



Shell Exploration & Production Company
3601 C Street, Suite 1334
Anchorage, AK 99503

September 25, 2007

U.S. Department of the Interior
Minerals Management Service (MMS)
Alaska OCS Region
Attention: Mr. Rance Wall, Regional Supervisor
Resource Evaluation
3801 Centerpoint Drive, Suite 500
Anchorage, Alaska 99503-5823

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Resource Evaluation

SEP 25 2007

U.S. Dept. of the Interior
Minerals Management Svc.
Alaska OCS Region

Re: Geological and Geophysical (G&G) Permit Application (Forms MMS-327 and 328), 2008 On-Ice Marine Seismic Exploration Program in the Outer Continental Shelf

Dear Mr. Wall:

Shell Offshore Inc. (SOI), a legal entity of Shell Exploration and Production Company, is submitting the attached G&G Permit Application and supporting documents for the proposed 2008 on-ice marine seismic exploration program. Like the 2007 program (Permit 07-02), the 2008 seismic work is planned to be conducted by CCG Veritas (Veritas) entirely within the federal outer continental shelf (OCS). A mobile temporary field camp is planned to be situated on grounded ice on submerged lands in State of Alaska waters in the vicinity between Thetis and Spy Islands.

The 2008 program will cover a geographically larger area than the 2007 program and utilize vibrator (Vibroseis) sources only (please see Attachment 1 Fact Sheet). The 2008 program will employ the same approach of ice verification as used in 2007 program. Ice verification is proposed to begin in early January 2008 and continue periodically into March until project startup. Pending acquisition of all required federal, state and local permits, the seismic program is expected to begin mid-March 2008 (depending on ice conditions) and finish by the end of May 2008.

In addition to the permit applications (forms MMS-327 and 328 - Attachment 2), Attachment 1 includes a map showing the general area of the proposed 2008 on-ice marine seismic program as well as proposed area for the temporary, mobile field camp. The location map exhibits an area of approximately 50 OCS blocks; however, the proposed seismic acquisition program would occur over only approximately 10 to 20 OCS blocks (20 to 40 percent) of that area. The application fee of \$1,900 was paid through the on-line Pay.gov service on September 19, 2008 by SOI (Pay.gov tracking # 24UBV94E).

For the 2008 on-ice marine seismic program, Plan of Cooperation meetings in the communities of Nuiqsut and Barrow are scheduled to occur during October 2007. Additional follow-up meetings are tentatively scheduled for early winter 2008 in the affected communities.

September 25, 2007

MMS

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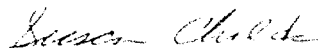
SOI held a pre-application teleconference September 6, 2007 with representatives of the following federal, state, and North Slope Borough agencies, and companies:

- National Oceanic & Atmospheric Administration/National Marine Fisheries Service (NOAA/NMFS)
- MMS
- Alaska Department of Natural Resources (ADNR), Office of Project Management and Permitting (OPMP)
- ADNR, Division of Oil and Gas
- North Slope Borough (NSB) Planning Department
- SOI
- ASRC Energy Services, Regulatory and Technical Services (AES-RTS)
- Veritas

Representatives of the NSB Wildlife Management Department and U.S Fish and Wildlife Service were invited but did not attend the pre-application teleconference.

If there are any questions you may reach me at (907) 770-3700 or susan.childs@shell.com, or contact Greg Horner of AES-RTS at (907) 250-0868 or email greg.horner@asrcenergy.com.

Sincerely,



Susan Childs
Regulatory Affairs Manager, Alaska

Attachments:

Attachment 1 – Fact Sheet (includes location map)

Attachment 2 – Application Forms MMS-327 & 328 (includes Section D Proprietary Information)

Attachment 3 – 2008 On-Ice Seismic IHA Application

CC: Walt Sandel - SOI
Mark Davidson – SOI
Bob Rosenblatt – SOI
Johnny Aiken – NSB
Don Perrin – ADNR
Jeff Walker – MMS
Greg Horner – AES-RTS
Project File
Administrative Record

GH/PR/AH/KP/GS

15214-03.04-07-010/07-410

Fact Sheet

Alaska On-Ice Seismic Program

Prepared August, 2007

Introduction

This fact sheet has been prepared to address the project information for the proposed 2008 on-ice seismic program by Shell Exploration & Production Co (Shell). The fact sheet covers the data acquisition program and logistics including equipment and camp operations.

