Colomac Mine Remediation Project

“From Final Remediation to Long Term Monitoring”

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Colomac Mine Remediation Project

Presentation Overview

- Site History and Project Overview
- Remediation Summary
- Project Completion and Closure
- Monitoring Phase Overview
- Future development
Colomac Mine Site Location

>>Insert Google Earth zoom-in video<<
Colomac Site Description

South mine area

Steeves Lake

South waste dump

Baton Lake

Mine complex & camp

North waste dump

Zone 2.0 Pit
Colomac Site Description

Tailings Containment Area

Tailings Lake

Fuscum Lake

Spruce Lake

Dam 1 Valley

Dam 2 and spillway
Colomac Mine History

- Open pit mine
- 10,000 TPD mill
- average grade 0.05 opt
- 535,000 troy oz recovered

- 35 M tonnes waste rock
- 11 M tonnes tailings
Colomac at Abandonment
Colomac Project Timeline

- April 1 1999: AANDC Assumes Colomac Site
- 1999-2002: Care & Maintenance
- 2002-2005: Site Clean up and Remediation Planning
- 2005-2011: Full Scale Remediation
- 2011-2015: Closure and Monitoring
AANDC – Tlicho Partnership
Final Remediation

2010-2011

- Major civil works (Steeves Lake shoreline, Truck Lake Channel)
- Major demolition (mill, shop, camp)
- PHC impacted soil treatment
- Free product recovery
- Off-site waste disposal
- On-site mill process waste disposal
- On-site non-hazardous landfill
- Contractor and Crown asset demob
Petroleum Hydrocarbons
Steeves Lake Shoreline Remediation

Design

- Waste Rock Breaker Wall
- Vegetative Cover
- Sediments
- Zone of Impacted Sediments
- Peat
- Local Gravels
Steeves Lake Shoreline Remediation

As built
Steeves Lake Shoreline Remediation
Steeves Lake Shoreline Remediation

PLUME (IMPACT) AREA

SHORELINE RESTORATION AREA
Hydrocarbon Soil Remediation
Demolition – Maintenance Shop
Mill Demolition – Mill Facility
Mill Demolition

>>MVI video clip <<
Mill Process
Waste
Disposal
Non Hazardous Waste and Engineered Landfill
Site Restoration

Truck Lake Channel
2011 Winter Road
Airstrip Decommissioning

- Through Transport Canada
Colomac site (TCA)

September 2011
Colomac site
(main complex)

September 2011
Long Term Monitoring Program

Initial Phase

2012-2015

- Adaptive Hydrocarbon Management Program
- Water Quality Monitoring
- Geotechnical Monitoring
- Hydrological Monitoring
- Re-vegetation Monitoring
- Aquatic/Terrestrial Monitoring
Adaptive Hydrocarbon Management Program

- Free product recovery
- Monitoring

-> Steady state conditions
Project Completion

3 plaques = 3 phases

1. Pre-Development (traditional land use)
2. Mine Operations
3. Site remediation & closure
Future Development

Indin Lake Greenbelt:

. December 2011 Merc announcement
. Indin Lake sites (Spider & Chalco Lakes, Diversified Mine) clean up
. Colomac Crown Land reserves
. Site restrictions within Merc LUP
Colomac Project Summary

- Largest project remediated in the North to date
- Approximately $135M over 12 years
- Innovative, “made in the North” solutions
- Engineering/science/traditional knowledge
- Socio-economic benefits (nearly 70% direct benefit to Tlicho)
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Faces of Colomac
Faces of Colomac
Faces of Colomac
Faces of Colomac
Let the healing begin ...
..... Questions ?