## INDEPENDENT EVALUATION OF THE FRONTIER EXPLORATION AND PRODUCTION FUNCTION

Prepared for **National Energy Board** 

Submitted by Gartner Lee Limited

June 2005

Prepared for National Energy Board

In association with Gartner Lee Limited

June 2005

Reference: GLL 50135

Distribution:

- 6 National Energy Board
- 3 Gartner Lee Limited

# Disclaimer

This report is an independent evaluation of the Frontier Exploration and Production Function completed by Gartner Lee Limited as the result of a competitive bid process tendered by the National Energy Board. The results that are presented are an accurate representation of the information collected through an interview process that was conducted with a representative cross-section of the clients and stakeholders that may interact with the Frontier Exploration and Production Function at any given time. The results also include information provided by a representative cross-section of internal National Energy Board personnel that are part of or interact with the Frontier Exploration and Production Function.

The conclusions and recommendations found in this report are the express views of Gartner Lee Limited, based on our findings and analysis of the information collected. The National Energy Board may use the information contained in this report at its discretion.

June 22, 2005

Mr. Albert Fung Manager, Audit and Evaluation National Energy Board 444 Seventh Avenue SW Calgary, AB T2P 0X8

Dear Mr. Fung:

#### **Re:** 50135 – Independent Evaluation of the Frontier Exploration and Production Function

I am please to provide you with the recently completed Final Report of the independent evaluation of the Frontier Exploration and Production Function at the National Energy Board (NEB). The evaluation was initiated by the NEB's Audit and Evaluation Committee as a way of assessing current practices, identifying gaps, building on strengths, and improving results of the Frontier Exploration and Production Function. Our results, findings and recommendations are presented to meet the objectives of the evaluation, and include suggested approaches for achieving each recommendation.

Gartner Lee Limited would like to acknowledge the advice, guidance and valuable assistance provided by the NEB Project Manager and the Advisory Committee in completing this project on behalf of the National Energy Board.

Yours very truly, GARTNER LEE LIMITED

Gordon G. Stewart, M.Sc. Senior Environmental Scientist / Project Manager

GGS:ggs

# **Executive Summary**

Gartner Lee Limited was retained by the National Energy Board (NEB), through a competitive bid process, to undertake an independent evaluation of the NEB's Frontier Exploration and Production Function. The objectives of this evaluation were to:

- assess the effectiveness of the Board's Frontier Exploration and Production Function;
- assess the ability of the current process to deal with an expected increase in workload;
- identify gaps in the current procedures and practices; and
- develop specific recommendations within an overall action plan to improve the Frontier Exploration and Production Function.

Over 50 individuals from a representative cross-section of clients (representing the oil and gas industry), stakeholders (representing governments, other decision-making Boards, and interested parties) and internal NEB personnel were interviewed, using a standard set of questions developed from performance measures also developed as part of this project. The information gathered from these interviews was analyzed and formed the basis for conclusions and recommendations.

In general, clients and internal NEB personnel viewed the Frontier Exploration and Production Function as being efficient, effective and fair in its operation. Clients held the Frontier Exploration and Production Function in high regard, and valued its expertise and professionalism in completing its regulatory role in Frontier areas. Stakeholders in northern Frontier areas were critical of the Frontier Exploration and Production Function, and the NEB in general, for not having a better northern presence or undertaking outreach and educational programs to explain the NEB responsibilities in the north. Stakeholders also suggested that the Frontier Exploration and Production Function improve its participation in northern decision-making processes. Internally, NEB personnel were generally content with their roles and responsibilities with the Frontier Exploration and Production Function, and only identified a few areas where improvements could be made.

Overall, twelve recommendations were developed in response to the objectives of the project. Six recommendations were directed to the NEB and address:

- Improved Northern and Frontier Presence
- Legal Certainty and Devolution
- Improvements to Existing Legislation and Regulations that apply in Northern Frontier Areas
- Streamlining the *Canadian Petroleum Resources Act* Regulatory Application Process
- Internal NEB Team Development
- Industry Compliance



Six recommendations were also directed to the Frontier Exploration and Production Function and address:

- Improvements to Guidelines and Best Practices
- Educational and Outreach Programs for Clients and Stakeholders
- Kyoto Protocol on Greenhouse Gas Emissions
- Decision Making Processes
- Information Management
- Maintaining and Enhancing Internal Capacity

All of the recommendations included suggestions that could be included in an Action Plan for achieving each recommendation. Also, a priority rating of High, Medium or Low to indicate the level of importance of each recommendation for acceptance and implementation was also given.



# Table of Contents

Disclaimer Letter of Transmittal Executive Summary

1.	Intro	Introduction1		
	1.1	Objectives	1	
	1.2	Scope of Work		
2.	Fron	tier Exploration & Production Function Overview	3	
3.	Eval	uation Methodology	5	
	3.1	Data Sources	8	
	3.2	Identification of Potential Interviewees		
	3.3	Data Analysis	9	
4.	Resu	lts	10	
	4.1	Quantitative Questions	10	
		4.1.1 Comparison of Results from External and Internal Interviews		
		4.1.1.1 Efficiency and Effectiveness		
		4.1.1.2 Openness, Transparency and Fairness	13	
		4.1.2 Results from External Interviews	15	
		4.1.2.1 Efficiency and Effectiveness		
		4.1.2.2 Openness, Transparency and Fairness		
	4.2	Qualitative Questions		
		4.2.1 Meet the Needs of Clients and Stakeholders		
		4.2.2 Clearly Defined Objectives and Results		
		4.2.3 Sound Performance Management		
		4.2.4 Continue to Correspond to the Mandate of the NEB	22	
		4.2.5 Relevant and Address a Realistic Need		
		4.2.6 Unwanted Outcomes		
		4.2.7 Alternative Delivery Approaches		
		4.2.8 Complement, Duplicate, Overlap, Conflict with other Programs	24	
5.	Cone	clusions	25	
	5.1	Impressions about the NEB	25	
		5.1.1 Internal NEB Representatives	25	
		5.1.2 External Clients		
		5.1.3 External Stakeholders		
	5.2	Northern Operational Context	26	
		5.2.1 Observations on Implications for the NEB and its Frontier Exploration		
		and Production Function	29	



6.	Recommendations and Suggested Action Plans		30
	6.1	NEB Recommendations	30
	6.2	Frontier Function Recommendations	36

## List of Figures

Figure 1.	Linkages between the Broad Areas of Inquiry of the Evaluation and the Interview
	Questions

## List of Tables

Table 1.	Decision Making Authorities in Frontier Areas for Activities Regulated by the NEB
Table 2.	Number of Individuals representing Clients, Stakeholders and the NEB that
	Participated
Table 3.	Internal and External Interview Question Types

## List of Graphs

Graph 1.	Comparison between External and Internal Interviewees on the Efficiency of the	
	Frontier Exploration and Production Function	12
Graph 2.	Comparison between External and Internal Interviewees on the Effectiveness of the	
	Frontier Exploration and Production Function	12
Graph 3.	Comparison between External and Internal Interviewees on the Openness and	
	Transparency of the Frontier Exploration and Production Function	13
Graph 4.	Comparison between External and Internal Interviewees of the Procedural Fairness of	
	the Frontier Exploration and Production Function	14
Graph 5.	Comparison between Clients and Stakeholders of the Efficiency of the Frontier	
	Exploration and Production Function	16
Graph 6.	Comparison between Clients and Stakeholders of the Effectiveness of the Frontier	
	Exploration and Production Function	16
Graph 7.	Comparison between Clients and Stakeholders of the Openness and Transparency of	
	the Frontier Exploration and Production Function	17
Graph 8.	Comparison between Clients and Stakeholders of the Procedural Fairness of the	
	Frontier Exploration and Production Function	18



## Appendices

- A. NEB Interview Questions
- B. External Client and Stakeholder Interview Questions
- C. Client, Stakeholder and NEB Organization Interview Participants



# 1. Introduction

The National Energy Board (NEB, the Board) is an independent federal regulatory tribunal that was established in 1959. It is a court of record. The Board's responsibilities include the regulation of the construction and operation of inter-provincial and international pipelines and power lines; the setting of just and reasonable tolls for pipelines under federal jurisdiction; the regulation of exports of oil, natural gas, natural gas liquids, and electricity; and the regulation of oil and gas activities on certain Canada lands.

The Board derives its statutory responsibilities from the *National Energy Board Act* (NEBA). It has additional responsibilities under the *Canada Oil and Gas Operations Act* (COGOA), the *Northern Pipeline Act* (NPA), and for certain provisions of the *Canada Petroleum Resources Act* (CPRA). The Board also has responsibilities under the *Mackenzie Valley Resource Management Act* (MVRMA) which applies in the Mackenzie Valley<sup>1</sup> of the Northwest Territories (NWT), and the *Canadian Environmental Assessment Act* (CEAA). As a result of the *Canada Transportation Act*, which came into effect on July 1, 1996, the Board's jurisdiction has been broadened to also include pipelines that transport commodities other than oil and natural gas.

Staff of the Audit and Evaluation Team are responsible for conducting internal audits and evaluations in accordance with the NEB Audit and Evaluation Policy. Through internal audits and evaluations, the NEB seeks opportunities to improve performance, promote organizational learning and drive change. It is anticipated that the level of oil and gas activity on non-Accord frontier lands regulated by the NEB, particularly in the NWT, will increase significantly in the near future. The NEB Audit and Evaluation Committee therefore considered this an opportune time to conduct an independent evaluation of the Board's Frontier Exploration and Production Function.

# 1.1 Objectives

The objectives of this evaluation were:

- to assess the effectiveness of the Board's Frontier Exploration and Production Function;
- to assess the ability of the current process to deal with an expected increase in workload;
- to identify gaps in the current procedures and practices; and
- to develop specific recommendations within an overall action plan that will improve the result of the frontier exploration and production function.



<sup>&</sup>lt;sup>1</sup> As defined by the MVRMA.

## 1.2 Scope of Work

The Frontier Exploration and Production Function of the NEB did not have performance measures that could be used for the purposes of this evaluation. Part of the work for completing this project included developing appropriate performance measures. The evaluation was then completed using a phased approach:

- **Phase 1** concentrated on understanding the Frontier Exploration and Production Function and how it operates within the NEB's business environment, developing the analytical framework, and developing well-defined performance measures for the evaluation.
- **Phase 2** resulted in the implementation and completion of the evaluation, the analysis, and the reporting of results.

Completion of these two phases involved preparing two interim reports: the *Project Management Plan* and the *Evaluation and Assessment Plan*. The Project Management Plan provided the overall analytical framework, or detailed work plan, for the evaluation which divided the project into nine separate tasks, covering both phases of the project. The analytical framework contained evaluation criteria appropriate for the project, which included:

- meeting the needs of internal NEB personnel and external clients<sup>2</sup> and stakeholders<sup>3</sup>;
- having clearly defined objectives and expected results;
- embodying principles of sound performance measurement, corresponding to the mandate of the Board; and
- alternative ways of achieving results.

