

Queen Anne's Revenge
Shipwreck Project



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**Archaeological Investigations at Beaufort Inlet: A Summary of
Submerged Cultural Resource Surveys and Investigations at
Beaufort Inlet, North Carolina**

Richard W. Lawrence
NC Underwater Archaeology Branch

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Underwater Archaeology Branch
Office of State Archaeology
Department of Cultural Resources
State of North Carolina
www.qaronline.org

Introduction

The beginnings of North Carolina's underwater archaeology program go back to the early 1960s when navy divers, working in cooperation with the North Carolina Department of Cultural Resources, recovered several thousand artifacts from sunken Civil War blockade-runners in the Wilmington, North Carolina vicinity. In 1963 the state established a preservation laboratory at the Fort Fisher State Historic Site to treat these artifacts, and in 1967 the North Carolina Legislature enacted a bill (G.S. 121, Article 3), entitled "Salvage of Abandoned Shipwrecks and Other Underwater Archaeological Sites", to protect the state's submerged cultural resources. This statute claimed ownership for the state of all cultural material that has remained unclaimed in state waters for more than 10 years. Further, the law authorized the Department of Cultural Resources to establish a professional staff and rules and regulations to manage these submerged resources, and to develop a permitting system to allow other individuals, groups, and institutions to conduct investigations and recovery projects of the state's underwater archaeological sites.

Over the past four decades the Underwater Archaeology Branch (UAB) has grown dramatically. From its origins as a preservation laboratory in the 1960s, the UAB has expanded to include an active management and field research program. During the late-1970s and early-1980s, the branch partnered with state university programs to increase site inventories of the state's historic harbors. Since then the UAB participates in an average of fifty field projects each year. Those projects range in duration from one day to several weeks. Archaeological sites examined in recent years include several dozen prehistoric dugout canoes ranging in age from 500 to over 4,000 years old; colonial and federal-period sailing ships; numerous Civil War shipwrecks; and a number of nineteenth and twentieth-century steamboats. Knowledge of these sites comes from a variety of sources including historical and archival research, environmental review surveys, and reports from the public--particularly divers and fishermen.

Another important function of the UAB is the review of various state and federal undertakings on public lands (including submerged lands) to determine their affect on archaeological resources. This review process, which was mandated by Section 106 of the National Historic Preservation Act, applies to both government sponsored projects, such as channel dredging conducted by the US Army Corps of Engineers (USACE), and to private development activities that require a federal permit including permits issued by the USACE and the North Carolina Division of Coastal Management. The UAB reviews plans for between 300-400 water-related construction projects each year to determine if those activities will affect significant archaeological sites. To assist in the review of these projects, the UAB maintains files on both known and historically documented shipwrecks as

well as research files on a variety of water-related subjects such as bridge and ferry crossings, historic ports and landings, riverine and coastal trade, and harbor development.

As stipulated in GS 123 Article 3, the UAB is responsible for issuing permits for the investigation of underwater archaeological sites in North Carolina. Over the twenty-five years, 124 such permits have been issued. Thirty-five of those permits were given to professional archaeologists or graduate students majoring in underwater archaeology. Sixty-one permits were issued to sport divers or avocational archaeologists, twenty to professional salvors (including five for submerged log salvage), and eight to local municipalities. Only a few of these permits have included provisions for the division of artifacts, generally on a basis of 75% for the permittee and 25% for the state and only one issued in the early 1970s to an quasi-professional archaeology group resulted in a reward of any submerged archaeological state properties. In the remainder of the permits, arrangements were usually made to have the artifacts placed on an indefinite loan to a museum, or similar facility, near the area from where they were recovered. In over half of the projects the UAB has provided assistance to the permittees in conducting the fieldwork or by treating artifacts at the branch's preservation laboratory.