Background

Shell acquired 86 leases in the Alaskan Beaufort Sea in March, 2005. A significant number of these leases are in water depths shallow enough such that they will prohibit access via conventional seismic streamer vessel operations. As an outgrowth of the on-ice seismic research program Shell conducted in 2007, Shell plans to implement acquisition techniques developed in that program to help meet it's exploration objectives in the Beaufort Sea.

Program Description

Overview

The acquisition program will consist of an area of approximately 10 to 20 OCS blocks in extent. Receivers will be placed principally below the ice sheet, suspended in the water column. Surface receivers will be utilized where necessary, such as in areas containing grounded ice. Sources will be industry-standard light and heavy-weight vibrators.

Field Camp

The program will require a camp facility geared to accommodate 120 people. This camp is composed of purpose-built accommodations which are largely self-sufficient for normal operations. The proposed camp locations are offshore in the vicinity of Thetis and Spy Islands, on grounded ice and proximal to an access trail to the proposed survey area. The camp will be moved periodically as the project progresses, to maintain integrity of the ice and to comply with permit regulations. Re-supply operations will periodically be required for fuel and provisions. These operations will be based out of Deadhorse and occur via Oliktok Dock at Oliktok Point.

Project Location

The proposed program location is in the vicinity of Thetis and Spy Islands, north-northwest of Oliktok Point. The majority of the OCS blocks covered in the program are surrounding the 10 m water depth contour. Seismic data acquisition will occur over an area of 10-20 OCS blocks within the proposed survey boundary shown on Figure 1 that encloses an area of approximately 50 OCS blocks.

Project Timeline

Permitting for the project will begin September, 2007. Ice verification will begin in January, 2008, and continue periodically until the startup of the project. Our current timeline places our start date in March, depending on ice conditions. The program is projected to take up to 60 days to acquire.

Equipment Summary

Equipment for the project consists of a combination of industry-standard heavy equipment and purpose-built arctic equipment. Below are summary descriptions of the equipment.

Seismic Sources

Seismic sources for the program will consist of two industry-standard seismic vibrator sources (Figures 2 & 3). The two types of units are 1.) wheeled 68,000 lb GVW AHV-IV ('heavy vibe') and 2.) 20,000 lb GVW IVI Envirovib (which will be modified to accommodate tracks). The program is proposed to have five heavy vibes and nine Envirovibs. Not all vibrators will be working at any one time; the Envirovibs will be used in two groups of 3-4 vibes each (ie. 6-8 vibes working at any one time). The Envirovibs are proposed to provide approximately 95% the bulk of the vibration source. The heavy vibes are proposed to provide the remaining 5% of the vibration source. This may change if field conditions dictate.

Seismic Recording/Support and Camp Equipment

The recording unit is comprised of 13 tracked vehicles for crew transport and technical support (Figures 4-5), a tracked recording trailer, and several ice drilling units. Camp facilities (Figures 6-7) include 30-40 sled trailers. These trailers include medical facilities, crew quarters, offices, kitchen and dining facilities, laundry facilities, technical work spaces, generators, and fuel storage units. These are supported by several tracked units that also prepare the camp site and access trail maintenance.

