

APPENDIX E

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Scoping Newsletter

Environmental Assessment for the Bank Stabilization of the Cockspur Island Lighthouse

The National Park Service, in collaboration with US Army Corps of Engineers, is preparing an Environmental Assessment for the bank stabilization of the island where the Cockspur Island Lighthouse is located.

The island is located southeast of Fort Pulaski, situated between the north and south channels of the Savannah River. The small island is almost completely composed of common oyster shells (*Crassostrea virginica*), portions of which are live oyster reefs and other portions which are dead shell. Sparse areas of saltmeadow cordgrass (*Spartina alterniflora*) and tidal pools are also present on the island.

The Cockspur Island Lighthouse is located on the southeastern tip of the island, marking the South Channel of the Savannah River. The lighthouse is a forty-six foot tall brick structure. It is accessible to the public during low tide by small boats.

Cockspur Island Lighthouse History

The Cockspur Island Lighthouse was originally constructed in 1849 to guide vessels to the port of Savannah. In 1854, a massive hurricane destroyed the tower as high winds and surging waters hit the island. The lighthouse was immediately rebuilt using Savannah Gray brick and the original foundation was expanded in 1855. The keeper's quarters were located nearby on the island.

At the outbreak of the American Civil War, the lighthouse was extinguished by Confederate forces to hinder the Union blockading efforts. On April 10, 1862, Union forces in eleven batteries along the northern shore of Tybee Island opened fire on Fort Pulaski. During this 30-hour long battle,



The Cockspur Island Lighthouse is located southeast of Fort Pulaski National Monument.

cannons were fired across the mouth of the Savannah River, with the lighthouse directly in the line of fire. Approximately five thousand rounds were fired between the Confederates and the Union, and the lighthouse remained unscathed. The Cockspur Island Lighthouse is significant because it served as a witness to the battle of Fort Pulaski.

After the war's end the lighthouse was re-lit and painted white for use as a day mark. In 1881, the lighthouse was hit by another hurricane. The 23-foot storm surge filled the interior of the lighthouse and destroyed the original keeper's residence. Following the hurricane, the light keepers decided to move the residence to higher ground, building a two-story frame house atop Fort Pulaski's massive walls.

On June 1, 1909, the Cockspur Island Lighthouse was officially extinguished due to the natural and

man-made changes to the Savannah River. With time, the North Channel had been dredged deeper to accommodate larger vessels and the South Channel gradually lost its importance.

Since being extinguished, the vacant Cockspur Island Lighthouse was passed through several owners, including the US Coast Guard. On August 14, 1958, the lighthouse was obtained by the National Park Service and became a part of the Fort Pulaski National Monument.



Cockspur Island Lighthouse during high tide.

Cockspur Island Lighthouse Today

The Cockspur Island Lighthouse is one of five historic lighthouses remaining in Georgia. The lighthouse is only accessible to park visitors during low tide. The lighthouse is supported by a wooden grillage base that exists under the foundation of the structure. This base consists of support beams that were sunk seventy feet into the salt marsh clay.

There are two principle issues affecting the Cockspur Island Lighthouse: island erosion and infestation of the wooden foundation of the lighthouse by marine borers. The island is under water for approximately fifty to sixty percent of the day. During high tide, the island is completely submerged, as well as the first several steps to the lighthouse's doorway. Natural processes, including winds and tides, as well as waves caused by passing ships have eroded the island away, so now it only consists of a narrow strip of land visible during low tide. Up until 1980, the island offered a significant amount of protection for the lighthouse.

Marine borer infestation also threatens the lighthouse today. Two groups of organisms, teredo worms (shipworms) and gribbles, can damage wood submerged in salt or brackish water in the Savannah area. The Cockspur Island Lighthouse is currently being affected by shipworms. A shipworm is a mollusk that bores itself into wood, where it will stay for life (2 to 10 months). While living in its burrow, the shipworm will eat the wood and lay approximately 100 million eggs.

Portions of the lighthouse's wooden foundation are now exposed and have visual shipworm damage. The National Park Service has completed emergency repairs to the portions of exposed wood by covering the wood foundation, thus removing the oxygen that encourages shipworm infestation. The shipworm infestation can compromise and eventually destroy the wooden foundation. If the foundation fails, the historic lighthouse would fall into the water and be lost.



Damaged lighthouse steps.



The NPS has been making emergency repairs to the lighthouse's exposed wooden foundation that is being damaged by shipworms.

Project Description

The proposed project is to stabilize the banks of the island. To do this, a portion of the island would be protected by placing riprap along the shoreline. This riprap would only be visible during extreme low tide events. The area from the riprap to the interior of the island surrounding the lighthouse would be filled with a slope approximately 3:1.

Protection of the 1860s viewshed would be particularly important to the National Park Service while planning the bank stabilization. Fill material has not been determined at this time, however materials suggested include Coast Guard riprap, dried oyster shells, or vegetated saltmeadow cordgrass. The fill material would resemble the 1860s historic viewshed.

The secondary benefit of the bank stabilization would be lighthouse protection. By raising the bank to the level of high tide, the damage from wind, wave, and tides would be minimized. Further deterioration of the lighthouse foundation and erosion of the oyster reef island would halt.

