

PUBLIC VERSION

**IN THE MATTER OF AN ARBITRATION UNDER CHAPTER ELEVEN OF THE
NORTH AMERICAN FREE TRADE AGREEMENT
AND THE 1976 UNCITRAL ARBITRATION RULES**

BETWEEN:

**THEODORE DAVID EINARSSON, HAROLD PAUL EINARSSON, RUSSELL JOHN
EINARSSON, GEOPHYSICAL SERVICE INCORPORATED**

(the “Claimants”)

AND

GOVERNMENT OF CANADA

(the “Respondent”, and together with the Claimants, the “Disputing Parties”)

(ICSID Case No. UNCT/20/6)

WITNESS STATEMENT OF CARL MAKRIDES

January 14, 2023

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I, Carl Makrides, of Halifax Regional Municipality, in the Province of Nova Scotia, HEREBY AFFIRM as follows:

I. INTRODUCTION

1. I am the Director, Resources and Rights and Chief Conservation Officer of the Canada-Nova Scotia Offshore Petroleum Board (the “CNSOPB” or the “Board”). I have held this position since 2013. My responsibilities include direction of geoscientists and engineers responsible for the management and conservation of Nova Scotia’s offshore petroleum resources and conduct of regional and field-specific geological, geophysical, petrophysical and reservoir engineering studies. I am also responsible for the Board’s review of industry submitted activity authorizations, reports and plans, including resource management audits and inspections.

2. I have worked at the CNSOPB since 1992. During that time, I have also held the positions of Geological Technologist and Geologist and Petrophysicist. Prior to joining the CNSOPB, I was a Geological Technologist at the Canada Oil and Gas Lands Administration (“COGLA”), which was the federal government predecessor to the CNSOPB. I have a Bachelor of Science in Geology from Dalhousie University and am a Registered Professional Geoscientist (P.Geo.). I am a member of the Mining and Energy Committee of Geoscientists of Nova Scotia. I am also the CNSOPB’s representative to the International Upstream Forum, International Offshore Petroleum Environment Regulators and the North Sea Offshore Authority Forum Wells Working Group. I am the co-author of numerous geoscience publications evaluating the geology, reservoir properties and resource potential of the Canada Nova Scotia offshore area (“C-NS Offshore Area”).

3. I provide this Witness Statement to respond to certain allegations made in the Memorial and accompanying materials submitted by Theodore David Einarsson, Harold Paul Einarsson, Russell John Einarsson and Geophysical Service Incorporated (“GSI”) (together, the “Claimants”)

on September 27, 2022 in their arbitration claim against the Government of Canada under the North American Free Trade Agreement (ICSID Case No. UNCT/20/6).

4. I previously filed two sworn affidavits in a domestic litigation initiated by GSI in 2014 against the CNSOPB in the Federal Court of Canada in which GSI alleged, among other things, that the CNSOPB infringed GSI's copyright by using its seismic materials in a 2013 Call for Bids.¹ As some of the matters at issue in that litigation overlap with the facts at issue and the allegations made by the Claimants in the current arbitration, I have utilized various statements from those affidavits and accompanying exhibits in this Witness Statement. For avoidance of doubt, I reaffirm the truth and veracity of those two previously sworn affidavits.

5. I make this Witness Statement from my personal knowledge and from my review of certain relevant contemporaneous documents. The fact that I have not addressed certain of the Claimants' characterizations of facts and events in this Witness Statement must not be taken to mean that I agree with them.

II. CNSOPB AND NOVA SCOTIA OFFSHORE PETROLEUM REGULATORY REGIME

6. On August 26, 1986, the *Canada-Nova Scotia Offshore Petroleum Resources Accord* ("C-NS Accord") was entered into between the Governments of Canada and the Province of Nova Scotia.² In 1987 and 1988, the C-NS Accord was implemented through the enactment of "mirror"

¹ **R-196**, *Geophysical Service Incorporated v. Canada-Nova Scotia Offshore Petroleum Board*, Court File No. T-467-14, Affidavit of Carl Makrides, 28 March 2014 ("First Affidavit of Carl Makrides"); **R-197**, *Geophysical Service Incorporated v. Canada-Nova Scotia Offshore Petroleum Board*, Court File No. T-467-14, Affidavit of Carl Makrides 6 October 2014. GSI sought an injunction against the CNSOPB to prevent it from disclosing certain of GSI's seismic data material. The Federal Court of Canada rejected GSI's request. See **C-210**, *Geophysical Service Incorporated v. Canada-Nova Scotia Offshore Petroleum Board*, 2014 FC 450, Order and Reasons, 9 May 2014.

² **R-198**, *Canada-Nova Scotia Offshore Petroleum Resources Accord*, 26 August 1986 ("C-NS Accord").

legislation at the federal and provincial levels (collectively, the “C-NS Accord Acts”).³ The purpose of the C-NS Accord was to provide a unified regime for the joint management of petroleum resources in the C-NS Offshore Area, as defined therein.

7. A key objective of the C-NS Accord is “to achieve the early development of Petroleum Resources in the Offshore Area for the benefit of Canada as a whole and Nova Scotia in particular.”⁴ One of the ways to achieve this goal is to make geophysical information about the C-NS Offshore Area – which is managed by the CNSOPB on behalf of the Crown – widely available to government, industry and researchers. This geophysical information is generally obtained through authorized surveys carried out by or on behalf of oil companies and geophysical companies.

8. The C-NS Accord Acts established the CNSOPB on January 5, 1990 as the joint federal-provincial agency responsible for the management and regulation of petroleum activities in the C-NS Offshore Area. The Board reports to the federal Minister of Natural Resources Canada and the provincial Minister of Natural Resources and Renewables.

9. The CNSOPB’s powers and duties are set out in the C-NS Accord Acts, which provide it with authority to regulate work and activities in the C-NS Offshore Area. The CNSOPB’s role in regulating offshore petroleum resources spans the full life-cycle of a potential project, from the initial exploration phase through to production and eventually project decommissioning and abandonment.

³ **C-152**, *Canada-Nova Scotia Offshore Petroleum Resources Accord Implementation Act*, S.C. 1988, c. 28 (“C-NS Federal Accord Act”); **C-154**, *Canada-Nova Scotia Offshore Petroleum Resources Accord Implementation (Nova Scotia) Act*, S.N.S. 1987, c. 3, as amended (“C-NS Provincial Accord Act”). The section numbers may not be identical between the Accord Acts, so I refer to the C-NS Federal Accord Act section numbers for ease of reference.

⁴ **R-198**, C-NS Accord, Article 1.02(a).

10. The C-NS Offshore Area within the CNSOPB's jurisdiction is illustrated in Annex I.

III. LEGISLATION, REGULATIONS AND GUIDELINES GOVERNING SUBMISSION AND PUBLIC DISCLOSURE OF SEISMIC MATERIALS BY THE CNSOPB

11. Under the C-NS Accord Acts, no one can conduct work or activity in the C-NS Offshore Area relating to, among other things, the exploration for or production of petroleum, unless they first obtain from the Board an operating licence and work authorization.⁵ This requirement applies to conducting seismic surveys and other geophysical activities.⁶ The form of work authorization that the CNSOPB issues to geophysical companies is called a "Geophysical/Geological Work Authorization" ("GWA"). As discussed below, the legislative authority for the CNSOPB to disclose submitted seismic materials to the public after the expiration of a five-year privilege period is found in Section 122 of the C-NS Federal Accord Act.

12. The C-NS Accord Acts authorize the CNSOPB to issue guidelines and interpretation notes, including with respect to geophysical (seismic) programs.⁷

13. In 1992, the CNSOPB issued guidelines entitled "Geophysical and Geological Programs in the Nova Scotia Offshore Area Guidelines for Work Programs, Authorizations & Reports" (the

⁵ **C-152**, *C-NS Federal Accord Act*, ss. 140 and 142(1).

⁶ In my March 28, 2014 Affidavit at paragraphs 9-12, I provide a description of what seismic data is and how it is collected and stored. At paragraphs 13-15 of that same Affidavit, I described what seismic data reports can look like using one of GSI's fully processed, migrated seismic lines (SG-01-0137) from seismic program NS-24-G005-004P, which GSI submitted to the CNSOPB in accordance with **C-141**, *Nova Scotia Offshore Area Petroleum Geophysical Operations Regulations*, 1995, SOR/95-144 (C-NS Federal Geophysical Regulations"), Part IV and its provincial counterpart the *Nova Scotia Offshore Area Petroleum Geophysical Operations Regulations*, N.S. Reg. 191.95, Part IV (together the "1995 C-NS Geophysical Regulations"). See **R-196**, First Affidavit of Carl Makrides, ¶¶ 9-12, 13-15. Because the federal and provincial versions of the 1995 *C-NS Geophysical Regulations* contain corresponding provisions, for ease of reference, citations are made to the 1995 *C-NS Federal Geophysical Regulations*.

⁷ **C-152**, *C-NS Federal Accord Act*, s. 156(1).

“1992 CNSOPB Program Guidelines.”).⁸ The 1992 CNSOPB Program Guidelines set out the requirements and procedures for obtaining operating licences and GWAs, the requirements for holders of GWAs (i.e., operators of seismic programs) to submit certain information and documentation to the CNSOPB, and the mechanics of public disclosure of such information and documentation.

14. The 1992 CNSOPB Program Guidelines applied to all six of GSI’s non-exclusive seismic surveys undertaken in the C-NS Offshore Area between 1998 and 2003.⁹

15. Other regulations enacted pursuant to Section 153 of the C-NS Federal Accord Act govern works and activities related to geophysical operations. In particular, the 1995 *Nova Scotia Offshore Area Petroleum Geophysical Operations Regulations* (“1995 C-NS Geophysical Regulations”) govern geophysical operations and require holders of GWAs to submit prescribed reports to the CNSOPB and to retain in Canada certain information and materials.¹⁰ The 1995 *C-NS Geophysical Regulations* continue to govern geophysical operations in the C-NS Offshore Area.

16. Like the 1992 CNSOPB Program Guidelines, the 1995 *C-NS Geophysical Regulations* applied to all six of GSI’s non-exclusive seismic programs undertaken between 1998 and 2003.

17. I note that in 2014 the Nova Scotia Supreme Court (“NSSC”) rejected GSI’s challenge against the legality of the public disclosure provisions of the 1995 *C-NS Geophysical*

⁸ **R-199**, CNSOPB, “Geophysical and Geological Programs in the Nova Scotia Offshore Area Guidelines for Work Programs, Authorizations & Reports”, 1992 (“1992 CNSOPB Program Guidelines”).

⁹ The 1992 CNSOPB Program Guidelines were updated in 2015 but did not apply to GSI’s geophysical surveys in the C-NS Offshore Area, the last of which was completed in 2003. See **R-200**, CNSOPB, “Geophysical, Geological, Geotechnical and Environmental Program Guidelines”, 26 January 2015 (“2015 CNSOPB Program Guidelines”).

¹⁰ **C-141**, 1995 *C-NS Federal Geophysical Regulations*, ss. 24-26.

