Atlantic Canada

Flemish Pass Exploration

Drilling Project

Report Number: CA-EXP-AC-DWD-HS-00254-RP-01

Title: Pelles A-71 Seabird Observation and Monitoring Follow-up Program Report

Document Approval Matrix

Issue	Date	Reason for Change	Author(s)	Endorsed by
Rev 2	6-Dec-2021	Addition of Section 6.0 – Lighting Reduction Efforts	***Mark White,*** ***HSSE Lead*** 	***Todd Hartlaub,*** ***Senior Manager, NA Exploration*** 
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1.0 INTRODUCTION

CNOOC completed an offshore exploration drilling program at Exploration Lease (EL) 1144 in the Flemish pass region of the Canada Newfoundland and Labrador (NL) Offshore Area. CNOOC is committed to complying with conditions set out in the Decision Statement for exploration drilling activities at EL 1144. The following report outlines the actions completed in accordance with follow up conditions from the CNOOC (Formerly Nexen Energy ULC) Flemish Pass Exploration Drilling Project (2018 - 2028) Environmental Impact Statement (EIS) related to seabird observations and monitoring.

2.0 PROJECT DESCRIPTION

CNOOC conducted petroleum exploration drilling and associated activities in the Flemish Pass region of the Canada-Newfoundland and Labrador Offshore Area from April to July 2021. The Project included associated Vertical Seismic Profiling (VSP) survey, well testing, abandonment and associated supply and service activities required to support drilling activities. The Project Area (Figure 1) included the Exploration License (EL) 1144.

2.1 Project Location

Pelles A-71 is located in the Flemish Pass at 47° 30’ 11.90” N, 46° 40’ 39.14” W. The wellsite is located in the EL 1144 in approximately 1160 m water depth.

