

Development of a “Mining 101” Presentation for Ontario’s Aboriginal Peoples

September 12th, 2011

Odanah, Wisconsin

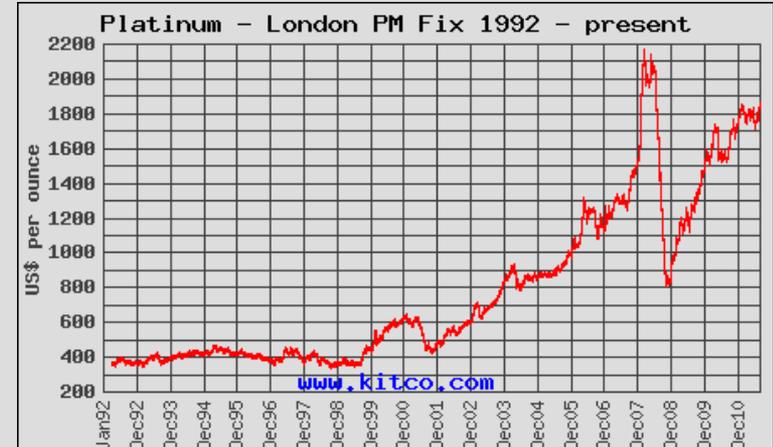
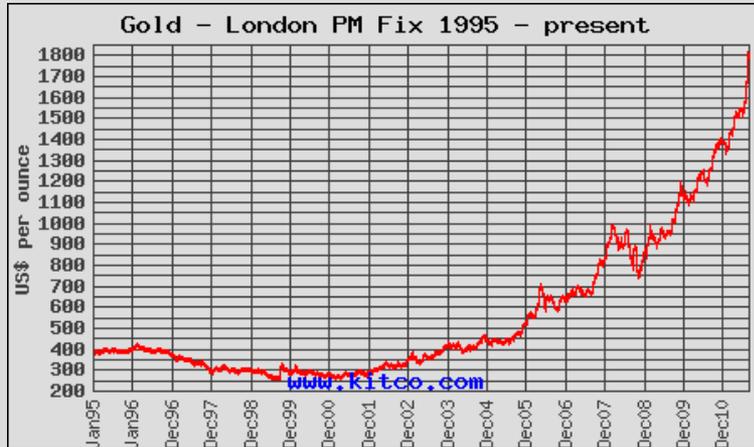
The Need

- General lack of understanding of the minerals industry, not just within the Aboriginal population the general public as well;
- Significant increase in the level of mineral exploration and development in Ontario;
- Capacity in Aboriginal communities is increasing, there is greater opportunity to be involved in the mineral development and resource extraction industries;
- Government is best-suited to present general information on the complete mineral exploration and development cycle.

Ring of Fire Secretariat



Ministry of Northern Development, Mines and Forestry



Mineral exploration in Ontario is being fueled by high commodity prices, primarily gold.



SOME CONTEXT, WHY MINERALS ARE IMPORTANT TO ONTARIO

- Mineral production for 2010 was valued at \$7.7B
- 28 metal mines produced \$4.8B worth of metals
- Exploration expenditures of \$801M in 2010, of which \$560M targeted gold
- Exploration expenditures for 2011 are forecasted at \$939M

SOME CONTEXT, WHY ENGAGE WITH ABORIGINAL PEOPLES?

- Sec. 35 of the Constitution Act affirms Aboriginal and treaty rights of Aboriginal peoples in Canada;
- There are signed Treaties covering the province of Ontario;
- Supreme Court of Canada decisions have confirmed the need to engage aboriginal communities and compensate for infringements on aboriginal and treaty rights;
- Communities no longer prepared to watch development occur within traditional lands and not see some benefits;
- Past revisions in the *Mining Act* entrenched the need for aboriginal consultation for advanced exploration and production;
- Recent “Modernization of the *Mining Act*” has moved the need for consultation earlier in the mineral development ‘cycle’;
- Companies are seeking “social licence to operate”;
- It is the right thing to do.

