

**Terms of Reference and Work Plan**  
*for the*  
**Environmental Assessment**  
*of the*  
**Jane Lind**  
**Horn River Mineral Exploration**

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# 1 INTRODUCTION

## 1.1. Purpose of this Document

This document outlines the process of the Environmental Assessment for the proposed mineral exploration of the Horn River area near the Horn River Plateau in the Northwest Territories. Section 2 defines the scope of development that is being assessed. Section 3 defines the scope of the assessment, i.e. the issues that will be addressed in this assessment. Section 4 provides the developer with terms of reference for the Developer's Assessment Report (DAR). Finally, Section 5 defines the responsibilities of those involved in the assessment and provides an overview of the process and a schedule.

## 1.2. Referral to Environmental Assessment

Jane Lind applied for a Land Use Permit (MV2004C0030 and MV2001C0022) to the Mackenzie Valley Land and Water Board (MVLWB) on May 7, 2004. The MVLWB carried out a Preliminary Screening of the proposed development according to Section 124 of the *Mackenzie Valley Resource Management Act* (MVRMA). The MVLWB consulted thirty-eight (38) organizations during the Preliminary Screening process.

On June 1, 2004 the MVLWB referred the proposed development to Environmental Assessment, according to Section 125 of the MVRMA, citing public concern regarding the location of the proposed development within the Edehzie Candidate Protected Area. The MVEIRB notified the developer on June 3, 2004 that the Environmental Assessment had been started.

## 1.3. Legal Context

This Environmental Assessment is subject to the requirements of Part 5 of the MVRMA. It is also subject to the MVEIRB's Rules of Procedure. These documents can be accessed on the MVEIRB's web site ([www.mveirb.nt.ca](http://www.mveirb.nt.ca)). Please contact the MVEIRB for further information.

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## **2 Scope of Development**

### **2.1. Principal Development**

The proposed mineral exploration development includes the following components:

- Drill holes (minimum 4) using a Boyles 25A or equivalent drill
- Ground geophysical surveys using magnetometer and electromagnetics

### **2.2. Accessory Developments and Activities**

The proposed mineral exploration development also includes the following accessory components:

- Construction of 8 person camp
- Helicopter pad construction (all helicopter access)
- Drill site preparation (some clearing and leveling)
- Reclamation of the drill sites, campsite and helicopter pad
- Drill waste disposal
- Camp waste disposal
- Fuel storage
- Surface water removal for drill fluids

### **Scope of Assessment**

The scope of this assessment is described by these terms of reference and may include other issues. The Review Board notes that the MVLWB referred the development to Environmental Assessment because of public concern, regarding the location of the proposed development within the boundaries of the Edehddie Candidate Protected Area. The public record of the Preliminary Screening provides some material for the Review Board's EA consideration, in accordance with section 117 of the *Mackenzie Valley Resource Management Act* (MVRMA), however the Board retains the right to raise other issues in the course of the assessment if it deems appropriate.

The MVEIRB requires more information on social, economic, cultural and environmental impacts. This is reflected in the items requested in Section 4 of this document.

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## Terms of Reference

### 4.1. General Terms

Jane Lind is to provide the Review Board with a Developer's Assessment Report that provides the information requested in section 4.2. Jane Lind is required to:

**Identify the development activity;**

**Identify all changes this activity produces in the environment;**

**Identify all potential impacts of these changes (with supporting rationale and evidence if possible);**

**Propose mitigation measures and provide evidence and/or rationale showing the effectiveness of the mitigation measures; and**

**Predict the residual impacts that cannot be mitigated.**

When describing impacts, Jane Lind is expected to characterize the impact in terms of:

**Direction (beneficial/adverse);**

**Magnitude;**

**Geographical extent (spatial boundaries);**

**Duration;**

**Frequency;**

**Probability;**

**Reversibility; and,**

**Significance<sup>1</sup>.**

For each impact prediction or proposed mitigation, all uncertainties (e.g. due to poor baseline data or low predictive validity) should be stated explicitly.

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<sup>1</sup> Although the Review Board will make a final determination of significance, the developer should submit its views on significance for each impact.

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## 4.2. Specific Terms

### A Summary

- A-1 *Non Technical Summary*: Please provide a plain language, non-technical summary of the Developer's Assessment Report (DAR) to enable the public to follow the proceedings.
- A-2 *Executive Summary*: Please provide an executive summary of the DAR, containing the most relevant points for decision-makers.
- A-3 *Conformity Table*: Include a table cross referencing the items in these Terms of Reference with relevant sections of the DAR.

