



# Breakwater Resources Ltd.

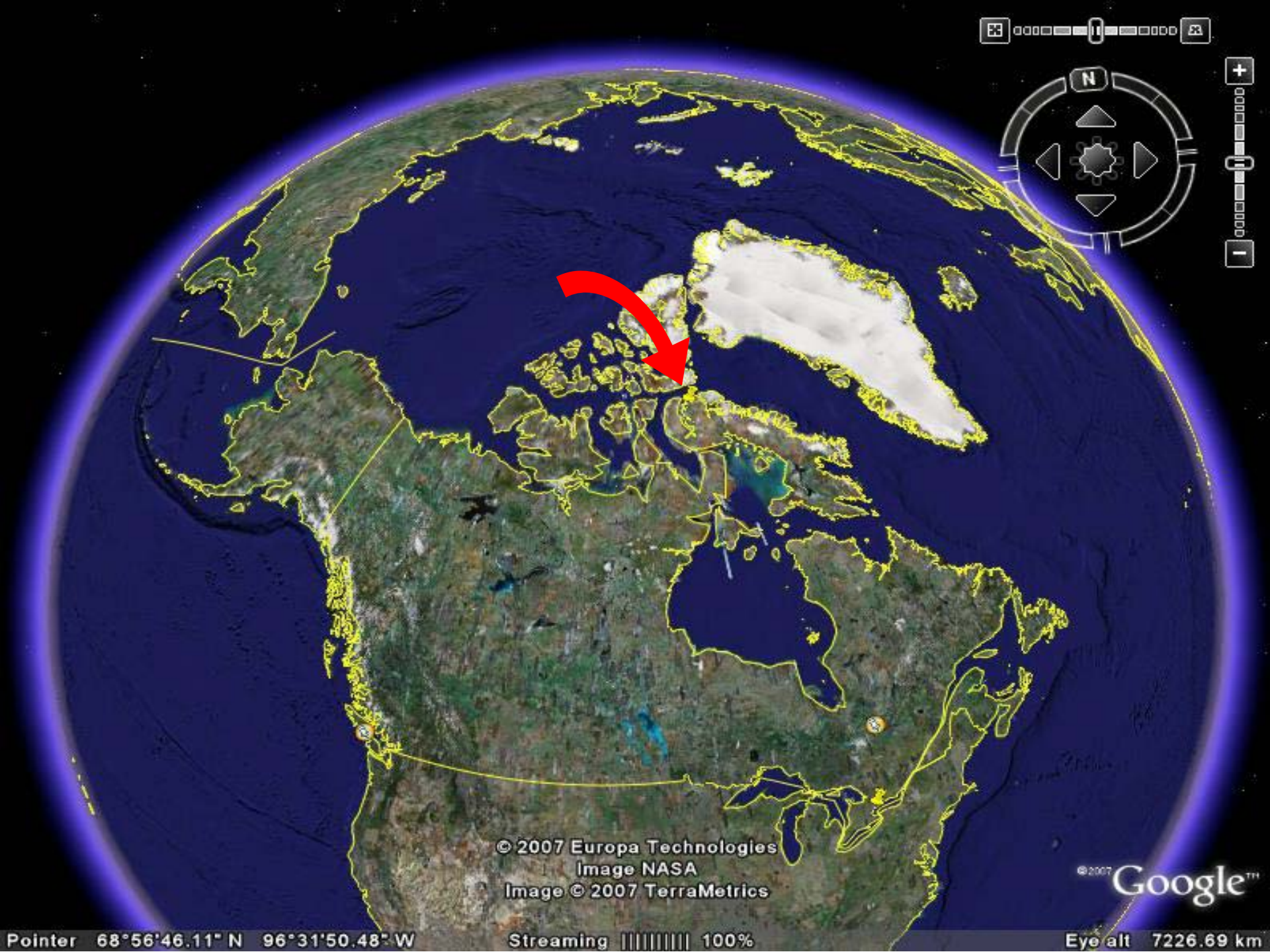


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## Nanisivik Reclamation Update

October 15, 2007



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Image NASA  
Image © 2007 TerraMetrics

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Pointer 68°56'46.11" N 96°31'50.48" W

