

Mackenzie Valley Environmental Impact Review Board

December 20, 2000

Box 938 200 Scotia Centre, (5102-50th Avenue) Yellowknife, NT X1A 2N7

By Fax 1-604-688-2043

Our File: EA00-002

Mr. Alan Taylor
Vice-President Exploration
Canadian Zinc Corporation (CZN)
Suite 1202
700 West Pender Street
Vancouver, BC V6C 1G8

Dear Mr. Taylor,

RE: Environmental Assessment Terms Of Reference for the CZN Drill Program and the Cat Camp/Fuel Cache Retrieval and Clean-Up Developments

The Mackenzie Valley Environmental Impact Review Board (Review Board) is pleased to provide CZN its Terms of Reference for the environmental assessment (EA) of the drill program and the cat camp/fuel cache retrieval and clean-up.

As requested, the work plan dates for the fuel cache retrieval and clean-up development EA were amended, and now coincide with the Drill Program EA milestone dates. Please call me at 867-873-9189 if you have any questions regarding the Terms of Reference.

Sincerely,

Luciano Azzolini

Environmental Assessment Officer

c: Peter J. Campbell, Vice President Projects, Review Board CZN distribution list Attach:



WORK PLAN

for the

ENVIRONMENTAL ASSESSMENT

of the

Canadian Zinc Corporation Drill Program

and

Cat Camp/Fuel Cache Retrieval

Development

December 22, 2000

Mackenzie Valley Environmental Impact Review Board

200 Scotia Centre P.O. Box 938 Yellowknife, NT X1A 2N7

Phone: (867) 873-9189 Fax: (867) 920-4761

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1 PURPOSE OF THE WORK PLAN

This Work Plan provides a framework for the Mackenzie Valley Environmental Impact Review Board (Review Board) to undertake the environmental assessment (EA) of the Prairie Creek Drill Program (Mineral Exploration) and the Cat Camp/Fuel Cache Retrieval and Clean-up proposals. The EA will be conducted in accordance with Part 5 of the Mackenzie Valley Resource Management Act (MVRMA).

The work plan describes the general approach to completing the CZN environmental assessments. The work plan also provides resource allocation estimates for completing the EA by staff and the Review Board.

2 Chronology of Events

Canadian Zinc Corporation (CZN) on July 28, 2000, submitted an application to the Mackenzie Valley Land and Water Board (MVLWB) for a Land Use Permit to undertake the following developments:

- To continue mineral exploration by diamond drilling of six (6) new holes in support of future production, and
- to re-establish a 40 km access tote road, to recover cached diesel fuel, and to clean-up the fuel cache site.

On October 4, 2000 the MVLWB referred the development proposal to the Review Board, in accordance with ss.126(1) of the MVRMA, citing the following reasons for the referral,

Referral of the development proposal to the MVEIRB due to the likelihood of the development to have a significant adverse impact on the environment and due to a high level of public concern expressed about the proposal.

The Review Board is required by s.126 of the MVRMA to conduct an EA of the development proposal. The Review Board decided on October 30, 2000 to separately assess each development. This work plan therefore encompasses two environmental assessments; the mineral exploration, and the tote road and fuel cache clean-up.

3 BACKGROUND

This section provides a generalized description of the proposed development. Additional information on development components may be requested by the Review Board to complete the EA. A complete scope of development will be determined by the Review Board and included as part of the EA Terms of Reference that will be issued to the developer as guidance for completing an EA Report.

3.1 Mineral Exploration Development Components

The mineral exploration development includes:

- locating and drilling seven (7) diamond drill cores, each up to 500 m in length, for mineralization sampling in support of future production, approximately 500 m to 1,000 m NE of the mine site;
- drilling with a Longyear Super 38 diamond drill, using water as a carrier fluid and lubricant down hole (down hole chemical use will be kept to a minimum and used only if required);
- access to drill locations by existing network of tote roads;

The Tote road and fuel cache clean-up includes:

- re-establish a 40 km portion of the original access road, from the mine site to the fuel cache location; and,
- clean up of the fuel cache and relocating the fuel and tanks to the mine site.

In both developments, the existing mine site facilities would be used to house field crews. Access to the mine site will be by aircraft, using the 3000 foot private airstrip, and local transportation will be by equipment (e.g., D-8 cat, rock trucks, pick-up trucks) located at the mine site.

3.2 ROLES AND RESPONSIBILITIES

The roles and responsibilities of the Review Board, Review Board's staff and other parties in the EA are explained.

3.2.1 Government and the Public

Regulatory authorities, federal and territorial government departments and expert advisors are encouraged to provide any information they have that is relevant to these EA's. Impacts or issues identified by experts should be clearly identified and substantiated with supporting documentation and information, and analyses. Recommendations and conclusions designed to mitigate impacts should include a rationale for their inclusion and evidence supporting their effectiveness if available. First Nations, the public and other interested parties that wish to provide information relevant to the EA, or that may be asked by the Review Board to provide any relevant information they may have, should do so in a form that is easily available to all stakeholders. All information received will be considered before the Review Board makes a decision on the environmental assessments.

3.2.2 Developer

The Review Board encourages CZN to commence discussions with affected communities, regulatory authorities, federal and territorial government departments, First Nations, the public and other interested parties as early as possible. The Review Board will request CZN to provide a written record verifying consultations, including how consultation may have influenced design of any part of the development. CZN is expected to respond in a suitable and timely course to the EA Terms of Reference that will be issued by the Review Board.

3.2.3 Review Board Functions

The Review Board is required to undertake the following in relation to these two EA's:

- conduct the EA's, in accordance with ss.126(1) of the MVRMA;
- take into account any previous screening or assessment report made in relation to the development, in accordance with s.127 of the MVRMA;
- determine the scope of the development, in accordance with ss.117(1) of the MVRMA;
- consider several factors, in accordance with ss.117(2) of the MVRMA;
- make a determination regarding the environmental impacts and public concern of the development, in accordance with ss.128(1) of the MVRMA;
- report to the federal Minister in accordance with ss.128(2) of the MVRMA; and,
- identify areas, and extent of effects, within or outside the Mackenzie Valley in which the
 development is likely to have a significant adverse impact or be a cause of significant public
 concern.

