ExxonMobil Canada Ltd.
2022 Eastern Newfoundland Offshore Exploration Drilling Project – EL 1165A

EL 1165A (Hampden) Conditions Closure Report

FINAL REPORT

Submitted by:

ExxonMobil Canada Ltd.
20 Hebron Way
St. John's, Newfoundland and Labrador
Canada A1A 0L9

November 2022

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

ACRONYMS

Term or Abbreviation	Definition
ADW	Approval to Drill a Well
BOP	Blow-Out Preventer
CEAA	Canadian Environmental Assessment Agency
CEFAS	Centre for Environment, Fisheries and Aquaculture Science
CHS	Canadian Hydrographic Service
C-NLOPB	Canada-Newfoundland and Labrador Offshore Petroleum Board
CNSOPB	Canada-Nova Scotia Offshore Petroleum Board
DFO	Fisheries and Oceans Canada
DND	Department of National Defence
ECCC	Environmental and Climate Change Canada
ECCC-CWS	Environmental and Climate Change Canada – Canada Wildlife Services
ECMP	Environmental Complicance Monitoring Plan
ESRF	Environmental Studies Research Fund
EIS	Environmental Impact Statement
EL	Exploration Licence
EMCL	ExxonMobil Canada Ltd.
IAAC	Impact Assessment Agency of Canada
IMT	Incident Management Team
MARPOL	International Convention for the Prevention of Pollution from Ships
MMO	Marine Mammal Observer
MODU	Mobile Offshore Drilling Unit
NEB	National Energy Board
NL	Newfoundland and Labrador
OA	Operations Authorization
OSP	Operations Safety Plan
OSRP	Oil Spill Response Plan
OVID	Offshore Vessel Inspection Database
OWS	Oily Water Seperator
OWTG	Offshore Waste Treatment Guidelines
P&A	Plug and Abandon
PAL	Provincial Aerospace Limited
PAM	Passive Acoustic Monitoring
ROV	Remotely Operated Vehicle
SAR	Species at Risk
SBM	Synthetic Based Mud
SIMA	Spill Impact Mitigation Assessment
SOC	Synthetic on Cuttings
SMS	Safety Management System
TD	Total Depth
VSP	Vertical Seismic Profiling
WBM	Water Based Mud

1 INTRODUCTION

ExxonMobil Canada Ltd. (EMCL) undertook an offshore exploration drilling program at Exploration Licence (EL) 1165A, in the eastern portion of the Canada-Newfoundland and Labrador (NL) Offshore Area. EMCL committed to preparing a Conditions Closure Report as part of commitments in the Decision Statement, issued under Section 54 of the *Canadian Environmental Assessment Act, 2012* for the Eastern Newfoundland Offshore Exploration Drilling Project. This report outlines activities undertaken by EMCL to comply with conditions set out in the Decision Statement for exploration drilling activities at EL 1165A.

The spudding of the Hampden K-41 well and associated top-hole drilling, casing, and cementing was conducted in 2020. A closure report for the 2020 activities was previously submitted (EMCL 2021a). This closure report details response to conditions and commitments for the 2022 EMCL Exploration campaign.

2 PROJECT DESCRIPTION

EMCL is conducting an exploration drilling project within offshore exploration licenses located in the Jeanne d'Arc Basin and the Flemish Pass Basin. The proposed Eastern Newfoundland Offshore Exploration Drilling Project will take place between 2019 and 2029, during which EMCL could drill to up to 18 offshore wells (up to six per exploration licence) to determine the presence, nature, and quantities of the potential hydrocarbon resource in EL 1165A (formerly 1134), EL 1165B (formerly 1135) and EL 1137 (no longer exists but covered in the original EIS scope).

In 2016, the Impact Assessment Agency of Canada (IAAC, formerly the Canadian Environmental Assessment Agency, referred to herein as the Agency) conducted an environmental assessment of the Designated Project in accordance with the requirements of the *Canadian Environmental Assessment Act, 2012*, and submitted its report to the Minister of Environment and Climate Change. On April 17, 2019, after considering the report of the Agency on the Designated Project and the implementation of mitigation measures, a Decision Statement was released, in which the Minister determined that the Designated Project was not likely to cause significant adverse environmental effects referred to in subsection 5(1) of the *Canadian Environmental Assessment Act, 2012*.

The Hampden well was an undrilled prospect ~400 kilometres east of St John's, Newfoundland on EL 1165A. The EMCL-operated Hampden K-41 exploration well tophole was drilled by the Seadrill *West Aquarius* Mobile Offshore Drilling Unit (MODU) under Operations Authorization (OA) no. 24020-020-OA06 in a water depth of 1180 metres in 2020. In 2022, under an OA amendment, the *Stena Forth* continued the EMCL Exploration campaign at Hampden K-41 to well total depth (TD) at the same water depth.

2.1 Project Location

Hampden K-41 is located in the southern Flemish Pass, at 47°0'31.124" N; 46°51'50.595" W in EL 1165A, which is an area of 2,661 km^2. The wellsite is located in the southeastern portion of the EL at approximately 1,180 m water depth (Figure 1).

2.2 Project Activities

Table 1 outlines key activities that occurred during the Hampden drilling campaign.

Table 1 Project Activities

Date (Month, Year)	Activity	Comments
August, 2018	Cold Water Coral and Sponge Survey conducted	Pre-drilling seabed survey conducted at drill center, cuttings dispersal area and anchor pre-lay transects to evaluate the presence and distribution of corals and sponges.
April, 2019	Minister of Environment and Climate Change releases Decision Statement	Honourable Catherine McKenna, Minister of the Environment, released Decision Statement concluding that, with the implementation of applicable conditions, the Designated Project was not likely to result in significant adverse environmental effects.

Date (Month, Year)	Activity	Comments
Seadrill *West Aquarius* Campaign Timeline		
April, 2020	Riserless "ADW"	C-NLOPB granted an approval to drill a well (ADW) to EMCL and authorized the commencement of drilling operations for the Hampden exploration well.
May, 2020	Rig move from Harp well location to Hampden well Location	Rig move to Hampden well location and deploy transponders
May, 2020	Hampden 1067mm x 711mm (42" x 28") Conductor Hole Section	Spud Hampden, drilling, casing and cementing of 1067mm hole section.
May, 2020	711mm (28") Surface hole section	Drilling, casing and cementing of 711mm hole section.
***Stena Forth* Campaign Timeline**		
May, 2022	Weather buoy deployment	C-NLOPB granted an OA amendment authorization to deploy a weather buoy at the Hampden K-41 well location in advance of the MODU arrival.
July, 2022	Canada-Newfoundland and Labrador Offshore Petroleum Board (C-NLOPB) grants ADW for Hampden K-41	C-NLOPB granted an ADW to EMCL and authorized the commencement of drilling operations for the Hampden exploration well.
July, 2022	Rig transit from Bay Bulls to Hampden well location	Rig move to Hampden well location
July, 2022	Run Blow-Out Preventer (BOP) and Marine Riser	BOP and marine riser run and installed on well head.
July, 2022	Drill 445mm (17.5") Hole Section	Hole section drilled and casing cemented in place
July, 2022	Drill 311mm (12.25") Hole Section	Hole section drilled to final well TD
July - August, 2022	Formation Evaluation Program; Marine Mammal Observer (MMO) Monitoring for planned Vertical Seismic Profiling (VSP) Operations	VSP operations were conducted July 31 - Aug 1
August, 2022	Well Plug and Abandoned; Pressure Tested	Cement plugs set and pressure tested to plug and abandon (P&A) the wellbore.
August, 2022	BOP recovery	BOP recovered from wellhead and secured on rig.
August, 2022	Rig Demob	*Stena Forth* departed from wellsite on August 14
August, 2022	Post-drilling survey	Post-drilling follow-up ROV survey for fish and fish habitat

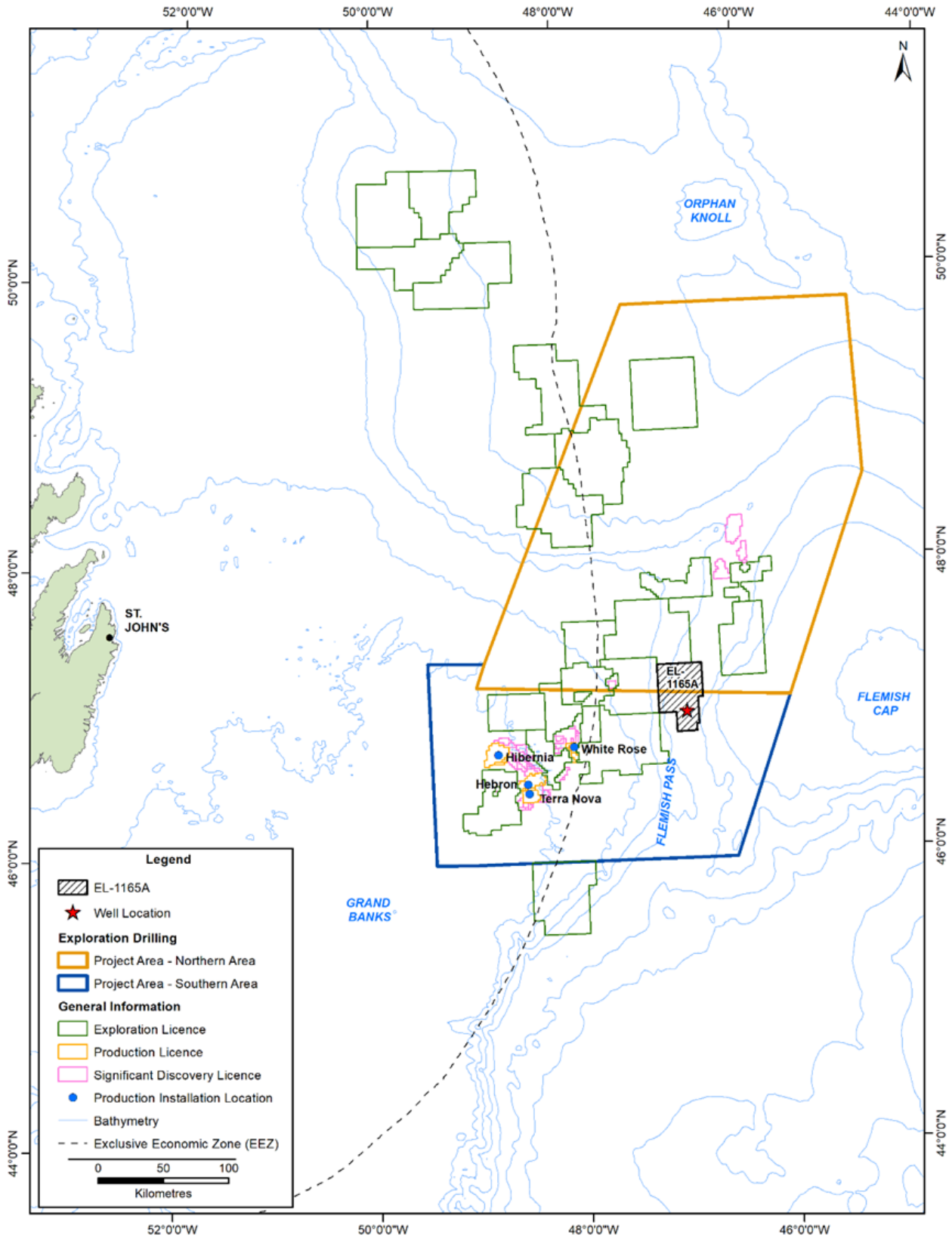

Figure 1 Map of Well Location

3 SCOPE

This report has been prepared to fulfill Condition 2.7 of the Decision Statement. Table 2 details how conditions in the Decision Statement were addressed by the Proponent, EMCL, and identifies associated closure report sections.