Streaming ||||| 100%

Eye alt 7226.69 km





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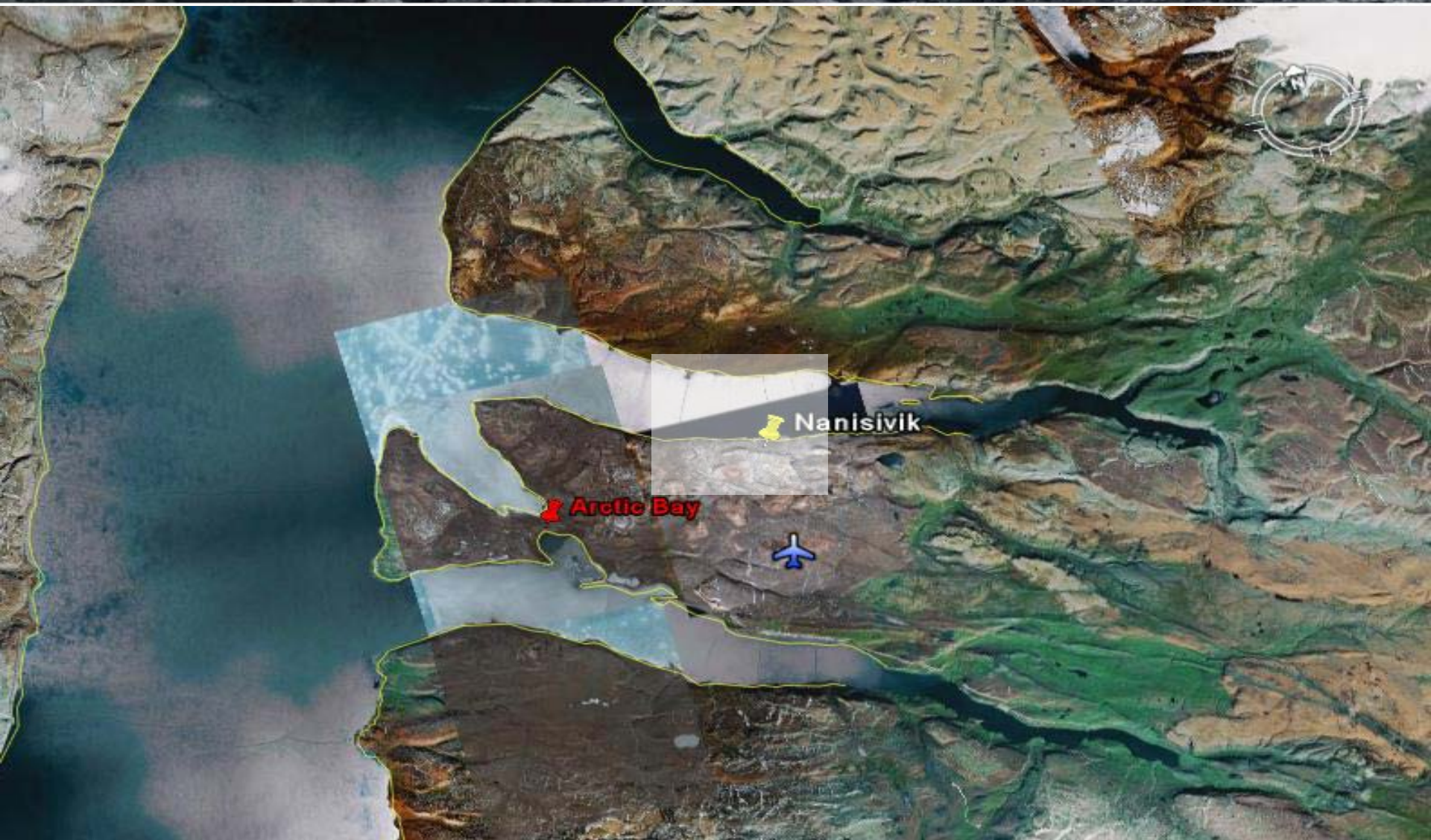


