

APPENDIX C

ASSUMED MITIGATION MEASURES

C. ASSUMED MITIGATION MEASURES

All Minerals Management Service (MMS) sale proposals include rules and regulations prescribing environmental controls to be imposed on lease operators. Lease stipulations, Outer Continental Shelf (OCS) regulations, and other measures provide a regulatory base for implementing environmental protection on leases issued as a result of a sale. The MMS Environmental Studies Program and the analyses and monitoring of activities in a sale area provide information used in formulating the Agency's regulatory control over the activities that occur during the life of the leases.

The MMS has broad permitting and monitoring authority to ensure safe operations and environmental protection. Use of the best available and safest technologies during exploration, development, and production, and the adopted stipulations, are just a few of the measures designed to prevent environmental damage. The MMS also monitors operations after drilling has begun and carries out periodic inspections of facilities (in certain instances, in conjunction with other Federal Agencies such as the U.S. Environmental Protection Agency) to ensure safe and clean operations over the life of the leases.

The analyses in the environmental impact statement assume the implementation of all mitigation measures required by statute or regulation. In addition, the impact analysis assumes that sale-specific stipulations that were commonly adopted in past lease sales are in effect. The following is a brief description of the sale-specific stipulations or other mitigations assumed in the analysis of potential effects of the proposed action. Because over 100 individual mitigations can be applied to exploration and development activities in the Gulf of Mexico Region, only lease stipulations are described individually. Both the lease stipulations and other protective environmental measures issued through Information to Lessees (ITL) in Alaska are described.

1. Gulf of Mexico Region

a. Lease Stipulations

(1) Topographic Features

This stipulation designates a "No Activity Zone" around several underwater topographic features commonly called "banks" whose crests may contain biological communities including corals. The No Activity Zone is designed to protect the biota of these features from adverse effects of routine offshore oil and gas activities by preventing the emplacement of platforms, or the anchoring of service vessels or mobile drilling units, directly on the banks and requiring that drilling discharges be shunted in such a manner that they do not settle on the biota.

(2) Live Bottom (Pinnacle Trend)

This stipulation is intended to protect the pinnacle trend area and the associated hard-bottom communities from damage from oil and gas activities. If the required live bottom survey report determines that the live bottom may be adversely impacted by the proposed activity, certain measures, such as relocation or monitoring, may be required.

(3) Live Bottom (Low Relief)

This stipulation is intended to protect hard-bottom communities not associated with bathymetric features on the sea bottom. Biological communities such as seagrass beds, sponges, and corals may occur on smooth topography. If the required live bottom survey report determines that the live bottom may be adversely impacted by the proposed activity, certain measures, such as relocation or monitoring, may be required.

(4) Oil-Spill Response (Eastern Gulf of Mexico)

This stipulation is intended to minimize the risk of oil spills reaching Florida State waters by requiring the staging of state-of-the-art mechanical oil-spill response equipment within specified timeframes and by requiring that oil dispersant chemicals and equipment be maintained in a state of readiness.

(5) Military Areas

This stipulation has three sections: hold harmless, electromagnetic emissions, and operational. The hold harmless section serves to protect the U.S. Government from liability in the event of an accident involving a lessee and military activities. The electromagnetic emissions section requires the lessee and its agents to reduce and curtail the use of equipment emitting electromagnetic energy in certain areas. This reduces the impact of offshore oil and gas activities on military communications and missile testing. The operational section requires prior notification of the military when offshore oil and gas activities are scheduled within a military use area to assist in scheduling activities and to prevent potential conflicts.

A second stipulation requires the evacuation, upon the receipt of a directive from the MMS Regional Director, of all personnel from all structures on the lease and the shutting in and securing of all wells and other equipment, including pipelines, on the lease.

Two additional stipulations are applied to leases in the Eastern Gulf of Mexico Planning Area only. In cooperation with the U.S. Air Force, “drilling windows” are established for 6-month periods during which exploratory operations or workover operations may be conducted on leases. This time-sharing arrangement allows military operations to proceed in areas containing leases without being disrupted by oil and gas activities, and without undue disturbance to the exploratory activity and workover operations.

An additional stipulation has been included for the Western Gulf of Mexico Planning Area only. The Naval Mine Warfare Stipulation is intended to eliminate potential impacts from multiple-use conflicts in the Western Planning Area, Mustang Island Area East Addition, Blocks 732, 733, and 734. The U.S. Department of the Navy has identified these blocks as needed for testing equipment and for training mine warfare personnel.

b. Other Mitigations Categories

(1) Air Quality

This category includes 8 mitigations that apply to offshore exploration, development, and pipeline activities.

