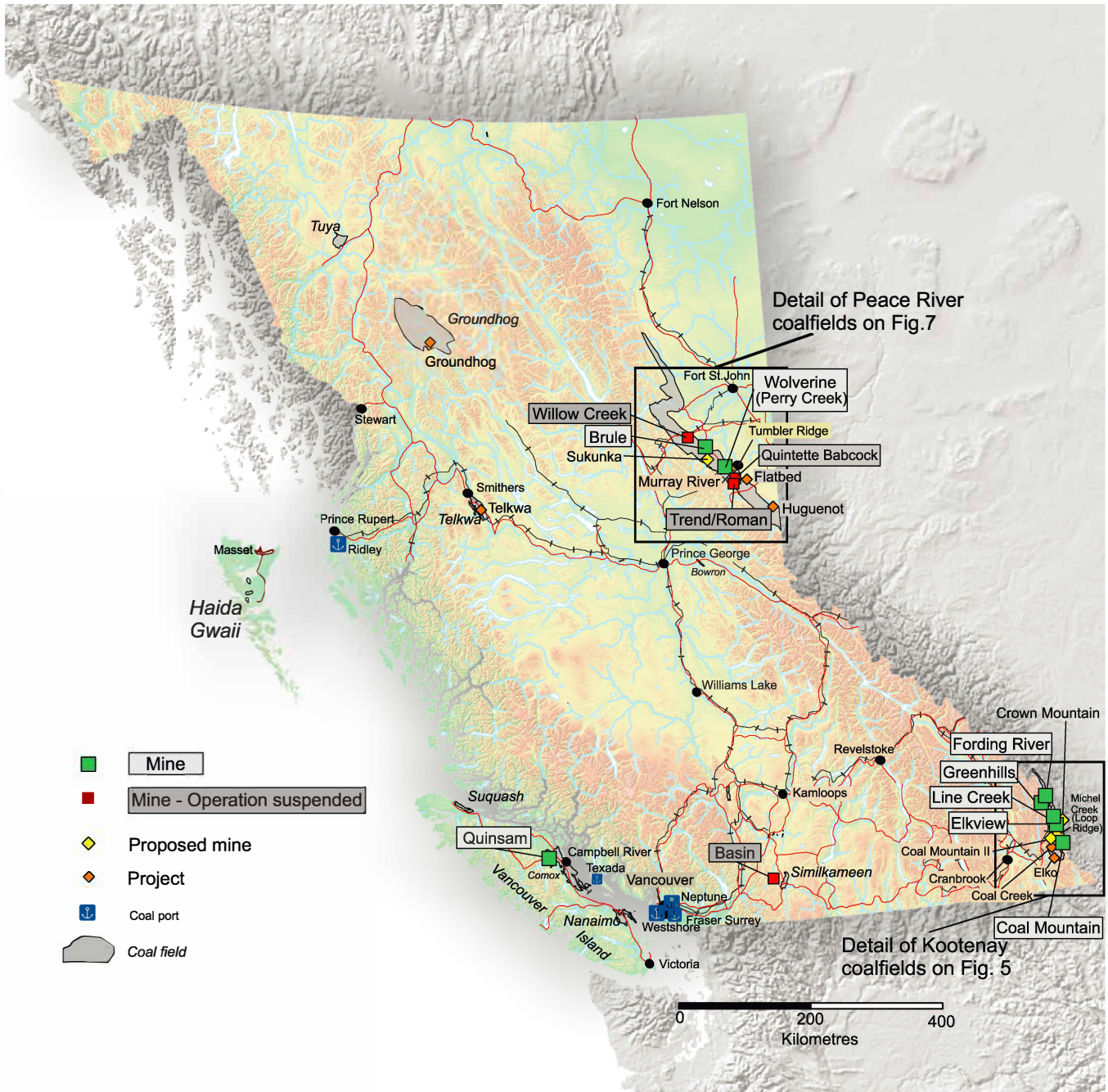


Fig. 2. Coal mines and selected coal projects in British Columbia 2017.

and development in the Flathead River watershed (Fig. 5), so the Flathead coalfield and part of the Crowsnest coalfield 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. 1, 7). 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. 8). Coal 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 (Lower Cretaceous) between the Pine

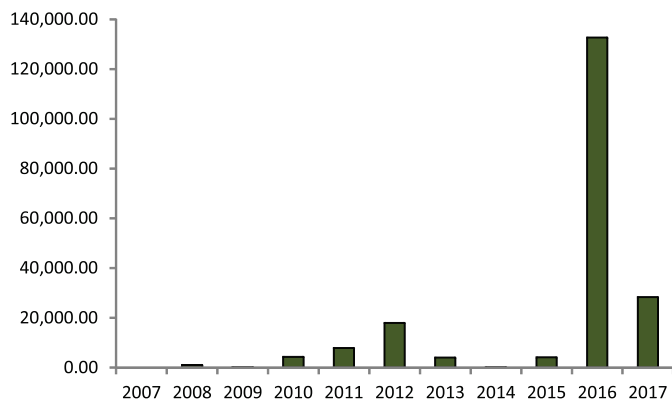


Fig. 3. New coal license applications 2007 to 2017, in hectares. Value for 2017 is as of November 9, 2017.

