

MEMORANDUM OF UNDERSTANDING

CONCERNING

ENVIRONMENTAL ASSESSMENT

OF THE

TERRA NOVA DEVELOPMENT

This **MEMORANDUM OF UNDERSTANDING**, dated June 17, 1996,

AMONG The Canada-Newfoundland Offshore Petroleum Board
(the Board),

The Minister of the Environment of the Government of Canada,

The Minister of Natural Resources of the Government of Canada,

The Minister of Environment and Labour of the Government of Newfoundland
and Labrador,

The Minister of Mines and Energy of the Government of Newfoundland and
Labrador, and

The Premier as Minister Responsible for Intergovernmental Affairs of the
Government of Newfoundland and Labrador

("the Parties")

RECORDS, pursuant to Sections 44 and 46 of the *Canada-Newfoundland Atlantic Accord Implementation Act*¹ and of the *Canada-Newfoundland Atlantic Accord Implementation Newfoundland Act*² (the "Accord Acts"), Sections 40 through 42 of the *Canadian Environmental Assessment Act*³ (the "CEAA"), the *Environmental Assessment Act*⁴, and the *Intergovernmental Affairs Act*⁵ that:

WHEREAS, Petro-Canada, on behalf of the interest owners in the Terra Nova oil field, has indicated its intention to submit to the Board an application describing its plans to develop the petroleum resources of the Terra Nova oil field, located on the north-east Grand Banks offshore Newfoundland; and

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1. S.C. 1987, c. 3
 2. R.S.N. 1990, c. C-2
 3. S.C. 1992, c. 37
 4. R.S.N. 1990, c. E-14
 5. R.S.N. 1990, c. I-13

WHEREAS, Section 46 of the Accord Acts requires the Board to conclude with departments and agencies of the Government of Canada and of the Government of Newfoundland and Labrador Memoranda of Understanding in relation to environmental regulation, and to such other matters that are appropriate, in order to ensure effective coordination and to avoid duplication of work and activities; and

WHEREAS, the Board is the lead agency in ensuring that petroleum exploration and development activities in the Newfoundland Offshore Area proceed with due consideration for the safety of the operations and the protection of the environment; and

WHEREAS, the Board has responsibility for administering the provisions of the Accord Acts, has a duty, pursuant to Section 44 of the Accord Acts, to conduct a public review of development applications, and has established procedures for such reviews and published guidelines regarding the information required to be submitted as part of such applications; and

WHEREAS, the Board is a federal authority and a responsible authority within the meaning of the CEAA; and

WHEREAS, Sections 40 through 42 of the CEAA enable the Minister of the Environment of the Government of Canada to enter into an agreement with other jurisdictions respecting the joint establishment of a review panel and the process by which the panel conducts an assessment of the potential environmental effects of a proposed project; and

WHEREAS, the Minister of the Environment of the Government of Canada has responsibilities respecting the environmental assessment of certain proposed activities pursuant to the CEAA; and

WHEREAS, the Minister of Environment and Labour of the Government of Newfoundland and Labrador has responsibilities in the Province of Newfoundland and Labrador pursuant to the *Environmental Assessment Act*; and

WHEREAS, The Minister of Environment and Labour of the Government of Newfoundland and Labrador has been authorized, pursuant to Section 37 of the *Environmental Assessment Act*, to exempt the Terra Nova Project from the application of the said Act, subject to the environmental

assessment being performed in accordance with this Memorandum of Understanding and those other terms and conditions that the Minister may impose, and

WHEREAS, the Minister of Natural Resources of the Government of Canada and the Minister of Mines and Energy of the Government of Newfoundland and Labrador have responsibilities related to the Accord Acts; and,

WHEREAS, the Premier as Minister Responsible for Intergovernmental Affairs of the Government of Newfoundland and Labrador has responsibilities pursuant to the *Intergovernmental Affairs Act*; and

