

**CANADIAN ZINC**  
**C O R P O R A T I O N**

October 11, 2001

Mr. Louie Azzolini  
Environmental Assessment Officer  
Mackenzie Valley Environmental Impact Review Board  
PO Box 938, 200 Scotia Centre, 5102 - 50<sup>th</sup> Ave.  
Yellowknife, NT  
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By Fax: 1-867-920-4761

Dear Mr. Azzolini:

**Re: Responses to Information Requests - Environmental Assessments - Prairie Creek Mine**

- **Phase II Mineral Exploration Drilling Program**  
(Land Use Application MV 2001C0022; MVEIRB File EA01-003)
- **Metallurgical Pilot Plant Program**  
(Water Licence Application MV2001L2-0003; MVEIRB File EA01-002)
- **Underground Decline and Exploration Drilling**  
(Land Use Application MV2001C0023; MVEIRB File EA01-002)

In follow up to my teleconference call with yourself, Joe Acorn and Greg Yeoman of CPAWS on October 5, 2001, I am pleased to provide Canadian Zinc's responses to the two Information Requests directed to DIAND as submitted by CPAWS on July 4, 2001.

As agreed, I have contacted DIAND and discussed means by which the information necessary to adequately respond to these IR's may be provided to the Review Board. It is my understanding that DIAND's legal obligations under the Freedom of Information Act prevent direct disclosure of such information to a public body such as the MVEIRB. As a result, I have, with the concurrence of DIAND, taken the other alternative we discussed, that being to respond to these IR's directly.

It is my understanding, based on our discussions, that upon receipt of this information the Public Registry will remain open for one week, after which time it will be closed and the process brought to a timely conclusion as set out in the Work Plan. If there is any deviation from this, I would appreciate being notified at your earliest convenience.

Yours very truly,

**CANADIAN ZINC CORPORATION**

J. Peter Campbell  
VP Project Affairs

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October 11, 2001

**Canadian Zinc Corporation Environmental Assessments  
Response to Information Request**

**Information Request:**

**Date:** July 4, 2001

**From:** Greg Yeoman, CPAWS-NWT

**Subject:** Surface Lease 'Overhold Tenancy'

**Objective:** To obtain information for the public registry on the legal mechanism by which Canadian Zinc occupies the Prairie Creek minesite

**Request:** We request that DIAND supply the following:

- 1) A definition and description, with specific reference to relevant legislation, of a surface lease in overhold tenancy.
- 2) A description of the legal mechanism by which Canadian Zinc occupies the Prairie Creek mine site, including the rights and responsibilities it grants, any conditions placed on their occupancy, the expiration date, and the process for renewal.
- 3) A description of why Canadian Zinc is in an overhold tenancy position.
- 4) A copy of the surface lease and/or overhold tenancy agreement for the Prairie Creek minesite, to be placed in the public registry.

**Response:**

CZN does not believe that the overholding tenancy status of the surface leases at Prairie Creek is relevant to the environmental assessments currently before the Review Board. However, recognizing the need of the Review Board to assess the relevance of this Information Request CZN, with the concurrence of DIAND, offers the following summarization of the status of the surface leases and the overholding tenancy issue.

Canadian Zinc currently occupies the area of the Prairie Creek minesite through several forms of tenure. Mineral claims and mining leases issued pursuant to the Canada Mining Regulations and Surface Leases issued pursuant to the Territorial Lands Regulations, each of which were promulgated subject to the Territorial Lands Act. Details of such land tenure were provided to the Review Board by Canadian Zinc in conjunction with previous submissions and placed on the Public Registry.

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The surface lease component of the land tenure position is comprised of Lease No. 95F/10-7-2 covering the immediate of the area minesite and Lease No. 95F/10-5-3 covering the airstrip. The surface leases, which provide surface tenure, overlie a portion of Mineral Leases 2932 and 2931, which provide the mineral and mining rights. The surface leases are standard form lease documents which represent legal agreement between the Company and the Government of Canada as it relates to the use and occupancy of the specified area. The rights conferred by lease are as provided for under the Territorial Lands Act and Regulations.

The current leases were issued in the name of Procan Exploration Company Limited on November 12, 1987 and subsequently amended as in the name of Nanisivik Mines Ltd. on August 19, 1991. The Leases were subsequently assigned to San Andreas Resources Corporation on June 18, 1993 in conjunction with the purchase of the property. San Andreas Resources Corporation changed its name to Canadian Zinc Corporation on May 25, 1999. Again, such details have been previously provided by Canadian Zinc and placed on the Public Registry.

The surface leases were issued with an initial term of 10 years from April 1, 1987 to March 31, 1997, with provision for renewal for a further 10 years. A request for renewal was made by the Company on January 24, 1997. The Leases were subsequently placed in overholding tenancy with payment of the annual rental in 1997 pending preparation of renewal leases. By mutual consent, the leases have been allowed to remain in overholding tenancy since that time with the Company continuing to pay the annual rentals and maintain the leases in good standing. During this time the Company and DIAND have continued to actively negotiate in good faith as to the terms and conditions of the renewal leases as they specifically relate to the Company's ongoing care and maintenance activity and its goal to place the mine back in production in the near future.

Canadian Zinc is not in a position to provide a legal opinion as to the definition of "overholding tenancy" within the current legislative regime. However, an analogy has been expressed, which may be useful in helping reviewers understand the circumstances surrounding this subject, that it is similar to a situation where a tenant has rented an apartment for a specified length of time under a lease which has subsequently expired and the tenant and landlord have mutually agreed that the tenant may continue to occupy the premises by continuing to pay the agreed upon rent and meeting such other obligations as set out in the lease.

The surface leases are integral to the continued use and occupancy of the Prairie Creek minesite by Canadian Zinc. To the best of the Company's knowledge all of the terms and conditions of the leases have been complied with and the leases remain in good standing. It is the Company's intention to continue to maintain the leases in good standing in anticipation of and throughout active mining operations.