Ring of Fire Secretariat

Ministry of Northern Development, Mines and Forestry

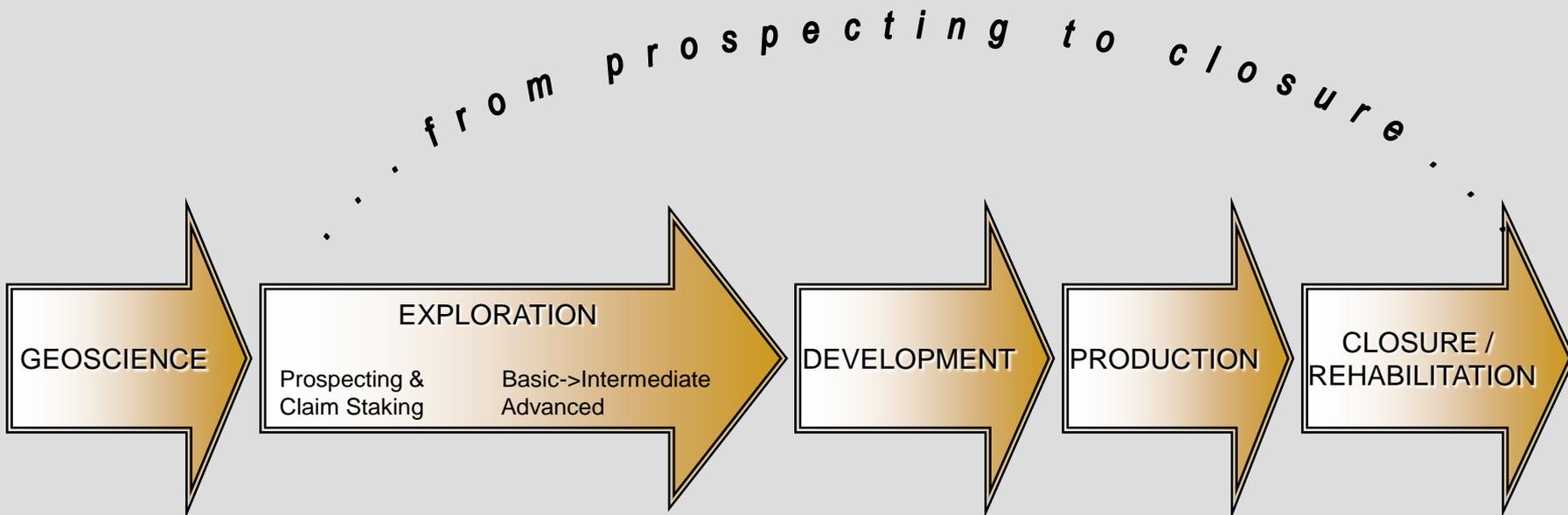


The Approach

- The information has to be understandable by the lay-person (ie. strip away the terminology);
- The format has to be simple and visual;
- Language is a challenge, three dialects in northern Ontario: Ojibway; Oji-cree; and Cree;
- The structure of the presentation has to be open to allow lots of dialogue;
- The point is to have an open discussion and exchange of information/viewpoints, not just “present and get out”;
- NOTE: Two way exchange of info is a good opportunity for the Ontario government to learn about the Aboriginal community and its concerns. This is the start of on-going communications/engagement with communities.

Structure of the Presentation

- Introduction
 - Minerals in your life
 - Legislative scope
 - “Why Mining?”
- The “Cycle”
 - Exploration
 - Advanced Exploration
 - Development
 - Production
 - Closure
- Aboriginal consultation, industry risk factors



The Mining Sequence

Minerals in your life



Gypsum



Fluorite



Calcite

Minerals in your life



Iron

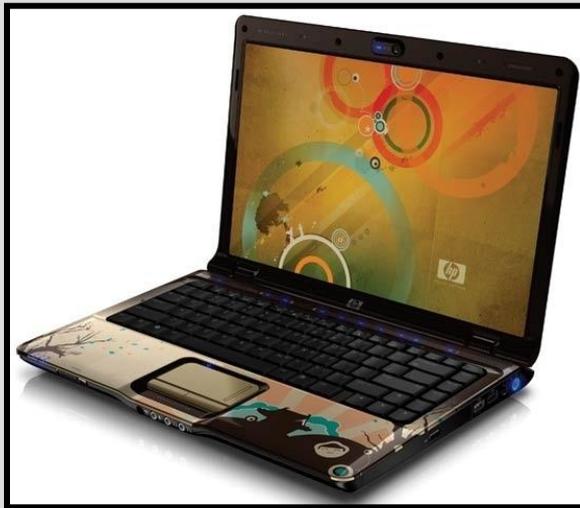


Palladium



Anthophyllite

Minerals in your life



Tantalum



Cesium - pollucite

The Exploration Cycle

1. Prospecting and Staking
2. Exploration
3. Advanced Exploration

PROSPECTING

Mining Act applies; other Acts may apply

Prospector's licence required to prospect on Crown lands

Work includes:

- geological mapping (reconnaissance)
- hand sampling and taking grab samples for possible assaying
- surveys (no grids)
- prospecting (traversing and interpretation)

Contacting Aboriginal communities is recommended.

