## Louie Azzolini

as it was only one emoil.

From: Sent:

Peter [peter@canadianzinc.com]

Tuesday, February 27, 2001 1:13 PM

To: Subject:

Louie Azzolini (E-mail) Response to MVEIRB IR















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konisenta01-05-01. road development konisenta10-06-00.MDAGminutes11-21MDAGpresentation1 PDF

options.PDF

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LEB 3 8 Snow

Louie:

Please find attached electronic versions of documentation of consultation efforts as requested in your Information Request of February 20, 2001. I am sending these to you in this fashion due to the short time frame in which to get them to you by mail or courier by the March 2 deadline and in order to avoid faxing due to the bulky nature of some of the documentation.

The cover letter, IR response and copies of several other documents, for which electronic versions are not available, are being sent by fax as well. The breakdown of means of distribution is noted on the copy of the IR response coming by fax.

Hope this works for you. Give me a shout if you require anything further

I will forward electronic copies of responses to Information Requests by other parties separately.

Regards,

Peter



# ATTENDANCE LIST

# MACKENZIE VALLEY LAND AND WATER BOARD

# INFORMATION MEETING – August 16, 2000

Name	Affiliation	Contact No.
Ken Weagle Karl Lauten Matt Bender Mardy Semmler Dan Elliot Char Coe Heidi Klein Zoe Posynick Brett Hudson Juanita Robinson Chuck Blyth Pete Cott	MVLWB MVLWB MVLWB MVLWB DIAND DIAND DIAND MVEIRB RWED/GNWT RWED/GNWT RWED/GNWT Parks Canada DFO-Habitat	669-0506 669-0506 669-0506 669-0506 669-2760 669-2762 873-9029 920-6392 920-8768 873-7315 695-3151
Stephen Harbicht Petr Cizek  Alan Taylor Malcolm Swallow Peter Campbell	Environment Canada DCFN  CZN CZN CZN CZN	669-4733 920-7529/695-2355



By fax: 1-867-695-2665

October 6, 2000

Chief Rita Cli Liidlii Kue First Nations P.O. Box 469 Ft. Simpson, NT X0E 0N0

Dear Chief Cli:

With the busy summer season behind us, Alan Taylor and I would like to offer to come up to meet with you and other representatives of the Liidlii Kue First Nation to give you an update on Canadian Zinc and our Prairie Creek Mine. A number of changes have been made here at Canadian Zinc since last spring and there has been a fair amount of activity at our Prairie Creek mine over the summer.

If you are available we would like to suggest that we make our travel arrangements for the week of November 6 and perhaps meet with you on the morning of November 9. We are hoping to meet with other First Nations in Nahanni Butte and Fort Liard earlier in the week and with the Deh Cho First Nations in Fort Simpson later on the same day.

We would like to propose the following as a preliminary agenda for discussion purposes at the meeting:

- · Changes in management and corporate direction at Canadian Zinc
- Site activity summer 2000
- Land Use Application August, 2000
- Scoping study currently underway
- Future plans for development
- Prairie creek Development Cooperation Agreement
  - Opportunities for Deh Cho involvement
- Other matters

We suggest just an informal meeting to review these and any other issues you may wish to discuss.

I will call your office next week in order to hopefully finalize these arrangements.

Yours very truly.

#### CANADIAN ZINC CORPORATION

J. Peter Campbell V.P. Project Affairs



October 6, 2000

Chief Judy Kotchea Acho Dene Koe First Nation General Delivery Ft. Liard, NT X0E 0A0

By fax: 1-867-770-4144

#### Dear Chief Kotchea:

With the busy summer season behind us, Alan Taylor and I would like to offer to come up to meet with you and other representatives of the Acho Dene Koe First Nation to give you an update on Canadian Zinc and our Prairie Creek Mine. A number of changes have been made here at Canadian Zinc since last spring and there has been a fair amount of activity at our Prairie Creek mine over the summer.

If you are available we would like to suggest that we make our travel arrangements for the week of November 6 and perhaps meet with you in Ft. Liard on the late morning – early afternoon of November 8. We would then plan to meet with other Deh Cho First Nations in Fort Simpson the next day.

We would like to propose the following as a preliminary agenda for discussion purposes at the meeting:

- Changes in management and corporate direction at Canadian Zinc
- Site activity summer 2000
- Land Use Application August, 2000
- Scoping study currently underway
- Future plans for development
- Prairie creek Development Cooperation Agreement
  - Opportunities for Deh Cho involvement
- Other matters

We suggest just an informal meeting to review these and any other issues you may wish to discuss.

I will call your office next week in order to hopefully finalize these arrangements.

Yours very truly,

#### CANADIAN ZINC CORPORATION

J. Peter Campbell V.P. Project Affairs



By fax: 1-867-695-2038

October 6, 2000

Grand Chief Michael Nadli Deh Cho First Nations P.O. Box 89 Ft. Simpson, NT X0E 0N0

Dear Grand Chief Nadli:

With the busy summer season behind us, Alan Taylor and I would like to offer to come up to meet with you and other Deh Cho First Nations representatives to give you an update on Canadian Zinc and our Prairie Creek Mine. A number of changes have been made here at Canadian Zinc since last spring and there has been a fair amount of activity at our Prairie Creek mine over the summer.

If you are available we would like to suggest that we make our travel arrangements for the week of November 6 and perhaps meet with you in Nahanni Butte on the early afternoon of November 9. We are hoping to meet with other Deh Cho First Nations in Nahanni Butte and Fort Liard earlier in the week, and in Fort Simpson earlier the same day.

We would like to propose the following as a preliminary agenda for discussion purposes at the meeting:

- Changes in management and corporate direction at Canadian Zinc
- Site activity summer 2000
- Land Use Application August, 2000
- Scoping study currently underway
- Future plans for development
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  - Opportunities for Deh Cho involvement
- Other matters

We suggest just an informal meeting to review these and any other issues you may wish to discuss.

I will call your office next week in order to hopefully finalize these arrangements.

Yours very truly,

#### CANADIAN ZINC CORPORATION

J. Peter Campbell V.P. Project Affairs



## **Deh Cho First Nations Information Meeting**

## November 22, 2000 Nahanni Butte

## Preliminary Agenda

## **Update on Canadian Zinc**

- Changes in management and corporate direction
- Site activity summer 2000
- Scoping study currently underway
  - Mill design and metallurgical testwork
  - Access road cost estimate and alternative alignment review
- Planned Site Activity summer 2001
  - Exploration decline
  - Underground diamond drilling
  - Bulk sample
  - Pilot plant
- Future plans for development
  - Feasibility study
  - Technical, environmental impact studies

#### **Government Regulatory Initiatives**

- Land Use Application August, 2000
- Mine Development Assessment Group meeting Nov. 21
- Planned applications 2001

#### **Land Use Planning Initiatives**

- South Nahanni Watershed land withdrawal proposal under interim measures agreement
- Park proposals Nahanni Park Reserve expansion, Ram Plateau Territorial Park
- Third party peripheral staking

## **Prairie Creek Development Cooperation Agreement**

- Establishing PCDCA Management Committee
  - Appointment of committee member and technical advisor
- Appointment of training/liaison officer
  - Establishing CZN community office
- Establishing environmental review committee
  - Appointment of environmental reviewer
- Opportunities for Deh Cho involvement
  - Deh Cho access road initiative
  - Wilderness eco-tourism JV
  - Grainger Fuel Cache recovery
  - Employment and contracting opportunities

#### **Other Matters**

Prairie Creek Logo contest



## PRAIRIE CREEK DEVELOPMENT COOPERATION AGREEMENT

- Article 4 acknowledges the importance of the access road to both CZN and Nahanni, and commits Nahanni to using its best efforts in procuring grants, guarantees or other financial assistance from government for the access; Item 5 provides for Nahanni to acquire a 10% or 15% equity position in the property through payment of \$6 or \$9 million, respectively.
  - CZN recommends examination of alternatives whereby the Access Road may be constructed as a Deh Cho initiative.
    - Funding may be acquired by Nahanni towards construction of the road access:
    - Such funding could be applied towards purchase of the equity position by Nahanni in the property;
    - The road & ferry could be "owned", operated and maintained:
      - 1. by CZN,
        - As road "owner" CZN would be responsible for all costs associated with road and ferry; CZN would contract out construction and maintain/operate road & ferry with operating personnel or under contract; Nahanni would participate as employees, contractors or through JV's with contractors;
      - 2. as a Joint Venture between Nahanni and CZN,
        - As Joint Venture Partners, costs associated with the road would be shared by Nahanni and CZN on a pro rata basis; Nahanni would participate as above with additional return as provide through their equity position;

or.

- 3. by Nahanni;
  - As a road user, CZN would pay a road user fee based on a \$/tonne levy
    for concentrate transported over the road calculated to cover operating
    costs & reasonable profit; road user fees would be shared by other
    users; Nahanni would control access on to the road and into their
    territory.
- Article 6 provides for establishment of a **Project Management Committee** with Nahanni nominating **1 Full Member** and **1 Technical Advisor** to attend project management committee meetings
  - While the agreement does not specify when the **Management Committee** is to be established, CZN recommends the Committee be established as soon as possible in order to facilitate planning and involvement of Nahanni as the project moves forward



- Article 10 provides for the appointment by Nahanni of a Liaison Officer to facilitate training, recruitment and dissemination of employment and apprenticeship information
  - While the agreement contemplates hiring of the Liaison Officer upon commencement of construction of the access and costs of employment to be borne by the Joint Venture, CZN recommends hiring a Liaison Officer as soon as possible and expanding the scope of the position to include logistical support for the Project, dissemination of information pertaining to Project amongst local communities, including permit applications, reports on environmental studies and monitoring data, etc. and communicating with local communities with respect to activity at the property
- Article 12 provides for establishment of a Cooperative Environmental Agreement Process and appointment by Nahanni of an Environmental Reviewer
  - CZN recommends establishment of joint Environmental Review Committee and appointment of the Environmental Committee Member by Nahanni as soon as possible in order to facilitate planning as further studies are proposed and undertaken in support of permitting
- Article 13 acknowledges the potential of the access road to support Eco-tourism
   Opportunities and commits CZN and Nahanni to cooperate to optimize these
   opportunities
  - CZN recommends examination of an Eco-tourism Joint Venture opportunity
    whereby CZN contributes financially to the establishment of a Wilderness Ecotourism Facility to be operated by Nahanni to take advantage of increased access to
    areas of the Ram Plateau afforded by the proposed airstrip and access road; business
    would be operated in a manner similar to that contemplated by the PCDCA with pro
    rata equity participation, a management committee, etc.