The Evaluation and Assessment Plan provided the details of Gartner Lee's intended approach and methodology, and the tools used to complete the evaluation. Both plans were completed in Phase 1 and approved by the NEB Project Authority and Advisory Committee prior to beginning work on Phase 2 and completing the project.



<sup>&</sup>lt;sup>2</sup> Where **Client** means: those requiring regulatory authorizations from the NEB.

<sup>&</sup>lt;sup>3</sup> Where **Stakeholder** means: those that may participate in the process, but do not require regulatory authorizations.

# 2. Frontier Exploration & Production Function Overview

The NEB is headed by a Chairman who has both a quasi-judicial role as a Board Member and a management role as the Chief Executive Officer. In addition, the NEB has a Vice-Chairman and up to seven other Board Members. A staff complement of approximately 310 provides technical advice, administrative and regulatory support services to the Board through five Business Units: Planning, Policy and Co-ordination; Commodities; Applications; Integrated Solutions; and Operations.

The Operations Business Unit is accountable for safety, environmental matters and security pertaining to facilities under the NEBA, the CPRA and the COGOA. It conducts safety, security and environmental inspections and audits, investigates incidents, monitors emergency response procedures, regulates the exploration, development and production of hydrocarbon resources in non-accord Frontier areas, and develops regulations and guidelines with respect to the above. The Operations Business Unit is made up of four Teams: Pipeline Audits; Operations Compliance; Construction Compliance; and Exploration and Production.

The Frontier Exploration and Production Function ensures that the NEB's mandate, goals and objectives (i.e., essentially the Strategic Plan) are fulfilled for Frontier areas, and regulatory responsibilities are met. This is achieved primarily by the (up to) eighteen staff of the Exploration and Production Team in the Operations Business Unit, with on-going assistance from other Teams within the Operations Business Unit and from other Business Units as required. The NEB, through its Frontier Exploration and Production Function, has responsibility for regulating the operational aspects of oil and gas activities on Frontier lands and offshore areas in Canada not covered by federal-provincial shared management agreements. These responsibilities consist of: the regulation of surface activities and infrastructure under the COGOA; the regulation of underground resources under the CPRA; and the custody and dissemination of Frontier hydrocarbon resource information.

The nature of the Frontier areas in which the Frontier Exploration and Production Function has responsibilities is also changing, and results in a continued need for improvement of service to clients and stakeholders. Some recent changes in northern Frontier areas that directly affect the Frontier Exploration and Production Function relate to the jurisdictional restructuring that has occurred through land claim agreements coming into force in Nunavut and the NWT. These new jurisdictional structures include changes to the environmental assessment and regulatory regimes that apply, and the devolution of oil and gas management responsibilities to the Government of Yukon. The industry is also undergoing changes as new technologies lead to a greater understanding of the environmental, socio-economic and geophysical nature of Frontier regions and contribute to improved exploration and development capabilities, performance and compliance of companies operating in these areas.



Currently, Frontier oil and gas activities are occurring in the Cameron Hills, Fort Liard, Mackenzie Valley and Mackenzie Delta portions of the Northwest Territories. There is currently no activity off the west coast of Canada, in the Gulf of St. Lawrence, in the Hudson's Bay area, or in Nunavut.

The decision-making authorities for activities regulated by the NEB under the COGOA and the CPRA in Frontier areas rest with the Chief Conservation Officer, the Chief Safety Officer, and the NEB. These decision making authorities are described in Table 1.

 Table 1.
 Decision Making Authorities in Frontier Areas for Activities Regulated by the NEB

Decision Making Authority	Description of Decision Making Authority
Chief Conservation Officer	Decision making related to protection of the environment and conservation of oil and gas resources regulated under the COGOA, and for environmental decisions under the CEAA and the MVRMA that are required as a result of the COGOA authorizations. Some of this authority has been delegated by the NEB to the Chief Conservation Officer.
Chief Safety Officer	Decision making for matters pertaining to safety under the COGOA.
NEB	Decision making for matters regulated under the CPRA, the COGOA and associated environmental decisions under the CEAA and the MVRMA. The NEB has delegated some of its authority under COGOA to the Chief Conservation Officer.



# 3. Evaluation Methodology

Gartner Lee was required to develop an overall work plan for completing the project, and a more detailed evaluation and assessment plan which included the development of well-defined performance measures. The Project Management Plan provided the overall framework, or detailed work plan, for the evaluation of the NEB's Frontier Exploration and Production Function. The work was broken down into nine separate tasks, covering each phase of the project. Specifically, the Project Management Plan:

- provided a more detailed explanation of the objectives of each task;
- identified the NEB resources required to support the successful completion of each task (i.e., Who or What);
- indicated when and how these resources were used (i.e., How we see utilizing/accessing resources);
- identified expected outcomes from using these resources (i.e., What we expect from the resources);
- clearly identified an integrated timeline showing the anticipated start and completion dates of each task; and
- identified the expected results from completing each task, measured against the objectives of the project.

The Evaluation and Assessment Plan provided the details of our approach and methodology, and the tools used to complete the evaluation, by:

- identifying and confirming the individuals and organizations to be interviewed, both internal and external to the Board;
- developing interview questions/focus group approaches, with the development of questions tailored to the various types of groups being interviewed (Board Members and NEB executives, Team Leaders and technical experts, and external clients and stakeholders);
- providing details of the completed analytical and evaluation framework; and
- providing a draft table of contents for the Evaluation Report.

The Evaluation and Assessment Plan identified broad areas of inquiry that served as performance measures to guide the evaluation of the Board's Frontier Exploration and Production Function. The measures addressed and built upon the objectives for this project<sup>4</sup>, Evaluation Policy from the Treasury

<sup>&</sup>lt;sup>4</sup> From: NEB Request for Proposal, Solicitation No. 84084040213

Board of Canada<sup>5</sup>, and recent guidance on Program Evaluation and public sector review<sup>6</sup>. The broad areas of inquiry/performance measures are:

- Does the function/program meet the needs of internal and external stakeholders?
- Does the function/program have clearly defined objectives and expected results?
- Does the function/program employ sound performance measurement?
- Does the function/program continue to correspond to the mandate of the Board?
- Is the function/program relevant and does it address a realistic need?
- Are there unwanted outcomes?
- Are the most effective and appropriate means being used to achieve the function/program objectives, relative to alternative design and delivery approaches?
- In what manner and to what extent does the function/program complement, duplicate, overlap or work at cross purposes with other programs?

Specific qualitative and quantitative questions were then developed that were used in the internal NEB interviews (Appendix A) and interviews with external clients and stakeholders (Appendix B). Figure 1 illustrates the linkages between the interview questions and the broad areas of inquiry.

Evaluation of NEB E&P Function Gartner



<sup>&</sup>lt;sup>5</sup> Treasury Board of Canada Secretariat. 2001. Evaluation Policy.

<sup>&</sup>lt;sup>6</sup> Treasury Board of Canada Secretariat. 2004. Strengthening Public Sector Management. An Overview of the Government Action Plan and Key Initiatives.

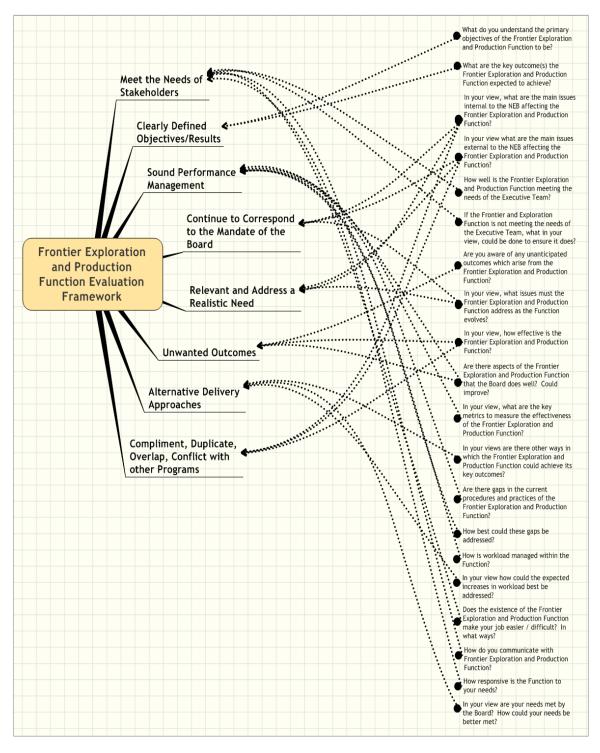


Figure 1. Linkages between the Broad Areas of Inquiry of the Evaluation and the Interview Questions



## 3.1 Data Sources

Various sources of information were used to provide background information on the Frontier Exploration and Production Function, and to determine its current operating structure and its efficiency and effectiveness within the NEB. Additional data sources were utilized in order to collect the information necessary for conducting the evaluation. These data sources included:

- documents provided by the NEB;
- information found on the NEB web site;
- information found on other federal government web sites and in other publications;
- results of workshops, focus groups and/or individual or small group meetings with NEB representatives; and
- interviews with external clients and stakeholders.

To enhance effectiveness, a written interview guide was distributed to the internal and external interviewees in advance explaining the background and reasons for the interview and the questions to be asked. This allowed interviewees to be better prepared and to provide complete answers during the interviews. In a very few cases, interview guides were not available to interviewees prior to the interviews. Based on the interview questions, two separate interview guides were developed one for the internal NEB interviews and one for the external client and stakeholder interviews.

## **3.2 Identification of Potential Interviewees**

Representatives of the various groups within the NEB were identified and interviews arranged with the assistance, and based on the advice, of the Project Authority. Interviewees were selected to represent a cross section of the individuals from the various management and technical areas within the NEB that were part of or interact with the Frontier Exploration and Production Function. External clients and stakeholders were identified based on an initial list of external contacts suggested by the Project Authority and Advisory Committee. Letters, signed by the Secretary to the Board, were sent to senior representatives of the various clients and stakeholders requesting their participation in the Project. The senior representatives then arranged for appropriate staff to be interviewed. In a few cases, clients and stakeholders declined the opportunity to participate, or did not respond to our many messages and attempts at contact.

Table 2 summarizes the types of client and stakeholder groups, and NEB representatives that were approached to participate in the evaluation, and the actual number of interviewees that did participate. A complete list of the client and stakeholder organizations that were invited to participate in the project is contained in Appendix C.



