

# **Environmental Assessment**

## **Terms of Reference**

for the

*EXPLOR DATA Ltd.*

*Land Use Permit N1998B0861 Amendment*

*Seismic Program,*

*Nahanni Butte, NT*

*September 14, 2000*

Issued by:

**Mackenzie Valley Environmental Impact Review Board**

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## 1.0 INTRODUCTION

Explor Data Ltd., on July 13, 2000, submitted a proposal to the Mackenzie Valley Land and Water Board (MVLWB) to amend its Land Use Permit, originally issued by the Department of Indian Affairs and Northern Development (DIAND) under Land Use Permit N1998B0861, to change the orientation and length of its SWM-5 seismic line. The original line was 31 KM in length, while the new line will be 35 KM in length with a revised orientation that would tie in two previously drilled, plugged and abandoned well locations, the Mesa Nahanni Butte L-20 (completed in 1973) and the Pan American Mattson Creek No.1 E-13 (completed in 1961). The seismic line would be located west of the community Nahanni Butte.

On August 18, 2000 the MVLWB referred the development proposal to the Review Board, in accordance with ss.126(1) of the *Mackenzie Valley Resource Management Act* (MVRMA), citing the following reasons for the referral,

*At the South Mackenzie Panel of the Mackenzie Valley Land and Water Board Meeting on August 11, 2000 the decision was made to refer this amendment to the Mackenzie Valley Environmental Impact Review Board for Environmental Assessment. The reasons for this decision were as follows:*

*In their review of the application for an amendment Parks and Heritage Canada indicated that they were opposed to the application because of the following reasons:*

- 1. The increased access to the area resulting in "...increased hunting pressure by non-aboriginal hunters..." resulting in negative impacts on traditional subsistence harvest;*
- 2. The Deh Cho First Nations and the Naha Dehe First Nation of Nahanni Butte passed resolutions that the entire South Nahanni River watershed should be set aside as a National park and that no incremental developments occur within the boundaries that would affect the ecological integrity of a potentially larger protected area;*
- 3. There is potential for future cumulative effects on the water resources of the South Nahanni River Basin from the amended seismic line.*

*The concern for future cumulative effects in the area near the present park reserve and in an area of possible expansion of the park reserve, resulting in the Board passing a motion to refer this application for an amendment to the Mackenzie Valley Environmental Impact Review Board for an Environmental Assessment.*

The Review Board is obliged, under s.126 of the MVRMA, to conduct an environmental assessment (EA) of the development proposal.

## **1.1 Purpose of Terms of Reference**

The EA Terms of Reference (ToR) provide direction to the developer on what information is required about the proposed development and its potential environmental effects. The ToR may also provide guidance to the developer for the submission of this information in the form of an EA Report.

This information assists the Review Board in reaching an EA decision, in accordance with ss.128(1) of the MVRMA. The Review Board will conduct the EA and make its decision in the context of Part 5 of the MVRMA.

## **2.0 SCOPE OF THE DEVELOPMENT**

The Review Board is required to provide a scope of development determination according to ss.117(1) of the MVRMA. This section describes what the Review Board considers the scope of the development to be.

### **2.1 Principal Development**

The development proposes:

- a 1.5 metre wide by 35 kilometre long cut line, located at (UTM - NAD 27 coordinates) SE 480392.0, 6758000.3 NW 447440.2, 6770915.9 (approximate NTS NW lat 61'04", long 123'54"; SE lat 60'57", long 123'22");
- drilling source shot holes with a heli-portable drill and charging each hole with 20 to 25 kg of dynamite;
- shooting and recording seismic;
- seismic line clean-up; and
- logistical support activities.

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

The activities associated with the development proposal include:

#### **2.2.1 Seismic Line Cutting**

- Hand-clearing and selectively cutting a 1.5 metre wide, new cut line;
- Bucking wood debris to 2.5 metre lengths and made to lie flat; and
- Removing any leaners encountered along the line.

### 2.2.2 Drilling

- New heli-portable drill source points will require 4m x 4m pads every 100m along the line, heli-pads require 20 metre diameter areas located every 2 kilometres (natural clearings will be used wherever possible for source points and heli-pads);
- Transportation of shot hole drilling rig, equipment, supplies and personnel by helicopter to and within the program area; and
- Each source shot hole will be loaded with 20 to 25 kg of dynamite, and back filled with drill cuttings, a plastic hole plug driven to 1 metre depth, and top filled with drill cuttings; any remaining drill cuttings will be spread evenly around the area.

