

National Energy Board



Office national de l'énergie

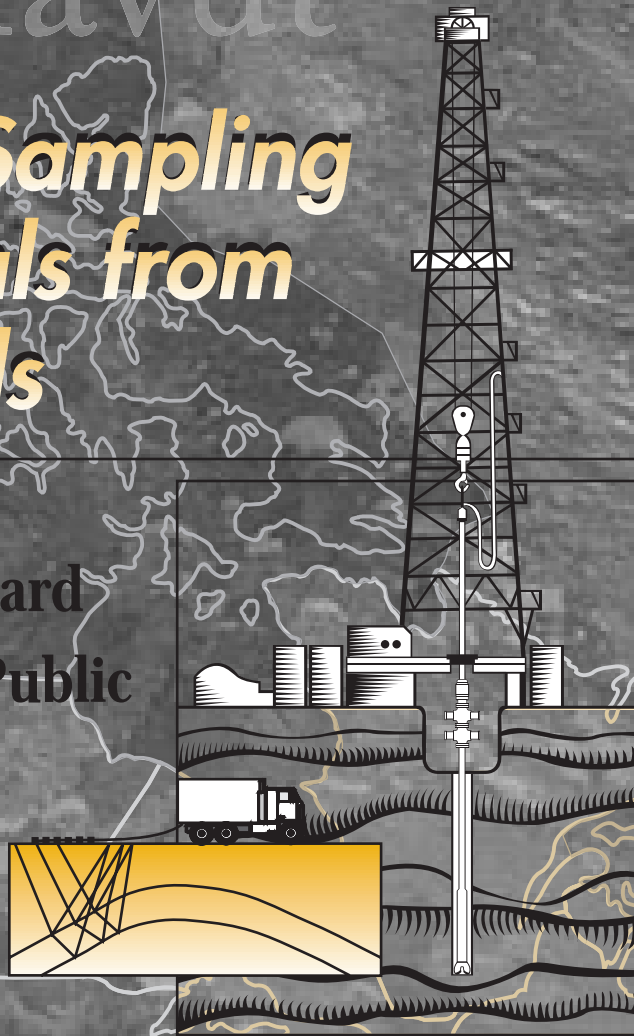
Northwest Territories  
Nunavut

# Studying & Sampling Well Materials from Frontier Wells



Regulated *by the*  
National Energy Board  
Information *for the* Public

February 2000

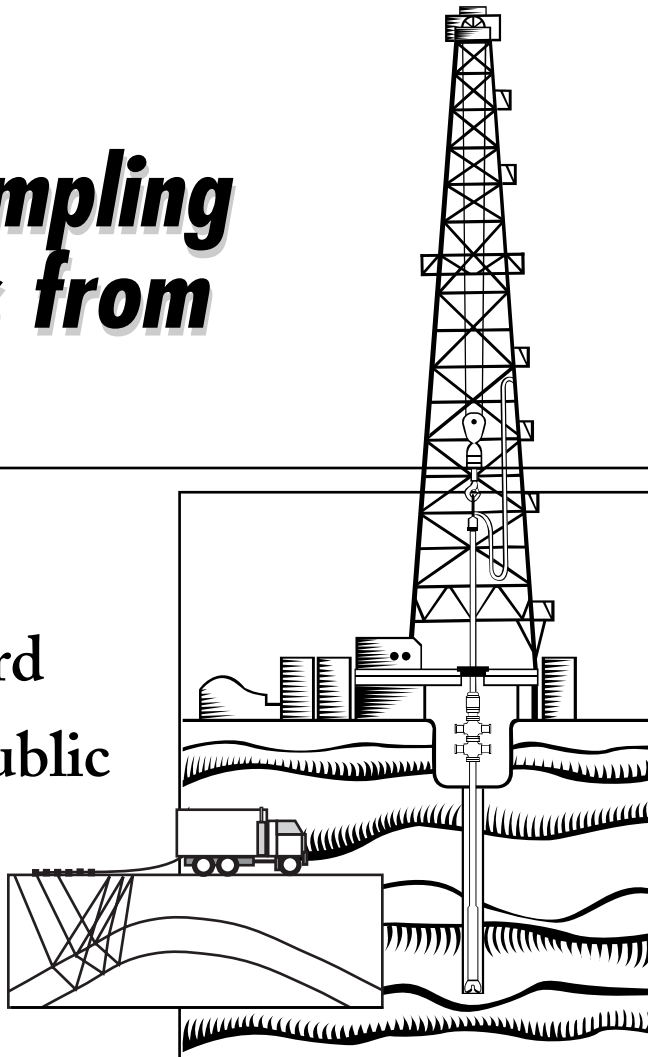


West Coast  
East Coast

# ***Studying & Sampling Well Materials from Frontier Wells***

Regulated *by the*  
National Energy Board  
Information *for the* Public

February 2000



© Her Majesty the Queen in Right of Canada  
1999 as represented by the National Energy Board

Cat. No. NE23-86/2000E  
ISBN 0-662-28918-8

This report is published separately in both official  
languages.

