

# Mining 101

**An overview of the mining sequence: impacts, decision points, and activities.**



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Presentation by Northwatch

# Mining 101

**An overview of the mining sequence: impacts, decision points, and activities.**

- ▶ Mining and Water: the Mining Sequence
  - Prospecting
  - Exploration
  - Operation
  - Processing
  - Closure
- ▶ Mining and the Land: Mineral Exploration
- ▶ Mining decision points / decision-makers
- ▶ Mining in Timiskaming First Nation Territory



# Mining 101

**An overview of the mining sequence: impacts, decision points, and activities.**

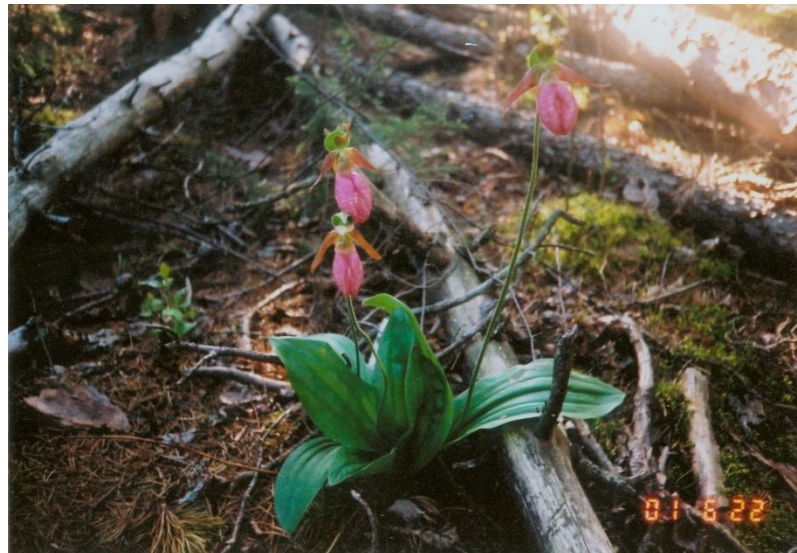
## ► Mining and Water: the Mining Sequence

- Prospecting
- Exploration
- Extraction
- Processing
- Mine Closure



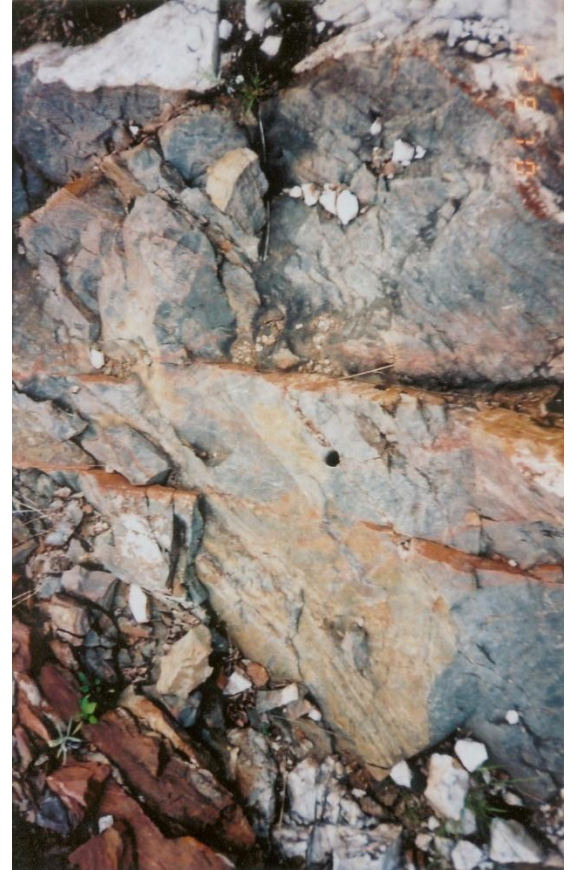
# The Mining Sequence

**Prospecting** – individuals or companies gain the exclusive right to search for minerals on an exploration property by staking a mineral claim



# The Mining Sequence

**Exploration** – includes surface stripping, drilling and bulk sampling to evaluate an area for its mineral potential; can include high levels of disturbance and loss of natural values



# The Mining Sequence

**Extraction** - the operation of a mine includes the mine itself, where the ore is removed from the ground, but also the creation of waste rock and mine tailings, and all of the infrastructure related to the mine's operation.





# The Mining Sequence

**Processing** - the ore is crushed and ground, and the valued metals are separated from waste; smelting or refining is carried out either on-site or at another location





# The Mining Sequence

**Closure** - Mine site is to be returned to its "original" state or to a productive alternative; Structures are removed, openings to surface capped, regrading and revegetation is done. Most often the area is reclaimed by constructing ponds, wetlands, grassland or forest over the mine site and impoundments of waste



# The Mining Sequence

- ▶ **Perpetual Care** - After closure, most major mines require perpetual care to monitor for structural stability (e.g. of tailings dams), many mines require water treatment long after closure



# Mining 101

**An overview of the mining sequence: impacts, decision points, and activities.**

- ▶ **Mining and the Land: Mineral Exploration**



**Mineral Exploration Site Visits – 2010**



# PROJECT OBJECTIVES

- ▶ DOCUMENT IMPACTS OF EARLY STAGES OF MINERAL EXPLORATION
- ▶ TEST-DRIVE AUDIT CHECKLIST
  - Identified candidate sites
  - Developed observation sheet
  - Conducted field visits
  - Assemble related background information

