



PRAIRIE CREEK MINE

POTENTIAL ENVIRONMENTAL IMPACTS



Valued Ecosystem Components

- **Air Quality**
- **Water Quality and Fish**
- **Wildlife and Habitat**
- **Cumulative Effects**

Air Quality and Mitigation

■ Mine

- **Dust (suppression)**
 - Roads and Airstrip
 - Temporary tailings storage
- **Gases (reduced in new models)**
 - Power generation (heat recovery)
 - Incinerator
 - Genset heat eliminates propane

Old 1150 kw Generators (4)



New 1566 kw Generators (3)



Old Incinerator



New Incinerator



Air Quality

■ Transfer Facilities

- Dust
 - None, winter
- Gases
 - Only small gensets

Water Quality and Fish

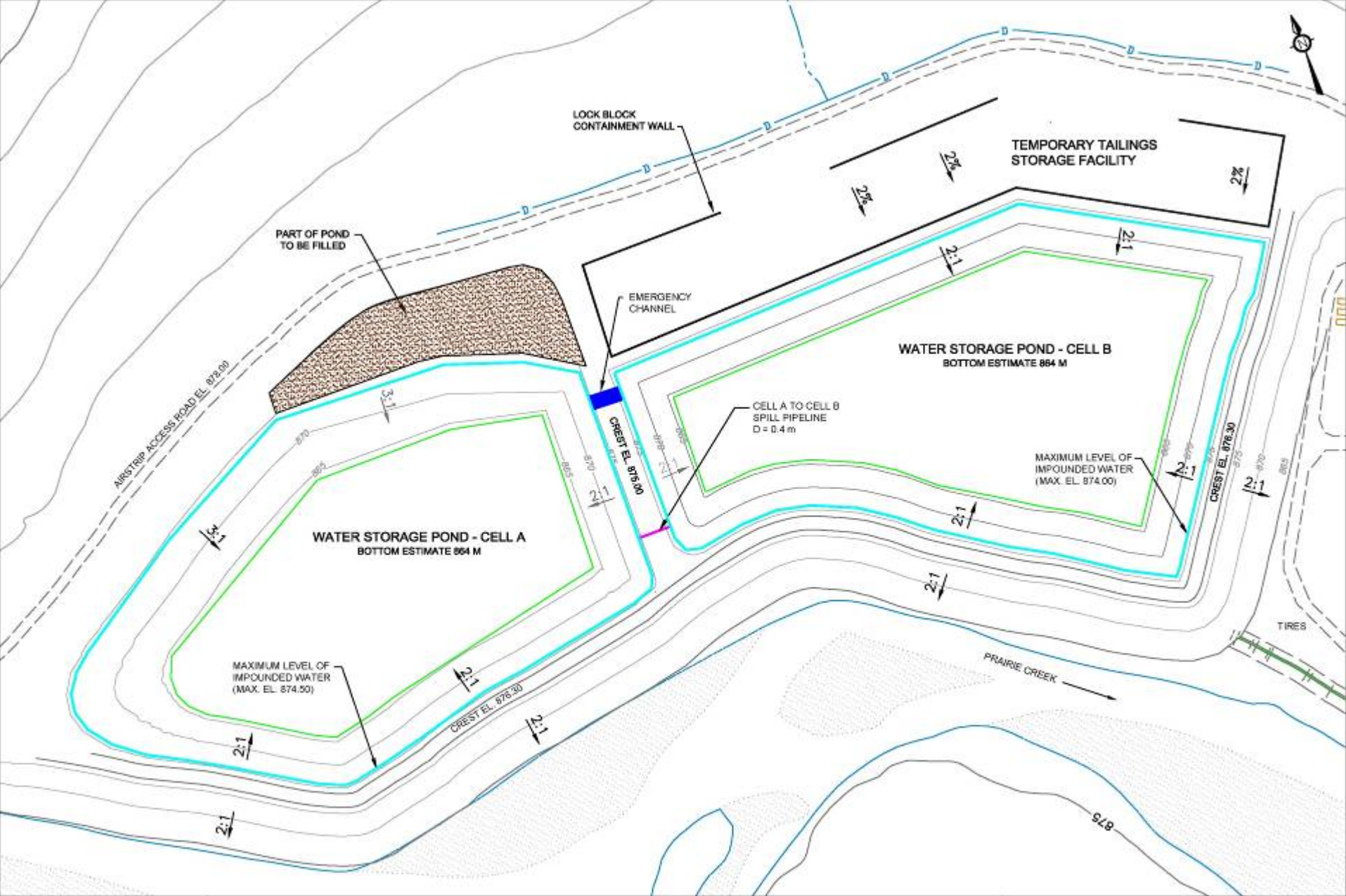
■ Mine - Operations

- Mill and excess mine water treatment
- Seasonal changes in WS pond level
- Treatment by lime and/or sulphide
- Same runoff management system
- Waste Rock Pile seepage collection
- Fuel spill prevention and response
- SNP and AEMP

