

# Mining in Northwestern Ontario: Opportunities and Challenges

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# Introduction to the Team



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# Acknowledgments

- John Mason, and the Thunder Bay CEDC
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- Various representatives of First Nation and Métis organization
- Marg Rutka, Ministry of Northern Development and Mines (MNDM)

# 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.
- Accordingly, this study measures the potential economic contributions and considers the social impacts of further growth in the mining industry on NWO, with a particular emphasis on Aboriginal communities.

# Agenda

1. An introduction to the study and brief background to the mining industry in NWO.
2. The economic impact of further development with consideration for:
  - a) the value of the un-mined minerals and metals,
  - b) the employment economic impact,
  - c) the projected government revenue.
3. The present and future challenges facing mining with consideration for:
  - a) Aboriginal involvement,
  - b) labour market dynamics, and
  - c) infrastructure.

Environmental impacts are beyond the scope of this study.



# Part I – Background

# Map of Mining Claims



# Mature Exploration Projects

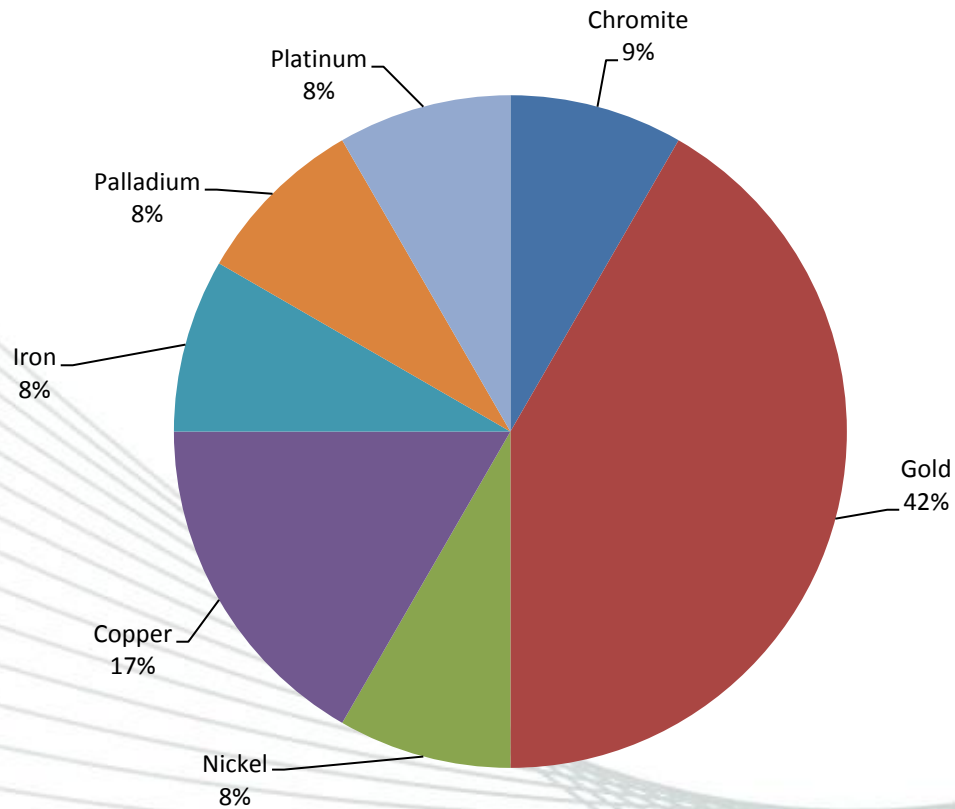
These nine projects under study are as follows:

1. Bending Lake Iron Group Limited – Bending Lake Iron Property
2. Cliffs Natural Resources Inc. – Black Thor
3. Goldcorp Inc. – Bruce Channel Deposit and Cochenour Project Gold Projects
4. Osisko Mining Corporation – Hammond Reef
5. Noront Resources Ltd. – Eagle’s Nest
6. Rainy River Resources Ltd. – Rainy River Gold Project
7. Rubicon Minerals Corporation – Phoenix Gold Project
8. Stillwater Mining Company – Marathon copper-PGE Deposit
9. Treasury Metals Inc. – Goliath Gold Project