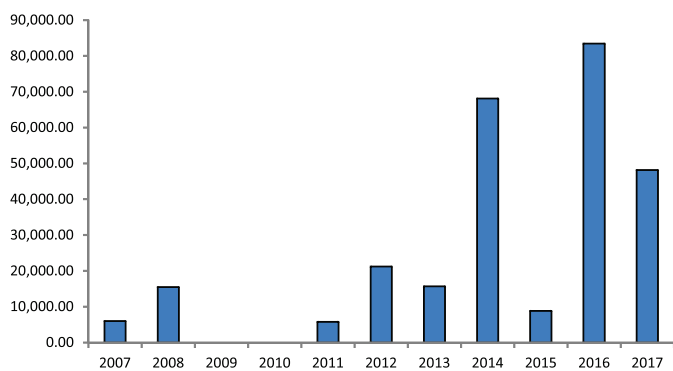


Fig. 4. Coal licenses issued, 2007 to 2017, in hectares. Value for 2017 is as of November 9, 2017.

and Sukunka rivers. On the Plains, coal seams of the Wapiti Formation (Upper Cretaceous) are lower in rank and have potential as thermal coal resources.

Potentially mineable coal resources in northeastern British Columbia coalfields have been estimated at 4.9 billion tonnes, with considerable potential for growth as exploration continues.

In **northwestern British Columbia**, the Groundhog-Klappan Coalfield (Fig. 2) 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. 2).

In the **southern interior**, numerous small Tertiary basins contain coal. Tertiary basin coals in the Similkameen, Merritt, and Hat Creek coalfields range from lignite to high-volatile bituminous, and are generally low in sulphur content.

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 in the high-volatile bituminous range; ash and sulphur contents vary.

Coal mining and exploration in 2017

Annual coal production in 2017 is forecast to reach 31.5 million tonnes. Production from Teck Resources Limited’s five mines in the southeast part of the province reached a five year record volume of 28 million tonnes, and Conuma Coal Resources Limited produced about 3.5 million tonnes from the Brule and Perry Creek mines in the Peace River coalfields (Table 1). The Quinsam mine on Vancouver Island resumed operations in October after a closure of several months; total production for 2017 was less than 50,000 tonnes. Please refer to the 2017 Provincial Overview of Exploration and Mining in British Columbia (British Columbia Geological Survey Information Circular 2018-1; link in Table 4) for coal exploration expenditure numbers.

Southeastern British Columbia Mining

Teck Coal Limited, the world’s second-largest exporter of metallurgical coal, operates five large open-pit coal mines in the Elk Valley area (Fig. 5). The mines at **Fording River**, **Greenhills**, **Line Creek**, **Elkview**, and **Coal Mountain** produced more than 85% of Canada’s total annual metallurgical coal exports. The main product is metallurgical coal (85%), with pulverized coal injection (PCI) coal and some thermal product (15% combined). All five are open-pit, truck and shovel mines. Based on Teck Coal Limited’s Q3 2017 report, volumes of clean coal production from southeastern British Columbia for 2017 are forecast at 28 million tonnes.

The Elk Valley Coalfield includes the **Fording River**, **Greenhills** and **Line Creek** operations, where coal beds are preserved in the Alexander Creek and Greenhills synclines. The Crowsnest Coalfield lies in the Fernie Basin, a broad north-trending synclinorium that hosts the current **Elkview** and **Coal Mountain** operations. The **Coal Mountain** mine, which produces Pulverized Coal Injection (PCI) coal, is approaching the end of its mine life and is scheduled to close in 2018; reclamation work has begun.

Exploration

Four of the five Teck Coal Limited operations had expansion projects in the exploration, permitting, or development stage (Table 2) in the southeastern part of the province, and several other companies continued with early- and advanced-stage exploration projects. At **Fording River** Operations, large diameter core drilling for coal quality testing was conducted in the **Swift** project expansion area (Fig. 9). Exploration at the **Greenhills** Mine focused on the Cougar Pit. The Fording Swift project is being amended to include portions of the Cougar North spoil area. Exploration and development work continued on the approved **Phase II expansion** area at **Line Creek Operations**, which extends the current Burnt Ridge South pit to the north. At **Elkview Operations**, exploration drilling was carried out to help plan for the next phases of mine expansion in Baldy and Natal pits.

