

The following pages are reproduced from the *Underwater Archaeology Proceedings from the Society for Historical Archaeology Conference, Washington, D.C., January 1995.*

J. BARTO ARNOLD III  
RICHARD J. ANUSKIEWICZ

## USS *Hatteras*: Site Monitoring and Mapping

### Introduction—Requiem for a Featherweight

“Under no circumstances...can a steam vessel, built expressly for the transportation of freight or passengers, be made, in any manner, equal in convenience or efficiency to a vessel originally intended for war purposes.” Perry was absolutely right in the quote above (Howarth 1991:186), and the quick disposal of USS *Hatteras* by CSS *Alabama* on 11 January 1863 off Galveston was a textbook example. For centuries it was common to convert merchantmen for naval service in time of war. However, by the mid-19th century, offensive armaments had developed to the point

that a lightly-constructed merchant vessel could no longer be expected to stand up to a purpose-built, heavily constructed, man-of-war (Keegan 1989:97-99). Nevertheless, the Navy acquired many commercial vessels for Union service during the Civil War. The West Gulf Blockading Squadron, of which USS *Hatteras* was a part, was mostly composed of such ships. This paper reports a program to monitor the *Hatteras* wreck site and map the remains visible above the bottom (Figure 1). The report also describes the ship, its history, wreck site, site history, and artifacts.

### The Ship—Physical Description

Harlan and Hollingsworth of Wilmington, Delaware, built a sidewheel steamer called *St. Mary*; on 25 September 1861 the Navy acquired the 1,126-ton iron-hulled ship from the builders at a cost of \$110,000 (Wilbur 1927:100). Fitted

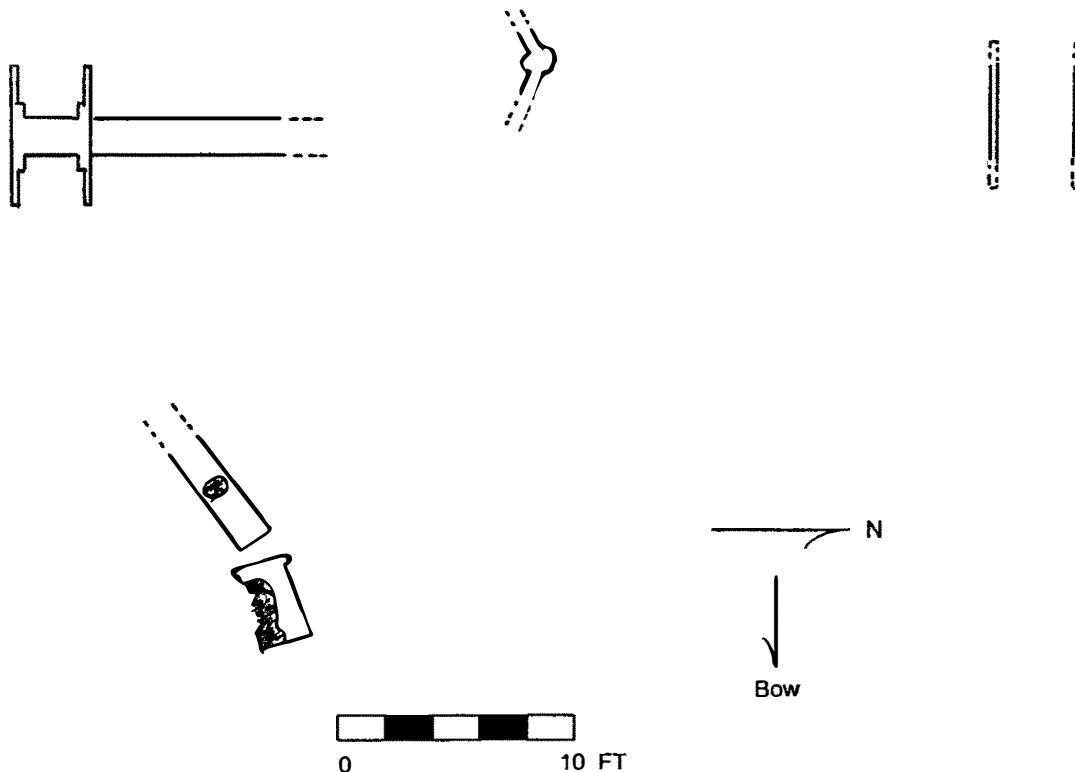


FIGURE 1. Preliminary site plan of the USS *Hatteras* wreck.

