



Mining in Northwestern Ontario: Opportunities and Challenges

Moving Forward

Introduction to the Team



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Purpose

- The purpose of this study is to assist policymakers to predict and measure the consequences of creating a political and business environment that will foster further development in Northwestern Ontario's (NWO) mining industry.

Agenda

1. Updated Economic Impact (Dr. Camillo Lento)
2. Moving Towards Sustainability (Dr. Karen Peterson)
3. Aboriginal Inclusion (Dr. Karen Peterson)
4. Concluding Thoughts (Dr. Bahram Dadgostar)



Part I – Economic Update

Map of Mining Claims



Recent Big News....



UPDATE 3-Cliffs suspends Canada chromite project, hopes dim for Ring of Fire

Wed Jun 12, 2013 3:36pm EDT

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* Miner Cliffs cites regulatory, political delays

* Black Thor project could open up region for development

* Weak iron ore prices have hit Cliffs' core business

By Allison Martell

June 12 (Reuters) - Cliffs Natural Resources Inc

said on Wednesday it was suspending work on its \$3.3 billion chromite-mining project in northwestern Ontario, a move that dimmed hopes for development of the region's mineral-rich Ring of Fire.

Cliffs attributed the delay to stalled talks with the Ontario provincial government and on other political and regulatory problems.

It was far from clear that the company would be able to revive the project, called Black Thor, given the low iron ore prices that are pressuring its operations elsewhere.

"We will be closing our Thunder Bay and Toronto offices," she said. "We also have the exploration camp up in north down that."

Revised Estimates...

- Assuming the conditions and assumptions of our original report remained constant, the following estimates represent the current scenario of Cliff's Natural Resources being suspended indefinitely.
- This figures are estimates only and for illustration purposes.
- Please do not quote or reference without permission of the authors.

Un-mined Metals Value

- Original Estimate:
 - Total value of the un-mined metals/minerals is roughly \$USD135 billion.
- Revised Estimate:
 - Total value of the un-mined metals/minerals is roughly \$USD59 billion.
- Change:
 - Decline in value is roughly \$USD76.5 billion.

Employment Impact - Ontario

- Original Estimate:
 - Total employment created in Ontario: 23,588 new positions.
 - 8,107 from construction,
 - 15,481 from mining operations over an average mine life of approximately 17.5 years.
- Revised Estimate:
 - Total employment created in Ontario: 22,193 new positions.
 - 7,412 from construction,
 - 14,781 from mining operations over an average mine life of approximately 15.7 years.
- Change:
 - Loss of 1,435 jobs for all of Ontario
 - Average continuing job decline to 15.7 years from 17.5 years

Employment Impact - NWO

- Original Estimate:
 - Total employment created in NWO: 13,149 new positions.
 - 5,719 during construction,
 - 7,430 from mining operations over an average mine life of approximately 17.5 years.
- Revised Estimate:
 - Total employment created in NWO: 12,297 new positions.
 - 7,094 from construction,
 - 5,203 from mining operations over an average mine life of approximately 15.7 years.
- Change:
 - Loss of 852 jobs for NWO
 - Average continuing job decline to 15.7 years from 17.5 years

Employment Salaries and Benefits

- Original Estimate:
 - Total salary compensation during operating (construction) phase:
 - Ontario: \$1.106 billion (\$427 million) annually
 - NWO: \$531 million (\$301 million) annually
- Revised Estimate:
 - Total salary compensation during operating (construction) phase:
 - Ontario: \$998 million (\$386 million) annually
 - NWO: \$507 million (\$274 million) annually
- Change
 - Total salary compensation during operating (construction) phase declined:
 - Ontario: \$105 million (\$43 million) annually
 - NWO: \$24 million (\$27 million) annually

Government Revenues

- Original Estimate:
 - Total salary compensation during operating (construction) phase:
 - Taxes from the construction phase : \$1.3 billion
 - Taxes over the operation cycle : \$14.7 billion over 17.5 years
 - Combined total tax revenue : \$16.013 billion
- Revised Estimate:
 - Total salary compensation during operating (construction) phase:
 - Taxes from the construction phase : \$901 million
 - Taxes over the operation cycle : \$8.6 billion over 15.7 years
 - Combined total tax revenue : \$9.5 billion
- Change
 - Decline in total taxes: \$6.51 billion

Revised Estimates...

