UNITED STATES DEPARTMENT OF THE INTERIOR
MINERALS MANAGEMENT SERVICE (MMS)
PACIFIC OCS REGION

NTL No. 06-P02 Effective Date: October 16, 2006

NOTICE TO LESSEES AND OPERATORS (NTL) OF FEDERAL OIL AND GAS LEASES IN THE PACIFIC OUTER CONTINENTAL SHELF REGION

Biological Survey and Report Requirements

This NTL supersedes NTL No. 00-P04.

Introduction

Sections 30 CFR 250.203(a)(12) (Exploration Plan) and 250.204(b)(8)(v)(B) (Development and Production Plan) require the lessee to submit the results of any biological surveys to the MMS. NTL No. 06-P02 updates regulatory references, technology, format and number of copies of the survey report that you should submit.

Background and Purpose

In general, this NTL can apply to both exploration and development projects, as well as to lessees with leases containing a biological survey stipulation that MMS invokes. It also applies to lessees in areas that may contain significant biological communities, such as within pipeline corridors or near proposed platform locations. In this event, the Chief, Office of Facilities, Safety and Enforcement (OFSE) will notify you.

The overall purpose of a biological survey is to describe the habitats and key species within the survey area that may be affected by the proposed operations. Some conceptual items you should account for when designing your survey are:

- Documenting species composition, abundance, density, and generally defining and describing, in a regional context, the biological components existing in the survey area.
- Ensuring that your biological survey design covers the rocky features that your proposed operations may affect, including but not limited to such agents as drilling muds and cuttings, anchors, and platform or drilling rig footprints.
- Although the emphasis of a biological survey is on the benthic environment, the survey should include observations of fish, seabird, and marine mammal activities within the survey area.
- When you survey features on your lease(s), you may need to cross to a neighboring lease to ensure that you cover the biological communities to their fullest extent.

The goal is for you to submit a quality product that gives MMS sufficient information on the biology of the survey area, in context with the regional biology, to make a well-founded decision on the proposal at hand. We provide examples of two successful biological surveys in Attachment 1 for your reference and planning. You may use these examples at your option to better tailor your proposal to your survey area. Note, however, that it is expected that you employ state-of-the-art equipment at the time you survey. It is assumed that you will use digital video and still photography to complete your survey,

Pre-Survey Planning and Coordination

We have found that developing a pre-survey strategy allows us to discuss common goals and expectations with you before you mobilize for a biological survey. We firmly believe that maintaining an early and open dialogue with you is critical to the timely, comprehensive execution of a biological survey. We recommend that you work closely with us to arrive at a strategy that meets overall requirements and tailors the survey to the site-specific needs of your area. Engaging in discussions with other knowledgeable agencies and concerned parties will also help to resolve any issues that may arise as early as possible. It is your option to resolve any items and issues that may be in dispute. However, MMS reserves the option to require you to resurvey some part of your area in the event that the survey results do not provide the information necessary for our decision-makers.

A survey strategy that meets all parties' reasonable needs is thus a highly-important first step toward a successful biological survey. In developing a survey strategy, a review of previous investigations of the area, such as shallow geologic hazards surveys (including side-scan sonar), cultural surveys, other previous biological surveys, MMS Environmental Studies and knowledge from fishers, can be useful. This information will help you develop an appropriate approach for your survey, including selecting the proper equipment, survey strategy, and sampling procedures.

Information from side-scan sonar, multi-beam shallow profiler and fathometer, or other shallow-hazards survey equipment can be critical in determining if and where hard bottom exists on your lease. Using these tools to map seafloor characteristics, either during your routine hazards assessment phase of your project or during the biological survey, can greatly improve your ability to search for hard bottom outcrops (see Attachment 2 for further guidance).

Notification

Notify the Chief, OFSE, 72 hours before the survey begins. There are several ways to inform other OCS users that you are conducting a biological survey. For example, the U. S. Coast Guard (USCG) will include your survey in their Notice to Mariners (contact the USCG for their advance-notice time requirements). Other methods are coordinating the survey with the Joint Oil/Fisheries Liaison Office in Santa Barbara and the Harbor Masters offices in Oxnard, Ventura, Santa Barbara, and Port San Luis (contact these agencies for their advance-notice needs). We will notify other

Federal and State agencies due to their interest in these types of surveys, including the National Marine Fisheries Service, the U.S. Fish and Wildlife Service, the Channel Islands National Park, the Channel Islands National Marine Sanctuary, the California Department of Fish and Game, the California Coastal Commission, and the Counties of Ventura, Santa Barbara and San Luis Obispo.