out at the Philadelphia Navy Yard and named USS *Hatteras*, its measurements were 210 ft. in length, 34 ft. in beam, 18 ft. in draft, and an 8-knot speed. The third-rate warship had a three-masted schooner rig and a condensing, walking-beam engine developing 500 horsepower whose cylinder diameter was 50 in. with a 132-in. stroke (Silverstone 1989:73). The engine had a Sickell's cutoff. The boiler had the flues mounted below and tubes above (Wilbur 1927: 100). *Hatteras* had a complement of 126 officers and men and was armed with four 32-pounders of 27 hundredweight (short 32-pounders) and one 20-pounder rifle (Navy Department 1977: 270). The 20-pounder rifle was not part of the original suite of guns but was added 21 November 1861. The warship was commissioned in October 1861 (Silverstone 1989:73).

### The Shipwreck Site

The site is located about 32 km (20 mi.) south of Galveston and about 8.7 km (14 mi.) offshore; snagged shrimp nets had pointed to this area, which otherwise could have been missed. A cooperative effort between the Texas Historical Commission (THC) and the Minerals Management Service (MMS), Gulf of Mexico OCS Region, recorded new site coordinates with a Trimble Navigation, Inc. Differential Global Positioning System (DGPS) in 1993. The DGPS system has an accuracy of one m. In 1994, as a test of the DGPS system, the magnetometer was not used to buoy the site prior to sending down the first dive team. Rather, navigating with the same model Trimble DGPS system, the research vessel anchored on the DGPS coordinates from 1993. The divers found and buoyed the site immediately upon descent, and several hours were saved in the process. Water depth at the site is 17.6 m (58 ft.), and maximum relief above the bottom is ca. 1.2 m (4 ft.). The shipwreck site's official number is 41GV68; the Texas Antiquities Committee has designated it a State Archaeological Landmark, and it is also listed on the National Register of Historic Places.

Little of the wreck is exposed above the sand. Paddlewheel hubs on both sides of the

ship and some parts of the steam engine rise partially above the sand bottom. The only other remains showing above the bottom in 1992 and 1993 were a very small section of encrusted iron near the bow which was tentatively identified on the assumption that it was located forward of the paddlewheels and on its orientation and distance from other exposed remains. In 1994, the bow wreckage was buried.

Site mapping and monitoring were conducted in 1992, 1993, and 1994 through a joint THC/MMS project under co-directors Barto Arnold and Rick Anuskiewicz (Anuskiewicz and Arnold 1992; Arnold 1993). The 1993 fieldwork included a detailed magnetometer survey to provide a contour plot of the magnetic anomaly and locate any scattered remains (Figures 2 and 3). Remarkably little scatter was detected—only three small, isolated point sources. These anomalies could result from scattering by shrimp trawls, battle damage, or *Hatteras*' portside guns, which had been jettisoned to correct a list as she was sinking. The magnetic signature with multiple highs and lows was typical of a shipwreck.

### The Ship's History

In fall 1862, Union forces captured Galveston. Earlier, the West Gulf Squadron had been running past Confederate forts and temporarily capturing such towns as Corpus Christi and Indianola. Texas was a major cotton producer, and it was important to the Confederacy to get that cotton past the blockade or down to Matamoros, Mexico, by wagon. General Bank's Union army was to come to Galveston for a thrust into Texas, but on New Year's Eve General Magruder's Confederate forces staged a surprise attack and recaptured the town and several hundred troops of the garrison. USS *Harriet Lane* was captured by cottonclads armed only with sharpshooters. USS *Westfield* went aground and was blown up to prevent capture. The premature explosion of *Westfield*'s magazine killed Captain Renfrew, the ship's as well as the squadron's commander (Fehrenbach 1968 and Snyder 1938). This disaster set the tone of Union frustration in assaults on Texas for the

