

MEMORANDUM OF UNDERSTANDING
FOR COOPERATION IN THE RESEARCH AND DEVELOPMENT
OF TAR SANDS (OIL SANDS) AND HEAVY OIL

BETWEEN

The Alberta Oil Sands Technology and
Research Authority of the Province of Alberta

The Department of Energy, Mines and
Resources of Canada,

The Department of Mineral Resources
of the Province of Saskatchewan

for Canada

AND

The Department of Energy of the United
States

for the United States of America

Hereinafter called the 'Participants'.

Recognizing their mutual interest in the utilization of tar sands and heavy oil, and desiring to exchange information and to further the development of processes and equipment concerned with tar sands and heavy oil:

Bearing in mind efforts of both countries to encourage international cooperation in the general field of energy research and development under both bilateral and multilateral arrangements:

Recognizing that appreciable resources of tar sands and heavy oils also occur in other and usually less developed countries:

Have agreed on the following:

Article 1

The objective of this Memorandum of Understanding is to establish a framework for a program of cooperation between the Participants in research and development activities in the field of tar sands and heavy oil extraction, processing and related technologies.

The areas and forms of cooperation are listed under Articles 2 and 3 respectively.

Article 2

The areas of cooperation covered by this Memorandum of Understanding may include:

1. Parametric analysis of tar sands and heavy oil characteristics.
 2. Comparative economics and sweep efficiencies of steam flooding and in situ combustion methods.
 3. Permeability-enhancement methods.
 4. Treatment and use of water produced during tar sands and heavy oil development.
 5. Steam flooding with additives (steam with a twist. -- SWAT).
 6. ~~Shaft and tunneling design.~~
LABORATORY AND FIELD PROJECT REVIEWS
- Handwritten notes: "MCC", "JLK", "C. W. P.", "AND" with a signature.*

Other areas may be added by the Participants by mutual agreement in writing.

Article 3

Cooperation in accordance with this Memorandum of Understanding may include but is not limited to the following forms:

1. Exchange of scientists, engineers and other specialists.
2. The planning, coordination and conduct of research and development and demonstration projects through task-sharing arrangements and joint funding as

agreed by any of the Participants. Each joint project would be implemented subject to a separate memorandum executed by those Participants involved in that joint project.

3. Exchange, on a current basis, of scientific and technical information, and results and methods of research and development.
4. The organization of seminars and other meetings on specific agreed topics concerning tar sands and heavy oil in the areas listed in Article 2, in a manner agreed by the Coordinating Committee (Article 4).
5. Short visits by specialist teams or individuals to the tar sands and heavy oil research facilities and test sites of the other Participants.
6. Joint testing in facilities located in each country.

Other specific forms of cooperation may be added by the Participants by mutual agreement in writing.

Each of the foregoing form of cooperation shall require an implementing agreement setting forth the details of such cooperation.

Article 4

1. To supervise the execution of this Memorandum of Understanding, the Participants will establish a Coordinating Committee.

- (a) Each country will designate up to five members for the Coordinating Committee; co-chairmen will be nominated by Canada and the United States. The Committee will meet as necessary but normally twice each year at locations mutually agreed upon, in Canada and the United States, alternately.

(b) The Coordinating Committee will have as its general objective the following goals:

- to optimize the efforts of the Participants devoted to resolving outstanding technological problems inhibiting the production and utilization of oil from tar sands and heavy oil
- to reduce the technical risks to any of the Participants when new technologies are introduced into this field
- to shorten the time needed to develop and introduce new technologies in this field

(c) The Coordinating Committee will be informed by each Participant of its own research, development and demonstration plans at the earliest time possible in the respective planning stages to the extent legally allowable or practically feasible to permit all Participants to comment critically on each of these plans so as to enable all Participants to take into account the intentions of the others in their own program planning procedures.

(d) The Coordinating Committee will identify studies and projects suitable for cooperation and prepare the basis of agreement and management structure appropriate to each. In general, initial summaries should be prepared by one or more of the Participants in the following format for formal consideration by the Coordinating Committee: these short documents (5-6 pages) should provide relevant information under the following headings:

- objective of study or project
- background, including pre-existing proprietary or non-proprietary information
- description of specific proposal

- projected cost level and method of financing proposed
- time-frame for study or project
- management approach

In addition, special licensing considerations are to be noted.

