Multi Klient Invest AS

Northeastern Canada 2D Seismic Exploration Survey

National Energy Board

October 2012 Community Engagement Report

1. Introduction

MKI ("the Proponent") submitted an application to the National Energy Board (NEB) for approval to conduct a 2D seismic survey in Baffin Bay and Davis Strait, herein referred to as "the Project". In compliance with the CEA Act, MKI has submitted an Environmental Assessment to the NEB and identified six Inuit communities for consultation. The six communities are: Pond Inlet, Clyde River, Qikiqtarjuaq, Pangnirtung, Iqaluit and Kimmirut. The community consultation process began in 2011, when RPS Energy Canada Ltd (RPS) held meetings with the Hunters and Trappers Organizations and the public, as described in Response to the NEB Information Request #1 (Appendix 6).

RPS contracted NEXUS Coastal Resource Management (NEXUS) to develop a community engagement plan for meaningful consultation with the six communities and relevant organizations. In June 2012, community information sessions were held in Pangnirtung (14 June 2012), Clyde River (20 June 2012), Pond Inlet (22 June 2012) and Iqaluit (25 June 2012). June information sessions in Qikiqtarjuaq and Kimmirut were rescheduled due to weather-related issues. In October 2012, the Engagement Team traveled to Qikiqtarjuaq and Kimmirut and held public information sessions and meetings within the communities (Table 1).

Table 1. Community Consultations

Community	Participants	Date	Time	Location
Qikiqtarjuaq	Community members	11 October 2012	6pm to 7:30pm	Community Hall
Qikiqtarjuaq	Economic Development Officer	12 October 2012	10am to 11am	Hamlet Office
Kimmirut	Community members	15 October 2012	6pm to 7:30pm	Community Hall
Kimmirut	HTO Representatives	16 October 2012	10am to 11:30am	HTO Office

2. Presentation Overview

The community information session provided an overview of the proposed 2D Seismic Survey in Baffin Bay and Davis Strait project and offered the opportunity for community members to provide comments, concerns, and questions to the Engagement Team and Project Proponents. If the Engagement Team was unable to address specific concerns or questions, the Team informed those in attendance that their concerns and questions would be addressed and provided back to the community in a timely matter.

A PowerPoint presentation provided the outline and discussion topics for the community information sessions. The PowerPoint presentation utilized in the June 2012 and October 2012 community information sessions included a discussion on the following topics.

2.1. 2D Seismic Surveys

Attendees were provided with an introduction on the operational procedures of 2D seismic surveys and the uses of information acquired by these surveys. It was explained that seismic surveys are a common method to investigate subterranean structure below the ocean floor, as well as on land.

Two videos were used to illustrate how 2D seismic surveys work. These videos were added to the presentation material at the request of community members. The first video showed an animation of a seismic survey vessel operating and how the sound travels down to the ocean floor and reflects back to the hydrophones at the surface towed behind the survey vessel. The second video showed a sound source producing the sound at the surface of the water. It was explained that seismic surveys no longer use explosives to generate sound.

An image showing results of a line transect of the 2008 Baffin Bay Survey was included as an example of how the information acquired throughout the project is visually represented. The image of the 2008 Baffin Bay Survey line transect showed a depression of the ocean floor. The Engagement Team explained that the depression was naturally occurring and was not caused by the seismic survey. The Team explained that the sound produced by seismic surveys travels downwards to the ocean floor and does not cause physical damage to the ocean floor. Instead, the sound penetrates the ocean floor and reflects back to the surface at different times depending physical composition of the layers beneath the ocean floor.

