

# BRITISH COLUMBIA COAL INDUSTRY OVERVIEW 2012

British Columbia Ministry of Energy, Mines and Natural Gas British Columbia Geological Survey Information Circular 2013-2



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# Ministry of Energy, Mines and Natural Gas British Columbia Geological Survey

#### INTRODUCTION

British Columbia's coal industry was busy in 2012. Production tonnages, exploration expenditures, and tenure applications all reached record levels. The estimated total coal output was over 30 million tonnes, which accounted for about \$5.1 billion of the 7.4 billion in production revenues from all mines in the province. Major markets for British Columbia coal include Asian countries, notably Japan, China, South Korea and India, and countries in South America and Europe. Looking forward, new mine proposals are being evaluated, and several port facilities are planning to increase export capacity.

This booklet provides a snapshot of the coal industry in British Columbia, including sections on trends, resources, mining, exploration, the tenure system, sources of information, and contacts in government and industry. It complements the more general reports produced by the Mineral Development Office: "Provincial Summary, Exploration and Mining in British Columbia 2012" and "Regional Geologist Summaries Exploration and Mining in British Columbia 2012", (see INFORMATION SOURCES below).

Coal is currently produced from ten mines in three regions (Fig. 1). Five mines in southeast British Columbia and four in the northeastern part of the province produce mainly coking and PCI (pulverized coal injection) coal, whereas the Quinsam mine on Vancouver Island produces thermal coal

#### **COAL INDUSTRY TRENDS, 2012**

Following an historic peak in 2011, coking coal prices decreased as global inventories increased. Prices (all \$ US, West Coast port) for premium hard coking coal (HCC) declined abruptly late in 2012, from \$220 per tonne in June to \$175 per tonne in the fourth quarter. Pulverized coal injection coal (PCI) prices ranged between \$144-180. Prices for thermal coal were less volatile, averaging \$114 for most of the year. Despite price decreases, the province saw a record year for coal license applications, total exploration expenditures hit a record high due to a surge in spending on mine evaluation and advanced projects, many properties inactive since the early 1980s were re-evaluated and, reflecting the importance of foreign markets, port expansions and upgrades continued.

The Westshore Terminals coal port in Delta, which services the Elkview and Crownest coalfields in southeast

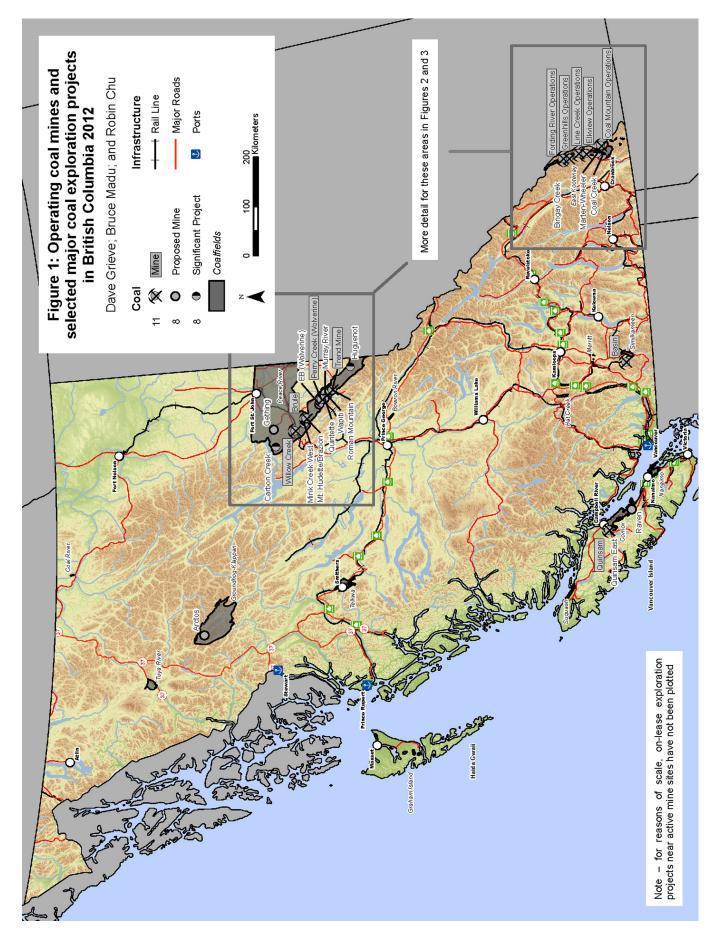
British Columbia, completed Phase 2 of an ongoing equipment upgrade. Annual capacity at Westshore has increased from 23.5 to 33 million tonnes in the past 5 years. One of Westshore's two loading berths was damaged in December 2012, when a bulk carrier crashed through a conveyor system, reducing loading capacity by 50%. Westshore expects repairs to be fully completed by the end of March 2013. Also servicing southeastern coalfields, as well as the Quinsam mine on Vancouver Island, Neptune Bulk Terminals in North Vancouver received approval from Port Metro Vancouver early in 2013 to increase annual coal export capacity from 9 million to 18 million tonnes. Coal from mines in the northeastern part of the province is transported by rail to the Ridley Terminals near Prince Rupert. Ridley Terminals, which is a Crown-owned asset, plans to increase annual capacity from 12 to 24 million tonnes, to handle anticipated increased production of coking and PCI coal from the Peace River coalfield. In December 2012, the Canadian Government announced plans to sell Ridley Terminals.