Table 2 Closure Response to Decision Statement Conditions

Cond. #	Condition	Relevant Closure Report Sections	Proponent Response
2.1	The Proponent shall ensure that its actions in meeting the conditions set out in this Decision Statement during all phases of the Designated Project are considered in a careful and precautionary manner, promote sustainable development, are informed by the best information and knowledge available at the time the Proponent takes action, including community and Indigenous traditional knowledge, are based on methods and models that are recognized by standard-setting bodies, are undertaken by qualified individuals, and have applied the best available economically and technically feasible technologies.	All	EMCL took careful and precautionary considerations throughout all phases of the project, considered Indigenous and stakeholder knowledge and feedback and utilized recognized methods/models and best available technologies throughout the life of this exploration campaign and had regular communication and engagement with the C-NLOPB. These considerations and efforts can be seen through various components of the program and corresponding sections of this closure report.
2.2	The Proponent shall, where consultation is a requirement of a condition set out in this Decision Statement: 2.2.1 provide a written notice of the opportunity for the party or parties being consulted to present their views and information on the subject of the consultation; 2.2.2 provide sufficient information on the scope and the subject matter of the consultation in a period of time that allows the party or parties being consulted, to prepare their views and information; 2.2.3 undertake and impartial consideration of all views and information presented by the party or parties being consulted on the subject matter of the consultation; and 2.2.4 advise in a timely manner the party or parties being consulted on how the views and information received have been considered by the Proponent.	4	Indigenous and stakeholder notifications, consultation and engagement is critical to executing projects and programs in the offshore. EMCL recognizes the importance of communication and engagement with various Indigenous groups and stakeholders. The EMCL Exploration Communications Plan detailed the methods and procedures for engagement with regulatory bodies, fisheries and Indigenous groups prior to and during operations. Section 4 provides further detail on the groups with which engagement occurred as well as the timing and nature of engagement, including those actions described in conditions 2.2.1 to 2.2.4. When consultation was a requirement of this Decision Statement, written notification of opportunity for participation was provided.
2.3	The Proponent shall, where consultation with Indigenous groups is a requirement of a condition set out in this Decision Statement, communicate with each	4	EMCL has been engaging with Indigenous groups on the proposed drilling program since 2017. Where consultation with Indigenous groups was required by a condition set out in the Decision Statement, appropriate engagement

	Indigenous group with respect to the manner by which to satisfy the consultation requirements referred to in condition 2.2, including methods of notification, the type of information and the period of time to be provided when seeking input, the process to be used by the Proponent to undertake impartial consideration of all views and information presented on the subject of the consultation, the period of time to advise Indigenous groups of how their views and information were considered by the Proponent and the means by which Indigenous groups will be advised.		methods were followed according to consultation requirements referred to in conditions 2.2 and 2.3.
2.4	The Proponent shall, where a follow-up program is a requirement of a condition set out in this Decision Statement, determine the following information, for each follow-up program: 2.4.1 the methodology, location, frequency, timing and duration of monitoring associated with the follow-up program as necessary to verify the accuracy of the environmental assessment predictions as they pertain to the particular condition and to determine the effectiveness of any mitigation measure (s); 2.4.2 the scope, content and frequency of reporting of the result of the follow-up program; 2.4.3 the levels of environmental change relative to baseline conditions and predicted effects as described in the Environmental Impact Statement, that would require the Proponent to implement modified or additional mitigation measure(s), including instances where the Proponent may be required to stop Designated Project activities; and 2.4.4 the technically and economically feasible mitigation measures to be implemented by the Proponent if monitoring conducted as part of the follow-up program shows that the levels of environmental change have reached or exceeded the limits referred to in condition 2.4.3.	5, 6, 7	Where a follow-up program was a requirement of the Decision Statement, EMCL provided a follow-up program plan to the C-NLOPB which included the information required in condition 2.4.
2.5	The Proponent shall submit the information referred to in condition 2.4	NA	Where follow-up programs were required, the information in condition 2.4 was submitted to the C-NLOPB prior to

	prior to the implementation of each follow-up program. The Proponent shall update that information in consultation with relevant authorities during the implementation of each follow-up program, and shall provide the updated information to the Board within 30 days of the information being updated.		implementation of that program. When comments or feedback was received the plans were updated and submitted to the C-NLOPB to its satisfaction.
2.6	The Proponent shall, where a follow-up program is a requirement of a condition set out in this Decision Statement: 2.6.1 conduct the follow-up program according to the information determined pursuant to condition 2.4; 2.6.2 undertake monitoring and analysis to verify the accuracy of the environmental assessment as it pertains to the particular condition an/or to determine the effectiveness of any mitigation measure(s); 2.6.3 determine whether modified or additional mitigation measures are required based on the monitoring and analysis undertaken pursuant to condition 2.6.2; and 2.6.4 if modified or additional mitigation measures are required pursuant to condition 2.6.3, develop and implement these mitigation measures in a timely manner and monitor them pursuant to condition 2.6.2.	5,6,7	All required follow-up programs were conducted according to the information and plans submitted to the C-NLOPB.
2.7	The Proponent shall, within 90 days of the completion of the drilling program for a single year program, or annually within 90 days of the end of each calendar year of a multi-year drilling program, submit to the Board and the Agency a report, including an executive summary of the report in both official languages. The Proponent shall document in the report: 2.7.1 the activities undertaken by the Proponent in the reporting year to comply with each of the conditions set out in this Decision Statement; 2.7.2 how the Proponent complied with condition 2.1; 2.7.3 for conditions set out in this Decision Statement for which consultation is a requirement, how the	All	The Closure report for EL1165A was submitted on November 10, 2022. This was within 90 days of well completion (August 14, 2022). An executive summary in both official languages was posted to the internet on November 10, 2022.

	Proponent considered any views and information that the Proponent received during or as a result of the consultation; 2.7.4 the information referred to in conditions 2.47 and 2.5 for each follow-up program; 2.7.5 the results of the follow-up program requirements identified in conditions 3.12 and 4.3; and 2.7.6 any modified or additional mitigation measures implemented or proposed to be implemented by the Proponent, as determined under condition 2.6.		
2.8	The Proponent shall cause to be published on the Internet the reports and the executive summaries referred to in condition 2.7, the coral and sponge survey results referred to in condition 3.6, the communication plan referred to in condition 5.1, the well and wellhead abandonment plan referred to in condition 5.2, the well control strategies referred to in condition 6.5, the spill response plan referred to in condition 6.6, the Spill Impact Mitigation Assessment referred to in condition 6.10, the implementation schedule referred to in condition 7.1, monitoring and follow-up results for marine mammals, fish and fish habitat, and migratory birds and any update(s) or revision(s) to the above documents, upon submission of these documents to the parties referenced in the respective conditions. The Proponent shall notify Indigenous groups of the availability of these documents within 48 hours of their publication.	4	All required documents were posted to the EMCL Exploration website at the following domain as they became available or were finalized: https://exploration.exxonmobilcanada.ca/ When the EMCL Exploration website went live Indigenous groups were made aware of the availability of the documents and location via written notification from EMCL's Indigenous Affairs consultant or EMCL employees. As documents were added to the EMCL Exploration website, Indigenous groups were also notified of the additions.
2.9	When the development of a plan is a requirement of a condition set out in this Decision Statement, the Proponent shall submit the plan to the Board prior to the start of the drilling program, unless otherwise required through the condition.	All	When the development of a plan was required per the Decision Statement, it was submitted to the C-NLOPB prior to drilling unless otherwise required through the condition and as specified in the implementation schedule reviewed with the C-NLOPB monthly.
2.10	The Proponent shall notify the Agency and Indigenous groups in writing no later than 60 days after the day on which there is a change of operator for the Designated Project.	4	There was no change of operator for the Designated Project.
2.11	The Proponent shall consult with Indigenous groups prior to initiating any material changes to the Designated	4	No material changes that may have resulted in adverse environmental effects were made during the program.

	Project that may result in adverse environmental effects, and shall notify the Board and the Agency in writing no later than 60 days prior to initiating the change(s).		
2.12	In notifying the Board and the Agency pursuant to condition 2.11, the Proponent shall provide the Board and the Agency with a description of the potential adverse environmental effects of the change(s) to the Designated Project, the proposed mitigation measures and follow-up requirements to be implemented by the Proponent and the results of consultation with Indigenous groups.	4	No material changes that may have resulted in adverse environmental effects were made during the program.
3.1	The Proponent shall treat all discharges from offshore drilling into the marine environment which, at a minimum, will meet the volumes and concentration limits identified in the Offshore Waste Treatment Guidelines, issued jointly by the National Energy Board, the Canada-Newfoundland and Labrador Offshore Petroleum Board, the Canada-Nova Scotia Offshore Petroleum Board, and any other legislative requirements, where applicable.	5.3, 5.4, 5.5	Sampling, analysis, and reporting requirements for regulated waste streams were outlined in the EMCL Environmental Compliance Monitoring plan (originally submitted Dec 2, 2018, with updates for the 2022 EMCL Exploration campaign submitted July 6, 2022). A robust process was developed to ensure that discharges overboard met the requirements of subsection 9(i)(j) of the *Newfoundland Offshore Drilling and Production Regulations*. Sections 5.3 through 5.5 below provide additional clarity on how this expectation was met.
3.2	The Proponent shall dispose of spent or excess synthetic-based drilling muds that are not re-used at an approved on-shore facility.	5.3	EMCL removed synthetic based drilling mud from the mud tanks and transported it onshore for disposal or reuse at another facility. Section 5.3 provides additional information on how this expectation was met.
3.3	The Proponent shall apply, at a minimum, the standards identified in the Offshore Chemical Selection Guidelines for Drilling & Production Activities on Frontier Lands, issued jointly by the National Energy Board, the Canada-Newfoundland and Labrador Offshore Petroleum Board and the Canada-Nova Scotia Offshore Petroleum Board, to select lower toxicity chemicals for use and discharge into the marine environment, including drilling fluid constituents, and shall submit any necessary risk justification pursuant to the Guidelines to the Board for acceptance prior to use.	5.3, 5.5	All fluids intended for release to sea were managed in accordance with the C-NLOPB *Guidelines Respecting the Selection of Chemicals Intended to be used in Conjunction with Offshore Drilling & Production Activities on Frontier Lands*. Chemicals were approved through the EMCL Agent Master process. See section 5.3 and 5.5 for additional information.
3.4	The Proponent shall treat all discharges from supply vessels into the marine environment in accordance with the International Maritime Organization's International Convention for the	5.5	All supply vessels followed the International Convention for the Prevention of Pollution from Ships (MARPOL) which outlines all discharge requirements. See section 5.5 for additional information.

