

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 BHARAT DIXIT

January 16, 2023

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I, Bharat Dixit, of the City of Calgary, in the Province of Alberta, HEREBY AFFIRM as follows:

I. INTRODUCTION

1. I recently retired (in July 2022) from the Canadian Energy Regulator (“CER”), formerly known as the National Energy Board (“NEB”).¹ My last position there was Technical Leader – Exploration And Production in the NEB’s Central and North Team in the Energy Adjudication Business Unit, a position I held from 2010 to 2022.

2. Prior to this, from 2004 to 2010, I was the Team Leader of the Exploration and Production team at the NEB. I was responsible for leading a multi-disciplinary team to support the full life-cycle of responsibilities of the NEB. This included application receipt and assessment, decision-making, operational oversight and compliance verification, and reporting. I was also responsible for the operations of the Frontier Information Office (“FIO”) providing access to information submitted to the regulators and disclosable under the applicable legislation.

3. Until late 2009, I was the designated Chief Conservation Officer under the *Canada Oil and Gas Operations Act* (“COGOA”).² This role included receipt, review, and approval of applications for oil and gas exploration work or activities, and granting authorizations or approvals such as for geophysical operations and exploration drilling programs.

4. I have a Master degree in Physics and a Ph.D. in Physics & Physical Oceanography from McGill University in Montreal, QC that I received respectively in 1973 and 1978. Following my education and a brief assignment with the Bedford Institute of Oceanography in Dartmouth, Nova

¹ The National Energy Board became the Canada Energy Regulator in 2019. Since most of the relevant events described in this Witness Statement took place prior to the name change, I generally use the acronym “NEB” throughout the remainder of this Witness Statement for simplicity.

² C-150, *Canada Oil and Gas Operations Act*, R.S.C. 1985, c. O-7.

Scotia, I worked for a shipping company that was part of a consortium with two major oil and gas exploration and production companies and an oil and gas transmission pipeline company to develop gas fields on and offshore Melville Island. In 1983, I joined a major oil and gas company in the exploration for, and production of, oil and gas in the Canadian Beaufort Sea. In 1986, I was a principal in a consulting company that provided support services to oil and gas companies and drilling contractors exploring for oil and gas in the Canadian and U.S. Beaufort Sea. Finally, in 1992, I joined the NEB where I occupied the position of Senior Physical Oceanographer.

5. The CER authorized me to 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).

6. In 2015, I filed two sworn affidavits in domestic litigations initiated by GSI against the NEB and other parties in the Court of Queen’s Bench of Alberta.³ As the issues in those litigations overlap to some extent with the facts and assertions 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 previously sworn affidavits.

³ **R-278**, *Geophysical Service Incorporated v. Encana et al.*, Case No. 0701-04061, Affidavit of Bharat Dixit (“First Affidavit of Bharat Dixit”), 28 August 2015; **R-279**, *Geophysical Service Incorporated v. Murphy Oil Company Ltd.*, Case No. 1301-15085, Affidavit of Bharat Dixit, 7 October 2016 (“Second Affidavit of Bharat Dixit”). For the purposes of this Witness Statement, I refer to *Geophysical Service Incorporated v. Encana et al.* as the “Common Issues Trial”.

7. I make this Witness Statement from my personal knowledge and from my review of contemporaneous documents. The fact that I do not address 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. THE OFFSHORE REGULATORY REGIME IN CANADA UNDER THE JURISDICTION OF THE NEB

8. The NEB was a regulatory agency and administrative tribunal established in 1959 by the Parliament of Canada pursuant to the *National Energy Board Act*, RSC 1985, c N-7. In 1991, the NEB staff began conducting regulatory activities in connection with oil and gas operational activities, including geophysical (seismic) operations, on frontier lands in northern Canada and in offshore areas that are not subject to federal-provincial joint management legislation, specifically, the offshore areas managed by the Canada-Newfoundland and Labrador Offshore Petroleum Board ("CNLOPB") and the Canada-Nova Scotia Offshore Petroleum Board ("CNSOPB"). The areas within the NEB's jurisdiction include the offshore regions north of 60° latitude (the Beaufort Sea, Arctic Islands, Eastern Arctic Offshore and Hudson Bay), Gulf of St. Lawrence and the west coast offshore area. For ease of reference, I will refer to the areas currently under the NEB's jurisdiction as "Federal Frontier Lands." A map of the Federal Frontier Lands over which the NEB exercises jurisdiction is attached as Annex I.

9. Before the NEB took on its functions, an organization within the federal government called the Canada Oil and Gas Lands Administration ("COGLA") was responsible for regulating geophysical operations on Federal Frontier Lands between 1981 and 1991.⁴ COGLA's tasks

⁴ See generally, R-280, NEB/COGLA Integration, Discussion Paper, August 1991, pp. 2-3.

included issuing authorizations for seismic programs, receiving the seismic materials required to be submitted and disclosing seismic materials to the public after the expiration of the applicable confidentiality period. In 1991, COGLA was dissolved and some of its records, personnel and functions were transferred to the NEB. Records that fell into the jurisdictions of the newly created CNLOPB and CNSOPB were transferred to those agencies.

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

10. The following provides a historical background and description of the regulatory regime under which the NEB regulates geophysical programs in the Federal Frontier Lands and pursuant to which the NEB is authorized to disclose certain seismic materials to the public after the expiration of the applicable confidentiality period.

11. I understand that the requirement for operators to obtain an authorization to conduct geophysical activities in Canada's offshore, to submit seismic materials to the government and for the public disclosure of certain seismic materials has existed since at least 1961 when the *Canada and Oil Gas Land Regulations* ("1961 COGL Regulations") were enacted.⁵ In 1982, the *Canada Oil and Gas Act* ("COGA") was enacted and maintained the requirement that an operating licence had to be obtained prior to conducting geophysical operations.⁶ COGA section 50(1) stipulated a five-year confidentiality period after completion of the work before documentation submitted to government regulators could be disclosed to the public:

⁵ C-138, *Canada Oil and Gas Land Regulations*, S.O.R., 61/253.

⁶ C-160, *Canada Oil and Gas Act*, S.C., 1981, c.81 ("COGA"), s. 76(3.1). This provision became s. 4 in R-281, *Oil and Gas Production and Conservation Act*, R.S., 1985 c. O-4 ("OGPCA (1985)") and s. 4 C-150, *Canada Oil and Gas Operations Act*, R.S.C. 1985, c. O-7 ("COGOA"). The OGPCA was renamed as COGOA pursuant R-282, *An Act to Amend the Oil and Gas Production and Conservation Act*, S.C. 1992, c. 35, s. 2. Note that the COGOA complements the CPRA and has governed operational safety, environmental protection, and conservation of the petroleum resources in the Frontier Lands since 1985 (when the OGPCA was repealed).

(1) Information or documentation furnished under this Act or the *Oil and Gas Production and Conservation Act* is privileged and shall not knowingly be disclosed without the consent in writing of the party who provided it except for the purposes of the administration or enforcement of either Act or for the purposes of legal proceedings relating to that administration or enforcement. [...] Notwithstanding subsection (1), information or documentation furnished in respect of the following matters may be disclosed, in the manner prescribed as follows: [...] in respect of geological or geophysical work performed on or in relation to Canada lands, on the expiration of five years following the completion of the work or on the reversion of the lands to Crown reserve lands, whichever first occurs;.⁷

12. *COGA* made no distinction between exclusive seismic surveys and non-exclusive (or “speculative”) seismic surveys for the purposes of the five-year confidentiality period before public disclosure.

