

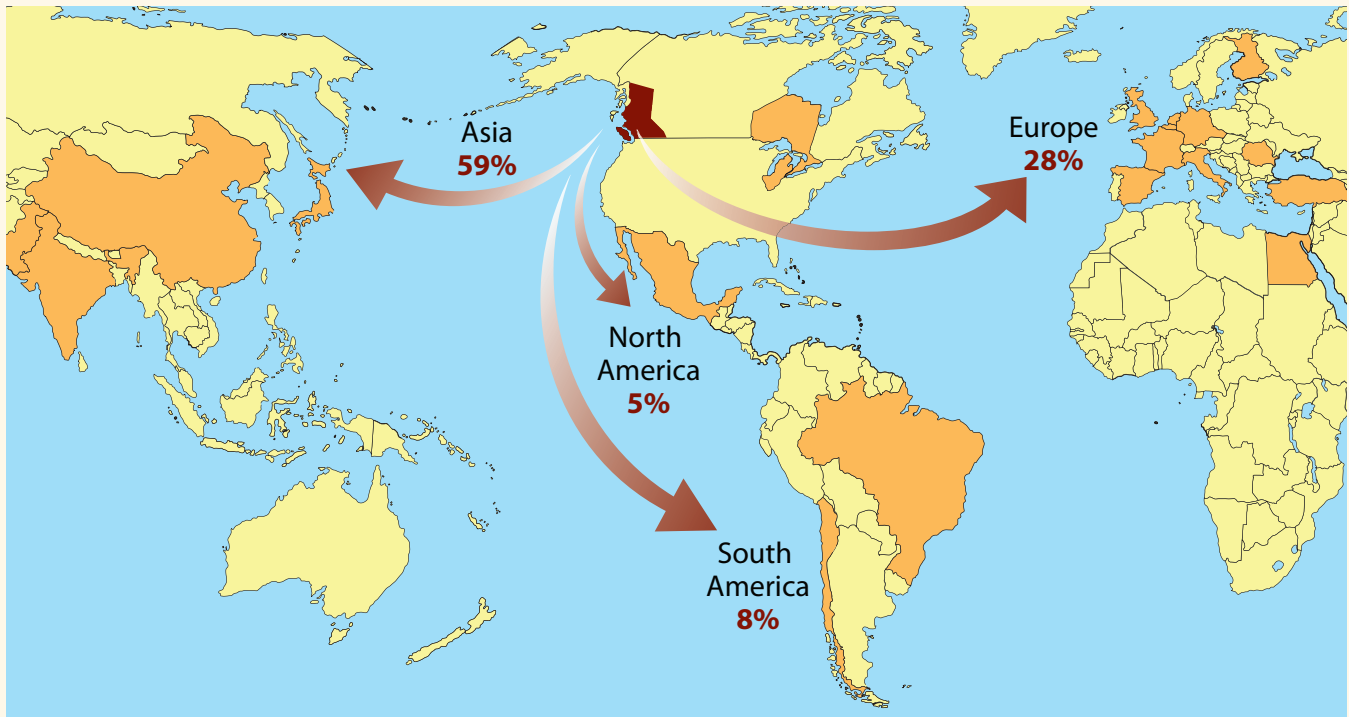


# Coal Resources in British Columbia: Opportunities, Logistics and Infrastructure



Ministry of  
Energy, Mines and  
Petroleum Resources

**British Columbia is Canada's largest exporter of coal.**



**Export Destinations for B.C. Coal**

**For information about investing in British Columbia's mineral resources,  
please visit: [www.empr.gov.bc.ca/MACR/investors/Pages/default.aspx](http://www.empr.gov.bc.ca/MACR/investors/Pages/default.aspx)**

# INTRODUCTION

British Columbia is Canada's largest exporter of coal and the second highest seaborne exporter of metallurgical coal globally, boasting a provincial resource of 13 billion tonnes. The province's resources of thermal coal follow closely behind at 10 billion tonnes. British Columbia provides high quality metallurgical coal for the manufacture of steel. British Columbia's thermal coal is used for electricity generation, cement manufacture and industrial process heating. British Columbia continues to offer extensive opportunities for the further development of coal resources throughout the province. With an increasing global demand for coal, British Columbia's coal resources are a significant opportunity for investment.

In 2008 in British Columbia, there were 9 operating coal mines, 1 coal mine development, and 7 coal projects in the permitting/Environmental Assessment process. Annual provincial coal production totalled 26 million tonnes worth approximately \$3 billion Canadian in 2008. Production has ranged from 23 to 27 million tonnes annually for the last decade. There is a complete range of coal types with significant resources found in the province ranging from lignite through bituminous to anthracite coals. Northern B.C. has one of the largest undeveloped anthracite resources in the world.

British Columbia's coal resources have strong linkages to Asian markets. In 2008, 59 per cent of B.C.'s coal exports were destined for steel production in Asia. Other destinations for B.C.'s coal exports included Europe, South America and the U.S.A. It can truly be said that B.C.'s coal is in demand throughout the world.

As well, the linkages between Asia and B.C. include investment by Asian companies in B.C.'s coal mines and projects under development with recent investments from China, Japan and Korea. B.C. has quality coal resources to supply world markets for many years to come.

British Columbia, Canada's gateway to the Pacific, has an ideal geographic location for supplying the Pacific Rim markets with coal products. In addition, the Province enjoys access to an ample supply of low-cost power, a high-quality road and rail network, and major deep water seaports that facilitate the transportation and exporting of coal products. With substantial undeveloped resources and an extensive infrastructure in place to support development and transport of coal resources, B.C. is well-positioned to continue its strong position in world coal markets.

See [British Columbia Mining and Minerals 2009: Opportunities to Explore](http://www.empr.gov.bc.ca/MACR/investors/Pages/default.aspx) for additional information about investing in British Columbia's mineral resources. [www.empr.gov.bc.ca/MACR/investors/Pages/default.aspx](http://www.empr.gov.bc.ca/MACR/investors/Pages/default.aspx)

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## **PROFILES OF SELECTED B.C. COAL COMPANIES**

<b>Canadian Dehua International Mines Group</b>	<b>3</b>
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The Government of British Columbia provides these profiles for information only and is not responsible for the content or reliability of the material and does not endorse the content, products, services or views expressed within them. Companies have voluntarily provided the information for their profiles.