Group	Туре	Actual Number of Interviewees that Participated
Clients	Petroleum Producers, Pipeline Companies, Seismic Service Companies	25
Stakeholders	Federal and Territorial Government departments, Land Claim Boards, Aboriginal Groups, Industry Associations	13
NEB	Board members, NEB executives, Legal Services, Team Leaders, technical experts	15

 Table 2.
 Number of Individuals representing Clients, Stakeholders and the NEB that Participated

## 3.3 Data Analysis

The information collected for the evaluation and during the interviews was a combination of qualitative information and quantitative data. The qualitative information was analyzed using content analysis techniques, while statistical analyses were applied (where required) to the quantitative data. Examples of qualitative data included verbal comments and responses to specific questions. Quantitative data related to numeric responses, such as using a satisfaction rating system and, analyzing responses based on the number of interviews conducted with a certain number of individuals from specific target audiences. Where qualitative data were obtained, efforts were made to record all relevant information and to create a record of the discussions.



# 4. **Results**

The information collected for the evaluation of the NEB's Frontier Exploration and Production Function was a combination of qualitative information and quantitative data. Table 3 shows which questions in the internal and external interviews were qualitative or quantitative questions.

Internal Interview Questions		
Qualitative Questions	1, 2, 3, 6, 7, 8, 9, 10, 12, 14 and 15.	
Quantitative Questions	4, 5, 11 and 13.	
External Interview Questions		
Qualitative Questions	1, 2, 3, 5, 6, 7, 8, 9, 10, 12, 14, 15, 16 and 17.	
Quantitative Questions	4, 11 and 13.	

#### Table 3. Internal and External Interview Question Types

## 4.1 Quantitative Questions

As part of the evaluation of the NEB's Frontier Exploration and Production Function, a number of quantitative questions were posed. These questions related to the:

- efficiency and effectiveness of the Frontier Exploration and Production Function in meeting the needs of external clients and stakeholders, and in meeting the needs of internal NEB staff, executives and Board members;
- openness and transparency of the Frontier Exploration and Production Function in fulfilling its responsibilities; and
- procedural fairness of the Frontier Exploration and Production Function in fulfilling its responsibilities.

For all topics, interviewees were asked to rate their opinion on a scale from one to five, where one indicated they were not satisfied and five indicated complete satisfaction. In each graph, the X-axis represents the rating scale from one to five. The Y-axis represents the percentage of the total number of responses to each question. Percentages were calculated by pro-rating the number of responses on a scale of 100. Responses are based on individual interviewee responses and are therefore not lumped according to a particular client (i.e., regulated company), stakeholder or NEB representative group (e.g., staff, Executive or Board members). Table 2 provides the total number of individuals that were interviewed from each group (e.g., client, stakeholder or NEB). In some cases interviewees could not respond to quantitative questions, due primarily to these individuals having very limited experience working with the Frontier Exploration and Production Function.



## 4.1.1 Comparison of Results from External and Internal Interviews

This section compares quantitative results from the internal NEB interviews with the combined external client and stakeholder interviews. The value of these comparisons is to identify how perceptions about the efficiency, effectiveness, openness, transparency and fairness of the Frontier Exploration and Production Function may differ between internal (i.e., how the staff, executives and Board members think the Frontier Exploration and Production Function is perceived by external clients and stakeholders) and external interviewees (i.e., how external clients and stakeholders actually perceive the Frontier Exploration and Production Function). It should be noted that these results only indicate general trends, as no statistical analysis of the data were completed due to the small number of quantitative responses in the stakeholder and NEB data sets.

#### 4.1.1.1 Efficiency and Effectiveness

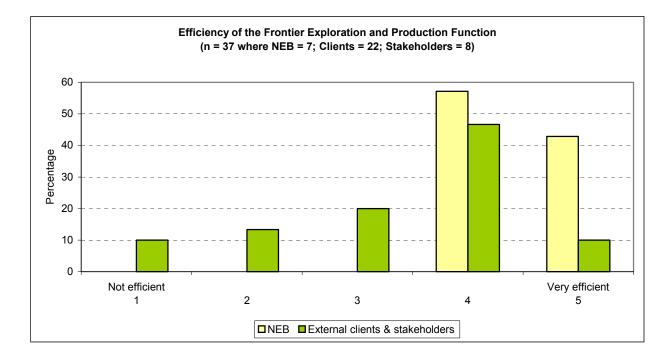
Interviewees were asked to rate their opinion regarding the efficiency and effectiveness of the Frontier Exploration and Production Function in meeting the needs of external clients and stakeholders.

In general, the internal interviewees felt the Frontier Exploration and Production Function was more efficient in meeting the needs of external clients and stakeholders than how external clients and stakeholders actually perceived it. These results are illustrated in Graph 1.

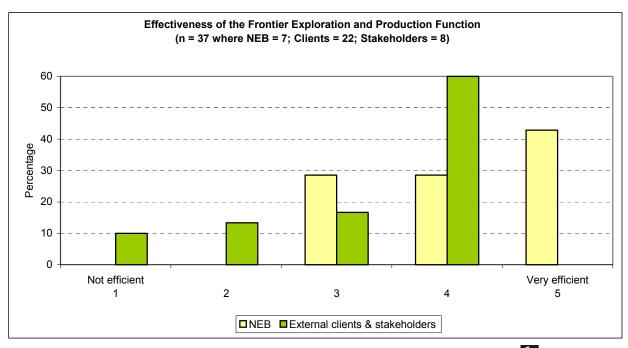
When asked about the effectiveness of the Frontier Exploration and Production Function, the internal interviewees responses ranged from generally effective to very effective (i.e., ratings of 3 to 5), while the external interviewees responses where concentrated around the Frontier Exploration and Production Function being effective (i.e., a 60% rating of 4, and the remaining 40% spread between a rating of 1 and 3). These results are illustrated in Graph 2. As is the case with efficiency, internal interviewees judged the Frontier Exploration and Production Function to be more effective than how external clients and stakeholders actually perceived the situation.



### Graph 1. Comparison between External and Internal Interviewees on the Efficiency of the Frontier Exploration and Production Function



#### Graph 2. Comparison between External and Internal Interviewees on the Effectiveness of the Frontier Exploration and Production Function



Evaluation of NEB E&P Function Gartner Lee Final Report June 05.doc 12

Gartner Lee

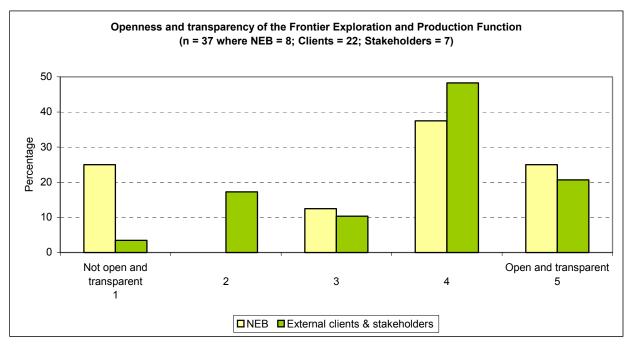
#### 4.1.1.2 Openness, Transparency and Fairness

Interviewees were asked to rate their opinion regarding the openness, transparency and fairness of the Frontier Exploration and Production Function in meeting the needs of external clients and stakeholders.

The internal interviewees felt the Frontier Exploration and Production Function was generally less open and transparent in fulfilling its responsibilities to external clients and stakeholders than the clients and stakeholders actually perceived the Frontier Exploration and Production Function to be. These results are illustrated in Graph 3.

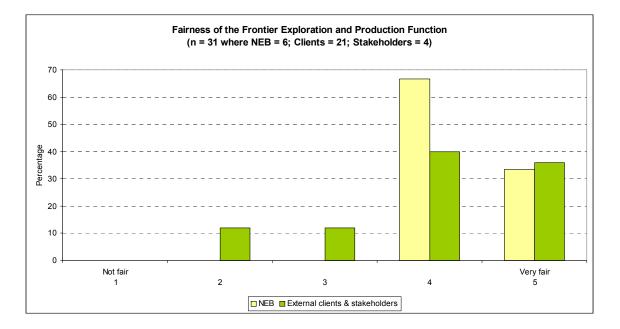
The internal interviewees felt the Frontier Exploration and Production Function was marginally more procedurally fair in dealing with external clients and stakeholders than the clients and stakeholders actually perceived the Frontier Exploration and Production Function to be. These results are illustrated in Graph 4.

# Graph 3. Comparison between External and Internal Interviewees on the Openness and Transparency of the Frontier Exploration and Production Function





# Graph 4. Comparison between External and Internal Interviewees of the Procedural Fairness of the Frontier Exploration and Production Function





## 4.1.2 Results from External Interviews

The external interviewees consisted of two separate groups:

- clients consisting of companies requiring regulatory authorizations from the NEB; and
- **stakeholders** consisting of land claim boards, federal and territorial government departments, and industry associations that may participate in, or be affected by, the NEB processes on Frontier lands.

This section analyzes the results of external interviews to better understand any trend differences in the quantitative results from the external client and stakeholder interviews. The value of these comparisons is to identify how perceptions may differ about the efficiency, effectiveness, openness, transparency and fairness of the Frontier Exploration and Production Function between external clients and stakeholders. It should be noted that these results only indicate general trends, as no statistical analysis of the data were completed due to the small number of quantitative responses in the stakeholder data set.

Overall, with the low number of responses from stakeholders to these questions, it is difficult to make more than very general statements about the results.

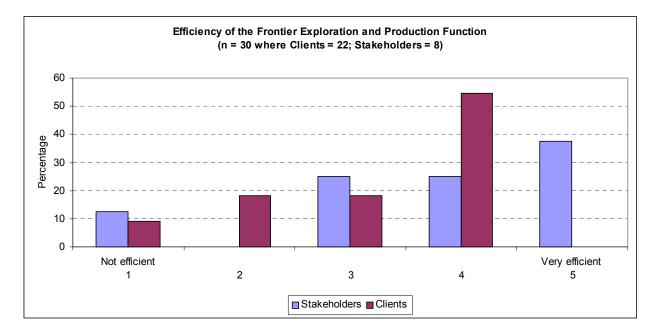
### 4.1.2.1 Efficiency and Effectiveness

When asked about the efficiency of the Frontier Exploration and Production Function, the majority of clients felt that it was efficient (i.e., 54% gave a rating of 4). About 38% of stakeholders felt that the Frontier Exploration and Production Function was very efficient, with an additional 50% being evenly distributed between ratings 3 and 4. Overall, a higher proportion of stakeholders than clients judged the Frontier Exploration and Production Function to be more efficient. These results are illustrated in Graph 5.