The passage of the Abandoned Shipwreck Act of 1987 (ASA) resolved the jurisdictional dispute between state governments and the federal court system concerning ownership and management of historic shipwrecks. This was particularly important in states like Florida where treasure salvors had attempted to use federal admiralty law as a means of circumventing state historic preservation statutes. Through the ASA the U.S. Government asserted title to historic shipwrecks in state waters, transferred title of these wrecks to the respective states, and exempted these shipwrecks from "the [federal] law of salvage and law of finds". Since there have in the past been few legal challenges to North Carolina's underwater archaeology law, passage of the ASA has had little noticeable impact on divers or salvors in North Carolina. In fact, the majority of recreational diving along the North Carolina coast takes place well outside the three-mile limit, beyond the jurisdiction of the ASA. Inside the territorial waters of the state, North Carolina's existing statute and regulations have remained in effect. Research undertaken by private, corporate, institutional, and agency interests in the Cape Lookout/Beaufort Inlet area represents a full range of underwater archaeological activities overseen by UAB.

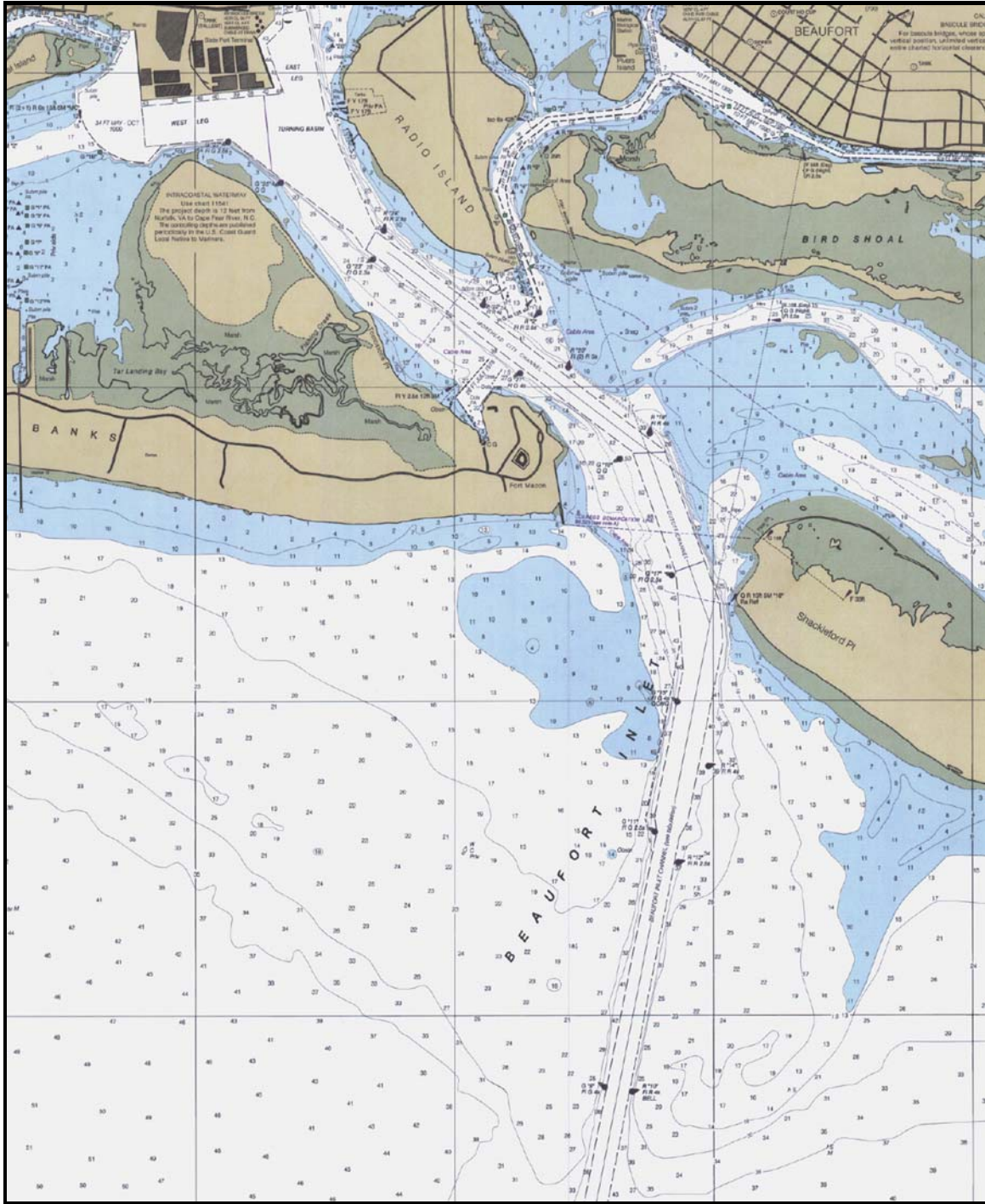


Figure 1 Beaufort Inlet 2000 (NOAA Morehead City Harbor 11547)

Cultural Resource Management Surveys

Investigation of a reported shipwreck in the Beaufort Inlet navigation channel, US Army Corps of Engineers, 1978.

Since no report exists on this incident the following account is based on notes in the UAB's site files. Sometime in the spring of 1978 the private dredge *Ezra Zanzibar* encountered an obstruction while dredging in Beaufort Inlet under contract with the USACE. According to local diver Wayne Hassen, he was hired to free the dredge's grapnel anchor from the obstruction. Mr. Hassen reported the location as between buoys 3 and 5, but closer to buoy number 3. Mr. Hassen said visibility was poor, but he discovered approximately 60 feet of a partially exposed wooden hull. He reported that the hull was clinker planked, intact up to the gunwale, with some decking exposed. According to Captain Jarvis Midgett, the *Ezra Zanzibar* brought up the head of a diesel engine from the shipwreck. In June 1978, US Army divers, working off the USACE vessel *Snell*, spent three days searching for the reported shipwreck, but were unsuccessful in that effort. The shipwreck has never been relocated (Duff 1978).

