



# **The Canadian and Global Mining Scene: Contributions, Opportunities, Issues**

St. John's, April 25, 2012





Hydrogen



Lithium



Beryllium



Sodium



Magnesium



Potassium



Calcium



Scandium



Titanium



Vanadium



Chromium



Manganese



Iron



Cobalt



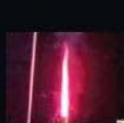
Nickel



Copper



Rubidium



Strontium



Yttrium



Zirconium



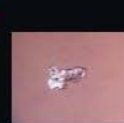
Niobium



Molybdenum



Technetium



Ruthenium



Rhodium



Palladium



Silver



Cesium



Barium



Hafnium



Tantalum



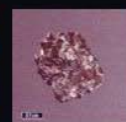
Tungsten



Rhenium



Osmium



Iridium



Platinum



Gold



Francium



Radium



Rutherfordium



Dubnium



Seaborgium



Bohrium



Hassium



Meitnerium



Darmstadtium



Roentgenium



Lanthanum



Cerium



Praseodymium



Neodymium



Promethium



Samarium



Europium



Gadolinium



Actinium



Thorium



Protactinium



Uranium



Neptunium



Plutonium



Americium



Curium

# ABOUT MAC

The national voice of the mining industry in Canada:

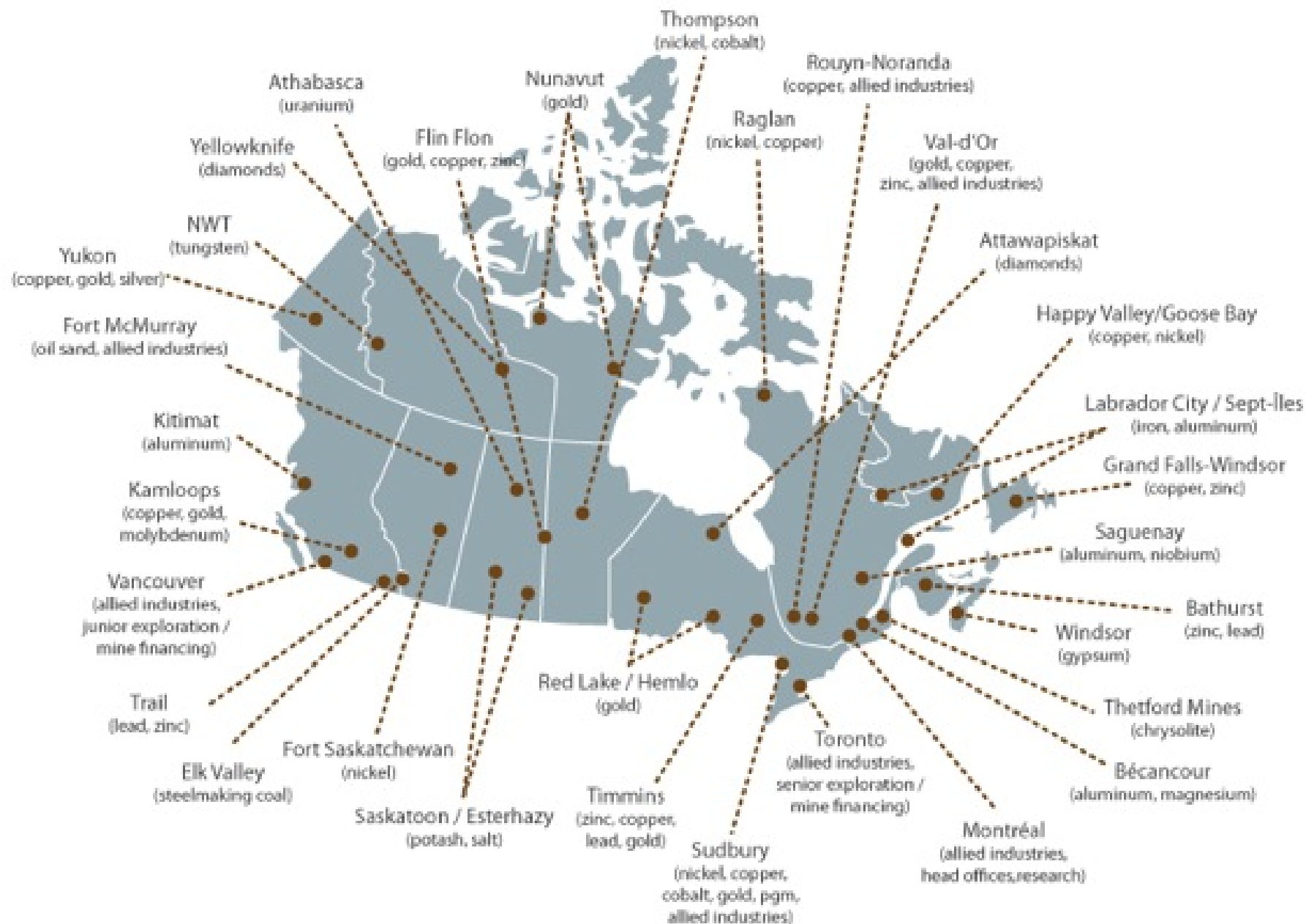
- Advocacy - to advance the business of mining
- TSM Initiative – stewardship and social license
- 30 members in iron ore, gold, diamonds, oil sands, met-coal, base metals, uranium
- 50 members in engineering, environment, finance
- Members engaged in exploration, mining, smelting, semi-fabrication, supply