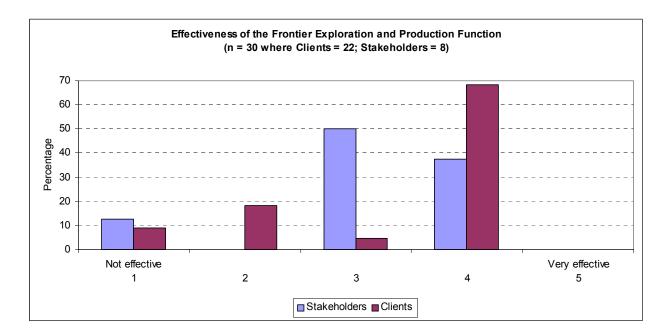
With respect to the effectiveness of the Frontier Exploration and Production Function, clients gave a marginally higher rating than the stakeholders did. These results are illustrated in Graph 6.



#### Graph 5. Comparison between Clients and Stakeholders of the Efficiency of the Frontier Exploration and Production Function



#### Graph 6. Comparison between Clients and Stakeholders of the Effectiveness of the Frontier Exploration and Production Function



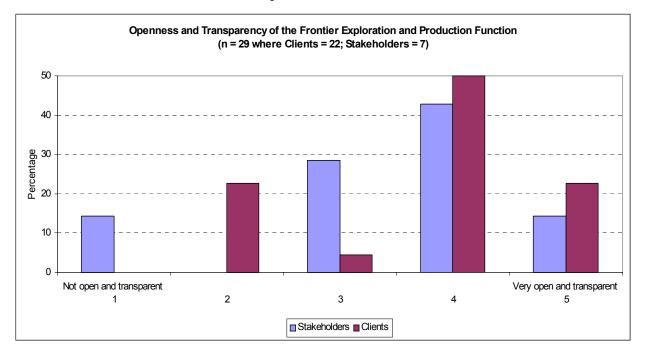


#### 4.1.2.2 Openness, Transparency and Fairness

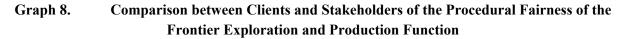
When comparing the perceived openness and transparency of the Frontier Exploration and Production Function, clients gave a marginally higher rating overall than did the stakeholders. Graph 7 illustrates these results.

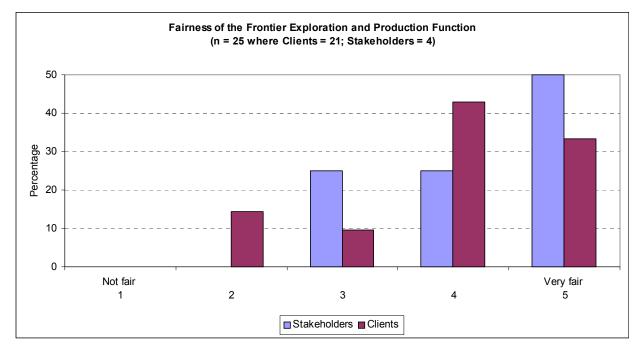
Procedural fairness was generally perceived to be the same between clients and stakeholders, with the majority of ratings ranging between 3 and 5. Graph 8 illustrates these results.

#### Graph 7. Comparison between Clients and Stakeholders of the Openness and Transparency of the Frontier Exploration and Production Function









## 4.2 Qualitative Questions

The qualitative results from the interviews, conducted by telephone, as one-on-one meetings, and in small group sessions, have been separated into "external" and "internal" groupings. External interviewees were clients and stakeholders, while internal interviewees were NEB staff, executives and Board members. The interviews followed the guides that were distributed prior to conducting the interviews. However, many of the responses were open-ended, with considerable overlap in responses between questions.

This section identifies the key findings that emerged from analyzing the qualitative results of the interviews. The key findings are categorized according to the broad areas of inquiry identified in the Evaluation and Assessment Plan. Due to the open ended nature of the responses to many of the questions, and to the overlapping nature of the broad areas of inquiry, some of the identified key findings may relate to more than one broad area of inquiry. In these cases, the key findings have been identified against the most appropriate broad area of inquiry. Observations on each key finding are also presented, and represent the observations of the interviewer.

It should be noted that when interviewed by Gartner Lee, many clients and stakeholders did not differentiate explicitly between the Frontier Exploration and Production Function and the NEB, and



generally used the terms synonymously. In this section, the terms will be used correctly, wherever possible.

## 4.2.1 Meet the Needs of Clients and Stakeholders

Legislation and regulations administered by the NEB's Frontier Exploration and Production Function, and related guidelines and guidance documents for clients need to be continually revised and updated to reflect and accommodate current information and technological changes, improvements and advancements adopted by the oil and gas industry.

Clients generally felt that the provisions of the COGOA and the CPRA were not keeping up with technological advances and improved operational practices endorsed and implemented by industry. At the very least guidelines and guidance documents, and preferably regulations and legislation, should reflect these changes and improvements. For example, some clients felt that a more streamlined regulatory process would recognize the improvements and advances implemented by industry, while requiring less effort and creating a more timely regulatory process. A streamlined regulatory process similar to what is currently in place in British Columbia or Alberta that seems to place the responsibility with the applicant is the preferred approach. Clients suggested that they do practice responsible and sustainable approaches in their operations, yet the NEB "regulatory processes" do not seem to reflect or give credit for this.

Alternative methods and approaches for maintaining open and more constructive and effective dialogue between Frontier Function staff and clients during the application and approvals processes, particularly those processes requiring a quasi-judicial decision-making approach, should be considered and implemented.

Generally, clients felt that opportunities to have face-to-face discussions with Frontier Exploration and Production Function staff during the COGOA regulatory process resulted in a more efficient, effective and timely process overall. Clients that have experience in the CPRA regulatory process for declaration of significant discovery and commercial discovery have expressed a desire to be able to have similar open discussions throughout that process. Clients did however, seem to recognize the natural justice considerations of the application process under the CPRA. This finding emphasizes the need and advantages of fostering and maintaining personal working relationships and open dialogue between the Frontier Exploration and Production Function staff and clients. This is something that both NEB respondents and clients indicated as being of value.

Keeping informed about the status of the devolution of land-based oil and gas management to the Government of the Northwest Territories.



Many clients and some stakeholders that have developed a good working relationship with the Frontier Exploration and Production Function, look to it as having considerable knowledge, expertise and experience with the oil and gas industry, and as being a bridge between industry and government. Although the Frontier Exploration and Production Function is not involved in devolution discussions, clients (i.e., industry) and to a certain extent some stakeholders, are looking to the Frontier Exploration and Production Function about the progress of devolution. There was also a desire to have the Frontier Exploration and Production Function provide to government its expertise and corporate knowledge on the importance of the oil and gas industry in Frontier areas and to emphasize the importance of having a devolved management process that is as good as or preferably an improvement over the existing process.

A forum to provide an exchange of information, in an appropriate fashion that protects proprietary information and the identity of operators, on problem areas that other operators have run into and the agreed-upon solutions that worked.

Many clients expressed interest in establishing a forum where the Frontier Exploration and Production Function could provide information on problem areas that some operators have run into and the agreed-upon solutions that worked. Many felt this would facilitate easier, more efficient and cost effective handling of similar/same problems when experienced by others. This should be done without revealing proprietary information. In other words, let's share problems and solutions that could be common among operators.

## 4.2.2 Clearly Defined Objectives and Results

Applications should be processed in a timely fashion with clarity of requirements, and predictability of outcomes.

Many clients expressed a desire to see greater clarity in the regulatory processes and in the guidance documents explaining these processes. In some cases, clients felt the regulation of offshore activities should be separate from land-based activities. Some also felt there were regulations or stated requirements that were ambiguous, and that the interpretation of what was required could vary among the regulators consulted, or between the regulator and the applicant. Timeliness of the regulatory process was also of concern for most clients, particularly in the north where multi-jurisdictional requirements tend to slow down the process and result in duplication and inefficiencies.

#### Up-date the regulations that apply to offshore oil and gas activities in Frontier areas.

Clients that operate in offshore Frontier areas expressed the desire to have separate offshore regulations, which can be rigorous owing to the higher potential for impacts to occur in the offshore. However, many

clients also expressed the need to make the regulation of land-based activities (e.g., COGOA primarily) a more streamlined process.

# Revise and modernize the CPRA legislation and associated regulations to reflect the changing nature of today's upstream oil and gas industry operating in Frontier areas.

Clients that have had experience with the CPRA regulatory process indicated the legislation and regulations are out of date and do not adequately reflect the changing nature of the upstream oil and gas industry. Many felt regulations should be streamlined to improve efficiency and effectiveness, and to reflect how the Frontier oil and gas industry is developing today.

## 4.2.3 Sound Performance Management

# Alternative regulatory delivery and decision-making model for the Frontier Exploration and Production Function.

Many clients expressed concern that the Frontier Exploration and Production Function was likely operating at or near capacity with the current level of activity in Frontier areas, and would not be able to effectively handle an increased work load. This included maintaining efficiency, timeliness and certainty in the regulatory processes, inspection processes and clients being able to meet the northern seasonal operational window. Regulatory processes could be streamlined to improve timeliness and certainty, but a significant increase in workload would still put a strain on existing Frontier Exploration and Production Function staff.

### The loss of "corporate knowledge" within and between the Frontier Exploration and Production Function and industry with respect to maintaining and improving working relations and improving efficient and effective regulation, operation and compliance in Frontier areas.

Clients and NEB representatives expressed concern over the potential for the loss of corporate knowledge when individuals retire or change jobs. This was expressed for positions within the NEB and maintaining the continuity of contact and the same level of expertise with clients, and with clients when individuals that are used to dealing with the Frontier Exploration and Production Function move on and replacement staff have no experience. Basically each party has to start from the beginning in building relationships and levels of experience and knowledge.

Develop policies or procedures that would assist staff in better enforcing regulations and good practices for non-compliant clients (i.e., operators), while not penalizing compliant clients.



Many Frontier Exploration and Production Function staff expressed the desire to implement an internal tracking system that would assist them in identifying those clients that are non-compliant in submitting required information (i.e., reporting requirements), and/or contravene regulations. The idea is to be able to identify those clients with a high-risk of being non-compliant, so Frontier Exploration and Production Function staff could proactively address issues that could lead to non-compliance before it happens. In most cases, non-compliance occurs when inexperienced operators are involved. In some cases, when clients do not provide required information about a well (i.e., under COGOA), then it presents problems in the future if a CPRA application for that well is made. By that time much of the required information is either lost or misplaced.

# Enable staff of the Frontier Exploration and Production Function to complete their jobs more efficiently and effectively.

Many staff expressed a sense of isolation in working within the overall NEB business structure and that there was little knowledge among other Business Units within the NEB of the Frontier Exploration and Production Function. Within their Business Unit, there was some concern that initiatives had been started in the past that tried to improve operational efficiency, but seemed to have gone nowhere, or had no results. Most staff indicated satisfaction with their jobs and sensed there was potential for improvement, but were not sure how to achieve it.