**Copies are available on request from:**

Publications Coordinator  
National Energy Board  
444 Seventh Avenue S.W.  
Calgary, Alberta  
T2P 0X8  
Fax: (403) 292-5503  
Phone: (403) 299-3562  
Internet: [www.neb.gc.ca](http://www.neb.gc.ca)

**For pick-up at the NEB office:**

Library  
Ground Floor

Printed in Canada

© Sa Majesté la Reine du Chef du Canada 1999  
représenté par l'Office national de l'énergie

N° de cat. NE23-86/2000F  
ISBN 0-662-84667-2

Ce rapport est publié séparément dans les deux  
langues officielles.

**Exemplaires disponibles sur demande auprès du:**

Coordonnateur des publications  
Office national de l'énergie  
444, Septième Avenue S.-O.  
Calgary (Alberta)  
T2P 0X8  
Télécopieur: (403) 292-5503  
Téléphone: (403) 299-3562  
Internet: [www.neb.gc.ca](http://www.neb.gc.ca)

**En personne, au bureau de l'Office:**

Bibliothèque  
Rez-de-chaussée

Imprimé au Canada



This publication is printed on paper containing 20% Total Recovered Fiber/All Post-Consumer Fiber

**Table of Contents**

A. Definition of Terms ..... 2

B. Introduction ..... 3

C. Legislative and Administrative Authority ..... 3

D. Map of Frontier Lands Regulated by the National Energy Board ..... 4

E. Well Materials ..... 5

F. Authorizations to Sample and Study Well Materials ..... 5

G. Requests to Examine or Study Privileged Material ..... 7

H. Reporting ..... 7

I. Contact Names and Addresses ..... 8

## **A. Definition of Terms**

For ease of reference, the following terms are used in this document:

<b>Chief Conservation Officer</b>	means the person designated by the National Energy Board for that purpose.
<b>Frontier Lands</b>	means those parts of Canada, outside the provinces and both onshore and offshore, for which the Government of Canada has the right to dispose of or exploit the natural resources. ( <i>Canada Petroleum Resources Act (CPRA)</i> s. 2).
<b>Head, Core and Sample Repository</b>	refers to the curator of well materials at the appropriate facility as defined in Section C.
<b>Privileged information</b>	means information that may not be made public. The term has similar meaning to the commonly used industry term "confidential". ( <i>CPRA</i> s. 101).
<b>Samples</b>	refers to well materials, or portions of well materials that are the subject of the proposed study.
<b>Sampling</b>	refers to the process of acquiring portions of the well materials stored at one of the facilities which house well materials.
<b>Study</b>	refers to a proposed program of sampling, testing, or analysis.
<b>Well material(s)</b>	refers to any formation or reservoir material obtained from a well, including drill cuttings (washed and unwashed), conventional cores, sidewall cores and well fluids.
<b>Well operator</b>	refers to the person or company that was granted authorization pursuant to the <i>Canada Oil and Gas Operations Act (COGOA)</i> to drill the well which is the source of the well materials to be studied.

## **B. Introduction**

This document is intended to provide guidance to companies and individuals who have a specific need to sample well materials from wells that fall within the regulatory authority of the National Energy Board (NEB) for the purpose of studies, see "Legislative Authority" - Section C below, and map (page 4) .

Persons who wish to examine, without sampling, the well materials from non-privileged wells need only contact the Head, Core and Sample Repository at the appropriate facility identified in this document to make any arrangements that may be required.