The Engagement Team explained how information acquired throughout a 2D Seismic Survey Project might be used. Several examples were provided:

- Understand the ocean floor: The project will also provide a visual image of the ocean floor and may identify fractures present in the ocean floor. Information can also be used to explore hydrocarbon potential in the area.
- Explore hydrocarbon potential: It was explained that if evidence of oil and gas deposits were found, additional Environmental Assessments would need to be completed for each project (example: 3D Seismic Surveys, exploratory drilling, etc.), and more community consultations would happen.
- Identification of fault zones: Information on fractures on the ocean floor and possible fault zones may be identified. This information may be used to help monitor naturally occurring seismic activity on the ocean floor.
- Study marine mammal migratory patterns: The daily logs completed by trained Marine Mammal Observers that identify the species, number and location of whales can provide information which may be used to study marine mammals.
- Economic development in Nunavut: This project, along with potential future projects will contribute to the Nunavut economy through flights, accommodations, and potential industry and community

development dependent on the results of this proposed 2D Seismic Survey of Baffin Bay and Davis Strait.

2.2. Project Description

The Engagement Team showed the project map to illustrate several facts regarding the proposed 2D Seismic Survey in Baffin Bay and Davis Strait. These included the following:

- Survey lines (illustrated as grid lines on the map)
- Bathymetry (ocean depth) of Baffin Bay and Davis Strait
- Survey boundaries (includes outside the 12 nautical mile territorial sea boundary and the international boundary between Canada and Greenland)
- The Narwhal and Deep-Sea Coral Conservation Area exclusion zone
- The proposed survey lines will be surveyed once
- The entire project area may be surveyed over 5 years (in the ice-free months)

In addition, the Engagement Team provided the name of the project proponent undertaking this proposed 2D Seismic Survey in Baffin Bay and Davis Strait.

2.3. Environmental Assessment Summary

The Engagement Team mentioned that, as this proposed project would take place outside of the 12 nautical mile territorial boundary, the proposed project falls under the National Energy Board regulations. The Environmental Assessment (EA) Process was discussed and the purpose of these community information sessions was explained.

The Engagement Team discussed how an Environmental Assessment is used to predict, identify, assess, and mitigate the potential impacts of a project. It was explained that an EA consisted of environmental, social, and economic components. The EA for this project identified that marine mammals, fish, ocean habitats and birds may be affected by the project. This began the discussion of the proposed project's mitigation measures.

2.4. Mitigation Measures

As a result of the findings from the Environmental Assessment completed for this proposed 2D seismic survey, the project proponents are implementing a number of mitigation measures. The mitigation measures discussed in the presentation include the following:

- Statement of Canadian Practice on the Mitigation of Seismic Noise in the Marine Environment: Guide developed by Fisheries and Oceans Canada (DFO) to standardize the mitigation measures used in Canada with respect to the conduct of seismic surveys in the marine environment.
- 500m Safety Zone: sound sources will be shut down if a marine mammal enters or is anticipated to enter the 500 metre safety zone through observations by the Marine Mammal Observer. The sound sources will not be turned on unless a 500 metre safety zone is clear of any marine mammals by inspection of a trained Marine Mammal Observer for a continuous period of at least 30 minutes.
- Ramp Up Procedure: Over a period of 30 minutes, the sound source intensity will gradually increase to reach its operating level.
- Passive Acoustic Monitoring: Used to listen for whales vocalizing under water.
- Marine Mammal Observer: Responsible for identifying marine mammals within or anticipated to enter the 500m safety zone.

- Fisheries Liaison Officer: Responsible for maintaining communication with the commercial fishing fleets.
- Community Liaison Officer: Maintain communication between the community and the project proponents.

3. Community Summaries

The following is a summary of the information sessions and meetings held in Qikiqtarjuaq and Kimmirut. These summaries identify the community's concerns, comments, feedback, and questions, which will act as a guide for future community engagement activities.

3.1. Qikiqtarjuaq

The community information session in Qikiqtarjuaq was planned for 6pm on 11 October 2012 at the community hall. The Engagement Team arrived at the Hamlet office to meet with the recreation coordinator to discuss seating arrangement and refreshments for the community information session. At this time, the Engagement Team was made aware that community members had little access to the notification procedures regarding community information session. The Team was told that the community does not receive the Nunatsiaq News newspaper when it is first published. Oftentimes, the newspaper may not reach the community for a few weeks after it is published. The Engagement Team quickly arranged an announcement about the meeting over the local radio station.

