



2010 Secretary's Partners in Conservation Award U.S.
Department of the Interior
Nomination External Department of the Interior

Archaeological Analysis of Submerged Sites on the Gulf of Mexico Outer Continental Shelf

Category: External Partners or Partnership. The External Award recognizes individuals, groups, business entities, private sector organizations, nongovernmental organizations, communities, and other Federal, state, local or tribal governments that have engaged with the Department to further its mission.

Project Location: Gulf of Mexico

Duration: FY 2009 – ongoing

SUMMARY

The Gulf of Mexico has played a fundamental role in the nation's cultural and historical maritime heritage. Evidence of the nation's maritime history is represented by shipwreck sites spanning over 500 years of exploration and exploitation across this region. Significant historical shipwreck sites documented throughout the Gulf range from 16th-century ships of discovery, to World War II-era *U-boats* and merchant casualties; all of which have played important roles in shaping American history and the unique culture and heritage encompassed within the Gulf of Mexico region.

The "Archaeological Analysis of Submerged Sites on the Gulf of Mexico Outer Continental Shelf" is a unique collaboration between Federal, private sector, and academic entities to strengthen research efforts and document historically significant shipwreck sites located on the Gulf of Mexico Outer Continental Shelf. This study is more than simply an inventory and assessment of shipwreck sites discovered via oil and gas industry surveys. It represents a critical assessment of data gathered from archaeological sites by examining the dynamic processes that effect archaeological sites, their overall context, and best management strategies by DOI's BOEMRE.

In 2009, the Bureau of Ocean Energy Management, Regulation and Enforcement (BOEMRE) (formerly Minerals Management Service (MMS)) and TESLA Offshore entered into an agreement to conduct research on the natural and anthropomorphic processes that affect the Nation's submerged historic resources located on the Gulf of Mexico's Outer Continental Shelf. This project is highly collaborative and follows other successful studies such as the 2004 "Archaeological and Biological Analysis of World War II Shipwrecks in the Gulf of Mexico"; a study that received the NOPP award.

The Northern Gulf of Mexico is one of the most heavily industrialized bodies of water in the world and is the site of intensive energy exploration and exploitation. There are approximately 4,000 offshore oil platforms and 25,000 miles of active oil and gas pipeline on the Gulf of Mexico seafloor. Submerged cultural and historic resources are ubiquitous throughout the region, and unlike many other resources, are non-renewable. The National Historic Preservation Act provides BOEMRE with guidance on how best to manage and protect these unique resources.

This collaborative project developed methodologies to accurately identify the natural and anthropogenic processes that effect cultural and historic resources discovered as a result of high-resolution surveys conducted by the oil and gas industry. The multi-component nature of this project will aid DOI and BOEMRE in understanding and managing this resource. The components of the project include: 1) additional high-resolution and multibeam data acquisition of each shipwreck; 2) in-water diver assessments of each site including mapping, video and photo documentation, and assessments made of key features on the hull or artifacts in the immediate area; 3) collection of core data and subsequent laboratory analysis providing geotechnical and geomorphological information on changes occurring at these sites including modeling of waves and currents at selected sites, assisting in analysis of site specific remote sensing data to assess scour, collection ores at each site, processing and analyzing the cores, and contributing to the final site formation analysis; 4) conduct chemical and corrosion analysis occurring at each site, 5) conduct historic research including archival research and collect oral histories, 6) determine the eligibility of each site to the National Register of Historic Places; and 7) provide for public outreach and education regarding the resource, the project, and the results.

In August and September of 2010, a dedicated cruise aboard M/V *Spree* was carried out to conduct all in-water assessments, collect core data, and carry out corrosion analysis. Initially, six sites were selected for assessment. However, due to the Deepwater Horizon oil spill, three alternative sites were selected in the event that oil might be present in the water column or because of weather. The areal extent of these sites stretches from the Central Planning Area to the Western Planning area of the Gulf of Mexico. All of the sites were selected due to a lack of information about them and the possibility to learn more about the natural and cultural forces at work at these sites. Three sites were tentatively identified as SS *Cities Services Toledo*, *R. W. Gallagher*, and SS *Heredia*, each one a casualty of World War II U-boat activity in the Gulf of Mexico. Additional sites include the early 20th century steam tug *J.A. Bisso*, as well as shipwrecks whose name, cultural affiliation, and function are unknown.

The crew consisted of archaeologists and geologists as well as students from the University of West Florida. The careful planning of the contractor and expeditious manner at which the work was conducted by the partners allowed the scientists to examine all six preselected sites. In addition, the scientists were able to examine the three additional, alternative sites as well as one site that was not on the initial or alternative list. The final site, the American Civil War Gunboat USS *Hatteras*, was examined over a two-day period yielding valuable information on the impacts that storms such as Hurricane Ike (2008) have on these resources. All work was conducted on time and within the scope of the budget. Currently, laboratory analysis is being carried out at the University of Texas and at Louisiana State University; the results are pending.

