

## Guidance for Compliance with Mitigation 3.20 Avoidance of Archaeological Resources

This document provides guidance on how to proceed when directed by a condition of your approval to perform an archaeological assessment of your seafloor-disturbing activity (Appendix A). These guidelines provide a consistent and systematic approach to acquiring information relevant to the timely analysis of your submission.

### **Definitions**

Archaeological interest means capable of providing scientific or humanistic understanding of past human behavior, cultural adaptation, and related topics through the application of scientific or scholarly techniques, such as controlled observation, contextual measurement, controlled collection, analysis, interpretation, and explanation.

Archaeological resource means any material remains of human life or activities that are at least 50 years of age and that are of archaeological interest.

Bottom-disturbing activity means any activity associated with an action for which you have received an approval from BOEM or BSEE that impacts areas of the seafloor and includes, but is not limited to, the following: all anchor touchdown points, chain/wire on the seafloor to lift-off point, pipeline and structure emplacements, site clearance trawling, and well site locations.

Professional marine archaeologist means an individual who meets the professional qualification standards for an archaeologist published in *Archaeology and Historic Preservation: the Secretary of Interior's Standards and Guidelines* and 36 CFR 61 with the addition of at least one year of professional experience in the study of submerged cultural resources, including interpretation of marine remote-sensing survey data for the purpose of identifying potential archaeological resources.

Significant archaeological resources are those that meet one or more of the criteria for evaluation of eligibility to the National Register of Historic Places as defined by 36 CFR §60.4.

### **Guidance**

BOEM and BSEE are required to assess the potential impacts of offshore oil and gas operations on cultural resources to ensure their protection. Bottom-disturbing operations such as drilling, anchoring, pipe-laying, site clearance trawling, and other associated activities may damage such resources on the seabed, particularly such resources as historic shipwrecks.

Therefore, when you submit an EP, DOCD, DPP, or application that proposes bottom-disturbing activities to the Gulf of Mexico OCS Region, BOEM will conduct an analysis of your plan or application that considers the potential for the presence of a significant archaeological resource in all portions of the seafloor where bottom-disturbing activities might occur. BOEM or BSEE may then impose conditions of approval requiring data and information concerning the potential existence of archaeological resources that could be affected by your proposed operations before you may commence such bottom-disturbing activities.

In most cases, the condition of approval will not be applied in areas that have been heavily disturbed or to proposed activities where the disturbance is minimal such as cores and borings. When directed by a condition of your approval to perform an archaeological assessment, operators may use various methods to provide BOEM and/or BSEE with the necessary data and information to ensure compliance with the approved permit.

- 1) If you choose to use high-resolution survey data for the assessment, acquire data in all areas where bottom-disturbing activities are proposed using a line spacing sufficient to provide 100 percent side-scan sonar coverage of the seafloor as per Notice to Lessees and Operators (NTL) No. 2005-G07. For example, if your proposed operations are in water depths greater than 400 meters and you decide to move your well location or associated anchors by up to 500 feet, (as provided in NTL No. 2009-G27), ensure that the survey covers an area large enough to account for that variation. In addition, previously collected side-scan sonar data may be used, provided that it was collected using DGPS positioning and is of sufficient resolution and quality to allow accurate interpretation by a qualified marine archaeologist. If more than one data set is utilized, all data must be synthesized into an integrated archaeological assessment.
- 2) If you choose to use an ROV survey for the assessment, the ROV should be equipped with acoustic positioning and sector-scanning sonar. Video, sonar, and navigation should all be recorded to DVD and made available for review. In the event that you intend to conduct your approved activities immediately following certification of site clearance, a professional marine archaeologist should observe the survey while it's being conducted either by being physically present or via a remote internet feed of sufficient quality and resolution to permit the archaeologist to perform his/her analysis. In addition, the archaeologist must be able to communicate in real time with the ROV pilot in order to direct the investigation. In the event of a loss of video or communication, the survey should resume at the point where such loss occurred at the time video or communication is restored. In the event that the archaeologist was not physically present to observe the survey from the ROV control room, he/she should demonstrate in the archaeological assessment report through review of the recorded navigation, sonar, and video files that the investigation was completed in a manner such that the project area was adequately covered and that potential targets were not overlooked.
- 3) If the structure you are proposing to remove is within a block that has not been surveyed previously or if your survey does not cover all impacts from the proposed action such as site-clearance trawling, barge anchors, anchor chains, wire ropes, cables, etc., conduct your investigation over an area of sufficient size to include all proposed bottom disturbing activities using conventional survey instrumentation (i.e. magnetometer, side-scan sonar, sub-bottom profiler digitally recorded and tied into DGPS or other commensurate navigation systems). In water depths greater than 200 meters (656 feet), the magnetometer will not be required. If the use of conventional instrumentation is not feasible, acquisition of this data may be accomplished using autonomous underwater vehicles (AUVs) or Deep Tow systems. NTL 2005-G07 provides guidance regarding the specific instrumentation (<http://www.boem.gov/Regulations/Notices-To-Lessees/2005/05-G07.aspx>).