# Metal Claim Proportions

## Metals to be Mined



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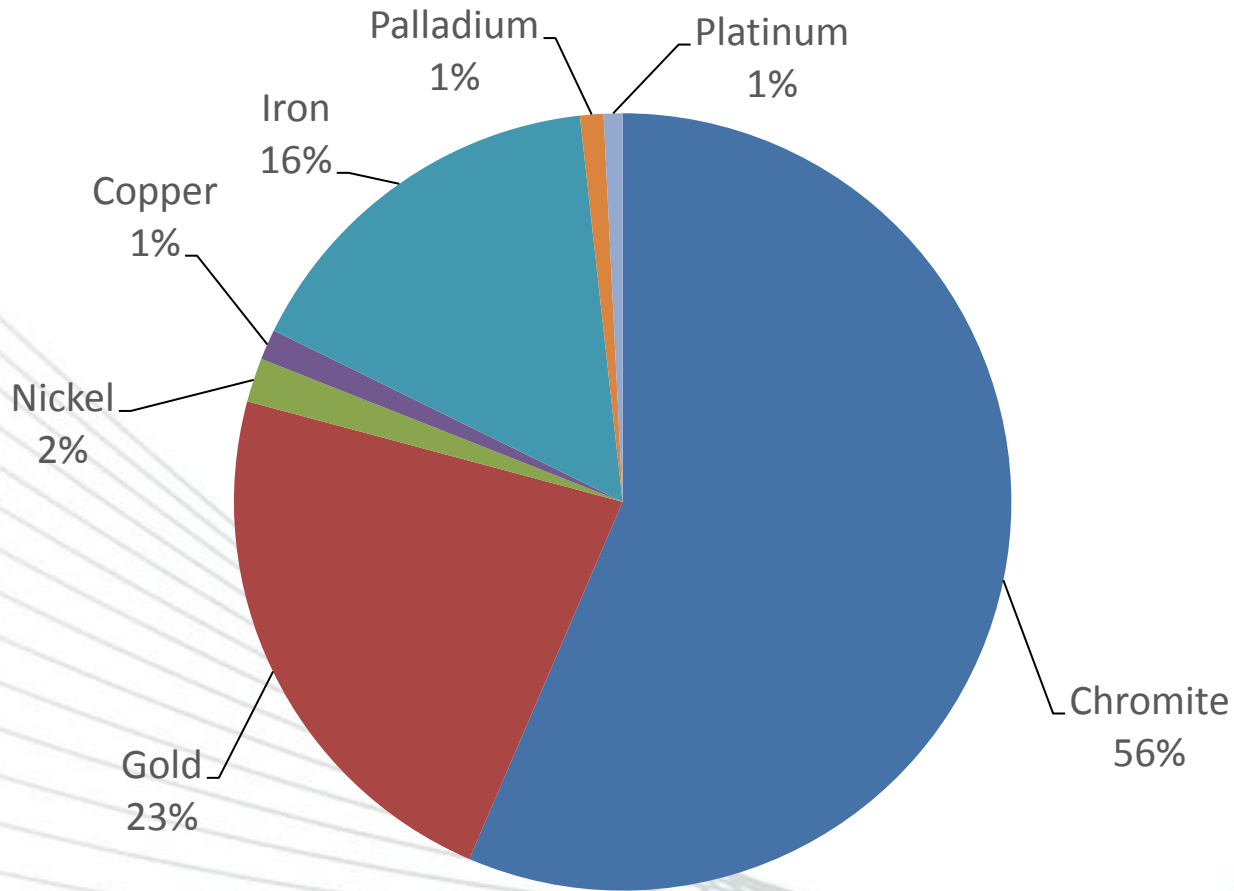
# **Part II – Economic Impact Analysis**

# Un-mined Metals Value

- Total value of the un-mined metals/minerals is roughly \$USD135 billion.

