

**MEMORANDUM OF UNDERSTANDING
Between**



**UNITED STATES
DEPARTMENT OF ENERGY
OFFICE OF NATURAL GAS AND PETROLEUM TECHNOLOGY**

And



**UNITED STATES
DEPARTMENT OF THE INTERIOR
MINERALS MANAGEMENT SERVICE**

**For The
IMPLEMENTATION OF AND PARTICIPATION IN
TECHNOLOGY COMMERCIALIZATION TO
BENEFIT PRODUCTION IN THE ULTRA-DEEPWATER
GULF OF MEXICO**

A. OBJECTIVES

This Memorandum of Understanding ("MOU") is entered into by the United States Department of Energy Office of Natural Gas and Petroleum Technology ("NGPT") and the United States Department of the Interior Minerals Management Service ("MMS") (collectively the "Parties") for the purpose of formalizing their commitment to create, support and participate in technology development and commercialization for ultra-deepwater oil and gas production in the Gulf of Mexico and elsewhere.

Specifically, the Parties desire to partner in achieving the following objectives:

- a) Promote the development, commercialization and implementation of new and existing technologies which will lower the cost of ultra-deepwater (i.e.,

- greater than 5,000 feet) exploration and production of oil and gas while maintaining safety of operations and protection of the marine environment;
- b) Promote increased domestic production of oil and gas, thereby reducing America's dependence on imported sources of oil and stabilizing world oil prices, and better satisfying the increasing demands of domestic gas consumption;
 - c) Promote increasing the source of revenue available to the national labs and other government and private research facilities for further research and development of ultra-deepwater oil and gas production technologies;
 - d) Promote increasing revenues collected by the U.S. Treasury through greater production of oil and natural gas production from deepwater sites under the jurisdiction of the United States;
 - e) Identify areas where technology gaps exist to enhance and assist future deepwater operations, and make recommendations for areas of future research and development;
 - f) Make any other recommendations related to the sustainable and safe production of oil and natural gas from the ultra-deepwater Outer Continental Shelf; and
 - g) Promote the conservation and protection of natural resources to ensure that they are not wasted.

B. BACKGROUND

A secure energy future for our Nation depends upon increasing exploration, development and production of domestic sources of fossil energy. The ultra-deepwater Gulf of Mexico presents a unique opportunity to increase domestic reserves. U.S. law and treaties provide the MMS with the authority to regulate and manage all hydrocarbon resources on the Nation's Outer Continental Shelf ("OCS").

With regards to the development of technologies necessary for the safe, economic and sustainable development of these resources, production companies have recently reduced their research and development initiatives due to market forces. As a result, production companies have come to seek technological advancements from the service companies, who may lack adequate resources or insulation from market fluctuations. Meanwhile, the national labs, and other government and private research facilities, have available many technologies that can improve production efficiencies or enhance environmental and worker safety, but that often fail to reach the market in a timely manner. The national labs are an integral part of the U.S. Department of Energy.

The feasibility and challenges of improving ultra-deepwater production was recently explored in "Offshore Technology Roadmap for Ultra-Deepwater Gulf of Mexico" by NGPT in cooperation with MMS. This Roadmap recommends using

the Natural Gas and Oil Technology Partnership ("Partnership"), or a similar entity, as a mechanism for transferring advanced technologies developed either at the national labs or through laboratory and industry collaborations. The Roadmap also recommends an ongoing dialogue with stakeholders that includes analysis of existing mechanisms and identification of "best practices" for technology commercialization for offshore oil and gas production in the Gulf of Mexico. Finally, the Roadmap encourages identification of opportunities for expanding the use of these mechanisms, streamlining the movement of technology exiting the national labs as well as other government and private research facilities, and initiating processes to enhance offshore technology commercialization.

C. AUTHORITY

1. Department of Energy Organization Act of 1977 (Public Law No. 95-91), 42 USC §§ 7101 et seq.
2. The Outer Continental Shelf Lands Act ("OCSLA") of 1953, as amended by the OCSLA amendments of 1978 (Public Law No. 95-372), 43 USC §§ 1331 et seq.