Image NASA





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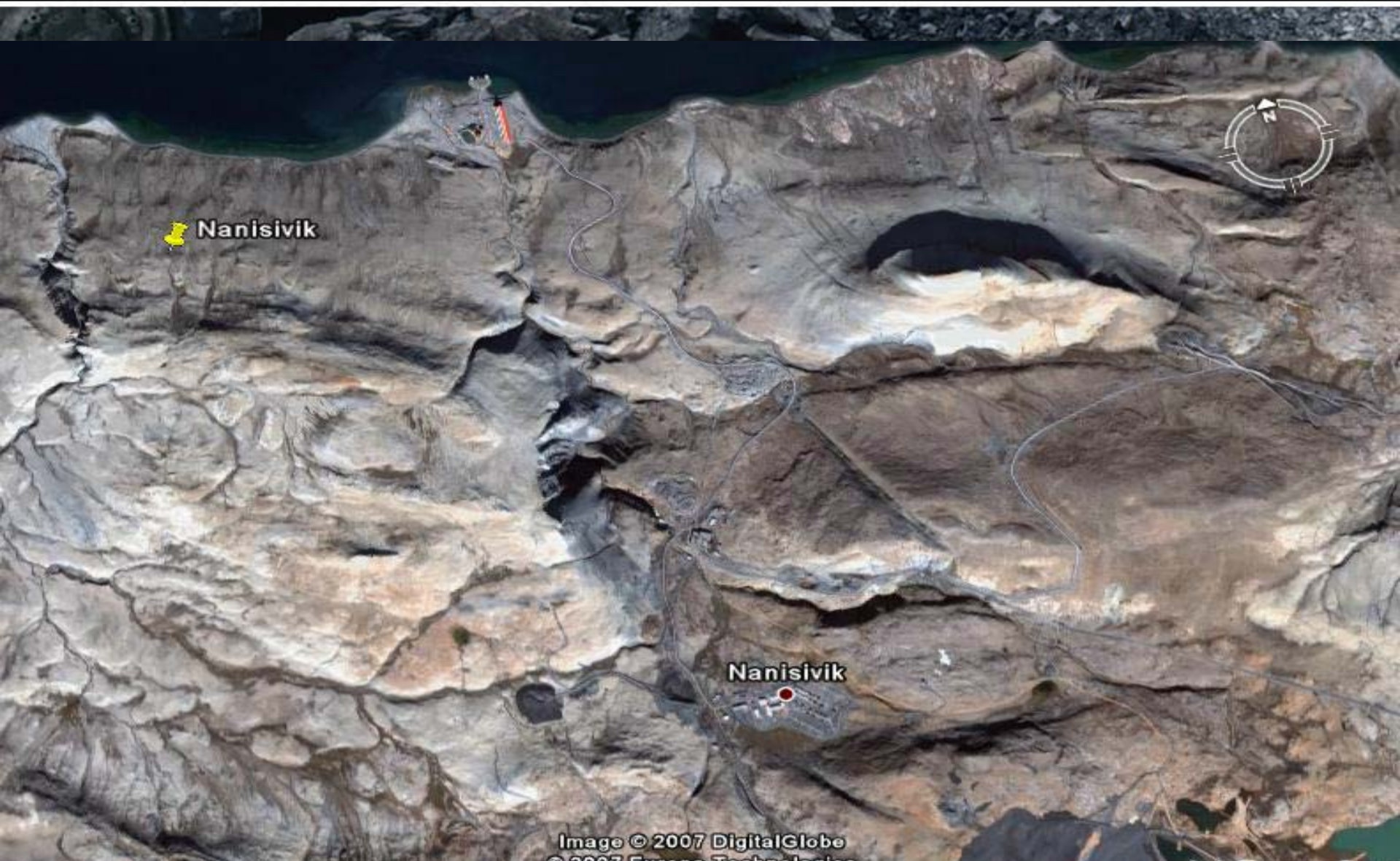


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- Began operations in 1976
- Canada first mine north of the Arctic Circle
- Operated successfully for 26 years
- Produced zinc and lead concentrate
- Mined approx 18 million tonnes of ore (vs 6.3 million tonnes in the feasibility study)
- Total capital estimated at \$61 million
- Current owner of the mine, CanZinco, since 1999
- In 2000 mine plan anticipated 2004/5
- In 2001 re-evaluation due to long term forecast of depressed metal prices
- Nanisivik announced early closure and produced the last tonne of ore in Oct 2002



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# INFRASTRUCTURE





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Concentrate storage shed

Tank farm







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Industrial complex





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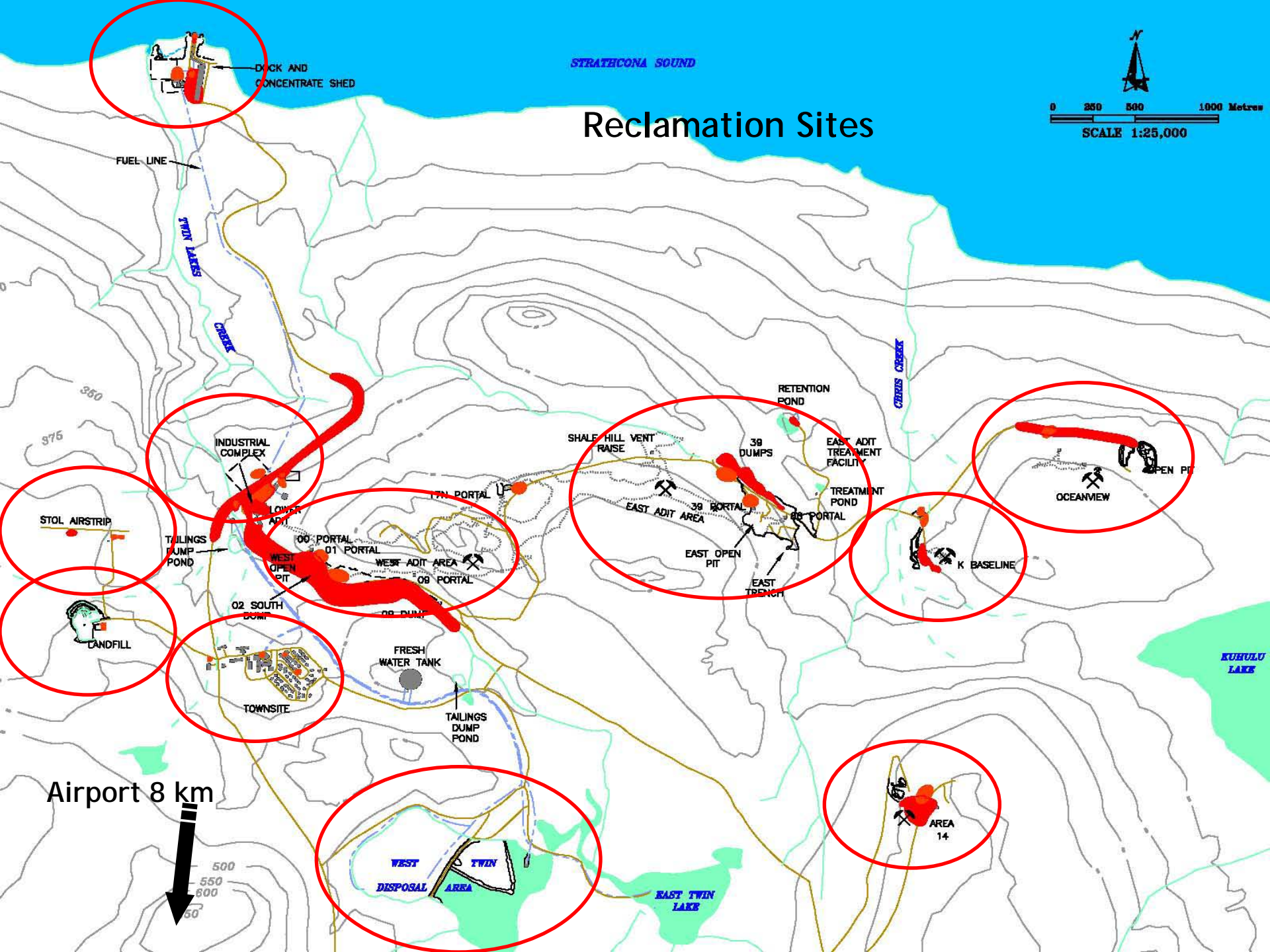


