

PRAIRIE CREEK MINE

PROJECT DESCRIPTION



CANADIAN ZINC CORPORATION

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VP Environment and Permitting – Dave Harpley
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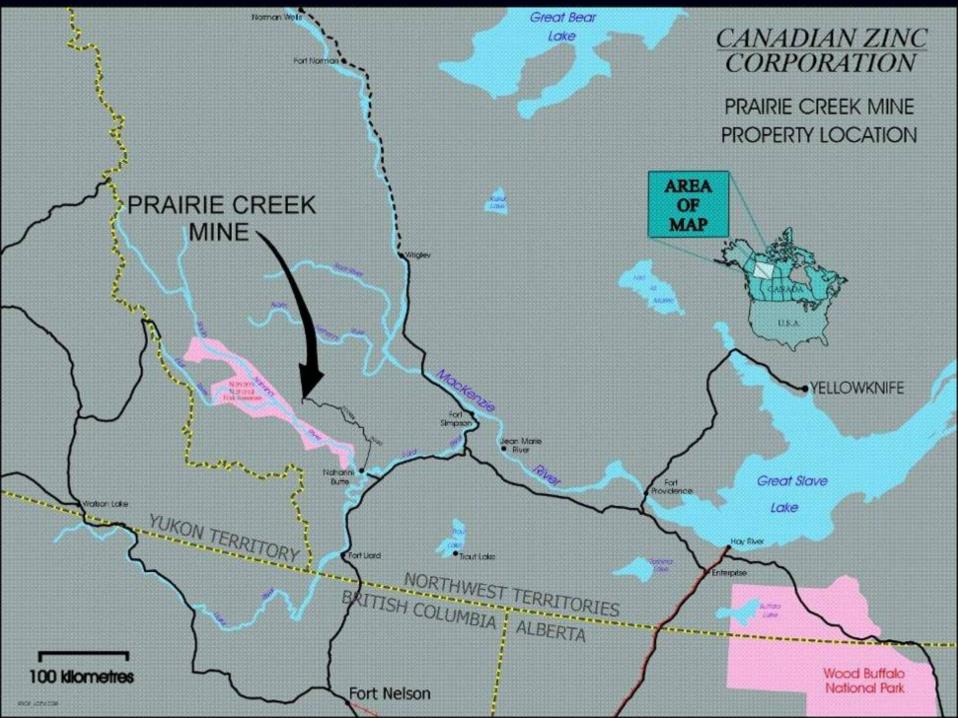
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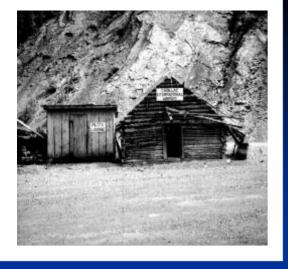
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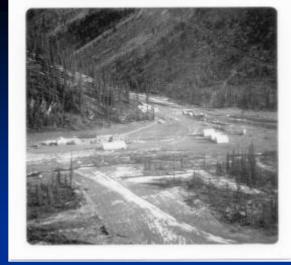








Prairie Creek History



Prairie Creek Camp: 1968

- Original discovery in 1928
- Discovery of Main Zone in 1960's and establishment of camp
- Underground development of main zone 1960'-70's.
- Cadillac Exploration 1979-1982, minesite infrastructure setup, road to Liard established, fully permitted
- April 1982, silver price collapse, Cadillac bankrupt 3 months from production
- 1993 San Andreas acquires Prairie Creek
- 1999 San Andreas name change to Canadian Zinc
- **2000-2007 CZN exploration and development programs**



Prior/Existing Permits

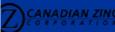
- Mine and Winter Road Land Use Permits, 1980
- Mine Water License, 1982
- Land Use Permit and Water License for Underground Decline and Pilot Mill Plant, 2003 (Water License renewed for 5 years)
- Winter Road Land Use Permit, 2007
- Phase 3 Exploration Land Use Permit, 2006