13. In March 1984, COGLA published guidelines which explained the approval and reporting requirements for seismic operations under *COGA*, including the applicable confidentiality period under the heading “Confidentiality”:

The geological and geophysical data and report will be kept confidential for the same period of time as is the case for the well for which the site investigation was conducted. In the case of investigations for which a well is not drilled, the period of confidentiality for the report and data will be the same as stipulated for such work under the Canada Oil and Gas Act, namely 5 years from the date of completion of the work or on the reversion of the land to Crown reserve status, whichever occurs first.⁸

14. The *COGA* was replaced in 1986 by the *Canada Petroleum Resources Act* (“*CPRA*”).⁹ The *CPRA*, along with the 1985 *Canada Oil and Gas Operations Act* (“*COGOA*”),¹⁰ continue to govern the issuance of geophysical licences in the Federal Frontier Lands. The five-year confidentiality period for exclusive and non-exclusive seismic materials was maintained in the *CPRA*, a rule

⁷ **C-160**, *COGA*, s. 50 (emphasis added).

⁸ **R-238**, COGLA, “Geophysical and Geological Programs on Canada Lands: Guidelines for Approvals and Reports”, March 1984, p. 37.

⁹ **C-167**, *Canada Petroleum Resources Act*, R.S.C. 1985, c. 36 (2nd Supp.) (“*CPRA*”).

¹⁰ **C-150**, *COGOA*. The *OGPCA* was renamed as *COGOA* by **R-282**, *An Act to Amend the Oil and Gas Production and Conservation Act*, S.C. 1992, c. 35, s. 2.

which remains in force in legislation today.¹¹

15. With the passage of the *CPRA*, COGLA issued new guidelines in January 1987 that applied to the Federal Frontier Lands and confirmed again that geophysical reports, maps and other seismic materials would be kept confidential for five years before they can be disclosed to the public.¹²

16. Although the *CPRA* maintained the pre-existing rule that exclusive and non-exclusive seismic materials were held as confidential for five years, COGLA decided in 1987 that, as a matter of administrative policy, it would extend the confidentiality period for non-exclusive programs by an extra 10 years, making the total confidentiality period for non-exclusive seismic materials 15 years.¹³ I explained the origin of this administrative policy in my affidavit filed during the Common Issues Trial.¹⁴ My understanding from contemporaneous documents is that a different company also called GSI (“Old GSI”), which Mr. Davey Einarsson was employed, had advocated for a 15-year confidentiality period.¹⁵

17. For example, on October 7, 1986, Mr. John Clink, Arctic Marine Exploration Manager of Old GSI, wrote to the Canadian Minister of Energy, Mines and Resources, Minister Marcel Masse, arguing that if non-exclusive seismic materials could not be confidential in perpetuity, the legislation should be changed to allow for a 15-year confidentiality period. Mr. Clink said this was

¹¹ **C-167**, *CPRA*, s. 101(7)(d)(ii).

¹² **R-239**, COGLA, “Geophysical and Geological Programs on Frontier Lands: Guidelines for Approvals and Reports”, January 1987 (“*1987 COGLA Guidelines*”), s. 8.3” (“Confidentiality” “Geophysical and geological reports, maps and other data and materials are kept confidential in accordance with the provisions of the Canada Oil and Gas Act or, when proclaimed, the Canada Petroleum Resources Act and the Canada-Newfoundland Atlantic Accord Implementation Act.”).

¹³ **C-169**, Memorandum, G.R. Campbell, Director General, Resource Evaluation Branch to M.E. Taschereau, Administrator, RE: “Disclosure of Geophysical Data”, 31 July 1987; **C-170**, Canada Oil and Gas Lands Administration, Resource Evaluation Branch, “Disclosure of Geophysical Data: Discussion Paper on Modification to the Five Year Confidential Period”, 8 January 1988.

¹⁴ **R-278**, First Affidavit of Bharat Dixit, ¶¶ 47-59.

¹⁵ **R-278**, First Affidavit of Bharat Dixit, ¶¶ 47-59.

“[Old GSI’s] normal restriction with the licensee in other areas of the world), when presumably it would have little or no commercial value [...]”.¹⁶

18. Mr. Clink also testified before the Standing Senate Committee on Energy and Natural Resources on October 22, 1986 that he believed it was a “reasonable suggestion” that “nonexclusive data be held confidential by the government for a period of 15 years”.¹⁷ Mr. Clink stated “this is a normal license restriction interval in other areas of the world. Presumably the data will have little or no commercial value by then.”¹⁸

19. In addition to Mr. Clink, Mr. Davey Einarsson, who I understand is a Claimant in this arbitration, also wrote to Minister Masse on February 17, 1987 arguing that the confidentiality period for non-exclusive seismic materials should be extended.¹⁹

20. GSI’s proposal to extend the confidentiality period for non-exclusive material programs to 15 years was ultimately not implemented in the *CPRA*.²⁰ Yet Minister Masse wrote to Mr. Clink and Mr. Einarsson on April 8, 1987 and June 1, 1987, respectively, to say he had asked officials within COGLA to engage in consultations and take into account Old GSI’s position that there should be an extended confidentiality period for non-exclusive seismic materials.²¹ Government

¹⁶ **C-165**, Letter from John Clink, Manager, Old GSI to Minister Masse, Ministry of Energy, Mines and Resources, RE: “Confidentiality of Non-Exclusive Seismic Data”, 7 October 1986, p. 3.

¹⁷ **R-283**, Senate of Canada, Proceedings of the Standing Committee on Energy and Natural Resources, 22 October 1986, p. 4:29.

¹⁸ **R-283**, Senate of Canada, Proceedings of the Standing Committee on Energy and Natural Resources, 22 October 1986, p. 4A:25.

¹⁹ **R-284**, Letter from John Clink, Manager, Old GSI to Minister Masse, Ministry of Energy, Mines and Resources, 6 February 1987; **R-285**, Letter from Davey Einarsson, Senior Vice President, Old GSI to Minister Masse, Ministry of Energy, Mines and Resources, 17 February 1987.

²⁰ **R-286**, Letter from Minister Masse, Ministry of Energy, Mines and Resources to John Clink, Manager, Old GSI, 3 December 1986.

²¹ **R-287**, Letter from Minister Masse, Ministry of Energy, Mines and Resources to John Clink, Manager, Old GSI, RE: “Confidential Period for Geophysical Information”, 8 April 1987; **C-168**, Letter from Minister Masse, Ministry of Energy, Mines and Resources to Davey Einarsson, Senior Vice President, Old GSI, 1 June 1987.

officials subsequently decided to exercise administrative discretion to hold non-exclusive seismic materials confidential for 15 years, just as Old GSI had proposed.²² COGLA informed Mr. Clink by letter on February 16, 1988 that it agreed with Old GSI's proposal to extend the confidentiality period for non-exclusive seismic materials to 15 years.²³

21. The NEB carried over COGLA's policy (adopted in 1987) that non-exclusive seismic programs should receive 15 years of confidentiality before public disclosure. This remains the policy that is currently administered today.

