

General Comments

G.1. The proposed project is tentatively scheduled to take place in the fall of 2010. As noted in the document, there may be a few harvesters fishing redfish in the area at this time. As there is no temporary exclusion area from fishing in the area that Corridor Resources proposes to conduct their survey the deployment of an environmental liaison onboard the survey vessel, as noted in the document, is a good mitigative measure to effectively reduce any potential conflicts with fishing vessels/gear during the survey program. The FFAW has trained fisheries liaison officers (FLOs) that can serve as a communication link for the fishing industry during the geohazard program in 2010 and beyond. Some of these individuals also have marine mammal and seabird training as well.

G.2. It is also important to note that FFAW harvesters, in conjunction with DFO, conduct a post-season crab survey in the fall of the year. While there are no survey positions near the project area, there will be additional fishing vessel traffic closer to the shore in NAFO Zone 4Rd.

G.3. Fish harvesters in Newfoundland and Labrador regularly express concerns regarding seismic impacts on fish and shellfish species. The timing of the proposed 2010 survey during a known redfish mating season may have effects on the population in the future. Redfish has not been the main species fished for several years in the area due primarily to market conditions. Some harvesters do target the species and Ocean Choice International is currently fishing for redfish off the south coast of Newfoundland. Redfish, therefore, is still a species of commercial importance to the fishery.

G.4. There is a general level of uncertainty with respect to the proponent's intent to implement mitigative measures that are outlined in the "Statement of Canadian Practice with respect to the Mitigation of Seismic Sound in the Marine Environment" (SOCP) and the Geophysical, Geological, Environmental and Geotechnical Program Guidelines and referenced in the report. Sections 6.2.3, 6.3.3 and 6.4.3 state that "*the following technically and economically feasible mitigation measures to reduce or eliminate potential adverse effects of the Project and Fish, Shellfish and Habitat have been identified and are in compliance with the SOCP (DFO 2007c) and the C-NLOPB Program Guidelines (C-NLOPB 2008).*" Please be advised that the SOCP specifies the mitigation requirements that must be met during the planning and conduct of marine seismic surveys, in order to minimize impacts on life in the oceans. These requirements are set out as minimum standards, which will apply in all non-ice covered marine waters in Canada. As such it is advised that Corridor Resources Inc. revise the relevant environmental effects sections, including 6.2.3, 6.3.3 and 6.4.3, to clarify their commitment to adhere to all relevant minimum mitigation standards outlined in the Planning Seismic Surveys, Safety Zone and Start-up, Shut-down of Air Source Array(s), Line Changes and Maintenance Shut-downs, Operations in Low Visibility and Additional Mitigative Measures and Modifications sections of the SOCP.

G.5. Additionally DFO requests that all sighting data collected for marine mammals and sea turtles be forwarded to DFO as per standard practice.

G.6. The literature review for cetaceans seems incomplete and some interpretations seem incorrect, and are likely to underestimate the risks for certain species. One example: blue whale is stated to be "uncommon" in the project area. In fact, the population, listed as "endangered" under SARA, is present in low numbers in the St. Lawrence (probably less than 250 mature individuals). Therefore, even if it might not be common to see a blue whale there, it is a migratory corridor for the entire population, it is susceptible to be an important habitat for this endangered species, especially in the fall, the period of the project.

G.7. Mitigation measures are debatable and could be insufficient to lower the risks for cetaceans to acceptable levels. For example, the area of detection is 500 m, which is smaller than in other similar projects. Furthermore, these types of mitigation measures (marine mammal observers, ramping up, etc.) do not eliminate risks of physical injuries and do nothing to reduce the risks of behavioural impacts (disturbance, displacement, stress, masking of sounds for reproduction, etc.).

G.8. It appears that no marine mammal specialist was consulted by Corridor Resources to produce this Environmental Assessment.

G.9. As stated by Bureau d'audiences publiques sur l'environnement (BAPE) report in 2004, the cumulative impacts of such a project should consider that it is a first step to a new industry for the St. Lawrence Gulf, which is oil and gas exploitation.