The Cockspur Island Lighthouse is currently open to the public, although access is limited to low tide. Visitors can paddle by kayak or canoe to the island

and climb to the top of the lighthouse. Also, visitors are able to view the lighthouse from the Lighthouse Overlook Trail located at Fort Pulaski. The current substrate of the island is composed of live oyster reef and oyster shells. This substrate is very sharp and becomes extremely slippery when wet, creating a treacherous walking surface for visitors. The fill material proposed between the shoreline and lighthouse would create a safe walking surface for visitors. In addition, the lighthouse would be accessible during high and low tides, allowing visitors to access the lighthouse for longer periods throughout the day. This would ultimately increase the visitor use of the area.



Live reefs on the island create an unsafe walking surface for visitors.

NEPA Process and Public Scoping Period

NEPA Process



Fort Pulaski National Monument is located off of Highway 80 approximately 15 miles east of Savannah. The Cockspur Island Lighthouse can be reached by canoe or kayak.

The National Park Service must follow the National Environmental Policy Act (NEPA) of 1969 to assure consideration of important environmental issues. The bank stabilization being considered on the island will be analyzed during the NEPA process.

The environmental effects resulting from the proposed bank stabilization will be evaluated in the Environmental Assessment. The analysis will consider impacts to topics such as wildlife habitat, vegetation, wetlands, floodplains, rare/threatened/ endangered species, aquatic resources, air quality, water quality, socioeconomics, cultural resources, soils, park visitor use and experience, and public health and safety.

The document will analyze both short-term, long-term, and cumulative effects of the proposed action, along with the “no action alternative.” By comparing the proposed action with the no action alternative, and identifying mitigation measures that would minimize adverse effects, this Environmental Assessment will assist stakeholders in the decision-making process.



National Park Service
U.S. Department of the Interior

The mission of Fort Pulaski National Monument is to preserve the historic fort, its associated structures and surroundings, and to interpret its roles in coastal fortifications, military technology, and the Civil War.

Fort Pulaski National Monument
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The National Park Service cares for the special places saved by the American people so that all may experience our heritage.

Public Scoping Period

As part of the NEPA process, the proposed project will be evaluated in an Environmental Assessment, which will analyze the potential environmental effects of the bank stabilization of the island. At this time, the Superintendent is announcing a 30-day public scoping period to solicit public comments on this project. During this period, the public is invited to identify any issues or concerns they might have with the proposed project so that the National Park Service can appropriately consider them in the Environmental Assessment. You may submit your comments electronically at the National Park Service’s Planning, Environment, and Public Comment website (<http://parkplanning.nps.gov>). If you are unable to access this website, please submit written comments to :

Superintendent
Fort Pulaski National Monument
PO Box 30757
Savannah, GA 31410-0757

Please submit comments by May 7, 2008. Once the Environmental Assessment is developed, it will be made available for public review for a 30-day period. If you wish to be added to the park’s mailing list, please be sure to indicate that in your response.

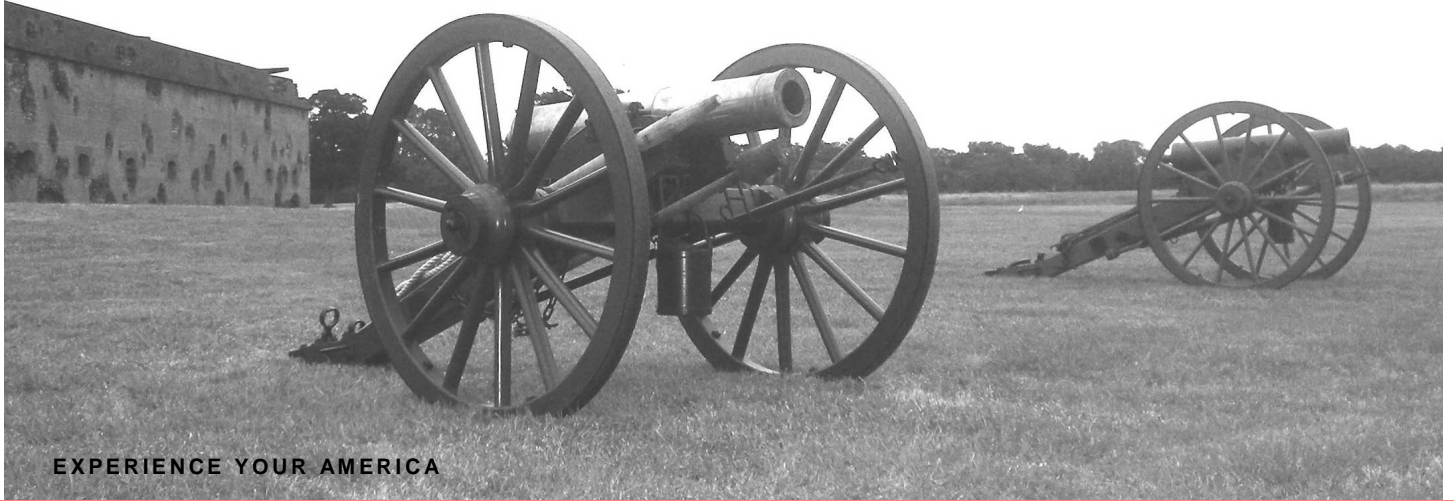
It is National Park Service practice to make all comments, including names and addresses of respondents who provide that information, available for public review. Individuals may request that the National Park Service withhold their name and/or address from public disclosure. If you wish to do this, commentors using the website can make such a request by checking the box “keep my contact information private”. If submitting written comments please state this request at the beginning of your comment. The National Park Service will honor such requests to the extent allowable by law.



