2006

**Ninety Six Fortification Search: Ninety Six National Historic Site**

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Ninety Six Fortification Search: Ninety Six National Historic Site

Keywords
Excavations, Fortifications, Ninety Six, Ninety Six National Historic Site, South Carolina, Archaeology

Disciplines
Anthropology

Publisher
The South Carolina Institute of Archaeology and Anthropology--University of South Carolina

Comments
In USC online Library catalog at: http://www.sc.edu/library/

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NINETY SIX
Fortification Search:
Ninety Six National Historic Site

Stanley South

With Contributions by:

Chester DePratter
James Legg
Michael Stoner

South Carolina Institute of Archaeology and Anthropology
Research Manuscript Series 232

College of Arts and Sciences
The University of South Carolina
Columbia
NINETY SIX FORTIFICATION SEARCH:
Ninety Six National Historic Site

Stanley South

The University of South Carolina
The South Carolina Institute of Archaeology and Anthropology
Columbia, South Carolina

With Contributions by:

Chester DePratter
James Legg
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National Park Service
Regional Archeologist Bennie Keel
Southeastern Archeological Center
ARPA Permit NISI 05-001
SEAC Accession No. 1951

RESEARCH MANUSCRIPT SERIES 232

University of South Carolina
South Carolina Institute of Archaeology and Anthropology
Research Division
Columbia, South Carolina
2006
Dedication

For my colleagues
who helped so much:
Chester DePratter
James Legg
and
Michael Stoner
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Acknowledgements

The primary acknowledgement for the funding of the Ninety Six fortification search is to the Archaeological Research Trust, and Jonathan Leader, Interim Director of the South Carolina Institute of Archaeology and Anthropology. Thanks to Tommy Charles and Brian Siegel for their effort at fundraising to support the project, and to John N. Walker, of Travelers Rest, who made a donation. I am grateful to Tommy for his loan of a power screen.

Thanks also, to my colleagues Chester DePratter, James Legg and Michael Stoner, who assisted me in the field as well as with the drawings and analysis of data. A special thanks to Michael Stoner for his computer help and for processing the artifacts and crunching them onto spreadsheets for me. His was a major contribution to the project. I am grateful to Sharon Pekrul for searching the SCIAA records for maps from my 1970-1971 expeditions to Ninety Six. Thanks to Steve Smith for providing some volumes for my research on the history of Ninety Six. And I am grateful to Nena Powell Rice, Archaeologist at SCIAA, and Maria Bertsch for their help with budget management. Thanks to Terry Ferguson from Wofford College, for carrying out his experiment on ground-penetrating radar for a paper he is planning, using data from Ninety Six.

Thanks to Bennie Keel, Regional Archaeologist for the National Park Service at the Southeast Archeological Center for providing Permit #NISI 05-001, under which this project was conducted. Thanks to Richard Vernon at SEAC for the good news he provided on the professional processing and curation of the artifacts recovered.

Farrell Saunders, Superintendent at Cowpens Battlefield and Ninety Six National Historic Sites, was of great administrative help during the early stages of trying to get the paper work at Ninety Six excavated from the bureaucratic strata in which it was buried. I am grateful, also, for the subsequent support and interest of Acting Superintendent, Paul Carson, who provided Kyle Kelly, a student at Clemson University, who was Paul’s summer intern in his Cowpens Battlefield office.

I am grateful for the cooperation and assistance provided by Eric Williams, Chief Park Ranger/Historian and his staff at Ninety Six National Historic Site. Thanks too, to Ninety Six National Historic Site employees: Charles Stevens, George McCarty, Renee Wheeler, and Melinda Zupon, who showed an interest in the archaeological detective work we were carrying out on their site, with which they are so familiar.

A special thanks to Gray Wood, Park Ranger, for his supervision of a group of young Youth Conservation Corps employees. They backfilled many of the slot trenches we dug, allowing my crew to focus on revealing the clues to the archaeological map beneath the surface at Ninety Six. Thanks to those YCC youths: Laura Sampson, Terrance Thompson, Kentia Hawkins, Kim Rodgers, Jovido Hawkins and Drew Wilson.

Volunteers are an important part of any archaeological expedition and I was fortunate to have a number of such helpful and interested people on the site to assist with our research effort. John Jameson, Senior Archeologist, Interpretive Development Program Certifier for the Southeast Archeological Center, who was one of my crew chiefs at Ninety Six in 1971, was one of the volunteers on this 2005 fortification search. It was good to be digging with John again after 34 years. Other colleagues who volunteered...
were Bert Dunkerly, archaeologist and historian and Jim Bates and Mike Harmon from the Sumter National Forest Service District.

Other volunteers were Sharon Alvarez and her children Daniel and Marlena, Kalla DePratter, and Laura Litwer, a University of South Carolina student, and her brother Gabriel Litwer. Laura was particularly helpful, returning for many days of digging, backfilling, and pulling tape for mapping, often on extremely hot days in the sun. Thanks Laura.

Visiting colleagues were Gregg Smith, Marsha Chance, Jonathan Leader, and Bill Green. Also visiting were my wife, Janet Reddy, my son, David and his wife, Mary and my granddaughter, Stephanie, as well as my son, Robert, his wife, Sheila, and my grandchildren, Alex and Gigi.

The Archaeological Society of South Carolina met at Ninety Six during the dig and I gave them a tour of the site and an overview of the archaeology I had done there in the past and currently underway. Thanks are due to Nena Powell Rice, Becky Berrera and Catherine Shumpert Long, who arranged for and hosted the meeting, during which Wayne Roberts demonstrated his flint-knapping skill for the fascinated society members and site visitors.

During the project, David Morgan, reporter for The Ninety Six The Star and Beacon, wrote four articles on the fortification search we were conducting. It was good that the local people were informed so they could visit the site and see the archaeology in progress.

I would be remiss if I did not thank the fine people at The Farris Restaurant for their hospitality and friendliness to our crew during our visit to Ninety Six. That is a good restaurant with good country food and friendly people with whom to enjoy the experience.
The Ninety Six Fortification Search

Stanley South
University of South Carolina
South Carolina Institute of Archaeology and Anthropology

Prepared for
The Archaeological Research Trust and the
Southeast Archeological Center
National Park Service
Permit # NISI 05-001
August 17, 2005

Historical Note

Ninety Six National Historic Site, located two miles south of the present town of Ninety Six, South Carolina, was the site of many forts and fortification features, during the French and Indian War and the American Revolution, dating from 1751 to 1781. American General Nathanael Greene besieged the Royal Provincial force defending the town under Lt. Col. John Harris Cruger from May 22 to June 19, 1781. Col. Cruger and Lt. Henry Haldane ordered fortification ditches dug to defend the town of Ninety Six. (Wemyss to Cornwallis, October 29, 1780, Greenwood County Library, BPRO, Cornwallis Papers, 50/11/1, F220 and MacKenzie 1787:143; South 1970a, Figure 3, 1972b, Figure 19, 1972, Figure 16).

The most recent archaeological story relating to this history took place from May to Mid-July, 2005, but it began for me 34 years earlier.

Project Background

In 1970 and 1971 I conducted three exploratory archaeology searches at what is now Ninety Six National Historic Site in Greenwood County, South Carolina. The Ninety Six Historical Commission funded these archaeological research projects. Other donors worked with Bruce Ezell and the University of South Carolina Institute of Archaeology and Anthropology to provide data necessary to fulfill the dream of the site becoming a National Historic Site in the Department of the Interior under National Park Service management.

Those archaeological projects revealed and mapped 15 forts and fortification features dating from 1751 to 1781. These were documented in published reports and a dozen maps (see Bibliography). These documents were placed on file at the South Carolina Institute of Archaeology and Anthropology at the University of South Carolina (SCIAA), and at the Ninety Six Historical Commission, and the National Park Service. As a result of these efforts and the continuing interest and leadership of Mr. Bruce Ezell and other community leaders, the dream was realized in 1976, when the site came under the administration of the National Park Service.

In the years following my work (South 1970a, 1970b, 1971a, 1971b, 1971c, 1971d, 1972) historians wrote about the site (Greene 1978; Cann 1996), and archaeologists came and examined various parts of it using a variety of methods (Holschlag and Rodeffer 1977; Prentice 2002).
In 2005 I received a permit from the United States Department of the Interior through the office of Regional Archaeologist, Dr. Bennie C. Keel at the National Park Service, Southeast Archeological Center, to conduct excavation of exploratory slot trenches at Ninety Six National Historic Site. Early in September 2005, I completed a preliminary report which describes the objectives and accomplishments of that fieldwork activity which ended on August 11, 2005.

**Bastions Found and Lost**

As the end of the 1971 project approached, part of my crew was working on reconstructing the earthen embankments of Revolutionary War Holmes’ Fort, captured by Light Horse “Harry” Lee on June 18, 1871 (South 1970a, Figure 4). Another part of the crew was backfilling the many exploratory trenches used to locate the various fortification ditches and features. While that was going on, I had other workers following a stockade ditch at the south edge of the town of Ninety Six because I wanted to determine whether it was yet another fortification ditch (South 1972b, Figure 19; Area A herein). It was on the last few days of the project when I cut slot-trenches trying to locate the extent of that ditch, but had trouble finding it in the slots I dug in the woods. Then, we luckily found postholes for a small diamond-shaped bastion about six feet long and four feet wide, but we saw no clearly defined ditch.

Excited by this discovery, we cut slot trenches to the north, still having no luck finding a ditch to follow. Then, in the woods, at a point parallel with the north fortification ditches of the town, we found a second set of postholes forming a small diamond-shaped bastion. There was no time left for mapping the bastions but I was scheduled to return in a few months for another project, so I knew I could expose and map them then. I tied flagging tape to the trees and bushes around the bastions to locate them when I returned, but that project failed to be funded, as expected (see South 2005: 242-244, 262 for that story). Thirty-four years later I am still haunted by not having mapped those two bastions!