Regulations.¹¹ I was not an affiant in that case but am familiar with its outcome because the NSSC affirmed the authority of the CNSOPB under the C-NS Accord Acts and 1995 *C-NS Geophysical Regulations* to release seismic materials after the expiration of the confidentiality period:

I find that the seismic operations performed by [GSI] are part of that overall scheme for exploration and development of Nova Scotia's offshore petroleum resources. I find that the data and information requirement of the Board are an integral part of and consistent with the overall purpose, objectives and scheme of the Acts and the Regulations [...] I find that the impugned Regulations are *vires* and are part of the overall legislative and regulatory scheme of the Acts. The fact that the information supplied by [GSI] to the Board for many years, pursuant to authorizations and upon agreed terms and conditions, is no longer confidential are the rules of the industry in Nova Scotia. They are the "governing authority's rules" and they are enabled by the governing statutes. They are the same rules by which [GSI] undertook to participate in this exploration more than a decade ago.¹²

IV. SEISMIC PROGRAM REPORTING REQUIREMENTS

18. As explained above, under the C-NS Offshore Area regulatory regime, operators are required to retain and submit to the CNSOPB various technical information, documentation and data resulting from seismic surveys. The details of the information to be submitted were set out in the 1992 CNSOPB Program Guidelines and 1995 *C-NS Geophysical Regulations*, both of which were in effect at the time GSI conducted non-exclusive surveys in the C-NS Offshore Area between 1998 and 2003.

19. According to the 1992 CNSOPB Program Guidelines and 1995 *C-NS Geophysical Regulations*, every operator, within 12 months following the termination of field work, was required to submit a final report to the CNSOPB including, among other things:

- (a) digital seismic navigation data of the location where the seismic data was

¹¹ **R-201**, *Geophysical Service Inc. v. Canada – Nova Scotia Offshore Petroleum Board*, 2014 NSSC 172, Decision on Motion, 14 May 2014.

¹² **R-201**, *Geophysical Service Inc. v. Canada – Nova Scotia Offshore Petroleum Board*, 2014 NSSC 172, Decision on Motion, 14 May 2014, ¶¶ 33-35.

acquired during the survey (“shotpoint” data);

- (b) hardcopy maps in paper and mylar (reproducible film) formats displaying the information described in (a) above;
- (c) seismic reports (e.g., acquisition and processing reports); and
- (d) copies of all final, migrated seismic lines in paper and mylar formats.

20. With the exception of digital seismic navigation data, under the 1992 CNSOPB Program Guidelines and 1995 *C-NS Geophysical Regulations*, operators were only required to submit the information and reports referred to in the paragraph above in hardcopy format (paper and mylar). While the CNSOPB’s Chief Conservation Officer has the authority to require an operator to submit the information in the manner and form as he or she approves, such as digital seismic data in SEG-Y format,¹³ the CNSOPB does not release SEG-Y data received from operators to the public. Furthermore, the CNSOPB does not collect or release raw or field data.

V. PUBLIC DISCLOSURE OF INFORMATION SUBMITTED TO THE BOARD AFTER EXPIRY OF THE CONFIDENTIALITY PERIOD

21. Section 122(5)(d)(ii) of the C-NS Federal Accord Act provides that seismic materials submitted to the CNSOPB is deemed to be privileged and cannot knowingly be disclosed by the CNSOPB for five years following the date of completion of the work, except to the respective governments, without the consent in writing of the submitter.¹⁴ The C-NS Accord Acts make no distinction as between the privilege periods for exclusive and non-exclusive seismic surveys.

22. While the C-NS Accord Acts allow the Board to release both exclusive and non-exclusive seismic data after five years, the CNSOPB announced in 1992 that it would apply an additional five years for non-exclusive seismic data (i.e., ten years in total), which the CNSOPB refers to as

¹³ **C-141**, 1995 *C-NS Federal Geophysical Regulations*, ss. 25(1) and (9) (the final report must contain prescribed information “in the form, manner and quantity approved by the Chief Conservation Officer.”).

¹⁴ **C-152**, *C-NS Federal Accord Act*, s. 122(5)(d)(ii).

the “confidentiality period”. After the expiry of the confidentiality period, seismic materials submitted to the CNSOPB, including the hard copy reports and data, were made publically available. This policy was set out in Section 9 (Confidentiality) of the 1992 CNSOPB Program Guidelines:

Exclusive geophysical and geological reports, maps, data and other materials are kept confidential for 5 ½ years after termination of the field work.

Non-Exclusive or Speculative geophysical data, reports and maps will be kept confidential for at least ten years from the completion of the field work.

[...]

Reports and data are made available to the public at the termination of relevant confidentiality periods.¹⁵

23. The confidentiality periods for exclusive and non-exclusive seismic programs (five and ten years, respectively) have not changed since 1992.¹⁶

24. All six of GSI’s seismic programs between 1998 and 2003 (see Part VII below) were approved subject to compliance with the 1992 CNSOPB Program Guidelines. Each of the GWAs for GSI’s seismic programs stated:

Authorization is hereby given to the Operator named in the Application, pursuant to subsections 142(1)(b) of the Canada - Nova Scotia Offshore Petroleum Accord Implementation Act and 135(1)(b) of the Canada - Nova Scotia Offshore Petroleum Resources Accord Implementation (Nova Scotia) Act to conduct a Geophysical/Geological program as described within the above Application subject to:

1. Compliance with the reporting requirements as outlined in the publication “Geophysical and Geological Programs in the Nova Scotia Offshore Area Guidelines for Work Program Authorizations and Reports”; and

¹⁵ **R-199**, 1992 CNSOPB Program Guidelines, s. 9 (“Confidentiality”) (emphasis added).

¹⁶ The same confidentiality period was maintained in the 2015 CNSOPB Program Guidelines. See **R-200**, 2015 CNSOPB Program Guidelines, s. 9 (“Release of Data”).

2. Submission of digital seismic shotpoint location data within one year of completion of the program.¹⁷

25. The CNSOPB reminded GSI that the “conditions [...] attached to” the approval to conduct the proposed seismic surveys were that final reports, maps and data for non-exclusive programs would be publicly disclosed after the expiration of the applicable confidentiality period. For example, in its approval letter dated October 4, 2000 for CNSOPB Program No. NS24-G005-003P, the CNSOPB reminded GSI that:

Final reports, maps and data for non-exclusive geophysical programs will be disclosed to the public after 10 years from the termination date of the geophysical operation. In accordance with the geophysical regulations a non-exclusive survey is conducted for the sale, in whole or in part, to the public. If the data is not available for sale to the public then it will be considered exclusive data and will be disclosed five and one half years after the termination date of the geophysical operation.¹⁸

26. The CNSOPB reminded GSI of the same condition in letters dated May 15, 2001, July 18, 2002 and April 25, 2003 for Programs NS24-G005-004P, NS24-G005-007P and NS24-G005-008P, respectively:

Exclusive geophysical and geological reports; maps and data and other materials will be kept confidential for five and one half years after termination of the fieldwork. Non-exclusive or speculative geophysical and geological data, reports and maps will be kept confidential for at least ten years from the completion of the fieldwork. Hard copy of data, reports and maps will be made available for public disclosure at the termination of the relevant confidentiality periods.¹⁹

¹⁷ See e.g. **R-202**, Geophysical/Geological Work Authorization, Program NS24-G005-001P, 13 July 1998; **C-145**, Geophysical/Geological Work Authorization, Program NS24-G005-002P, 9 April 1999, p. 4; **R-203**, Geophysical/Geological Work Authorization, Program NS24-G005-003P, 4 October 2000; **R-204**, Geophysical/Geological Work Authorization, Program NS24-G005-004P, 15 May 2001; **R-205**, Geophysical/Geological Work Authorization, Program NS24-G005-007P, 19 July 2002; **R-206**, Geophysical/Geological Work Authorization, Program NS24-G005-008P, 25 April 2003 (emphasis added).

¹⁸ **R-207**, Letter from J.E. (Jim) Dickey, Chief Executive Officer, CNSOPB to Matthew Kimball, Vice President, Marine Operations, Geophysical Service Inc., RE: “Geophysical Program Authorization No. NS24-G005-003P”, 4 October 2000 (emphasis added).

¹⁹ **R-208**, Letter from J.E. (Jim) Dickey, Chief Executive Officer, CNSOPB to Matthew Kimball, Vice President, Marine Operations, Geophysical Service Inc., RE: “Geophysical Program Authorization No. NS24-G005-004P”, 15

27. Having received approval by the CNSOPB based on these explicit conditions in its six GWAs, and having been apprised of those conditions prior to commencement of these projects, GSI decided to proceed with its seismic surveys.

28. Since 1992, the CNSOPB has operated the Geoscience Research Centre (“NS GRC”) in Dartmouth, Nova Scotia where well and seismic materials are stored and the public can access the relevant information. The confidentiality periods of 530 geological and geophysical reports from the C-NS Offshore Area have expired and are currently available to the public, including materials from six non-exclusive seismic programs undertaken between 1971 and 1984 by other companies that are now allegedly owned by GSI, as well as the six CNSOPB-approved programs undertaken by GSI between 1998 and 2003.

29. Seismic materials for which the confidentiality period has expired is made available to the public at the NS GRC for viewing in paper and mylar format (as noted above, digital data in SEG-Y format is not released to the public). Hardcopy materials can be signed out on loan upon signature of a *Liability Agreement – Borrowed Materials* form. Since the early 2000s, the form has included the statement that the borrower “understand[s] that information and data contained in these materials is being disclosed to me in accordance with the Accord Acts but that it may be protected under the intellectual property laws of Canada and will only use these materials in a manner consistent with those laws.”²⁰ I understand the language chosen by the CNSOPB in the *Liability Agreement – Borrowed Materials* form is to alert the borrower that the materials “may be

May 2001, p. 2; **R-209**, Letter from J.E. (Jim) Dickey, Chief Executive Officer, CNSOPB to Matthew Kimball, Vice President, Marine Operations, Geophysical Service Inc., RE: “Geophysical Program Authorization No. NS24-G005-7P”, 19 July 2002, PDF, p. 2; **R-210**, Letter from J.E. (Jim) Dickey, Chief Executive Officer, CNSOPB to Matthew Kimball, Vice President, Marine Operations, Geophysical Service Inc., RE: “Geophysical Program Authorization No. NS24-G005-8P”, 25 April 2003, PDF, p. 2 (emphasis added).

²⁰ **R-211**, CNSOPB, “Liability Agreement – Borrowed Materials”.

protected” under Canada’s intellectual property laws, but did not take a position as to whether they were or not.

30. Once the *Liability Agreement – Borrowed Materials* form was signed, the CNSOPB would either send the requested materials to a reproduction company (which would directly bill the party requesting the materials) or temporarily loan the requested materials to the borrower.

31. Since December 2007, the CNSOPB has made PDF copies of seismic materials for exclusive seismic programs available to the public online via its digital Data Management Centre (“DMC”). While there had been discussions with industry in the mid-2000s to make non-exclusive survey materials available online and in digital format, that plan did not proceed. Accordingly, materials from non-exclusive surveys are not available to download on the DMC and can only be obtained in paper or mylar format from the NS GRC.

VI. GSI SEISMIC PROGRAMS IN THE NOVA SCOTIA OFFSHORE AREA

A. GSI Seismic Programs which Pre-Dated the 1986 C-NS Accord Acts and CNSOPB

32. According to the records of the CNSOPB, GSI’s “predecessor companies”²¹ undertook six non-exclusive seismic programs in the C-NS Offshore Area²² between 1971 and 1984 (Programs 8620-G005-001P; 8620-G005-004P; 8620-G005-010P; 8624-G005-006P; 8624-G005-007P; and 8624-G005-008P).²³ These non-exclusive surveys were approved by federal regulators prior to the C-NS Accord Acts and the creation of the CNSOPB.

²¹ I understand from the Witness Statement of Davey Einarsson that the seismic data discussed in this section was purchased by GSI from Halliburton in 1993. See **CWS-03**, Witness Statement of Davey Einarsson, 2 December 2019, ¶ 26.

²² Certain of these programs involved seismic data acquired in both the Newfoundland and Labrador and C-NS Offshore Area and may also be in the Canada-Newfoundland and Labrador Offshore Petroleum Board’s records.