## LAND USE PLANNING ISSUES

#### Nahanni National Park Reserve

• Current area

4766 km<sup>2</sup>

• Reserve includes 300 km of 540 km long S. Nahanni River, plus 128 km of Flat River

## Parks Canada Proposed Expansion of Nahanni Park Reserve into 3 new areas:

Ragged Range
 Tlogotsho Plateau
 Nahanni Karst
 2000 km²
 1175 km²
 1000 km²

Total area of expansion 4175 km<sup>2</sup> (88% increase)

• Expanded park area 8941 km² (1.9x current size)

#### South Nahanni River Watershed Land Withdrawal

Total area of watershed

 $37,000 \text{ km}^2$ 

- Proposed by Deh Cho at treaty negotiations table & by Nahanni Butte BCR
- Supported by Parks Canada as a buffer zone to protect ecological integrity of Park Reserve (32,234 km² buffer zone 6.8x the size of the park reserve)
  - Comparison of buffer zone areas to protect Park Reserve

Buffer zone	Buffer area	Park + buffer area	Park size increase
5 km	3,136 km <sup>2</sup>	7,886 km <sup>2</sup>	1.7x
10 km	6,425 km <sup>2</sup>	11,175 km <sup>2</sup>	2.4x
15 km	9,912 km <sup>2</sup>	14,662 km <sup>2</sup>	3.1x
20 km	13,340 km <sup>2</sup>	18,090 km <sup>2</sup>	3.8x
Watershed	32,234 km <sup>2</sup>	37,000 km <sup>2</sup>	7.8x

#### Ram Plateau Proposed Territorial Park

Proposed area

 $12,000 \text{ km}^2$ 

#### **Protected Areas**

- Total areas under proposed land protection 49,000 km<sup>2</sup> (over 8.5x the size of Prince Edward Island - 5,660 km<sup>2</sup>; pop. 138,000)
- Protected areas would cover almost entire traditional territory of the Nahanni Butte Dene Band (approx. 41, 300 km²)

## Implications of land alienation to the Prairie Creek Mine

- Prairie Creek is within the South Nahanni River Watershed; 32 km upstream of Park Reserve boundary; 48 km upstream of confluence with S. Nahanni R.
- Proposed access road passes through northeast section of proposed Nahanni Karst area of park reserve expansion
- Proposed access road passes through southwest section of proposed Ram Plateau Territorial Park; road does not cross the Ram Plateau itself



# PRAIRIE CREEK 2000 ACTIVITIES

• May 25	AGM shareholders elect new board of directors
• May 30	New president & CEO appointed
• May - June	3 <sup>rd</sup> Party Peripheral staking
• June 27	1 <sup>st</sup> financing of \$756,000 closed
• July – Aug	Site cleanup
• July 20	2 <sup>nd</sup> financing of \$750,000 closed; scoping study underway
• July 28	Land Use Permit Application submitted to MVLWB
• August 1	New VP Project Affairs appointed
• August 14-16	Meetings with regulatory agencies in Yellowknife
• Aug – Dec	Scoping Study review
• Aug - Dec	Metallurgical testwork
• Oct 2	Land Use Application referred to MVEIRB
• Nov 21	Presentation to MDAG
• Nov 22	Presentation to DCFN
• Dec	<ul> <li>Submit applications for proposed 2001 programs</li> <li>Exploration Decline</li> <li>Exploration drilling – Underground &amp; Surface</li> <li>Pilot plant</li> <li>Winter road</li> </ul>



# **PLANNED ACTIVITIES 2001**

• January	Completion of Scoping Study
• Feb	Recovery of Grainger fuel cache
• Jan - Dec	Complete additional financings as required
• Jan - Dec	Initiate additional baseline environmental studies in support of Project EIA
• May – June	Drive exploration decline to delineate stratabound deposit  Obtain bulk sample  Underground exploration drilling
• June – July	Run 1.5tph pilot plant on bulk sample  • Confirm metallurgical performance
• June - Sept	Additional site cleanup Surface Exploration drilling
• Aug - Sept	Recovery of Cat Camp fuel cache
• Sept	Initiate bankable feasibility study
• Nov	Submit application for water licence
• Nov	Feasibility Study complete



February 26, 2001

Luciano Azzolini By fax: (867) 920-4761 c/o the Mackenzie Valley Environmental Impact Review Board

Dear: Mr. Azzolini:

Re: Canadian Zinc Corporation

**Environmental Assessment Information Request** 

Please find enclosed our response to your Information Request on behalf of the MVEIRB dated February 20, 2001.

Yours very truly,

**CANADIAN ZINC CORPORATION** 

J. Peter Campbell VP Project Affairs



## February 26, 2001

Canadian Zinc Corporation
Cat Camp Fuel Cache Recovery and Drill Program Environmental Assessments
Response to Information Request

## Information Request:

Date:

February 20, 2001

From:

Luciano Azzolini c/o the Mackenzie Valley Environmental Impact Review

Board

Subject:

Consultation

Requests:

Provide the Review Board documentation of consultations related to the proposed development. Include minutes of meetings, travel notes, meeting notes, correspondence, and any other materials that will help the Review Board in its consideration of consultation as referenced in line numbers 206-209.

#### Response:

Please find attached to this response the following documents:

- August 16, 2000 Attendance List MVLWB Information Meeting
- October 6, 2000 Letter from CZN to NBDB, DCFN, LKFN, ADKFN requesting meeting
- October 18, 2000 Letter from DCFN to CZN re: meeting in Nahanni Butte Nov. 22
- November 21, 2000 MDAG meeting agenda
- November 21, 2000 MDAG meeting minutes
- November 22, 2000 DCFN meeting agenda
- November 22, 2000 DCFN meeting minutes
- November 30, 2000 News Article Deh Cho Drum Road to riches
- November 30, 2000 News Article Deh Cho Drum Looking for work
- January 5, 2001 Letter from CZN to NBDB, DCFN, LKFN, ADKFN requesting traditional knowledge



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January 5, 2001

Chief Leon Konisenta Nahanni Butte Dene Band General Delivery Nahanni Butte, NT X0E 0N0 By fax: 1-867-602-2910

## Dear Chief Konisenta:

On December 22, 2000 the Mackenzie Valley Environmental Impact Review Board issued the Final Terms of Reference for the Mineral Exploration Drill Program and Cat Camp Fuel Recovery Program proposed by Canadian Zinc in its Land Use Application of July 28, 2000 (MV2000C0030).

As a component of the Terms of Reference, the Review Board has instructed Canadian Zinc to incorporate the following information with respect to the Traditional Knowledge of local First Nations communities and organizations into the Environmental Assessment report we are preparing:

## 4.2.1 Traditional Knowledge

CZN shall make all reasonable effort to collect traditional knowledge, relative to the proposed development, for integration into the environmental assessment report in collaboration with Aboriginal communities and organizations. Where traditional knowledge is not available to the developer, in a timely manner, despite appropriate diligence, the developer will describe efforts taken to obtain it.

I have attached for your reference two maps showing the locations of the proposed activity. The mineral exploration program is proposed to take place within 1000 metres of the Prairie Creek minesite facilities to the northeast up the Harrison Creek valley. The Cat Camp Fuel recovery program involves rehabilitating 40 km of the existing winter road through the Mackenzie mountains to the headwaters of a tributary to Sundog Creek in order to allow trucks currently at the minesite to travel to Cat Camp to recover the fuel stored there.

1...2

We would appreciate receiving any information you or your people, and especially your elders, can provide that you feel may be relevant and worthy of consideration in the environmental assessment of our proposed programs. The EA report is due for submission on January 26, 2000. We will do our best to incorporate any information received in advance of that of that date into the report.

Thank you for your time and effort in responding to this request.

Should you have any questions or require any additional information please feel free to contact me at your convenience.

Yours very truly,

## CANADIAN ZINC CORPORATION

J. Peter Campbell V.P. Project Affairs

cc: Chief Rita Cli LKFN By fax: 1-867-695-2665 Chief Judy Kotchea ADKFN By fax: 1-867-770-4144 Grand Chief Michael Nadli DCFN By fax: 1-867-695-2038





#### ALL WEATHER ACCESS ROAD DEVELOPMENT

#### DISCUSSION OF FIRST NATION BUSINESS OPPORTUNITIES

## Introduction

A key component of the Prairie Creek Mine re-activation plan, which will factor significantly in its economic viability, is the provision of an access road connecting the minesite to the Liard Highway. The Company is faced with two choices for access - a winter road, providing access for up to about 90 days over the period from January to March; or, an all weather road, providing access for up to about 10 months of the year, excluding some 4 weeks in each of the spring and fall for break-up/freeze-up.

An all weather access road, while significantly more capital intensive, will facilitate movement of both concentrate to market and supplies to the minesite. A winter road has the advantage of significantly lower capital cost, but all material will have to be shipped over a three month period from January through March of each year. This will increase direct operating costs, as well as causing a deferral of production revenue due to the delays in moving concentrate to market.

Canadian Zinc finds itself in a somewhat unique position with respect to construction of an all weather access road into the Prairie Creek Mine and may be able to provide some innovative opportunities to the Deh Cho First Nations as part of any such development. The proposed access road passes through the traditional territory of the Nahanni Butte Dene Band of the Deh Cho First Nations. These lands are subject to ongoing treaty negotiations and ultimately land settlement upon reaching of a Final Agreement, likely in some 5 to 7 years from now.

An Interim Measures Agreement is pending which will provide the Deh Cho First Nations with a degree of certainty with respect to the use of resources within their traditional territory. The Nahanni National Park Reserve is located to the south and west of the mine and the access road, and a Territorial Park has been proposed for the Ram Plateau to the north and east. The future status and ultimate boundaries of these proposed parks are subject to the outcome of the land claims process. Opportunities for tourism associated with improved access into the Ram Plateau karst areas are evident. At the same time oil and gas exploration to the north and south of the Prairie Creek access road has been on the increase, driven by successes to the south.



# WHO WE ARE

>	A PUBLIC CANADIAN MINING COMPANY
>	HEAD OFFICE LOCATED IN VANCOUVER, BC
<b>&gt;</b>	FORMERLY SAN ANDREAS RESOURCES CORPORATION INCORPORATED IN 1991
>	NAME CHANGED TO CANADIAN ZINC CORPORATION IN 1999 TO BETTER REFLECT THE COMPANY'S MAJOR ASSET
<b>A</b>	PRINCIPAL ASSET IS THE 100% OWNED, PRAIRIE CREEK MINE, NWT, CANADA ACQUIRED IN 1993
<b>&gt;</b>	SHARES TRADED ON THE TORONTO STOCK EXCHANGE UNDER THE SYMBOL: CZN
>	FULLY DILUTED 30 MILLION SHARES OUTSTANDING
>	RECENTLY TRADING AT AROUND \$0.40 FOR A MARKET CAPITALIZATION OF \$12 MILLION



#### **PERSONNEL**

## **MANAGEMENT**

- MALCOLM SWALLOW PRESIDENT & CEO
- > ALAN TAYLOR VP EXPLORATION
- > PETER CAMPBELL VP PROJECT AFFAIRS
- ➢ RHONDA SCHULTZ OFFICE ADMINISTRATOR
- > KATHLEEN HANCOCK ADMINISTRATIVE ASSISTANT

## **BOARD OF DIRECTORS**

- > JOHN MACPHERSON CHAIRMAN
- > HUGH MORRIS -DIRECTOR
- > WAYNE LENTON DIRECTOR
- > DAVID SHAW DIRECTOR
- **▶** BOB GAYTON DIRECTOR (VP FINANCE & CFO)
- > MALCOM SWALLOW DIRECTOR (PRESIDENT & CEO)



## CORPORATE DIRECTION

- MAY 25, 2000 SHAREHOLDERS ELECT NEW BOARD OF DIRECTORS & NEW PRESIDENT & CEO
- > STRONG PROJECT DEVELOPMENT MANDATE GIVEN TO MANAGEMENT BY BOARD
- > \$1.5 MILLION RAISED TO SUPPORT ONGOING EXPLORATION AND DEVELOPMENT ACTIVITIES
- > SCOPING STUDY UNDERWAY AND SCHEDULED FOR COMPLETION IN JANUARY, 2001
- > UPON COMPLETION OF A POSITIVE SCOPING STUDY THE COMPANY WILL PROCEED WITH A DETAILED FEASIBILTIY STUDY
- FEASIBILITY TO INCLUDE DEVELOPMENT OF DECLINE TO DELINEATE STRATIFORM DEPOSIT AND PILOT PLANT TEST OF BULK SAMPLE TO CONFIRM METALLURGICAL PERFORMANCE
- > EFFORTS BEING DIRECTED AT ADDITIONAL FINANCINGS TO SUPPORT FURTHER DEVELOPMENT ACTIVITY
- > THE COMPANY HAS TARGETED A PRODUCTION DECISION WITHIN 2 YEARS