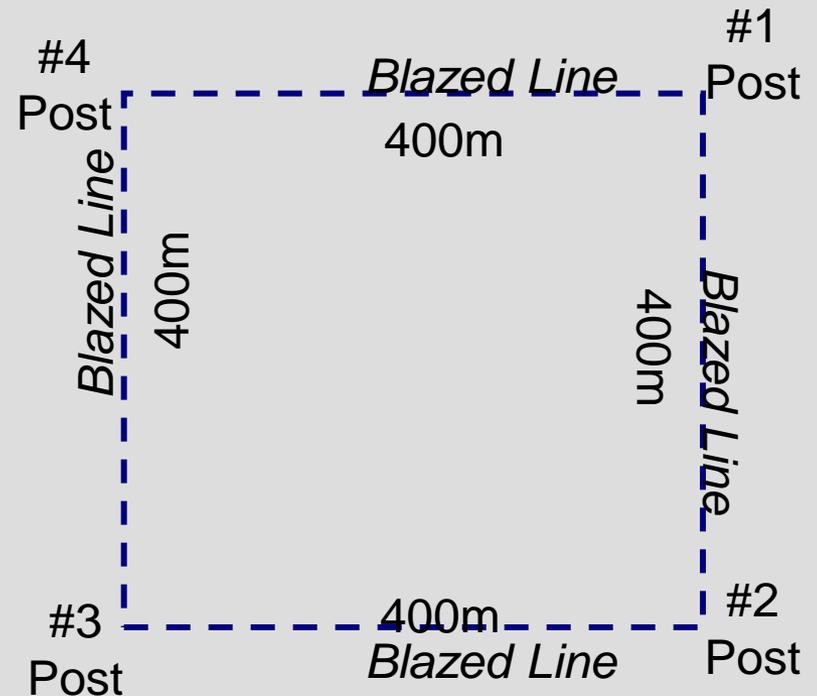


Prospectors at a mineral occurrence.