CZN does not believe it is appropriate or necessary to place the existing long standing and legally binding lease agreement on the Public Registry. Such agreements are typically considered commercially confidential. Other such legally binding agreements, such as the Prairie Creek Development Cooperation Agreement entered into between the Company and the Nahanni Butte Dene Band, are treated in a similar confidential manner.

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October 11, 2001

**Canadian Zinc Corporation Environmental Assessments  
Response to Information Request**

**Information Request:**

**Date:** *July 4, 2001*

**From:** *Greg Yeoman, CPAWS-NWT*

**Subject:** *Draft Reclamation Costing Model for Prairie Creek Minesite*

**Objective:** *To obtain information for the public registry on mitigation of environmental impacts specific to the Prairie Creek mine.*

**Request:** *For DIAND to place a copy of the Draft Reclamation Costing Model for Prairie Creek Minesite, and any subsequent versions of the report, in the public registry.*

**Response:**

CZN does not believe that the Draft Reclamation Costing Model requested to be placed on the Public Registry, or the cost information contained therein, are relevant to the environmental assessments currently before the Review Board.

The referenced report consists of a preliminary mine reclamation cost estimate for the Prairie Creek mine prepared internally by DIAND in 1998. Four separate estimates based on different assumptions were created using the Reclaim V.3.1 reclamation cost-estimating model software program developed for DIAND. The estimates reflect conditions at the site in 1998 and bear no relation to activities proposed in the current development application before the Review Board for assessment.

The reclamation cost estimates so produced were an office exercise conducted at arms length from the property. CZN did not participate in the costing exercise and does not endorse the validity or agree with the accuracy of these estimates.

The reclamation cost estimate report contains calculations of costs to undertake specific aspects of reclamation activity considered necessary to reclaim the property from its present state back to as close to its original state as practical. These cost estimates, even though not agreed to by the Company, could be assumed by outsiders to reflect a financial liability to the Company. As such these costs and the calculations used to determine them must be considered commercially confidential.

However, recognizing the need of the Review Board to assess the relevance of this Information Request, CZN, with the concurrence of DIAND, is prepared to sanction release of the report with the confidential information excluded. Accordingly, a copy of the Prairie Creek Mine Reclamation Report with the costs and units of calculation whited-out is appended for review and placement on the Public Registry.

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NWT Land Administration

Mine Reclamation





## OVERVIEW

San Andreas Resources Corporation own the Prairie Creek Mine property which contains reserves of zinc, lead, copper and silver. The mine is located in the Eastern Mackenzie Mountains within the South Mining District of the Northwest Territories. It is 180 k west of Fort Simpson at latitude 61°33' N and longitude 124°48' W. The mine is situated on Prairie Creek, 17 km from the boundary of the Nahanni National Park Reserve

The Prairie Creek property was first staked in 1958. Following the discovery and exploration of Zinc and Lead mineralization, Surface site construction and preproduction development was carried out in 1981 and 1982. Cadillac Exploration received a water licence for this project in July of 1982. When they could not raise sufficient funding in concert with low silver prices, project development ceased leaving the plant, equipment and camp in it's original state.

San Andreas acquired interest and development in the property in 1991. Further exploration has taken place at the site and the current owners are taking steps towards the possible reopening of the mine. The original water licence issued to Cadillac Resource has expired and San Andreas have carried out a small drilling program operating under the conditions of a land use permit. San Andreas also have a lease on an adjacent property for a 3000' airstrip. The leases for both properties expired March 31<sup>st</sup> 1998 and the lessee has requested renewal.

On March 12<sup>th</sup>, 1998, The Manager of Land Administration requested the annual rental payment from San Andreas to place the leases in over-holding tenancy for one year in order to finalize negotiations on the terms and conditions of the renewal leases.

The purpose of this report is to provide preliminary reclamation cost estimates of the Prairie Creek Mine site to assist with discussions Land Administration will have with the Department of Justice in finalizing and negotiating the security deposit requirements on these leases.

Documents reviewed in completing this report included the most recent site inspection reports, current lease agreements with an attached "Abandonment and Restoration Plan", the "Project Description Report" prepared by San Andreas, site maps, photographs and inventory lists. Kent Halvorson, Resource Management Officer in Fort Simpson, Neill Thompson, Brian Collins and David Jessiman in the Water Mangement Division, were also contacted for additional information on this project.

The four (4) estimates provided in this report were developed using "RECLAIM: VERSION 3.1", a mine reclamation cost estimating model developed for DIAND's Water Resources Division. "RECLAIM" was developed as a tool for government agencies, mining companies, and others to estimate the cost of mine reclamation. The "RECLAIM" Model is not intended to replace site reclamation planning nor can it be used to determine the activities required to reclaim a site. It is simply intended as a tool to facilitate cost estimating and to compare costs of alternative reclamation plans.

DIAND is not responsible for the completeness or accuracy of any reclamation estimate made using this model. The user agrees to check and take responsibility for all aspects of any cost estimate made using this model

**RECLAMATION COST SUMMARIES**

Four reclamation cost summaries with cost assumptions are presented in this report. The first three summaries deal with the mine site on lease 95 F/10-5-3 and fourth summary deals with the Airstrip on lease 95 F/10-7-2. Annual on-going monitoring and maintenance costs for 10 years are also shown in the table below. The "RECLAIM" Model includes a sensitivity analyses function for comparing a LOW and HIGH costs in the Unit Cost Summary Table. The estimates provided in this report are based on the HIGH cost assumptions ignoring the "H" and "L" suffix on cost codes.