If it is decided to undertake any such studies and projects, such studies and projects shall require an implementing agreement setting forth the details of implementation of cooperation.

- (e) The Coordinating Committee will report at least annually on its activities to the heads of the departments and agencies who are the Participants to this Memorandum of Understanding.

Article 5

The Participants recognize the need to agree upon provisions concerning information, copyrights and treatment of inventions or discoveries made or conceived in the course of or under any implementing agreement entered into in accordance with this Memorandum of Understanding. Accordingly, specific provisions relating to these concerns shall be set forth in each such implementing agreement.

Article 6

The provisions of this Memorandum of Understanding shall not affect the rights or duties of the Participants hereto under other agreements or arrangements. This Memorandum of Understanding also in no way precludes commercial firms or other legally constituted enterprises in each of the two countries from engaging in commercial dealings in accordance with the applicable laws of each country; nor does it preclude the Participants from engaging in activities with other governments or persons. Moreover, it is expected that the present Memorandum of Understanding shall facilitate industrial and commercial exchanges in the field of tar sands and heavy oil

between the firms of the countries of the Participants with a view to mutual benefits from such exchanges for both countries. The Participants shall coordinate contracts and arrangements involving commercial firms in their respective countries when such firms or enterprises act on behalf of their respective governments under the terms of this Memorandum of Understanding. It is understood that all such contracts and arrangements shall conform with applicable laws and regulations under which each Participant operates.

Article 7

Cooperation under this Memorandum of Understanding shall be in accordance with laws of the respective countries and the regulations of the respective Participants. All questions related to the Memorandum of Understanding arising during its term shall be settled by the Participants by mutual agreement.

Article 8

Except when otherwise specifically agreed at the time, all costs resulting from cooperation under this Memorandum of Understanding shall be borne by the Participant that incurs them. The implementation of this Memorandum of Understanding will be subject to the availability of appropriated funds.

Article 9

1. This Memorandum of Understanding shall enter into force upon signature and continue for a five (5)-year period. This Memorandum of Understanding may be extended by written agreement by the Participants following a review of accomplishments under the Memorandum of Understanding.

2. Any Participant may withdraw from this agreement upon six months written notice, sent to the Coordinating Committee, but such withdrawing Participant

(i) agrees to leave with other Participants all data and technical information exchanged prior to withdrawal; and

(ii) agrees to handle all data and technical information it has received from the other Participants and guard it from all disclosure to others in accordance with provisions of the implementing agreements under which the data and technical information was received.

(iii) agrees to continue its participation in any study or project underway at the time of its withdrawal from this Memorandum of Understanding, subject to the withdrawal arrangements agreed in respect to any individual study or project.

Withdrawal by the United States will result in the termination of the MOU.

3. In the event that, during the period of this Memorandum of Understanding the nature of any Participant's tar sands and heavy oil programs should change substantially whether this be by substantial expansion, reduction, transformation or amalgamation of major elements with the tar sands and heavy oil programs of a third party, any Participant shall have the right to request revisions in the scope and/or terms of this Memorandum of Understanding.
4. All joint efforts and experiments begun but not completed at the expiration or termination of this Memorandum of Understanding may be continued until their completion under the terms of this Memorandum of Understanding.

Done this fourth day of June, 1979 at Washington, D.C., USA; and Edmonton, Regina, and Ottawa, Canada.

FOR THE UNITED STATES OF AMERICA:

DEPARTMENT OF ENERGY

Name: John F. O'Leary
Title: Deputy Secretary

FOR CANADA:

ALBERTA OIL SANDS TECHNOLOGY
AND RESEARCH AUTHORITY

Name: C. W. Bowman
Title: Chairman
M. A. Carnegie

Approved by:

Peter Lougheed

for the Minister of Federal and
Intergovernmental Affairs of
the Province of Alberta