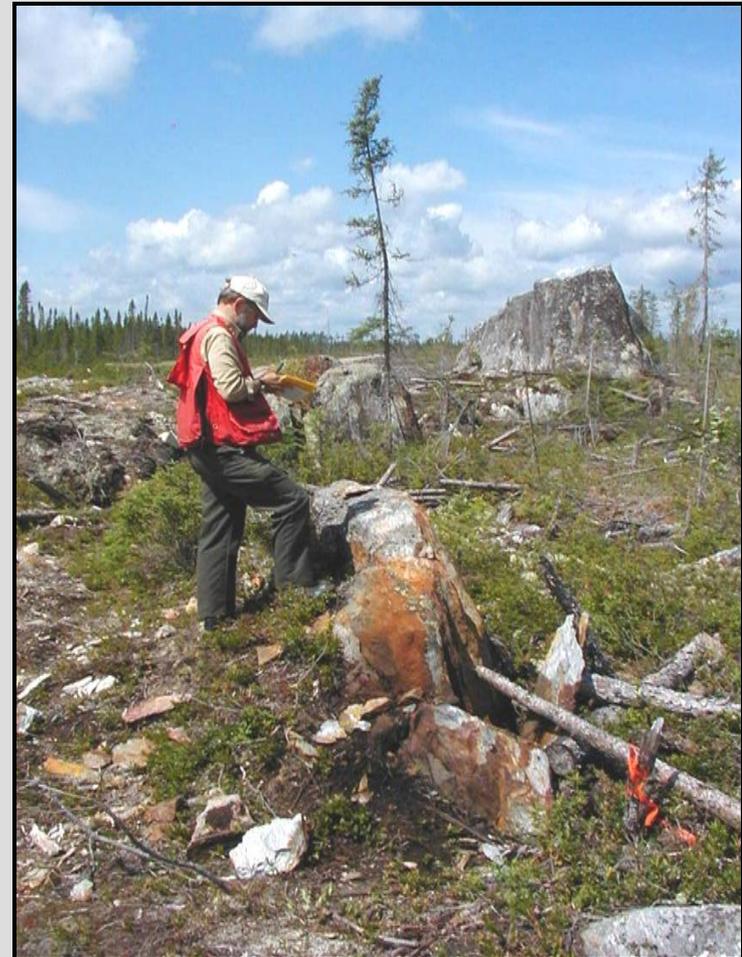
Staking



Mining Claim Post / Inscribed

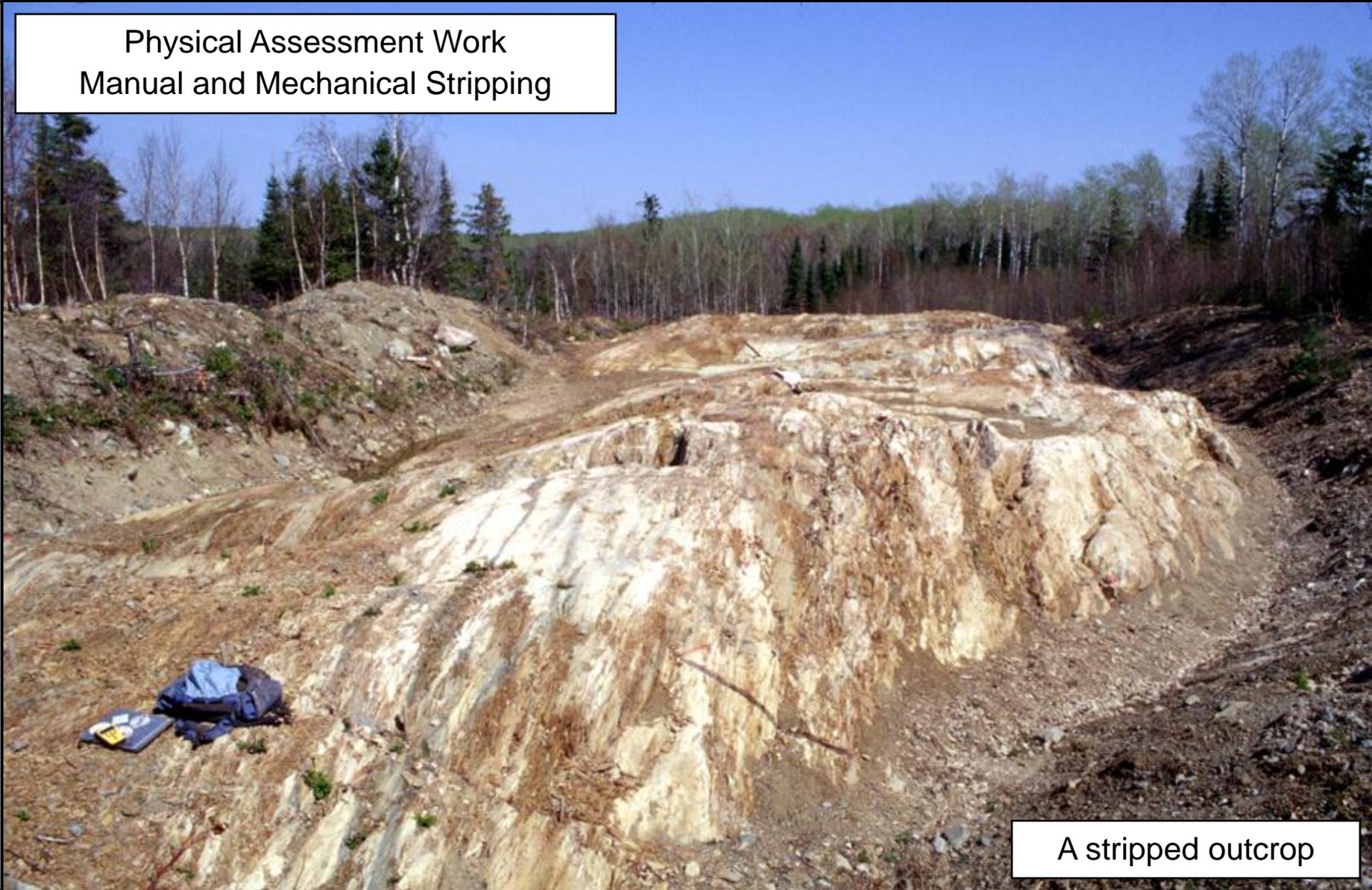


Geological Mapping