## PRAIRIE CREEK

## 2000 ACTIVITIES

>	MAY 1	CAMP OPENED UP
>	MAY - JUNE	3 <sup>RD</sup> PARTY PERIPHERAL STAKING ACTIVITY
<b>&gt;</b>	JUNE 27	1 <sup>ST</sup> FINANCING OF \$756,000 CLOSED
Þ	JULY – AUG	SITE CLEANUP ACTIVITY
>	JULY 20	2 <sup>ND</sup> FINANCING OF \$750,000 CLOSED SCOPING STUDY INITIATED
A	JULY 28	LAND USE PERMIT APPLICATION SUBMITTED TO MVLWB
<b>&gt;</b>	AUGUST 14-16	MEETINGS WITH REGULATORY AGENCIES IN YELLOWKNIFE
>	AUG – DEC	SCOPING STUDY REVIEW ONGOING
<b>&gt;</b>	AUG - DEC	METALLURGICAL TESTWORK ONGOING
<b>A</b>	OCT 2	LAND USE APPLICATION REFERRED TO MVEIRB
<b>A</b>	NOV 21	PRESENTATION TO MDAG
4	NOV 22	PRESENTATION TO DCFN
<b>A</b>	DEC	SUBMIT APPLICATIONS FOR PROPOSED 2001 PROGRAMS  > EXPLORATION DECLINE  > EXPLORATION DRILLING - UNDERGROUND & SURFACE  > PILOT PLANT > WINTER ROAD



# PRAIRIE CREEK

# **PLANNED ACTIVITIES 2001**

> JANUARY	COMPLETION OF SCOPING STUDY
> FEB	RECOVERY OF GRAINGER FUEL CACHE
> JAN - DEC	COMPLETE ADDITIONAL FINANCINGS AS REQUIRED
> JAN - DEC	INITIATE ADDITIONAL BASELINE ENVIRONMENTAL STUDIES IN SUPPORT OF PROJECT EA
> MAY – JUNE	DRIVE EXPLORATION DECLINE TO DELINEATE STRATABOUND DEPOSIT
	<ul> <li>OBTAIN BULK SAMPLE</li> <li>UNDERGROUND EXPLORATION DRILLING</li> </ul>
> JUNE – JULY	RUN 1.5TPH PILOT PLANT ON BULK SAMPLE ➤ CONFIRM METALLURGICAL PERFORMANCE
> JUNE - SEPT	ADDITIONAL SITE CLEANUP SURFACE EXPLORATION DRILLING
> AUG - SEPT	RECOVERY OF CAT CAMP FUEL CACHE
> SEPT	INITIATE BANKABLE FEASIBILITY STUDY
> NOV	SUBMIT APPLICATION FOR WATER LICENCE
> NOV	FEASIBILITY STUDY COMPLETE



#### **LOCATION**

- LOCATED AT 61° 33' NORTH LATITUDE AND 124° 48' WEST LONGITUDE IN THE MACKENZIE MOUNTAINS IN THE SOUTHWESTERN NWT
- > 90 KM NW OF NAHANNI BUTTE 170 KM N OF FORT LIARD 180 KM W OF FORT SIMPSON 480 KM W OF YELLOWKNIFE
- MINESITE IS AT ELEVATION 850M ADJACENT TO PRAIRIE CREEK, A TRIBUTARY OF THE SOUTH NAHANNI RIVER
- THE PRAIRIE CREEK VALLEY TRENDS NE TO SW WITH PARALLELING MOUNTAIN RANGES TYPICALLY RISING TO 1500 TO 1600 M ON EITHER SIDE
- > 146 KM UPSTREAM OF NAHANNI BUTTE
- > 48 KM UPSTREAM OF THE CONFLUENCE OF PRAIRIE CREEK AND THE SOUTH NAHANNI RIVER
- > 32 KM UPSTREAM OF THE POINT WHERE PRAIRIE CREEK CROSSES THE NAHANNI NATIONAL PARK RESERVE BOUNDARY
- > 17 KM IN A STRAIGHT LINE FROM THE NEAREST PARK RESERVE BOUNDARY ACROSS THE UP TO 1600M HIGH FUNERAL RANGE
- NEAREST MINE IS TUNGSTEN, 184 KM TO THE NE; ALSO LOCATED IN THE SOUTH NAHANNI WATERSHED, ON THE FLAT RIVER, ABOUT 110 KM UPSTREAM OF THE PARK RESERVE BOUNDARY AND 200 KM UPSTREAM OF THE SOUTH NAHANNI



# **HISTORY**

$\triangleright$	1928 - MINERALIZATION FIRST DISCOVERED
>	1958 – PROPERTY STAKED BY FORT RELIANCE MINERALS
>	1965 – CLAIMS ALLOWED TO LAPSE
>	1966 - PROPERTY RESTAKED AND ACQUIRED BY CADILLAC EXPLORATIONS
>	1966-69 - SURFACE AND UNDERGROUND EXPLORATION
>	1970 - UNDERGROUND EXPLORATION UNDER OPTION WITH PENARROYA CANADA LTD.
>	1970- 80 - EXTENSIVE UNDERGROUND DEVELOPMENT BY CADILLAC; EXPLORATION COSTS TO DATE \$5 MILLION
>	1980 - 1000 TON PER DAY FEASIBILITY STUDY COMPLETED BY KILBORN ENGINEERING
>	1980 - PROJECT FINANCING AGREEMENT REACHED WITH PROCAN EXPLORATION COMPANY (HUNT BROTHERS)
>	1981–82 - CONSTRUCTION OF EXISTING FACILITIES AT A CAPITAL COST OF \$64 MILLION
<b>&gt;</b>	1991 – CONWEST EXPLORATIONS (NANISIVIK MINES LTD.) ACQUIRED PROPERTY; OPTION GRANTED TO SAN ANDREAS RESOURCES CORPORATION
>	1992-95 – DIAMOND DRILLING EXPLORATION BY SAN ANDREAS RESOURCES \$2.5 MILLION
	1996 – PRAIRIE CREEK DEVELOPMENT COOPERATON AGREEMENT SIGNED WITH NAHANNI BUTTE DENE BAND
>	1999 – NAME CHANGED TO CANADIAN ZINC



## SUMMARY OF A

# "REPORT ON LEAD DEPOSITS ON PRAIRIE RIVER" (by ALAN CAMERON SEPTEMBER 20, 1935)

>	JULY 21, 1935 FLEW FROM EDMONTON TO NAHANNI BUTTE
>	JULY 26 DEPARTED NAHANNI BUTTE
<b>&gt;</b>	33 HOURS TRAVELLING BY GAS BOAT UPSTREAM TO "THE GATE" OVER 7 DAYS (87 MILES)
<b>&gt;</b>	3 DAYS OVERLAND FROM THE GATE TO PRAIRIE CREEK BY DOG AND BACKPACK
>	TRAVERSED LOWEST PASS AT 4400' (1341m), 3200' (975m) ABOVE "THE GATE" AT 1200' (366M); PRAIRIE CREEK AT 3100' (945M); ELEVATIONS BY ANEROID BAROMETER
<b>&gt;</b>	3 DAYS ON SITE
<b>&gt;</b>	AUGUST 9 BEGAN RETURN TRIP

**OLDEST STAKE REPORTED FOUND DATED 1922** 

1934 BY POOLE FIELD OF NAHANNI BUTTE

MINERAL TENURE STATUS IN 1935 - 47 CLAIMS STAKED IN

**AUGUST 13 AT NAHANNI BUTTE** 

 $\triangleright$ 



## PERMITS, LICENCES & LAND TENURE

#### **CURRENT**

- > 8 MINING LEASES COVERING 3540 HA\*
- > 7 MINERAL CLAIMS COVERING 6450 HA
- > 2 SURFACE LEASES FOR THE MINE AND AIRSTRIP COVERING 132 HA
- > TOTAL PROPERTY AREA 10,122 HA (101 KM²)

#### **PREVIOUS**

- > AT THE TIME OF CONSTRUCTION IN 1982 THE MINE WAS FULLY PERMITTED FOR OPERATIONS
- LAND USE PERMIT N80F249FOR WINTER ROAD FROM PRAIRIE CREEK TO LIARD HWY. ISSUED JULY 2, 1980
- **▶** WATER LICENCE N3L3-0932 ISSUED JULY 1, 1982



## **EXISTING FACILITIES**

$\triangleright$	5 KM OF UNDERGROUND DI	<b>EVELOPMENT</b>	ON 3 LEVELS
	(870M, 930M, 970M)	ek	

- > 1000 TPD MILL (ORIGINALLY FROM CHURCHILL COPPER NEAR FORT NELSON) UPGRADABLE TO 1500-2000 TPD
- > TAILINGS POND
- > 1000 M GRAVEL AIRSTRIP
- > MAINTENANCE SHOPS
- > 240 PERSON CAMP ACCOMODATIONS
- > OFFICE AND WAREHOUSE
- > MOBILE EQUIPMENT
- ► 4.4 MEGAWATT DIESEL GENERATOR POWER SUPPLY
- ► FUEL TANK FARM 8.5 MILLION LITRE DIESEL STORAGE
- **EXISTING FOOTPRINT APPROX. 20 HA**
- > FUTURE DEVELOPMENT
  - MINESITE AREA UNCHANGED
  - SUNDOG CREEK AIRSTRIP 10 HA (2000M X 50M)
  - ALL WEATHER ROAD 82.5 HA (165KM X 5M)



#### **ACCESS**

- ORIGINAL ACCESS BY 288 KM WINTER ROAD ALONG RAM AND N. NAHANNI RIVERS NE TO CAMSELL BEND AND THE MACKENZIE HIGHWAY 69 KM NORTH OF FORT SIMPSON
- NEW 170 KM WINTER ROAD CONSTRUCTED SOUTH TO LIARD HIGHWAY TO SUPPORT CONSTRUCTION ACTIVITY IN 1981-82
- CURRENT ACCESS BY A 1000M VFR GRAVEL AIRSTRIP 1 KM
  NORTH OF MINESITE ADJACENT TO PRAIRIE CREEK
- > PROPOSED 2000M IFR AIRSTRIP AT SUNDOG CREEK (CAT CAMP) 40 KM EAST OF MINESITE
- PROPOSED 165 KM ALL WEATHER ROAD FROM MINESITE TO LIARD HIGHWAY INCLUDING FERRY AND ICEBRIDGE CROSSING OF LIARD RIVER
- > PERSONNEL TRANSPORT: FLY IN / FLY OUT; 2 WEEKS IN / 2 WEEKS OUT; 10 12 HOUR SHIFT PER DAY
- > SUPPLY TRANSPORT: BY ROAD & / OR AIR
- > PRODUCT TRANSPORT: BY ROAD & RAIL TO SMELTER OR PORT FOR SHIPMENT TO SMELTER



#### MINERAL RESOURCE

- > A WORLD CLASS LEAD ZINC SILVER DEPOSIT
- > 11.8 MILLION TONNE RESOURCE GRADING
  12.5 % ZINC
  10.1 % LEAD
  0.4 % COPPER
  161 GRAMS/TONNE SILVER
- > RESOURCE DELINEATED OVER ONLY 2.1 KM OF A MINERALIZED STRIKE LENGTH OF 16 KM
- > HISTORICALLY A VEIN TYPE DEPOSIT
- > UNDERLYING STRATABOUND MINERALIZATION DISCOVERED IN 1992 HAS THE POTENTIAL TO SIGNIFICANTLY INCREASE TONNAGE
- > STRATABOUND MINERALIZATION, UP TO 28 M THICK



## **EXPLORATION & GEOLOGY**

- > 232 HOLES AND 50,000 M OF CORE DRILLED BETWEEN 1966 & 1995
- > 5 KM OF UNDERGROUND DEVELOPMENT ON 3 LEVELS (870M, 930M, 970M) BETWEEN 1968 & 1975
- MINERALIZATION OCCURS IN TWO FORMS: A QUARTZ VEIN MASSIVE SULPHIDE AND AN UNDERLYING STRATABOUND MASSIVE SULPHIDE
- > PREDOMINANT SULPHIDE MINERALS ARE GALENA, SPHALERITE, TENNANTITE-TETRAHEDRITE AND PYRITE
- MINERALIZATION IS HOSTED WITHIN CARBONATE ROCKS, DOLOSTONES & SHALES
- > EXPOSURES OF QUARTZ VEIN MASSIVE SULPHIDE OCCUR OVER 16 KM OF THE PROPERTY
- > STRATABOUND MASSIVE SULPHIDE HAS BEEN LOCATED OVER 3 KM SO FAR



## MINE PLAN

M	IINIDED	CDOUND	
	UNDER	GROUND	IVELINE.

