

AMENDMENT TO EXTEND, until 4 December 1994

- 1. The MEMORANDUM OF UNDERSTANDING for cooperation in the Research and Development of Tar Sands (Oil Sands) and Heavy Oil; and**
- 2. The Four IMPLEMENTING AGREEMENTS:**
 - I The Joint Canadian - United States Proposal for Resource Characterization of Oil Sands (Tar Sands);**
 - II Implementing Agreement II on Steam Flooding with Additives in a Tar Sand Deposit;**
 - III Implementing Agreement III on Dissemination of Information; and**
 - IV Implementing Agreement IV on Monitoring Frontal Movements in Thermal Recovery**

BETWEEN The Department of Energy, Mines and Resources of Canada,
The Department of Energy and Mines of the Province of
Saskatchewan,
The Alberta Oil Sands Technology and Research Authority of the
Province of Alberta,

for Canada

AND The Department of Energy of the United States
for the United States of America

Hereinafter called the "Participants"

RECITALS

- 1. The Memorandum of Understanding for Cooperation in the Research and Development of Tar Sands (Oil Sands) and Heavy Oil was signed on 4 June 1979 by the Participants and amended on 4 December 1979 to account for intellectual property and exchanges of staff (the "MOU") and is due to remain in force until 4 December 1989 unless extended by written agreement of the Participants following a review of accomplishments under the MOU.**
- 2. Article 3 of the MOU provides that each joint research and development and demonstration project and each form of cooperation under the MOU would be the subject of a separate Implementing Agreement executed by the**

Participants. Thus far, four Implementing Agreements, mentioned above, have been made and additional Implementing Agreements are in various stages of development.

I Memorandum of Agreement (hereinafter called "Implementing Agreement"), concerning a Joint Canadian - U.S. Proposal for Resource Characterization of Oil Sands (Tar Sands) was signed on 4 June 1979 by the four Participants. Although the Implementing Agreement had no termination date explicitly contained in its text, the intent of the four Participants at the time of signature was that it should remain in force as long as the MOU remained in force. Moreover, the Participants agreed on 10 January 1980 that paragraphs 1, 2A, 2B, 2C, and 2E of Article 1 and Article 2 of the Amendment signed on 4 December 1979 would govern cooperation among the Participants under this Implementing Agreement.

II Implementing Agreement II, concerning Steam Flooding with Additives, was signed by the four Participants on 13 September 1982, to remain in force until 4 December 1984 and extended to remain in effect until 4 December 1989, or as extended by written agreement of the Participants.

III Implementing Agreement III, concerning Dissemination of Information was signed by the four Participants on 13 September 1982, to remain in force until 4 December 1984 and extended to remain in effect until 4 December 1989, or as extended by written agreement of the Participants.

IV Implementing Agreement IV, concerning Monitoring Thermal Fronts, was signed by the four Participants on 28 February 1986, to remain in force until 31 December 1987 and extended to remain in effect until 4 December 1989 or as extended by written agreement of the Participants.

3. At the 13 April 1989 meeting of the Coordinating Committee it was agreed that the cooperation among the four Participants had been of considerable mutual value and that the MOU should be extended until 4 December 1994. It was further agreed that the four Implementing Agreements should also be extended in force until 4 December 1994.

THEREFORE, the Participants agree to extend the MOU and the four Implementing Arrangements until 4 December 1994.

Done in quadruplicate.

FOR THE DEPARTMENT OF ENERGY
OF THE UNITED STATES OF AMERICA

MR. McElwath
(Signature)

MICHAEL R. McELWATH
(Printed Name)

ACTING ASST. SEC. FOR FUEL ENERGY
(Title)

10/27/89
(Date)

FOR THE DEPARTMENT OF ENERGY, MINES
AND RESOURCES OF CANADA

Marc Denis Everell
(Signature)

MARC DENIS EVERELL
(Printed Name)

ASSISTANT DEPUTY MINISTER
(Title)

89/11/19
(Date)

FOR THE DEPARTMENT OF ENERGY AND MINES
OF THE PROVINCE OF SASKATCHEWAN

John Reid
(Signature)

JOHN REID
(Printed Name)

DEPUTY MINISTER
(Title)

1 Dec 89
(Date)

FOR THE ALBERTA OIL SANDS TECHNOLOGY
AND RESEARCH AUTHORITY OF THE PROVINCE
OF ALBERTA

William J. Yarko
(Signature)

WILLIAM J. YARKO
(Printed Name)

CHAIRMAN AND CEO
(Title)

Nov 9/89
(Date)