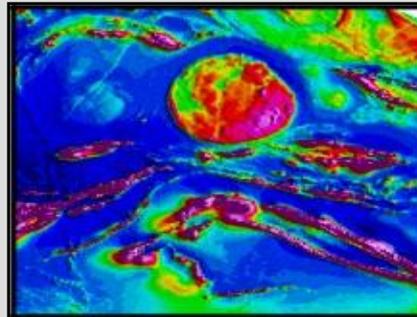
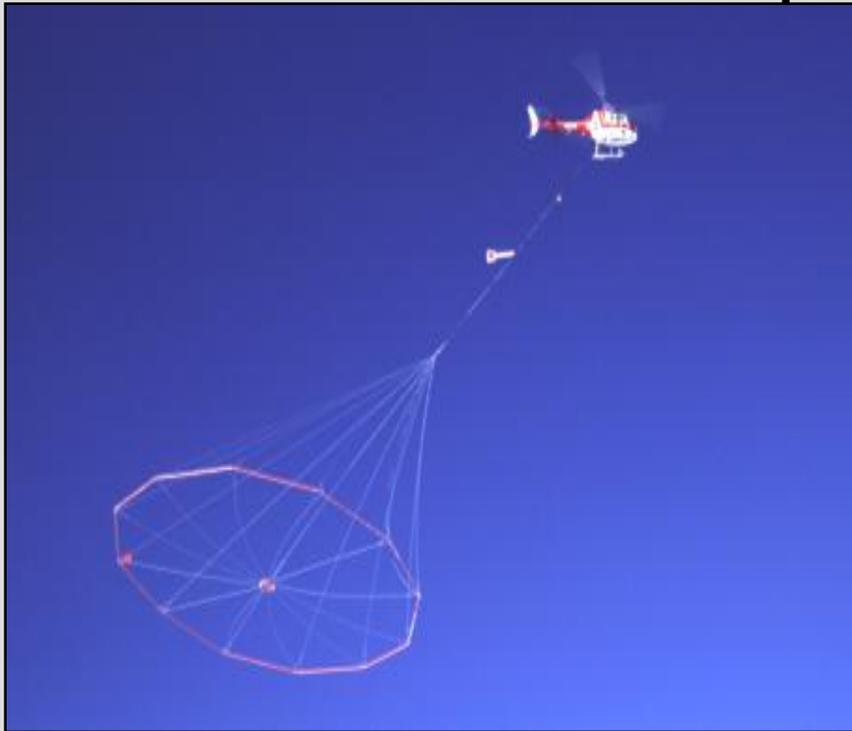
Ministry of Northern Development, Mines and Forestry