The Engagement Team then went to the Hunters and Trappers Organizations office to finalize a meeting time. However, due to scheduling conflicts and absent board members due to harvesting activities, the Chairman decided that it would be best to postpone the meeting for the return visit scheduled for the winter of 2012. The Engagement Team was also informed that several hunters were away harvesting marine mammals.

The Qikiqtarjuaq community information session was scheduled for 6pm at the community hall. Unfortunately due to lack of awareness and harvesting activities only a few community members attended the scheduled session. At that time, the Engagement Team asked those in attendance if they would like to proceed with the presentation. The community members decided that there was not an adequate representation of the community present for the session and voted to postpone the session until the return visit in the winter of 2012. A number of other suggestions were made regarding future community information sessions:

- The sessions should be held from 7pm to 9pm
- Announcements of the sessions should be broadcasted over the local radio two weeks prior to the scheduled meeting
- Ongoing communication between the project proponents and the community should be maintained
- Maintain a consistent engagement team to promote familiarity and trust within the community

The following morning (12 October 2012), the Engagement Team met with the Economic Development Officer at the Hamlet to discuss the proposed project. The meeting was constructive and opportunities for community involvement in the project were discussed.

Questions pertaining to the mitigation measures were brought to the attention of the Engagement Team. The economic development officer asked if the project had any measures in place to watch for whales. The proposed project's mitigation measures were discussed, which included conversations on marine mammal observers and passive acoustic monitoring. The tone and content of the meeting suggested that there is a willingness within the Hamlet to work with the project proponents to ensure that the project is designed to avoid conflict to the community's interests and that the project can provide relevant opportunities for the community.

3.2. Kimmirut

The community information session in Kimmirut was held at 6pm on 15 October 2012 at the community hall. Prior to leaving Qikiqtarjuaq, the Engagement Team called the Kimmirut contact and requested to have a notice of the community information meeting broadcast over the local radio. Unfortunately, the Kimmirut radio station was not working at the time. The Team asked the Hamlet Office to post flyers around the community so that community members would be aware of the meeting. Upon arrival in Kimmirut, the Team saw that flyers were posted in the Hamlet Office and the Co-Op Store.

The Engagement Team arrived at the Hamlet to meet with the recreational coordinator to discuss the location and seating arrangement for the upcoming community engagement session.

Only two members of the community attended the meeting, the local QIA representative, and the interpreter. The Engagement Team presented the material on the proposed project, however, it was suggested that the meeting should be rescheduled for our return visit to the community in the early winter of 2012. Furthermore, the interpreter informed the Engagement Team that the local radio station has not been working for a number of months making communication about public meetings difficult. The Hamlet office did post a number of flyers on the upcoming meeting throughout the community; however, attendance remained low.

The following morning on 16 October 2012 the Engagement Team held a meeting with the Hunters and Trappers Organization (HTO) at their office to discuss the proposed 2D Seismic Survey. The HTO board members expressed their concerns on the potential negative impacts on marine life and marine mammals.

NEXUS recorded the following questions during this meeting with HTO board members. The Engagement Team verbally responded to the questions with the following:

HTO Question: Is there an impact on hearing to whales and seals?
Response: It is difficult to know if an animal is negatively impacted as a result of this project. It is not ethical to capture marine mammals and subject them to testing in captivity. The available information on the impact of anthropogenic (man-made) noise to marine mammals seals have been from modeling and direct observations during seismic surveys. Several papers have used models to predict the impact of sound intensity, measured in decibels, on the hearing of marine mammals. The 'Canadian Statement of Practice on the Mitigation of Seismic Noise in the Marine Environment' states that at 500m, or 1500 feet, the sound intensity is at a level where no permanent damage would occur to marine mammals (based on what is known about marine mammals).

Direct observations during seismic surveys have shown that some species of whales may outwardly extend their migration path so that it does not interfere with the seismic survey. In these studies, there was no report of mortality as a direct result of the seismic survey.