**The Interpretation of Fortifications on the East Side of Ninety Six**

On July 1, 1776, the Cherokee Indians “poured down upon the frontiers of South Carolina; “massacreing” all persons who fell into their power” The people crowded together and “ran into little stockade forts, for momentary preservation” (Drayton 1821: II, 339, 341). Another source revealed that: “Ninety Six, previous to the war, had been slightly fortified for defense against the incursions of the neighbouring Indians.” “This stockade was still standing...” on June 22, 1780, when British provencial troops occupied Ninety Six. (Johnson 1822:138-139). “These works were considerably strengthened after the arrival of the British troops” (Lee 1812).

On one of my maps of the fortifications I found around the town of Ninety Six (South, 1972b, Figure 19), I show a little two-bastioned fort I found, measuring 190 by 220 feet. *It had been intruded-upon by a later ten-foot-wide fortification ditch.* Based on the above references to the strengthening of the 1776 fort by the British, I interpreted this ditch as representing “The Stockade Fort of 1776,” which was “considerably strengthened” by Lt. John Harris Cruger’s 1780 defenses around the town. I also found that a 95-foot extension was added to the two-bastioned 190 by 220 foot stockade at the south side, shown on my map (1972b, Figure 19) (Figure 1 herein).
If the 190 by 220 foot ditch was the 1776 anti-Cherokee fort that was “considerably strengthened” by Cruger by adding 95 feet to the south side, what fort is represented by the two little bastions I located, which have still eluded my search? If the missing bastions represent the 1776 fort, then it would follow that the 190 by 220 ditch with its 95 foot addition was constructed later by Colonel Cruger.

This alternative interpretation of these fortifications was shown on another map (South 1970a, Figure 3), on which I indicated the squared 190 by 220 foot two-bastioned stockade fort as having been erected, not in 1776, but in 1780, by Col. Cruger. An observer states that: “Colonel Cruger has enclosed the Court House & some other Houses that joined it within a square stockade, flanked by Blockhouses” (Wemyss to Cornwallis, October 29, 1780, Greenwood County Library, BPRO, Cornwallis Papers, 50/11/1, F220). Cruger, himself said, on October 13, 1780: “I have palisaded ye Courthouse & the principal houses in about one hundred yards square [italics mine], with Block House flankers...” (Greenwood County Library, British Public Records Office, Cornwallis Papers, 50/11/2, F220, Cruger to Cornwallis, October 13, 1780). The 100-yard-long fort and blockhouse flankers I found around the town matches these October accounts.

Two months later, in December, 1780, Lt. Henry Haldane inspected Cruger’s stockade defenses, and ordered more extensive works — a star-shaped redoubt on the northeast of the town and a so-called stockade (that my archaeology demonstrated to be a hornwork [Holmes’ Fort]) on the high ground on the west (MacKenzie 1787:143; South 1970b, Figure 3, 1972, Figure 19). Lt. Haldane also ordered more extensive fortifications around the town. When Lt. Haldane left to return to his duties as Cornwallis’ Aide de Camp, Col. Cruger was then responsible for carrying out the more extensive works ordered by Haldane. In this project I refer to the stockade fort ditch as that of Col. Cruger and the 14-foot-wide fortification ditch as being a Haldane-ordered defensive work (although Cruger may have completed the town works before Haldane arrived). This complex combination of documentary and archaeological data is hopefully made somewhat clearer by referring to the map in Figure 1.

Project Goals

In this project, my first priority was to re-locate the 1776 anti-Cherokee fort bastions I saw in 1971. The second priority was to map the southeast corner of the 190 by 280-foot 1780 Cruger stockade, and the Haldane-ordered, what we have found to be, a 10 to 14-foot wide dry fortification ditch at the southeast corner of the town of Ninety Six. The research was designed to provide a map and report on that area, so that interpreters and the visiting public, can gain a more complete picture of what happened at that nationally significant site to allow interpretive exhibits to more effectively communicate to the public the valuable information from the archaeological map that still lies buried beneath the grassy surface of the site the visitor now sees.

Project Funding

I requested and received from the Archaeological Research Trust, and from Jonathan Leader, Interim Director for the South Carolina Institute of Archaeology and Anthropology, a total of $10,484 (exclusive of salaries for me and Chester DePratter) to attempt to relocate those once-seen 1776 bastions, and to cut slot trenches to follow the Cruger and Haldane fortification ditches at the southeast corner of the town. The
Figure 1. The archaeological base map for the Ninety Six Fortification Search.
ar...
addition to the Carolina Artifact Pattern artifacts, seven Native American objects were tabulated. A preliminary report was completed by September 6, 2005. The artifacts will be turned over to the National Park Service Southeastern Archaeological Center for processing and curatorial responsibility.

Publicity

Several articles and photographs on the fort-search research project appeared in the local Ninety Six newspaper *The Star and Beacon* (Morgan 2005a, 2005b, 2005c). An article also appeared in the July-September issue of *Features and Profiles*, the Quarterly Newsletter of the Archaeological Society of South Carolina, Inc., announcing that the association was hosting a field trip to the Ninety Six dig on June 4th (Poplin 2005).

The Slot Trenching Method

Reference Points

In my 1970-1971 exploratory excavations at Ninety Six, I established many reference points by driving an iron pipe into the ground and indicating their exact location on my many site maps. When I returned to the site to conduct the present project, using the town maps, I was able to relocate Reference Point 7, near the junction of the Charleston and Augusta roads (South 1970a, Figure 3 and 1972b, Figure 19). However, machinery had bent the pipe I had placed there, but it was possible to determine its original position, so I placed a rebar beside the bent pipe to again indicate the position of RP 7. Guy Prentice, had established the Universal Transverse Mercator (UTM) grid system coordinate for RP 7 as E405963.04, N3778475.21 (Prentice 2002: 100).

From RP 7 I measured to the north 80 feet to locate RP 28, beside the asphalt walkway placed in the Charleston Road. This pipe had not been hit by machinery, so the alignment between these points was then used to attempt to locate RP 8 in the town village area. Bulldozing activity in the area had removed that reference point, but using my original transit log, I relocated a rebar in the position indicated on my maps. From that point I then located RP 9. From RP 7 I relocated RP 21. These reference points were then used to map all the slots dug in this project. I also added other reference points to allow mapping from a location closer to the data being recorded. These rebar reference points are: 1A through 8A, and 21A. They are shown on the map in Figure 1.

Excavating the Slots

The slot-trenching method used was the same one I used in my 1970-1971 exploratory archaeology search. This involved removing the plowed topsoil zone to the depth necessary to read soil discolorations caused by intrusions into the wine-colored subsoil. This depth varied from six inches to 18 inches. The difference between the wine subsoil and the Revolutionary War period ditch features is revealed by the bright flecks of red clay (from a red layer underlying the wine clay zone), mixed with the wine-colored backfilled ditch feature. The difference between the wine subsoil and the red clay flecked feature fill is sometimes very difficult to read, and difficult to see in some photographs. To help with viewing this contrast we sometimes drew a line around the feature and sometimes placed a string along the edge to augment the visual contrast.
Because of this difficulty of “reading the dirt,” the subsoil in each slot was carefully schnitted (cut) very clean in order to facilitate the visibility of the contrast between subsoil and feature. Sharp shovels, trowels and hoes were used in this process.

Artifact Recovery

We had planned to screen the soil from the slots using a power screen, but as we began cutting slots we observed (as I had previously) few artifacts being revealed. However, we recovered and bagged any we saw as we excavated the slots. In addition to this, Jim Legg used a metal locator on the dirt thrown from the slots as an additional method of artifact recovery.

The artifacts were placed in zip-lock bags numbered with the assigned South Carolina state number (38), the designation for Greenwood County (GN), and the site number for the fortifications around the town of Ninety Six (5). This was followed by the slot number, beginning with 150. Other numbers having been previously assigned. I transit-mapped each slot, and photographed those in which archaeological features were seen. The details of each slot were recorded on a site provenience form, and the process was recorded in a daily log, which is included in the Appendix. The length of the slots we dug ranged from 2.5 to 95.1 feet — the width from .9 to 1.9 feet, and the depth from .4 to 1.5 feet.

The Fortification Search in Areas A, B, and C

Area A

On the first day of the dig, by cutting slot trenches, we located the stockade ditch I had seen in 1971, in Slots 150 through 152. It began at the gut at the south side of the town site in the area I designated as “Area A” (Figures 1 and 3). The stockade ditch was not seen in three other slots in Area A, probably because plowing and prior bulldozing activity in the area may have removed the data. However, after verifying the presence of the ditch in the three slots we moved our slot-trenching activity to the east side of the Charleston Road.

Area B

We cut a number of slots on the east side of the Charlestown Road, in “Area B,” but did not find the ditch or postholes for a bastion. In was in this area, near the ridge remaining from the Hamilton Survey Line of 1751, that the southeast bastion postholes I found in 1971 were seen. But none of our slots revealed them. What we did find was that refuse from the late eighteenth and early nineteenth century was deposited in Area B by those living there after the Revolutionary War. Ceramics, window and wine bottle and other bottle glass, and iron pot fragments were discarded there more than in any other area of the site. In Area B, Slots 158 and 159, the largest number of artifacts were recovered (Figures 1 and 4), providing strong evidence for the presence of occupation in this area after the Revolutionary War. The discussion of the artifacts and their distribution is presented in a later section.
Figure 3. The slightly darker stockade ditch revealed in Slot 150.

Figure 4. Slot 159, looking west toward the town site.

Figure 5. The Native American Clovis point found in Slot 159.
Others had lived there ten thousand years earlier than the Ninety Six period of occupation. When Jim Legg was trimming the profile of slot 159, he discovered a Clovis projectile point (Figure 4) (Goodyear et. al. 1990; Haynes 1993; Womington 1957). This was an interesting artifact, but incidental to the historic period occupation of the Ninety Six site (Figure 5).

In 1971, when I saw the two bastions, I marked their location with flagging tape tied to trees and bushes around each bastion under the plan to return within three months for an upcoming project, the funding for which had been promised by Ninety Six resident, Bruce Ezell, but that funding did not materialize. In hindsight I should have put in a rebar or some other marker to identify the location of each bastion, but I didn't. So, I had to depend on my memory of where the bastions had been found in the woods. Although we dug a total of 75 slots in the current project (not all of which were dug searching for the 1776 fort), we did not find the bastions. With that disappointment behind me, I turned toward the north to search for the northeast bastion in Area C (Figure 1).

