UNITED STATES DEPARTMENT OF THE INTERIOR
MINERALS MANAGEMENT SERVICE
Gulf of Mexico OCS Region
New Orleans, Louisiana

FINAL
SITE-SPECIFIC ENVIRONMENTAL ASSESSMENT
WELL CONDUCTOR REMOVAL

ES/SR No. APM ST159-001

ASSESSMENT OF THE ENVIRONMENTAL IMPACTS
OF THE
PROPOSAL TO SEVER WELL NO. 001
IN
SOUTH TIMBALIER AREA, BLOCK 159
LEASE OCS- G23925
BY
ENERGY RESOURCE TECHNOLOGY GOM, INC.

DATE SUBMITTED: JULY 23, 2009
COMMENCEMENT DATE: JULY 2009
SITE-SPECIFIC ENVIRONMENTAL ASSESSMENT/FONSI/EIS DETERMINATION

Energy Resource Technology GOM, Inc.'s Application for Permit to Modify (APM) to Remove Well No. 001 (API No. 177154113600) in South Timbalier Area, Block 159 (Lease OCS-G 23925) using an explosive-severance charge has been reviewed. Our Site-Specific Environmental Assessment (SEA), ES/SR APM ST159-001, on the subject action is complete and results in a Finding of No Significant Impact (FONSI). Based on the conclusions of the SEA, there is no evidence to indicate that the proposed action will significantly (40 CFR 1508.27) affect the quality of the human environment. Preparation of an environmental impact statement is not required. Mitigation is imposed to ensure environmental protection, consistent environmental policy and safety as required by the National Environmental Policy Act (NEPA), as amended; or measures needed for compliance with 40 CFR 1500.2(f) regarding the requirement for Federal agencies to avoid or minimize any possible adverse affects of their actions upon the quality of the human environment. This Finding is valid only insofar as the following conditions are imposed:

- **STANDARD EXPLOSIVE-SEVERANCE SCENARIO C1 – MITIGATION PACKAGE:** The operator is proposing explosive-severance activities that are covered under Standard Blasting Category C1. Detailed pre- and post-detonation mitigation requirements can be found in Appendix A of this SEA.

- **PROHIBITION OF TAKING FISH INJURED/KILLED DURING EXPLOSIVE-SEVERANCE ACTIVITIES:** Under the Magnuson-Stevens Fisheries Conservation and Management Act, 50 CFR 600.725 prohibits the use of explosives to take reef fish in the Exclusive Economic Zone. Consequently, those involved in removal operations must not take such stunned or killed fish on board their vessels. Should this happen, they could be charged by the National Marine Fisheries Service (NMFS) with violation of the Act. If you have questions, contact NMFS at (727) 570-5305.

[Chief, Environmental Compliance Section]  
Leasing and Environment, GOM OCS Region  
7/23/2009 Date
INTRODUCTION AND BACKGROUND

The purpose of this Site-Specific Environmental Assessment (SEA) is to assess the specific impacts associated with proposed structure removal activities. This SEA implements the tiering process outlined in 40 CFR 1502.20, which encourages agencies to tier environmental documents and eliminates repetitive discussions of the same issue. The SEA is based on a Programmatic Environmental Assessment (PEA) (USDOI, MMS 2005) which evaluates a broader spectrum of potential impacts resulting from all decommissioning operations in the Central and Western Gulf of Mexico (GOM) and the 181/189 Lease Sale Area of the Outer Continental Shelf (OCS). In addition to the analyses, a discussion of the legal and regulatory mandates to remove abandoned oil and gas structures from Federal Waters can be found in the PEA.

This SEA conforms to the Minerals Management Service (MMS) and other appropriate guidelines for preparing environmental assessments by tiering to the PEA, and by use of reference to related environmental documents. It presents site-specific data regarding the proposed structure removal activities and evaluates the potential impacts. Mitigation measures are contained in this document to lessen potential impacts. Preparation of this SEA has allowed the determination of whether a Finding of No Significant Impact (FONSI) is appropriate or whether further assessment of the proposal is necessary.

I. DESCRIPTION AND NEED FOR THE ACTION

Energy Resource Technology GOM, Inc. (ERT) proposes to sever and remove Well No. 001 (API No. 177154113600) in South Timbalier Area, Block 159 (Lease OCS-G 23925) using an explosive-severance charge. The well is located at a water depth of 141 feet and lies approximately 36 miles from the nearest Louisiana shoreline. The operator will remove the conductor at least 15ft below mudline (BML) using an explosive-severance charge up to 80 lbs. ERT’s APM includes additional information about the proposed activities and is incorporated by reference. According to the operator, the well will be removed because it is uneconomic to produce and the conductor is no longer required (ERT, 2009).