National Park Service
U.S. Department of the Interior

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EXPERIENCE YOUR AMERICA

APPENDIX F

Archaeological Trip Report



United States Department of the Interior

NATIONAL PARK SERVICE

SOUTHEAST ARCHEOLOGICAL CENTER

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Tallahassee, Florida 32310

IN REPLY REFER TO:

October 23, 2008

To: Acting Director, Southeast Archeological Center (SEAC)
George Smith

From: Archeologist R. Steven Kidd and Charles F. Lawson

Subject: Trip Report Describing Activities Performed While
Conducting Research at the National Archives and
Records Administration (NARA), College Park, MD, and
Washington D.C. for Fort Pulaski National Monument
(FOPU), September 7-13, 2008, Followed by Pedestrian
and Magnetometer Survey conducted at Lighthouse,
September 24-26, 2008, SEAC Acc. 2203.

INTRODUCTION

As part of the SEAC project to document the foundation and associated outbuildings of the Cockspur Island Lighthouse (9CH674, FOPU4.001) (SEAC Acc. 2203), SEAC Archeologists Steven Kidd and Robert Hellmann, departed Tallahassee on September 7, 2008, en route to Washington D.C. Research was conducted at both the College Park branch of the National Archives (NARA II) as well as the main office of NARA in Washington D.C. The research conducted during the second week of September combined with the fieldwork at the end of September has furthered our understanding of extinct structures associated with the lighthouse on Cockspur Island.

RESEARCH AT NARA II

Previous research conducted online in advance of the project in Washington indicated there were records housed at NARA II that would need to be researched. Upon arrival at the College Park division of NARA (NARA II), the records related to Cockspur Island Lighthouse, GA Record Group 26 (RG26) were examined. The Cartographic and Architectural division housed architectural drawings and maps of the current lighthouse as well as its predecessors and other nearby lighthouses. Monday and Tuesday, September 8th and 9th, were spent at NARA II examining, photocopying, and photographing all the information pertaining to the lighthouse.

The facility provided transparencies of three Topographic Chart or T-Charts: #379, #906, and #1349. These were examined and found that they provided no new information with regards to outbuildings associated with the lighthouse.

Two drawings of the Cockspur Island lighthouse from 1848 and 1855 were located, photocopied, and photographed (see Appendix 1). The 1855 map, in particular, revealed information regarding the foundation of the lighthouse that confirms the mapping work completed during the June project (Kidd 2008).

The morning of the 9th, Steven Kidd contacted Scott Price at the U.S. Coast Guard (USCG) Historian's Office. He accessed USCG's information regarding the Cockspur Lighthouse and reported that the USCG did not have any historical documentation pertaining to the lighthouse and that the Cockspur Island Lighthouse folder contained one (1) black and white photograph of the lighthouse at high tide. All other information in their possession regarding the lighthouse was provided by NPS and was housed at NARA.

On the afternoon of the 9th, all reference materials housed at NARA II had been researched. The rest of the week was spent at the downtown offices of NARA (NARA I) in Washington.

RESEARCH AT NARA I

From Wednesday, September 10th, through Friday the 12th, Kidd's time was spent at the D.C. NARA headquarters. This location

contained written documents associated with the lighthouse including what are referred to as "clipping files". These files are excerpts of the *Annual Reports of the Light House Board*. All files relating specifically to the Cockspur Island lighthouse were photocopied and brought to SEAC. Additionally, correspondences between the Lighthouse Board, Bureau of Lighthouses, Superintendent of Lights at Savannah, and the General Superintendent of the Light House Service were examined. Of the previously mentioned sources, any reference to the lighthouse in question was selected for examination. These primary sources were reviewed and photocopied to bring back to SEAC for further investigation. Over the course of the three days spent at NARA headquarters, an abundance of information regarding the lighthouse was examined. All documentation examined at NARA I and NARA II was photocopied and later provided to FOPU during trip to conduct the pedestrian and magnetometer survey at the end of September. Information regarding the possible existence of outbuildings and other structures associated with the lighthouse are provided in the following section.

PEDESTRIAN SURVEY

On September 24, 2008, SEAC archeologists Steven Kidd, Charles Lawson, and Jessica McNeil departed Tallahassee en route to Fort Pulaski, GA. The group arrived at the park the afternoon of the 24th and met with FOPU Chief of Maintenance Mike Hosti. Kidd provided Hosti with photocopies of the information he had gleaned from the National Archives concerning the Cockspur Island Lighthouse. Hosti then provided the group with a quick tour around the fort and then proceeded to the edge of the island to examine the lighthouse across the channel. The group discussed the testing strategy for the following day and what they hoped could be accomplished. On the afternoon of the 24th the SEAC group departed FOPU and checked into the hotel for the night.

On the morning of the 25th, the group arrived at the park and met with the maintenance staff. Due to previously planned projects during the month of September and the upcoming end of fiscal year 2008, the only time a low water survey could be conducted was September 25th. The expected low tide for the 25th was a 0.5 foot tide at 11:40 a.m. The morning high tide at 5:18 a.m. for the 25th was expected to be seven feet with the afternoon tide at 5:46 p.m. listed at seven feet eleven inches. Once the tide

began to ebb, Maintenance Chief Hosti escorted the group to the lighthouse in one of the park boats.