22. Since the adoption of the *CPRA* in 1986, other regulations and guidelines have been implemented which set out more specific guidance regarding authorization of seismic programs, submission of seismic materials and public disclosure after the expiration of the applicable confidentiality period. After the NEB took over full regulatory responsibility and authority with respect to oil and gas operations on Federal Frontier Lands in 1994,²⁴ the 1996 *Canada Oil and Gas Geophysical Operations Regulations* ("*COGGOR*") were promulgated. The *COGGOR* specify requirements for the authorization, conduct and reporting of geophysical operations on Federal Frontier Lands.²⁵ Specific details on seismic materials reporting requirements are described in Part IV below.

²² **C-169**, Memorandum, G.R. Campbell, Director General, Resource Evaluation Branch to M.E. Taschereau, Administrator, RE: "Disclosure of Geophysical Data", 31 July 1987; **C-170**, Canada Oil and Gas Lands Administration, Resource Evaluation Branch, "Disclosure of Geophysical Data: Discussion Paper on Modification to the Five Year Confidential Period", 8 January 1988.

²³ **C-171**, Letter from Graham R. Campbell, Director General, Canada Oil and Gas Lands Administration to John Clink, Manager, Old GSI, RE: "Geophysical Disclosure", 16 February 1988.

²⁴ In 1994, the *Act to Amend the Canada Oil and Gas Operations Act, the Canada Petroleum Resources Act and the National Energy Board Act and to Make Consequential Amendments to Other Act*, transferred the responsibility to issue operating licences and authorizations to the National Energy Board (NEB). See **C-176**, *An Act to Amend the Canada Oil and Gas Operations Act, the Canada Petroleum Resources Act and the National Energy Board Act and to Make Consequential Amendments to Other Act*, S.C. 1994, c. 10, Summary.

²⁵ **C-142**, *Canada Oil and Gas Geophysical Operations Regulations*, SOR 96/117, 13 February 1996 ("*COGGOR*").

23. I understand the Claimants have alleged that the NEB “implemented various retroactive policy changes to the regulatory regime, such as revising the length of time the Submissions remained privileged and threatening to disclose the Seismic Works in SEG-Y format and to disclose the field data.”²⁶ This characterization is not accurate. As discussed above, the NEB’s predecessor, COGLA, decided in 1987 to extend the confidentiality period to 15 years (10 years more than provided in legislation) for non-exclusive programs within its jurisdiction, a policy which the NEB has continued for programs within its jurisdiction. Furthermore, as described in Part IV below, the NEB has not required the submission of field data or SEG-Y format seismic materials from GSI. Thus, the NEB could not have “threatened” to release it.

IV. SEISMIC PROGRAM REPORTING REQUIREMENTS

24. Just as the NEB’s predecessor agencies required before 1991, both an operating licence and a geophysical authorization form (which I refer to together as an “authorization”) from the NEB is a prerequisite before any geophysical operation on Federal Frontier Lands can take place. As a condition of an authorization, operators are required to submit final reports on all operations within 12 months after the date of termination of a geophysical operation.

25. Since 1996, section 38 of the *COGGOR* has described the seismic materials that are required to be submitted to the NEB within 12 months after termination of a geophysical operation, including: (a) general information about the program;²⁷ (b) information about the operation and

²⁶ Claimants’ Memorial, 27 September 2022 (“Claimants’ Memorial”), ¶ 56.

²⁷ This includes: a title page; a table of contents; an introduction or abstract; a summary of significant dates, the number of members of the complement, the type of equipment used, the production data, the total distance surveyed, the downtime per day, and the number of kilometres of data recorded per day; a summary of weather, sea, ice and topographic conditions and their effect on the operation. See **C-142**, *COGGOR*, s. 38(1)(a), (b), (c), (e), (f).

processing of geophysical data;²⁸ (c) “a fully processed, migrated seismic section for each seismic line recorded and, in the case of a 3-D survey, each line generated from the 3-D data set”;²⁹ (d) shotpoint location data;³⁰ and (e) maps, including shotpoint maps.³¹

26. It is important to note that the NEB has never collected field data, which remains in the exclusive possession of the operators. Nor does the NEB collect processed data in SEG-Y format from operators. Accordingly, the NEB does not make field or processed data publicly available. Until 2008, operators only filed paper and film (mylar) copies with the NEB and its predecessor agencies. Since 2008, the NEB has required a paper copy and a copy in electronic format (e.g., a CD with an electronic file in .tif, .pdf or .jpg format).³²

V. PUBLIC DISCLOSURE OF SEISMIC MATERIALS AFTER THE CONFIDENTIALITY PERIOD HAS EXPIRED

27. Since 1991, the NEB has operated the FIO in Calgary, Alberta through which seismic materials and other information are disclosed (or “released”) to the public after the expiration of the confidentiality period under the applicable legislation and administrative policies. I provide more details regarding the operation of the FIO at paragraphs 24-32 of my August 28, 2015, affidavit filed in the Common Issues Trial.

28. Since at least 1984, COGLA and then the NEB have regularly published catalogues that

²⁸ This included: a general description of the operation; and a detailed description of the geophysical data processing method. See **C-142**, *COGGOR*, s. 38(1)(g), (h).

²⁹ **C-142**, *COGGOR*, s. 38(1)(j).

³⁰ **C-142**, *COGGOR*, s. 38(1)(m).

³¹ This included: a locality map; and shotpoint maps, track plots, flight lines with numbered fiducial points and gravity station maps. See **C-142**, *COGGOR*, s. 38(1)(d), (i).

³² This latter requirement only ever applied to one GSI program: 2008 2D Marine Seismic Survey North Labrador Sea NEB#5554116. See **R-288**, Letter from Bharat Dixit, Chief Conservation Office, National Energy Board to Darlene Davis (GSI) RE: “Geophysical Service Incorporated 2D Marine Seismic Survey North Labrador Sea 2008 [5554116]”, 8 August 2008, p. 3.

can be used by members of the public to identify seismic materials that have been released after the expiration of the applicable confidentiality period and request copies thereof. In addition to the hundreds of seismic programs by other operators whose confidentiality periods had expired, Old GSI's seismic programs approved by COGLA and predecessor government agencies have been listed since at least 1984 as available to the public for viewing and reproduction.

29. For example, in January 1984, COGLA published a catalogue titled "Released Geophysical and Geological Reports – Canada Lands" which contained all the geophysical and geological reports that had been released pursuant to *COGA* section 50(3)(d) (i.e., five years following the completion of the work or reversion of the land to the Crown, whichever occurs first).³³ The January 1984 COGLA catalogue offered "reproduction [...] by a commercial firm who will bill the purchaser direct" and offered reproduction in microfilm, enlargement (scale of maps, seismic sections) and medium (film or paper).³⁴ In that January 1984 publication, COGLA lists 23 programs under the name of "GSI" as available to the public.³⁵

30. Mr. Davey Einarsson states at paragraph 61(o) of his Witness Statement that it was "unbeknownst to GSI until 2015" that COGLA released in 1984 the *Released Geophysical and Geological Reports* publication. I cannot speak as to why Mr. Einarsson was unaware of this publication or any of the subsequent publications that listed all the released seismic programs and provided instructions on how to get copies. Nonetheless, these publications were widely available to participants throughout the industry.

