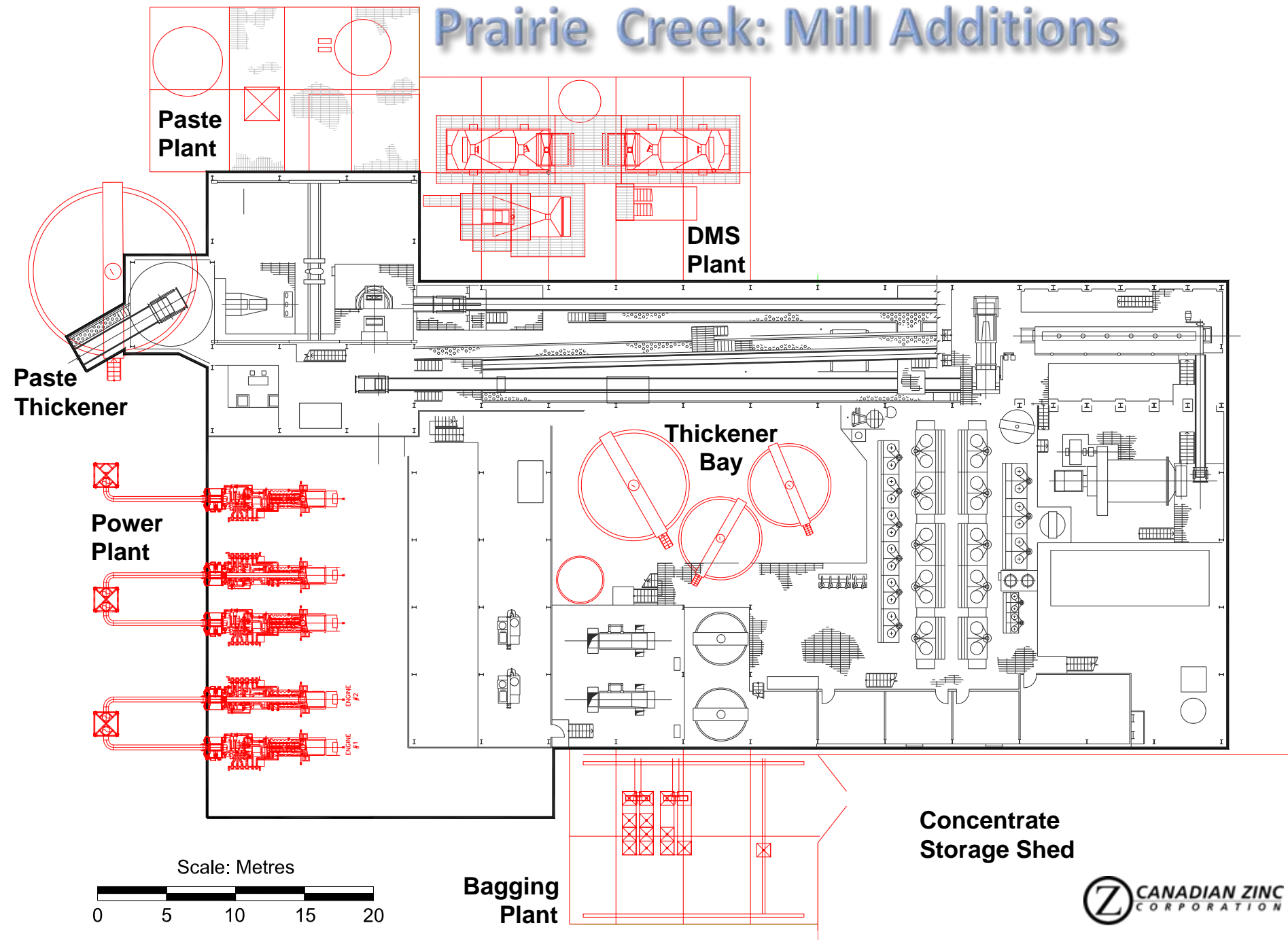


Prairie Creek: Mill Additions



New 1566 kw Generators (3 Units)

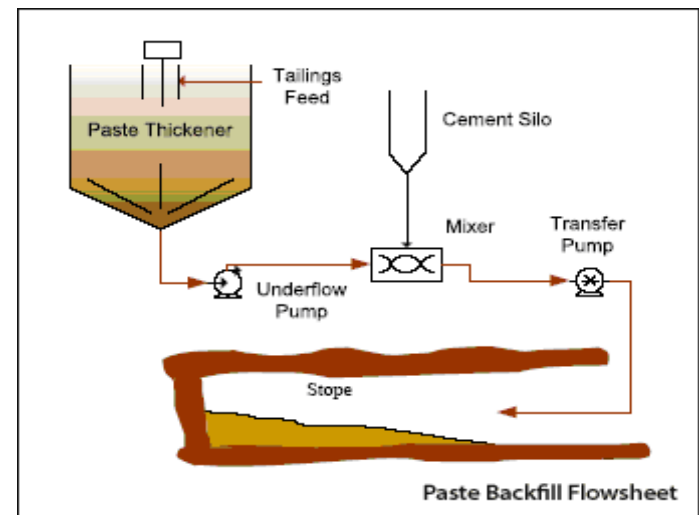
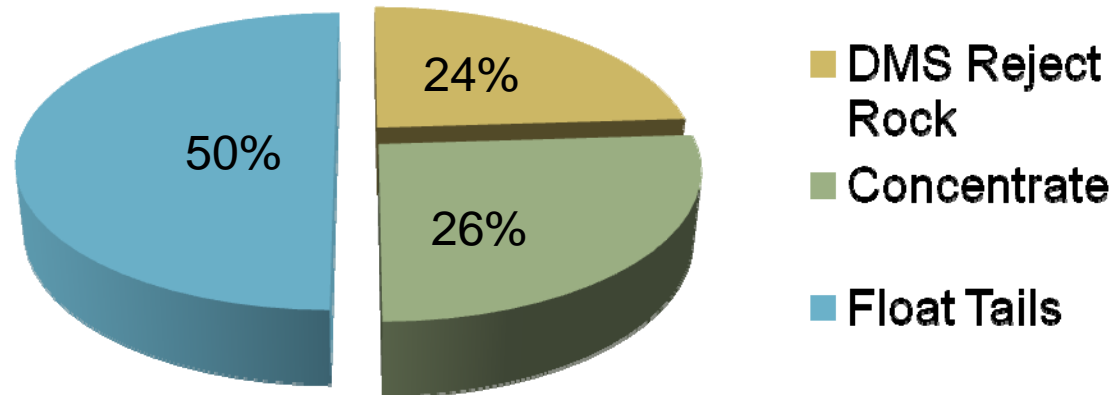


