



Figure 1. Project location map, Bogue Inlet survey areas (NOAA Chart 11541, Neuse River to Myrtle Grove Sound, 1993).

Personnel at the Underwater Archaeology Unit of the Division of Archives and History at Kure Beach, North Carolina were contacted for shipwreck data associated with Bogue Inlet and the White Oak River area. TAR personnel also contacted and interviewed area archaeologists and other individuals knowledgeable in maritime history and shipwreck research to solicit their assistance in generating wreck data.

Remote Sensing Survey

Field investigation of the study areas was designed to accomplish two major research goals. The first was to employ magnetic and acoustic remote sensing equipment to identify anomalies with signature characteristics similar to those previously demonstrated to be associated with historically significant submerged cultural resources. The second objective was to assess each target signature and identify those that required avoidance procedures and those that could be dismissed as indicative of modern debris. To accomplish these objectives, TAR personnel collected data with a proton precession magnetometer and a 600 kHz side scan sonar.

Working from 24-foot and 20-foot survey vessels, TAR personnel collected magnetic data with an 866 Geometrics proton precession magnetometer capable of plus or minus 0.1 gamma resolution. To produce the most comprehensive magnetic record the sensor was deployed approximately 30 feet aft of the GPS antenna and maintained in the water column at a depth of 5 to 10 feet above the bottom surface. In shoal areas, the sensor was mounted on a spar off the bow of the survey vessel. Magnetic data was recorded as a data file associated with the computer navigation system and contour plotted using QUICKSURF[®] computer software to facilitate anomaly location and definition of target signature characteristics. Acoustic data was collected using a 600 kHz Marine Sonics digital side scan sonar. The side scan sonar transducer was towed just below the water surface approximately 3 feet aft and 6 feet to starboard of the differential antenna. Lane spacing during the survey was maintained at 50 feet and vessel speed at 3 to 4 knots to ensure sufficient data would be available to locate any potentially significant targets in the survey areas.

During the survey, positioning and lane spacing were maintained with a Furuno GP-35 differential global positioning system [DGPS] interfaced with a Compaq 500mhz laptop computer. Navigation was controlled and data recorded by Coastal Oceanographics HYPACK[®]Max Navigation software. This navigation system affords a positioning accuracy of plus/minus 3 feet. The positioning system was preset with a layback and data generated was correlated to magnetometer and sonar records by annotations to facilitate target location and anomaly analysis. Annotations included lane number, date and target identification. At the completion of the general survey, significant anomalies identified during the magnetometer survey were re-surveyed using a lane spacing of 20 feet to help in target analysis and interpretation. All data were plotted to North Carolina State Plane Transverse Mercator Coordinate System, East Zone, NAD 83.

Data Analysis

To ensure reliable target identification and assessment, analysis of the magnetic and acoustic data was carried out as it was generated. Using QUICKSURF[®] contouring software, magnetic data generated during the survey was contour plotted at 10-gamma intervals for analysis and accurate location of the material generating each magnetic anomaly. Magnetic targets were isolated and analyzed in accordance with intensity, duration, areal extent and other signature characteristics. Sonogram signatures associated with magnetic targets were analyzed on the basis of configuration, areal extent, elevation, target intensity and contrast with background and shadow image.

Data generated by the remote sensing equipment was developed to support an assessment of each magnetic and acoustic signature. Analysis of each target signature included consideration of magnetic and sonar signature characteristics previously demonstrated to be reliable indicators of historically significant submerged cultural resources. Assessment of each target included recommendations for additional investigation to determine the exact nature of the cultural material generating the signature and its potential National Register significance. Historical evidence was developed into a background context and an inventory of shipwreck sites that identified possible correlations with magnetic targets (Appendix A). A magnetic contour map of the survey area was produced to aid in the analysis of each anomaly. All targets were listed and described and a map produced that showed their location within the project area.

Historical Background

The area around the White Oak River and Bogue Inlet has been occupied by humans for over 2,500 years. Long before the English colonized the region, the Algonkian Indians inhabited a village in the same area as 18th century Swansboro. From artifactual remains, it is known that these Native Americans lived intermittently on the site from the Middle Woodland Period through the time of European contact (Swansboro Historical Association 1990). The Algonkian name for the White Oak River was the Weetock. Historical evidence indicates that the river was still referred to by that name as late as 1710. In 1711, the Algonkians joined with the Tuscaroras in an attack on New Bern and the surrounding countryside. Any Europeans that may have been residing in the Weetock River area were most likely killed during the raids. As a result of the Tuscarora War, all of the Native Americans in the area were driven out.

The Bogue Inlet region was visited by Europeans as early as the 16th century. In 1524, the Italian navigator and explorer Giovanni da Verrazano dispatched a small group to meet Indians somewhere between New River Inlet and Bogue Inlet (Littleton 1981). Verrazano, a Florentine employed by the French, described the coastline of Onslow County in his writings concerning his exploration of the coast from North Carolina to Maine.