Once on the island a quick pedestrian survey was conducted to determine the best area to place the GPR grid for optimum data recovery. It was decided that the area west of the current lighthouse would have been the most likely location for a structure associated with the lighthouse since this is the highest elevation on the small shell and ballast stone island. Three 20x20 meter grids were set E/W along the long axis of the island. The results of the magnetometer survey are provided in a later section in this report. Lawson and McNeil, with the assistance of Hosti, began the magnetometer survey while Kidd began the low tide pedestrian survey of the island.

The basal remains of four copper sheathed piles were located, photographed, and mapped in with a Trimble Pro XRS Global Positioning System (GPS) unit (Figure 1). The projected southern direction in which the piles extended would have placed them in deepening water toward the south channel of the Savannah River which likely indicates that these piles supported a boat dock, wharf, or possibly a boat house. The clipping files for Cockspar Island indicate that in 1868 "A substantial boat landing has been erected; piles cased with yellow metal; ..." (Clipping Files 1868). The clipping files produced further information regarding the boat landing for the lighthouse. In 1885 the clipping files report "The landing at the tower was strengthened, a boat landing was built on metaled (sic) piles, 200 linear feet of plank walk were laid, and various minor repairs were made" (Clipping Files 1885).

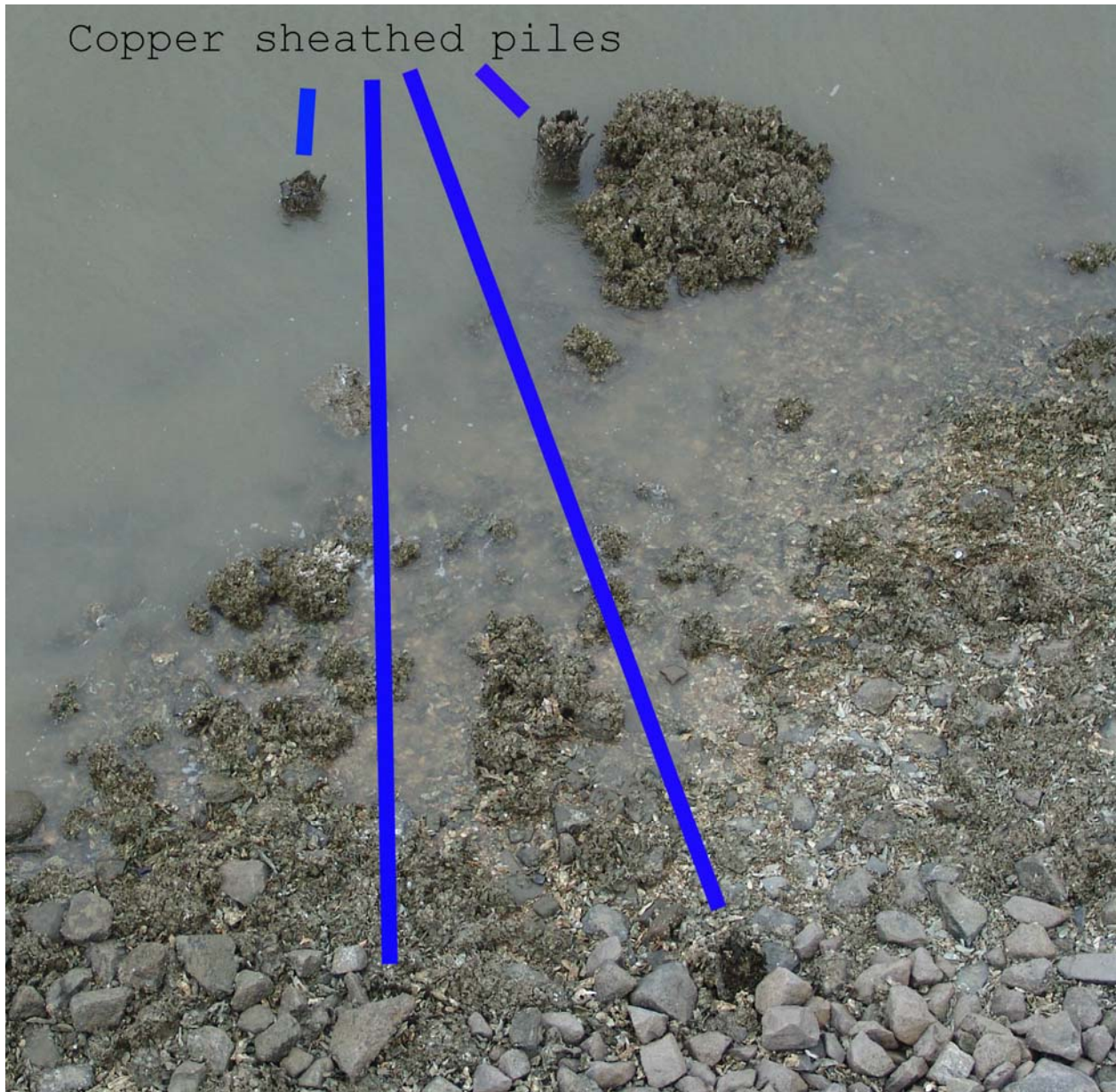


Figure 1. Copper sheathed piles extending into south channel.