**Area C**

In an attempt to intercept any palisade ditch connecting the southeast and northeast bastions I had seen, we dug slot trench 168, beginning at a low embankment that paralleled the mound representing the 1751 “Hamilton’s Great Survey” line (Meriwether 1940: 126; South Carolina Archives, Charleston Deeds, T-4: 492-496, Nov. 28, 1755, and I-3: 11-17, June 21, 1767; South 1970a: 53). This survey of 2000 acres was a major step toward opening the area of Ninety Six to settlement and land acquisition. It is represented today by a mound partially caused by plowing of fields bordering both sides of the survey line in the past.

A depression 25 feet wide, which parallels the western side of this line may represent a road that once ran along beside it. Along the western edge of this depression, a low embankment may represent the edge of a plowed field, which, at the south end of the site, loops around the natural contour of the land. These features are shown on the map in Figure 1.

**Feature 169 — A Flèche**

As we dug Slot 168 we found Feature 169, which appeared to be the end of a ditch three feet wide (Figure 6). Jim Legg cut a profile through the feature (Figure 7), and found it to be a carefully dug ditch, 3.4 feet deep from the surface (Figure 8). He made a measured drawing of the plan and profile (Figure 9). It was apparent to us that this ditch with carefully-cut sloping sides was likely a military feature. To determine its length toward the south, we cut slots 171 through 174, but the ditch was not seen (Figure 1).

Mike Stoner then cut Slot 175 (Figure 10), and it was there we found the south end of Feature 169 (Figure 11). I then mapped the plan of the entire 3 x 10-foot feature, combining Jim Legg’s north end drawing with mine of the south end (Figure 12).

Jim Legg’s profile of Feature 169 is like the fortification ditch illustrated in *Diderot’s Pictorial Encyclopedia*, 1763 [1959], Plate 80), (Figure 13 herein), which shows such a ditch being excavated.
Figure 6. The difficult-to-read Feature 169, found in Slot Trench 168.

Figure 7. Jim Legg excavating the section through ditch-Feature 169.
Figures 8 and 9. Top: Feature 169 excavation showing the flat bottom and slightly sloping sides. Below: Jim Legg’s plan and profile drawing of Feature 169 in Slot 168.
Figure 10: Left: Mike Stoner cleaning the south edge of Feature 169 in Slot 175.
Figure 11. Right: The south end of Feature 169 (to the right), in Slot 175.
The Fleche Ditch in Slots 168 and 175

Figure 12. Plan of Feature 169 in Slots 158 and 175.
At first I thought Feature 169 might be an observation trench for Greene’s army to keep informed of comings and goings at the southeast corner of the fortifications around the town of Ninety Six, because the profile suggested that the mound of dirt (parapet) was on the town side of the trench. General Greene “sent a party to construct a battery, protected by arrow-like works called flèches, close to the enemy’s lines” (Conrad 1995 (8): 423n3). Feature 169 certainly was close (10 yards) from the enemy’s lines at the southeast corner of the town. Perhaps this feature was one of Greene’s flèches.

My thinking changed, however, when I found that Greene had said that the British fortifications around included “several little flèches in different parts of the town” (Tarleton 1787: 499; Mackenzie 1987: 142-143). So, Feature 169 may have been a British defensive trench. Flèches are arrow-shaped trenches, but ours was a single trench ten feet long as seen in Figure 12.

The Search for Other Flèches

Under the hypothesis that perhaps other such ten-foot military ditches may have been aligned with Feature 169, I cut a number of slots to attempt to locate another such flèche ditch but no other was found in that exploratory process (Area C, Figure 1). Park Ranger, Gray Wood assisted our process by supervising his Youth Conservation Corps in backfilling many of our slot trenches (Figure 14).

At this point in the excavation process, Professor Terry Ferguson from Wofford College arrived to test some of his subsurface radar equipment on Feature 169. This experimental process was also tried in the grassy area where the town stockade was located (Figure 15). Terry plans to write a paper on the result of this experiment.
Figure 14. Park Ranger Gray Wood with his Youth Conservation Corps backfilling slots.

Figure 15. Mike Stoner, Terry Ferguson, and Jim Legg conducting a ground penetrating radar experiment.
Area D

When I became frustrated at not finding the bastions, or additional flèche ditches, I turned to the second goal of the project, which was searching for what happened at the southeast corner of the fortifications around the town (Area D, Figure 1). Here we had more success. By cutting Slot 200, we found the 14-foot wide north-south-running fortification ditch along the east side of the town of Ninety Six. That ditch (Feature 203), was slightly darker than the wine-colored subsoil on each side of it (Figure 16).

![Figure 16. Mike Stoner at Slot 200, showing the string-marked edges of fortification ditch Feature 203.](image)

Mike Stoner excavated a profile section through ditch Feature 203 in Slot 200 and it was photographed and mapped (Figures 17-20). The ditch was 2.5 feet deep, with long tapered sides flanking the deeper central part. I have sometimes referred to this ditch as "Haldanes 1781 ditch," because he ordered such fortification ditches when he arrived, and they cut into Col. Cruger’s previously constructed stockade fort ditches, but Col. Cruger’s men likely dug these ditches. But, Feature 203 may have been dug by Cruger in the Fall before Haldane arrived in December. Regarding the fortification around the town, Greene said: "The Works are strong and extensive. The position difficult to approach and the Ground extremely hard" (Conrad 1995 [8]: 364).
Figure 17. The Profile of the excavated Feature 203 in Slot 200.

Figure 18. A close-up view of the profile of the topsoil zone of Slot 200 and the fortification ditch (Feature 203), intruding into the wine subsoil.
Fortification Ditch Feature 203 in Slot 200

Profile

The East Town
Fortification Ditch

Plan at 1.0 ft. Below Surface

Figure 19. Mike Stoner's plan and profile drawings of the fortification ditch Feature 203 in Slot 200.
The Southeast Corner of the Fortified Area of the Town of Ninety Six, S. C.

38GN5

Area D

Scale: Feet

0 10 20 30

CRUGER'S DITCH

38GN4-138 Slots dug in 1971 (South RMS 18, Map, Fig. 19)

Entrace

Figure 20. The southeast corner of the fortified area of the town of Ninety Six, South Carolina.
covered way to the Star Fort (Area D, Figure 20). I suspected this might have indicated a
gateway through the curtain at the junction with a southeast bastion, such as I revealed at
Ft. Moultrie (South 1974: 26, Fig. 2). To check this hypothesis Mike cut slots to reveal
the ditch on the south side of such an opening, but it was not found (Figure 20). In 2003,
I had conjectured an eastward bastion at this southeast corner of the town (South 2003a),
as I had conjectured for the southward corner in 1971 (South 1972b, Figure 19) (see
Figure 1, herein).

The East Town Stockade Ditch in Area D

Thirty feet west of the 14-foot wide
fortification ditch Mike opened Slot 201 to
search for the stockade fort ditch we knew to
be in that area from my previous
archaeological explorations (Figure 21). I
had revealed this stockade ditch in only two
slots near the north bastion in 1970 (South
1970a, Figure 3) and I wanted to verify this
stockade ditch in the central and southeast
area of the town. The ditch (Feature 202)
was revealed as seen in Figure 22, having
the characteristic lighter clay inclusions in
the backfill of wine-colored subsoil.

A profile of Feature 202 was excavated
to reveal the depth (Figure 23), and a
drawing was made of the plan and profile
(Figure 24), of the 2.6 foot deed ditch.

Thirty feet south of Slot 201, Mike dug
Slot 212, which was designed to intercept
the junction of the original two-bastioned
stockade with the 95-foot addition that had
been added to the south by Cruger. I had
conjectured the location of that junction in
1971 (South 1972a, Figure 19), and I wanted
to archaeologically verify its location. What
we saw in Slot 212 was the “T”-shaped
junction of stockade ditches I had predicted
(Figure 25). The drawing of this junction is
seen in Figure 26.

Sixty-five feet south of this junction we
dug slot 199, and again verified the location
of the stockade ditch (Figure 20). In 1971
I had found the ditch ended at a corner
entrance shown in Figure 20.

Figure 21. Michael Stoner opening Slot 201.
The Charleston Road is located at the two
trees in the background.
Figure 22. The stockade ditch. Feature 202, in Slot 201.

Figure 23. The excavated profile of stockade ditch Feature 202 in Slot 201.
The East Town Stockade Ditch

Figure 24. Mike Stoner's drawing of the plan and profile of the east town stockade ditch Figure 202 in Slot 201.

Figure 25. The stockade fort ditch at the southeast corner, where it joins the ditch for the 95 foot south addition.

Figure 26. Plan of the east town stockade ditch junction of stockade ditch Feature 202 in Slot 212.
The South Town Fortification Ditch in Area D

With the east side of the town stockade ditch examined, we turned our attention to locating the south fortification ditch near the southeast corner of the town. To do this, Mike Stoner cut Slot 213 a foot deep for 27 feet, searching for the fortification ditch, but we saw no evidence of it. It wasn't until he had deepened the slot to 18 inches, that we could see the darker soil of the seven-foot-wide Feature 214 against red subsoil, with the edges angled toward the northeast (Figure 27).

In 1971, as I cut slot trenches to follow the south stockade wall, one of my trenches revealed the north edge of the south fortification ditch around the town (South 1972b, Figure 19) (seen on Figure 20 herein). With both sides of the ditch revealed, the northeast direction of the ditch became obvious. Mike then cut slots 215 through 219, following the north edge of the ditch Feature 214 (Figure 20). What we saw was the ditch making an “S” curve, apparently forming a protection around a bastion, inside of which defensive fire could be directed along the ditch toward the west. This series of slots, cut by Mike, assisted by Laura Litwer, and sometimes by other volunteers, is shown in Figure 28.

