

# Long Harbour Project Update

Media Briefing – June 10<sup>th</sup> 2011

# A global leader

Vale operates in more than 30 countries around the world.



# Vale's business lines

<b>Energy</b> Eight hydroelectric plants, of which seven are already operating.
<b>Logistics</b> Railways, port terminals, coastal navigation and logistical solutions.
<b>Fertilizers</b> Potash, phosphate, nitrogen and others.
<b>Mining</b> Ferrous: iron ore and pellets, manganese and ferroalloys. Non-Ferrous: nickel, copper, potash and kaolin.
<b>Coal</b> Thermal and metallurgical coal.



## Vale Base Metals

Base Metals commodities include:



- Nickel
- Copper
- Cobalt
- Aluminum
- PGMs
- Other precious metals



Vale employs more than 12,000 people in our base metals business

## Vale in Canada

Operations currently in production include:

### **Sudbury, Ontario**

100+ year old mining and processing (smelting and refining) operation producing nickel, copper, cobalt and precious metals.

### **Port Colborne, Ontario**

Cobalt refining and precious metals upgrading facility originally commissioned in 1918.

### **Thompson, Manitoba**

Integrated mining, milling, smelting and refining operation since 1961.

### **Voisey's Bay, Labrador**

Nickel and copper mining and milling operation in coastal Labrador since 2005.

## Future investment

Over the next four years, Vale plans to spend \$10 billion in projects within Canada.



## Project Overview – Long Harbour

- Design and construct a hydrometallurgical facility to produce 50,000tpy of Nickel and associated Copper and Cobalt
- Construction timeline: 2009 - 2013
- Commissioning and Start-up: 2013
- Construction Phase Employment: 10 million person-hours

**Estimated Capital Cost: US\$2.8 billion**



# Safety Stats

## Project operates under a 'Zero Harm' target

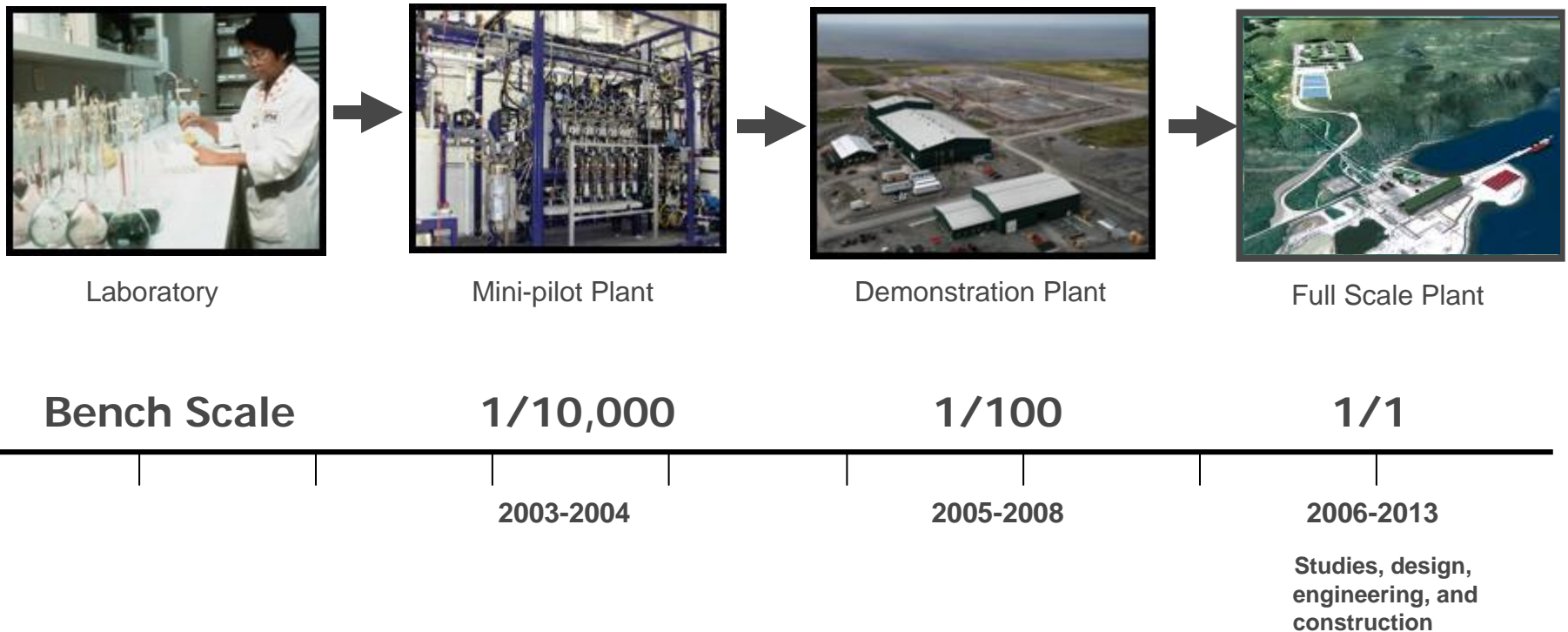
5.1 M hours expended on the project so far

