

**Statoil Canada Ltd. - East Coast Operations
Newfoundland & Labrador Offshore Area
Environmental Assessment Review for 2012
Seismic Survey Operations**

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1 Introduction

Offshore oil and gas exploration and production programs generally encompass long periods of time and multiple, successive, operational steps. As a consequence, this environmental assessments of these programs address a variety of activities undertaken over a number of years.

This document is one of a series of annual reviews, committed to by Statoil Canada Ltd. (SCL), on the status and ongoing validity of the environmental assessment (EA) approval(s) in place for SCL's geophysical survey activities in the Newfoundland and Labrador Offshore Area (Table 1). These reviews are intended to assist the C-NLOPB in fulfilling its responsibilities under the Canadian Environmental Assessment (CEA) Act by ensuring that both the scope of the assessment and the mitigations committed to therein remain technically valid.

Table 1 - Environmental Assessment Approvals in place for Statoil Geophysical survey programs in 2012

Screening Determination Reference ¹	Temporal Scope	EA Report Title
CEAR No. 11-01-60411	April 1 - Oct 31 of 2011 through 2019	<i>Environmental assessment of Statoil's Geophysical Program for Jeanne d'Arc and Central Ridge/Flemish Pass Basins, 2011-2019</i>
	April 1 - Oct 31 of 2012	<i>Amendment to the Environmental Assessment of Statoil's Geophysical Program for the Jeanne d'Arc and Central Ridge/Flemish Pass Basins, 2011-2019</i>

The following sections provide the information necessary to confirm the ongoing validity of the assessment in question or note any changes that need to be addressed.

2 Environmental Assessment of Statoil's Geophysical Program for Jeanne d'Arc and Central Ridge/Flemish Pass Basins, 2011-2019.

2.1 Project Description and Scope

2.1.1 Activities Covered

This assessment encompasses the conduct of 2d, 3d and 4d seismic surveys in the Jeanne d'Arc Basin area. In addition, necessary geo-hazard surveys that are needed prior to the start of individual drilling operations to help ensure the safety of those operations are addressed.

Typically, for 2d, 3d and 4d surveys, up to two 5085 in³ air gun arrays of 24 Bolt airguns each operating at 2000 to 2500 psi could be employed firing alternately with sound source characteristics of 109.9 bar-m

¹ Follow the link to the C-NLOPB public registry to view the environmental assessments, amendments and regulatory determinations.

(i.e., ~255 dB re 1 μ Pa (0 p)). The arrays will typically be towed at a depth of 5 to 8 meters and operated with a shot point interval of 18 to 25 metres. The assessment also considers the use of vessels to support the survey and a picket vessel(s) to accompany the survey vessel.

For the 2012 3d survey, the air gun array will have the following characteristics. The array designed for the 2012 survey will have alternating air gun arrays of 4,700 cubic inches each with a source level of 119.5 bar-m (~255 dB re 1 μ Pa (0-p)). The environmental implications of this variance, which result in a less than 3 decibel difference at 25 kilometers from the array, are addressed in an environmental assessment Amendment filed with the C-NLOPB in May of 2012 (Statoil, 2012) and were determined not to be significant from an environmental perspective.

Streamer configurations (strings of hydrophone sound receivers) may vary from 8 to 14 streamers of 5,000 to 8,000 metres in length towed as noted above at a depth of 5 to 8 meters. Streamers may be either solid core floatation type or use Isopar M, an iso-paraffinic hydrocarbon (C12 to C15) fluid for floatation at a volume of approximately 12 litres per 100 meters of streamer length. For the 2012 survey it is planned to use 12 streamers each of 7,000 meters length with 100 to 150 meter separation.

Geophysical site surveys (i.e., geo-hazard surveys) using smaller sound sources and other necessary survey equipment needed to conduct a site survey for a drilling location. For this type of survey typically four or more sleeve airguns of approximately 160 in³ in total volume operating at 2000 psi are used. This array is typically streamed approximately 30 meters behind the stern of the survey vessel at a depth of approximately 3 meters. The maximum output from this array has a peak to peak value of 17.0 Bar-metres equating to 244.6 dB (peak to peak)//1 μ Pa@1m, or 238 dB (zero to peak)//1 μ Pa@1m.

Mitigation procedures implemented during surveys carried out under this program will follow those defined in Appendix 2 of Geophysical, Geological, Environmental and Geotechnical Program Guidelines (CNLOPB 2012), including ramp-up (i.e., soft start) of the airgun arrays, the use of qualified, dedicated Marine Mammal Observer(s) (MMOs) to monitor marine mammals and turtles and implement shut downs of the surveys when appropriate, and the use of a Fisheries Liaison Officer (FLO) and communication procedures to avoid conflicts with the fishery. Seabird observations will also be carried out by qualified personnel as required in the above-referenced guidelines.

2.1.2 Geographic Scope

The geographic scope of the assessment, designed to encompass sufficient area to conduct seismic surveys over SCL's current land interests in the Jeanne d'Arc Basin is portrayed in Figure 1. The project area encompasses an approximately 10-kilometer turn around distance for the survey vessel while the Study Area encompassed the potentially affected area 25 kilometers outside the project area.

The configuration of the 2012 survey area requires the survey lines to exit and re-enter the Project Area for a short distance along the south west part of the survey area (Figure 1 & Figure 2). The environmental implications of this variance are addressed in an environmental assessment Amendment filed with the C-NLOPB in May of 2012 (Statoil, 2012) and were determined not to be significant from an environmental perspective.