New Incinerator



Metallurgical Summary

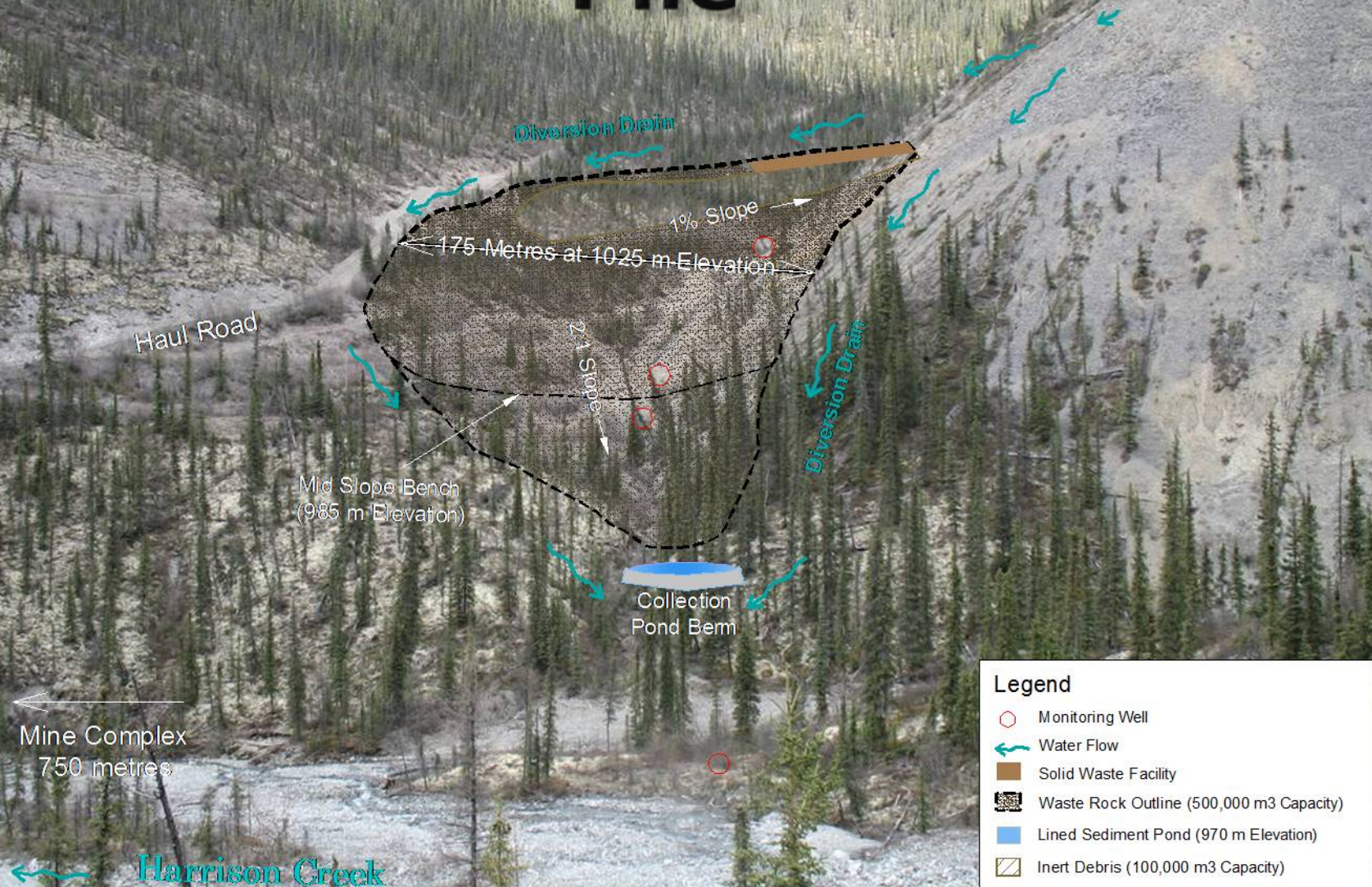
Prairie Creek Mine Process Summary Per Tonne of Mine Rock



Mine Waste Management

- All tailings placed underground
- Mill rock (DMS) used in backfill, excess to Waste Rock Pile
- Waste Rock Pile for development rock
- Conversion of original tailings pond to Water Storage Pond to allow recycle

Conceptual View of Waste Rock Pile



Future Operating Prairie Creek Mine



Upgraded Mine Facilities:

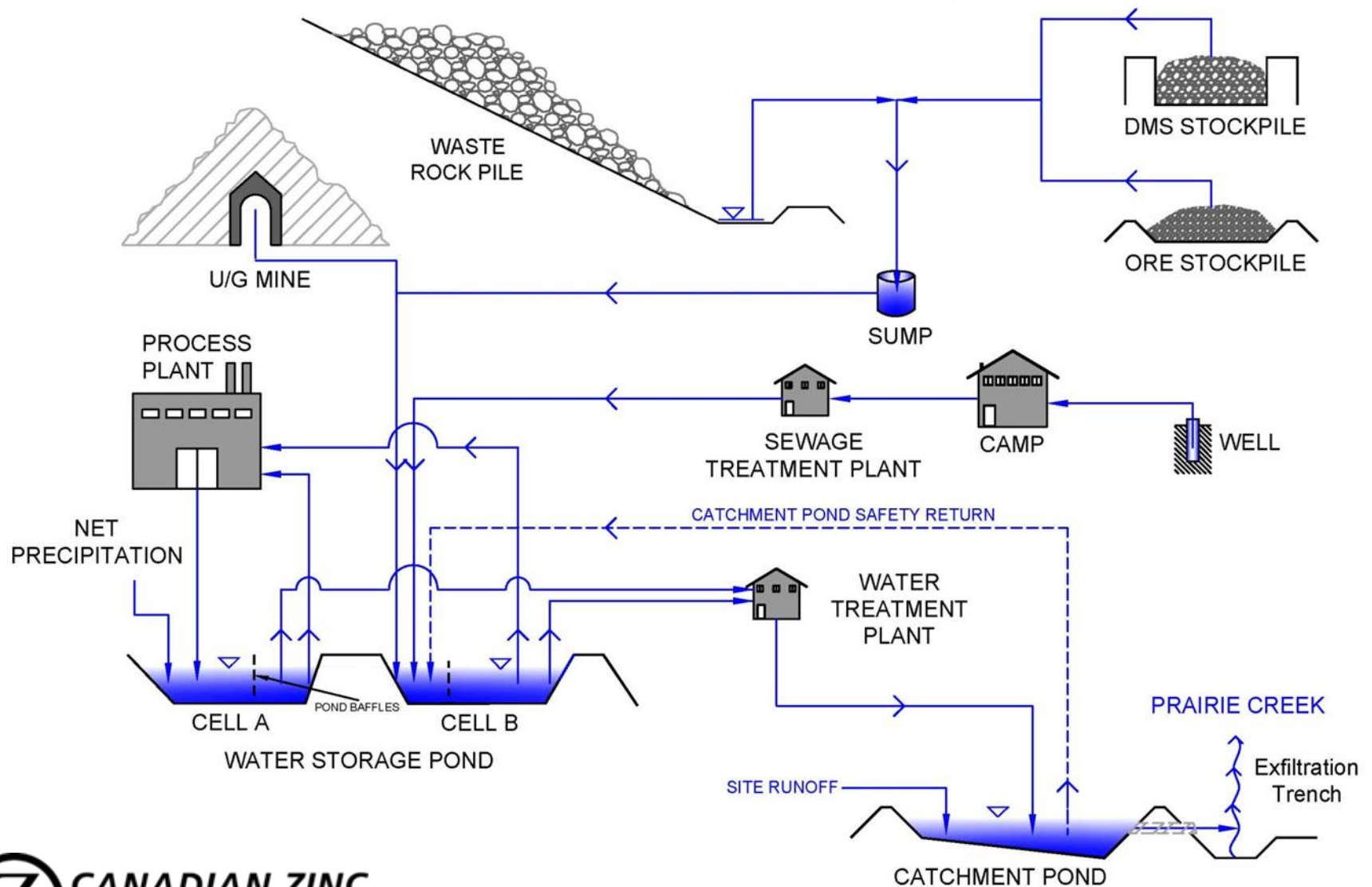
1 - Water Storage Pond - Cell A
2 - Water Storage Pond - Cell B
3 - Reagent Storage Sheds
4 - Water Treatment Plant

5 - Staff Accommodation Block
6 - Ore Stockpile Lined Pad
7 - 2nd 870 Underground Portal
8 - Concentrate Storage Shed

9 - DMS Plant (Attached to Mill)
10 - Temporary Float Storage Pile
11 - Paste Backfill Plant (Attached to Mill)
12 - Waste Rock Pile

