

BOEM ENVIRONMENTAL STUDIES PROGRAM: ONGOING STUDIES

BOEM OCS Region: [Gulf of Mexico](#)

Title: Examining and Testing Potential Prehistoric Archaeological Features on the Gulf of Mexico, Offshore Continental Shelf (GM-92-42-136)

Planning Areas: Central and Western

Total Cost: \$367,095

Period of Performance: FY 2007-2012

Conducting Organization: [Coastal Marine Institute](#), Louisiana State University

BOEM Contact: [Melanie J. Damour](#)

Description:

Background: Previous remote sensing work on the Outer Continental Shelf (OCS) has identified two high probability areas (South Marsh Island, LA, and Galveston, TX) with potential prehistoric sites in the Western and Central planning areas located within the upper 5 feet of sediment. A third area in High Island Area, Western planning area, contains a deeper feature has been tentatively identified as a midden located approximately 12 feet below the seafloor. The proposed project directly relates to the core mission of the Bureau of Ocean Energy Management (BOEM) by addressing potential socioeconomic impacts to these cultural resources on the offshore continental shelf by evaluating the current survey guidelines and avoidance criteria for prehistoric features that may be impacted by oil and gas industry development. Because only limited testing has ever been performed, this study will attempt to determine if landforms and sites are being identified correctly from the geophysical remote sensing data acquired under guidelines published in NTL 2005-G07, and if these buried landforms/sites do indeed reflect, or actually are preserved prehistoric sites.

Objectives: The objectives of this study are to: 1) determine the accuracy of terrestrial analogues and the time, space, mechanism model for identifying high probability areas for prehistoric site occurrence and preservation in the wider Gulf of Mexico (GOM) OCS planning districts; 2) determine if the core analysis data identified in previous studies represent a universal set of characteristics indicative of prehistoric archaeological deposits, or is either areally restricted to the Sabine River Valley or temporally restricted to the Paleoindian period; 3) identify additional core analysis that suggest, or are indicator factors for archaeological deposits; 4) assess the optimal line spacing for acquisition of sub-bottom profiler data to detect geologic and potential archaeological features; and 5) identify possible discrete archaeological features that are located within depths that can be tested through excavation.

Methods: Most archaeological investigations conducted to date on submerged prehistoric sites around the world have focused on sites that are still exposed at the seafloor and accessible to divers and seafloor scanning instruments. The methods and techniques used

for this project are unique in relying on sub-bottom profiler data and sediment cores to locate, identify, and evaluate archaeological sites buried below the seafloor. Sites buried below the seafloor contain archaeological information critical to understanding prehistoric human migrations, contacts, and subsistence strategies for time periods and environments not represented in sites currently above sea level.

Products: Final Report of Findings

Importance to BOEM: The BOEM is responsible for managing the economic development of offshore natural resources in federal waters of the GOM. Pursuant to the National Historic Preservation Act, archaeological assessments must be conducted in advance of any ground disturbing activities to ensure that cultural resources are not adversely impacted by, or create hazards to industry development. The proposed research will expand upon the current knowledge base for prehistoric sites in the OCS, and assess if the current survey guidelines are sufficient for accurate interpretations of potential archaeological features. The study will also determine the most accurate and cost-effective methods for identifying archaeological deposits.

Current Status: This study was awarded in August 2007. A post-award meeting was held in October 2007. The first phase of Remote remote sensing operations were completed in July 2008. A total of 6 sites were surveyed. Coring operations were completed in July 2009. A total of 30 cores (totaling 136 sections) were extracted from four separate areas and were processed at LSU. Analysis is complete and a draft report is expected in February 2012.

Final Report Due: September 2012

Publications: Two professional conference papers have been presented on this study:

Evans, A., Oceanographic and Geomorphological Impacts to Potential Submerged Prehistoric Sites. Society for American Archaeology, Atlanta, GA, April 22-26, 2009.

Evans A., Oceanographic and Geomorphological Impacts to Potential Submerged Prehistoric Sites. Conference on Historical and Underwater Archaeology, Toronto, Ontario, January 6-10, 2009.

Affiliated WWW Sites: None

Revised date: December 2011

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