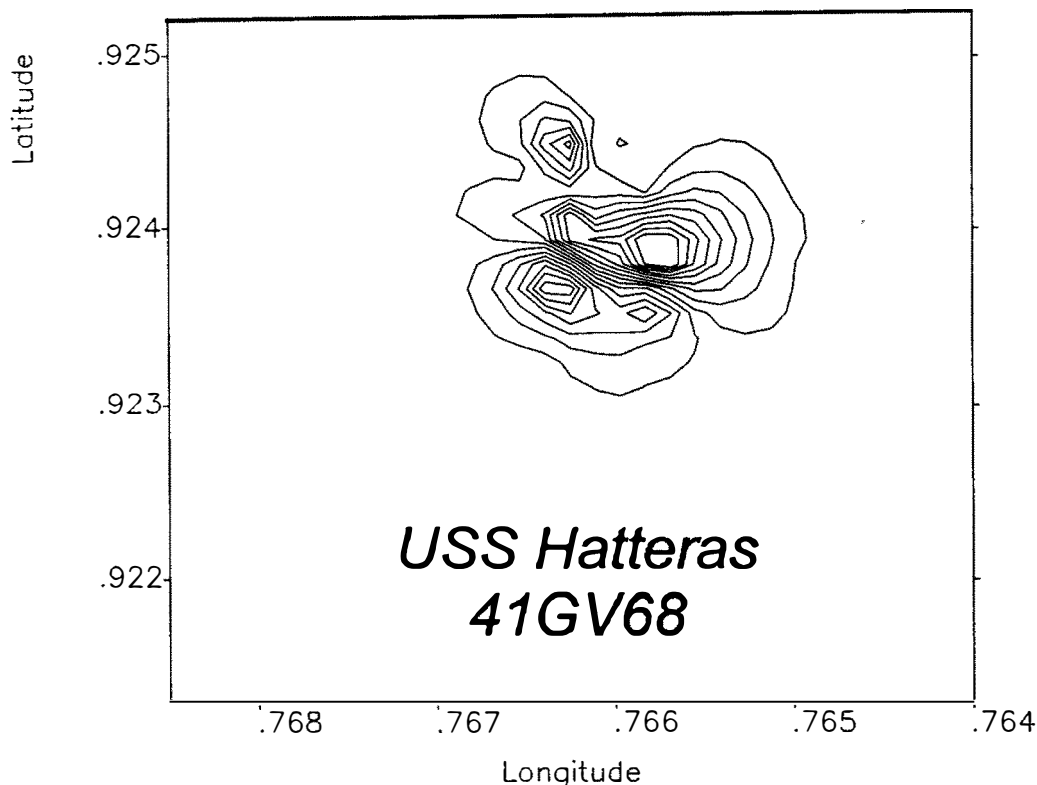


FIGURE 2. Contour plot of magnetometer data from USS *Hatteras*. One hundred gamma contours. (Surfer for Windows software provided by Golden Software.)

rest of the war (Neyland 1993). “There was never to be a Union song called ‘Marching Through Texas’” (Fehrenbach 1968:372).

At the same time, the famous raider CSS *Alabama* was lurking across the Gulf of Mexico preparing to attempt to catch General Bank’s invasion force and destroy the transports. The loss of Galveston changed Union plans. USS *Hatteras* joined Farragut and his reinforcements to the remnants of the West Gulf Squadron off Galveston on 6 January, just in time for an encounter with Semmes’ *Alabama*.

Under her first captain, Commander George F. Emmons, *Hatteras* began her Civil War career when she joined the South Atlantic Blockading Squadron at Key West, Florida, on 13 November 1861. She served off Apalachicola and Cedar Keys, Florida, before transferring to the Gulf

Blockading Squadron. The time in Florida included a highly successful raid on Cedar Keys harbor, when the crew burned seven small blockade runners loaded with turpentine and cotton. The raiders also burned the railroad terminal, several buildings, and flatcars and captured half the small garrison and its commander.