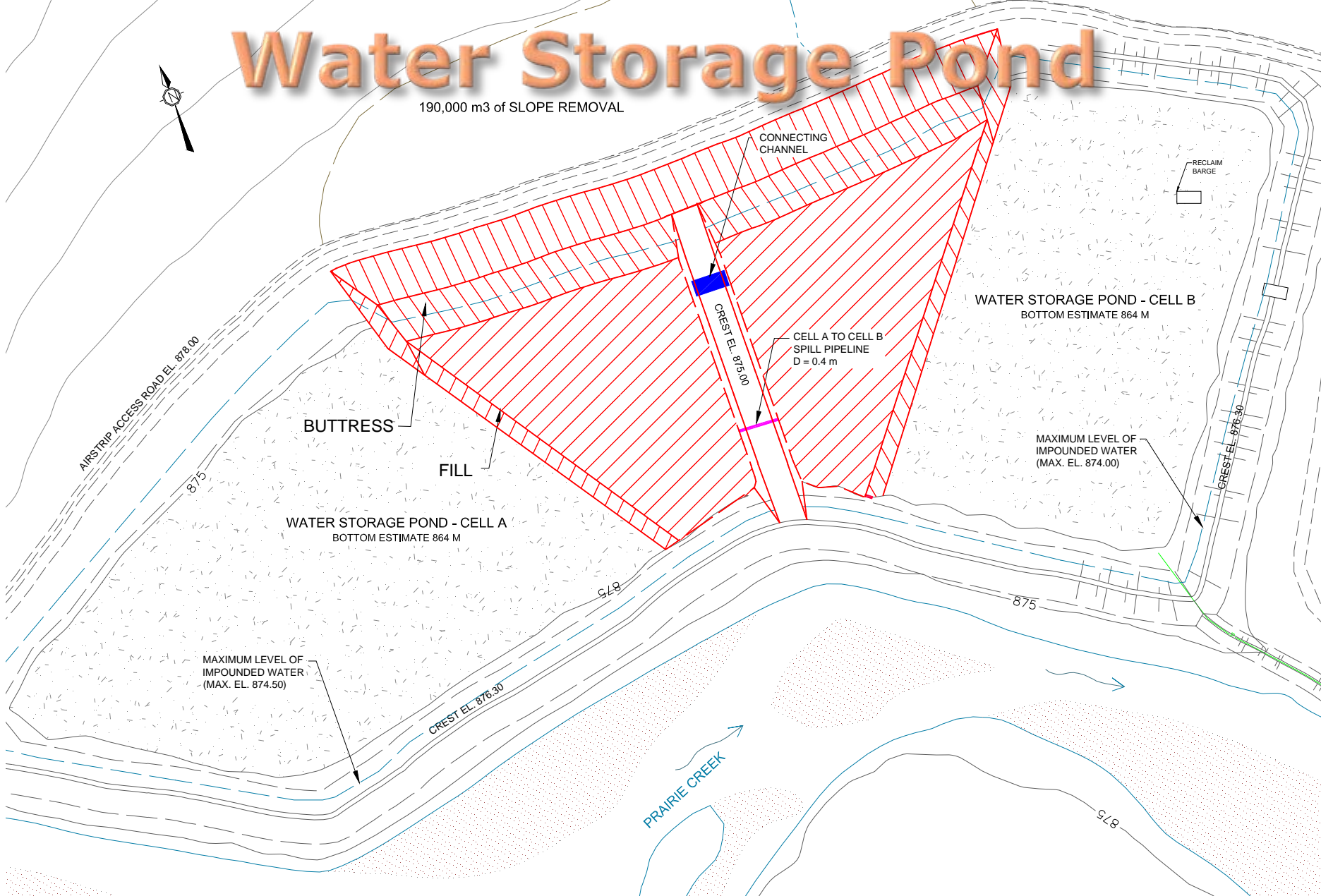
13 - Acid Storage Tanks
14 - Bagging Plant
15 - Cement Storage Shed

Site Water Management

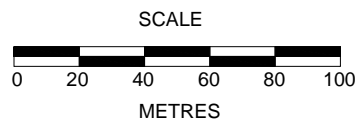


Water Storage Pond

190,000 m³ of SLOPE REMOVAL



Date: October 2009
Drawn By: C. Reeves
Scale: As Shown
Drawing: DAR Fig. 6-17.dwg



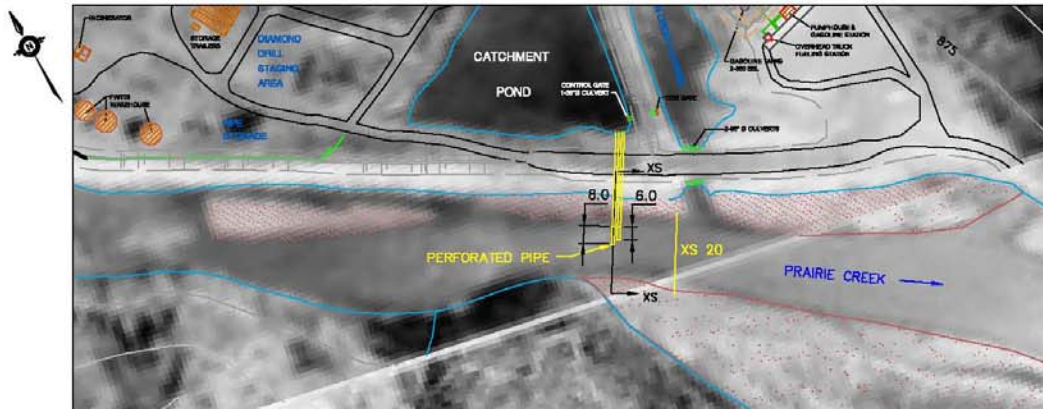
PRAIRIE CREEK MINE

FIGURE 6-17:
RECONFIGURED WATER STORAGE POND

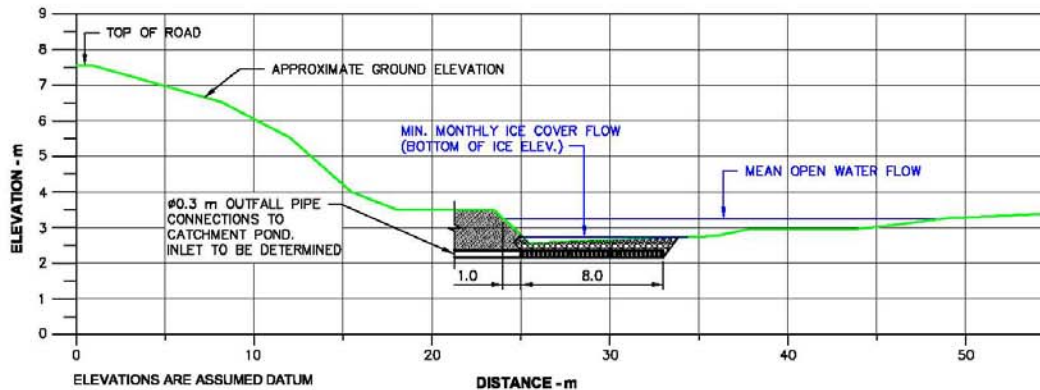
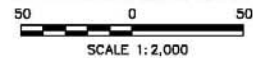
Water Protection

- Recycle and re-use mill water
- Reliable treatment of mine water and mill water for discharge at safe concentrations
- Discharge via buried pipe
- Detailed monitoring (Env. Monitors)
- Spill containment - dykes and Catchment Pond