### 4.2.4 Continue to Correspond to the Mandate of the NEB

Develop and maintain a more visible presence in northern Frontier areas, take on a more proactive role in administering its legislation in the north, and be more directly involved in the environmental assessment and regulatory processes in these areas.

Virtually every northern stakeholder expressed concern over the lack of a northern presence of the NEB or the Frontier Exploration and Production Function. Decision-makers in northern jurisdictions indicated that a Frontier Exploration and Production Function presence (i.e., a representative) at hearings related to oil and gas activities (whether an environmental assessment or regulatory process) would be beneficial and useful.

Other northern stakeholders wanted to know more about the NEB generally and the Frontier Exploration and Production Function specifically, and its responsibilities in the north. How information is exchanged and decisions are made in northern jurisdictions generally requires a physical presence in and open dialogue with communities and at meetings. Clients did not express such a need for the Frontier Exploration and Production Function to have an improved northern presence, although some did recognize that with a greater understanding of the NEB among northerners, assessment and regulatory processes would likely be easier.



## 4.2.5 Relevant and Address a Realistic Need

Frontier Exploration and Production Function electronic submission and information retrieval system.

Many clients indicated a preference for an electronic form of information exchange, which would include upgraded information access and retrieval capabilities in the Frontier Information Office. Virtually every client expressed an interest to moving to a completely electronic application process. There was also a request for the Frontier Exploration and Production Function to look at all reporting requirements in the regulations and ensure that acceptable reporting options would be available when conventional means of communications do not work, particularly for those clients operating in remote northern locations.

# Continually develop state-of-the-art best practices for oil and gas exploration, production and transmission activities in Frontier areas.

Many clients expressed an interest in the Frontier Exploration and Production Function in developing and maintaining more up-to-date and state-of-the-art regulatory best practices and guidelines. These should be modeled after similar structures in place through east coast Federal-Provincial Offshore Boards.

#### Working together to meet the Kyoto Protocol.

Many clients expressed a desire to work with the Frontier Exploration and Production Function to develop acceptable strategies and targets for industry to be able to meet any requirements related to the Kyoto Protocol. Some clients felt that government would impose requirements that industry may not be able to, or feel they cannot, meet. Clients have a very high regard for the expertise and knowledge of the Frontier Exploration and Production Function, and feel confident in looking to them for this kind of assistance and guidance.

### 4.2.6 Unwanted Outcomes

# Reconsider the practice of publicly releasing geophysical and geological information provided by clients during the regulatory process after a certain length of time.

Some clients indicated the release of information into the public domain was not helpful, and perhaps the time for this had come and gone as the face of the north and the pace of development had changed since legislation was implemented. There appears to be no requirement in the legislation for the public release of the information, it appears to be totally arbitrary on the part of the Chief Conservation Officer.



### 4.2.7 Alternative Delivery Approaches

A "Stewardship" role with clients and stakeholders for oil- and gas-related activities in Frontier areas.

Many clients acknowledged the talent, experience and expertise residing in the Frontier Exploration and Production Function, and the high regard that industry has for it. With this in mind, some clients have expressed the notion that the Frontier Exploration and Production Function should take on a "Stewardship" role for oil and gas activities in Frontier areas, and even be an advocate (to a limited extent, primarily focused on the technology and socio-economic areas) for the industry in these areas. In a general sense, this is outside the mandate of the NEB; however, in the context of environmental assessment (EA), the Frontier Exploration and Production Function has a responsibility to consider certain things within the scope of what is required to be considered in the applicable EA legislation, including socio-economic impacts.

## 4.2.8 Complement, Duplicate, Overlap, Conflict with other Programs

#### Conduct regular educational and outreach programs for clients and stakeholders.

Clients and stakeholders identified the need for the Frontier Exploration and Production Function to improve its educational and outreach programs to facilitate a greater understanding of the responsibilities and mandate of the NEB among these groups.

# Develop and maintain a more visible presence in northern Frontier areas, and be more directly involved in the environmental assessment and regulatory processes in these areas.

Many northern stakeholders generally did not know what the role of the Frontier Exploration and Production Function was in northern Frontier regions. Some stakeholders, such as the environmental assessment and regulatory boards in the north, knew about the NEB generally, but could not differentiate the specific role of the Frontier Exploration and Production Function or what its regulatory responsibilities were in these areas. Even some federal government departments were unclear as to the specific role of the Frontier Exploration and Production Function.

What this means in a multi-jurisdictional setting, is that some of the decision-making processes in the north may be making environmental assessment and regulatory decisions related to oil and gas applications in the absence of specific technical information that could be easily provided by the Frontier Exploration and Production Function. By having a better understanding of the roles and responsibilities of the Frontier Exploration and Production Function Function in northern Frontier regions and having NEB expertise present in these northern decision-making processes, the northern Frontier decision-making



processes may be improved. This would ultimately improve the functioning of the Frontier Exploration and Production Function in these regions.

# 5. Conclusions

## 5.1 Impressions about the NEB

The general impressions and perceptions about the NEB and its Frontier Exploration and Production Function that were relayed during the interviews are summarized according to the three groups interviewed.

## 5.1.1 Internal NEB Representatives

This group represented a cross-section of all levels within the NEB, from staff performing the day-to-day tasks of the Frontier Exploration and Production Function, to Team Leaders, Executives and Board members. Specialized services (i.e., Legal Services) were also interviewed.

Those representing senior management levels, the executive and the Board all felt the Frontier Exploration and Production Function was performing well internally and was providing an acceptable level of service to external clients and stakeholders. There was some acknowledgement that more work could be done in raising the profile of the NEB in the north, but that the existing level of presence was probably adequate for the amount of activity currently in the north.

Amongst staff, there was a general sense of isolation within the NEB structure, and some uncertainty surrounding the upcoming staff turnovers within the Frontier Exploration and Production Function. All staff interviewed indicated a high level of interest and satisfaction with their jobs, and felt they were providing a valuable service to the NEB internally and to external clients and stakeholders. Generally, there was a feeling that current work loads were at or near maximum capacity for the Team.

## 5.1.2 External Clients

This group represented the full range of upstream oil and gas activities that are regulated by the NEB in Frontier areas, and were the largest group interviewed. Almost all clients that participated in the interviews expressed a high level of respect for the Frontier Exploration and Production Function, built up mainly through personal contacts and ongoing interactions in the regulatory processes. In most cases, the



NEB was perceived as a trusted industry advisor, even in areas that appeared to go beyond the mandate of the NEB. For example, they requested the involvement of the NEB in areas such as Kyoto Protocol, the promotion of oil and gas development in Frontier areas, and a continued and improved (i.e., leadership) role in the north. Most clients also realized and accepted the limitations of the NEB in dealing with multi-jurisdictional regulatory issues.

Those clients that were less enamoured with the NEB appeared to be so through direct experience in the regulatory processes where decisions were either not in their favour, or these processes were viewed as being very bureaucratic, cumbersome and inefficient. In some cases, these clients were also frustrated over the fact that they felt they had met the requirements, yet the desired end results were not forthcoming. In these cases, there appeared to be little or no personal relationships built between staff of the Frontier Exploration and Production Function and the client.

## 5.1.3 External Stakeholders

This group was the most diverse, representing Territorial and federal government departments, land claim Boards, aboriginal groups, and industry associations. This group was also most representative of northern stakeholders.

These stakeholders all agreed that the NEB's profile in the north should be improved and participation in northern based environmental assessment and regulatory processes should be direct and in-person. Many of the stakeholders had very little knowledge about the NEB and what its responsibilities were in the north with respect to oil and gas activities. Generally, having little working experience with the NEB, most stakeholders had little information to offer. Most stakeholders also expressed strong opposition to the term "frontier" when referring to the north, they find this term out of date as they do not consider the north to be "frontier".

# 5.2 Northern Operational Context

It was evident to the researchers, as a result of the interviews conducted, that there was limited acknowledgement, or understanding in some cases, of how consultation and decision-making processes worked in a northern setting, and what would be required to efficiently and effectively operate there. Many of the key findings and resulting recommendations make sense only in a northern context, and may be easily dismissed in a southern business environment. The following discussion provides insight into the northern context as it exists today.

The NWT has one of the most diverse and complex social, cultural and political environments in Canada. Although the overall population is small (just over 41,000 residents) relative to its geographic size



(1,171,918 km<sup>2</sup>), the dynamics of the society and the overall political and institutional interrelationships are highly unique in structure, form and operation. Northerners appear to be willing to experiment with government structures and to question whether institutions developed elsewhere are appropriate for their particular needs and circumstances. As a result, co-management structures and integrated environmental management approaches to care for the environment in the NWT were established. This was ultimately captured in land claims and in the case of the Mackenzie Valley, codified in law through the *Mackenzie Valley Resource Management Act* (MVRMA).

These land claims were settled in the NWT as follows:

- Inuvialuit Settlement Region, Inuvialuit Final Agreement (IFA) in 1984;
- Gwich'in Settlement Area, Gwich'in Comprehensive Land Claim in 1992;
- Sahtu Settlement Area, Sahtu Dene and Metis Comprehensive Land Claim in 1993; and
- Tlicho Settlement Area, Tlicho Comprehensive Land Claim in 2003.

Each of the land claims settled in the Mackenzie Valley (i.e., the last three in the above list) are based on the same basic integrated resource management structure. This structure includes land use planning, environmental impact assessment (EIA), and land and water regulation. The classic theory behind integrated resource management is that environmental parameters are set in land use plans which capture environmental thresholds of change, the EIA process evaluates projects against those thresholds and finally, the regulatory process manages the impacts within established guidelines. This manner of managing the environment allows for the identification of cumulative impacts by all feeding back to the land use planning process. "Co-management" boards, namely, the Gwich'in and Sahtu Land Use Planning Boards, the Mackenzie Valley Environmental Impact Review Board, and the Gwich'in, Sahtu and Mackenzie Valley. There are also requirements in the MVRMA for cumulative effects monitoring. The approach is different in the Inuvialuit Settlement Region.

In the Inuvialuit Settlement Region (ISR), there also exists EIA bodies, namely the Environmental Impact Screening Committee (EISC) and the Environmental Impact Review Board (EIRB). Land use planning is handled through communities, with the development of Community Conservation Plans that contain land classification systems 'A' through 'E': 'A' being areas where development is allowed; and, 'E' being the most restrictive (e.g., National Parks) with respect to development. These Conservation Plans, while nonenforceable, are taken seriously by the EIA bodies and voluntarily complied with by industry. Finally, the regulation of land and water remains with Indian and Northern Affairs Canada. The entire approach, while similar, is not as integrated as later claims in the Mackenzie Valley. A particular area of weakness is cumulative impact monitoring and a regional approach to considering cumulative impacts. There is no such requirement in the claim. There is a partial response to cumulative impact concerns with the EIA bodies requesting a cumulative impact analysis in their assessment reports. There are also two EIA

processes that apply in the ISR, required by the IFA and implemented through the EISC and EIRB, and required by the *Canadian Environmental Assessment Act* (CEAA) that is a super-added responsibility on federal departments. Meeting both of these requirements in the ISR can complicate the process for industry, but a reasonably acceptable process seems to have been worked out between the various parties in meeting requirements.