Jameson Resources Limited began preliminary engineering

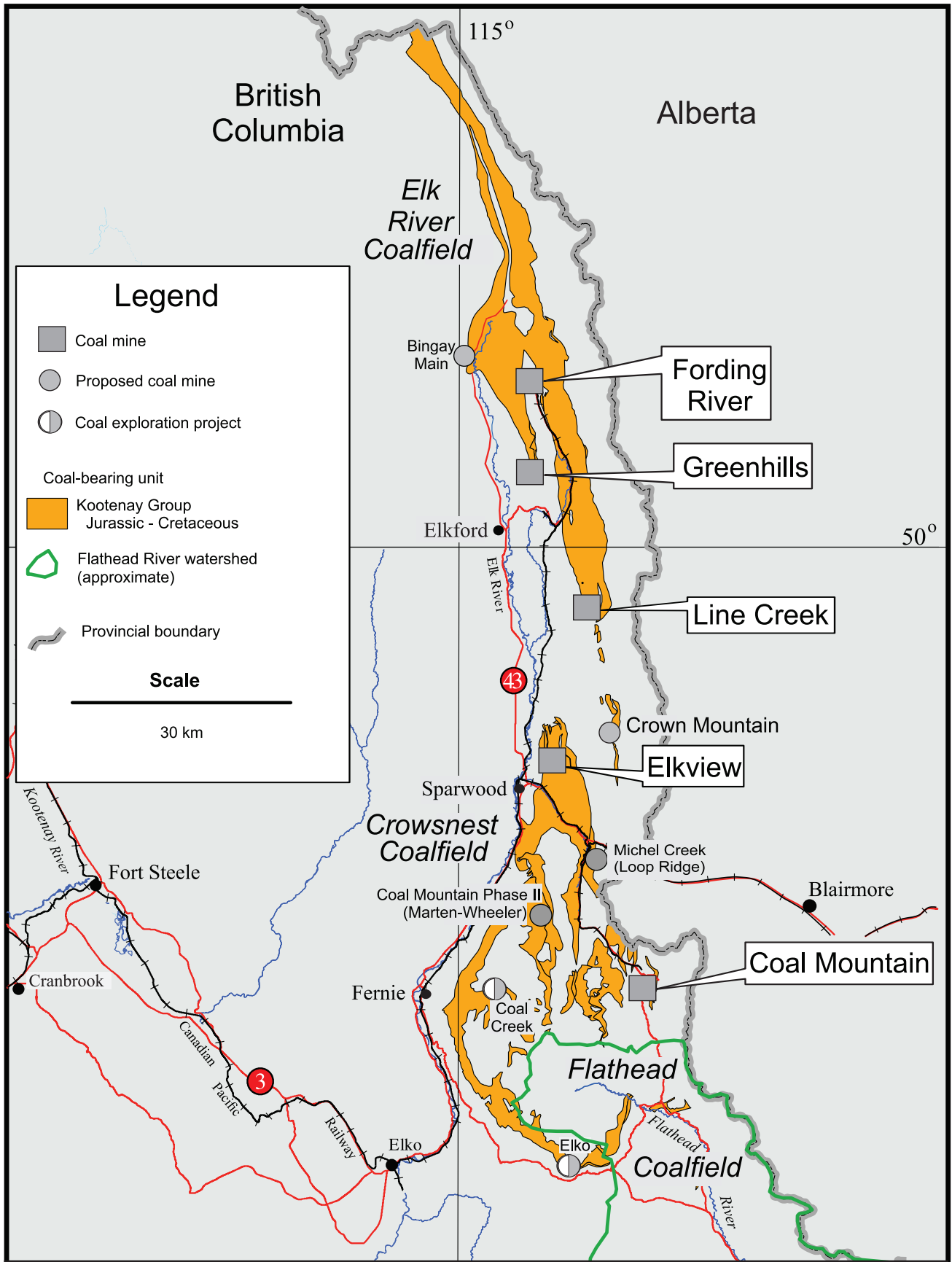


Fig. 5. Coal mines and selected exploration projects, southeastern British Columbia.