Figure 27. Mike Stoner's drawing of the south town fortification ditch, Feature 214, in Slot 213.
We extended Slot 219 to the south to reveal the south edge of the ditch Feature 214, and found that the edge was angling sharply toward the northeast, as had the north side of the ditch in that slot. We also found in the ditch fill of Feature 214, in Slot 219, a number of ceramic fragments dating to the early nineteenth century, and the base of a wine bottle (Figure 29). The most interesting object was a flattened musket ball, which we couldn’t help associating with the Revolutionary War period on the site. These artifacts, along with the others recovered, are examined in the next section.

We cut Slot 224, hoping to intercept the ditch further east, but it was not there. Volunteer Bert Dunkerly showed up and cut Slot 225 and found that the south edge continued toward the northeast. Slots 221 and 223 revealed that the ditch had narrowed to a width of only three feet (Figure 20). When we cut 222, we found that the ditch had ended before that, somewhere between Slot 221 and 222. This resulted in a distance of 70 feet between the major fortification ditches at the southeast corner of the town. The small bastion ditch we found at the southeast corner of the town was much smaller than the bastion ditches I had hypothesized in 1971 and 2003 (Figure 1). What was the reason for this gap? Perhaps a barn or other building may have already existed at this corner, which was used as a blockhouse to defend this corner of the town. To test this hypothesis, a block excavation would be necessary to look for footing holes for such a structure. Such footings would be difficult to reveal using the slot-trenching process I have used here to follow linear ditch features.
Details of Features Revealed in Areas E, F, and G

In order for the reader to better grasp the relationship of the findings in this project to the other town fortification corners, I have included three details of my 1971 drawings as Areas E, F, and G (Figures 30-32). They reveal how the slot trenching method was used in the other three corners of the town. These figures reveal how archaeology discovers and delineates the remarkable archaeological map lying beneath the grassy surface of the town of Ninety Six. That grassy surface is what the visitor sees while visiting the town site of Ninety Six today. If the archaeological map revealed through the slot-trenching process were interpreted as interpretive ditches and parapets as well as posts placed in the original stockade ditch, the visitor could have a far better understanding of the fortifications around the town than is reflected by the grassy field seen today. A vast quantity of that archaeological map is yet to be revealed and interpreted to the visitor through on-site exhibits tightly anchored in the original archaeological record. But that would require a considerable cost to the National Park Service. I hope to take a first step in this direction by raising funding for more work at Ninety Six at the town site in the future.

More exploration of this southeast fort corner is needed to resolve what caused both the south and the east fortification ditches to end, leaving that 70-foot wide space at the corner, mentioned above. It is my hope that further archaeology in that area can be carried out as more funding is raised to reveal that fascinating map beneath the topsoil around the town of Ninety Six. The following section focuses on the artifacts recovered in the features described above.
1780-81 Northeast Town Fortifications
AREA E

1971 Slots Revealing Fortification Ditches in Area E

Figure 30. The northeast corner of the fortification ditches around the town of Ninety Six (Area E), revealing the features located through the slot-trenching method (Detail from South 1970a, Figure 3).
1780-81 Northwest Town Fortifications

AREA F

Blockhouse

Ditch
(Puger's Palisade)

Ditch
(Picketed Firing Wall)

Cellar
(Probably a Magazine Beneath a Blockhouse)

Fortification Ditch

Figure 31. The northwest corner of the fortification ditches around the town of Ninety Six (Area F), revealing the features located through the slot-trenching method (Detail from South 1970a, Figure 3).
Figure 32. The southwest corner of the fortification ditches around the town of Ninety Six (Area G), revealing the features located through the slot-trenching method (Detail from South 1972a, Figure 19).
Analysis of the Artifacts Recovered

The artifact fragments recovered from the topsoil A-zone and those from the fortification ditch features were cataloged by Mike Stoner and tabulated in Table I. The artifacts were grouped into two assemblages, the historic period and the prehistoric period. Fragment counts were recorded, but historic period brickbats, and prehistoric period lithic debitage were recorded by weight in grams.

Prehistoric Period Native American Artifacts

The most attention-getting Native American artifact was the Clovis projectile point found in Slot 159 (Goodyear et. al. 1990; Haynes 1993; Womington 1957). The white quartz tip of what may be a Archaic Period Kirk Seriated projectile point was also found (Coe 1964: 72; Griffin 1952). These are illustrated in Figure 33. Only two Native American pottery fragments were recovered (Table I). From these data it is apparent that as early as 10,000 years ago, Native Americans were on the site that was to later become the town of Ninety Six.

Figure 33. Historic Period ceramics, glass, and Native American projectile points. 
Top Row: left, two green-edged pearlware rim fragments (Slots 159 and 163); right two, blue-edged pearlware rim fragments (Slots 167 and 223).
Row 2: left, two sherds of blue painted pearlware (Slots 219 and Fea. 214 in Slot 219); third sherd: polychrome painted pearlware (Slot 166); right: blue transfer-printed pearlware 166).
Row 3: left, creamware rim (Fea. 214 in Slot 219); right, Chinese porcelain (Slot 168).
Row 4: left, alkaline glazed stoneware rimsherd (Slot 159); center: Westerwald blue and gray stoneware (Slot 155); right, Clovis projectile point (Slot 159).
Row 5: left, glass lamp fragment with drilled hole (Slot 165); right, Kirk seriated projectile point tip (Slot 192).
### Table I: Artifact Tabulation

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<td>29</td>
<td>30</td>
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<tr>
<td>Whiteware, plain</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
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<td>22</td>
<td>23</td>
<td>24</td>
<td>25</td>
<td>26</td>
<td>27</td>
</tr>
<tr>
<td>Whiteware, blue transfer-prints</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
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<td>21</td>
<td>22</td>
<td>23</td>
<td>24</td>
<td>25</td>
<td>26</td>
<td>27</td>
<td>28</td>
</tr>
</tbody>
</table>

### Stoneware:
- Alkaline-placed: 1
- Westward: 2
- Unglazed: 3

### Porcelain:
- Overall enamelled: 4
- Underglaze: Blue: 5

### Glass:
- Bottle, dark olive green: 6
- Bottle, dark olive: 7
- Bottle, dark green: 8
- Bottle, dark green: 9
- Bottle, blue: 10
- Bottle, clear: 11
- Bottle, clear: 12

### Earthenware:
- Rood, lamp fragment: 13
- Flat, window: 14

### Metals:
- Copper Alloy, fluted, cartridge boul. iron nail removed: 15
- Lead, musket ball, .65 caliber: 16
- Cast Iron, put fragments: 17
- Cast Iron, put fragments: 18
- Wrought Iron, door latch-keeper: 19
- Wrought Iron, door hinge, fragments: 20
- Nail, cut: 21
- Nail, cut with wrought head: 22
- Nail, unidentifiable: 23
- Nail, wrought: 24
- Iron, rectangular buckle: 25
- Iron, barrel head, fragment: 26

### Prehistoric:
- Barbed bone:
- Plains, in situ: 27
- Cored-marked, in situ: 28
- Quartz, white:
- Projectile Point/Knife, UbD, serrated (fragment): 29

### Human Remains:
- Bone: 30

### Human Remains:
- Dental:
- Blackened, physeol: 31

### Human Remains:
- Metaphyseal, digit: 32

### Human Remains:
- FFRA, Gaet Dinows: 33
Historic Period Artifacts — Ceramics

Ceramic types recovered were creamware, pearlware, whiteware, stoneware and Chinese porcelain (Greer 1977, 1981; Noël Hume 1970; South 1977:210-212). A selection of these is illustrated in Figure 33. Not illustrated are fragments of bottle and window glass.

Historic site artifact assemblages can be dated through the fragments of ceramic types recovered. The researchers cited above have provided a means of doing this. Ivor Noël Hume in his 1970 book A Guide to Artifacts of Colonial America, has provided archaeologists and ceramicists with a useful framework for identifying and dating ceramics.

In 1971, using Noël Hume’s book and through conversations with him, I developed what I called the Mean Ceramic Date Formula useful for determining the mean date represented by an assemblage of eighteenth and early nineteenth century ceramic fragments (South 1972d). In 1977, after having tested the formula on a number of sites of documented time span, I again published it in 1977 in a my book on Method and Theory in Historical Archaeology, in a chapter entitled, “Revealing Culture Process Through the Formula Process” (South 1977: 231-236. Eliot Werner Publications Inc. again published the book on method and theory in 2002. What the formula does is to provide a Mean Ceramic Date (MCD) for ceramic assemblages such as that we recovered from the slots we dug at Ninety Six. This mean date for the accumulation of the ceramic sample can then be used along with a documented beginning or end date for the occupation of the site to determine the time period during which the ceramics were deposited, and from that, the occupation period for the site. For instance, if the documented end date of the site is 1780 and the Mean Ceramic Date from the ceramic assemblage is 1800, then it might be suggested that the occupation period represented by the ceramics is from around 1780 to around 1820.

Michael Stoner, counting the ceramic type fragments from the slots, used the Mean Ceramic Date Formula to derive a mean ceramic date of 1806 for the assemblage (Table II). With the *terminus post quem* for most of the ceramic types (“a date after which the object must have made its way into the ground”) (Noel Hume 1970:11; South 1977: 202) dating to the late eighteenth and early nineteenth centuries, it seems apparent that the assemblage we have accumulated after the Revolutionary War, and during the first two decades of the nineteenth century.