Physical Assessment Work
Manual and Mechanical Stripping



A stripped outcrop

Airborne Geophysical Surveys



Ring of Fire Secretariat

Ministry of Northern Development, Mines and Forestry

Physical Assessment Work
Exploration Diamond Drilling



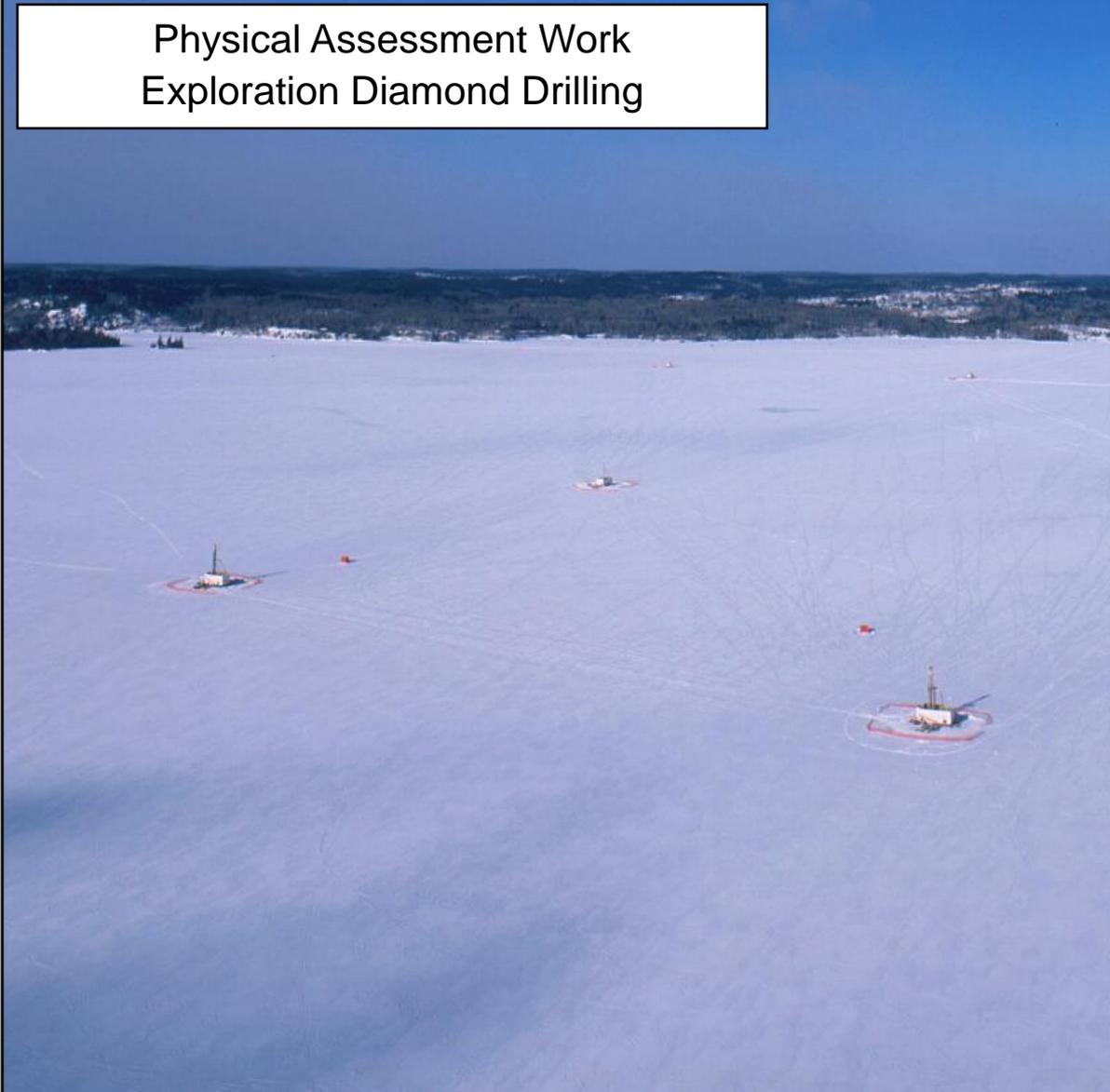
Small Diamond Drill on Skids
North of Kenora

Ring of Fire Secretariat



Ministry of Northern Development, Mines and Forestry

Physical Assessment Work
Exploration Diamond Drilling



Red Lake

Sudbury

Key Applicable Legislation:

- ✓ ***Mining Act*** (Ministry of Northern Development, Mines and Forestry)
- ✓ ***Environmental Protection Act*** (Ministry of the Environment)
- ✓ ***Ontario Waters Resource Act*** (Ministry of the Environment)
- ✓ ***Occupational Health & Safety Act*** (Ministry of Labour)
- ✓ ***Public Lands Act*** (Ministry of Natural Resources)
- ✓ ***Lakes & Rivers Improvement Act*** (Ministry of Natural Resources)
- ✓ ***Crown Forest Sustainability Act*** (Ministry of Natural Resources)
- ✓ ***Technical Standards and Safety Act*** (Technical Standards and Safety Authority)
- ✓ ***Planning Act*** (Ministry of Municipal Affairs and Housing / Ministry of Health)
- ✓ ***The Health Protection & Promotion Act*** (Ministry of Health)
- ✓ ***Environmental Assessment Act*** (Ministry of the Environment)
- ✓ ***Fisheries Act*** (Fisheries and Oceans Canada (DFO))
- ✓ ***Canadian Environmental Assessment Act*** (CEA Agency)
- ✓ ***Public Transportation and Highway Improvement Act*** (Ministry of Transportation)
- ✓ ***Explosives Act*** (Natural Resources Canada)