Fraser Surrey Docks in Surrey has applied to Port Metro Vancouver for approval to develop part of its facility to transfer thermal coal from Wyoming. The coal would be loaded onto barges for transport to the deep-water port on Texada Island in the Strait of Georgia, and from there be loaded onto ocean-going freighters. The current plan is to build initial annual capacity of four million tonnes, which would increase to eight million tonnes in future years.

#### **COAL REGIONS**

Coal seams of economic interest occur in several regions of British Columbia and range in age from Upper Jurassic to Tertiary. The distribution of coalfields follows the southeast-to-northwest tectonic and physiographic "grain" of the province (Fig. 1). Currently, most coal mining is in the Rocky Mountain belt of eastern BC. Farther west, coalfields are in the interior of the province, and on west coast islands (Vancouver Island and Haida Gwaii).

In the East Kootenay coalfields of **southeast BC**, which extend 175 km along the Rocky Mountains (Fig. 2), economic coal seams are hosted by the Mist Mountain Formation of the Jurassic-Cretaceous Kootenay Group. Most of the known resource is metallurgical coal, ranging mainly from high-volatile A bituminous to low-volatile bituminous. Southeast BC coals are characterized by low total sulphur contents and low ash base-acid ratios. Potentially mineable coal resources in southeast BC are estimated at about 8.0 billion tonnes.



The Peace River Coalfield of northeast BC (Fig. 3) extends along the Rocky Mountain Foothills for over 400 km. The coals occupy a stratigraphic interval of over 3000 m and are hosted by four units, the most important of which are the Gates Formation (Fort St. John Group, Lower Cretaceous) and Gething Formation (Bullhead Group, Lower Cretaceous). Coal rank in the Gething and Gates formations ranges from high-volatile A bituminous to low-volatile bituminous. The known resources are predominantly metallurgical coals, and total sulphur contents are typically low. Seams in the Upper Cretaceous Wapiti Formation are lower in rank and have potential for thermal coal resources. Thin coal seams in the Lower Cretaceous Minnes Group are not currently exploration targets. Northeast BC contains about 4.9 billion tonnes of potentially mineable coal, an estimate that is likely to increase as exploration continues. The marketability of Gething Formation coals has benefitted from increasing use of pulverized coal injection (PCI) products in steel production.

In **northwest BC**, the Groundhog-Klappan Coalfield (Fig.1) is hosted by the Jurassic-Cretaceous Bowser Lake Group. Covering approximately 2300 km², the field contains Canada's only significant anthracite deposits. The estimated potential of the region is in excess of 9 billion tonnes of semi-anthracite to meta-anthracite coal. Several other smaller basins host coal in northwest BC, including the Telkwa Coalfield south of Smithers, the Tuya River deposit southwest of Dease Lake, and the Naskeena prospect north of Terrace (Fig.1).