	Prevention of Pollution from Ships and any other legislative requirements, where applicable.		
3.5	The Proponent shall conduct a pre-drill survey with qualified individual(s) at each well site to confirm the presence or absence of any unexploded ordnance or other seabed hazards. If any such ordnance or seabed hazard is detected, it shall not be disturbed and the Proponent shall contact the Canadian Coast Guard's Joint Rescue Coordination Centre in Halifax and the Board to determine an appropriate course of action, prior to commencing drilling.	NA	Canadian Hydrographic Service (CHS), Department of National Defence (DND) and Fugro databases were reviewed, for indicators of shipwrecks, munitions, cables or other anthropogenic objects on the seafloor within the Hampden K-41 hazards surveys area. None were found and all required information was submitted to the C-NLOPB as required.
3.6	The Proponent shall develop and conduct, in consultation with Fisheries and Oceans Canada and the Board, a coral and sponge survey, using remote operated vehicles guided by a qualified individual, to confirm the presence or absence of any aggregations of habitat-forming corals or sponges or any other environmentally sensitive features. Survey transect length and pattern around wellsite's shall be based on applicable drill cutting dispersion model results. Transects around anchor sites should extend at least 50 metres from the extent of the anchor pattern.	5.1, 5.2	Pre-drilling coral and sponge surveys were developed prior to conducting the program in consultation with DFO and C-NLOPB. The surveys were conducted via remotely operated vehicle (ROV) in August 2018 and June 2019. EMCL contracted RPS Canada Ltd and WSP (formerly Wood) to provide biological support for the survey, which was conducted using the *Paul. A. Sacuta*, a support vessel owned and operated by Atlantic Towing. Section 5.1 and 5.2 details the survey methodology and findings.
3.7	If the survey(s) conducted in accordance with condition 3.6 confirm(s) the presence of aggregations of habitat-forming corals or sponges, or if other environmentally sensitive features are identified by a qualified individual, the Proponent shall change the location of the well on the seafloor or redirect drill cuttings discharges to avoid affecting the aggregations of habitat-forming corals or sponges, unless not technically feasible, as determined in consultation with the Board. If not technically feasible, the Proponent shall consult with the Board and Fisheries and Oceans Canada prior to commencing drilling to determine an appropriate course of action, subject to the approval of the Board, including any additional mitigation measures.	5.1	While the pre-drilling cold water coral and sponge surveys noted the presence of a single species of cold-water soft coral, the size and abundance was determined to be not large enough to constitute a coral colony. Based on survey findings, it was determined not necessary to change the location of the well or redirect drill cuttings discharges. Full details of the survey findings and conclusion are found in section 5.1.
3.8	The Proponent shall apply Fisheries and Oceans Canada's *Statement of Canadian Practice with Respect to the Mitigation of Seismic Sound in the Marine Environment* during the planning and	6	A VSP monitoring program was developed in consultation with DFO and C-NLOPB prior to conducting the program. Using both real-time visual monitoring and passive acoustic monitoring, a 500 m safety zone around the

	conduct of vertical seismic surveys. In doing so, the Proponent shall establish a safety zone of a minimum radius of 500 metre from the seismic sound source.		*Stena Forth* was established during all VSP activities. Full details of the survey findings are found in section 6.
3.9	The Proponent shall develop, in consultation with Fisheries and Oceans Canada and the Board, a marine mammal monitoring plan that shall be submitted to the Board at least 30 days prior to the commencement of any vertical seismic survey. The Proponent shall implement the plan during the conduct of vertical seismic surveys. As part of the plan, the Proponent shall: 3.9.1 develop and implement marine mammal observation requirements, including the use of passive acoustic monitoring, or equivalent technology, and visual monitoring by marine mammal observers throughout vertical seismic surveys; 3.9.2 ensure that observation requirements specify the requirement for shut down of the seismic sound source if any marine mammal or sea turtle is observed within the 500 metre safety zone; and 3.9.3 submit the results of the activities undertaken as part of the marine mammal observation requirements to the Board within 60 days of the end of the vertical seismic surveys.	6	A VSP monitoring program was developed in consultation with DFO and C-NLOPB prior to conducting the program. This plan included details on the use of visual monitoring by experienced biologists, and passive acoustic monitoring by hydrophone. Using both of these techniques, a 500 m safety zone around the *Stena Forth* was established during all VSP activities. Four groups of marine mammals were sighted within the 500 m safety zone around the MODU while at the Hampden K-41 drill site, two of which required biological shutdowns. As VSP was still in the warmup phase, no harm to marine mammals took place and VSP was suspended. Full details of the survey findings are found in section 6.
3.10	The Proponent shall implement measures to prevent or reduce the risks of collisions between supply vessels and marine mammals and sea turtles, including: 3.10.1 requiring supply vessels to use established shipping lanes, where they exist; and 3.10.2 requiring supply vessels to reduce speed to a maximum of 7 knots when a marine mammal or sea turtle is observed or reported within 400 metres of a supply vessel, except if not feasible for safety reasons.	N/A	Marine traffic follows traditional routes during trans Atlantic voyages based on final destination, there are no established shipping lanes to or near the exploration area, and therefore supply vessels were not required to follow established shipping lanes during this campaign. Requirements for reduced speeds were communicated to vessel operators, who then communicated requirements to all captains of vessels under contract for this exploration scope. Supply vessels were required to reduce speed to a max. of 7 knots when a marine mammal or sea turtle was observed or reported within 400 m of the supply vessel. During this program there were no reported sightings of marine mammals within 400 m of a supply vessel.
3.11	The Proponent shall report any collisions of a supply vessel with marine mammals or sea turtles to the Board, Fisheries and Oceans Canada's Canadian Coast Guard	NA	No collisions of supply vessels with marine mammals or sea turtles occurred during this exploration program.

	Regional Operations Centre, any other relevant authorities as soon as reasonably practicable but no later than 24 hours following the collision, and notify Indigenous groups within three days.		
3.12	The Proponent shall develop and implement follow-up requirements, pursuant to condition 2.4, to verify the accuracy of the predictions made during the environmental assessment as it pertains to fish and fish habitat, including marine mammals and sea turtles, and to determine the effectiveness of mitigation measures identified under conditions 3.1 to 3.11. As part of these follow-up requirements, for the duration of the drilling program, the Proponent shall: 3.12.1 for every well, measure the concentration of synthetic-based drilling fluids retained on discharged drill cuttings as described in the Offshore Waste Treatment Guidelines to verify that the discharge meets, at a minimum, the performance targets set out in the Guidelines and any applicable legislative requirements and report the results to the Board; 3.12.2 for the first well in each exploration license, and for any well where drilling is undertaken in an area determined by coral and sponge surveys to be sensitive benthic habitat, and for any well located within a special area designated as such due to the presence of sensitive coral and sponge species, or a location near a special area where drill cuttings dispersion modelling predicts that drill cuttings deposition may have adverse effects, develop and implement, in consultation with Fisheries and Oceans Canada and the Board, follow-up requirements to verify the accuracy of the environmental assessment and effectiveness of mitigation measures as they pertain to the effects of cuttings discharges on benthic habitat. Follow-up shall include: 3.12.2.1 measurement of sediment deposition extent and thickness post-drilling to verify the drill waste deposition modeling predictions;	5	Synthetic on Cuttings (SOCs) monitored and discharged within prescribed guideline criteria with monthly reports submitted to the C-NLOPB as required. See section 5.3 for further detail treatment of SOCs. A pre-drill coral and sponge survey program was developed in consultation with the various regulatory bodies. The survey was conducted around the well head and along the modelled depositional area prior to the start of drilling. The pre-drill survey also included the identification and cataloging of any benthic fauna encountered. The 2022 post-drilling cuttings survey collected benthic video imagery covering 9,500 m of the seafloor. The post-drilling survey evaluated the extent and thickness of sediment via visual analysis of the drill cuttings. *EL 1165A Drilling Discharges Follow-up Program: Drill Cutting Measurement and Monitoring 2020 Report* (Wood, 2020a) and *EL 1165A Drilling Discharges Follow-up Program: Benthic Habitat Monitoring 2020 Report* (Wood, 2020b), both of which describe the 2020 follow up campaign, were submitted to the regulatory agencies within 60 days and verified the predicted modeling results. *EL 1165A Hampden K-41 drilling discharges follow-up program: 2022 report* (WSP 2022a), which describes the 2022 follow-up program, was submitted to the regulatory agencies within 60 days and verified the predicted modeling results. An extensive acoustic monitoring program was developed in consultation with DFO and C-NLOPB. Acoustic receivers were deployed prior to the commencement of the drilling program to establish baseline sound scape conditions in the area. An acoustic monitoring report, *ExxonMobil Canada Ltd Flemish Pass Exploratory Drilling Operations Soundscape Characterization, Marine Mammal Occurrence, and Potential Effects of Underwater Noise Emissions on Cetaceans (Jasco 2020)* was submitted to the C-NLOPB on November 16, 2020.

	3.12.2.2 benthic fauna surveys to verify the effects of mitigation measures; and 3.12.2.3 The Proponent shall report the information collected, as identified in conditions 3.12.2.1 and 3.12.2.2, including a comparison of modelling results to *in situ* results, to the Board within 60 days following the drilling of the first well in each exploration license; and 3.12.3 for the first well in each exploration license, develop and implement, in consultation with Fisheries and Oceans Canada and the Board, follow-up requirements to verify the accuracy of the environmental assessment as it pertains to underwater noise levels. As part of the development of these follow-up requirements, the Proponent shall determine how underwater noise levels shall be monitored through field measurement by the Proponent during the drilling program and shall provide that information to the Board prior to the start of the drilling program.		
3.13	The Proponent shall submit to the Board a letter, prior to drilling, confirming its intent to participate in research pertaining to the presence of Atlantic salmon (*Salmo salar*) in the Jeanne d'Arc Basin and the Flemish Pass and update the Board and Indigenous groups annually on related research activities.	4.5	A letter was submitted to the C-NLOPB on August 9th, 2019, detailing the activities related to salmon research. An update letter on Atlantic Salmon research activities was submitted to the C-NLOPB on July 5, 2022. For more information see section 4.5.
4.1	The Proponent shall carry out the Designated Project in a manner that protects migratory birds and avoids harming, killing or disturbing migratory birds or destroying, disturbing or taking their nests or eggs. In this regard, the Proponent shall be in compliance, where applicable, with the *Migratory Birds Convention Act, 1994,* the *Migratory Birds Regulations* and with the *Species at Risk Act* and shall take into account Environment and Climate Change Canada's *Avoidance Guidelines.*	7	After consultation with Environmental and Climate Change Canada (ECCC) a seabird handling permit was issued, along with associated protocols for seabird handling, avoidance and release, which were distributed to the MODU and support vessels along with the permit. In addition, as per condition 4.3 of the Decision Statement, a follow-up monitoring program was developed in consultation with C-NLOPB and Environmental and Climate Change Canada – Canada Wildlife Services (ECCC -CWS) to verify the accuracy of the predictions made during the environmental assessment as it pertains to migratory birds and to determine the effectiveness of the mitigation measures implemented. For more information see section 7.
4.2	The Proponent shall implement measures to avoid harming, killing or disturbing migratory birds, including:	7	No flaring operations were required during the exploration program. Vessels were required to maintain a minimum lateral distance of 300 metres from Cape St. Francis and Witless Bay Islands Important Bird and Biodiversity Areas.