- > 1650 TONNES OF ORE PER DAY; 1000 TPD VEIN, 650 TPD STRATABOUND
- > TAILINGS PASTE BACKFILL UNDERGROUND
- MINE LIFE BASED ON CURRENT RESOURCE ESTIMATE A MINIMUM OF 15 AND UP TO 20 YEARS
- > EXCELLENT POTENTIAL TO EXPAND/MINEABLE RESOURCE AND EXTEND MINE LIFE SIGNIFICANTLY



#### MILL PROCESSING

$\triangleright$	PRIMARY AND SECONDARY O	CRUSHING OF RUN OF MINE
	ORE	×i.

- > DAILY MILL THROUGHPUT 1650 TONNES OF ORE PER DAY
- > PRECONCENTRATION SEPARATING WASTE AND ORE BASED ON SPECIFIC GRAVITY AND PRODUCING A LEAD CONCENTRATE
- > CONVENTIONAL GRINDING
- > SEQUENTIAL FLOTATION TO PRODUCE SEPARATE ZINC, LEAD AND COPPER CONCENTRATES; SILVER WILL REPORT PRIMARILY TO THE COPPER AND LEAD CONCENTRATES
- > CONVENTIONAL FLOTATION REAGENTS FROTHERS, COLLECTORS, DEPRESSANTS, CONDITIONERS
- > ORIGINAL MILL FLOWSHEET USED CYANIDE FOR ZINC DEPRESSION; CURRENT MILL FLOWSHEET REPLACES CYANIDE WITH SODIUM METABISULFITE
- > TAILINGS WILL REPORT TO A PASTE BACKFILL PLANT TO BE MIXED WITH CEMENT FOR DEPOSIT IN MINED OUT PORTIONS OF THE UNDERGROUND WORKINGS
- PROCESS WATER TO BE RECYCLED FROM THE PROCESS
   WATER SETTLING POND; MAXIMUM EFFORT TO MAINTAIN
   NEUTRAL WATER BALANCE WITH MINIMUM DISCHARGE
   TO THE ENVIRONMENT



## CONCENTRATE PRODUCTION

- ► BASED ON 1650 TONNES PER DAY (577,000TPY)
- **ZINC CONCENTRATE 112,000 TPY 57 % Zn**
- ► LEAD CONCENTRATE 64,000 TPY 71% Pb
- **COPPER CONCENTRATE 4,400 TPY 23% Cu, 7500 GPT Ag**

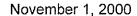
#### CONCENTRATE TRANSPORTATION

- TRANSPORTATION BY TRUCK AND B<sub>7</sub>TRAIN TRAILER UNIT FROM MINESITE TO RAIL HEAD AT FORT NELSON, BC OR ENTERPRISE (OR HAY RIVER), NWT
- RAIL CAR TRANSPORT TO SMELTER (TRAIL, FLIN FLON, KOREA, SPAIN, JAPAN)
- > BASED ON ALL WEATHER ROAD OPEN 305 DAYS PER YEAR; 40 TONNE LOADS
  - ➤ ZINC CONCENTRATE 9 TRUCKS PER DAY
  - ► LEAD CONCENTRATE 5 TRUCKS PER DAY
  - ➤ COPPER CONCENTRATE 2 TONNE BAGS 6 BAGS PER DAY 2-3 TRUCKS PER WEEK



#### **TAILINGS POND**

- EXISTING TAILINGS IMPOUNDMENT DESIGNED BY GOLDER ASSOCIATES FOR A PROBABLE MAXIMUM FLOOD; CONSTRUCTION COMPLETED MARCH, 1982
- MPOUNDMENT DIKES CONSTRUCTED OF LOCALLY AVAILABLE SAND & GRAVEL; CLAY CORE LINER ON THE INSIDE SLOPE; HYPALON LINER ON BACKSLOPE; RIP RAP ON OUTSIDE SLOPE ADJACENT TO PRAIRIE CREEK
- A TOTAL OF 9 ALTERNATIVE LOCATIONS WERE ASSESSED IN 1980 OF WHICH 5 WERE SELECTED FOR FURTHER STUDY; NARROWED DOWN TO 2 VIABLE LOCATIONS; EXISITING SITE (T2) SELECTED AS BEST L'OCATION
- EMBANKMENT SLOPES CONSTRUCTED AT 2:1 WITH FACTORS OF SAFETY AT 1.3 (STATIC) & 1.2 (EARTHQUAKE LOADING)
- DAM CREST ELEVATION 2867'; PRAIRIE CREEK PROBABLE MAXIMUM FLOOD ELEVATION ADJACENT TO DAM 2850'
- RIP RAP DESIGN MIN. THICKNESS 5'; AVG. ROCK SIZE 2.5' DIA. PLACED TO A HEIGHT OF 3' ABOVE THE PMF LEVEL; DAM CRST IS APPROX. 14' ABOVE RIPRAP
- > ORIGINAL DESIGN CAPACITY 7-8 YEARS AT 110,000 YD<sup>3</sup>/YEAR; 800,000 M<sup>3</sup> OR 1.5 MILLION TONNES; PASTE BACKFILL WILL EXTEND THIS SIGNIFICANTLY
- > TAILINGS NON-ACID GENERATING
- > UPSTREAM SLOUGHNG OF CLAY CORE AND BACKSLOPE GRAVELS RAISED CONCERNS RE: DAM INTEGRITY
- SUBSEQUENT GEOTECHNICAL ASSESSMENTS COMPLETED BY HARDY ASSOCIATES & BRUCE GEOTECHNICAL HAVE IDENTIFIED AREAS REQUIRING REMEDIATION AND PROPOSED REHABILITATION MEASURES PRIOR TO USE





Canadian Zinc entered in to a Development Cooperation Agreement with the Nahanni Butte Dene Band in 1996. This Agreement foresaw the many benefits which could accrue to the Nahanni Butte Dene Band and Deh Cho First Nations in conjunction with development of the road and mine, and made provision for maximizing opportunities to realize these benefits.

While Canadian Zinc could pursue either winter or all weather mine access road construction in the traditional manner (ie. applying for a land use permit and upon issuance contracting out construction to build the road), there may be an opportunity to approach road development either jointly with or solely as a **Deh Cho Initiative**. From Canadian Zinc's perspective, a direct Deh Cho involvement in any road development may provide access to funding not readily available to the Company, thereby improving economic projections by reducing the capital costs associated with bringing the mine into production. From the Deh Cho's perspective, development of a Deh Cho all weather road would create opportunities for capacity building and introduce the First Nations to significant long-term employment and economic benefits. As well, other opportunities, beyond those immediately available through development and operation of the mine, are evident in the form of tourism and other resource ventures.

This discussion paper has been put together as an introduction to some of the concepts by which all weather access road development may be pursued from a business perspective and is intended to facilitate an open dialogue between Canadian Zinc, the Nahanni Butte Dene Band and the other Deh Cho First Nations on this subject.





Following is a comparison of options to be considered for proceeding with the access road development with respect to the goals of achieving maximum benefit to the Deh Cho, while at the same time meeting CZN's requirements for achieving economic viability through minimizing costs to the operation.

#### 1. CZN road

- CZN would include the all weather road in its development proposal, acquire the necessary permits, construct the road and purchase the ferry at its own cost
- CZN would maintain the road and operate the ferry at its own cost
- Business and employment opportunities in respect of the construction and maintenance of the road, and operation of the ferry would fall to the Deh Cho as per our Development Cooperation Agreement

#### 2. CZN - Deh Cho Joint Venture Road

- DCFN would pursue and acquire maximum possible funding through DIAND, GNWT, Treaty negotiations (Interim Measures Agreement) or, other available funding mechanisms for road and ferry
- Funds so acquired would be applied towards Nahanni's (or DCFN's) purchase of equity participation in the operation as provided for under the Agreement
- Development of the road would be pursued by the Joint Venture; costs would be shared on a pro rata basis
- DCFN would maintain the road and operate the ferry through Dev Corp or JV
- Operating/maintenance costs would be shared by the JV on pro rata basis

#### 3. Deh Cho Road

- Road and ferry to be taken on as a Deh Cho Initiative in its entirety
- DCFN would pursue and acquire maximum possible funding
- CZN would fund shortfall
- DCFN to submit development proposal; obtain permits; construct, operate and maintain road
- CZN to pay a user fee to cover operating costs and appropriate level of profit; user fee
  to be reduced at outset subject to payback of CZN funds injected; user fees to be shared
  by other users
- A Road User Agreement setting out respective responsibilities would have to be negotiated and agreed upon up front



#### First Nation Business and Employment Opportunities

In our Development Cooperation Agreement with the Nahanni Butte Dene Band dated December 9, 1996, Nahanni proclaimed its support for the establishment of the Access in recognition of the significant benefits of the Access, including longer term tourism opportunities, to Nahanni and Deh Cho First Nation communities as a whole, and undertook to assist the Company in procuring grants, guarantees or other financial assistance from Government towards the establishment of the access.

The overall intent of the Agreement is to establish and maintain a positive and cooperative working relationship between the Company and Nahanni in respect of the further development and operation of the mine, while at the same time supporting an economically viable and environmentally sound operation and maximizing economic opportunity and benefits to Nahanni and other Deh Cho first Nations. To this end the Agreement provides for access to contracting and employment opportunities to Nahanni and the Deh Cho.

Some specific considerations as set out in the Agreement pertaining to road development and opportunities relating thereto are as follows:

- Nahanni recognizes the all weather road and ferry are required and beneficial to both parties, and fully supports establishment of the access
- Nahanni will grant an easement for the access
- Nahanni will provide all necessary assistance in obtaining and maintaining permits to establish the access
- Nahanni will use its best efforts to procure maximum financial assistance for the access
- Nahanni shall enjoy preferential access to economic opportunities including open book negotiated contracts
- CZN shall have a minimum target of 20% employees from Deh Cho communities
- CZN shall require non-First Nation contractors to have a target of not less than 20% employees from Deh Cho communities
- Nahanni will receive a 5% equity interest of profits before taxation
- Nahanni will be granted an option to purchase either a 10% or 15% working interest in the project for \$6 or \$9 million, inflation adjusted
- Nahanni will grant a 5% equity interest to CZN in all tourism ventures which make use of the airstrip or access road
- Nahanni will deliver to CZN 50% of any cost savings arising as a consequence of their participation





The all weather access road proposal provides an excellent opportunity to realize these goals and maximize such opportunities at the very outset of the mine re-development, through operations and into the future.