²³ For an explanation of what the program numbers represent, see **R-212**, CNSOPB “Information on Well Data, Geological Data and Geophysical Data” February 2012, p. 5; and **R-213**, CNSOPB “Information on Well Data, Geological Data and Geophysical Data” December 2019, p. 5.

33. The pre-CNSOPB surveys are set out in the table below. Noted in the footnotes is an instance where, according to the records of the CNSOPB, the survey did not fully comply with final reporting requirements in effect at the time, which means the materials for this program which the CNSOPB has in its possession (and hence can release to the public) is limited.

Program Number/Name	Survey Start/Completion Date	Confidentiality Period Expired/Release Date
8620-G005-001P (Offshore Newfoundland-Grand Banks-Scotian Shelf) (NE Nfld Offshore, Grand Banks, Flemish Pass, Labrador Sea)	Start: May 7, 1971 End: November 5, 1971	May 5, 1982
8620-G005-004P (Offshore Newfoundland-Scotian Shelf) (NE Nfld Offshore, Grand Banks, Flemish Pass, Labrador Sea)	Start: April 5, 1972 End: December 6, 1972	June 6, 1983
8620-G005-010P (East Coast) (Regional Program off the Nova Scotia shelf)	Start: October 30, 1978 End: November 9, 1978	<i>Seismic materials for this program have not been disclosed by CNSOPB as a portion of the survey extends across the Georges Bank Prohibition Area²⁴</i>
8624-G005-006P (Gulf of St. Lawrence / Sable Island)(Gulf of St. Lawrence and Scotian Shelf)	Start: September 18, 1982 End: October 1, 1982	April 1, 1993 ²⁵
8624-G005-007P (Nova Scotia)(1984 Scotian Shelf Marine Seismic)	Start: January 29, 1984 End: April 5, 1984	October 5, 1994
8624-G005-008P (Sable Island Area 3D Survey)(Onondaga-3D)(Scotian Shelf)	Start: August 26, 1983 End: January 28, 1984	June 28, 1994

²⁴ The Georges Bank Prohibition Area is off the southwest coast of Nova Scotia along the Canada-United States maritime boundary. There has been a ban on oil and gas activity in this area since 1988. See **R-214**, CNSOPB, Map of Marine Protected Areas, Georges Bank Prohibition Area, Sable Island National Park Reserve and Donkin Coal Block Area, February 2019.

²⁵ The Final Report for 8624-G005-006P was not submitted.

B. GSI Seismic Programs Approved by the CNSOPB Pursuant to the 1992 CNSOPB Program Guidelines and 1995 C-NS Geophysical Regulations

34. Between 1998 and 2003, the CNSOPB issued GWAs to GSI for the performance of six non-exclusive surveys in the C-NS Offshore Area.²⁶ These surveys had the following CNSOPB program numbers: NS24-G005-001P; NS24-G005-002P; NS24-G005-003P; NS24-G005-004P; NS24-G005-007P; and NS24-G005-008P.

35. As noted above, each of these surveys were subject to the 1992 CNSOPB Program Guidelines and 1995 *C-NS Geophysical Regulations*. Compliance with the reporting requirements contained therein were express conditions of the GWAs issued to GSI, as were the conditions that seismic materials are made available to the public at the termination of the ten-year confidentiality period applicable to non-exclusive surveys.

36. The following chart summarizes details as to when the confidentiality period expired for these six non-exclusive GSI surveys. Also noted are instances of significant non-compliance by GSI whereby it failed to submit seismic materials for four of its surveys as required by the 1992 CNSOPB Program Guidelines and 1995 *C-NS Geophysical Regulations*. Accordingly, the CNSOPB only has limited materials from the four non-compliant GSI surveys indicated in the chart below.

Program Number/Name	Survey Start/Completion Date	Confidentiality Period Expired/Release Date
NS24-G005-001P BA98 & CA98 lines	Start: August 27, 1998 End: April 10, 1999	October 10, 2009 ²⁷

²⁶ See **R-202**, Geophysical/Geological Work Authorization, Program NS24-G005-001P, 13 July 1998; **C-145**, Geophysical/Geological Work Authorization, Program NS24-G005-002P, 9 April 1999; **R-203**, Geophysical/Geological Work Authorization, Program NS24-G005-003P, 4 October 2000; **R-204**, Geophysical/Geological Work Authorization, Program NS24-G005-004P, 15 May 2001; **R-205**, Geophysical/Geological Work Authorization, Program NS24-G005-007P, 19 July 2002; **R-206**, Geophysical/Geological Work Authorization, Program NS24-G005-008P, 25 April 2003.

²⁷ GSI did not submit seismic lines for program NS24-G005-001P.

Program Number/Name	Survey Start/Completion Date	Confidentiality Period Expired/Release Date
(Barrington / Scotian Shelf)		
NS24-G005-002P BA99 & PA99 lines (Banquereau / Scotian Shelf / Barrington / Demascota)	Start: April 10, 1999 End: August 8, 2000	February 8, 2011 ²⁸
NS24-G005-003P Laurentian 2D (LO lines) (Laurentian Channel)	Start: October 4, 2000 End: December 1, 2000	June 1, 2011
NS24-G005-004P Marquis 2D (North West Sable)	Start: May 18, 2001 End: June 6, 2001	December 6, 2011
NS24-G005-007P Mariner 2D (Sable Island)	Start: July 22, 2002 End: November 17, 2002	May 17, 2013 ²⁹
NS24-G005-008P Mamou 2D & 3D (Scotian Shelf – Infill / Mamou 3D)	Start (2D): April 24, 2003 End (2D): May 21, 2003 Start (3D): May 24, 2003 End (3D): July 24, 2003	January 24, 2014 ³⁰

VII. OTHER AVAILABLE SEISMIC PROGRAMS IN THE NOVA SCOTIA OFFSHORE AREA

37. Attached as Annexes II-VI are maps that illustrate the locations of GSI's seismic surveys in the C-NS Offshore Area. Annex II shows the locations of GSI's 2D and 3D seismic programs acquired between 1971 and 2003; Annex III-A to III-L show each GSI program individually. Annex IV illustrates GSI's 2D surveys and 2D surveys by other operators. Annex V illustrates GSI's 3D surveys and 3D surveys by other operators. Finally, Annex VI illustrates all the

²⁸ GSI did not submit seismic lines for program NS24-G005-002P.

²⁹ GSI did not submit hardcopy (paper/mylar maps, seismic lines and reports) or digital seismic navigation data (shotpoint data) for program NS24-G005-007P.

³⁰ GSI did not submit hardcopy (paper/mylar maps, seismic lines and reports) or digital seismic navigation data (shotpoint data) for the 2D portion of program NS24-G005-008P but did submit all the required data for the 3D portion of the program.

publically-available 2D and 3D geophysical surveys available within the C-NS Offshore Area.

38. These maps illustrate that there is a significant amount of 2D and 3D seismic data in the C-NS Offshore Area collected by other seismic operators in addition to GSI's surveys. Whether GSI's data is "unique" or superior to competing data available from other sources, which Mr. Davey Einarsson and Mr. Paul Einarsson imply in their Witness Statements,³¹ can only be determined by a careful comparison of GSI's seismic data to that which is available from other sources taking into account, among other factors, the type of seismic acquisition (e.g., 2D survey, single vessel 3D surveys, multi-vessel 3D surveys), processing methods and its vintage compared to newer surveys in the same geographic area.

VIII. CORRESPONDENCE BETWEEN GSI AND THE CNSOPB REGARDING THE PUBLIC DISCLOSURE OF GSI SEISMIC REPORTS

39. At various times, the CNSOPB received correspondence from GSI alleging, among other things, that the CNSOPB could not disclose GSI's seismic materials to the public after the expiry of the applicable confidentiality period because it was allegedly copyrighted, a trade secret and/or confidential information. While I was not privy to all of the correspondence between GSI and the CNSOPB, I am familiar with some of it, including the CNSOPB's responses thereto.

40. GSI wrote to the Board on February 29, 2000 asserting that materials submitted to the CNSOPB were confidential information and subject to copyright.³² As noted above, the Board reiterated in the GWAs issued to GSI in 2000, 2001, 2002 and 2003 that the Board would exercise

³¹ **CWS-03**, Witness Statement of Davey Einarsson, 2 December 2019, ¶ 42; **CWS-06**, Witness Statement of Harold Paul Einarsson, 27 September 2022, ¶ 90.

³² **R-215**, Letter from Paul Einarsson, Geophysical Service Incorporated to Mr. J.E. (Jim) Dickey, Chief Executive Officer, CNSOPB, RE: "GSI participation in the Shared Data Repository", 29 February 2000.

its authority to publicly disclose GSI's seismic materials after ten years.³³

41. CNSOPB General Counsel and Access to Information Coordinator Michael S. McPhee explained the Board's position further in his January 29, 2001 affidavit in a Federal Court of Canada claim by GSI against the CNSOPB. In 2000, GSI had sought access to the names of third-parties that had accessed GSI's seismic materials from the Board after the confidentiality period expired.³⁴ Mr. McPhee explained the CNSOPB's position and practice regarding the disclosure of seismic materials after the expiration of the applicable confidentiality periods.³⁵ Mr. McPhee noted that while digital data is not made available to the public for inspection or copying, the paper or mylar copies of reports for which the confidentiality periods had expired could be loaned to a borrower provided that the *Liability Agreement – Borrowed Materials* form was signed.³⁶

42. On March 30, 2006, GSI alleged in a letter to the CNSOPB that the release of its seismic materials by the CNSOPB would constitute an "expropriation" for which "a heated legal challenge...will be the likely result in protest to the expropriation."³⁷ On March 30, 2007, GSI's legal counsel, Gowlings, sent a letter and draft statement of claim to Mr. McPhee demonstrating its intention to file a lawsuit seeking an injunction and declaration against the Board. GSI alleged

³³ **R-203**, Geophysical/Geological Work Authorization, Program NS24-G005-003P, 4 October 2000; **R-204**, Geophysical/Geological Work Authorization, Program NS24-G005-004P, 15 May 2001; **R-205**, Geophysical/Geological Work Authorization, Program NS24-G005-007P, 19 July 2002; **R-206**, Geophysical/Geological Work Authorization, Program NS24-G005-008P, 25 April 2003.

³⁴ **R-216**, *Geophysical Service Incorporated v. The Chairman, Canada-Nova Scotia Offshore Petroleum Board and Information Commissioner of Canada*, Affidavit of Michael S. McPhee, Federal Court - Trial Division T-2102-00, 26 January 2001 ("Affidavit of Michael S. McPhee"), ¶ 3.

³⁵ **R-216**, Affidavit of Michael S. McPhee, ¶ 14.

³⁶ **R-216**, Affidavit of Michael S. McPhee, ¶ 14.

³⁷ **R-217**, Letter from Paul Einarsson, COO, Chairman, Executive Vice President, Geophysical Service Incorporated to Mr. J.E. (Jim) Dickey, Chief Executive Officer, CNSOPB, 30 March 2006.

that the Board had infringed its copyright and trade secrets in the submitted seismic materials.³⁸

43. On April 4, 2008, GSI again threatened to initiate legal action to protect its “copyright and intellectual property rights” if its demands were not met.³⁹ On November 4, 2008, GSI demanded that the seismic materials that it was required to provide to the CNSOPB not be disclosed to the public after the expiry of the applicable confidentiality period.⁴⁰

44. The CNSOPB did not accept GSI’s position regarding the conditions on disclosing seismic materials after the confidentiality period expired. The Board maintained that it would continue to apply the laws, regulations and policies regarding public disclosure of seismic materials that it had been applying since 1992 and on which GSI’s six non-exclusive surveys in the C-NS Offshore Area between 1998 and 2003 had been authorized.⁴¹

45. I am aware that GSI initiated several legal actions against the CNSOPB regarding its seismic materials, including lawsuits in January 2013 against the CNSOPB in the Supreme Court of Nova Scotia⁴² and in 2014 in the Federal Court of Canada⁴³ seeking an injunction and a

³⁸ **R-218**, Letter from Anthony J. Jordan, Gowlings to Michael McPhee, CNSOPB, RE: “Geophysical Service Incorporated (“GSI”)”, 30 March 2007, *attaching* draft Statement of Claim.