(2) Archaeology

There are 18 mitigations describing procedures for conducting archaeological surveys before bottom disturbing activities can occur on a lease which the procedures operators must follow to avoid impacts to potential prehistoric and shipwreck sites.

(3) Artificial Reefs

Five mitigations exist to avoid impacts to artificial reef sites and permit areas.

(4) Chemosynthetic Communities

There are 5 mitigations to avoid impacts to chemosynthetic communities in deepwater areas of the Gulf of Mexico.

(5) Coastal Zone Management

Five mitigations describe the conditions of approval in each of the Gulf Coast States.

(6) Topographic Features, Live Bottoms, and the Flower Garden Banks

There are 13 mitigations to protect the health and stability of these benthic features.

(7) Miscellaneous Mitigations

These apply to space-use conflicts, oil spill preparedness, remote operating vehicle surveys in deep water, essential fish habitat, hydrogen sulfide and other issues.

2. Alaska Region

a. Lease Stipulations

(1) Orientation Program

This stipulation is designed to provide increased protection of the environment by promoting an understanding of, and appreciation for, local community values, customs, and lifestyles of Alaskans. It also provides information to industry on the biological resources used for commercial and subsistence purposes, archaeological resources of the area and appropriate ways to protect them, and reducing industrial noise and disturbance effects on marine mammals and marine and coastal birds. The program shall be designed in sufficient detail to inform individuals working on the project of specific types of environmental, social, and cultural concerns that relate to the sale and adjacent areas.

(2) Protection of Biological Resources

This stipulation provides a formal mechanism for identifying important or unique biological populations or habitats that may exist in the proposed sale area and require additional protection because of their sensitivity and/or vulnerability. If previously unknown sensitive biological resources are identified during the conduct of lease activities under an approved Plan of Exploration or Development and Production Plan, the lessee will be required to modify operations, if necessary, to minimize adverse impacts to those biological populations or habitats. These modifications could

include shifts in operational sites, modifications in drilling procedures, and increased consideration of the areas during oil-spill contingency planning.

(3) Protection of Fisheries

This stipulation is designed to ensure that the petroleum industry and the participants in commercial and subsistence fishing activities coordinate their activities to minimize spatial conflicts. Without safeguards, commercial and subsistence fishing may be subject to interference from offshore oil and gas operations. Lease-related uses will be restricted, if determined necessary, to prevent unreasonable conflicts with local subsistence hunts and sport and commercial fishing operations. The stipulation requires the lessee to review planned exploration and development activities (including plans for seismic surveys, drilling rig transportation, or other vessel traffic) with potentially affected fishing organizations, subsistence communities, and port authorities to prevent unreasonable fishing gear conflicts. It also provides an opportunity for local communities, including fishing interests, to review and comment to MMS on proposed exploration plans and development and production plans as part of the MMS regulatory review process, which considers such comments prior to any decisions to approve, disapprove, or require modification of such plans.

(4) Transportation of Hydrocarbons

This stipulation provides a formal way of selecting a means of transporting petroleum from a sale area. It also informs the lessee that (1) MMS reserves the right to require the placement of pipelines in certain designated management areas, (2) pipelines must be designed and constructed to withstand the hazardous conditions that may be encountered in the sale area, and (3) pipeline construction and associated activities must comply with regulations. This stipulation is intended to ensure that the decision on which method to use in transporting hydrocarbons considers the social, environmental, and economic consequences of pipelines. This stipulation requires the use of pipelines if (1) pipeline rights-of-way can be determined and obtained; (2) laying such pipelines is technologically feasible and environmentally preferable; and (3) in the opinion of the lessor, pipelines can be laid without net social loss, taking into account any incremental costs of pipelines over alternative methods of transportation and any incremental benefits in the form of increased environmental protection or reduced multiple-use conflicts.

(5) Industry Site-Specific Bowhead Whale-Monitoring Program

This stipulation requires industry to conduct a site-specific monitoring program to determine when bowhead whales are present in the vicinity of lease operations during exploratory drilling activities, including seismic surveys, and the extent of behavioral effects on bowhead whales due to these activities. It also provides a formal mechanism for the oil and gas industry to coordinate logistics activities with the MMS Bowhead Whale Aerial Survey Project and provide reports of bowhead whale sightings during monitoring. It is intended to help protect endangered bowhead whales during their migration from significant adverse effects due to exploratory activities. The monitoring plan must provide an opportunity for an Alaska Eskimo Whaling Commission (AEWC) or North Slope Borough (NSB) representative to participate in the monitoring program. No monitoring program will be required if the MMS Alaska Regional Supervisor for Field Operations, in consultation with the NSB and the AEWC, determines that a monitoring program is not necessary based on the size, timing, duration, and scope of the proposed operations. The stipulation ensures participation by the NSB, the AEWC, and the State of Alaska in the design and review of proposed bowhead whale monitoring plans, and the establishment of an independent peer review of the monitoring plans and draft reports.