Coal is found in numerous, relatively small Tertiary basins in the **southern interior of BC**, including the Similkameen, Merritt, and Hat Creek coalfields. Tertiary basin coal ranks range from lignite to high-volatile bituminous; these are generally low-sulphur coals.

On **Vancouver Island**, coal in the Nanaimo and Comox coalfields is hosted by several formations within the Upper Cretaceous Nanaimo Group. Coal ranks are generally in the high-volatile A to B bituminous range, and sulphur contents are variable.

There are no active coal mines in the Tertiary Basins of **southern interior BC**. Coalmont Energy Corp is currently working toward reopening the Basin thermal coal mine in the Similkameen Coalfield near Princeton.

#### **COAL MINING**

Over the past 20 years, annual coal production from British Columbia has ranged between 22 and 28 million tonnes. In 2012, production surpassed 30 million tonnes for the first time (Table 1).

Coal has been mined in **southeast BC** since the opening of trans-Canada rail lines in the late 1800s. Teck Coal

Limited's five mine operations (all open pit, truck and shovel) in the East Kootenay coalfields (Fig. 2) increased total production to a forecast 24.2 million tonnes of washed coal in 2012. Hard coking coal is the main product from the Fording River, Greenhills, Line Creek (Fig. 3) and Elkview mines. The Coal Mountain mine east of Fernie produces primarily pulverized coal injection (PCI) coal. The total of the proven and probable reserves at the five southeast BC mine sites, as of December 31, 2011, was just less than 1 billion tonnes.

Northeast BC has seen a resurgence of coal production since mines that were active in the 1980s shut down (Quintette closed in 2000; Bullmoose Mines closed in 2003). In 2012, the Peace River Coalfield (Fig. 4) hosted four mines (Table 1). All four are open-pit, truck and shovel operations working seams from the Gates or Gething formations. Products are medium- and low-volatile bituminous in rank, and include coking coal and PCI. Western Coal Corp., now a subsidiary of Walter Energy Inc., operates the Wolverine mine, which opened in 2007, and the Brule and Willow Creek mines, which opened in 2004. The projected 2012 total production of 4.5 million tonnes of washed coal from Walter's British Columbia operations included hard coking coal and PCI coal products. The largest operation, Perry Creek, which is part of the Wolverine Project, produces predominantly hard coking coal, whereas Brule and Willow Creek produce predominantly PCI coal. Peace River Coal (100% owned by Anglo American Coal plc) produces mainly hard coking coal at the Trend Mine, which opened in 2006; 2012 production was forecast to be 1.0 million tonnes of washed coal.



Figure 4: Toren Olver of Teck Resources explains operations to Ministry geologists, Line Creek Mine, Elk River Coalfield.

On **Vancouver Island** Hillsborough Resources Limited continues to produce thermal coal from the Quinsam Mine in the Comox Coalfield. Quinsam is an underground room-and-pillar operation. Forecast 2012 production was 365 000 tonnes. In 2012, production operations expanded into