PRAIRIE CREEK MINE: WATER

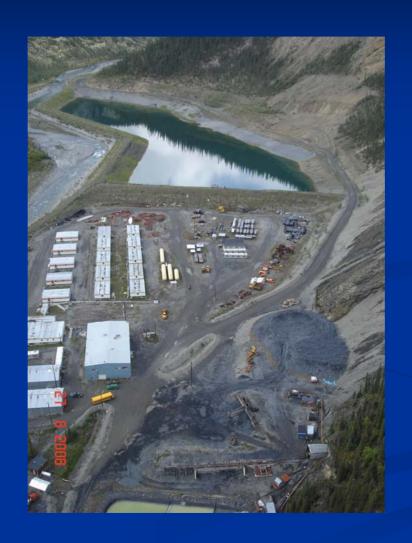


Mill and Catchment Pond



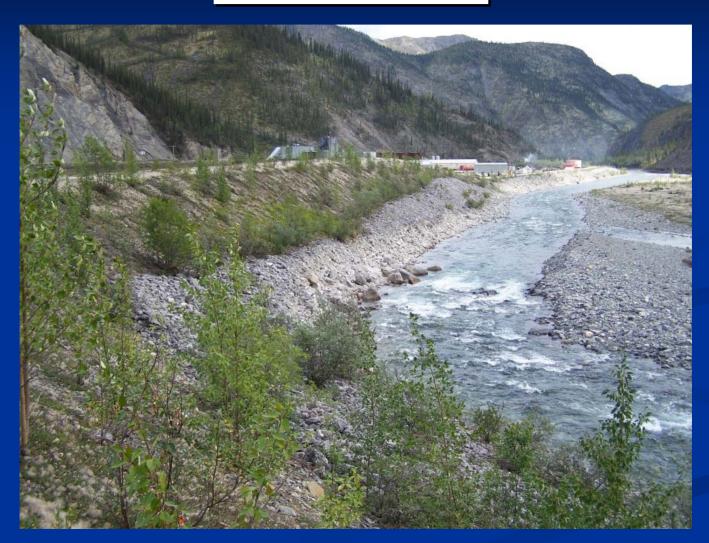


Camp





Main Dike





Tank Farm



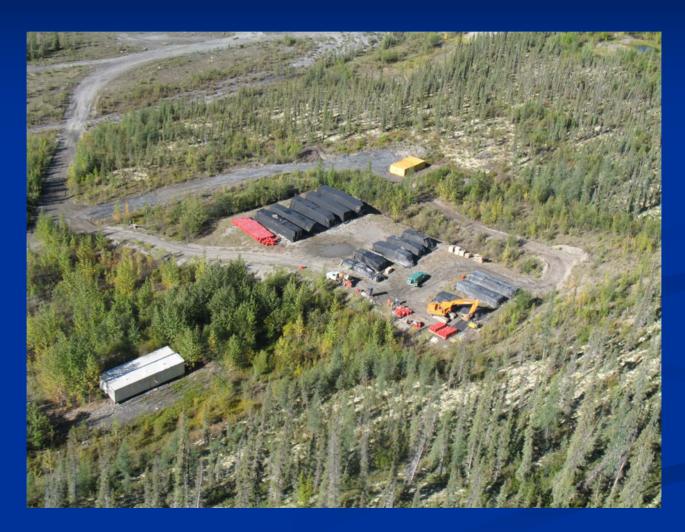


Adit and Polishing Pond



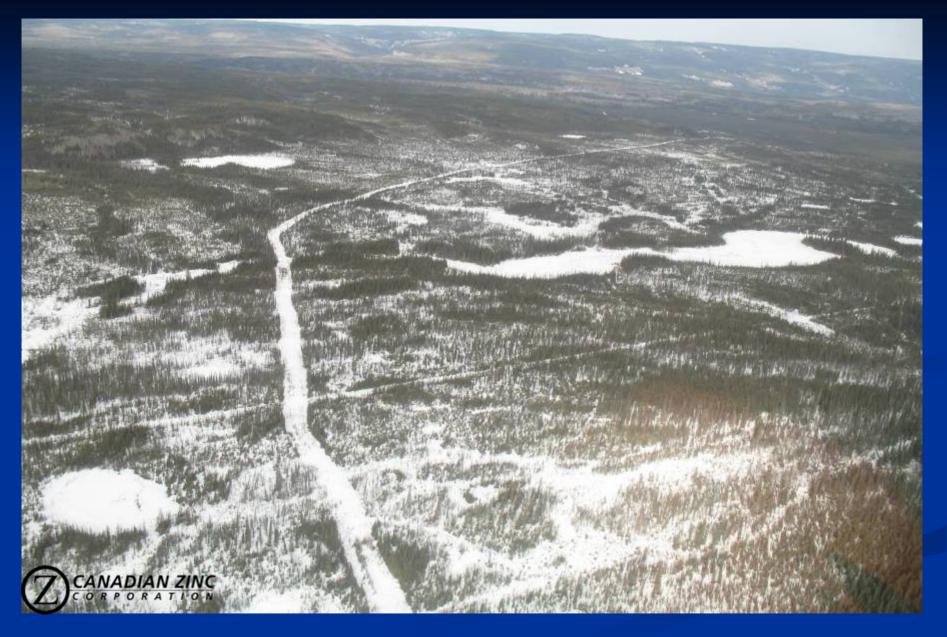


Magazines and Reagent Pad





PRAIRIE CREEK – LIARD HIGHWAY WINTER ROAD



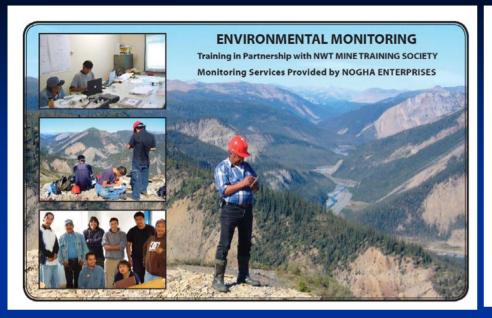
WINTER ROAD LAND USE PERMIT RECEIVED 2007

Previous EA's

- Six environmental assessments 2001 2006
- Underground Decline & Pilot Plant, 2003
 - Mine Water Contingency Plan
 - Effluent Treatment Options Plan
 - Polishing Pond
 - Tank Farm inspections
 - Maximum Flood Re-Assessment
 - Wildlife Management Plan
 - Fuel Spill Contingency Plan
- Phase 3 Drilling, 2006
 - Wildlife survey
 - Flight Impact Management Plan



LOCAL ACTIVITIES



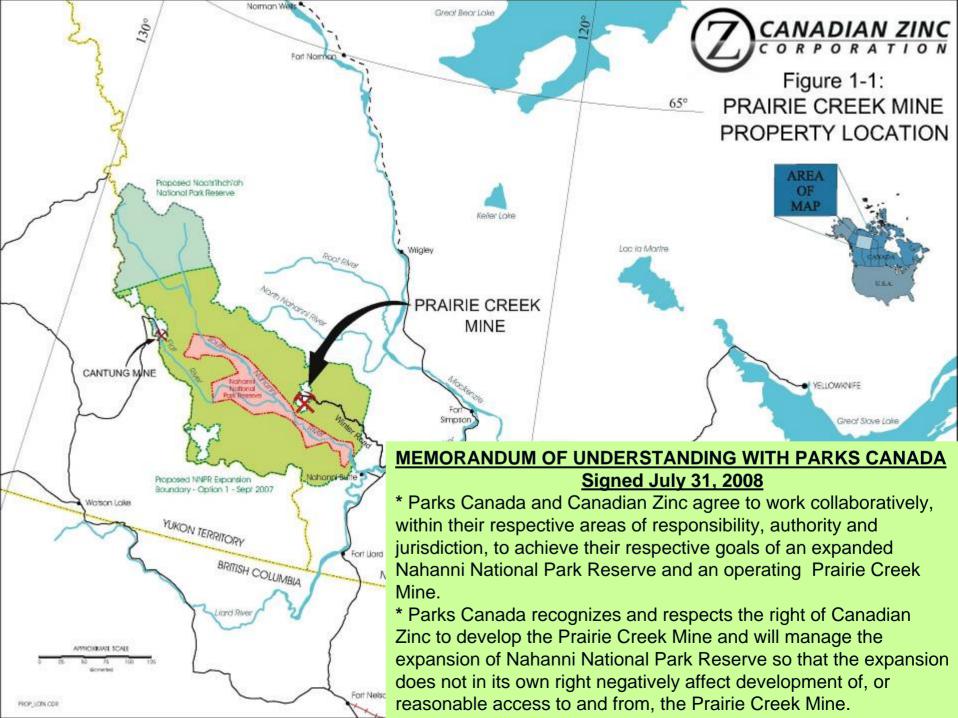












OPERATIONS APPLICATIONS



PRAIRIE CREEK MINE PROJECT DESCRIPTION REPORT



PRAIRIE CREEK MINE LIARD TRANSFER FACILITY

PROJECT DESCRIPTION REPORT



SUBMITTED IN SUPPORT OF:

Type "A" Water Licence Application
Type "A" Land Use Permit Application

SUBMITTED TO:

Mackenzie Valley Land and Water Board Box 2130, 4910 - 50th Avenue, Yellowknife, NT, X1A 2P6

SUBMITTED BY:

Canadian Zinc Corporation Suite 1710 - 650 West Georgia Street Vancouver, BC, V6B 4N9



PRAIRIE CREEK MINE TETCELA TRANSFER FACILITY

PROJECT DESCRIPTION REPORT



SUBMITTED IN SUPPORT OF:

