History of Coal in B.C.

Coal mining in B.C. commenced on Northern Vancouver Island in the mid 19th Century, soon moving south to the Nanaimo coalfields where underground mining continued until the 1960’s. With the development of the railways, underground coal mining began in southeastern B.C. in the late 1800’s.

The industry has gone through many economic cycles, re-emerging in the late 1960’s in southeastern B.C. in the form of large-scale, open pit metallurgical coal mines in response to demand from the Japanese steel industry. Simultaneous with development of large-scale mines has been construction of port facilities such as Westshore Terminals, serving the southeastern coalfields, and Ridley Terminals, serving the northeast. Rail carriers implemented unit train haulage whereby complete train sets are dedicated to the exclusive use of moving coal from the mine to the port.

Exploration surged in the 1970’s and early 1980’s resulting in many good development prospects being identified in northeastern and southeastern BC. Producers diversified into other Asian, European, South American markets, supplying customers in more than 20 countries.

Production of coal continued to increase through the 1990’s, when approximately 25 million tonnes of clean coal were produced annually. Today, companies are once again considering underground mining to recover coal in B.C., and the northeastern coalfields have also re-emerged as a focus of industry expansion.

B.C. Coal Production

Coal contributes a very significant amount of revenue to B.C.’s economy. The average annual value of coal production over the last 5 years has been just over $3 billion, which represents over half the total value of mineral production in the province during that period.

More than 90% of the coal produced in British Columbia is metallurgical coal. B.C.’s metallurgical coal products generally have the following favourable characteristics: medium-volatile bituminous; clean coal ash < 9.5% (air dried); low sulphur (0.4% to 0.6%); low coke oven pressure; high coke stability and coke strength after reaction; low to moderate base/acid ratios; and excellent blending characteristics.

Value of Mineral Production in B.C.

Based on a 10 year average from 2000-2010

For More Information

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Coal in B.C.

www.empr.gov.bc.ca/Mining/Geoscience/Coal/Pages

British Columbia Coal Quality Survey (Bulletin 96)
by D.A. Grieve, M.E. Holuszko, and F. Goodarzi, 1995
www.empr.gov.bc.ca/Mining/Geoscience/PublicationsCatalogue/BulletinInformation/BulletinsAfter1940/Pages/Bulletin96.aspx

MINFILE

www.empr.gov.bc.ca/Mining/Geoscience/Minfile

MapPlace

www.empr.gov.bc.ca/Mining/Geoscience/MapPlace

BC Geological Survey

www.empr.gov.bc.ca/Mining/Geoscience
Coal Categories
In addition to carbon, coal contains hydrogen, oxygen, nitrogen, and varying amounts of sulphur, phosphorus and various other major and trace elements. There are several methods of classifying coals, but some of the more common ones are based on the concept of rank (organic maturity). High-rank coals are high in carbon and therefore heat value, and low in volatile components. Low-rank coals are low in carbon but high in volatiles.

The highest rank, and generally the hardest coal, is **anthracite**. In Canada it is found almost exclusively in remote regions of northern British Columbia and the Yukon. Mount Klappan is a large anthracite deposit in northwest British Columbia.

**Bituminous** coal is found in Alberta, British Columbia and the Maritimes. It is sub-divided into high, medium, and low-volatile categories (lower to higher rank). Certain bituminous coals can be classified as metallurgical coal (used to make coke for the steel industry). All bituminous coals make excellent thermal coal, which is mainly used to generate electricity. In 2002, bituminous coal accounted for approximately 45% of Canada’s total coal production, and bituminous coal is the primary category of coal produced in B.C.

**Sub-bituminous** coal is softer than bituminous and contains more moisture, making it less economic to transport long distances. Alberta is the only province where sub-bituminous coal is mined, and all of it is used to generate electricity. It is found in a few locations in B.C., but generally in relatively small sedimentary basins.

**Lignite** is a soft, brown or black coal found in southern Saskatchewan, southeastern Alberta, southwestern Manitoba, and a few locations in B.C., most notably Hat Creek.

<table>
<thead>
<tr>
<th>Coal Reserves from Producing Mines</th>
<th>Resource</th>
<th>Tonnage (P+P)</th>
<th>Year</th>
<th>NI 43-101</th>
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<tr>
<td>Willow Creek</td>
<td>29,600,000</td>
<td>2010</td>
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<tr>
<td>Brule</td>
<td>20,100,000</td>
<td>2010</td>
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<td></td>
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<td>Wolverine</td>
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<td></td>
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<td>Trend Mine</td>
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<td>Fording River</td>
<td>249,900,000</td>
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<td>Greenhills</td>
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<td>Elkview</td>
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<td>Quinsam</td>
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<td>2008</td>
<td>Y</td>
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