



Mackenzie Valley
Environmental Impact Review Board

Terms of Reference and Work Plan

for the Environmental Assessment of
the Northrock Summit Creek B-44
Exploratory Well

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1 Introduction

1.1 Purpose of this Document

This document outlines the process of the Environmental Assessment for the proposed Northrock Summit Creek B-44 Exploration Well near the community of Tulita, NT. Section 2 defines the scope of the 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

Northrock Resources Ltd applied for a Land Use Permit (S02A-004) and a Water Licence (S02L1-003) to the Sahtu Land and Water Board (SLWB) on September 13, 2002. The SLWB carried out a Preliminary Screening of the proposed development according to Section 124 of the Mackenzie Valley Resource Management Act (MVRMA). As per Section 124(3), the SLWB acted as lead screener. The SLWB consulted 26 organizations during the Preliminary Screening Process.

On March 21, 2003 the SLWB referred the proposed development to Environmental Assessment, according to Section 125 of the MVRMA, citing potential for public concern. The Preliminary Screening Report concluded that all potential environmental impacts can be mitigated with known technology, but that there is a potential for public concern. The MVEIRB notified the developer on March 25, 2003 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 Environmental Impact Assessment Guidelines (revised in April 2001) and the MVEIRB's Rules of Procedure. These documents can be accessed on the MVEIRB's web site (www.mveirb.nt.ca). (Please contact the MVEIRB for further information).

2 Scope of Development

The proposed development includes the following components:

- construction of a staging area, barging in and storage of construction equipment, and fuel;
- construction and watering of a temporary access road from the staging site to the well site, as well as construction and maintenance of an ice bridge across the Mackenzie River;
- shipment of a drilling rig and ancillary equipment via the winter road and temporary access road to the well site;
- drilling of an exploration oil or gas well using a fresh water based gel chem mud system, including construction and operation of a sump;
- operation of a 16 person mobile camp during access construction, a 40 person camp near the well site, a 6 person camp at the staging site, and an airstrip; and
- removal of all equipment via temporary access and winter road - by barge if winter road closes - and restoration of well site, sumps, and access road.

3 Scope of Assessment

The scope of the assessment is the determination of which issues and items will be examined in the environmental assessment. The Review Board notes that the Sahtu Land and Water Board referred the development to Environmental Assessment because of potential public concern, regarding harvester compensation, access related issues, and potential impacts on cultural sites. The public record of the Preliminary Screening provides sufficient material for the Review Board's EA consideration, in accordance with s.117, with the exception of impacts on wildlife harvesting and other social and cultural impacts.

The MVEIRB requires more information on impacts on wildlife harvesting and other social and cultural impacts. This is reflected in the items requested in Section 4 of this document. The Board retains the right to raise other issues in the course of the assessment if it deems appropriate.

4 Terms of Reference

4.1 General Items

Northrock Resources is to provide the Review Board with a DAR that provides the information requested in section 4.2. Where appropriate Northrock should:

- identify the development activity;
- identify all changes this activity produces in the environment;
- identify the 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, Northrock is expected to characterize the impact in terms of:

- direction (beneficial / adverse);
- magnitude;
- geographical extent (spatial boundaries);
- duration;
- frequency;
- probability;
- reversibility; and,
- significance¹.

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

4.2 Specific Items

A Summary

A-1 Non Technical Summary: Please provide a plain-language, non-technical summary of the EA Report to enable the public to follow the proceedings.

A-2 Executive Summary: Please provide an executive summary of the EA Report, containing the most relevant points for decision-makers.

A-3 Conformity Table: The DAR should 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 into the appropriate Aboriginal language(s).

B Developer

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

- B-1 *Company Corporate History:* Please summarize the company's corporate history in Canada and the Northwest Territories. 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.
- B-3 *Organizational Structure:* Identify corporate and individual responsibilities for the proposed development and associated operations.
- B-4 *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, including a waste management plan and a water budget.

Note: This is not to imply that the scope of the EA will include all potential impacts from waste management or water use. Rather, the EA will only consider what impacts any of the development components may have on the items detailed in sections I to K. 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 Road and Well Site:* Describe the access route and the well site location, including coordinates of stream crossings, airstrips, and any other facility.
Note: The "DFO Protocol for Temporary Winter Access Water Crossings for Oil and Gas Activities in the Northwest Territories" may provide useful guidance.
- C-3 *Construction Methods:* Describe the methods used to build the access road and well lease.
- C-4 *Operations:* Describe the operations in terms of timing and traffic volumes on the access road.
- C-5 *Waste Management:* Give a description of your proposed waste management plans.
- C-6 *Water Use:* Provide a water budget for access and lease construction as well as drilling operations. Identify the water sources and the quantity anticipated to be drawn from each source.
Note: The "DFO Protocol for Water Withdrawal for Oil and Gas Activities in the Northwest Territories" may provide useful guidance.
- C-7 *Abandonment and Restoration:* Describe your plans for abandonment and restoration, including the well site, sumps, and access road. Include any plans for long term monitoring.
- C-8 *Other:* Any other relevant proposed activities or development components.