Type "A" Land Use Permit Application

SUBMITTED TO:

Mackenzie Valley Land and Water Board Box 2130, 4910 - 50th Avenue, Yellowknife, NT, X1A 2P6

SUBMITTED BY:

Canadian Zinc Corporation Suite 1710 - 650 West Georgia Street Vancouver, BC, V6B 4N9

May, 2008



Letters of Support

- LKFN
- ADKFN
- MLA Menicoche



Precedent

 2005, Supreme Court rules CZN's application for winter road permit exempt from EA (grandfathered)

 CZN could apply for Cadillac's mine project and go directly to permitting, avoiding EA

 CZN chooses to include modern waste and water management plans



CZN's View

 Based on law, EIA guidelines and majority community view, EA should:

 focus on new plans and water quality

be efficient in time and content

 not re-assess contents of previous EA's and permits



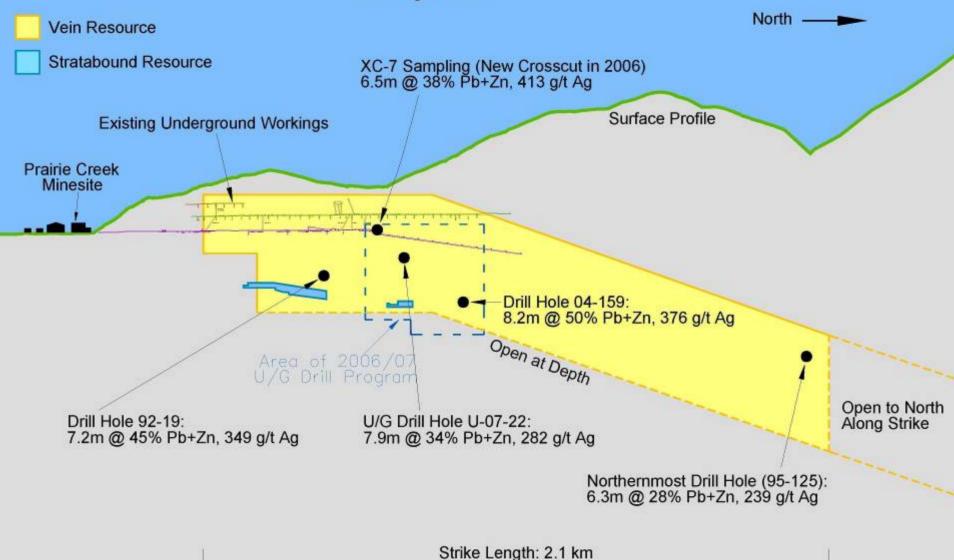
Geological Resource

- Total resource = 11.85 million tonnes:
 12.5% Zn; 10.1% Pb; 161 g/t Ag; 0.4% Cu
- Measured and Indicated = 3.57 million tonnes: 11.9% Zn; 9.7% Pb; 142 g/t Ag; 0.3% Cu
- >60 million ounces silver
 - >3 billion lbs of zinc
 - >2.2 billion lbs of lead