Summary	Assumption	Capital	Total M&M Costs
No. 1	Based on the current "Abandonment and Restoration Plan" which forms part of the current lease agreement. Tailings pond remains intact. Bulk fuel & oil is incinerated using a low cost per litre estimate.		
No. 2	Similar to No. 1 but allows for restoration of tailings pond area and petroleum products incinerated using a high cost per litre estimate.		
No. 3	Based on re-opening the winter road to allow for the disposal of all equipment and buildings on site and the removal of all petroleum products using the winter road.		
	<i>Note: The opening of the winter road is a conservative estimate of ... San Andreas quote a cost as high as ... to upgrade the 165 km winter access road to an all weather route.</i>		
No. 4	Based on the decommission and closure of the airstrip		





## RECLAMATION ACTIVITIES

Cost Summary No. 1  
Cost Summary No. 2  
Cost Summary No. 3  
Cost Summary No. 4

PROJECT NAME: **Prairie Creek Mine**

HIGH estimate for unit costs; ignoring "H" and "L" suffix on cost code

27-Apr-98

CAPITAL COST COMPONENT NAME	COMPONENT TYPE	TOTAL COST
	OPEN PIT	
	UNDERGROUND MINE	
	TAILINGS IMPOUNDMENT	
Waste Dumps A&B	ROCK PILE	
Mill Site and Surrounding Area	ROCK PILE	
	BUILDINGS AND EQUIPMENT	
	CHEMICALS & CONTAM. SOILS	
	WATER MANAGEMENT	
	MOBILIZATION/DEMOBILIZATION	
<b>SUBTOTAL</b>		
PROJECT MANAGEMENT	% of subtotal	
ENGINEERING	% of subtotal	
CONTINGENCY	% of subtotal	
<b>GRAND TOTAL - CAPITAL COSTS</b>		
<b>MONITORING &amp; MAINTENANCE</b>		
CONTINGENCY	% of subtotal	
	monitor & maintenance - . . . years	
<b>TOTAL - ANNUAL ONGOING COSTS</b>		
<b>ESTIMATED SALVAGE VALUE</b>		

PROJECT NAME: **Prairie Creek Mine**

HIGH estimate for unit costs; ignoring "H" and "L" suffix on cost code

27-Apr-98

CAPITAL COST COMPONENT NAME	COMPONENT TYPE	TOTAL COST
	OPEN PIT	
	UNDERGROUND MINE	
	TAILINGS IMPOUNDMENT	
Waste Dump A&B	ROCK PILE	
Mill and Building Site	ROCK PILE	
	BUILDINGS AND EQUIPMENT	
	CHEMICALS & CONTAM. SOILS	
	WATER MANAGEMENT	
	MOBILIZATION/DEMOBILIZATION	
<b>SUBTOTAL</b>		
PROJECT MANAGEMENT	% of subtotal	
ENGINEERING	% of subtotal	
CONTINGENCY	% of subtotal	
<b>GRAND TOTAL - CAPITAL COSTS</b>		
<b>MONITORING &amp; MAINTENANCE</b>		
CONTINGENCY	% of subtotal	
	Monitor & maintenance yrs	
<b>TOTAL - ANNUAL ONGOING COSTS</b>		
<b>ESTIMATED SALVAGE VALUE</b>		

PROJECT NAME: **Prairie Creek Mine**

HIGH estimate for unit costs; ignoring "H" and "L" suffix on cost code

27-Apr-98

CAPITAL COST COMPONENT NAME	COMPONENT TYPE	TOTAL COST
	OPEN PIT	
	UNDERGROUND MINE	
	TAILINGS IMPOUNDMENT	
Waste Dump A&B	ROCK PILE	
Mill and Building Sites	ROCK PILE	
	BUILDINGS AND EQUIPMENT	
	CHEMICALS & CONTAM. SOILS	
	WATER MANAGEMENT	
Re-open Winter Road	MOBILIZATION/DEMOBILIZATION	
<b>SUBTOTAL</b>		
PROJECT MANAGEMENT	% of subtotal	
ENGINEERING	% of subtotal	
CONTINGENCY	% of subtotal	
<b>GRAND TOTAL - CAPITAL COSTS</b>		
<b>MONITORING &amp; MAINTENANCE</b>		
CONTINGENCY	% of subtotal	
	Monitoring and Maintenance for years	
<b>TOTAL - ANNUAL ONGOING COSTS</b>		
<b>ESTIMATED SALVAGE VALUE</b>		

PROJECT NAME: **Prairie Creek Airstip**

HIGH estimate for unit costs; ignoring "H" and "L" suffix on cost code

27-Apr-98

CAPITAL COST COMPONENT NAME	COMPONENT TYPE	TOTAL COST
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OPEN PIT

UNDERGROUND MINE

TAILINGS IMPOUNDMENT

ROCK PILE

BUILDINGS AND EQUIPMENT

CHEMICALS &amp; CONTAM. SOILS

WATER MANAGEMENT

MOBILIZATION/DEMOBILIZATION

**SUBTOTAL**

PROJECT MANAGEMENT

% of subtotal

ENGINEERING

% of subtotal

CONTINGENCY

% of subtotal

**GRAND TOTAL - CAPITAL COSTS****MONITORING & MAINTENANCE**

CONTINGENCY

10 % of subtotal

**TOTAL - ANNUAL ONGOING COSTS****ESTIMATED SALVAGE VALUE**



## COST ASSUMPTIONS

### Summary No. 1

The "Abandonment and Restoration Plan" which forms part of the Prairies Creek Leases is attached as Schedule "A". It describes the action required with respect to the removal of Class A & B materials, equipment, Structure and buildings, concrete structures, surface services, underground entrances, mine ore stock pile, tailings pond, drainage and erosion control, oil drums and containers and general area conditions. Annex 1 & 2 of the schedule list the Class "A" & "B" materials. Annex 3 list those structure that are to be left intact. It is noted that the lessee has the option of either removing or leaving: class "B" materials, equipment, structure and buildings. It is expected that in the event that the Prairie Creek properties are abandoned the lessee will choose to leave buildings and equipment on site in a suitable location and condition.

### UNDERGROUND MINE: COST ASSUMPTIONS

#### OBJECTIVE: Control Access

- Block Roads                      Block roads and access to site. Access control berm based on . . . m high berm with m crest width, gives m<sup>3</sup>. over a length of m = . . . m<sup>3</sup>. Cost based on an excavate, load, short haul, high unit cost @ . . . per cu. metre.
- Block Adits                      Assumes each adits is . . m X . . m, volume of waste rock is . . m<sup>3</sup> X = . . m<sup>3</sup> @ . . per cu m.
- Block Portal                      portals blocked with concrete bulkheads allowing . . . for each.
- Hazardous Materials           Remove hazardous and petroleum waste materials from underground (assumes there is material) allow flat rate of . . .