D Effects of the Environment

This section pertains to potential changes to the development, e.g. timing or alternative methods, caused by the environment (e.g. through extreme weather conditions).

D-1 Description of Effects: List and describe all effects that the environment may have on your development (e.g. effects of ice movements in the Mackenzie River).

D-2 Changes to Development: List and describe any changes or modifications to your proposed development that may be caused by the environment.

E Alternatives

E-1 Access: Contrast environmental impacts of different access routes. Also include, where possible, alternatives to the proposed equipment.

E-2 Well Site: Consider alternative locations of the well site, given its proximity to a traditional trail.

E-3 Waste Management: Contrast efficiency and environmental impacts of waste management alternatives, such as a sumplex system.

E-4 Water Use: Contrast and environmental impacts of using different water sources.

F Regulatory Regime: Provide a table summarizing relevant licences, permits or other authorizations required for the proposed development.

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 others. Include dates and participants.

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 Wildlife Harvesting

Levels or limits of harvesters' compensation are not within the scope of the EA. The information requirements below are to determine if a significant adverse impact on wildlife harvesting is likely.

I-1 Efforts: Report any efforts undertaken to resolve the issue of harvester compensation. List the unresolved issues and any proposed action to resolve these.

- I-2 *Construction:* Describe the potential impacts of constructing the proposed access road and the well pad and related installations on wildlife harvesting. Use the directions given in section 4.1 of this document.
- I-3 *Operation:* Describe the potential impacts of operating the access road and drill rig and related installations on wildlife harvesting. Use the directions given in section 4.1 of this document.
- I-4 *Cumulative Effects:* Describe the impacts on wildlife harvesting this project may have in conjunction with previous, present, and reasonably foreseeable future projects in this area.

J Cultural and Heritage Resources

- J-1 *Local Resources:* Identify archeological and other heritage resources as well as sites or areas of cultural significance in or near the project area.
- J-2 *Direct Impacts:* Describe potential direct impacts on sites or areas identified in I-1.
- J-3 *Indirect Impacts:* Describe potential indirect impacts on any of the sites or areas identified in I-1 (e.g., through increased access).
- J-4 *Cumulative Effects:* Describe the impacts on any of the sites or areas identified in I-1 that this development may have in conjunction with previous, present, and reasonably foreseeable future developments in this area.

K Access Road

- K-1 *Erosion:* Describe the potential for the development causing erosion on the proposed access road. Use the directions given in section 4.1.
- K-2 *Wildlife disturbance:* In addition to impacts on wildlife harvesting, describe and discuss the potential of the access road (during construction and operation) to disturb wildlife. Use the directions given in section 4.1.
- K-3 *Cumulative Effects:* Describe the potential for wildlife disturbance this project may have in conjunction with previous, present and reasonably foreseeable future projects in this area.

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 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 NEB) 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.

This Environmental Assessment will be coordinated and facilitated by Martin Haefele.

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,
- advisors to the Review Board.

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

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

First Nations, NGOs, the public and other interested 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.

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	✓	✓	✓	
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	✓	✓	✓	✓

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.

Northrock Resources will use this document to guide the preparation of the DAR. Although the format of the DAR is largely left to 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. Diagram, charts and maps are useful for clarifying information presented in 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 that are issued will be developed by the Review Board. The second round will be open to all EA participants.

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. The Review Board will also provide the National Energy Board as Designated Regulatory Agency under the MVRMA with its Report of Environmental Assessment as per Section 128(2).

5.3 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

MILESTONE	Duration	Short Scenario	Long Scenario
Start-up of the EA	Done		
Draft Terms of Reference and Work Plan	6 days	April 4	April 4
Comments on draft ToR and WP	8 days	April 16	April 16
Final Terms of Reference and Work Plan	6-10 days	April 28	May 2
Developer's Assessment Report	10-20 days	May 12	June 2
Review Board Conformity Check and Deficiency Statement (if required)	4-7 days	May 16	June 11
Developer's response to the Deficiency Statement	5-10 days	May 26	June 25
Community Meeting (subject to scheduling constraints)	1 day	2 nd half of May	
Review Board IRs to developer	5 days	June 2	July 2
Open IRs to developer	10 days	June 16	July 16
Developer's response to IRs	5-15 days	June 23	August 7
Technical analysis reports	12 days	July 10	August 25
Closure of Public Registry	1 day	July 11	August 26
Review Board EA decision	10-15 days	July 25	Sept. 17
Review Board's Report of EA to the NEB and the Minister of INAC	5 days	August 1	Sept. 24
Federal Minister's response to the Review Board's Report of EA (if required)	-		
Consultation – throughout / as required	-		