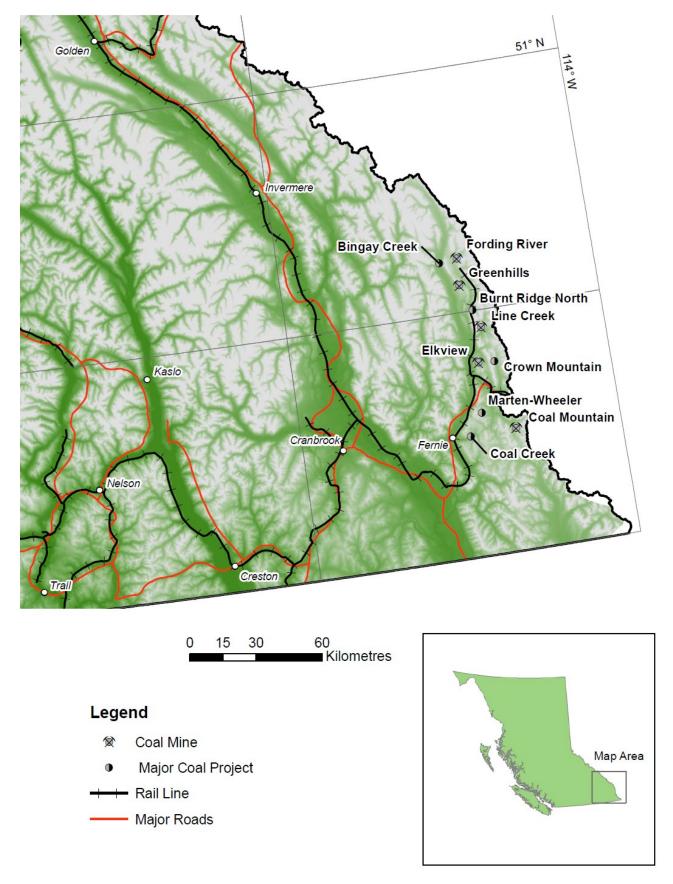


Figure 2: Operating coal mines and selected exploration projects, southeast BC, 2012. Large on-lease exploration drilling programs at three mines (Fording River, Greenhills and Elkview) are not plotted.

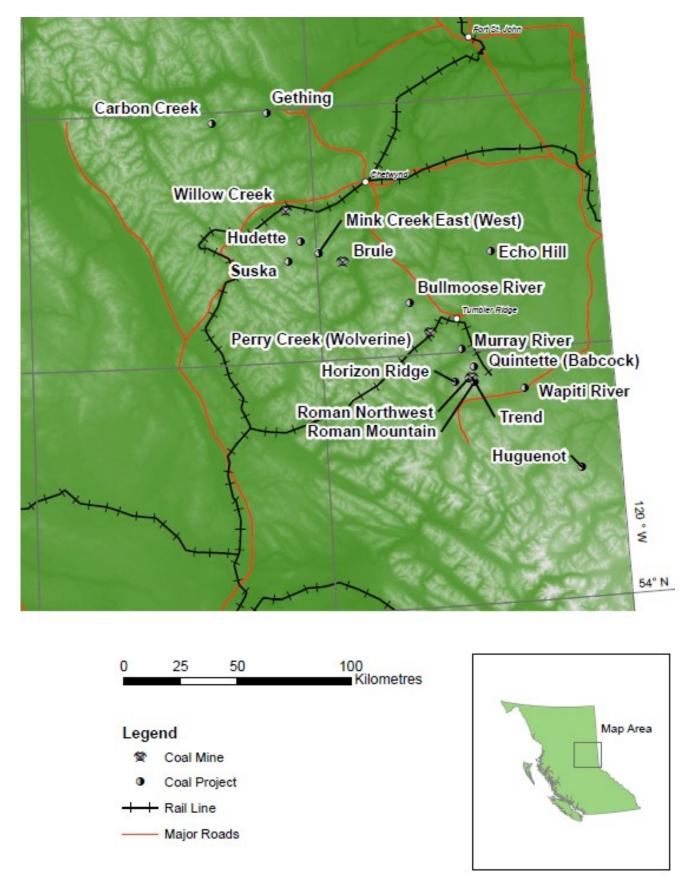


Figure 3: Operating coal mines and selected exploration projects, northeast BC, 2012.

TABLE 1: PRODUCTION AND RESERVE ESTIMATES FOR COAL PRODUCERS IN BRITISH COLUMBIA, 2012

Mine	Operator	Deposit Type / Commodity	Forecast 2012 Production	Proven and Probable Reserves (on Dec 31, 2011, or as indicated)
Brule	Walter Energy Inc (Western Coal Corp)	ULV PCI coal	1.8 Mt	21.1 million tonnes
Coal Mountain	Teck Coal Ltd	PCI and thermal coal	2.687 Mt	15.9 million tonnes
Elkview	Teck Coal Ltd	HCC and PCI coal	4.653 Mt	215 million tonnes
Fording River	Teck Coal Ltd	HCC and thermal coal	8.915 Mt	626.5 million tonnes
Greenhills	Teck Coal Ltd	HCC, PCI and thermal coal	4.544 Mt	75.3 million tonnes
Line Creek	Teck Coal Ltd	HCC, PCI and thermal coal	3.4 Mt	67.2 million tonnes
Quinsam & 7 South	Quinsam Coal Corp (Hillsborough Resources Ltd)	Thermal coal	365 000 t washed coal	N/A (Developing 5,10,15 year plans)
Trend	Anglo American plc (Peace River Coal Inc)	НСС	1.0 Mt washed coal	22.6 million tonnes
Willow Creek	Walter Energy Inc (Western Corp Corp)	HCC and ULV PCI	0.9 (0.6 PCI, 0.3 HCC)	19.9 million tonnes
Wolverine (Perry Creek)	Walter Energy Inc (Western Coal Corp)	НСС	1.8 Mt	12.9 million tonnes