³³ **R-226**, COGLA, "Released Geophysical and Geological Reports – Canada Lands", January 1984.

³⁴ **R-226**, COGLA, "Released Geophysical and Geological Reports – Canada Lands", January 1984, p. 5.

³⁵ **R-226**, COGLA, "Released Geophysical and Geological Reports – Canada Lands", January 1984, pp. 16-17, 19, 26, 29, 34, 98, 123, 127 (excerpts).

31. Similar catalogues were published by the NEB regularly after COGLA was dissolved. Two examples are the NEB publications in December 1992 and June 2005, which both explained the process of how members of the public could obtain copies of disclosed seismic materials.³⁶ Both of those publications listed all of the seismic programs under the name “GSI” or “Geophysical Service” whose confidentiality periods had expired and were available to the public in 1992 and 2005, respectively.³⁷

32. Further information about how the public could obtain copies of seismic materials for which the confidentiality period had expired was explained in the June 1995 information bulletin entitled “The Frontier Information Office.” This information bulletin explained that after the expiration of the confidentiality period set out in the *CPRA*, technical reports are made available to the public, “[m]ylar copies of the location maps and seismic sections may be available for reproduction” and a microfilm reader-printer is available to print microfilmed maps and seismic sections.³⁸ An updated brochure was published in 2002 and reiterated the availability for reproduction of seismic materials such as geophysical reports.³⁹

VI. LOGISTICS OF PUBLIC DISCLOSURE OF SEISMIC MATERIALS BY THE NEB

33. As explained above, the FIO has made copies of paper and mylar seismic materials whose confidentiality period had expired available to the public for decades. GSI would have been aware

³⁶ **R-247**, NEB, “Frontier Lands: Released Information”, December 1992, pp. 4-6; **R-289**, NEB, “Frontier Lands: Released Information”, June 2005, PDF pp. 7-8.

³⁷ In the December 1992 publication, GSI’s seismic programs were listed as available to the public. *See* **R-247**, NEB, “Frontier Lands: Released Information”, December 1992, pp. 17, 19, 95, 122, 127. In the June 2005 publication, 70 programs under the name “GSI” or “Geophysical Service” were listed as available to the public. *See* **R-289**, NEB, “Frontier Lands: Released Information”, June 2005, PDF pp. 28, 38, 47, 54-55, 59, 107, 114, 128, 131.

³⁸ **R-290**, NEB, “The Frontier Information Office: Information Bulletin”, June 1995, p. 1.

³⁹ **R-291**, NEB, “The Frontier Information Office: Information Bulletin”, 2002, PDF p. 4.

of this: representatives of GSI visited the FIO on at least three occasions in the years 2000, 2001 and 2002, as recorded in the FIO Office Log.⁴⁰ Representatives of GSI had themselves been borrowing materials from the FIO more than two decades ago, as evidenced by signed FIO Liability Agreements from 2000 and 2001.⁴¹

34. The NEB uses a document entitled “Liability Agreement – Borrowed Materials” to keep a record of what material has been borrowed from the FIO and to ensure that it is returned.⁴² When a person wants to borrow seismic materials from the FIO, he or she lists the unique program identification numbers and signs the Liability Agreement. Though the general form of the Liability Agreement remained consistent over time, the NEB added language in 2006 which stated “I am aware that the information and data contained in these materials may be protected under the intellectual property laws of Canada and may only be used in a manner consistent with those laws.”⁴³ A sign containing similar language was posted at the FIO around the same time.⁴⁴ My understanding is that the NEB added this language out of an abundance of caution to alert borrowers to their responsibility to use materials in accordance with the intellectual property laws of Canada. The NEB did not take a position on what those laws required.

⁴⁰ **R-292**, NEB, “Frontier Information Office Log: GSI Logs”, 2000-2002.

⁴¹ **R-293**, NEB, “Liability Agreement – Borrowed Materials”, GSI Signed Agreements, 2000-2001.

⁴² **R-294**, NEB, “Liability Agreement – Borrowed Materials”, effective to 2003; **R-295**, NEB, “Liability Agreement – Borrowed Materials”, effective 2003-2006; **R-296**, NEB, “Liability Agreement – Borrowed Materials”, effective after 2006.

⁴³ **R-296**, NEB, “Liability Agreement – Borrowed Materials”, effective after 2006.

⁴⁴ The version of the sign since 2011 states “The Frontier Information Office library contains material that may be subject to copyright, owned by those providing the material. The copyright law of Canada governs the making of photocopies or other reproductions of copyrighted material. Copying may be an infringement of the copyright law. The Frontier Information Office is not responsible for, nor does it authorize, either implicitly or explicitly, any infringement of this law.” See **R-297**, National Energy Board, Frontier Information Office Sign, current as of 2011.

VII. GSI SEISMIC PROGRAMS IN THE CANADIAN OFFSHORE APPROVED BY COGLA AND NEB

35. Attached to this Witness Statement as Annex II is a table showing seismic programs that have been released by the NEB through the FIO that were submitted and approved by COGLA or the NEB under the name “Geophysical Service Incorporated” and the date each was released to the public. This table was included to my first affidavit dated August 28, 2015 as “Exhibit J”. I have reviewed the chart and confirm that it remains accurate.⁴⁵

Pre-1994 Seismic Programs

36. As can be seen from Annex II, as well as the COGLA and NEB publications in 1984 and 1992, by the time GSI acquired the Old GSI seismic programs from Halliburton in 1993, the majority of the seismic programs were already in the public domain and available for viewing and copying from the FIO.⁴⁶

Post-1994 Seismic Programs

37. Since 1996, GSI conducted only two non-exclusive seismic surveys for which authorizations were required from the NEB. GSI’s Fort Laird 1997 Seismic Survey (Program 9229-G005-001P) was completed on land to the east of a river in the Northwest Territories on April 6, 1997 and seismic materials for this program were made public on October 6, 2012 (i.e., after the 15 year confidentiality period).⁴⁷

⁴⁵ I note that program 8620-G005-004P J001 has a release date indicated as 12/31/2000, though it appears that this should read as 18/04/1978.

⁴⁶ **R-226**, COGLA, “Released Geophysical and Geological Reports – Canada Lands”, January 1984, pp. 16-17, 19, 26, 29, 34, 98, 123, 127 (excerpts); **R-247**, NEB, “Frontier Lands: Released Information”, December 1992, pp. 17, 19, 95, 122, 127.

⁴⁷ Program 9229-G-005-001P/NEB 5553693 (Fort Liard 1997 Seismic Survey), Application Date: 11 December 1996, Release Date: 6 October 2012. *See Annex II*, Offshore Program Spreadsheet, “Geophysical Service Incorporated”.

38. GSI received approval from the NEB on August 8, 2008 to carryout its 2D Marine Seismic Survey North Labrador Sea (Project ID 5554116) with the caveat that “the [submitted] information will be disclosed pursuant to section 101 of the *Canada Petroleum Resources Act*.”⁴⁸ After several requests, GSI finally submitted all the requisite seismic materials.⁴⁹

VIII. SEISMIC PROGRAMS IN THE OFFSHORE AREA WITHIN NEB JURISDICTION

39. Attached as Annex III is a map illustrating the publically available offshore seismic programs within the NEB’s jurisdiction in Baffin Bay, Beaufort Sea, High Arctic and Banks Island and the Mackenzie Delta whose confidentiality period has expired.⁵⁰ This map illustrates those surveys which the NEB has in its geospatial database and is not comprehensive, as seismic material that was submitted to the NEB’s predecessors in the 1970s and 1980s did not always include the shotpoint locations or, if it did, may not have been loaded into the NEB’s database.