(6) Conflict Avoidance Mechanisms to Protect Subsistence Whaling and Other Subsistence Activities

This stipulation is designed to reduce disturbance effects on Native lifestyles and subsistence practices from oil and gas industry activities by requiring industry to make reasonable efforts to conduct all aspects of their operations in a manner that recognizes Native subsistence requirements and avoids adverse effects on local subsistence harvests and cultural values. It requires industry to conduct all exploration, development, and production activities in a manner that prevents unreasonable conflicts between the oil and gas industry and subsistence activities, especially the subsistence bowhead whale hunt. This stipulation also requires industry to consult with potentially affected Native communities, the NSB, and the AEWG to discuss possible siting and timing conflicts and to assure that exploration, development, and production activities do not result in unreasonable conflicts with subsistence whaling and other subsistence harvests. It also provides a mechanism to address unresolved conflicts between the oil and gas industry and subsistence activities. This stipulation provides for restriction of lease-related uses, when necessary, to prevent unreasonable conflicts with local subsistence activities. These might include a seasonal drilling restriction, seismic and threshold depth restriction, and requirements for directional drilling and the use of other technologies.

b. Information to Lessee

Several ITL's have been developed to provide specific protection for environmental, social, and cultural concerns. These measures encourage lessees to bring residents of North Slope communities into the planning process and to incorporate into their Orientation Programs the Kaktovikmiut and Nuiqsutmiut papers as guides to foster understanding and sensitivity to community values.

The ITL's advise lessees of:

- the potential effects of seismic surveys and the specifics of the stipulation on the bowhead whale monitoring program;
- the potential for polar bears to be present in the area of operations, and to conduct activities in a manner which will limit potential encounters and interactions between lease operations and polar bears;
- the review of exploration and development and production plans to ensure that the threatened spectacled and Steller's eiders and their habitats are protected;
- the possible prohibition of shore-based facilities in river deltas that have been identified as special habitats for bird nesting and fish over wintering areas;
- the possibility that MMS may limit or modify operations if they could result in significant effects on the availability of bowhead whales for subsistence use;
- the U.S. Department of Commerce, National Marine Fisheries Service's review of exploration and development and production plans for activities planned in the spring lead systems of the bowhead whales to determine whether the planned activities would likely jeopardize the continued existence of the bowhead whale population;
- the fact that disturbance of wildlife could be determined to constitute harm or harassment and thereby be in violation of existing laws and treaties;
- sensitive areas to be considered when developing oil-spill contingency plans to help protect environmentally sensitive areas and their concentrations of marine birds, marine mammals, fishes, and other biological resources;
- the threatened status of the Steller sea lion and that lessees should conduct their activities in a manner that will limit potential encounters and interactions;

Appendix C. Assumed Mitigation Measures

- the fact that oil-spill cleanup plans must be prepared by lessees and approved by MMS prior to approval of exploration and development plans;
- the fact that evidence of oil-spill financial responsibility must be established and maintained;
- the fact that the State of Alaska will review OCS plans and associated oil-spill contingency plans per consistency review with the Alaska Coastal Zone Management Program;
- the MMS review and approval process for exploration and development and production plans to encourage lessees to use existing pads and islands wherever feasible;
- the fact that the area around Cross Island is of particular importance to the residents of Nuiqsut for subsistence whaling activities;
- the implementation of the stipulations and regulations that provide for mitigation of unreasonable conflicts with subsistence activities which will be used to make determinations regarding the type and location of facilities and the timing of activities in this area;
- the Good Neighbor Policy, which may provide a more immediate compensation system to minimize disruption to subsistence activities and provides resources to relocate subsistence hunters to alternate hunting areas or provides temporary food supplies if a spill affects the taking of marine subsistence resources;
- the potential effect of geological and geophysical activity to bowhead whales and subsistence hunting activities;
- the fact that conduct of all activities related to leases will be subject to the following laws, among others: the provisions of the Marine Mammal Protection Act of 1972, as amended (16 U.S.C. 1361 et seq.); the Endangered Species Act, as amended (16 U.S.C. 1531 et seq.); and applicable International Treaties; and
- the fact that certain river deltas of the Beaufort Sea coastal plain (such as the Kongakut, Canning, and Colville) have been identified by the U.S. Fish and Wildlife Service as special habitats for bird nesting and fish over wintering areas, as well as other forms of wildlife, and that shore-based facilities in these river deltas may be prohibited by the permitting agency.