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



Figure 5: Site preparation of the 7 South area at Quinsam Mine, Vancouver Island. A coal seam is exposed in the centre of the frame.

the 7-South area (Fig. 5), approximately 3.5 km from the main Quinsam mine.

Although no coal deposits in the Tertiary Basins of **southern interior** were mined in 2012, Coalmont Energy Corporation worked toward the anticipated reopening of the Basin thermal mine near Princeton (2013).

## COAL EXPLORATION AND DEVELOPMENT

Coal exploration expenditures in British Columbia reached

a record high of over \$150 million in 2012. Most spending was on expansions adjacent to active mines and advanced projects that moved from exploration to mine evaluation and development (Table 2).

In **southeast BC** coal exploration and development expenditures totalled over \$37 million. All five Teck operations have potential expansion projects in the exploration, permitting, or development stage (Table 2). Over 32 000 m of in-pit drilling was done to refine reserve

definitions and for coal quality analysis, geotechnical analysis, and structural interpretation. Permitted mining areas, such as the Line Creek Phase II Expansion, were pre-stripped. Centermount Coal Limited's exploration at the Bingay Main project (Fig. 6) included drilling, trenching, mapping, and coal quality analysis. The Bingay project entered the Environmental Assessment Process (EAP) in 2012. Jameson Resources carried out a drilling project on the Crown Mountain property, the first on the site in over 30 years. Crowsnest Pass Coal Mining Limited conducted a rotary drilling program on the Coal Coal Creek Project, 8 km east of Fernie. Teck Coal continued to assess the potential of the Marten-Wheeler property northeast of Fernie, with a rotary drilling program.



Figure 6: Geotechnical exploration drilling on the Bingay Creek coal property of Centermount Coal Limited.

In **northeast BC**, 2012 was a record year for coal exploration and activity, due to continued mine development and exploration. Spending more than doubled from 2011 levels to \$109.3 million. Expansion work was carried out adjacent to operating mines, and other exploration projects moved toward opening new mines. Anglo American plc/Peace River Coal Inc continued to evaluate potential expansion areas for the Trend Mine at the adjacent Roman Mountain, Roman Northwest, and at Horizon Ridge properties. HD Mining International Ltd, a joint venture of Canadian Dehua International Mines Group Inc (CDIMG) and Huiyong Holdings Group,

completed initial stages of surface facility area development and bulk sample excavation at the Murray River underground metallurgical coal project. CDIMG carried out exploration drilling programs at Wapiti River and Bullmoose River properties, the latter in joint venture with Canadian Bullmoose Mines Co Ltd. Canadian Kailuan Dehua Mines Co Ltd ran a geotechnical drilling program at the Gething property to support a mine surface facility and proposed bulk sampling project similar to that of CDIMG at Murray River. Cardero Resources Corp completed a Preliminary Economic Assessment (PEA) and prefeasibilty study for the Carbon Creek project (Fig. 7). Colonial Coal International Corp drilled at the Huguenot property, and provided an updated NI 43-101 compliant resource estimate. Hillsborough Resources Ltd (owned by Vitol B.V.) submitted a revised Project Description for the Echo Hill thermal coal mine project (formerly the Wapiti Project) to the Environmental Assessment Office. Drilling by Teck Coal Ltd tested reopening workings on Mount Babcock at the Quintette property. Through drilling, Walter Energy (Western Coal) evaluated the Willow Creek South and West projects (near the Willow Creek mine) and the Mt Hudette/Brazion and Mink Creek projects, (near the Brule mine). Xstrata Coal (75%) and JX Nippon Oil and Energy (25%) completed phase-1 drilling, supporting a prefeasibility study at the Suska property.