LONG SECTION OF PRAIRIE CREEK MAIN ZONE Facing West



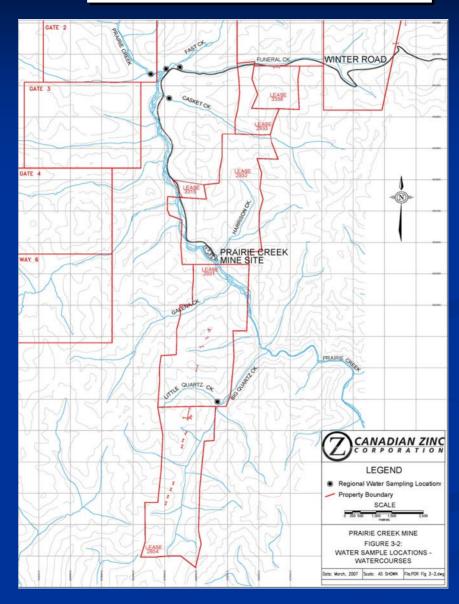


Baseline Study Update

- Climate
- Hydrology
- Water Quality
- Fish
- Wildlife



Water Quality

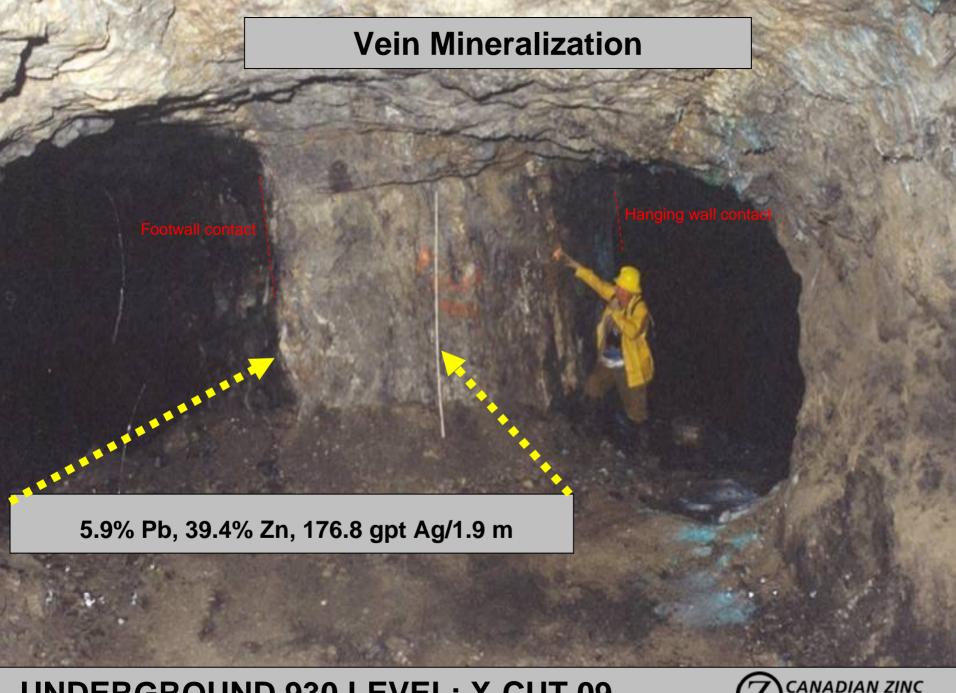




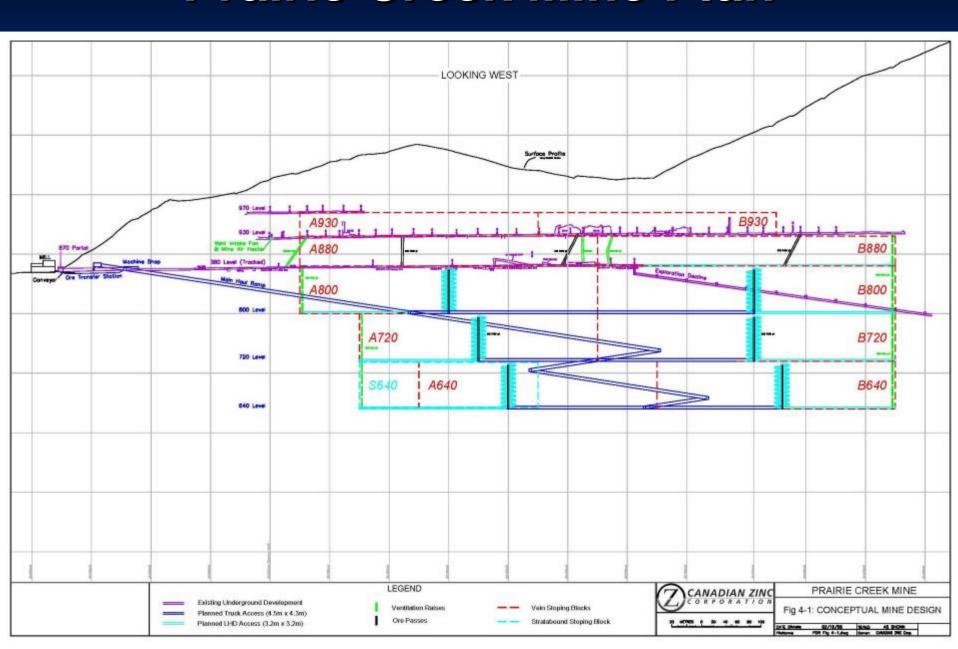
OPERATIONS OVERVIEW

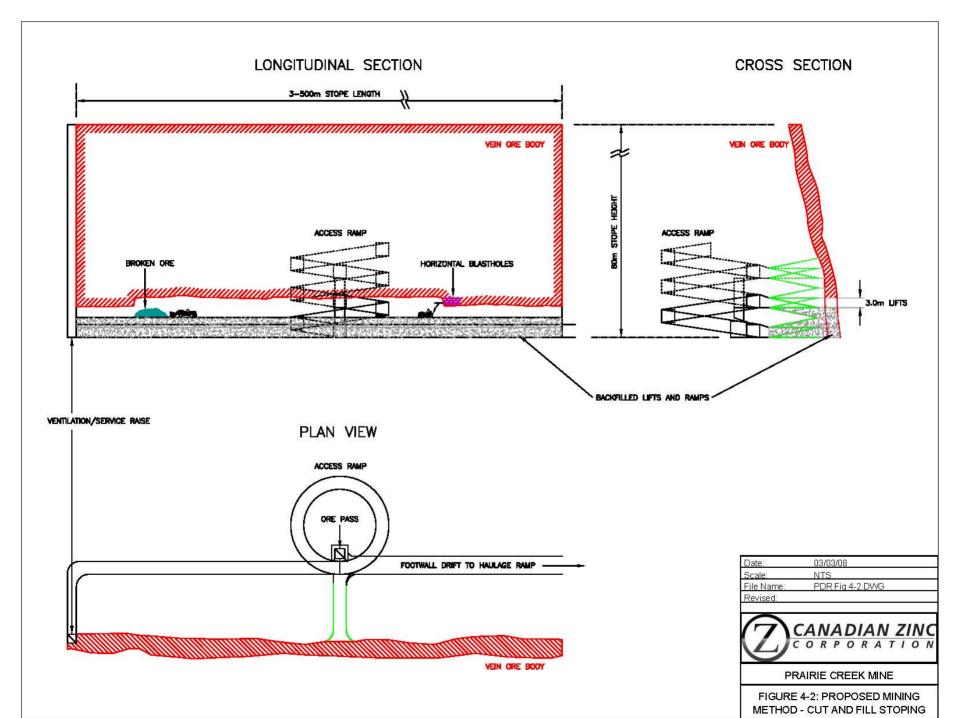
- Up to 1,300 tonnes/day mining
- Up to 1,000 tonnes/day milling
- Crushing/grinding/flotation process, addition of dense media separation and backfill plants
- Production of zinc and lead concentrates, transport by truck to railhead via winter road
- Mill rock and tailings placed underground
- Creation of a Waste Rock Pile
- Conversion of original tailings pond to Water Storage Pond to allow recycle





