

Wek'eezhii Board Orientation Session

Setting the Stage:
An Introduction to Development
in the Region

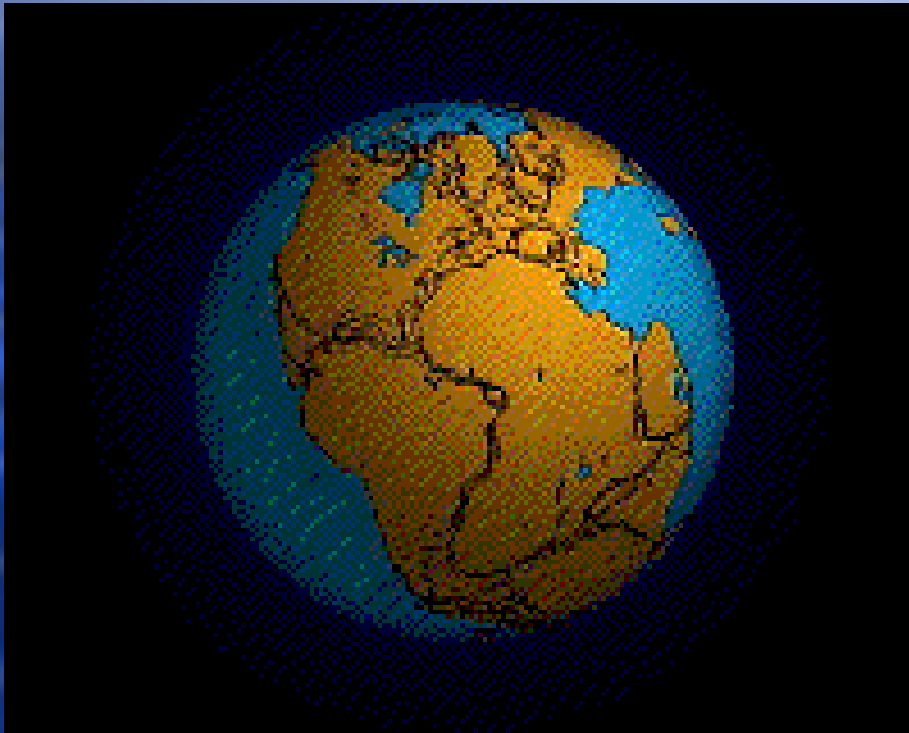
What Brings Developers North?



- ◆ The Rocks
- ◆ The Communities
- ◆ The Mines



How the Earth Has Changed

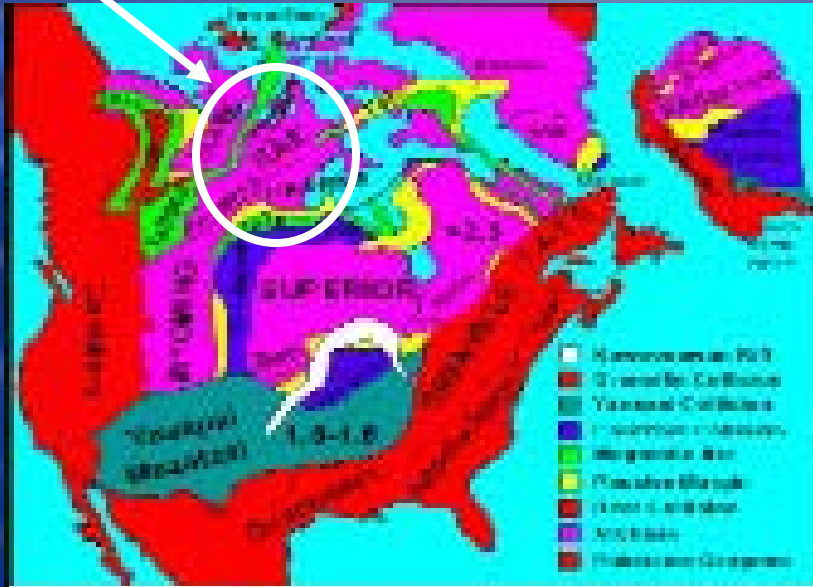


- ♦ The Earth's crust is separated into pieces (like a puzzle)
- ♦ Over millions of years the pieces have moved around
- ♦ When the pieces collide, mountains are created, and earthquakes occur

The Canadian Shield

- ◆ What type of rocks does the Wek'eezhii Region host?