- There are other factors that need to be considered:
 - Changes in commodity values
 - Changes in the operations of other mining companies
 - Changes in the timing of the mining benefits
 - Addition of new mines that are closer to production

Commodity Values

Metal	1-Jun-12	3-Dec-13	% Change
Chromite	\$2.86/kg	\$2.31/kg	-19.2%
Gold	\$1626.30/oz	\$1222.3/oz	-24.8%
Nickel	\$7.27/lb	\$6.07/lb	-16.5%
Copper	\$3.34/lb	\$3.18/lb	-4.8%
Iron	\$135/tonne	\$132.57/tonne	-1.9%
Palladium	\$612/oz	\$712.4/oz	16.4%
Platinum	\$1443/oz	\$1345.9/oz	-6.8%

In Summary

- Decline in un-mined commodity values: \$76.5B
- Loss of 1,435 jobs for all of Ontario (852 jobs for NOW)
 - 15.7 years from 17.5 years
- Salary compensation during operating (construction) phase declined:
 - Ontario: \$105 million (\$43 million) annually
 - NWO: \$24 million (\$27 million) annually
- Decline in total taxes: \$6.51 billion



Part III – Moving Towards Sustainability

Infrastructure

Challenge

- Inadequate and limited infrastructure hinders development
 - a significant reason why Cliffs suspended operations indefinitely, although other factors are pertinent, as well.
- A major constraint is the requirement for electrical power and transportation.

Recommendation

- develop an integrated transportation, energy and communication network to realize mining potential
- an expanded infrastructure will also provide economic and social benefits for local communities and Aboriginal peoples

Infrastructure

- For the nine mining projects, it was originally estimated that capital costs for roads, rail and power line transmission were approximately \$1.739 billion.
 - This figure represented approximately 10% of the projected government revenues to be generated by these mines.
 - Assuming that the infrastructure costs do not change significantly due to the absence of Cliffs, the estimation is now 18.3% rather than 10%.

Labour Market

Challenge

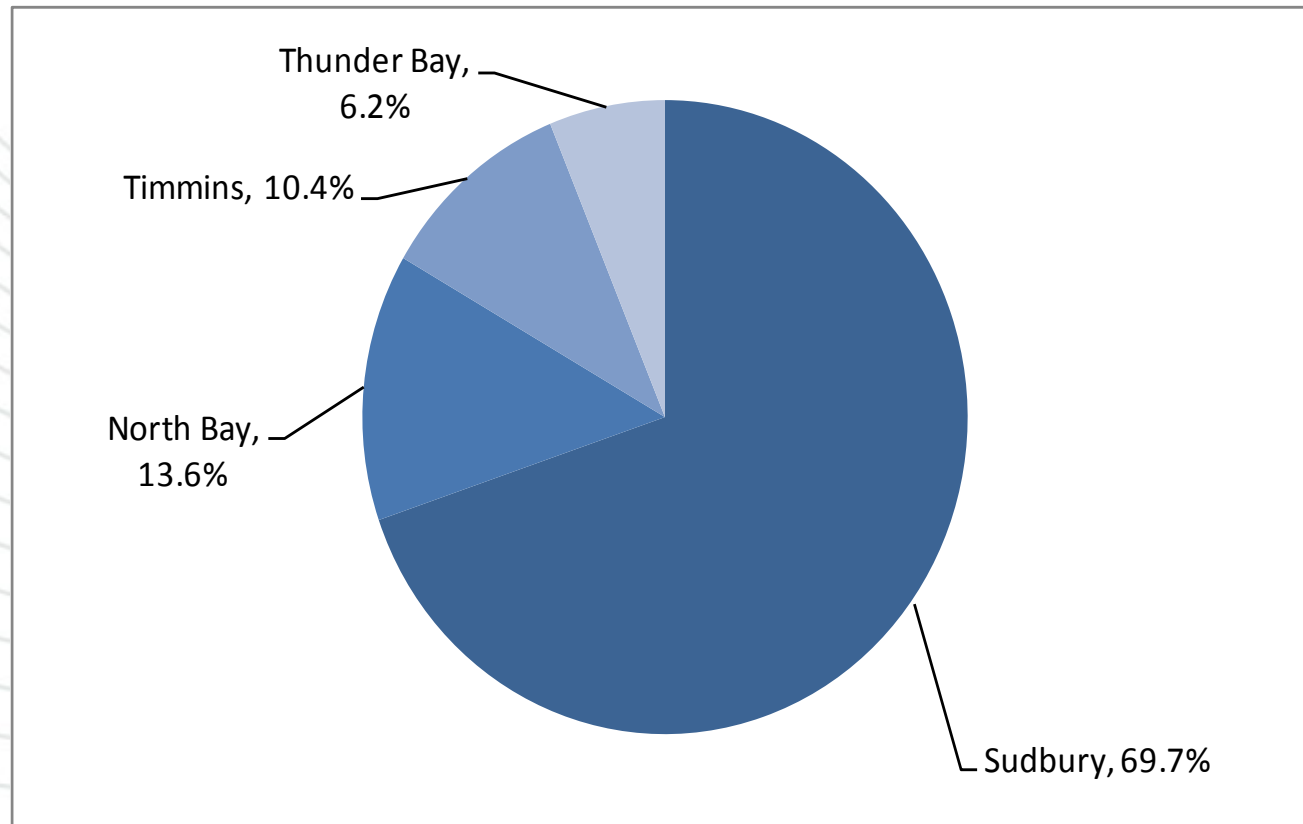
- Need to attract 25% to 40% new entrants to the mining industry.
- highest demand are the trades - miners, millwrights, mineral processors, heavy equipment operators and electricians.