Buried Pipe Discharge



SITE PLAN WITH 1994 BACKGROUND IMAGE



CROSS SECTION AT OUTFALL ALONG 8.0 m PIPE
(VIEWING DOWNSTREAM)



PHOTO 1. VIEW DOWNSTREAM
PHOTO DATE: AUGUST 9, 2010



PHOTO 2. EXFILTRATION TRENCH LOCATION
PHOTO DATE: AUGUST 9, 2010

NOT FOR CONSTRUCTION

CANADIAN ZINC CORPORATION

PRAIRIE CREEK MINE

**EXFILTRATION TRENCH OUTFALL
CONCEPTUAL DESIGN**

Dwg. 6987-006-R2 29 Apr 2011 **Figure 2**

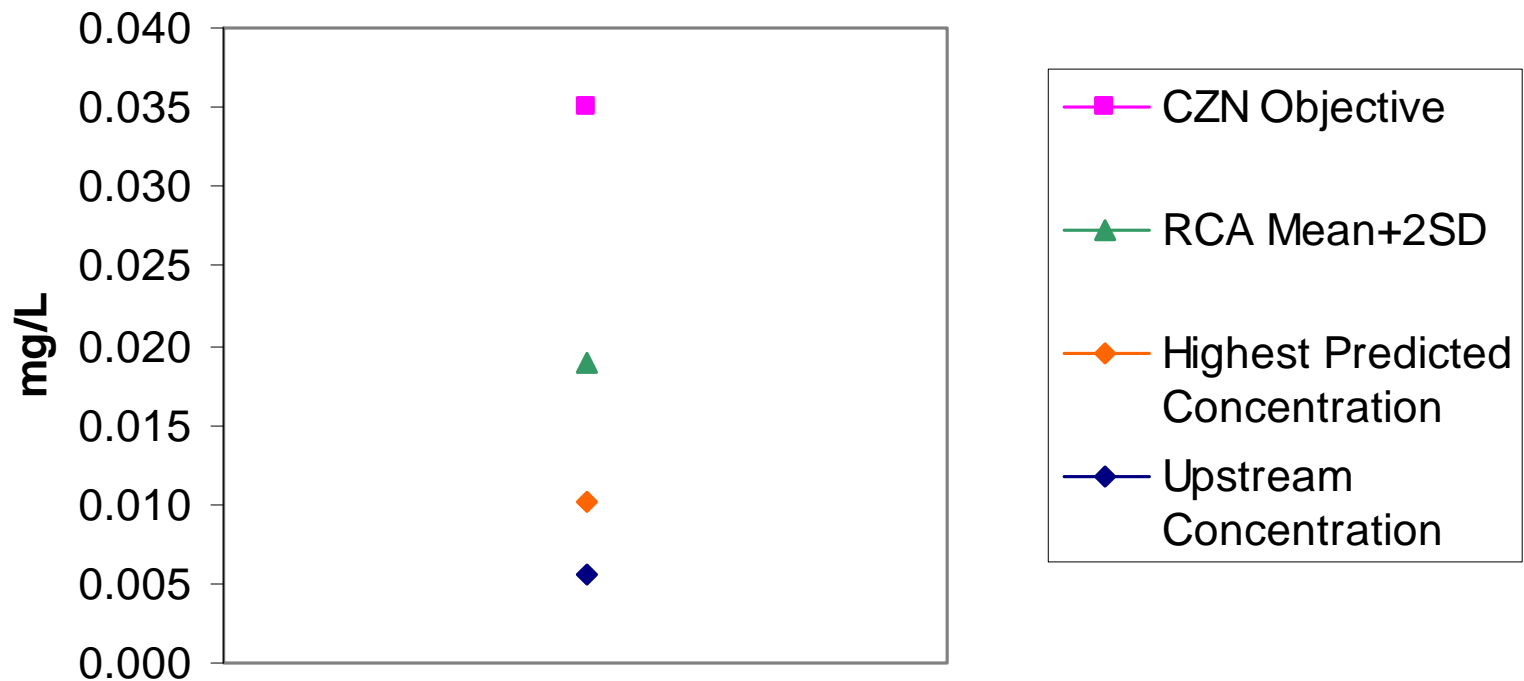
northwest hydraulic consultants

Water Quality

- Downstream water quality likely mineralized before the Mine
- Downstream shows some, but surprisingly little, affect from historic Mine
- Testing confirms future Mine operations discharge will not affect fish or other aquatic life
- Water quality after discharge meets objectives protective of aquatic life
- No significant effects on Prairie Creek, the Park or South Nahanni R.