Glassware

A number of small bottle fragments were found (Table I), from pharmaceutical bottles, wine bottles, molded bottles, blown bottles, but these provided few clues beyond their function as containers for medicines or spirits. Beyond that, we could determine they were from bottle types in use during the time frame established by the associated ceramics (Jones and Sullivan 1985; South 1977: 94, 166). A pressed glass lamp fragment was also found (Figure 33).
Table II: The Mean Ceramic Date

<table>
<thead>
<tr>
<th>Ceramic MCD for Slots Containing Ceramics</th>
<th>Slot-Provenience Topsoil Zone A and Features:</th>
<th>155</th>
<th>156</th>
<th>159</th>
<th>161</th>
<th>163</th>
<th>165</th>
<th>166</th>
<th>167</th>
<th>168</th>
<th>203</th>
<th>214</th>
<th>219</th>
<th>223</th>
<th>225</th>
<th>Total by Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Earthenwares:</td>
<td>South Type No. Date Range</td>
<td>Median Date</td>
<td>Total by Type</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>Creamware, plain</td>
<td>22</td>
<td>1762-1820</td>
<td>1791</td>
<td>1</td>
<td>89</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Creamware, light colored, plain</td>
<td>15</td>
<td>1775-1820</td>
<td>1798</td>
<td>3</td>
<td>35</td>
<td>25</td>
<td>1</td>
<td>88</td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Pearlware, plain</td>
<td>20</td>
<td>1780-1830</td>
<td>1805</td>
<td>2</td>
<td>13</td>
<td>12</td>
<td>4</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>39</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Pearlware, blue and green shell-edged</td>
<td>19</td>
<td>1780-1830</td>
<td>1805</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>7</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pearlware, blue transfer-print</td>
<td>11</td>
<td>1795-1840</td>
<td>1818</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>13</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pearlware, blue hand-painted decoration</td>
<td>17</td>
<td>1780-1820</td>
<td>1800</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>7</td>
<td>9</td>
<td></td>
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<td></td>
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<tr>
<td>Pearlware, underglaze polychrome decoration</td>
<td>12</td>
<td>1795-1815</td>
<td>1805</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>5</td>
<td></td>
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<tr>
<td>Pearlware, &quot;Annular ware&quot;</td>
<td>13</td>
<td>1790-1820</td>
<td>1805</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>5</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Whiteware</td>
<td>2</td>
<td>1820-1900+</td>
<td>1860</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>Stonewares:</td>
<td>44</td>
<td>1700-1775</td>
<td>1738</td>
<td>1</td>
<td>2</td>
<td>3</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Total by Provenience</td>
<td>10</td>
<td>26</td>
<td>66</td>
<td>1</td>
<td>2</td>
<td>7</td>
<td>4</td>
<td>10</td>
<td>12</td>
<td>2</td>
<td>1</td>
<td>33</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>186</td>
</tr>
<tr>
<td>Mean Ceramic Date</td>
<td>1806.19</td>
<td>1806.19</td>
<td></td>
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</tbody>
</table>

1 Hume 1970; South 1977
2 South 1977: 210-212
Metal Artifacts

Wrought and cut nails were recovered from the excavated slot trenches, as well as a rectangular harness buckle, a door-latch keeper, a wagon box bolt brace, a wrought iron rivet for a barrel or hogshead band — fragments of which were found (Figure 34).

Figure 34 illustrates cut nails with blacksmith-wrought heads, which Lee Nelson (1963:1) illustrates as dating from the 1790s to the 1820s — the same time period indicated by the ceramic analysis. Perhaps the artifacts with the closest military connection to the Revolutionary War are the .69 cal. musket ball, the buckle with tang missing, and the brass cartridge box finial shown in Figure 34. The buckle is similar to those illustrated by Legg, Smith and Wilson (2005 107), found on the Revolutionary War battlefield site near Camden, South Carolina. They interpret these buckles as having been attached to cartridge boxes, such as those illustrated by Newman and Kravic (1975: 79).

Figure 34. Metal artifacts from slots and features. **Top row**, left: musket ball (Fea. 214). Center: cartridge box finial (159). Right: buckle (163), possibly from a cartridge box. **Row 2**, left: cut nails (159), with wrought heads. **Row 3**: Latch keeper (159). **Row 4**: Wagon box brace bolt (153). **Row 5**: Barrel or hogshead band (156).
The brass finial (Figure 34) was cast around an iron nail and was attached to the bottom center of the cartridge box (Newman and Kravic 1975: 79). Legg, Smith and Wilson found cartridge box finials on the Camden battlefield site (2005: 107).

The flattened .69 cal. lead musket ball is probably an American ball fired at the British defenders. It was recovered from the south fortification ditch Feature 214 (Figure 34) (Legg, Smith and Wilson 2005: 98-101).

The door or gate latch keeper (Figure 34) is typical of those found on eighteenth and early nineteenth century sites. This type keeper functioned well with a latch to fasten a door or gate. The form remained virtually unchanged, and one hundred years later it was illustrated with a latch, in “Sears Roebuck & Co’s Builder’s Hardware & Material” in their 1897 catalog as No. 13856, as “Wrought Iron Gate Latch” (Israel 1968: 87).

The hexagonal wagon box brace bolt is threaded and has the nut attached. The width of the barrel or hogshead band, as well as the rivet for such a band (Figure 34), suggests they may be from a large hogshead barrel. The rivet was cut away from an iron band using a chisel, as the cut-marks indicate. The rivet was cut away from the band, probably to salvage the iron band for another use. This process leaves a diamond-shaped fragment of the band still attached. Jim Legg and I have seen such rivets, with the attached diamond-shaped band fragment, on other eighteenth century sites.

### Artifact Distribution Analysis

#### The Brunswick Pattern of Refuse Disposal

The use of artifact sampling at the intersections of a site grid has for decades proven of value in allowing archaeologists to focus on the occupation areas represented by the revealed artifact densities. When I began excavating the ruins of colonial Brunswick Town in 1958, it became apparent that refuse from the houses was denser at the entrance to the homes. This association of refuse with architecture, prompted me to refer to this phenomenon as, "The Brunswick Pattern of Refuse Disposal, which I described two decades later (South 1977: 47-80). This pattern applies both to historic sites as well as to Native American sites (South 1975), and also to Spanish colonial sites (DePratter and South 1995).

That cultural refuse disposal behavior I have expressed as “A Law of By-product Regularity,” which states (South 1977: 122):

> The by-product of a specified activity has a consistent frequency relationship to that of all other activities in direct proportion to their organized integration.

This law is the theoretical base underlying the distribution of the artifacts recovered from the slots at Ninety Six. The first step toward synthesizing an artifact assemblage, after the cataloging and descriptive stage is completed, is to organize the assemblage using the Carolina Artifact Pattern I developed for use on British colonial site assemblages (South 1977: 107). Michael Stoner has done this in Table III, using 365 of the artifacts from the slots and features from Ninety Six.
### Table III. The Carolina Pattern

| Slot Topsoil Zone A and Feature Provenience | 151 | 155 | 156 | 158 | 159 | 160 | 161 | 162 | 163 | 165 | 166 | 167 | 168 | 169 | 200 | 201 | 202 | 204 | 205 | 213 | 214 | 219 | 220 | 221 | 223 | 225 | Qty. % |
|--------------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| **Kitchen Group:**                        | 344 | 66.8|
| Cast iron                                 | 10  |
| Pot fragment                              | 15  |
| **Earthenwares:**                         |     |
| Creamware, plain                          | 13  |
| Creamware, light-colored, plain           | 25  |
| Pearlware, plain                          | 31  |
| Pearlware, blue shell-edged               | 15  |
| Pearlware, green shell-edged              | 4   |
| Pearlware, blue transfer-print            | 12  |
| Pearlware, brown hand-painted decoration  | 2   |
| Pearlware, blue hand-painted decoration   | 10  |
| Pearlware, brown parallel-painted lines   | 1   |
| Pearlware, blue and green hand-painted    | 1   |
| Pearlware, polychrome hand-painted        | 1   |
| Pearlware, "Annual ware"                  | 3   |
| Whiteware, plain                          | 14  |
| Whiteware, blue transfer-print            | 3   |
| **Glass:**                                |     |
| Bottle, dark olive green                  | 26  |
| Bottle, lime, pharmaceutical              | 1   |
| Bottle, clear                             | 3   |
| Bottle, glass, glass                      | 1   |
| **Stonewares:**                           |     |
| Alkaline-glazed                           | 13  |
| Westerwald                                | 3   |
| Unglazed                                  | 1   |
| Porcelains                                | 3   |
| Overglaze enamelled                       | 2   |
| Underglaze, blue                          | 1   |
| **Arms Group:**                           |     |
| Copper Alloy, finial, cartridge box?, iron nail removed | 1 |
| Lead, musket ball, .69 calibre            | 1   |
| **Furniture Group:**                      |     |
| Glass, caster cover                       | 1   |
| **Architecture Group:**                   |     |
| Glass                                      | 113 | 30.9|
| Flat, window                              | 83  |
| **Iron:**                                 |     |
| Wrought, door latch-keeper                | 1   |
| Wrought, door hinge, fragments            | 3   |
| Cast, bolt for wagon box                  | 1   |
| Nail, cut                                 | 8   |
| Nail, cut with wrought head               | 8   |
| Nail, unidentifiable                     | 3   |
| Nail, wrought                             | 6   |
| **Personal Group:**                       |     |
| Iron, rectangular buckle (for cartridge box?) | 1   |
| **Activities Group:**                     |     |
| Iron, barrel band, fragment               | 2   |
| **Total**                                 | 235 |

* indicates feature provenience
The Carolina Artifact Pattern

By comparing the percentage relationship between eight artifact groups from Ninety Six with the percentages for the Carolina Artifact Pattern, which represents a domestic household profile, some interpretations can be made regarding the function reflected by the assemblage (South 1977: 82-139). If the percentage profile for the eight groups in the assemblage from Ninety Six is close to that of the Carolina Artifact Pattern, a domestic household or households is represented. That comparison is as follows:

<table>
<thead>
<tr>
<th>The Carolina Artifact Pattern</th>
<th>The Ninety Six Artifact Profile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Artifact Group</td>
<td>Percent</td>
</tr>
<tr>
<td>Kitchen</td>
<td>63.1</td>
</tr>
<tr>
<td>Architecture</td>
<td>25.5</td>
</tr>
<tr>
<td>Furniture</td>
<td>.2</td>
</tr>
<tr>
<td>Arms</td>
<td>.5</td>
</tr>
<tr>
<td>Clothing</td>
<td>3.0</td>
</tr>
<tr>
<td>Personal</td>
<td>.2</td>
</tr>
<tr>
<td>Tobacco Pipes</td>
<td>5.8</td>
</tr>
<tr>
<td>Activities</td>
<td>1.7</td>
</tr>
</tbody>
</table>

The major artifact groups represented in the Carolina Artifact Pattern and the Ninety Six assemblage are Kitchen and Architecture artifact groups. Both of these groups are within the predicted percentage-range for the Carolina Pattern, as are the Furniture, Arms Personal and Activities groups. Clothing items, such as buttons, pins, scissors and thimbles are missing, as are pipe stem fragments from the Tobacco Pipe group. The explanation for this for the tobacco pipe fragments might be that the household or households represented by the assemblage had no smoker present. Another explanation could be that the fragile pipes did not reach Ninety Six in great quantity as they did on coastal sites. The absence of the sewing items may relate to the lack of screening, because most of those items are small and may have been missed in the method we used to recover artifacts from the slots. Basically, however, the Ninety Six artifact assemblage percentage profile falls within that for the domestic household represented by the Carolina Artifact Pattern.

