

ExxonMobil Canada Ltd. Eastern Newfoundland Offshore Geophysical, Geochemical, Environmental and Geotechnical Programs, 2015 to 2024 (Amec Foster Wheeler July 2015)

GENERAL COMMENTS

Environment Canada (EC)

Previously submitted comments (sent on 19 February) are still applicable.

Fish, Food and Allied Workers (FFAW-Unifor)

At our initial consultation meeting with ExxonMobil in March 2015 our discussions were very general as this EA runs over an extensive time period and geographic area. Our ocean environment is constantly changing. As such, it is imperative that the proponent continue to engage FFAW-Unifor and its members throughout the life of this Environmental Assessment to ensure there is a thorough understanding of commercial fishing activities and trends as well as fisheries research survey endeavours from year to year. Consultations with fishing interests should be planned in the first quarter of the year, prior to the start of the typical fishing year.

Overall the document is very non-specific in terms of the actual project that is planned over a ten-year period. As such, it is challenging to comment how the work will impact commercial fishing or the environment over the timeframe.

It remains of utmost importance that the proponent keep FFAW-Unifor informed of its planned activities in the coming years. This recommendation extends to vendors that may be conducting work on behalf of the proponent.

There are several instances within the report that lump several NAFO Divisions together improperly. Divisions 3N, 3L, 3O and 3Ps would be abbreviated 3LNOPs as used by the fishing industry, not 3NLOPs.

ExxonMobil Canada Ltd. Eastern Newfoundland Offshore Geophysical, Geochemical, Environmental and Geotechnical Programs, 2015 to 2024 (Amec Foster Wheeler July 2015)

SPECIFIC COMMENTS

Canada-Newfoundland and Labrador Offshore Petroleum Board (C-NLOPB)

§2.3 Project Area, pg 9 – The coordinates for the corner points of the Study Area should be provided.

§2.4.1 Seismic Surveys, pg 11-14 – Gravity and magnetic data collection is an activity identified within the scope of the project. Please describe this activity and confirm that it has been included in the assessment of potential effects of the project, as proposed.

§2.7.4 Potential Accidental Events and Malfunctions, pg 19 - §5.2.10 Accidental Events of the Scoping Document states that the *“Environmental effects of any accidental events arising from streamers or accidental releases from the seismic and/or support vessels (e.g., loss of product from streamers) Cumulative effects in consideration of other oil pollution events (e.g., illegal bilge disposal) should be included”*. This section does not meet this requirement.

§2.4.1.1 2D Seismic Survey, pg 12 – Please confirm that the maximum amount of 2D line kilometers to be collected each year between 2015 and 2024 is 5,000 and that this is the number that has been used to assess this activity.

§2.4.1.1 2D Seismic Surveys, pg 12 and §2.4.1.2 3D Seismic Surveys, pg 13 – It is stated in both sections that operating pressures of the source array will be approximately 1,800-2,000 psi. The project description stated that operating pressures of the source array will be approximately 1,800-2,500 psi. This should be clarified to avoid any future issues.

§ 4 Existing Environment, pgs 35 – 247 - The *Eastern Newfoundland Strategic Environmental Assessment (SEA)* (August 2014) provides information on the eastern Newfoundland offshore physical, biological, and socioeconomic environments. This SEA, as well as recent EAs in the area, provides descriptions of: marine birds; fish and fish habitat; marine mammals and sea turtles; species at risk; sensitive areas; and human activities, including marine fisheries. As per the Scoping Document (C-NLOPB March 2, 2015), only relevant new information for the Study Area that has become available since the publication of the above noted documents should be provided in the EA.

§4.3.1.2 Commercial Fisheries, 1st para, line 2, pg 204 – The text states the “May to December” period, however the Figures, although not referenced by number, state “May to November”. Please clarify. The figures do not appear to be properly referenced in the text.

ExxonMobil Canada Ltd. Eastern Newfoundland Offshore Geophysical, Geochemical, Environmental and Geotechnical Programs, 2015 to 2024 (Amec Foster Wheeler July 2015)

§5.1 Project Components, Activities and Key Environmental Considerations, pg 248 –

Confirm that activities are to take place within the May 1 to November 30 period, as stated in Section 2.6, and not **generally** within the May to November timeframe as stated in various locations throughout the report.