3.2.4 Staff Functions

The Review Board's Executive Director and staff are the primary contact for the developer, regulatory authorities, federal and territorial government departments, First Nations, expert advisors, the public and other interested parties. The staff member coordinating and facilitating the EA is Mr. Louie Azzolini.

4 EA WORK PLAN

Table 1 provides an estimated timeline for completing each indicated milestone in the two EA processes. The Review Board may amend the milestone dates at its discretion.

Table 1 - Milestone Completion Time Table

Table 1 - Wilestone Completion Time Table		Drill Program
MILESTONE	Tote Road and Fuel Clean-up	EA
Start-up of the EA	October 4, 2000	October 4, 2000
Complete development description submitted		
Advance consultation		
EA Work Plan developed	October 25	October 25
EA Work Plan approval	November 16	November 16
Prepare Draft EA Terms of Reference - including scope of development	November 16	November 16
EA Work Plan and Draft Terms of Reference approved and issued	December 7	December 7
Preparation and submission of EA Report by Developer	January 26	January 26
Conformity check	February 2	February 2
Deficiency statement	As required	As required
Last day for Submission of Information Requests	February 10	February 10
Submission of IR responses	February 16	February 16
Submission of RA and others technical reports	March 2	March 2
Closure of Public Registry	March 19	March 19
EA decision	by March 31	by March 31
Federal Minister's response to the Review Board's Report of EA, if required	-	-
Consultation - throughout / as required	-	-

5 Milestones and Responsibilities

This section summarizes the process for completion of an EA.

5.1 Assessment Process

The EA process is outlined below in Table 2, showing appropriate milestones and responsibility assignments. The RA', and expert advisors would provide information and advice related to regulatory requirements for the development.

Table 2 - Milestones and Responsibility Assignments for steps in the EA

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MILESTONE	Developer	RA / DRA	Staff	Board
Start-up of the EA			•	
Complete development description submitted	•			
Advance consultation	•		•	
EA Work Plan developed			•	
EA Work Plan approval				•
Prepare Draft EA Terms of Reference -		* •	•	
including Scope of Development				
EA Terms of Reference - approved and				
issued				•
Preparation and submission of EA Report	•			
Conformity check		•	•	
Deficiency statement				•
Analysis		•	•	
EA decision				•
Consultation - throughout / as required	•	•	•	•

Once a development proposal has been referred to the Review Board for an EA, the following milestones are established:

- Start-up of the EA;
- Advance consultation;
- · Development description requirements;
- Work Planning;
- The EA Terms of Reference;
- Developer's EA Report;
- Conformity Check;
- Deficiency Statement;
- Technical Analysis;
- Information Requests;
- Consultation; and,
- EA Decision.

The time allocations and the information requirements for each milestone will vary with each EA, and depend upon the complexity, location and duration of the development. These will also vary depending on the reasons for decision provided by the preliminary screener(s), and on the information provided by the developer.

5.1.1 Start-up of the EA

At the start of the EA the developer, RA's, the DRA as required, federal and territorial government departments, First Nations, expert advisors, the public and other interested parties

are informed of the referral. The notification lets people know that while the development is in the EA process, no licence, permit or other authorization can be issued by government. As part of the referral, staff start a public registry on the development and start tracking development issues.

Public, and government notification of the referral is done by:

- Written notification
- News release
- Newspaper advertising

Tasks involved in starting the environmental assessment are listed below.

- Open case file
- · Open public registry and registry log
- Public notification of referral
- Notify regulatory authorities of the referral
- Review Board notifies the developer of the referral

Deliverable: Public registry, public notification, government notification, developer notification, issue tracking, expert advisor identification, responsible authority self-identification.

5.1.2 Advance consultation

Advance consultation is used to identify and inform stakeholders about the EA process. The public, First Nations, and government would be identified and contacted. Advance consultation would parallel the developer submitting additional information as required by the Review Board for work planning purposes. Development of the draft EA Work Plan by Review Board staff would also occur concurrently with Advance consultation.

Pre-scoping meetings and discussions with RA's, as required, and experts to review the referral, development description, and supporting information provided by the developer. A stakeholder notification list is prepared and can include any of the following:

- Communities
- Organizations
- Special Interest Groups
- First Nations
- Relevant Businesses
- Representative Groups
- Government
- Experts
- Regulatory Authorities
- Designated Regulatory Agency (if required)
- Developer
- Staff may conduct public information sessions to inform the public and stakeholders about the Review Board and the EA process. Developers would be asked to participate in these sessions to provide information about their development proposal.
- Possible site visits by the Review Board and staff.

Deliverable: Awareness of the Review Board, the EA process and the development proposal. Any relevant issues raised by the public and stakeholders during this Advance consultation step would be noted and brought to the attention of the Review Board for possible inclusion in the EA Terms of Reference.

5.1.3 Development Description Requirements

The Review Board may require a more detailed and complete description of the proposed development from the developer. This would enable the Review Board to determine a proper scope of development and issue a complete set of EA Terms of Reference that address all phases and components of the development. The developer is responsible for providing a development description that is suitable for consultation with Aboriginal, public and government stakeholders.

The Review Board would inform stakeholders of its direction to the developer using the following involvement methods:

- Fax out of Review Board's direction to the developer;
- News release to media;
- Newspaper advertising informing people of the overall EA process and the Review Board's direction to the developer.

The developer will be responsible for providing its final development description to all identified stakeholders.

Deliverable: A complete description of the proposed development provided by the developer to the Review Board and identified stakeholders.

5.1.4 Work Planning and Time Frames

A work plan for completing the EA will be developed by staff, in consultation with stakeholders. Each work plan is unique as is every development proposal referred to EA. For example, if the developer completed and submitted a detailed EA Report along with any application(s) that triggered the EA, that information could affect the length of time and level of effort spent on a particular step in the EA process, and would be reflected in the Work Plan. An estimate of resource requirements for completing the EA would also be developed. This Work Plan would be developed concurrently during the Advance consultation phase.

Once the Advance consultation phase is completed the draft Work Plan would be presented to the Review Board for its approval.

Deliverable: An approved Work Plan, including an estimate of resource requirements, for completing the EA.

