



January 26, 2009

Canada-Newfoundland Offshore Petroleum Board
5th Floor, TD Place
140 Water Street
St. John's, NL
A1C 6H6

Attention: Ms. Elizabeth Young

Dear Ms. Young,

RE: PDI Production Inc. Port-au-Port Peninsula Ocean Bottom Cable Seismic/VSP Program

Please find attached, PDIP's responses to comments received on the above Environmental Assessment from the C-NLOPB, dated January 13, 2009. I trust you find these comments provide clarification as required. It is also noted that the C-NLOPB has recommended a meeting between PDIP, the C-NLOPB and DFO to discuss a monitoring program for Lobster. PDIP are happy to arrange such a meeting prior to finalizing a monitoring plan and prior to undertaking the offshore elements of the proposed seismic program. We look forward to continued cooperation between PDIP, the C-NLOPB and DFO.

Should you have any additional queries do not hesitate to contact me.

Sincerely,

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**Responses to Comments by Reviewers of the
Environmental Assessment of the PDI Production Inc.
Port-au-Port Peninsula Ocean Bottom Cable
Seismic/VSP Program 2009-2014**

Prepared by



Prepared for

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**January 2009
Project No. SA961**

Responses to Comments on Port au Port Seismic EA

General Comment No. 1

Commercial Fisheries

Commercial Fisheries are considered to be a valued ecosystem component (VEC) in Section 6.3, however, recreational fisheries are not considered to be a VEC. Recreational fishing is mentioned in Section 8.3 (Cumulative Effects of the Project) however it is unclear as to what level the area is used for recreational fishing. Communication with commercial fishers has been identified as a proposed mitigative measure in Table 8.1 (Summary of Mitigation Measures). Communication with recreational fishers or other site users (such as recreational boaters) was not explicitly mentioned. A discussion of recreational use of the area should be provided. Also, recreational/subsistence fishers or other recreational water users (e.g. boaters) that may be affected.

Response to General Comment No. 1

Marine recreational fishery activity in the Study Area is likely limited to the cod food fishery and perhaps sea-run trout fishing in estuarine areas. In 2008, the limited food fishery was restricted to three weeks in the summer (July-August) and one week in the fall (Sept-Oct). Sea-run trout fishing is typically conducted in the springtime.

Table 8.1 does indicate communication with fishers as a primary mitigation, which would include recreational fishers. Table 8.1 should be amended to include advisories and communications with recreational users as mitigation.

General Comment No. 2

Seabird Colonies

There are 2 very large Black-legged Kittiwake colonies on the southwestern tip of the peninsula. These colonies lie in the Garden Hill South discovery. There are a number of additional Gull and Tern colonies on the peninsula. This seismic project has an offshore and onshore component (See Section 3.5 pg. 10), however the document does not give exact locations of seismic lines, or areas of transition to land based surveys. Details on how the proponent will operate marine activities in the vicinity of the kittiwake colonies must be outlined. These two colonies are two of the largest kittiwake colonies in western Newfoundland. Although, black-legged kittiwakes are relatively insensitive to short bouts of human disturbance, prolonged disturbance and seismic charges close to the colony have the potential to impact the breeding success of the nesting birds. It would be preferable for seismic activities to take place outside of the breeding season, from mid May to mid August in this area. However, if this is not possible, CWS recommend the following to mitigate impacts from activities:

- 1) Limit boat activity below the colonies where feasible.*
- 2) Do not enter the colonies from the land (assuming the seismic lines will continue over cliff edges). Entering the colony will result in the destruction or abandonment of nests.*

- 3) *When working near the colonies (within 500 m), have a biologist monitor the activity of the colony to assess whether the colony is being repeatedly disturbed. Cease activity if the colony is being repeatedly disturbed.*

Response to General Comment No. 2

The exact locations of seismic lines and areas of transition to land-based surveys have not yet been selected. Seismic activity is not intended to occur during the breeding season of the Black-legged Kittiwake. However, the mitigations recommended by CWS are noted and will be implemented if some activity does occur during breeding season.

General Comment No. 3

Newfoundland and Labrador Department of Fisheries and Aquaculture is concerned with the potential disturbances upon the behaviour and distribution of finfish and shellfish, and their associated fisheries. It is noted in Section 7.3 of the report under the mitigation section that:

“PDIP does not intend to commence seismic acquisition during sensitive fishing seasons, and will work to establish a mutually acceptable schedule with stakeholders. Within that context, seismic acquisition over the Garden Hill South area is most likely to take place during the fall.”

Fisheries and Aquaculture agree with this strategy and recommend PDIP follow this course of action for all facets of the project. Autumn migrations toward deeper water by species such as lobster, crab, and cod should allow an opportunity to perform shallow water work while minimizing potential impacts upon these resources and their associated fisheries. An important fall pelagic fisheries also occurs in the area. PDIP should consult with fishers prior to conducting surveys to ensure there are no aggregations of fish (i.e., spawning herring).