³⁹ **R-219**, Letter from Paul Einarsson to Ms. Mary Jean Verrall, CNSOPB, 4 April 2008.

⁴⁰ **R-220**, Letter from H. Paul Einarsson to Brian Altheim, CNSOPB, RE: “Confidential Information”, 4 November 2008.

⁴¹ *See e.g.*, **R-221**, Email from Stuart Pinks, Chief Executive Officer, CNSOPB to Paul Einarsson, Geophysical Service Incorporated, RE: “GSI”, 17 August 2009: (“[...] 1. The CNSOPB does not share your opinion that it is violating any Canadian laws; 2. The Board has not implemented any changes to its long-standing disclosure practices respecting non-exclusive seismic data.”); **R-222**, Letter from Stuart Pinks, Chief Executive Officer, CNSOPB to Paul Einarsson, Geophysical Service Incorporated, RE: “Your Letter of May 3, 2010”, 12 May 2010; **R-223**, Letter to A. William Moreira, Stewart McKelvey from Stuart Pinks, Chief Executive Officer, CNSOPB, RE: “Geophysical Service Incorporated – Copyright and Website Content of NS13-1 Call for Bids”, 3 October 2013.

⁴² **R-224**, *Geophysical Service Incorporated v. Canada-Nova Scotia Offshore Petroleum Board, the Attorney General of Nova Scotia and the Attorney General of Canada*, Case No. 410874, Notice of Application, 8 January 2013.

⁴³ **C-210**, *Geophysical Service Incorporated v Canada-Nova Scotia Offshore Petroleum Board*, 2014 FC 450, Order and Reasons, 9 May 2014. As noted above, I was an affiant in this Federal Court of Canada proceeding.

declaration that the CNSOPB was not authorized to publicly disclose GSI's seismic materials after the expiration of the applicable confidentiality period. I also understand that the CNSOPB was implicated in the claim initiated by GSI in 2014 against the Government of Canada in the Court of Queen's Bench of Alberta, in which GSI claimed, among other things, that the regulatory regime in Canada and Nova Scotia constituted an expropriation of GSI's copyright and trade secrets.⁴⁴

IX. RESPONSE TO SPECIFIC ALLEGATIONS MADE BY THE CLAIMANTS

46. In addition to those discussed above, I would like to comment on certain other statements made by the Claimants in the Memorial and Witness Statements of Mr. Paul Einarsson and Mr. Davey Einarsson pertaining to the CNSOPB.

47. At paragraph 58(b) of the Claimants' Memorial, they allege that in November 1974 the Province of Nova Scotia "represented to GSI Delaware and Davey [Einarsson] that non-exclusive seismic data did not need to be included in the Submissions" and that "during that time, and continuously after the creation of the CNSOPB, Davey and later GSI understood that Nova Scotia and Canada coordinated their practices with respect to the Regulatory Regime."⁴⁵

48. While I have no knowledge of Mr. Davey Einarsson's interactions with the Province of Nova Scotia in 1974, it is not clear what Mr. Einarsson is suggesting regarding the CNSOPB's practices since its creation. My observation of the November 28, 1974 letter relied on by Mr. Einarsson for his statement (Exhibit C-156) is that it contains no representation or any connection to GSI's non-exclusive seismic surveys. Rather, a permit (now called a GWA) was issued to

⁴⁴ **R-010**, *Geophysical Service Incorporated v HMTQ (NRCAN) and the National Energy Board*, Court File No. 1401-05316, Statement of Claim, 14 May 2014.

⁴⁵ Claimants' Memorial, ¶ 58(b). See also **CWS-03**, Witness Statement of Davey Einarsson, 2 December 2019, ¶ 61(g).

“Geophysical Services Incorporated” in 1977 to conduct an exclusive seismic survey on behalf of Cavalier Energy and Soquip-Hudson’s Bay.⁴⁶ This program has been in the public domain since at least 1984.⁴⁷

49. As for the Claimants’ statement in paragraph 58(b) in their Memorial regarding Nova Scotia and Canada’s regulatory regime after the creation of the CNSOPB, I cannot comment on what Mr. Einarsson and/or GSI might have “understood”. However, it is my opinion that the regulatory regime for the C-NS Offshore Area after the creation of the CNSOPB was straightforward and readily discernible to participants in the industry from the C-NS Accord Acts, 1992 CNSOPB Program Guidelines and 1995 *C-NS Geophysical Regulations*.

50. At paragraphs 58 (aa)-(cc) of their Memorial, the Claimants describe how in 2006 the CNSOPB requested industry input on the creation of a digital database to facilitate public access to seismic materials for which the confidentiality period had expired. Mr. Paul Einarsson alleges at paragraph 131 of his Witness Statement that “the C-NSOPB sought to skip the work with third party copy companies by releasing SEG-Y digital data online in a ‘Shared Data Repository’, which GSI understands has been up and running for years but is not able to find out what is being disclosed.”⁴⁸

51. I disagree with the Claimants’ characterizations of the CNSOPB’s motivations. In any

⁴⁶ **C-156**, Letter from R. Slater, Nova Scotia Department of Mines to Geophysical Services Incorporated, enclosing Permit No. 5, 28 November 1974 (“Condition 3 of the permit does not apply to G.S.I but to the licensee, i.e., Hudson’s Bay or Cavalier.”).

⁴⁷ **R-225**, Program # 8620-C039-001E, Final Report Chedabucto Bay November 1974, 18 April 1977. See **R-226**, Canada Oil and Gas Lands Administration “Released Geophysical and Geological Reports – Canada Lands” January 1984, p. 18 (listing program Cavalier Energy program 8620-C039-001E). CNSOPB records indicate that the disclosure date for this program was May 29, 1980.

⁴⁸ See also Claimants’ Memorial, ¶ 75.

event, as noted above, after consulting with industry (including GSI) in 2006, the Board decided not to include non-exclusive seismic data in its public online database. The DMC provides online access to PDF copies of seismic materials (not SEG-Y) from exclusive programs whose confidentiality periods have expired.⁴⁹ Since GSI's programs in the C-NS Offshore Area are all non-exclusive, none of the materials it submitted to the CNSOPB are available on the DMC, other than the location of its non-exclusive surveys. I also note that, since 2007, any member of the public can see what is being disclosed through the DMC by simply registering online for access.

52. At paragraphs 70-71 of their Memorial, the Claimants make allegations regarding oil companies submitting GSI's seismic data to the CNSOPB in order to claim allowable expenditure credits against a work deposit.⁵⁰ GSI refers to these as "Secondary Submissions".

53. It is in the discretion of the oil company involved to decide if it wants to claim the allowable expenditure credit. If it chooses to do so, Sections 25(5) and (6) of the 1995 *C-NS Federal Geophysical Regulations* require the oil company submit to the Board the seismic data for which it claims credit for its costs.⁵¹ The CNSOPB is not a party or privy to licence agreements between GSI and its licensees. Accordingly, the Board has no knowledge as to whether oil companies that submit the requisite materials to claim allowable expenditure credits are doing so in violation of their licence agreements with GSI.

⁴⁹ The website for the CNSOPB DMC is: <https://www.cnsopb.ns.ca/what-we-do/information-management/data-management-centre>.

⁵⁰ A work deposit is set at 25% of a successful work expenditure bid for an Exploration Licence. As the oil company does work relating to its Exploration Licence, it can apply to the CNSOPB for allowable expenditure credits that, if approved, would result in a prorated refund of their work deposit.

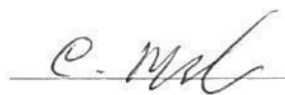
⁵¹ See **C-141**, 1995 *C-NS Federal Geophysical Regulations*, s. 25(5) (requires a company which has licenced or purchased seismic data and claimed an allowable expenditure credit against their Exploration Licence(s) to submit a seismic interpretation report to the CNSOPB in order to receive credit for the licensing costs); s. 25(6) (requires a company that has reprocessed licenced or purchased data and claimed an allowable expenditure credit against their Exploration Licence(s) to submit a copy of the reprocessed data and a seismic interpretation report to the CNSOPB in order to receive credit for the licensing and reprocessing costs).

RWS-03

Witness Statement of Carl Makrides

54. At paragraph 437 of their Memorial, the Claimants allege that because of technological advancements in vectorization, the CNSOPB is “effectively making the Seismic Works available to the public in SEG-Y format.” As previously noted, the CNSOPB does not provide industry-submitted SEG-Y data to the public, nor does it provide vectorized copies to third-parties after the applicable confidentiality period has expired. If third-parties are borrowing seismic data from the CNSOPB, they are required to sign the *Liability Agreement – Borrowed Materials* form. If these companies are copying paper or mylar copies and vectorizing this data themselves, it is not under the authority or control of the CNSOPB.

Dated this 14th day of January, 2023.