## **C. Legislative and Administrative Authority**

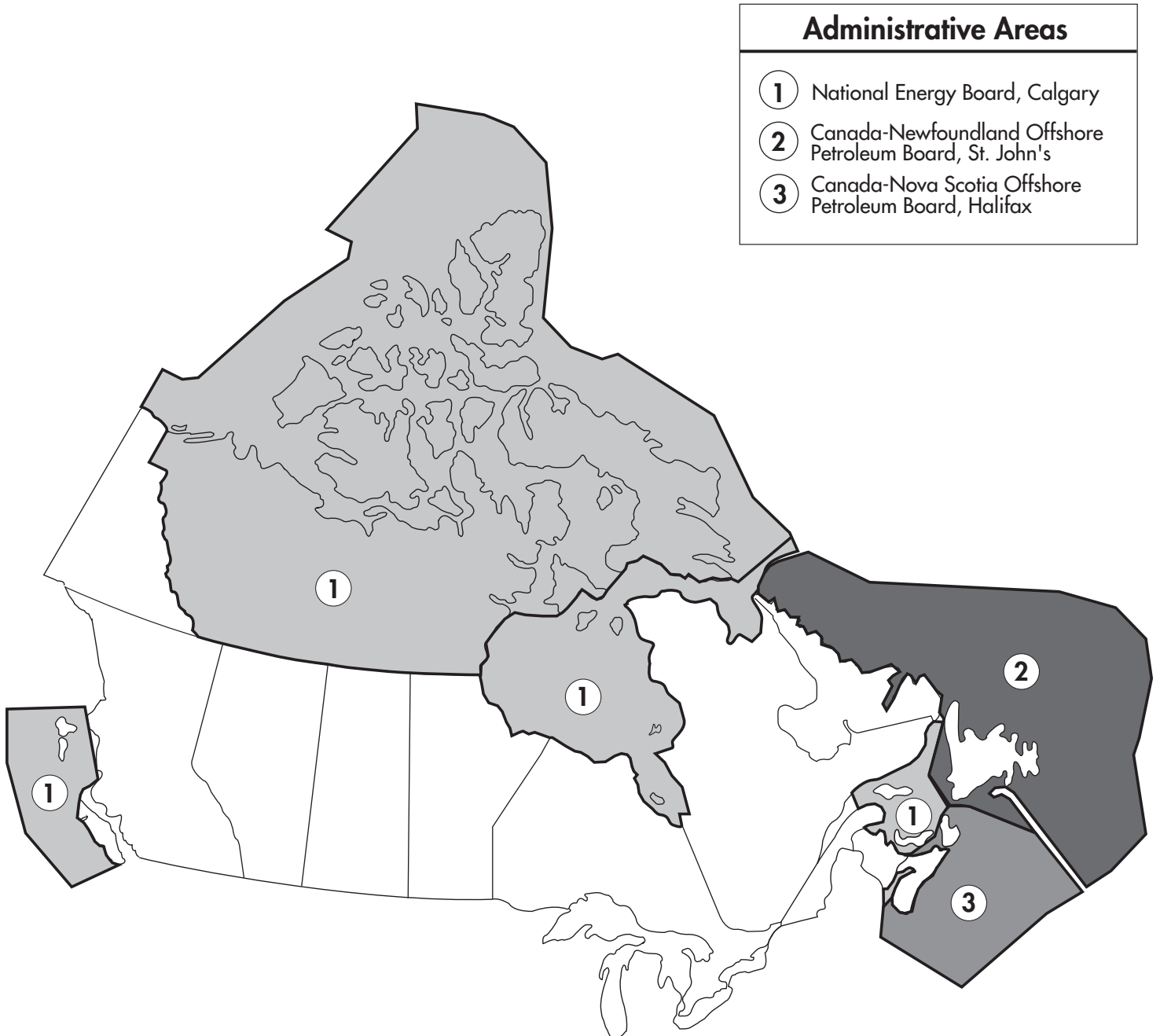
The Board has regulatory powers under the *COGOA* and certain provisions of the *CPRA* for oil and gas exploration and activities on frontier lands not otherwise regulated under joint federal/provincial accords. Specific responsibility for the storage and conservation of well materials is contained in the *Canada Oil and Gas Drilling Regulations (COGDR) Part XI - Security and Release of Well Information and Materials*.

Well materials from wells drilled on Frontier Lands regulated by the NEB (see map page 4) are stored on behalf of the NEB, at Geological Survey of Canada-Calgary (GSC-Calgary) and at Canada-Nova Scotia Offshore Petroleum Board-Dartmouth (C-NSOPB). GSC-Calgary stores materials from wells drilled in the Yukon and Northwest Territories, Nunavut, Beaufort Sea, Arctic Islands and West Coast offshore. C-NSOPB stores well materials from wells drilled in Hudson Bay, Eastern Arctic Offshore, Gulf of St. Lawrence and Bay of Fundy (in addition to well materials from the Nova Scotia offshore area regulated by C-NSOPB).