	4.2.1 using formation testing while tripping, or similar technology, rather than formation testing with flaring, where acceptable by the Board; 4.2.2 limiting flaring to the length of time required to characterize the wells' hydrocarbon potential and as necessary for the safety of the operation; 4.2.3 flaring as early as practicable during daylight hours to limit flaring that occurs during nighttime; 4.2.4 operating a water curtain barrier around the flare during flaring; 4.2.5 notifying the Board at least 30 days in advance of planned flaring to determine whether the flaring would occur during a period of migratory bird vulnerability and to determine how the Proponent plans to avoid adverse environmental effects on migratory birds; 4.2.6 requiring supply and other support vessels to maintain a minimum lateral distance of 300 metres from Cape St. Francis and Witless Bay Islands Important Bird and Biodiversity Areas, unless there is an emergency situation; and 4.2.7 requiring supply helicopters to fly at altitudes greater than 300 metres above sea level from active bird colonies and at a literal distance of 1000 metres from Cape St. Francis and Witless Bay Islands Important Bird and Biodiversity Areas except for approach, take-off and landing maneuvers, as required under the *Canadian Civil Aviation Regulations,* or if not feasible for safety reasons.		Supply helicopters were required to fly above 300 metres altitude from active bird colonies and a lateral distance of 1000 metres from the above areas except for approach, take-off and landing or if not feasible for safety reasons.
4.3	The Proponent shall develop, prior to the start of the drilling program and in consultation with Environment and Climate Change Canada, and the Board, follow-up requirements, pursuant to condition 2.4, to verify the accuracy of the environmental assessment as it pertains to migratory birds and to determine the effectiveness of the mitigation measures implemented by the Proponent to avoid harm to migratory birds, their eggs and nests, including the mitigation measures used to comply with conditions 4.1 to 4.3. The Proponent shall implement these follow-up requirements for the duration of the drilling program. As part of the follow	7	As per condition 4.3 of the Decision Statement, EMCL developed a Migratory Birds follow-up monitoring program, in consultation with C-NLOPB and ECCC-CWS, to verify the accuracy of the predictions made during the environmental assessment as it pertains to migratory birds and to determine the effectiveness of the mitigation measures implemented. Both the MODU and supply vessels were monitored daily for the presence of stranded marine birds, following ECCC's *Procedures for Handling and Documenting Stranded Birds Encountered on Infrastructure Offshore Atlantic Canada*. In addition, hourly seabird monitoring was carried out as per the Seabird Management Plan (EMCL 2021b).

	up, the Proponent shall: 4.3.1 monitor daily for the presence of marine birds from the drilling installation using a trained observer following Environment and Climate Change Canada's Eastern Canada Seabirds at Sea Standardized Protocol for Pelagic Seabird Surveys from Moving and Stationary Platforms; and 4.3.2 monitor the drilling installation and supply vessels daily for the presence of stranded birds and follow Environment and Climate Change Canada's Procedures for Handling and Documenting Stranded Birds Encountered on Infrastructure Offshore Atlantic Canada.		
5.1	The Proponent shall develop and implement a Fisheries Communication Plan in consultation with the Board, Indigenous groups and commercial fishers. The Proponent shall develop the Fisheries Communications Plan prior to the drilling and implement it for the duration of the drilling program. The Proponent shall include in the Fisheries Communication Plan: 5.1.1 procedures to notify Indigenous groups and commercial fishers of planned drilling activity, a minimum of two weeks prior to the start of drilling of each well; 5.1.2 procedures to determine the requirement for a Fisheries Liaison Officer and/or fisheries guide vessel during drilling installation movement and geophysical programs; 5.1.3 procedures to communicate with Indigenous groups and commercial fishers, in the event of an accident or malfunction, the results of the monitoring and any associated potential health risks referred to in condition 6.9; and 5.1.4 the type of information that will be communicated to Indigenous groups and commercial fishers, and the timing of distribution of this information, that will include but not be limited to: 5.1.4.1 a description of planned Designated Project activities; 5.1.4.2 location(s) of safety exclusion zones;	4	A Fisheries Communication Plan and Indigenous Fisheries Communications Plan were developed to meet this condition. They were reviewed with the C-NLOPB, Indigenous groups and commercial fishers. Per the plan, Indigenous groups and commercial fishers were notified a minimum of two weeks prior to the drilling of each well. Commercial fishers were consulted to determine if a Fisheries Liaison Officer should be onboard during specific operations. No accidents or malfunctions occurred during the exploration program. Monthly notifications went out to Indigenous groups and commercial fisheries including project activities, location of safety exclusions zones, vessel information and locations of suspended or abandoned wellheads.

	5.1.4.3 anticipated vessel traffic schedule; 5.1.4.4 anticipated vessel routes; and 5.1.4.5 locations of suspended or abandoned wellheads.		
5.2	The Proponent shall develop and implement a well and wellhead abandonment plan and submit to the Board for acceptance at least 30 days prior to abandonment of each well. If the Proponent proposes to abandon a wellhead on the seafloor in a manner that may interfere with Indigenous or commercial fisheries, the Proponent shall develop the wellhead abandonment strategy in consultation with commercial fishers and potentially affected Indigenous groups with fishing licenses that overlap with the Designated Project Area, identified in consultation with Fisheries and Oceans Canada.	NA	Details on the Hampden well abandonment were included as part of the ADW application submitted on January 31, 2022, and approved July 7, 2022. The plan was also posted on the Internet. The details of the abandoned wellhead were communicated to commercial fishers and Indigenous groups in the August 24, 2022, operational update.
5.3	The Proponent shall provide the details of its operation, including the safety exclusion zones during drilling and testing, and the location information of abandoned wellheads if left on the seafloor, to the Marine Communications and Traffic Services for broadcasting and publishing the Notices to Shipping, to the North Atlantic Fisheries Organization Secretariat, and to the Canadian Hydrographic Services for future nautical charts and planning.	4.2	A communication detailing location of abandoned well heads associated with the Designated Project was sent on August 24, 2022, to commercial fishers, Indigenous groups and other stakeholders per condition 5.3.
5.4	The Proponent shall report annually to the Board on known incidents of lost or damaged fishing gear attributed to the Designated Project.	NA	No known incidents of lost or damaged fishing gear were attributed to this exploration program.
6.1	The Proponent shall take all reasonable measures to prevent accidents and malfunctions that may result in adverse environmental effects and shall implement emergency response procedures and contingency plans developed in relation to the Designated Project in the event of an accident or malfunction. This shall include the development and implementation of operating procedures including thresholds for cessation of a work activity, with respect to meteorological and oceanographic conditions	8	Details regarding accident and malfunction prevention measures were included in the Emergency Response Plan, Oil Spill Response Plan (OSRP), Severe Weather Plan, Collision Avoidance Plan, Helicopter Operations Plan, Ice Management Plan, Marine Operations Plan and Operations Safety Plan (OSP) were submitted to the C-NLOPB as part of the 2022 OA amendment application. See Section 8 for more information.

	experienced at the project location, and which reflect the facility's design limits and limits at which any work or activity may be conducted safely and without causing adverse environmental effects. These conditions include poor weather, high sea states, and presence of sea ice or icebergs.		
6.2	The Proponent shall develop, in consultation with the Board and Environment and Climate Change Canada, and implement for the duration of the drilling program, a physical environment monitoring program, in accordance with the *Newfoundland Offshore Petroleum Drilling and Production Regulations* that meets or exceeds the requirement of the *Offshore Physical Environmental Guidelines* (September 2008). The physical environment monitoring program shall be submitted to the Board for approval prior to commencing drilling.	NA	The Physical Environmental Monitoring Plan was developed in consultation with and submitted to the C-NLOPB as part of the 2022 OA amendment application. The physical environment monitoring program report was submitted to the C-NLOPB on November 10, 2022.
6.3	The Proponent shall prepare a plan for avoidance of drilling installation collisions with vessels and other hazards that may reasonably be expected in the Designated Project Area and submit the plan to the Board for acceptance prior to drilling.	NA	Details regarding collision avoidance are included in the EMCL Exploration Collision Avoidance Plan which was submitted to the C-NLOPB as part of the 2022 OA amendment application.
6.4	The Proponent shall prepare an Ice Management Plan that will include measures for avoidance of collisions with icebergs and submit the plan to the Board for acceptance prior to drilling	8.2	An Ice Management Plan was developed and submitted to the C-NLOPB as a part of the OA application. See section 8.2 for additional information.
6.5	The Proponent shall prepare and submit to the Board well control strategies that include: 6.5.1 - measures for well control and containment and the drilling of a relief well, as well as options to reduce overall response timeline; and 6.5.2 - measures to quickly disconnect the marine drilling riser from the well in the event of an emergency or extreme weather conditions.	8.1	Measures for well control and containment, relief wells and quick disconnect in the event of an emergency or extreme weather conditions were included in the EMCL Well Intervention Plan and the Well Control Plan which were submitted to the C-NLOPB as part of the 2022 OA amendment application.
6.6	After considering the views of Indigenous groups, the Proponent shall prepare and submit a Spill Response Plan to the Board for acceptance prior to drilling. The Spill Response Plan will include the following: 6.6.1 - procedures to respond to and	8.1	During the environmental assessment process, EMCL met with various Indigenous groups and discussed spill prevention, including spill response tactics. An updated EMCL Exploration OSRP was submitted to the C-NLOPB as part of the 2022 OA amendment application and was posted to the EMCL Exploration website as required. Included in this plan were

	mitigate the potential environmental effects of a spill of any substance that may cause adverse environmental effects, including spill containment and recovery procedures; 6.6.2 - reporting thresholds and notification procedures; 6.6.3 - measures for wildlife response, protection and rehabilitation including procedures for the collection and cleaning of marine mammals, migratory birds, sea turtles and species at risk, and measures for shoreline protection and clean-up; and 6.6.4 - roles and responsibilities for offshore operations and onshore responders.		procedures and measures related to spill containment/recovery, reporting and notification, wildlife response/protection/rehabilitation, and roles and responsibilities for onshore and offshore responders.
6.7	The Proponent shall conduct an exercise of the Spill Response Plan prior to drilling activities as recommended in the Newfoundland Offshore Drilling and Production Guidelines, document any deficiencies observed during this exercise and provide to the Board for review, and adjust the plan to the satisfaction of the Board to address any deficiencies identified during the exercise.	8.1	A spill response tabletop exercise was conducted on June 23, 2022. The results of this exercise and associated actions were provided to the C-NLOPB on July 5, 2022, and Indigenous groups on July 5, 2022. The Spill Response Plan was posted to the Internet with a link shared with Indigenous July 6, 2022.
6.8	The Proponent shall review the Spill Response Plan prior to the drilling of each well to verify that it continues to be appropriate and shall update the plan as necessary and in a manner acceptable to the Board.	8.1	An OSRP was included in the original OA application package, with an updated OSRP submitted to the C-NLOPB as part of the 2022 OA amendment application.
6.9	In the event of a spill or unplanned release of oil or any other substance that may cause adverse environmental effects, the Proponent shall notify the Board and any other relevant authorities as soon as possible and implement its Spill Response Plan, including procedures for notification of Indigenous groups and commercial fishers. As required by and in consultation with the Board, this may include monitoring the environmental effects of a spill on components of the marine environment until specific endpoints identified in consultation with relevant authorities are achieved. As applicable, this may include: 6.9.1 - sensory testing of seafood for taint, and chemical analysis for oil	8.1	Throughout the duration of the Hampden well, there were no accidents or malfunctions that required activation of the OSRP.