Response to General Comment No. 3

PDIP will issue advisories and communications with fishers prior to commencement of seismic activities to ensure minimal interaction.

Specific Comment No. 1

Section 5.0: Biological Environment

The section is almost entirely focused on commercially important species, with very little consideration of the ecological perspective. Given that the EA is attempting to assess potential impacts and that the Project Area is within one of five Large Ocean Management Areas in Canada identified for unique ecological importance, a more ecological view of the Study Area seems warranted. Otherwise, the limitations of the effects assessment should be acknowledged.

This section should include a subsection dedicated to Sensitive and Special Areas, as per other EA documents produced for the NL offshore areas. The Cod Spawning Box is briefly mentioned in subsections 5.2.1 and 5.6.1.15, however there are no mitigations listed to avoid this area even though Figure 5.1 clearly illustrates that the project will overlap a portion of the box. The Western Newfoundland SEA and Amendment (LGL 2006, 2007) should be referenced regarding any

mitigations or restrictions concerning the cod box and any other sensitive areas within the Project Area.

DFO has recently released a listing of ecologically and biologically significant areas (EBSAs) in the Gulf of St. Lawrence (http://www.dfo-mpo.gc.ca/csas/Csas/status/2007/SAR-AS2007_016_E.pdf). At least one of these areas is adjacent to the study area and should be noted and discussed in the report.

Response to Specific Comment No. 1

As indicated on the first page of Section 5.0, several relevant recently-completed documents were cross-referenced in order to avoid repetition of information and an over-lengthy document. The Western Newfoundland and Labrador Offshore Area SEA and associated Amendment (C-NLOPB 2005, 2007), and the PDIP Port-au-Port Exploration Drilling Program EA and associated Addendum (LGL 2007b,c) provide extensive background discussion on ecological components deemed non-commercial. Electronic versions of all four documents were provided with submission of the EA.

The following is the requested subsection on sensitive and special areas.

Sensitive and Special Areas

A portion of the Cod Spawning Box, as indicated in Figure 5.1 in Subsection 5.1.2 of the EA, overlaps slightly with the western edge of the Study Area and the westernmost corner of the Project Area. As indicated in Subsection 4.1.5.6 of the Western Newfoundland and Labrador Offshore Area SEA (C-NLOPB 2005), 'optimal scheduling of seismic surveys' will be a mitigation implemented to minimize conflict on biota in key areas. Therefore, seismic activities in the portion of the Study Area that overlaps with the Cod Spawning Box will not occur during the important spawning time (i.e., April-June). Temporal and spatial avoidance also applies to key lobster spawning and nursery areas, and to spring and fall herring spawning areas in the Study Area (see Subsection 5.4.3 in C-NLOPB 2005).

DFO's recently released listing of ecologically and biologically significant areas (EBSAs) in the Gulf of St. Lawrence (DFO 2007) was discussed in the Western Newfoundland and Labrador Offshore Area SEA Amendment (see Subsection 3.7 in C-NLOPB 2007). Most of the West Coast of Newfoundland EBSA (No. 10) overlaps with the original SEA Study Area (C-NLOPB 2005). This EBSA is mostly characterized for the role it plays for groundfish (e.g., maximum uniqueness, concentration and adaptive values). At times, entire populations of particular species concentrate in EBSA 10. Western Newfoundland is a main concentration area for juvenile Atlantic cod, redfish, American plaice and Atlantic wolffish. The West Coast of Newfoundland EBSA is also important for certain pelagic species (e.g., capelin, Atlantic herring, ribbon barracudina, spiny dogfish, silver hake and pollock), meroplankton (e.g., Atlantic cod eggs, capelin larvae, Atlantic herring larvae), and marine mammals. Potential impact on all of these species will be minimized by implementation of mitigations discussed in the EA.

Specific Comment No. 2

Section 5.2 Commercial Fisheries - The second paragraph on page 148 refers back to section 5.2 stating “Commercial fishing has been discussed and assessed in detail in subsection 5.2”. In fact, section 5.2 provides only a description of the commercial fisheries within and adjacent to the PDIP areas. The statement should be changed to read “Commercial fishing has been discussed in Subsection 5.2 and assessed in subsection 7.3.2.”

Response to Specific Comment No. 2

Replace “Commercial fishing has been discussed and assessed in detail in Subsection 5.2.” with “Commercial fishing has been discussed in Subsection 5.2 and assessed in Subsection 7.3.2.” in Subsection 8.3, page 148.

