

MINING INDUSTRIES

Canada's competitive advantages

Canada









CANADA'S MINING SECTOR

Canada's mining industry employs 320,000 workers and contributes \$35.6 billion* to gross domestic product (GDP). Mining accounts for 22.8% of Canadian goods exports.¹

- Canada is the world's top destination for exploration, attracting 18% of global investment more than Australia, the U.S. and Mexico.¹
- Canada has the world's second largest mining supply sector with almost 3,200 suppliers.
- In 2011, Canadian mining and metals companies invested \$590 million in research and development (R & D) and employed 6,000 R & D workers. Innovation has been focussed on tailings management, energy efficiency and effective exploration.¹
- Stock of foreign direct investment in Canada's metallic minerals and metal products industry totalled \$60.9 billion in 2011.¹
- The value of Canadian mineral production increased in 2011 by 21% to reach a record \$50.3 billion.
- Canadian companies account for approximately 37% of global exploration spending budgets the largest share of all nations.¹

A WEALTH OF OPPORTUNITIES

Canada currently produces some 60 types of minerals and metals from more than 200 mines. It ranks among the top five countries for the global production of 11 major minerals and metals; ranking number one in the world for potash production and in the top five for the production of uranium and cobalt; aluminum, titanium, platinum, tungsten and sulphur; diamonds and nickel; and chrysolite. Growing interest in rare earth elements has spurred significant exploration efforts across the country, adding to Canada's already considerable list of promising prospective targets.

CANADA'S KEY STRENGTHS

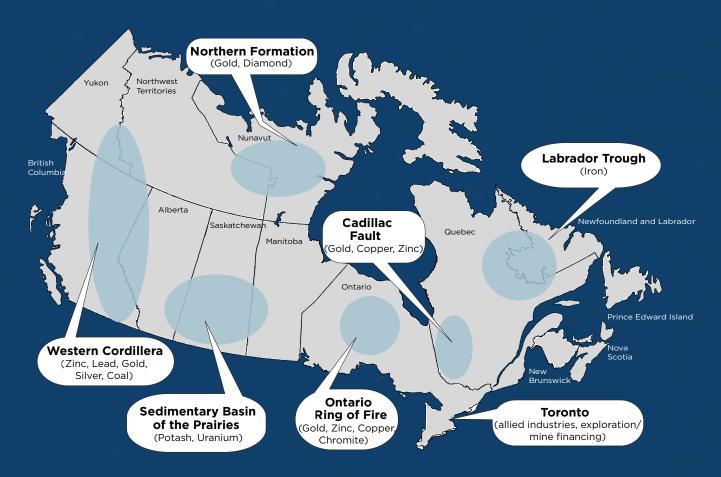
- Extensive science and technology network
- Broad expertise in geological-science
- Sophisticated financial institutions
- Mineral and Metals Policy of the Government of Canada is committed to securing international investment
- Responsible Resource Development: one project, one review, in a clearly defined time period

*Unless otherwise noted, all values in this publication are in Canadian dollars. Content is based on the latest available information at time of publication. Cover image: Photo courtesy of Rail-Veyor Technologies Global Inc. Page 2 images: Courtesy of ArcelorMittal Mining Canada and Xstrata

¹ The Mining Association of Canada, F&F 2012 — Facts and Figures of the Canadian Mining Industry (2012)

MINING ACTIVITIES

Canada's mining industry is comprised of 1,200 companies covering a wide spectrum of activities throughout the value chain.



Recent investments

Areva

France-based Areva and its partners are investing \$150 million to upgrade its McClean Lake mill facility in Saskatchewan and increase its capacity so that it can process uranium ore from the Cigar Lake mine.

K+S Potash Canada

K+S Potash Canada, a subsidiary of Germany-based K+S Aktiengesellschaft, is investing \$3.21 billion to develop a potash mine at its Legacy project in Saskatchewan, Canada. The company expects to commence production at the mine in 2015. When completed, it will supply the Asian, South American and North American markets.

Other selected investors in Canada's mining industry include AngloAmerican, ArcelorMittal, BHP Billiton, De Beers, POSCO, PotashCorp, Rio Tinto, Vale and Xstrata.

CANADA'S ADVANTAGES

OPEN TO TRADE AND INVESTMENT

Canada remains among the world's most open countries in terms of trade and investment in mining. The country does not restrict foreign involvement in the development of its mineral resources, except for uranium. Canada has trade and investment initiatives with Europe, India, China, the Americas and Africa.

FINANCIAL INCENTIVES

- Flow-through shares (FTS) enable a company to transfer eligible exploration and development expenses to investors. Investors can then apply for tax credit for these expenditures. This feature generates attractive prices for FTS, enabling a junior company to fund exploration activities more easily.
- Canada offers a variety of financial incentives including the accelerated capital cost allowance (ACCA), Canadian Exploration Expense (CEE) and Mineral Exploration Tax Credit (METC).

EASY ACCESS TO CAPITAL

The Toronto Stock Exchange (TSX) and the TSX Venture Exchange handled 90% of the world's public mining financings in 2011. Almost 60% of the world's publicly-listed mining companies list in Canada.² Canada's top standing as a source of equity financing for mineral capital is supported by disclosure standards that ensure fairness and efficiency. In 2011, almost 40% of a worldwide total of \$31.7 billion of mining equity was raised in Canada.