Historic research is also continuing as researchers have explored the archives for additional historical data related to the construction, operation, and eventual loss of these vessels in the Gulf of Mexico. Recent oral interviews have yielded information that does

not appear to exist in archival repositories. In addition, public outreach is continuing with web sites devoted to the goals of the project, archival research, archaeological information regarding the individual sites, and educational components that are being developed. Furthermore, two students who participated in the study are working with these data to complete their Master's thesis work.

The collaboration and cooperation of the Federal government, private entities and academia are of extreme importance as they illustrate the need to work in partnership to achieve the many goals of this study. Furthermore, this cooperative collaboration will inform BOEMRE on the best management practices related to historic resources on the seafloor and how best to protect them as the oil and gas industry moves forward with various projects. The additional high-resolution data coupled with the geotechnical and geomorphologic data gathered at each site will also aid BOEMRE archaeologists in further understanding the changing dynamics occurring at these sites and how these sites are further displaced and spread apart. These data will aid BOEMRE in determining the appropriate avoidance criteria necessary so that impacts will not occur to these sites.

Building Collaborative Relationships

The team put together by Tesla Offshore includes academia and private partners who, by working effectively together, were able to provide valuable information regarding archaeological resources in the Gulf of Mexico. BOEMRE also participated by providing agency-owned equipment that further facilitated data gathering for the project. This partnership between the Federal government, private companies, and academia, has illustrated that this type of collaboration not only exemplifies this agency's fiduciary responsibility with respect to using taxpayer dollars, it has also yielded solid science and research that will inform BOEMRE's decisions regarding this resource in the future.

Communication

The efforts made by Tesla and its partners will be disseminated via internet and through outreach in the form of presentations, papers, academic thesis's, and web sites. To date, the partners (Federal, private, and academic entities) have presented preliminary research at major conferences. This information will also be utilized by this agency and disseminated to the public as well as other researchers.

Making the Federal Government a more effective partner.

BOEMRE has a regulatory responsibility associated with this resource and needs this information to make informed decisions. While earlier work by BOEMRE has yielded valuable information, significant gaps remain in our knowledge of the impacts to shipwreck sites on the OCS. This study is seeking to fill in those gaps while identifying new issues that arise as a result of the efforts on the part of the various partners. Studies such as these continue to strengthen our decision making processes. They also encapsulate the agency's desire to work with industry and academia by forming partnerships and addressing future questions and issues. The partnership forged by this study illustrates BOEMRE's commitment to acquiring solid research and science as well as its obligation to disseminate this information so that the agency's work is not only thoughtful and based on the best information available; it is transparent.

Individuals:

Christopher E. Horrell, Ph.D. RPA, Senior Marine Archaeologist, BOEMRE, Gulf of Mexico Regional Office, New Orleans, LA 504-736-2796

Amanda M. Evans, M.A.,RPA, Principal Investigator, Tesla Offshore, 36499 Perkins Rd., Prairieville, La 70769. (225) 673-2163.

Matthew E. Keith, M.A., RPA Project Manager/Co-Principal Investigator, Tesla Offshore, 36499 Perkins Rd., Prairieville, La 70769. (225) 673-2163.

Erin Voisin, M.A. Project Archaeologist, Tesla Offshore, 36499 Perkins Rd., Prairieville, La 70769. (225) 673-2163.

Gregory Cook, M.A. Project Archaeologist and Dive Coordinator, Archaeology Institute, University of West Florida, Bldg. 89, 11,000 University Parkway Pensacola, Florida 32514, (850)-474-6321.

Norine Carroll, M.A. Project Archaeologist, Archaeology Institute, University of West Florida, Bldg. 89, 11,000 University Parkway Pensacola, Florida 32514, (850)-474-3015.

Fritz Sharar, Diving Safety Officer, University of West Florida Marine Services Center, Ellyson Industrial Park 8810 Paul Starr Drive, Pensacola, FL 32514 (850)-475-5438

Patrick A. Hesp, Ph.D., Coastal Geomorphologist, Louisiana State University, Geography and Anthropology, 227 Howe/Russell Geoscience Complex, Baton Rouge, LA 70803-4105 (225) 578-6244

Graziela Miot da Silva, Ph.D. Oceanographer, Louisiana State University, Geography and Anthropology, 227 Howe/Russell Geoscience Complex, Baton Rouge, LA 70803-4105 (225) 578-1984

Mead Allison, Ph.D. Senior Research Scientist University of Texas Institute for Geophysics, John A. and Katherine G. Jackson School of Geosciences J.J. Pickle Research Campus, Bldg. 196 (ROC), 10100 Burnet Road (R2200) Austin, TX 78758-4445 (512) 471-8453

Frank Wasson, Captain of M/V *Spree*, Spree Expeditions, PO Box 692, Muenster, TX 76252 (281) 300-4748

Della Scott-Ireton, Ph.D. RPA, Outreach Coordinator, Director Northwest Region, Florida Public Archaeology Network, 207 East Main Street. Pensacola, FL 32502 (850) 595-0050.