G.10. The Regroupement des Palangriers et Petoncliers Unique Madelinots (RPPUM) represents pelagic and groundfish fishermen from the Magdalene Islands, the RPPUM firstly denounces the fact that they have not been consulted by Corridor Resources in its Environmental Assessments as required by the Canadian Environmental Assessments Act.

G. 11. Contrary to the conclusions of Corridor Resources, the RPPUM finds that there is enough scientific evidence available attributing the negative effects of seismic surveys on fish to warrant a review and/or comprehensive study. To claim that there would be no serious adverse environmental derived from a seismic program in the Laurentian Channel in September and October goes against all traditional knowledge of fish aggregations gathered by Island fishermen. Traditional knowledge is further corroborated in DFO's findings published in the, "Description of the Southern Gulf of St. Lawrence and Sydney Bight Marine Ecosystems in Relation to Oil and Gas Exploration.". According to these sources, the proposed schedule of the seismic program for the early fall corresponds to a time when the Laurentian Channel is coveted by many groundfish species. Since these do not exit the Gulf region until November it is felt that seismic test would cause serious biological disruptions which could be mitigated by postponing the program until the late fall.

G.12. The RPPUM stresses the fact that cod, which is now on the COSEWIC endangered list would be exposed to disruptions in their habitat. Because cod would be aggregating on the slopes of the Laurentian Channel at the time of the proposed program the RPPUM is concerned that not taking a precautionary approach in this instance may disrupt a significant link in the gulf ecosystem.

G.13. The (Regroupement des Pêcheurs Professionnels des Îles) RPPIM, is of the opinion that the EA deposited with the Canada Newfoundland Petroleum Board on May 21, 2010, fails to consult with all stakeholders. The RPPIM underlines the inconsistency which would see Newfoundland fishermen consulted through One Ocean and the FFAW while there was no similar attempt to contact Magdalene Island fishermen. The RPPIM further deplores the fact they have not been consulted despite the fact that the Old Harry project area is closer to the Magdalene Islands and located within their groundfish fishing grounds. It is further noted that a significant amount of literature corroborates the assumption that seismic blasts cause disturbances in migration patterns and would directly impact RPPIM fishermen. The RPPIM feels that their redfish, turbot, halibut, and witch flounder fisheries would be directly and negatively affected by a seismic program in the Laurentian Channel.

G.14. As the RPPIM also represents snow crab fishers for the zone 12F adjacent to the Old Harry deposit, it seconds its objection to seismic blasts in the project area. Given that the EA for Geohazard Survey acknowledges that the project will affect 22.5 km radius and an additional 3km buffer zone, it is contended that these undertaking are too close to crab zone 12F. The RPPIM feels that given the lack of information on long term effects of seismic testing on snow crab resources it would not be “precautionary” to proceed with a seismic program so close to the productive 12F crab zone. Members of the RPPIM fear that the same toxic stresses, physiological and neurological disturbances observed in lobster as a result of seismic program would also be introduced to crab stocks. As with lobsters the disruptions may negatively impact crab resources by disrupting feeding and egg laying which could potentially have lasting negative effects on crab stocks.

G.15. Finally, the RPPIM contests the EA’s conclusion that there will no serious and adverse environmental effects as a result of the Geohazard Program at Old Harry.

Data Collection

G.16. This survey provides a good opportunity to collect additional seabird data from the area. CWS has developed a pelagic seabird monitoring protocol that they recommend for all offshore projects. This protocol is a work in progress and CWS would appreciate feedback from the observers using it in the field. A guide sheet to the pelagic seabirds of Atlantic Canada is available through CWS in Mount Pearl, NL.

G.17. In an effort to expedite the process of data exchange, the Canadian Wildlife Service would appreciate that the data (as it relate to migratory birds or species at risk) collected from these surveys be forwarded in digital format to their office following completion of the study. These data will be centralized for internal use to help ensure

that the best possible natural resource management decisions are made for these species in Newfoundland and Labrador. Metadata will be retained to identify source of data and will not be used for the purpose of publication. The Canadian Wildlife Service will not copy, distribute, loan, lease, sell, or use of this data as part of a value added product or otherwise make the DATA available to any other party without the prior express written consent.