Figure 7: Gething Formation coal seam No. 31 in core, Cardero Coal's Carbon Creek project .

In **northwest BC**, Fortune Minerals and Atrum Coal are active in the Groundhog-Klappan Coalfield. Fortune Minerals Limited completed a Definitive Feasibility Study for the Lost Fox area of their Arctos (formerly Mount Klappan) anthracite deposit. Atrum Coal initiated their Groundhog project with drilling in the Discovery/Beirnes Creek areas

On Vancouver Island, near the active Quinsam Mine, resources in the Quinsam North area may extend mine life significantly; exploration was conducted at the Quinsam East property, 8 km east of the main mine site. Elsewhere on Vancouver Island, Comox Joint Venture partners Compliance Energy Corporation, Itochu Corporation, and LG International Corp, evaluated the Raven Project, another potential underground operation.

TABLE 2: SELECTED EXPLORATION AND DEVELOPMENT PROJECTS, 2012

Property name	Operator name	Status	Region
Arctos (Mount Klappan)	Fortune Minerals Ltd	Pre-application (EA)	Northwest
Basin	Coalmont Energy Corp	Mine reopening planned in 2013	Southern Interior
Bingay Main	Centermount Coal Ltd	Pre-Application (EA)	Southeast
Bullmoose River	Canadian Dehua International Mines Group Inc/Canadian Bullmoose Mines Co Ltd	Exploration	Northeast
Burnt Ridge North (Line Creek Operations)	Teck Coal Limited	Exploration	Southeast
Carbon Creek	Cardero Resource Corp (Coal	Pre-application (EA)	Northeast
Coal Creek	Crowsnest Pass Coal Mining Ltd	Exploration and mine evaluation	Southeast
Cougar North Extension Greenhills Operations)	Teck Coal Ltd	Exploration	Southeast
Crown Mountain	Jameson Resources Ltd	Exploration	Southeast
Dunlevy	Jameson Resources Ltd	Exploration	Northeast
EB (Wolverine Project)	Walter Energy Inc (Western Coal Corp)	Approved (EA)	Northeast
Echo Hill Thermal	Hillsborough Resources Ltd	Pre-application (EA)	Northeast
Elkview Operations	Teck Coal Limited	Exploration	Southeast
Gething	Canadian Kailuan Dehua Mines Co Ltd	Pre-application (EA)	Northeast
Groundhog	Atrum Coal	Exploration	Northwest
Henretta Phase 4	Teck Coal Limited	Exploration	Southeast
Hermann (Wolverine Pro- ect)	Walter Energy Inc (Western Coal Corp)	Approved (EA)	Northeast
Horizon Ridge	Anglo American Canada plc	Pre-application	Northeast
Hudette/Brazion	Walter Energy Inc	Exploration	
Huguenot	Colonial Coal International Corp	Exploration	Northeast
Line Creek Phase 2 (Line Creek Operations)	Teck Coal Ltd	Under Review (EA)	Southeast
Marten-Wheeler	Teck Coal Ltd	Exploration and mine evaluation	Southeast
Mink Creek (East and West)	Walter Energy Inc (Western Coal Corp)	Exploration	Northeast
Murray River	HD Mining International Ltd	Pre-application (EA)	Northeast
Quinsam East	Hillsborough Resources Ltd	Exploration	Vancouver Island
Quintette - Babcock	Teck Coal Ltd	Awaiting MAPA (Mines ActPermit Amendment)	Northeast
Raven	Comox Joint Venture (Compliance Energy Corporation, Itochu Corporation, LG International Corp)	Pre-application (EA), Mine evaluation	Vancouver Island
Roman Mountain	Anglo American plc (Peace River Coal Inc)	Certificate issued (EA)	Northeast
Roman Northwest	Anglo American plc (Peace River Coal Inc)	Exploration	Northeast
Suska	Xstrata Coal	Exploration	Northeast
Swift Project (Fording River Operations)	Teck Coal Ltd	Pre-application (EA)	Southeast
Frend (expansion)	Anglo American plc (Peace River Coal Inc)	Mine evaluation	Northeast
Wapiti River	Canadian Dehua International	Exploration	Northeast
Williston North (Pink Mountain)	Anglo American plc (Peace River Coal Inc)	Exploration	Northeast
Willow Creek South & West	Walter Energy Inc	Exploration	Northeast

Mine development refers to the exploration stage when viability of the profitability of a mine is assessed, and includes refinement of reserve definitions.