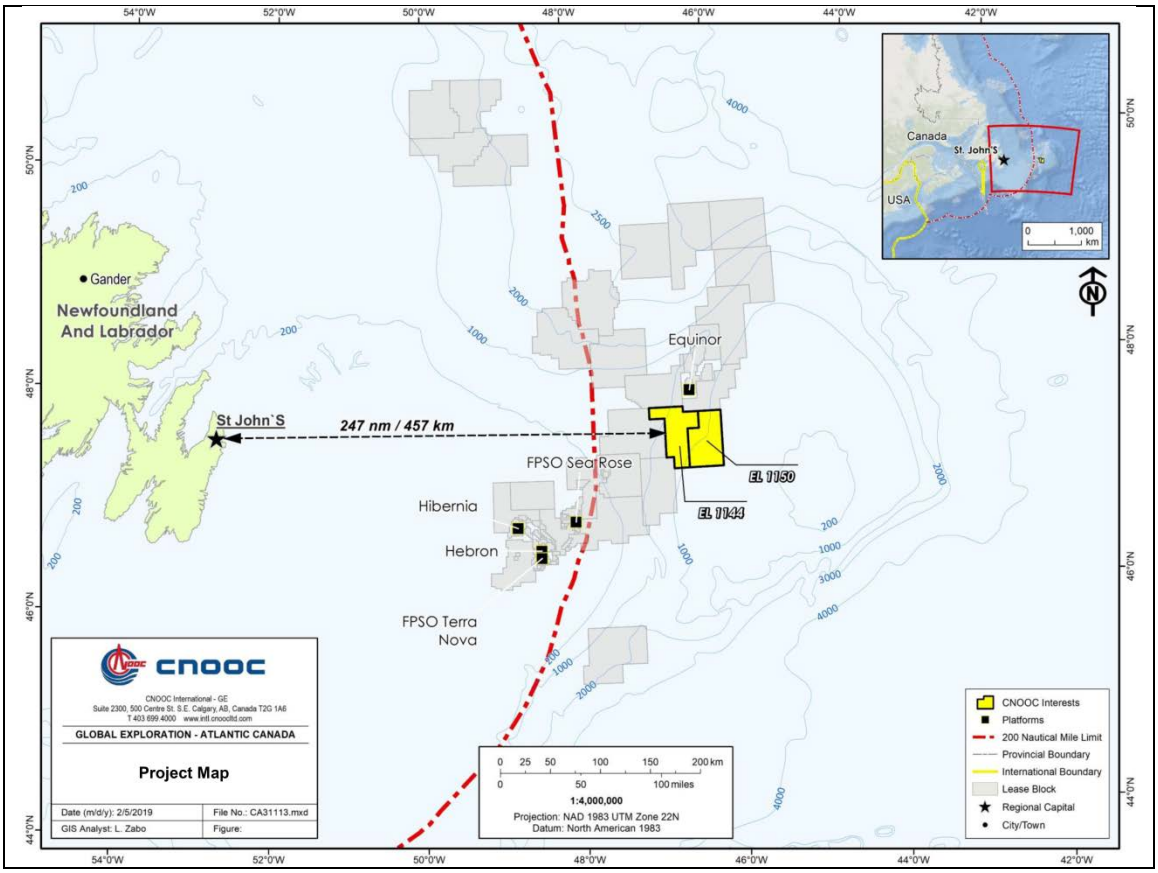

Figure 1. Project Area

3.0 ENVIRONMENT ASSESSMENT ACT DECISION STATEMENT CONDITIONS

CNOOC conducted seabird observations and monitoring in accordance with the requirements of the "Seabird Observation and Monitoring Follow Up Program" (CA-EXP-AC-DWD-RG-00166-PL-001) that was developed in consultation with Environment and Climate Change Canada and the C-NLOPB.

This report speaks specifically to conditions outlined in 4.3, 4.3.1 and 4.3.2 of The Minister's Decision Statement issued under Section 54 of the Canadian Environmental Assessment Act (2012) for the "CNOOC International Flemish Pass Exploration Project".

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 2.5, 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 and 4.2. The Proponent shall implement these follow-up requirements for the duration of the drilling program. As part of the follow-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.

4.0 SEABIRD OBSERVATIONS

PAL Aerospace conducted all seabird observations on the Pelles A-71 well site from the Mobile Offshore Drilling Unit (MODU). During the operational period, a total of 804 seabird observation entries recorded 23,685 seabirds. Observations were conducted between April 28th and July 7th, 2021 and completed in accordance with CNOOC's approved "Seabird Observation and Monitoring Procedural Aid". Table 1 details a summary of the observations completed during the drilling program. CNOOC has submitted a copy of all raw data associated with seabird observations to the C-NLOPB.

Species	Number
Black-legged Kittiwake	336
Common Murre	10
Dovekie	20
Glaucous Gull	1
Great Black-backed Gull	26
Great Shearwater	260
Herring Gull	74
Iceland Gull	2
Leach's Storm-Petrel	10
Lesser Black-backed Gull	6
Manx Shearwater	1
Northern Fulmar	22495
Northern Gannet	3
Pomarine Jaeger	1
Sooty Shearwater	2
South Polar Skua	2
Unknown Gull	430
Unknown Murre	1
Unknown Shearwater	2
Unknown Skua	2
Unknown Tern	1
Total	23,685

Table1. Seabird Observation Summary

5.0 STRANDED SEABIRD SEARCHES

Daily stranded seabird surveys were conducted daily at dawn during the Pelles A-71 exploration drilling program that included the Stena Forth drillship and the Siem Pilot, Maersk Clipper, Maersk Mobiliser and Skandi Vinland support vessels. Table 2 details stranded seabird searches completed during the program. Seabirds were handled in accordance with CNOOC's approved "Seabird Capture and Handling Procedural Aid". There was a total of 22 birds found; 4 carcasses disposed of at sea, 4 carcasses sent ashore; 1 live seabird that died in transit to shore and 13 live seabirds released. CNOOC has submitted a copy of all raw data associated with stranded seabird searches to the C-NLOPB.