Prairie Creek Mine Plan





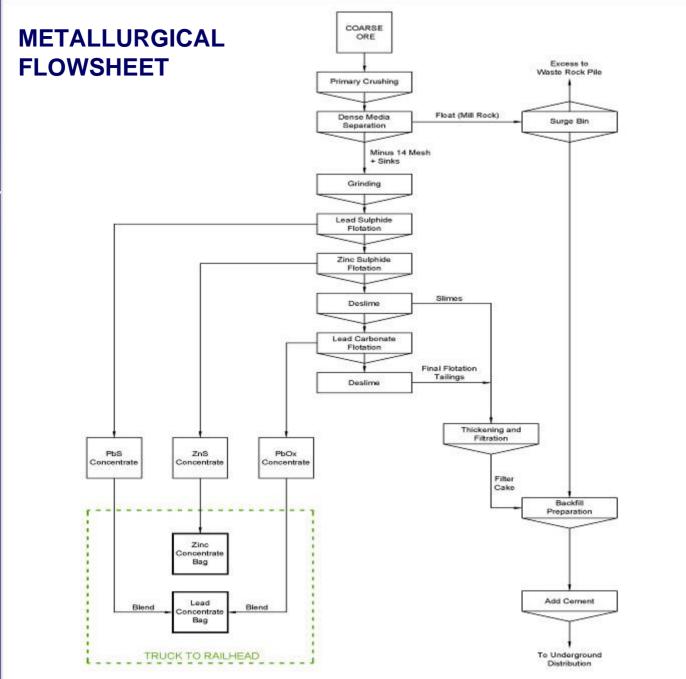
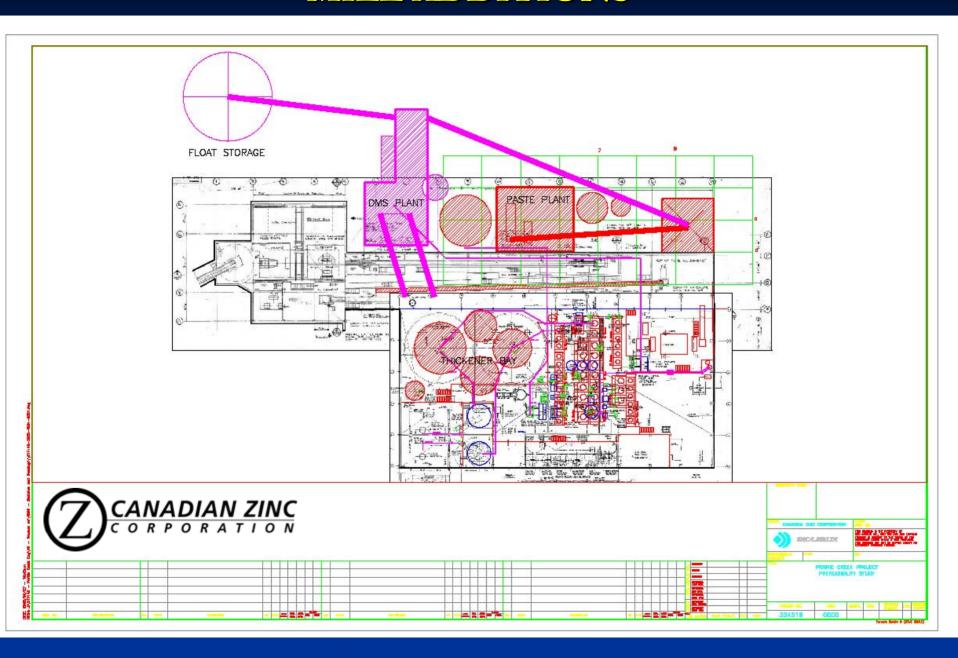
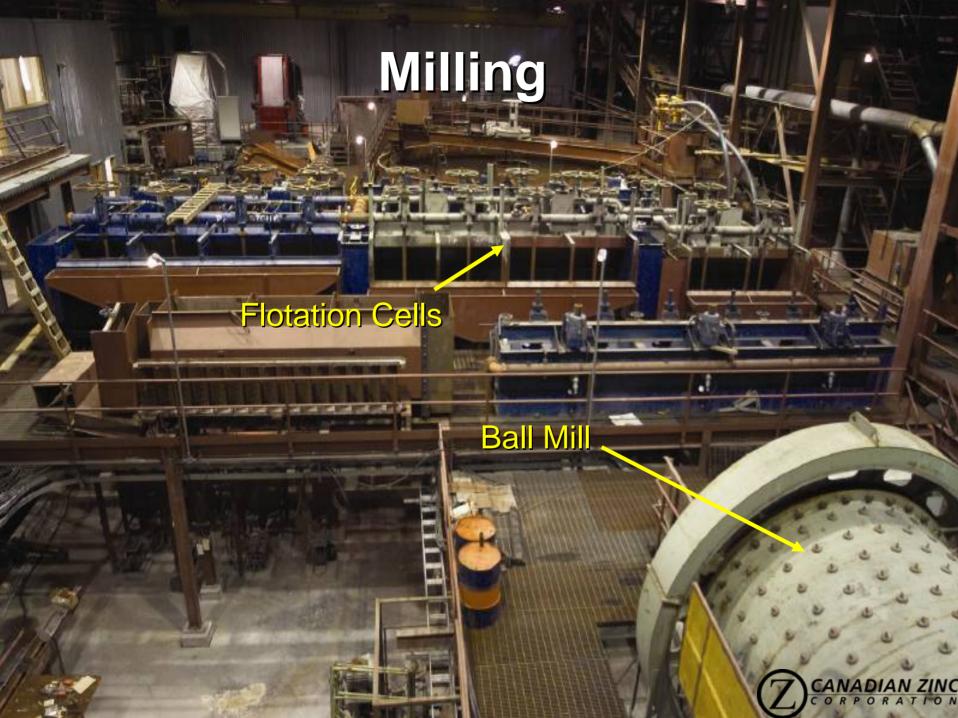


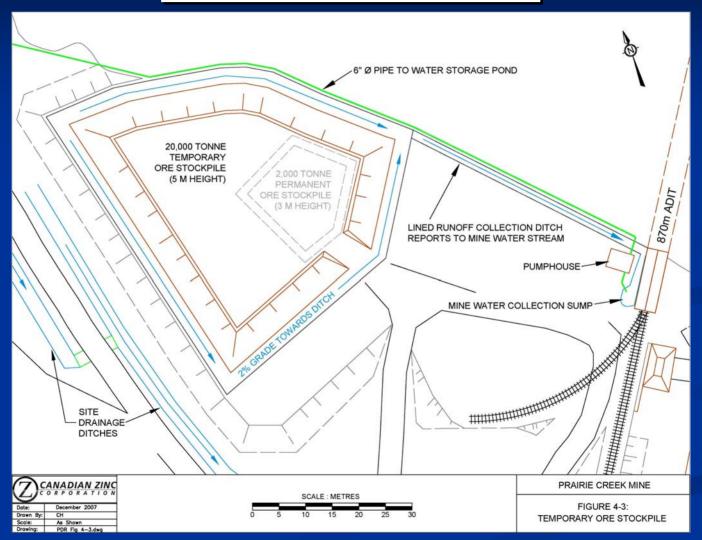
Figure 4-4: Simplified Metallurgical Process Flowsheet