### 2.2.3 Shooting and Recording

- Use of dynamite in drilled and plugged holes to create the seismic energy source; and
- Set-up and use of geophones for the acquisition of seismic data.

### 2.2.4 Clean-up

- Clean-up of pinflags, debris, refuse and brush disposal to be done concurrently with the recording operation;
- All cap wire will be pulled up, or cut flush with the ground and pushed down hole; and
- Disturbed areas will be re-seeded with approved native seed mixture, and planting of shrubs may be undertaken to stabilize a disturbed area.

### 2.2.5 Logistical Support

- Use of an existing camp based out of Fort Liard;
- Use of an existing staging area off the Liard Highway near the SWM-5 line location;
- Helicopter flight lines are along the cut line corridor; and
- Temporary storage of fuels and lubricants needed to undertake the program.

This section was developed based on information provided by the developer.

## 3.0 SCOPE OF ASSESSMENT

The Review Board considers the development proposal in the context of Part 5 of the MVRMA, including those factors to be considered in an EA - ss.117(2) of the MVRMA.

Consistent with the MVRMA and with the interim EIA Guidelines issued by the Review Board, previous preliminary screenings of the development will have been conducted in the context of Part 5 of the MVRMA. Depending on the complexity, location and duration of the proposed development, and on the reasons for referral of the development to EA, the preliminary screening may be adopted by the Review Board as being sufficient to fulfil some of the requirements for EA.

This section will examine previous preliminary screenings completed for this development and their applicability in meeting some of the requirements for EA. In accordance with s.127 of the MVRMA, the Review Board will also consider any report made in relation to the development proposal under the *Canadian Environmental Assessment Act* (CEAA) and the *Environmental Assessment and Review Process Guidelines Order* (EARPGO) before the proclamation of the MVRMA.

### 3.1 Previous Preliminary Screenings and Reports

Applications for this seismic program were made to DI AND for a Land Use Permit and to the National Energy Board (NEB) for required *NEB Act* and *Canadian Oil and Gas Operations Act* (COGOA) permits and licences. A preliminary screening was completed by the NEB on May 3, 2000 for three seismic lines, including the SWM-5 line under consideration in this EA. The MVLWB also completed a preliminary screening of the amendment to re-orientate the SWM-5 seismic line. These two preliminary screening reports are analyzed in the following table to determine whether or not they could be adopted wholly or in part by the Review Board for the purposes of this EA.

There were no *CEAA* or *EARPGO* reports identified by preliminary screeners with respect to this development.

Component	Where Addressed	Adopted by Review Board for EA
<i>Physical Environment</i>		
effects on land	NEB PS MVLWB PS	Yes
effects on organic matter	NEB PS MVLWB PS	Yes
effects on inorganic matter	N/A	Not Applicable
effects on water	NEB PS MVLWB PS	In part; consider cumulative effects on water resources of South Nahanni River in EA.

Component	Where Addressed	Adopted by Review Board for EA
effects on living organisms	NEB PS MVLWB PS	In part; consider increased hunting effort, species at risk and relationship to ecological integrity in EA.
effects on air	NEB PS MVLWB PS	Yes
effects on natural systems	NEB PS	In part; consider cumulative effects on water resources and ecological integrity in EA.
<i>Social Environment</i>		
effects on society	Benefits plan	Yes
effects on social programs	N/A	Not Applicable
effects on community infrastructure	N/A	Not Applicable
effects on regional infrastructure	N/A	Not Applicable
effects on quality of life	Benefits plan	Yes
<i>Cultural / Heritage Environment</i>		
effects on hunting	NEB PS	In part, consider potential for increased hunting effort in EA.
effects on fishing	NEB PS	Yes
effects on archaeological sites	Standard regulatory authorization terms and conditions	Yes
effects on burial sites	Standard regulatory authorization terms and conditions	Yes
effects on historical sites	Standard regulatory authorization terms and conditions	Yes
effects on historical records	N/A	Not Applicable
effects on wildlife harvesting	NEB PS	In part; consider potential for increased hunting effort in EA.
effects on trapping	Licensing terms and conditions	Yes