What we have learned so far from the artifact analysis is that they were deposited on the site during the latter part of the eighteenth century and the first decade or two of the nineteenth century — sometime between 1780 and 1820. This is based on the beginning date of pearlware (1780) and of whiteware (1820) (South 1977: 211-212). A few artifacts, such as the musket ball and cartridge box finial, also date from the 1780-81 Revolutionary War period at the site. Noticeably missing from the ceramic collection, are white salt-glazed stoneware, darker creamware and English delft — types often represented on sites of that time, and earlier. Given the beginning manufacture date of 1780 for pearlware, this may mean is that the occupants of the area represented by the slots we dug were obtaining the latest ceramics available shortly after the Revolution — or — the ceramics represent occupation of that area a decade or so later, some years after the Revolution.

In the absence of white salt-glazed stoneware and other types usually seen on sites of the period of the Revolution, this latter explanation seems most feasible to me. This is supported by the fact that the earliest map of Ninety Six, showing the site of
beside the road to Augusta (Drayton 1821: 389; South 1970a: 57). By 1780, when Lt. Allaire saw the town, he reported that it was a village or country town containing about 12 houses, with the courthouse and jail (Draper, 1954: 498; South 1970a: 57). William Johnson's 1822 map of the town (Figure 35) reveals 12 houses and one small outbuilding, besides the courthouse and jail. (South 1970a: Figure 2: maps of Ninety Six, compared on pp. 57-63).

The important point regarding the deposition of ceramics as refuse is that only five of these houses were located to the east of the Charleston Road, and only one of those is shown to be south of the junction with the road to Cambridge and Augusta to the west (Figure 35 herein). Our slot trenches were located far to the south and east of the road junction, and apparently represent refuse discarded by occupants living in that area, perhaps a decade after the Revolution. In fact, Areas A, B, and C, are located well beyond the occupied and fortified area of the town at the time of the Revolution. Fragments of pearlware were found in the south fortification ditch fill, having been discarded in the area prior to the backfilling some years after the Revolution.

This conclusion is also supported by "several handfuls of sherds" recovered in 1970. These were found in a relatively undisturbed plowed soil zone in a square (38GN4-7) excavated 60 feet to the southeast of the jail site, between the houses and the jail (Figure 1 in South 1970b: 23). I reported in 1970, that these fragments "were primarily two major ceramic types; pale creamware and pearlware:

Blue-painted pearlware, blue-edged pearlware, faded blue transfer-printed ware, polychrome-painted pearlware and brown stoneware were represented. Also present were two sherds of lead-glazed red earthenware, which appeared to be identical to some made by Gottfried Aust of Bethabara, North Carolina, but could perhaps have come from another potter making a very similar ware [South 1999].

Slag or clinkers from a blast fire were also found here, along with fragments of wrought iron, providing clues to a possible blacksmith operation in the general area. Fragments of an iron pot, bone fragments, a glass tumbler fragment, brick bats, a tobacco pipe stem and wine bottle fragments all testify to the area being used as a garbage dump. The absence of the rich cream-colored English creamware typical of the 1770s, and the presence of relatively large amounts of very pale creamware, along with the pearlware, all point toward the 1780s and 1790s for the accumulation of this material.

Again, not mentioned here are white salt-glazed stoneware, English delft, and other ceramic types usually found on sites pre-dating 1780. Unfortunately, later bulldozing activity on the town site has removed the possibility of recovering other ceramic samples from the houses west of the Charleston Road. However, no such activity has taken place on the east side of that road, where the houses mentioned above were shown on the 1822 Johnson map (Figure 35). This provides an excellent future opportunity to carefully and scientifically explore the archaeological map of the houses and the Brunswick Pattern artifacts located there, as I did in 1970 and 1971 in other areas of the town. However, the next time I would excavate squares on a grid system to recover that information. It is my
Figure 35. "View of Ninety Six," (William Johnson 1822; South 1970a, Figure 2: 58) showing the five houses and an outbuilding on the east side of the Charleston Road, at the junction with the Cambridge road. Excavation in that area should produce architectural and artifact data of the period pre-dating the Revolutionary War.
hope I may undertake such a house architecture and Carolina Artifact Pattern search east of the Charleston Road in the future.

I have described so far why I dug slots where I did, and where we dug them, and what features and artifacts we found. I have also explored when the features were originally cut into the subsoil, and when the artifacts were deposited as trash to become archaeological treasures centuries later.

Now, as a final exploratory journey into the past at Ninety Six, I look at where the recovered artifacts were concentrated in the slots we dug in Areas A, B, and C. This should provide some clues to the location of the houses from which the post-Revolutionary War artifacts we found were discarded. This is made possible using the association of discarded refuse and domestic households demonstrated by the Brunswick Pattern of Refuse Disposal, discussed above (South 1972d and 1977: 47-80).

Artifact Distribution in Slots

As we dug the slot trenches and collected artifacts, we began to get a “feel” for where the artifact density was greatest, reflecting the Brunswick Pattern of Refuse Disposal. When a grid system is used on a site, and data is collected at grid intersections, as was done at the sixteenth century Spanish colonial town of Santa Elena (South 1980; DePratter and South 1995), the distribution of recovered artifacts can be determined by using a computer printout. However, when slot trenching is used to discover and follow linear feature disturbances intruding into the subsoil, computer manipulation to delineate the artifact density is more difficult.

To address this challenge, I used artifact Table I to find a solution. Using the artifact counts from that table, I placed a dot beside each slot, representing each artifact recovered. The result of this “dot beside the slot” method of artifact density-determination is shown in Figure 36.

The artifact assemblage most likely accumulated after the Revolution, as shown below. The greatest concentration of artifacts of that period, judging by the dots beside the slots, is in Area B, south of the southeast corner of the town, and in the south fortification ditch fill of Feature 214, backfilled after the war. The dots reveal Area B as that most available (among the slot-trenched areas) to be occupied after the war (Figure 36).

Brickbat Distribution in Slots

As a further check of the architecture/artifact association, another look at artifact density is illustrated in Figure 37. Here I wanted to see whether the concentration of Carolina Pattern artifacts was replicated using brickbats (reflecting structures). The brickbats were weighed in grams. I used a single dot to represent all weights below 200 grams. The number of dots for each slot were determined by dividing the weight over 200 grams by 100. Figure 37 reveals the brickbat distribution density was the same as for the other artifacts shown in Figure 36, except for a large brick fragment found in Area A.
Figure 36. The artifact density distribution from slots for the post-Revolutionary War occupied area. (Each dot represents one artifact shown for the slots in Table I.)
Figure 37. The density of the gram weight of brickbats from the slots. Gram weight was divided by 100 and expressed as one dot per hundred.
Conclusions and Recommendations

The major goal of the fortification search at Ninety Six was to relocate the two bastions I found in 1971. The lost bastions were not found. Our slot-trenching method, however, revealed a trench interpreted as a Revolutionary War period flèche, an arrow-shaped fortification work documented to have been used by both the Americans and British at Ninety Six. However, the ten-foot long trench we found was not arrow-shaped, but it appeared to have had a military function.

The two bastioned stockade ditch along the east side of the town of Ninety Six was located and sectioned, and the junction of the original stockade ditch with an addition to the South (which I had predicted in 1971), was exposed and mapped. This stockade ditch was part of Lt. Col. Cruger's Royal Provincial defenses around the town of Ninety Six.

The 14-foot-wide east defensive ditch outside the stockade fort was located found to have ended before it reached the southeast corner of the town fortifications. The 10-foot-wide south fortification ditch was found and followed toward the southeast corner until it formed a small semi-circle designed to serve as a bastion for the southeast corner of the town. When this fortification ditch ended it left a 70-foot gap at the corner, where a larger bastion would be expected to be located. I have conjectured that a building, perhaps a barn, was located there, against which the east and south fortification ditches ended.

The artifacts recovered in the project included some from the Native American occupation of the site, demonstrated by a ten-thousand year old Clovis projectile point, as well as later stone artifacts and a few fragments of pottery.

The analysis of the historic period artifacts revealed they were discarded in the late eighteenth and early nineteenth centuries — after the Revolutionary War. These were found to be concentrated in and beyond the south fortification ditch around the town, revealing occupation in that area some years after the Revolution.

I have recommended that future archaeological work be carried out to expose, excavate and appropriately interpret the northeast stockade bastion I located in 1971. Such an explanatory exhibit is badly needed at Ninety Six to help the visitors to more effectively understand where the town of Ninety Six was located in the vast expanse of grass they see there today.

Also recommended is a grid-controlled block excavation (no machinery) in the area of the town where five houses and an outbuilding were shown on William Johnson's 1822 map. This area is located east of the Charleston Road, just opposite the junction with the Cambridge/Augusta roads. This project would provide architectural and associated artifacts from a pre-Revolutionary War period, in contrast with the artifacts from the Post-Revolution occupation south of the town recovered in the 2005 project reported here.
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Ninety Six Fort Search Project 2005

Daily Log – Stanley South

Monday
May 23, 2005
Stan South met Chester DePratter, Jim Legg, and Mike Stoner at the South Carolina Institute of Archaeology and Anthropology (SCIAA) at 7 a.m. – Loaded gear and equipment – Drove to Ninety Six National Historic Site.
Chester and I had located R.P. 7 pipe I had set in 1970. Using corrected-for-declination, we set up on R.P. 7 and located R.P. 28. Then we located R.P. 8 and 9, and from R.P. 9, we shot lines to the location of a fort ditch in three slots I had mapped in 1970. We dug these slots and found the fort ditch in all three slots. I consider this a very successful day of progress. Chester met us for lunch in Ninety Six. We packed up and left the site at 4:30 p.m. The three slots we dug were numbered GN5-150 through 152.