Yellowknife



Main Rock Types in this Region

Greenstone
Metamorphic



Sea Rocks
Sedimentary



Gneiss
Metamorphic



Granite
Igneous



Rocks and Minerals of the Slave Province



Iron



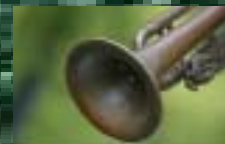
Copper



Nickel



Silver



Zinc



Gold



Tungsten



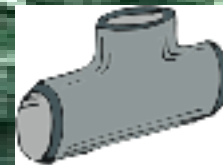
Cobalt



Lithium



Uranium



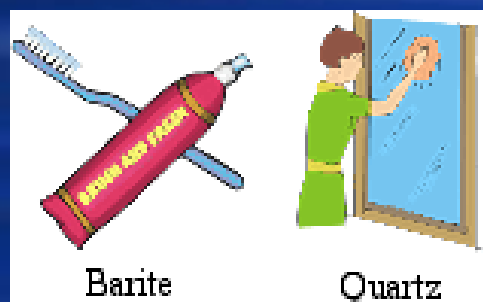
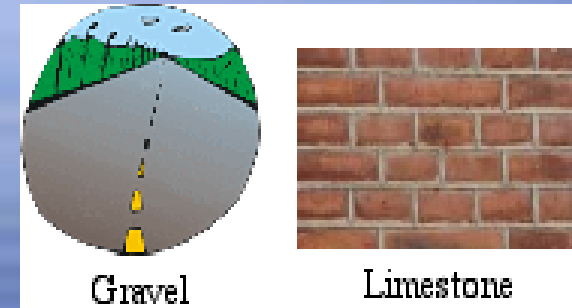
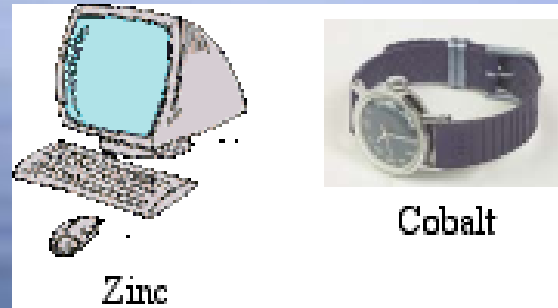
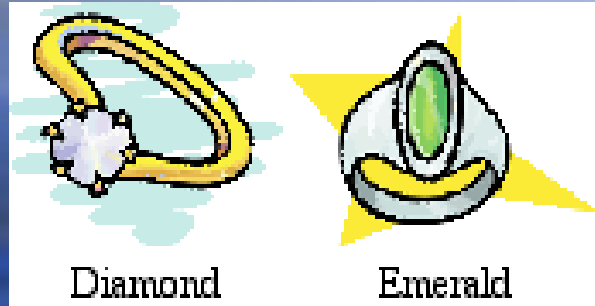
Lead



Diamond

Why Explore for Ore?

- ◆ We use rocks and minerals everyday



How do we know where to look for ore bodies?

