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**BAB 3970-130**

February 10, 2009

Ms. Elizabeth Young  
Environmental Analyst  
Canada-Newfoundland and Labrador Offshore Petroleum Board  
5th Floor, TD Place  
140 Water Street  
St. John's NL A1C 6H6

Dear Ms. Young:

**Subject:    Environmental Assessment of Petro-Canada Jeanne d'Arc Basin  
Exploration Drilling Program, 2009-2017.**

As requested, DFO has reviewed the document entitled '*Environmental Assessment of Petro-Canada Jeanne d'Arc Basin Exploration Drilling Program, 2009-2017*' dated December 2008. According to this document, up to 18 exploration drilling wells are proposed in the Jeanne d'Arc Basin over the next nine years. The following comments are provided for your review and consideration.

***General Comments***

The Environmental Assessment does not provide enough detailed information to consider this an independent document. It is acknowledged that the established practice is to cross-reference previous assessments as a means of streamlining, but the document should be able to stand alone. Furthermore, there are several sections that do not provide any information whatsoever, which forces the reviewer to look at many separate documents in order to gain an appreciation of the topic at hand. This obviously results in extra review time and causes unnecessary frustration. A summary of the pertinent information would be preferable, with a cross-reference to additional documentation if required. For example, in the species profile section, a brief description of the habitat within the study area, life history characteristics of any species present and general stock assessment information would be sufficient to determine whether there are any potential issues regarding fish and fish habitat.

It is possible to create .pdf documents that have bookmarks in the table of contents to easily select a specific chapter or section, similar to a document map. It would be appreciated if the referenced documents were created using this feature as scrolling through countless pages of multiple documents is both cumbersome and time consuming for a reviewer.

## **Specific Comments**

Section 3.6.3.3 Evaluation: Page 16. What does DG2 refer to in the following statement “*Changes that influence the technical conditions for the operational TFM plan will be limited after DG2 is completed?*”

Section 4.1.1 Geology: Page 24. Although this information is similar to that provided in previous documents, a summary would be useful to give a general indication of the existing environment. Furthermore, there is no mention of sea bottom conditions in this section, which again would be useful.

Section 4.3.1 General Description of the Major Currents: Page 67. In the first paragraph it states that “*there are no measurements closer to the surface at this location*” as captured by BIO in 1981. It should be noted that data may be available for more recent observations closer to the study site as part of oil spill trajectory modeling for Terra Nova and Hibernia.

Subsection 4.3.2 Currents in the Project Area: Page 68. The same description was written in LGL 2008. The following comment was provided in the previous EA and is believed to be still relevant: “*The authors used archived temperature and salinity data at BIO and omitted all of the T-S data recorded by NWAFC trawl mounted CTDs that is archived at NWAFC and at MEDS. Consequently, only a small fraction of available data was captured*”.

Section 4.4 Ice and Icebergs. Pages 80-81. More recent data for sea ice is available and should be incorporated into this analysis.

Section 5.2.1.2 Benthic: Page 85. The second paragraph suggests that the benthic species assessment is based on sampling conducted in 1976. There should be supplemental information to support this from other EEM programs.

Section 5.2.1.2 Benthic: Page 86-87. The reference to Subsection 4.1.2.2 holds no merit unless it contains the relevant information.

Section 5.2.2 Profiles of Commercially-Important Species: Page 88. Although it mentions that Atlantic cod is one of “*...the main commercial species caught during regular stratified random bottom trawl surveys on the Flemish Cap*” there is no detailed information provided.

Section 5.2.2 Profiles of Commercially-Important Species: Pages 88-90. Although the current “*accepted*” practice is cross-referencing materials from past assessments, at least some basic information regarding the life history characteristics of various species should be provided. American plaice, redfish and roughhead grenadier are good examples of the level of detail required.

Section 5.2.2.1 Snow Crab: Page 88. Although catch values for 2006 are discussed, more recent data (2007) should also be provided.

Section 5.6 Sea Turtles: Page 128. The following statement: "*Sea turtles are probably not common in the study area but are important to consider because of their threatened or endangered status...*" may not be accurate since there is evidence that sea turtles are common within the study area according to McAlpine et al. (2000).