## **Professional Marine Archaeologists**

A professional archaeologist must meet the qualification standards under 36 CFR Part 61.

## APPENDIX A

### **BUREAU OF OCEAN ENERGY MANAGEMENT (BOEM) BUREAU OF SAFETY AND ENVIRONMENTAL ENFORCEMENT (BSEE) GULF OF MEXICO OCS REGION (GOMR) AVOIDANCE OF ARCHAEOLOGICAL RESOURCES MITIGATION**

**MITIGATION 3.20 AVOIDANCE OF ARCHAEOLOGICAL RESOURCES:** Your proposal includes bottom-disturbing activities that have the potential to impact submerged archaeological resources that could be in the area of potential effect (APE), which encompasses all portions of the seafloor where bottom disturbing activities are to occur, and include, but are not limited to, the following: all anchor touchdown points, chain/wire on the seafloor to lift off point, pipeline and structure emplacements, well site locations, and site clearance trawling. Pursuant to 30 CFR §550.194(a)(2) and 30 CFR §250.1007(a)(5) prior to commencing any bottom-disturbing activities, BOEM and BSEE requires as a condition of approval for you to perform an archaeological assessment. Operators may use various methods to provide BOEM and BSEE with these data and information. Examples of the types of archeological data and information and methods of collection that BOEM and BSEE would deem sufficient to make such a decision are as follows: 1) high-resolution survey data or 2) remotely operated vehicle (ROV) survey data; the details are provided below. If you detect any archaeological resource with either survey method, you should halt operations and notify Dr. Christopher Horrell (BSEE) at (504) 736-2796 for further instructions in compliance with the regulations under 30 CFR §250.194(c).

- 1) If you choose to use high-resolution survey data for the assessment, you should acquire these data in all areas where bottom-disturbing activities are proposed. The acquisition of these data may be accomplished using conventional survey instrumentation (i.e., magnetometer, side-scan sonar, and sub-bottom profiler digitally recorded and tied into DGPS or other commensurate navigation systems). In water depths greater than 200 meters (656 feet), the magnetometer will not be required. If the use of conventional instrumentation is not feasible, acquisition of this data may be accomplished using autonomous underwater vehicles (AUVs) or Deep Tow systems. NTL 2005-GO7 provides guidance regarding the specific instrumentation (<http://www.boem.gov/Regulations/Notices-To-Lessees/2005/05-G07.aspx>).

If archaeological resources are not detected, you should provide confirmation noting such to BSEE prior to conducting any bottom-disturbing activities proposed in your approved plan/permit (i.e., subsequent to data collection/ conclusion work, but prior to submittal of the formal archaeological assessment report). Confirmation can be sent to [Env-Compliance-Arc@bsee.gov](mailto:Env-Compliance-Arc@bsee.gov) and should contain:

- A certification from a professional marine archaeologist noting the absence of any potential archaeological resources in the APE; and

- A certification from an operator representative confirming the survey results and certifying that all seabed disturbing activities will be confined to the surveyed APE.

Once receipt of the certifications is confirmed by BSEE, you may commence with approved bottom-disturbing activities.

The associated archaeological assessment report of the high-resolution survey and an as-built map at a scale of 1-in. = 1,000 ft with DGPS accuracy, showing the location of all seafloor disturbances, must be submitted to the following:  
Section Chief, BOEM Plans Section (GM1053C), at the same time you submit the End of Operations Report (Form BSEE-0125) or Structure Installation Notification.

For pipelines, your Archaeological Report should accompany your Pipeline Construction Report and must be submitted to the BSEE Pipeline Section (GE 1035A). You should refer to NTL 2005-G07, Appendix 2 for recommended report guidelines.