5.1.5 EA Terms of Reference and Scope of Development Determination

The EA Terms of Reference are the Review Board's instructions to the developer designed to ensure the appropriate information is provided to understand the environmental consequences and the benefits of the proposed development. The Terms of Reference are developed from the development description provided by the developer and any other relevant information. The Terms of Reference also provide the scope of the development and scope of assessment determination of the Review Board.

As a minimum, the EA report should include the following:

- Title (of the development proposal);
- Executive summary (translated into appropriate aboriginal languages);

- Description of the development (e.g., phases, timetables, location, technology used, alternatives to the development, development design details taking into account the environment);
- Description of the existing environment, including environmental interactions (e.g., natural and human setting);
- Impact of the development on the environment, including those caused by malfunctions or accidents, and any cumulative impact(s);
- List of potential impacts and the proposed mitigation or remedial measures;
- Identification and description of the residual impacts following mitigation or remedial measures;
- Results and summary of issues from public and community consultation, including any concerns:
- Plans for any environmental management plan, follow-up and monitoring;
- List of supporting evidence and information sources, including previous environmental assessments; and,
- List of the required licences, permits and other authorizations, if relevant.

Staff will coordinate the preparation of the draft Terms of Reference. After the Review Board's consideration and approval of the Terms of Reference, they are issued to the developer and others as required.

Deliverable: Draft and final Terms of Reference, direction to the developer including confirmed scope of development and associated scope of assessment, identification of key issues, effects, baseline data requirements, and desired results of research, and suggested environmental assessment report table of contents.

5.1.6 Preparation and Submission of the EA Report

CZN will use the EA Terms of Reference to complete its EA report and tell the a story of how people and the natural world could be changed by the proposed development and what is to be done about these changes.

Deliverable: An EA report from the developer that addresses the requirements of the EA Terms of Reference, and additional information from other sources as directed by the Review Board.

5.1.7 Conformity Check

After receiving the developer's completed EA report the Review Board will ensure the developer has provided the information requested in the Terms of Reference. Opportunity is provided for parties having expressed an interest to be involved in the EA to contribute to this stage. **Note:** this conformity check determines whether or not the developer has responded to what was asked for in the EA Terms of Reference; it does not reflect the technical adequacy of the information provided by the developer. Any additional technical information, or further explanation, required would be requested through information requests (IR's). IR's would facilitate the technical analysis of the development.

Where a developer has submitted a satisfactory EA report with the original application (e.g., at preliminary screening or at the start of the EA), this conformity check would likely occur shortly after the Review Board's approval and release of the EA Terms of Reference.

Deliverable: A draft deficiency statement of the EA report for Review Board consideration and approval.

5.1.8 Deficiency Statement

The Review Board will decide conformity and, where required, issue a deficiency statement if needed.

Deliverable: Review Board issues deficiency statement on developers EA report.

5.1.9 Technical Analysis

The Review Board's staff will coordinate the analysis of the EA. The aim is to provide opportunities for RA's, federal and territorial governments, First Nations, the public and other interested parties to participate in the EA process and express their ideas, and present their information (e.g., traditional knowledge holders and scientific experts) to the Review Board. The more complete the analysis the better the EA.

The analysis identifies unresolved issues and environmental impacts, and provides possible suggestions for addressing the issues and impacts. Where unresolved or unclear issues or impacts are identified, the developer, and other appropriate parties (e.g., RA's, experts) will have the opportunity of responding. The developer can formally provide and present its views on the information brought to the Review Board's attention after submission of its environmental assessment report including any proposed amendments, additions or refinements to the development or the environmental assessment.

The Review Board tries to secure a sound technical analysis and where warranted will conduct public meetings and hearings.

Deliverable: This is a critical stage in the EA process where the key issues and impacts are identified and opportunities for public input in a public forum are possible. The Review Board would like to receive technical reports from participants that clearly state reviewer's conclusions, recommendations and supporting rationales. At public meetings or hearing, its important that those that want to speak have an opportunity to speak and to listen to others speak.

5.1.10 Information Requests

Throughout the Conformity Check and Technical Analysis phases of the EA, the Review Board and stakeholders may have additional information needs for technical analysis of the developer's environmental assessment report. This information would be requested use of IR's. These IR's and responses would form part of the public registry and body of evidence or information the Review Board would consider.

The Review Board in its Work Plan would identify milestone dates for the submission of IR's and also identify response dates. Depending on the technical adequacy of the information submitted in the developers EA Report, there could be two rounds of IR's during an EA. If a third round were required, then the Work Plan would be revised after the developer and other interested participants were informed and provided an opportunity to comment on the proposed work plan amendment.

Deliverable: The IR's represent very specific and focused requests for clarification or additional information, required in order for the party or parties requesting the information to complete its analysis and reach a conclusion about the developers EA report and proposed development. The developer's response, or the stakeholders response in cases for example where an IR is sent to a government department or RA, to the IR is placed on the public registry and circulated to all stakeholders.

5.1.11 Consultation

The Review Board may decide a round of public consultation is warranted to discuss the developers EA report and stakeholder responses. This consultation could take one of two forms. A forum where people make their presentations about the development proposal to the Review Board; and, as a formal hearing where people could, under certain rules developed by the Review Board, ask questions to any other stakeholder.

Deliverable: A public forum for the Review Board to listen to and get additional information about the EA, the development proposal and the conclusions reached by stakeholders in filed documents.

5.1.12 EA Decision and Written Reasons

The Review Board will prepare its determination after considering the EA Report, its analysis, and the information on the Public Registry. The Review Board will then prepare its written reasons. The Review Board will give the Minister of DIAND, and when required the NEB, its written reasons. The Minister of DIAND, and the NEB when required, will distribute them to every responsible minister. The referring bodies and the developer also receive copies of the Review Board's written reasons.

Staff would work with the Review Board in the preparation of its Report of EA and written reasons.

Deliverable: Report of the Review Board on the EA, with decision and written reasons.

APPENDIX 1 Environmental Assessment Process Overview

APPROACH TO COMPLETING THE MVRMA EA PROCESS

This section provides a more detailed discussion of the Review Board's approach, some general expectations, and milestones in the MVRMA EA process. This approach is used as a template, to be applied specifically to the development undergoing an EA. The Review Board reserves the right to vary or change its approach to completing an EA based on the circumstances, size, and complexity of the development.