§5.3 Environmental Planning, Management and Mitigation, pg 252 – Although a number of mitigation measures are listed in this section, it should be confirmed by ExxonMobil that all applicable mitigation requirements, as outlined in the *Geophysical, Geological, Environmental and Geotechnical Program Guidelines* (C-NLOPB), will be met.

ExxonMobil Canada Ltd. Eastern Newfoundland Offshore Geophysical, Geochemical, Environmental and Geotechnical Programs, 2015 to 2024 (Amec Foster Wheeler July 2015)

Environment Canada (EC)

§5.12 Environmental Monitoring and Follow-up, pg 300 - “ExxonMobil will develop and implement an operational monitoring program for marine birds and mammals throughout the course of the Project. A qualified and experienced Environmental Observer will be onboard the seismic vessel(s) to record marine bird and marine mammal sightings during Project operations, which will be undertaken in accordance with applicable requirements and guidelines. Reports from these monitoring programs will be submitted to the relevant government authorities on a regular basis.”

EC-CWS has developed a pelagic seabird monitoring protocol (**attached**) that is recommended for use by experienced observers on all offshore projects. A guide for pelagic seabirds of Atlantic Canada is also **attached**, for assistance in identifying pelagic seabirds in the area. A report of the seabird monitoring program, together with any recommended changes, is to be submitted to EC-CWS on a yearly basis. In an effort to expedite the process of data exchange, EC-CWS recommends that the data (as it relate to migratory birds or Species at Risk) collected from the monitoring program be forwarded in digital format to the EC-CWS office following completion of the study.

ExxonMobil Canada Ltd. Eastern Newfoundland Offshore Geophysical, Geochemical, Environmental and Geotechnical Programs, 2015 to 2024 (Amec Foster Wheeler July 2015)

Fisheries and Oceans Canada (DFO)

Figure 1.1 (page 2), Figure 2.1 (page 10) and Figure 3.2 (page 28) - While these figures (and other similar figures in the EA) show a polygon labelled “Sectors” located immediately outside the NW boundary of the Project Area it is not clear what this area represents as it has not been defined or referenced within the EA. This should be clarified and an indication provided as to the nature of this area and its relationship to the activities undergoing EA.

§2.4.1.1 2D Seismic Surveys and §2.4.1.2 3D Seismic Surveys, pgs 12 and 13 - The sound levels anticipated for both 2D and 3D seismic surveys are presented in terms of volume 3000 – 5000 in³, pressure 1800 – 2000 psi and peak to peak pressure 100 – 180 bar-meters. It is not clear what these values represent in terms of decibels (dB). This should be clarified.

§4.2.1.1 Approach, Key Data Sources and Administrative Considerations, pg 53 - Since the proposed exploration program is planned to continue into 2024 and the Environmental Assessment (EA) report utilizes commercial fishing data up to 2013, it would be prudent to periodically revisit the potential impacts on commercial fisheries if fishing activity or the planned exploration survey activities vary significantly from that described in this EA report.

§4.2.1.6 Marine Fish – Fish Species at Risk and Otherwise of Special Conservation Concern Table 4.6, pgs 112 and 113

- The information in the “*Population*” column refers to the species range (*i.e.* Atlantic Ocean (AO) and Newfoundland and Labrador (NL)) and not the applicable population name. The heading should be changed to reflect the information in the column, or the information in the column changed.
- When referring to SARA listed or COSEWIC assessed species it is important to include the applicable population names. For example the population names for the following species are:
 - White shark - Atlantic population
 - Smooth Skate - Funk Island Deep population
 - Acadian Redfish - Atlantic population
 - Deepwater Redfish - Northern population
 - Short fin Mako Shark - Atlantic population
 - Spiny Dogfish - Atlantic population
- Spiny dogfish is assessed by COSEWIC as “*Special Concern*”, and not as “*Threatened*”, this should be corrected.