⁴⁸ **R-288**, Letter from Bharat Dixit, Chief Conservation Officer, National Energy Board to Darlene Davis, Geophysical Service Incorporated, RE: 2D Marine Seismic Survey North Labrador Sea 2008”, 8 August 2008. This program is not listed in Annex II since it was applied a 15-year confidentiality period and will therefore not be released until the expiration of such period in late 2023.

⁴⁹ **R-298**, Letter from Bharat Dixit, Team Leader, National Energy Board to Davey Einarsson, President and CEO, Geophysical Service Incorporated, RE: “Second Request – Outstanding Report for GSI 2D Marine Seismic Survey North Labrador Sea 2008”, 26 January 2010; **R-299**, Email from Paul Einarsson, Chairman and COO, Geophysical Service Incorporated to Bharat Dixit, Team Leader, National Energy Board, RE: “Requests for outstanding reports GSI 2D Labrador File no. OF-EP-GeopOp-G138-55541160101”, 4 February 2010; **C-206**, Letter from Paul Einarsson, Chairman, Geophysical Service Incorporated to Bharat Dixit, Chief Conservation Officer, National Energy Board, RE: “Program ID 5554116 GSI 2D Marine Seismic Survey North Labrador Sea 2008 per letters dated November 9, 2009, January 26, 2010, and Dixit email dated February 5, 2010”, 22 April 2010; **R-300**, Letter from Bharat Dixit, Team Leader, National Energy Board to Paul Einarsson, Chairman, Geophysical Service Incorporated, RE: “Reporting Deficiencies for GSI 2D Seismic Survey Labrador Sea 2008”, 25 May 2010; **R-301**, Letter from Bharat Dixit, Team Leader, National Energy Board to Paul Einarsson, Chairman, Geophysical Service Incorporated, RE: “Deficiencies for GSI 2D Seismic Survey Labrador Sea 2008 Program (ID 5554116), Response to GSI email, dated 17 June 2010”, 30 June 2010.

⁵⁰ GSI also has a small amount of seismic data in the Fort Liard Region, which is not shown in **Annex III**. The **Annex III** map also includes the areas within the jurisdiction of the Canada-Newfoundland and Labrador Offshore Petroleum Board and the Canada-Nova Scotia Offshore Petroleum Board, but is not intended to illustrate all the seismic programs available in their jurisdictions.

40. It is important to note that the areas where GSI has the bulk of its seismic data north of 60° latitude (Beaufort Sea/Mackenzie Delta, High Arctic and North Labrador Sea/Baffin Island) has not been an active exploration area for many years. To the best of my knowledge, there have been no calls for bids in any area north of 60° latitude since 2013.⁵¹ Furthermore, Canadian Arctic waters have been off-limits to new offshore oil and gas licencing since December 2016.

IX. CORRESPONDENCE BETWEEN GSI AND THE NEB REGARDING THE PUBLIC DISCLOSURE OF ITS SEISMIC MATERIALS

41. Over the past twenty years, GSI has argued at various times to the NEB that its seismic materials should not be released to the public because, amongst other reasons, they were protected by copyright and constituted a trade secret. While I cannot speak to the entirety of the interactions between GSI and the NEB over the course of many years, I refer to some of the representative correspondence below.

42. On September 20, 1999, GSI sent an *Access to Information* request to the NEB asking for the names of all persons who had accessed GSI's seismic materials from the FIO.⁵² In its reply of October 8, 1999, the NEB reminded GSI that Canadian laws and regulations permitted the release and photocopying of its seismic materials once the applicable confidentiality period expires:

As you may be aware, the information you provide to the Board for the purposes of the *Canada Oil and Gas Operations Act* (COGOA) or the *Canada Petroleum Resources Act* (CPRA) is kept in our Frontier Information Office (FIO), after it has been released from privileged status pursuant to Section 101 of the CPRA. A person who wishes to consult any information in the FIO makes us an appointment to do so and attends at the FIO. Once in the FIO, the person may consult and photocopy any released information respecting oil and gas exploration and production operations on

⁵¹ The call for bids process is the responsibility of Crown-Indigenous Relations and Northern Affairs Canada ("CIRNAC") (formerly Indigenous and Northern Affairs Canada) for areas in its jurisdictions.

⁵² See **C-194**, Letter from GSI to NEB enclosing Canadian Access to Information Request, 20 September 1999.

[federal] frontier lands. [...] If a person borrows information from the FIO, the Board records the specifics of the information borrowed to ensure its return.⁵³

43. The NEB further explained its position regarding the public disclosure of seismic material through the FIO in an affidavit filed by NEB Business Unit Leader, Operations John McCarthy on March 7, 2001 in the context of GSI's lawsuit against the NEB seeking disclosure of third parties who had accessed GSI's seismic materials.⁵⁴

44. I also had direct communication with GSI concerning the NEB's practices on the release of non-exclusive seismic materials. On April 22, 2010, Mr. Paul Einarsson wrote to the NEB stating his objection to the public release of any of GSI's seismic materials.⁵⁵ I replied on May 21, 2010 and explained the laws, regulations, and guidelines pursuant to which the NEB was able to make seismic materials available to the public after the expiry of the confidentiality period, concluding as follows:

For the reasons set out above, the Board is not in a position to provide confirmation to GSI that the subject non-exclusive seismic information will be held confidential indefinitely. Rather, in a manner consistent with the Board's cover letter to GSI's authorization, the Board will maintain the subject information confidential for a fifteen year period. Thereafter, the Board intends to make the non-exclusive seismic information public via the FIO.⁵⁶

45. GSI's previous legal counsel, Gowlings, wrote to me on June 3, 2010 explaining GSI's

⁵³ **R-302**, Letter from Michel Mantha, Access to Information & Privacy Coordinator, National Energy Board to Doug Dowdell, Geophysical Service Incorporated, RE: "Access to Information Request dated 20 September 1999", 8 October 1999 (emphasis added). The NEB made the same statement to GSI in its letter of March 21, 2000. See **R-303**, Letter from Michel L. Mantha, Access to Information & Privacy Coordinator, National Energy Board to Paul Einarsson, RE: "Access to Information Request dated 2 March 2000", 21 March 2000.

⁵⁴ **R-304**, *Geophysical Service Incorporated v. The Chairman, National Energy Board*, Court File No. T-2101-00, Affidavit of John McCarthy, 7 March 2001.

⁵⁵ **C-206**, Letter from Paul Einarsson, Chairman, Geophysical Service Incorporated to Bharat Dixit, Chief Conservation Officer, National Energy Board, RE: "Program ID 5554116 GSI 2D Marine Seismic Survey North Labrador Sea 2008 per letters dated November 9, 2009, January 26, 2010, and Dixit email dated February 5, 2010", 22 April 2010.