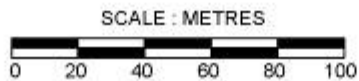
Water Quality and Fish

■ Mine - Operations

- Dilution factors, Prairie Creek at Mine, March = 10, Mean = 170
- Zn guides:
 - MMER = 0.5 mg/L
 - CCME aquatic life = 0.19 mg/L
- PC downstream, 0.01-0.03 mg/L



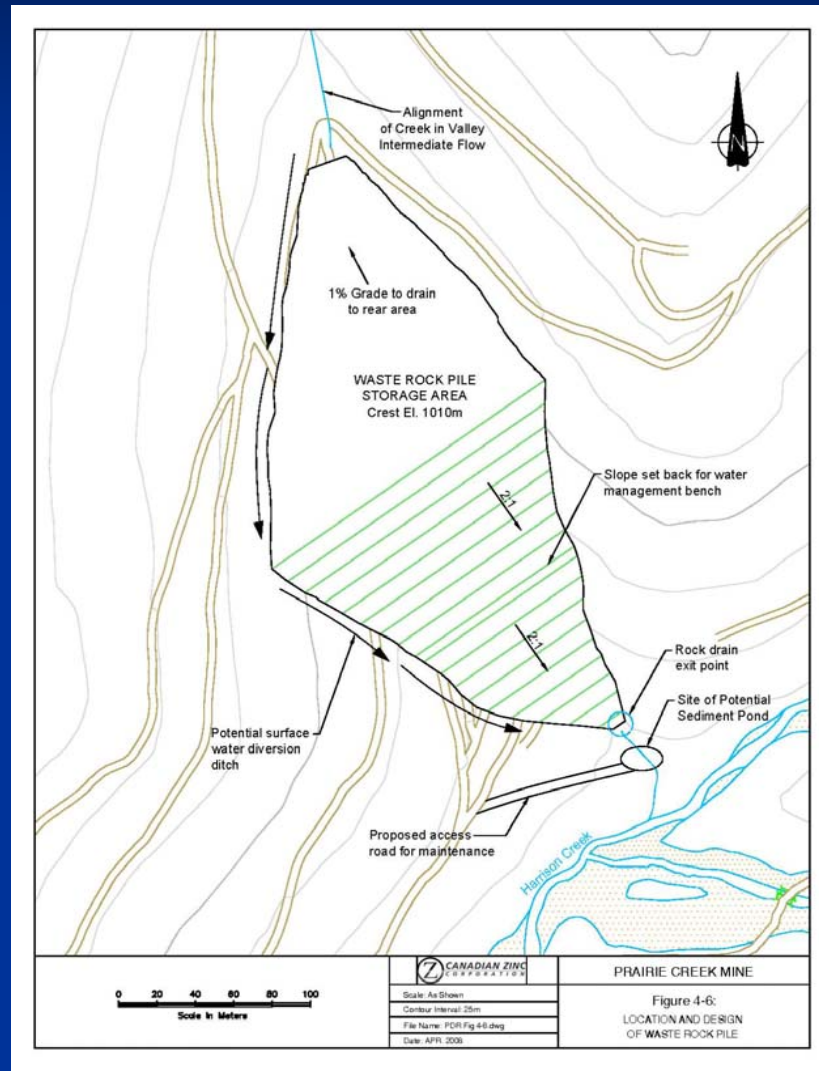
Date:	MAY 2008
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Drawing:	PDR Fig 4-9.dwg