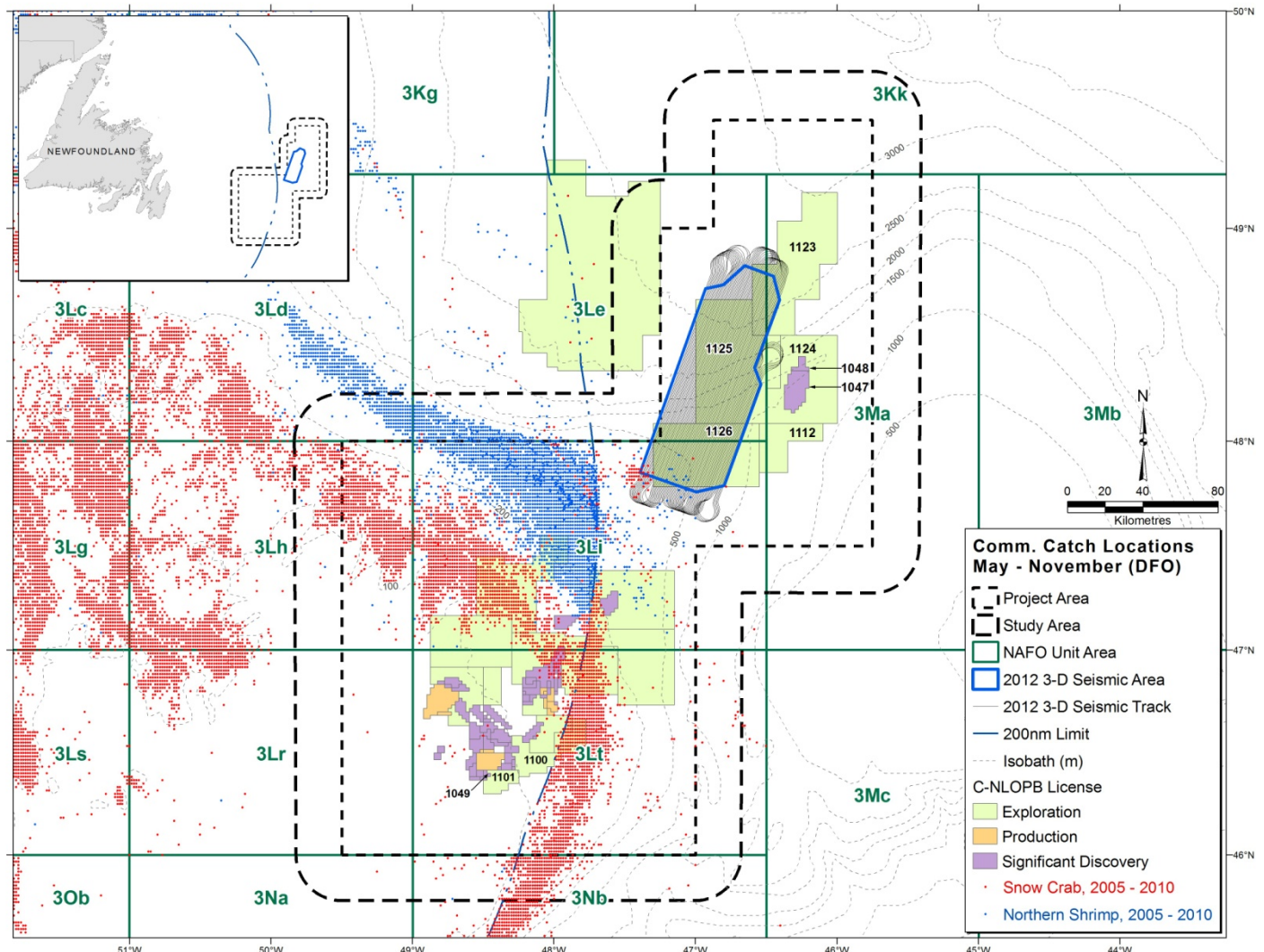


Figure 1: Geographic Scope of Project Area for CEAR No. 11-01-60411 with an overlay of the patterns of Snow Crab and Northern Shrimp fishing activity from 2005 through 2010 and approximate layout of end-of-line turns

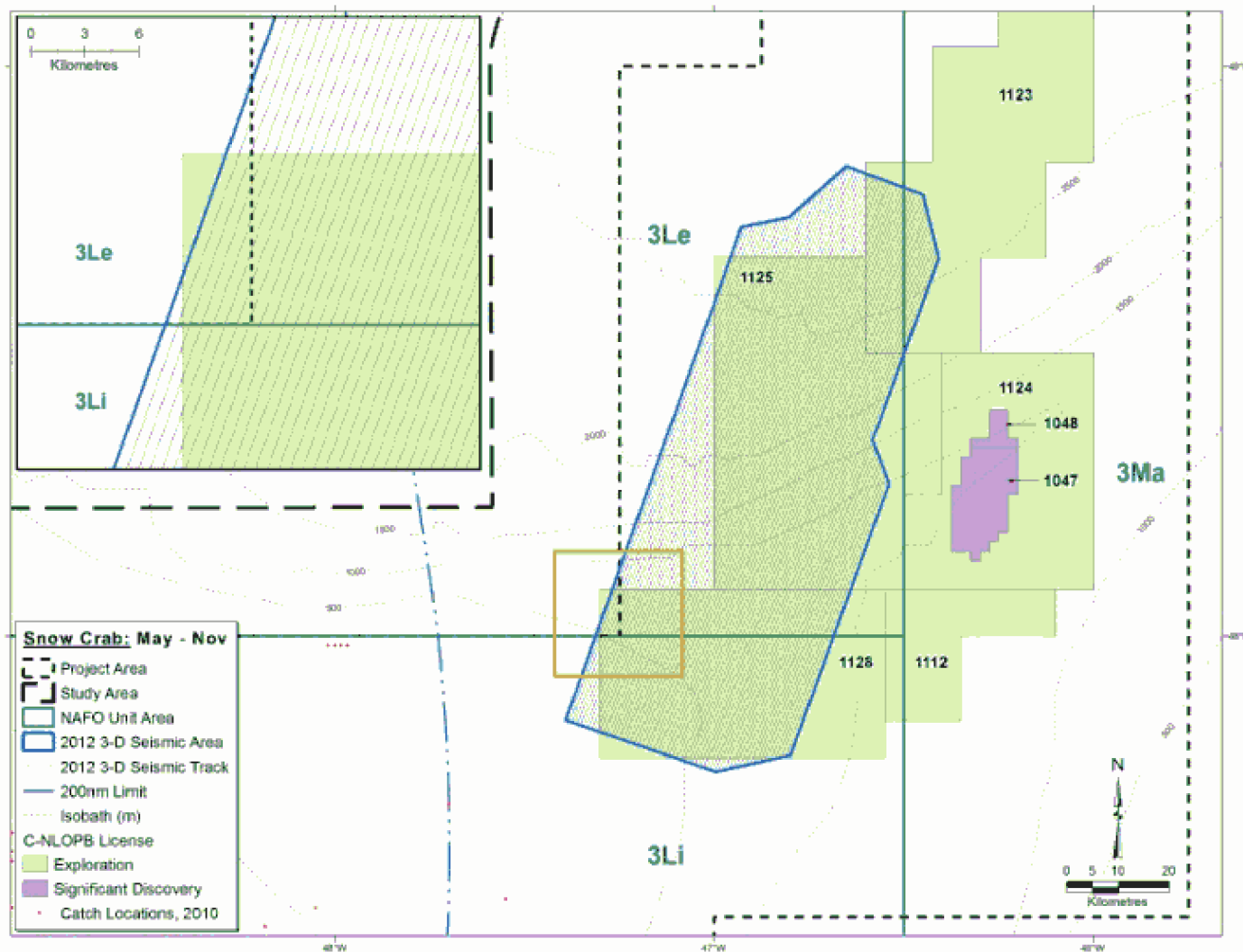


Figure 2: Detail of Survey Lines in South-western Portion of the 3D Survey Area

2.1.3 Temporal Scope

This assessment was prepared to cover the years 2011 through 2019. Within any one year, large area surveys were anticipated to occur from April through the end of October inclusive. Geohazard surveys could occur at any time during the year.