COAL, METALLURGICAL					
<b>Contact Person</b>	Naishun Liu, President				
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1411– 409 Granville Street Vancouver, British Columbia Canada, V6C 1T2	T: 604 697 0118 F: 604 697 0113 E: info@dehua.ca W: www.dehua.ca				
<b>Symbol</b>	Private company				
<b>Current Status</b>	Exploration and Feasibility Study				
<b>Seeking</b>	<table border="1"> <tr> <td><input type="checkbox"/> Venture Capital</td> <td><input type="checkbox"/> Market Sales</td> </tr> <tr> <td><input checked="" type="checkbox"/> Partners</td> <td><input type="checkbox"/> Purchaser</td> </tr> </table>	<input type="checkbox"/> Venture Capital	<input type="checkbox"/> Market Sales	<input checked="" type="checkbox"/> Partners	<input type="checkbox"/> Purchaser
<input type="checkbox"/> Venture Capital	<input type="checkbox"/> Market Sales				
<input checked="" type="checkbox"/> Partners	<input type="checkbox"/> Purchaser				
<b>Project</b>	<p><b>Murray River Project</b></p> <p>The property area is approximately 160 sq km in NE B.C. and the 2009 Exploration program further strengthened the coal resources with over 1.5 billion tons (nine coal seams) of primarily coking coal within only the proposed 40 sq km exploratory area.</p>				

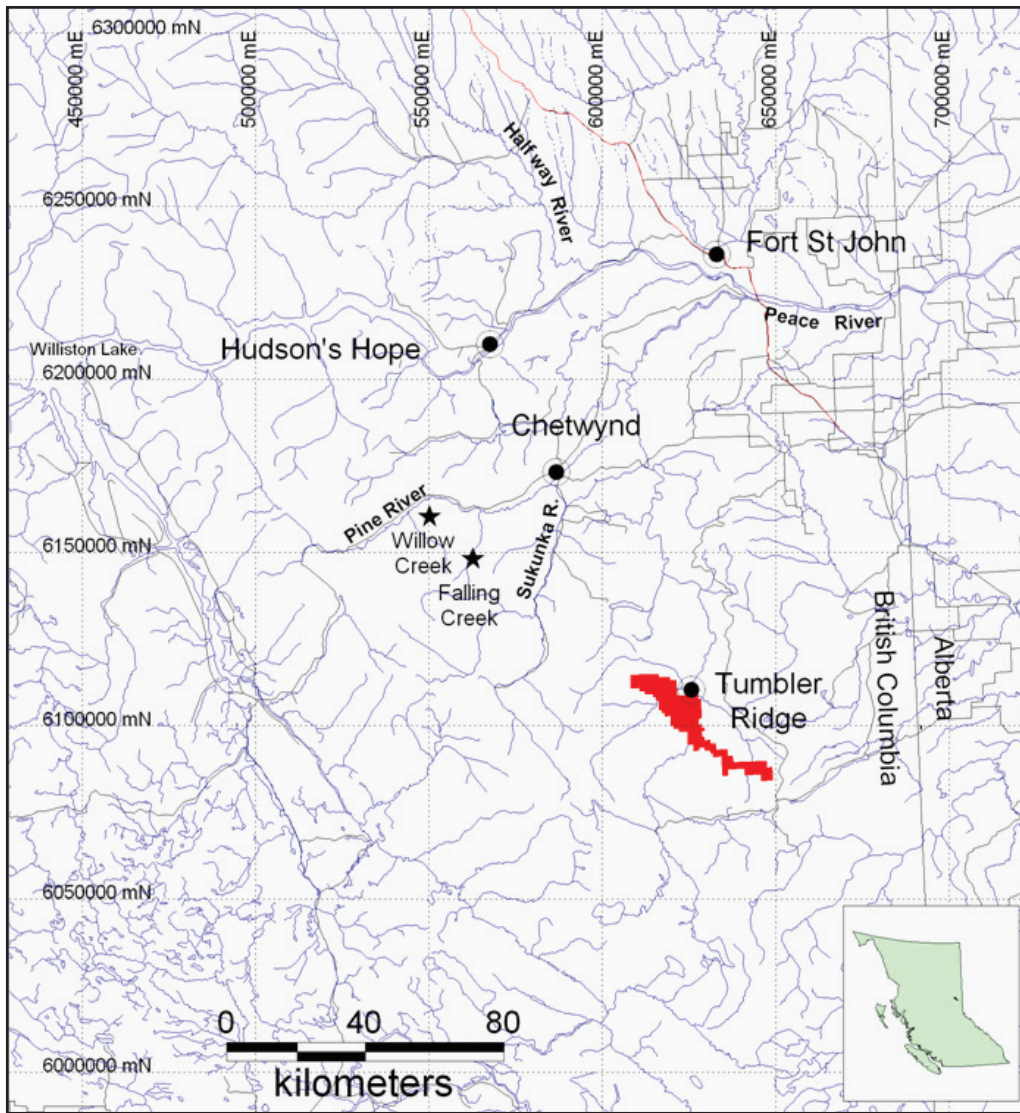


**Overview of Canadian Dehua International Mines Group Inc.**

Canadian Dehua International Mines Group Inc. is a mining company engaged in coal investment and development since incorporated in 2004. The objective of the company is to develop the owned coal properties into coal mines, and then expand the production year by year, with the intention of supplying over 5 million tons of coal products annually to the world coal market.

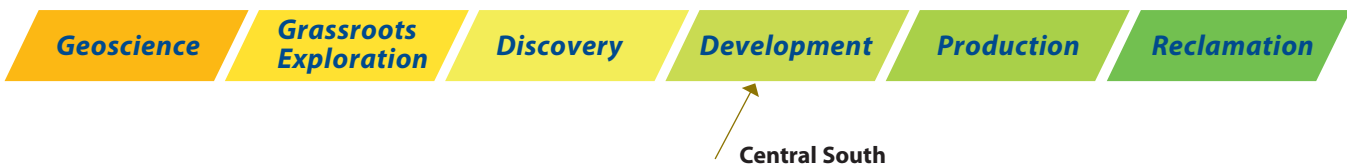
**Murray River Project**

Murray River property is located at 5 km southwest of Tumbler Ridge, B.C. and within the Peace River Coalfield, in an area well known for producing metallurgical grade (hard coking) coal from mainly surface mining operation. Based on 2009 exploration program, it is expected to produce high quality coking coal with low ash and sulphur, high heating value, and easy to wash.





<b>COAL, METALLURGICAL</b>	
<b>Contact Person</b>	<b>Douglas H. Smith, P. Eng.,</b> President and CEO
<b>Contact Information</b>	<div style="display: flex; justify-content: space-between;"> <div>                     2010 – 1075 Georgia Street West                      Vancouver, British Columbia                      Canada, V6E 3C9                 </div> <div>                     T: 604 605 8811                      F: 604 605 8822                      E: dsmith@firstcoal.com                      W: www.firstcoal.com                 </div> </div>
<b>Symbol</b>	Privately owned and widely held.
<b>Current Status</b>	First Coal is a development stage coal mining company advancing a coal resource estimated at 1.6 billion tonnes <sup>1</sup> of primarily metallurgical coal. First Coal is expecting to begin production in 2013 <sup>2</sup> , using low-cost, technologically-advanced mining techniques. The deposit in Northeastern British Columbia is adjacent to rail lines providing ready access to a deep water port.
<b>Seeking</b>	<div style="display: flex; justify-content: space-between;"> <div> <input checked="" type="checkbox"/> Venture Capital   <input checked="" type="checkbox"/> Partners                 </div> <div> <input checked="" type="checkbox"/> Market Sales   <input checked="" type="checkbox"/> Purchaser                 </div> </div>
<b>Project(s)</b> <ul style="list-style-type: none"> <li>• Stage in Mining Process</li> <li>• Estimated Resources</li> </ul>	<b>Central South:</b> <ul style="list-style-type: none"> <li>• development property with an estimated 98<sup>3</sup> million tonnes of primarily metallurgical coal</li> <li>• production initially of 1 million tpa planned to start in 2013</li> <li>• low-cost mining technique to be employed</li> <li>• ready access to rail and port facilities</li> </ul>



**Overview of First Coal Corporation**

First Coal Corporation is a private Canadian coal company with its head office located in Vancouver, B.C. and project office in Chetwynd, B.C. The Company has 200 shareholders and 60.9 million shares outstanding on a fully-diluted basis. Since the Company’s inception in December 2004, over CAD \$63.3 million has been raised. First Coal operates solely in British Columbia, a jurisdiction that encourages mine development. The coal properties are located in the Peace River Coalfield in Northeastern British Columbia, and are adjacent to an underutilized main rail line that runs 1,000 km to Ridley Terminals, at the deep water port at Prince Rupert.