DEPARTMENT OF ENERGY, MINES AND
RESOURCES OF CANADA

Name: J. O. ...
Title: Deputy Minister

DEPARTMENT OF MINERAL RESOURCES
OF SASKATCHEWAN

Name: John R. Messer
Title: John R. Messer - Minister

AMENDMENTS concerning Intellectual Property and
Exchanges of Staff and Information to the
MEMORANDUM OF UNDERSTANDING FOR COOPERATION IN THE
RESEARCH AND DEVELOPMENT OF TAR SANDS (OIL SANDS) AND HEAVY OIL

BETWEEN

The Alberta Oil Sands Technology and
Research Authority of the Province of
Alberta,

The Department of Energy, Mines and
Resources of Canada,

The Department of Mineral Resources of
the Province of Saskatchewan,

for Canada

AND

The Department of Energy of the United
States of America

for the United States of America

Hereinafter called the four 'Participants'.

In fulfillment of the intent to agree upon entitlement to Intellectual Property and on conditions of exchanges of staff and information for the Memorandum of Understanding for Cooperation in the Research and Development of Tar Sands (Oil Sands) and Heavy Oil (hereinafter referred to as "The Memorandum of Understanding") dated 4 June 1979 the Participants have agreed that the following provisions will apply to the cooperation pursuant to the Memorandum of Understanding.

Article 1

1. General

The Participants support the widest possible dissemination of information provided or exchanged under this Memorandum of Understanding, subject to the need to protect proprietary information exchanged hereunder, and to the provisions of Article 3 of this Amendment.

2. Use of Proprietary Information

A. Definitions as used in this Memorandum of Understanding and this amendment:

(i) The term "information" includes scientific or technical data, results, or methods of research and development, and any other information intended to be provided or exchanged under this Memorandum of Understanding.

(ii) The term "proprietary information" means information which contains trade secrets or commercial or financial information which is privileged or confidential, and may only include such information which:

- (a) has been held in confidence by its owner;
- (b) is of a type which is customarily held in confidence by its owner;
- (c) has not been transmitted by the transmitting Participant to other entities (including the receiving Participant) except on the basis that it be held in confidence; and
- (d) is not otherwise available to the receiving Participant from another source without restriction on its further dissemination.

B. Procedures

(i) A Participant receiving proprietary information pursuant to this Memorandum of Understanding shall respect the privileged nature thereof. Any document which contains proprietary information shall be clearly marked with the following (or substantially similar) restrictive legend:

"This document contains proprietary information furnished in confidence under a Memorandum of Understanding dated 4 June, 1979 between the Department of Energy of the United States of America, the Alberta Oil Sands Technology and Research Authority of the Province of Alberta, the Department of Energy, Mines and Resources of Canada, and the Department of Mineral Resources of the Province of Saskatchewan, and shall not be disseminated outside these organizations, their contractors, licensees and the concerned departments and agencies of the governments of the U.S.A., Alberta, Canada, and Saskatchewan, without the prior approval of:

This notice shall be marked on any reproduction hereof, in whole or in part. These limitations shall automatically terminate when this information is disclosed by the owner without restriction."

(ii) Proprietary information received in confidence under this Memorandum of Understanding may be disseminated on a need-to-know basis by the receiving Participant to:

- (a) persons within or employed by the receiving Participant, and to departments and agencies of the government of the receiving Participant; and
- (b) prime or subcontractors of the receiving Participant located within or without the geographical limits of the receiving Participant's legal jurisdiction, for use only within the framework of their contracts with the receiving Participant in work relating to the subject matter of the proprietary information;

provided that any proprietary information so disseminated shall be pursuant to an agreement of confidentiality and shall be marked with a restrictive legend substantially identical to that appearing in sub-paragraph (i).

(iii) With the prior written consent of the Participant providing proprietary information under this Memorandum of Understanding, the receiving Participant may disseminate such proprietary information more widely than otherwise permitted in subparagraph (ii). The Participants will cooperate with each other in developing procedures for requesting and obtaining prior written consent for such wider dissemination, and each Participant will use its best efforts to grant such approval to the extent permitted by its policies, regulations, and laws.

C. Each Participant will exercise its best efforts to ensure that proprietary information received by it under this Memorandum of Understanding is controlled as provided herein. If one of the Participants becomes aware that it will be, or may reasonably be expected to become, unable to meet the confidentiality provisions of this Article, it will immediately inform the other Participant. The Participants will thereafter consult to define an appropriate course of action.