- Significant efforts are undertaken such as planning, training and mentoring to maximize maintain highest standards of safety
  - 1 LTI recorded to date
    - Critical is use of leading indicators such as First Aids and Near Miss reporting to continuously improve

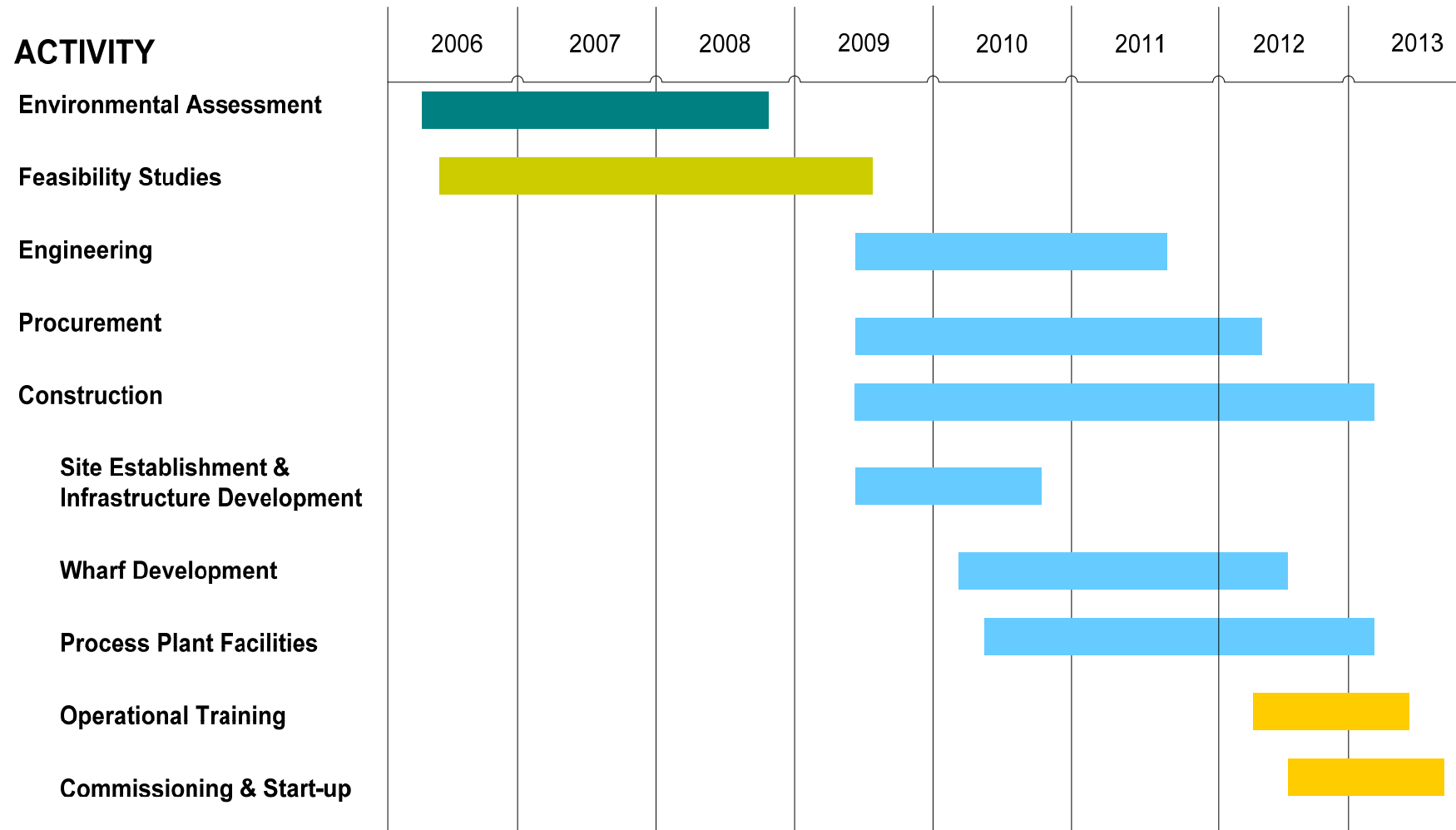
<b>Long Harbour Project</b>	
<b>Man hours worked (Site)</b>	<b>3,285,972</b>
<b>Hours without Lost Time</b>	<b>344,955</b>
<b>Frequencies</b>	
<b>Lost Time</b>	<b>0.06</b>
<b>Medical Aid</b>	<b>0.55</b>
<b>First Aid</b>	<b>9.92</b>