Remote sensing survey of Beaufort Inlet, North Carolina, Dames and Moore, 1978.

In September 1978, the research firm Dames and Moore conducted a magnetometer survey of the Beaufort Inlet navigation channel for the USACE in anticipation of a planned dredging project. The remote sensing survey was confined to Range A of the navigation channel beginning at the point where it intersects with the Cutoff Channel and extending seaward a distance of 1,000 feet to the 42-foot mean low water contour. Five lanes, ranging from 40 meters to 50 meters apart, were surveyed and 26 magnetic anomalies were detected. The authors of the report concluded, "None of these anomalies appear to be shipwrecks, and several represent channel buoys (Dames and Moore 1979).

In a December 7, 1979, letter to the USACE, Larry Tise, North Carolina State Historic Preservation Officer, criticized the survey report and its findings. Dr. Tise noted the report lacked a historical background section and argued that the survey methodology was insufficient to detect small wooden vessels of the type likely to frequent Beaufort Inlet. Dr. Tise also noted that none of the anomalies were inspected to confirm their identity.

An acoustic remote sensing reconnaissance investigation of ship channels approaching the harbor at Morehead City, North Carolina, Tidewater Atlantic Research (TAR), Gordon P. Watts, Principal Investigator, 1988.

In October 1988 TAR conducted a side scan sonar survey of the Beaufort Inlet navigation channel for the USACE. That survey included portions of the offshore channel (Range A), portions of the inshore channel (Range B), and the "Cutoff" channel that connects the two ranges. The purpose of the survey was to collect acoustic data to supplement the 1978 Dames and Moore survey

and a 1986 magnetometer survey conducted by the USACE. In addition, the researchers hope to locate the shipwreck reportedly encountered by the dredge *Ezra Zanzibar* in 1978.

TAR researchers identified only three objects in or near the navigation channel. All three were reported as long linear objects likely to be pilings or dredge pipe. The survey detected a fourth target well outside of the navigation channel between Range B and the Ft. Macon Coast Guard Station. Researchers speculated that the target might represent “material associated with Fort Hampton, or perhaps more likely, an historic dock structure known to have served Fort Macon during the mid-nineteenth century” (Watts 1989).