Equipment Pictures

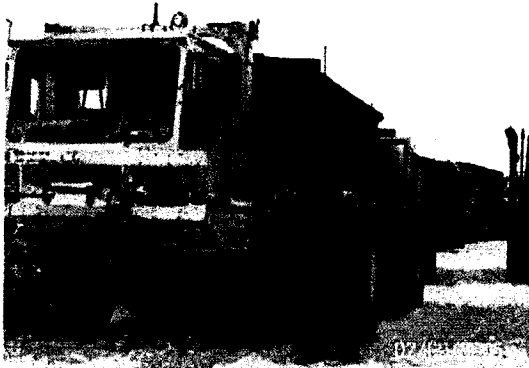


Figure 2: 68,000 lb Vibrator



Figure 3: 20,000 lb mini-vibrator (to be modified for tracks).

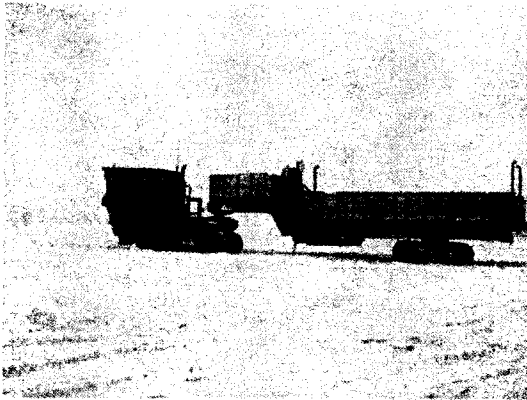


Figure 4: Equipment trailer



2004 5 5

Figure 5: Personnel carrier

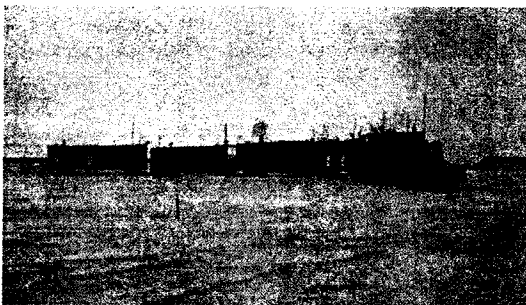


Figure 6: Camp trailers

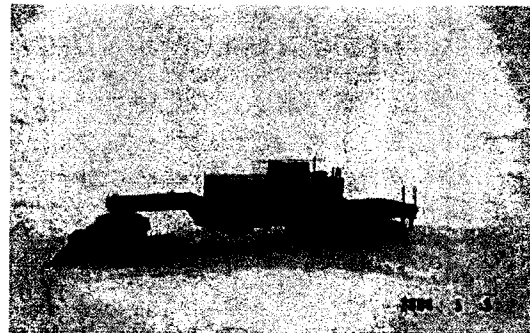


Figure 7: Fuel trailer

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

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OCT - 1 2007

ALASKA OCS REGION
(Insert Appropriate Regional Office)

U.S. Dept. of the Interior
Minerals Management Service
Alaska OCS Region

**APPLICATION FOR PERMIT TO CONDUCT GEOLOGICAL OR GEOPHYSICAL
EXPLORATION FOR MINERAL RESOURCES OR SCIENTIFIC RESEARCH
IN THE OUTER CONTINENTAL SHELF**

(Section 11, Outer Continental Shelf Lands Act of August 7, 1953, as amended on September 18, 1978, by Public Law 95-372, 92 Statute 629, 43 U.S.C. 1340; and 30 CFR Part 251)

Shell Offshore Inc.

Name of Applicant

3601 C Street, Suite 1334

Number and Street

Anchorage, Alaska, 99503

City, State, and Zip Code

ASRC Energy Services - Regulatory & Technical Services

Name of Service Company or Purchaser
(if different from above)

Application is made for the following activity: (check one)

- Geological exploration for mineral resources
- Geological scientific research
- Geophysical exploration for mineral resources
- Geophysical scientific research

Submit: Original, two copies, and one public information copy.

=====

To be completed by MMS

Permit Number: 08-02

Date: 12/7/07

A. General Information

1. The activity will be conducted by:

CCG Veritas

Service Company Name

2000 East 88th Avenue

Address

Anchorage, Alaska, 99507

City, State, Zip

(907) 276-6037/6034

Telephone/FAX Numbers

Jeff_Hastings@cggveritas.com

E-Mail Address

For Shell Offshore Inc.