The Review Board determines, based on the size, complexity and nature of the development, and on the nature of the environmental effects and public concerns associated with the development, the level of effort and detail required to complete the EA. The level of effort and detail required to complete the EA would be reflected in the Review Board's determination of the scope of the development and scope of assessment, issued with the EA Terms of Reference.

1.0 Review Board Context for Environmental Assessment

The Review Board, in exercising its authority is guided by the following legal principles and by definitions, purposes and factors found in the MVRMA. This context provides the developer, RA's, the DRA (NEB) as required, federal and territorial governments, First Nations, expert advisors, and other affected or interested parties the framework within which the EA will be conducted.

1.1 Legal Principles

The Review Board is governed by the rules of natural justice and procedural fairness. This essentially means that fair play is required when exercising decision making functions. Three of the basic elements are:

- (i) The right to be heard means providing fair opportunity for parties to prepare and state their case, and to correct or contradict relevant statements prejudicial to their position;
- (ii) The rule against bias is a rule against prejudging a case; addressing not only actual bias but also any reasonable apprehension of bias; and,
- (iii) Fettering of discretion means the Review Board is governed by the common law principle which requires that As/he who hears must decide. This means that the Board members who hear or review the evidence in an EA must be the decision makers. Members who did not participate can play no role in the decision. The law also requires that the Board and its members must be free to exercise their full authorities under the statute. The Board must decide each case on its own merits.

1.2 Context

The context within which the Review Board conducts an EA is based on following definitions and indicated sections from the MVRMA.

Development - means any undertaking, or any part of an undertaking, that is carried out on land or water and, except where the context otherwise indicates, wholly within the Mackenzie

Valley, and includes measures carried out by a department or agency of government leading to the establishment of a national park subject to the National Parks Act and an acquisition of lands pursuant to the Historic Sites and Monuments Act.

Environment - means the components of the Earth and includes

land, water and air, including all layers of the atmosphere; all organic and inorganic matter and living organisms; and the interacting natural systems that include components referred to in paragraphs (a) and (b).

Follow-up program - means a program for evaluating

the soundness of an environmental assessment or environmental impact review of a proposal for a development; and

the effectiveness of the mitigative or remedial measures imposed as conditions of approval of the proposal.

Harvesting - in relation to wildlife, means hunting, trapping or fishing activities carried on in conformity with a land claim agreement or, in respect of persons and places not subject to a land claim agreement, carried on pursuant to aboriginal or treaty rights.

Heritage resources - means archaeological or historic sites, burial sites, artifacts and other objects of historical, cultural or religious significance, and historical or cultural records.

Impact on the environment - means any effect on land, water, air or any other component of the environment, as well as on wildlife harvesting, and includes any effect on the social and cultural environment or on heritage resources.

Mitigative or remedial measure - means a measure for the control, reduction or elimination of an adverse impact of a development on the environment, including a restorative measure.

s.114 The purpose of this Part is to establish a process comprising a preliminary screening, an environmental assessment and an environmental impact review in relation to proposals for developments, and

to establish the Review Board as the main instrument in the Mackenzie Valley for the environmental assessment and environmental impact review of developments; to ensure that the impact on the environment of proposed developments receives careful consideration before actions are taken in connection with them; and to ensure that the concerns of aboriginal people and the general public are taken into account in that process.

s.115 The process established by this Part shall be carried out in a timely and expeditious manner and shall have regard to

the protection of the environment from the significant adverse impacts of proposed developments; and

the protection of the social, cultural and economic well-being of residents and communities in the Mackenzie Valley.

ss.117(1) Every environmental assessment of a proposal for a development shall include a determination by the Review Board of the scope of the development, subject to any guidelines made under section 120.

ss.117(2) Every environmental assessment and environmental impact review of a proposal for a development shall include a consideration of:

- the impact of the development on the environment, including the impact of malfunctions or accidents that may occur in connection with the development and any cumulative impact that is likely to result from the development in combination with other developments;
- the significance of any such impact;
- any comments submitted by members of the public in accordance with the regulations or the rules of practice and procedure of the Review Board;
- where the development is likely to have a significant adverse impact on the environment, the imposition of mitigative or remedial measures; and
- any other matter, such as the need for the development and any available alternatives to it, that the Review Board or any responsible minister, after consulting with the Review Board, determines to be relevant.

Environmental Assessment

Terms of Reference

for the

Canadian Zinc Corporation

Drill Program

Development

December 22, 2000

Issued by:

Mackenzie Valley Environmental Impact Review Board

200 Scotia Centre P.O. Box 938 Yellowknife, NT X1A 2N7

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1 INTRODUCTION

These EA Terms of Reference (ToR) provide direction to the Canadian Zinc Corporation (CZN) on what information is required about the proposed development and its potential environmental effects. The ToR also provide guidance to the CZN for the submission of this information in the form of an EA Report. The information provided will assists the Review Board in reaching an EA decision, in accordance with ss.128(1) of the MVRMA. The Review Board will conduct the EA and make its decision in the context of Part 5 of the MVRMA.

1.1 Chronology of Events

Canadian Zinc Corporation (CZN) applied to the Mackenzie Valley Land and Water Board (MVLWB) on July 28, 2000 for a Land Use Permit (LUP) to undertake diamond drilling of seven (7) new holes, and to re-establish a 40 km portion of the original access tote road, to recover cached diesel fuel, and to clean up the fuel cache site. San Andreas Resources Corporation changed its name to Canadian Zinc Corporation on May 25, 1999 under the Company Act of British Columbia. San Andreas Resources had previously acquired the property from Nanisivik Mines Ltd. in 1993. It was Cadillac Explorations limited that originally developed the property and subsequently went bankrupt in 1982.

On October 4, 2000 the MVLWB referred the development proposal to the Review Board, in accordance with ss.126(1) of the MVRMA, citing the following reasons for the referral,

Referral of the development proposal to the MVEIRB due to the likelihood of the development to have a significant adverse impact on the environment and due to a high level of public concern expressed about the proposal.