<sup>1</sup> Historic resource not a NI 43-101 compliant estimate  
<sup>2</sup> Subject to financing and permitting  
<sup>3</sup> Includes Measured, Indicated, Inferred and Speculative Resources



First Coal has over 90,000 hectares of property under license or under application for license, in this region. The Company has assembled a management and operations team with extensive experience in bringing mining projects to production. Due to the complex geology, and narrow, steeply dipping seams, hybrid mining techniques will be employed to maximize production. The mining method will be to build trenches to create a highwall and expose the coal seams which will then be extracted using customized highwall mining equipment. This will put First Coal in a position to be a world leader in mining these coal seams in a safe, cost-effective manner.

First Coal has concentrated its exploration activities at the Central South property with an extensive drill program. The Company has received the amendment to its exploration permit and is in the process of extracting a bulk sample. First Coal will be starting an environmental assessment process in early 2010 and expects to continue its exploration programme on the Central South property in late 2010. An exploration programme is also being prepared for the South Cirque property which shows promise of additional, high quality metallurgical coal.

### First Coal’s Properties

- Largest land holding in Northeastern B.C. with over 90 thousand hectares under tenure licenses or under application for license.
- The resource is contained in an area of complex geology characterized by narrow, steeply dipping coal seams.
- 1.6 billion tonnes<sup>4</sup> of historic resources, primarily metallurgical coal.
- Properties adjacent to rail line and 1,000 kms from deep water port.
- A strong, technically capable management team in place with extensive resource sector experience to bring projects into production.



### First Coal’s Project

#### Central South

- 2007 NI 43-101 Technical Report for all of Central South property (4,474 ha) indicated 97.9 million tonnes (see chart below).
- 2009 NI 43-101 Technical Report for 27.0 per cent of the area of Central South property indicated 81.0 million tonnes (see chart below).

Year	Model Area (km <sup>2</sup> )	Relative to 2007 (%)	Total Resource (Mt) *	Relative to 2007 (%)
2007	31.09	100	97.9	100
2009	8.47	27.0	81.0	83

<sup>4</sup> Historic resource not a NI 43-101 compliant estimate

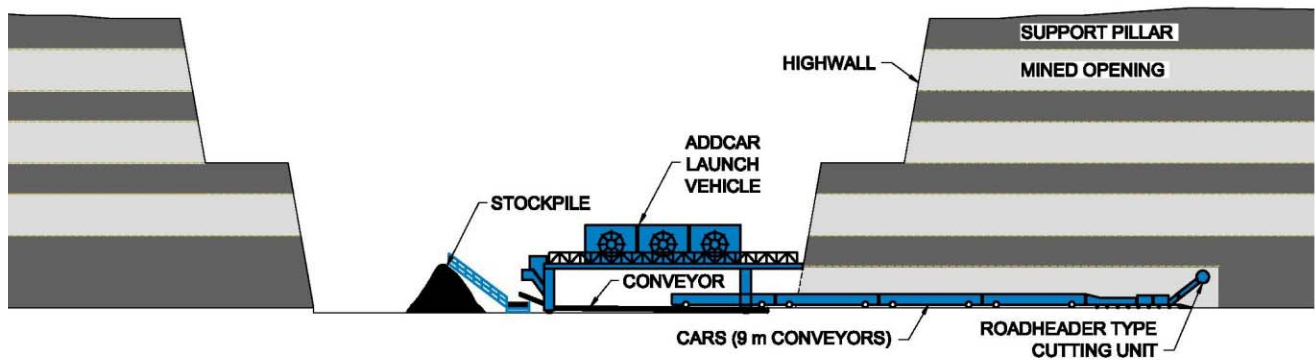
## Mining Method

First Coal is using a combination of trench mining and the remotely-operated, underground ADDCAR Any Dip Highwall Mining System which has been modified to meet the needs of First Coal.

Trenches enable access to coal seams and the ADDCAR System extracts coal from the exposed, narrow, steeply dipping seams.

### Benefits:

- First time this mining method will be used anywhere in the world.
- Significantly reduces the environmental footprint as compared to conventional open pit mining.
- Enables reclamation to be undertaken as mining proceeds throughout the mine's life.
- ADDCAR System minimizes strip ratio and is safe, efficient and cost effective.
- Initial production of 1 mtpa planned to commence in 2013<sup>5</sup> on the Central South property with potential production of 1.5 mtpa.
- Additional production expected to be from the South Cirque property commencing in 2016 to enable total mine production of 3 mtpa.



## First Coal's Representatives

**Douglas H. Smith**, P. Eng., President and CEO

- 33 years in coal industry in Canada and the United States
- Includes 12 years President and Director ANDALEX Resources Inc.

**W. Peter Stokes**, P. Eng., Chief Operating Officer

- 45 years in coal and hard rock mining
- Extensive experience with Kaiser Resources, Westmin Resources Ltd.

**W. Alan Ahlgren**, CA, Chief Financial Officer

- 25 years in finance and accounting in private and public companies
- Senior roles with Kinross Gold, Greater Toronto Airports Authority

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<sup>5</sup> Subject to permitting and financing