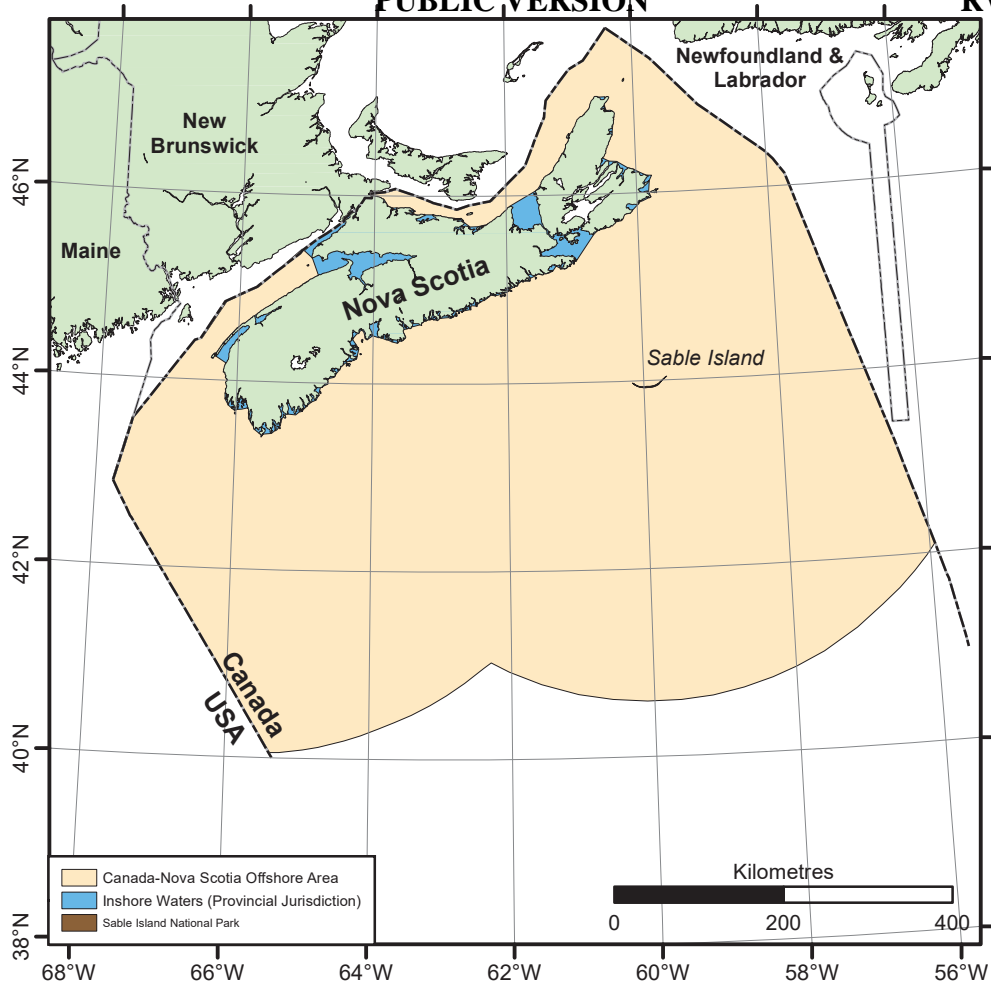
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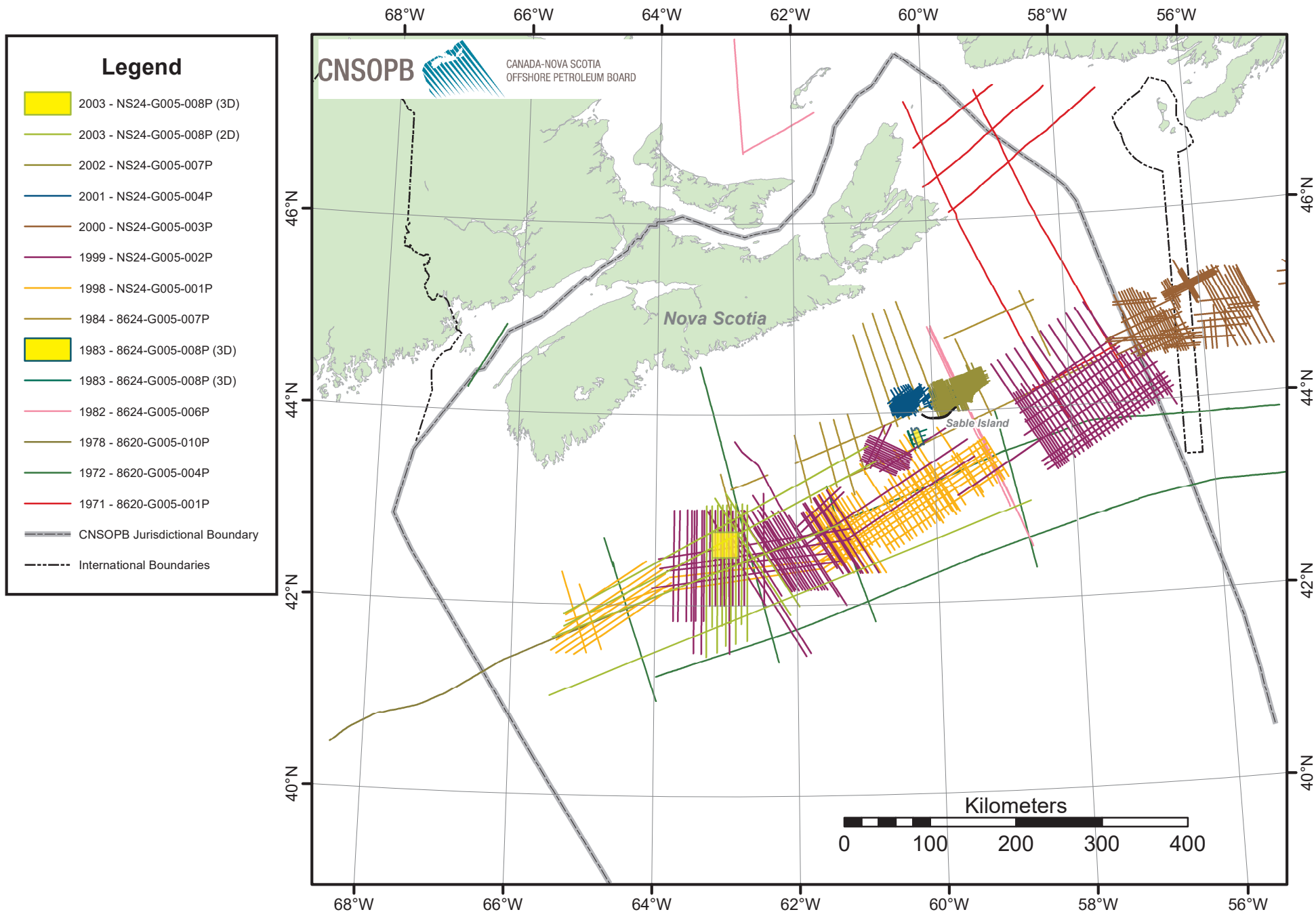
CARL MAKRIDES