	concentrations and any other contaminants, as applicable; 6.9.2 - measuring levels of contamination in recreational and commercial fish species with results integrated into a human health risk assessment to determine the fishing area closure status 6.9.3 - monitoring for marine mammals, sea turtles and birds for visible signs of contamination or oiling and reporting results to the Board; and 6.9.4 - monitoring benthic organisms and habitats in the event of a spill or other event that could result in smothering or localized effects to the benthic environment.		
6.10	The Proponent shall undertake a Spill Impact Mitigation Assessment to identify spill response options that will be implemented in the case of a spill to provide for the best opportunities to minimize environmental consequences, and provide it to the Board for review prior to drilling.	8.1	A draft Spill Impact Mitigation Assessment (SIMA) was prepared for EMCL by LGL Ltd and was submitted to the C-NLOPB on April 30, 2019 (LGL 2019). The SIMA was part of the contingency planning process for exploratory drilling in the Flemish Pass. The SIMA was a tool to help evaluate scientific, policy and stakeholder inputs to arrive at reasoned decisions as to which response tool(s) should be used under a particular set of circumstances, with the goal of minimizing overall harm once a spill has occurred. Following submission of the draft SIMA, a meeting was held with the C-NLOPB and the National Environmental Emergencies Centre's Environmental Emergencies Science Table (the "Science Table") to review the draft. Participants included representatives from Fisheries and Oceans Canada, Environment and Climate Change Canada, Canadian Wildlife Service, Canadian Coast Guard, Transport Canada, and Natural Resources Canada. Comments were provided to EMCL and incorporated prior to submission of the final SIMA on August 19, 2019, which was posted on the EMCL Exploration website.
6.11	The Proponent shall provide Indigenous groups with the results of the exercise conducted pursuant to condition 6.7, following its review by the Board. The Proponent shall provide the final Spill Response Plan to Indigenous groups prior to drilling and any updates to the Spill Response Plan pursuant to condition 6.8.	8.1, 4	Exercise results were provided to Indigenous groups on July 5, 2022, and the OSRP was posted to the Internet with a link shared to Indigenous groups the week of July 6, 2022.
6.12	In the event of a sub-sea well blowout, the Proponent shall begin the immediate mobilization of subsea containment and	NA	Prior to commencement of drilling, as part of the OA amendment application submitted to the C-NLOPB, EMCL prepared a Well Intervention Plan which outlined the procedure for initiation, mobilization and deployment

	capping equipment to the blowout location. Simultaneously, the Proponent shall commence mobilization of a relief well drilling installation.		of a primary capping stack and back-up capping stack, if required. During the 2022 EMCL Exploration campaign on EL1165A, no sub-sea well blowouts occurred.
6.13	In the event of an accident or malfunction, the Proponent shall comply with the requirements of the *Accord Acts* and the *Canada-Newfoundland and Labrador Offshore Financial Requirement Regulations* and the requirements described in the Compensation *Guidelines Respecting Damages to Offshore Petroleum Activity.*	NA	During the 2022 EMCL Exploration campaign on lease EL1165A, no accidents or malfunctions occurred. In the event of an accident or malfunction, the proponent had sufficient processes in place to ensure compliance with the requirements of the *Accord Acts* and the *Offshore Petroleum Financial Requirements Regulations* and the requirements described in the *Compensation Guidelines Respecting Damages Relating to Offshore Petroleum Activity*.
6.14	The Proponent shall report annually to the Board on the effectiveness of operating procedures and cessation of a work or activity thresholds, established for operating in poor weather, high sea state, and sea ice or iceberg conditions.	NA	The physical environment report was submitted on November 10, 2022.
7.1	The Proponent shall submit to the Board a schedule for each condition set out in this Decision Statement at least 30 days prior to the start of a drilling program. This schedule shall detail all activities planned to fulfill each condition set out in this Decision Statement and the commencement and estimated completion month(s) and year(s) for each of these activities.	NA	The implementation schedules referred to in Condition 7.1 were submitted to the C-NLOPB and posted online on July 6, 2022.
7.2	The Proponent shall submit to the Board a schedule outlining all activities required to carry out all phases of the Designated Project no later than 30 days prior to the start of the drilling program. The schedule shall indicate the commencement and estimated completion month(s) and year(s) and duration of each of these activities.	2.2	The activities schedule was prepared and submitted as part of the 2022 OA amendment application. For a complete list of activities and schedule see Section 2.2 of this closure report.
7.3	The Proponent shall submit to the Board in writing an update to schedules referred to in conditions 7.1 and 7.2 every year no later than June 30, until completion of all activities referred to in each schedule.	NA	The implementation schedules referred to in Condition 7.1 were submitted to the C-NLOPB and posted online on July 6, 2022.
7.4	The Proponent shall provide to the Board revised schedules if any change is made to the initial schedules referred to in condition 7.1 and 7.2 or to any subsequent update(s) referred to in condition 7.3, upon revision of the schedules.	NA	The implementation schedules referred to in Condition 7.1 were submitted to the C-NLOPB and posted online on July 6, 2022.

8.1	The Proponent shall maintain all records required to demonstrate compliance with the conditions set out in this Decision Statement. The Proponent shall provide the aforementioned records to the Board or the Agency upon demand within a timeframe specified by the Board or Agency.	NA	EMCL retains all records required to demonstrate compliance with this Decision Statement and has provided records to the C-NLOPB as required.
8.2	The Proponent shall retain all records referred to in condition 8.1 at a facility in Canada. The records shall be retained and made available for a minimum of five years after completion of the Designated Project, unless otherwise specified by the Board. The Proponent shall inform the Board of the location of the facility where records are retained and notify the Board and the Agency at least 30 days prior to any change to the location of the facility.	NA	EMCL retains all records required to demonstrate compliance with this Decision Statement and utilizes document control practices to ensure adequate retention standards.
8.3	The Proponent shall notify the Board and the Agency of any change to the contact information of the Proponent included in the Decision Statement.	NA	EMCL remained in contact with the C-NLOPB throughout the duration of the 2022 EMCL Exploration campaign and notified them of any changes to personnel/ contacts as needed.

4 COMMUNICATIONS AND CONSULTATION

4.1 Communications Plan

The updated EMCL Exploration Fisheries Communication Plan was submitted to the C-NLOPB on May 5, 2022. This plan was developed in consideration of Condition 5.1 of the Decision Statement and in consultation with the C-NLOPB, Indigenous groups and commercial fishers. On April 28, 2022, an update to this plan was completed for the 2022 Exploration campaign. Details regarding the 2020 Hampden drilling campaign communications can be found in EMCL (2021a). Details regarding the consultation on this plan can be found in section 4.4. In addition, an Indigenous Fisheries Communication Plan was created with other operators in the region to outline procedures for engagement with Indigenous groups and was submitted to the C-NLOPB on June 28, 2019.

Both the EMCL Exploration Fisheries Communication Plan and Indigenous Fisheries Communication Plan include a list of contacts, a description of how information is shared with fishers and Indigenous groups, and a list of the type of information that is shared.

4.2 Commercial Fishers and Indigenous Groups Communications

Both section 5.1 of the Fisheries Communication Plan (titled '*Communication During Operations*') and the section titled "Communications During Operations" in the Indigenous Fisheries Communication Plan specified that beginning two weeks prior to drilling commencement and monthly thereafter, operational updates would be emailed to identified Indigenous groups and fisheries contacts (see Table 3 for dates and contents of these communications).

Table 3 Indigenous Groups and Fisheries Updates

Title	Date	Contents
One Ocean Working Group	September, 2021	Program update provided
	January, 2022	Program update provided

One Ocean Board Meeting	September, 2021	Program update provided
	January, 2022	Program update provided
Fisheries Update #1	April 13, 2022	Operational update
Fisheries Update #2	May 6, 2022	Operational update
Fisheries Update #3	July 6, 2022	Operational update
Fisheries Update #4	August 8, 2022	Operational update
Fisheries Update #5	August 24, 2022	Final operational update including location of abandoned wellhead

4.3 Internet Site

The EMCL Exploration site went live on August 27, 2019. The following documents were updated and posted to the EMCL Exploration website and email notification was sent to Indigenous groups on July 6, 2022:

- Commercial Fisheries Communications Plan;
- Well and Wellhead Abandonment Plan;
- Well Control Strategies;
- Implementation Schedule; and
- Oil Spill Response Plan.

Additional documents and the final report will be posted once finalized and available. An email notification will be sent to Indigenous groups notifying them of the posted documents.

4.4 Engagement and Consultation

See EMCL (2021) for a list of engagements and consultations for the 2020 Hampden K-41 drilling campaign (see Table 4 for dates and contents of these communications).

Table 4 List of Engagements and Consultations for the 2022 EMCL Exploration campaign

Stakeholder Group	Description of Engagement
Commercial Fishers	• September 2021 - Program update provided to One Ocean working group; • September 2021 - Program update provided at September One Ocean Board meeting; • January 2022 - Program update provided to One Ocean working group; • January 2022 - Program update provided at January One Ocean Board meeting; • April 2022 - Program update provided to One Ocean Director; • April 2022 - Program update provided to One Ocean, Fish Food and Allied Workers Union (FFAW-Unifor), Ocean Choice International (OCI), Atlantic Groundfish Council (AGC) and Association of Seafood Producers (ASP); • April 2022 – Provided location specific details to AGC as requested; • April 2022 – Meeting with FFAW-Unifor to discuss 2022 EMCL Exploration campaign and requirement for a fisheries liaison for drillship transit from nearshore staging location to well site; • April 2022 – Updated draft of Fisheries Communications Plan sent to One Ocean for review / feedback; • April 2022 – Provided updated copy of Fisheries Communications Plan to One Ocean, FFAW-Unifor, OCI, AGC and ASP; • May 2022- Program update provided to One Ocean, FFAW-Unifor, OCI, AGC and

	ASP; • July 6, 2022 – Operational update provided to One Ocean, FFAW-Unifor, OCI, AGC and ASP; • August 8, 2022 - Operational update provided to One Ocean, FFAW-Unifor, OCI, AGC and ASP; • August 24, 2022 - Final operational update provided including location of abandoned wellhead One Ocean, FFAW-Unifor, OCI, AGC and ASP.
Indigenous Groups	• April 2022 - Program update provided to Indigenous Groups. Request from one Indigenous group for the update to be provided in French which was completed; • May 2022 – Program update provided to Indigenous Groups; • July 5, 2022 – Provided a copy of Oil Spill Response exercise report; • July 6, 2022 – Notification to Indigenous groups that the EMCL Exploration website documents had been updated; • July 6, 2022 – Operational update provided; • July 7, 2022 – Provided letter of Atlantic Salmon research activities; • August 8, 2022 - Operational update provided; • August 24, 2022 - Final operational update provided including location of abandoned wellhead.
Fisheries and Oceans Canada & C-NLOPB	• March 2022 – Consult with C-NLOPB and DFO on 2022 Drill Cuttings Dispersion Follow Up Program for EL 1165A;
Environment and Climate Change Canada & C-NLOPB	• April 2022 – Feedback received from Environment and Climate Change Canada's (ECCC) Canadian Wildlife Service (CWS) division on Seabird Monitoring Plan; • May 2022 – Meeting with ECCC – CWS to discuss Seabird Management Plan comments; • May 2022 – Consult with ECCC-CWS on Scientific Seabird Permit; • June 2022 – Provided stranded seabird search protocols; • June 2022 – Provided copy of Physical Environmental Monitoring Plan.
Impact Assessment Agency of Canada & C-NLOPB	• February 2022 - Consult with C-NLOPB and the Impact Assessment Agency of Canada regarding the revised worst-case discharge rate for the planned Hampden K-41 well for an unmitigated hydrocarbon release.