MILL ADDITIONS





Ore Stockpile





Concentrate Shed





Tailings Mix on Surface



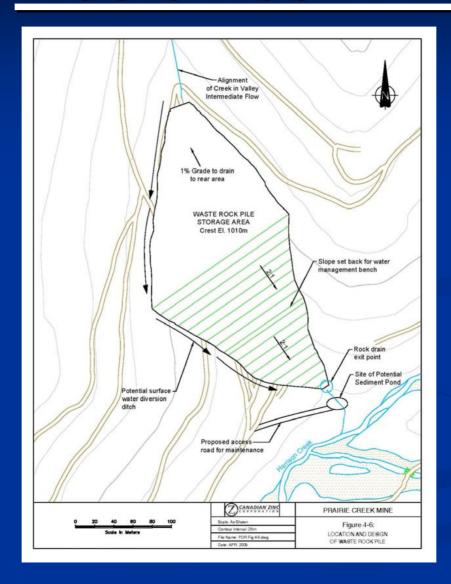


Tailings Mix Underground





Waste Rock Pile





Waste Rock Pile Site

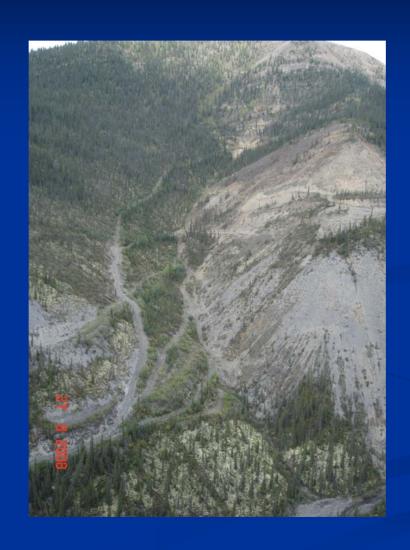
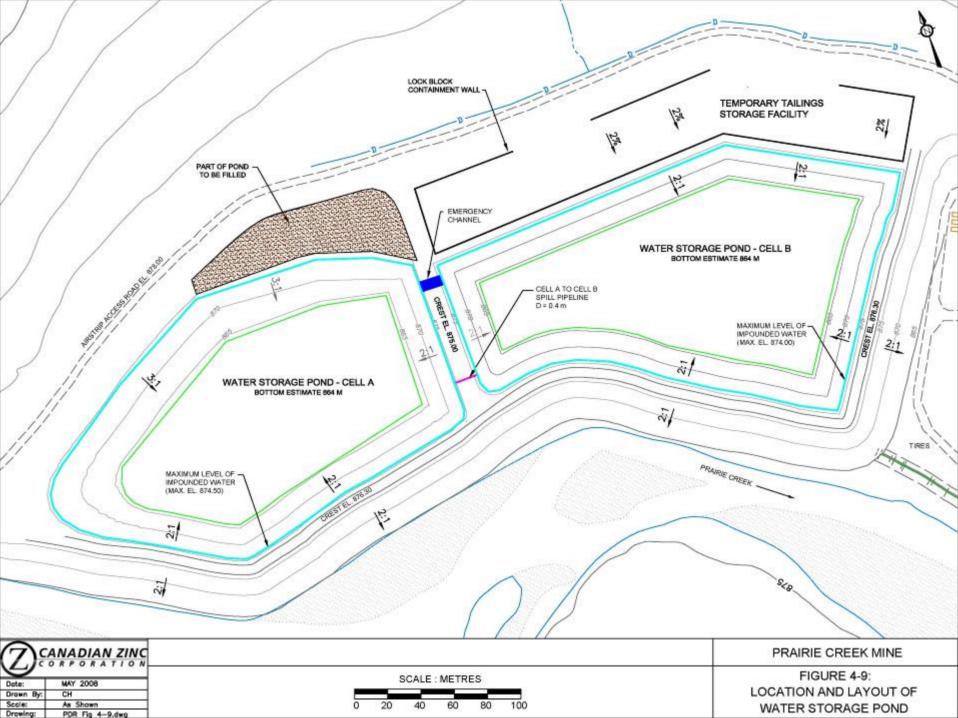




TABLE 4-3: LIFE OF MINE (YEARS 0-14) WASTE ROCK QUANTITIES

Mine Life Quantities	Tonnes	%	t/m°	m°	Comment
Mill Feed	4,995,000	100%			
DMS Rock	1,203,750	24%			
Flotation Tailings	2,506,222	50%			
Concentrates	1,285,028	26%			
Unplaced Backfill (DMS+FT)	3,709,972	26%			
Voids (stopes & development)				1,799,720	
Density Backfill			2.24		wet density
Solids Content		84%			
Placed Backfill (DMS+FT)	3,401,470		1.89		dry density (1.89 dry tonnes/m³)
Backfill not placed u/g (DMS)	308,502			163,229	
Proportion DMS not placed		26%			
Ratio Tails to DMS in Fill			2.8		
Development waste rock				276,470	
Total to Waste Rock Pile				439,699	waste rock plus DMS rock





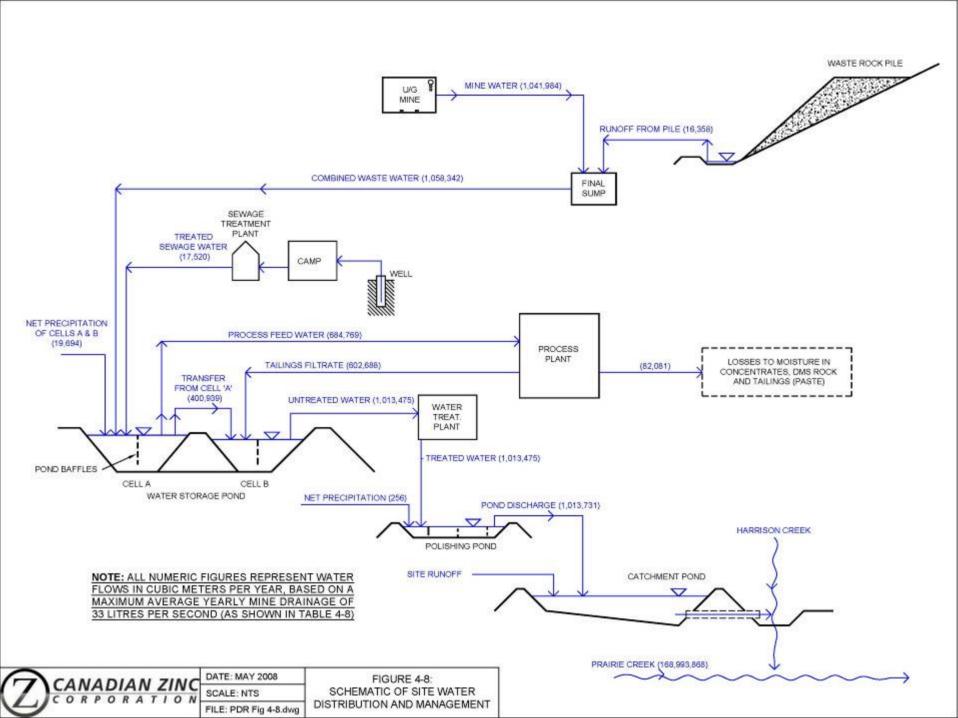
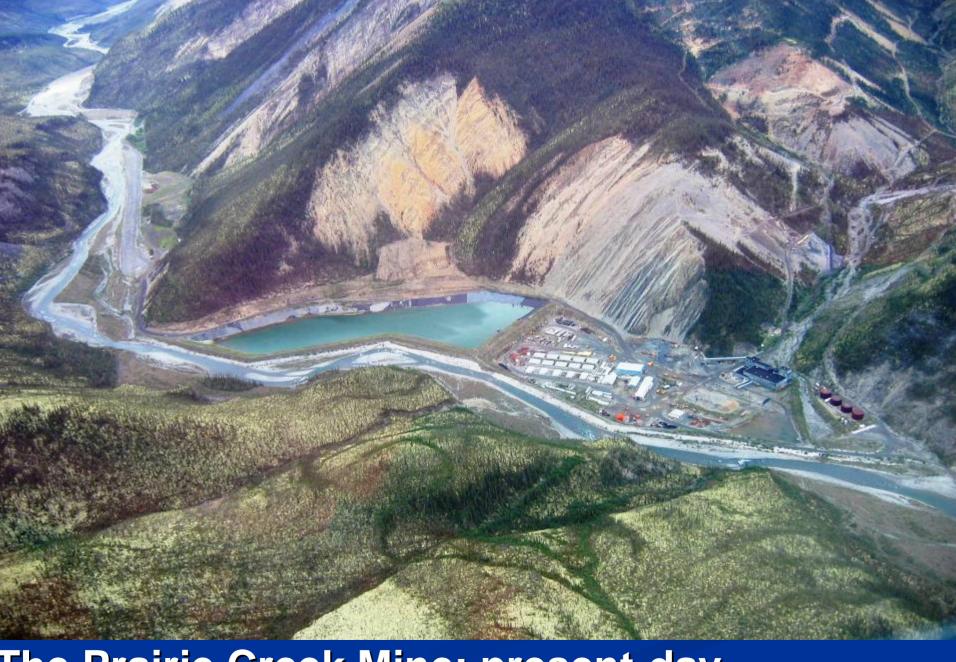