Water Quality Objective

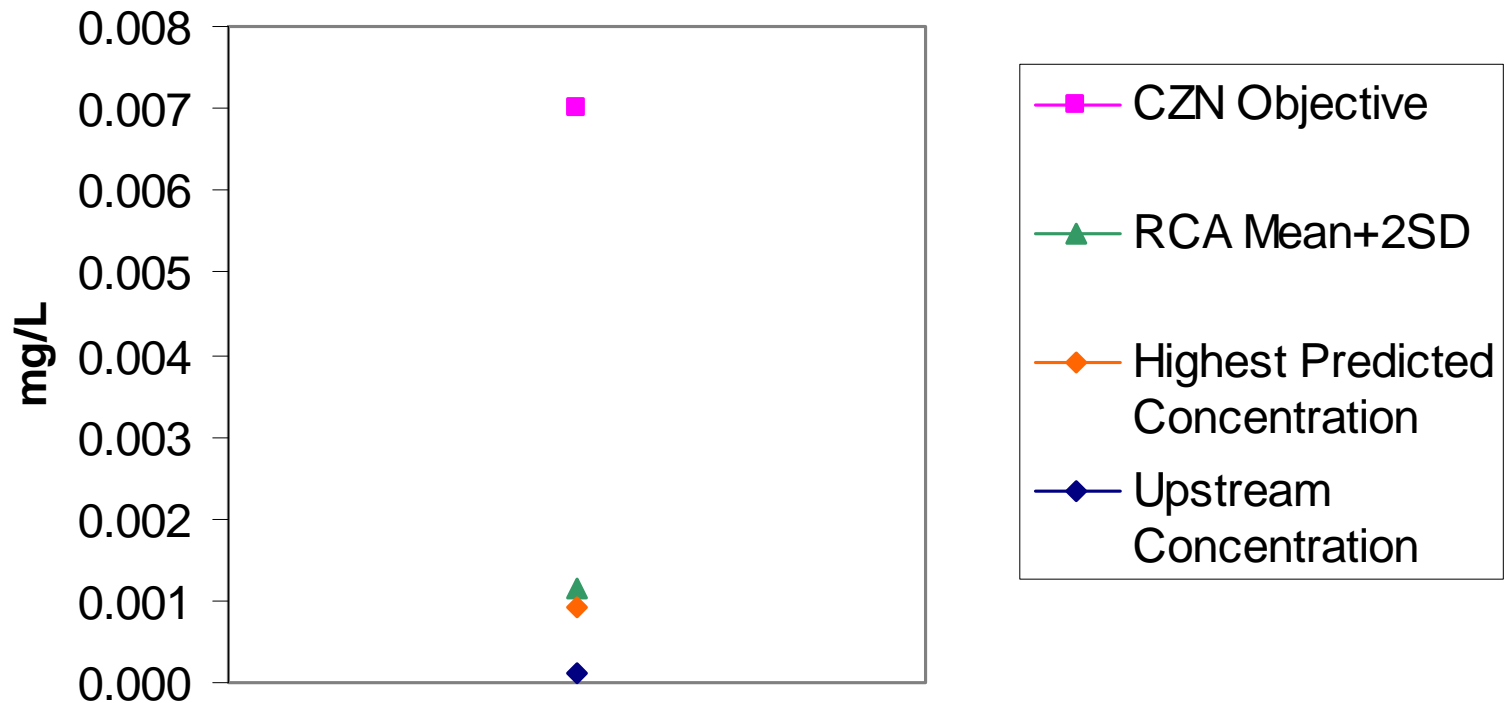
Zinc



Note: Drinking water = 5

Water Quality Objective

Lead



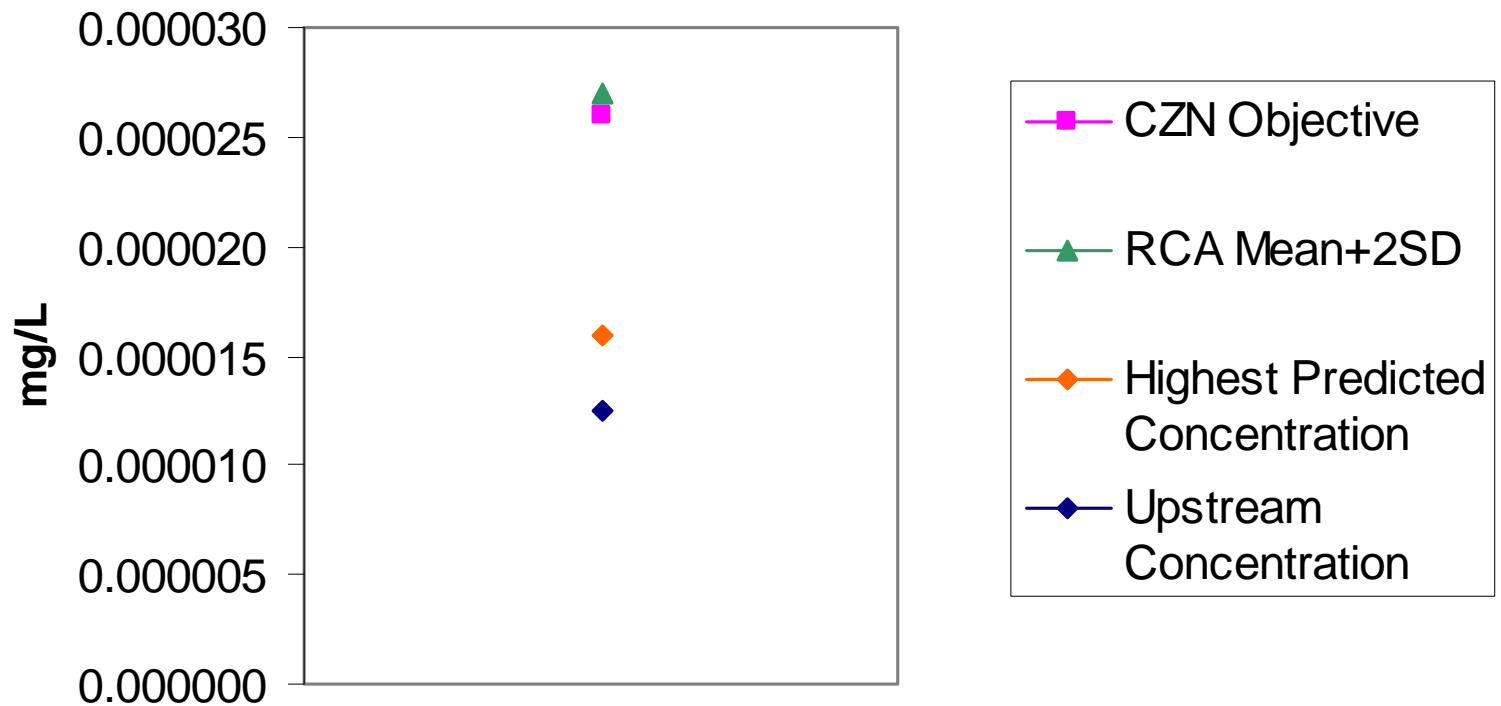
Note: Drinking water = 0.01

Mercury

- Background concentration in Prairie Creek is very low
- Similar very low concentration in mine water
- Downstream water quality will be very close to background levels
- Mine operations will not lead to a significant increase in accumulation in fish

Water Quality Objective

Mercury



Manpower and Logistics

- 220 full-time jobs at the Mine, 110 on site at one time
- 2 mine and mill shifts, 1 admin shift, per day
- 3 weeks on, 3 weeks off rotation by air, weekly flights
- Concentrates/supplies haul to/from Mine during December-April

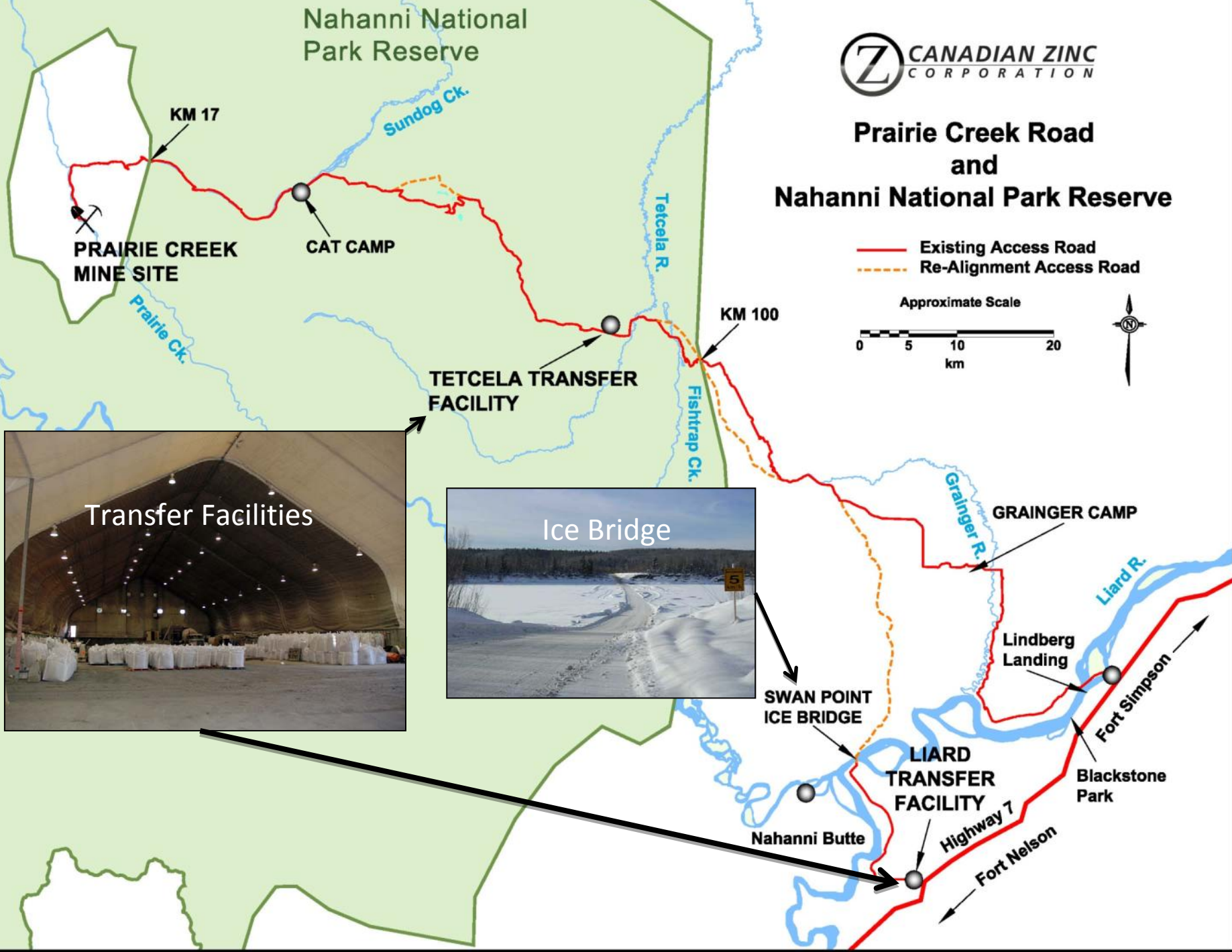
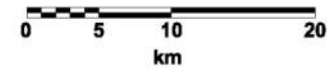
Prairie Creek Mine: Transport