A remote sensing survey and reconnaissance investigations to identify and assess targets located along Range A, a bar channel widener, a channel extension, and two spoil deposits at Beaufort Inlet, North Carolina, Tidewater Atlantic Research, Gordon P. Watts, Principal Investigator, 1991.

In May 1991 the USACE contracted with TAR to conduct a magnetometer and side scan sonar survey of four areas in the Beaufort Inlet vicinity. Those areas included:

- Area 1: A 1,500-foot by 8,000-foot area on the west side of the Beaufort Inlet Channel under consideration as a nearshore disposal area.
- Area II: A 1,500-foot by 8,000-foot area on the east side of the Beaufort Inlet Channel under consideration as a nearshore disposal area.
- Area III: An approximately 600-foot by 3,800-foot area at the southern (seaward) end of Range A under consideration as a channel extension.
- Area IV: An approximately 450-foot by 2,000-foot area on the west side of the Range A/Cutoff Channel intersection under consideration as a channel widener.

The 1992 TAR report on the project states that no magnetic or acoustic targets were located in Area IV and only one magnetic target was found in Area III. According to the report, the survey identified five targets in Area I and four in Area II. Based on the magnetic signatures, TAR recommended that one target in Area I, two in Area II, and one in Area III be examined by divers to determine the source of the magnetic anomalies. TAR divers inspected those sites in September 1991 with the following results.

- Target I-A: Divers located a rectangular sheet metal tank, eight feet long by 2 feet 7 inches wide. TAR recommended no additional work at this target.
- Target II-A: The survey crew could not relocate this magnetic target and no diving was conducted.
- Target II-C: Divers located the remains of a wooden hull screw steamboat at this location. The TAR crew took measurements of the site and prepared a preliminary site map. The site map depicts the vessel’s boiler and a single cylinder, vertical steam engine. TAR tentatively identified the site as the Union transport *Quinnebaugh*, which was lost at Beaufort Inlet during the Civil War. The UAB assigned site number 0001BUI to that site.
- Target III-B: Divers located a small steel object buried under four feet of sand. TAR identified the object as possibly an I-beam or thick steel plate. TAR recommended no additional work at this target.

The TAR report includes a comprehensive historical maritime overview of the Beaufort Inlet vicinity as well as specific historical research on the *Quinnebaugh* (Watts 1992). It is interesting to note that survey of Area I came within 600 feet of site 31CR314, which at that time was undiscovered.

Underwater remote sensing survey and diver inspection near Beaufort Inlet, North Carolina, Tidewater Atlantic Research, Gordon P. Watts, Jr., Principal Investigator, 1997.

This project was an extension of the work conducted by TAR in 1991. The USACE selected Area I as the preferred nearshore disposal area; however, that area was too shallow for the hopper dredges to be used for the project. Consequently, the USACE wanted to extend Area I to the south and east and contracted with TAR to conduct a remote sensing survey of the expanded area. The L-shaped survey area measured roughly 840' by 8,000'. It should be noted that due to confusion over the datum used to control the 1991 survey (NAD 27) and the datum used for this survey (NAD83) that the Corps- specified survey coordinates left a 600-foot wide gap between the 1991 and the 1997 survey areas.

In April 1997 TAR conducted a magnetometer and side scan sonar survey of the expansion area. That survey located three magnetic anomalies that were investigated by divers. The TAR divers were unable to locate the source of the targets, concluding that they were all buried. Since the proposed on-site disturbance consisted of depositing dredge material, with no excavation, TAR recommended no further archaeological investigation (Watts 1997).

Underwater remote sensing survey and diver inspection of anomalies near Beaufort Inlet, North Carolina, Tidewater Atlantic Research, Gordon P. Watts, Jr., Principal Investigator, 2001.