⁵⁶ **C-207**, Letter from Bharat Dixit, Team Leader, National Energy Board to Paul Einarsson, Chairman, Geophysical Service Incorporated, RE: "Geophysical Services Inc. ("GSI") – Letter dated April 22, 2010", 21 May 2010, p. 3.

position that the NEB could not release GSI's seismic materials after the expiry of the applicable confidentiality period because, amongst other things, GSI's seismic materials were confidential information and trade secrets and was also subject to copyright.⁵⁷ The NEB replied to the letter, disagreeing with GSI's position.⁵⁸ Mr. Einarsson wrote to me again on July 27, 2010 expressing his objections to the NEB's position regarding the disclosure of GSI's seismic materials.⁵⁹

46. I replied to Mr. Einarsson on August 12, 2010 and reiterated the Board's position again:

Our position has not changed from the 21 May 2010 correspondence. As such, we are not in a position to provide confirmation that confidentiality over GSI's seismic data will be maintained for an indefinite period of time.⁶⁰

47. I am aware that GSI subsequently initiated numerous legal actions against the NEB regarding its seismic materials. These included the 2014 proceedings in which I filed two affidavits in response to GSI's claim that the disclosure of seismic materials to the public by the NEB, the CNLOPB and the CNSOPB was an expropriation of GSI's intellectual property rights and its business and that GSI was entitled to compensation.⁶¹

⁵⁷ **R-305**, Letter from James Eamon, Gowlings to Bharat Dixit, National Energy Board, RE: "Confidential Information of Geophysical Service Incorporated ("GSI")", 3 June 2010.

⁵⁸ **R-306**, Letter from Anne Marie Erickson, Secretary of the Board, National Energy Board, to James T. Eamon, Q.C., Gowlings Lafleur Henderson LLP, RE: "Letter dated 3 June 2010 re: Geophysical Services Inc. ("GSI")", 22 July 2010.

⁵⁹ **C-208**, Letter from Paul Einarsson, Chairman, Geophysical Service Incorporated to Bharat Dixit, Chief Conservation Officer, National Energy Board, RE: "Program ID 5554116 GSI 2D Marine Seismic Survey North Labrador Sea 2008 per letters dated November 9, 2009, January 26, 2010, May 25, 2010, and June 30, 2010, and Dixit email dated February 5, 2010", 27 July 2010.

⁶⁰ **C-209**, Letter from Bharat Dixit, Team Leader, National Energy Board to Paul Einarsson, Chairman, Geophysical Service Incorporated, RE: "Deficiencies for GSI 2D Seismic Survey Labrador Sea 2008 Program (ID 5554116) Response to GSI email, dated 15 July 2010 and follow-up letter, dated 27 July 2010", 12 August 2010.

⁶¹ **R-010**, *Geophysical Service Incorporate v. Her Majesty the Queen in Right of Canada as represented by the Attorney General of Canada, Department of Natural Resources Canada and the National Energy Board*, Court File Number 1401-05316, Statement of Claim, 14 May 2014.

X. RESPONSE TO SPECIFIC ALLEGATIONS MADE BY THE CLAIMANTS IN THEIR MEMORIAL

48. I wish to comment on certain additional statements in the Claimants' Memorial and in the Witness Statements of Mr. Paul Einarsson and Mr. Davey Einarsson.

49. Mr. Paul Einarsson makes allegations about the NEB's actions starting in 2000 on the release of names of individuals who had accessed GSI's seismic materials pursuant to *Access to Information* legislation.⁶² My second affidavit in the Common Issues Trial deals with many of Mr. Einarsson's statements and explains the extraordinary efforts the NEB went to accommodate GSI's voluminous requests while simultaneously upholding the rules under *Access to Information* legislation.⁶³ I continue to disagree with Mr. Einarsson's suggestions that the NEB acted improperly in any way handling GSI's *Access to Information* requests.

50. The Claimants have alleged that the NEB "led Davey, Paul and/or GSI to believe, either through explicit representations or conduct, that their intellectual property rights in the Seismic Works would be protected."⁶⁴ It is not clear what "explicit representations or conduct" the Claimants are referring to. As explained above, for over 35 years the NEB's law, regulations, policies and communications to Old GSI and GSI regarding public disclosure of seismic materials was clear and understandable. The letters consistently referred to the fact that disclosure of seismic materials to the public, with the opportunity for reproduction, would occur after the expiration of the applicable confidentiality period.

51. Mr. Einarsson further alleges that the NEB "paid" GSI's licensees through allowable

⁶² CWS-06, Witness Statement of Harold Paul Einarsson, 27 September 2022, ¶ 121.

⁶³ R-279, Second Affidavit of Bharat Dixit.

⁶⁴ Claimants' Memorial, ¶ 57.

expenditure credits to submit seismic materials, which GSI calls “Secondary Submissions.”⁶⁵ Mr. Einarsson has made the same allegations in the past, including during the Common Issues Trial. In my second affidavit at paragraphs 63-65, I contested Mr. Einarsson’s allegations and explained that the NEB makes no such “payments”. Pursuant to the *COGGOR*, exploration licence holders which reprocess seismic data can submit the reprocessed seismic materials to the NEB to obtain an allowable expenditure credit from the responsible government authority.⁶⁶ Companies applying for allowable expenditures do so of their own volition and there is no “payment” of any kind by the NEB. The NEB is not a party to and has no knowledge of the terms and conditions of GSI’s licences with third parties.

52. Mr. Paul Einarsson claims that “GSI learned that the NEB had provided a copy company, Lynx, with Seismic Works for copying and that the NEB was aware that Lynx could convert paper seismic images into SEG-Y format and even asked for a copy”.⁶⁷ Lynx, like any other member of the public, was allowed to borrow seismic materials from the FIO once it had signed the requisite Liability Agreement. The NEB had no control over what third parties were doing with the borrowed seismic materials. NEB staff does not recall it ever requesting or receiving a copy of what Mr. Einarsson alleges.

53. The Claimants have also alleged that the NEB is effectively making GSI’s SEG-Y format seismic materials available to the public because paper and mylar copies can be vectorized by third parties.⁶⁸ In my opinion, this is not an accurate statement. As noted above, the NEB does not collect

⁶⁵ Claimants’ Memorial, ¶ 70; **CWS-06**, Witness Statement of Harold Paul Einarsson, 27 September 2022, ¶ 126.

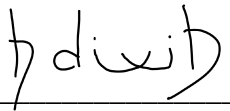
⁶⁶ **C-142**, *COGGOR*, s. 38(6). CIRNAC is the responsible government authority for granting allowable expenditure credits.

⁶⁷ **CWS-06**, Witness Statement of Harold Paul Einarsson, 27 September 2022, ¶ 133; **C-204**, Letter from NRC to Paul Einarsson, 10 August 2022. *See also* Claimants’ Memorial, ¶ 77.

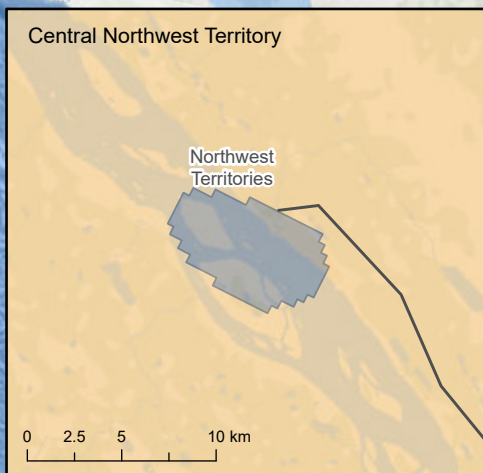
⁶⁸ Claimants’ Memorial, ¶ 437.

or disclose processed data in SEG-Y format, which is available only from the operator that collected it. Nor does it control what third parties do with the paper copies obtained from the FIO, including vectorization. If Lynx or other third parties were vectorizing paper copies from the FIO and using them to create SEG-Y format data in violation of their licence agreements with GSI, the NEB had no knowledge or control over those actions.