<b>COAL, ANTHRACITE</b>					
<b>Contact Person</b>	<b>Robin E. Goad</b> , M.Sc., P.Geo., President and C.E.O.				
<b>Contact Information</b>	<table border="0"> <tr> <td>148 Fullarton Street, Suite 1902 London, Ontario Canada, N6A 5P2</td> <td>                     T: 519 858 8188                      F: 519 858 8155                      E: rgoad@fortuneminerals.com                      W: www.fortuneminerals.com                 </td> </tr> </table>	148 Fullarton Street, Suite 1902 London, Ontario Canada, N6A 5P2	T: 519 858 8188 F: 519 858 8155 E: rgoad@fortuneminerals.com W: www.fortuneminerals.com		
148 Fullarton Street, Suite 1902 London, Ontario Canada, N6A 5P2	T: 519 858 8188 F: 519 858 8155 E: rgoad@fortuneminerals.com W: www.fortuneminerals.com				
<b>Symbol</b>	TSX: FT				
<b>Current Status</b>	Developing two deposits in British Columbia and the Northwest Territories				
<b>Seeking</b>	<table border="0"> <tr> <td><input checked="" type="checkbox"/> Venture Capital</td> <td><input type="checkbox"/> Market Sales</td> </tr> <tr> <td><input checked="" type="checkbox"/> Partners</td> <td><input type="checkbox"/> Purchaser</td> </tr> </table>	<input checked="" type="checkbox"/> Venture Capital	<input type="checkbox"/> Market Sales	<input checked="" type="checkbox"/> Partners	<input type="checkbox"/> Purchaser
<input checked="" type="checkbox"/> Venture Capital	<input type="checkbox"/> Market Sales				
<input checked="" type="checkbox"/> Partners	<input type="checkbox"/> Purchaser				
<b>Project(s)</b>	<p><b>Mount Klappan Anthracite Coal Project in Northwest British Columbia</b> Bankable Feasibility study completed August 2008, test mining, processing and trial cargos completed, permitting in progress for production targeted in 2012. Resources 2.8 billion tonnes in 4 deposit areas, reserves 102 million tonnes in Lost Fox deposit.</p> <p><b>NICO Cobalt-Gold-Bismuth-Copper Project in Northwest Territories</b> Bankable feasibility study completed in January 2007, updated in 2008, test mining completed, pilot plant, acquisition of Hemlo mill to be relocated to the NICO site and permitting is in progress. Reserves 22 million tonnes, resource 57 million tonnes.</p>				



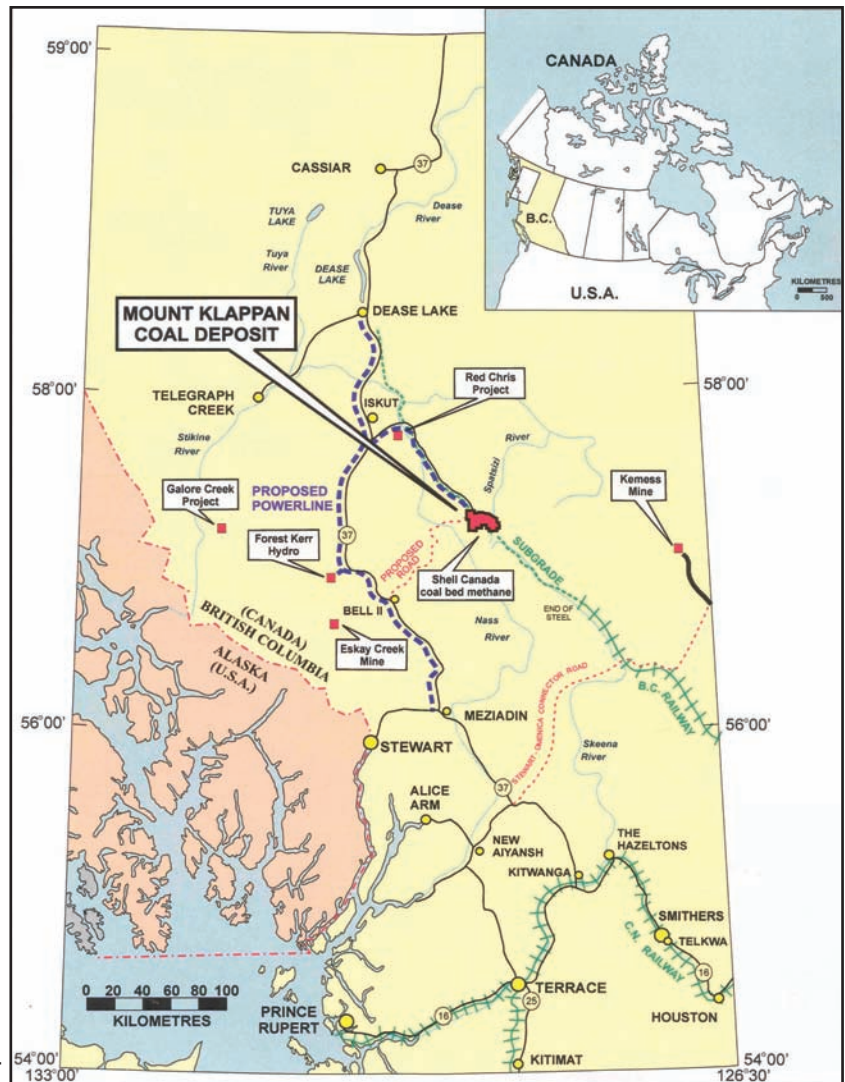
**Overview of Fortune Minerals Limited**

Fortune Minerals Limited is a diversified natural resource company with several mineral deposits and a number of exploration projects in Canada. The Company is currently focused on the development of its two major assets, the Mount Klappan anthracite coal project in Northwest British Columbia and the NICO cobalt-gold-bismuth-copper deposit in the Northwest Territories. Both of these projects have been assessed in positive, comprehensive bankable feasibility studies, they have both been test mined and subjected to pilot plant processing and both projects are in the environmental assessment process to develop mines targeting commercial production in 2011. Fortune Minerals also owns a small 9 million tonne copper-silver deposit located near its proposed NICO development, which will provide a future source of incremental mill feed.



## Mount Klappan Anthracite Coal Project

Fortune's Mount Klappan coal project in northwest British Columbia contains one of the world's largest undeveloped resources of anthracite coal. The four resource areas at Mount Klappan – Lost Fox, Hobbit-Broatch, Sumitt and Nass – contain resources totalling 107.9 million tonnes (Measured), 123 million tonnes (Indicated), and 2.572 billion tonnes (Inferred and Speculative). A 2008 Bankable Feasibility Study (BFS) of the Lost Fox deposit (an estimated 3.5% of the project resource) indicated very attractive rates of return for the development under a variety of production and coal price scenarios. The BFS was conducted by Marston and Marston Inc. and verified the economics of 102 million tonnes of run-of-mine coal reserves, producing 60 million product tonnes of high quality ultra-low volatile PCI coal for the overseas steel industry. The study assessed the production of 3 million tonnes of coal per year with truck haulage of products to the port of Stewart. The study shows an IRR of 40.9% and 8% discounted NPV of \$1,280 million. The study also examined a number of opportunities to enhance project