Specific Comment No. 3

Section 5.3 Marine-associated Birds - In Table 5.7 the categories of Common, Uncommon, Scarce, Rare and Absent should be defined.

Response to Specific Comment No. 3

The following are definitions of the qualitative relative abundance categories used for marine-associated birds (B. Mactavish, pers. comm.).

Common: present daily in moderate to high numbers

Uncommon: present daily in small numbers

Scarce: present regularly in very small numbers

Rare: very few individuals present

Absent: not present

Specific Comment No. 4

Section 7.3.3 Effects of the Project on Marine-associated Birds - In the first paragraph in this section, Charadriiformes should be replaced with Charadriidae. Charadriiformes is the order that includes shorebirds, alcids and larids, while Charadriidae is the family that includes shorebirds.

Response to Specific Comment No. 4

Replace “Charadriiformes (shorebirds)” with “Charadriidae (shorebirds)” in first paragraph of Subsection 7.3.3, page 119.

Specific Comment No. 5

Section 7.3.3.1 Interaction with Sound - In the first paragraph, shearwaters are included in a list of birds that feed mostly on the surface of the water. However, shearwaters are reported to regularly dive to depths of 15-30m, and should be removed from this list.

Source:

Shaffer, S. A., Y. Tremblay, H. Weimerskirch, D. Scott, D.R. Thompson, P.M. Sagar, H. Moller, G.A. Taylor, D.G. Foley, B.A. Block, and D.P. Costa. 2006. Migratory shearwaters integrate oceanic resources across the Pacific Ocean in an endless summer. Proceedings of the National Academy of Sciences of the United States of America. V. 103, No. 34.

Response to Specific Comment No. 5

Replace “It is logical to assume that diving birds such as loons, cormorants, seaducks, and the alcids would be affected by underwater sounds more than birds that feed mostly on the surface of the water (e.g., fulmars, shearwaters, storm-petrels, gulls and terns).” with “It is logical to assume that diving birds such as loons, cormorants, seaducks, and the alcids would be affected by underwater sounds more than birds that feed mostly on the surface of the water (e.g., fulmars, storm-petrels, gulls and terns).” in Subsection 7.3.3.1, page 120.

Specific Comment No. 6

Section 8.1 Mitigations - Data Collection

CWS has developed a pelagic seabird monitoring protocol for all offshore projects. One version of the protocol is for experienced observers. These protocols are a work in progress and CWE would appreciate feedback from the observers using them in the field. The protocol and a guide sheet to the pelagic seabirds of Atlantic Canada are available through CWS in Mount Pearl. A report of the seabird monitoring program, together with any recommended changes, is to be submitted to CWS on a yearly basis.

Response to Specific Comment No. 6

So noted.

Specific Comment No. 7

Section 8.4: Monitoring and Follow-up

The commitment to a monitoring program for lobster is reasonable given the effects on feeding and serum parameters noted in pilot studies carried out by DFO (Payne et al. 2007. Can. Tech. Rep. Fish. Aquat. Sci. 2712: v+46; Payne et al. 2008. Bioacoustics 17: 262-265.). The value of a monitoring program also seems especially important given that much of the survey area is fairly shallow water lobster habitat and airguns having fairly high source levels (around 255 dB 0-peak) is planned for use. DFO looks forward to participating in the study design as well as the final study.

Response to Specific Comment No. 7

So noted.

References

- C-NLOPB. 2005. Western Newfoundland and Labrador Offshore Area Strategic Environmental Assessment. Prepared by LGL Ltd., St. John's, NL, for C-NLOPB, St. John's, NL. 335 p. + appendices.
- C-NLOPB. 2007. Western Newfoundland and Labrador Offshore Area Strategic Environmental Assessment Amendment. LGL Rep. SA941. Rep. by LGL Limited, St. John's, NL, Oceans Limited, St. John's, NL, Canning and Pitt Associates, Inc., St. John's, NL, and PAL Environmental Services, St. John's, NL, for Canada-Newfoundland and Labrador Offshore Petroleum Board, St. John's, NL. 56 p. + appendices.
- DFO. 2007. Ecologically and biologically significant areas (EBSA) in the Estuary and Gulf of St. Lawrence: identification and characterization. DFO Can. Sci. Advis. Sec. Sci. Adv. Rep. 2007/016.
- LGL. 2007b. Port au Port Bay Exploration Drilling Program Environmental Assessment. Report Prepared by LGL Ltd., St. John's, NL, in assoc. with Calixte Environmental Management for PDI Productions Inc., St. John's, NL.
- LGL. 2007c. Port au Port Bay Exploration Drilling Program Environmental Assessment Addendum. Report Prepared by LGL Ltd., St. John's, NL, in assoc. with Calixte Environmental Management for PDI Productions Inc., St. John's, NL.

Personal Communications

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