WHEREAS, the Parties wish to ensure that an application for the development of the Terra Nova oil field is assessed to ascertain the potential effects of the proposed development upon the natural and socio-economic environments, and that this assessment is conducted in a responsible and efficient manner, without unnecessary delays or duplication of effort; and,

WHEREAS, it is appropriate to describe more formally the process which will be followed by the Parties in the conduct of an environmental assessment of the Terra Nova development;

THEREFORE, the Parties agree that:

1. DEFINITIONS

In this Memorandum,

"Accord Acts" means the *Canada-Newfoundland Atlantic Accord Implementation Act* and the *Canada-Newfoundland Atlantic Accord Implementation Newfoundland Act*;

"Agency" means the Canadian Environmental Assessment Agency;

"Board" means the Canada-Newfoundland Offshore Petroleum Board;

"Canada-Newfoundland Benefits Plan" has the same meaning as in Section 2 of the Accord Acts;

"CEAA" means the *Canadian Environmental Assessment Act*;

"Development Application" means the application submitted to the Board by Petro-Canada, on behalf of the interest owners in the Terra Nova oil field, to develop and exploit the petroleum resources of that field;

"Development Plan" has the same meaning as in Section 2 of the Accord Acts;

"Environment" has the same meaning as in Section 2 of the CEAA;

"Environmental assessment" means an assessment of the environmental effects of the Project that is conducted in accordance with this Memorandum;

"Environmental effect" has the same meaning as in Section 2 of the CEAA;

"Minister of the Environment" means the Minister of the Environment of the Government of Canada;

"Minister of Environment and Labour" means the Minister of Environment and Labour of the Government of Newfoundland and Labrador;

"Minister of Mines and Energy" means the Minister of Mines and Energy of the Government of Newfoundland and Labrador;

"Minister of Natural Resources" means the Minister of Natural Resources of the Government of Canada;

"Panel" means the public review panel which is appointed pursuant to this Memorandum;

"Participant Funding Program" means the program which has been established pursuant to Section 58(1.1) of the *Canadian Environmental Assessment Act*;

"Parties" means the Parties to this Memorandum;

"Project" means the proposed development by Petro-Canada of the Terra Nova oil field located on the northeast Grand Banks offshore Newfoundland, as described in Annex II;

"Proponent" means Petro-Canada, acting on behalf of the interest owners of the Terra Nova oil field;

"Responsible Authority" has the same meaning as in Section 2 of the CEAA; and

"Secretariat" means the Panel's support staff established pursuant to Paragraph 2.4 of this Memorandum.

2. GENERAL

- Purpose** 2.1 The purpose of this Memorandum is to establish a single process for assessing the environmental effects of the Project, to ensure that this process satisfies the environmental assessment requirements of the Parties, and thereby to avoid unnecessary delay and duplication of work and activities in the fulfilment of these requirements.
- Public Review** 2.2 Pursuant to Sub-section 44(1) of the Accord Acts and Sections 21(b) and 40 of the CEAA, the Board has determined that the Project will proceed directly to a public review and the Parties have agreed to proceed with the joint establishment of a Panel for the review of the Project.
- Public Registry** 2.3 For the purposes of Section 55 of the CEAA, the Board and the Agency will establish at the offices of the Board a registry that provides ongoing public access to information relating to the environmental assessment of the Project.
- Panel Secretariat** 2.4 A Secretariat shall be established by the Parties to assist the Panel in its duties.
- Provision of Information** 2.5 Any information which the Board provides to the Agency pursuant to the role of the Board as a Responsible Authority under the CEAA also will be made available to the Minister of Natural Resources and the Minister of Mines and Energy.
- Publication of MOU** 2.6 This Memorandum shall be published, in a manner satisfactory to the Parties, prior to the commencement of public hearings.

3. ACTIVITIES PRIOR TO PANEL HEARINGS

- Documentation to be Submitted** 3.1 The Board will require the Proponent of the Project to submit, in support of its Development Application, documentation that includes the biophysical and socio-economic information that is described in Chapter 6 and Chapter 7 of the Board's December, 1988 *Development Application Guidelines* and a consideration of the factors listed in Section 16 of the CEAA.