TABLE 4-8: STORAGE POND WATER BALANCE, MINE DRAINAGE MAXIMUM 40 L/SEC

Period	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Inflows (m³)													
Mine Drainage	74,995	67,738	74,995	82,944	107,136	103,680	107,138	107,136	82,944	85,709	72,576	74,995	1,041,984
Sewage Water	1,488	1,344	1,488	1,440	1,488	1,440	1,488	1,488	1,440	1,488	1,440	1,488	17,520
Precip pond	1,229	1,229	1,092	1,365	2,184	3,140	4,642	3,823	3,140	2,594	1,638	1,229	27,305
Precip pile	0	0	0	0	6,756	2,045	3,023	2,489	2,045	0	0	0	16,358
Total	77,712	70,310	77,575	85,749	117,565	110,305	116,288	114,936	89,569	89,791	75,654	77,712	1,103,167
Outflows (m ⁵)													
Mill Process Feed	58,158	52,530	58,158	56,282	58,158	56,282	58,158		56,282	58,158	56,282	58,158	684,769
Evaporation	0	0	0	0	1,075	4,096	5,461	4,098	2,731	0	0	0	17,458
Spill to Cell B	19,553	17,780	19,417	29,467	58,331	49,927	52,669	52,682	30,556	31,632	19,372	19,553	400,939
Total	77,712	70,310	77,575	85,749	117,565	110,305	116,288	114,936	89,569	89,791	75,654	77,712	1,103,167
Inflows (m³)	Cell B												
Spill from Cell A	19,553	17,780	19,417	29,467	58,331	49,927	52,669	52,682	30,556	31,632	19,372	19,553	400,939
Tails Filtrate	51,187	46,234	51,187	49,536	51,187	49,536	51,187	51,187	49,536	51,187	49,536	51,187	602,688
Precip pond	1,229	1,229	1,092	1,365	2,184	3,140	4,642	3,823	3,140	2,594	1,638	1,229	27,305
Total	71,969	65,242	71,696	80,368	111,703	102,603	108,498	107,692	83,232	85,413	70,546	71,969	1,030,932
Outflows (m³)													
Treatment Plant	84,913	84,913	84,913	84,913	84,913	82,174	84,913	84,913	82,174	84,913	84,913	84,913	1,013,474
Evaporation	0	0	0	0	1,075	4,096	5,461	4,096	2,731	0	0	0	17,458
Total	84,913	84,913	84,913	84,913	85,988	86,269	90,374	89,008	84,904	84,913	84,913	84,913	1,030,932
Difference (m³)	-12,943	-19,670	-13,216	-4,545	25,715	16,333	18,124	18,683	-1,672	501	-14,367	-12,943	0
Cum. Diff. (m³)	-12,943	-32,614	-45,830	-50,375	-24,659	-8,326	9,798	28,481	26,809	27,310	12,943	0	
Inflows (m ⁵) Polishing Pond													
Treatment Plant	84,913	84,913	84,913	84,913	84,913	82,174	84,913	84,913	82,174	84,913	84,913	84,913	1,013,474
Precip.	32	32	28	36	57	82	121	100	82	68	43	32	711
Outflows (m ³)													
Discharge	84,945	84,945	84,941	84,948	84,942	82,149	84,891	84,906	82,184	84,980	84,955	84,945	1,013,731
Evaporation	0	0	0	0	28	107	142	107	71	0	0	0	455
Prairie Creek	1,418,213	921,110	826,286	2,121,552	33,098,328	44,679,168	31,551,552	25,006,212	16,374,960	7,398,686	3,352,828	2,244,972	168,993,868
Ratio to pond discharge	17	11	10	25	390	544	372	294	199	87	39	26	167
Mine Drainage L/s	28	28	28	32	40	40	40		32	32	28	28	33.0
Treatment Plant L/s	31.6	31.6	31.6	31.6	31.6	31.6	31.6	31.6	31.6	31.6	31.6	31.6	31.6



The Prairie Creek Mine: present-day





Upgraded Mine Facilities:

- 1 Water Storage Pond Cell 'A'
- 2 Water Storage Pond Cell 'B'
- 3 Temporary Tailings Storage Pad
- 4 Water Treatment Plant
- 5 New Accommodations Block
- 6 Covered Ore Stockpile
- 7 New Underground Portal
- 8 Concentrate Storage Sheds
- 9 DMS Plant (Behind Mill)
- 10 Temporary DMS Rock Storage Pad
- 11 Paste Backfill Plant (Behind Mill) 12 - Waste Rock Pile



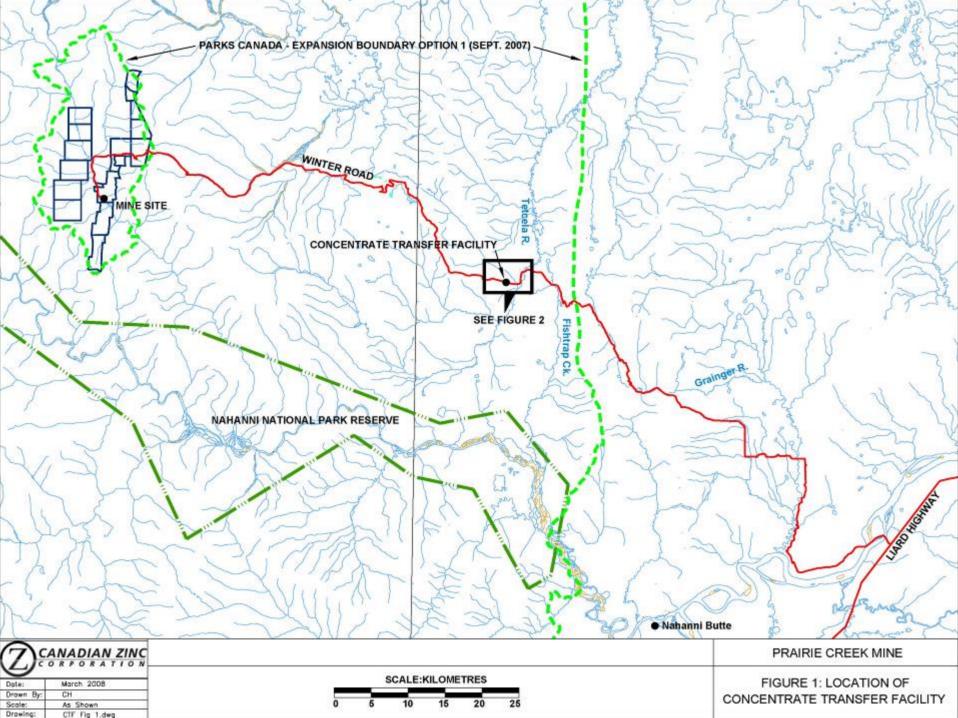
Plate 4-2: Prairie Creek Site Showing Conceptual View of Upgraded Mine Facilities