HTO Question: Who are you? What is the company that is doing this?
Response: We work for a company called NEXUS Coastal Resource Management. Our company was hired by Multi Klient Invest to facilitate dialogue with the communities. Multi Klient is the company that will be operating and conducting the proposed 2D Seismic Survey.

HTO Question: How far (depth) is it from the airgun to the ocean floor?
Response: The distance between the airgun and the ocean floor depends on the ocean bathymetry. The project map illustrates the bathymetry of Baffin Bay and Davis Strait. Bathymetry tells us how far away the ocean floor is from the surface. Since the airgun will be relatively near the surface of water (~9m), we can use the bathymetry to tell us how far the airgun will be from the ocean floor. On this map, the darker the colour, going from light purple to dark blue, the further the ocean floor is from the surface. In some

areas (dark blue), the air gun will be as far as 5km, roughly 15,000 feet, or as close as 500 metres, which is roughly 1500 feet, from the ocean floor.

HTO Question: Will the narwhal conservation area be bothered after this project is completed?
Response: No survey activity will occur within the narwhal conservation area and activity surrounding the conservation area is minimal. However, to mitigate any potential effects of the project on narwhal and other marine mammals during the proposed project, the proposed project will adhere to the 'Canadian Statement of Practice on the Mitigation of Seismic Noise in the Marine Environment'. If additional projects were to occur after this proposed 2D Seismic Survey, then Environmental Assessments would need to be completed for each project.

HTO Question: Will the survey impact narwhal?
Response: The potential impacts, if any, on narwhal and other marine mammals will vary. These impacts may include behavioral changes, loss of hearing, and the potential for death (if a marine mammal is directly underneath the sound source). However, to our knowledge, no marine mammal deaths have been directly linked to seismic surveys. The effect of seismic surveys on marine mammals will vary depending on the species and individuals within a species.

To limit the potential effect of the proposed project on narwhal and other marine mammals, the project proponent will implement mitigation measures. These mitigation measures include a 30-minute ramp up procedure, marine mammal observers, and passive acoustic monitoring. In addition, the proposed project will adhere to the 'Canadian Statement of Practice on the Mitigation of Seismic Noise in the Marine Environment'.

HTO Question: Have there been any differences in the sand/mud or microorganisms on the ocean floor from seismic surveys?
Response: Studies have shown that algae and other microorganisms are not negatively affected by the sound produced from 2D Seismic Surveys.

HTO Question: How long will the project take to complete?
Response: The project could be over a span of five years, based on the results of the first year. The survey vessel will only be in operation during the ice-free months.

The HTO board members provided comments and questions and expressed their concerns about the potential impacts of the proposed 2D seismic survey on marine mammals and the environment. Many Inuit community members continue to be heavily dependent on marine mammals and fish as a main staple of their diet.

Overall, the initial meeting was constructive and the HTO members expressed the need for ongoing communication between the community and project proponent. They were pleased to be informed that there would be future engagement opportunities in the early winter of 2012.

4. Summary

The following summarizes general observations made during the meetings with community, governmental, and HTO representatives in Qikiqtarjuaq and Kimmirut. Specific questions asked in each community are listed in the previous community summary sections.

1. Effective Communication

The desire for communication with the project proponent throughout the duration of the proposed project was expressed. In the meeting with the Qikiqtarjuaq Economic Development Officer, it was suggested to have the same engagement team return to communities to maintain familiarity and begin to build a positive relationship with the communities.

2. Meeting Time

In Qikiqtarjuaq and Kimmirut at the community information sessions, through discussion with those in attendance, it was expressed that an appropriate time to hold meetings would be at 7pm. It was also recommended to use the local radio stations to broadcast news of any future meetings in addition to the newspaper.

3. Long-term Engagement

Individuals within Qikiqtarjuaq and Kimmirut expressed the importance of having a longer-term engagement strategy for the duration of the project. It was suggested that the strategy include further community meetings, email consultation and development of information packages (updates) for the communities. The Engagement Team explained that the community liaison officer will have an active role in the long-term community engagement.