## Research and Development

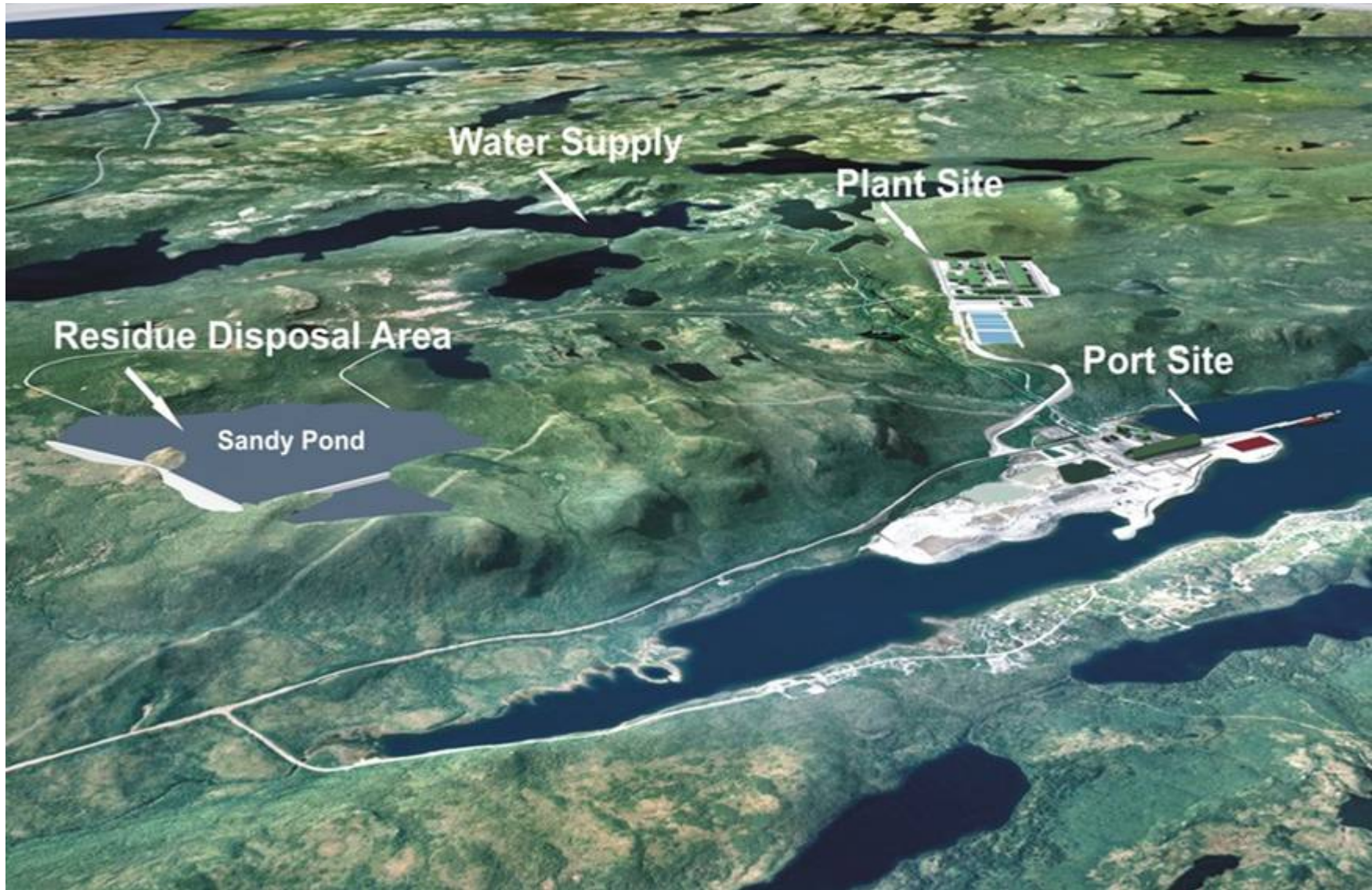
A multi-phased US\$200 million R&D program was conducted to extend the application of hydromet technology to process Voisey's Bay nickel concentrate