Eight years later, in 1893, the files indicate "The boat landing on the south channel of the Savannah River was extended and repaired with piles sheathed with yellow metal" (Clipping Files 1893). The files also indicate work done on the boat landing in 1899 when it was extended 26 feet into the channel, in 1901 when it was extended 20 feet on metaled (sic) piles, and in 1905 when approximately 75 feet of the boat landing was 'renewed' (Clipping Files 1905).

With regards to the location of the keeper's quarters near the lighthouse, several of the documents refer to the structure(s).

A letter book entry dated November 29, 1848, provides reference to a letter from the Superintendent of Lighthouses "asking permission to erect a house for a Keeper of Beacon Light" (Journal of the Lighthouse Board, 1848). Unfortunately the letter book referenced in the entry was destroyed in a fire at NARA that also destroyed many other letter books that would have been useful in this research. Clipping files for 1855 refer to rebuilding the keeper's house on Cockspur to replace the one destroyed in a September 1854 hurricane. The September 1854 event that destroyed the keeper's dwelling also destroyed the 1848 lighthouse. The replacement lighthouse, completed in 1856 is the current lighthouse situated on Cockspur. The 1855 clipping file also suggests that the new keeper's quarters be built on a brick foundation to make it more comfortable in winter. The file goes on to suggest the addition of a small frame kitchen also be added. Apparently the advice of the Lighthouse Board concerning the brick foundation went unheeded. Reviews of the lighthouse board correspondences for 1876 provide an account on the conditions of the keeper's quarters. "The keeper's dwelling, a small one story frame building, built on a wooden foundation, is more than twenty years old, and so decayed that further repairs are unadvisable. It is also so near the ground that during severe gales the water rises above the floor. This dwelling accommodates the keepers of both the Oyster Bed and Cockspur beacons" (Light House Board Correspondences 1876).

Four years later in 1880, the board once again describes the dwelling as dilapidated, the quarters, having recently been struck by lightning, were thought to be almost uninhabitable. The decrepit keeper's quarters were completely destroyed by another hurricane in August 1881. This hurricane created an immense storm surge of at least 23 feet above mean sea level (amsl). The parade ground within the fort, which lies 18 ft (amsl), was submerged to depths of at least five feet (DeBolt 1976).

After the 1881 hurricane, the keepers were housed in modified casemates within the fort for an extended period, ending in 1906 when the War Department finally allowed the keepers access to the former Ordnance Sergeant's residence.

In regards to the location of the keeper's quarters, it seems unlikely that it would have been located near the current or previous lighthouse despite Groh's (2000:148) assertion that the keeper's house that John Norris designed and built in 1848 was located next to the lighthouse tower on Cockspur Island Reservation. Prentice (2006:45) believes that the keeper's

quarters was more likely located on the eastern end of Cockspur Island proper, which was also part of the Cockspur Island Reservation. This would explain why the need for two boats to maintain the beacons on Cockspur Island and the Oyster Beds is mentioned in the following passage that appears in a letter written in 1848 by W. B. Bullock, Superintendent of Lights to S. Pleasonton, Esq., Fifth Auditor of the Treasury.

The Beacons according to the sketches, contract, and specifications, and so constructed as to afford a night residence for the Keepers whose attention to the Lights at night are so indispensable. The Boat House to answer for the days residence of both Keepers. Allow me to say that it will be difficult, if not impossible, from the situation of these Lights for one Man to perform the duty fully, that will be expected from them. A Boat for each Beacon seems to be necessary. The Beacon on Cockspur as well as the one on the Oyster beds, being isolated - they are completely surrounded by water at full tide. [Bullock's Letter dating December 4, 1848; cited in Prentice 2006:44]

Given the height of the daily tides, and small size of the oyster bed, it would make little sense to place a keeper's quarters here. Plus, none of the records examined explicitly stated that the keeper's quarters were located adjacent to the lighthouse near the eastern end of Cockspur Island. On the basis of the available evidence there appears to be no merit to the assertion that a keeper's quarters was ever built at FOPU-4.

In reviewing the clipping files and Lighthouse Board correspondences, there was a much discussed plan, beginning in 1874, to provide a 750+ yard elevated walkway placed on coppered piles leading from the fort to the lighthouse. A number of cost estimates, bids, and detailed plans were provided to complete the construction of the walkway, but apparently funding was never obligated. Correspondences between the Lighthouse Engineer, who did not think the walkway was necessary, and the Lighthouse Inspector, who pointed out that the assistant Lighthouse Keeper had perished trying to reach the lighthouse just a few years prior, reveal that cost was the ultimate doom of the boardwalk. The Lighthouse Inspector suggested in lieu of the boardwalk, which was deemed too expensive, the present dilapidated keeper's quarters be removed and "a small house of four rooms be built on wooden piles with iron sleeves close alongside or attached to each of these beacons" (Lighthouse Board Correspondences 1874). Neither the boardwalk nor the keeper's quarters were ever financed by the Lighthouse Board.

The recent survey did not locate any evidence of the keeper's quarters during the pedestrian or magnetometer portions of the survey. The copper sheathed wooden piles which lead into the

Savannah River are most likely the remains of the 1868 boat landing which was repaired and expanded on many occasions. The many bricks scattered over the surface of the small island appear to be of the Savannah Gray type, most certainly used in the construction of the 1848 lighthouse. Their presence greatly reduced the efficacy of the proton magnetometer. A more detailed discussion of the magnetometer survey is provided in the next section.