2.1.4 Planned activities for 2012

In 2012 SCL plans to undertake a 3-D seismic survey over two newly acquired leases (EL 1125 & 1126) in the Flemish Pass/Central Ridge area of the Newfoundland and Labrador Offshore Area. Figure 1 shows the general extent of the planned survey area.

In addition to the plans for a 3-D seismic survey in the area described above, SCL also plans to undertake a geohazard survey over its proposed Federation K-87 well (Figures 1 and 3) in the Jeanne d'Arc basin in late May or early June of 2012.

Figure 3 provides the specific location of the well site survey area, which is approximately 5.4 kilometers on a side, in relation to the Terra Nova Field and the 200 mile EEZ. The UTM coordinates (Zone 22T) of the survey area are as follows:

- 711289.00 m E & 5149917.00 m N
- 716686.00 m E & 5150105.00 m N
- 716874.00 m E & 5144709.00 m N
- 711478.00 m E & 5144520.00 m N

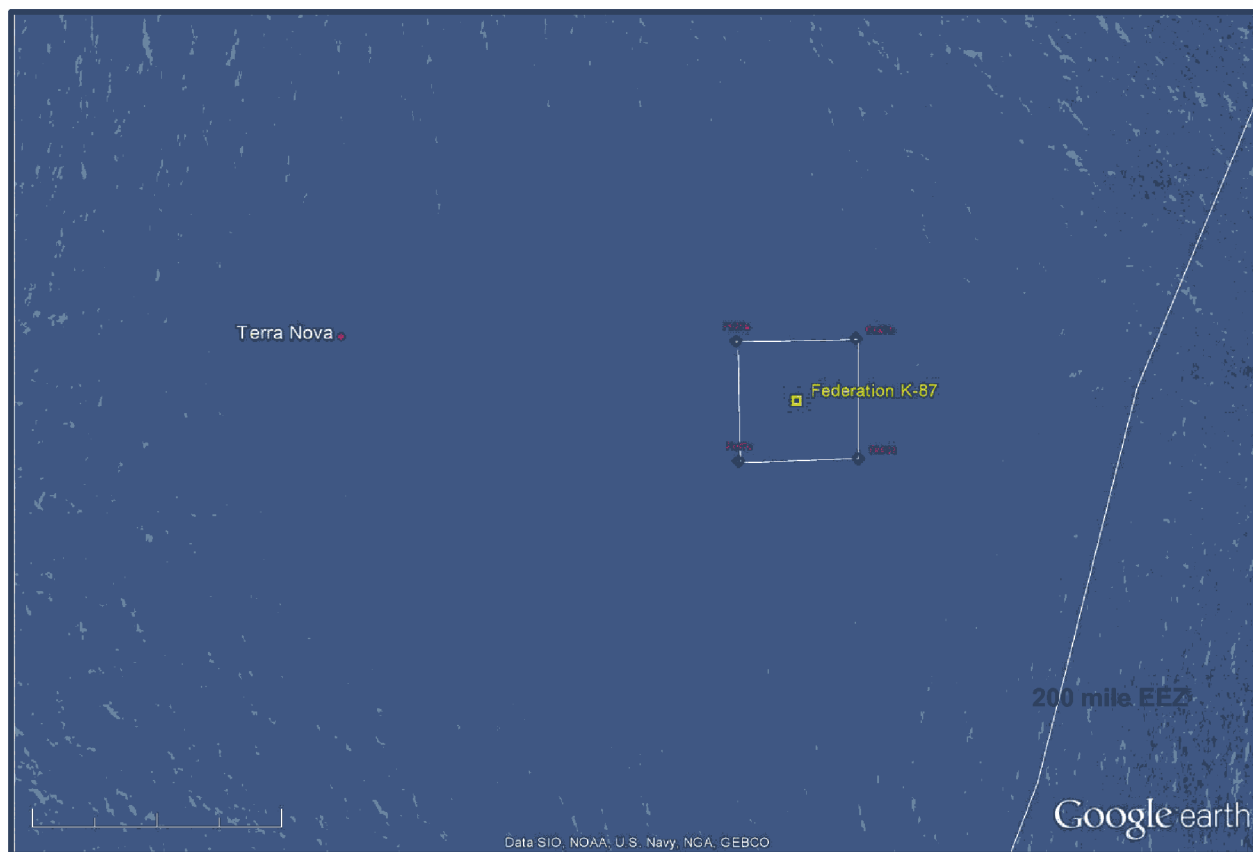


Figure 3: Location and Extent of Federation K-87 Well Site Survey

2.2 Environmental Aspects

2.2.1 Commercial Fisheries

Fishing activities in the study area have not changed significantly since the environmental assessment report cited in Table 1 was accepted and the program approved. Figure 1 provides a map of recently compiled fishing activity information that depicts an overall patterning of fishing activities that is consistent with that documented in the original environmental assessment. This compilation, derived from Fisheries and Oceans databases including research vessel and underutilized species information, was prepared by SCL in support of its application for the conduct of a seismic survey program and is consistent with recent environmental assessments by other offshore operators that have geographic and temporal scopes for their operations that overlap SCL's (c.f. Section 4.2).

Figure 1 shows the patterns of fishing activity based on aggregated data for 2005 to 2010 inclusive. It shows that the shrimp fishery in the aptly named "triangle", bounded on the east by the 200 NM EEZ (Exclusive Economic Zone), is the nearest major concentration of fishing activity to the new SCL exploration licenses and hence the 2012 survey area. As noted previously the patterns of fishing activity shown for shrimp and crab in Figure 1 have been consistent for a number of years giving a reasonable level of confidence in predicting where the bulk of fishing activity will be in 2012 for planning purposes.

The survey lines will be oriented along the long axis of the survey block such that the survey vessel turns will begin at the northeast and southwest ends of the survey block. The distance of closest approach of the survey vessel during normal survey operation to the 200NM EEZ boundary and hence the easternmost boundary of the shrimp fishery is approximately 15 nautical miles (~25 km).

There is a pattern of snow crab fishing at the extreme southwest corner of the 2012 survey area. Appendix 2 provides a series of maps showing the pattern of the crab fishery in this area from 2005 to 2010. The mitigation measures described elsewhere in this Update will be required to ensure that interactions between the survey, particularly end-of-line turns, and any crab fishing operations that may occur here in 2012 are managed effectively.