After 26 January 1862 when it arrived at Berwick, Louisiana, *Hatteras* had a successful cruise and captured a number of blockade runners in less than a year. Most of this action occurred off Vermilion Bay, as the ships ran either toward Havana or Sabine Pass (Navy Department 1977). In November 1862, Commander Homer C. Blake took command as the second captain of *Hatteras*.

When *Alabama* sighted Galveston on 11 January 1863, it found not General Bank’s trans-

ports but a fleet of warships anchored offshore. The crew deduced that the Confederates had recaptured the town when they saw the fleet lob a shell that burst over the town. One of the Union ships stood out to investigate the stranger. Semmes lured *Hatteras* away from the support of her sisterships, and just after dark a sharp but brief battle took place (Semmes 1962). The reports of this action by the two captains, ex-colleagues in the pre-war Navy, appear in Arnold and Hudson (1981).

USS *Morning Light*'s log recorded heavy firing to the southwest during the 6–8 p.m. watch. *Morning Light* was blockading Sabine Pass on the Texas-Louisiana border about 80 mi. from the scene of the battle (National Archives 1863).

The 13-minute battle took place at close range, ending when a shell exploded in *Hatteras*' engine cylinder and knocked down the walking beam. Whole plates of iron were blown away at the waterline. Captain Blake surrendered with his ship on fire and rapidly sinking and *Alabama* maneuvering to rake it. *Hatteras* suffered two dead and five wounded, while *Alabama* had two injured and very light damage. *Alabama* launched her boats and helped take off *Hatteras*' crew, who were later paroled at Port Royal, Jamaica. The morning after the battle, USS *Brooklyn* found the wreck sitting upright in 9-1/2 fathoms of water with its masts visible above the waves. In relation to potential artifacts at the site, Captain Blake mentioned an extra gun, a 30-pound Parrot rifle. Semmes mentioned yet more guns on *Hatteras*: a second, similar Parrot, and a 12-pound howitzer.

### The Shipwreck Site's History

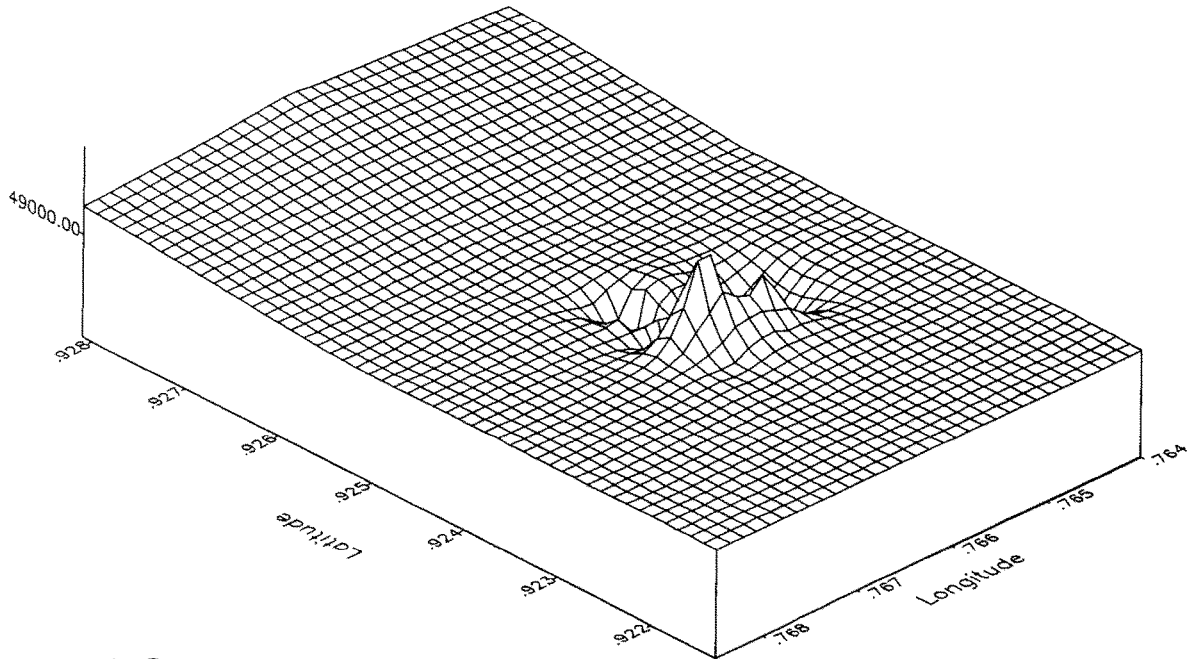
Historical research so far reveals no salvage contemporary with *Hatteras*' sinking. Since it went down very quickly, there was likely no time for removing even personal possessions. The site may contain the fully-intact remains of the ship and its equipment. There has been considerable deterioration of the hull and organic objects above the sediment, but the site's archaeological potential is tremendous. The water