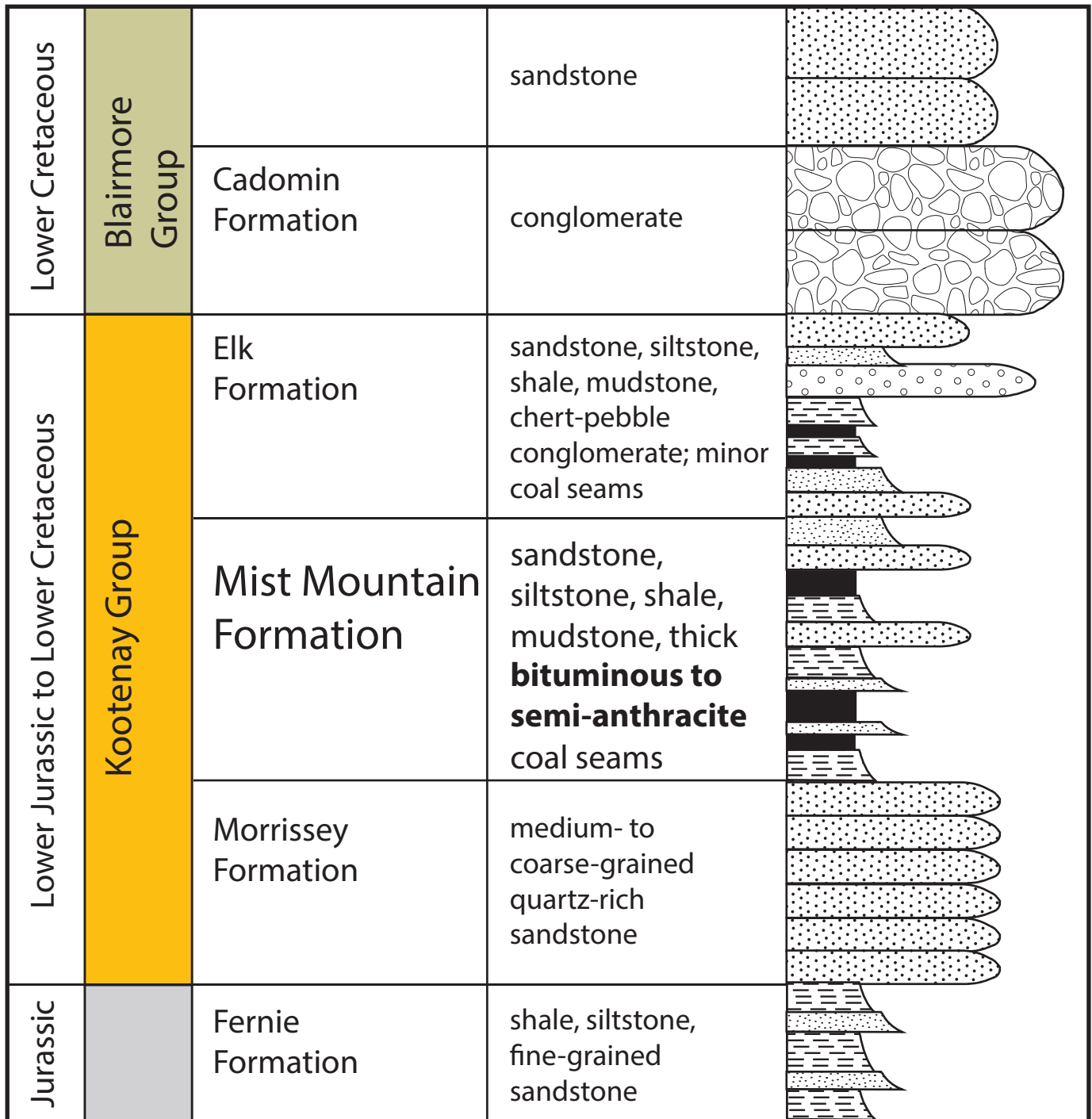


Fig. 6. Coal stratigraphy of southeastern British Columbia.

design and continued environmental baseline work on their **Crown Mountain** project, which entered pre-application of environmental assessment in October 2014.

North Coal Limited (formerly CanAus Coal Limited) continued exploration drilling and coal quality testing at their **Michel Creek** (Loop Ridge) project.

The Bingay Main project (Centermount Coal Limited) is in the pre-application stage of Environmental Assessment.

The company submitted an updated project description and consultation plan in 2017 for a proposed open pit that would produce approximately 1 Mt/year over an estimated 15-year lifespan.

Crows Nest Pass Coal Mining Limited continued environmental baseline studies and water quality surveys at their **Coal Creek** property south of Fernie. Pre-feasibility work and geological modelling studies are continuing.