D. Information arising from seminars and other meetings arranged under this Memorandum of Understanding and information arising from the attachments of staff, use of facilities, and joint projects will be treated by the Participants according to the principles specified in this Article; provided, however, no proprietary information orally communicated will be subject to the limited disclosure requirements of this Memorandum of Understanding unless the individual communicating such information places the recipient on notice as to the proprietary character of the information communicated and forthwith confirms the notice in writing.

E. Nothing contained in this Memorandum of Understanding will preclude the use or dissemination of information received by a Participant through arrangements other than those provided for under this Memorandum of Understanding.

Article 2

Information transmitted by one Participant under this Memorandum of Understanding will be accurate to the best knowledge and belief of the transmitting Participant, but the transmitting Participant does not warrant the suitability of the information transmitted for any particular use or application by any other Participant or by any third party. Information developed jointly by any Participants will be accurate to their best knowledge and belief. No Participant warrants the accuracy of the jointly-developed information nor its suitability for any particular use or application by any Participant or by any third party.

Article 3

1. With respect to any invention or discovery made or conceived in the course of or under the Memorandum of Understanding, and unless otherwise agreed to in writing:

A. If made or conceived by personnel of one Participant (the Assigning Participant) or its contractors while assigned to another Participant (Recipient Participant) or its contractors in connection with exchanges of scientists, engineers, and other specialists, the Recipient Participant shall acquire all right, title, and interest in and to any such invention or discovery in its own country and in third countries, and the Assigning Participant shall acquire all right, title, and interest in and to any such invention or discovery in its own country.

B. If made or conceived by a Participant or its contractors as a result of employing information which has been communicated to it under the Memorandum of Understanding by any other Participant or its contractors, or communicated during seminars or other joint meetings, the Participant making the invention shall acquire all right, title, and interest in and to such invention or discovery in its own and third countries, and the other Participant shall own such rights in its own country.

C. With regard to other specific forms of cooperation, including loans or exchanges of materials, instruments, and equipment for special joint research projects, the Participants will provide for appropriate distribution of rights to inventions or discoveries resulting from such cooperation. In general, however, each Participant will normally own the rights to such inventions or discoveries in its own country and the rights to such inventions or discoveries in other countries will be agreed upon by the Participants on an equitable basis.

2. Each Participant will pay awards or compensation required to be paid to its own employees according to its own laws.

Article 4

1. Whenever an exchange of staff is contemplated under this Memorandum of Understanding, each Participant will ensure that qualified staff are selected for attachment to the other Participant.

2. Each such attachment of staff will be the subject of a separate attachment agreement in writing between the Participants involved.

3. Each Participant will be responsible for the salaries, insurance and allowances to be paid to its staff.

4. Each Participant will pay for the travel and living expenses of its staff while on attachment to the host Participant unless otherwise agreed.

5. The host Participant will arrange for comparable accommodations for the other Participant's staff and their families on a mutually agreeable reciprocal basis.

6. Each Participant will provide all necessary assistance to the attached staff (and their families) of the other Participant as regards administrative formalities (travel arrangements, etc.).

7. The staff of each Participant will conform to the general and special rules of work and safety regulations in force at the host establishment, or as agreed in the separate attachment agreement.

Done on December 4, 1979, in five copies at Washington, D.C., U.S.A.; and Edmonton, Ottawa, and Regina, Canada.

FOR THE UNITED STATES OF AMERICA:

DEPARTMENT OF ENERGY

Name: Harry E. Berpeck
 Title: Assistant Secretary for
International Affairs

FOR CANADA:

ALBERTA OIL SANDS TECHNOLOGY
 AND RESEARCH AUTHORITY

Name: Ch. Bowman
 Title: Chairman
B. M. A. Gange
Vice-Chairman
 Approved by: Peter Decker
 for the Minister of Federal
 and Intergovernmental Affairs
 of the Province of Alberta.

DEPARTMENT OF ENERGY, MINES AND
 RESOURCES OF CANADA

Name: Charles D. Smith
 Title: Sr. Asst. Deputy Minister

DEPARTMENT OF MINERAL RESOURCES
 OF SASKATCHEWAN

Name: John L. Bisset
 Title: Minister