This work was an expansion of the surveys conducted by TAR in 1991 and 1997 of the near shore disposal area to the west of Beaufort Inlet. Once again, the USACE needed to extend the area to the south to accommodate the draft of the hopper dredges using the disposal area. TAR subcontracted the work with Intersal since that research firm was actively surveying Beaufort Inlet as part of their ongoing efforts to locate the remains of the vessels *Adventure* and *El Salvador*.

Intersal conducted a magnetometer survey of the 2,000' by 8,000' survey area and located thirteen anomalies. Divers investigated eight of those targets and found that five were "modern shipwreck material and other modern debris." Divers could not locate anything above the bottom at the three other investigated targets. TAR recommended no further archaeological investigation (Watts 2002).

University Field School and Graduate Research

Field school in maritime history and underwater archaeology, East Carolina University and NC Division of Archives and History, 1982.

During the summer of 1982, East Carolina University's Maritime Studies Program and the Division of Archives and History's Underwater Archaeology Branch conducted a four-week cooperative field school in the Cape Lookout/Beaufort Inlet vicinity. Although the UAB's magnetometer was used for the project, the survey vessel was not equipped with a positioning system. Consequently, survey runs were loosely controlled. General survey runs were made along the coast from Atlantic Beach to Cape Lookout and from Cape Lookout north to Drum Inlet. Portions of Beaufort Inlet were also surveyed as was Cape Lookout Bight and various channels in the sound and adjoining creeks and rivers. Only two shipwrecks were investigated, both located in Cape Lookout Bight (Watts 1983).

Search for a reported shipwreck site on the north side of Shackleford Banks adjacent to Beaufort Inlet, James R. Reedy, Jr., Principal Investigator, 1983-1984.

In 1972 Rob Reedy heard reports by divers about an old wooden vessel in a narrow channel on the north side of Shackleford Banks. The shipwreck was found when a small trawler snagged its net on a submerged object in ten to fifteen feet of water. A diver, brought in to untangle the net, discovered, "what appeared to be portions of the lower hull planking and structural timbers of a fair sized wooden vessel protruding from the south bank of the channel . . . The divers reported extensive evidence of fire, with many burned timbers and much waterlogged charcoal and ash" (Reedy 1985:2). Based on the shipwreck's location, the evidence of burning, and an examination of a timber fragment recovered by divers, Reedy hypothesized that the site represented the remains of a prize vessel brought to Beaufort by the Continental frigate *Raleigh* in 1778. That prize, variously described as a brig or a brigantine, was in turn seized by a British privateer and subsequently burned near Beaufort Harbor.

In 1983 and 1984, Reedy, then a graduate student in the ECU Maritime Studies Program, attempted to relocate the shipwreck. Using the verbal description of the shipwreck's location as a starting point, Reedy attempted to find the site by dragging a light cable behind a boat and by diver survey. When those attempts were unsuccessful, Reedy enlisted the assistance of the UAB to conduct a magnetometer survey of the area. That survey was conducted by boat and by walking the magnetometer over a shoal that had formed since 1972. Based on the magnetometer readings, Reedy concluded that the shipwreck was now underneath the shoal covered by eight to twelve feet of sand. The amount of overburden precluded any additional investigation of the site (Reedy 1985).

Search for the pirate sloop Adventure in the interior waters of Beaufort Inlet, Michael Overfield, Principal Investigator, 2000.

In June 2000 a team from ECU's Program in Maritime Studies conducted a controlled magnetometer and side scan sonar survey of the interior waters of Beaufort Inlet. The survey was initiated by graduate student Michael Overfield, who was conducting research on the sloop *Adventure* as part of his MA thesis. *Adventure* was part of the pirate Blackbeard's fleet that entered the inlet in June 1718. *Adventure* was reportedly lost while returning to assist the grounded flagship, *Queen Anne's Revenge*. In his thesis, Overfield reports:

Thirty-seven magnetic anomalies were located in four survey areas. Area five produced no anomalies. Ten targets were located along the southern shore of Radio Island extending toward the northwestern shore of Shackleford Banks (Area 1), eight targets off the northern shore of Bogue Banks (Area 2), sixteen targets southeast of Radio Island (Area 3), and three targets off the northern shore of Shackleford Banks (Area 4). The majority of magnetic contacts were associated with underground cables (identified on NOAA chart 11547) and modern ship debris (modern anchors, chains, weights, etc.) (Overfield 2002:98).