The Review Board is required by s.126 of the MVRMA to conduct an EA of the development proposal.

2 SCOPE OF THE DEVELOPMENT

The Review Board is required to provide a scope of development determination according to ss.117(1) of the MVRMA. This section describes what the Review Board considers the scope of the diamond drill program.

2.1 Principal Development

The development proposes:

An exploration program to drill seven (7) exploration holes, in an area adjacent to the
existing underground workings (see figure 1), on land for which active mining leases exist.

2.2 Accessory Developments and Activities

The activities associated with the development proposal include:

- Use of an existing tote road to access the drill sites.
- Use of water from a local water supply for drilling purposes.
- Use of a sump to retain drill cuttings and any return water.
- Timber removal.
- Development of additional tote roads.

• Return of equipment to the main mine site.

Figure 1 - Exploratory Drill Program Location map

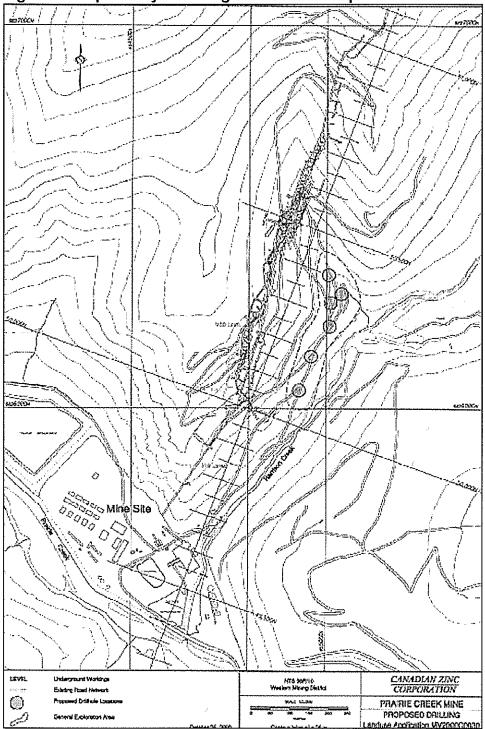


Figure 1 Source: Canadian Zinc Corporation

2.2.1 Logistical Support

To undertake the proposed development the following logistical support services and infrastructure would be utilized.

Use of existing mine site facilities at Prairie Creek as base camp for operations;

3 SCOPE OF ASSESSMENT

Scope of assessment covers the components of the environment that will be evaluated for impacts from the proposed development. For the purposes of this environmental assessment, MVRMA ss.117(2) factors must be considered, as well as,

- Impact on the environment means any effect on land, water, air or any other component of the
 environment, as well as on wildlife harvesting, and includes any effect on the social and cultural
 environment or on heritage resources.
- Environment means the components of the Earth and includes land, water and air, including all layers of the atmosphere; all organic and inorganic matter and living organisms; and the interacting natural systems.
- Harvesting in relation to wildlife, means hunting, trapping or fishing activities carried on in conformity with a land claim agreement or, in respect of persons and places not subject to a land claim agreement, carried on pursuant to aboriginal or treaty rights.

In making this determination, the Review Board took into account the reasons for referral, the project description, previous screening reports, public comments and other documents on the public registry.

3.1 Previous Screenings and Reports

In accordance with s.127 of the MVRMA, the Review Board is required to consider any report made in relation to the development proposal under the Canadian Environmental Assessment Act (CEAA) and the Environmental Assessment and Review Process Guidelines Order (EARPGO) before the proclamation of the MVRMA. The Prairie Creek mine was established in 1982/83, and has been under different ownership since that time. The site is maintained under a Land Lease issued by DIAND that was transferred to the present owners, Canadian Zinc Corporation.

Application for this development proposal was made to the MVLWB for a Land Use Permit under the MVRMA. A preliminary screening was completed by the MVLWB on October 4. There were no CEAA or EARPGO reports identified by preliminary screeners with respect to this development proposal; however, there is a completed environmental assessment reports for the Prairie Creek mine, and some of the information is relevant to the environmental assessment of this development.

4 ENVIRONMENTAL ASSESSMENT

This section provides direction to CZN about the information required by the Review Board and its advisors in order to make an EA decision.

The EA Terms of Reference are the Review Board's instructions to CZN are designed to ensure the appropriate information is provided to understand the environmental consequences and the benefits of the proposed development. The Terms of Reference are developed from the development description provided by the developer and other relevant information. The Terms of Reference also

provide the scope of the development and scope of assessment determination of the Review Board. The Review Board may also request CZN to respond to Information Requests from Regulatory Authorities, expert advisors, and interested participants.

As a minimum, the EA report prepared CZN should include the following:

- Title (of the development proposal),
- Executive Summary,
- Description of the development (e.g., phases, timetables, location, technology used, alternatives
 to the development, development design details taking into account the environment),
- Description of the existing environment potentially impacted by the proposed development, (e.g., natural and human setting),
- Impact of the development on the environment, including those caused by malfunctions or accidents, and any cumulative impact(s),
- List of potential impacts and the proposed mitigation or remedial measures,
- · Identification and description of the residual impacts following mitigation or remedial measures,
- Results and summary of issues from public and community consultation, including any concerns, and
- List of supporting evidence and information sources, including previous environmental assessments.

For clarity, the scope of factors to be considered in the environmental assessment shall include, the following.

4.1 Environmental Impacts

The environmental assessment report shall report impacts resulting from the proposed development on the physical, biological and social, economic and cultural components of the environment.

4.1.1 Air Quality and Climate

Report the impacts of the proposed development on air quality. Include a discussion of measures considered to minimize the release of air contaminants (dust, particulate exhaust fumes and other air contaminants).

4.1.2 Terrain

Report the impacts on the environment when surficial geology, bedrock or soils are disturbed, or used for construction purposes.

4.1.3 Vegetation and Plant Communities

Report the impacts of the proposed development on local plant communities, rare or highly valued species and long-term, direct and indirect, habitat loss or alteration.

4.1.4 Water Quality and Quantity

Report the impacts of proposed development impacts on surface and ground waters. This analysis shall include the impacts on water quality and quantity, catchment areas.

4.1.5 General Water

Report the impacts of proposed development on water quality including contaminant loading and dispersion (including surface runoff and airborne contaminants).

