

Environmental Studies Program: Studies Development Plan | FY 2019–2021

Title	Archaeological Investigations in Support of Development of Energy and Mineral Resources on the US Outer Continental Shelf
Administered by	Headquarters
BOEM Contact(s)	Brandi Carrier. brandi.carrier@boem.gov
Procurement Type(s)	IDIQ Multi-Year Contract
Approx. Cost	\$1,500 (in thousands) over five years (i.e., \$300,000 per year)
Performance Period	FY 2019–2023
Date Revised	December 8, 2017
PICOC Summary	
<i><u>Problem</u></i>	Potential development and minerals usage is constrained because it is uncertain whether a geophysical survey target is, in actuality, a significant archaeological site.
<i><u>Intervention</u></i>	By performing targeted groundtruthing investigations, BOEM can confirm which potential sites warrant protection and which do not. The information will also assist BOEM by improving its target selection for avoidance or additional investigation.
<i><u>Comparison</u></i>	Prior pilot exercises in Virginia and Maryland suggest that 50% of targets identified for avoidance prove, through ground truthing, to <i>not</i> be historic properties eligible for protection under the National Historic Preservation Act (NHPA); these may be cleared for development. The remaining 50% are resources eligible for protection and avoidances are warranted.
<i><u>Outcome</u></i>	With confirmation, additional areas will be available for development and minerals usage, resulting in more flexibility for industry, greater development of a lease area, and full compliance with the NHPA. After incorporating the findings of this study in BOEM’s analyses, the successful identification of targets selected for avoidance that actually are historic properties may be expected to improve.
<i><u>Context</u></i>	This study is intended to be utilized in all BOEM regions and by all operational program areas, in rotation, year-to-year.

BOEM Information Need(s): BOEM needs to gather additional information on previously identified geophysical targets to determine if they potentially represent archaeological sites, and if so, if they are eligible for listing on the National Register of Historic Places (NRHP). This information also will improve BOEM’s analysis of industry-provided remote sensing data supporting plans, and future selection of targets for avoidance and/or further investigation.

Background: At present, BOEM requires oil and gas and wind energy developers to either avoid or investigate all geophysical targets (sidescan sonar contacts and magnetic anomalies representing historic shipwrecks and downed aircraft, or sub-bottom profiler contacts representing potential paleolandforms) that may potentially represent an archaeological resource. BOEM also avoids all potential targets identified as part of sand

resource assessments. In actuality, previously identified geophysical targets may prove to be significant archaeological resources that should be avoided, or they may prove not to be significant archaeological resources and therefore they should not prevent development or require additional investigation.

Since the vast majority of targets identified through industry surveys and sand resource assessment surveys are avoided, BOEM never learns their actual identities or whether the avoidance was warranted. In addition to potentially clearing areas for development, this study will also provide information to improve BOEM's analysis of remote sensing data and confidence in which targets are being selected for avoidance or additional investigation. Moreover, Marine Minerals Program activities are a collaboration between BOEM, states, and other agencies, and with shrinking availability of sand resources, and no for-profit developer involved, clearing areas ensures the availability of the most sand resource for development. Finally, archaeological groundtruthing of potential targets and determinations of significance and eligibility for listing on the National Register of Historic Places (NRHP) is necessary for informed, responsible decision making, and for compliance with the NHPA (36 CFR 800).

Objectives: The objective is to conduct additional investigations of previously identified geophysical targets that may potentially represent archaeological resources. The study will assist BOEM with staying informed about the continual evolution of remote sensing technologies and will test the accuracy of data collected from previous site studies.

Methods: Using previously collected geophysical survey data, field operations will involve additional high resolution geophysical survey retrospectively, to relocate each target and ascertain its suitability for diving or Remotely Operated Vehicle (ROV) investigations, and executing diver or ROV investigations with photography and videography to accurately document the resource. Specifically, methods will include: (1) conducting high resolution sidescan sonar, high density magnetometer, and/or high resolution sub-bottom profiler surveys of each identified priority target; (2) determining whether or not the priority target warrants further investigation; (3) completing a rapid assessment exterior survey, via divers or ROV, of those targets warranting further investigation; (4) completing detailed video and photographic surveys of those targets warranting further investigation; (5) as conditions allow, producing a cursory site map (or photomosaic) of each confirmed archaeological site for interpretation; (6) assessing the historical significance and archaeological integrity of each confirmed archaeological site; (7) determining eligibility of each confirmed archaeological site for nomination to the NRHP; and (8) identifying to what degree site preservation is influenced by environmental and anthropogenic formation processes.

In order to fulfill these objectives, BOEM archaeologists must be provided with access to services and equipment necessary to perform these activities. Services and equipment may include vessels, vessel support services, and specialized instrumentation necessary to perform archaeological and complementary scientific investigations. It is proposed that HQ would establish an IDIQ commercial contract against which project-specific task orders (TOs) may be issued for the provision of these services and equipment. TOs would be issued annually, subject to the availability of funds, and would be based on

research designs prepared by BOEM's cultural and archaeological resources team (CART), in conjunction with new and established partnerships in the appropriate region(s). As far as possible, BOEM will seek to partner with affected States and other Federal agencies, including BSEE, to create efficiencies and reduce expenditures; agreements will be drafted between BOEM and State or Federal agencies as appropriate. Annual research designs would be prepared collaboratively and would focus on geographic areas which BOEM anticipates represent the bureau's highest priorities for both energy and marine minerals development activities and for archaeological resource protection needs. It is anticipated that scientific activities supporting other disciplines (e.g., biological, water quality) that are complementary to the field operations may also be conducted in concert with the archaeological investigations. Only previously-recorded targets will be investigated and the study will not involve areas that have never been surveyed.

Specific Research Question(s): For each geophysical survey target with the potential to represent a historic property, determine:

1. Does the geophysical survey target constitute an archaeological site retaining integrity?
2. If so, does the site constitute a historic property (i.e., a site potentially eligible for the National Register of Historic Places)? If the geophysical survey target represents a historic property, then avoidance or mitigation are warranted. If the target does not represent a historic property, then development may proceed without further avoidance restrictions.
3. What have we learned about analyzing geophysical survey targets that can be incorporated into our future analyses of industry-provided and resource-analysis surveys?