### TAILINGS IMPOUNDMENT: COST ASSUMPTIONS

As per Schedule "A" of the Lease Agreement the Tailings Pond is to be left in its present condition

#### OBJECTIVE : Control Access:

- Block Roads                      Block roads and access to tailings retention area.. Access control berm based on . . m high berm with m crest width, gives cu. m./m over a length of m = . . cu. m. Cost based on an excavate, load, short haul, high unit cost @ . . per m<sup>3</sup>.

#### OBJECTIVE: Stabilize Bank

- Repair Liner                      Allow . . . for repairs

#### OBJECTIVE: Remove Tailings Discharge

- Tailings Line                      Remove and dispose of approximately . . metres of piping @ . . per metre high cost rate
- Pump House                      Remove and dispose of pump house , allowing . . .



### ROCK PILE: COST ASSUMPTIONS - COMPONENT NO. 1 WASTE DUMPS A & B

#### OBJECTIVE: Cover Dump

##### Waste Dump A - Garbage Dump

- Cover Dump Based on a cost of per cu m. - m3 of material required to level and cover dump

##### Waste Dump B - Scrap Metal Dump

- Cover Based on a cost of per cu m. - m3 of material required to level and cover dump

##### Waste Dump A & B

- Vegetate As required waste dump A&B - based on hectare, flat surface, high cost @ per hectare.

### ROCK PILE: COST ASSUMPTIONS - COMPONENT NO. 2 MILL SITE AND SURROUNDING AREA

#### OBJECTIVE: Scarify, Cover & Vegetate Site (as required)

- Based on site area (excludes building areas) of approximately hectares, scarify compacted soil and roads around building and vegetate
- Scarify - ha @
- Vegetate - ha @

### BUILDINGS AND EQUIPMENT: COST ASSUMPTIONS

Equipment is to be stored inside existing structures or in other designated locations on the site

#### OBJECTIVE: Dispose Mobile & Stationary Equipment

- Mobile: Trucks, Graders, Dozers, and vehicles - decontaminate and dispose units @
- Stationary: Hoist, crusher, grinder, power plant, - decontaminate and dispose units @  
Autoclave decontaminate tanks and plumbing - lump sum
- Surface Services Hydro lines and poles:

Approximately kilometre of power lines with poles. Cost based on per pole assumes that the poles are chemically treated and must be removed from site, poles taken down stock piled on site, insulators and wire removed and stock piled. Price includes labour, accommodation and mobilization. Does not include transport off the site to nearest centre for disposal. Estimate poles are spaced at metres. Allow at power plant Therefore kilometres of poles with metre spacing = poles @ = . This is a high cost estimate

NOTE: These estimates were provided with little information as to the conditions on site and the



## NWT Land Administration

## Mine Reclamation

time of year to undertake the project. Costs could vary anywhere from a low of (controlled camp) to . The remoteness of site and availability of on site equipment will also affect cost. Estimates provide by in Yellowknife, February , 1998

### OBJECTIVE: MOTHBALL BUILDINGS

All major structures left standing will have all openings securely sealed with timber

- Mothball industrial use metal buildings with an average cost of and residences at an average cost of

### CHEMICALS & CONTAMINATED SOILS: COST ASSUMPTIONS

Class "A" materials shall be disposed by either (a) on-site destruction or removal and disposal in a suitable manner.

#### LABORATORY CHEMICALS

The procedures, equipment and packaging for clean up and removal of chemicals or contaminated soils are highly dependent on the nature of the chemicals and their existing state of containment. Government guidelines should be considered very rough unless specific evaluations have been conducted. The quantities used to calculate the incineration of bulk fuel, gasoline, other petroleum products is considered a conservative estimate. The disposal of propane have not been included in these estimates.

Based on Chemical inventory annexed to schedule "A" of the lease agreement;

- Removal of pallets based on a cost of per pallet (air freight charter cost)

PCB Based on current known PCB inventory on site

- Remove and dispose of PCBs based on a cost of per kg

FUEL All fuel is to be incinerated on site

Type 1 P-50 There are steel bulk storage tanks on site. Current inventory is not known at this time. A conservative estimate of litres and a low cost of per litre has been used to calculate cost of incineration.

Type 2 Gas There are steel storage tanks. Current inventory not known. A conservative estimate of litres and a low cost of per litre has been used to calculate cost of incineration

OIL All used lube-oil is to be incinerated on site

Cost based on bbls ( ) litres at a low cost of per litre. Empty barrels to be crushed and disposed at reagent storage waste site.

#### CONTAMINATED SOILS

- pcb contaminates @ per cu. m.





- tank farm soil disposal and replacement @      per cu. m.

#### MOBILIZATION / DEMOBILIZATION: COST ASSUMPTIONS

- to mobilize the camp -based on a cost of      per person
- mobilize workers - travel days      man days @
- mobilize supplies -      charters @
- mobilize and house workers -      man days @

#### MONITORING AND MAINTENANCE

##### OBJECTIVE: INSPECTIONS

- Visual inspections @      each
- Water sampling @      each
- Reporting and analysis @
- Miscellaneous supplies @

Note: It has yet to be determined if a water treatment plant is required on site. As such the cost of water treatment is not known at this time.



## COST ASSUMPTIONS

### Summary No. 2

The reclamation activities here are similar to Summary No. 1 with exception of the tailings impoundment area which is being drained and backfilled. Also disposal of fuel is based on a HIGH cost unit value of per litre to incinerate.