In addition, the survey located forty side scan sonar targets, which were compared to the location of magnetic anomalies. Although the scope of the ECU project did not include diver investigation of the remote sensing targets, Overfield concluded, "four areas contain magnetometer anomalies and/or sonar images associated with wrecking processes" (Overfield 2002:104).

Commercial Investigations

Search for the Spanish vessel El Salvador and the pirate vessels Queen Anne's Revenge and Adventure at Beaufort Inlet, North Carolina, John Levin, Permittee, 1987-1993.

On January 1, 1987, the North Carolina Department of Cultural Resources (DCR) issued an exploration and recovery permit (BUI549) to John Levin, of Ft. Lauderdale, Florida, to search for the Spanish vessel *El Salvador*. *El Salvador* was lost during a hurricane in 1750 somewhere in the Beaufort Inlet/Cape Lookout vicinity. Levin's search area was roughly diamond-shaped and extended 3 miles to the east and 3 miles to the west of Beaufort Inlet and offshore to the 30-foot contour. Levin's partners in this project were Philip Masters, who conducted most of the historical research, and Dr. Allan Fields. The following is a summary of annual operations from 1987-1993.

- 1987 – Continued historical research on *El Salvador* and the 1750 fleet and made a brief visual reconnaissance of Beaufort Inlet (Levin and Masters 1987).
- 1988 – Conducted a magnetometer survey covering an area one mile east of the navigation channel and ¼ mile west of the channel, "approximately 30% of the prime target area." A microwave positioning system using shore-based transponders controlled vessel navigation. In January, the original partners formed the company Intersal, Inc. to raise capital to finance the project (Levin and Masters 1988).

- 1989 – Continued the controlled magnetometer survey, primarily to the west of the channel. Levin applied for and received a second permit (BUI565) to search for Blackbeard’s flagship, *Queen Anne’s Revenge*, within the same geographical boundaries as his original permit (Levin and Masters 1989).
- 1990- Intersal acquired the former crew boat *Pelican III* and fabricated 28-inch prop wash deflectors to fit over the vessel’s two 24-inch propellers. The group conducted test excavations with the deflectors and, with the UAB’s approval, attempted to excavate two of the anomalies located during the 1988/89 surveys. No cultural material was discovered due, in large part, to the fact that a magnetometer was not available to the group during the 1990 operations to confirm the location of the targets, and positioning onboard *Pelican III* consisted of a LORAN C navigation system, not the microwave positioning system used during the initial magnetometer surveys. The sloop *Adventure*, which was also lost by Blackbeard at Beaufort Inlet in 1718, was added to permit # BUI565 (Levin and Masters 1990).
- 1991 – No field operations were conducted this year due to lack of funding (Levin and Masters 1991).
- 1992 – No significant fieldwork was conducted this year. The group focused on converting the original magnetometer survey positioning data (state plane coordinates) to latitude and longitude (Levin and Masters 1992).
- 1993 – No fieldwork, continued data conversion (Levin and Masters 1993).
- 1994 – DCR received conflicting permit renewal requests from John Levin and from Intersal. After considering documentation submitted by both parties, DCR issued two new permits to Intersal. Those permits, BUI584 (*El Salvador*) and BUI585 (*Queen Anne’s Revenge* and *Adventure*), were first issued in January 1995.

Search for the Spanish vessel El Salvador and the pirate vessels Queen Anne’s Revenge and Adventure at Beaufort Inlet, North Carolina, Intersal, Inc./Philip Masters, Permittee, 1995-2004.