4.5 Other Stakeholder Engagement and Research

See EMCL (2021a) for details on other stakeholder engagement and research, including details on the Atlantic salmon research and engagement program.

5 FISH AND FISH HABITAT

The objective of the follow-up survey program was to meet conditions 3.12.1 and 3.12.2 of the Decision Statement and verify the accuracy of the predictions made during the environmental assessment as it pertains to marine fish and fish habitat and determine the effectiveness of the mitigation measures (CEA Agency 2019).

5.1 Pre-Drilling Surveys

In preparation for regulatory approval for drilling at EL 1165A, a pre-drill survey program to evaluate the presence and distribution of corals and sponges was undertaken (RPS 2018). This survey consisted of the collection of high-resolution videos of the seabed at the drill site, using an ROV for the purposes of identifying cold water corals and sponges. In the original follow-up survey conducted by Wood in 2020, only the 200 x 200m area around the drill centre was surveyed and compared to the baseline survey completed in 2018 (Wood 2020a,b). The current survey completed in 2022 surveyed the predicted depositional area outside the 200 x 200 m grid box. A survey plan was developed, in consultation with the C-NLOPB and DFO, prior to the start of the survey (EMCL 2022a). Water depths exceeded 1,100 m, therefore the MODU maintained position using a dynamic positioning system. Anchors were not used at this site and were thus not included in the survey design. The objective of the pre-survey was to monitor the existing environment at the wellsite for fish and fish habitat and implement mitigations in the C-NLOPB's guidance for coral colonies. The C-NLOPB guidance indicates that drilling activities shall not occur within 100 m of a coral colony as defined by C-NLOPB as either:

- *Desmophyllum pertusum* (formerly *Lophelia pertusa*) reef complex; or
- Five or more large corals (larger than 30 centimeters in height or width) within a 100 square metre area.

From these pre-drill surveys, it was determined that no *D. pertusum* complexes or coral colonies as defined by the C-NLOPB were observed within the surveyed area at the Hampden K-41 wellsite.

5.2 Post-Drilling Coral and Sponge Survey

Full details of the post-drilling coral and sponge survey can be found in WSP (2022a). A summary of relevant sections of this report is included below.

5.2.1 Corals

Four coral functional groups (soft corals, sea pens, branching corals, and stony corals) were observed throughout the post-drilling survey area. Soft corals (Nephtheids) and sea pens were the most commonly observed functional groups, followed by branching corals and stony corals. A majority of the soft corals and sea pens were observed in the eastern half of each transect line and were more common in the northern lines compared to the southern areas. Branching corals were less common and were evenly distributed throughout the transect lines area. Stony corals (cup corals) were rare, with only two individuals observed in 2018 and eight individuals in 2022.

In addition to density and distribution, coral condition was also noted. In both surveys, the overall condition for corals was "Good" (99.5% of corals observed in the 2022 survey and 97.2% in 2018). Only two dead individuals were noted in both the 2018 and the 2022 surveys, with the remaining percentage being injured corals. Due to variations in coordinates, it can be difficult to identify the same coral on the seafloor between surveys. Coral condition was consistent throughout the survey area in the post-drilling survey, with no increased incidence noted nearly the drill centre.

5.2.2 Sponges

Sponges from five morphological groups were observed throughout the survey area in both the pre- and post-surveys. In both surveys, the most observed sponge morphological group was solid/massive followed by round with projections, and leaf/vase shaped. Stalked and thin-walled/complex sponges were also observed in low numbers. All sponge groups were found at similar densities in both the pre- and post-drilling surveys. For solid/massive sponges and leaf/vase shaped sponges, higher densities were found in the western half of most transect lines, while other sponge groups were evenly distributed in low numbers throughout.

Sponge condition was assessed visually for both pre- and post-drilling surveys. In both the pre- and post-drilling surveys, most of the sponges observed had a sediment veneer on their surface. Of the sponges observed in the post-drilling

survey, 85% had a sediment veneer or were covered compared to 74% in the pre-drilling survey. Sediment veneers can occur naturally and do not necessarily indicate drill cuttings or impact the overall health of a sponge.

5.2.3 Invertebrates

Non-coral and sponge invertebrate taxa were observed throughout the transect lines, though they were absent near the well centre along line T-1. Echinoderms were the most commonly observed invertebrate group of which sea urchins were the most abundant, followed by sea stars and brittle stars. Compared to the pre-drilling survey, the average echinoderm density decreased by 25.5%. Cnidarians (other than corals) were the second most common group, with sea anemones (mainly cerianthids) as the most abundant taxa. Average cnidarian density similarly decreased by 28.9% compared to the pre-drilling survey. Brachiopods were the third most common group and were sporadically distributed on hard substrates and only visible when the ROV stopped or flew low. Molluscs, such as gastropods and cephalopods, were observed in low densities throughout in both surveys. Other invertebrate taxa observed included arthropods and annelid worms. These taxa were found throughout the survey area in both surveys.

5.2.4 Fish

Four fish functional groups were found throughout the transect lines in both the pre- and post-drilling surveys. Benthivores were the most commonly observed group in both surveys, with grenadier species as the most abundant taxa followed by rocklings and blue hake. Compared to the pre-drilling survey, average benthivore density decreased by 52.5%. Fish unable to be assigned to a functional group, such as poorly seen fish or small juveniles, were classified as “Unknown fish” and were the second most common group overall. Unknown fish average density decreased by 15.4% compared to the pre-drilling survey. Planktivores, of which lanternfish were the only taxa, were the third most common group. Small numbers of piscivores such as Greenland halibut and sharks were also observed. No species at risk (SAR) were observed during this survey.

5.3 Drill Cuttings Monitoring

5.3.1 Synthetic-Based Fluid on Cuttings

As outlined in the Decision Statement, EMCL was required to measure the concentration of synthetic-based drilling fluids retained on discharged drill cuttings. The Environmental Compliance Monitoring Plan outlined the monitoring and reporting actions that EMCL put in place to meet this requirement. As outlined in the plan, the SOC and mass of cuttings drilled and released were collected and recorded. The MI Swaco Environmental Services Specialist, located onboard the rig, was responsible for monitoring the synthetic based cuttings discharges. If any exceedances of regulatory requirements occurred, the Stena Offshore Installation Manager and EMCL Wells Supervisor were notified and required notifications to the C-NLOPB were made.

The concentration of SOC discharged to sea after treatment aboard the *Stena Forth* was measured every 12 hours and reported as a mass-weight rolling 48-hour average. EMCL had a performance target for SOC discharged to sea based on the Offshore Waste Treatment Guidelines (OWTG) of not exceeding 6.9g/100g oil on wet solid. This target was maintained for the duration of the campaign with 3.35g / 100g of wet solids being the highest level reached. EMCL reported the discharged SOC results to the C-NLOPB on a monthly basis.

Figure 2 illustrates the SOC concentration (g/100 g wet solids, or %) discharged to sea after treatment aboard the MODU from July 1, 2022, to August 10, 2022. Specific follow-up survey results for Benthics and Drill Cuttings surveys will be submitted to the C-NLOPB and DFO and posted to the internet in a separate report.

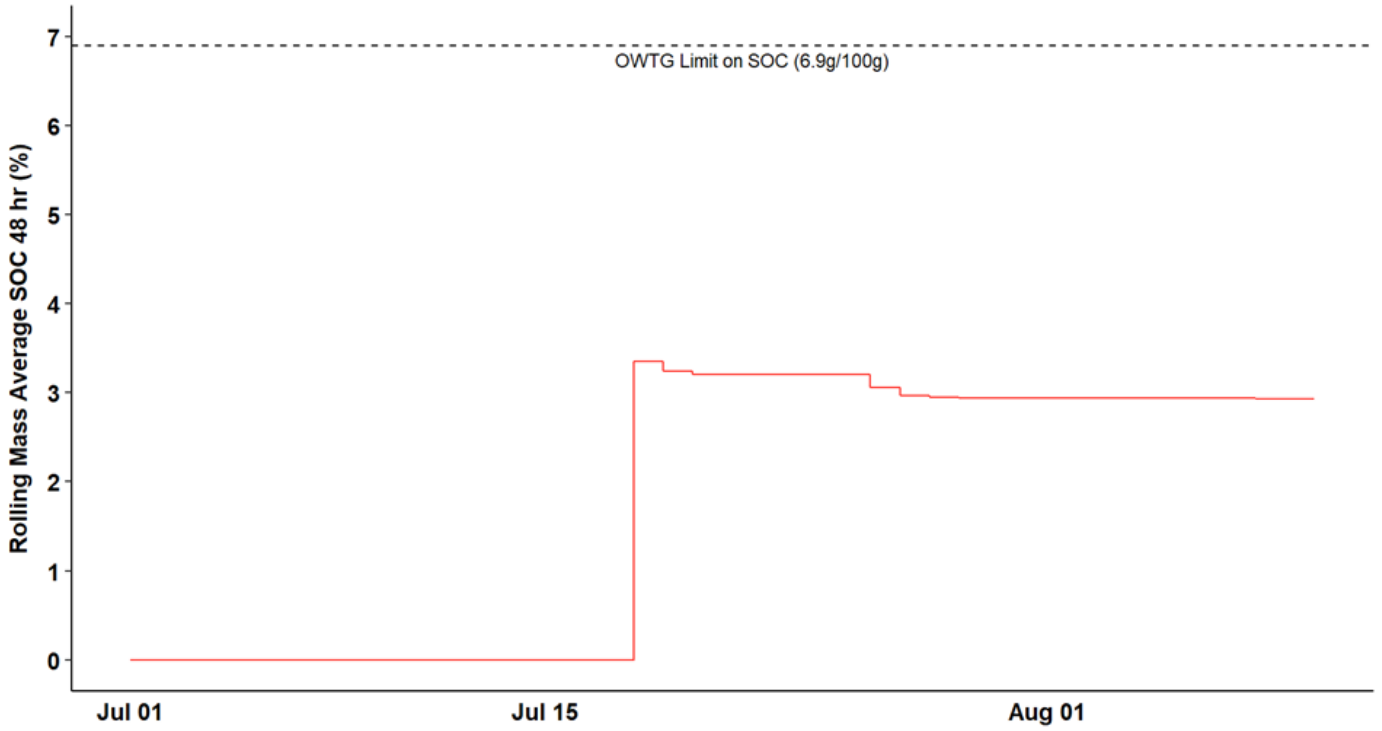

Figure 2 Synthetic on Cuttings (SOC) concentration (g of oil per 100 g wet solids, or %) discharged to sea after treatment aboard the Stena Forth from July 1, to August 10, 2022.

5.3.2 Drill Cutting Modeling

A drill cuttings model was used to predict the extent of released water-based muds (WBM) and synthetic-based muds (SBM) using four seasonal scenarios, to account for variable environmental conditions throughout the year (Figure 3). A numerical computer model was used that employs a transport computation to simulate the advection of dispersed drill cuttings materials in three dimensions through the water column, following release into the sea, until the particles come to rest on the sea bottom. The 2020 tophole drilling campaign used only WBMs released near the sea floor, which was predicted to settle near the well and as such the survey in 2020 was limited to the 200 x 200 m area around the well head. The 2022 EMCL Exploration campaign used SBMs that were treated and released at sea level. These cuttings were predicted to drift primarily to the south and southeast of the drill centre, with the majority deposited within 1 km of the wellhead.