Mine evaluation refers to the exploration stage during which environmental, social, and engineering studies are undertaken, and applications for production permits are prepared for government. EA = Environmental Assessment. For details see "Regional Geologist Summaries, Exploration and Mining in British Columbia 2012" at <a href="http://www.empr.gov.bc.ca/Mining/Geoscience/PublicationsCatalogue/ExplorationinBC/Documents/2012RegSumExpln/RegionalGeologistSummaries2012.pdf">http://www.empr.gov.bc.ca/Mining/Geoscience/PublicationsCatalogue/ExplorationinBC/Documents/2012RegSumExpln/RegionalGeologistSummaries2012.pdf</a>

#### **COAL TENURE**

Coal applications reached a record level in 2012 (Fig. 8), with 217 applications for 638 821 hectares.

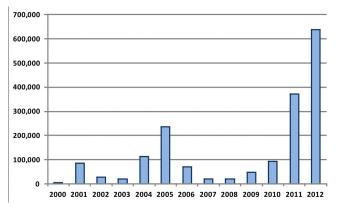


Figure 8: Coal license claim applications in hectares, 2000 -2012.

Coal tenure in BC is held in two forms: coal licence or coal lease. Analogous to a mineral claim, the **coal licence** is the initial stage of coal tenure, and is appropriate for exploration. Acquisition is initiated by 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.

Regularly updated coal tenure and application maps, both for specific areas and the entire province, can be viewed at: <a href="http://www.empr.gov.bc.ca/Titles/MineralTitles/Pub/Coal/Pages/Maps.aspx">http://www.empr.gov.bc.ca/Titles/MineralTitles/Pub/Coal/Pages/Maps.aspx</a>

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. It is recommended that 75 hectares per unit be used as an estimate for calculating total hectares. Coal licenses must be renewed annually by the anniversary date of the tenure acquisition. Links for the coal licence application and other forms may be found at <a href="http://www.empr.gov.bc.ca/Titles/MineralTitles/Pub/Coal/Pages/Forms.aspx">http://www.empr.gov.bc.ca/Titles/MineralTitles/Pub/Coal/Pages/Forms.aspx</a>

Annual renewal requirements include remittance of the annual rental fees and submission of a technical report on all exploration work during the previous year. For information on the format for technical report (Assessment Report) submissions, see

 $\frac{http://www.empr.gov.bc.ca/Mining/Geoscience/ARIS/}{Pages/Submissions.aspx}$ 

Before carrying out exploration that involves mechanized ground disturbance, the licence holder must possess a permit under the Mines Act. The application form for approval of exploration activities is termed a Notice of Work, and the form and information may be found at

http://www.empr.gov.bc.ca/Mining/Permitting-Reclamation/ApplicationForms/Documents/MX\_NoW (Jun21\_2011).pdf

A Notice of Work (NOW) can be submitted at the same time as the coal license application, but work cannot begin until tenure is granted.

A **coal lease** is the appropriate tenure to hold when a mineable resource has been proven and a project is ready to switch from exploration to production. 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. More information can be found at

http://www.empr.gov.bc.ca/Mining/Permitting-Reclamation/Pages/default.aspx

An environmental assessment is a key component for proposed major mine construction and expansion projects. Information, including links to the Environmental Assessment Process, can be found at

http://www.empr.gov.bc.ca/Mining/Permitting-Reclamation/Pages/EA.aspx



Figure 9: The Mist Mountain Formation, looking south at Fernie Ridge. The Mist Mountain Formation hosts the coal mined from the Elk River and Crow's Nest coalfields.