G.18. The proponent has indicated that they will follow the Williams and Chardine protocol for handling stranded birds, and will obtain the necessary permits to do so. They have also indicated that they will be conducting seabird monitoring.

Specific Comments

§ 3.2 - Commercial Fisheries, page 3.1 - The section referring to the Redfish fishery should be revised to read that due to limited participation there are currently only three enterprises of approximately 60 license holders participating in the Redfish fishery.

§5.2 Issues Scoping and Selection of Valued Environmental Components, 1st bullet, pg 5.1 - What consultation “with relevant regulatory agencies and stakeholders” was undertaken by Corridor Resources, other than as reported in Section 3.0 (FFAW and OO) for issues scoping and selection of VECs.

§5.3 Environmental Effects Assessment Organization, 1st para.,pg 5.5 – Please confirm the temporal scope of the project. Is it year-round or only certain months of each year.

§6.2.1 Existing Conditions, 2nd para.,pg 6.17 – “redfish mating area”. Reference is made to Section 6.5 for a discussion on “a potential redfish mating area” however; Section 6.5 refers to Section 6.2 for the discussion. Where is the discussion?

§6.2.3 Mitigation, 1st bullet, item v, pg 6.22 – How has the potential overlapping of the timing of “redfish mating” and the project activities been mitigated.

Table 6.3 - Summary of Fish Species with the Potential to Occur in the Project Area and their Status page 6.10 - There are a number of species in the table where status is identified as "Not at Risk" under the SARA and COSEWIC status columns, which is not accurate.

"Not at Risk" is a COSEWIC designation that means that a species would have to be assessed by COSEWIC in order for it to be determined to be “not at risk.” Many of the species in the table have not yet been assessed by COSEWIC (e.g. Atlantic Salmon, Bluefin Tuna, Capelin, Smooth Skate, Thorny Skate, etc...)

If a species has not yet been assessed by COSEWIC, then the Status under COSEWIC column should remain blank. If a species is not listed under SARA then it has no SARA

status. If the species actually has been assessed as “Not at Risk” by COSEWIC then it is accurate to note that in the table.

Furthermore, for all SARA listed species please remove the reference to the COSEWIC designation since the SARA listing is what legally applies.

As such, the table should be revised to accurately reflect the status of each species under SARA and/or COSEWIC. The COSEWIC website (www.cosewic.gc.ca) and the SARA Registry There are a number of species in the table where status is identified as "Not at Risk" under the SARA and COSEWIC status columns, which is not accurate.

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If a species has not yet been assessed by COSEWIC, then the Status under COSEWIC column should remain blank. If a species is not listed under SARA then it has no SARA status. If the species actually has been assessed as “Not at Risk” by COSEWIC then it is accurate to note that in the table.

Furthermore, for all SARA listed species please remove the reference to the COSEWIC designation since the SARA listing is what legally applies.

As such, the table should be revised to accurately reflect the status of each species under SARA and/or COSEWIC. The COSEWIC website (www.cosewic.gc.ca) and the SARA Registry (www.sararegistry.gc.ca) can be checked for the latest assessments and status.

Additional issues include:

American Plaice - The NL and Maritimes populations were assessed as threatened by COSEWIC in 2009.

Atlantic Cod was reassessed by COSEWIC in April 2010. NL population assessed as endangered, Laurentian North population assessed as endangered, Laurentian South population assessed as endangered, Southern population assessed as endangered, Arctic Lakes population assessed as special concern, Arctic Marine population assessed as data deficient.

Deepwater Redfish was assessed in April 2010. Gulf of St. Lawrence/Laurentian Channel population assessed as endangered, Northern population assessed as threatened.

Acadian Redfish was assessed in April 2010. Atlantic population assessed as threatened, Bonne Bay population assessed as special concern.
Spiny Dogfish (Atlantic) was assessed in April 2010 as special concern.