# Project Schedule



## Site Layout



## Estimated Quantities

Commodity	Unit	Approx. Quantity
Concrete	m <sup>3</sup>	130,000
Structural Steel	t	30,000
Piping	m	300,000
Electrical Cable	m	1,000,000
Earthworks – Cut	m <sup>3</sup>	2,000,000
Earthworks - Fill	m <sup>3</sup>	1,800,000

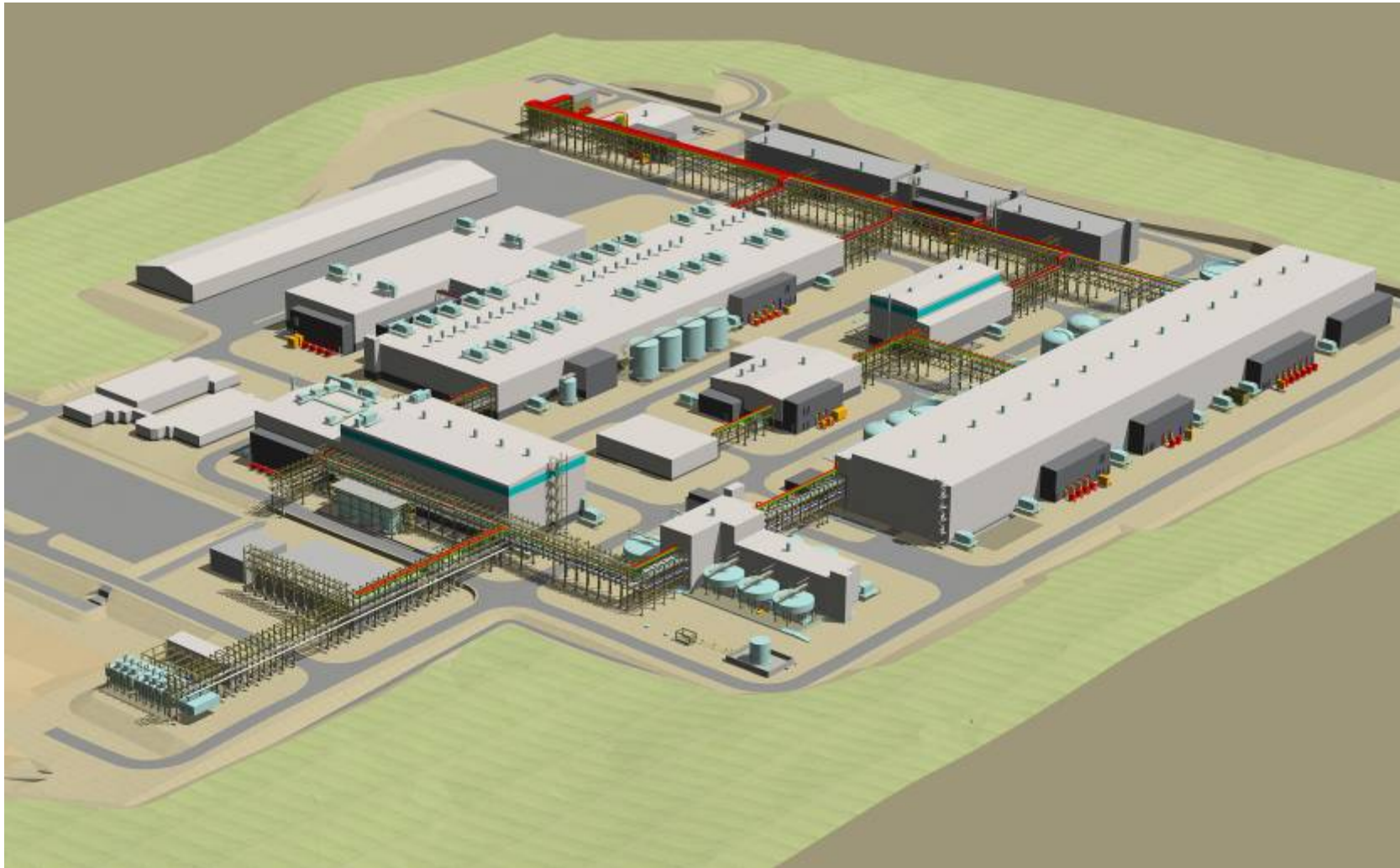
# Main Processing Plant Superimposed over downtown St. John's