Manpower and Logistics

- 220 full-time jobs at the Mine
- 3 weeks on, 3 weeks off rotation by air
- Concentrates/supplies haul November-March
- Business opportunities for catering, winter road construction, transportation







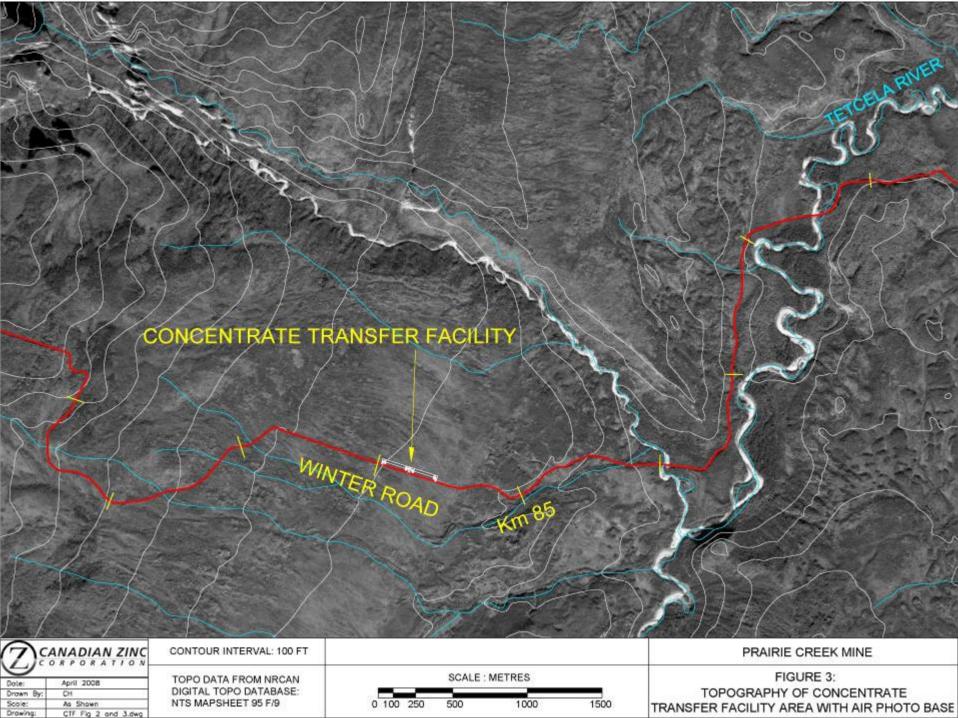




Plate 1: Area of Proposed Tetcela Transfer Facility Showing Winter Road Corridor (2007, Looking East Towards Tetcela River)



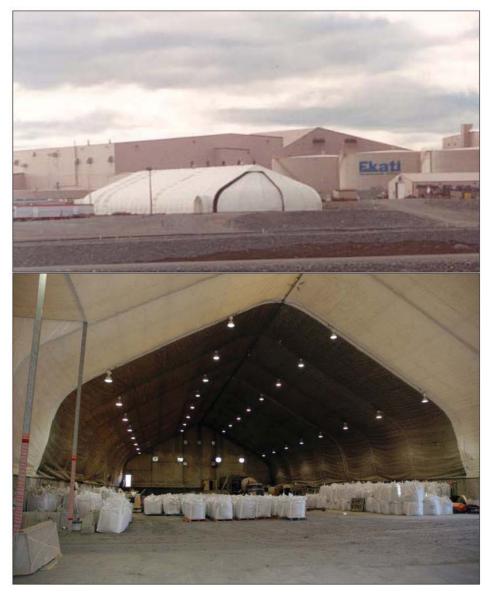
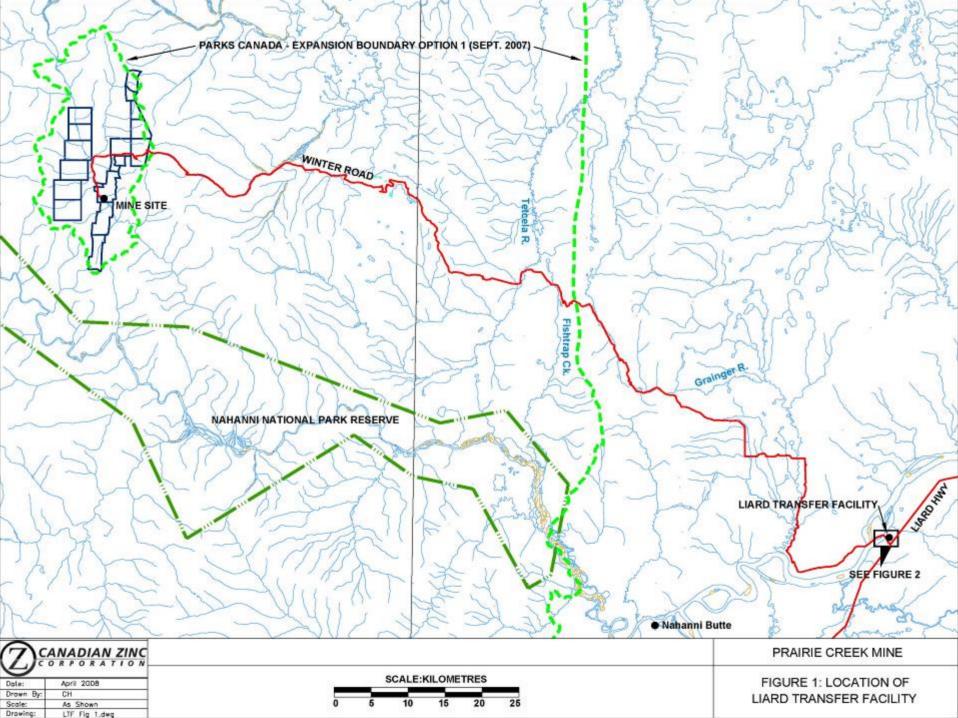


Plate 2: Proposed Structure for Tetcela Transfer Facility
TOP: Exterior View of Structure, in place at Ekati Mine
BOTTOM: Interior View of Structure Showing Concentrate Tote bags (photo courtesy of Sherwood Copper)













Thank you