4.1.6 Aquatic Habitat

Report the impacts on aquatic organisms and their habitat shall be considered taking into account predicted water quality and quantity impacts.

4.1.7 Wildlife and Wildlife Habitat

Report the direct and indirect environmental impact of the proposed development on wildlife and wildlife habitats, including migratory birds. Special consideration shall be given to species listed as vulnerable or endangered on the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) list.

4.1.8 Cultural and Heritage Resources

Describe potential impacts of the proposed development on cultural and heritage resources.

4.1.9 Land and Resources Use

Report the impacts of the proposed development on the use of land, water and renewable resources, including:

- Traditional land use and occupation.
- · Existing land use and occupation.
- Hunting, trapping, and outfitting, recreational, commercial and sport fishing.
- Availability, abundance and quality of wildlife, fishing, gathering, recreational
- Commercial land and water-based areas.
- Protected areas.

4.1.10 Economy

Report the impact of the proposed development on the economy, having regard to direct, indirect and induced impacts on income and employment. Include incremental abandonment and restoration costs resulting from the proposed development.

4.1.11 Noise

Report the impact of the proposed development on the environment resulting from changes to ambient noise levels, continuous exposure versus acute noise.

4.1.12 Visual and Aesthetic Resources

Report the visual and aesthetic impact of the proposed development. Report design components that mitigate visual and aesthetic impacts.

4.2 Additional Direction to the Developer

In addition to the information requirements set out above, CZN shall provide the following:

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.

4.2.2 Developer Identification and Performance Record

CZN shall provide developer specific information including the name of company representatives managing the proposed development and corporate directors. Include company incorporation and structure. Briefly summarize, the developer's corporate history in Canada and the Northwest Territories, and that of its partners, if any. The brief discussion shall include proposed development ownership, organizational structure identifying organizational responsibilities for the development and operations, and an environmental performance record at the current site.

4.2.3 Tenure

Clearly delineate using appropriate mapping the surface interests that CZN intends to secure through the Land Use Permit and/or other tenure arrangements for the proposed development.

4.2.4 Regulatory Regime

Provide a table summarizing relevant licenses, permits and other authorizations that are required, or require amendment to allow the proposed development to occur. Include, for reference purposes, existing permits and other authorizations that remain in force, and do not require amendment to allow the proposed development to occur, and their respective durations.

4.2.5 Accidents and Malfunctions

The probability, risk and potential magnitude of an accident or malfunction, and contingencies in the event of an accident and/or malfunction occurrence, related to the proposed development including, but not limited to fuel and other hazardous material spills.

4.2.6 Consultation

Provide a summary of all consultations completed, including those with government, the Nahanni Butte Dene Band, the Liidlii Kue First Nation (Fort Simpson) and the Deh Cho First Nation, indicating how any concerns raised by the community have been addressed.

4.2.7 Alternatives

Provide an explanation of viable alternatives to the principle and accessory parts of the development (e.g., winter Cat Trail haul, on-site incineration). Indicate the risks associated with each alternative and indicate whether or not a winter completion of the proposed development is a viable alternative, and if not, explain why not.

4.2.8 Closure and Reclamation

Describe, report and evaluate, in relation to the proposed development, the abandonment and reclamation of the following:

- The Tote road.
- The fuel cache cat camp areas.

4.3 Additional Direction to the Developer

In addition to the information requirements set out above, CZN shall provide the following

4.3.1 Developer Identification and Performance Record

CZN shall provide developer information including name of company representatives managing the proposed development. Include company incorporation and structure. Briefly summarize, the developer's corporate history in Canada and the Northwest Territories, and that of its partners, if any. The brief discussion shall include proposed development ownership, organizational structure identifying organizational responsibilities for the development and operations, and an environmental performance record at the current site.

4.3.2 Tenure

Clearly delineate using appropriate mapping the surface extents that CZN intends to secure through the Land Use Permit and/or other tenure arrangements for the proposed development.

4.3.3 Regulatory Regime

Provide a table and map summarizing relevant licenses, permits and other authorizations that are required, or require amendment to allow the proposed development to occur. Include, for reference purposes, existing permits and other authorizations that remain in force, and do not require amendment to allow the proposed development to occur, and their respective durations.

4.3.4 Accidents and Malfunctions

Probability, potential magnitude, and contingencies in the event of an accident and/or malfunction occurrence, related to the proposed development including, but not limited to fuel and other hazardous material spills.

4.3.5 Consultation

Provide a summary of consultations completed with government and the Nahanni Butte Dene Band, the Liidlii Kue First Nation (Fort Simpson) and the Deh Cho First Nation, indicating how any concerns raised by the community have been addressed.

4.3.6 Alternatives

Provide an explanation of the alternatives to the principle and accessory parts of the development. Indicate if a winter completion of the proposed development is a viable alternative, and if not, explain why not.

4.4 Direction to Others

The Review Board may also request information from expert advisors, RA's, or others, through the issuance of information requests (IR's). Information requested and received through the IR process would assist the Review Board in completing the EA and reaching an EA decision. Parties receiving an IR should provide clear rationale for statements made, conclusions reached and any recommendations provided to the Review Board. With an anticipated EA decision date of late March 31, all responses to IR's and any other information parties wish to provide to the Review Board should be submitted as soon as possible, and certainly before the closure of the public registry.

5.0 EA DECISION PROCESS

When the public registry has closed for this EA the Review Board will consider all of the evidence received and reach an EA decision in accordance with ss.128(1) of the MVRMA. Once the Review Board has made a decision and provided its written reasons, the Review Board's Report of EA, made in accordance with ss.128(2), will be forwarded to the federal Minister of DIAND for his decision in accordance with s.130.

Environmental Assessment

Terms of Reference

for the

Canadian Zinc Corporation

Cat Camp/Fuel Cache Retrieval and Clean-up

Development

December 22, 2000

Issued by:

Mackenzie Valley Environmental Impact Review Board

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1 INTRODUCTION

These EA Terms of Reference (ToR) provide direction to the Canadian Zinc Corporation (CZN) on what information is required about the proposed development and its potential environmental effects. The ToR also provides guidance to CZN for the submission of this information in the form of an EA Report. The information provided will assist the Review Board in reaching an EA decision, in accordance with ss.128(1) of the MVRMA. The Review Board will conduct the EA and make its decision in the context of Part 5 of the MVRMA.