II. ALTERNATIVES TO THE PROPOSED ACTION

MMS initially discussed various structure/well removal techniques in the Final Environmental Impact Statement (FEIS) for Proposed Oil and Gas Lease Sales 118 and 122 (USDOI, MMS, 1988) and in the PEA. Updated information is found in the FEIS for Gulf of Mexico OCS Oil and Gas Lease Sales: 2007-2012 (USDOI, MMS, 2007). Refer to the FEIS (USDOI, MMS, 1988 and 2007) and PEA for detailed information concerning alternative methods of structure removal. Alternatives to the proposed structure/well removal with mitigation originally submitted are:

A. NON- REMOVAL OF THE WELL

The alternative to the proposed well removal as originally submitted is non-removal. Non-removal of the structure would represent a conflict with Federal legal and regulatory requirements, which mandate the timely removal of obsolete or abandoned structures and seafloor components within a period of one year after termination of the lease, or upon termination of a right-of-use and easement. Therefore, non-removal is not an acceptable alternative.

B. REMOVAL OF THE WELL WITH NON-EXPLOSIVE SEVERANCE ONLY

MMS discussed and analyzed decommissioning operations and various severance techniques in the PEA. Based upon this updated information, it was concluded that one of the most effective methods of severing targets both above and below the mudline was by using explosive-severance charges. Though
non-explosive cutter methods are becoming more effective, they often have additional operational and logistical problems associated with their use. Primarily for this reason, ERT is proposing the use of explosive charges; therefore, limiting the operations to only non-explosive methods does not appear to be a feasible alternative for the removal of the subject structure.

Refer to the PEA referenced in the Introduction for detailed information concerning alternative methods of structure removal.

C. REMOVAL OF THE WELL AS PROPOSED WITH ADDED MITIGATION

Measures that ERT proposes to limit potential environmental effects are discussed in the APM and are incorporated herein by reference. Outer Continental Shelf Operating Regulations, Notices to Lessees and Operators, and other regulations and laws were identified throughout the PEA as existing mitigation for potential environmental effects associated with the proposed structure removal application. Additional information can be found in the PEA.

The following mitigative measures will also be included in MMS' approval of the proposed structure removal to ensure environmental protection, consistent environmental policy, and safety as required by the National Environmental Policy Act.

STANDARD EXPLOSIVE-SEVERANCE SCENARIO C1 – MITIGATION PACKAGE: The operator is proposing explosive-severance activities that are covered under Standard Blasting Category C1. Detailed pre- and post-detonation mitigation requirements can be found in Appendix A.

PROHIBITION OF TAKING FISH INJURED/KILLED DURING EXPLOSIVE-SEVERANCE ACTIVITIES: Under the Magnuson-Stevens Fisheries Conservation and Management Act, 50 CFR 600.725 prohibits the use of explosives to take reef fish in the Exclusive Economic Zone. Consequently, those involved in removal operations must not take such stunned or killed fish on board their vessels. Should this happen, they could be charged by the National Marine Fisheries Service (NMFS) with violation of the Act. If you have questions, contact NMFS at (727) 570-5305.

III. ENVIRONMENTAL EFFECTS, SOCIOECONOMIC CONCERNS, AND OTHER CONSIDERATIONS.

In accordance with The National Environmental Policy Act (NEPA) of 1969, as amended (Pub. L. 91-190, 42 U.S.C. 4321-4347, January 1, 1970, as amended by Pub. L. 94-52, July 3, 1975, Pub. L. 94-83, August 9, 1975, and Pub. L. 97-258, 4[bf], Sept. 13, 1982) and the Council on Environmental Quality (CEQ) implementing regulations (40 CFR Sec. 1502.15) Affected Environment, the following potential environmental effects were identified from the proposed action. Mitigative measures are included to eliminate or reduce the potential effect from the proposed activities to a level of insignificance as described in 40 CFR Sec. 1508.27