If requested by the Review Board, the developer will have the summaries translated to the appropriate Aboriginal language(s).

### B Developer

- B-1 *Company Corporate History*: Summarize the company's corporate history in Canada and the Northwest Territories as well as the regulatory and consultation history in the Horn River area. Also include the corporate histories of any partners.
- B-2 *Proposed Development Ownership*: List all owners of the proposed developments and the portion each will own. Also include details of financial securities for government liabilities in the event of bankruptcy or other unforeseen failure to complete the project.
- B-3 *Organizational Structure*: Identify corporate and individual responsibilities for the proposed development and associated operations.
- B-4 *Operational Structure*: Describe the relationship between the parent company, its contractors, and subcontractors. Also detail how the company will ensure the contractors and subcontractors utilized will be responsible for, and honour commitments made by the parent company.
- B-5 *Environmental Performance Record*: Provide a record of environmental performance of the company and its contractors in conducting this type of development.

### C Development Description

The Board requires a complete development description.

*Note: In this section the developer is only asked to provide details on the development itself, not on impacts from the development.*

- C-1 *Timing*: Provide the proposed schedule for the project, and identify any time constraints.
- C-2 *Access Route*: Describe the access route for all building materials, equipment

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and personnel required for the proposed development.

- C-3 *Operations:* Describe the timing of the operations. Also, describe the operations in terms of employees, contractors, schedules and worker accommodations.
- C-4 *Waste Management:* Provide a detailed description of waste management plans, including the types and quantities of waste generated by each activity. The equipment and/or facility requirements for storage, transport and disposal should also be included along with the locations of any such storage, transport or disposal.
- C-5 *Accidents and Malfunctions:* List any possible accidents or malfunctions that may occur and describe the procedures to be followed in such instances (include the probability, potential magnitude and potential environmental impacts of any such accidents or malfunctions).
- C-6 *Abandonment and Restoration:* Describe the plans for abandonment and restoration.
- C-7 *Airphotos and Drawings:* Include a plan view drawing, to scale, of the proposed development superimposed on an airphoto or satellite image of the site. Also indicate detailed site-specific locations for proposed drilling sites and all related activities.
- C-8 *Other:* Describe any other relevant proposed activities or development components.
- C-9 *Modifications:* Provide details of any changes or modifications to the development description as presented in the Preliminary Screening phase that may occur throughout the EA phase. 2
- C-10 *Future Development:* Provide information about future development plans associated with this exploration program in the Horn River area. In the event that this project does reach an advanced stage of exploration, please outline a mitigation plan to address potential impacts of such an operation in the Candidate Protected Area adjacent to the exploration block(s). For example, would the developer propose a buffer zone around the exploration block to reduce impacts associated with activities such as overflights, dust, noise, etc?

## **D Effects of the Physical Environment**

This section pertains to potential changes to the development, e.g. timing or alternative methods, caused by the environment.

- D-1 *Description of Effects:* List and describe all effects that the environment may have on your development (e.g. effects of a forest fire, late freeze up)
- D-2 *Changes to Development:* List and describe any changes or modifications to your proposed development design that may be caused by the environment (e.g. late ice break-up, flooding).

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<sup>2</sup> This information should be updated on an ongoing basis.

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## **E Alternatives**

- E-1* Evaluate the need for this development and identify possible alternatives to the project in question, given that the proposed development area is surrounded by a Candidate Protected Area and the full ecological and non-renewable resource assessments are still in progress.
- E-2* Identify alternative methods for the project.
- E-3* *Waste Management:* Contrast the environmental impacts of different waste management alternatives and provide the rationale for the preferred method for the proposed undertaking.

## **F Regulatory Regime**

- F-1* *Licenses, Permits and Authorizations:* Provide a table summarizing relevant licenses, permits or other authorizations required for the proposed development. Also include a summary of land ownership and the present state of each license or authorization required.

## **G Public Consultation**

- G-1* *Records:* Provide minutes and a summary of consultation undertaken with the public, Aboriginal organizations, land owners, federal, territorial and municipal governments and industry. Include dates and participants. This should include clear evidence of, and details from, consultation directly with members of potentially affected communities.
- G-2* *Issues:* Identify the issues raised, how they were resolved and what issues remain unresolved.

