Opportunities to Explore

British Columbia Minerals and Coal Industry
Information documents of various types are available

www.empr.gov.bc.ca/mining/investors
British Columbia

Population = 4.5 million

Land Mass = 944,735 km²

Flag

Flower
2011 Mineral Production
$9.9 Billion

- Metallurgical Coal: 54%
- Copper: 16%
- Zinc: 8%
- Molybdenum: 3%
- Silver: 9%
- Gold: 2%
- Lead: 2%
- Thermal Coal: 5%

PWC Survey
(aggregates and industrial minerals not included)
Active Mines

- 10 Major Coal Mines
- 8 Major Metal Mines
- Numerous smaller or intermittent producers
Most are open pits in mountainous terrane
• ~25 Mt annual production
  • Predominantly metallurgical coal
• Destined for seaborne export market
• Expansions and new mine openings planned

Kootenay and Peace Coalfields
Peace Coal Fields

- Perry Creek mine
- Brule mine
- Willow Creek
- Trend mine

- Produced ~4.4 Mt
- Very active area for business transactions and exploration
Carbon Creek
Cardero Resources Corp

Pre-feasibility completed
121 Mt P +P coal
468 M + I coal
Proposed 4.1 Mt/y combined surface and underground mine
Feasibility study anticipated

Photo courtesy of Coal Hunter Mining
Huguenot
Colonial Coal International Corp

- Continued drilling
- Updated resource estimate
  - 189.4 Mt (M + I) coal
  - 194.7 (Inf.) coal

Photo courtesy of Colonial Coal International
Arctos
Fortune Minerals Ltd

• Updated Feasibility Study completed
• Anthracite grade coal
  • PCI product
• Cash cost of $128/tonne FOB T
• Updated reserves estimate
  • 124.9 Mt (P +P) coal
  • 194.7 (Inf.) coal
Numerous evaluations and major exploration programs across the province

- Arctos – Fortune Minerals / POSCAN
- Quintette – Teck Coal
- Gething – Cdn Kailuan Dehua Mines
- Raven – Compliance Energy Corp.
- Huguenot – Colonial Coal
- Marten-Wheeler – Teck Coal
- Coal Creek – Crowsnest Pass Coal Mining
- Basin – Coalmont Energy Corp
- Numerous more....
BC Metal Mines

- The industry is dominated by open pit copper-molybdenum-gold mines
- Most are undertaking major upgrades and expansions

Gibraltar Pit
Copper-Gold-Molybdenum projects are a major target in BC
Highland Valley
Teck and Highmont Mining

- Canada’s largest metal mine
- Copper-molybdenum
- Pit expansions and new mill underway
Gibraltar
Taseko Mines

- Copper-molybdenum mine
- New 55,000 t/d mill underway
- Soon to be Canada’s 2\textsuperscript{nd} largest metal mine

Endako
Thompson Creek Metals

- New 50,000 tonne per day mill
- Currently no new mining due to low prices
Huckleberry Mine
Imperial Metals

- Copper-gold-silver-molybdenum
- 20,000 tpd - mine life to 2021

Ootsa
Gold Reach Resources Ltd
Drilled Ox and Seel deposits
(817 m @ 0.2% Cu, 0.21 g/t Au + Mo and Ag)

Image courtesy of Gold Reach
New Mines Opened and Under Construction

Photo courtesy of Copper Mtn Mining
Copper Mountain
Copper Mountain Mining and Mitsubishi

- Copper mine opened in 2011
- 35,000 t/d mill
- 17 year mine life

Photo courtesy of Copper Mountain Mining
New Afton
New Gold Inc

Gold-copper mine opened September 2012
Underground large tonnage mining
Mount Milligan
Thompson Creek Metals

• Copper-gold mine under construction
• $1.5 Billion project
• 60,000 tpd, 22 year life
• Start up late 2013
Power in the Northwest

Northwest Transmission Line

• 335 km power line under construction to region may benefit many proposed mining projects
Red Chris
Imperials Metals Corp.

- New copper-gold mine under construction
- The first to benefit from the Northern Transmission Line
Exploration levels in BC are at record levels.

Only a few projects are shown here.
KSM and Snowfield
Seabridge Gold Inc and Pretium Res Inc

- Gold-copper -molybdenum exploration project
- Very large deposit
  - 2.2 Bt reserves,
  - 120,000 t/d mine proposal,
  - 52 year mine life
Galore Creek
Teck and Novagold

- Redesigned project
  - $5.2B Capital cost
  - 95 000 t/d mill, 18 year mine life
- NovaGold to divest

Granduc
Castle Res.

- Copper massive sulphide deposit
- Past producer
- Drilling and underground development

NovaGold to divest
New Prosperity
Taseko Mines Ltd

- Proposed copper-gold mine
- Project modified to address federal assessment requirements

Photo courtesy of Taseko Mines
Proposed copper-gold-silver mine
70,000 t/d
Feasibility study in progress

Resource 532 Mt at 0.31% Cu

Image courtesy of Yellowhead Mining
Ajax

KGHM Ajax Mining

- Proposed expansion of historic copper-gold mine
- Proceeding through environmental assessment
- Feasibility study in progress

Image courtesy of KGHM Ajax Mining

Images courtesy of Kamloops Daily News
Brucejack
Pretium Resources

Dramatic ice road developed to mobilize equipment
Brucejack
Pretium Resources
- Very high-grade gold deposit
- Very large drill program ongoing

SU-452
0.5 m grading
41,582 g/t Au + 27,725 g/t Ag from 201.9 m depth
Blackwater
New Gold Inc

- Major gold-silver discovery
- Up to 18 drills operating
- May be the world’s largest exploration project in 2012
- $139 million program

165 Mt 1.01 g/t Au (Ind.)
39 Mt 0.94 g/t (Inf.)

Image courtesy of: New Gold Inc
Tulsequah Chief
Chieftain Metals Inc

- Proposed copper-zinc-lead-silver-gold mine

- New Collaborative MOU Announced
  - China CAMC Engineering Co., Ltd
  - Procon Holdings (Alberta) Inc.

Photo courtesy of Chieftain Metals
Niobium in carbonatite
• World’s largest undeveloped niobium deposit
  • 286 Mt of 0.37% Nb₂O₅ (M+I)

Tantalum and niobium in carbonatite
• New positive PEA
• 7500 t/d u/ground considered

Aley Taseko Mines

Blue River Commerce Resources Inc

Albitite-syenite fenite breccia (Geologist Mercedes Rich)

36.4 Mt 195 ppm Ta₂O₅, 1700 ppm Nb₂O₅ (Ind.)
New concept in BC
Low grade nickel in ultramafic rocks
0.1 to 0.15% Nickel in alloy
Possible simple separation process of nickel from host rock

Serpentinite speckled with awaruite (12-BAP-041)
• Geologically intimate with ultramafic rocks
• Two producing operations
• Bulk sales by auction or special arrangement
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