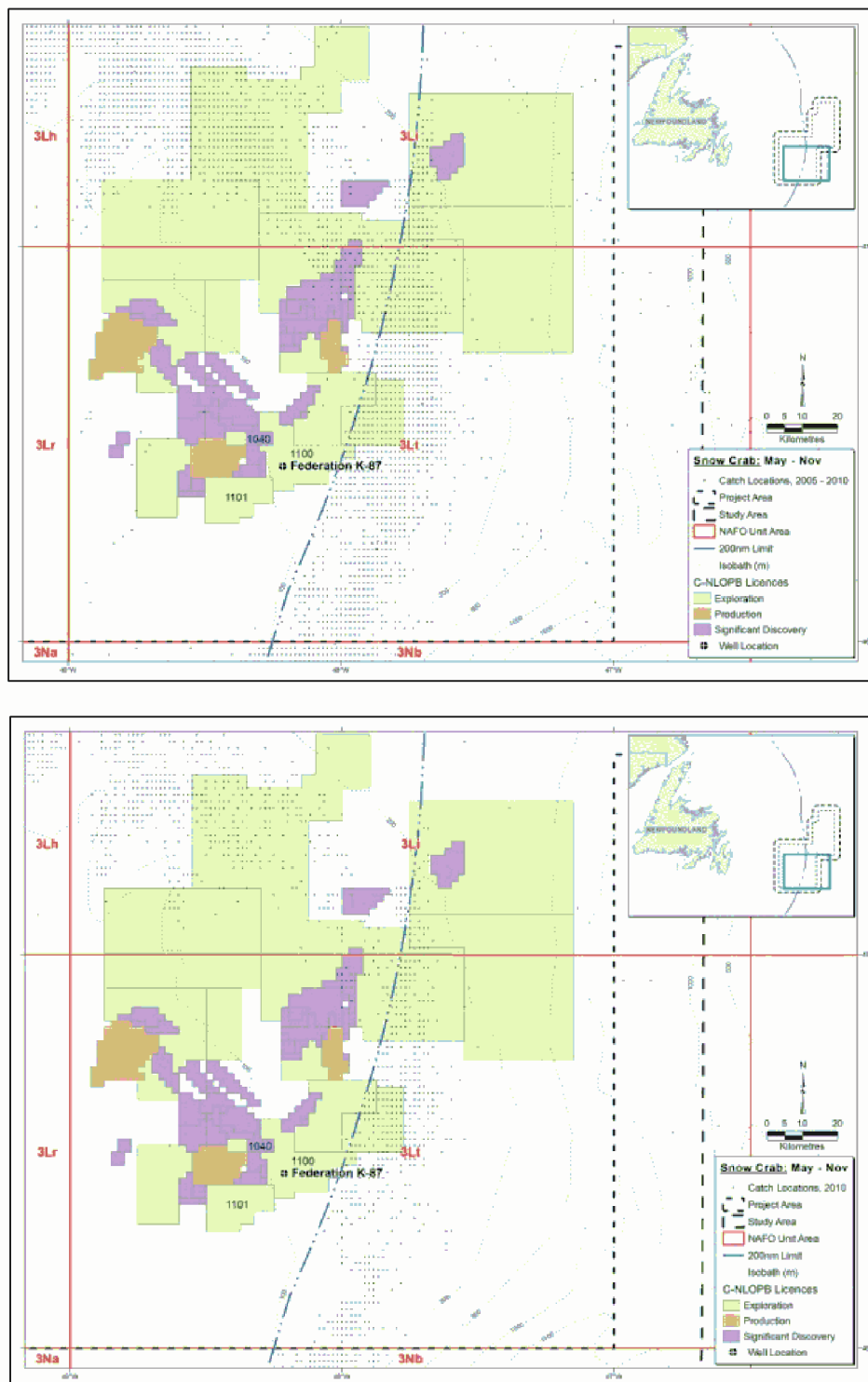


Figure 4: Pattern of Crab Fishery in NAFO Area 3Lt Relative to Federation K-87 well site – 2005 to 2010 data (top frame) & 2010 data (bottom frame)

Figure 3 shows the historical pattern of crab fishing in the 3Lt NAFO zone within which is the geohazard survey in support of the Federation K-87 exploration well drilling program that will take place in the summer or fall of 2012. The geohazard survey will take place in May or June for approximately 5 to 10 days depending on weather over an area of approximated 5 kilometers by 5 kilometers centered on Latitude: 46°26'43.49" N Longitude: 48°12'45.82" W .

While the general patterning of fishing relevant to this assessment is generally the same over years, the following paragraphs note some points relevant to the interaction between the oil and gas and fishing industry within the scope of this environmental assessment.

SCL recognizes that during 2011 issues arose around communications and coordination between oil and gas industry seismic surveys and the shrimp fishery in the northern Jean d'Arc Basin area. SCL has and will continue to take steps to avoid this kind of issue arising in relation to its seismic survey operations in 2012 and in the future. To that end, SCL has been in discussion with One Ocean and the Fish Food and Allied Workers Union both with other operators and bilaterally to determine how it can improve communications and coordination. Key to achieving this will be:

- clear instruction to its contractors with regard to fishing activities and practice in the survey area
- briefing sessions for the main survey contractor and the subcontracted picket vessel personnel
- ensuring clear understanding among survey personnel of the role of the Fisheries Liaison Officer as the sole tactical point of contact between the survey and fishing vessels
- ensuring clear protocols for reporting with respect to any fisheries issues that may arise to SCL, FFAW and the C-NLOPB as well as routine operational reporting
- enhanced frequency of Notices to Shipping to ensure that tactical survey planning is communicated to fishers and other marine interests
- consultation with regard to a streamer deployment plan prior to filing the plan with the C-NLOPB

Consultations relevant to this update took place in March 2012 with Fish Food and Allied Workers Union (FFAW) and One Ocean to discuss fishing activities in the area of interest. At that meeting the issues related to the points around communication, coordination noted above were discussed and agreed to, and furthermore, the issue of "waiting on weather" was discussed. During weather conditions that preclude survey activities the seismic vessel will sail in and around the survey area without air guns in operation to keep the streamer pattern stable while awaiting improvement in weather conditions. It was determined that the seismic vessel needed to communicate with fishers in the area, through the FLO, that this was taking place and that no air guns would be in operation.

Later planning discussions with Ocean Choice International indicate that they plan to prosecute a redfish fishery in vicinity of the Flemish Cap and Pass in the early summer of 2012 and again later in the late summer and early fall however, this may be complete before drilling operations get underway in 2012. However, in the November-December timeframe Statoil understands that a 200 tonne cod quota will be taken in the Flemish Pass area by the same company. Statoil will keep in communication with Ocean Choice International directly and through One Ocean to help ensure each company is kept up to date with respect to the other's activities.

From a fisheries perspective the primary stakeholders affected by SCL's operations sit with SCL on the One Ocean Executive and its Technical Working Group. This means that SCL benefits from direct and regular engagement with representatives from the FFAW and seafood producer/processors sectors. Notwithstanding this, as indicated in its drilling and other environmental assessments, SCL will continue to engage with stakeholders as circumstances require particularly with respect to tactical planning before and during this and future seismic surveys.