Project-Specific Guidance	3.2 The Board will consult the Parties concerning any Project-specific guidance it proposes to provide the Proponent that would vary or make more specific the information referred to in Paragraph 3.1.
Issue Identification Sessions	3.3 The Board will request the Proponent to hold public sessions in advance of its submission of the Development Application, to permit interested persons to gain a general appreciation of the Project which is being proposed and to assist the Proponent in identifying issues of concern to the public which should be addressed in its documentation. The Board will encourage the Proponent to host the sessions, and will attend as facilitator and observer. The Board will consult with the Parties concerning the timing, nature and locations for the sessions.
Preliminary Review of Application	3.4 Following the submission of the Development Application, the Board will review the documentation contained therein to determine its completeness and suitability for the purposes of public review. The Board will consult with its advisors and with the public, and take their views into account, prior to making this determination.
Public Information Sessions	3.5 The Board will request the Proponent to hold, approximately thirty days following the submission of the Development Application described in Paragraph 3.1, a round of public information sessions to describe more completely its plans for the proposed development and to allow interested parties to ask questions of clarification. The Panel, its Secretariat, or both, will audit the sessions.

4. APPOINTMENT OF PUBLIC REVIEW PANEL

Membership of Panel	4.1 The membership of the Panel shall consist of three persons. Panel members will not be members or employees of the Board, members of the Public Service of Canada, nor civil servants of the Province of Newfoundland and Labrador.
Qualifications of Panel Members	4.2 Each Panel member shall be unbiased and free of any conflict of interest relative to the Project and have knowledge or

experience relevant to the anticipated environmental effects of the Project and to other matters described in the Development Application.

Nomination and Appointment of Panel Members	4.3 The Government of Canada and the Government of Newfoundland and Labrador will jointly nominate candidates for appointment to the Panel. The Board, the Minister of the Environment of the Government of Canada, and the Government of Newfoundland and Labrador will appoint the nominees to, and select a Chairperson for, the Panel.
Timing of Panel Appointment	4.4 Every reasonable step will be taken to ensure the Panel is appointed by the date upon which it is anticipated the Development Application described in Paragraph 3.1 will be submitted.
Public Notice	4.5 Upon the appointment of the Panel, the Board, the Minister of the Environment, and the Minister of Environment and Labour, on behalf of the Parties, will give public notice of its appointment.
Powers of Panel	4.6 The Panel shall be vested with the powers described in Sub-section 44(3) of the Accord Acts, and in Section 35 of the CEAA.

5. PANEL TERMS OF REFERENCE

Terms of Reference	5.1 The terms of reference for the Panel, as agreed by the Parties, are attached as Annex III of this Memorandum.
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6. FINANCIAL CONSIDERATIONS

Panel Budget	6.1 Prior to the appointment of the Panel, the Parties will prepare a budget for the Panel's operation.
Funding	6.2 The funds for the operation of the Panel, and for its conduct of the public hearings, will be provided by the Board.
Participant Funding	6.3 Persons who wish to participate in the public review may apply for funding from the Agency in accordance with its Participant Funding Program. The Agency will review applications and allocate funds to participants as appropriate.

Separate Board Budget Item 6.4 The Board will submit for the approval of the Minister of Natural Resources and the Minister of Mines and Energy pursuant to the Accord Acts a supplementary budget request for the funds required pursuant to Paragraph 6.2.

7. **REVIEW PANEL REPORT**

Reporting 7.1 The Panel will be required to provide a report of the proceedings of the public hearings, its findings and its recommendations to the Board, to the Minister of Natural Resources, to the Minister of Mines and Energy, to the Minister of the Environment, and to the Minister of Environment and Labour. The report shall be made publicly available in a coordinated and timely manner by the Board, on behalf of the Parties, following its receipt.

