



May 21, 2004

Imperial Oil Resources Ventures Ltd.
Deh Cho Geotechnical Investigations Environmental Assessment
Distribution List

Dear Sirs/Madams;

**Re: Final Terms of Reference for the Imperial Oil Resources Ventures Ltd.
Geotechnical Environmental Assessment**

Attached is the final Terms of Reference (T of R) of Imperial Oil Ventures' geotechnical investigations program in the Deh Cho region. The Review Board appreciates the detailed comments received from parties, including the submissions from the Deh Cho First Nations' Pipeline Working Group (PWG) and from Imperial Oil Resources Ventures Ltd (Imperial). Many of the changes in the Terms of Reference reflect the comments received. The purpose of this letter is to set out the Review Board reasons for making the revisions to the T of R.

When finalizing the schedule, the Review Board considered the suggestions of Imperial and the PWG. Imperial made it clear to the Review Board that a late start to the field work, resulting from a lengthy environmental assessment, could affect the program and cause additional environmental problems. Imperial suggested compressing the schedule. PWG, on the other hand, suggested extending the schedule, and ensuring minimum periods between certain key steps of the assessment.

The Review Board decided not to overlap steps in the EA process. The Board is of the view that the steps of the EA should be completed sequentially, because each step builds on the information from the previous step. Doing this also provides for reasonable periods between steps as requested by the PWG.

The PWG requested that technical reports from parties be required a minimum of 20 days after the transcripts of a hearing are publicly available. The Review Board did not make this change in the schedule because it felt that the views submitted in the technical reports

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are important to assist the Review Board in its preparation for a hearing and in order to ensure that the outstanding key issues are adequately addressed during a hearing.

Imperial indicated that it did not believe that a hearing is necessary, while the PWG requested that a hearing be included. Because of the importance of community concerns in this environmental assessment, the Review Board has included time for a community hearing (or community hearings) in the T of R. The Review Board will make a final decision on the need for a hearing, including such details as hearing dates and venues later in the environmental assessment process.

In response to the other issues raised by the PWG, the Board has incorporated a number of the PWG's suggestions into the T of R including a requirement for mandatory translation of a summary of the DAR, greater detail on consultation processes and results, expanded Traditional Knowledge use, as well as greater consideration of:

- impacts on regional infrastructure;
- the contracting process; impacts on social infrastructure;
- impacts on heritage sites;
- access and benefits agreements; and,
- environmental monitoring and follow-up.

The Review Board has chosen to focus the Terms of Reference on the most important environmental impact issues.

The cumulative effects assessment section of the DAR will continue to focus on access-related impacts, because, in the view of the Board, it is this aspect of the development's cumulative effects that is most relevant to making their environmental assessment decisions. The Board also decided to exclude impacts from the proposed Mackenzie Gas Pipeline from the EA because it recognizes that the pipeline proposal is about to be assessed in rigorous detail in the Environmental Impact Review ordered by the Review Board.

Once again, the Review Board wishes to thank the parties that submitted comments on the draft Terms of Reference.

Sincerely,



Vern Christensen
Executive Director



Terms of Reference and Work Plan
for the
Environmental Assessment
of the
Imperial Oil Resources Ventures Ltd.
Deh Cho Geotechnical Program

May 21st, 2004

Mackenzie Valley Environmental Impact Review Board

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1 INTRODUCTION

1.1 Purpose of this Document

This document outlines the process of the Environmental Assessment for the proposed geotechnical investigations proposed in the Deh Cho of the Northwest Territories region by Imperial Oil Resources Ventures Ltd. (Imperial). 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

Imperial applied for a Water License (MV2003L8-0012) and Land Use Permit (MV2003F0045) to the Mackenzie Valley Land and Water Board (MVLWB) on Oct. 27, 2003. 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 completed the Preliminary Screening on Feb. 12, 2004, deciding not to refer the development to Environmental Assessment.

Following this, the Review Board received letters from communities in the Deh Cho describing concerns with the proposed development. In response, the Review Board decided, on March 2, 2004, to exercise its authority under s.126(3), to conduct an environmental assessment on the development on its own motion.

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). Please contact the MVEIRB for further information.

2 Scope of Development

The proposed development includes physical work related to the investigation of subsurface conditions in the Deh Cho Region along a preliminary route for the Mackenzie Valley Pipeline, to assess engineering and construction feasibility. It includes the following components:

- Use of various types of drill rigs, including auger, air rotary and mud rotary drill rigs;
- Access related work, including use of existing routes and clearing of new ones;
- Clearing of vegetation along re-grown cut lines and previously undisturbed areas;

- Excavation of soils and stripping of overburden;
- Use of machinery including bulldozers, backhoes, graders, helicopters, trucks, and other equipment;
- Creation of two 65-person portable trailer camps, which will remain in place in various locations for four to six weeks at a time;
- Use of water for ice road construction and other uses and discharge at camp locations; and,
- Other proposed activities as described in Type A Land Use Permit Application #MV2003F0045 and Type B Water License Application # MV2003L8-0012

3 Scope of Assessment

The scope of this assessment is the determination of which issues and items will be examined in the environmental assessment described by these terms of reference. The Review Board notes that it decided to conduct this Environmental Assessment due to expressed concerns. The applications submitted by Imperial contain information that is useful to an Environmental Assessment. Much of this information would normally be requested in a Terms of Reference. The public record of the Preliminary Screening provides further material for the Review Board's EA consideration, in accordance with section 117 of the *Mackenzie Valley Resource Management Act* (MVRMA). However, parties and the Board may raise other issues in the course of the assessment, within the parameters of s.117(2).