# INDUSTRY'S DOMESTIC CONTRIBUTION

- 300k employees;  
Wages 30-60%  
above other sectors
- 220 producing mines,  
33 smelters and  
refineries
- \$8.4B in taxes and  
royalties paid to  
governments in 2010
- \$20B capital  
investment annually
- Largest private  
employer of Aboriginal  
Canadians
- Core supplier to clean-  
technology sectors



# CANADA'S MINING INDUSTRY NATIONAL AND REGIONAL PRESENCE



Source: Natural Resources Canada

mining.ca



A photograph of two workers in a field of tall green plants. They are wearing yellow hard hats and high-visibility safety vests. One worker is holding a plant sample, and the other is looking at it. The background is a dense field of similar vegetation.

# ENVIRONMENTAL PERFORMANCE

*“One cannot report on the industry’s performance without noting the significant progress in environmental protection. The mining sector, through multi-stakeholder initiatives, regulatory and financial instruments, and science and technology has demonstrated its environmental commitment through reductions in energy intensity, air emissions, and GHG emissions, as well as increases in environmental expenditures, including remediation and decommissioning. This change in performance has taken place against a backdrop of rising public expectations which has challenged the industry to extend its practices beyond regulatory compliance to environmental stewardship.”*

**MINING SECTOR PERFORMANCE REPORT 1998-2008  
(September 2010).  
FINAL REPORT OF THE FEDERAL, PROVINCIAL AND  
TERRITORIAL SOCIAL LICENCE TASK GROUP**



# CANADA AS A GLOBAL MINING PLAYER

- Attracted 19% of world exploration spending in 2010 – draws on useful tax measures
- Efficient TSX processes - 1400 mining companies listed, ~50% of their mineral projects are outside Canada
- Minerals account for 21% of value of Canada's goods exports
- Top 5 World Producer in uranium, potash, nickel, platinum, aluminum, diamonds, zinc, met coal
- Large direct investment stocks – 14% of all FDIC and 10% of CDIA

# CHINA AS A MINERAL PRICE DRIVER

- 30 consecutive years of 8-15% annual growth (exception '89-'90)
- China consumed 5% of world's base metals in 1980s versus ~30% today
- Shift toward feed-intensive diets (potash), nuclear power (uranium), infrastructure and manufacturing (base metals), middle-class (diamonds, gold)
- Mineral price increases in decade have been ~3-25 times larger than inflation

Mineral Prices	2000	2007	2008	2009	2010	Apr. '12	'00-'12 (%)
Aluminum (\$/lb)	0.70	1.20	1.17	0.76	0.98	.92	60
Copper (\$/lb)	0.82	3.23	3.15	2.34	3.40	3.65	378
Gold (\$/oz)	279	697	872	973	1225	1641	489
Uranium(\$/lb)	8.29	98.81	63.17	47.00	48.00	51.00	518
Nickel (\$/lb)	3.92	16.88	9.57	6.50	9.85	7.98	108
Zinc (\$/lb)	0.51	1.47	0.85	0.75	0.98	.89	75
Iron Ore (c/dmtu)	12.45	36.60	60.80	105.30	125.90	144.70	1062