## Port Facility



# Processing Plant



## Project Status

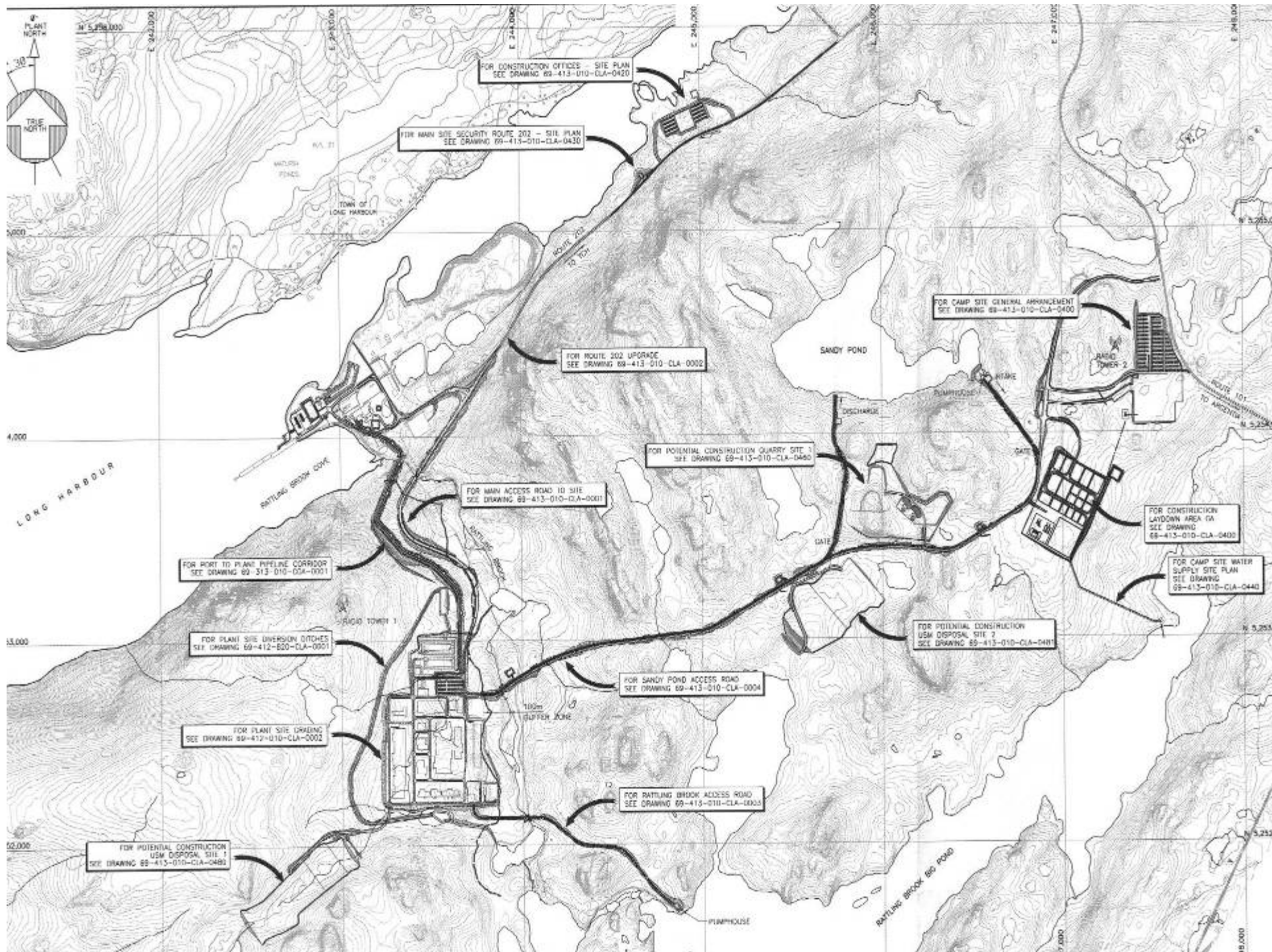
- Released from Environmental Assessment in July 2008
- Hydromet technology selected in November 2008
- Initial Construction began April 2009
- Federal regulatory (MMER) amendment completed (Gazette II) in June 2009
- Overall Project completion: ~40%
  - Engineering: +80%
  - Construction: ~20%
  - 5.1 M person hours of employment generated since initial work began in April 2009
    - 72% of person-hours in Newfoundland & Labrador
  - Employment by region:
    - 1300+ at construction site
    - ~600 in Vancouver and Calgary engineering offices and
    - ~120 in St. John's engineering and Project Management Office
- Project Diversity
  - Long Harbour site – 8%
  - Technical and engineering – 27%
- Project diversity program in place to attract women in non-traditional occupations; \$0.20/hour earned