The proposed all weather road follows approximately the alignment of the winter road constructed and used in 1981 and 1982 until it reaches Grainger Gap. From there two options have been examined; one which would follow the winter road alignment to the Liard River at the Blackstone crossing, and the other which would turn south along the east side of the Nahanni Range to cross the Liard River near to Nahanni Butte. The extent of either route is approximately 165 km from the minesite to the Liard River. Delcan (1983) estimated the construction cost of the road at \$13.8 million, including engineering, added to which is the cost of the ferry and landings, estimated at \$500,000. Monthly operating and maintenance costs were estimated at \$45,000 for the road and \$15,000 for the ferry. More recently, Bruce Geotechnical Engineering Inc. has completed a Preliminary Construction Cost Estimate for the All Weather Road (Oct. 2000) totaling about \$20 million for either route.

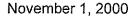
Through construction and operation of the road as a Deh Cho Initiative, the Deh Cho will maintain a direct (joint or independent) interest in the road from the beginning and over the longer term, and will also benefit from other opportunities associated with the presence of the road (ie. tourism, oil and gas). As a Deh Cho Initiative, the Deh Cho would control access onto the road and into their traditional territory by virtue of the ferry crossing, thereby eliminating one of the common concerns with respect to road development. Such an arrangement would require an agreement between Canadian Zinc and the Deh Cho which would set respective responsibilities, assure availability of the road for use, determine appropriate user fees, etc.





The following business and employment opportunities for First Nations are anticipated in connection with the all weather road proposal:

- Road construction
  - Up to 250 persons over 12 months
  - Equipment operation, mechanics, gravel crushing, drilling/blasting, service & supply, camp operation & catering, culvert placement & ditching, fuel supply.
  - Est. \$14 million (1983); \$20 million (2000)
- Road maintenance
  - 1 supervisor, 3 operators (grader, front end loader, dump truck, water truck)
  - Est. \$50,000 per month
- Ice bridge establishment
  - Add on to road maintenance
- Ferry operation
  - Joint use of ferry to service both the Mine and Nahanni Butte
  - Operators/maintenance, est. 2-4 persons
  - 7 months, 11hrs/day, 7days/week
  - Est. \$15,000 per month (1982)
- Concentrate haulage
  - 110,000 180,000 tonnes per year to either Enterprise, NWT or Fort Nelson, BC
  - Est. 9 15 trucks per day, 305 days per year
  - Est. 12 18, 40-tonne B-train tractor/trailer units or equivalent
- Vehicle service
  - Maintenance service / parts supply for haul truck fleet
- Fuel supply
  - Fuel supply for haul truck fleet
- Expediting
  - Logistical support and supply services
- Personnel transport
  - Alternative to use of minesite airstrip, transport of employees resident to local communities to and from minesite on shift basis
- Tourism opportunities
  - Establishment of a wilderness destination resort with road access to serve the Ram Plateau Karst lands and adjacent areas





#### Winter Road

From Canadian Zinc's perspective, the winter road is significantly cheaper to build, but imposes extra expense on the operation in the form of increased operating costs and higher working capital requirements. A winter road into Prairie Creek could alleviate some of the concern with respect to access into remote areas associated with a permanent road. However, the ferry would effectively control access to an all weather road during the summer season, negating this advantage of a winter road.

From the Deh Cho perspective many of the business and employment opportunities identified above are not available under a winter road scenario. This scenario would result in a campaign haul in which up to 4500 loads of concentrate would have to be hauled out over 90 days, requiring a much larger scale operation for a much shorter period of time. Those opportunities which may still be available, are identified as follows:

- Winter road construction
- Est. \$950,000 annually
- Concentrate haul
  - 110,000 180,000 tonnes per year to either Enterprise, NWT or Fort Nelson, BC
- Campaign haul, 90 days (Jan Mar)
- Est. 30 50 trucks per day
- Est. 35 55, 40-tonne B-train tractor/trailer units or equivalent
- Vehicle maintenance
  - Maintenance service / parts supply for haul truck fleet
- Fuel supply
  - Fuel supply for haul truck fleet
- Wilderness tourism destination
  - Establishment of a wilderness destination resort to serve the Ram Plateau Karst lands and adjacent areas; air access only



October 6, 2000

Chief Leon Konisenta Nahanni Butte Dene Band General Delivery Nahanni Butte, NT X0E 0N0

By fax: 1-867-602-2910

#### Dear Chief Konisenta:

With the busy summer season behind us, Alan Taylor and I would like to offer to come up to meet with you and other representatives of the Nahanni Butte Dene Band to give you an update on Canadian Zinc and our Prairie Creek Mine. A number of changes have been made here at Canadian Zinc since last spring and there has been a fair amount of activity at our Prairie Creek mine over the summer.

If you are available we would like to suggest that we make our travel arrangements for the week of November 6 and perhaps meet with you in Nahanni Butte on the afternoon of November 7. We would then plan to meet with other Deh Cho First Nations in Fort Liard and Fort Simpson later in the week.

We would like to propose the following as a preliminary agenda for discussion purposes at the meeting:

- Changes in management and corporate direction at Canadian Zinc
- Site activity summer 2000
- Land Use Application August, 2000
- Scoping study currently underway
- Future plans for development
- Prairie Creek Development Cooperation Agreement
  - Opportunities for Deh Cho involvement
- Other matters

We suggest just an informal meeting to review these and any other issues you may wish to discuss.

I will call your office next week in order to hopefully finalize these arrangements.

Yours very truly,

#### CANADIAN ZINC CORPORATION

J. Peter Campbell V.P. Project Affairs



# MINUTES OF A MEETING OF THE MINERAL DEVELOPMENT ADVISORY GROUP: (MDAG) AND CANADIAN ZINC CORPORATION REGARDING THE PRAIRIE CREEK MINE HELD ON TUESDAY, NOVEMBER 21, 2000 AT 9:00 A.M. IN THE TUNGSTEN ROOM OF THE YELLOWKNIFE INN, YELLOWKNIFE, NT

Representing Indian and Northern Affairs Canada (INAC):

Ranjit Soniassy - Environment and Conservation

Brenda Becker – Lands Gary Magee – Lands

Gary Potts – Mineral Development Division Malcolm Robb – Mineral Development Division

Ed Hornby – South Mackenzie District

Representing the Department of Fisheries and Oceans:

Pete Cott - Habitat

Representing Environment Canada:

Anne Wilson - Environmental Protection Branch

Representing the Government of the Northwest Territories:

Warwick Bullen - Resources, Wildlife and Economic

Development (RWED)

Brett Hudson – RWED Juanita Robinson – RWED

Craig Nowakowski - Stanton Health Board

Representing WCB-NT:

Peter Bengts – Mine Inspection Bert Varkonyi – Mine Inspection

Representing Canadian Zinc Corporation:

Malcolm Swallow Peter Campbell Alan Taylor Rhonda Schultz

The meeting commenced at approximately 9:20 am. Gary Potts introduced the various members of the Mineral Development Advisory Group ("MDAG") and Canadian Zinc Corporation ("CZN"). Peter Campbell made introductions for CZN, and reviewed the agenda and overhead presentation materials on the Prairie Creek Mine, which were distributed to the participants. These presentation materials are

attached for ease in referring to presentation details. Items marked \* and in bold denote a follow up item to the meeting.

Malcolm Swallow reviewed the new board and staff of CZN, and the corporate direction this team is taking including work toward a scoping study to be completed by January 2001.

Alan Taylor described activities at Prairie Creek in 2000, and planned activities for 2001, which include completion of a feasibility study by November of that year.

Peter Campbell gave a full review of Prairie Creek, detailing the location, history, current land status, existing facilities, access, the mineral resource, exploration and geology, and mine development plans.

Anne Wilson (EC) asked what percentage of the waste would be paste backfill. Malcolm Swallow replied that he would estimate a high percentage with 3-5% concrete.

Malcolm Swallow then reviewed mill processing and current work underway for the scoping study.

Anne Wilson (EC) asked how the waste rock would be handled. Malcolm Swallow explained that the gravity circuit gets rid of much of the waste at the front end of the process, at which time it is put back underground. Peter Campbell also commented that there is a high neutralizing potential of the waste rock at Prairie Creek.

Peter Campbell reviewed concentrate production and transportation, and the existing tailings impoundment.

Ranjit Soniassy (INAC) asked for clarification that our current applications to clean up Cat camp and to drill 6 exploration holes are currently in front of the Mackenzie Valley Land and Water Board (MVLWB), and that our other applications will come later. This was confirmed.

Juanita Robinson (RWED) observed that CZN was not considering Hay River as a concentrate shipping route when last CZN met with MDAG in the summer, and asked if anything had changed between then and now.

Pete Cott (DFO) asked if silver was being mined as well. It was explained that silver was part of the lead concentrate, and that CZN would get paid for it.

Mr. Cott also asked about the maximum capacity of the tailings dam, and Malcolm Swallow explained that it was designed to withstand more than a 100 year event, and more like as Mr. Cott described, a "Noah's Ark" event.

Peter Campbell described preliminary estimates of socioeconomic impacts and benefits from the Prairie Creek Mine.

Peter Campbell then reviewed existing environmental baseline studies, including field programs, studies on fisheries, wildlife, benthic invertebrates and periphyton, ARD testwork, studies on water quality, vegetation, archaeology and on traditional use. An extensive list of reports available was circulated in the presentation materials.

Ranjit Soniassy (INAC) reminded CZN that as part of the public consultation process, the Company will be asked to report on past use of the site.

Peter Campbell reviewed the Deh Cho First Nations and more specifically the Nahanni Butte Dene Band, the status of land claims between the Deh Cho and the Federal government, and the implementation of the 1996 Prairie Creek Development Cooperation Agreement between CZN (as San Andreas Resources) and the Nahanni Butte Dene Band.

Brett Hudson (RWED) asked what the role of the Project Management Committee as outlined in the Summary of the Principal Terms of the Prairie Creek Development Cooperation Agreement was. Malcolm Swallow explained that the Committee would meet regularly to discuss the operations, the concerns of the parties, and plans for the future, and that this Committee should meet during permitting and the land use negotiations, through road development and into production. Peter Campbell further stated that this was an appropriate way to meet as the Nahanni Butte Dene Band are partners to the operation.

Juanita Robinson (RWED) asked what "Share cost saving benefits with the Company as a consequence of (Nahanni's) involvement" means in the Summary. Peter Campbell explained that this means tax savings.

(a break was taken from 10:30 to 11:00 am)

After break, Gary Potts invited CZN to discuss in more detail current work and the Company's proposals for 2001.

Malcolm Swallow discussed current work toward a scoping study, which is expected to be complete in January 2001. Mr. Swallow estimated a value of \$40-50 million for a cost of \$0.30/lb. He then outlined the three proposals for which the Company will be soon applying for permits: underground development of 600-7000 metres for the driving of an exploration decline; a surface drill program; and the running of a small pilot plant.

Pete Cott (DFO) asked if water would be taken out of Prairie Creek for the pilot plant. Malcolm Swallow said no, and Peter Campbell explained that 200,000 gallons of water would be required for a three-month period. Mr. Cott asked if this could be expressed as a number in terms of recharge of water to the area.

Anne Wilson (EC) asked if much water would be coming in when the decline was driven. Malcolm Swallow explained that yes, it would have to be pumped.

Anne Wilson (EC) asked what reagent would be used rather than cyanide, and Malcolm Swallow replied sodium metabisulphide.

#### \* Provide MDAG participants with a full list of reagents proposed to be used.

Ranjit Soniassy (INAC) explained that sodium metabisulphide floats the metal, and is dealt with at the smelter and not in the tailings.

Pete Cott (DFO) asked if there were environmental concerns with elevated pH? Peter Campbell said no.