In Yukon, the Umbrella Final Agreement was signed in 1993 and sets out the ground rules by which Canada, the Yukon Government and Yukon First Nations will negotiate individual Yukon First Nation final agreements and self-government agreements. To date, nine Yukon First Nations have ratified agreements. On April 1, 2003, responsibility for management of most federal land in the Yukon devolved to the Government of the Yukon. The Yukon Government will use the *Yukon Environmental and Socio-economic Assessment Act* (YESSA) to assess the environmental and socio-economic impacts of proposed projects. At the present time, the *Yukon Environmental Assessment Act* (YEAA) is in force as interim legislation prior to the implementation of YESSA. Water management responsibility was also transferred to the Government of the Yukon, with the Water Resources Branch now administering water-related policies, regulations and programs under the Yukon Waters Act.

In Nunavut, the Nunavut Land Claim Agreement was implemented in 1999, creating the Nunavut Territory and establishing co-management boards to manage land (Nunavut Planning Commission), water (Nunavut Water Board), wildlife (Nunavut Wildlife Management Board), and environmental impact assessment (Nunavut Impact Review Board (NIRB)). The operational processes of these boards are similar to the co-management and integrated resource management approach established in the Mackenzie Valley. However, to date, in the absence of implementing legislation, these boards operate under the Nunavut Land Claim Agreement (NLCA). This results in two EIA processes applying in Nunavut, the NIRB process and the CEAA process.

Northern Frontier areas (excluding Yukon, as devolution of land based oil and gas management has occurred there), have a strong federal government presence and involvement in EIA and regulatory decision-making. This, in part, is due to the majority of the land areas not transferred through a land claims process to First Nation control, still remain as federal crown lands and are subject to federal management and regulatory processes; and, to the fact that many responsibilities that remain with federal departments in the north have not been transferred to territorial governments, as similar responsibilities have been in the provinces. However, where there has been devolution or devolution is contemplated, these territories, because of provisions of land claims, will still have diminished powers as compared with the provinces. Decision-making processes established through settled land claim agreements have also set-up independent decision-making or advisory boards, with responsibilities tied ultimately to a federal Minister (usually the Minister of Indian and Northern Affairs Canada). The resulting decision-making processes found in other jurisdictions.



Some of the resulting realities of this northern operational context are: expectations of adequate consultation; confusion about the roles of various agencies; overlapping responsibilities among the agencies established by the various levels of government; and the lack of knowledge about the roles and responsibilities of the NEB and its Frontier Exploration and Production Function.

# **5.2.1** Observations on Implications for the NEB and its Frontier Exploration and Production Function

A multi-jurisdictional setting for decision-making in northern Frontier regions results in more complicated environmental assessment and regulatory processes that generally do not lend themselves to streamlining for efficiency and effectiveness. Local involvement in the decision-making processes is a result of settled land claims, and requires greater effort on the part of clients, stakeholders and the decision-making bodies to ensure effective involvement is achieved and demonstrated in these processes. In the 21-years since the IFA was ratified and implemented and in the seven years since the MVRMA came into force in the Mackenzie Valley, the environmental assessment and regulatory processes have evolved to become reasonably acceptable processes for meeting requirements, and in the case of the Mackenzie Valley, achieving integrated resource management. An important component of these processes is the need to adequately consult with affected parties, communities and stakeholders prior to entering or triggering the environmental assessment and regulatory processes. Experience with the IFA and Mackenzie Valley processes suggests that the decision-making bodies that promote the processes for which they have responsibility with affected parties, communities and stakeholders have a more efficient, effective and meaningful level of participation by these groups. Developers and proponents (i.e., clients) that operate in these northern Frontier regions would also benefit by undertaking similar programs with affected parties, communities and stakeholders.

The capacity of the northern decision-makers and of northern stakeholders generally, to understand the technical complexities and issues related to oil and gas exploration and development is a limiting factor in the effective involvement of these groups in the management and regulation of this industry in northern Frontier areas. Capacity building through education, outreach and generally building a level of trust between the Frontier Exploration and Production Function and northern stakeholders needs to be fostered to ensure more efficient and effective decision-making processes. The success of building such relationships is already evident, as a similar kind of capacity building and trust has already been established, and continues to be fostered through day-to-day operations, between the staff of the Frontier Exploration and the majority of its clients. These relationships work to the mutual advantage of the clients and the Frontier Exploration and Production Function and Production Function and result in more efficient and effective operations and the achievement of desired results.



### 6. Recommendations and Suggested Action Plans

The recommendations are divided into NEB and Frontier Exploration and Production Function groupings, followed by a brief discussion and suggested approaches to be considered as part of an Action Plan for addressing each recommendation. NEB recommendations are addressed to the Board itself, as it has the ultimate authority in being able to implement the necessary changes to policies and programs required to achieve them. The remaining recommendations are addressed to the Frontier Exploration and Production Function, as these can be implemented through day-to-day activities.

A priority rating of High, Medium or Low has been assigned to indicate the level of importance given to each recommendation for acceptance and implementation.

### 6.1 NEB Recommendations

The following recommendations are addressed to the NEB.

#### 1. Improved Northern and Frontier Presence

It is recommended that the NEB establish a presence in the Northwest Territories (NWT), Nunavut, and other Frontier areas.

#### <u>Priority</u>: HIGH

Clients and stakeholders have strongly suggested that an improvement to the overall effectiveness of the NEB and its Frontier Exploration and Production Function in the north could be achieved by facilitating a greater understanding of the NEB's mandate and responsibilities amongst northern and other Frontier area stakeholders. By establishing an improved northern and Frontier presence, the NEB will be better able to fulfill its mandate (especially with Northerners) by engaging the public more effectively, and by providing more effective leadership and quality management with affected processes. The NEB will also be implementing its stated strategies with respect to clients and stakeholders, outlined in the NEB Strategic Plan 2005 - 2008.

Clients have also indicated that there appears to be jurisdictional issues that exist in the Gulf of St. Lawrence between the Government of the Province of Quebec and the Government of Canada, and a general sense among stakeholders in that area of not knowing who the NEB is and what their responsibilities are. The NEB should be prepared to work with stakeholders in all Frontier areas to help them better understand the jurisdictional and regulatory responsibilities of the various regulatory and assessment regimes that apply to oil and gas projects. By determining requirements and clarifying



expectations in a multi-jurisdictional setting where overlapping responsibilities may be present, the NEB and its Frontier Exploration and Production Function should be able to improve its efficiency, effectiveness and transparency in implementing and achieving its responsibilities.

#### **Suggested Action Plan Approaches**

The following actions are some suggestions for achieving this recommendation:

- consider establishing an NEB office in the north to be a point of contact for clients and stakeholders. The need for establishing this office is immediate, and its long term existence could be tied to the timeframe associated with devolution of land based oil and gas management responsibilities to the Government of the Northwest Territories, after which the NEB's responsibilities in the NWT Frontier area will be significantly reduced;
- develop a consistent and year round outreach and educational program to be delivered to stakeholders in the NWT specifically, and to stakeholders in other Frontier areas such as in Nunavut and the Gulf of St. Lawrence region as required, and concentrate on explaining the responsibilities and mandate of the NEB, and explaining about oil and gas exploration, development and transmission generally;
- concentrate outreach and educational programs to those communities and stakeholders directly affected by oil and gas exploration activities in these Frontier areas;
- concentrate dialogue, cooperation and coordination efforts towards stakeholders having regulatory and assessment responsibilities, where the NEB should be present and involved in these decision-making processes for oil and gas related activities; and,
- work with clients and stakeholders wherever possible to improve coordination and share responsibilities.

#### 2. Legal Certainty and Devolution

It is recommended that the NEB consider the impact of devolution on the hydrocarbon industry through active interdepartmental consultation, and ensuring consistency in the regulatory processes for clients during the transition period.

#### Priority: MEDIUM

Clients have indicated that negotiations between governments towards devolution of land-based oil and gas management responsibilities to the Government of the Northwest Territories is contributing to a high level of uncertainty about the long term regulatory regime for oil and gas exploration and development in the NWT. The nature of oil and gas exploration and development requires clients to engage in long term planning and to make substantial resource commitments. The uncertainties associated with devolution may lead to a lower level of exploration and development in these northern Frontier areas. There is a



need for the NEB to undertake client and stakeholder consultations to provide as much legal certainty and consistency as possible during the period of transition of responsibilities.

The NEB generally and the Frontier Exploration and Production Function specifically have considerable expertise and corporate knowledge related to the oil and gas industry overall, and specifically in Frontier areas. In part, this has resulted from the establishment of the NEB in 1959 and its long years of service to the industry as a respected regulator and monitoring body of oil and gas activities in Canada. It is also a result of the NEB having the function of providing advice to the Minister of Natural Resources Canada on certain oil and gas issues as the Minister may request. The NEB is also held in high regard by the industry because it is seen as being unbiased and having considerable corporate experience and oil and gas expertise. The NEB should consider sharing its expertise and corporate experience with the governments negotiating devolution so the resulting process can be as efficient and effective as possible.

#### **Suggested Action Plan Approaches**

The following actions are some suggestions for achieving this recommendation:

- consider preparing a briefing note or paper on the importance of the northern hydrocarbon industry and potential benefits and impacts of devolution to the industry;
- if appropriate, consider initiating an interdepartmental consultation program on the northern hydrocarbon industry and potential benefits and impacts of devolution to the industry; and,
- consider establishing a regular forum with clients and stakeholders for the purpose of explaining NEB processes, roles and responsibilities. This would impart as much certainty as possible that an efficient and effective legal framework will be maintained during the transition period;
  - the forum should also allow for the discussion and exchange of ideas and suggestions about devolution, and as a method for identifying issues and problems that could be dealt with through better communication.

# **3.** Improvements to Existing Legislation and Regulations Applicable in Northern Frontier Areas

It is recommended that the NEB consider undertaking a review and revision of the regulations administered by its Frontier Exploration and Production Function.

#### Priority: HIGH

Many of the clients interviewed felt that legislation and regulations governing oil and gas exploration and development activities in Frontier areas, particularly COGOA (and to a lesser extent the CPRA as very few of the clients interviewed had experience with the CPRA process) were not keeping up with, or able to deal effectively with, technological and information advances adopted by the hydrocarbon industry.