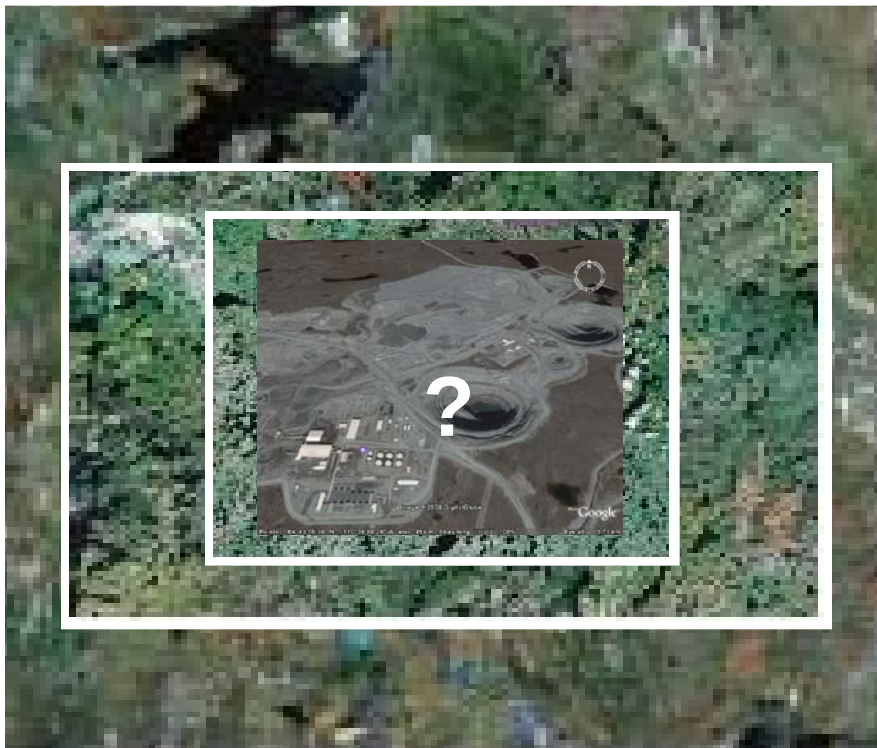
Clues:

- ◆ The Rocks
- ◆ The Geologic History

Exploration stages:

- ◆ Desktop Study - read about the rocks from the office
- ◆ Fly Camp - a first visit
- ◆ Preliminary - a clue has been found
- ◆ Advanced - how much ore is around
- ◆ Feasibility - how valuable is the mine

Levels of Exploration



1. Desktop Study
2. Fly Camps
3. Preliminary Study
4. Advanced Exploration
5. Feasibility Study

Stages of Mining

Blast



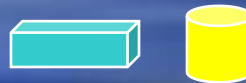
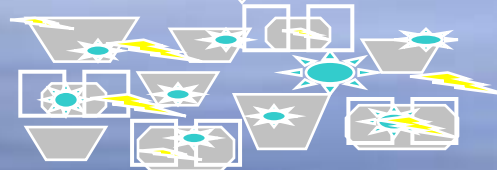
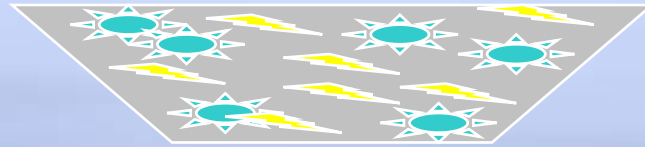
Separate



Refine
"Clean"



Transform



WASTE

Dust

Noise

Ammonia

Tailings

Waste Rock

Metals

Fuel

Chemicals

Buildings

Equipment

Garbage

Waste Water

Waste: Mine Components

- ◆ Underground
- ◆ Open Pit
- ◆ Waste Rock & Overburden
- ◆ Tailings
- ◆ Buildings & Equipment
- ◆ Infrastructure
- ◆ Landfills/Waste Disposal Sites
- ◆ Water Management Systems



Waste



Contaminated Water



Effluent



Blasting



Garbage



Electrical Wires



Equipment/Buildings

- ◆ Naturally Occurring: metals
- ◆ Brought On-Site: electronics, cables, buildings, reagents (chemicals), paint, fuel
- ◆ Mining: effluent (waste water), tailings, waste rock, noise, emissions, dust

The Regulatory System

Prevent, Control, Treat, Reclaim

- ◆ Plan ahead: do not create the waste
- ◆ Control waste to minimize amount/impact
- ◆ Treat waste as it is created
- ◆ Reclaim to original or agreed upon state