is deep enough that scattering of the contents by wave action should not be significant.

Treasure hunters discovered the wreck in the mid-1970s and filed an admiralty suit in 1978 (U.S. District Court nd). The Navy won the lawsuit since naval vessels always remain government property, and they are not available for commercial salvage. As litigation proceeded to the court of appeals and back, the Bureau of Land Management (BLM, from which the MMS later emerged) sponsored two trips to the site which yielded good remote-sensing data (Arnold and Hudson 1981), and its location was firmly fixed with microwave radar positioning. The THC and the Institute for Nautical Archaeology at Texas A & M University participated in the BLM projects. During one of these trips archeological divers attempted to visit the wreck. It was the end of the day, and they could not locate the wreck in the fading light; however, Donald Keith later succeeded.

The MMS's renewed interest in *Hatteras* began as a cooperative study effort with the THC in 1992. The MMS was specifically interested in the wreck because of its proximity to existing oil production platforms (less than 1 mi.) and the potential impact of oil and gas development upon it. In 1992 the two agencies initiated a program of site monitoring and mapping that continued in 1993 and 1994. They conducted dives at the site on two days in 1992 and 1993. The first year's dives were for familiarization and preliminary mapping of surface remains. In 1994, bad weather shortened the trip to one day of diving. The second and third years' dives included the beginning of measuring for a site plan and placing a sediment meter. From 1992 to 1994 sediment levels remained fairly constant, and there was no apparent disturbance of the site.

Comparing the condition of the site today with slides provided by Donald Keith reveals one noticeable major change. In the 1970s, there were upright engine components described by the treasure hunters as the steam condenser. It may have been the valve assembly, but in any case the structure has now been knocked down, probably by a shrimp trawl.



### *USS Hatteras* 41GV68

FIGURE 3. Three-dimensional plot of the magnetometer data from *USS Hatteras*. (Surfer for Windows software provided by Golden Software.)

#### The Artifacts

The treasure hunters removed artifacts from the wreck and turned them over to the court as part of their salvage claim, including a builders' plate marked "Harlan and Hollingsworth and Co., Iron Ship and Steam Engine Builders, no. 327, Wilmington, Delaware, 1861," two small bronze oil cups with covers, a brass steam valve, two large bronze priming cups (one with attached pipe stem), an oiling pipe stem, and an iron ball with eye weighing ca. 45 pounds. These artifacts have languished with the court records since 1983 when the case was decided in the government's favor. With the help of the Naval Historical Center and the Navy Judge

Advocate General's Office, the THC hopes to have the artifacts in a museum soon.

#### Conclusion

The wreck of *USS Hatteras* is an integral part of the story of the Civil War on the Texas coast. The remains of an unsalvaged, fully-equipped naval vessel are expected to be found at this site, making it one of the most important underwater archeological sites in the country. The responsible agencies continue to monitor the site's condition on a regular basis. "Historians generally regard the defense of the Texas coast and borders as one of the greatest military feats of the Confederacy" (Fehrenbach 1968).