## **H Assessment Boundaries**

- H-1* *Spatial:* Provide a rationale for setting the spatial boundaries for the impacts described below.
- H-2* *Temporal:* Provide a rationale for setting the temporal boundaries for the impacts described below.

## **I Human Environment**

### **Socio-Cultural and Economic Matters**

- I-1* *Direct and Indirect Economic Impacts:* Describe potential direct and indirect economic impacts on the potentially affected communities.
- I-2* *Direct and Indirect Socio-Cultural Impacts:* Describe potential direct and indirect impacts on the social and cultural environment of potentially affected communities.

### **Cultural and Heritage Resources**

The Review Board suggests that the developer consult with the Prince of Wales Northern Heritage Centre and the Deh Cho First Nations communities to predict impacts on cultural and archaeological resources, and to determine appropriate mitigation measures.

- I-3* *Local Cultural, Spiritual and Heritage Resources:* Identify archeological and



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other heritage resources as well as sites or areas of cultural or spiritual significance in or near the project area.

- I-4 *Direct and Indirect Impacts:* Describe potential direct and indirect impacts on sites or areas identified in I-3.
- I-5 *Protected and Withdrawn Areas:* Describe potential impacts on the Candidate Protected Area, Edehzhie, which has been withdrawn from development under the Deh Cho process and the NWT Protected Areas Strategy. Describe in detail potential impacts within the boundaries of Edehzhie and explain how they may affect the 'Candidate Protected Area' status. Describe detailed mitigations to minimize or avoid those impacts. Specifically, explain how the proposed mineral exploration is compatible, or incompatible, with:
- i) *the goals and mandate of the NWT Protected Areas Strategy;*
  - ii) *the long-term ecological integrity of Edehzhie as a protected area.*
- Also describe how this development, or future related developments, may affect the potential of Edehzhie to reach full protection status, under the NWT Protected Areas Strategy.
- I-6 *Cumulative Effects:* Describe the impacts on any of the sites or areas identified in I-3 that this development may have in conjunction with previous, present, and reasonably foreseeable future developments in this area.

### **Land and Resource Use**

- I-7 *Traditional Land Use:* Discuss the potential impacts of the proposed development on traditional land use and occupation.
- I-8 *Existing land use:* Discuss the potential impacts of the proposed project on existing land use and occupation.
- I-9 *Recreational Activities:* Discuss the potential impacts of the proposed development on recreational activities.

## **J Physical and Biological Environment:**

- J-2 *Terrain and Soils:* Discuss the potential impacts of the proposed development on the local terrain and soils.
- J-3 *Vegetation and Plant Communities:* Discuss the potential impacts of the proposed development on the local vegetation and plant communities.
- J-4 *Water Quality and Quantity:* Discuss the potential impacts of the proposed development on the water quality and quantity in the immediate project area (e.g. quantity from each source, substrate disturbance, increased suspended sediments, substrate type, water flow, water depth). Also discuss the potential impacts of the proposed development, including cumulative effects, on the headwaters that feed Willowlake River, the Horn River, and Mills Lake.
- J-5 *Aquatic Resources and Habitat:* Discuss the potential impacts of the proposed project on the aquatic resources and habitat in the immediate project area (discuss the current habitat characteristics and range of species present, any potential impacts to fish and invertebrates, as well as any proposed monitoring

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plans).

- J-6** *Wildlife and Wildlife Habitat:* Discuss the potential impacts of the proposed project on the wildlife and wildlife habitat in the project area. Specifically, examine the effects of the proposed development on wildlife disturbance, movement, habitat suitability, mortality and habituation.
- J-7** *Migratory Birds and Habitat:* Discuss the potential impacts of the proposed project on the migratory birds and migratory bird habitat (including waterfowl) in Edehzie.
- J-8** *SARA:* Pursuant to section 79 of the Species at Risk Act, conduct an assessment of the potential effects of the project on species at risk. This assessment should include: identification of species at risk that may be affected by the project, identification of measures to avoid, minimize, and mitigate potential effects on these species or their habitat, and a proposed approach to monitoring of these effects.<sup>3</sup> Mitigation measures proposed must be consistent with any applicable recovery strategy or Action Plan for the species.
- J-9** *Noise:* Discuss the potential impacts of the proposed project on the noise levels within the project area and surrounds.
- J-10** *General:* Describe the unique ecological and physiographic features of Edehzie.