### UNDERGROUND MINE: COST ASSUMPTIONS

#### OBJECTIVE: Control Access

- Block Roads      Block roads and access to site. Access control berm based on m high berm with m crest width, gives m<sup>3</sup> over a length of m = m<sup>3</sup>. Cost based on an excavate, load, short haul, high unit cost @ per cu. metre.
- Block Adits      Assumes each adits is m X m, volume of waste rock is m<sup>3</sup> X = m<sup>3</sup> @ per cu m.
- Block Portal      portals blocked with concrete bulkheads allowing for each.
- Hazardous Materials      Remove hazardous and petroleum waste materials from underground (assumes there is material) allow

### TAILINGS IMPOUNDMENT: COST ASSUMPTIONS

It is assumed that because the mine did not go into production contamination in the pond is minimal. Two internal dykes will be built dividing the pond into three sections which will work as a settling and polishing pond. The last cell will be drained into the river with a 2 stage weir system to control the flow. Sludge (assuming it is not contaminated) will be consolidated, moved to the NE corner of the pond area and covered. Remove and dispose of the liner. The dykes and retaining walls to be levelled backfilling the pond area. The area will be graded to re-establish the shore and flood plane areas.

#### OBJECTIVE: Stabilize Embankment

- Construction Dykes      Based on a low cost of m<sup>3</sup> to excavate haul and compact. Estimated material required 1<sup>st</sup> dyke = m<sup>3</sup>, 2<sup>nd</sup> dyke = m<sup>3</sup>
- Flatten dykes      Based on a low cost of m<sup>3</sup> to level and backfill pond area. Sediment is to be covered and graded. Total volume of material estimated at m<sup>3</sup>.
- Liner      Remove and dispose of liner based on a flat rate of

#### OBJECTIVE: Stabilize decant system

- Pump House      Remove and dispose based on flat rate of



## NWT Land Administration

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### OBJECTIVE: Remove Tailings Discharge

- Based on a low cost of per m remove and dispose of approximately m of piping

### OBJECTIVE: Specialized Items

- Large pump required to decant pond - allow

### ROCK PILE COST ASSUMPTIONS

#### COMPONENT No. 1 Waste Dumps A, B & C

##### OBJECTIVE: Cover Dump

###### Waste Dump "A" - Garbage Dump

- Cover Dump Based on a cost of per cu m. - cu m. of material required to level and cover dump

###### Waste Dump "B" - Scrap Metal Dump

- Cover Based on a cost of per cu m. - cu m. of material required to level and cover dump

###### Waste Dump "C" - Reagent Site

- Cover Based on a cost of per m<sup>3</sup> - estimate m<sup>3</sup> of material required to level and cover dump.
- Vegetate As required, waste dump A, B & C - based on hectare, flat surface, low cost @ per hectare

#### COMPONENT No.2 Mill & Buildings Site Areas

##### OBJECTIVE: Stabilize ore stock pile

- Level Based on a cost of m<sup>3</sup> to level, spread and cover ore stock pile. Short haul high cost

##### OBJECTIVE: Scarify, Cover & Vegetate Site

Based on a building site area of approximately hectares, scarify compacted soil and roads around building, cover concrete slabs with soil, and re-vegetate as required.

- Break floor slabs m<sup>2</sup> @
- Scarify - ha @
- Cover floor slabs m<sup>2</sup> @
- Vegetate - as required ha @



## BUILDING AND EQUIPMENT COST ASSUMPTIONS

### OBJECTIVE: Dispose Mobile Equipment

- **Mobile:** Trucks, Graders, Dozers, and vehicles - decontaminate and dispose units @

### OBJECTIVE: Dispose Stationary Equipment

- **Stationary:** Hoist, crusher, grinder, power plant - decontaminate and dispose units @
- **Hydro lines and poles**  
Approximately .1 kilometre of power lines with poles. Cost based on . per pole assumes that the poles are chemically treated and must be removed from site, poles taken down stock piled on site, insulators and wire removed and stock piled. Price includes labour, accommodation and mobilization. Does not include transport off the site to nearest centre for disposal. Estimate poles are spaced at metres. Allow . at power plant Therefore kilometres of poles with metre spacing = . poles @ = This is a high cost estimate

**NOTE:** These estimates were provided with little information as to the conditions on site and the time of year to undertake the project. Costs could vary anywhere from a low of (controlled camp) to . The remoteness of site and availability of on site equipment will also affect cost. Estimates provide by . in Yellowknife, February ., 1998

### OBJECTIVE: Remove/mothball buildings

- **Buildings 1 (metal & wood )**

All buildings except mill are to be torn-down and removed to reagent site for disposal. Cost based on m2 of steel buildings @ m2 and . m2 frame buildings @

The Mill ( . m2) will NOT be torn down. It will be decontaminated and sealed to prevent access.

### OBJECTIVE: Grade and contour

- **Drill Pads** Grade, contour and vegetate as required . drill pads (approximately hectares, @ per ha.



### CHEMICALS & CONTAMINATED SOILS: COST ASSUMPTIONS

Class "A" materials shall be disposed by either (a) on-site destruction or removal and disposal in a suitable manner.

#### LABORATORY CHEMICALS

The procedures, equipment and packaging for clean up and removal of chemicals or contaminated soils are highly dependent on the nature of the chemicals and their existing state of containment. Government guidelines should be considered very rough unless specific evaluations have been conducted. The incineration of bulk fuel and oil was calculated using a high cost code of \$1000 per litre. However in some sites cost have been as high as \$2000 per litre. Incineration cost estimates provided by

Propane quantities are unknown and are not included in these estimates.

Based on Chemical inventory annexed to schedule "A" of the lease agreement;

- Removal of 10 pallets based on a cost of \$1000 per pallet (air freight charter cost)
- PCB Based on current known PCB inventory on site
  - Remove and dispose of PCBs based on a cost of \$1000 per kg
- FUEL All fuel is to be incinerated on site
  - Type 1 P-50 There are 10 steel bulk storage tanks on site. Current inventory is not known at this time. A conservative estimate of 1000 litres and a HIGH cost of \$1000 per litre has been used to calculate cost of incineration.
  - Type 2 Gas There are 10 steel storage tanks. Current inventory not known. A conservative estimate of 1000 litres and a HIGH cost of \$1000 per litre has been used to calculate cost of incineration
- OIL All used lube-oil is to be incinerated on site
  - Cost based on 1000 (1000) litres at a HIGH cost of \$1000 per litre. Empty barrels to be crushed and disposed at reagent storage waste site.