# CHINA'S LONG-TERM DEMAND

- 2020-2025, China growth will still be in the 6-9% range
- Autos: 76 per 100 people in US versus 10 in China
- Personal computers: 76 per 100 people in US versus 4 in China
- India lags China - 30% of world's metals demand versus 3%
- Next 25 years - as many minerals and metals consumed worldwide as in all of history to date







# CANADIAN OPPORTUNITIES

MAC estimates that approximately \$137 billion in mining-related projects are presently proposed in Canada, including multi-billion dollar investments in:

- Nunavut gold and iron ore projects – Agnico Eagle, Newmont, Baffinland (ArcelorMittal)
- NWT rare earths, diamonds, gold – De Beers, Avalon, Fortune, others
- BC coal, copper mines - Teck, Capstone, Walter Energy, Imperial, Taseko, Xstrata, others
- Alberta mined oil sands projects – Suncor, Syncrude, Shell, CNRL, others
- Saskatchewan diamonds, potash, uranium – Shore Gold, BHP, Cameco
- Ontario nickel, gold, palladium – Vale, Xstrata, Goldcorp, others
- Quebec diamonds, nickel, gold – Stornoway, Xstrata, Agnico-Eagle, others
- Newfoundland and Labrador nickel processing plant – Vale
- Labrador/QC Iron ore – Rio Tinto IOC, ArcelorMittal, Cliffs, Tata, Labrador Iron Mines, Alderon



## THE IRON ORE SCENE

- Price increases most impactful since 2008 – order of magnitude increase since 2000
- Export barriers in India and China will serve to constrain supply into the future
- Chinese investment in Australia, Africa, Canada (Alderon, Adriana, Century, Cliffs)
- Canadian action is centered in Quebec, Labrador and Nunavut
- IOC investment plans - \$800M in Labrador City expansion
- Tata Steel Minerals Canada- \$300M investment, production by 2012
- Cliffs - \$5B for Consolidated Thompson, Bloom Lake synergy
- ArcelorMittal - \$2B in Mont Wright; also \$400M for Baffinland and its Nunavut project.
- Some projects also include investment in railroads and ports.



# NL Mining

- \$4.6 billion industry – more than 4-fold increase since 2000.
- #5 mining jurisdiction in Canada. 8.6% of provincial GDP
- Significant increase in royalty payments in last decade
- Exploration expenditures are forecast to be a record high of \$234 million in 2012, up from an estimate of \$172 million in 2011.



# NL Mining

Currently 8 metal mines in operation (up from 2 in 2005) and two under construction

## Labrador:

- IOC (Rio Tinto, etc – Fe + pellet plant)
- Wabush (Cliffs – Fe + pellet plant in Quebec)
- Voisey's Bay (Vale – Ni, Cu, Co)
- Labrador Iron Mines – DSO Fe
- Tata Steel Minerals Canada has a DSO Fe mine under construction

## Newfoundland:

- Duck Pond (Teck – Cu, Zn)
- Beaverbrook Antimony Mine (Hunan Non Ferrous Metals).
- Ming Mine (Rambler Metals and Mining Plc. – Cu-Au)
- Pine Cove Mine (Anaconda Gold – Au)
- Newspar, a JV between Canada Fluorspar and Arkema under construction

## Processing

- Vale's hydromet Nickel Plant is under construction at a capital cost of \$3.6 billion, the biggest metals project currently underway in Canada





## STRONG FEDERAL GOVERNMENT ACTIONS

- Corporate tax competitiveness
- Strategic infrastructure investments
- Amendments to Canadian Environmental Assessment Act
- Aboriginal Skills and Employment Partnership programs
- Other Tax measures (flow through and accelerated capital cost allowance)
- Investment in northern geoscience
- Regulatory modernization
  - Fed/prov. equivalency, specific timelines, consistent and efficient administration of the fisheries act





# KEY CHALLENGES

- Inefficiencies in government review processes for natural resource projects; lack of compliance mechanisms
- Human resource/skills constraints
- Remote regions, inadequate or uncompetitive infrastructure





## TAKE AWAY MESSAGES

- Global mineral price increases, particularly in past decade, have been driven by China's development – in turn these are driving global investment
- Canadian mining industry has strengths in all regions
- Mining is growing in Newfoundland and Labrador and will get bigger
- Approximately \$140 billion in mining-related projects are proposed in Canada over the coming years
- A range of policy challenges face governments and the mining industry. These will require all of us to work together





**FOR MORE INFORMATION  
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