## **K Cumulative Impacts**

- K-1** Predict the cumulative impacts that might result from the proposed development impacts in combination with other past, present or reasonably foreseeable future developments and activities:
- Identify the valued parts of the environment that are potentially affected by the proposed development;
  - Determine what other past, present or reasonably foreseeable future development will affect these parts of the environment;
  - Predict the effects of the proposed development in combination with these other developments; and,
  - Identify ways to manage combined impacts.<sup>4</sup>

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<sup>3</sup> For the purposes of this section, “species at risk” should include wildlife at risk as defined in *Environmental Assessment Best Practice Guide for Wildlife at Risk in Canada*, Canadian Wildlife Service, 2004.

<sup>4</sup> MVEIRB EIA Guidelines March 2004, p.77.

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## 5 Assessment Process

### 5.1 Responsibilities

The roles and responsibilities of the Review Board and its staff, government bodies, the developer and other parties in the EA are explained in this section. Further information regarding the structure of the EA process is available in the Review Board's Environmental Impact Assessment Guidelines (March 2004) and the Rules of Procedure. Both documents are available from the Review Board.

All submissions received from all sources will be considered during the Review Board's decision-making processes on the environmental assessment. Usually these submissions will be public documents and will be posted on the Public Registry. However, the Review Board can and will accept documents on a confidential basis if required. Submissions should be in a format that is easily available to all stakeholders and should follow any templates provided by the Review Board.

#### Review Board

The Review Board, assisted by its staff, is required to undertake the following in relation to this EA:

- conduct the EA 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 environmental assessment 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*;
- identify areas and extent of impacts 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, in accordance with ss.128(4) of the *MVRMA*;
- report to the designated regulatory agency (the MVLWB) in accordance with ss.128(2) of the *MVRMA*; and
- report to the Federal Minister in accordance with ss.128(2) of the *MVRMA*.

The Review Board's Environmental Assessment Officer (EAO) is the primary point of contact between the Review Board and the developer, government bodies (federal, territorial and municipal), non-government organizations (NGOs), First Nations, expert advisors (expert consultants contracted directly by the Review Board), the public and other interested parties. This does not limit or preclude the developer's contact with other parties during the EA process.

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This Environmental Assessment will be coordinated and facilitated by Kimberley Cliffe-Phillips.

### **Government Bodies**

Government bodies may be involved in the EA process as:

- a Regulatory Authority as defined in the *MVRMA*;
- a Responsible Minister as defined in the *MVRMA*;
- a Federal Minister as defined in the *MVRMA*; or,
- technical advisors to the Review Board.

Government bodies are expected to participate and adhere to the timelines as set out in the Terms of Reference.

### **Developer**

The developer is expected to respond in a suitable and timely manner to directions and requests issued by the Review Board. The developer may present additional information at any time to the Review Board beyond what was requested during the EA process. The Review Board encourages the developer to continue consulting all potentially affected communities and organizations during the EA process.

### **Other Parties**

First Nations, NGOs, the public and other interested parties may request and be granted party standing by the Review Board, as per the MVEIRB Rules of Procedure. Parties may provide the Review Board with information relevant to the EA of their own volition, or they may be asked by the Review Board to provide any relevant information they may have. Parties are expected to participate and respond to directions and requests issued by the Review Board in a suitable and timely manner.

In addition to the expertise available from within government, the Review Board may also choose to hire expert advisors to provide technical expertise on specific aspects of the EA.

## 5.2 Milestones

Table 1 summarizes the milestones and responsibilities in the EA process.

**Table 1 - Milestones and Responsibility Assignments for Phases in the EA Process**

Milestone	Developer	Government Bodies	Other Parties	Review Board and Staff
EA start-up				✓
Prepare draft Terms of Reference and Work Plan				✓
Review and comment on draft ToR and WP	✓	✓	✓	
Revise and approve final ToR and WP				✓
Submit DAR	✓			
Conformity Check and Deficiency Statement (if required)				✓
Deficiency Statement Response	✓			
Information Requests		✓	✓	✓
Information Request Responses	✓	✓	✓	
Public Hearing	✓	✓	✓	✓
Technical Analysis		✓	✓	✓
Review Board Report of EA and Reasons for Decision				✓
Response from the Minister of Indian Affairs and Northern Development (if required)		✓		
Consultation - throughout / as required	✓	✓	✓	✓

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### **5.3 Deliverables**

The following section lists and explains the various deliverables or milestones during the EA process. They are listed in the order they will be produced.