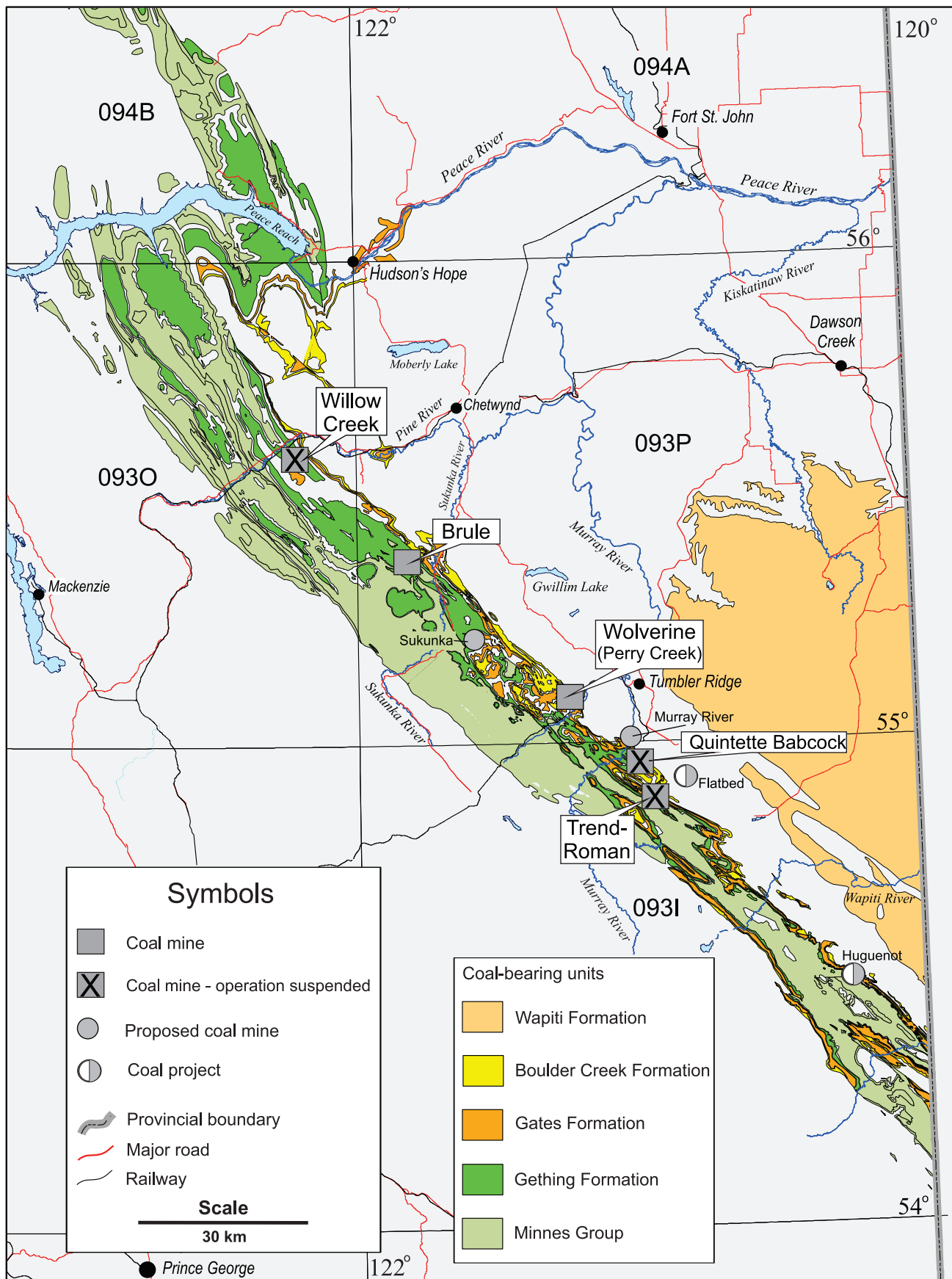


Fig. 7. Coal mines and selected exploration projects, northeastern British Columbia.