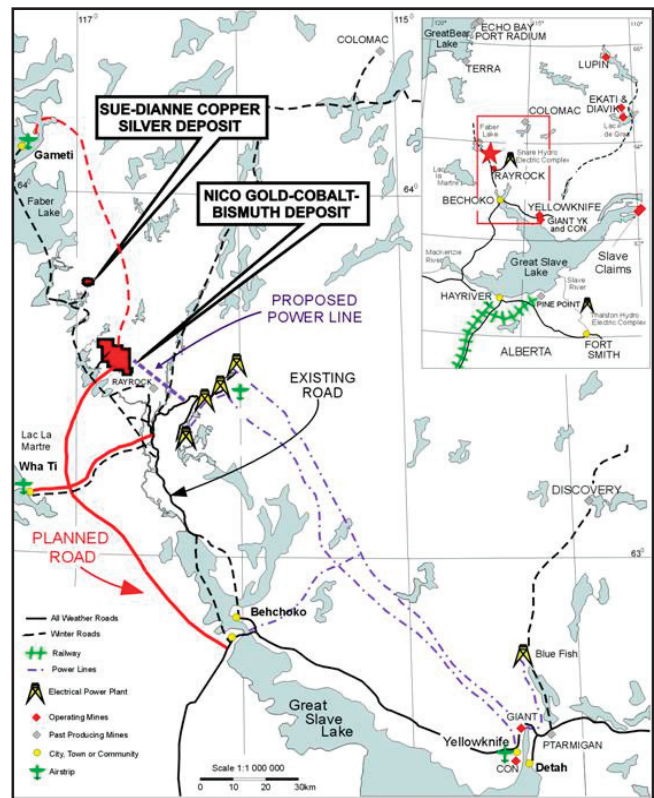
economics and/or allow for an expanded project. These included: 1) extension of the Dease Lake rail line along the partially completed subgrade 150km to Klappan for rail haulage of product to the Ridley Coal Terminal at the port of Prince Rupert; 2) extension of the BC electrical grid to Klappan; 3) lease purchase of major equipment; and 4) construction of a buried slurry pipeline to transport coal products from Mount Klappan to Stewart or Prince Rupert. Fortune is proceeding with an Environmental Assessment of the project and mine permitting.

## NICO Cobalt-Gold-Bismuth-Copper Deposit, Northwest Territories

Fortune has completed a Bankable Feasibility Study (BFS) on its wholly-owned NICO gold-cobalt-bismuth-copper project, which lies 160km northwest of Yellowknife, NWT. This is a significant near-surface deposit containing an estimated 760,000 ounces of gold, 61 million pounds of cobalt and 77 million pounds of bismuth (making it one of the largest 'Bi' deposits in the world). The study, which was led by Micon International Limited and Met-Chem Canada Inc., was based on the assessment of a combined open pit and underground mine processing 4,000 tonnes (t) of ore per day in a plant constructed at the site to produce gold doré, cobalt cathode and a high-grade bismuth concentrate. (After completion of the feasibility study, Fortune completed test work that shows it can now produce bismuth cathode). The feasibility study issued in January 2007 was updated in May 2008 using conservative metal price assumptions.

## Highlights of the Study

- Proven and Probable Reserves of 21.8 million tonnes, sufficient for a minimum 15- year mine life;
- Capital costs of C\$215.2 million;
- Annual metal production of:
  - Gold: Averages 70,000 oz in first 2 years; 24,000 oz in years 3-15;
  - Cobalt: 3.46 million lbs as 99.8% cobalt cathode;
  - Bismuth: 3.59 million lbs in concentrate (now 99.5% cathode);
- In-situ reserves of 4 million equivalent oz of gold;
- Economic results using base case metal price assumptions:
  - Pre-tax Internal Rate of Return (IRR) of 32.7%;
  - 8% discounted Net Present Value (NPV) of C\$361 million;
  - Average production cash costs of US\$1.41/lb for cobalt (net of by-product credits) or US\$249/oz of equivalent gold ounces;
- Already completed significant underground development and pilot plant testing;
- Golden Giant Mine (Hemlo) processing facility purchased and being dismantled for relocation to NICO.



## Fortune Minerals' Board of Directors and Management Team

### Directors

**George Doumet**, MSc, MBA, Chairman

Engineer – President of Federal White Cement Ltd. and control of other industrial companies

**Robin Goad**, MSc, PGeo, President and CEO

Geologist with over 28 years of experience in mining and exploration industries

**David Knight**, BA, LLB, Secretary

Partner with Macleod Dixon LLP, Barristers and Solicitors – Securities and Mining lawyer

**James Currie**, B.Sc. (Hons.)

Mining Engineer – VP Operations of New Gold Inc. – 28 years of mining experience

**James Excell**, BASc

Metallurgist – Former senior executive with BHP Billiton and North American Palladium

**William Breukelman**, BASc, MBA, PEng

Engineer – Chairman Gedex Former Chair of IMAX Corporation

**Mahendra Naik**, B.Comm., C.A.

CFO Fundeco – Founding director of IAMGOLD Corporation

**Carl Clouter**, Commercial pilot with 35 years of prospecting experience in Canada

### Management Team

**Julian Kemp**, BBA, CA, VP Finance and CFO

**Thomas Rinaldi**, BSc (Mining Engineering) VP Operations

**Michael Samuels**, B.Eng, Director Technical Services

**Richard Schryer**, PhD, Director Environment & Regulatory Affairs

**James Mucklow**, MEng, P.Eng, Manager Environment & Community Relations

**Pat Maloney**, Manager Human Resources

**Adam Jean**, Comptroller



COAL, METALLURGICAL AND THERMAL		
<b>Contact Person</b>	<b>Larry Li, Vice-President and Chief Engineer</b>	
<b>Contact Information</b>	920-700 West Pender Street Vancouver, British Columbia Canada, B.C. V6C 1G8	T: 604 879 6526 F: 604 879 6580 E: larry.li@theunicorn.ca W: www.theunicorn.ca
<b>Symbol</b>	Private mining company	
<b>Current Status</b>	Coal Project Developing	
<b>Seeking</b>	<input checked="" type="checkbox"/> Venture Capital  <input checked="" type="checkbox"/> Partners	<input type="checkbox"/> Market Sales  <input type="checkbox"/> Purchaser
<b>Project(s)</b>	<p><b>Project 1: Haslar Coal Project</b> Further exploration stage, more than 100 Mt of the inferred metallurgical coal resources in place.</p> <p><b>Project 2: Under exploring</b> Inspecting exploration and feasibility study stage. 300 Mt of the demonstrated resources for metallurgical uses.</p>	



**Overview of Unicorn International Mines Group Inc.**

Unicorn International Mines Group Inc. is a junior private Canadian exploration and mining company, with experience in coal development and coal international trade. The company is engaged in metallurgical and thermal coals exploration and development, and selling the coal to the global market.

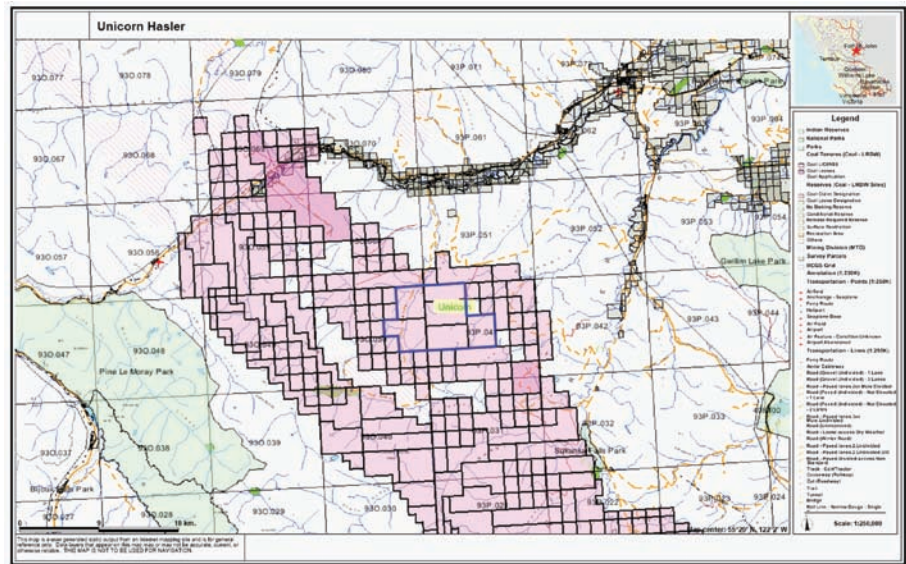
**Haslar Coal Project**

South Haslar Coal Project is located in Northeast B.C., 60 km southwest of Chetwynd, 17 km down off Highway 97 and CN Railway. Traffic conditions and capacities of the project are advantageous.