Environmental Assessment Decisions 7.2 Those Parties with environmental assessment decision-making responsibilities will ensure that their environmental assessment decisions are made in a timely fashion, with the objective of announcing those decisions in a coordinated manner not later than sixty (60) days following the receipt by the Parties of the Panel report.

8. **BOARD REVIEW AND DECISIONS**

Board's Review 8.1 The Board will conduct a detailed internal review of the Development Application concurrently with the public review process.

Board Decisions 8.2 The Board will, in formulating its decisions with respect to the Development Plan and the Canada-Newfoundland Benefits Plan, explicitly take into account the report and the recommendations of the Panel and the positions of the Government of Canada and the Government of Newfoundland and Labrador regarding the report of the Panel.

Follow-up Program 8.3 The Board's decisions described in Paragraph 8.2 shall include a description of measures which the Board intends to implement, or ensure that the Proponent implements, to mitigate any adverse environmental effects identified as a result of the Panel review.

Approval of Board's Development Plan Decision 8.4 Pursuant to the Accord Acts, the Board's decision regarding the Development Plan is subject to the approval of the Minister of Natural Resources and the Minister of Mines and Energy. These Ministers shall take such steps as are required within their respective jurisdictions in their consideration of the acceptability of the Board's decision.

9. AMENDMENTS

Amendments 9.1 This Memorandum may be amended with the written approval of all Parties. Unless another day is agreed, an amendment will become effective upon its signature by the Parties.

IN WITNESS WHEREOF our signatures are hereunto inscribed.

For The Canada-Newfoundland
 Offshore Petroleum Board

Minister of the Environment
Government of Canada

Minister of Natural Resources
Government of Canada

Minister of Environment and Labour
Government of Newfoundland
and Labrador

Minister of Mines and Energy
Government of Newfoundland
and Labrador

Approved Pursuant to the Intergovernmental Affairs Act
by the Premier as Minister Responsible for
Intergovernmental Affairs or the Secretary to Cabinet for
Intergovernmental Affairs

ANNEX I

LIST OF ANNEXES

Annex I	List of Annexes
Annex II	Project Description
Annex III	Terms of Reference for Panel Review

ANNEX II

PROJECT DESCRIPTION

The purpose of the Project is to develop and exploit the petroleum resources of the Terra Nova oil field, which is located some 350 km southeast of St. John's, Newfoundland on the northeast Grand Banks in a water depth of about 95 m. The field is located approximately 35 km southeast of the Hibernia field, the proposed development of which underwent a joint federal-provincial public review in 1985.

Project activities include the construction, installation, commissioning, operation, decommissioning and abandonment of a floating petroleum production facility, and associated facilities located on, or beneath, the sea floor. The Project also includes the drilling of some 30 to 40 development wells using one or more conventional semi-submersible mobile offshore drilling units. A separate floating oil storage facility also may be required, depending upon which production facility alternative is selected. The development wells will be tied into manifolds on the sea floor using flow lines and will be connected to the floating production facility using flexible marine risers. The floating production facility will be designed for a peak oil production rate of $20 \times 10^3 \text{ m}^3/\text{d}$, and a total fluid handling rate of $32 \times 10^3 \text{ m}^3/\text{d}$. The crude oil will be transported from the field by ice-strengthened, double-hulled and double-bottomed shuttle tankers. Shipping of oil to an approved trans-shipment facility, and from there to market, is also being considered. The producing life of the field is estimated to be 15 to 20 years.

The Terra Nova oil field comprises four distinct geological units, named the "West Flank", the "Graben", the "East Flank", and the "Far East". Petro-Canada, the Proponent of the Project, believes that the West Flank has a low potential for commercial oil production, and does not propose to develop it. The Graben and the East Flank are estimated to contain a total of approximately $48 \times 10^6 \text{ m}^3$ (300 million barrels) of recoverable crude oil. Although the Far East unit has not yet been tested by drilling, Petro-Canada believes that it may contain up to $16 \times 10^6 \text{ m}^3$ (100 million barrels) of recoverable crude oil. The three prospective units span an area of approximately 70 km^2 .