Townsite





## Reclamation Sites







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# RECLAMATION ACTIVITIES

2002 - 2007





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## Reclamation and Closure Key Dates

### ■ September 30, 2002:

- ★ Production stops
- ★ “Care and maintenance” - discussions continue GN

### ■ July 26, 2004:

#### ◆ Final decisions:

- ★ 1) GN Cabinet – decision not to use site or infrastructure
- ★ 2) NWB approves Reclamation and Closure Plan (permission to proceed)





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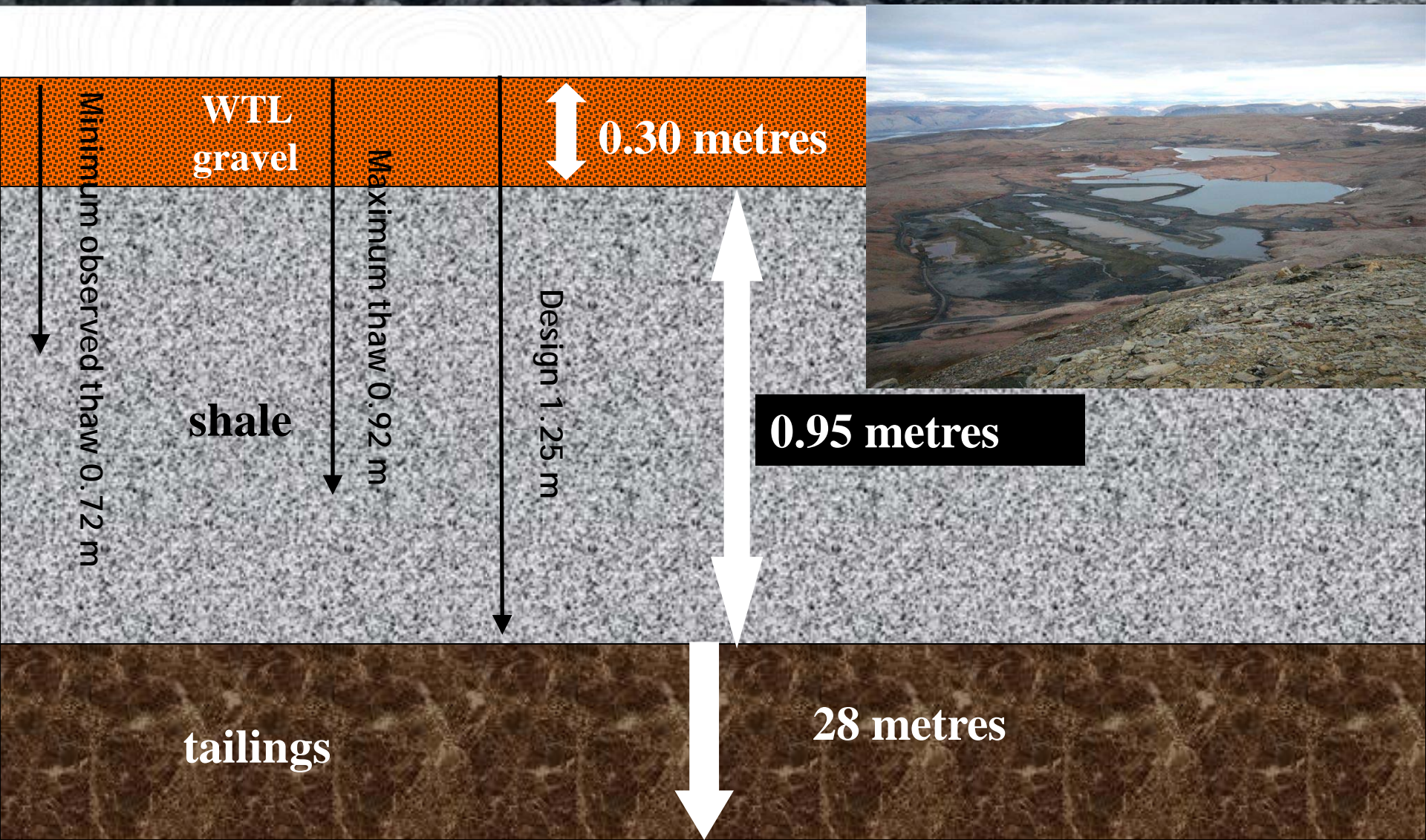
## West Twin Disposal Area - 2003