1.1 Chronology of events

Canadian Zinc Corporation applied to the Mackenzie Valley Land and Water Board (MVLWB) on July 28, 2000 for a Land Use Permit (LUP) to undertake diamond drilling of up to (7) new holes, and to re-establish a 40 km portion of the original access tote road, to recover cached diesel fuel, and to clean up the fuel cache site. San Andreas Resources Corporation changed its name to Canadian Zinc Corporation on May 25, 1999 under the Company Act of British Columbia. San Andreas Resources had previously acquired the property from Nanisivik Mines Ltd. in 1993. It was Cadillac Explorations limited that originally developed the property and subsequently went bankrupt in 1982.

On October 4, 2000 the MVLWB referred the development proposal to the Review Board, in accordance with ss.126(1) of the MVRMA, citing the following reasons for the referral,

Referral of the development proposal to the MVEIRB due to the likelihood of the development to have a significant adverse impact on the environment and due to a high level of public concern expressed about the proposal.

The Review Board is required by s.126 of the MVRMA to conduct an EA of the development proposal.

2 SCOPE OF THE DEVELOPMENT

The Review Board is required to provide a scope of development determination according to ss.117(1) of the MVRMA. This section describes what the Review Board considers the scope of the Cat Camp/Fuel Cache Retrieval and Clean-up development. The Review Board has decided to split the proposed development.

2.1 Principal Development

The development proposes:

- re-establish a 40 km portion of the original access road, from the mine site to the fuel cache location; and,
- clean-up of the fuel cache and relocating the fuel and tanks to the mine site.

2.2 Accessory Developments and Activities

The activities associated with the development proposal include:

2.2.1 Re-establish Tote Road (Road Access Rehabilitation)

Access to the cat camp where the fuel is located from the mine site along a previously developed winter access road would include the following:

- Repair of road,
- Surface clean-up of the existing road,

- Repair of road washouts including use of borrow pit material,
- Use of local fill as available adjacent to the existing roadbed,
- Placement of culverts for drainage control,
- Road maintenance using on-site equipment including a D-8 Cat, loader and backhoe, and
- Undertake approximately three weeks of road rehabilitation in July and August.

2.2.2 Fuel Cache Removal

Removal of the fuel cache would entail the following:

- Use of two Volvo 5350 rock trucks fitted with a suitable containment vessel located and fixed to the truck boxes. Containment vessels are either collapsible fabric such as the Terra Tank Petro Guard Bladder or lightweight polyethylene hard plastic tanks,
- Transfer 30,000 gallons of fuel from the Cat Camp bulk storage to the Volvo trucks using a
 portable gas pump,
- Transport of fuel to the mine site, and
- Transfer of the fuel to the mine's main tank farm using a second pump.

2.2.3 Fuel Cache Clean-up

Upon completion of the fuel transfer the developer proposes to undertake the following:

- Transport the skid mounted tanks to the mine site by flatbed truck, and
- Relocate trailers, barrels and excess culverts to the mine site.

2.2.4 Logistical Support

To undertake the proposed development the following logistical support services and infrastructure would be utilized.

- Use of existing mine site facilities at Prairie Creek as base camp for operations,
- Use of existing trucking equipment to haul fuel and fuel tanks back to base camp,
- Helicopter support for safety and personnel transport to fuel cache and mineral exploration drilling locations, and
- Permanent storage of fuels and lubricants at mine site.

The description of the development adopted by the Review Board was compiled with the assistance of, and with information provided by the developer and reviewers.

3 SCOPE OF ASSESSMENT

Scope of assessment covers the components of the environment that will be evaluated for impacts from the proposed development. For the purposes of this environmental assessment, MVRMA ss.117(2) factors must be considered, as well as,

- Impact on the environment means any effect on land, water, air or any other component of the
 environment, as well as on wildlife harvesting, and includes any effect on the social and cultural
 environment or on heritage resources.
- Environment means the components of the Earth and includes land, water and air, including all layers of the atmosphere; all organic and inorganic matter and living organisms; and the interacting natural systems.
- Harvesting in relation to wildlife, means hunting, trapping or fishing activities carried on in conformity with a land claim agreement or, in respect of persons and places not subject to a land claim agreement, carried on pursuant to aboriginal or treaty rights.

In making this determination, the Review Board took into account the reasons for referral, the project description, previous screening reports, public comments and other documents on the public registry.

3.1 Previous Screenings and Reports

In accordance with s.127 of the MVRMA, the Review Board is required to consider any report made in relation to the development proposal under the Canadian Environmental Assessment Act (CEAA) and the Environmental Assessment and Review Process Guidelines Order (EARPGO) before the proclamation of the MVRMA. The Prairie Creek mine was established in 1982/83, and has been under different ownership since that time. The site is maintained under a Land Lease issued by DIAND that was transferred to the present owners, Canadian Zinc Corporation.

Application for this development proposal was made to the MVLWB for a Land Use Permit under the MVRMA. A preliminary screening was completed by the MVLWB on October 4. There were no CEAA or EARPGO reports identified by preliminary screeners with respect to this development proposal; however, there is a completed environmental assessment report for the Prairie Creek mine, and some of the information is relevant to the environmental assessment of this development.

4 ENVIRONMENTAL ASSESSMENT

This section provides direction to CZN about the information required by the Review Board and its advisors in order to make an EA decision.

The EA Terms of Reference are the Review Board's instructions to CZN are designed to ensure the appropriate information is provided to understand the environmental consequences and the benefits of the proposed development. The Terms of Reference are developed from the development description provided by the developer and other relevant information. The Terms of Reference also provide the scope of the development and scope of assessment determination of the Review Board. The Review Board may also request CZN to respond to Information Requests from Regulatory Authorities, expert advisors, and interested participants.