Many of these advances have lead to better industry practices and safer, more sustainable approaches to exploration and development. This new and evolving industry capability and responsibility should be acknowledged and reflected in new legislation and regulations. Many of the clients interviewed expressed a preference for a regulatory system like that implemented in Alberta for land-based activities. Clients operating in the offshore in the non-accord Frontier areas felt new regulations and regulatory processes should be developed specifically for offshore operations and modeled after those implemented by the joint offshore boards in the Maritimes.

Addressing this recommendation would assist the NEB in fulfilling its mandate and meeting its goals of: ensuring that NEB-regulated facilities are safe and secure and perceived to be so; and that NEB-regulated facilities are built and operated in a manner that protects the environment and respects the rights of those affected.

#### **Suggested Action Plan Approaches**

The following actions are some suggestions for achieving this recommendation:

- initiate an internal review of existing legislation and regulations that are applied in Frontier areas to determine the feasibility of undertaking revisions;
- it is understood that an internal review process is already in place within the NEB to review and revise regulations consider assigning higher priorities to the review of the regulations associated with the COGOA and the CPRA;
- consider establishing a joint industry/government working group at the technical level to advise on revisions;
- develop an action plan and timetable for undertaking revisions;
- if revisions are determined not to be feasible, investigate alternative methods for addressing client concerns, and include clients in the solution; and
- inform clients of these initiatives and progress made.

#### 4. Streamlining the *Canadian Petroleum Resources Act* regulatory application process.

It is recommended that the NEB consider streamlining the regulatory process for significant discovery and commercial discovery applications under the CPRA.

#### <u>Priority</u>: HIGH

Many clients and NEB representatives expressed concern over the inordinate amount of NEB resources and the complex quasi-judicial application process required for significant discovery and commercial discovery applications under the CPRA. Most clients that have made these applications view the process



as not being efficient or effective. NEB representatives indicated that an increase in these types of applications in the future would severely overload the capacity of the Frontier Exploration and Production Function to process applications in as timely a manner as they are processed now. Under the existing process it was suggested that applications could take a year or more to process if volumes increased. Effectively addressing this recommendation will contribute to the NEB achieving its goals and meeting its stated objectives.

#### **Suggested Action Plan Approaches**

The following actions are some suggestions for achieving this recommendation:

- initiate an internal review of the CPRA application process to quantify the amount of NEB resources needed to support the process;
- determine the feasibility of revising the process in order to streamline it; and
- if it is feasible, streamline the CPRA application process.

#### 5. Internal NEB Team Development

It is recommended that the NEB develop internal methods and programs for enabling Relationship Building between the Frontier Exploration and Production Function and other Teams and Business Units.

#### <u>Priority</u>: HIGH

Many NEB representatives interviewed indicated there was little in the way of Relationship Building between the Frontier Exploration and Production Function and other Teams and Business Units, or a common knowledge and understanding of individual Team functions within a Business Unit and across the NEB. Team building between Business Units is important as it provides for a consistent business approach and improved productivity across the NEB, and for integrated support for the Board. It also facilitates effective service delivery for clients across all Business Units at a time of increasing pressures due to high levels of resource development activities. Effectively addressing this recommendation will contribute to the NEB achieving its goals and meeting its stated objectives.

#### **Suggested Action Plan Approaches**

The following actions are some suggestions for achieving this recommendation:

• implement on-going internal orientation courses for Team and Business Unit staff that explain the linkages and integration within the NEB and between the Frontier Exploration and Production Function and other areas of the NEB;



- promote staff exchange programs within the NEB to expand understanding and knowledge of the whole organization; and
- provide opportunities for non-work related team building activities for Teams, Business Units and the whole organization.

#### 6. Industry Compliance

It is recommended that the NEB develop an approach to working with the appropriate clients to bring them into regulatory compliance. This may include investigating techniques such as risk assessment, and verifying progress in this area.

#### <u>Priority</u>: HIGH

NEB representatives have indicated that certain clients are non-compliant in submitting required information (i.e., meeting reporting requirements), and some may be working or undertaking activities without the appropriate regulatory approvals in place. This represents a significant legal liability for the NEB and is the cause of on-going frustration for the Frontier Exploration and Production Function. Non-compliance that is an on-going issue with certain clients needs to be fully investigated and resolved, by addressing the fundamental problems that cause the non-compliance and imposing stricter measures on clients to force compliance. The NEB should consider adopting a risk-based approach for identifying and addressing non-compliance. The intent is to be able to identify those clients with a high-risk of being non-compliant so Frontier Exploration and Production Function staff can proactively address the issues that could lead to non-compliance before these situations happen. In most cases, non-compliance occurs when inexperienced operators are involved.

Addressing this recommendation will contribute to the NEB meeting its goals of ensuring NEB-regulated facilities and activities are safe and secure, and are perceived to be so; and ensuring NEB-regulated facilities are built and operated in a manner that protects the environment and respects the rights of those affected.

#### **Suggested Action Plan Approaches**

The following actions are some suggestions for achieving this recommendation:

- implement a risk management program that would identify, assess and manage client compliance;
- this program would involve the NEB and clients accepting joint responsibilities and joint accountabilities;
- developing joint work plans with clients that address all reporting requirements, including potential areas of non-compliance. These plans would include timeframes and resulting achievable targets;



- improve the internal NEB and Frontier Exploration and Production Function processes to more easily track the compliance record of clients, and identify potential problem areas for investigation;
- undertake a regular risk assessment of the industry, to help identify potential non-compliant clients; and
- build personal working relationships and trust within the Frontier Exploration and Production Function and with clients.

### 6.2 Frontier Function Recommendations

These recommendations are addressed to the Frontier Exploration and Production Function.

#### 7. Improvements to Guidelines and Best Practices

It is recommended that the NEB consider using the goal-oriented approach to regulating Frontier activities, providing this approach is proven to be more efficient and effective, and consider alternative methods of program delivery and decision-making.

#### **<u>Priority</u>: MEDIUM**

Clients consistently raised the issues of certainty in regulatory processes, clarity of required elements to be included in applications, and timeliness in the environmental assessment and regulatory processes in Frontier areas. For most clients, the operating window in northern Frontier areas is narrow and generally restricted to several months during the winter. Improved clarity of expectations and requirements for information was identified as a priority by clients for speeding up these processes. It was acknowledged by clients that this was also a multi-jurisdictional issue, requiring better coordination and interaction among the various decision-making authorities in the north. Although clients felt the Frontier Exploration and Production Function was working reasonably well at the moment, many felt it was operating at peak capacity for the given workload in Frontier areas, and that an increase in activity would lead to longer turn-around times and result in slower regulatory processes. Clients also expressed concern over what they viewed as the single decision-making authority residing with the Chief Conservation Officer, and that it might become a "bottle-neck" that would significantly slow down the regulatory process in times of increased workloads.

Addressing this recommendation will assist the NEB in achieving its strategies, goals and measures and fulfill its mandate stated in the NEB Strategic Plan 2005 - 2008. The goal-oriented approach to regulation should be monitored and assessed by the NEB to determine whether or not it is effective.



#### **Suggested Action Plan Approaches**

The following actions are some suggestions for achieving this recommendation:

- work with clients to develop and identify state-of-the-art industry best practices that could be used in conjunction with updated guidelines for meeting regulatory requirements to improve the certainty, clarity and timeliness of the application process; and
- investigate alternative methods of program delivery and decision-making for the Frontier Exploration and Production Function, such as the delegation of decision-making responsibilities to a number of different levels as workloads increase.

#### 8. Educational and Outreach Programs for Clients and Stakeholders

It is recommended that the NEB develop and implement a specific educational and outreach program in Frontier exploration and production matters for clients and stakeholders.

#### **<u>Priority</u>: MEDIUM**

Many clients and stakeholders appeared not to know who the NEB is and what it does. They expressed the desire to have more workshops and information sessions in order for them to gain a better understanding of the NEB, its responsibilities and how it delivers its programs. Opportunities for information exchange with clients and stakeholders will contribute to developing higher levels of trust and building personal relations between the parties, and in the long term, lead to more efficient and effective program delivery and achievement of goals and objectives for the NEB.

#### **Suggested Action Plan Approaches**

The following actions are some suggestions for achieving this recommendation:

- establish a regular schedule of workshops and information sessions with clients to raise the profile of the NEB generally, and the Frontier Exploration and Production Function specifically, with clients and to continually build and maintain working relationships. The NEB Workshop 2005 that occurred from June 6 8, 2005 was an example of the type of interaction that is required; however, these workshops should happen on a more frequent basis; and
- consider developing and implementing information sessions with individual clients as a means of reviewing past year activities using a "lessons learned" approach where the client and the Frontier Exploration and Production Function share information about what worked and what did not work, and for reviewing planned programs for the coming year.



#### 9. Kyoto Protocol on Greenhouse Gas Emissions

It is recommended that the NEB show leadership and provide guidance for clients on best available technologies and possible requirements for meeting the Kyoto Protocol.

#### Priority: MEDIUM

Clients raised concerns over what the federal government would require the hydrocarbon industry to achieve in order to meet Kyoto Protocols. Clients expressed a strong desire to collaborate with the NEB on meeting any requirements. They suggested the NEB take a leadership role by providing guidance to the industry, and assisting with sorting out any disagreements on requirements or methodologies for achieving goals. In most cases it was agreed that the NEB was considered to be a trusted and respected industry leader among clients.

Addressing this recommendation will contribute to building a higher level of trust between clients and the NEB which will ultimately lead to more efficient and effective processes overall, which contributes to the NEB meeting and fulfilling its goals, objectives and mandate.

It should be noted that this recommendation goes beyond the mandate of the NEB. This recommendation did arise from the suggestions of clients that hold the NEB in high regard and look to it for leadership in meeting regulatory requirements.

#### **Suggested Action Plan Approaches**

The following actions are some suggestions for achieving this recommendation:

- take an active leadership role on issues related to meeting Kyoto Protocols;
- acquire the necessary expertise to provide guidance and assistance to the hydrocarbon industry; and
- establish a working group with clients to cooperatively address these issues.

#### **10.** Decision Making Processes

It is recommended that the NEB investigate alternative methods and approaches for achieving a more constructive and effective dialogue with clients during the application and approval processes.

#### Priority: MEDIUM

Many clients expressed how well the interactive dialogue approach worked for them with the Frontier Exploration and Production Function during the application and approvals process for authorizations under the COGOA. The quasi-judicial decision-making process for declaration of significant discovery



and commercial discovery under the CPRA was identified as being a more onerous and less effective method of achieving desired end results for clients. There was general recognition of why the quasijudicial process was in place, but many clients still expressed a desire to have face-to-face meetings to work through requirements, even if legal council had to be present. Addressing this recommendation will contribute to a more efficient and effective regulatory process overall.