Anne Wilson (EC) asked if the lime precipitation occurring when zinc was extracted made the pH in the final affluent too high. Peter Campbell said no, that the pH is adjusted after precipitation of the zinc.

Malcolm Robb (INAC) asked if the underground workings were above water level at the first level. Alan Taylor stated that no surface drill holes make water.

Anne Wilson (EC) asked how waste would be handled with a full camp. Peter Campbell explained that a secondary treatment plant is in place, and that another may be used in time.

Juanita Robinson (RWED) asked who the decline contractor is. Malcolm Swallow explained that CZN has not decided between Procon or BLM. Ms. Robinson asked what size of work crew would be required in 2001. It was explained as follows:

- 1-2 metallurgists for the pilot plant
- 4-5 camp support
- 8-10 per shift for the decline
- 2-3 per shift for the diamond drill program

Ed Hornby (INAC) explained that a water license is required for the use of 50 cubic meters/day. A Type "A" water license means a public meeting will be called, and a Type "B" water license means a public meeting may be called. The pilot plant would require a Type "A" license.

Ranjit Soniassy (INAC) asked if the tailings dam had sufficient volume for full production. Malcolm Swallow said this would depend on the percentage of tailings used in paste backfill or put into the pond. Mr. Soniassy asked if the mine life would be longer than 7-8 years, and Mr. Swallow said that again, this would depend on paste backfill and which method is cheaper.

Ed Hornby (INAC) asked what the second tailings dam placement choice was, and would it still be viable. Alan Taylor explained that the second choice was a similar site to the first, just further downstream, and that there is a significant clay layer in the dam from the surrounding area.

At this time, Alan Taylor explained that a land use application would be submitted to drill additional holes within the 16 kilometres of the property.

Ed Hornby (INAC) advised that CZN should apply for a permit to drill on the entire claim block, and that anything off the surface lease should be made as one application.

Juanita Robinson (RWED) agreed with Mr. Hornby, adding that if part of the property is tied up, all of the property is tied up.

Ed Hornby (INAC) further explained that the Environmental Assessment process will want to see all work proposals, including the decline, as a whole. They will be interested in the cumulative effects impact. So the whole program should be applied for in one package.

Ranjit Soniassy (INAC) expressed his agreement with this advice because of the cumulative impacts.

Pete Cott (DFO) offered that making one application would also make our intentions more transparent.

Ranjit Soniassy (INAC) suggested that the MVLWB probably split the previous applications because one was for environmental cleanup and the other for exploration, and these are separate issues or types of projects. He stated that further separation of applications could be confusing for the Board.

Malcolm Robb (INAC) asked if anyone outside of the Company had checked out the camp. Craig Nowakowski (Stanton Health Board) said that this falls under Camp Sanitation. Malcolm Swallow explained that for recent exploration purposes, only an isolated part of the camp was used, but for full production, the Company would conduct a full review of camp facilities, fire regulations, etc.

Peter Campbell suggested to MDAG that since the MVLWB asked for specific locations for the six-hole diamond drilling permit, wouldn't they ask again when the Company applies next time.

\* Ed Hornby (INAC) replied that he could provide Peter Campbell with useful documents and affidavits regarding precedent on this subject.

Juanita Robinson (RWED) asked for confirmation that the feasibility study would be done by the end of 2001. Malcolm Swallow said that yes, a full permit application would be available at the end of 2001. She also confirmed that the scoping study would include socioeconomic impacts.

Malcolm Swallow asked MDAG what additional studies would be required at the end of 2001.

Juanita Robinson (RWED) suggested a study of the impact on the local region, specifically the Deh Cho, i.e. what are the employment opportunities for the Deh Cho, what is the local capacity to fill these opportunities, how likely will it be that they fill these positions, and how can the Company ensure that this happens.

Ranjit Soniassy (INAC) explained that the Environmental Assessment process with CIA is similar to the MVLWB and the Mackenzie Valley Environmental Impact Review Board (MVEIRB). He said that DIAND (INAC) is not in the loop, but that the Minister is there for approval and inspection.

Mr. Soniassy suggested the Company consider pollution sources, sustainable development, climate change, and the scope of the project. The Company should look at the concept of mine abandonment and reclamation now. It should look ahead at alternatives in processing, timing, and the location of the tailings, and be prepared for the unexpected.

\* Mr. Soniassy further suggested that once a draft project description is available, it should be reviewed by the Company in person with a MVLWB member to see if it is heading in the right direction. The Board member should give direction at this stage.

Alan Taylor asked MDAG what omissions there are in the Company's data.

Ed Hornby (INAC) advised that study on the impact to wildlife such as population surveys, although prognostication, still need to be carried out, as the public will demand these issues be addressed. Malcolm Swallow pointed out that the road does not need to be a public access road, by Mr. Hornby stated that ATV access is all-weather, and control over road access will always be limited in this regard.

Juanita Robinson (RWED) advised that the Government of the NWT emphasizes follow-up programs in addition to baseline studies.

(lunch break was taken from 12:00 to 1:45 am)

After lunch, Gary Potts invited MDAG and CZN participants to further discussion.

Juanita Robinson (RWED) stated that the impact on the local community from Prairie Creek should be consistent with other economic activity in the area.

\* Ranjit Soniassy (INAC) advised that Dave Milburn, Water Resources, INAC, would be a good contact in the Fort Simpson regional office. Mr. Soniassy said that it would be important for the Company to re-establish a network of stations and contacts in the area. \* He strongly encouraged Peter Campbell to come to his offices to discuss logistics, as there are people there familiar with Prairie Creek.

Peter Campbell emphasized that although MDAG is formed during the pre-permitting stage only, he would like to continue to draw upon MDAG members as a resource in the future.

- \* Anne Wilson (EC) advised that Doug Halliwell of Environment Canada would be a good person to contact as he has much data on the area from the mid-90's.
- \* Malcolm Robb (INAC) said he has access to both public and non-public reports, and especially reports on regional land use, which are public. He suggests the Company start with Gary Magee (INAC) for resources. Dead files from these INAC offices are held in Edmonton. Also, the Resource Room at INAC in Yellowknife is available for the Company's use.

Ed Hornby (INAC) advised that the RWED library is built primarily from the old INAC library.

\* Anne Wilson (EC) said she would provide Peter Campbell with a supplemental list of reports other than those in the list provided in the presentation materials.

Malcolm Robb (INAC) advised that Water Resources and the MVLWB handle ARD issues. Also, CZN should look at BHP and Diavik for precedent on additional land use permits on existing leases.

Gary McGee (INAC) advised that the Company would still need a Land Use Permit to work on the lease. Since the lease is now for maintenance only, this may affect the outcome of the Company's upcoming applications.

Malcolm Robb (INAC) said that since the work we are applying for is pre-feasibility work, there should be no problem. At feasibility, more applications will probably be required.

Ranjit Soniassy (INAC) advised that the Company should consider the aesthetics of the property, as this can blind public opinion and carry weight.

Anne Wilson (EC) advised that when migratory bird and endangered species are done, CWS (the Canadian Wildlife Society?) of Environment Canada should be consulted.

Juanita Robinson (RWED) advised that Brett Hudson is the best contact for vegetation concerns and data.

Ranjit Soniassy (INAC) advised that the Company should consider its criteria for revegetation now.

Gary Potts called the meeting to a close and suggested that it would be valuable to meet again in 6 or 8 months to a year.

Peter Campbell thanked the members of MDAG on behalf of CZN for their assistance and participation in the meeting.

Respectfully submitted, Rhonda Schultz



#### **MDAG MEETING - NOVEMBER 21, 2000**

#### PRESENTATION AGENDA

#### Update on Canadian Zinc

- Changes in management and corporate direction
- Site activity summer 2000
  - Site clean up activity
  - · Third party peripheral staking
  - Land Use Application August, 2000
  - Scoping study currently underway
    - Mill design and metallurgical testwork
    - Access road cost estimate and alternative alignment review
- Planned Site Activity summer 2001
  - Planned applications
  - Exploration decline
  - Underground diamond drilling
  - Bulk sample
  - Pilot plant
- Future plans for development
  - Feasibility study
  - Technical, environmental baseline studies
  - Permit applications

#### Review of Property Status and Development Plans

- Location, History, Access
- Existing Facilities
- Geology, Mineral Resource, Mine Plans
- Mill Process, Production, Concentrate Transportation
- Tailings Disposal
- Baseline Studies

#### **First Nations**

• Prairie Creek Development Cooperation Agreement

#### Land Use Planning Initiatives

- South Nahanni Watershed land withdrawal proposal under interim measures agreement
- Park proposals Nahanni Park Reserve expansion, Ram Plateau Territorial Park



#### **SOCIOECONOMICS**

(Preliminary estimates)

<b>A</b>	266 EMPLOYEES/CONTRACTORS; 130 ON-SITE AT A TIME (NOT INCLUDING CONCENTRATE HAUL, AIR TRANSPORT, INCOMING FREIGHT)
>	EMPLOYMENT MULTIPLIER OF 2:1 MEANING FOR EVERY MINING JOB 2 MORE ARE CREATED ELSWHERE = 532 SPIN OFF JOBS
>	PAYROLL (INCLUDING BENEFITS) \$21 MILLION ANNUAL
>	AIR TRANSPORT CONTRACT \$800,000 ANNUAL
>	INBOUND FREIGHT COSTS \$650,000 ANNUAL
>	CONCENTRATE HAUL \$8 MILLION ANNUAL
>	MILL SUPPLIES \$5.2 MILLION ANNUAL
<b>&gt;</b>	DIESEL POWER GENERATION \$2.8 MILLION ANNUAL
>	CORPORATE INCOME TAX \$7.4 MILLION ANNUAL (\$5.2 MILLION FEDERAL; \$2.2 MILLION NWT)
>	NWT ROYALTY PAYMENTS \$925,000 ANNUAL
<b>A</b>	EMPLOYEE INCOME TAX \$7.5 MILLION ANNUAL
D	СБРИПС

**WCB** 

**FUEL TAX** 



#### **ENVIRONMENTAL STUDIES**

#### FIELD PROGRAMS

- **▶** 1975 DIAND
  - WATER QUALITY
- APRIL 15-18, 1980 BEAK CONSULTANTS
  - FISH HABITAT SURVEY; PRAIRIE, HARRISON, ROAD CROSSINGS
  - WILDLIFE AERIAL & GROUND RECONNAISSANCE; MINESITE
  - WATER QUALITY
  - ABA ORE, WASTE ROCK, TAILINGS
- **▶** JULY 6 − 10, 1980 BEAK CONSULTANTS
  - WILDLIFE AERIAL SURVEY; MINESITE, ROAD TO SUNDOG, NAHANNI RANGE
  - UNGULATES, RAPTORS, WETLANDS
  - BENTHIC INVERTEBRATES; PRAIRIE, HARRISON, RAM, GRAINGER, TETCELA, FISHTRAP
  - WATER QUALITY
  - SEDIMENT METALS
  - VEGETATION SURVEYS; MINESITE & ROAD
- **▶** JULY 21 25, 1980 BEAK CONSULTANTS
  - FISH HABITAT SURVEY
- > JULY 7 SEPTEMBER 3, 1980 GOLDER ASSOCIATES
  - TAILINGS IMPOUNDMENT INVESTIGATIONS
- → JANUARY 27 29, 1981 BEAK CONSULTANTS
  - WILDLIFE AERIAL SURVEY; MINESITE WINTERING HABITAT
- MARCH 13-27, 1981 BEAK CONSULTANTS
  - WINTER FISH HABITAT SURVEY; PRAIRIE CR., ROAD CROSSINGS; OVERWINTERING POTENTIAL
  - WATER QUALITY
  - WILDLIFE AERIAL SURVEY; MINESITE & ROAD