#### CONTAMINATED SOILS

- pcb contaminates @ \$1000 per cu. m.
- tank farm soil replacement @ \$1000 per cu. m.

### WATER MANAGEMENT COST ASSUMPTIONS

OBJECTIVE: Treat Drainage (see "Ongoing Treatment")

- Soil Sampling Program - Complete a detailed inventory of site. Allow 1000 includes report. Inventory will reveal extent of contamination of site and required remedial action.



### MOBILIZATION/DEMOBILIZATION COST ASSUMPTIONS

#### OBJECTIVE: Mobilize Camp & Workers

- Mobilize camp < persons @ transportation in and out of camp trips each
- Mobilize workers < @ per day X man days
- Mobilize Misc Supplies - X charters
- Mobilize & House Workers man days X

### MONITORING AND MAINTENANCE COST ASSUMPTIONS

#### OBJECTIVE: Inspections

- Visual Inspections Based on a cost of each
- Water Sampling require each year at a HIGH cost of each
- Reporting Based on a high cost for - consultant, site visit & report of

### **COST ASSUMPTIONS**

#### **Summary No. 3**

### UNDERGROUND MINE COST ASSUMPTIONS

#### OBJECTIVE: Control Access

- Block Roads Block roads and access to site. Access control berm based on m high berm with m crest width, gives m<sup>3</sup> over a length of m = m<sup>3</sup>. Cost based on an excavate, load, short haul, high unit cost @ per m<sup>3</sup>.
- Block Adits Assumes each adits is m X m, volume of waste rock is m<sup>3</sup> X = m<sup>3</sup> @ per m<sup>3</sup>.
- Block Portal portals blocked with concrete bulkheads allowing for each.
- Hazardous Materials Remove hazardous and petroleum waste materials from underground (assumes there is material) allow

### TAILINGS IMPOUNDMENT: COST ASSUMPTIONS

Assuming that there are no environmental concerns the tailings pond is to be left in its present condition with improvements to the banks.

#### OBJECTIVE : Control Access:



## NWT Land Administration

## Mine Reclamation

- Block Roads Block roads and access to tailings retention area.. Access control berm based on m high berm with m crest width, gives cu. m./m over a length of m = m3. Cost based on an excavate, load, short haul, HIGH unit cost @ - per m3.

### OBJECTIVE: Stabilize Bank

- Stabilize banks Allow a flat rate of

### OBJECTIVE: Remove Tailings Discharge

- Tailings Line Remove and dispose of approximately metres of piping @ per metre.
- Pump House Remove and dispose of pump house , allowing

### ROCK PILE COST ASSUMPTIONS

#### COMPONENT No. 1 Waste Dumps A&B

##### OBJECTIVE: Cover Dump

##### Waste Dump "A" - Garbage Dump

- Cover Dump Based on a cost of per cu m. - cu m. of material required to level and cover dump

##### Waste Dump "B" - Scrap Metal Dump

- Cover Based on a cost of per cu m. - cu m. of material required to level and cover dump

##### Waste Dump "C" - Reagent Site

- Cover Based on a cost of per m3 - estimate m3 of material required to level and cover dump.
- Vegetate As required, waste dump A, B & C - based on hectare, flat surface, low cost @ per hectare

#### COMPONENT No.2 Mill & Buildings Site Areas

##### OBJECTIVE: Stabilize Ore Stock Pile

- Flatten and cover ore stock pile based on m3 @ high cost of m3

##### OBJECTIVE: Scarify, Cover & Vegetate Site



## NWT Land Administration

## Mine Reclamation

- Based on mill and all building site area of approximately      hectares, scarify compacted soil and roads around building, cover concrete slabs with soil, and re-vegetate.
- Break floor slabs      m2 @
- Scarify      ha @
- Cover floor slabs      m2 @
- Vegetate      ha @

BUILDING AND EQUIPMENT COST ASSUMPTIONS

## OBJECTIVE: Dispose Mobile Equipment

- Mobile: Trucks, Graders, Dozers, and vehicles - decontaminate and dispose units @

## OBJECTIVE: Dispose Stationary Equipment

- Stationary: Hoist, crusher, grinder, power plant - decontaminate and dispose units @
- Hydro lines and poles  
Approximately      kilometre of power lines with poles. Cost based on      per pole assumes that the poles are chemically treated and must be removed from site, poles taken down stock piled on site, insulators and wire removed and stock piled. Price includes labour, accommodation and mobilization. Does not include transport off the site to nearest centre for disposal. Estimate poles are spaced at      metres. Allow      at power plant Therefore      kilometres of poles with      metre spacing =      poles @      =      . This is a high cost estimate

NOTE: These estimates were provided with little information as to the conditions on site and the time of year to undertake the project. Costs could vary anywhere from a low of      (controlled camp) to      . The remoteness of site and availability of on site equipment will also affect cost. Estimates provide by      in Yellowknife, February      , 1998

## OBJECTIVE: Remove/mothball buildings

- Buildings 1 (metal & wood )  
All buildings - torn-down and removed based on      sq m of steel buildings @      m2 and      m2 frame buildings burned @      m2.

## OBJECTIVE: Grade and contour

- drill pads (approximately      hectares) @      per ha. Vegetate as required





## CHEMICALS & CONTAMINATED SOILS: COST ASSUMPTIONS

Class "A" materials shall be disposed by either (a) on-site destruction or removal and disposal in a suitable manner.

### LABORATORY CHEMICALS

The procedures, equipment and packaging for clean up and removal of chemicals or contaminated soils are highly dependent on the nature of the chemicals and their existing state of containment. Government guidelines should be considered very rough unless specific evaluations have been conducted. The quantities used to calculate the incineration of bulk fuel, gasoline, other petroleum products is considered a conservative estimate. The disposal of propane have not been included in these estimates.