#### ***Public Registry, public notification, government notification, developer notification, expert advisor identification, identification of EA roles***

The Review Board has initiated the notification measures required by the *MVRMA*. The Review Board has opened the Public Registry on the EA. The Public Registry will be updated regularly. The Review Board will identify expert advisors if and as required.

#### ***Approved Terms of Reference and Work Plan***

This Draft Terms of Reference and Work Plan for completing the EA was developed and approved by the Review Board. A final Terms of Reference and Work Plan will be developed incorporating comments on the draft document received from parties.

This document contains the scope of the development, the scope of the assessment, directions to the developer, a description of the EA process and an EA schedule.

#### ***Developer's Assessment Report***

Jane Lind will use this document to guide the response to these terms of reference and in the preparation of the DAR. Although the format of the DAR is largely left at the discretion of the developer, the developer should consider the use of appendices for providing some information, the use of a glossary for technical or uncommon terms and the clarity and accuracy of the information presented in the DAR. Diagrams, charts and maps are useful for clarifying information presented in the text.

#### ***Conformity Check, Review Board Deficiency Statement and Developers' Response***

The Review Board will review the Developer's Assessment Report to ensure that the developer has provided the information required. If needed, the Review Board will issue a deficiency statement identifying those areas in which the developer has not provided information to address an item listed in the scope of the assessment. The developer will be asked to submit information to the Review Board to fill the information gaps identified by the deficiency statement.

#### ***Information Requests and Responses to Information Requests***

Information Requests (IRs) are very specific and focused requests for clarification or additional information. They may be required for the Review Board to complete its analysis and reach a conclusion about the information provided by the developer. The first round of IRs issued will be developed by the Review Board. The second round will be open to all EA participants.

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IRs can be issued by any party in the EA and can be directed to any other party. However, all IRs must be submitted to the Review Board for approval and they must also be submitted in the form required by the Review Board. If approved, the Review Board will then issue the IR under its authority to the intended IR recipient. The IRs and the responses will be included in the Public Registry and be used as evidence for the consideration of the Review Board.

***Technical Reports from EA parties***

The Review Board staff will undertake the analysis of the EA with the assistance of federal and territorial governments, First Nations, the public, and other interested parties. A thorough analysis of the development is essential to assist the Review Board to make the best EA decision. This is a critical stage in the EA process where the key issues and impacts are identified and evaluated. The developer can formally provide and present its views on the information brought to the Review Board's attention including any proposed amendments, additions or refinements to the development or the environmental assessment documents. The technical reports from EA parties are to clearly state the reviewer's conclusions, recommendations and supporting rationales.

***Review Board's Report of Environmental Assessment (EA Decision)***

The Review Board will provide the Minister of Indian and Northern Affairs Canada (INAC) with its Report of Environmental Assessment as per Section 128(2) of the MVRMA. The Minister of INAC will distribute the report to every responsible minister as per 128(2)(a) of the MVRMA. The developer and the other EA parties will also receive copies of the Review Board's Report of EA.

## 5.4 Schedule

Table 2 provides estimated time lines for the completion of each milestone in the EA process. Days refer to working days. The Review Board may amend the schedule at its discretion. The short scenario assumes that all tasks will be completed in the shorter time given under 'duration', while the long scenario assumes all tasks will require the maximum time. It is expected that the actual completion date of the EA will fall somewhere in between.

**Table 2 - EA Schedule**

<b>MILESTONE</b>	<b>Duration</b>
Start-up of the EA	3 days
Draft Terms of Reference and Work Plan	15 days
Comments on draft ToR and WP	15 days
Final Terms of Reference and Work Plan	6-10 days
Developer's Assessment Report*	10-20 days
Review Board Conformity Check and Deficiency Statement (if required)	4-7 days
Developer's response to the Deficiency Statement *	5-10 days
Review Board IRs to developer	20 days
Developer's response to IRs*	10-15 days
Open IRs to developer	20 days
Developer's response to IRs*	10-15 days
Technical analysis reports	12 days
Public Hearing and/or Site Visit	10 days
Closure of Public Registry	1 day
Review Board EA decision	20-25 days
Review Board's Report of EA to the Minister of INAC	5 days
Federal Minister's response to the Review Board's Report of EA (if required)	-
Consultation – throughout / as required	-

\* Note: duration may vary, depending on quality and completeness of submission