#### INFORMATION SOURCES

British Columbia Geological Survey main coal geology page http://www.empr.gov.bc.ca/Mining/Geoscience/Coal/Pages/default.aspx



Table of British Columbia Coal Resources (Northcote, 2010)
BC Ministry of Energy and Mines, British Columbia Geological Survey GeoFile 2010-11
http://www.empr.gov.bc.ca/Mining/Geoscience/PublicationsCatalogue/GeoFiles/Pages/2010-11.aspx

A compilation of industry resource and reserve estimates

British Columbia Coal Quality Survey (Grieve, Holuszko and Goodarzi, 1996)
BC Ministry of Energy and Mines, British Columbia Geological Survey Bulletin 96

 $\underline{http://www.empr.gov.bc.ca/Mining/Geoscience/PublicationsCatalogue/BulletinInformation/BulletinsAfter1940/Pages/\underline{Bulletin96.aspx}$ 

Provincial Summary, Exploration and Mining in British Columbia 2012

http://www.empr.gov.bc.ca/Mining/Geoscience/PublicationsCatalogue/InformationCirculars/Documents/IC2013-1.pdf
Annual summary of exploration and mining in BC for 2012

Regional Geologist Summaries, Exploration and Mining in British Columbia 2012

BC Ministry of Energy, Mines and Natural Gas, British Columbia Geological Survey Information Circular 2012-1 <a href="http://www.empr.gov.bc.ca/Mining/Geoscience/PublicationsCatalogue/ExplorationinBC/Documents/2012RegSumExpln/RegionalGeologistSummaries2012.pdf">http://www.empr.gov.bc.ca/Mining/Geoscience/PublicationsCatalogue/ExplorationinBC/Documents/2012RegSumExpln/RegionalGeologistSummaries2012.pdf</a>

Annual detailed descriptions of exploration and mining projects in BC, organized by region and written by the Regional Geologists

#### British Columbia Coal Assessment Reports and COALFILE

http://www.empr.gov.bc.ca/Mining/Geoscience/Coal/CoalBC/Pages/CoalDataReports.aspx

Assessment reports document exploration results. COALFILE is a database which summarizes exploration data from the coal assessment reports and provides an index to, and facilitates handling of, the data.

#### British Columbia Geological Survey MINFILE

http://www.empr.gov.bc.ca/MINING/GEOSCIENCE/MINFILE/Pages/default.aspx

Database inventory of known mineral and coal occurrences, providing geological setting, technical descriptions of each occurrence, and, where applicable, exploration and production history

### British Columbia Geological Survey MapPlace

# www.mapplace.ca

Desktop mapping platform for BC topography, geology, mineralization, titles and other mining-related information. All spatial databases managed by the BC Geological Survey are accessible. Includes a coal-themed map:

http://webmap.em.gov.bc.ca/mapplace/minpot/coal.cfm



#### Coal Titles website

http://webmap.em.gov.bc.ca/mapplace/minpot/coal.cfm

Site maintained by the Mineral Titles Branch of the BC Ministry of Energy and Mines. Provides information concerning the regulations pertaining to coal title, as well as guidance for researching and acquiring coal tenures in BC.

#### Environmental Assessment Office (EAO) website

http://www.eao.gov.bc.ca/ea process.html

Site maintained by the Environmental Assessment Office (EAO), which is a separate agency, independent of the Ministry of Energy, Mines and Natural Gas. This page provides information on the steps in the British Columbia Environmental Assessment process.

# **CONTACTS**

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Industry	
Coal Association of Canada	www.coal.ca
Teck Coal Limited	www.teck.com
Walter Energy Incorporated	www.walterenergy.com
Hillsborough Resources Limited	www.hillsboroughresources.com
Anglo American Canada plc	www.angloamerican.ca
Canadian Kailuan Dehua Mines Company Limited	www.kailuandehua.com
Fortune Minerals Limited	www.fortuneminerals.com
Compliance Energy Corporation	www.complicanceenergy.com
Crowsnest Pass Coal Mining Limited	www.grmresources.com
Cardero Resource Corporation	www.cardero.com
Colonial Coal International Corporation	www.ccoal.ca
Xstrata Coal Canada	www.xstratacoal.com
Centerpoint Coal Limited	http://centerpointcanada.ca
Jameson Resources Limited	www.jamesonresources.com.au
Coalmont Energy Corporation	http://coalmontenergy.com/
Atrum Coal	http://atrumcoal.com/
HD Mining	http://www.hdminingintl.com/



View of the Trend Mine and Roman Mountain, Peace River coalfield.