Petro-Canada proposes a staged approach to field development, whereby the Graben and East Flank are developed initially. About 32 subsea wells, comprising 19 production wells and 13 water or gas injection wells, presently are estimated to be required for this initial phase of development. The Far East unit will be delineated during this phase, and developed later if favourable reservoir conditions are encountered. An additional 12 wells could be required for Far East development.

Development wells will be abandoned on an individual basis as each no longer is required. The wells will be abandoned by setting a series of cement and mechanical plugs, and by removing all equipment above the zone of iceberg scour. Oil production wells also will be purged of hydrocarbons prior to abandonment. The floating production facility and the floating storage facility (if the latter is required) will be decommissioned and made safe offshore, then will be towed to a shore location for modification or scrapping. Production and riser base manifolds will have any associated piles or pipes cut 1 m below the seabed and will be removed. All seabed pipelines will be purged of hydrocarbons and removed.

ANNEX III

TERMS OF REFERENCE FOR PANEL REVIEW

- Definitions** In these Terms of Reference,
- "Environmental effect", "follow-up program", and "mitigation" have the same meaning as in Section 2 of the *Canadian Environmental Assessment Act*; and
- "Board", "Canada-Newfoundland Benefits Plan", "Development Application", "Development Plan", "Minister of the Environment", "Minister of Environment and Labour", "Minister of Natural Resources", "Minister of Mines and Energy", "Panel", "Project", "Proponent", and "Secretariat" have the same meaning as in Paragraph 1 of the *Memorandum of Understanding Concerning Environmental Assessment of the Terra Nova Development*.
- General** 1. The Panel will conduct a review of the environmental effects of the Project, considerations of human safety incorporated into the proposed design and operation of the Project, the general approach to the development and exploitation of the petroleum resources respecting the Project, and the employment and industrial benefits that are expected to accrue to the Province of Newfoundland and Labrador, and to Canada, from the Project.
- Scope of the Review** 2. The Panel will include in its review consideration of the factors listed in Schedule 1 to this Annex.
- Limitation** 3. The Panel's mandate shall not include an examination of questions of energy policy, jurisdiction, the fiscal and royalty regime, or the division of revenues between the Government of Canada and the Government of Newfoundland and Labrador.
- Public Participation** 4. The Panel shall conduct its review in a manner which shall promote and facilitate public participation.
- Conduct of the Review** 5. The review procedures to be set by the Panel will be generally consistent with Section 2.5 of the Board's 1988 *Development Application Guidelines*, which are set out in Schedule 2, and will be published by the Panel prior to the commencement of hearings.

Panel to Monitor Preliminary Review of Application

6. During the Board's preliminary review of the Development Application, the Panel, its Secretariat, or both will monitor the review process and, on invitation from the Board, will provide advice concerning the adequacy of the information contained in the Development Application for the purposes of public review.

Referral of Documentation to Panel

7. Following the Board's determination that the documentation contained in the Development Application is complete and suitable for public review, the Board shall refer the documentation to the Panel for public review. The documentation will include, but not be limited to, an environmental impact statement, a socio-economic impact statement, a Development Plan and a Canada-Newfoundland Benefits Plan.

Additional Information

8. The Panel will gather any information it requires for the conduct of its review, including but not limited to:

- (a) information on the Project;
- (b) existing technical, environmental or other information relevant to the review;
- (c) insofar as is appropriate, the conclusions and recommendations of the Hibernia Environmental Assessment Panel and information in response to those recommendations;
- (d) supplementary information including a description of any Proponent-initiated public consultation program, its nature and scope, issues identified, commitments made and outstanding issues; and
- (e) any proposed work plans, terms of reference or guidelines relating to the Proponent's preparation of its development application.

Distribution of Information

9. The Panel shall ensure that the information referred to in Paragraphs 7 and 8 is made available for public examination.