Dated this 16 day of January, 2023.

A handwritten signature in black ink, appearing to read 'B. Dixit', is written over a horizontal line.

BHARAT DIXIT



LANDS WHERE THE CER HAS JURISDICTION OVER OIL AND GAS WORK OR ACTIVITIES

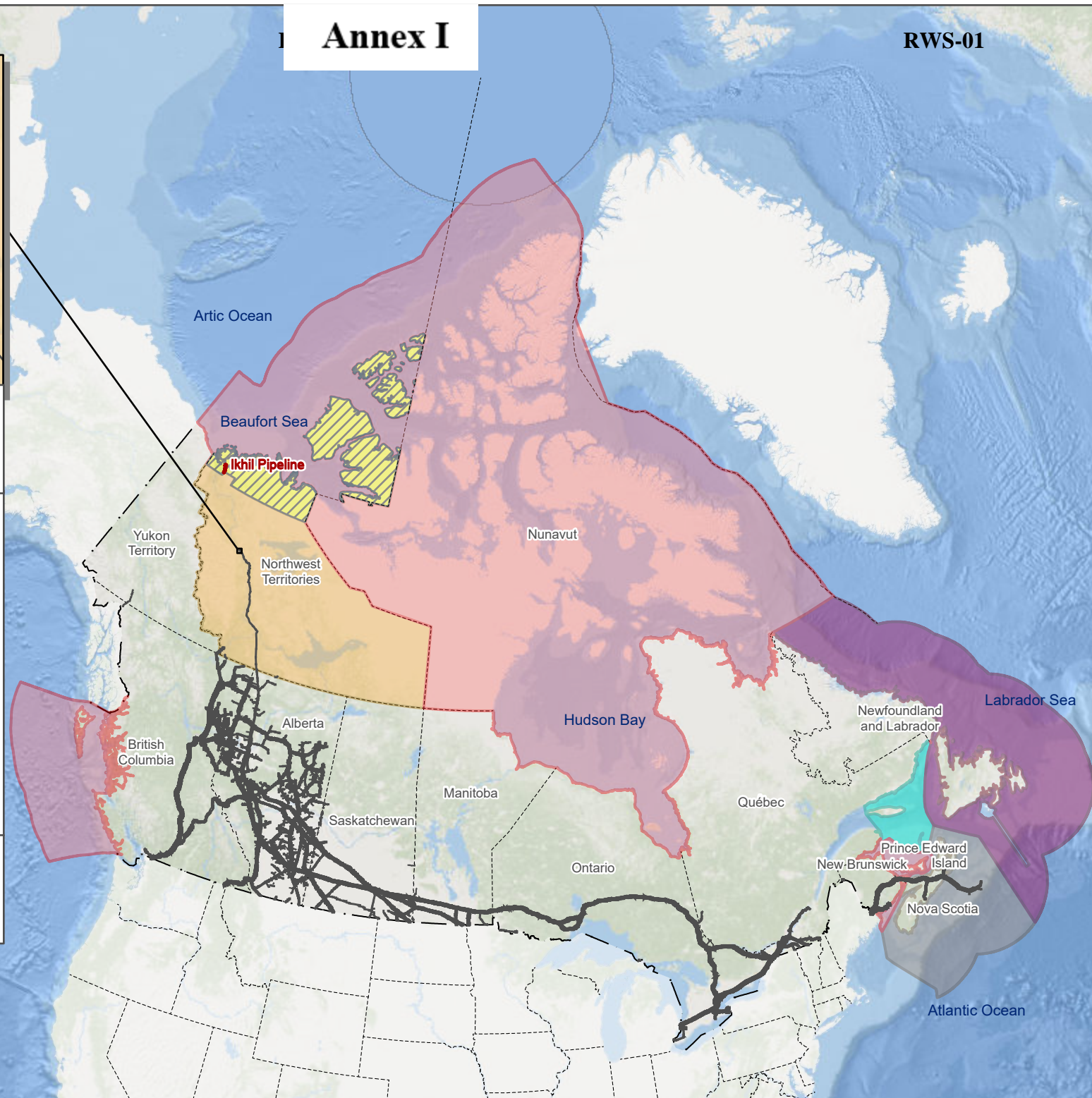
- CER Regulated Under COGOA
- Northwest Territories (GNWT Regulator)
- Onshore ISR (CER Regulator under OGOA)
- Norman Wells Proven Area (CER Regulator under COGOA)
- Canada-Newfoundland and Labrador Offshore Petroleum Board
- Canada-Nova Scotia Offshore Petroleum Board
- Canadian Quebec Joint Accord Area (CER Regulator under COGOA)
- CER Act Pipelines
- OGOA Pipeline (CER Regulator Under OGOA)

Coordinate System: Canada Lambert Conformal Conic
 Projection: Lambert Conformal Conic
 Datum: North American 1983