### Mineral Exploration Sites – Field Observations

Site:
Claim Holder:
Explorationist:

Location:
Observations by:
Date:

#	Category	Description	Indicator	Observations	Comments	Followup
1	Physical Hazards	Pits, Trenches, Stripping, Adits, Shafts	Disturbance, slope/depth, overburden or waste rock piles			
2	Chemical Hazards	pH, metals, nitrates, ammonia	Field monitoring, lab samples			
3	Aquatic Values	Wetlands, streams, creeks, lakes; Riparian Zones	Disturbance, sedimentation / siltation, conductivity			
4	Terrestrial Values	Life Science (Vegetation), Habitat (eg. Endangered Species), Earth Science (land formations)	Forest composition, plant communities, nests, land forms			
5	Landscape Values	Fragmentation, eg. related to road access, grid lines,	Width, condition, spacing, compaction, rutting, pooling			
6	Infrastructure	Camps, clearing, waste, debris, core, power lines,	Presence of structures, pads, waste piles			
7	Social	Hunting, Fishing, Trapping, NITPs, Recreational uses, Nearby residences	Indication of other uses of site or adjacent areas			
8	Aboriginal Interests	Treaty area, proximity to First Nation(s)				





Miller Lake / O'Brien

























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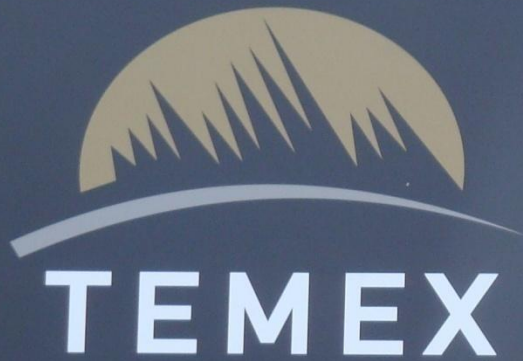
GOLDEYE

EXPLORATIONS LIMITED



**BIG DOME PROJECT**





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**GOLDEYE**  
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**ATHENA CLAIMS  
CRESO OPTION**



















**GOLDEYE**  
EXPLORATIONS LIMITED



**HYDRO CREEK PROJECT**









Nemewenda





















**Scadding West**





































**Wolfe Lake**









**Scadding East**













































**Pele Mountain**













PROG - Ta

60M



**CRESO**  
Exploration Inc.



**TYRANITE MINE SITE**

**CONTACT PERSON**  
PERSONNE DE CONTACT

**SONNY WILCOX**  
1-289-440-3850

**PROJECT MANAGER**  
CHEF DE PROJET































# CRESO

Exploration Inc.

## MINTO OPEN PIT SITE

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**PROJECT MANAGER**  
CHEF DE PROJET











A photograph showing a red metal container, possibly a drum or large bucket, with several pipes resting on its rim. A white bucket is hanging from the side of the container. The background shows a forest of tall evergreen trees under a clear sky. The red paint on the container is peeling and worn in several places.

FORIDA  
LINSEED SOY  
WT. NET 23 L









**TRELAWNEY**  
MINING AND EXPLORATION INC.

## CHESTER MINE ROAD

**“WARNING POTENTIALLY HAZARDOUS ROAD CONDITIONS AHEAD”**

**“MINING OPERATIONS ONGOING 24 HOURS”**

**“USE AT YOUR OWN RISK”**

**“AVERTISSEMENT DE RISQUES POTENTIELS CAUSES PAR LA CONDITION DU CHEMIN”**

**“LES OPERATIONS ACTIVITÉ MINIÈRE OPERENT SUR UNE BASE DE 24 HEURES”**

**“L'UTILISATION DU CHEMIN EST A VOS RISQUES”**



















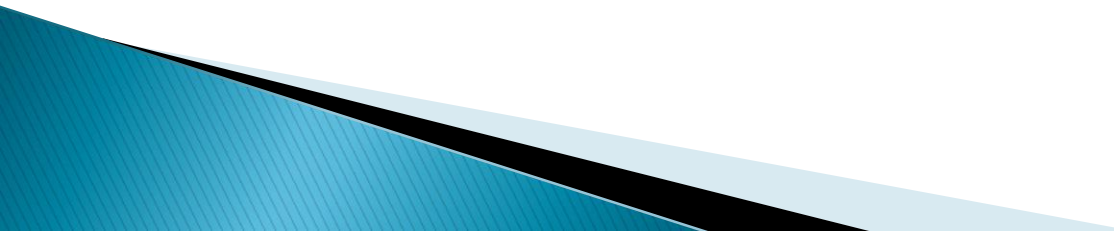








# Summary Observations

- ▶ Disturbances are extensive, and affect terrestrial and aquatic environments
  - ▶ Past and current mineral exploration disturbances are co-mingled
  - ▶ Mineral exploration is taking place amidst a variety of other land uses, some of them competing and all of them cumulative
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# Key recommendations

- ▶ Remediation must be mandatory, within defined and limited timelines
  - ▶ Permitting process must take into account previous disturbances
  - ▶ Monitoring, compliance and enforcement are essential
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