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January 17, 2002

Earth Sciences Sector Natural Resources Canada 580 Booth Street, 14th Floor Ottawa, Ontario K1A 0E4

Attention:

Dr. Irwin Itzkovitch

ADM, Earth Sciences Sector

Dear Sir:

Re: Memorandum of Understanding - Geological Survey of Canada

Enclosed herewith, please find the original executed copy of a Memorandum of Understanding (the MOU) between the Geological Survey of Canada (the GSC) and the Canada-Newfoundland Offshore Petroleum Board.

The Board has agreed to enter into this MOU with the GSC under the authority of Sections 18 and 46 of the Canada-Newfoundland Atlantic Accord Implementation Act and the Canada-Newfoundland Atlantic Accord Implementation Newfoundland Act (the Acts). More specifically, the information is being provided to an agency under the jurisdiction of the Federal Minister who is entitled to access to any information or documentation relating to petroleum resources in the offshore that is provided for the purposes of the Acts or regulations made thereunder. Inherent in this MOU is compliance with the privilege provisions of the Acts which also will now apply to the GSC relating to the information provided by the Board. The issue of confidentiality of this privileged information is addressed specifically in the MOU.

The Board looks forward to our continued co-operation with GSC and your Department in the effective administration of our offshore resources.

Yours truly

H.H. Stanley Chairman & CEO

Encl.

MEMORANDUM OF UNDERSTANDING BETWEEN

CANADA-NEWFOUNDLAND OFFSHORE PETROLEUM BOARD 29 2001 AND

GEOLOGICAL SURVEY OF CANADA

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PURPOSE

The purpose of this Memorandum of Understanding is to establish guidelines and procedures to ensure close cooperation between the Canada-Newfoundland Offshore Petroleum Board (C-NOPB) and the Geological Survey of Canada (GSC) in matters related to geoscientific studies and hydrocarbon resource assessment in areas under C-NOPB jurisdiction.

GENERAL CONSIDERATIONS

C-NOPB is the regulatory agency for oil and gas activities offshore Newfoundland and Labrador (hereafter referred to as the Region). In accordance with the legislation incorporated in the Canada-Newfoundland Atlantic Accord Implementation Act and the Canada-Newfoundland Atlantic Accord Implementation Newfoundland Act (the Acts) and the accompanying regulations and guidelines, C-NOPB receives from the petroleum industry: geological and geophysical reports and data, well reports, petrophysical and geological logs, cores, cuttings, reservoir fluids, the results of seabed surveys, and seabed samples resulting from oil and gas activities in the Region.

C-NOPB has a statutory responsibility to preserve the confidentiality of those data and materials resulting from oil and gas activities in the Region in accordance with the provisions of the Acts.

C-NOPB is required by the Acts to: establish, maintain and operate a facility in Newfoundland for the storage and curatorship of all geophysical records and geological and hydrocarbon samples relating to the offshore area. Such a facility has been constructed in St. John's.

GSC has the obligation under the Resources and Technical Surveys Act and federal Cabinet directives to: ensure the availability of comprehensive geological, geophysical and geochemical knowledge, technology and expertise concerning the Canadian landmass, including the offshore areas, mineral and energy resources and conditions affecting land and seabed use, as required for effective exploitation of mineral and energy resources, estimation of the resource base of Canada, land use, public safety and security and formulation of policies.

As a result, GSC has the capability to carry out scientific studies and analyses of the data and materials from the Region, the timely results of which: (1) would assist C-NOPB in its management of resources; (2) are important in the assessment of Canada's petroleum resources; and so should be made available publicly as soon as

practicable following the period of confidentiality provided in the legislation, to assist exploration efforts for oil and gas in the Region.

AGREEMENT

In view of the above considerations, both parties agree to the following terms. In this Agreement "access" is defined as the right to examine, sample well materials, and/or to obtain reproductions of data.