A. PHYSICAL ENVIRONMENT

Environmental geology, geologic hazards, meteorological conditions, physical and chemical oceanography, water quality and air quality are discussed in the PEA. The proposed structure removal activities are not in an area of sediment instability (mud flows, slumps, or slides). Other potential impacts from the proposed activities to the physical environment have been considered, but were deemed insignificant (40 CFR 1508.27) and are not discussed in this SEA.
B. BIOLOGICAL ENVIRONMENT

Coastal habitats, protected, endangered and threatened species (birds, marine mammals, and sea turtles), and sensitive marine habitats are discussed in the PEA. Based on the cumulative impact scenarios and assessments presented in the multisale EIS’s and the potential effectiveness of protective NTL’s and lease stipulations, it is expected that the short-term, incremental contribution of potential impacts from decommissioning activities (i.e. vessel discharges, explosive severance, explosive/nonexplosive-severance products, habitat removal/salvage, vessel anchoring, progressive transport, site-clearance trawling, and sediment redistribution) would not result in significant cumulative impact on coastal/wetlands habitat, fish resources, commercial and recreational fishing, benthic resources, and essential fish habitat of the GOM OCS.

A discussion of marine mammals occurring across the Gulf of Mexico (GOM) and an assessment of the potential impacts of structure removal activities on marine mammals can be found in the PEA. Twenty-nine species of marine mammals occur in the GOM (Davis et al., 2000). There are 28 species of cetaceans and 1 sirenian species (Jefferson et al., 1992). Five baleen whales (the northern right [Eubalaena glacialis], blue [Balaenoptera musculus], fin [Balaenoptera physalus], sei [Balaenoptera borealis], and humpback [Megaptera novaeangliae]), one toothed whale (the sperm whale [Physeter macrocephalus]), and one sirenian (the West Indian manatee [Trichechus manatus]) occur in the GOM and are listed as endangered.

Fritts et al. (1983) conducted aerial surveys across a 9,514 square-mile area of GOM waters. Results of these surveys indicate that the bottlenose dolphin is by far the most likely marine mammal to be encountered in the GOM. MMS and NMFS observers may be utilized to look for marine mammals prior to detonation of the primary charges at the removal site. If marine mammals are detected, detonation of the primary charges will be delayed until the animals are removed from the area. In spite of these precautions, a low probability exists that marine mammals could enter the blast area undetected and could be injured or killed by the underwater, subsurface detonations. Such an occurrence is considered highly unlikely and, with the indicated protective mitigation measures outlined in the Biological Opinion, the proposed structure removal activities are expected to have only a low impact on marine mammals.

A discussion of sea turtles occurring across the central and western GOM and an assessment of the potential impacts of structure removal activities on sea turtles can be found in the PEA. Five species of sea turtles (the green sea turtle [Chelonia mydas], the loggerhead [Caretta caretta], the hawksbill [Eretmochelys imbricata], the Kemp’s ridley [Lepidochelys kempi], and the leatherback [Dermochelys coriacea]) are known to inhabit the waters of the GOM and the area of the proposed activities and therefore could be impacted by the operations. All sea turtles species inhabiting the GOM are listed as either endangered or threatened (Pritchard, 1997). Definitive information on the probability of encountering sea turtles at the removal site during explosive operations is scarce. NMFS and/or MMS observers will be utilized to look for sea turtles prior to detonation of the primary charges. If sea turtles are detected at the structure removal site, detonation of the primary charges will be delayed until the animals are removed from the area. The possibility exists that sea turtles could enter the blast areas undetected and could be injured or killed by the underwater, subsurface detonations. However, with the indicated protective mitigation measures, we expect the proposed structure removal activities to have only a low impact on sea turtles. NMFS authorized a cumulative incidental take for this category action, but with all the precautions to be taken as mitigating measures, it is unlikely these proposed operations will affect any sea turtles.

NMFS concluded that this category of structure removal activities will not likely jeopardize the continued existence of any threatened or endangered species under their purview. No critical habitat has been designated in the project area. Additionally, they concluded that this type of “standard” structure
removal activity may result in injury or mortality of loggerhead, Kemp’s ridley, green, hawksbill, and leatherback turtles. Therefore, they established a cumulative level of incidental take and discussed various measures necessary to monitor and minimize this impact. NMFS noted that no incidental taking of marine mammals was authorized under Section 101(a)(5) of the Marine Mammal Protection Act of 1972 in connection with this category of structure removal activities.

Other potential impacts from the proposed activities to the biologic environment have been considered, but were deemed insignificant (40 CFR 1508.27) and are not discussed further in this SEA.