SCL also understands that it is important to recognize that harvesters fish a resource, and not fixed points from year to year. Fishing licenses are issued for large areas (e.g. NAFO subdivisions 3K or 3L) and fishing activity could take place anywhere within these areas and not just at the pattern of locations fished in recent years indicated by Fisheries and Oceans data. This means that the operator should continue to consult with the fishing industry on a regular basis to keep up to date with trends in fishing from year to year through mechanisms noted above.

With regard to the conduct of the planned geohazard survey, or any future geohazard or ROV surveys or anchor placement activities SCL will continue to keep fishing interests informed of these activities during the operational planning and execution phases. This will be done through the established One Ocean and FFAW contacts and others as deemed necessary or as advised.

2.2.2 Research Vessel Surveys by Fisheries and Oceans Canada

Fisheries and Oceans Canada (DFO) undertakes annual fisheries research surveys in the Newfoundland and Labrador Offshore area. Statoil's environmental assessment indicated that the extreme northeastern portion of the study/project area was not normally subject to these surveys therefore this was not an issue for survey work in 2011. The area to be encompassed by Statoil's 2012 survey operations is nearer to DFO survey locations mapped in the 2011 environmental assessment ([CEAR No. 11-01-60411](#)).

As the 2012 survey will start in May and continue into the Fall Statoil will consult with DFO with regard to the timing and locations of their research vessel cruises in 2012 to determine if overlaps in time and space are likely and what measures are required to manage and potential interactions.

2.2.3 Corals and Sponges

The fish habitat VEC in the current environmental assessment encompassed corals and sponges. Information on these species was provided in the assessment as well as the understanding of their distribution in the project and study areas (c.f. Campbell et al, 2009; DFO, 2010; Kenchington et al, 2010 and NAFO/FC Doc. 11/1).

The survey planned for 2012 overlaps a small segment of a NAFO bottom trawling closure area (Area 6 Sackville Spur (Figure 6). However, as the survey does not involve equipment being on or near the sea floor and there is no indication in the literature of damage to corals or sponges arising from seismic survey activities of the nature planned by SCL the conclusions of the current environmental assessment on this issue remain valid.

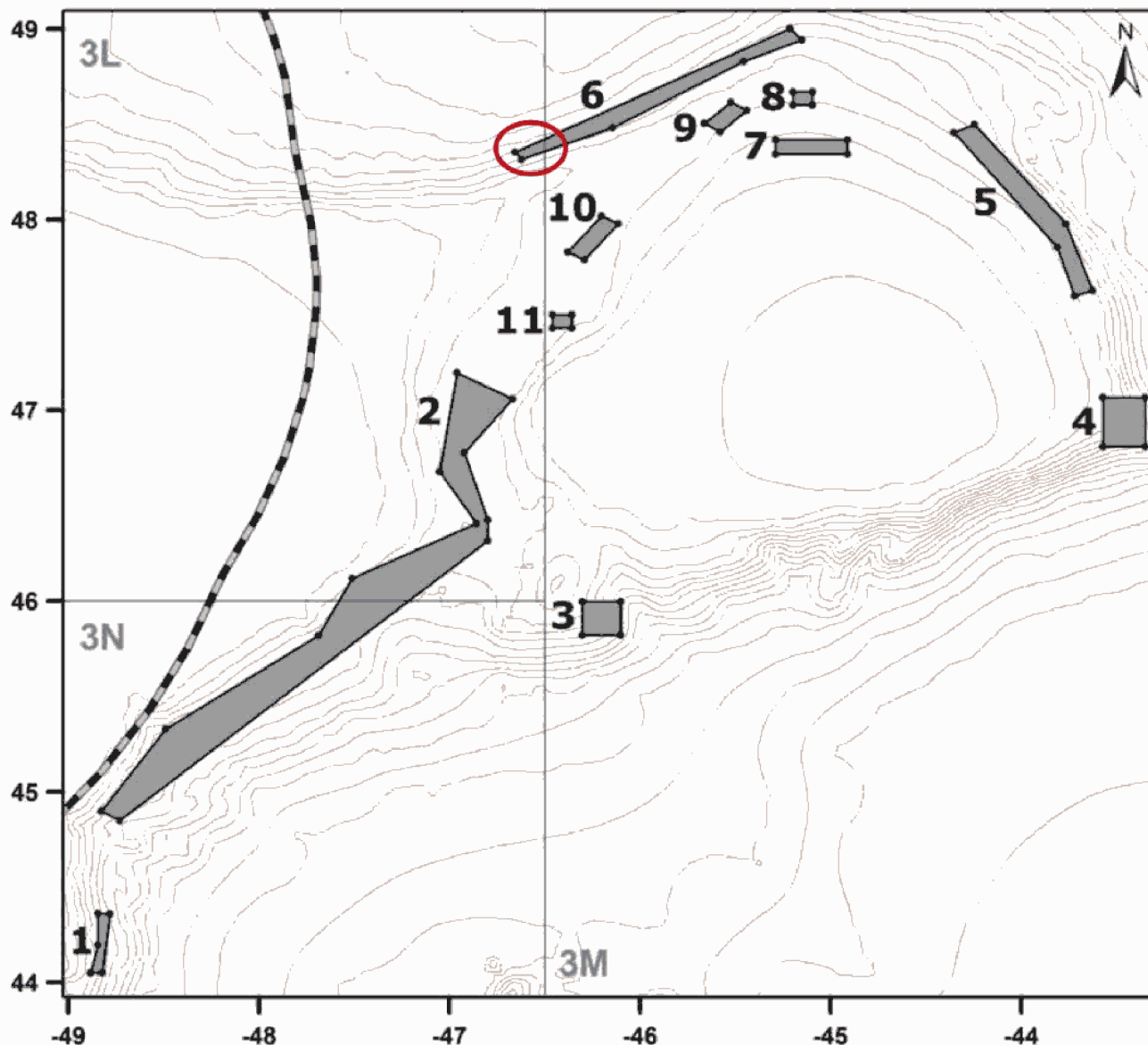


Figure 5: Locations of NAFO Fishing Closure Areas for Corals and Sponges – Area of 2012 Survey overlap with closure area indicated with red oval

2.2.4 Species at Risk

An updated listing of Species at Risk Act (SARA) and Committee on the Status of Endangered Wildlife in Canada (COSEWIC) listed species for the Grand Banks area of relevance to this assessment is provided in Appendix 1. SARA listed species with final recovery strategies in place are noted. None of the SARA listed species relevant to the scope of this assessment have an associated critical habitat description or an action or management plan in place. It is noted however that the North Atlantic Right Whale does have a critical habitat statement pursuant to SARA however it is rare in the study area considered under this

environmental assessment (see Appendix 1 – footnotes). Appendix 1 also provides a listing of COSEWIC candidate species under consideration.

Since the last environmental assessment update **one new species was added to SARA Schedule 1 listing** the white shark (*Carcharodon carcharias*). With respect to COSEWIC one species the American Eel (*Anguilla rostrata*) was reclassified from special concern to threatened and the Kemp Ridley's sea turtle is noted as a low priority candidate for assessment (Appendix 1).