Recommendation

- Target underrepresented groups
- Strategies for students from high school to post secondary to consider mining careers – develop career paths
- Develop a branding and communication strategy

Organizational Challenges

- Thunder Bay's share of the \$5.6B Mining Service and Supply Market is small:



Organizational Recommendations

- create a Northern Ontario Mining Service and Supply Association (NOMSSA)

.....considered Thunder Bay to function as a hub for mining activity through the development of an association of businesses

- promote member companies, network, research, tradeshow, data base of suppliers, etc.



Part IV – Aboriginal Inclusion

Context – Complexity

- Urban, rural, remote, road accessible, differing levels of development, First Nations, Metis, different aspirations, differing expertise, etc.
- Higher levels of unemployment, rates of chronic illnesses, poverty in communities, lower levels of education, social issues such as drugs and alcohol, suicides
- Limited skill development and work experience in mining
- Uneven playing field
- Aboriginal and Treaty Rights

Impacts to Aboriginal Communities

- Displacement from Land
 - Rights to land
 - Environmental degradation
 - Traditional pursuits
 - Cultural significance
 - Informal Economy
- Community Vitality
 - Way of Life
 - Increased cash
 - Influx of people
 - Increased presence of drugs and alcohol
 - Boom-bust economy

Aboriginal Inclusion

Challenge

- Unique Circumstances
 - culturally distinct, legal rights to land, disadvantaged, and a history of constrained relations
- Integration of cultural aspects and community development within socio-economic and technical processes

Recommendation

- Utilize flexible, innovative and collaborative approaches to develop long-term solutions
- Utilize community protocols
- Need for clarity re: meaningful consultation
- move agreement making beyond impact benefits to relationship and partnership building.

Enhance Opportunities

- **Community Development**
 - Include CCPs as well as Land Use Plans, affordable energy supply
- **Capacity Building**
 - Build community as well as individual capacity
- **Training and Education**
 - Develop a 5 yr plan
 - Short term, certificates, diplomas, degrees
 - Adjust programs for systemic discrimination
- **Access and Retention**
 - Provide information re: jobs and paths to get there
 - Provide support services & a dedicated HR person
 - Provide flexible work arrangements
- **Working Conditions**
 - Create a safe and welcoming work environment

Reduce Impacts

Approach

- Work within a principled context of
 - Social Justice
 - Environmental Sustainability
 - Economic Equity
 - Cultural Diversity

Outcome

- Individuals are prepared to succeed
- Communities are left better off
- Environmental guidelines are not only met but exceeded

Take Home Message

- Cultivate on-going and lasting relationships where communities are involved in development, common interests are identified and where structures, ground rules and work plans are jointly decided.
- It takes time and work to get there but the process is more in line with the spirit of the Treaties and therefore more prone to having lasting effects as it is relevant and meaningful to Aboriginal communities.
 - Paul Burroughs, Project Manager, Hydro Electric Development, Ontario Power Corporation



Part V – Concluding Thoughts

Some Considerations for Policy Design

- Distribution of the mining wealth generated:
 - Aboriginal Communities
 - Municipalities (property tax issues)
 - Corporations
 - Federal and Provincial Governments
- Reinvestment of the mining wealth generated:
 - Federal and Provincial Level of Governments

Thank You

- Thank you for coming!
- We welcome any questions.