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600,000 m<sup>3</sup> of shale as thermal  
layer





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2003



2007



125,000 m<sup>3</sup> of armour





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Diversion channel -  
spillway



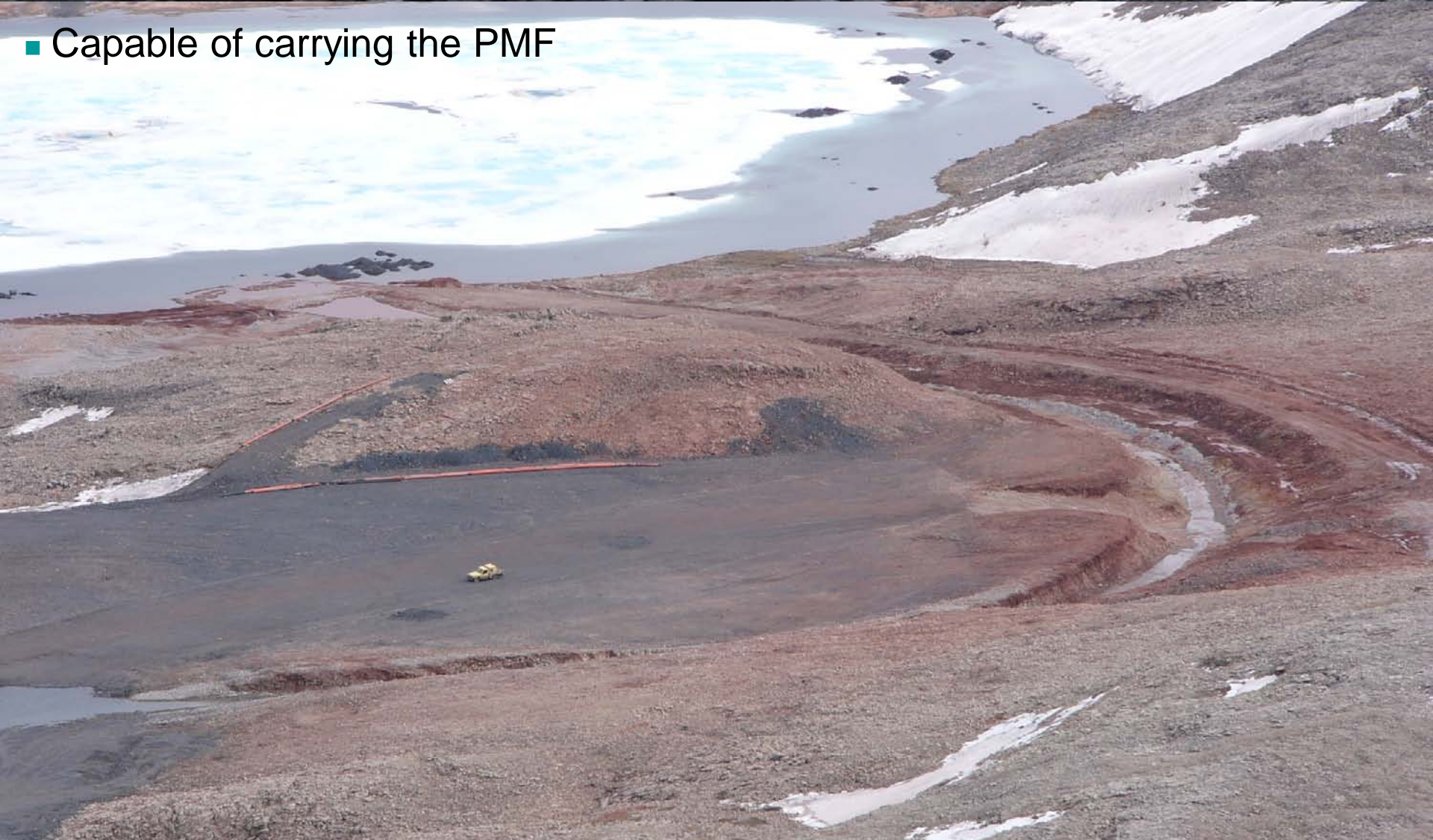




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■ Capable of carrying the PMF