Date (yyyy/mm/dd)	Location of Stranding (Lat/Long, or Name)	Bird Species	TOTAL # stranded birds	Found Dead			Captured Alive					
					Fate		Oiled**			Not oiled		
				# Oiled**	# disposed of at sea	# sent ashore*	# died in care	# released alive	# sent ashore*	# died in care	# released alive	# sent ashore*
2021-05-12	Stena Forth Pelles A-71	WTSP	1									1
2021-05-14	Stena Forth Pelles A-71	WTSP	1		1							
2021-05-17	Stena Forth Pelles A-71	WTSP	1		1							
2021-06-01	Stena Forth Pelles A-71	LESP	1								1	
2021-06-08	Stena Forth Pelles A-71	LESP	1			1						
	Stena Forth Pelles A-71	UNSP	1		1							
2021-06-11	Stena Forth Pelles A-71	LESP	1			1						
2021-06-20	Mobiliser Pelles A-71	LESP	5			1					4	
2021-06-21	Stena Forth Pelles A-71	LESP	1								1	
	Stena Forth Pelles A-71	LESP	1								1	
2021-06-22	Stena Forth Pelles A-71	OSFL	1		1							
2021/06/28	Stena Forth Pelles A-71	LESP	1			1						
2021/06/29	Stena Forth Pelles A-71	LESP	1								1	
2021/07/01	Stena Forth Pelles A-71	LESP	1								1	
	Stena Forth Pelles A-71	LESP	1								1	
2021/07/03	Stena Forth Pelles A-71	LESP	2								2	
2021/07/05	Stena Forth Pelles A-71	LESP	1								1	
			22		4	4					13	1

Table2. Stranded Seabird Search Summary

6.0 LIGHTING REDUCTION EFFORTS

CNOOC worked with the MODU and supply vessel vendors to identify and implement reduced artificial lighting where possible during project operations. The opportunities were identified by the installation owners and confirmed to not impact operational health and safety requirements. These reduced lighting opportunities were tracked monthly and reported to CNOOC.

The following is a high level summary of lighting reductions achieved during the campaign:

Installation	Total Operational Days	Days Reduction Fully Implemented	Days Reduction Partially Implemented	Days Reduction Not Implemented
Stena Forth	73	71	2	0
Maersk Clipper	91	61	20	10
Maersk Mobilizer	77	54	20	3
Secunda Siem Pilot	77	35	15	27
DOF Skandi Vindland	12	9	2	1

CNOOC has submitted a copy of all raw data associated with artificial lighting reductions to the C-NLOPB.

7.0 EFFECTIVENESS OF EIS MITIGATIONS

The Flemish Pass Exploration Drilling Project (2018 - 2028) Environmental Impact Statement (EIS) assessed the potential effects of marine and migratory birds which are known, or likely to be found, within the project area and may be affected by planned project components and activities.

The EIS highlighted that the primary mechanisms of interaction that may have negative effects on marine and migratory birds, included platform and vessel attraction associated with lighting and increased foraging opportunities, and potential hydrocarbon sheening. While these interactions may have led to increased potential for mortality or injury of individuals, the effects were anticipated to be negligible to minor, due to the localized nature of Project activities. The data acquired during the program supports that the operation had no population-wide effects within the project area. The mitigative measures that are currently in place have been proven effective and no additional measures are recommended at this time.

8.0 REFERENCES

Amec Foster Wheeler Environment and Infrastructure (2018). Nexen Energy ULC – Flemish Pass Exploration Drilling Project (2018-2028) – Environmental Impact Statement.

CNOOC (2020). Seabird Observation and Monitoring Procedural Aid.

CNOOC (2020). Seabird Capture and Handling Procedural Aid.

CNOOC (2021). Seabird Observation and Monitoring Follow-up Program

PAL Aerospace (2021). PAL Seabird Data Summary – Stena Forth – V00.

WOOD (2021). EA Prediction Support Letter.