Coal quality and properties are expected as Ultra-lower ash LVPCI and coking coal, based on the first exploration around the boundaries. Proximately, there is 100 Mt of the inferred resources in situ.



## Unicorn's Representatives

### Patrick Liu, Chairman of the Board

Patrick Liu is an entrepreneur and a founder of Carnival International Trading Ltd, with more than twenty years of experience of investment and trade in North America. The business of all the companies owned by him covers such countries and regions as America, Asia, Africa and Australia.

### Taylor Wu, President and Chief Executive Officer

Taylor Wu obtained a Ph.D. in Engineering from Japan Tohoku University. For many years he was engaged in investment and development of mining and energy projects in Canada, being a researcher at the National Research Council Canada. He was the general manager at Canadian Dehua International Mines Group from February 2004 to September 2007.

### Larry Li, Vice-President and Chief Engineer

Larry Li has been working in mining over 27 years, with experience in coal projects involving engineering consulting, design, authorization, project construction and management, due diligence and operation supervision, spanning mining, processing and clean coal technology, being a manager for Gething Coal Project since February 2005 to March 2008.



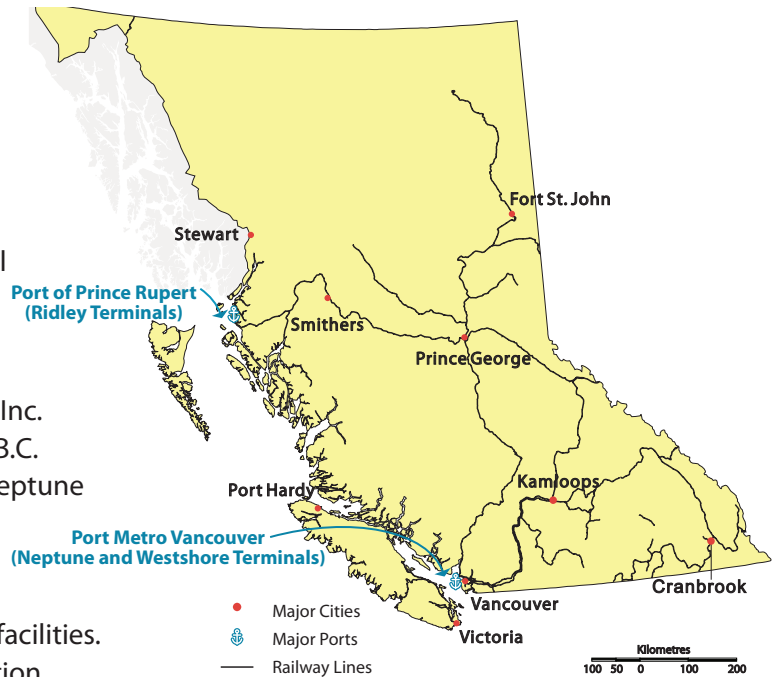
# LOGISTICS AND INFRASTRUCTURE

<b>Rail</b>	<b>14</b>
<b>Port</b>	<b>15</b>
<b>Port of Prince Rupert</b>	<b>16</b>
<b>Port Metro Vancouver</b>	<b>17</b>
<b>Fees</b>	<b>19</b>

# RAIL

Strong and reliable logistic partnerships exist throughout the Province to move coal from B.C. mines to international markets. British Columbia's extensive rail network is a key component in the province's thriving coal industry.

- ▶ Two main railway companies transport B.C. coal to the ports on the coast: Canadian National (CN) and Canadian Pacific Railways (CPR). CN focuses on Northern B.C. and brings most of the coal from this region to Ridley Terminals Inc. (Port of Prince Rupert). CPR works in Southern B.C. and mainly transports coal to Westshore and Neptune Terminals (Port Metro Vancouver).
- ▶ In order to connect to the main rails, mining companies establish "spur lines" and unloading facilities. This infrastructure is often created in collaboration with the mining companies and railway lines. For instance, spur lines may be purchased by the mining companies but will be managed by the railway companies. Cargo trains are owned by the railways and are made available to the mining companies. CN and CPR indicate that coal is transported from mine to port in B.C. within three days (see chart, below).
- ▶ CPR services coal mines located in south-eastern British Columbia, transporting the majority of coal to Port Metro Vancouver for export. Some of the coal is transported east by CPR for consumption by steel mills in the Great Lakes region. CPR owns 1900 high-capacity aluminum coal railcars, resulting in a 17% increase in capacity per train over conventional steel coal cars.
- ▶ CN transports coal from mine to port in B.C. in unit trains (90 cars or more). The fleet of rotary gondola railcars transport coal efficiently with heavy-duty cars that are designed for unit trains with capacity of 107 metric tonnes. The loading or unloading is completed in minutes without being uncoupled. CN can offer a complete transportation solution thanks to its high-capacity 286,000 pound weight limit rail line and connections to three key coal terminals on Canada's west coast.



LOADED TRAIN CYCLES FROM COAL MINE TO PORT	
British Columbia to Ridley Terminal, Prince Rupert	45 hours
British Columbia to Port Metro Vancouver	70 hours

Source: Canadian National ([www.cn.ca](http://www.cn.ca))



# PORT

As well as British Columbia's extensive railway infrastructure, the province's port facilities play a key role in ensuring the coal business in British Columbia continues to succeed.