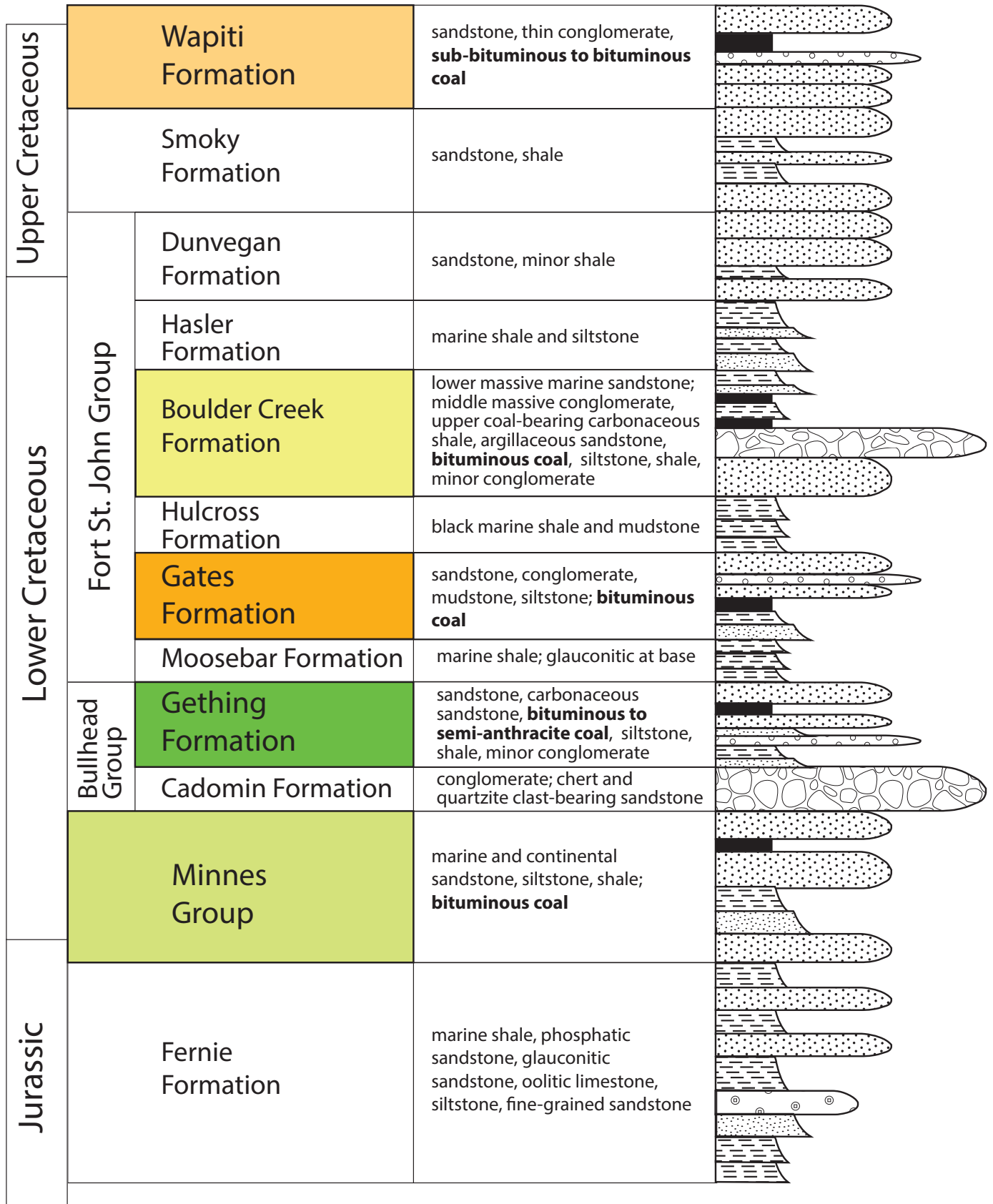


Fig. 8. Coal stratigraphy of northeastern British Columbia.

Table 1. Coal mines in British Columbia; production and reserve numbers for 2017.

Mine	Operator	Deposit Type/ Commodity	Forecast 2017 Production	Reserves as of Dec. 31, 2016 (Proven + Probable)
Brule	Conuma Coal Resources Limited	ULV PCI coal	2.33 Mt	16.3 Mt Proven
Coal Mountain	Teck Coal Limited	PCI	2.7 Mt	2.7 Mt PCI
Elkview	Teck Coal Limited	HCC	6.3 Mt	266 Mt HCC
Fording River	Teck Coal Limited	HCC	9.1 Mt	389.5 Mt HCC
Greenhills	Teck Coal Limited	HCC	6.2 Mt	173.3 Mt HCC
Line Creek	Teck Coal Limited	HCC and thermal coal	3.7 Mt	64.7 Mt HCC 10.7 Mt thermal
Quinsam & 7 South	Quinsam Coal Corporation	Thermal coal	<50,000 t	not available
Trend & Roman	Anglo American plc	HCC	0	34.1 Mt HCC
Willow Creek	Conuma Coal Resources Limited	HCC and ULV PCI	0	16.6 Mt
Wolverine (Perry Creek)	Conuma Coal Resources Limited	HCC	1.14 Mt	8.8 Mt Proven

HCC = hard coking coal; PCI = pulverized coal injection; ULV = ultra-low volatile



Fig. 9. Large diameter core drilling for coking coal quality testing at the Fording River Swift expansion area.

In the early stages of exploration, Pacific American Coal Limited began exploration and sampling work, and conducted baseline and wildlife for their planned drilling at the **Elko** project.

Northeastern British Columbia Mining

Conuma Coal Resources Limited resumed production at the **Brule** and **Perry Creek (Wolverine)** (Fig. 10) mines late in 2016, and combined to produce 3.5 million tonnes in 2017. The company expects to re-open the **Willow Creek** mine in 2018, after a closure of 4 years due to low prices.

Approval of the **Murray River** mining project (HD Mining International Limited) by the Federal cabinet was announced on December 13, 2017, following a federal environmental assessment. The mine will produce coking coal from an underground operation.

Anglo American plc's **Trend** coal mining operations, suspended in 2014, remained idle throughout 2017.

The planned reopening of the Teck Resources Limited's **Quintette** mine at Mount Babcock remains on hold, as does the opening of the new Anglo American plc's **Roman Mountain** expansion area for the **Trend** mine.

Exploration

Exploration in the northeast coalfields was subdued in 2017. Colonial Coal International Corporation drilled 2832 m at the Flatbed project near Tumbler Ridge. Flat-lying coal was

Table 2. Selected coal exploration and development projects in British Columbia 2017.