- APRIL 8, 1981 BEAK CONSULTANTS
   FISH HABITAT, ICE BRIDGE SURVEY
- MAY 21-25, 1981 BEAK CONSULTANTS
  - SPRING FISH HABITAT SURVEY
    - PRAIRIE, GRAINGER, TETCELA, SUNDOG TRIB.
    - ELECTROSHOCKING, GILLNETS, MINNOW TRAPS
    - AERIAL CROSSING RECONNAISANCE
    - WATER QUALITY
    - TISSUE METALS
    - BENTHIC INVERTEBRATES
- ► JUNE 9 10, 1981 BEAK CONSULTANTS
  - WILDLIFE AERIAL SURVEY; MINESITE AREA
  - CALVING, LAMBING, DENNING SURVEY
- ► JULY 9 17, 1981 BEAK CONSULTANTS
  - WILDLIFE AERIAL SURVEY; MINESITE & ROAD
  - VEGETATION SURVEY; HABITAT ASSESSMENT & MAPPING
- > SEPTEMBER 22-26, 1981 BEAK CONSULTANTS
  - FISH HABITAT SURVEY; FALL SPAWNING PRAIRIE CR.
  - AERIAL SURVEYS; GILLNETS; ELECTROSHOCKING
  - WATER QUALITY; SUBSTRATE PARTICLE SIZE
- MAY 30-JUNE 4, 1994 RESCAN
  - FISH HABITAT SURVEY
  - BENTHIC INVERTEBRATES; PERIPHYTON
  - HYDROLOGY
  - WATER QUALITY
  - ABA
- > SEPTEMBER 12-16, 1994 RESCAN
  - FISH HABITAT SURVEY
  - WILDLIFE AERIAL SURVEY; HABITAT MAPPING; WETLANDS SURVEY; MINE & ROAD
  - BENTHIC INVERTEBRATES; PERIPHYTON
  - HYDROLOGY
  - WATER QUALITY



#### **ENVIRONMENTAL STUDIES**

#### **FISHERIES**

APRIL 17-18, 1980	BEAK CONSULTANTS

- FISH HABITAT SURVEY: PRAIRIE, HARRISON, ROAD CROSSINGS
- VISUAL EXAMINATION; WATER QUALITY (pH, DO, OC)
- ► JULY 21 25, 1980 BEAK CONSULTANTS
  - PRAIRIE CREEK 5 LOCATIONS: 1-2 DOLLY VARDEN, SLIMY SCULPIN
  - HARRISON CREEK 1 LOCATION: SLIMY SCULPIN
  - ROAD CROSSINGS 6 LOCATIONS: GRAYLING, WHITEFISH, LAKE CHUBB, N. PIKE, SLIMY SCULPIN
  - ELECTROFISHING, GILLNETTING, HABITAT SURVEYS, TISSUE METAL ANALYSES, WATER QUALITY (pH, do, °C)
- MARCH 13-27, 1981 BEAK CONSULTANTS
  - OVERWINTERING HABITAT SURVEY
  - PRAIRIE, GRAINGER, GRAINGER TRIBS, FISHTRAP, TETCELA
  - DO, TEMP DEPTH
- > APRIL 8, 1981 BEAK CONSULTANTS
  - ICEBRIDGE SURVEY WINTER ROAD CROSSINGS
- MAY 21-25, 1981 BEAK CONSULTANTS
  - SPRING SURVEY
  - PRAIRIE, SUNDOG TRIB, GRAINGER, TETCELA
  - ELECTROSHOCKING, GILLNET, MINNOW TRAPS
  - FISH HEALTH, AGE, TISSUE METALS
  - AERIAL RECONNAISSANCE



- > SEPTEMBER 22-26, 1981 BEAK CONSULTANTS
  - FALL SPAWNING HABITAT SURVEY
  - PRAIRIE CREEK
  - MOUNTAIN WHITEFISH, BULL TROUT SPAWNING U/S IN HEADWATERS; NO FISH D/S
- MAY 30-JUNE 4, 1994 RESCAN
  - PRAIRIE, HARRISON, GALENA, BIG QUARTZ
  - ELECTROSHOCKING, GILL NETS, DIP NETS, MINNOW TRAPS
  - HABITAT SURVEYS
  - 1 TISSUE METAL ANALYSES: PRAIRIE CR. (1 SCULPIN)
- > SEPTEMBER 12-16, 1994 RESCAN
  - PRAIRIE, HARRISON, GALENA, BIG QUARTZ
  - ELECTROSHOCKING, GILL NETS, DIP NETS, MINNOW TRAPS
  - HABITAT SURVEYS, AGES, CONDITION FACTOR
  - 20 TISSUE METAL ANALYSES: PRAIRIE CR. (3 SCULPIN, 3 BULL TROUT), GALENA (3 SCULPIN, 1 BULL TROUT), BIG QUARTZ (3 BULL TROUT), FAST (1 SCULPIN, 3 BULL TROUT), TETCELA (1 SUCKER, 2 LAKE CHUB)
  - STOMACH CONTENTS ANALYSES



#### WILDLIFE

- > APRIL 15-18, 1980 BEAK CONSULTANTS
  - AERIAL & GROUND RECONNAISSANCE; MINESITE, ACCESS ROAD
- **▶** JULY 6 − 10, 1980 BEAK CONSULTANTS
  - AERIAL SURVEY; MINESITE, ROAD TO SUNDOG, NAHANNI RANGE
  - UNGULATES, RAPTORS, WETLANDS
- ► JANUARY 27 29, 1981 BEAK CONSULTANTS
  - AERIAL CONTOUR SURVEY; MINESITE
  - CARIBOU, DALL SHEEP & MOOSE WINTERING HABITAT
- MARCH 13-27, 1981 BEAK CONSULTANTS
  - AERIAL SURVEY; MINESITE & ROAD
  - LATE WINTER UNGULATE DISTRIBUTION
  - 39 TRANSECTS; 445 KM; LIARD R TO MACKENZIE MTNS
  - CONTOUR SURVEYS; NAHANNI RÁNGE & MINESITE
- **▶** JUNE 9 10, 1981 BEAK CONSULTANTS
  - AERIAL CONTOUR SURVEY; MINESITE AREA
  - CARIBOU CALVING, SHEEP LAMBING, GRIZZLY DENNING SURVEY
- **▶** JULY 9 17, 1981 BEAK CONSULTANTS
  - AERIAL SURVEY; MINESITE & ROAD
  - HABITAT ASSESSMENT & MAPPING
  - BROWSE UTILIZATION; PELLET COUNTS; INCIDENTAL OBSERVATIONS
- > SEPTEMBER 12-16, 1994 RESCAN
  - AERIAL SURVEY; HABITAT MAPPING; WETLANDS SURVEY; MINE & ROAD



#### BENTHIC INVERTEBRATES & PERIPHYTON

- **▶** JULY 6 − 10, 1980 BEAK CONSULTANTS
  - BENTHIC INVERTEBRATES (4 REPS EA.); PRAIRIE (4), HARRISON (1), SUNDOG (1), GRAINGER (2), TETCELA (4), FISHTRAP (1)
  - SURBER OR ECKMAN
- MAY 21-25, 1981 BEAK CONSULTANTS
  - BENTHIC INVERTEBRATES (8 REPS EA.): PRAIRIE CR, (7), HARRISON (1), SUNDOG (1), TETCELA (4), GRAINGER (2)
- MAY 30-JUNE 4, 1994 RESCAN
  - BENTHIC INVERTEBRATES (3 REPS EA.): PRAIRIE CR. (4 SITES)
- > SEPTEMBER 12-16, 1994 RESCAN
  - BENTHIC INVERTEBRATES (3 REPS EA.): PRAIRIE CR. (3), FAST CR. (1), GALENA (1), BIG QUARTZ (1), SUNDOG (1), TETCELA (1), GRAINGER (2), FISHTRAP (1)
  - PERIPHYTON (1 REP EA.): PRAIRIE CR. (2), BIG QUARTZ (1), GALENA (1), FISHTRAP (1), GRAINGER (1).



# PRAIRIE CREEK MINE ARD TESTWORK

- APRIL 15-18, 1980 BC RESEARCH
  - ABA 3 SAMPLES: ORE, WASTE ROCK, TAILINGS
    - ORE -51 NNP
    - WASTEROCK +425 NNP
    - TAILINGS +364 NNP
- MAY 30-JUNE 4, 1994 RESCAN
  - ABA 26 SAMPLES: ORE, WASTE ROCK, DRILL CORE
  - 2 SAMPLES EACH OF 7 ROCK TYPE UNITS
  - ICP METAL SCAN; PLUS As, Hg
  - NNP RANGE FROM +237 TO +1047; AVERAGE +720
  - NP/AP RANGE FROM 2.2:1 TO 686:1, AVERAGE 179:1



# PRAIRIE CREEK MINE WATER QUALITY

<b>&gt;</b>	1975	DIAND				
	• WATER QUALITY	DIAND				
	<ul> <li>TSTNS; 3 SAMPLINGS (MAY 27, JULY 5, AUG 6)</li> </ul>					
		RRISON U/S & D/S, GALENA, BIG				
	QUARTZ U/S & D/S	dation of a Dis, Galena, Did				
>	APRIL 15-18, 1980	BEAK CONSULTANTS				
	<ul> <li>WATER QUALITY</li> </ul>					
	• 3 STNS; PRAIRIE U/S & D/S, HARRISON D/S					
	<ul> <li>MINEWATER 3050' PORTAL</li> </ul>					
4	<b>JULY 6 – 10, 1980</b>	BEAK CONSULTANTS				
	<ul> <li>WATER QUALITY</li> </ul>					
	<ul> <li>3 STNS; PRAIRIE U/S &amp; D/S, HARRISON D/S</li> </ul>					
	<ul> <li>SEDIMENT METALS; PRAIRIE CR U/S &amp; D/S</li> </ul>					
<b>A</b>	<b>JULY 21 – 25, 1980</b>	BEAK CONSULTANTS				
	MINEWATER 2850' PORTAL					
		80 GOLDER ASSOCIATES				
	<ul> <li>GROUNDATER SAMPLE</li> </ul>	CS; 1 WELL, 3 BOREHOLES				
>	MARCH 13-27, 1981	BEAK CONSULTANTS				
	<ul> <li>WATER QUALITY</li> </ul>					
×	MAY 21-25, 1981	BEAK CONSULTANTS				
	<ul> <li>WATER QUALITY</li> </ul>					
>	SEPTEMBER 22-26, 1981	BEAK CONSULTANTS				
	• WATER QUALITY; SUBSTRATE PARTICLE SIZE					
<b>&gt;</b>	MAY 30-JUNE 4, 1994	RESCAN				
	<ul> <li>WATER QUALITY</li> </ul>					
	<ul> <li>7 STNS; PRAIRE CR. U/S &amp; D/S, FST CR., HARRISON,</li> </ul>					
	GALENA, BIG QUARTZ, LITTLE QUARTZ					
	<ul> <li>GRAINGER, TETCELA, SUNDOG TRIB., FISHTRAP</li> </ul>					
<b>&gt;</b>	SEPTEMBER 12-16 1994	RESCAN				

• WATER QUALITY



#### **VEGETATION**

- > APRIL 15-18, 1980
  - GROUND RECONNAISSANCE; MINESITE
- > JULY 6 10, 1980
  - VEGETATION SURVEYS; MINESITE & ROAD
- **>** JULY 9 − 17, 1981
  - VEGETATION SURVEY; HABITAT ASSESSMENT & MAPPING
  - 209,000 HA STUDY AREA; MINESITE & ACCESS ROAD
  - 11 VEGETATION MAP NITS; 41 HABITAT MAP UNITS
  - AIR PHOTO INTERPRETATION
  - GROUNDTRUTHING BY TRANSECTS & 10M X 10M PLOTS
- SEPTEMBER 12-16, 1994
  - HABITAT MAPPING; MINE & ROAD