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- 565 metres long - 6 metres wide  
14,000 tonnes of material drilled, blasted and hauled







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## East Open Pit - pre-remediation

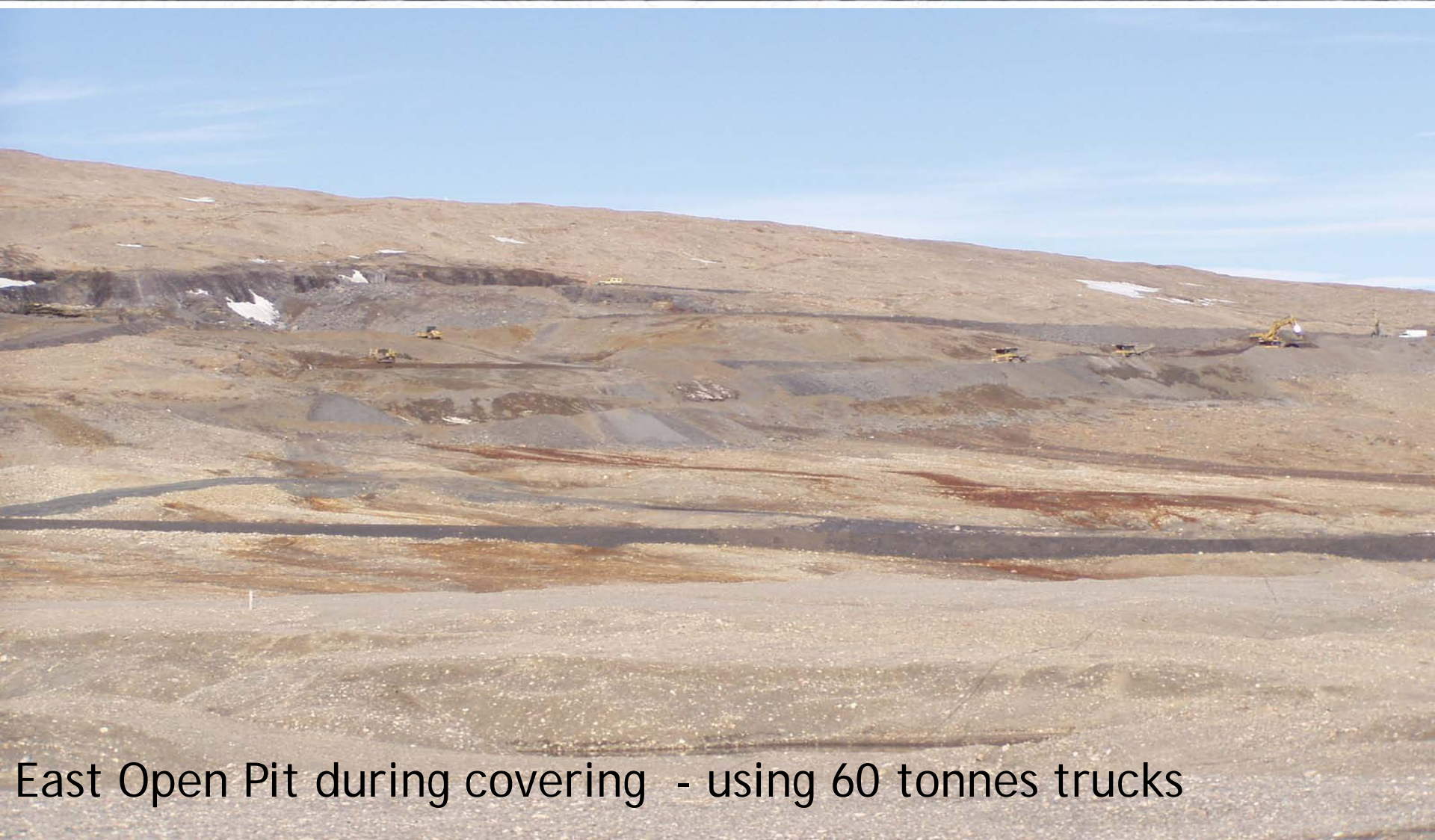


- Back-filled to cover sulphides in high wall
- 32,000 m<sup>3</sup> of development rock excavated/backfilled





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East Open Pit during covering - using 60 tonnes trucks





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## East Open Pit complete







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## East Open Pit

- 100,000 m<sup>3</sup> of shale and 30,000 m<sup>3</sup> armour for geothermal cover





