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June 6, 2011

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

Attention: Darren Hicks, Environmental Analyst

Dear Mr. Hicks:

RE: Chevron Canada Limited North Grand Banks Regional Seismic Program, 2011-2017

Further to your email of June 3, 2011, please accept the following as Chevron Canada Limited's (Chevron) response to the suggestions provided by DFO upon their review of Chevron's EA Addendum for the above-referenced project.

**Page 4 of Addendum:**

**DFO Comment (Section 4.2.8, Page 40, Table 4.4):** *It is stated that Greenland Halibut spawn in "winter months." There may be some major spawning during this time, but evidence suggests a very poorly defined spawning season for this species with multiple peaks in spawning activity and even some degree of spawning observed throughout the entire year.*

**Response:** Agreed that text in Table 4.4 should be revised to reflect the uncertainty associated with the timing of spawning activity by Greenland halibut and that there may be some degree of this activity throughout the year.

**DFO Suggestion:** *Table 4.4 should be revised as noted, however, the text on page 30 of the EA report should also be updated.*

**Response:** Revise the text in Section 4.2.6.1 that discusses the timing of Greenland halibut spawning to reflect the uncertainty associated with the timing of this activity, and to suggest that some degree of spawning activity by this flatfish may occur throughout the year.

**Page 6 of Addendum:**

**DFO Comment (Section 4.5.1.3, Page 81, 3rd sentence):** *Based on aerial searches and acoustic recordings, the south eastern edge of the Grand Banks remains an area populated by cetaceans during the winter. Therefore, the statement “although some individual baleen whales may be present in offshore waters of NL...” is not necessarily accurate.*

**Response:** DFO has placed autonomous acoustic recorders at the east and southeast edges of the Grand Banks and have recorded mysticete and odontocete calls throughout the winter (J. Lawson, Research Scientist, DFO, pers. comm.). PAL surveillance imagery, records, and observations by DFO staff have also shown there to be quite a few humpbacks and other large whales out in this area through the winter. Based on these observations, change the sentence referenced above to “Some baleen whales are present in offshore waters of Newfoundland year-round but most species presumably migrate to lower latitudes during winter months.”

**DFO Suggestion:** *It seems the comment and response is in agreement. It is suggested to simply remove the word “some” from the sentence above.*

**Response:** Delete the word “some” from the sentence indicated above.

**Page 7 of Addendum:**

**DFO Comment (Section 4.5.1.5, Page 91):** *More information should be provided on the importance of the area for feeding Harp and Hooded Seals. The area of the NE Grand Banks, slope and Flemish Pass is critical for seals during the spring when they need to replenish their energy reserves. Satellite telemetry studies have shown that this area is used extensively by Hooded Seals in May. By late May they have left the area for the moulting ice, although harps are still present through June. Harp Seals tend to remain on the continental shelf while Hooded Seals dive in the deep shelf waters.*

**Response:** The Chevron EA referred the reader to LGL (2008) for a more detailed review of the biological background information on marine mammals, including seals. The following text for hooded and harp seals is taken from Sections 5.6.1.21 and 5.6.1.22 of LGL (2008), respectively:

Hooded Seals

“Data collected from satellite transmitters deployed on hooded seals in the Gulf of St. Lawrence indicate that some females feed near the Flemish Cap after breeding while migrating to Greenland waters (G.B. Stenson, unpubl. data). Tagged males migrating to Greenland in early summer were recorded along the Grand Banks shelf edge near the Flemish Pass. It appears that males spend little time foraging in this area (G.B. Stenson, unpubl. data). Little is known regarding their winter distribution, although it is believed that the majority of seals remain offshore; they have been seen feeding off the Grand Banks in February. Surveys in the early 1990s suggested that the offshore waters on the northern edge of the Grand Banks might be an important over-wintering area for hooded seals (Stenson and Kavanagh 1994).”

Harp Seals

“Surveys conducted during the early 1990s suggested that offshore waters on the northern edge of the Grand Banks in NAFO fishing area 3L were an important over-wintering area for these animals during those years (Stenson and Kavanagh 1994). ...Similarly, data from satellite transmitters deployed on harp seals suggest that the Grand Banks is an important wintering area for some seals (Stenson and Sjure 1997).”

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References:

LGL. 2008. Environmental assessment of StatoilHydro's Jeanne d'Arc Basin area seismic and geohazard program, 2008-2016. LGL Rep. SA947. Rep. by LGL Limited, Canning and Pitt Associates Inc., and Oceans Ltd., St. John's, NL for StatoilHydro Canada Ltd., St. John's, NL. 174 p + appendices.

Stenson, G.B. and D.J. Kavanagh. 1994. Distribution of Harp and Hooded Seals in offshore waters of Newfoundland. Northwest Atlantic Fisheries Organization, Scientific Council Studies 21:121-142.

Stenson, G.B. and B. Sjare. 1997. Seasonal distribution of Harp Seals, *Phoca groenlandica*, in the Northwest Atlantic. ICES. C.M. 1997/10 p.

**DFO Suggestion:** *Incorporate the above response into the actual EA Report, instead of just referring.*

**Response:** Revise Section 4.5.1.5, pages 91 and 92 to include the text on hooded and harp seals. Also, add the references listed above to Section 6 (Literature Cited) of the EA Report.

Should you have any questions in this regard, please contact me either by phone at 403-234-5194, or by email at [jennifer.wyatt@chevron.com](mailto:jennifer.wyatt@chevron.com).

Sincerely,

<original signed>

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