Tuesday
May 24, 2005
We cut slot trenches 153 and 154 but no fort ditch was found. We moved to the higher ground on the east side of Charleston Road and dug 155 parallel to Charleston Road but found no fort ditch. We then cut slot trench number 156 and found what appeared to be two postholes (?) and cut a cross trench, but found no sign of a row of posts.
John Jameson, National Park Service (NPS) archaeologist, who dig with me in 1970-71 here at Ninety Six, showed up and helped dig. It was good to see him again after 34 years. We met with him for dinner at the Holiday Inn Express Motel, where we are staying, and where they have free barbecue, slaw, potato salad, and cola. We talked until 9 p.m. We spoke of many things—"of shoes—and ships and sealing wax—of cabbages and kings—of why the sea is boiling hot—and whether pigs have wings."

Wednesday
May 25, 2005
7 a.m. left Greenwood for Ninety Six. We began cutting slot trench 158 in the woods further toward the east from slot 155 searching for the fort ditch and bastion of the anti-Cherokee Fort of 1776 (we think). Mike Stoner and I did the transit work on the slots we cut yesterday. Our hope is to find the fort ditch today so we can follow it in the woods east of Charleston Road. John Jameson helped cut trench 157 to try to catch the ditch. We cut a long east-west trench (158) to try to cross the east-west-running south fort ditch. At the end of the day, Jim Legg found a clay-lump area that may be that ditch — he will clean it further tomorrow. We said "good-bye" to John Jameson who had worked with us today. He must leave tomorrow to return to Tallahassee. It was good to have him visit and dig again with me after 34 years.
Thursday
May 26, 2005
Jim cleaned trench 158 and saw what seemed to be a possible ditch disturbance, so Chester and Jim cut a box-shaped window on the west side to check it out, but it turned out to be a possible tree root disturbance – a real disappointment.

Chester and Mike Stoner cut trench 159 and found some 19th century ceramics and glass and a brass finial and a number of brick-bats. We see stones but they are not collected. Chester observed depressions where my previous trenches were located and Mike and I transit-plotted them. Chester also observed similar depressions in the woods to the east of the junction of the Charleston and Augusta Roads, but these proved to be from machinery once used there (?). We expect to be back in this north area later to locate the NE bastion of the 1776 fort we are looking for. We re-set R.P. 21 – the original pipe had been knocked over by machinery. We can still see the depression of two of my 1971 trenches in the field east of R.P. 21.

I worked with Mike and Chester in transit plotting the new trenches. We are disappointed that we haven’t yet found the fort ditch, but we will keep on trying. I was interviewed by a reporter from the local paper. He will return next week to see what we have found. He was accompanied by Park Ranger Gray Wood. The reporter, David Morgan, took my picture with Gray Wood to accompany his article.

Friday
May 27, 2005
Chester had to go to Beaufort to examine a shell ring newly discovered. He will return to Ninety Six on Monday.

Jim and Mike continued opening trench 159 toward the east in an effort to locate the north-south-running East stockade ditch for the 1776 fort. I talked with Park Chief Ranger Historian Eric Williams who visited the site when making the rounds of cleaning the interpretive signs. I talked to a group of Greenwood Day Care children and teachers and explained the project history of Ninety Six to them.

We did not see the NS fort ditch in trench 159, but will move farther north on Monday and try to cross it there with EW trenches.

Monday
May 30, 2005
Met Jim and Mike at 7 a.m. at SCIAA, packed gear and left for Ninety Six in the rain. It rained hard on the trip, but slaked off and quit when we arrived. We began opening trench 162 running EW hoping to catch the NS fort-ditch in the area to the north nearer where the NE fort bastion was seen in 1971. We found 5 postholes but no fort ditch.

I went to Hardee’s in Ninety Six to meet my son, Robert and his family (Selia, Alex, and Gigi) from Charlotte. I showed them around the site. Jim and Mike worked through lunch. Jim cut his thumb while sharpening his trowel. Mike treated it with things he found in the First Aid kit I had brought. Shortly after that we left for the Holiday Inn
Express in Greenwood, where we are staying. As we drove up we saw Chester and Kalla. We had dinner with them.

Tomorrow I plan to cut east-west slots to the north of 162 to see if we can cross the north-south fort ditch we followed in 1971. I also plan to cut one south of 159 to attempt to locate the SE bastion of the fort. Rain last night left some of the slot trenches standing in water.

Yesterday I found a tick had a hold of me behind my left knee – I removed it.

Tuesday
May 31, 2005
We cut slots 163, 164, and 170 but found no fort ditch. I worked with Kalla DePratter on instructing her how to use the transit. Chester and I set R.P. 3A. Eric Williams and NPS Superintendent Paul Carson visited the site and I gave them a tour of what we were up to. He offered to help us with volunteers to help us with the project and was pleased we were on the site.

I explained my current goal of trying to reveal bastions rather than the stockade ditch strategy I have used thus far. Hopefully this may pay off as the crew cuts the slots – although this method did not pay off today on trench 163 and 164.

Mike Harmon with the National Forest Service came to volunteer and dug with Mike Stoner on 164. He dug with me at Santa Elena in the early years of the 1980s. It was good to visit with him.

The weather forecast is for rain tonight and tomorrow.

I found another tick, acquired today, on my right knee – I hope they don’t have Lyme disease!

David Morgan’s article “Dr. Stan South: noted archaeologist return after 35 years to Ninety Six Historic Site, searching for 1776 Stockade”, appeared in The Star and Beacon today, along with the photo of me with Park Ranger Gray Wood.

Wednesday
June 1, 2005
Rained Out! I met my son David and his family at the NPS office where I spent the day plotting transit points onto the new map for the project. I showed them around the site and went to lunch with them in the current town of Ninety Six. The crew stays in the motel in Greenwood.

Thursday
June 2, 2005
More rain, so I told the crew to go to Columbia, while I continued plotting on the maps. I left late in the morning for Columbia. I spent the afternoon catching up on mail in the office.
Friday
June 3, 2005
Rain.
I worked in the office at SCIAA. I worked with Tommy Charles on the cover photo for the book in press by David Hodgin on “Religion and the Modern Mind,” which I edited and is now in press with Parkway publishers. I turned in per diem and payroll paperwork.

Saturday
June 4, 2005
I returned to Ninety Six with Janet Reddy to conduct a tour for the Archaeological Society of South Carolina (ASSC). I showed maps and used a golf cart to lead the group around the site of Ninety Six. About a dozen visitors were present. Jon Leader and his wife Bonnie attended the tour with her dog. The event was planned by ASSC President Becky Berrera, assisted by Nena Powell Rice of SCIAA and Catherine Shumpert Long. I returned to Columbia.

Monday
June 6, 2005
I met Jim Legg and Mike Stoner at 7 a.m. at SCIAA and loaded gear – arrived at Ninety Six at 9 a.m. and met Chester. A volunteer, Laura Litwer was waiting for us, as well as Sharon Alvarez and her teenage children, Daniel and Marlena. I gave the group the run-down on the history and archaeology of Ninety Six and put them to backfilling some of the slot trenches. The three family members left at noon but Laura stayed to work during the hot and humid afternoon.
We were surprised when, at lunch in Ninety Six, Gregg Smith and Marsha Chance – archaeologists from St. Augustine – showed up. What a coincidence! I gave them a map briefing and a tour of the site. Gregg dug with me for two or three weeks at Santa Elena in the early 1980s.
We cut slots 165-167 in the area where I found the SE bastion in 1971. We still haven’t seen the ditch I saw then. It was an extremely hot and humid day. Jim Legg used the metal locator to recover iron artifacts from the slots. Chester and I ate at a nearby Mexican restaurant in Greenwood for dinner.

Tuesday
June 7, 2005
Heavy rain and stormy last night.
Chester, Jim, Mike, and I began the day at 7 a.m. and began work. Mike and I shot transit points on all slots, while Jim and Chester opened a new slot trench, number 168. 168 is deeper than slots further south but no artifacts at this area far east of the row of house in the town.
A storm moved in at quitting time. We got a call after work from Bill Green who said he would eat pizza with us in the lobby. Jim Bates will show up tomorrow to volunteer. He works for the US Forest Service with Mike Harmon.
Wednesday
June 8, 2005
We continued to work on the long 168 slot trench in an effort to discover evidence of the
call or palisade connecting the two bastions I saw in 1971. We found no ditch but we
did find feature 169, which is the north end of a rectangular pit. Jim Legg will cut a
section through it tomorrow to learn more.
Jim Bates, with the Forest Service, worked with us today. Also, Laura Litwer worked
with us. Gray Wood and his Youth Conservation Corps (YCC) helped backfill today.
There were six of them.
With no luck at this point in finding either the north or south bastions I saw in 1971, we
will not cut any more slots at this time. Chester, Mike, and I completed transit mapping
of all slots.
Chester and I also shot points on the 1751 Hamilton Survey line and a low embankment
that accompanies it. We wonder if the low ridge might be the remains of a Cruger
defensive fortification feature. We plan to map it and backfill tomorrow. A shower came
up at quitting time, but it rained harder in the town of Ninety Six than at the site. Jim
took photos today of feature 169 and some of the water-filled slots from the rain last
night.
Not locating the bastions is a disappointment but without further clues to their location it
appears that we should stop the search now.

Thursday
June 9, 2005
Chester and I transit-shot points on the 1751 Hamilton Survey line and a low
embankment paralleling it. Jim Legg excavated feature 169 in slot trench 168. It is quite
deep – and is clearly dug with precision. We think it is an approach trench dug by
Nathanael Greene to observe the east fortified area of Ninety Six during his 28-day siege.
Jim drew a plan and profile of it and Mike and I transit shot it for mapping.
Assisting us in backfilling and digging also, was Kyle Kelly, summer intern with interim
NPS Superintendent Paul Carson. Kyle is a student at Clemson University. Park Ranger
Gray Wood brought six YCC employees who helped with backfilling. Bert Dunkerly,
archaeologist at King’s Mountain National Historic Site helped dig and backfill. James
Bates, archaeologist with the US Forest Service at Sumter National Forest, Edgefield
District, was also a volunteer who dug with us yesterday and today. It was good to
have this group of volunteers to help us open slots and backfill today. Although we did
not find the 1776 fort bastions we were happy to see Greene’s trench appear.
Chester left in the morning for Columbia. We closed down the site at 5 pm and will go to
Columbia tomorrow.