Property name	Operator name	Status	2017 activity	Region
Bingay Main	Centermount	Pre-application EA*	Drilling Environmental Engineering Mine design Permitting	Southeast
Coal Creek	Crows Nest Pass Coal Mining Limited	Exploration	Geological modelling Pre-feasibility Resource assessment	Southeast
Cougar (Greenhills Operations)	Teck Coal Limited	Cougar Pit Expansion approved	Coal quality testing	Southeast
Crown Mountain	Jameson Resources Limited	Pre-application EA	Engineering design Environmental Baseline Mine plan update	Southeast
Elko	Texas and Oklahoma Coal Company (Canada)	Exploration	Exploration Sampling Environmental and wildlife baseline study	Southeast
Elkview (Baldy Ridge Extension)	Teck Coal Limited	EA certificate received	Drilling	Southeast
Fording-Swift	Teck Coal Limited	EA certificate received	Drilling Coal quality	Southeast
Groundhog	Atrum Coal Ltd.	Exploration	Test sampling Environmental baseline	Northwest
Line Creek Phase II	Teck Coal Limited	Approved EA	Development	Southeast
Michel Creek (Loop Ridge)	North Coal Limited (formerly CanAus Coal Limited)	Pre-application EA	Drilling Coal quality	Southeast
Murray River	HD Mining International Limited	Federal approval received December 2017	Inactive pending Federal decision	Northeast
Panorama	Atrum Coal Ltd.	Exploration	Drilling Wash tests	Northwest
Quintette - Babcock	Teck Coal Limited	Mining permit in place	Development on hold	Northeast
Roman Mountain	Anglo American plc (Peace River Coal Inc.)	Mining permit in place	Development on hold	Northeast
Sukunka	Glencore plc	EA Application under review	On hold	Northeast
Telkwa	Allegiance Coal	Planning	Pre-Feasibility	Northwest
*EA Environmental Assessment				



Fig. 10. Mining resumed at the Perry Creek (Wolverine) mine in late 2016 after a closure of more than 3 years.

encountered at 700 m at the underground prospect. Flatbed's first resource estimate is in preparation for filing on SEDAR. Environmental data collection continued at the company's Huguenot property. The Sukunka project was inactive in 2017.

Northwestern and north-central British Columbia Exploration

At the **Groundhog North** project, Atrum Coal Ltd. continued environmental baseline studies and extracted anthracite samples for testing in North Asian steel mills. A bulk sample permit application was put on hold. Atrum's **Panorama** project was drilled and sampled for washability testing.

Allegiance Coal Limited completed a Pre-Feasibility Study for the first phase of a staged development of the **Telkwa** coal deposit. The company plans to produce 250,000 tonnes per year during a 19 year mine life from the Tenas Pit.

Vancouver Island Mining

The **Quinsam** thermal coal mine near Campbell River was sold by Hillsborough Resources Limited to ERP Compliant Fuels LLC in 2017. The mine continues to be operated by Quinsam Coal Corporation. Production resumed in October after a suspension of operations for 20 months.

Exploration

No new coal exploration was undertaken on Vancouver Island in 2017.

Transportation infrastructure

Coal produced in the Elk River and Crowsnest coalfields in southeastern British Columbia is transported by rail to Westshore Terminals in Delta and Neptune Bulk Terminals in North Vancouver for export (Fig. 2). The coalfields of northeastern British Columbia are connected by rail to Ridley

Island Terminals near Prince Rupert.

The \$275 million upgrade of the Westshore facility continued in 2017. The expansion began in 2014 and is scheduled to be completed in 2018. At the Neptune facility, detailed engineering work was conducted to support the coal system improvement project that received a permit in 2016.

Fraser Surrey Docks obtained a permit in 2014 from Port Metro Vancouver to add a coal shipping facility to its existing terminal on the Fraser River. The permit is currently under Federal judicial review.

Coal tenure

The Mineral Titles Branch of the British Columbia Ministry of Energy and Mines maintains a website that provides information about Coal Titles regulations and resources for researching and acquiring coal tenures in the 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 licenses 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 (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 per hectare plus \$7 per hectare first year rental. Coal licenses 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 (Table 3).

Before carrying out exploration that involves mechanized ground disturbance, the licence holder must possess a permit under the Mines Act. The application for approval of exploration activities is termed a Notice of Work (NOW). A Notice of Work can be submitted at the same time as the coal licence application (Table 3), 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 30 years, followed by 15 years upon renewal. All appropriate approvals and authorizations must be in place before commencing work on a coal lease (Table 3).

Table 3. Websites to access coal tenure information.

To access	Click
Coal titles	https://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	http://www.empr.gov.bc.ca/Mining/Geoscience/Coal/Pages/Reporting_Information.aspx
Permitting and Reclamation, and Notice of Work submissions	http://www2.gov.bc.ca/gov/content/industry/mineral-exploration-mining/permitting
Environmental Assessment Office	http://www.eao.gov.bc.ca/ea_process.html

Table 4. Websites to access British Columbia Geological Survey publications, maps and databases, at no charge.