MAGNETOMETER SURVEY

Archeological geophysical surveys have been commonplace in Europe since the late 1950s and have been growing in popularity in the United States over the past twenty years, particularly with the use of magnetic gradiometers. Despite the now relatively commonplace use of geophysical survey on archeological sites (Aitken 1961; Johnson 2006), imaging of buried features can still be a difficult task. In order for archeological features (or anomalies) to be detected, and be distinguished from natural disturbances, they must contrast in some way with the surrounding soil matrix. Unfortunately, geophysical instruments do not only respond to archeological anomalies, and, therefore, interpretation of geophysical survey results depends greatly on the recognition of patterns in the data that correspond to the expected form of an archeological feature. Often, if there is significant "noise" in the form of chemical or physical variations in the surrounding soil matrix, archeological features can be lost (Nickel 2003). In the case of magnetic survey, conditions that are most conducive to successful anomaly recognition include large open areas free of modern metal debris, and relatively homogeneous low-iron content soils. Unfortunately, none of these conditions were met on the small island containing the lighthouse. The island is made up of a small amount of silt covered with a thick oyster bed and broken coral heads. There were also iron objects scattered throughout the project area, and a large number of bricks associated with a demolished previous lighthouse covered the ground surface. Bricks are highly magnetic due to their substantial iron content and thermoremanent magnetism. Nevertheless, an attempt was made to conduct a magnetic survey of the island using a Geoscan FM-256 Fluxgate Gradiometer. It was hoped that despite the obstacles, the survey could identify buried iron scatters or foundations associated with any previously existing structures present on the island, or that concentrations of magnetic, igneous ballast stones would be

revealed that could indicate the original extent of the constructed landform around the lighthouse.

Gradiometers are a type of magnetometer in which two magnetic sensors are held in rigid perpendicular alignment within a single unit. Gradiometers function by simultaneously collecting readings of the Earth's magnetic field (measured in nanoteslas, [nT]) in both of the sensor heads. This allows the unit to record only the variation between the two sensors, which is indicative of localized disruptions of the Earth's magnetic field (i.e. archeological and other buried features), while ignoring the overall presence of the Earth's strong magnetic field.

Gradiometer surveys are conducted by carrying the unit over the ground surface in a series of linear transects making up a larger grid. Three adjacent (east/west) grids measuring 20-by-20-meters were established to the west of the lighthouse. The grids were laid out in a manner that allowed as much of the land surface exposed during low tide to be surveyed as possible. Despite these efforts, the northwest corner of the westernmost grid became submerged prior to completion of the survey, and some of the data from this portion of the grid may be skewed because of the need to raise the FM-256 approximately two feet higher above the ground surface to keep it out of the water. The unit was carried along north/south transects spaced at one-meter intervals within each grid. Magnetic readings were collected every 12.5 centimeters along each transect at a 1 nT resolution. Upon completion of the survey, data from the three grids were combined into a single composite measuring 20-by-60-meters (oriented east/west) and then post-processed using the software package Geoplot (produced by Geoscan Research for use with the FM-256). Extraordinarily high and low readings (usually caused by the presence of large iron objects) were clipped from the dataset to accentuate the lower magnetic variations usually caused by archeological features. Interpolated data was added to the dataset between transects and individual magnetic readings along the transects in order to smooth contours and a low pass filter was run to accentuate anomalies ranging between one and two meters in size. The entire composite dataset was then exported into the contour mapping software package Surfer for the production of the graphic displays seen in Figures 2 and 3 below.

Unfortunately, there was little information to be gleaned from the processed magnetic data set. There were no apparent anomaly patterns that would suggest any buried structures or features,