McAlpine, D.F. M.C. James, J. Lien and S.A. Orchard. 2000. Status and conservation of marine turtles in Canadian waters. In: Seaburn, C.N.L. and C. Bishop (eds). 2001. Conservation and Status of Reptiles in Canada. Herpetological Conservation 3. Society for the Conservation of Amphibians and Reptiles.

On page 2 of this report it states:

*"...leatherbacks (and juvenile loggerheads) may be seasonally common in Canadian and international waters beyond the shelf break over the southern Grand Banks and Newfoundland Basin. There is now good evidence that eastern Canadian waters inshore from the continental shelf margin are also within the regular range of significant numbers of migrating leatherbacks and this area should be considered important seasonal foraging habitat for the species."*

Section 5.7.1 Profiles of SARA Schedule 1 – and COSEWIC-Listed Species: Pages 131-139. Similar to comments made on Section 5.2.2, more information is required in the species profiles to ascertain the life history characteristics of these species. A brief summary would be useful similar to the roundnose grenadier description.

Section 5.8 Sensitive/Special Areas: Page 139. An important omission is the absence of any reference to the Ecologically and Biologically Significant Areas (EBSAs) identified by DFO Science Branch as part of Integrated Management Planning for the Placentia Bay/Grand Banks Large Ocean Management Area [http://www.dfo-mpo.gc.ca/csas/Csas/DocREC/2007/RES2007\\_052\\_e.pdf](http://www.dfo-mpo.gc.ca/csas/Csas/DocREC/2007/RES2007_052_e.pdf). Four EBSAs are located within the project study area and EL 1089 is partially located within the Northeast Shelf and Slope EBSA. The Sensitive/Special Areas sub-section 4.1.6 in the recent (December 2008) HMDC screening report is an example of a recent document that includes references to EBSAs.

7.2.2 Potential effects of Routine Activities on VECs: Page 163. There is a potential for two rigs to be operating simultaneously. There will be added noise from the additional rig, traffic and activities if this does occur. The statement "*...the assessment of the residual effects of the various routine activities associated with the concurrent drilling of two wells does not differ from the assessment of the residual effects of the same activities associated with the drilling of only one well at a time*" needs to be qualified. Noise would increase substantially if two units were deployed simultaneously.

Section 7.2.2.5 Marine Mammals and Sea Turtles: Page 184. There is no mention of noise in the description of the effects assessment. It is understood that there has been discussions in previous documents; however, it would be useful to at least mention some of these here. More information is required to support the assertion of not significant as reported on page 189 and Table 7.18.

Section 8.1.4.1 Historical Statistics for Extremely Large and Very Large Spills: Page 208. In Table 8.2, the title should read 1970-2001 as the source is from Gulf 1981, updated in

2001. More recent information would need to be presented if the title were to remain unchanged.

Section 8.1.5.2 Calculated Probability of Blowout During Petro-Canada's Proposed Nine-Year Exploration Drilling Program. Page 212. Table 8.4 should be updated to incorporate more recent figures; data from 2005 does not need to be a forecast.

Section 8.1.6.3 Calculated Frequencies for Petro-Canada's Proposed Nine-Year Drilling Program: Page 215. This assumption regarding the direct comparability of the US GOM and NLOA seems counterintuitive. The duration of the sample size would suggest that there should be more spills during the longer time frame, which would result in a higher probability compared to that of the NLOA experience.

Section 8.2.2 Modeling in Support of Petro-Canada's 2002 Drilling EA. Page 217. The information provided in this section does not adequately represent the results obtained from the study. The level of detail provided in Section 8.2.1 should be provided thereby allowing the reviewer to make an informed comparison.

Section 8.7.3 Commercial Fisheries: Page 232. The third paragraph refers to the company's response to an oil spill for the fishing industry; however, the proponent's name is incorrect.

Thank you for providing DFO the opportunity to comment on this document. Should you have any questions or comments regarding the above, please contact Senior Regional Habitat Biologist Sara Lewis by phone at 772-4140 or by e-mail ([sara.lewis@dfo-mpo.gc.ca](mailto:sara.lewis@dfo-mpo.gc.ca)).

Yours truly,

**Original signed by Carole Grant**

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sl/jm