



**GX Technology Canada Ltd's GrandSPAN 2D Seismic, Gravity and Magnetic Survey, 2014–2018
Environmental Assessment Amendment:
GXT Response to Consolidated Comments on Response to Comments on Amendment**

**Submitted
19 April 2016**

The following are GX Technology Canada Ltd.'s (GXT's) responses to reviewer comments related GXT's March 2 Response to Consolidated Comments on Response to Comments on Amendment provided to GXT by the Canada – Newfoundland and Labrador Offshore Petroleum Board (C-NLOPB) regarding the Environmental Assessment Amendment for GXT's GrandSPAN 2D Seismic, Gravity and Magnetic Survey, 2014 – 2018 (<http://www.cnlopb.ca/pdfs/gxtgpm2ds/concom3.pdf>).

As in GXT's previous responses, the current text is organized under the name of the commenting organization or agency, and repeats the full comment received, followed by GXT's new response.

Fish, Food and Allied Workers-Unifor (FFAW-Unifor)

While we appreciate GXT's responses to our identified issues, we would like to stress once again that evidence on the effects of seismic operations on fish species has not been agreed upon and evidence exists in the literature to support both sides of the argument. Thus, until there is sound evidence that points in one direction we have concerns about the effects of seismic on key commercial fisheries.

Similarly, the 7 day temporal/30 km spatial separation mitigation is equally as troublesome until these effects are known. For this reason we once again stress that no overlap is to occur between seismic activity and the Post-Season Snow Crab Survey stations until these stations have been completed.

GXT RESPONSE: GXT acknowledges FFAW-Unifor's position. GXT will, of course, apply all mitigations required by the C-NLOPB as the regulatory authority for seismic work in the Newfoundland and Labrador offshore area.

Fisheries and Oceans Canada (DFO)

DFO ORIGINAL COMMENT: Section 5.4.1 (d) Environmental monitoring and Follow up, page 96 (and possibly other similar parts of Chapter 5 that reference Environmental Monitoring and Follow up) – Could / should the noted monitoring plan and related reporting on same also include monitoring to confirm compliance / implementation of the various measures outlined within the Statement of Canadian Practice with respect to the Mitigation of Seismic Sound in the Marine Environment and other mitigations committed to within the EA and EA Amendment.

GXT ORIGINAL RESPONSE: GXT uses a variety of tools to ensure that the environmental commitments and mitigations (including those resulting from EA reviews) are communicated and followed during its operations.

It is, for example, a specific responsibility of each on-board Manager of the MMOs implementing the marine mammal and seabird mitigation and monitoring program (on each vessel with an array) to insure that all related mitigation and monitoring measures are in place and to monitor their proper application during the survey. This includes the implementation of pre-ramp-up watches, ramp-ups, monitoring the safety zone during array activities, and efficient shutdowns if necessary. The Manager also has at-sea responsibility to ensure that marine animal and seabird data are collected and recorded appropriately and accurately, and that reports and other communications are completed in a timely manner. This has been the case for all of GXT past Canadian marine seismic surveys (Beaufort Sea, Nova Scotia and Labrador offshore areas).

GXT also places a strong emphasis on pre-Survey Start-Up Sessions with all the project personnel and crew so that each of the mitigation commitments, responsibilities and compliance requirements are understood by all, and that all are aware of ongoing monitoring and reporting requirements. See for

instance Section 5.2.2 of the 2014 GrandSPAN EA Report.

GXT on-shore managers also maintain regular contact with personnel at sea (Including the and check on how the various mitigations and monitoring measures are being applied. In addition, as noted in Section 5.4.1 (d) of the EA Amendment document, monitoring reports will be forwarded weekly to authorities which will provide evidence of implementation and compliance throughout the seismic activities.

DFO NEW COMMENT: First sentence, second paragraph, page 12 - “It is for example a specific responsibility of each on-board Manager of the MMOs implementing the marine mammal and sea bird mitigation and monitoring program (on each vessel with an array) to insure that all related mitigation and monitoring measures are in place and to monitor their proper application during the survey” ; AND

First sentence, 4th paragraph, page 12 - “GXT on-shore managers also maintain regular contact with personnel at sea including the and check on how the various mitigations and monitoring measures are being applied.”

The wording for the above noted sentences seems awkward and needs to be clarified / corrected.

GXT RESPONSE: Although the DFO reviewer indicates that the resubmission of a response is not required (DFO to C-NLOPB 18 March 2016 <http://www.cnlopb.ca/pdfs/gxtgpm2ds/dforeply2.pdf>), GXT welcomes the opportunity to clarify these statements.

1. First sentence, second paragraph, page 12: This statement was intended to provide an example of how GXT will “confirm compliance / implementation of the various measures outlined within the Statement of Canadian Practice” as DFO indicated in its original comment. Specifically, GXT describes one of the key responsibilities of the on-board MMSO¹ Program Manager (the at-sea senior MMSO on each source vessel who is responsible for managing the MMSO program on that ship), which is to ensure that the Program as stated in GXT’s filings (and the Statement of Canadian Practice) is fully implemented and that it continues to be applied correctly throughout the program. As the following text in GXT’s original response notes, this person also ensures that marine animal and seabird data are collected properly and is responsible for ongoing reporting to GXT and authorities (as described in the Amendment report, Section 5.4.1.d).
2. First sentence, forth paragraph, page 12: The original sentence “GXT on-shore managers also maintain regular contact with personnel at sea (Including the and check on ...“ contained a typographical error, omitting “MMSOs)”. It should have read:

GXT on-shore managers also maintain regular contact with personnel at sea (including the MMSOs) and check on how the various mitigations and monitoring measures are being applied.

¹ GXT prefers the term (as used in the Amendment document) “Marine Mammal and Seabird Observer” (MMSO), to reflect their additional role in seabird monitoring and mitigation.