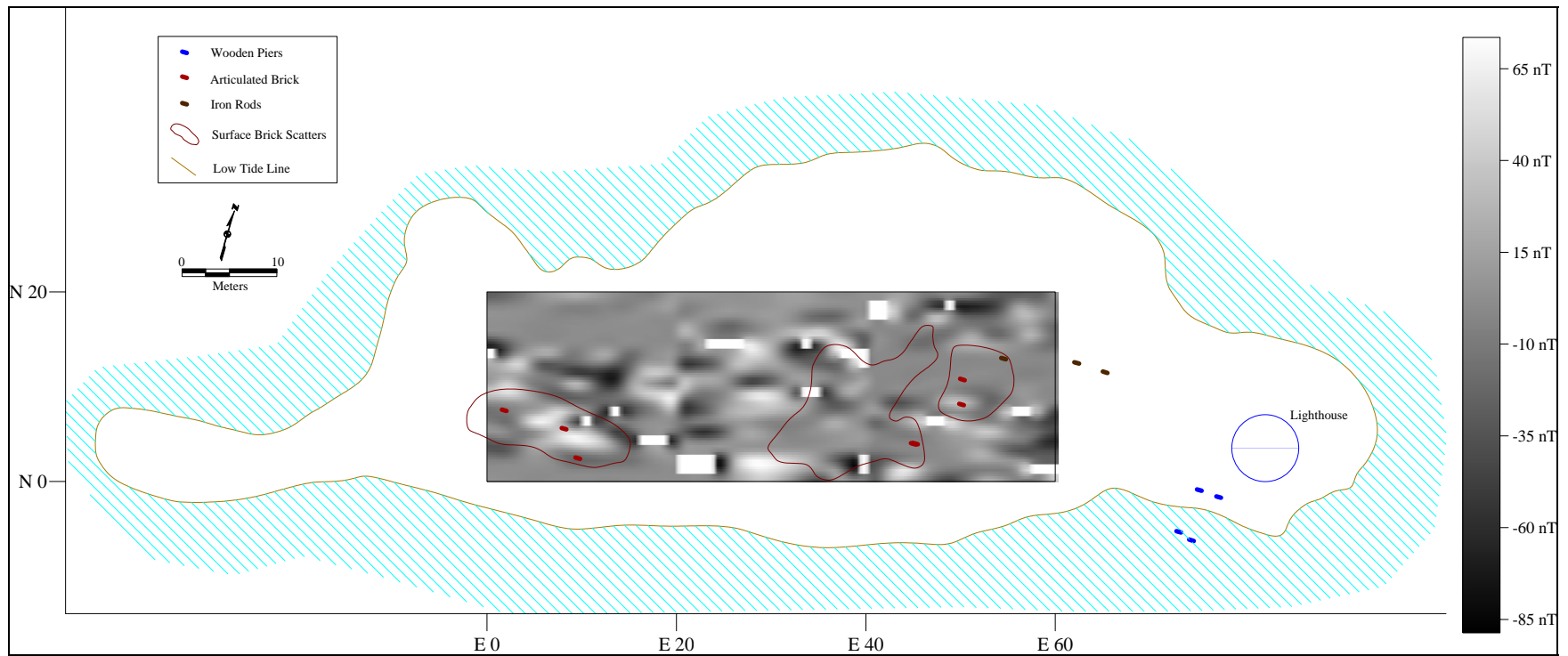


Figure 2. The project area and gradiometer results from the Cockspur Lighthouse island survey.