The NEB also manages well materials for wells drilled in the Yukon on behalf of the Yukon Government.

Please contact the C-NSOPB at the address indicated on page 8 for further information on access to and procedures for well materials from the Nova Scotia offshore area.

Well materials from the Newfoundland offshore area regulated by the Canada-Newfoundland Offshore Petroleum Board (C-NOPB) are stored at its Core Storage and Research Centre in St. John's. Please contact the C-NOPB at the address listed on page 8 for further information on access to and procedures for those materials.

**D. Map of Frontier Lands Regulated by the National Energy Board**

## **E. Well Materials**

Subsection 186(1) of the *COGDR* provides that operators "...shall obtain sufficient ... samples [well materials] during the drilling of a well to ensure that a comprehensive geological and reservoir evaluation can be made." Subsection 227(1) provides that specified portions of these samples [well materials] shall be delivered to the locations specified by the Chief Conservation Officer (CCO).

The well materials are stored, managed and made publicly accessible, so as to ensure:

1. optimal preservation and maintenance of the material in accordance with good conservation practice;
2. protection of privileged information pursuant to Section 101 of the *CPR*A;
3. provision of reasonable access to the non-privileged materials for examination; and
4. sampling and analysis of the materials when scientifically justified subject to good conservation practice and the conditions specified below.

## **F. Authorizations to Sample and Study Well Materials**

1. No sampling of well materials is permitted without the written authorization of the CCO.
2. To obtain authorization to sample well materials for the purpose of conducting studies, written application must be made to the NEB at the address indicated on page 8, with a copy to the Head, Core and Sample Repository at the appropriate facility (GSC-Calgary or CNSOPB-Dartmouth). An application should include a detailed description of the study that is being proposed including:
  - a) expected commencement and completion dates;
  - b) well names and unique well identifiers;
  - c) proposed intervals and sample volumes;
  - d) a description of the purpose of the proposed study and analytical procedures;
  - e) a list of the in-house departments or the contractors, and their locations, proposed to undertake the study; and,
  - f) a responsible contact name, address and telephone number for the study.
3. The CCO will consider authorization of the study on the basis of whether:
  - a) the current condition and quantity of the original well materials will permit the proposed amounts and locations of sampling in accordance with good conservation practice;
  - b) the geoscientific and interpretive value of the remaining well materials is threatened by the proposed sampling;
  - c) the proposed sampling will reduce, damage or destroy the bulk of the well materials or that of a specified zone or interval by an amount greater than ten (10) per cent of the original quantity archived;
  - d) the zone has been previously studied in the manner that is being proposed;
  - e) the results of such a prior study are publicly available; and,



- f) there is sufficient scientific evidence that the proposed study will achieve the intended purpose.
4. All authorizations to sample and study well materials are subject to the following conditions:
- a) a "Record of Examination and Loan" form must be obtained by the applicant from the Head, Core and Sample Repository prior to commencement of the study and the completed form will be returned to the Head, Core and Sample Repository at the conclusion of the study;
  - b) actual sample locations and quantities for removal will be in accordance with the directions of the Head, Core and Sample Repository and will not exceed the amounts authorized by the CCO;
  - c) sampling must be done under the supervision of the Head, Core and Sample Repository;
  - d) maximum permissible sampled volume, including continuous linear sampling, of a core sample is 16 cubic centimetres per 30 linear centimetres of original material;
  - e) no sample from a core may include more than twenty-five (25) per cent of the original diameter of the core; slab and full diameter core sampling may be permitted if supported by clear scientific justification.
  - f) a maximum of 20 grams of cutting or fluid samples is permitted;
  - g) a maximum of 20 grams per sample interval of unwashed cuttings is permitted for each procedure;
  - h) plug sampling is restricted to one plug every 30 centimetres and the size of the plug permitted is dependent on the core diameter;
  - i) the original or a duplicate petrographic data and thin sections, recovered macro-fossils, micro-fossils and palynomorph slides and preparations is submitted to the Head, Core and Sample Repository for incorporation into the inventory of subsurface material;
- j) any portion of the sample not destroyed in the study and any resulting residue is returned properly labelled as to the test performed, well name, unique well identifier and depth to the Head, Core and Sample Repository for proper re-insertion at the correct location and sampled position. If plugs are contaminated (ie. mercury injection) then the plugs must be disposed of appropriately according to the hazardous waste disposal requirements in effect in the jurisdiction where the disposal is to occur.
  - k) when the sampled material itself can not be preserved, then the fullest possible description of the material sampled, including pre-testing photographs must be submitted as part of the final report (see Section H);
  - l) materials that have not been destroyed in the study must be returned within 6 months from the sampling date;
  - m) materials are subject to immediate recall on demand from the NEB; and
  - n) a final report containing the information specified in Section H of this document will be submitted to the NEB and the Head, Core and Sample Repository.
5. Sampled materials shall not be removed from Canada without the prior written authorization of the CCO.
6. If, after consideration of the application, an Authorization to Sample and Study Well Materials is issued, it will be in writing, signed by the CCO, and returned to the applicant.