Purchaser(s) of the Data

3601 C Street, Suite 1334

Address

Anchorage, Alaska, 99503

City, State, Zip

(907) 770-3700/3636

Telephone/FAX Numbers

Susan.Childs@shell.com

E-Mail Address

2. The purpose of the activity is: Mineral exploration
 Scientific research

3. Describe the environmental effects of the proposed activity, including potential adverse effects on marine life and what steps are planned to minimize these adverse effects (use continuation sheets as necessary):

No anticipated adverse effects on either the environment or marine life (see attached IHA application)

4. The expected commencement date is: March 1, 2008

The expected completion date is: May 31, 2008

5. The name of the individual in charge of the field operation is: Mark Davidson (Houston)

May be contacted at: (281) 544-4183

Telephone (Local) (907) 770-3700 (Marine) N/A

Radio call sign N/A

6. The vessel(s) to be used in the operation is (are):

Name N/A Registry number N/A

Registered owner N/A

7. The port from which the vessel(s) will operate is: N/A

8. Briefly describe the navigation system (vessel navigation only):

N/A

B. Complete for Geological Exploration for Mineral Resources or Geological Scientific Research

1. The type of operation(s) to be employed is: (check one)
- (a) Deep stratigraphic test, or
- (b) Shallow stratigraphic test with proposed total depth of _____, or
- (c) Other N/A
2. Exact geographic coordinates of proposed test(s) (attach a page-size plat(s)):
N/A

C. Complete for Geophysical Exploration for Mineral Resources or Geophysical Scientific Research

1. Proposed location of the activity (attach a page-size plat(s)): north of Oliktok Point
2. The type(s) of operation(s) to be employed is (are):
on-ice 3-D seismic survey
(Seismic, gravity, magnetic, etc.)
3. The instrumentation and/or technique(s) to be used in the operation(s) is (are):
68,000 lb gross vehicle weight (GVW) wheeled vibrators and 20,000 lb GVW tracked vibrators
(Air gun, sparker, etc.)
4. Explosive charges will will not be used. If applicable, indicate the type of explosive and maximum charge size (in pounds) to be used:
Type N/A Pounds N/A Equivalent Pounds of TNT N/A

D. Proprietary Information Attachments

Use the appropriate form on page 9 for a "geological" permit application or the form on page 10 for a "geophysical" permit application. You must submit a separate Form MMS-327 to apply for each geological or geophysical permit.

E. Certification

I hereby certify that foregoing and attached information are true and correct.

SIGNED *Susan Childs* DATE 9/25/2007

TITLE Regulatory Affairs Manager, Alaska

TO BE COMPLETED BY MMS

Permit No. 08-02 Assigned by *Virginia Hoffman* Date 9/25/2007
of MMS

This application is hereby:

- a. Approved
- b. Returned for reasons in the attached

The approved permit is:

- a. Attached
- b. Will be forwarded at a later date

SIGNED *Tom Wall* TITLE Regional Supervisor DATE 12/7/07

UNITED STATES
DEPARTMENT OF THE INTERIOR
MINERALS MANAGEMENT SERVICE

ALASKA OCS REGION

(Insert Appropriate Regional Office)

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Resource Evaluation

SEP 25 2007

PERMIT FOR GEOPHYSICAL EXPLORATION
FOR MINERAL RESOURCES OR SCIENTIFIC RESEARCH
IN THE OUTER CONTINENTAL SHELF

U.S. Dept. of the Interior
Management Svc
OCS Region

In consideration of the terms and conditions contained herein and the authorization granted hereby, this permit is entered into by and between the United States of America (the Government), acting through the Minerals Management Service (MMS) of the Department of the Interior, and

Shell Offshore Inc.

(Name of Permittee)

3601 C Street, Suite 1334

(Number and Street)

Anchorage, Alaska, 99503

(City, State, and Zip Code)

PERMIT NUMBER: 08-02

DATE: 12/7/07

This permit is issued pursuant to the authority of the Outer Continental Shelf Lands Act, as amended, (43 U.S.C. 1331 et seq.), hereinafter called the "Act," and Title 30 Code of Federal Regulations Part 251 (Geological and Geophysical (G&G) Explorations of the Outer Continental Shelf).