ExxonMobil Canada Ltd. Eastern Newfoundland Offshore Geophysical, Geochemical, Environmental and Geotechnical Programs, 2015 to 2024 (Amec Foster Wheeler July 2015)

§4.2.3.1 Mysticetes Table 4.14, pg 171 - There is no designated population name for North Atlantic Right Whale; the population name "*Western North Atlantic*" should be removed.

§4.2.3.2 Odontocetes Table 4.15, pgs 173 to 179

- There is no population name designated for Sowerby's Beaked Whale; the population name "*Atlantic Ocean*" should be removed.
- The population name for Harbour Porpoise is Northwest Atlantic population, this should be corrected.

§4.2.3.5. Species at Risk and Otherwise of Special Conservation Concern Table 4.18, pg 186 - The population name for Harbour Porpoise - Northwest Atlantic population, should be included.

§4.2.3.6 Key Areas and Times for Marine Mammals and Sea Turtles, pg 188 - This section should also make reference to Figure 4.68 Protected and Special Areas (page 195) as it depicts areas that are described in this section - see Table 4.19.

§4.3.1.6 Recreational Fishing and Other Activities, pg 242 - Aboriginal communal commercial fishing licenses for both the Qalipu First Nation Band, (shrimp, snow crab and groundfish in NAFO 3K) and Innu Nation (groundfish in NAFO 3LMNO, shrimp in NAFO 3K and 3L) are factored into the Commercial Fishery statistics. As such the last sentence of this section i.e. "*There are no known Aboriginal interests or associated resource use activities...*" should be revised to indicate "...There are no known aboriginal food, social or ceremonial fishing activities..."

§5.3 Environmental Planning, Management and Mitigation, pgs 251 to 254 - It should be noted (most likely within this Section of the EA report) that the Marine Mammal Regulations (MMR) under the *Fisheries Act* is currently undergoing amendment. While public consultation on proposed amendments have only just recently ended it should be noted that Schedule 11 of the proposed amended MMR provide approach distances for marine mammals based on species, vehicle (vessel, aircraft, etc), area and timing. Given that the proposed exploration survey is planned to continue into 2024 it is recommended that the proponent be aware of potential implications that may arise if proposed amendments to MMR are accepted during the timeframe covered by the proposed survey program.

§5.5.1 Potential Environmental Issues Interactions and Existing Knowledge - Table 5.2, pgs 258 to 262 - As noted earlier in relation to seismic sound levels the EA report should provide an indication of the anticipated and likely level of seismic sound in terms of

ExxonMobil Canada Ltd. Eastern Newfoundland Offshore Geophysical, Geochemical, Environmental and Geotechnical Programs, 2015 to 2024 (Amec Foster Wheeler July 2015)

decibels (dB), especially so since all the information presented in Table 5.2 is relative to seismic sound in terms of decibels (dBs). It is not clear how the likely / probable levels of seismic sound during 2D/3D seismic surveys as provided on page 13 relate to, or compare to, the levels presented within Table 5.2 and the subsequent analysis of potential effects of seismic sound. This should be clarified.

§5.5.2.1 Vessel and Equipment Use (Last sentence 1st paragraph Pg 264) and §5.9.2 Environmental Effects Assessment (Last sentence 1st paragraph pg 290) - Both of these sentences note that *“Prior to undertaking seabed sampling in work areas that are protected and/or have been identified as having a high probability of occurrence of corals and sponges (see Section 4.2) a representative sea bed characterization (reconnaissance) drop camera/video system survey transect will be acquired to investigate the potential presence of these sensitive benthic organisms”*. There is no indication what is proposed to happen if noted reconnaissance surveys confirm that such sensitive benthic organisms are present – would the area be sampled regardless or would the survey move to an adjacent area with no such organisms? This should be clarified.