0 250 500 1,000 km



Pacific Ocean



Annex II IN

RWS-01

OldFrontierProgramId	Program Name	Program Operator	Classification	ActualStartDate	ActualEndDate	Data Release Date
8620-G005-001P	1971 OFFS. NEWFOUNDLAND-GRAND BANKS-SCOTIAN SHELF	Geophysical Service Inc.	Non - Exclusive	05/07/1971	11/05/1971	05/05/1977
838-09-08-71-0001	SEARCH PRUDHOE II MARINE SEISMIC MACKENZIE DELTA	Geophysical Service Inc.	Exclusive – Data Acquisition	08/16/1971	08/28/1971	02/28/1977
838-09-12-71-0002	SEISMIC REPORT BAFFIN BAY NWT	Geophysical Service Inc.	Exclusive – Data Acquisition	08/17/1971	08/09/1971	02/09/1977
8620-G005-002P	1971 DAVIS STRAIT/N. LABRADOR	Geophysical Service Inc.	Non - Exclusive	09/13/1971	09/19/1971	09/19/1977
838-09-09-71-0002	DAVIS STRAIT SEISMIC SURVEY - 1971	Geophysical Service Inc.	Exclusive – Data Acquisition	09/14/1971	09/19/1971	03/19/1977
8620-G005-003P	1971 OFFSHORE LABRADOR SPEC SURVEY	Geophysical Service Inc.	Non - Exclusive	09/23/1971	09/30/1971	03/30/1977
8620-G005-004P	1972 OFFSHORE NEWFOUNDLAND-SCOTIAN SHELF	Geophysical Service Inc.	Non - Exclusive	04/04/1972	12/02/1972	04/18/1978
8620-G005-004PJ001	1972 OFFSHORE NEWFOUNDLAND-SCOTIAN SHELF	Geophysical Service Inc.	Non - Exclusive	04/04/1972	12/02/1972	12/31/2000
838-09-08-72-0001	EXPERIMENTAL RECORDING&PROCESSING MACKENZIE BAY	Geophysical Service Inc.	Exclusive – Data Acquisition	07/20/1972	07/21/1972	01/21/1978
838-09-10-73-0001	INTERPRETATION SEISMIC BELCHER CHANNEL-PENNY ST	Geophysical Service Inc.	Exclusive – Data Acquisition	06/01/1973	06/01/1974	12/01/1979
8620-G005-005P	1973 LABRADOR, N.E. NEWFOUNDLAND,DAVIS STRAIT	Geophysical Service Inc.	Non - Exclusive	06/02/1973	11/15/1973	05/15/1979
838-09-12-73-0002	MARINE SEISMIC LABRADOR SEA-DAVIS STRAIT NWT	Geophysical Service Inc.	Exclusive – Data Acquisition	08/05/1973	11/09/1973	05/09/1979
838-09-12-73-0002P22	MARINE SEISMIC LABRADOR SEA-DAVIS STRAIT NWT	Geophysical Service Inc.	Exclusive – Data Acquisition	08/05/1973	11/09/1973	12/31/1978
838-09-10-74-0001	MARINE GEOPHYSICAL SURVEY SVERDRUP BASIN NWT	Geophysical Service Inc.	Exclusive – Data Acquisition	08/03/1974	11/10/1974	05/10/1980
838-09-10-74-0001P22	MARINE GEOPHYSICAL SURVEY SVERDRUP BASIN NWT	Geophysical Service Inc.	Exclusive – Data Acquisition	08/03/1974	11/10/1974	12/31/1979
8620-G005-007P	1974 LABRADOR REGIONAL SPECULATIVE SURVEY	Geophysical Service Inc.	Non - Exclusive	08/25/1974	11/10/1974	05/10/1980
8620-G005-009P	1975 LABRADOR REGIONAL SPECULATIVE SURVEY	Geophysical Service Inc.	Non - Exclusive	07/30/1975	11/15/1975	05/25/1981
838-09-08-76-0002	SEISMIC RECORD SECTIONS BEAUFORT SEA NWT	Geophysical Service Inc.	Exclusive – Data Acquisition	08/01/1976	09/01/1976	03/01/1982
838-09-10-76-0001	MARINE SEISMIC ARCTIC ISLAND NWT	Geophysical Service Inc.	Exclusive – Data Acquisition	08/29/1976	09/15/1976	03/15/1982
838-09-10-77-0001	1977 HIGH ARCTIC SEISMIC SURVEY	Geophysical Service Inc.	Exclusive – Data Acquisition	09/06/1977	09/11/1977	03/11/1983
838-09-10-77-0002	FINAL REPORT-NOW EXCLUSIVE HIGH ARCTIC PROJECT	Geophysical Service Inc.	Exclusive – Data Acquisition	09/06/1977	09/11/1977	03/11/1983
838-09-08-78-0001	GEOPHYSICAL SURVEY - BEAUFORT SEA 1978	Geophysical Service Inc.	Exclusive – Data Acquisition	07/01/1978	08/15/1978	02/15/1984
838-09-08-79-0001	SEISMIC SECTIONS:BEAUFORT SEA	Geophysical Service Inc.	Exclusive – Data Acquisition	07/15/1979	09/15/1979	03/15/1985
8620-G005-011P	8627-G005-001P	Geophysical Service Inc.	Non - Exclusive	01/09/1980	05/15/1980	11/15/1985
838-09-08-80-0001	SEISMIC SURVEY: BEAUFORT SEA	Geophysical Service Inc.	Exclusive – Data Acquisition	08/14/1980	09/25/1980	03/25/1986
8620-G005-012P	1981 GRAND BANKS AND NEWFOUNDLAND SHELF	Geophysical Service Inc.	Non - Exclusive	01/26/1981	04/17/1981	10/17/1986
838-09-08-81-0002	SEISMIC SURVEY: BANKS ISLAND	Geophysical Service Inc.	Exclusive – Data Acquisition	07/02/1981	07/15/1981	01/15/1987
8624-G005-001P	1982 GRAND BANKS AND NEWFOUNDLAND SHELF	Geophysical Service Inc.	Non - Exclusive	01/02/1982	05/19/1982	05/19/1992
8624-G005-002P	1982 NFLD SHELF SPECULATIVE SURVEY	Geophysical Service Inc.	Non - Exclusive	03/19/1982	05/08/1982	05/08/1992
8624-G005-003P	1982 SOUTH WHALE BASIN TO FLEMISH PASS	Geophysical Service Inc.	Non - Exclusive	04/27/1982	12/20/1982	12/19/1992
8624-G005-005P	1982 LABRADOR OFFSHORE TO FLEMISH PASS	Geophysical Service Inc.	Non - Exclusive	05/19/1982	12/20/1982	12/19/1992
9424-G005-001P	FINAL REPORT-MARINE SEISMIC SURVEY	Geophysical Service Inc.	Non - Exclusive	07/16/1982	09/10/1982	03/10/1998
8624-G005-006P	1982 GULF OF ST.LAWRENCE AND SCOTIAN SHELF	Geophysical Service Inc.	Non - Exclusive	09/18/1982	10/01/1982	10/01/1997
9424-G005-002P	MARINE SEISMIC SURVEY-BEAUFORT SEA	Geophysical Service Inc.	Non - Exclusive	07/22/1983	09/22/1983	03/22/1999
8624-G005-009P	1984 NEWFOUNDLAND BASIN	Geophysical Service Inc.	Non - Exclusive	12/19/1983	04/18/1984	04/22/1994
8624-G005-007P	1984 SCOTIAN SHELF MARINE SEISMIC	Geophysical Service Inc.	Non - Exclusive	01/29/1984	04/05/1984	04/05/1999
9424-G005-003P	REFLECTION SEISMIC SURVEY-BEAUFORT SEA	Geophysical Service Inc.	Non - Exclusive	07/09/1984	09/07/1984	03/07/2000
8624-G005-011P	1985-86 JEANNE D'ARC 3D SURVEY	Geophysical Service Inc.	Non - Exclusive	04/22/1985	07/06/1986	07/06/2001
9424-G005-004P	REFLECTION SEISMIC SURVEY-BEAUFORT SEA	Geophysical Service Inc.	Non - Exclusive	09/21/1985	09/28/1985	03/28/2001
9424-G005-005P	1986 MARINE SEISMIC - BEAUFORT SEA (MULTI-YEAR)	Geophysical Service Inc.	Non - Exclusive	08/11/1986	09/20/1986	03/20/2002
9424-G005-007P	BEAUFORT SEA SEISMIC SURVEY	Geophysical Service Inc.	Non - Exclusive	08/24/1988	10/11/1988	04/11/2004
9424-G005-008P	MARINE SEISMIC:BEAUFORT SEA	Geophysical Service Inc.	Non - Exclusive	07/15/1989	10/02/1989	10/02/2004
9424-G005-009P	MARINE SEISMIC REFLECTION SURVEY (2-D & 3-D)	Geophysical Service Inc.	Non - Exclusive	07/23/1990	09/22/1990	03/22/2005
9229-G005-001P	FT. LIARD 1997 SEISMIC SURVEY	Geophysical Service Inc.	Non - Exclusive	03/29/1997	04/06/1997	10/06/2012
838-09-08-81-0001	GSi BEAUFORT SEA	Geophysical Service Inc.	Exclusive – Data Acquisition		09/10/1981	03/10/1987