LOW BUSINESS COSTS

Overall business costs in Canada are the second lowest in the G-7 and 5.0% lower than the U.S.³

INFRASTRUCTURE

According to the World Bank, Canada has one of the world's best logistics infrastructures,⁴ including ports and railways. Canada also offers duty-free access to the U.S., Mexico and many other global markets.

AVAILABLE LABOUR FORCE

Canada ranks first in the G-7 for the availability of qualified engineers in its labour market.⁵ A total of 50,500 students graduate from Canadian universities each year in architecture, engineering and related technologies.⁶

K+S AKTIENGESELLSCHAFT

"We are convinced that Legacy [Project based in Saskatchewan] is a decisive strategic step forward for the whole K+S Group and, in combination with our German potash mines, will significantly strengthen the international competitiveness of K+S."

Norbert Steiner, Chairman of the Board of Executive Directors, K+S Aktiengesellschaft

ARCELORMITTAL

"We have always known that ArcelorMittal Mining Canada is a flagship asset [for ArcelorMittal] with considerable opportunity for expansion."

Peter Kukielski, Chief Executive of Mining, ArcelorMittal

- ² The Mining Association of Canada, F&F 2012 Facts and Figures of the Canadian Mining Industry (2012)
- ³ KPMG's Competitive Alternatives Report (2012)
- ⁴ World Bank, International Logistics Performance Index (2010)
- ⁵ IMD, Rank among 59 economies considered in the World Competitiveness Yearbook 2012
- ⁶ Statistics Canada, Public postsecondary graduates by institution type, sex and field of study, 2010 (accessed January 2013)

INNOVATION

Canada's mining industry provides innovation in the production and processing of minerals and metals.

Many foreign mining companies are taking advantage of Canada's expertise through R & D programs and collaboration with research organizations. Programs and organizations include:

- Scientific Research and Experimental Development Program (SR & ED)
- Canadian Mining Industry Research Organization (CAMIRO) (Sudbury, ON)
- Canadian Mining Innovation Council (CMIC) (Ottawa, ON)
- Centre for Excellence in Mining Innovation (CEMI) (Sudbury, ON)

Six mining and metal companies rank among 'Canada's Top 100 Corporate R & D Spenders', namely ArcelorMittal Dofasco, Neo Material Technologies, Novelis, Rio Tinto Iron & Titanium, Teck Resources and Vale Canada.

CASE STUDY: VALE

Vale Technology Development facilities in Mississauga, Ontario and Port Colborne, Ontario have played a major role in developing Vale's nickel technology. The Vale Technology Development Group focuses on six disciplines: mineral processing; pyrometallurgy; hydrometallurgy; carbonyl technology; product applications and process engineering. In 2011, Vale Canada spent more than \$100 million on R & D.⁷

Selected Canadian companies that are currently undertaking innovative projects include Barrick Gold, Inmet Mining, Neo Material Technologies, Novelis and Teck Resources.

Canadian innovative technologies cover a wide range of sectors including ICT and machinery among others. Examples include:

- Smart Rock makes it possible to track the movement of ore in real time using a geographic information system. www.penguinasi.com
- **Anti-vibration Handle** attaches to a tool such as a hydraulic drill and reduces the vibrations that can cause injuries like carpal tunnel syndrome by up to 60%. www.legroupemisa.com
- **Low-impact Seismics**, made possible by improved signal capture and processing, are less harmful to the environment. www.spethdrilling.com
- Owl Head Assembly is designed for optimal sample recovery thanks to locking and independent latches.
 www.fordia.com
- **Borealis IMS**, the only corporate social responsibilities (CSR) software that delivers a production-proven solution for driving the social and environmental challenges of the extractive industries. www.boreal-is.com

INVEST IN CANADA TO ACHIEVE GLOBAL EXCELLENCE

FINANCIAL STABILITY

For the fifth consecutive year, the World Economic Forum has declared Canada's banking system to be the soundest in the world. Source: Global Competitiveness Report 2012-2013, World Economic Forum (WEF)

A STRONG GROWTH RECORD

Canada led all G-7 countries in economic growth over the past decade (2002–2011).

Source: World Bank

A HIGHLY EDUCATED WORKFORCE

Canada's workforce is the most highly educated among members of the Organisation for Economic Co-operation and Development (OECD), with half of its working-age population having a tertiary level education.

Source: Education at a Glance 2012, OECD

A WELCOMING BUSINESS ENVIRONMENT

Canada rates as the best country for business in the G-20.

Source: Forbes Magazine, November 2012

LOW TAX RATES

Canada's combined federal-provincial general corporate income tax rate of 26.1% in 2012 is below the level of most other G-7 countries. Source: Department of Finance Canada and the OECD Tax Database 2012

INNOVATION

Canada's R & D-intensive sectors enjoy the lowest costs in the G-7, with a cost advantage that is 10.7 per cent lower than that in the U.S. <u>Source: KPMG Competitive Alternatives</u>, 2012

MARKET ACCESS

The North American Free Trade Agreement (NAFTA) gives investors access to a vast lucrative market of nearly 461 million consumers and a combined continental GDP of about US\$18 trillion.

Source: World Bank, World Development Indicators Database, 2012, and Department of Finance Canada

A GREAT PLACE TO INVEST, WORK, AND LIVE

Canada is one of the globally most multicultural countries with world-class universities, a universal health care system and clean and friendly cities in addition to having in 2011, the second highest standard of living in the G-20, as measured by GDP per capita.

Source: World Bank



FOREIGN AFFAIRS AND INTERNATIONAL TRADE CANADA



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