Metal/Current Price (June 1, 2012)	PV of metal	Exercise price (PV cost)	Real option value	Aggregate real option value
Chromite/\$2860/tonne	\$85.8	\$21.88	\$76.44	<b>\$76.44</b>
Gold/\$1626.30/oz	\$7.59	\$2.07	\$6.15	<b>\$30.75</b>
Gold-open pit/\$1626.30/oz	\$8.36	\$2.52	\$6.58	<b>\$13.75</b>
Gold-underground/\$1626.30/oz	\$5.02	\$1.19	\$4.21	<b>\$17</b>
Nickel/\$7.27/lb	\$3.00	\$0.74	\$2.48	<b>\$2.48</b>
Copper/\$3.34/lb	\$1.22	\$0.51	\$0.86	<b>\$1.72</b>
Iron/\$135/tonne	\$23.62	\$4.92	\$21.63	<b>\$21.63</b>
Palladium/\$612/oz	\$0.94	\$0.45	\$0.66	<b>\$1.32</b>
Platinum/\$1443/oz	\$0.63	\$0.13	\$0.53	<b>\$1.06</b>
<b>Total</b>				<b>\$135.40</b>

# Metal Value Proportions



# New Employment – Ontario

- The direct, indirect and induced employment created for the Province of Ontario is expected to total 23,588 new positions:
  - 8,107 from construction,
  - 15,481 from mining operations over an average mine life of approximately 17.5 years.

# New Employment – NWO

- A total of 13,149 of these new positions are expected to remain in NWO:
  - 5,719 during construction,
  - 7,430 from mining operations.

# Employment Salaries and Benefits

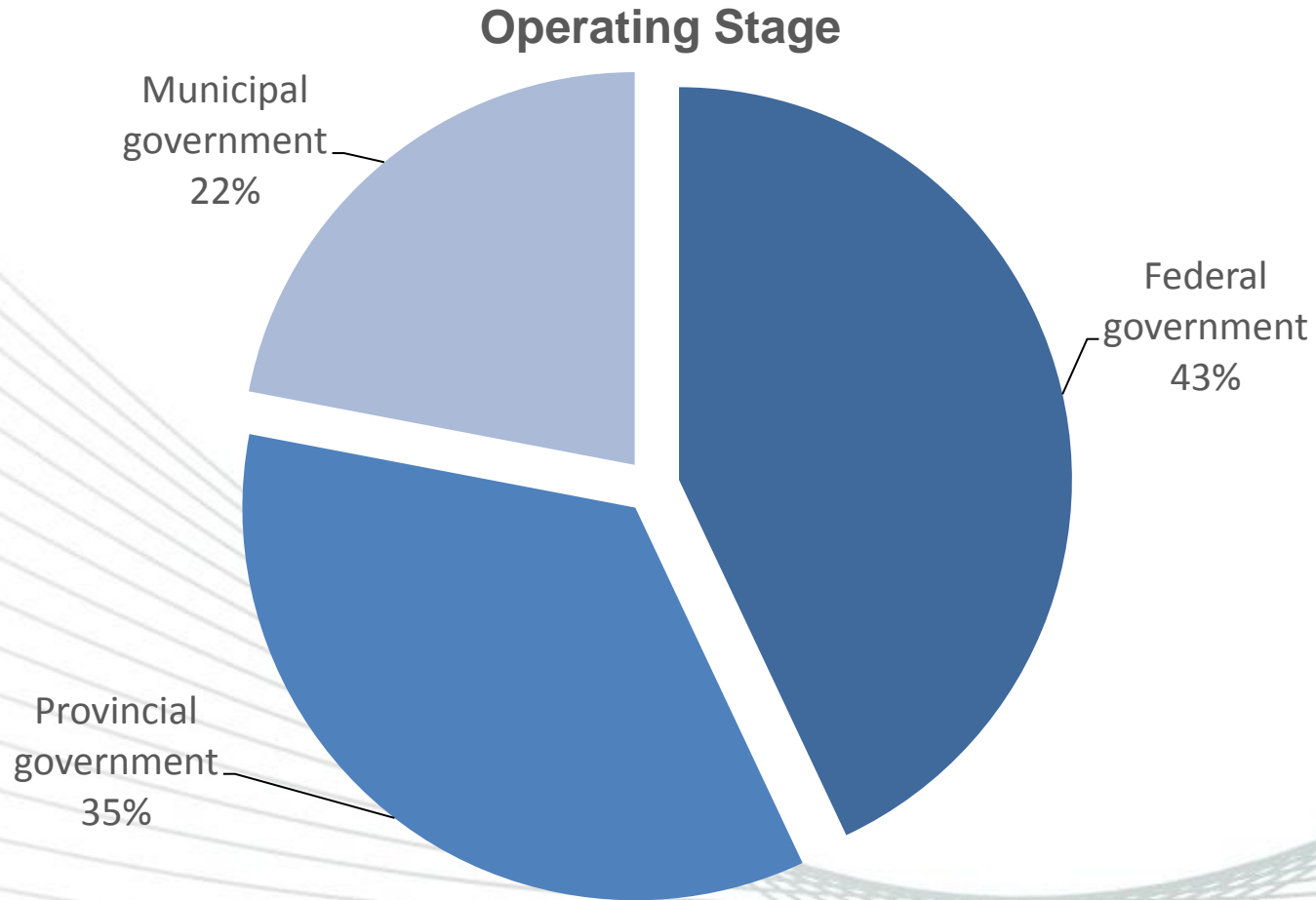
- In terms of total salary compensation during the operation phase, wages and benefits paid are estimated as:
  - Ontario: \$1.106 billion annually
  - NWO: \$531 million annually
- The construction period (approx. 3 years):
  - Ontario: \$427 million annually
  - NWO: \$301 million annually