Based on Chemical inventory annexed to schedule "A" of the lease agreement;

- Removal of pallets based on a cost of per pallet (air freight charter cost)
- PCB Based on current known PCB inventory on site
  - Remove and dispose of PCBs based on a cost of per kg
- FUEL All bulk fuel removed from site by truck on winter road
  - Type 1 P-50 There are steel bulk storage tanks on site. Current inventory is not known at this time. A conservative estimate of litres and a HIGH cost of per litre has been used to calculate cost of removal.
  - Type 2 Gas There are steel storage tanks. Current inventory not known. A conservative estimate of million litres and a HIGH cost of per litre has been used to calculate cost of removal
- OIL All used lub-oil is to be incinerated on site
  - Type 1 Used Cost based on bbls ( ) litres at a HIGH cost of per litre.

### CONTAMINATED SOILS

- pcb contaminates @ per cu. m.
- tank farm soil replacement @ per cu. m.

## WATER MANAGEMENT COST ASSUMPTIONS

### OBJECTIVE: Soil Sampling Program

- Complete an inventory of the site. Allow includes report



### MOBILIZATION/DEMOBILIZATION COST ASSUMPTIONS

#### OBJECTIVE: Mobilize Heavy Equipment

- Re-open winter road to mine site lump sum @

#### OBJECTIVE: Mobilize Camp & Workers

- Mobilize camp < persons @ transportation in and out of camp trips each
- Mobilize workers < @ per day X man days
- Mobilize Misc Supplies - X charters
- Mobilize & House Workers man days X

### MONITORING AND MAINTENANCE COST ASSUMPTIONS

#### OBJECTIVE: Inspections

- Visual Inspections Based on a cost of each
- Water Sampling require each year at a cost of each
- Reporting Based on a high cost for - consultant, site visit & report of

#### OBJECTIVE: Maintenance

- Security guard required @ per/month X months
- Other Air charters - @

#### OBJECTIVE: Ongoing Monitoring and Maintenance

- Allow years to monitor this site based on an annual cost of

### **COST ASSUMPTIONS**

#### **Summary No. 4**

##### PRAIRIE CREEK AIRSTRIP

The Prairie Creek airstrip is a gravel surface. The length is metres with a width of metres. It will

**NWT Land Administration****Mine Reclamation**

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handle DC-3 and Buffalo type aircraft. The surface area of the strip and the access roads to the airstrip is approximately hectares.

**OBJECTIVE: SCARIFY & VEGETATE SITE**

- Scarify the airstrip and existing road, re-establish drainage and vegetate site as required.
  - scarify @ per ha
  - Vegetate @ high cost of per ha

**OBJECTIVE: DISPOSE OF STATIONARY EQUIPMENT**

- Decontaminate and dispose of equipment at airstrip lump sum

**OBJECTIVE: REMOVE/MOTHBALL BUILDINGS**

- Tear down and burn wood buildings @ m2

**OBJECTIVE: CONTAMINATED SOILS**

- Dispose of barrels of avgas @ per litre
- Remove and replace soil at fuel cache area @ per m3.



NWT Land Administration

Mine Reclamation

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NWT Land Administration

Mine Reclamation

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October 11, 2001

**Canadian Zinc Corporation Environmental Assessments  
Response to Information Request**

**Information Request:**

**Date:** July 4, 2001

**From:** Greg Yeoman, CPAWS-NWT

**Subject:** Surface Lease 'Overhold Tenancy'

**Objective:** To obtain information for the public registry on the legal mechanism by which Canadian Zinc occupies the Prairie Creek minesite

**Request:** We request that DIAND supply the following:

- 1) A definition and description, with specific reference to relevant legislation, of a surface lease in overhold tenancy.
- 2) A description of the legal mechanism by which Canadian Zinc occupies the Prairie Creek mine site, including the rights and responsibilities it grants, any conditions placed on their occupancy, the expiration date, and the process for renewal.
- 3) A description of why Canadian Zinc is in an overhold tenancy position.
- 4) A copy of the surface lease and/or overhold tenancy agreement for the Prairie Creek minesite, to be placed in the public registry.

**Response:**

CZN does not believe that the overholding tenancy status of the surface leases at Prairie Creek is relevant to the environmental assessments currently before the Review Board. However, recognizing the need of the Review Board to assess the relevance of this Information Request CZN, with the concurrence of DIAND, offers the following summarization of the status of the surface leases and the overholding tenancy issue.

Canadian Zinc currently occupies the area of the Prairie Creek minesite through several forms of tenure. Mineral claims and mining leases issued pursuant to the Canada Mining Regulations and Surface Leases issued pursuant to the Territorial Lands Regulations, each of which were promulgated subject to the Territorial Lands Act. Details of such land tenure were provided to the Review Board by Canadian Zinc in conjunction with previous submissions and placed on the Public Registry.

The surface lease component of the land tenure position is comprised of Lease No. 95F/10-7-2 covering the immediate of the area minesite and Lease No. 95F/10-5-3 covering the airstrip. The surface leases, which provide surface tenure, overlie a portion of Mineral Leases 2932 and 2931, which provide the mineral and mining rights. The surface leases are standard form lease documents which represent legal agreement between the Company and the Government of Canada as it relates to the use and occupancy of the specified area. The rights conferred by lease are as provided for under the Territorial Lands Act and Regulations.

The current leases were issued in the name of Procan Exploration Company Limited on November 12, 1987 and subsequently amended as in the name of Nanisivik Mines Ltd. on August 19, 1991. The Leases were subsequently assigned to San Andreas Resources Corporation on June 18, 1993 in conjunction with the purchase of the property. San Andreas Resources Corporation changed its name to Canadian Zinc Corporation on May 25, 1999. Again, such details have been previously provided by Canadian Zinc and placed on the Public Registry.