- During the period of confidentiality C-NOPB will provide designated scientists and technicians of GSC and designated contractors of GSC access to, from its offices and repositories, geological, geophysical and drilling data and materials from the Region for the purpose of carrying out studies and analyses. These officers and contractors will be designated jointly by GSC and C-NOPB.
- 2. GSC will carry out appropriate geoscientific studies using the data and materials from the Region. The priority of these studies will be established by GSC, after consulting with C-NOPB. The results of these studies will be provided to C-NOPB as soon as they have been completed.
- 3. GSC will include scientists of C-NOPB in any formal assessment of petroleum resources of the Region and will keep these officers of C-NOPB fully aware of the progress and results of such assessments. Publication of the results of the assessments will be made jointly with C-NOPB.
- 4. GSC will provide C-NOPB, from its offices, access to seismic and other geophysical data and reports resulting from surveys, undertaken by the GSC by itself or in partnership with other scientific institutions in the Region, including the St.Pierre and Miquelon area under the control of the Government of France.
- The cost of all reproductions made for GSC by C-NOPB will be borne by GSC, and the cost of all reproductions made for C-NOPB by GSC will be borne by C-NOPB.
 - 6. C-NOPB and GSC will work in cooperation to maintain publicly accessible and mutually beneficial databases. GSC will not, any time, distribute to the public data received from C-NOPB without the consent of C-NOPB. The contact in C-NOPB for this purpose is the Manager, Exploration. C-NOPB will not, any time, distribute to the public data received from GSC without the consent of GSC.
- 7. ACCESS TO WELL HISTORY REPORTS, CORES, CUTTINGS, DOWN-HOLE LOGS, RESERVOIR FLUIDS
- 7.1 Access to confidential well history reports and down-hole logs, and to samples from well cuttings, cores and reservoir fluids will be provided from C-NOPB's St. John's office or repository to the designated officers of GSC undertaking

studies of the Region after submission of these reports and well materials by the companies and approval by C-NOPB.

- 7.2 Cores, cuttings, and reservoir fluids may be examined at C-NOPB's repository. Sampling of these for specific scientific studies will be allowed, on request, at the C-NOPB's repository subjected to conditions in the C-NOPB's Sampling/Borrowing Well Materials memorandum. Sampling will be permitted by designated scientists or technicians of the GSC, assisted by C-NOPB technicians. Sampling may be restricted on account of the quantity of materials available.
- 8. ACCESS TO REPORTS AND DATA FROM MULTI-CHANNEL SEISMIC SURVEYS AND OTHER GEOPHYSICAL DATA.
- 8.1 Access to confidential industry-processed multi-channel reflection seismic sections, shot-point maps, geophysical reports and other geophysical data will be provided from C-NOPB's St. John's office, to the designated officers of GSC after filing by the companies and approval by C-NOPB.
- 9. ACCESS TO REPORTS AND DATA FROM SITE SURVEYS AND GEOTECHNICAL SURVEYS AND TO SEABED AND GEOTECHNICAL SAMPLES
- Access to confidential reports and data from site surveys and geotechnical surveys, and to seabed and geotechnical samples, will be provided from C-NOPB's St. John's office or repository, to the designated officers of GSC after filing by the companies and approval by C-NOPB.
- 9.2 GSC will provide reasonable assistance to C-NOPB, when requested, concerning the analysis and interpretation of the results of site surveys and reports, and geotechnical surveys.
- 10. ALL CONFIDENTIAL DATA MADE AVAILABLE TO GSC BY C-NOPB WILL BE SUBJECT TO THE FOLLOWING CONDITIONS:
- 10.1 The data are to be protected within the provisions of the Acts.
- 10.2 The data are to be held strictly confidential by those designated officers of GSC entrusted with their use until the end of the periods of confidentiality; C-NOPB will inform GSC of the confidentiality periods in writing.
- 10.3 No person who is not a designated employee of GSC or a designated contractor of GSC shall have access to the confidential data.
- The text of any publication or presentation resulting from the study or use of confidential data or materials provided by C-NOPB to any officer or contractor of GSC shall, during the period of confidentiality of any of the data or materials used in the publication or presentation, be made available for review by

C-NOPB, and any reference to which C-NOPB objects on account of confidentiality shall be deleted.

- 10.5 The contact in C-NOPB for information on confidential or released industry data from the Region shall be the Manager, Exploration.
- ALL CONFIDENTIAL DATA MADE AVAILABLE TO C-NOPB BY GSC WILL BE SUBJECT TO THE FOLLOWING CONDITIONS:
- 11.1 The data are to be held strictly confidential by C-NOPB until the end of the periods of confidentiality; GSC will inform C-NOPB of the confidentiality periods in writing.
- No person who is not a designated employee of C-NOPB or a designated contractor of C-NOPB shall have access to the confidential data.
- 11.3 The text of any publication or presentation resulting from the study or use of confidential data or materials provided by GSC to any officer or contractor of C-NOPB shall, during the period of confidentiality of any of the data or materials used in the publication or presentation, be made available for review by GSC, and any reference to which GSC objects on account of confidentiality shall be deleted.
- 12. DISPUTES

Any concerns or disputes that arise shall be resolved by the Assistant Deputy Minister, Earth Sciences Sector, Natural Resources Canada and the Chairman, C-NOPB.

13. REVIEW

The senior officers of C-NOPB and GSC will meet as frequently as necessary, but not less frequently than once annually, to review the operation of this Memorandum and to consider any amendment which may be required thereto.

AMENDED

Assistant Deputy Minister Earth Sciences Sector

Chairman
Canada-Newfoundland
Offshore Petroleum Board