## **G. Requests to Examine or Study Privileged Material**

Access may be granted to examine or study well materials that are privileged pursuant to Section 101 of the *CPRA*. Requests for sampling of such privileged material will be considered and may be granted under the same terms and conditions as non-privileged material, with the following **additional conditions**:

1. written authorization from the well operator to examine and/or study privileged material must be submitted with the request to the NEB; and,

2. any data or analysis obtained from the study will not be disclosed, except with the written permission of the well operator or in accordance with Section 101 of the *CPRA*.

## **H. Reporting**

Two copies of a report on the study are required within six months of completion of the study. One copy is to be sent to the NEB at the address specified on page 8 and one copy to the Head, Core and Sample Repository at the appropriate facility.

The report will include the purpose of the study, the procedures used for analysis and the results of tests and analyses performed and any interpretations made.

More specifically, the report should include:

1. an introduction which includes the background information and the purpose of the study;
2. a summary of the testing/analysis procedures utilized, a list of companies and individuals that performed the testing/analysis and their relevant professional credentials;
3. a description of the results achieved;
4. an interpretation of the results and implications for future work;

5. appendices that include the raw data, any graphs/plots/strip logs, any photographs/scanning electron microscope (SEM) photomicrographs or other such representations, including before and after photographs for samples where destructive testing has occurred; and,
6. where appropriate, such as in geochemical analyses, a digital file of the results on diskette.

Reports from studies on non-privileged wells will be privileged for a period of two years from the date of completion of the study. Reports from studies on wells that are privileged under Section 101 of the *CPRA* will be kept privileged until the privilege period for the well has expired, or for two years from the date of completion of the study, whichever is longer. These reports will be made available to the public subsequent to the expiration of the period of privilege.

## ***I. Contact Names and Addresses***

Requests to sample and study well materials taken from wells on Frontier Lands regulated by the NEB should be addressed to the following:

**Rudi Klaubert**

Regulatory Information Administrator  
National Energy Board  
444 Seventh Avenue SW  
Calgary Alberta T2P 0X8  
Telephone: (403) 299-3112  
FAX: (403) 292-5503  
Email: rklaubert@neb.gc.ca

A copy of the request addressed to the NEB should also be sent to:

For materials from wells drilled in the Yukon, Northwest Territories, Nunavut, Beaufort Sea, Arctic Islands and West Coast offshore:

**Allan Scott**

Core and Sample Repository  
Geological Survey of Canada (Calgary)  
3303 - 33 Street NW  
Calgary, Alberta T2L 2A7  
Telephone: (403) 292-7057

Or, for materials from wells drilled in Hudson Bay, the Eastern Arctic Offshore, Gulf of St. Lawrence and Bay of Fundy:

**Ms. Mary-Jean Verrall**

Canada-Nova Scotia Offshore Petroleum Board Core  
Storage and Laboratory  
Suite 27, 201 Brownlow Avenue  
Dartmouth, Nova Scotia B3B 1W2  
Telephone: (902) 468-3994  
FAX: (902) 468-4584

Information on the procedures to be followed in the Nova Scotia offshore area, and requests to sample and study well materials taken from wells from that area should be addressed to Ms. Mary-Jean Verrall at the address specified above for the Canada-Nova Scotia Offshore Petroleum Board.

Information on the procedures to be followed in the Newfoundland offshore area, and requests to sample and study well materials taken from wells from that area should be addressed to:

**Exploration Department**

Canada-Newfoundland Offshore Petroleum Board  
Fifth Floor, TD Place  
140 Water Street  
St. John's, NF, A1C 6H6  
Telephone: (709) 778-1430  
FAX: (709) 778-1473

Canada