## Common basis – Project values

1. Safety in all aspects of project execution.
2. An environment of trust and mutual respect.
3. Employee sense of ownership, pride and fulfillment.
4. People are key to our success.
5. Positive reinforcement, coaching and teamwork.
6. Open communication and transparency.
7. Celebrate successes and recognize performance.

**CONTINUOUS IMPROVEMENT!!**

Construction progress



## Current Construction Activities

- Earthworks and building foundation concrete substantially complete
- Internal concrete placement and steel erection in progress
- 1<sup>st</sup> Electrical room delivered and installed
- Preparation for first equipment deliveries in place
- 1400 personnel currently on site engaged in 26 contracts
- CM-0001 (largest contract) site mobilization commenced; planning work underway
- Camp and lodge are now operational
- Removal of obsolete Rhodia buildings on adjacent land has commenced

## Upcoming Construction Activities

- Mechanical, piping, electrical and instrumentation work
- Remaining earthworks and overland piping
- Estimated peak construction ~2200 direct labour plus supervision, EPCM, owner team
- Main concern availability of craft and professionals
  - Construction resources over-stretched across Canada
  - Poor recruitment of new people across trades, aging workforce leads to productivity and HS issues
  - Ability to transfer across provinces, travel cards. Protection of local jurisdiction, contingency plans required.

# Site Before Construction



## Long Harbour Site – pre 2009



## Long Harbour Site – May 2010



## Long Harbour Site – May 2011



# POL Utilities Building



# Neutralization Building



# Ni Co Electrowinning



# Piperacks Looking East



# Movement of E-House to Foundation



# Port Site Marine Work



# Marine Dredging



# Construction Camp – May 2011



# Community investment

## Committed to our communities

We have established strong community partnerships in Newfoundland and Labrador, including:

- \$21.5 million to Memorial University
- \$1.5 million to Innu Healing Foundation
- \$2.2 million to Town of Placentia
- \$2 million to Argentia Management Authority
- \$200,000 to the Bliss Murphy Cancer Care Centre
- \$850,000 to various Health Campaigns in partnership with RDC
- \$1.7 million Diversity Fund in partnership with the RDC
- \$280,000 to fund scholarships at the College of the North Atlantic
- \$750,000 for new Fire Hall in Town of Long Harbour
- \$3 million for new community centre in Town of Long Harbour

# Thank you!

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