Annex I

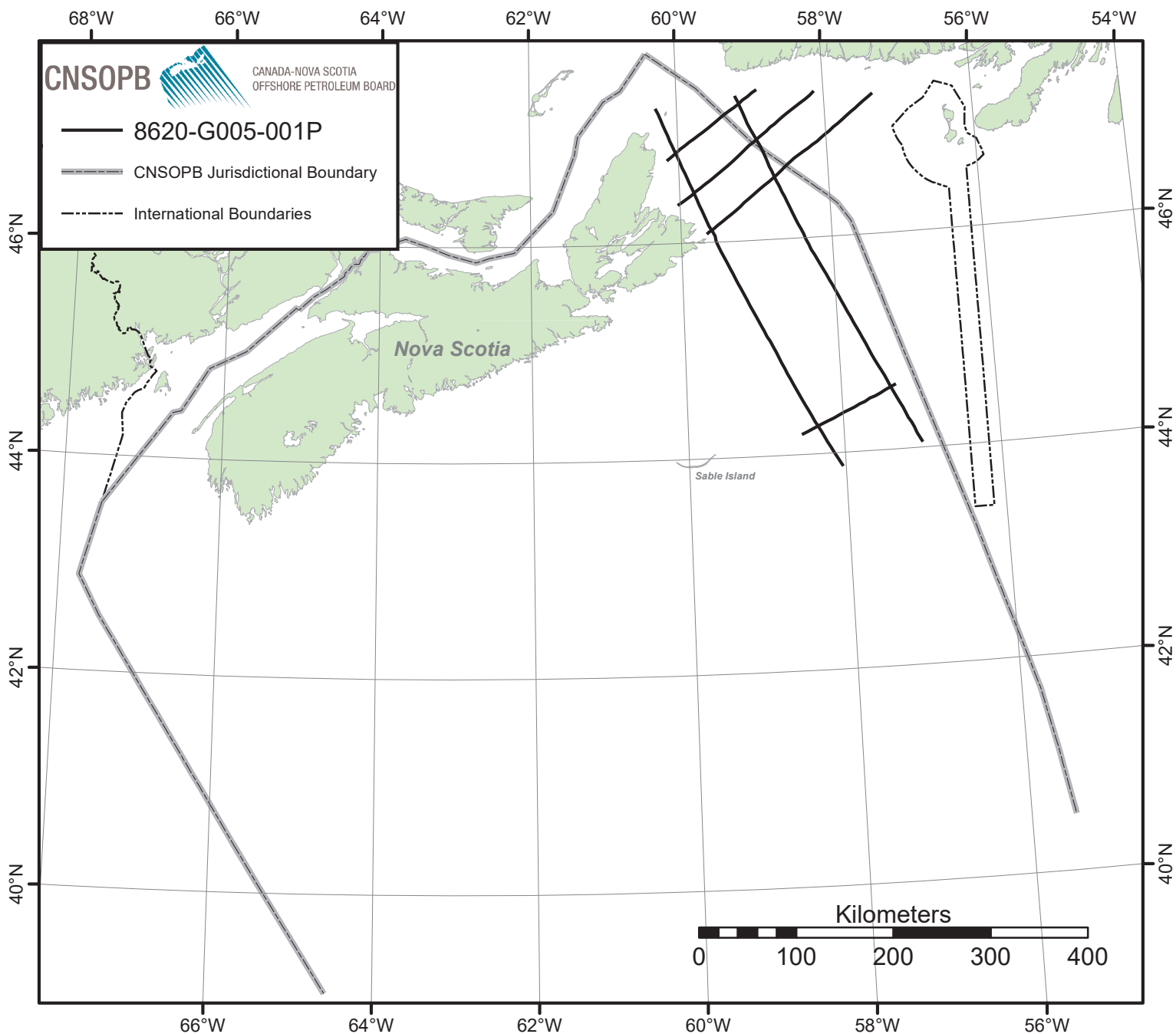
PUBLIC VERSION

RWS-03

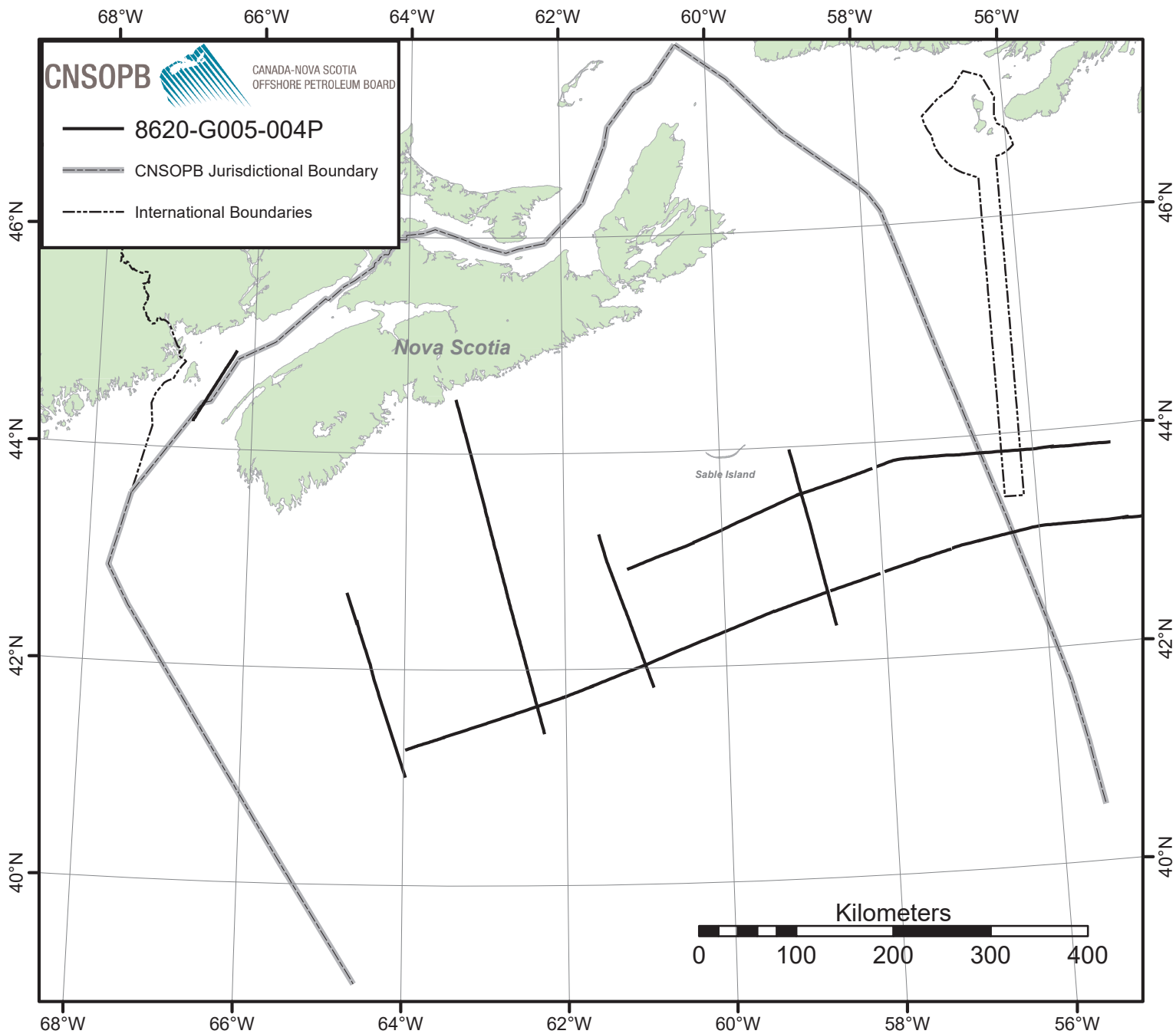




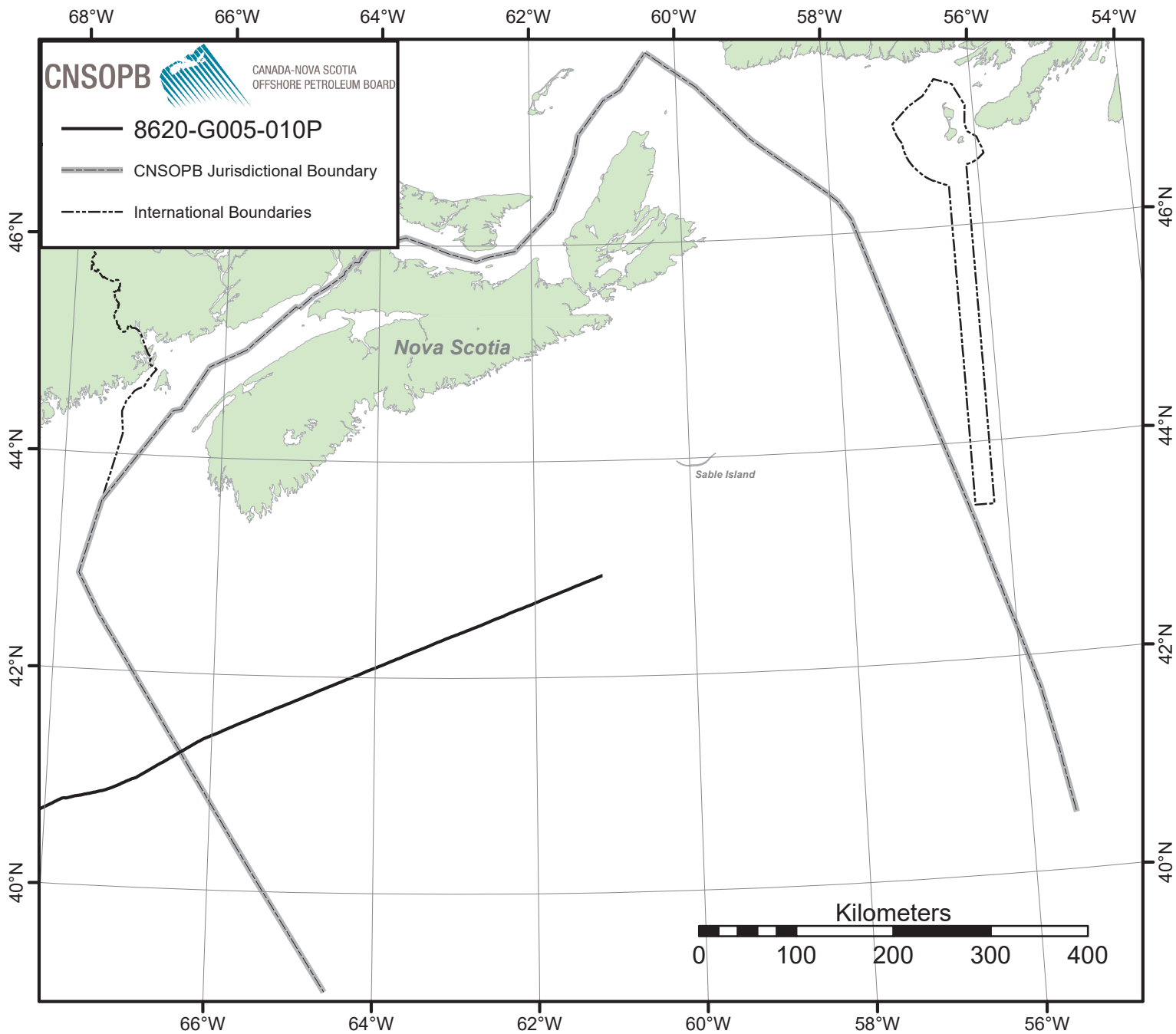
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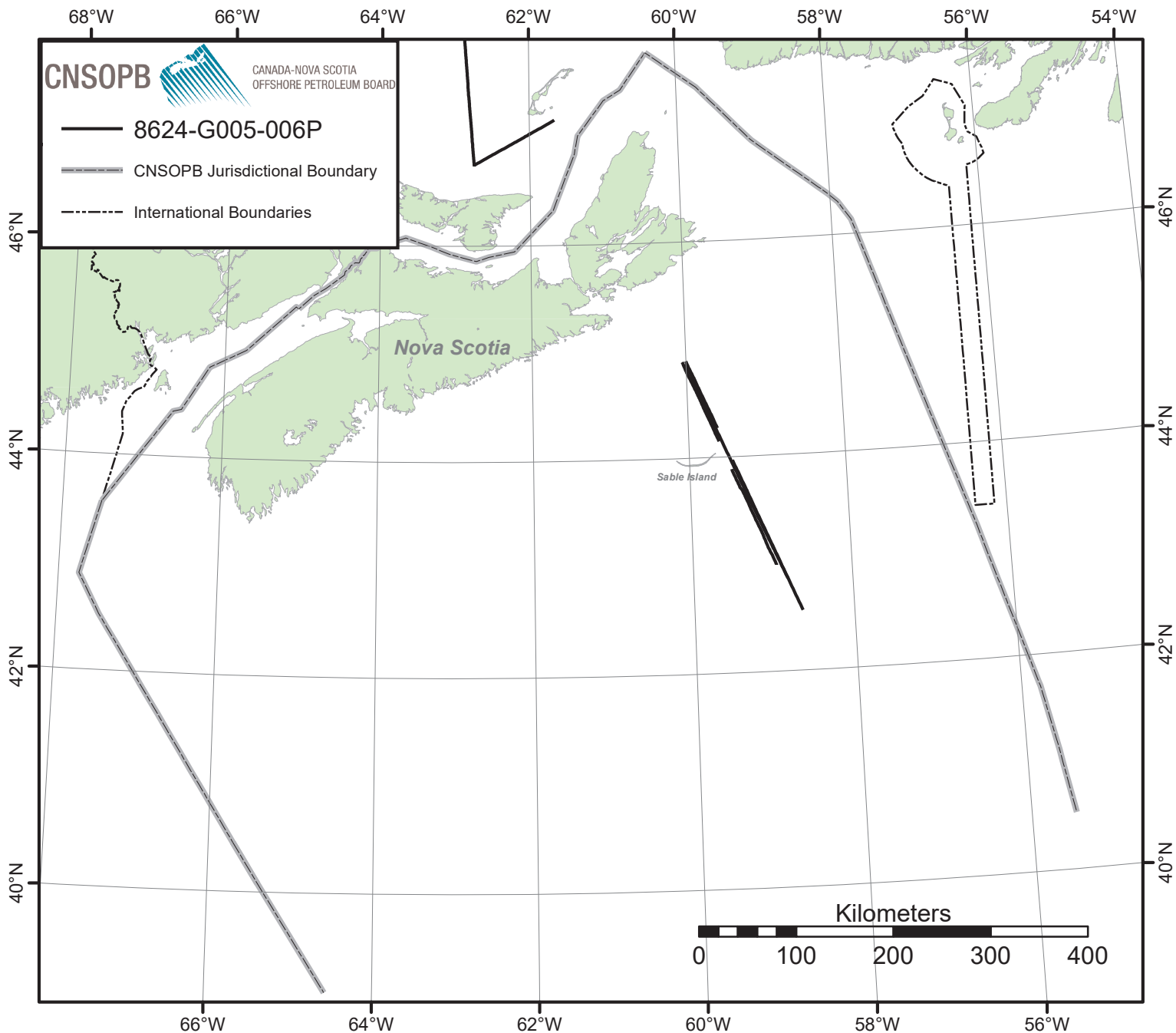
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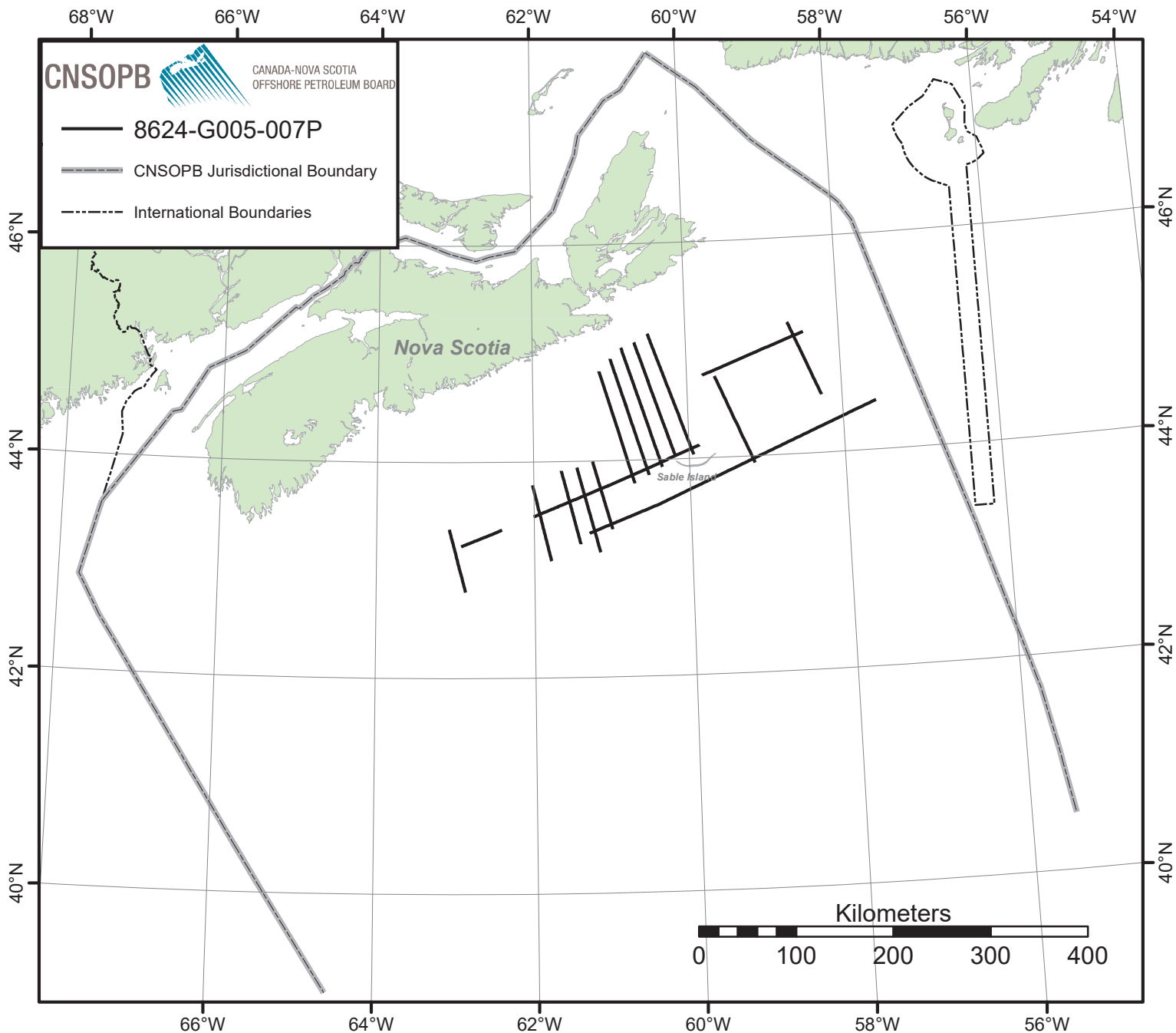