D. DEFINITIONS

The term "NGPT" means the United States Department of Energy's Office of Natural Gas and Petroleum Technology.

The term "MMS" means the United States Department of the Interior's Minerals Management Service.

The term "gas" means natural gas as it is commonly understood.

The term "MOU" means this document entitled "Memorandum of Understanding Between the United States Department of Energy Office of Natural Gas and Petroleum Technology and the United States Department of the Interior Mineral Management Service for the Implementation of and Participation in Technology Commercialization to Benefit Production in the Ultra-Deepwater Gulf of Mexico." The term explicitly excludes any prior agreements or communications between the Parties related to the same or similar issues or topics.

The term "Parties" means NGPT and MMS collectively.

The term "Partnership" means the Natural Gas and Oil Technology Partnership.

The term "Roadmap" means "Offshore Technology Roadmap for Ultra-Deepwater Gulf of Mexico" published by NGPT and produced in cooperation with MMS in November 2000.

The term "Ultra-Deepwater" means water depths in excess of 5,000 feet.

E. GENERAL MANAGEMENT AND RESPONSIBILITIES OF THE PARTIES

1. Further Agreements and Consultation

The Parties recognize that implementation of the Roadmap will require an ongoing dialogue and, accordingly, future modifications and amendments of this MOU as technologies, policies and markets change over time. Inter-agency agreements and/or project plans that set forth specific arrangements and procedures shall be developed as necessary to implement this MOU. The Parties agree to consult directly with each other as deemed necessary regarding implementation and progress of this MOU. Coordinators for the Parties are identified in Section G(1) below.

2. Information Coordination

Decisions on the disclosure to the public or media of information developed, collected, compiled, produced or used during the course of implementing this MOU will be made in accordance with the Freedom of Information Act, 5 USC § 552, or as otherwise required by law, following consultation between the Parties.

3. National Laboratory Participation

It is understood that any work done or action taken by any U.S. Department of Energy laboratory will be in accordance with the terms and conditions of the prime operating contract between such laboratory and the U.S. Department of Energy. In the event of any conflict between this MOU or any document or agreement executed in furtherance of the objectives of the MOU, the laboratory's prime operating contract shall take precedence.

4. General Responsibilities of Both Parties

NGPT and MMS agree to individually undertake the following:

- a) Issue a notice of endorsement of this MOU to all field and program elements requesting their full commitment and active support in fulfilling the purposes and objectives of this MOU.
- b) To the extent any technologies or information have been, or will be developed or identified by the Parties, which may have a beneficial impact on the success of the goals contained in this MOU, the

Parties agree to share such knowledge of technologies and information with each other. The Parties acknowledge that some technologies are proprietary and are not subject to this provision during such proprietary period.

- c) Identify and make available to each other, knowledge of any existing program or office, or create a new program or office, with the jurisdiction, resources or information useful in achieving the objectives of this MOU.
- d) Work together to determine the relative merits of various implementing strategies for the Roadmap. This includes serving as Co-Chair, or in a similar partnership capacity, of any organization designated to achieve the objectives contained in this MOU.
- e) Work together to develop, manage and identify funding for any inter-agency programs determined by the Parties to be necessary for the implementation of the Roadmap.

5. Specific Office of Natural Gas and Petroleum Technology ("NGPT") Responsibilities

NGPT agrees to undertake the following:

- a) Implement this MOU through the U.S. Department of Energy's Office of Natural Gas and Petroleum Technology.
- b) Designate the Deputy Assistant Secretary for Natural Gas and Petroleum Technology as the point of contact. This person will be responsible for implementation of this MOU, for program development and management, and for the coordination of relevant activities within NGPT and with the MMS.
- c) Facilitate the identification of potential funding for the actions contained in this MOU.
- d) Serve as the "lead agency" by coordinating and fostering the flow of information and communications between the Partnership, MMS and other stakeholders. As the lead agency, NGPT will strive to ensure that efforts undertaken by others in furtherance of the goals contained in this MOU are not duplicative.