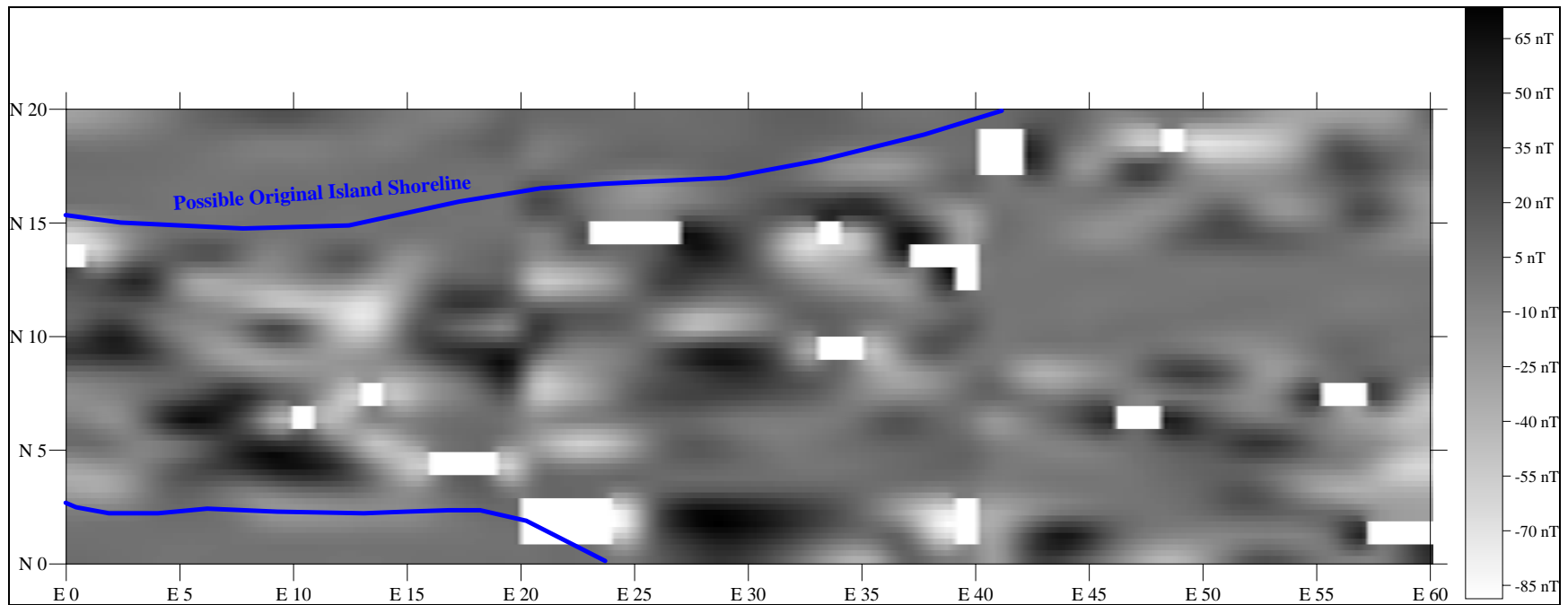


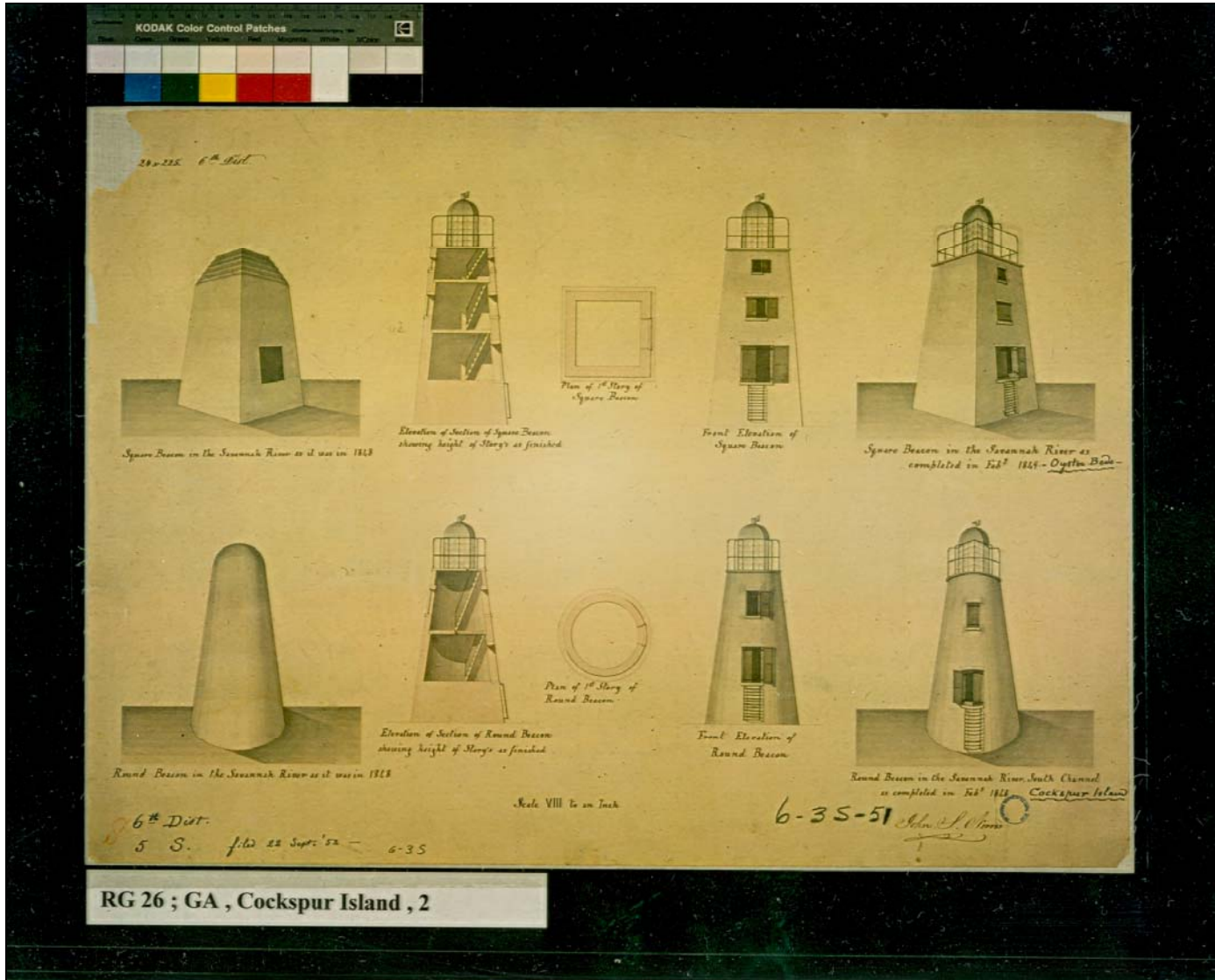
Figure 3. Gradiometer results. White blocks represent clipped (removed) data spikes.

and it is possible that most of the variation in the data set stems from the demolished brick covering the surface of the island. There was only one noticeable trend within the data, that most of the collection of magnetic dipoles recorded is confined to an east/west oriented band through the center of the western grid that expands north and south through the central grid and encompasses the entire eastern grid. This general trend and positioning of anomalies may be indicative of the original dimensions of the island as it was constructed to support the lighthouse (Figure 3).

CONCLUSIONS AND RECOMMENDATIONS

The low tide pedestrian and magnetometer survey of little Cockspar Island located four copper sheathed pilings extending south from the island into the south channel of the Savannah River. Documentary research indicates that these wooden piles are all that remain from a much more substantial boat landing that suffered the effects of numerous hurricanes. The magnetometer survey, hampered by large numbers of surface and near surface disturbances caused by the tower fall of the 1848 lighthouse, was not able to clearly reveal the outlines of any structures that would have been associated with the lighthouse. From the documentary research, it appears that any structures on the island would likely have been similar to the historical accounts of the keeper's quarters and would have been supported on wooden piers. Given the height of the tides along this portion of the Savannah River, any structure would have to be placed on piers to avoid twice daily flooding. Given the number and severity of the hurricanes to strike the area over the last 160 years there is little likelihood that little more than the base of posts similar to those associated with the landing would remain. Unfortunately this survey was unable to locate any of those post remains. SEAC recommends that no further testing above the low tide line is required prior to beginning the revetment portion of the proposed stabilization project.

Appendix One



RG 26 ; GA , Cockspur Island , 2

Figure 4. Drawing of 1848 Lighthouse on Cockspur Island. (Lower right)



Figure 5. Drawing of 1855 Lighthouse on Cockspar Island.

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