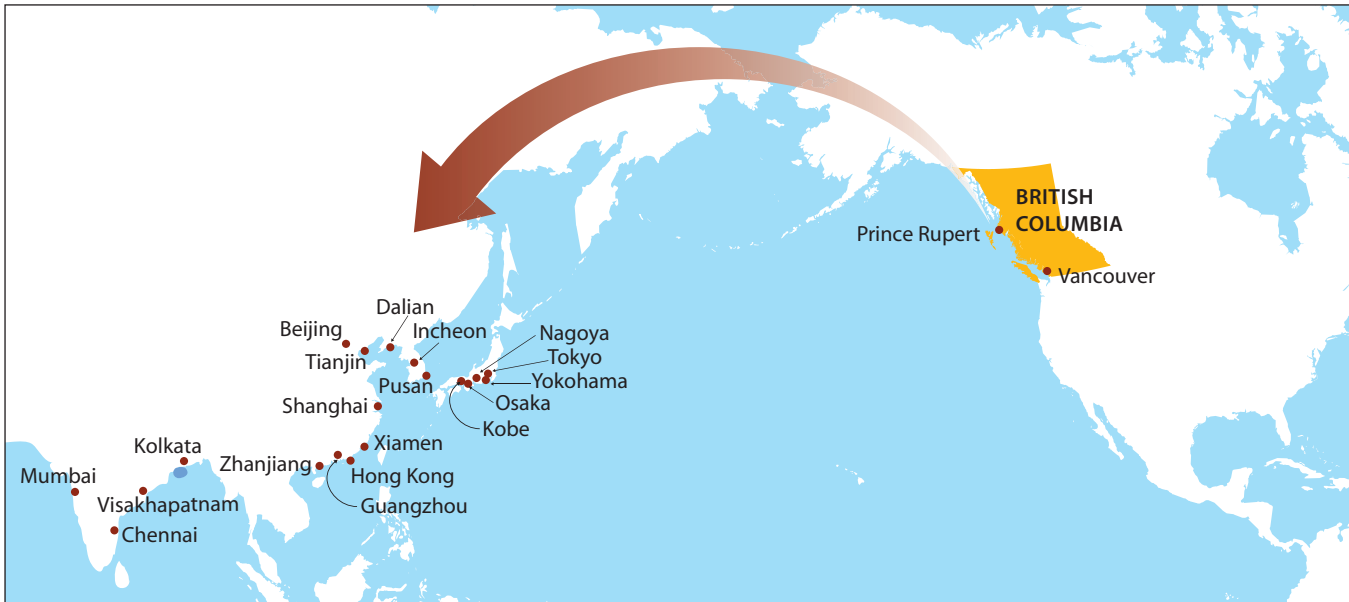
- ▶ British Columbia ports are the closest port of entry on the west coast of North America to Asia, offering shipping companies up to 58 hours of reduced sailing time when compared to other North American ports and saving approximately 1800 tonnes of carbon dioxide one-way.
- ▶ Shipping times in number of days from B.C.'s two main ports to major destinations in Asia are as follows:

CHINA	Dalian	Guangzhou	Hong Kong	Shanghai	Tianjin	Xiamen	Zhanjiang	KOREA	Incheon	Pusan
PRINCE RUPERT	13.1	15.0	14.8	13.0	13.5	14.0	15.5	PRINCE RUPERT	9.08	11.7
VANCOUVER	14.3	16.3	15.9	14.1	14.4	15.3	16.6	VANCOUVER	10.5	12.8

JAPAN	Kobe	Nagoya	Osaka	Tokyo	Yokohama	INDIA	Chennai	Kolkata	Mumbai	Visakhapatnam
PRINCE RUPERT	11.4	11.0	11.4	10.7	10.6	PRINCE RUPERT	22.9	23.1	25.3	22.4
VANCOUVER	10.5	12.8	9.5	10.5	12.8	VANCOUVER	24.1	24.3	26.4	24.0

Shipping Days calculated at vessel speed of 15 knots



- ▶ The main B.C. coal terminals are Ridley, located at the Port of Prince Rupert, and Neptune and Westshore located at Port Metro Vancouver. In addition to these two main ports, there are over 18 other deep-water ports in British Columbia that have facilities for bulk commodity shipments.
- ▶ Approximately 90% of Canada's coal exports were shipped through terminals in British Columbia in 2007.



## PORT OF PRINCE RUPERT

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- ▶ The Port of Prince Rupert is considered North America's Northwest Gateway. It is the closest port to some major destinations in Asia by up to three days of sailing time compared to any other west coast port in North America. Due to this proximity, the Port of Prince Rupert allows shippers to make approximately one extra round-trip voyage per year.
- ▶ The Port of Prince Rupert is strategically located to handle excess capacity on one of the world's busiest shipping corridors. With expansion plans in the near future, the Port of Prince Rupert is primed to become a facility of choice. It offers year-round service, an ice-free harbour and no congestion.
- ▶ The Port of Prince Rupert is considered the safest west coast port in terms of navigational risk factors. It is the closest port to open ocean, minimizing pilotage time in Canadian waters and reducing overall costs. It is the deepest natural harbour in North America.
- ▶ The Port of Prince Rupert's transit time advantage has a huge impact on the bottom line for exporters: vessels travel fewer miles and are docked and unloaded earlier for faster turnaround when compared to other North American ports. CN's congestion-free main tail line is located on-site providing efficient transport of goods to and from the port.

**Ridley Terminals Inc.** is the coal loading and unloading terminal at the Port of Prince Rupert, moving coal from unit trains onto vessels. It loads metallurgical and thermal coal, petroleum coke, iron ore pellets, and has the potential to ship other products such as sulphur.

### Advantages for Shippers:

- ▶ Only export terminal in British Columbia handling petroleum coke
- ▶ Able to unload small blocks of cars
- ▶ Located at the port closest to Asia

### Key Features of Ridley Terminals:

- ▶ Fully automated
- ▶ 55 hectare terminal
- ▶ Loading rate of 9,000 tonnes per hour
- ▶ Annual shipping capacity of 24 million tonnes
- ▶ Storage capacity of 1.2 million tonnes
- ▶ Ready to handle vessels of 350,000 DWT

### Ridley Terminals Inc.

**Transload Facility:** Ridley Terminals, Inc.

**Location:** Prince Rupert, B.C.

**Railroad Service(s):** CN

**Other Transportation Services:** Vessel

**Annual Tons:** 12 million tons; expandable to 24 million tons

**Storage Capacity:** 1.2 million tons

**Rotary Equipment Handling:** Yes

**Loading Capacity:** Two rail mounted stacker/bucket wheel reclaimers have a stacking capacity of 7,000 tons per hour each, and a combined reclaiming capacity of 7,000 tons per hour.

**Unloading Rate:** Tandem rotary dumper is capable of tipping 65 cars per hour without uncoupling - an unloading rate of 6,000 tons per hour.

**Source:** [www.cn.ca](http://www.cn.ca), [www.rti.ca](http://www.rti.ca)

## PORT METRO VANCOUVER

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- ▶ On January 1st 2008 the Fraser River Port Authority, North Fraser Port Authority and Vancouver Port Authority combined to become the Vancouver Fraser Port Authority (VFPA), now known as Port Metro Vancouver.
- ▶ Port Metro Vancouver is Canada's largest and most diversified port, processing more than \$75 billion in goods shipped to more than 130 countries annually.
- ▶ Port Metro Vancouver offers excellent infrastructure and world-class facilities, with services and productivity levels to serve shippers in the bulk, container and breakbulk cargo sectors.
- ▶ The world's leading international shipping lines choose the Port Metro Vancouver. With 28 major marine cargo terminals, 67 berths and some of the most extensive on-dock rail facilities of any port on the west coast, the port handles nearly 130 million tonnes of cargo each year.
- ▶ Port Metro Vancouver is connected to every key market in North America. Canadian National (CN), Canadian Pacific Railway (CPR) and Burlington Northern Santa Fe (BNSF) link with all major U.S. railways, offering transcontinental and double-stack capability to serve key markets throughout Canada, the United States and into Mexico.
- ▶ The Port has 18 bulk terminals that offer superior material handling of coal, grain, sulphur, potash, liquid bulk chemicals, and specialty grain products. Bulk cargoes account for three-quarters of the Port of Vancouver's annual throughput, the largest port in North America in terms of foreign export tonnage. Bulk carriers regularly call on the Port of Vancouver because of the availability of Western Canadian resource commodities available for export. As a result, shippers have an extensive choice of sailing schedules to suit a diverse selection of cargo.
- ▶ In response to the dramatic worldwide growth in containerized cargo, the Port Metro Vancouver offers super-post-Panamax capacity, increased efficiencies, and three modern container facilities.
- ▶ Port Metro Vancouver is planning to increase container-handling capacity to 4.0 million TEUs by 2012.
- ▶ Port Metro Vancouver is the first North American port to implement a reservation system for trucking companies to minimize wait times at container terminals, consequently helping to reduce delays and long line-ups at terminal gates.