Conducting Biological Surveys

Two types of biological surveys are generally conducted in the POCSR, depending on whether the survey area contains hard bottom and/or soft bottom. For the purposes of this NTL, we define hard bottom as any rocky area that has the potential to support a community of organisms that require a hard substrate on which to live. Since these communities are rare in the POCSR, we require operators to conduct biological surveys, and then avoid these areas, when possible, during the exploration and development of the lease(s). We may require surveys for exploration projects under other, more unusual, circumstances, such as the presence of nearby sensitive areas, sanctuaries or rare or unusual species. We may require soft bottom surveys for development projects even though geophysical data may indicate that no hard bottom exists within 1000 meters of the proposed development. Circumstances such as the potential for drilling discharge impacts to an unusual or unknown habitat, for example, a submarine canyon, may also cause us to require that a soft bottom survey be done. Generally, you should be capable of identifying organisms as small as 1 inch (2.5 cm) in length or diameter for both hard and soft bottom surveys.

When you conduct a biological survey, communications between you, the chief scientist (Principal Investigator), the vessel crew, and the ship's captain are critical. You need to ensure that clear communication lines are kept open so that any in-the-field or other changes to the survey strategy can be made with a minimum of misunderstandings. The Principal Investigator conducting the survey should be a professionally-qualified marine biologist with experience in conducting marine bottom surveys and familiar with the local flora and fauna.

A minimum of two berths on the survey vessel must be available to MMS (or other agency) observers during the biological survey. In addition, at least one berth should be available for one of your representatives. Having both MMS and you represented onboard the survey vessel provides opportunities for making critical decisions when unforeseen circumstances occur. You should make qualitative observations of marine mammals, seabirds and fish as well as weather, sea state and other survey-related information while the survey vessel is on-site even if actual surveying is not underway.

While the survey vessel is on-site, it is important that two-way radio communication be used to communicate with commercial fishers and other users of the OCS that may be in the area.

Deliverables

A. Survey Report. In order to properly validate the survey report, the Principal Investigator in charge of the biological survey should sign it. Use the standard scientific approach for the report format and, at a minimum, include the following major subdivisions: Abstract, Introduction, Survey Methodology and Procedures, Results, Discussion, Conclusion, References or Bibliography, and Appendices (if applicable). Include other headings and subdivisions when they enhance the information in the report. Submit two (2) hard copies and thirteen (13) digital copies of the survey report with all maps, figures and associated supporting information. Contact MMS for the proper word-processing format. Large-scale map data shall be compatible with the MMS Geographic Information System (contact MMS for guidance on this). The report should include at a minimum the information below.

1. Map showing:
   a. The survey area(s) in relation to the geographic area and indicating lease or block numbers (whichever is applicable);
   b. The proposed location(s) of wells, platforms, pipelines, anchors, moorings, and other project-related activities that could affect the biota or habitat of the survey area.

2. Map(s), on a scale appropriate to what is being depicted (past reports have used scales of 1 to 3000 [1" = 250']), to depict:
   a. Hard bottom areas so that high relief, greater than or equal to 1 meter in the vertical, are shown differently than areas of low relief, less than 1 meter;
   b. Areas that appear to be subject to periodic episodes of sedimentation;
   c. Survey transect lines indicating the locations of photographs, different community types and any unusual or interesting features seen on the video (time-index these to match the video and the photographs);
   d. Locations where samples and photographs were taken with the appropriate Lambert or Universal Transverse Mercator Grid (whichever is applicable) Zone (X and Y coordinates), latitude-longitude coordinates, and Global Positioning System (GPS) coordinates, if applicable;
   e. Bathymetry, in meters, with an appropriate contour interval; and
   f. Any additional information, including that from geophysical surveys, that may serve to further elucidate the bottom topography, or other evidence that could affect the benthic biology.

3. A map depicting the species and their densities (number of individuals per unit area), within the area of investigation. If necessary, use a separate bathymetric map to show this information.

4. A narrative to include:
   a. Survey equipment, instrumentation and procedures, as well as any problems encountered;

b. Sea state and weather conditions;
c. Bottom topography;
d. Bottom currents;
e. Sample collection and processing procedures;
f. Number of species and individuals for all samples with identification to the fullest taxonomic extent practicable of major and/or dominant organisms as well as any unusual species;
g. A summary of the percent coverage of the faunal and floral species at each designated photographic/sampling site;
h. A qualitative identification and assessment of existing fish and fisheries (both sport and commercial), seabirds and marine mammals in the survey area;
i. A discussion of the local habitats in the perspective of the regional knowledge. That is, how the habitats in your survey are similar to or different from, in all aspects, those previously surveyed; and
j. A summary of findings including an assessment of the potential for biological impact due to the proposed operations and methods to mitigate the impact.

B. Visual and Audio Records. Submit digital visual and audio records of the survey to MMS. Records should include an original set of the digital video, digital still photographs, and digital (computer files) time-indexed descriptions of observations on the video. For example, transitions between rocky features, changes in community types, sightings of unusual organisms, sample collection locations, navigational fixes, and other noteworthy sightings should be described.