Component	Where Addressed	Adopted by Review Board for EA
effects on objects of cultural significance	Standard regulatory authorization terms and conditions	Yes
effects on objects of religious significance	Standard regulatory authorization terms and conditions	Yes
effects on objects of historical significance	Standard regulatory authorization terms and conditions	Yes
effects on heritage resources	Standard regulatory authorization terms and conditions	Yes
effects on artifacts	Standard regulatory authorization terms and conditions	Yes
effects on cultural records	N/A	Not Applicable
<i>Economic Environment</i>		
effects on employment	Benefits Plan	Yes
effects on quality of life	Benefits plan	Yes
effects on secondary industry	N/A	Not Applicable
effects on procurement/contracting agreements	Benefits Plan	Yes
effects on traditional economy/lifestyle	NEB PS	In part; consider potential for increased hunting effort in EA.

### Legend

NEB PS Preliminary screening completed by NEB on original application dated May 3, 2000  
MVLWB PS Preliminary screening completed by MVLWB on amendment, dated August 17, 2000

The Review Board has determined that the preliminary screenings previously conducted for this development are sufficient to meet some of the requirements of Part 5 of the MVRMA for the purposes of EA for those environmental components where it is indicated that they will be adopted. For those environmental components that the Review Board has determined

to be not applicable (N/A) with respect to the development, no further analysis will be required.

## **4.0 ENVIRONMENTAL ASSESSMENT**

This section provides direction to the developer about additional information required to assist the Review Board in reaching an EA decision. It may also request information to assist Regulatory Authorities, expert advisors, and others in reaching their own conclusions about the possible effects of the development so they can make recommendations to the Review Board from their particular perspective and areas of expertise or legislated mandates.

### **4.1 Direction to the Developer**

The Review Board is requesting the following information from the developer regarding the proposed development. The developer should provide clear rationale for statements made, conclusions reached and intended courses of actions to be followed in carrying out the development.

- Provide a summary of consultations completed with Nahanni Butte, indicating how any concerns raised by the community have been addressed;
- Provide a detailed explanation of the alternatives to this development, and relate them to approvals already in place (e.g., why is an amendment being applied for? if this development is not allowed to proceed, will Explor Data carry out the already approved seismic program?);
- Provide details on the alternative use of the inertial navigation (Nav Pak) system for laying out the seismic line, highlighting the differences between this and what is being proposed (e.g., hand cut 1.5 metre line);
- Indicate whether or not a winter seismic program to complete a portion of this work is a viable alternative, and provide details on how this work would be carried out, the environmental implications and regulatory requirements;
- Provide a detailed explanation of how the findings from carrying out this development may be used for future developments in the area (i.e., if favourable results are achieved in carrying out this seismic program, what does that mean in terms of next steps in exploration or development activities in the area?);

- Provide an overview of how the proposed SWM-5 seismic program fits into other past and present seismic programs carried out by Explor Data in the Deh Cho region, explaining how the collected information provides geological information on a regional and/or specific basis; and
- Provide details of Explor Data's attempts to address the stated desires of Deh Cho First Nations and the Naha Dehe First Nation to set aside the entire South Nahanni River watershed as a national park and that no incremental developments should occur within the watershed that would effect the ecological integrity of a potentially larger protected area (e.g., expansion of the existing Nahanni National Park Reserve to encompass the South Nahanni River watershed). Provide details of any conclusions and decisions reached with respect to this issue.

#### **4.2 Direction to Others**

The Review Board may also request information from expert advisors, RA's, the DRA or others, through the issuance of information requests (IR's). Information requested and received through the IR process would assist the Review Board in completing the EA and reaching an EA decision. Parties receiving an IR should provide clear rationale for statements made, conclusions reached and any recommendations provided to the Review Board. With an anticipated EA decision date of late September, all responses to IR's and any other information parties wish to provide to the Review Board should be submitted as soon as possible, and certainly before the closure of the public registry.

#### **5.0 EA DECISION PROCESS**

When the public registry has closed for this EA the Review Board will consider all of the evidence received and reach an EA decision in accordance with ss.128(1) of the MVRMA. Once the Review Board has reached a decision and provided its written reasons, the Review Board's Report of EA, made in accordance with ss.128(2), will be forwarded to the federal Minister of DIAND for his decision in accordance with s.130. As this development also involves a DRA (i.e., the NEB), the Review Board's Report of EA will also be forwarded to the NEB for its decision in accordance with s.131.