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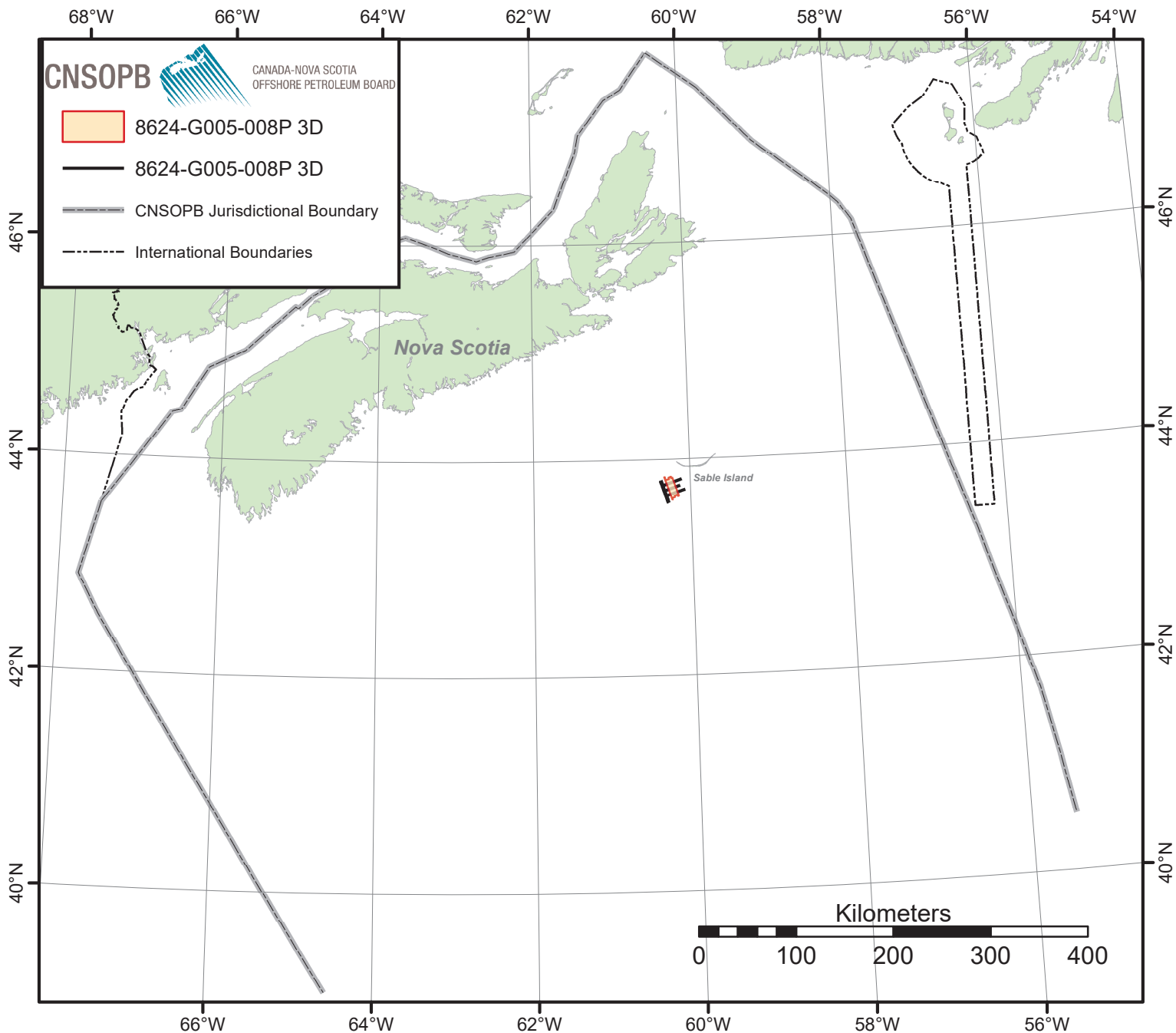
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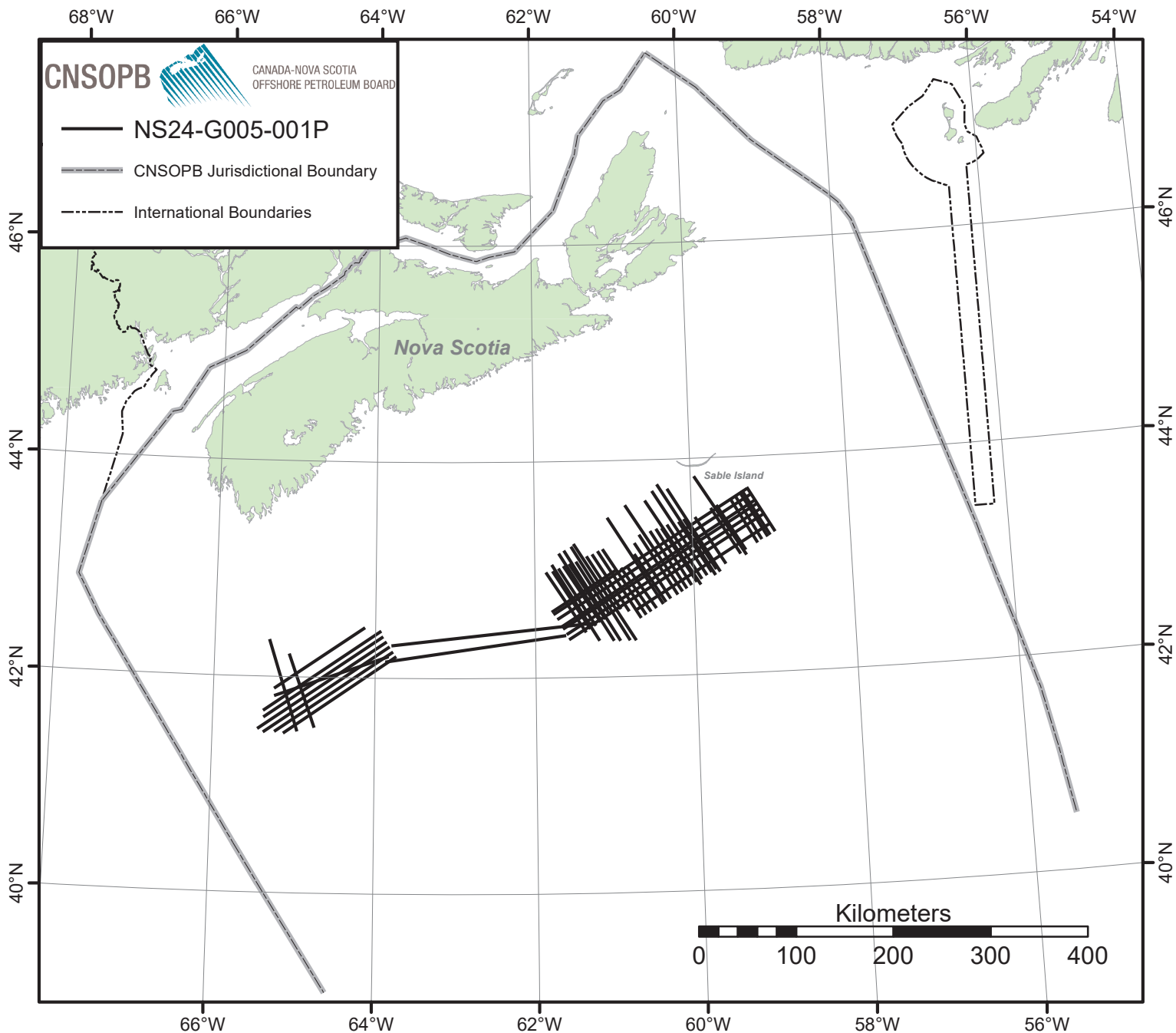
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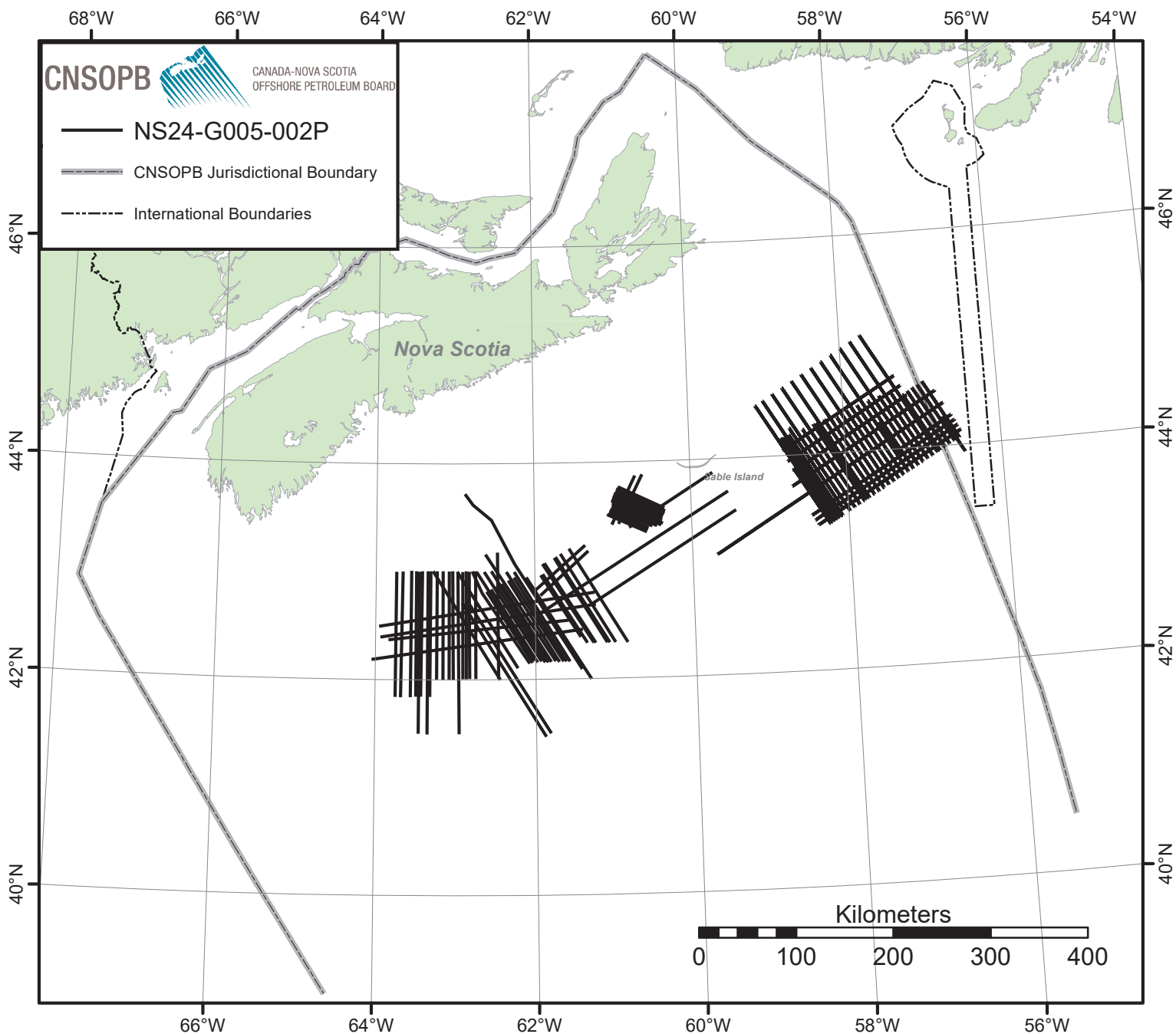