A review of the SARA species specific recovery plans and the one critical habitat statement in place, as noted in Appendix 1, does not indicate that any new or modified mitigation measures are required beyond those already committed to by SCL for the scope of the operations addressed by the environmental assessment.

2.2.5 Mitigations

Statoil regards the environmental predictions and consequent mitigations cited in the environmental assessment and subsequent significance determination that relates to [CEAR No. 11-01-60411](#) as still valid and re-commits to implementing these mitigation measures for the activities to be carried out under the scope of this assessment this year.

3 Concluding Statement

The activities SCL plans to carry out in 2012 have been reviewed and assessed to be within the scope of the environmental assessments currently in place to address those activities, specifically:

- the scope and nature of activities planned and addressed under the approved environmental assessment have not changed;
- the nature of the species at risk in the Project and Study areas have been validated and although one new species has been added to Schedule 1 of SARA and there have been two changes under the COSEWIC listings as noted in this up date no critical habitats for any of these species have been defined pursuant to the Species at Risk legislation;
- the nature and extent of the fishing activities being undertaken in the Project Area have been validated and have not changed such that project activities pose any potential effects not previously assessed; and,
- the mitigation measures defined and committed to in the environmental assessment are still valid and will continue to be implemented

Statoil continues to consult with stakeholders directly affected by the activities planned under the approved environmental assessment.

The environmental effects predicted in the currently valid environmental assessment are still valid. Statoil reaffirms its commitment to implement the mitigation measures proposed in these assessments and in the Screening Decisions made by the C-NLOPB.

References

3.1 Statoil Canada Ltd. Environmental Assessments²

1. Statoil Canada Ltd., 2012, Amendment to the Environmental Assessment of Statoil's Geophysical Program for the Jeanne d'Arc and Central Ridge/Flemish Pass Basins, 2011-2019 – *Under Review*
2. LGL Limited. 2011. Environmental assessment of Statoil's Geophysical Program for Jeanne d'Arc and Central Ridge/Flemish Pass Basins, 2011-2019. LGL Rep. SA1121. Rep. by LGL Limited, in association with Canning & Pitt Associates Inc., and Oceans Ltd., St. John's, NL, for Statoil Canada Ltd., St. John's, NL. 227 p. + appendices.
3. LGL Limited. 2008. Environmental Assessment of StatoilHydro Canada Ltd. Exploration and Appraisal/Delineation Drilling Program for Offshore Newfoundland, 2008-2016. LGL Rep. SA947b. Rep. by LGL Limited, Canning & Pitt Associates Inc., and Oceans Ltd., St. John's, NL, for StatoilHydro Canada Ltd., St. John's, NL. 292 p. + appendices.

3.2 Previous Environmental Assessment Updates

1. Statoil Canada Limited East Coast Operations. Newfoundland & Labrador Offshore Area Environmental Assessment Review for 2011
2. Statoil Canada Limited East Coast Operations. Newfoundland & Labrador Offshore Area Environmental Assessment Review for 2010

3.3 Recent & Relevant Environmental Assessments Reviewed for this Update

1. LGL Limited. 2011. Environmental Assessment of Husky's Jeanne d'Arc Basin/Flemish Pass Regional Seismic Program, 2012-2020. LGL Rep. SA1144. Prepared by LGL Limited in association with Canning & Pitt Associates Inc., St. John's, NL, and Oceans Ltd., St. John's, NL, for Husky Energy, St. John's, NL. 320 p. + appendices.
2. Stantec. 2010. Hebron Project Comprehensive Study Report. Prepared by Stantec Ltd. on behalf of ExxonMobil Canada Properties

3.4 Relevant Species at Risk Recovery Strategies Reviewed for this Update³

1. Atlantic Leatherback Turtle Recovery Team 2006. Recovery Strategy for Leatherback Turtle (*Dermochelys coriacea*) in Atlantic Canada. Species at Risk Act Recovery Strategy Series. Fisheries and Oceans Canada, Ottawa, vi + 45 pp.
2. Kulka, D., C. Hood and J. Huntington. 2007. Recovery Strategy for Northern Wolffish (*Anarhichas denticulatus*) and Spotted Wolffish (*Anarhichas minor*), and Management Plan for Atlantic Wolffish

² Documents referenced in Sections 4.1, 4.2, 4.3 are accessible on the Canada-Newfoundland & Labrador Offshore Petroleum Board [website](#)

³ Documents referenced in Section 4.4 are available on the Environment Canada Species at Risk [website](#)

(*Anarhichas lupus*) in Canada. Fisheries and Oceans Canada: Newfoundland and Labrador Region. St. John's, NL. x + 103 pp.

3. DFO (Fisheries and Oceans Canada). 2008. *Recovery Strategy for the Atlantic walrus (Odobenus rosmarus rosmarus), Northwest Atlantic population, in Canada. Species at Risk Act Recovery Strategy Series*. Fisheries and Oceans Canada, Ottawa, ON. x + 11 pp.
4. Beauchamp, J., Bouchard, H., de Margerie, P., Otis, N., Savaria, J.-Y., 2009. Recovery Strategy for the blue whale (*Balaenoptera musculus*), Northwest Atlantic population, in Canada [FINAL]. Species at Risk Act Recovery Strategy Series. Fisheries and Oceans Canada, Ottawa. 62 pp.
5. Brown, M.W., Fenton, D., Smedbol, K., Merriman, C., Robichaud-Leblanc, K., and Conway, J.D. 2009. Recovery Strategy for the North Atlantic Right Whale (*Eubalaena glacialis*) in Atlantic Canadian Waters [Final]. Species at Risk Act Recovery Strategy Series. Fisheries and Oceans Canada. vi + 66p.

3.5 Other References

1. Northwest Atlantic Fisheries Organization Conservation and Enforcement Measures NAFO/FC Doc. 11/1 Serial No. N5867 – Article 16 “Coral and Sponge Protection Zones” (updated 29 July 2011) <http://www.nafo.int/fisheries/frames/regulations.html>
2. Kenchington, E., Lirette, C., Cogswell, A., Archambault, D., Archambault, P., Benoit, H., Bernier, D., Brodie, B., Fuller, S., Wilkinson, K., Lévesque, M., Power, D., Siferd, T., Treble, M., and Wareham, V. 2010. Delineating Coral and Sponge Concentrations in the Biogeographic Regions of the East Coast of Canada Using Spatial Analyses. DFO Can. Sci. Advis. Sec. Res. Doc. 2010/041. vi + 202 pp..
3. Campbell, J.S. and Simms, J.M. 2009. Status Report on Coral and Sponge Conservation in Canada. Fisheries and Oceans Canada: vii + 87 p. <http://www.dfo-mpo.gc.ca/library/340259E.pdf>
4. DFO. 2010. Occurrence, susceptibility to fishing, and ecological function of corals, sponges, and hydrothermal vents in Canadian waters. DFO Can. Sci. Advis. Sec. Sci. Advis. Rep. 2010/041. http://www.dfo-mpo.gc.ca/CSAS/Csas/publications/sar-as/2010/2010_041_e.pdf