Paperwork Reduction Act of 1995 (PRA) Statement: This permit refers to information collection requirements contained in 30 CFR part 251 regulations. The Office of Management and Budget (OMB) has approved those reporting requirements under OMB Control Number 1010-0048.

Section I. Authorization

The Government authorizes the permittee to conduct:



Geophysical exploration for mineral resources as defined in 30 CFR 251.1.



Geophysical scientific research as defined in 30 CFR 251.1. A permit is required for any geophysical investigation that involves the use of solid or liquid explosives or developing data and information for proprietary use or sale.

This permit authorizes the permittee to conduct the above geophysical activity during the period from March 1, 2008 to May 31, 2008 in the following area(s): general area north of Oliktok Point (see map in attached Fact Sheet). Extensions of the time period specified above must be requested in writing. A permit plus extensions for activities will be limited to a period of not more than 1 year from the original issuance date of the permit. Inspection and reporting of geophysical exploration activities, suspension and cancellation of authority to conduct exploration or scientific research activities under permit, and penalties and appeals will be carried out in accordance with 30 CFR 251.8, 251.9, and 251.10.

The authority of the Regional Director may be delegated to the Regional Supervisor for Resource Evaluation for the purposes of this permit.

Section II. Type(s) of Operations and Technique(s)

A. The permittee will employ the following type(s) of operations:

on-ice 3-D seismic survey using vibrators (no explosive seismic sources to be used);

and will utilize the following instruments and/or technique(s) in such operations:

68,000 lb GVW wheeled vibrators and 20,000 lb GVW tracked vibrators

B. The permittee will conduct all activities in compliance with the terms and conditions of this permit, including the "Stipulations," "Special Provisions," and the approved "Application for Permit," which are attached to and incorporated into this permit.

C. The permittee will conduct all geophysical exploration or scientific research activities in compliance with the Act, the regulations in 30 CFR Part 251, and other applicable statutes and regulations whether such statutes and regulations are enacted, promulgated, issued, or amended before or after this permit is issued. Some of the provisions of 30 CFR Part 251 are restated in this permit for emphasis. However, all of the provisions of 30 CFR Part 251 apply to this permit.

Section III. Reports on Operations

A. The permittee must submit status reports on a weekly basis in a manner approved or prescribed by the Regional Supervisor, Resource Evaluation (hereinafter referred to as Supervisor). The report must include a daily log of operations and a map (preferably on a scale of 1:250,000 or other scale suitable to clearly display information in the report) showing traverse lines according to Minerals Management Service (MMS) area and block numbers.

- B. The permittee must submit to the Supervisor a final report within 30 days after the completion of operations. The final report must contain the following:
1. A description of the work performed including number of line miles or OCS blocks of geophysical data acquired;
 2. Chart(s), map(s), or plat(s) depicting the areas and blocks in which any exploration or scientific research activities were conducted. These graphics must clearly indicate the location of the activities so that the data produced from the activities can be accurately located and identified;
 3. The dates on which the actual geophysical exploration or scientific research activities were performed;
 4. A narrative summary of any: (a) hydrocarbon occurrences or environmental hazards observed and (b) adverse effects of the geophysical exploration or scientific research activities on the environment, aquatic life, archaeological resources, or other uses of the area in which the activities were conducted;
 5. The estimated date on which the processed or interpreted data or information will be available for inspection by the MMS;
 6. A final edited navigation tape or other suitable storage medium of all data or sample locations in latitude/longitude degrees. The tape or other medium is to be formatted to be readable by a PC running current Windows software, coded in ASCII with fixed record length and fixed block size. A printed listing and a format statement are to be included,
 7. Identification of geocentric ellipsoid (NAD 27 or NAD 83) used as a reference for the data or sample locations; and
 8. Such other descriptions of the activities conducted as may be specified by the Supervisor.
- C. The last status report and the final report can be combined into one report.