- 2) If you choose to use an ROV survey for the assessment, you should investigate the seafloor by deploying an ROV equipped with sector-scanning sonar technology and digital recording capabilities to investigate each location where bottom-disturbing activities will occur prior to conducting any bottom-disturbing activities. The ROV investigation should use video cameras, recorded to DVD, and a sector-scanning sonar set at a maximum range of 100 meters (330 feet). A professional marine archaeologist should be present to direct, observe, and monitor the ROV investigation. Specific ROV and sector-scanning sonar investigation requirements (for well site locations and anchoring activities) are shown below, while general guidelines for conducting the ROV investigation can be found on the BOEM website at [http://www.boem.gov/Environmental-Stewardship/Archaeology/ROV\\_2005\\_1-pdf.aspx](http://www.boem.gov/Environmental-Stewardship/Archaeology/ROV_2005_1-pdf.aspx)

For well site locations, the ROV investigation should result in a minimum 500 feet of sonar coverage from the well site. During this investigation, the sector-scanning sonar should be set at a range of no more than 100 meters to identify and investigate any features standing above the seafloor.

For anchoring activities, you should examine the seafloor running the ROV from the proposed anchor touchdown point along the mooring line/chain to the proposed liftoff point. During this investigation, the sector-scanning sonar should be set at a range of no more than 100 meters (330 feet) to identify and investigate any features standing above the seafloor. In addition, you should run one additional line on either side of the proposed mooring line to ensure a minimum of 500 feet of sonar coverage from the main mooring line. Finally, using the sector-scanning sonar, you should ensure a minimum of 500 feet of sonar coverage beyond the proposed touchdown point of the anchor and 500 feet of sonar coverage beyond the liftoff point of the chain/wire on the seafloor. If anomalous seafloor features are resolved in the sector-scanning sonar data, you should investigate using the ROV.

If archaeological resources are not detected, you should provide confirmation noting such to BSEE prior to conducting any bottom-disturbing activities proposed in your approved plan/permit (i.e. subsequent to data collection/conclusion work, but prior to submittal of the formal archaeological assessment report). Confirmation can be sent to [Env-Compliance-ARC@bsee.gov](mailto:Env-Compliance-ARC@bsee.gov) and should contain:

- A certification from a professional marine archaeologist noting the absence of any potential archaeological resources in the area of potential effects (APE); and
- A certification from an operator representative confirming the survey results and certifying that all seabed disturbing activities will be confined to the surveyed APE.

Once receipt of certifications is confirmed by BSEE, you may continue with approved bottom-disturbing activities.

An archaeological assessment report of the ROV investigation and an as-built map at a scale of 1-in. = 1,000 ft. with DGPS accuracy, showing the location of all seafloor disturbances, must be submitted to the Section Chief, BOEM Plans Section (GM1053C), at the same time you submit the End of Operations Report (Form BSEE-0125). For pipelines, your Archaeological Report should accompany your Pipeline Construction Report and must be submitted to the BSEE Pipeline Section (GE 1035A). You should refer to NTL 2005-G07, Appendix 2 for recommended report guidelines.

- 3) 30 CFR §250.1727(i) requires submittal of your plans to protect archaeological and sensitive biological features during removal operations. If the structure you are proposing to remove is within a block that has not been surveyed previously or if your survey does not cover all impacts from the proposed action such as site-clearance trawling, barge anchors, anchor chains, wire ropes, cables, etc., conduct your investigation over an area of sufficient size to include all proposed bottom disturbing activities using conventional survey instrumentation (i.e. magnetometer, side-scan sonar, sub-bottom profiler digitally recorded and tied into DGPS or other commensurate navigation systems). In water depths greater than 200 meters (656 feet), the magnetometer will not be required. If the use of conventional instrumentation is not feasible, acquisition of this data may be accomplished using autonomous underwater vehicles (AUVs) or Deep Tow systems. NTL 2005-GO7 provides guidance regarding the specific instrumentation (<http://www.boem.gov/Regulations/Notices-To-Lessees/2005/05-G07.aspx>).

If archaeological resources are not detected, you should provide confirmation noting such to BSEE prior to conducting any bottom-disturbing activities proposed in your approved permit (i.e. subsequent to data collection/conclusion work, but prior to submittal of the formal archaeological assessment report). Confirmation can be sent to [Env-Compliance-ARC@bsee.gov](mailto:Env-Compliance-ARC@bsee.gov) and should contain:

- A certification from a professional marine archaeologist noting the absence of any potential archaeological resources in the area of potential effects (APE); and
- A certification from an operator representative confirming the survey results and certifying that all seabed disturbing activities will be confined to the surveyed APE.
- Once receipt of certifications is confirmed by BSEE, you may continue with

approved bottom-disturbing activities

Your archaeological report should accompany your Site Clearance Removal Report and must be submitted to the BSEE Office of Structural and Technical Support (GE 1023A). You should refer to NTL 2005-G07, Appendix 1 for recommended report guidelines.