Advanced Exploration



Underground bulk sampling



Waiting for results



Rehabilitation



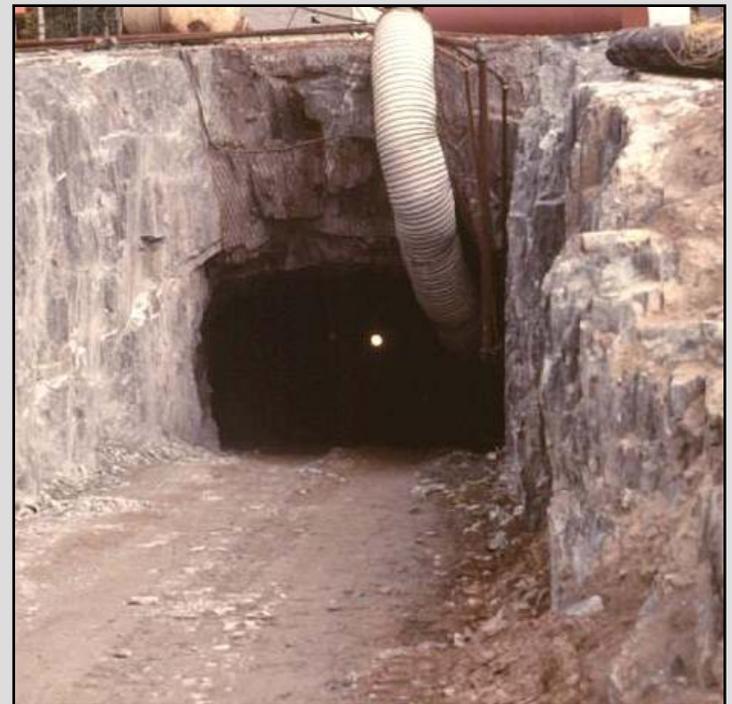
Done!!!!