# PRAIRIE CREEK MINE ARCHAEOLOGY

- > **OCTOBER**, 1980
  - DATABASE SEARCH, NATIONAL INVENTORY OF PREHISTORIC SITES
- > NOVEMBER, 1994
  - DATABASE SEARCH, PRINCE OF WALES HERITAGE CENTRE
- **► AUGUST, 2000** 
  - DATABASE SEARCH, MUSEUM OF CIVILIZATION



# PRAIRIE CREEK MINE TRADITIONAL USE

- > **OCTOBER**, 1980
  - TRAPPING RETURNS REVIEWED
  - GUIDE/OUTFITTER RECORDS REVIEWED
  - RESIDENT HUNTING HARVESTS REVIEWED
- **▶** DECEMBER, 1996
  - PRAIRIE CREEK DEVELOPMENT COOPERATION AGREEMENT; NAHANNI BUTTE DENE BAND
    - PROVISION FOR NAHANNI TO ASSEMBLE AND PROVIDE TRADITIONAL KNOWLEDGE IN SUPPORT OF PROJECT AND ACCESS
    - PROVISION FOR COMPENSATION TO TRADITIONAL HARVESTERS NEGATIVELY AFFECTED BY PROJECT



#### PRAIRIE CREEK MINE REPORTS

- > WATTS, GRIFFIS AND MCQUAT LTD. JANUARY, 1980
  - ACCESS ROUTES TO THE PRAIRIE CREEK PROPERTY
- ➤ KER, PRIESTMAN & ASSOCIATES LTD. MAY, 1980
  - PRELIMINARY ENVIRONMENTAL EVALUATION FOR MINE, MILL & CAMP
- ➤ KER, PRIESTMAN & ASSOCIATES LTD. MAY, 1980
  - PRELIMINARY ENVIRONMENTAL EVALUATION FOR WINTER ACCESS ROAD
- ➤ GOLDER ASSOCIATES JUNE, 1980
  - PRELIMINARY APPRAISAL TAILINGS STORAGE FACILITIES
- **➢ GOLDER ASSOCIATES − SEPTEMBER, 1980** 
  - TAILINGS STORAGE AND MINE PLANT FACILITIES
- **➢** GOLDER ASSOCIATES OCTOBER, 1980
  - PROGRESS REPORT MINE ACCESS ROUTE
- > KER, PRIESTMAN & ASSOCIATES LTD. OCTOBER, 1980
  - ENVIRONMENTAL EVALUATION FOR CADILLAC EXPLORATIONS LTD. PRAIRIE CREEK PROJECT, N.W.T.
- **▶** BEAK CONSULTANTS LTD. SEPTEMBER, 1981
  - PRAIRIE CREEK PROJECT: VEGETATION AND WILDLIFE STUDIES JANUARY TO JULY 1981
- **▶** BEAK CONSULTANTS LTD. SEPTEMBER, 1981
  - FISHERIES AND INVERTEBRATE STUDIES, 1981
- **▶** BEAK CONSULTANTS LTD. DECEMBER, 1981
  - FALL FISHERIES STUDY, 1981
- KER, PRIESTMAN & ASSOCIATES LTD. FEBRUARY, 1982
  - SUMMARY OF PROJECT STATUS PREPARED FOR WATER LICENCE HEARING FEBRUARY 23, 1982 - FORT SIMPSON



- > KER, PRIESTMAN & ASSOCIATES LTD. MAY: 1982
  - PROJECT DESCRIPTIONS FOR PROPOSED ALL WEATHER ROAD, AIRSTRIP & ORE HAUL ROAD
- **▶** BEAK CONSULTANTS LTD. OCTOBER, 1982
  - WILDLIFE STUDIES 1982 ADDENDUM
- ► HARDY ASSOCIATES LTD. OCTOBER, 1982
  - PRAIRIE CREEK MINE, TAILINGS POND
- ▶ DELCAN JULY, 1983
  - ENGINEERING ASSESSMENT OFPROPOSED ALL WEATHER ACCESS ROAD MINE SITE TO LIARD HIGHWAY
- ► HARDY ASSOCIATES LTD. AUGUST, 1983
  - REPORT ON TAILINGS POND REHABILITATION
- > HARDY ASSOCIATES LTD. MARCH, 1984
  - REPORT ON TAILINGS POND REHABILITATION
- ► HARDY ASSOCIATES LTD. AUGUST, 1985
  - REPORT ON CONSTRUCTION DETAILS, QUANTITIES AND GEOTECHNICAL COSTS ASSOCIATED WITH TAILINGS POND REHABILITATION
- > RESCAN ENVIRONMENTAL SERVICES LTD. DECEMBER, 1994
  - PROJECT DESCRIPTION REPORT
- ➤ DELCAN NOVEMBER, 1994
  - HAUL ROAD
- > RESCAN ENGINEERING LTD. JANUARY, 1995
  - PRAIRIE CREEK EFFLUENT TREATMENT PLANT
- ▶ BRUCE GEOTECHNICAL CONSULTANTS LTD. JULY, 1995
  - SUMMARY OF GEOTECHNICAL ASPECTS TAILINGS FACILITY AND ACCESS ROAD
- > JD MOLLARD & ASSOC. LTD. SEPTEMBER, 1995
  - REMOTELY SENSED TERRAIN ANALYSIS AND ASSESSED IMPACT OF THE EXISTING ROADWAY ALONG AND NEAR THE EXISTING WINTER HAUL ROUTE



#### **FIRST NATIONS**

- PROPERTY IS LOCATED WITHIN THE TRADITIONAL
  TERRITORY OF THE DEH CHO FIRST NATIONS AND MORE
  SPECIFICALLY THE NAHANNI BUTTE DENE BAND
- THE NEAREST DEH CHO COMMUNITY IS NAHANNI BUTTE
  90 KM TO THE SOUTH WHICH IS CLOSE TO THE LIARD
  RIVER CROSSING OF THE PROPOSED ALL WEATHER ROAD
- THE DEH CHO HAVE NOT REACHED SETTLEMENT OF LAND CLAIMS WITH THE FEDERAL GOVERNMENT; DISCUSSIONS ARE ONGOING WITH RESPECT TO INTERIM MEASURES, FRAMEWORK AND FUNDING AGREEMENTS
- CONCLUSION OF AIP AND FINAL AGREEMENT EXPECTED IN 5 7 YEARS
- THE NAHANNI BUTTE DENE BAND, WITH THE SUPPORT OF THE DEH CHO FIRST NATIONS, SUCCESSFULLY CONCLUDED A DEVELOPMENT COOPERATION AGREEMENT WITH SAN ANDREAS IN 1996
- THE AGREEMENT WAS SUPPORTED BY DEH CHO TRIBAL COUNCIL RESOLUTION AND NAHANNI BUTTE BAND COUNCIL RESOLUTION
- CANADIAN ZINC WILL CONTINUE TO WORK CLOSELY WITH NAHANNI BUTTE AND THE DEH CHO
  - > TO ACHIEVE EARLY AND FULL IMPLEMENTATION OF THE PCDCA
  - > TO MAXIMIZE EMPLOYMENT OPPORTUNITIES AND ECONOMIC BENEFITS TO THE DEH CHO. AND
  - > TO KEEP THEM INFORMED OF OUR ACTIVITIES AND PLANS IN A TIMELY AND OPEN MANNER



#### A SUMMARY OF THE PRINCIPAL TERMS OF THE PRAIRIE CREEK DEVELOPMENT COOPERATION AGREEMENT

#### **Operating policies:**

- A cooperative environmental agreement process will be established
- A Nahanni member will be appointed to the Project Management Committee
- Maximization of Aboriginal and northern employment with a minimum target for Deh Cho First Nations employment of 20% of the workforce
- A Liaison Officer will be appointed to coordinate this policy amongst the various Deh Cho First Nations communities

#### Nahanni undertakings:

- Use best efforts to procure financial assistance in order to reduce costs of the Access
- Grant quiet enjoyment of the Project and the Access
- Grant an easement for the Access connecting the Project and the Liard Highway
- Share cost saving benefits with the Company as a consequence of its involvement
- Support the Project and do nothing to adversely affect the Project or Access
- Assemble and provide its traditional knowledge in support of the Project and Access.

#### The Company's undertakings:

- Grant to Nahanni a 5% net profits interest of profits after taxation.
- Grant to Nahanni an option to purchase either a 10% or a 15% interest in the Project
- Grant to Nahanni precedence on contracts provided that the contract terms are competitive as to price, delivery, capability, performance and quality
- Upon production, Nahanni and the Project will fund equally between them
  - i) The establishment of The Prairie Creek Education Centre in Nahanni Butte to focus on adult literacy programs and special needs education for children.
  - ii) A Scholarship Trust Fund
- Upon commencement of construction of the Access, the Project will contribute to a Trust Fund to provide compensation to traditional harvesters who are negatively affected by the Project and the Access



#### LAND USE PLANNING ISSUES

#### Nahanni National Park Reserve

Current area

 $4766 \, \text{km}^2$ 

Reserve includes 300 km of 540 km long S. Nahanni River, plus 128 km of Flat River

## Parks Canada Proposed Expansion of Nahanni Park Reserve into 3 new areas:

Ragged Range

 $2000 \, \text{km}^2$ 

Tlogotsho Plateau

 $1175 \, \text{km}^{2}$ 

Nahanni Karst

 $1000 \text{ km}^2$ 

• Total area of expansion

4175 km<sup>2</sup> (88% increase)

Expanded park area

8941 km<sup>2</sup> (1.9x current size)

## South Nahanni River Watershed Land Withdrawal

Total area of watershed

 $37,000 \text{ km}^2$ 

- Proposed by Deh Cho at treaty negotiations table & by Nahanni, Butte BCR
- Supported by Parks Canada as a buffer zone to protect ecological integrity of Park Reserve (32,234 km<sup>2</sup> buffer zone - 6.8x the size of the park reserve)
  - Comparison of buffer zone areas to protect Park Reserve

Buffer zone	Buffer area	Park + buffer area	Park size increase
5 km	3,136 km <sup>2</sup>	7,886 km <sup>2</sup>	1.7x
10 km	6,425 km <sup>2</sup>	11,175 km <sup>2</sup>	2.4x
15 km	9,912 km <sup>2</sup>	14,662 km <sup>2</sup>	<del></del>
20 km	13,340 km <sup>2</sup>	18,090 km <sup>2</sup>	3.1x
Watershed	32,234 km <sup>2</sup>	37,000 km <sup>2</sup>	3.8x 7.8x

### Ram Plateau Proposed Territorial Park

Proposed area

 $12,000 \text{ km}^2$ 

#### **Protected Areas**

- Total areas under proposed land protection  $49.000 \text{ km}^2$ (over 8.5x the size of Prince Edward Island - 5,660 km<sup>2</sup>; pop. 138,000)
- Protected areas would cover almost entire traditional territory of the Nahanni Butte Dene Band (approx. 41, 300 km<sup>2</sup>)

## Implications of land alienation to the Prairie Creek Mine

- Prairie Creek is within the South Nahanni River Watershed; 32 km upstream of Park Reserve boundary; 48 km upstream of confluence with S. Nahanni R.
- Proposed access road passes through northeast section of proposed Nahanni Karst area of park reserve expansion
- Proposed access road passes through southwest section of proposed Ram Plateau Territorial Park; road does not cross the Ram Plateau itself