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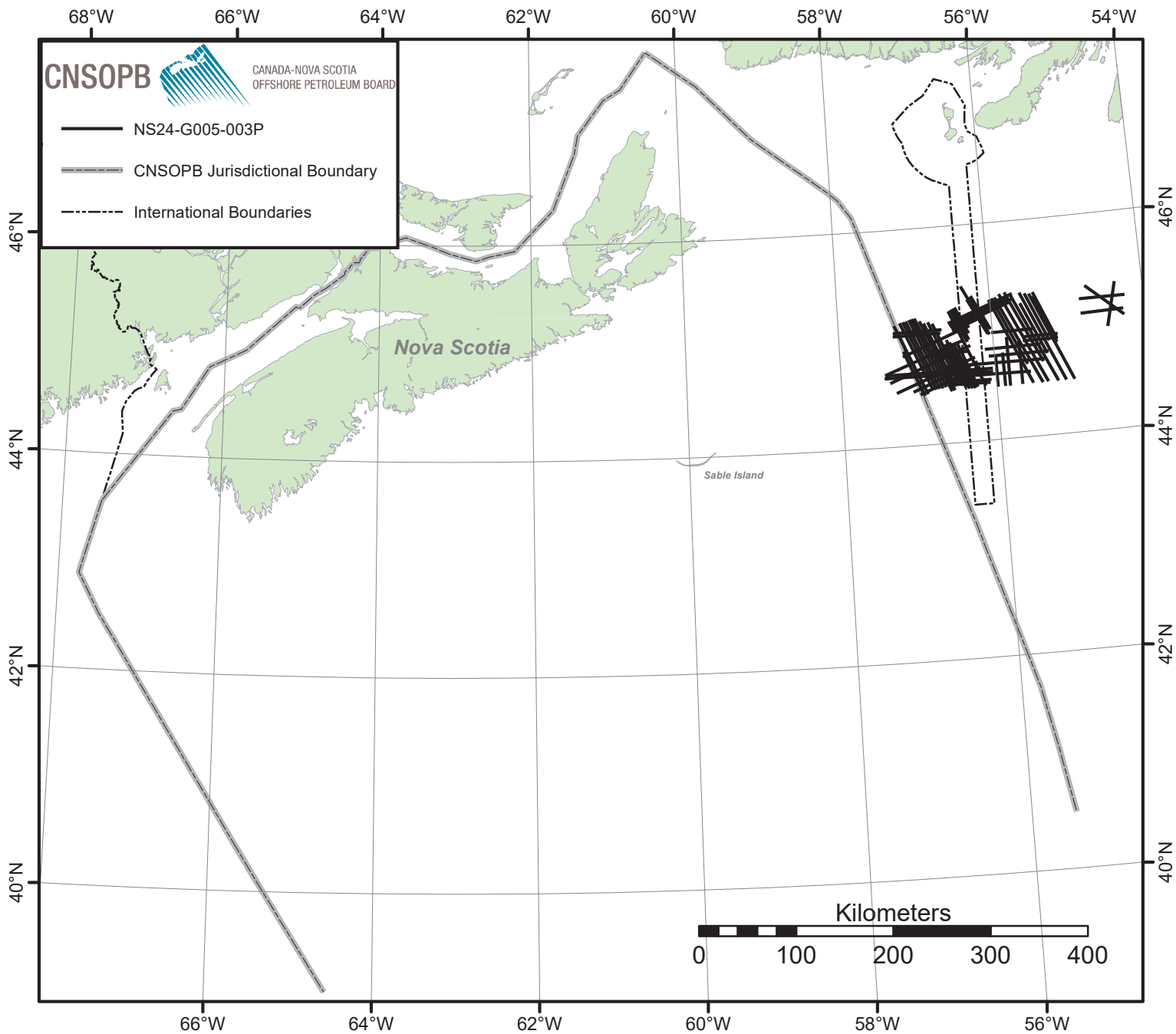
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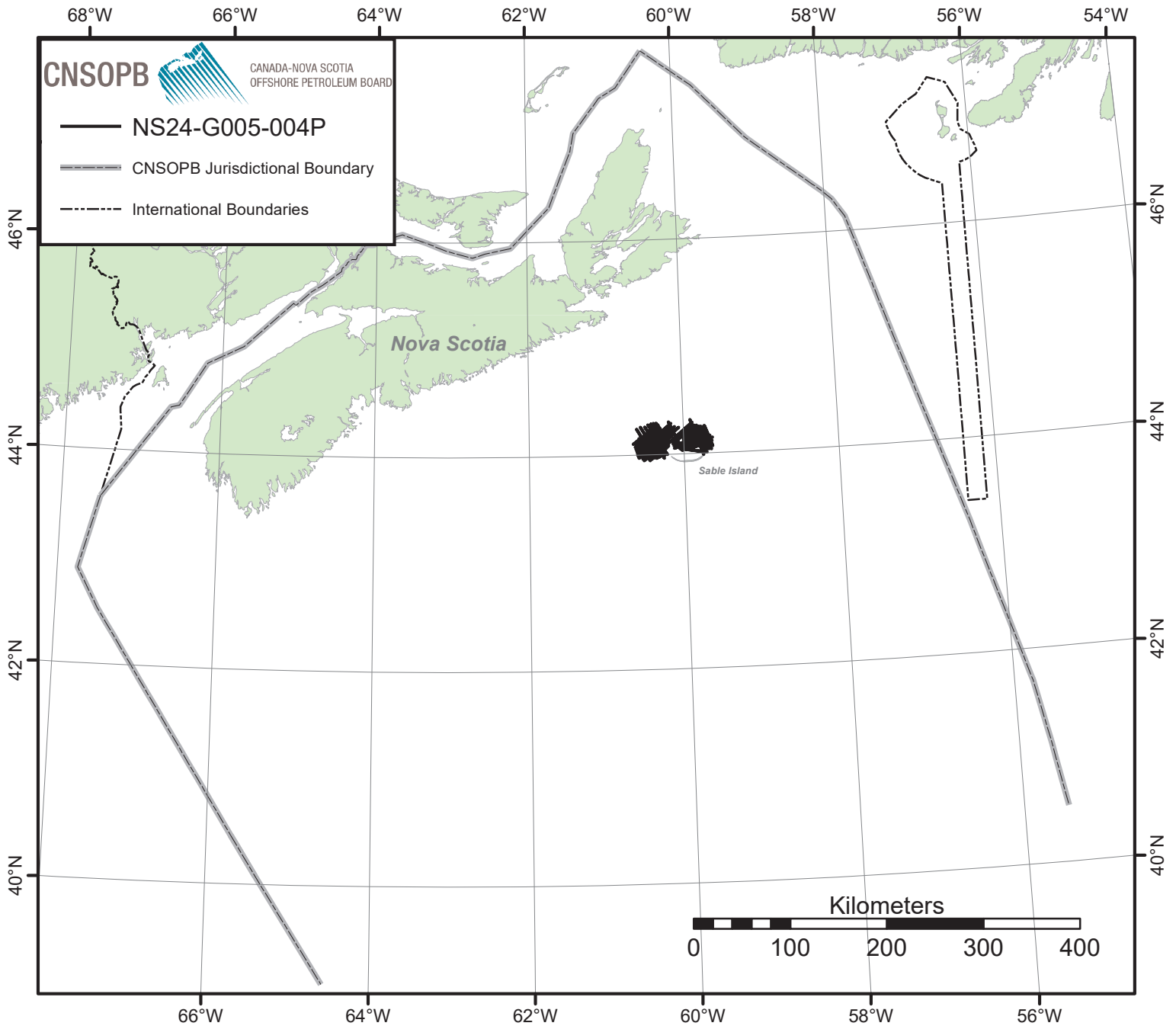
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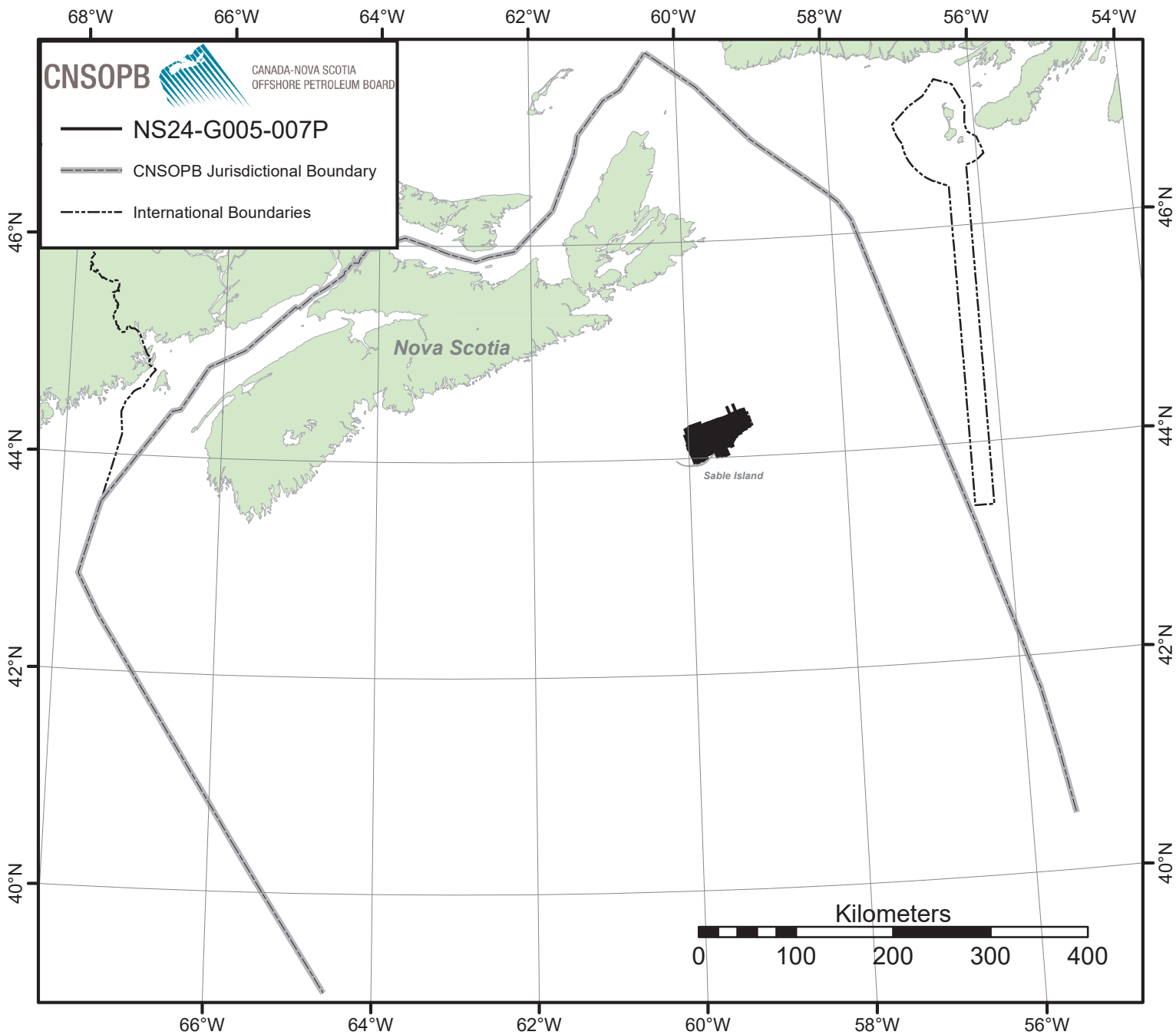
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NS24-G005-008P (2003)