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West Open Pit - pre-remediation







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- Thermal cover completed (shale and armour 29,000 m<sup>3</sup>)







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## Oceanview pre-remediation







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## Oceanview - 45,000 m<sup>3</sup> shale and armour







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## Landfill - before



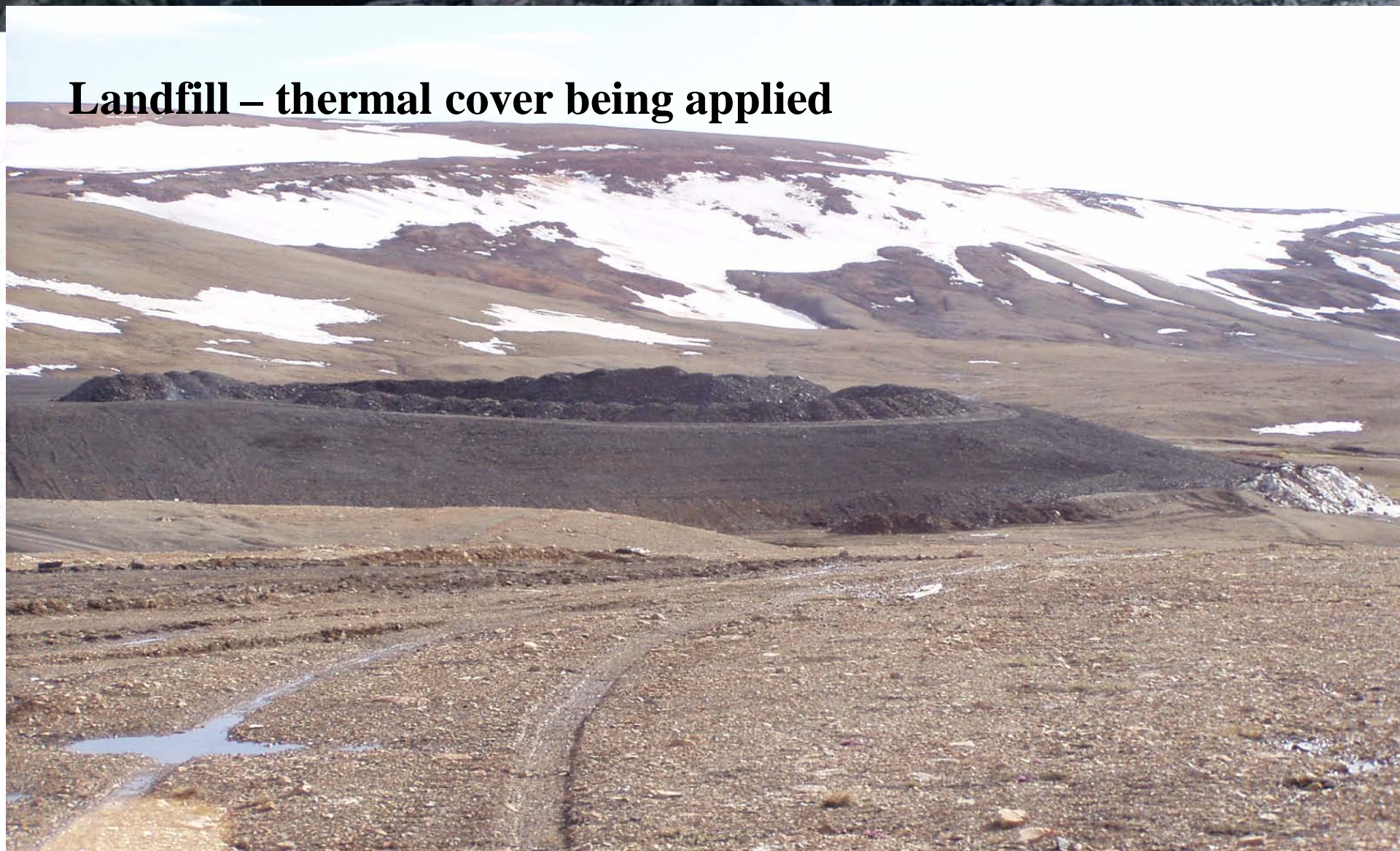




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## Landfill – thermal cover being applied







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## Landfill - after



60,000 m<sup>3</sup> of shale and 15,000 m<sup>3</sup> armour - geothermal cover





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## Contaminated Soil Targets

- HHERA determined no risk from metals but company committed to cleaning up "hotspots"
- Hydrocarbon soils were cleaned to CCME
- Soil volumes range between 1,000 and 36,000 m<sup>3</sup>
- Total estimated volume of 170,000 m<sup>3</sup>