The Review Board has reviewed the Preliminary Screening record, and placed it on the public registry for this EA. It has also solicited and received detailed comments to supplement the community concerns that were expressed. The Review Board intends to maximize its use of this existing information, but requires more information on certain social, economic, cultural and biophysical impacts. This is reflected in the items requested in Section 4 of this document.

4 Terms of Reference

4.1 General Terms

Imperial is to provide the Review Board with the information requested in section 4.2. This is intended to supplement the information that is already filed on the public record of the Preliminary screening of this development. Responses to the items in Section 4.2, along with relevant responses to information requests from the Preliminary Screening, should be integrated into the existing *Environmental, Socio-Economic and Heritage Resource Overview and Impacts for the 2004 Winter Field Investigation Program in the Deh Cho Region*, and presented as a single Developer's Assessment Report.

For each applicable item under Section 4.2, Imperial is required to:

- Identify the development activity;
- Identify all relevant changes this activity produces in the environment;
- Identify all relevant 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, Imperial 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. A precautionary approach should be followed when determining appropriate mitigative measures.

4.2 Specific Items

A Summary

- A-1 *Non Technical Summary*: Please provide a plain language, non-technical summary of the Developer's Assessment Report (DAR) in both Slavey and English to enable the public to follow the proceedings.
- A-2 *Conformity Table*: The DAR is requested to include a table cross referencing the items in these Terms of Reference with relevant sections of the DAR.

B Developer

- B-1 *Developer Profile*: Describe your company's corporate history, the ownership of the proposed development and the organizational structure of the company. Provide a record of environmental performance of the company and its contractors in conducting this type of development

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

C Development Description

The Board requires a description of selected parts of the development that are not adequately described in the existing material.

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

- C-1 Clearing Access:* Describe the total linear distance, in kilometers, and the aerial extent of access that will require the clearing of vegetation, (including both undisturbed vegetation and re-growth).
- C-2 Camp Protocols:* Describe what policies will be enforced at camps to reduce the risk of disturbance to nearby communities.
- C-3 Aerial Images:* Provide aerial photographs or satellite images to enable the Review Board to visualize the proposed developments sites and any major surrounding natural features.

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. variations in snow depth)
- 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* Provide an explanation of alternatives to the various parts of the development where appropriate alternatives are possible. This discussion shall include, but is not limited to, locations of camps and of proposed test sites and access. Discuss this in the context of the concerns voiced by communities during the preliminary screening, describing to what degree those concerns have led to changes in development design. Where changes were not made to the development in response to community concerns, describe why.

F Public Consultation:

- F-1 Methods and issues:* Outline the consultation activities and methods undertaken in respect of this development. Identify who was consulted, and describe the outcomes of the consultations, and report on key issues raised.
- F-2 Commitments:* Identify and reference all commitments made in response to issues raised by communities during consultation. Identify issues that remain unresolved.

G Assessment Boundaries:

- G-1 *Spatial:* Provide a rationale for setting the spatial boundaries for each of the impacts described below. The spatial boundary should be appropriate to the nature of each impact.
- G-2 *Temporal:* Provide a rationale for setting the temporal boundaries for each of the impacts described below. The temporal boundary should be appropriate to the nature of each impact.

H Human Environment:

- H-1 *Economic Impacts:* Describe potential direct and indirect economic impacts of the development on communities, including a description of business opportunities and Imperial's contracting process. Provide a summary of overall benefits to the Deh Cho region. Provide an assessment of potential impacts to community and regional infrastructure (including but not limited to all-weather roads, winter roads [including the Samba K'e winter road] and community roads in Fort Simpson and elsewhere. Describe detailed mitigations to minimize or avoid those impacts. Describe why Imperial is not planning to purchase potable water from communities in order to maximize local benefits. Summarize what specifically will be addressed in Access and Benefits agreements.
- H-2 *Social Impacts:* Provide a detailed description of potential social impacts that your development may have on the residents of communities along the development route, including education, training and skills enhancement. Describe the social impacts related to health and well-being in communities nearest to camps, including potential changes in pregnancy rates, STDs, and alcohol and drug use. This assessment should include a description of potential direct and indirect impacts on social infrastructure such as medical services and policing. Describe detailed mitigations to minimize or avoid those impacts.
- H-3 *Local Cultural and Heritage Resources:* Describe potential impacts on cultural and heritage resources, including a detailed description of how field workers will recognize archaeological sites. Describe the mechanism or process that will ensure that those recognizing the archaeological sites will have the authority and means to stop work before disturbance of heritage sites occurs. Describe detailed mitigations to minimize or avoid those impacts.
- H-4 *K'eotsee/ Traynor Lake:* Describe in detail the proposed development and potential impacts in the K'eotsee Lake watershed, along with details regarding with any concerns voiced, and the commitments of Imperial in response to those concerns in terms of development design. Describe any remaining activities proposed by Imperial within the watershed and their impacts. Describe detailed mitigations to minimize or avoid those impacts.