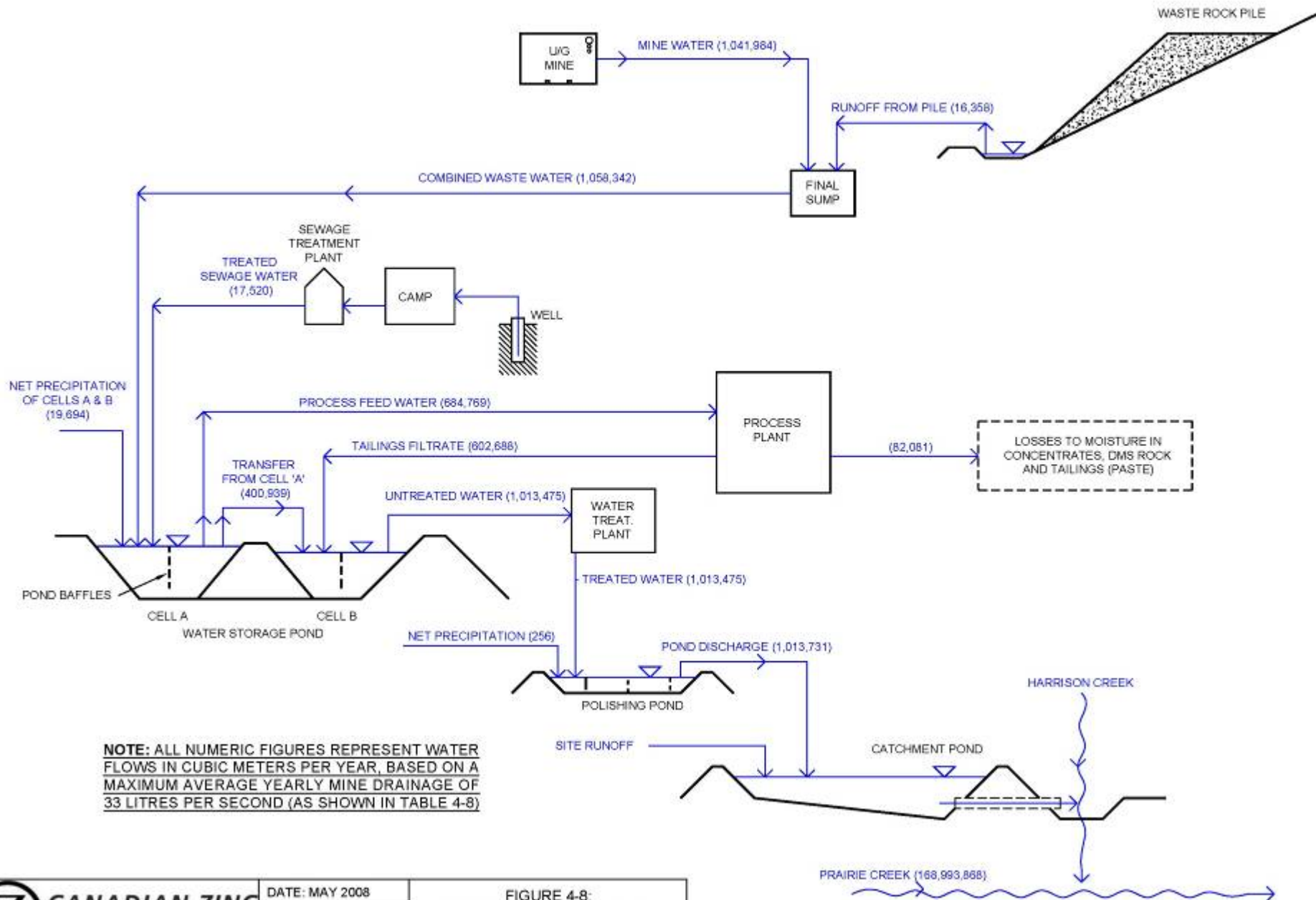


PRAIRIE CREEK MINE

FIGURE 4-9:
LOCATION AND LAYOUT OF
WATER STORAGE POND

Waste Rock Pile





NOTE: ALL NUMERIC FIGURES REPRESENT WATER FLOWS IN CUBIC METERS PER YEAR, BASED ON A MAXIMUM AVERAGE YEARLY MINE DRAINAGE OF 33 LITRES PER SECOND (AS SHOWN IN TABLE 4-8)

Water Quality and Fish

■ Mine - Closure

- Mine groundwater
- Cover for Waste Rock Pile

Water Quality and Fish

- **Transfer Facilities**
 - **Frozen conditions**
 - **Spill prevention and response**
 - **Seasonal closure**

Wildlife and Habitat

■ Mine

- 2006 survey
- Sighting log
- Bear awareness
- Project changes from Cadillac not significant

Wildlife and Habitat

- **Transfer Facilities**
 - **April 2007 survey, limited numbers**
 - **Very limited areas**
 - **Seasonal use only**
 - **Seasonal closure, removal of attractants**

Cumulative Effects

- **Mine Water Discharge**
 - **No treatment prior to 2006**
 - **Treatment 2006-2008**
 - **Similar treatment of Mine and Mill water during operations**
 - **Univ. of Saskatchewan/Parks Canada studies**

Cumulative Effects

■ Catchment Areas

- Prairie at mine, 495 km²
- S Nahanni at V Falls, 14,600 km²
- S Nahanni at Clausen, 31,100 km²

Thank you