4 Appendices

Appendix 1: Current Listing of [SARA](#) and [COSEWIC](#) Listed Species in the Statoil Study/Project Areas

Appendix 2: Crab Fishery Adjacent to SW Corner of Survey Area 2005 through 2010

4.1 Appendix 1: Current Listing⁴ of [SARA](#) and [COSEWIC](#) Listed Species in the Statoil Study/Project Area(s)⁵

Species		New since last update	SARA Status noted as Schedules 1, 2 or 3			COSEWIC Status			
Common Name	Scientific Name		Endangered	Threatened	Special Concern	Endangered	Threatened	Special Concern	Candidate ⁶
Birds									
Ivory Gull	<i>Pagophila eburnea</i>		1			X			
Marine Fish									
Northern wolffish	<i>Anarhichas denticulatus</i>			1			X		
Spotted wolffish	<i>Anarhichas minor</i>			1			X		
Atlantic wolffish	<i>Anarhichas lupus</i>				1			X	
Atlantic cod	<i>Gadus morhua</i>				3				
Atlantic cod (Newfoundland & Labrador population)	<i>Gadus morhua</i>					X			
Atlantic Salmon (various regional populations)	<i>Salmo salar</i>					X	X	X	
Porbeagle shark	<i>Lamna nasus</i>					X			
White shark	<i>Carcharodon carcharias</i>	■	1 ⁷			X			
Roundnose Grenadier	<i>Coryphaenoides rupestris</i>					X			
Cusk	<i>Brosme brosme</i>						X		

⁴ May 2012

⁵ Green Shade means a final Recovery Strategy is in place but no Critical Habitat has been identified nor have Action or Management plans been finalized for these species with the exception of the North Atlantic Right Whale (see footnote 8). Note that two other species that have recovery strategies, the Atlantic Walrus and Grey Whale, have been extirpated from Eastern Canadian waters and therefore are not listed in the above table.

⁶ Candidate COSEWIC species are classified as High (H), Medium (M) or Low (L) Priority Candidate (PC) species

⁷ June 2011



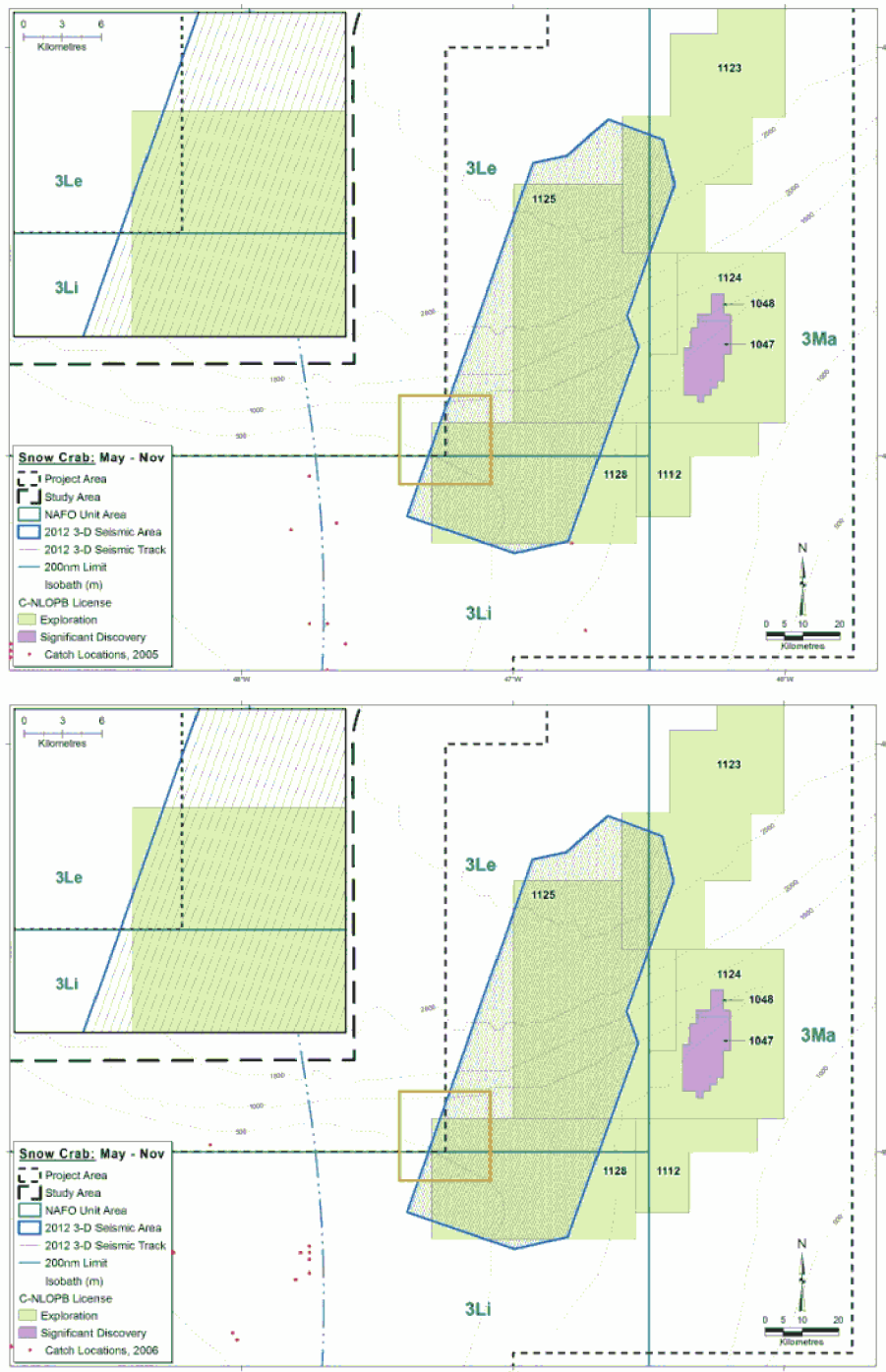
Species		New since last update	SARA Status noted as Schedules 1, 2 or 3			COSEWIC Status			
Common Name	Scientific Name		Endangered	Threatened	Special Concern	Endangered	Threatened	Special Concern	Candidate ⁶
American Shad	<i>Alosa sapidissima</i>								MPC
Alewife	<i>Alosa pseudoharengus</i>								MPC
Capelin	<i>Mallotus villosus</i>								MPC
Haddock	<i>Melanogrammus aeglefinus</i>								MPC
Shortfin mako shark	<i>Isurus oxyrinchus</i>						X		
Blue shark	<i>Prionace glauca</i>							X	
American Eel	<i>Anguilla rostrata</i>						X		
Roughhead grenadier	<i>Macrourus bergla</i>							X	
Bluefin Tuna	<i>Thunnus thynnus</i>					X			
Spiny eel	<i>Notacanthus chemnitzii</i>								MPC
Pollock	<i>Pollachius virens</i>								MPC
Spinytail Skate	<i>Bathyraja spinicauda</i>								MPC
Ocean pout	<i>Zoarces americanus</i>								MPC
American Plaice (Newfoundland & Labrador Population)	<i>Hippoglossoides platessoides</i>						X		
Acadian Redfish (Atlantic Population)	<i>Sebastes fasciatus</i>						X		
Deepwater Redfish (Northern Population)	<i>Sebastes mentella</i>						X		
Spiny Dogfish	<i>Squalus acanthias</i>							X	
Basking Shark	<i>Cetorhinus maximus</i>							X	
Marine Mammals									
Blue whale	<i>Balaenoptera musculus</i>		1			X			