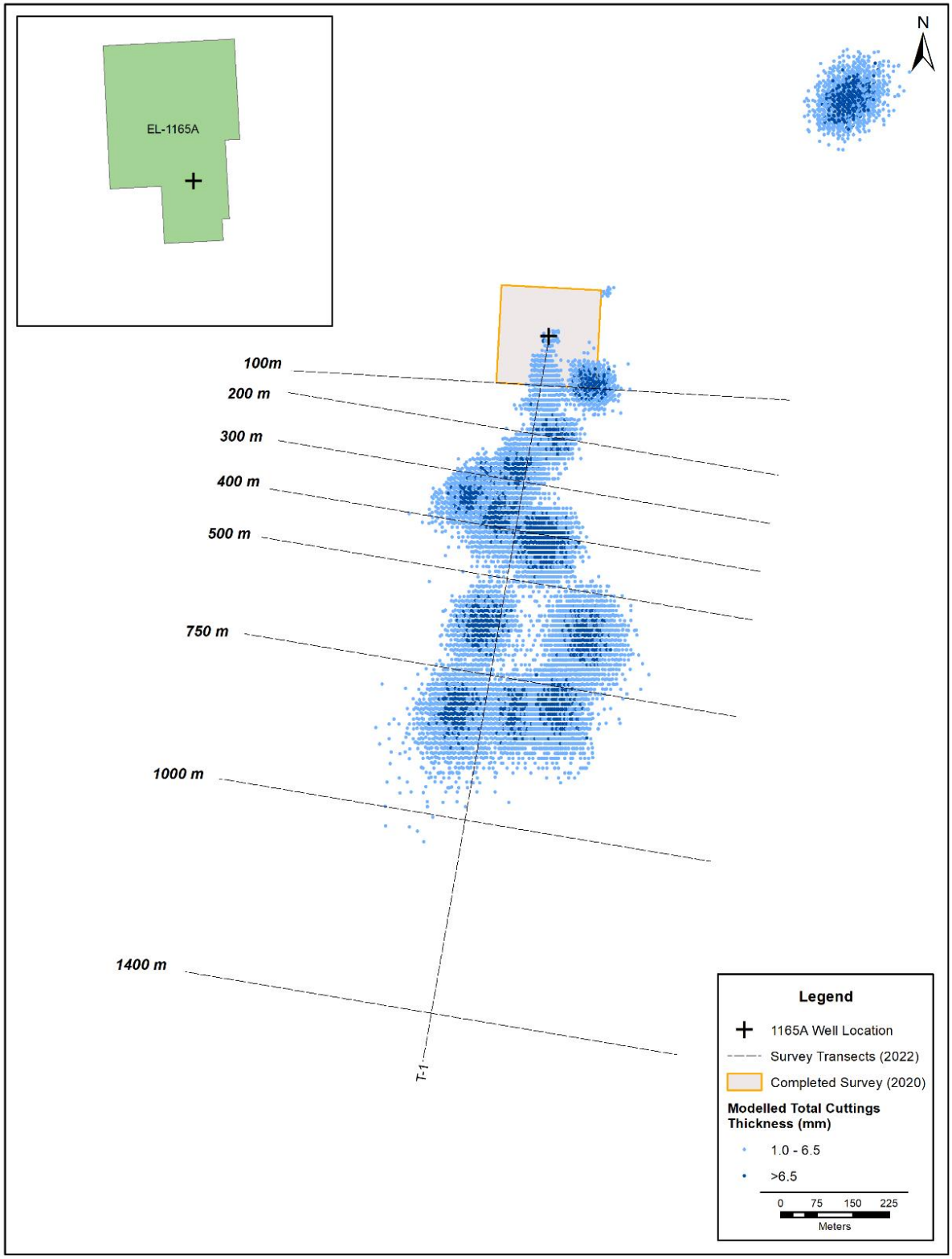

Figure 3 Predicted drill cutting footprint (WBMs and SBMs) all four seasonal models.

5.3.3 Findings

For the post-drilling survey, fines (e.g., sand and mud) were the dominant surficial substrate class observed within the transect area south of the well site. Other substrates present throughout the Hampden K-41 area were predominantly coarse (boulders and rubble) with lesser amounts of medium (cobble and gravel) substrate. Similar substrates were present during the 2018 pre-drilling survey, with small variations for each substrate type (Wood 2020b).

During the 2020 post-drilling survey, drill cuttings were observed within a 100 m radius of the well centre. These drill cuttings were subject to local near-bottom currents for over a year. Observations from the 2022 post-drilling survey include these re-distributed cuttings. Data collected along the 1,500 m transect that originated at the drill centre allowed for the observations of previously detected cuttings piles within the completed 2020 survey. The drilling muds used in 2022 were SBMs which are smaller in grain size compared to WBMs and released near the waterline. The deposition of SBM cuttings within the drill target area is predicted to be negligible (<0.1 mm) due to the drift of particles released at the surface before reaching the seafloor in ~1,200 m water depth.

The drill cuttings were visibly distinct from seafloor sediments in color, texture, and particle size. Drill cuttings were observed in three types of distributions:

- Patchy distribution was defined as occasional observations of drill cuttings <2m^2 in extent and >2 m apart,
- Dis-continuous distribution is where drill cuttings occurred either more frequently and/or in patches >2 m^2 in size and/or less than <2 m apart,
- Continuous distribution is where drill cuttings are continuous, in a drill cuttings pile, or patches are <1 m apart.

Prior to drilling, the fine-grained sediment appeared uniform. All three cutting descriptions were observed at Hampden K-41mainly along survey line T-1. Continuous cuttings were present at the drill centre along line T-1 and extended out to approximately line T-100. Discontinuous cuttings are present at the edge of the continuous cuttings pile along line T-1, and to the middle portion of line T-100. Patchy cuttings, in varying density and size, were present throughout all surveyed lines. These cuttings were most commonly found in the form of small white and grey clumps forming a "checkerboard" pattern when dense, or a star-like pattern at lower densities, though larger clumps were present at lower densities. While these accumulations were > 1.5 mm, due to their clumping nature it is unlikely they had any burial and smothering effects on benthic organisms

5.4 Summary and Conclusions

Based on the results summarized above, some general conclusions can be drawn related to the conditions 3.12.1 and 3.12.23 of the Decision Statement. The specific conditions and the determination are provided below.

Condition 3.12.1 *– for every well, measure the concentration of synthetic-based drilling fluids retained on discharged drill cuttings as described in the Offshore Waste Treatment Guidelines to verify that the discharge meets, at a minimum, the performance targets set out in the Guidelines and any applicable legislative requirements, and report the results to the Board;*

- The OWTG specifies that SOC levels should not exceed 6.9 g/100 g oil on wet solids. As detailed in Section 5.3.1, the highest reported level from the drilling unit was 3.35 g/100 g oil on wet solids. Therefore, the discharges meet the performance targets set out in the OWTG and addresses Condition 3.12.1 of the decision statement.

Condition 3.12.2.1 *- measurement of sediment deposition extent and thickness post-drilling to verify the drill waste deposition modeling predictions;*

- This condition for the area adjacent to the well centre is discussed in the EL1165A Drill Cutting Monitoring Report (Wood 2021a). The report concluded that the majority of the cuttings observed were within 100 m of the drill center. For the drilling dispersion area (2022 survey), drill cuttings were observed within the survey area in low accumulations.

Condition 3.12.2.2 *- benthic fauna surveys to verify the effectiveness of mitigation measures;*

- Mitigations implemented to reduce the potential harm from drilling activities to deep-sea corals included identifying coral clusters which was completed in 2018. Other mitigations include assessing the presence and condition of corals within the survey area post-drilling and assess whether these results change the conclusion of the original environmental assessment. It was determined from the 2020 post-drilling survey report concluded that effects from drilling activities within the 200 m x 200 m survey grid were within the EIS predictions. Results

from the 2022 post-drilling survey in the predicted drilling dispersion area were compared to the 2018 pre-drilling survey observations made in the same area. Differences in densities of corals and sponges (i.e., more sessile species) between the pre-and post-surveys were small. Observed changes are likely due to differences in the amount of benthic data available for comparison (6.55 km from 2018 compared to 9.5 km from 2022). In transects with corals present, their overall condition was considered good (e.g., upright, polyps extended, and without visible sedimentation) for both the 2018 and 2022 observations. Sponge condition was characterized by the presence or absence of a sediment veneer. In 2022, there was a slight increase of sponges observed with a veneer (increase from 74% to 85%), however over 70% of sponges in both surveys (2018 and 2022) had sediment veneers which is indicative of mainly natural sedimentation present. With the similarity in coral and sponge densities and distributions in the pre- and post- drilling surveys and the overall coral condition being good in both surveys (2018 and 2022), it is therefore concluded that the drilling activities observed were within the EIS predictions of the project not resulting in significant adverse environmental effects.

Condition 3.12.2.3 *– The Proponent shall report the information collected, as identified in conditions 3.12.2.1 and 3.12.2.2, including a comparison of modelling results to in situ results, to the Board within 60 days following the drilling of the first well in each exploration licence.*

- As described in the preceding sections of this report, the pre-drilling survey results were compared to *in situ* post-drilling survey results and found that the 2022 survey further confirms the effects to corals and sponges from drilling activities were mainly limited to within 100 m of the drill center.

5.5 Discharges

An updated Environmental Compliance Monitoring Plan (ECMP) was submitted and approved as a part of the EMCL OA amendment application by the C-NLOPB. The plan identified the waste streams and sampling, analysis and reporting requirements for regulated waste streams that were discharged during routine operation. The requirements outlined in the plan were aligned with the OWTG as set out by the National Energy Board (NEB), the C-NLOPB and the Canada-Nova Scotia Offshore Petroleum Board (CNSOPB).

Drilling Discharges

The ECMP outlined the monitoring and discharge requirements for drilling related discharges. It identified the effluents and activity that required compliance monitoring and those that did not. Discharges included:

- Drilling solids;
- Drains system;
- NAF Cuttings;
- Bilge Water; and

Synthetic Based Drilling Muds

Any SBM that was not reused was removed from the mud tanks and sent onshore, via supply vessel, for disposal. Once onshore, proper disposal was handled by a third-party waste management contractor.

Chemical Selection

During the exploration program, all chemicals onboard the MODU were managed through Stena's chemical management system. However, prior to initial receipt of the chemical onboard it was reviewed by EMCL as a part of the EMCL chemical screening process. This process included an environmental review to ensure the chemical met the requirements for use in a Canadian jurisdiction. The following are the environmental requirements used in the screening:

- Domestic Substance List
    - To ensure that the components in the proposed chemical were listed on the *Canadian Environmental Protection Act, 1999* domestic substances list
- Consideration for potential air and water emissions and eventual disposal at sea
- Provisions for spill clean-up

Supply Vessel Discharge

All supply vessels operating for EMCL were required to follow the requirements outlined in the International Convention for the Prevention of Pollution from Ships (MARPOL). Adherence to MARPOL requirements was captured within the vessels' Safety Management System (SMS) and various procedures. Also, all discharges from the vessels, either through the Oily Water Separator (OWS) or reception facilities, were tracked in the vessels' Oil Record Book and Garbage Record Book. Prior to awarding a contract EMCL reviews the vessel operators' SMS as part of the contractor screening process to ensure it meets EMCL requirements and contains the required components. In addition to the initial screening, prior to awarding the contract, EMCL initiated an Offshore Vessel Inspection Database (OVID) inspection on the three vessels used for the exploration program. As a part of this, MARPOL requirements were reviewed to ensure the vessels were in compliance. There were no non-conformities identified during these inspections.