Table 6.6 – Marine Mammals and Sea Turtles found within or Near the Project Area page 6.26 - Sei Whale - only the Pacific population is listed as endangered under SARA. The Atlantic population has no SARA status and the last assessment by COSEWIC was data deficient.

Humpback Whale (Northwest Atlantic) has no SARA status (Schedule 3 is not relevant).

Harbour Porpoise has no SARA status (Schedule 2 is not relevant).

White-beaked dolphin is a potential common occurrence in the project area

Killer Whale (Northwest Atlantic/Eastern Arctic population) has no SARA status but was assessed as special concern by COSEWIC in 2008.

Beluga should be specified as St. Lawrence Estuary population - that is the only population listed on SARA.

Northern Bottlenose Whale should be specified as Scotian Shelf population.

Harbour Seal (Atlantic and Eastern Arctic) was designated as not at risk by COSEWIC in 2007 and is uncommon occurrence in the study area.

Loggerhead Sea Turtle was assessed as endangered by COSEWIC in 2010.

§ 6.3.3 – Mitigation, bullet 6, page 6.32 - As per section 6.b.1 of the SOCP “a qualified Marine Mammal Observer, must continuously observe the safety zone for a minimum period of 30 minutes prior to the start up of the air source array(s).” Please revise this section and remove reference to environmental observer.

§ 6.4.1 – Existing Conditions page 6.37 - This section refers to Schedules 2 and 3 of SARA. Please note that there are no species left to be reassessed on Schedule 2 and many of the Schedule 3 species have also been re-assessed. Schedule 1 is the only official federal list of species at risk and as such is the only one that needs to be referred to in this section.

Table 6.8 - Species at Risk in the Vicinity of the Project page 6.38 - Except for the NL population, the COSEWIC assessment of Atlantic Cod given in the table is incorrect.

Harbour Porpoise has no SARA status (Schedule 2 is not relevant).

Humpback Whale (Northwest Atlantic) has no SARA status (Schedule 3 is not relevant).

Since this table includes COSEWIC assessed species, it is missing some species that were included in tables 6.3 and 6.6 which have been assessed by COSEWIC. (i.e. American Plaice, Deepwater and Acadian Redfish, Spiny Dogfish and Loggerhead Sea Turtle.)

Based on these comments please revise the table accordingly.

§ 6.4.1 - Existing Conditions – Wolffish, page. 6.39 - It is preferable, for accuracy, that the published Recovery Strategy/Management Plan for the 3 wolffish species be used as a reference rather than the SARA Registry

§ 6.4.1 - Existing Conditions – Atlantic Cod, page. 6.39 - As per previous comments, the information about the COSEWIC designations of Atlantic Cod populations are incorrect and the reference to Schedule 3 of SARA is not relevant. Also with the revised assessment of cod, there are now different designatable units. See Comment #1 and revise this section accordingly.

§ 6.4.1 - Existing Conditions – Blue Whale, page. 6.41 - For clarification purposes that the Blue Whale is **listed** as endangered under SARA. It was **designated** as endangered by COSEWIC before it was listed. Furthermore, for all SARA listed species please remove the reference to the COSEWIC designation since the SARA listing is what legally applies.

The Recovery Strategy for Blue Whale, published on the SARA Registry, will provide information on the species, threats, mitigation measures and recovery measures. As such, this section should be revised to include this information and reference.

§ 6.4.1 - Existing Conditions – North Atlantic Right Whale, page. 6.41; Northern Bottlenose Whale, page 6.41; Beluga, Fin Whale, page. 6.42 - For clarification purposes, these species were **listed** under SARA and **designated** under COSEWIC. Furthermore, for SARA listed species please remove the reference to the COSEWIC designation since the SARA listing is what legally applies.

The Recovery Strategies for the North Atlantic Right Whale and Northern Bottlenose Whale (Scotian Shelf), published on the SARA Registry, will provide information on the species, threats, mitigation measures and recovery measures. As such, this section should be revised to include this information and reference.