- Comments on Information** 10. Prior to announcing the schedule for public hearings, the Panel will request public comment to determine whether additional information should be provided before convening the public hearings. The time period for receipt of comments shall not be less than thirty (30) days and shall not exceed sixty (60) days.
- Panel May Request Additional Information** 11. Should the Panel identify deficiencies after reviewing the information referred to in Paragraphs 7 and 8 and in consideration of any comments which are received pursuant to Paragraph 10, it may request additional information from the Proponent. Any request for additional information shall be issued within fifteen (15) days following the expiry of the period for comment described in Paragraph 10.
- Location of Hearings** 12. The Panel will hold its hearings in St. John's and in such other locations that may be determined to be appropriate by the Panel.
- Announcement of Hearings** 13. The Panel will schedule and announce the start of its public hearings respecting the Project once the Panel is satisfied with the information provided. A minimum of thirty (30) days and a maximum of sixty (60) days notice will be provided prior to the start of the hearings.
- Reporting** 14. The Panel will prepare and submit to the Board, to the Minister of Natural Resources, to the Minister of Mines and Energy, to the Minister of the Environment, and to the Minister of Environment and Labour a report on its review of the Project, including:
- (a) the anticipated environmental effects of the Project;
 - (b) the efficacy of any mitigation measures which are proposed by the Proponent;
 - (c) comments which are received from the public; and
 - (d) the terms and conditions under which the Project may proceed in a safe and environmentally acceptable manner.

The report shall be submitted at the earliest possible date but in no event later than two hundred and seventy (270) days following receipt of the information referred to in Paragraph 7 of this Annex. The report of the Panel will be published.

Specialist Advisors to Panel

15. The Panel may secure the services of independent specialists to provide information on and help interpret technical and scientific issues. The names of any specialists retained and their advice to the Panel will be made public. Specialists hired by the Panel may be requested to appear before the Panel.

SCHEDULE 1

FACTORS TO BE CONSIDERED DURING PUBLIC REVIEW

The public review of the Development Application respecting the Terra Nova Project shall include a consideration of the factors described below, the temporal scope of which consideration shall include all phases (i.e., construction, installation, commissioning, operation, decommissioning and abandonment) of the Project:

1. The purpose of the Project;
2. The need for the Project;
3. Alternative means of carrying out the Project which are technically and economically feasible;
4. The temporal and spatial boundaries, for environmental assessment purposes, of the Project area ;
5. A description of the existing environment, or components thereof, including the socio-economic environment, which may reasonably be affected by the Project;
6. The effects of the environment upon the Project;
7. The environmental effects of the Project, including those due to malfunctions or accidents that may be reasonably expected to occur in connection with the Project;
8. Cumulative environmental effects of the Project that are likely to result from the Project in combination with other projects or activities that have been or will be carried out;
9. The significance of the effects described in items 6 through 8;
10. Measures, including contingency and compensation measures as appropriate, that are technically and economically feasible and that would mitigate any significant adverse environmental effects of the Project which are identified pursuant to item 9;
11. The significance of adverse environmental effects following the employment of mitigative measures referred to in item 10;
12. The capacity of renewable resources that are likely to be significantly affected by the Project to meet the needs of the present and those of the future;
13. The need for, and the contents of, follow-up programs respecting the results of the

- environmental assessment;
14. Measures which have been taken by the Proponent of the Project to identify, evaluate, and minimize risks to human safety which may be associated with the operation of the Project;
 15. The general approach to the development and exploitation of the petroleum resources respecting the Terra Nova oil field;
 16. The employment and industrial benefits that are expected to result from the Project and the general measures that are proposed or could be undertaken to optimize those benefits, particularly in the local and regional economies; and
 17. Comments from the public respecting any of the matters described above.

SCHEDULE 2

DEVELOPMENT APPLICATION GUIDELINES:

NEWFOUNDLAND OFFSHORE AREA

(Canada-Newfoundland Offshore Petroleum Board, December 1988)