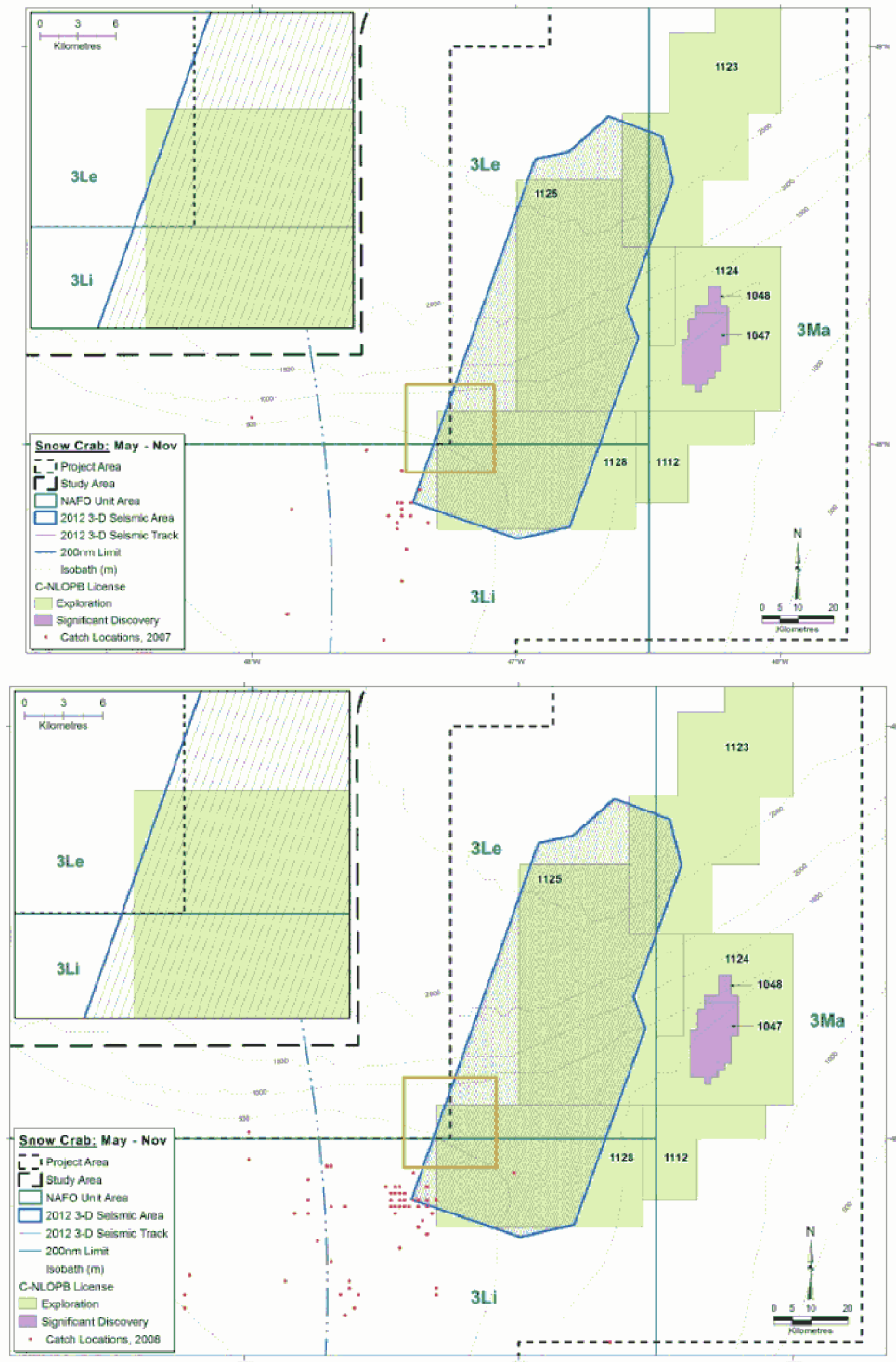
Species		New since last update	SARA Status noted as Schedules 1, 2 or 3			COSEWIC Status			
Common Name	Scientific Name		Endangered	Threatened	Special Concern	Endangered	Threatened	Special Concern	Candidate ⁶
Humpbacked whale	<i>Megaptera novaeanglia</i>				3				
North Atlantic right whale ⁸	<i>Eubalaena glacialis</i>		1			X			
Fin whale (Atlantic population)	<i>Balaenoptera physalus</i>				1			X	
Killer Whale (NW Atlantic & Eastern Arctic Populations)	<i>Orcinus orca</i>							X	
Sperm whale	<i>Physeter macrocephalus</i>								LPC
Cuvier's Beaked Whale	<i>Ziphius cavirostris</i>								MPC
Sowerby's beaked whale	<i>Mesoplodon bidens</i>				3			X	
Northern Bottlenose whale (Davis Strait/Baffin Bay/Labrador Sea)	<i>Hyperoodon ampullatus</i>							X	
Harbour porpoise	<i>Phocoena phocoena</i>			2				X	
Hooded seal	<i>Cystophora cristata</i>								LPC
Harp seal	<i>Phoca groenlandica</i>								LPC
Ringed seal	<i>Pusa hispida</i>								HPC
Reptiles									
Leatherback sea turtle	<i>Dermochelys coriacea</i>		1			X			
Loggerhead sea turtle	<i>Caretta caretta</i>					X			
Kemp Ridley's sea turtle	<i>Lepidochelys kempii</i>	●							LPC

⁸ A critical habitat statement exists for this species however it is rare in the study area considered in this assessment with one sighting of two individuals recorded in the DFO cetacean database.

4.2 Appendix 2: Crab Fishery Adjacent to SW Corner of Survey Area 2005 through 2010



Appendix 2 cont'd: Crab Fishery Adjacent to SW Corner of Survey Area 2005 through 2010



Appendix 2 cont'd: Crab Fishery Adjacent to SW Corner of Survey Area 2005 through 2010