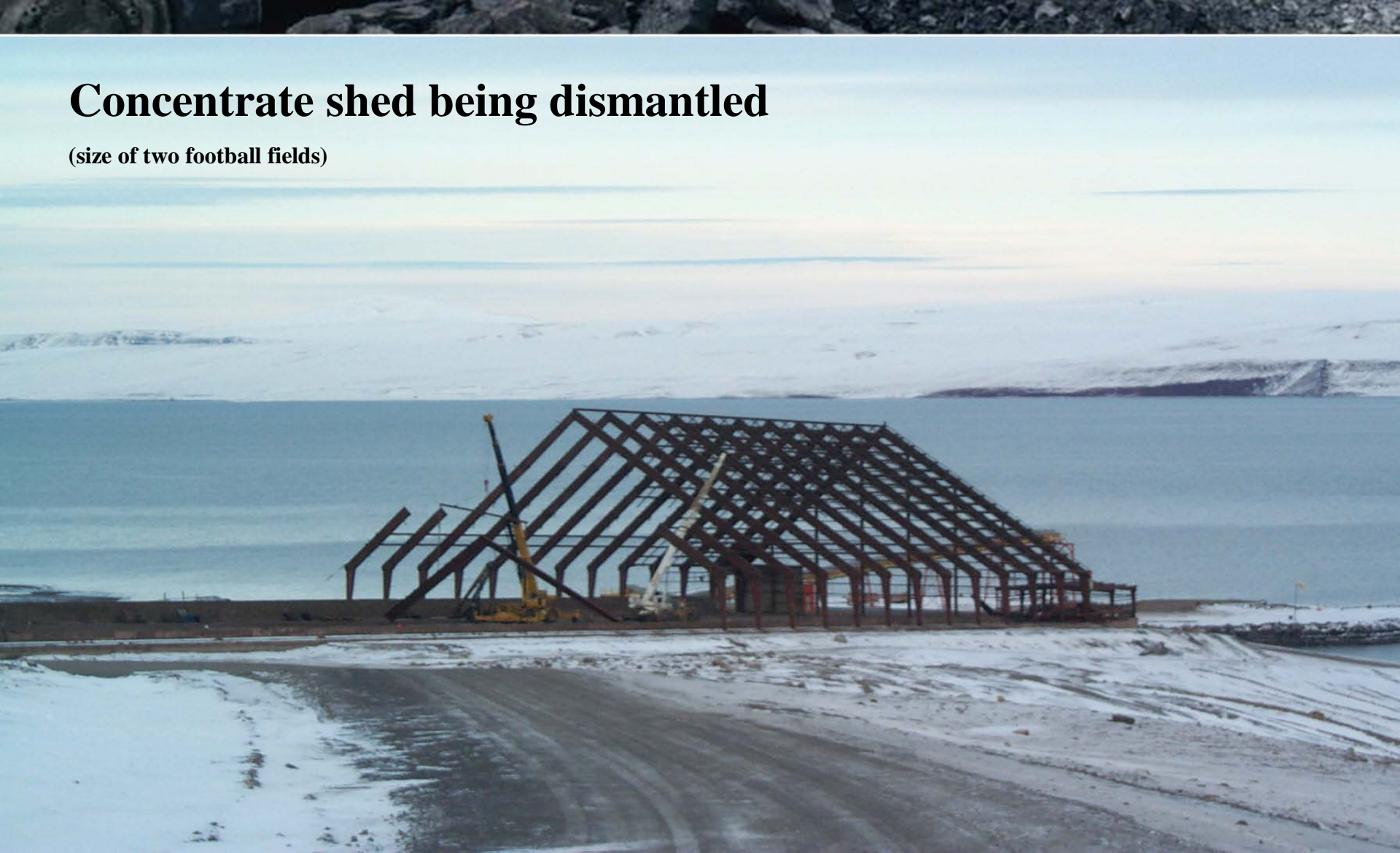


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# Concentrate shed being dismantled

(size of two football fields)







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## Dock Site

- Total contaminated soil removal +50,000 m<sup>3</sup>







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## Dock site

- center cell has HC cont soils from years of fuel off-loading







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## Dock site

- center cell excavated to water line and HC soils removed







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## Industrial complex

- Assets purchased by Wolfden
- Equipment/inventory salvage
- PCBs shipped
- Nuclear density gauges shipped
- Non-hazmats disposed underground
- Infrastructure dismantled
- ~ 75,000 m<sup>3</sup> of contaminated soil (metals, HC) excavated
- Foundation backfilled - thermal cover
- Residual soils in 2008







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# Industrial complex during dismantling







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## Town centre (gov't owned)

being demolished







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## Town centre (gov't owned)

being demolished





# Gymnasium/pool complex

ing demolished







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2007



2002







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## 2008 and Beyond

- Remnants and exit
- License Renewal
- Closure Monitoring





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### Doing the Right Things Right

*"After 27 years of operation, the Nanisivik mine closed in 2002. Canada's first mine north of the Arctic Circle, Nanisivik was a remarkably successful endeavour from which other northern operations have learned a great deal. Final closure and reclamation activities are being carried out this year."*



**Mining Association of Canada**

*Annual Report 2006*

*[www.mining.ca](http://www.mining.ca)*