C. OTHER CONSIDERATIONS

A discussion of socioeconomic factors, archaeological resources, commercial and recreational fisheries, military warning areas, explosive dumping areas, navigation and shipping areas, pipelines, cables, other mineral uses, and health and human safety can be found in the PEA referenced in the Introduction. Mitigation has been applied to minimize impacts to these factors where appropriate and is discussed elsewhere in this SEA. Other environmental effects have been considered, but potential impacts from the proposed activities were deemed insignificant (40 CFR 1508.27) and are not discussed further in this SEA.

Major impact-producing factors of decommissioning activities that could affect both prehistoric and historic archaeological resources are direct physical contact from anchoring, progressive-transport (i.e., jacket-hopping), and trawling activities associated with site clearance. Blocks with a high probability for the occurrence of prehistoric and/or historic archaeological resources are listed in the CPA, EPA, and WPA EIS’s. Prehistoric archaeological resources include sites, structures, and objects such as shell middens, earth middens, campsites, kill sites, tool manufacturing areas, ceremonial complexes, and earthworks. Blocks with a high probability for prehistoric archaeological resources are found landward of a line that roughly follows the 60-m bathymetric contour.

Structure removal activities with the most potential to impact archaeological resources include anchoring, jacket hopping, and trawling associated with the site clearance process. Anchoring associated with platform removal may physically impact prehistoric and/or historic archaeological resources. The removal of offshore structures through progressive-transport (or jacket-hopping) has the ability to impact prehistoric and/or historic archaeological resources along the path used to move into shallow water. The activity most likely to have the greatest impact on prehistoric and/or historic archaeological resources comes from trawling associated with the site clearance and verification process. The use of shrimp trawlers to verify seafloor clearance can seriously impact any archaeological resources encountered, particularly in lease blocks that were developed prior to the requirement of an archaeological survey and assessment.

However, conditional to archaeological review of the proposed action along with the implementation of proper avoidance mitigation, the potential impacts of the proposed action on archaeological resources are not expected to be significant.

D. UNAVOIDABLE ADVERSE IMPACTS

A discussion of unavoidable adverse impacts can be found in the PEA. Two areas of ongoing concern have been the potential impact to protected, threatened, and/or endangered species and potential loss of habitat to the marine environment. Both topics are discussed in the PEA and previously in this document. A more recent issue of concern has surfaced regarding the impacts of explosive structure removals on reef fish stocks. Although the impacts to commercial and recreational fisheries are
considered to be low, further studies information about this issue will be available in the future. Other
unavoidable adverse impacts are considered to be minor.

IV. PUBLIC OPINION

A discussion of public concerns regarding structure removals can be found in the PEA. No
public comments have been received regarding the proposed structure removal operations.

V. CONSULTATION AND COORDINATION

Consultation and interagency coordination efforts were undertaken during and subsequent to the
preparation of the 2005 PEA. NMFS concluded that this category of structure removal activities will not
likely jeopardize the continued existence of any threatened or endangered species under their purview.
Additionally, they concluded that this type of “standard” structure removal activity may result in injury or
mortality of loggerhead, Kemp’s ridley, green, hawksbill, and leatherback turtles. Therefore, they
established a cumulative level of incidental take and discussed various measures necessary to monitor and
minimize this impact. As a result of these efforts, a Biological Opinion (BiOp) and Incidental Take
Statement (ITS) were issued in August of 2006. In accordance with the provisions of Section 7 of the
Endangered Species Act (ESA), the proposed structure removal operations are covered by the BiOp and
ITS, which address the explosive-severance categories established in the PEA (USDOC, 2006).

A similar incidental-take rulemaking effort was conducted with NMFS under Subpart I of the
Marine Mammal Protection Act (MMPA) to cover protected marine mammals that could be impacted by
removal operations. The Final Rule was published on June 19, 2008 (FR, 2008). The survey mitigation
prescribed under the promulgated regulations are nearly identical to those proposed/analyzed in the 2005
PEA and included as terms and conditions of the 2006 ESA BiOp and ITS. Similarly, the mitigation
recommended and analyzed in this SEA was developed from the programmatic NEPA, ESA, and MMPA
guidance.

VI. BIBLIOGRAPHY AND SPECIAL REFERENCES

Gulf of Mexico: Distribution, Abundance and Habitat Associations. Volume II: Technical
Report. U.S. Dept. of the Interior, Geological Survey, Biological Resources Division,
of Mexico Region, New Orleans LA. OCS Study MMS 2000-003. 346 pp.