In January 1995 the Department of Cultural Resources issued two exploration and recovery permits to Intersal. Those permits covered the same geographical area and were for the same shipwrecks (*El Salvador*, *Queen Anne’s Revenge*, and *Adventure*) as the permits formerly issued to John Levin from 1987 to 1993. The following is a summary of Intersal’s operations from 1995 to 2004.

- 1995 – No fieldwork was conducted this year. Intersal concentrated its efforts on fundraising and historical research (Masters, 1996).
- 1996 – Intersal hired shipwreck researcher Mike Daniel to direct field operations. Daniel and his crew spent the month of October making repairs and renovations to Intersal’s research vessel *Pelican III*. From November 9 to November 22, the Intersal crew conducted field operations that included both magnetometer surveys and diver assessment of selected targets. Although most of the work was conducted on the west side of the inlet, the investigation located one shipwreck on the east side. That site proved to be the same shipwreck (0001BUI) located by the 1991 TAR survey and tentatively identified as the Union transport *Quinnebaugh*. On the west side of the inlet, the Intersal crew discovered four new shipwreck sites located in an area roughly 3,000 feet on a side and approximately one mile offshore of Ft. Macon. One of those sites, originally assigned site number 0003BUI, was tentatively identified as *Queen Anne’s Revenge*. That site, now numbered 31CR314, is the subject of this report. The three other sites discovered by Intersal in 1996 were:
 - 0002 BUI – The site consists of a large mound of ballast stones. Divers noted the presence of an iron chain, and later inspections of the site discovered chain plates

and deadeyes indicative of a sailing vessel. The Intersal divers recovered three artifacts from the site including a small brass eyepiece that bore a patent date of 1909. The schooner *Louise Howard* is a possible candidate for this shipwreck. *Louise Howard* was constructed in East Boothbay, Main in 1917 and was lost at Beaufort Inlet in 1921.

- 0004BUI – The Intersal divers did not recover any artifacts from this site but noted a large pile of railroad iron. The schooner *L.A. Bailey* is a possible candidate for this site. *L.A. Bailey* was lost at Beaufort Inlet in 1870 while traveling from New York to Savannah with a load of railroad iron.
- 0005BUI – The Intersal divers reported that there was very little exposed above the bottom at this site. They recovered a piece of copper sheathing and a brick and determined that the site dated to the late nineteenth century (Masters 1997).
- 1997 – During the month of October, Intersal provided their research vessel, *Pelican III*, and personnel to assist the UAB with the investigation of site 31CR314. From November 20 to December 4, Intersal conducted additional magnetometer survey and diver assessment operations to the north and south of site 31CR314 (*QAR* site). The survey located “a twentieth-century steel ship” 2,250 feet southeast of the *QAR* site. The Intersal team also discovered an eighteenth-century anchor approximately 400 feet south of the *QAR* site and what appeared to be a steel I-beam 600 feet east of *QAR* (Masters 1998).
- 1998 – During the year Intersal made considerable improvements to their surveying capabilities. Intersal President Phil Masters moved to Beaufort to oversee operations full time and Intersal entered into an agreement with Surface Interval Dive Company (SIDCO) whereby SIDCO agreed to provide volunteer labor and diving services. Intersal purchased a Geometrics cesium magnetometer, a Trimble differential GPS system, and the necessary hardware and software to interface the two systems for survey operations and to produce post-survey magnetic contour maps. Intersal also acquired a 26’ Bertram boat, aptly renamed *Anomaly*, to serve as the main survey vessel. With all systems tested and operational, Intersal conducted systematic magnetometer surveys from November 1, 1998 to January 31, 1999, covering an area approximately 7,800 feet by 9,600 feet. Intersal continued to assist the UAB with operations at the *QAR* site, particularly during the five-week fall project (Masters 1999).
- 1999 – Intersal continued magnetometer surveys through mid-June. At that time they decided to begin diving and excavation operations to identify the magnetic anomalies. Divers investigated a total of fifty anomalies, thirty-five of which were eliminated as containing either nineteenth or twentieth-century material. Two sites, given the names Maria and Danielle, were thought to date to the eighteenth century. Near the end of the year Intersal concentrated its field efforts at the Maria site (0006BUI), where they located three wood stock anchors and recovered several artifacts, including a brass shoe buckle and pewter spoon that both dated to the first half of the eighteenth century (Masters 2000).
- 2000 – From March through July, Intersal conducted a gradiometer survey of the Maria site. That survey indicated that little remained at the site beyond the three large anchors discovered in 1999. Intersal also conducted a detailed (30-foot lane spacing) magnetometer survey between the Maria site and Bogue Banks beach, a distance of one mile. That survey resulted in the examination of 37 magnetometer targets that included six additional wooden stock anchors and, most interestingly, a collection of seven eighteenth-century cannon (0007BUI). Assisted by UAB staff, Intersal recovered two of those cannon. The level of detail achieved in the magnetometer survey allowed Intersal to detect isolated artifacts of interest including an iron bilge pump rod with a portion of the wooden bilge pump, a cast iron kettle, and what may be the axle of a gun carriage (Masters (2001).
- 2001 – Intersal’s efforts this year focused on resurveying an area measuring one mile north to south and ½ mile east to west. That area extended from just south of the *QAR* site all the way to Bogue Banks beach and included previous discoveries of possible eighteenth-century