6. Specific Minerals Management Service ("MMS") Responsibilities

MMS agrees to undertake the following:

- a) Implement this MOU through the U.S. Department of the Interior's Minerals Management Service.
- b) Designate the Associate Director of Offshore Minerals Management as the point of contact. This person will be responsible for implementation of this MOU, for program development and management, and for the coordination of relevant activities within the MMS and with the NGPT.
- c) Coordinate actions undertaken on research program functions associated with the Technology Assessment and Research ("TAR") Program, the Oil Spill Research Program, the Environmental Studies Program, and the Resource Evaluation Program.
- d) Implement this MOU in a manner that will broaden the scope of the Offshore Technology Research Center ("OTRC") Cooperative Agreement with MMS and involve MMS's OHMSETT Oil Spill Research facility in order to facilitate projects funded through the U.S. Department of Energy's Offshore Technology Roadmapping initiative.
- e) Take the lead on research projects relative to subject areas coming under its regulatory jurisdiction, including the following examples: (i) Safety of operations; (ii) Conservation of oil and natural gas resources; (iii) Oil spill research, including prevention, response, and clean-up capabilities; and (iv) Protection of the marine environment. This will consist of all administrative responsibilities including recommending topics for research, receiving and reviewing proposals, approving funding actions, managing the research initiatives, and the distribution of research results. Furthermore, it will be consistent with funds appropriated to, or made available to, the MMS for this purpose as provided in Section F below.

F. PROJECT FUNDING

The details of the levels of support to be furnished one Party by the other Party with respect to funding will be developed in specific agreements or other appropriate funding documents, subject to the availability of funds. This MOU shall not be used to obligate or commit funds.

The Parties shall bear their own expenses including all administrative costs, overhead expenses, labor costs, insurance costs, travel expenses and similar

costs, unless a subsequent agreement between the Parties provides otherwise with respect to a specific cost or category of costs.

G. MISCELLANEOUS

1. Contacts and Notices

All notices, communications and coordination shall involve, at a minimum, the following individuals and their successors and designees.

a. For the United States Department of Energy

Deputy Assistant Secretary
for Natural Gas & Petroleum Technology (FE-30)
U.S. Department of Energy
1000 Independence Ave., SW
Washington, DC 20585
(202) 586-5600

b. For the United States Department of the Interior

Associate Director
Offshore Minerals Management (MS-4230)
U.S. Department of the Interior
1849 C Street, NW
Washington, DC 20240
(202) 208-3500

2. Amendment and Termination

This MOU may only be amended by written agreement between the Parties. Such amendment shall become an Annex to this MOU and incorporate the definition of all terms contained in Section D. The Parties recognize that implementation of the Roadmap will require an ongoing dialogue and, accordingly, future modifications and amendments of this MOU as technologies, policies and markets change over time.

Any Party may terminate this MOU on sixty (60) days advance written notice to the other Party.

3. Effective Date and Term

This MOU shall be effective for a term of five (5) years from the date of the last signature. This MOU shall be automatically renewed for another five (5) years

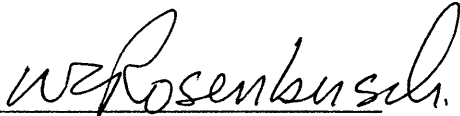
unless either of the Parties provides written notice to the other of its intent to terminate the MOU in accordance with Section G(2) above.

FOR THE PARTIES,

A large, stylized handwritten signature in black ink, appearing to be 'EP' or similar, written over a horizontal line.

Emil Peña
For the United States Department of Energy
Office of Natural Gas and Petroleum Technology

Date: 12.5.00

A handwritten signature in black ink that reads 'W. Rosenbusch' in a cursive style, written over a horizontal line.

Walter Rosenbusch
For the United States Department of the Interior
Minerals Management Service

Date: 12-05-00