To access	Click
British Columbia Geological Survey publication catalogue	http://www.empr.gov.bc.ca/MINING/GEOSCIENCE/PUBLICATIONSCATALOGUE/Pages/default.aspx
British Columbia Coal Industry Overview 2017 (this volume)	www.empr.gov.bc.ca/Mining/Geoscience/PublicationsCatalogue/InformationCirculars/Pages/IC2018-2.aspx
British Columbia Geological Survey Geological Fieldwork	www.empr.gov.bc.ca/Mining/Geoscience/PublicationsCatalogue/Fieldwork/Pages/default.aspx
British Columbia Geological Survey coal geology page	www.empr.gov.bc.ca/Mining/Geoscience/Coal/Pages/default.aspx
Provincial Overview of Exploration and Mining in British Columbia, 2017	http://www.empr.gov.bc.ca/Mining/Geoscience/PublicationsCatalogue/InformationCirculars/Pages/IC2018-1.aspx
Table of British Columbia coal resources (British Columbia Geological Survey GeoFile 2010-11, by B. Northcote)	www.empr.gov.bc.ca/Mining/Geoscience/PublicationsCatalogue/GeoFiles/Pages/2010-11.aspx
British Columbia coal assessment reports and COALFILE	www.empr.gov.bc.ca/Mining/Geoscience/Coal/CoalBC/Pages/CoalDataReports.aspx
MINFILE	http://www.empr.gov.bc.ca/Mining/Geoscience/MINFILE/Pages/default.aspx
MapPlace	www.empr.gov.bc.ca/mining/geoscience/MapPlace2
British Columbia digital geology	www.empr.gov.bc.ca/Mining/Geoscience/BedrockMapping/Pages/BCGeoMap.aspx

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

British Columbia Geological Survey information sources

Founded in 1895, the British Columbia Geological Survey integrates historical data with active research programs and, drawing on continuously advancing concepts and technologies in the Earth sciences, thus supports the coal and mineral industries. The British Columbia Geological Survey preserves, archives, and provides free web-based access to over a century's worth of geoscience information (Table 4). Each year in January, the British Columbia Geological Survey releases its Geological Fieldwork volume (a summary of field activities and current research), summaries of exploration and mining at the provincial and regional levels, and the present coal industry overview.

Since 1995, MapPlace has provided open geoscience data and custom map-making tools to aid in discovering coal and mineral potential in British Columbia. Introduced in 2016 and building on its predecessor, but with a simpler interface, MapPlace 2 is easier to use, faster, handles larger datasets, provides access to third-party base maps and imagery and can be used on either a Mac or PC. People can conduct queries, generate custom results, and efficiently mine geoscience 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; the 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 14,600 metallic, industrial mineral, and coal occurrences in British Columbia. COALFILE is the database of coal reports. It contains a collection of almost 1000 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 in a relational database, including data for about 15,500 boreholes, 550 bulk samples, 5600 maps, 3600 trenches, and 500 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.

Contacts at the Ministry of Energy, Mines and Petroleum Resources and the British Columbia Geological Survey

Ministry of Energy, Mines and Petroleum Resources and British Columbia Geological Survey personnel (Table 6) are available for consultation. Should you wish to be 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 5. Industry contacts.

Coal Association of Canada	www.coal.ca
Teck Coal Limited	www.teck.com
Conuma Coal Resources Limited	www.conumacoal.com
Atrum Coal Ltd.	http://atrumcoal.com/
Quinsam Coal Corporation	250-286-3224
Anglo American Canada plc	www.angloamerican.ca
Canadian Dehua International Mines Group Incorporated	http://www.dehua.ca/
Centermount Coal Limited	http://www.centerpointcanada.com/
Colonial Coal International Corporation	http://ccoal.ca/
Crowsnest Pass Coal Mining Limited	http://www.crowsnestpasscoal.com
Glencore Limited	www.sukunkaproject.ca
HD Mining International Limited	http://www.hdminingintl.com/
Jameson Resources Limited	http://www.jamesonresources.com.au/
North Coal Limited (formerly CanAus Coal Limited)	778-518-0775 Website: northcoal.ca coming soon
Pacific American Coal Limited	http://www.pamcoal.com/

Table 6. British Columbia Ministry of Energy, Mines and Petroleum Resources 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
Chris Smith Director, Coal Titles Mineral Titles Branch, Victoria	778-698-7150 chris.smith@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 Cranbrook	250-416-6010 fiona.katay@gov.bc.ca
John DeGrace (Acting) Regional Geologist, Northeast and North Central Prince George	250-565-4316 john.degrace@gov.bc.ca
Bruce Northcote Regional Geologist, Southwest Vancouver	604-660-2713 bruce.northcote@gov.bc.ca
Vacant Regional Geologist, Northwest Smithers	
Vacant Regional Geologist, South Central Kamloops	

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