Subject to Certified Closure Plans

Development

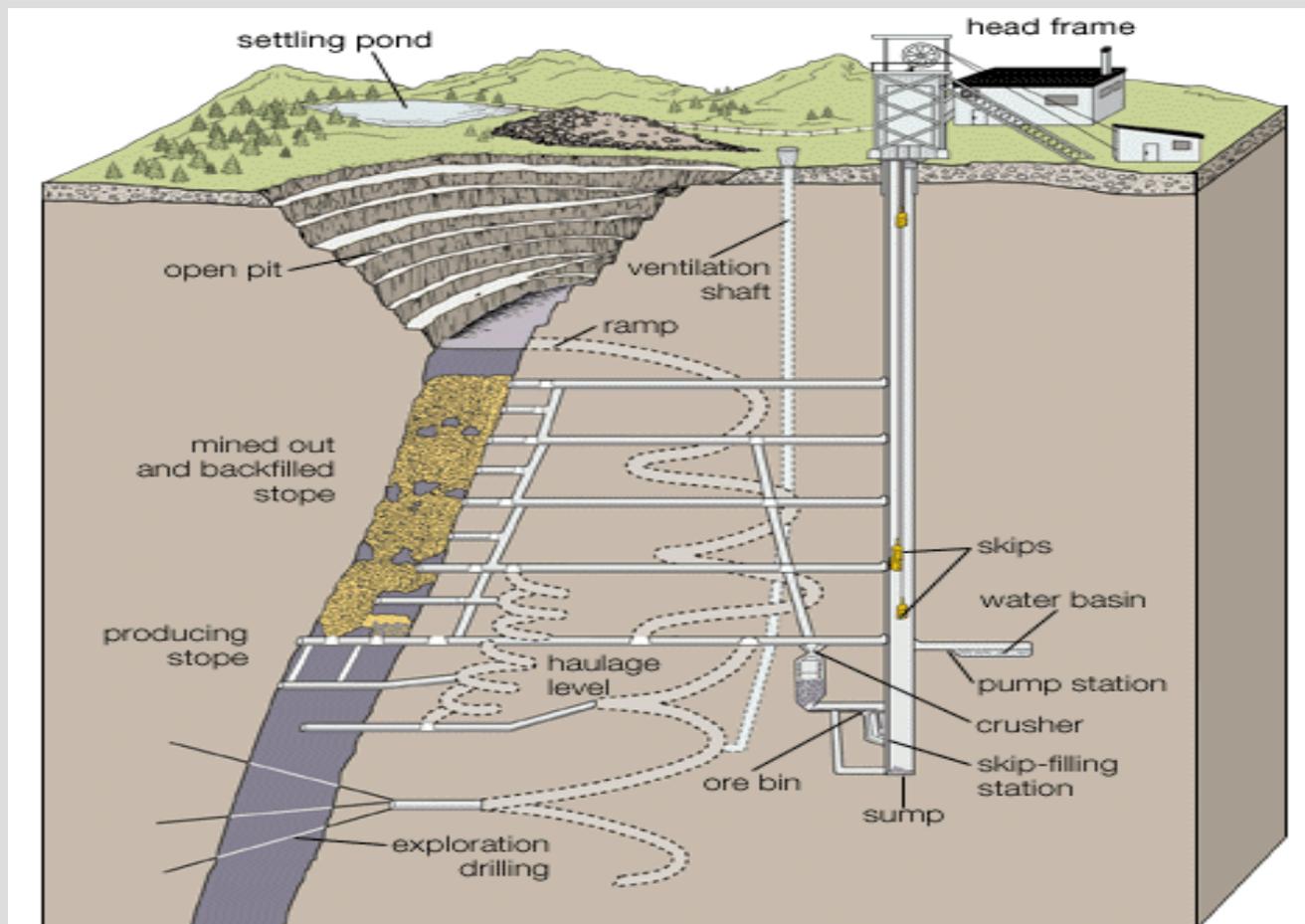


Construction of Infrastructure

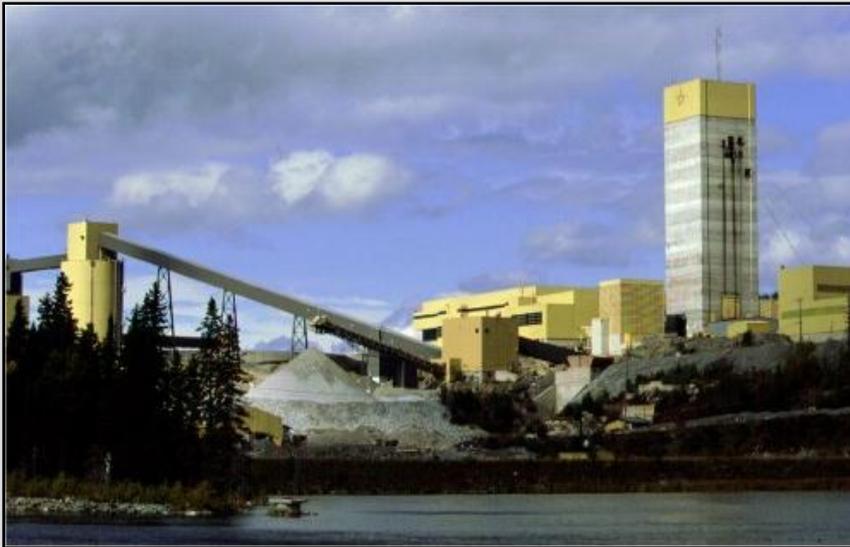


Underground Development

Production



Production



Williams Gold Mine, Hemlo

Red Lake Gold Mines



Production



Blast hole drills - Lac Des Iles
Platinum/Palladium Mine,
West of Thunder Bay

Open pit haul truck



Production



Ball mill - Lac Des Iles
Platinum/Palladium Mine,
West of Thunder Bay



Flotation cells – Lac Des Iles
Platinum/Palladium Mine,
West of Thunder Bay

Production



Tailings disposal



Environmental monitoring

Closure/Rehabilitation

North Coldstream Mine Rehabilitation

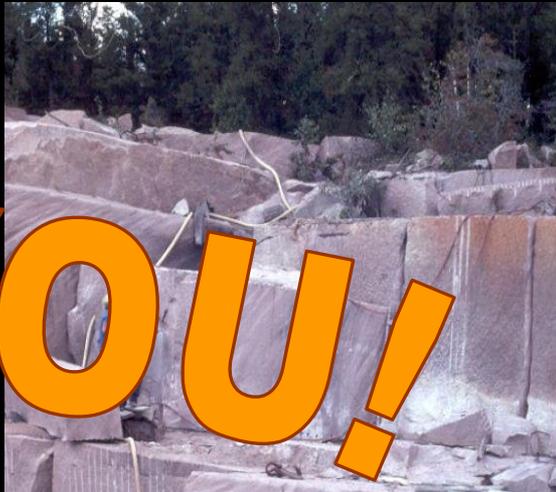
Before



After



At the end of its operation the site is closed and rehabilitated to its natural condition or alternate use.



THANK YOU!