Paperwork Reduction Act of 1995 (PRA) Statement

The information collection referred to in this NTL is intended to provide clarification, description, or interpretation of requirements contained in 30 CFR 250, subpart B. The Office of Management and Budget (OMB) has approved the information collection requirements in these regulations under OMB Control Number 1010-0151. This NTL does not impose additional information collection requirements subject to the Paperwork Reduction Act of 1995.

If you have any questions or need clarification, please contact the Office of Environmental Evaluation at (805) 389-7800.

Original signed by

OCT 16 2006

Nabil F. Masri
Chief
Office of Facilities, Safety and Enforcement

Date

Attachments

Attachment 1 to NTL No. 06-P02

EXAMPLES OF BIOLOGICAL SURVEYS, TECHNIQUES AND EQUIPMENT USED IN THE PACIFIC OCS REGION

We recommend that you examine these survey reports. They contain the level of information that MMS believes is appropriate for our decision. Note that we expect you to employ state-of-the-art equipment at the time or your survey, including digital photographs. Please contact our office to be certain that your data submittal will be compatible with MMS. Copies of these reports may be obtained from the Pacific OCS Regional office in Camarillo, California.

Marine Ecological Consultants (MEC). 1995. Disturbance of Deep-Water Reef Communities by Exploratory Oil and Gas Operations in the Santa Maria Basin and Santa Barbara Channel. Study products include: Technical Report; Surveys Maps; Field Survey Slides and Videos; and Study Highlights Video. ROV Photoquadrat Surveys of the following Sites were Conducted: OCS-P 0411 (Well #1), OCS-P 0425 (well #1), OCS-P 0434 (well #1), OCS-P 0512 (well #1), OCS-P 0463 (well #1), OCS-P 0522 (well #1), OCS-P 0475 (well #1), OCS-P 0524 (well #1), State PRC 2725 (well #26), Fishermen's Outcrop Lease (Tracts 0317 and 0316).

Chevron Anchor Scar Study of the Hard Bottom Areas near Point Arguello. 1992. Conducted and report authored by Chevron USA.

Some equipment and survey techniques that have enhanced survey results (many of these items were used in the studies cited, above):

- GPS with an accuracy of $\pm$ 10 meters.
- An ROV equipped with color sonar, color video and still cameras systems, and laser ranging device(s)
- Data analysis using techniques similar to those used in the CAMP Phase III final report.

REFERENCE: SAIC and MEC. 1995. Monitoring Assessment of Long-term Changes in Biological Communities in the Santa Maria Basin: Phase III, Final Report. Report Submitted to the U.S. Department of the Interior, Minerals Management Service/National Biological Service, under contract No. 14-35-0001-30584.

Please contact MMS Pacific OCS Region staff for further guidance, if needed.

- 35 mm for still photographs.
- Support/survey vessels of sufficient size and with bow thrusters to enhance station-keeping ability and to withstand weather and sea state conditions, especially in the Santa Maria Basin.
- Onboard scientific personnel with the ability to identify dominant organisms to species either by video or by acquiring samples.

Attachment 2 to NTL No. 06-P02

ADDITIONAL INFORMATION REGARDING THE USE OF HIGH RESOLUTION GEOPHYSICAL INSTRUMENTS TO ASSIST IN SEARCHING FOR HARD-BOTTOM FEATURES

Remote sensing data from high-resolution acoustic survey tools used for hazards assessment will usually provide sufficient information for a reconnaissance-level evaluation of the range and distribution of seafloor conditions present (e.g., rocks, consolidated or unconsolidated sands and silts, etc.). Side-scan sonar, SWATH bathymetry, and shallow subbottom profiler data are all useful for performing this type preliminary assessment, especially when data from complementary systems can be used to refine interpretations. A reconnaissance-level assessment may be adequate to define major trends of high-relief rock outcrop, potential low-relief rock outcrop, surface sediment zonation (e.g., silt, sand, gravel/rock rubble), and significant macro-topographic phenomena (i.e., sand waves, mega-ripples and pockmarks).

Side-scan sonar systems used specifically for evaluating biological habitat or archaeological resources will usually require the use of higher frequency (ca. 500 kHz) and closer primary line spacing in order to facilitate higher resolution imagery and may require data processing to prepare high quality seafloor mosaics.

More geologically complex sites that need to be evaluated may require a more detailed level of seafloor characterization employing current data analysis technology. The acoustic data acquisition tools used to prepare more detailed seafloor images are the same or similar to those used for reconnaissance-level evaluations, but data are typically acquired on a denser grid using higher frequency sound energy to increase resolution potential. Data from SWATH bathymetry, side-scan sonar, and subbottom profiler systems can be processed so that composite, mosaic images, approaching photographic image quality, are produced allowing the detection of very subtle seafloor characteristics that may affect biological communities.