- H-5** *Traditional Land Use:* Discuss the potential impacts of the proposed development on traditional land use and occupation. Describe in detail the concerns raised by land users and the commitments of Imperial regarding compensation for trappers and all other traditional harvesters. Describe detailed mitigations to minimize or avoid those impacts.
- H-6** *Protected and Withdrawn Areas:* Describe potential impacts on candidate protected areas, including Edehzhie land withdrawal and Pehdzeh Ki Deh areas, and areas which have been withdrawn from development under the Deh Cho process. Describe in detail potential impacts across the boundaries of Edehzhie and Pehdzeh Ki Deh, as well as of the withdrawn areas, by proposed development activities outside of the areas. Describe detailed mitigations to minimize or avoid those impacts.

I Physical and Biological Environment:

- I-1** *Vegetation and Plant Communities:* Describe how many linear kilometers of the work will require the removal of vegetation, how much of this is regrowth compared to undisturbed growth, and the successional condition and habitat value of the regrowth that is to be removed. Describe detailed mitigations to minimize or avoid those impacts.
- I-2** *Aquatic Resources and Habitat:* Describe how many water crossings will be required in total, and estimate the total area of watershed upstream of these crossings. Identify and reference all commitments made in response to water issues during consultation². Identify issues that remain unresolved.
- I-3** *Wildlife and Wildlife Habitat:* Discuss the potential impacts of the proposed project on boreal (woodland) caribou and moose, and their habitat in the project area. Include discussion of the effects of direct disturbance of the activity (including overflights), increased access, and wildlife responses to disturbance and cutlines. Incorporate traditional land use and Traditional Knowledge (such as the Sambaa K'e Traditional Knowledge Stud in your analysis. Describe proposed mitigations (such as access control or noise reduction) in detail.
- I-4** *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.³

² Particularly, incorporate into the DAR the commitments made in Imperial's Jan. 15, 2004 response to DIAND Water Resources division.

³ 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..

- I-5 Soil and Overburden: Describe the restoration or stabilization measures proposed to limit erosion and potential sedimentation issues during thaw for areas where soil and overburden are excavated and removed, and where trees are cleared. Describe the restoration and stabilization measures proposed for sites determined to be inappropriate for the pipeline.
- I-6 *Environmental Monitoring and Follow-up*: Describe Imperial's proposed environmental monitoring, including wildlife monitoring, and follow-up programs.

J Cumulative Impacts:

- J-1 Predict the cumulative impacts that might result from access created by the proposed development impacts in combination with other past, present or reasonably foreseeable future developments and activities (excluding the Mackenzie Valley Pipeline). Describe detailed mitigations to minimize or avoid those impacts.

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 (draft December 2003) 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(3) 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.

This Environmental Assessment will be coordinated and facilitated by Alan Ehrlich, Senior Environmental Assessment Officer.

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,
- advisers 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 + Responsibilities in the EA Process

Milestone	Developer	Government Bodies	Other Parties	Review Board and Staff
EA start-up				✓
Community feedback			✓	
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		✓	✓	✓
Public Hearing	✓	✓	✓	✓
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

Imperial 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. If the Review Board is not satisfied with the information received, it will halt the environmental assessment until it has received an adequate response.

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.

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.

Table 2 - EA Schedule

MILESTONE	Duration
Start-up of the EA	Done
Draft Terms of Reference and Work Plan	Done
Comments on draft ToR and WP	10 days
Final Terms of Reference and Work Plan	13 days
Developer's Assessment Report	10 days
Review Board Conformity Check and Deficiency Statement (if required)	8 days
Developer's response to the Deficiency Statement (if required)	10 days
Review Board IRs to developer	8 days
Developer Response	10 days
Supplementary IRs to developer (Review Board + parties)	10 days
Developer's response to IRs	8 days
Parties' technical reports	10 days
Preparation for Community Hearing(s)	5 days
Conduct of Community Hearing(s)	5 days
Closure of Public Registry	1 day
Review Board EA decision	25 days
Review Board's Report of EA to the Minister of INAC	1 day
Federal Minister's response to the Review Board's Report of EA	---