## ACKNOWLEDGMENTS

We greatly appreciate the loan of DGPS equipment by Trimble Navigation, Inc. (Ken Woolnough, Steve Davis, and Joe Morgan). Thanks also go to Golden Software, Inc. for providing a copy of Surfer for Windows used to produce the magnetometer data plots. US Divers, Inc. (George Roseberry) and Tom's Dive & Ski (Warren Roseberry and Janice Roseberry) are thanked for the loan of diving equipment. Thanks to volunteer computer expert and diver Bill Pierson, to Don Harper and Tom Iliffe and their students at Texas A & M University (Galveston) for their help as volunteer divers and to Dick Zingula for underwater photography. The original version of this manuscript was prepared by J. Barto Arnold III for the Maritime Initiative of the National Park Service with funding from the DOD Legacy Resource management program via the Naval Historical Center.

## References

- ANUSKIEWICZ, RICHARD J., AND J. BARTO ARNOLD III  
1992 *USS Hatteras: An Assessment and Monitoring Report*. Prepared for Minerals Management Service. Gulf of Mexico OCS Region, New Orleans.
- ARNOLD, J. BARTO III  
1993 Matagorda Bay Surveys: Applications of Inexpensive Satellite Navigation. *International Journal of Nautical Archaeology* 22 (1): 79-87.
- ARNOLD, J. BARTO III, AND JACK HUDSON  
1981 The USS *Hatteras*: A Preliminary Report on Remote Sensing Data and Litigation. In *In the Realms of Gold: The Proceedings of the Tenth Conference on Underwater Archaeology*, edited by Wilburne A. Cockrell, pp. 3-15. Fathom Eight, San Marino, California.
- FEHRENBACH, T. R.  
1968 *Lone Star: A History of Texas and Texans*. American Legacy Press, New York.
- GOVERNMENT PRINTING OFFICE  
1897 *Official Records of the Union and Confederate Navies in the War of Rebellion*. Government Printing Office, Washington, D.C.
- HOWARTH, STEPHEN  
1991 *To Shining Sea: A History of the United States Navy, 1775-1991*. Random House, New York.
- KEEGAN, JOHN  
1989 *The Price of Admiralty: The Evolution of Naval Warfare*. Viking, New York.
- NATIONAL ARCHIVES  
1863 *Log of USS Morning Light*.
- NAVY DEPARTMENT  
1977 *Dictionary of American Naval Fighting Ships*. Volume III. Office of the Chief of Naval Operations, Naval History Division, Washington, D.C.
- NEYLAND, ROBERT S.  
1993 The Naval War for the North Texas Coast. In *Underwater Archaeology Proceedings from the Society for Historical Archaeology Conference*, edited by Sheli O. Smith, pp. 115-122. Kansas City, Missouri.
- SEMMES, RAPHAEL  
1962 *The Confederate Raider Alabama: Selections from Memoirs of Service Afloat during the War between the States*. Fawcett Publications, Inc., Greenwich, Connecticut.
- SILVERSTONE, PAUL H.  
1989 *Warships of the Civil War Navies*. Naval Institute Press, Annapolis, Maryland.
- SNYDER, LAURA  
1938 The Blockade of the Texas Coast during the Civil War. Thesis presented to the faculty of the Graduate Division of the Texas Technological College in partial fulfillment of the requirements for the Degree of Master of Arts.
- U.S. DISTRICT COURT FOR THE SOUTHERN DISTRICT OF TEXAS,  
GALVESTON DIVISION  
nd *Hatteras, Inc. Plaintiff v. The USS Hatteras, her engines, armament, apparel, cargo, appurtenances, etc. in rem, and United States of America, in personam* Defendants. Civil Action No. G-78-77.
- WILBUR, CURTIS D., SECRETARY OF THE NAVY  
1927 *Official Records of the Union and Confederate Navies in the War of the Rebellion*. Series II, Volume 1.

J. BARTO ARNOLD III  
TEXAS HISTORICAL COMMISSION  
P.O. Box 12276  
AUSTIN, TEXAS 78711

RICHARD J. ANUSKIEWICZ  
MINERALS MANAGEMENT SERVICE  
1201 ELMWOOD PARK BLVD.  
NEW ORLEANS, LOUISIANA 70123-2394