Section IV. Submission, Inspection, and Selection of Geophysical Data and Information

- A. The permittee must notify the Supervisor, in writing, when the permittee has completed the initial processing and interpretation of any geophysical data and information collected under an exploration permit or a scientific research permit that involves developing data and information for proprietary use or sale. If the Supervisor asks if the permittee has further processed or interpreted any geophysical data and information collected under a permit, the permittee must respond within 30 days. If further processing of the data and information is conducted, it is the responsibility of the permittee to keep the most current resulting products available in the event the Supervisor requests the current status of data processing. At any time within 10 years after receiving notification of the completion of the acquisition activities conducted under the permit, the Supervisor may request that the permittee submit for inspection and possible retention all or part of the geophysical data, processed geophysical information, and interpreted geophysical information.
- B. The Supervisor will have the right to inspect and select the geophysical data, processed geophysical information, or interpreted geophysical information. This inspection will be performed on the permittee's premises unless the Supervisor requests that the permittee submit the data or information to the Supervisor for inspection. Such submission must be within 30 days following

the receipt of the Supervisor's request unless the Supervisor authorizes a later delivery date. If the inspection is done on the permittee's premises, the permittee must submit the geophysical data or information selected within 30 days following receipt of the Supervisor's request, unless the Supervisor authorizes a longer period of time for delivery. The data or information requested for inspection or selected by the Supervisor must be submitted regardless of whether the permittee and the Government have or have not concluded an agreement for reimbursement. If the Supervisor decides to retain all or a portion of the geophysical data or information, the Supervisor will notify the permittee, in writing, of this decision.

- C. In the event that a third party obtains geophysical data, processed geophysical information, or interpreted geophysical information from a permittee, or from another third party, by sale, trade, license agreement, or other means:
1. The third party recipient of the data and information assumes the obligations under this section except for notification of initial processing and interpretation of the data and information and is subject to the penalty provisions of 30 CFR Part 250, Subpart N; and
 2. A permittee or third party that sells, trades, licenses, or otherwise provides the data and information to a third party must advise the recipient, in writing, that accepting these obligations is a condition precedent of the sale, trade, license, or other agreement; and
 3. Except for license agreements, a permittee or third party that sells, trades, or otherwise provides data and information to a third party must advise the Supervisor in writing within 30 days of the sale, trade, or other agreement, including the identity of the recipient of the data and information; or
 4. With regard to license agreements, a permittee or third party that licenses data and information to a third party, within 30 days of a request by the Supervisor, must advise the Supervisor, in writing, of the license agreement, including the identity of the recipient of the data and information.
- D. Each submission of geophysical data, processed geophysical information, and interpreted geophysical information must contain, unless otherwise specified by the Supervisor, the following:
1. An accurate and complete record of each geophysical survey conducted under the permit, including digital navigational data and final location maps of all surveys;
 2. All seismic data developed under a permit presented in a format and of a quality suitable for processing;
 3. Processed geophysical information derived from seismic data with extraneous signals and interference removed, presented in a format and of a quality suitable for interpretive evaluation, reflecting state-of-the-art processing techniques; and
 4. Other geophysical data, processed geophysical information, and interpreted geophysical information obtained from, but not limited to, shallow and deep subbottom profiles, bathymetry, side-scan sonar, gravity, magnetic, and electrical surveys, and special studies such as refraction, shear wave, and velocity surveys.

is completed, 60 calendar days after the Department of the Interior executes the first lease for a block, any part of which is within 50 geographic miles (92.6 kilometers) of the site of the completed test.