### Neptune Bulk Terminals

**Location:** Vancouver, British Columbia  
**Railroad Service(s):** CN; CP; BNSF  
**Other Transportation Services:** Vessel  
**Annual Tons:** 8 million tons per year throughput of coal  
**Storage Capacity:** 600,000 tons  
**Rotary Equipment Handling:** Yes  
**Unloading Rate:** Rail-mounted stacker/reclaimer at 3,600 tons per hour  
**Train Configuration:** Continuous loop-track system; up to 124 rail cars per train  
**Commodities Handled:** Export metallurgical and thermal coal, potash, specialty grains, agri-products, bulk fertilizers, canola oil. Inbound grains and phosphate rock.  
**Site:** 29 hectares (71 acres) plus waterlots  
**Facilities and Rail Services:** 8 kilometres of continuous loop trackage and company owned locomotives to handle multiple unit train unloading operations  
**Other Information:** Railcar cleaning system allows unloaded rail cars to be cleaned inside and switched over to the inbound system. Neptune Bulk Terminals features a dedicated coal berth.

**Source:** [www.cn.ca](http://www.cn.ca),  
[www.neptuneterminals.com](http://www.neptuneterminals.com)

## PORT METRO VANCOUVER

- ▶ The Port is ISPS compliant and offers well-defined security plans including a 24-hour security force, round-the-clock port road surveillance, and a card access program for cargo and container terminals. Port Metro Vancouver is the first port in Canada and one of the first ports in North America to purchase gamma ray scanning technology for use by customs officials to inspect containers.
- ▶ Port Metro Vancouver is well connected to the international business community, with offices in Beijing and Chicago, and an extensive international network of agents throughout Canada and Asia.
- ▶ The two main terminals of Port Metro Vancouver to handle coal are Neptune and Westshore.

**Source:** [www.portmetrovancover.com](http://www.portmetrovancover.com)

### Neptune Bulk Terminals

Neptune Bulk Terminals is North America's largest multi-product bulk terminal. Located on the north shore of Vancouver's inner harbour, Neptune is a highly efficient operation providing modern loading and unloading services and storage facilities for a variety of bulk commodities. Neptune offers 37 years of bulk terminal experience, a range of customer services including rail and vessel coordination, agency services and available terminal capacity. Neptune has an annual throughput capability of over 17 million metric tonnes.

### Westshore Terminals

Westshore Terminals is Canada's leading coal export facility and the largest dry bulk terminal on the west coast of the Americas. Located at Roberts Bank, 35 km south of Vancouver's Burrard Inlet, Westshore celebrated its 600 millionth tonne of exported coal in November 2008.

### Westshore Terminals

**Location:** Greater Vancouver (Delta), British Columbia

**Railroad Service(s):** CN; CPR

**Other Transportation Services:** Vessel

**Annual Tons:** 21 million tons

**Storage Capacity:** 2.5 million tons of coal

**Rotary Equipment Handling:** Yes

**Loading Capacity:** Three stacker/reclaimers service the stockpile area: S/R 41 & 42 stack/reclaim 4,500 tons per hour/3,500 tph. S/R 43 stack/reclaim 6,500 tph/4,500 tph.

**Unloading Rate:** Incoming coal is unloaded by two rotary dumpers. Each can handle both the traditional Canadian steel coal cars (58 feet 6 inches) and the U.S. aluminum coal cars (53 feet 1 inch). Dumper 31 is a twin rotary, capable of unloading at the rate of 6,500 tons per hour. Dumper 32 is a single rotary with an unloading rate of 4,000 tons per hour. Train Configuration: On average, six unit coal trains up to 125 cars long arrive each day. It takes 2-4 hours to unload a train depending on use of the single or twin rotary dumpers.

**Commodities:** Coal and coke

**Total Area:** 40 hectares (100 acres)

**Equipment and Rail Services:**

- Two loop tracks and two rotary rail car dumpers for U.S. style and Canadian unit trains
- Three stacker/reclaimers
- Extensive high-speed conveyor system

**Source:** [www.cn.ca](http://www.cn.ca), [westshore.com](http://westshore.com)



## FEES

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### Railway

- ▶ Due to the increasing global demand for coal and the highly volatile freight rates, long term contracts are signed between buyers, mining companies and shipping lines. Mining companies usually sign contracts with the railway companies, while the coal buyers are responsible for shipping and therefore establish the terms and conditions of shipment with the embarkation's owners. The individual contracts are specific to the requests and demands of each party involved, specifying the amount of metric tons of coal per year to be delivered, freight rate, frequency of shipping, etc.
- ▶ The cost of carrying coal from mine to port by rail is decided upon in the contract between the mining company and the railway lines, and is consequently confidential. To obtain these figures, the mining company should be contacted directly. However, some industry experts have estimated an average of \$25 per metric tonne of coal specifying that this figure may change from one contract to another.

### Port

- ▶ As with railway transport, contracts are signed between buyers, mines and shipping companies to arrange for the transport of coal products from ports to their destinations. These documents are dependant upon the needs of each party. For this reason, rates and prices vary considerably and are unique to every contract.
- ▶ Average coal shipments from B.C. ports ranges between 60,000 and 80,000 metric tons.
- ▶ Fees associated with the shipping of coal may include (but are not limited to):
  - ▶ Charter Rental
  - ▶ Port fees (pilots, tugs, lines, labour, customs)
  - ▶ Terminal handling fees
  - ▶ Harbour dues
  - ▶ Berthage fees
  - ▶ Wharfage fees





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[www.empr.gov.bc.ca/MACR/investors/Pages/default.aspx](http://www.empr.gov.bc.ca/MACR/investors/Pages/default.aspx)

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#### COAL ASSOCIATION OF CANADA

[www.coal.ca](http://www.coal.ca)

#### ASSOCIATION FOR MINERAL EXPLORATION OF BRITISH COLUMBIA

[www.amebc.ca](http://www.amebc.ca)

#### MINING ASSOCIATION OF BRITISH COLUMBIA

[www.mining.bc.ca](http://www.mining.bc.ca)







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