Prairie Creek Road and Nahanni National Park Reserve

— Existing Access Road
- - - Re-Alignment Access Road

Approximate Scale



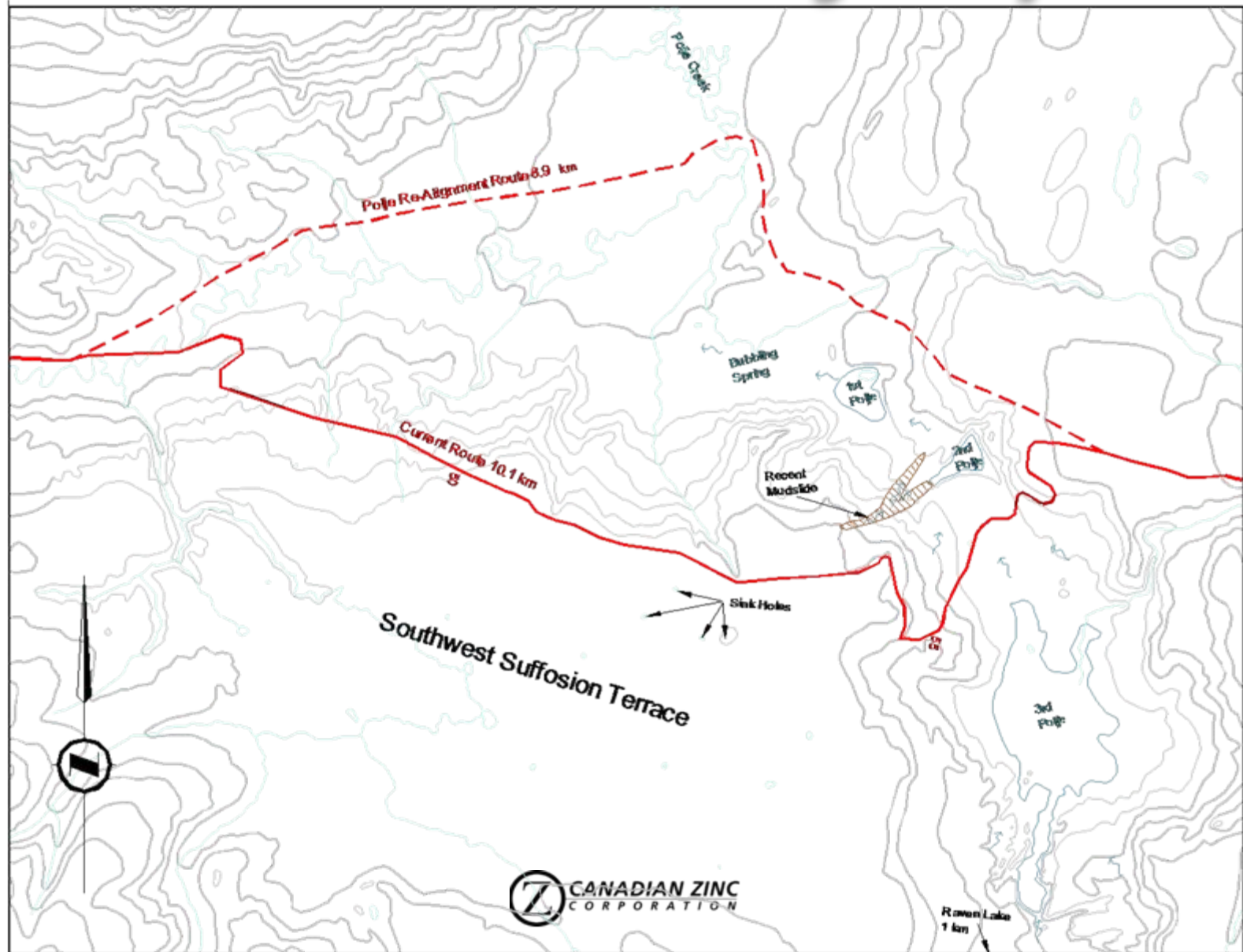
Road Design/ Changes

- Re-alignments out of wetlands
- Avoid poljes & karst features
- Reduce/remove grades/turns
- Bridges over some creeks
- Curbs, run-away lanes
- Speed limit and warning signs