The surface leases were issued with an initial term of 10 years from April 1, 1987 to March 31, 1997, with provision for renewal for a further 10 years. A request for renewal was made by the Company on January 24, 1997. The Leases were subsequently placed in overholding tenancy with payment of the annual rental in 1997 pending preparation of renewal leases. By mutual consent, the leases have been allowed to remain in overholding tenancy since that time with the Company continuing to pay the annual rentals and maintain the leases in good standing. During this time the Company and DIAND have continued to actively negotiate in good faith as to the terms and conditions of the renewal leases as they specifically relate to the Company's ongoing care and maintenance activity and its goal to place the mine back in production in the near future.

Canadian Zinc is not in a position to provide a legal opinion as to the definition of "overholding tenancy" within the current legislative regime. However, an analogy has been expressed, which may be useful in helping reviewers understand the circumstances surrounding this subject, that it is similar to a situation where a tenant has rented an apartment for a specified length of time under a lease which has subsequently expired and the tenant and landlord have mutually agreed that the tenant may continue to occupy the premises by continuing to pay the agreed upon rent and meeting such other obligations as set out in the lease.

The surface leases are integral to the continued use and occupancy of the Prairie Creek minesite by Canadian Zinc. To the best of the Company's knowledge all of the terms and conditions of the leases have been complied with and the leases remain in good standing. It is the Company's intention to continue to maintain the leases in good standing in anticipation of and throughout active mining operations.

CZN does not believe it is appropriate or necessary to place the existing long standing and legally binding lease agreement on the Public Registry. Such agreements are typically considered commercially confidential. Other such legally binding agreements, such as the Prairie Creek Development Cooperation Agreement entered into between the Company and the Nahanni Butte Dene Band, are treated in a similar confidential manner.



October 11, 2001

Mr. Louie Azzolini  
Environmental Assessment Officer  
Mackenzie Valley Environmental Impact Review Board  
PO Box 938, 200 Scotia Centre, 5102 – 50<sup>th</sup> Ave.  
Yellowknife, NT  
X1A 2N7

By Fax: 1-867-920-4761

Dear Mr. Azzolini:

**Re: Responses to Information Requests - Environmental Assessments - Prairie Creek Mine**

- **Phase II Mineral Exploration Drilling Program**  
(Land Use Application MV 2001C0022; MVEIRB File EA01-003)
- **Metallurgical Pilot Plant Program**  
(Water Licence Application MV2001L2-0003; MVEIRB File EA01-002)
- **Underground Decline and Exploration Drilling**  
(Land Use Application MV2001C0023; MVEIRB File EA01-002)

In follow up to my teleconference call with yourself, Joe Acorn and Greg Yeóman of CPAWS on October 5, 2001, I am pleased to provide Canadian Zinc's responses to the two Information Requests directed to DIAND as submitted by CPAWS on July 4, 2001.

As agreed, I have contacted DIAND and discussed means by which the information necessary to adequately respond to these IR's may be provided to the Review Board. It is my understanding that DIAND's legal obligations under the Freedom of Information Act prevent direct disclosure of such information to a public body such as the MVEIRB. As a result, I have, with the concurrence of DIAND, taken the other alternative we discussed, that being to respond to these IR's directly.

It is my understanding, based on our discussions, that upon receipt of this information the Public Registry will remain open for one week, after which time it will be closed and the process brought to a timely conclusion as set out in the Work Plan. If there is any deviation from this, I would appreciate being notified at your earliest convenience.

Yours very truly,

**CANADIAN ZINC CORPORATION**

*Original Signed By*

J. Peter Campbell  
VP Project Affairs



October 11, 2001

**Canadian Zinc Corporation Environmental Assessments  
Response to Information Request**

**Information Request:**

**Date:** July 4, 2001

**From:** Greg Yeoman, CPAWS-NWT

**Subject:** Draft Reclamation Costing Model for Prairie Creek Minesite

**Objective:** To obtain information for the public registry on mitigation of environmental impacts specific to the Prairie Creek mine.

**Request:** For DIAND to place a copy of the Draft Reclamation Costing Model for Prairie Creek Minesite, and any subsequent versions of the report, in the public registry.

**Response:**

CZN does not believe that the Draft Reclamation Costing Model requested to be placed on the Public Registry, or the cost information contained therein, are relevant to the environmental assessments currently before the Review Board.

The referenced report consists of a preliminary mine reclamation cost estimate for the Prairie Creek mine prepared internally by DIAND in 1998. Four separate estimates based on different assumptions were created using the Reclaim V.3.1 reclamation cost-estimating model software program developed for DIAND. The estimates reflect conditions at the site in 1998 and bear no relation to activities proposed in the current development application before the Review Board for assessment.

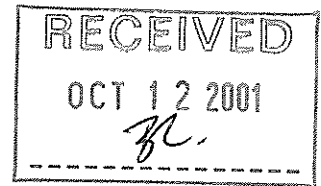
The reclamation cost estimates so produced were an office exercise conducted at arms length from the property. CZN did not participate in the costing exercise and does not endorse the validity or agree with the accuracy of these estimates.

The reclamation cost estimate report contains calculations of costs to undertake specific aspects of reclamation activity considered necessary to reclaim the property from its present state back to as close to its original state as practical. These cost estimates, even though not agreed to by the Company, could be assumed by outsiders to reflect a financial liability to the Company. As such these costs and the calculations used to determine them must be considered commercially confidential.

However, recognizing the need of the Review Board to assess the relevance of this Information Request, CZN, with the concurrence of DIAND, is prepared to sanction release of the report with the confidential information excluded. Accordingly, a copy of the Prairie Creek Mine Reclamation Report with the costs and units of calculation whited-out is appended for review and placement on the Public Registry.



**CANADIAN ZINC**  
CORPORATION



**Fax Cover Sheet**

Date: October 11, 2001  
To: Louie Azzolini - MVEIRB  
Fax: 1-867-920-4761  
From: Peter Campbell  
Pages: 30 (including cover sheet)  
Subject: Response to CPAWS IR's

Louie:

As discussed, please find attached CZN's response to the CPAWS IR's originally directed to DIAND.

I will email you the cover letter and two IR response documents.

The reclamation costing model is available in hard copy only.

Regards,

Peter

A handwritten signature in cursive script, appearing to read 'Peter'.

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