§ 6.4.1 - Existing Conditions, Harbour Porpoise, page 6.42 - This species has no SARA status, as the reference to Schedule 2 is not relevant, please revise accordingly.

§ 6.4.1 - Existing Conditions, Humpback Whale, page 6.42 - Humpback Whale (Atlantic) was designated as Not at Risk by COSEWIC. It has no SARA status as Schedule 3 is not relevant, please revise accordingly.

§ 6.4.1 - Existing Conditions, Leatherback Turtle, page 6.42 - For clarification purposes this species was **listed** under SARA and **designated** under COSEWIC. Furthermore, please remove the reference to the COSEWIC designation since the SARA listing is what legally applies.

Please revise this section to include more information as to when this species would most likely be found to occur within the vicinity of the project area. This information can be found in the Recovery Strategy.

General Comment on SARA Species referenced throughout the document. It should be noted that there are a number of sections within the document which makes reference to SARA species. As such, Comments # 1 - 12 should be reflected throughout the whole document.

§ 6.5 – Sensitive Areas, page 6.44 – 6.47 - This section concludes that there is no potential for adverse environmental effect or interaction between the EBSAs and the proposed activity due to the boundaries of the EBSAs falling outside the proposed project area. As a point of clarification, one caution that should be used when assessing the potential for impacts on EBSAs or what they represent is that, while EBSA boundary lines are placed on a map to depict areas or species that contribute in a significant way to the Gulf of St. Lawrence ecosystem, these lines should not be taken as either the spatial or temporal limits of the biological activity or ecological significance.

DFO (2007b), a document cited in the EA reference list, states that, "*The fact that a significant ecosystem component is not included or partially included in an EBSA cannot be considered as an ecologically significant absence. Sensitive populations as well as certain exceptional areas were not – or not entirely/always – included in the EBSA.*"

§ 6.5.1 Existing Conditions, pg 6.44 - A map showing the relation of the project area to all ten Ecologically and Biologically Significant Area's should be included in this section.

§ 6.5.1 Existing Conditions, 1st line, pg 6.45 – Is it the intent for streamers to be deployed enroute to the survey area?

§ 6.5.1 Existing Conditions, last para., pg 6.45 – The location of the IBAs should be included on Figure 6.1.

§ 6.6.1 - Existing Conditions, Commercial Fisheries, page 6.48 - Section 6.6 states that crab is fished by seasons like lobster, while this is true, it is also managed under a quota system like Groundfish.

§ 6.5.2 Potential Interactions and Existing Knowledge, last sentence, pg 6.47 – “The potential interaction has been discussed in greater detail in Section 6.2.2”. No it hasn't.

§ 6.6 Commercial Fisheries, Existing Conditions, Historical Fisheries, page 6.54 - 3rd and 4th sentence - The historic landings of cod and size of the cod stocks are stated without specifying the reference area. Is it "in the Gulf", "around NL; "all of Atlantic Canada"? Please provide clarification.

This section states, "*In the 1950-1970s, cod stocks...*" is this "stocks" or "landings"? Please provide clarification.

This section states, "*in 1993 a moratorium on the cod fishery was imposed.*" The specific stock being referenced is not stated. The northern cod moratorium began in 1992. A year later moratoria were declared for many other stocks. Please revise accordingly.

§ 6.6.3 Mitigation Commercial Fisheries, page 6.73 – The Geophysical, Geological, Environmental and Geotechnical Program Guidelines (C-NLOPB 2008) state that "Operators should implement a gear and/or vessel damage compensation program, to promptly settle claims for loss and/or damage that may be caused by survey operations."

§ 8.0 Cumulative Environmental Effects Assessment, Marine Mammals and Sea Turtles, pg 8.2 – The MMO should be monitoring for marine mammals, sea turtles, and seabirds.

§ 10.0 Follow-up and Monitoring, pg 10.1 – The MMO should be monitoring for marine mammals, sea turtles, and seabirds.