#### **Suggested Action Plan Approaches**

The following actions are some suggestions for achieving this recommendation:

- the NEB review options that may be available to facilitate a more effective quasi-judicial decision-making application and approval process; and
- the Frontier Exploration and Production Function should look at ways of interacting with clients in a more constructive way prior to the application process for these types of approvals.

#### 11. Information Management

It is recommended that the NEB implement new computerized information management systems that facilitate efficient, effective and coordinated communications and information exchanges with clients and stakeholders.

#### Priority: HIGH

Many clients expressed frustration with the requirement to supply both electronic and paper copies of applications to the NEB, as well as the on-going need for certain regular reporting methods requiring paper (i.e., the requirement to provide weekly field reports by facsimile to one fax number that may only be accessible intermittently from northern locations). Concerns were also raised over the poor equipment provided in the Frontier Information Office for copying files and acquiring information. The use of micro-fiche is a method of information storage and retrieval that does not facilitate easy access, exchange or retrieval of large quantities of information. As the holder and provider of information, the NEB needs to upgrade its computer systems and information storage and retrieval systems to be easily accessible and compatible with industry standards.

As a regulator, the NEB needs to consider maintaining certain standards of communication with its clients to be able to more effectively utilize the increasingly larger amounts of information generated by industry. There are legislated requirements for the NEB to maintain some of this information for regulatory purposes. Therefore, to be consistent with its mandate and effectively meet its goals, the NEB should address this recommendation.

#### **Suggested Action Plan Approaches**

The following actions are some suggestions for achieving this recommendation:



- immediately transfer data and information stored on micro-fiche to an electronic data storage system that would allow faster search and retrieval times and easier access for clients;
- investigate methods of allowing computer access to this information through a secure web-site, or by other secure and effective methods;
- consider adopting an electronic application and reporting process; and
- consult with clients to ensure acceptable levels of communication and information management are achieved and maintained.

#### 12. Maintaining and Enhancing Internal Capacity

It is recommended that the NEB develop an active internal mentoring program to assist in succession planning over the long term, to ensure capacity issues are addressed, and to facilitate the retention of corporate knowledge among staff.

#### <u>Priority</u>: HIGH

Much of the current success of the Frontier Exploration and Production Function is a result of staff:

- having a long corporate history with the NEB;
- having many years working in the hydrocarbon industry;
- acquiring and developing corporate knowledge over the years; and
- by building trust with clients over the long term.

The time will come when this corporate knowledge will be lost, and the ability of the Frontier Exploration and Production Function to operate efficiently and effectively will be diminished. As work loads increase, there will be an immediate need to hire new staff that may not have these attributes.

#### **Suggested Action Plan Approaches**

The following actions are some suggestions for achieving this recommendation:

- develop and implement a formal internal mentoring program that would have senior Frontier Exploration and Production Function staff mentoring newer staff. This should include transferring corporate knowledge and maintaining good working relationships with clients and building trust;
- design and implement an internal succession planning program that would plan for the eventual loss of senior staff with corporate knowledge and experience; and
- encourage clients to mirror this program in order to maintain the knowledge and experience of working and interacting with the NEB as industry staff move on.



# Appendices

Evaluation of NEB E&P Function Gartner Lee Final Report June 05.doc

## Appendix A

**NEB Interview Questions** 

#### **Internal NEB Interview Questions**

#### 1. General information

1	Date the interviews is conducted			
2	Time the interview is conducted			
3	Duration of the interview			
4	Method of conducting the interview	Phone	In person	Other
5	Person conducting the interview			

#### 2. Information about the interviewee

1. Stakeholder group the interviewee represents

NEB	NEB staff	Oil & gas	Gov. org. &	Communities
management		industry	agencies	

2. Position of the interviewee in the organization

3. Number of years in the organization \_\_\_\_\_

#### 3. Questions

- 1. What is (a) your role at the NEB? and (b) your relationship to the Frontier Exploration and Production Function? Is your role part of, or supporting the Function?
- 2. What do you understand the goals of the Frontier Function to be?
- 3. How is progress towards meeting the goals of the Frontier Exploration and Production Function measured internally and externally?



4. In your view, how efficient is the Frontier Function in meeting the needs of a) the NEB organization (i.e., internally) and b) external stakeholders?

a) internal efficiency

1	2	3	4	5
Not efficient				Very efficient
internally				internally

b) external efficiency

1	2	3	4	5
Not efficient				Very efficient
externally				externally

5. In your view, how effective is the Frontier Function in meeting the needs of a) the NEB organization (i.e., internally) and b) external stakeholders?

a) internal effectiveness

1	2	3	4	5
Not effective				Very effective
internally				internally

b) external effectiveness

1	2	3	4	5
Not effective				Very effective
externally				externally

- 6. What are the main issues affecting the efficiency and effectiveness of the Frontier Function?
- 7. How best could these issues be addressed?
- 8. What future issues must be considered and addressed by the Board to ensure the Frontier Function remains efficient and effective?
- 9. In your view, how manageable is the current workload of the Frontier Function? How could it (workload management) be improved?



10. In your view, how could a future increase in workload for the Frontier Function best be managed by the NEB?In your view, how open and transparent is the Frontier Function for:

#### a) internal stakeholders

1	2	3	4	5
Not open and				Very open and
transparent				transparent

b) external stakeholders

1	2	3	4	5
Not open and				Very open and
transparent				transparent

- 11. Please explain.
- 12. In your opinion, do the people in the NEB's Frontier Exploration and Production Function deal with affected parties fairly, (i.e., treat all interested parties equally)?

a) internal parties

1	2	3	4	5
Not fair				Very fair

b) external parties

1	2	3	4	5
Not fair				Very fair

- 13. Please explain.
- 14. Is there anything else you would like to add?



## Appendix B

**External Client and Stakeholder Interview Questions** 

#### **External Interview Questions**

1. Discuss your relationship with the NEB and its Frontier Exploration and Production Function. How familiar are you with the Function?

2. What do you understand to be the primary objectives of the NEB's Frontier Exploration and Production Function?

3. In your view, what should the key outcomes of the NEB's Frontier Exploration and Production Function be?

4. How efficient and effective is the NEB's Frontier Exploration and Production Function?

1	2	3	4	5
Not efficient				Very efficient

1	2	3	4	5
Not effective				Very effective

5. Are there aspects of the Function that are done well? Could be improved?

6. What are the main issues affecting the effectiveness of the NEB's Frontier Exploration and Production Function?

7. How best could these issues be addressed?

8. What future issues must be considered and addressed by the Board to ensure that the Frontier Exploration and Production Function remains effective?

9. Does the existence of the Frontier Exploration and Production Function make your job easier / difficult? In what ways?



10. How do you communicate with the NEB people in the Frontier Exploration and Production Function?

#### 11. How open and transparent is the Frontier Exploration and Production Function?

1	2	3	4	5
Not open and				Very open and
transparent				transparent

12. How responsive is the Function to your needs?

13. How fair is the Frontier Exploration and Production Function?

1	2	3	4	5
Not fair				Very fair

14. In your view, with regard to the Frontier Exploration and Production Function only, are your needs met by the NEB? How could your needs be better met?

15. In your view, are there any unwanted outcomes as a result of the NEB's Frontier Exploration and **Production Function?** 

16. In your view, are there other ways in which the Function could achieve its key outcomes and/or meet your needs?

17. Is there anything else you would like to add?



## Appendix C

**Client, Stakeholder and NEB Organization Interview Participants** 

#### External Client and Stakeholder Interviews & Internal NEB Interviews

#### Client

Industry	Example Interviewee Position(s)	Number Interviewed	Location
Oil and Gas Producer	Vice President, Northern	4	Calgary, AB
ConocoPhillips	Development		
Canada	Manager, Commercial and		
	Regulatory Affairs, Northern		
	Development		
	Manager, Frontier Exploration		
	Manager, Frontier Development		
Oil and Gas Producer	Regulatory Advisor	1	Calgary, AB
Imperial Oil			
Resources			
Oil and Gas Producer	Manager, Frontiers Exploration	1	Calgary, AB
Devon Canada Corp			
Oil and Gas Producer	Production Engineer Supervisor	2	Calgary, AB
Petro-Canada	Drilling Engineer		
Oil and Gas Producer	Team Lead, Northern Exploration	5	Calgary, AB
Encana Corp	Drilling Manager		
Oil and Gas Producer		1	Calgary, AB
Shell Canada			
Oil and Gas Producer	Regulatory and Community Affairs	2	Calgary, AB
Paramount	Coordinator		
Resources	Area Engineering Manager		
Oil and Gas Producer	Manager, Joint Venture	2	Calgary, AB
Apache Canada	Regulatory Consultant		
Oil and Gas Producer	Senior Geological Advisor,	1	Calgary, AB
Northrock	Exploration & Frontiers Group		



Industry	Example Interviewee Position(s)	Number Interviewed	Location
Resources			
Oil and Gas Producer	Regulatory Compliance Manager	3	Calgary, AB
Anadarko Canada	Manager, Land Frontier		
	Staff Environmental Coordinator		
Seismic	Vice-President, Manager Operations	2	Calgary, AB
Explor Data Ltd	President		
Seismic	President	1	Calgary, AB
<b>Geophysical Services</b>			
Inc			

#### Stakeholder - Government

Department	Example Interview Contact(s)	Number Interviewed	Address
DIAND	Senior Petroleum Geologist	2	Gatineau, Quebec
	Manager, Petroleum Development		Yellowknife, NT
NRCan	Senior Policy Advisor, Frontier Lands	2	Ottawa, ON
	Management		
	Advisor Hydrocarbon Resources,		
	Frontier Lands Management		
DFO	Habitat Biologist	1	Yellowknife, NT
RWED, GNWT	Deb Archibald	1	Yellowknife, NT
	A/Director, Minerals, Oil and Gas		
Nunavut	Director Minerals & Petroleum	1	Iqaluit, NU
	Resources		
GSC Atlantic	Marine Geophysical Technologist	1	Dartmouth, NS
Bedford Institute			



#### Stakeholder - Land Claim Boards

Group	Example Interview Contact(s)	Number Interviewed	Address
MVEIRB	Executive Director	3	Yellowknife, NT.
	Manager, Environmental Impact		
	Assessment		
	Legal Council		
MVLWB	Regulatory Officer	1	Yellowknife, NT
GLWB	Executive Director	1	Inuvik, NT

#### Internal NEB Contacts

Group	Interview Contact(s)	Number Interviewed	Address
Board	Board Members	2	Calgary, AB
NEB Executives	Senior Executives	1	Calgary, AB
Legal Services	Legal Council	2	Calgary, AB
Business Units	Business Unit/Team Leaders	2	Calgary, AB
Exploration and	Technical Experts	8	Calgary, AB
Production			