As a minimum, the EA report prepared by the developer should include the following:

- Title (of the development proposal),
- Executive Summary,
- Description of the development (e.g., phases, timetables, location, technology used, alternatives to the development, development design details taking into account the environment).
- Description of the existing environment potentially impacted by the proposed development, (e.g., natural and human setting),
- Impact of the development on the environment, including those caused by malfunctions or accidents, and any cumulative impact(s),
- List of potential impacts and the proposed mitigation or remedial measures.
- Identification and description of the residual impacts following mitigation or remedial measures,
- Results and summary of issues from public and community consultation, including any concerns, and
- List of supporting evidence and information sources, including previous environmental assessments.

For clarity, the scope of factors to be considered in the environmental assessment shall include, the following.

4.1 Environmental Impacts

The environmental assessment report shall report impacts resulting from the proposed development on the physical, biological and social, economic and cultural components of the environment.

4.1.1 Air Quality and Climate

Report the impacts of the proposed development on air quality. Include a discussion of measures considered to minimize the release of air contaminants (dust, particulate exhaust fumes and other air contaminants).

4.1.2 Terrain

Report the impacts on the environment when surficial geology, bedrock or soils are disturbed, or used for construction purposes.

4.1.3 Vegetation and Plant Communities

Analyze impacts of the proposed development on local plant communities, rare or highly valued species, and long-term, direct and indirect, habitat loss or alteration.

4.1.4 Water Quality and Quantity

Provide an analysis of proposed development impacts on surface and ground waters. This analysis shall include the impacts on water quality and quantity, catchment areas.

4.1.5 General Water

The assessment of proposed development impacts on water quality should consider contaminant loading and dispersion (including surface runoff and airborne contaminants).

4.1.6 Aquatic Habitat

The impacts on aquatic organisms and their habitat shall be considered taking into account predicted water quality and quantity impacts.

4.1.7 Wildlife and Wildlife Habitat

The environmental assessment report shall provide an analysis of the proposed development's impacts, (both direct and indirect), on wildlife and wildlife habitats, including migratory birds. Special consideration shall be given to species listed as vulnerable or endangered on the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) list.

4.1.8 Cultural and Heritage Resources

Describe potential impacts of the proposed development on cultural and heritage resources.

4.1.9 Land and Resources Use

Assess the impacts of the proposed development on the use of land, water and renewable resources, including:

- Traditional land use and occupation.
- Existing land use and occupation.
- Hunting, trapping, and outfitting, recreational, commercial and sport fishing.

- · Availability, abundance and quality of wildlife, fishing, gathering, recreational
- Commercial land and water-based areas.
- Protected areas.

4.1.10 Economy

The impact of the proposed development on the economy, having regard to direct, indirect and induced impacts on income and employment. Incremental abandonment and restoration costs resulting from the proposed development.

4.1.11 Noise

Assess the impact of the proposed development on the environment resulting from changes to ambient noise levels, continuous exposure versus acute noise.

4.1.12 Visual and Aesthetic Resources

Assess the visual and aesthetic impact of the proposed development. Report design components that mitigate visual and aesthetic impacts.

4.2 Additional Direction to the Developer

In addition to the information requirements set out above, CZN shall provide the following:

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.

4.2.2 Developer Identification and Performance Record

CZN shall provide developer specific information including the name of company representatives managing the proposed development and corporate directors. Include company incorporation and structure. Briefly summarize, the developer's corporate history in Canada and the Northwest Territories, and that of its partners, if any. The brief discussion shall include proposed development ownership, organizational structure identifying organizational responsibilities for the development and operations, and an environmental performance record at the current site.

4.2.3 Tenure

Clearly delineate using appropriate mapping the surface interests that CZN intends to secure through the Land Use Permit and/or other tenure arrangements for the proposed development.

4.2.4 Regulatory Regime

Provide a table summarizing relevant licenses, permits and other authorizations that are required, or require amendment to allow the proposed development to occur. Include, for reference purposes, existing permits and other authorizations that remain in force, and do not require amendment to allow the proposed development to occur, and their respective durations.

4.2.5 Accidents and Malfunctions

Provide the probability, risk and potential magnitude of an accident or malfunction, and contingencies in the event of an accident and/or malfunction occurrence, related to the proposed

development including, but not limited to fuel and other hazardous material spills.

4.2.6 Consultation

Provide a summary of all consultations completed, including those with government, the Nahanni Butte Dene Band, the Liidlii Kue First Nation (Fort Simpson) and the Deh Cho First Nation, and the Village of Fort Simpson indicating how any concerns raised by the community have been addressed.

4.2.7 Alternatives

Provide an explanation of viable alternatives to the principle and accessory parts of the development (e.g., winter Cat Trail haul, on-site incineration). Indicate the risks associated with each alternative and indicate whether or not a winter completion of the proposed development is a viable alternative, and if not, explain why not.

4.2.8 Closure and Reclamation

Describe, report and evaluate, in relation to the proposed development, the abandonment and reclamation of the following:

- The Tote road.
- The fuel cache cat camp areas.

4.2.9 Land Use

The Nahanni Butte Dene Band and Deh Cho First Nations have identified the South Nahanni River watershed for any Nahanni National Park Reserve (NNPR) expansion. A portion of the tote road passes through the Nahanni Karst area, an area identified by Parks Canada as one of three Parks Canada NNPR expansion areas. Explain and report what efforts are being made to keep the impact to the environment to a minimum on the Karst portion of the tote road. Also, identify known land use conflicts, if any, in relationship to the scope of development, and its residual environmental effects.

4.3 Direction to Others

The Review Board may request information from expert advisors, RA's, or others, through the issuance of information requests (IR's). Information requested and received through the IR process would assist the Review Board in completing the EA and reaching an EA decision. Parties receiving an IR should provide clear rationale for statements made, conclusions reached and any recommendations provided to the Review Board. With an anticipated EA decision date of late January 23, all responses to IR's and any other information parties wish to provide to the Review Board should be submitted as soon as possible, and certainly before the closure of the public registry.

5.0 EA DECISION PROCESS

When the public registry has closed for this EA the Review Board will consider all of the evidence received and reach an EA decision in accordance with ss.128(1) of the MVRMA. Once the Review Board has made a decision and provided its written reasons, the Review Board's Report of EA, made in accordance with ss.128(2), will be forwarded to the federal Minister of DIAND for his decision in accordance with s.130.