(API No. 177154113600), South Timbalier Area, Block 159 (Lease OCS-G 23925); Offshore,
LA.

Incidental to the Explosive Removal of Offshore Structures in the Gulf of Mexico; Final Rule (50

Birds, and Mammals in the Northern Gulf of Mexico and Nearby Atlantic Waters. U.S. Fish and
Wildlife Service, Division of Biological Services, Washington, D.C.


VII. PREPARER

TJ Broussard; Supervisory Environmental Scientist
APPENDIX A

MITIGATION REQUIREMENTS
Mitigation Requirements

- **STANDARD EXPLOSIVE-SEVERANCE SCENARIO D1 – MITIGATION PACKAGE:** The operator is proposing explosive-severance activities that are covered under Standard Blasting Category C1. Detailed pre- and post-detonation mitigation requirements can be found below.

- **PROHIBITION OF TAKING FISH INJURED/KILLED DURING EXPLOSIVE-SEVERANCE ACTIVITIES:** Under the Magnuson-Stevens Fisheries Conservation and Management Act, 50 CFR 600.725 prohibits the use of explosives to take reef fish in the Exclusive Economic Zone. Consequently, those involved in removal operations must not take such stunned or killed fish on board their vessels. Should this happen, they could be charged by the National Marine Fisheries Service (NMFS) with violation of the Act. If you have questions, contact NMFS at (727) 570-5305.
Standard Blasting Category C1

An operator proposing shelf-based (<200 m), explosive-severance activities conducted under the standard blasting category will be limited to below mudline (BML) charges from 20-80 lbs and will be required to conduct all requisite monitoring during daylight hours out to the associated impact-zone radii of 631 m (2,069 ft).

Required Observers

Generally, two NMFS observers (PROP or contracted personnel) are required to perform marine protected species (MPS) detection surveys for standard-blasting, shelf scenario C1. If necessary, the PROP Coordinator will determine if additional observers are required to compensate for the complexity of severance activities and or structure configuration. In addition to meeting all reporting requirements, the NMFS observers would:

- Brief affected crew and severance contractors of the monitoring efforts and notify topsides personnel to report any sighted MPS to the observer or company representative immediately;
- Establish an active line of communication (i.e., 2-way radio, visual signals, etc.) with company and blasting personnel; and
- Devote the entire, uninterrupted survey time to MPS monitoring.

Pre-Det Monitoring

Before severance charge detonation, both NMFS observers will conduct a 90 min surface monitoring survey of the impact zone. The monitoring will be conducted from the highest vantage point available from either the decommissioning target or proximal surface vessels. Once the surface monitoring is complete (i.e., the impact zone cleared of MPS), one of the NMFS observers will transfer to a helicopter to conduct a 30 min aerial monitoring survey. As per PROP-approved guidelines, the helicopter will transverse the impact zone at low speed/altitude in a specified grid pattern. If during the aerial survey a MPS is:

- Not sighted, proceed with the detonation;
- Sighted outbound and continuously tracked clearing the impact zone, proceed with the detonation after the monitoring time is complete to avoid reentry;
- Sighted outbound and the MPS track is lost (i.e., the animal dives below the surface),
  o Halt the detonation,
  o Wait 30 min, and
  o Reconduct the 30 min aerial monitoring survey; or
- Sighted inbound,
  o Halt the detonation,
  o Wait 30 min, and
  o Reconduct the 30 min aerial monitoring survey.
Post-Det Monitoring

After severance charge detonation, the NMFS observer will conduct a 30 min aerial monitoring survey of the impact zone to detect for impacted MPS. If a MPS is observed shocked, injured, or killed, the operations will cease, attempts will be made to collect/resuscitate the animal, and NMFS SERO will be contacted as per the take event procedures described on page F-9 of the Programmatic EA (MMS 2005-013). If no MPS are observed to be impacted by the detonation, the NMFS observer will record all of the necessary information as per the conditions detailed in MMS’s permit approval letter and PROP guidelines for the preparation of a trip report.

If unforeseen conditions or events occur during a standard-blasting operation that necessitates monitoring requirements fall outside of the applicable regulations, the NMFS observer will contact the PROP coordinator and/or MMS’s GOM Region for additional guidance. A flowchart of the monitoring process and associated survey times for standard severance-scenario C1 is shown below.