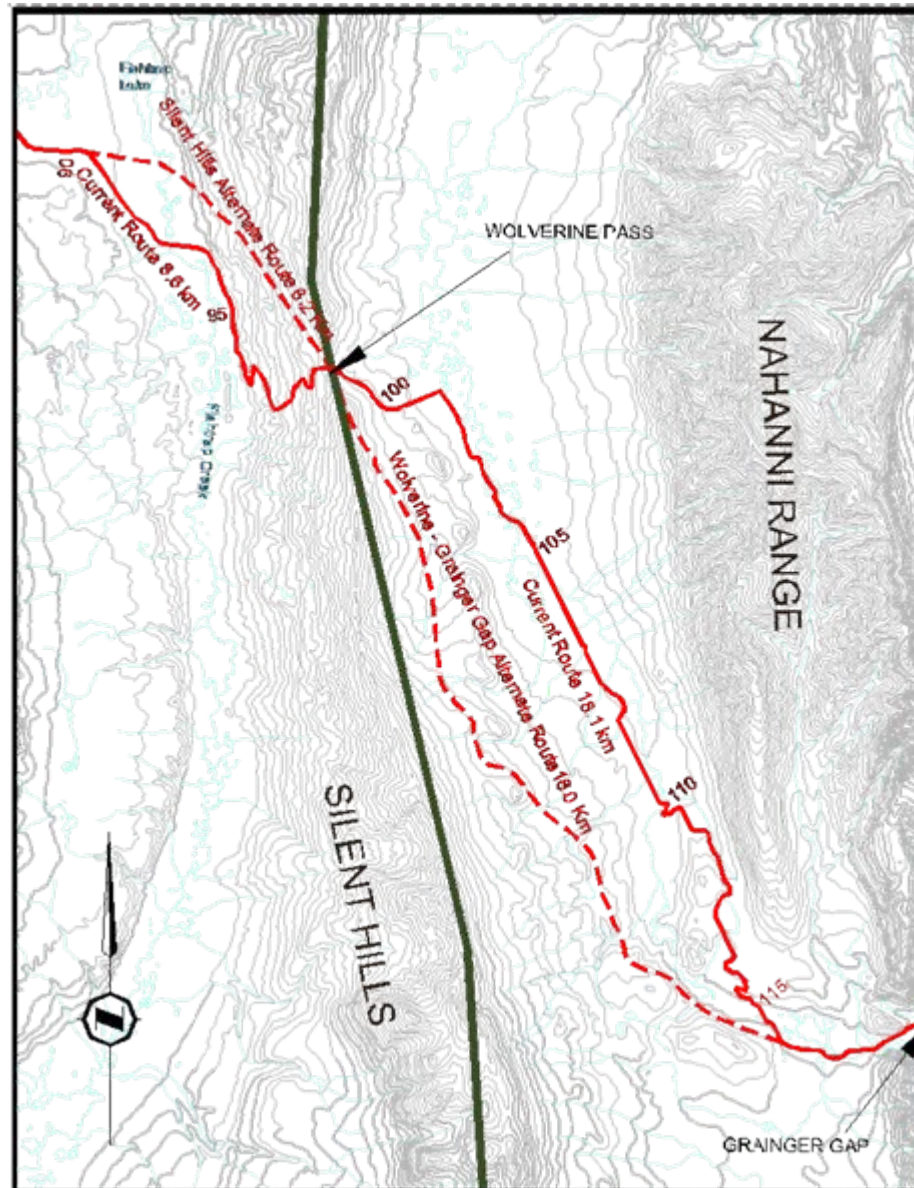
Bridge Concept - Sundog Creek



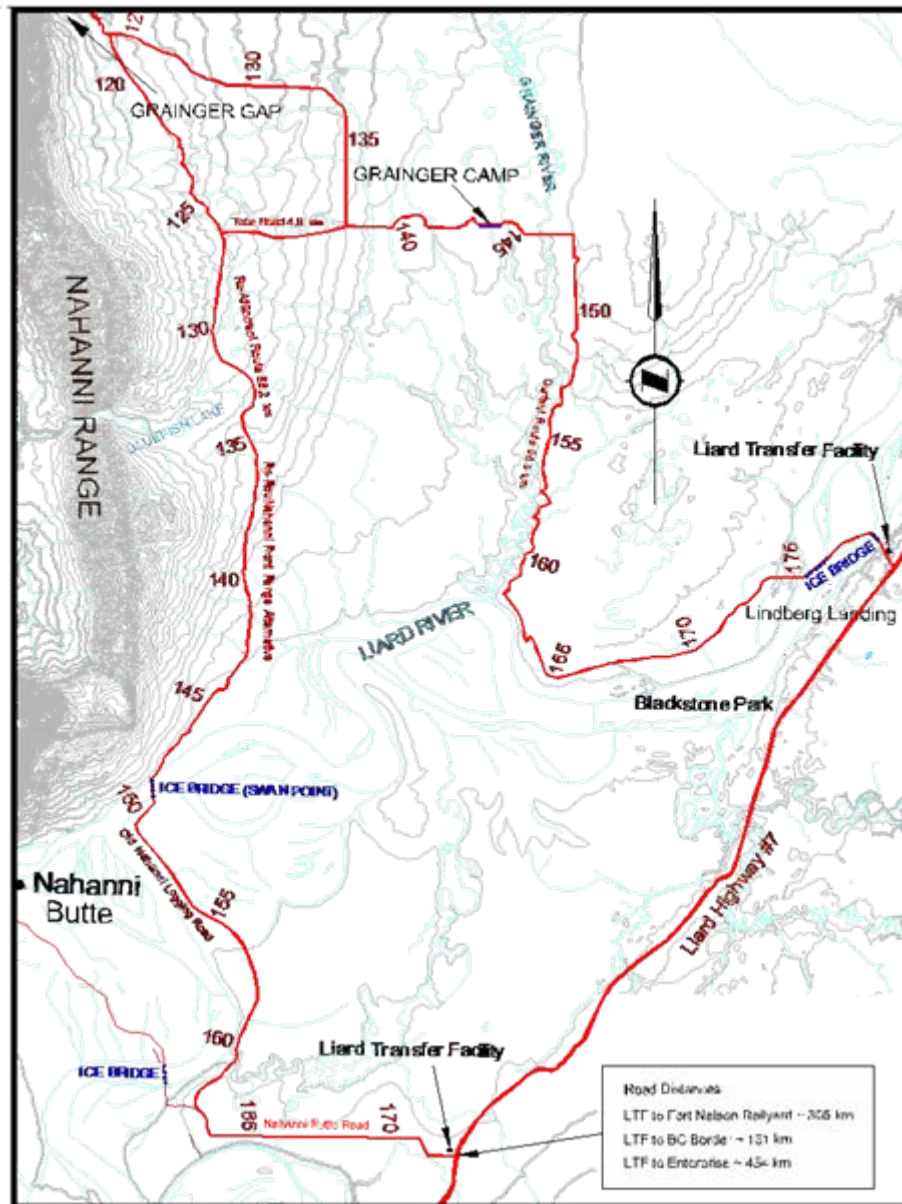
Access Road – Polje By-Pass



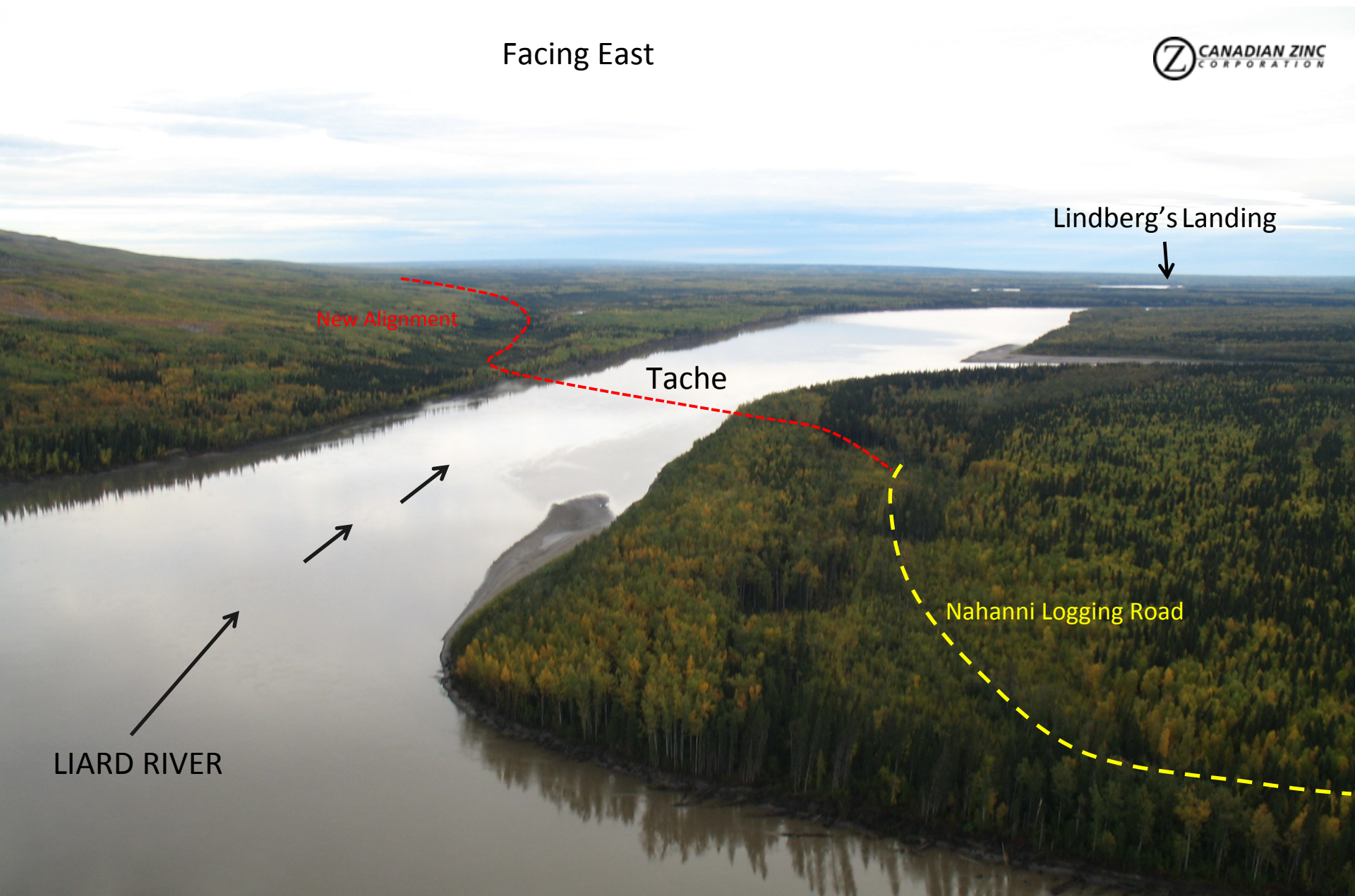
Access Road – Silent Hills



Access Road – Nahanni Range



Facing East



LIARD RIVER

New Alignment

Tache

Lindberg's Landing

Nahanni Logging Road

The Nahanni Route Re-alignment and Liard Crossing:
Location of Ice Bridge during winter operations