- origin. In his annual report, Phil Masters noted that, “this latest series of mag survey charts contain roughly twenty small to medium sized anomalies that do not appear in our mag contour charts from previous years.” Masters attributes the new anomalies to Intersal’s improved surveying techniques. Divers did not investigate any of the new or previously located sites this year (Masters 2002).
- 2002 – In May, June, and July, Intersal, assisted by the UAB, recovered the five remaining cannon at site 0007BUI. Preliminary cleaning of the cannon failed to uncover any identifying marks. David Moore provided drawings of the cannon to ordnance expert Ruth Brown, formerly with the Royal Armouries in London. Ms. Brown determined that one of the pieces dated no earlier than 1725 (Ruth Brown, personal communication 2003). That date rules out *Adventure*, lost in 1718, as the source of the cannon. Intersal resurveyed the cannon area after they were removed and found no evidence that additional shipwreck material remained at that site. In November Intersal continued its intensive magnetometer survey of its “prime target area,” and attempted to excavate an anomaly named “July” located in very shallow water within 100 yards of the beach. The efforts to locate the source of the “July” anomaly were unsuccessful (Masters 2003).
 - 2003 – In May and June, Intersal completed the intensive magnetometer survey of the fifty-block grid established in 2001. After studying the results of the survey, Phil Masters came to the conclusion that they were following the trail of an eighteenth century shipwreck, possibly *El Salvador*, that led from the Maria site through the cluster of cannon and eventually to the shallow waters, or under the beach, at Ft. Macon. Consequently, Intersal applied for a CAMA permit to use a jack-up barge to excavate in the shallow water off Ft Macon. A lack of funding precluded bringing in the barge during this field season (Masters 2004).
 - 2004 – Intersal conducted additional magnetometer survey to the east of the previously explored fifty-block area. Intersal also revisited the “September” anomaly originally investigated in 2000 at which time divers noted the presence of a wooden stock anchor and two brass rudder pintles. During the 2004 investigation divers relocated the anchor and collected diagnostic artifacts. Those artifacts included two British coins, one dating to 1798 and the other to 1806. The British brig *Catherine and Mary*, lost in 1814, is a possible candidate for this site. By using a truck on the beach as an anchor for *Pelican III* and waiting for ideal weather conditions, Intersal was able to uncover four large, shallow-water anomalies. All four were identified as large iron drainage pipes. A fifth, and smaller anomaly, “Samoa” was also examined in this fashion and proved to be a mixture of modern and historic material (Masters 2005).

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