# Government Revenues

- Potential tax revenue for all three levels of government is as:
  - Taxes from the construction phase : \$1.3 billion
  - Taxes over the operation cycle : \$14.7 billion
  - Combined total tax revenue : \$16.013 billion
- The tax revenues will be received over the average operating life of approximately 17.5 years.



# Share of Tax Revenue by Government



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## **Part II – Challenges and Recommendations**

# Aboriginal Involvement

- To enhance the involvement of Aboriginal peoples, this study demonstrates that flexible, innovative and collaborative long-term solutions are required.
- Recognition of Aboriginal and Treaty Rights and clearly defined processes for meaningful consultation in relation to the 'Duty to Consult' would help move agreement making beyond traditional impact benefits to relationship and partnership building.

# Labour Market Challenges

- Over the next decade, NWO would need to attract upwards of 30% to 45% of the entire new entrants to the mining industry.
- The occupations expected to be in highest demand are the trades, such as underground miners, millwrights, mineral processors, heavy equipment operators and electricians.

# Labour Market Challenges

## Distribution of Demand across Job Categories

### Percentage in each category

Trades and Labour Occupations	43.7%
Supervisors, Coordinators, and Foreman	7.6%
Professional and Physical Science Occupations	5.3%
Support Workers	4.6%
Technical Occupations	3.7%
Human Resources and Financial Occupations	1.9%
All Other Occupations	33.3%

# Labour Market Recommendations

- Utilizing underrepresented groups in mining, such as Aboriginal people and women;
- Developing strategies for high school, college and university students to consider mining as a career; and
- Creating an industry-wide branding and communication strategy.

# Infrastructure Challenges

- Inadequate and limited infrastructure has been a significant factor in hindering the development of the region's immense economic mining potential.
- A major constraint in operating the nine mining projects is the requirement for over 550 MW of electrical power.

# Infrastructure Recommendations

- The development of an integrated transportation, energy and modern communication network is necessary to realize the potential from mining.
- An expanded infrastructure network will also provide positive economic and social benefits for local communities and Aboriginal peoples.



# Infrastructure Recommendations

- For the nine mining projects, it is estimated that capital costs for roads, rail and power line transmission are approximately \$1.739 billion.
  - This figure represents approximately 10% of the projected government revenues to be generated by these mines.
- These capital costs will create an additional large number of construction and maintenance jobs.
- Infrastructure development will also open up the NWO region to further development of the minerals and metals potential.



# **Part III – Conclusion and Overall Recommendations**

# Overall Recommendations

- The extent of the magnitude of mining development in NWO calls for:  
*effective participation and leadership by the Provincial and Federal Governments to coordinate the required initiatives and to support economic growth that fosters sustainable development for the future of mining in this region.*

# Overall Recommendations

- It is apparent that collaboration amongst the Provincial and Federal governments, Aboriginal communities and industry is required to produce long-term strategies for the success of all parties.

# Thank You

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