- D. All line-specific preplot or postplot plat(s), and navigation tapes, including but not limited to seismic survey traverses and shotpoint locations, submitted as a requirement of 30 CFR 251.7 or 251.12, will be considered as "PROPRIETARY INFORMATION." Such information will not be made available to the public without the consent of the permittee for a period of 25 years from the date of issuance of the permit, unless the Director, MMS, determines that earlier release is necessary for the proper development of the area permitted.
- E. All other information submitted as a requirement of 30 CFR 251.8 and determined by MMS to be exempt from public disclosure will be considered as "PROPRIETARY." Such data and information will not be made available to the public without the consent of the permittee for a period of up to 25 years from the date of issuance of the permit as addressed in 30 CFR 251.14, unless the Director, MMS, determines that earlier release is necessary for the proper development of the area permitted. The executed permit will be considered as "PROPRIETARY" except the public information copy which will be available to the public upon request.
- F. The identities of third party recipients of data and information collected under a permit will be kept confidential. The identities will not be released unless the permittee and the third parties agree to the disclosure.

Section VII. Disclosure to Independent Contractors

The MMS reserves the right to disclose any data or information acquired from a permittee to an independent contractor or agent for the purpose of reproducing, processing, reprocessing, or interpreting such data or information. When practicable, MMS will advise the permittee who provided the data or information of intent to disclose the data or information to an independent contractor or agent. The MMS's notice of intent will afford the permittee a period of not less than 5 working days within which to comment on the intended action. When MMS so advises a permittee of the intent to disclose data or information to an independent contractor or agent, all other owners of such data or information will be deemed to have been notified of MMS's intent. Prior to any such disclosure, the contractor or agent will be required to execute a written commitment not to sell, trade, license, or disclose any data or information to anyone without the express consent of MMS.

Section VIII. Sharing of Information with Affected States

- A. At the time of soliciting nominations for the leasing of lands within 3 geographic miles of the seaward boundary of any coastal State, MMS, pursuant to the provisions of 30 CFR 252.7 and subsections 8(g) and 26(e) (43 U.S.C. 1337(g) and 1352(e)) of the Act, will provide the Governor of the State (or the Governor's designated representative) the following information that has been acquired by MMS on such lands proposed to be offered for leasing:
 - 1. All information on the geographical, geological, and ecological characteristics of the areas and regions proposed to be offered for leasing;
 - 2. An estimate of the oil and gas reserves in the area proposed for leasing; and
 - 3. An identification of any field, geological structure, or trap located within 3 miles of the seaward boundary of the State.

- B. After the time of receipt of nominations for any area of the OCS within 3 geographic miles of the seaward boundary of any coastal State and Area Identification in accordance with the provisions of Subparts D and E of 30 CFR Part 256, MMS, in consultation with the Governor of the State (or the Governor's designated representative), will determine whether any tracts being given further consideration for leasing may contain one or more oil or gas reservoirs underlying both the OCS and lands subject to the jurisdiction of the State.
- C. At any time prior to a sale, information acquired by MMS that pertains to the identification of potential and/or proven common hydrocarbon-bearing areas within 3 geographic miles of the seaward boundary of any such State will be shared, upon request by the Governor and pursuant to the provisions of 30 CFR 252.7 and subsections 8(g) and 26(e) of the Act, with the Governor of such State (or the Governor's designated representative).
- D. Knowledge obtained by a State official who receives information under subsections A, B, and C of this section will be subject to the requirements and limitations of the Act and the regulations contained in 30 CFR Part 250, Part 251, and Part 252.

Section IX. Permit Modifications

The Department will have the right at any time to modify or amend any provisions of this permit, except that the Department will not have such right with respect to the provisions of Sections VI, VII, and VIII hereof, unless required by an Act of Congress.

IN WITNESS WHEREOF the parties have executed this permit and it will be effective as of the date of signature by the Supervisor.

PERMITTEE:

THE UNITED STATES OF AMERICA:

Susan Childs

Rance R. Wall

(Signature of Permittee)

(Signature of Regional Supervisor)

Susan Childs

Rance R. Wall

(Type or Print Name of Permittee)

(Type or Print Name of Regional Supervisor)

Regulatory Affairs Manager, Alaska

12/7/07

(Title)

(Date)

9/25/2007

(Date)