§5.12 Environmental Monitoring and Follow-up, Pg 300

- The last sentence of the 1st paragraph notes that the implementation and effectiveness (of the various mitigations committed to) will be *“...directed, managed and tracked in accordance with ExxonMobil’s existing policies and procedures...”*. It is assumed that this includes audits and monitoring reports describing compliance with, and the effectiveness of, the various mitigations committed to within the EA (e.g. CNLOPB Guidelines, Statement of Canadian Practice, etc...). This should be clarified and copies of existing policies and procedures provided – e.g. as an appendix to the EA.
- 2nd Paragraph – given that 2D / 3D seismic surveys will occur during periods of darkness it is felt that the noted *“...operational monitoring program for marine mammals...”* should / will describe measures to allow monitoring of marine mammals and sea turtles within the safety zone during periods of darkness and/or reduced visibility and that it would be adaptive from one year, or one survey, to another. This should be clarified and details of noted operational monitoring programs provided for review and information – e.g. as an appendix to this EA and subsequent EA updates.

ExxonMobil Canada Ltd. Eastern Newfoundland Offshore Geophysical, Geochemical, Environmental and Geotechnical Programs, 2015 to 2024 (Amec Foster Wheeler July 2015)

Fish, Food and Allied Workers (FFAW-Unifor)

§ 4.2.1.2 The Offshore Marine Ecosystem, Ecological Regimes and Assemblages, Page 55 and § 4.2.1.5 Benthic Invertebrates, Snow Crab, page 68 – Although the general trend indicates that snow crab stocks declining it is important to note that this does not appear to be the case in 3L, the NAFO Division where the bulk of the Study Area falls.

§ 4.2.1.5 Benthic Invertebrates, Page 60 – Qualifying the statement “benthic invertebrates are the biggest contributors to commercial landings” by adding “currently” is warranted.

§ 4.3.1.2 Commercial Fisheries, Overview of Past Fisheries, Page 202 – Please qualify the discussion on the cod moratorium. There are several commercial fisheries for the species in NL and it is an important component of many fishing enterprises. Additionally, groundfish stocks are increasing such that there will be larger-scale directed fisheries in the near future. Stating that the moratorium for cod is “still substantially in place” is misleading. The sentence following does not adequately capture the expected resurgence.

§ 4.3.1.2 Commercial Fisheries, Overview of Past Fisheries, Page 202 – Please provide the reference for the inference that the downward trend in shrimp “could possibly be a result of the fisheries closure in Division 3M in 2010.”

§ 4.3.1.2 Commercial Fisheries, Commercial Fish Harvests, Pages 204 and 205 – There should be some indication in the text that the maps are displaying data from 3KLMN only. The text is misleading in that it states it is commercial fishing activity within and adjacent to the study area. However, 3Ps and 3O in particular are also adjacent to the study area.

§ 4.3.2.1 Marine Transportation and Shipping, Page 244 - MCTS Centres are located in Placentia, Port aux Basques and Goose Bay.

§ 5.3 Environmental Planning, management and Mitigation, Page 254 and § 5.10.2 Environmental Effects Assessment Page 295 – The FLO onboard the seismic vessel is tasked with directly communicating with fish harvesters on the water. This is not the role of the crew of the standby or guard vessel.

§ 5.10.2 Pages 294 and 295 – As the proponent is unsure of its detailed and specific operation plans for the proposed work it is critical in planning that consultation should be done in the first quarter of the year.

ExxonMobil Canada Ltd. Eastern Newfoundland Offshore Geophysical, Geochemical, Environmental and Geotechnical Programs, 2015 to 2024 (Amec Foster Wheeler July 2015)

§ 5.10.2 Environmental Effects Assessment Page 295 – The level of potential interaction or disturbance at any particular site and time may be minimal, as stated. However, it is highly dependent on the time of the year. The window of opportunity for exploratory oil and gas programs often coincides with peak fishing times. Avoiding active fishing areas is of utmost importance.

§ 5.10.2 Environmental Effects Assessment Page 296 – Anecdotal reports from harvesters who have been actively fishing in areas where seismic surveys were being conducted would disagree that seismic sound would have no effect (N) on marine fisheries. As such, it is suggested that the magnitude reported in **Table 5.17** should be low (L) or medium (M). It is reported as low (L) in Table 5.3 on page 265.