Road Construction & Maintenance

- Start from the Mine, November
- Use of frozen ground, snow/ice
- Inspect for cultural resources
- Water from Mine well or Mosquito Lake
- Protect stream banks
- Granular fill use, insulate permafrost
- Inspections/maintenance/closure

Road Use Schedule

- Dec 1 to Jan 15 – Mine to Tetcela - Concentrates to Tetcela Transfer Facility (TTF)
- Jan 15 to Mar 31 – Mine and TTF to Liard - Concentrates to Liard Transfer Facility, Supplies in to Mine
- Jan 15 to fall – Liard Transfer Facility to Fort Nelson - Concentrates to railhead

Road Management

- Speed limits
- Radio contact and control
- Journey management and checkpoints
- Supervision and monitoring

Road Spill Contingency

- Response plans and response team
- Response training
- Response equipment and control points
- Driver training relevant to cargo
- Rapid response and notifications
- Complete spill clean-up verified by investigation

Access Control

- Nahanni checkpoint to deter unauthorized use
- Information and signs re high traffic road, use at own risk
- Monitoring of use (monitors and truckers)
- Contracted non-residents prohibited from entering Nahanni Butte
- Barriers when road not in use

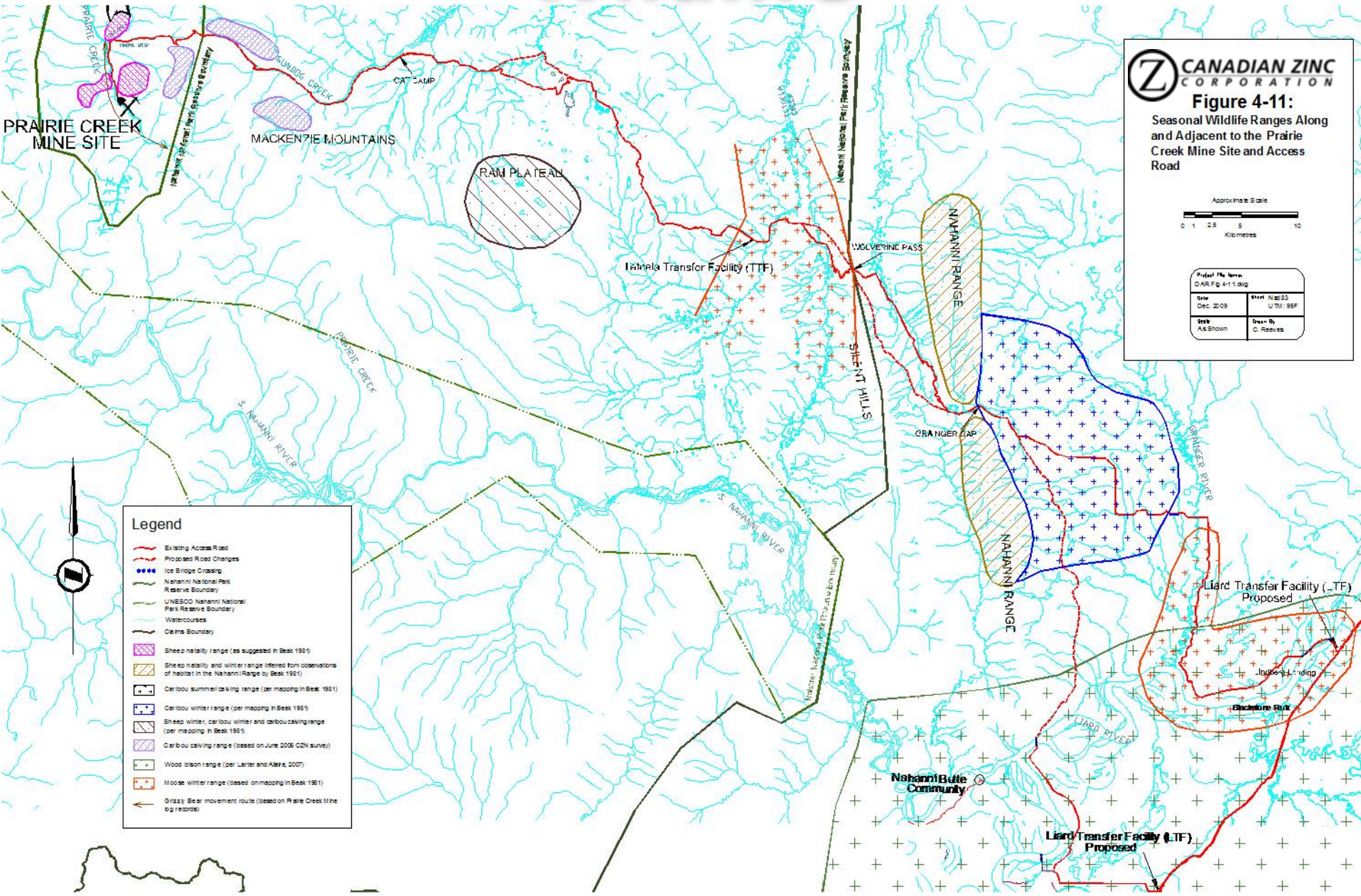
Expected Liard Facility Transfer Traffic

From	Trips per Day	Period	
		From	To
Mine	58	January 15	March 6
Mine	37	March 6	April 15
Fort Nelson	14	January 15	October 15 *

Proposed Transfer Facilities (Inside)



Wildlife



Wildlife

Residual effects:

- Potential for effects on Dall's sheep lambing activity during the spring (May-June) with air traffic;
- Potential for collisions with Dall's sheep, woodland caribou and wood bison associated on access road; and,
- Potential for grizzly bear-human encounters at the Mine site.

Wildlife Mitigation

- Wildlife Management and Monitoring Plan
- Flight Impact Management Plan
- Speed limits, warning signs for potential collision zones. Traffic stops when wildlife near roadway
- Minimize attractants to bears. Warning and encounter management.
- No hunting/fishing by employees.

Mine Closure

- Completely fill Mine to stop portal drainage
- Cover Waste Rock Pile, limit seepage
- Treat/Monitor groundwater until quality stable and groundwater discharge will not have significant impacts
- Remove buildings and infrastructure
- Restore natural floodplain

Mine Closure

Pre-1964 and future...

Present

- **Fill in underground mine**
- **Cover for Waste Rock Pile**
- **Remove buildings and infrastructure**
- **Restore natural floodplain**



Economic Benefits

- Priority hiring for the community
- Annual set-aside non-competitive contracts
- Priority on contracts
- Annual revenue
- Percentage of project's profits
- Education funds
- Anchor tenant in Band office
- On-going annual community events

Social Issues Programs

- Money Management
- Health Awareness
- Coordinating Family Assistance
- On-going Community Event Sponsorship
- Youth Workshops
- Traditional harvesting opportunities



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Nah?a Dehe Dene Prairie Creek Agreement
January 20, 2011



CANADIAN ZINC
CORPORATION

Mahsi Cho