5.6 Underwater Sound Monitoring

Underwater sound monitoring was not required as part of the 2022 EMCL Exploration campaign. See EMCL (2021) for previous Hampden K-41 top-hole drilling underwater sound monitoring information.

6 MARINE MAMMALS AND SEA TURTLES

EMCL developed a Marine Mammal Monitoring Plan to address Section 54 of the *Canadian Environmental Assessment Act, 2012*. Section 54 requires a marine mammals and sea turtle monitoring plan to be submitted prior to commencing any VSP operations. The objective of the plan was to minimize any risk to marine mammals and sea turtles as a result of exposure to air gun pulses during VSP activity.

The Hampden K-41 Marine Mammal and Sea Turtle Monitoring Plan was accepted by the regulators prior to any VSP activities (EMCL 2022b). This plan included both visual monitoring and real-time passive acoustic monitoring (PAM) during VSP activities aboard the *Stena Forth*. Monitoring activities took place aboard the MV *K.J. Gardner*, which visually and acoustically monitored the 500 m safety zone around the *Stena Forth* (Wood 2022, Kowarski 2022). VSP operations occurred from July 31st, 2022, to August 1st, 2022. During operations, there were four detections of marine mammals, three of which were visual, and one was acoustic. Two of these sightings required biological shutdowns during the soft start phase of VSP gun operations, and operations resumed after the mammals left the area.

In addition to requirements for monitoring during VSP activities, the Marine Mammal Monitoring Plan also addressed the requirements for reporting injured, dead or stranded species. During the exploration campaign there were no sightings of injured, dead or stranded species.

7 MIGRATORY BIRDS

Chapter 6 of the Eastern Newfoundland Offshore Exploration Drilling Project Environmental Impact Statement (EIS) assessed the potential effects to marine and migratory birds within the project area and predicted that the project was not likely to result in significant adverse environmental effects on marine and migratory birds, including Species at Risk (SAR); this conclusion was determined with a moderate to high level of certainty based on current understanding of the effects of similar projects on marine and migratory birds.

To comply with the mitigation measures described in the Decision Statement, monitoring measures were implemented in order to reduce potential environmental effects as they pertain to migratory birds. These consisted of daily searches of the MODU by a trained individual to determine the presence of stranded birds, with checks being logged and any encounter of a stranded bird, live or dead, documented on a Stranded Bird Encounter datasheet. This datasheet was sent weekly to the onshore Environmental Advisor. As required by seabird handling permit SC4039 all original data will be submitted to the Canadian Wildlife Services within the specified reporting timelines. Daily seabird monitoring during the 2022 EMCL Exploration campaign included stranded seabird searches from the drilling installation and supply vessels, as well as daily and hourly bird surveys from the drilling installation by trained personnel as per the approved Seabird Management Plan (EMCL 2021b).

Although no specific follow-up related to the marine and migratory birds was considered necessary in relation to this project, in addition to the implementation of the various mitigation measures outlined in the EIS, a monitoring and observation program was developed by EMCL, primarily to fulfill Condition 4.3 of the Decision Statement and to verify

the accuracy of EIS effects predictions. With the implementation of the various mitigation measures outlined in the EIS, the impact to marine and migratory birds was avoided or reduced, and no population-level effects were observed during the duration of the drilling program. Section 4.2 of the Decision Statement described mitigation measures necessary to reduce the potential impact of well testing and flaring operations on marine and migratory birds. Because there were no flaring operations during the drilling program, these mitigation measures were not necessary. WSP (2022b) details the results of the daily stranded bird surveys.

8 ADDITIONAL MITIGATIONS

8.1 Emergency/Spill Response

The EMCL MODU Well Intervention Plan and MODU Well Control Bridging Plan, along with a relief well plan, were submitted to the C-NLOPB as part of the 2022 OA amendment application. These documents, in conjunction with Stena documents, include strategies for maintaining well control on the MODU, disconnect strategies in the event of weather or an emergency, as well as details on how a relief well would be drilled in the unlikely event a loss of well control is encountered.

A SIMA was conducted by EMCL as part of the contingency planning process for exploratory drilling in the Flemish Pass. The SIMA is a tool to help evaluate scientific, policy, and stakeholder inputs to arrive at reasoned decisions as to which response tool(s) should be used under a particular set of circumstances, with the goal of minimizing overall harm once a spill has occurred. A draft SIMA was submitted to the C-NLOPB on April 30, 2019, and a meeting was held with the C-NLOPB and the Science Table to review, with participants including representatives from Fisheries and Oceans Canada, Environment and Climate Change Canada, Canadian Wildlife Service, Canadian Coast Guard, Transport Canada, and Natural Resources Canada. The final SIMA was submitted to the C-NLOPB August 19, 2019, and is available on the EMCL Exploration website.

An OSRP was also included in the original OA application, with an updated OSRP submitted to the C-NLOPB on August 9, 2019. Following consultation with Indigenous groups, this plan was developed to provide guidance to EMCL personnel who may be involved in the response to an oil spill during drilling operations within the Hampden prospect. EMCL recognizes that prevention is the most effective way to avoid damage to the environment due to oil spills. Thus, the MODU program was designed to prevent the occurrence of spills through use of policies, procedures, equipment, and trained personnel to reduce the probability of a spill and to minimize the consequences, should one occur. Accordingly, the OSRP was used to identify the boundary of responsibility and key interfaces for oil spill response while the MODU was on hire to EMCL. It included response measures to mitigate the effects of a spill, including spill containment and recovery, and wildlife preservation and rehabilitation procedures, as well as criteria and thresholds for reporting such events. This plan was updated to reflect the 2022 EMCL Exploration campaign and notification was provided to Indigenous groups on July 6, 2022.

On June 23, 2022, a tabletop oil spill response exercise was conducted. The objectives of this exercise were to:

- Test EMCL and Stena's emergency response communications as per objectives set by key players within the respective organizations for this emergency preparedness exercise. Communications are tested by means of emergency response teams and support groups through a credible emergency exercise scenario;
- Exercise EMCL/Stena's communications with external agencies and stakeholders as per objectives set by EMCL (i.e. communications with respect to logistics, personnel, family support, technical matters, media, and communication with stakeholders);
- Determine next steps for oil spill response, as required.
    - Seabird and marine mammal observations and impacts.
    - Spill response options.
    - Internal and external notifications.
    - Assess need for mutual aid.
    - Tracker buoy deployment.
    - Assess need for aerial observations.

- Mobilize an Incident Management Team (IMT) at 20 Hebron Way, St. John's.

The results of this exercise and associated actions were provided to the C-NLOPB on July 5, 2022, and Indigenous groups on July 5, 2022. The OSRP was posted to the Internet with a link shared to Indigenous groups July 6, 2022.

Throughout the duration of drilling at EL 1165A, there were no accidents or malfunctions that required activation of the Spill Response Plan. Prior to commencement of drilling at EL 1165A a complete review of the OSRP was completed per condition 6.8.

8.2 Ice Management

An Ice Management Plan was originally prepared by Provincial Aerospace Limited (PAL) Aerospace Ice and Environmental Services for EMCL. The intent of the plan was to outline procedures that prevent hazardous ice from reaching the MODU and address both iceberg and sea ice. EMCL submitted an update of the Ice Management Plan, to reflect the 2022 EMCL Exploration campaign, to the C-NLOPB as a part of the approved OA amendment application.

9 REFERENCES

Canadian Environmental Assessment Agency (CEA Agency). 2019. Decision statement issued under Section 54 of the *Canadian Environmental Assessment Act, 2012*.

EMCL (ExxonMobil Canada Ltd.). 2021a. ExxonMobil Canada Ltd. 2019-2020 Eastern Newfoundland Offshore Exploration Drilling Project – EL 1165A and EL 1165B: EL 1165A (Hampden) Conditions Closure Report.

EMCL (ExxonMobil Canada Ltd.). 2021b. Exploration Seabird Management Plan. Document Control Number: CAEL-EF-OOPRO-01-006-5001-000.

EMCL (ExxonMobil Canada Ltd.). 2022a. 2022 Eastern Newfoundland Offshore Exploration Drilling Project – EL 1165A Drilling Discharges Follow-up Program. Document Control Number: CAEL-EF-DPZZZ-03-500-0017.

EMCL (ExxonMobil Canada Ltd.). 2022b. 2022 Eastern Newfoundland Offshore Exploration Drilling Project – EL 1165A Marine Mammal Monitoring Plan. File Code CAEL-EF-OOPRO-01-006-5002-000.

Jasco Applied Science. 2020. ExxonMobil Canada Ltd Flemish Pass Exploratory Drilling Operations Soundscape Characterization, Marine Mammal Occurrence, and Potential Effects of Underwater Noise Emissions on Cetaceans. Report Prepared by Jasco Applied Science for Wood PLC.

Kowarski, K.A. 2022. Acoustic Monitoring during Vertical Seismic Profiling Operations: Flemish Pass Offshore Newfoundland, Canada. Document 02864, Version 1.0. Technical report by JASCO Applied Sciences for Wood Environment and Infrastructure Solutions

LGL Limited. 2019. Spill Impact Mitigation Assessment (SIMA) for ExxonMobil's Eastern Newfoundland Offshore Drilling Project, 2018–2030. LGL Rep. FA0166. Report prepared by LGL Limited, St. John's, NL for ExxonMobil Canada Ltd., St. John's, NL. 103 p. + appendices.

RPS Energy Canada Ltd. 2018. Cold Water Coral and Sponge Report August 2018 Flemish Pass EL1135 – Offshore Newfoundland. CS00415.1, Made for ExxonMobil Canada Ltd.

Wood (Wood Environment & Infrastructure Solutions Canada Limited). 2020a. EL 1165A Drilling Discharges Follow-up Program: Drill Cuttings Measurements and Monitoring 2020 Report. Wood Project ME2078301. Report prepared by Wood Environment & Infrastructure Solutions for ExxonMobil Canada Ltd.

Wood (Wood Environment & Infrastructure Solutions Canada Limited). 2020b. EL 1165A Drilling Discharges Follow-up Program: Benthic Habitat Monitoring 2020 Report. Wood Project ME2078301. Report prepared by Wood Environment & Infrastructure Solutions for ExxonMobil Canada Ltd.

Wood (Wood Environment & Infrastructure Solutions Canada Limited). 2022. Hampden K-41 Vertical Seismic Program Marine Mammal and Sea Turtle Mitigation Report. Wood Project ME2278308.

Submitted to ExxonMobil Canada Ltd.

WSP (WSP Environment & Infrastructure Canada Limited). 2022a. EL 1165A Hampden K-41 drilling discharges follow-up program: 2022 report. WSP Project TE22752003. Submitted to ExxonMobil Canada Ltd.

WSP (WSP Environment & Infrastructure Canada Limited). 2022b. Exploration Seabird Management Report. WSP Project Number: ME2278308. Submitted to ExxonMobil Canada Ltd.