Thursday
June 16, 2005
Met Jim and Mike at 7 am, loaded tools and arrived at Ninety-Six National Historic Site
at 9:30 – met Terry Ferguson, who’s going to use Ground-Penetrating Radar (GPR) to
attempt to get a signature for the deep pit feature 169 to use it to attempt to find other
such siege work holes. Mike began cutting slot 172 to the North in alignment with
feature 169 to see if we can luck up on another such trench. Jim and Terry used GPR on
the unexcavated part of feature 169, followed by a slot trench that revealed the edge of feature 169, but no new information was forthcoming. GPR has a long way to go to get to the level of sonar, which has revealed great improvement in recent years.

Jim and Mike cut slots 173 and 174 to check on radar readings, but nothing showed up! No surprise. Terry may return to use radar to try to locate more of the ditches we think are part of Greene's siege works in 1781.

We worked 'till 5pm and left for Columbia, arriving at 7 pm.

Friday
June 17, 2005
Worked on the budget remaining after our expenditures so far subtracted, and found that I have money remaining from my Archaeological Research Trust – South Carolina Institute of Archaeology and Anthropology (ART-SCIAA) grant to allow me to hire Mike Stoner for a week more at Ninety-Six.

Jim Legg researched his 18th century military references (Vaubon, Diderot, etc.) and we made copies of an illustration showing a siege work ditch under construction. This will make a great illustration in the report because it shows the profile exactly like the one Jim drew of feature 169! Jim made an ink tracing of the plan and profile he drew on the site. I took the film we shot (Kodacolor 200 36 exposures) to Columbia Photo to get prints and a CD to be picked up tomorrow.

I talked with Richard Vernon at SEAC about learning how to catalog the Ninety Six artifacts. He told me if we had less than 2 cubic feet of artifacts, the Park Service would catalog them. This was great news! Instead of Mike and I working on that for a couple of weeks we can now go to the site for more data recovery (if we can find it!).

Saturday
June 18, 2005
Worked on plotting the map of the slots we dug at Ninety Six to a 1”=20’ scale so as to get a good perspective of them in relation to the other features (fortifications, ditches, palisades ditches, moats, etc.) I found in 1971 and show on my map drafted at that time — (6hrs).

We plan to return on 6/20/05 for another week of slot-cutting to see if we can locate other siege work ditches such as feature 169. The angle of 169 is close to that shown on the 1822 map of Ninety Six, which is one additional clue I see that reveals that 169 is one of Greene's siege work ditches.

Sunday
June 19, 2005
Plotted a new map of Feature 169 area at a scale of 1”=10’ to give a larger picture of the orientation of the ditch and slots. Picked up the photos and CD of Fea. 169 and other shots taken at Ninety Six. They look great! (5 hrs)

Monday
June 20, 2005
Met Mike at 7 am, packed gear and drove to Ninety Six after e-mailing Bernie Keel to ask for instructions as to how to go about getting an extension on my permit, which
expires on June 30th. I am thinking that I may want to do more searching after the end of this week—depending upon what I do or don’t find this week. I have other funds I could use to hire Mike for further searching in July, if I can get a permit to do so.

As we approached the site on the back road in the woods, we met Laura Litwer, driving out. She is the University of South Carolina (USC) Junior who volunteered earlier to help dig. She helped a lot today.

We opened slot 175, to reveal more of Feature 169, and found the end of it. Took photos and mapped the square and Feature 169 again.

Began cutting a series of slots to the north in an effort to luck onto another trench like 169. These numbered 176-184. Shot transit mapping points — No ditch found. We left at 5 pm — just before the gate closed.

Tuesday
June 21, 2005

Heavy storm last night in Greenwood—Mike Stoner cut extensions toward the west in slots 176-184 under the idea that other features such as 169 might be revealed, but no features were seen. I chose a location for slot 185 in the hope that some evidence of the 1776 fort I saw in 1971 would be revealed, judging from depressions I saw at the 185 location today. The bastion postholes were running EW, in another search for that bastion. We also cut slot 187, but no feature intruding into the subsoil was seen.

Wednesday
June 22, 2005

Gray Wood and his YCC youth group came and backfilled the slot trenches for us, allowing Mike and Laura to concentrate on cutting a new row of exploratory slots in an effort to find another 10’ long trench like fea. 169. Transit mapped slots 188-197. No feature found in these slots.

I then moved to address the secondary goal of the project—delineation of the Cruger stockade ditch and the wide Haldane-Cruger fort ditch along the southeast area around the town. This took place in the grassy area—out of the woods. Slot 198, was cut to reveal the conjectural SE bastion shown on my town fortification map. It did not. Slot 199, however, cut to reveal the Cruger stockade ditch, which it did. Finally a feature was seen in a slot! Shot transit points for mapping this ditch and laid out the position for slots 200 and 201, to hopefully reveal the Haldane-Cruger fort trench and another point on the earlier Cruger ditch for this little 180x220 fort ditch around 96. It looks at this time that the conjectural SE bastion of the SE corner of the Haldane-Cruger town fort may not be present—a simple right turn? We will explore this further.

Thursday
June 23, 2005

Mike and Laura cut slot 200 and it revealed a ditch, which was found to have an eleven foot wide ditch at the east end, which is the Haldane ditch. Slot 201 revealed the Cruger fort ditch, which we will profile and photograph tomorrow. I photographed both the ditch the ditch features today.

Eric Williams visited the site with several National Parks Service (NPS) personnel and the reporter who had written two articles on our work. The YCC group came and backfilled the set of slots we cut yesterday.
My goal is to cut a set of slots to map the location of the Cruger and Haldane forts along the east side of the town. This east and southeast fortified area was not recorded before by me in 1971. So it formed the secondary goal of the present project. After work, Mike and I called up my e-mail on the motel computer and found that Bennie Keel is agreeable to adding an addendum to my permit to allow me to continue my research at 96 into July – Good News!

Dug slots 204 and 205 to find the Haldane fort ditch. It seems to be turning toward the east. We will chase it to the south tomorrow.

Friday
June 24

Our mission today is to cut slots to follow the apparent eastward turn of the wide Haldane ditch, which may be making a bastion at the SE corner of the town fortification. Also if time permits, we will cut a profile through the Cruger stockade ditch. Mike says Chuck Cantley and a friend may visit the site today. They didn’t.

Cut slot 206-209 but saw no edge of Fea. 203. We now doubt what we saw in 205, and cut 210 to follow the East edge of 203 toward the south. The disturbance we saw in 205 may be a hole cut to remove a tree?

Gray Wood and his YCC crew came and helped backfill the slots. I gave a tour to a couple from Miami, Florida. Laura showed up to help dig. Bert Dunkerly came from King’s Mountain National Park for a return visit.

Dug slot 210, in which we found the east side of Fea. 203, and photographed and transit mapped it. We left for Columbia at 3pm after we flag-taped the slots we are leaving open. We will return in July!

June 27-July 1, 2005

Mike Stoner worked three days this week on washing and recording artifacts and typing the log and data sheets into the computer CD. I worked all week in the office on a report of my activities for the last five years for the dean. Jim Legg made an ink rendering of Feature 169 in plan and profile and Mike scanned them onto a CD. I will make ink versions of the remaining plan and profile drawings made during the field project.

Tuesday
July 5, 2005

Mike Stoner and I met at SCIAA at 7 a.m., packed gear in the carryall and drove to Ninety Six. We cut a northward addition to slot 201, took photographs of Cruger’s Fea. 202 stockade ditch, and Mike drew the plan. He excavated the ditch Feature 202, as seen in expanded slot 201. It was deeper than it first appeared, being 2.6 ft. from the surface. Took photos of the profile of Featured 202 and Mike drew it. A dark humus stain in the shape of the fence rail cross-section showed up near the bottom of the slot. It was located at the west side of the ditch of Fea. 202, where posts in the ditch might be expected to have been located. It was a hot sunshiny day. We covered the excavation with plastic and drove to Greenwood to our room in the Holiday Express motel.
Wednesday
July 6, 2005
We took photos of the profile of Feature 303 and Mike refined and finished his plan and profile drawings. Mike dug out the Haldane ditch (Fea. 203) after drawing the plan, and I photographed the dark brown Feature 203 soil against the bright red subsoil background before he began removing the dry moat (ditch) contents.
I gave a spiel on Ninety Six, our archaeology, etc., to visitors. I completed drafting the map of the slots we shot last week. Chester has the transit on his Litchfield Beach project with Kalla DePratter and Jim Legg this week, so I will return to Ninety Six next week to transit map any new slots we dig this week. It clouded up in the P.M. in advance notice of a hurricane that may affect our schedule, with rain predicted for tomorrow. Because the gate to the site closes and is locked at 5 p.m., we must leave the site prior to that time.

Thursday
July 7, 2005
The expected hurricane went west of us, so we arrived on the site with the sun. Later in the A.M. clouds appeared. Mike cut out the darker east edge of the Haldane ditch (Fea. 203) we had speculated might be the location of a palisade ditch along the east edge of the larger moat. I took photos of the excavation at this point. Later, as Mike removed the remainder of the fill in the basin-shaped ditch, it was revealed that the dark palisade-ditch-appearing fill was simply a darker backfill soil that forms a darker lens underlying lighter wine-colored fill. I photographed a black-snake-in-the-grass—a classic example except for pale ghost-like mottled white bands that may indicate she has some king snake DNA somewhere in her mysterious past.
Mike dug Featured 203 moat to the bottom at 2.4 ft. from the surface and I took photos just as rain hit for a few minutes. After lunch it rained again for a few minutes, then sun. Mike cut slot extensions to 205 and 206 and 208 to chase ditch Feature 203. We did not see it in slot 206, so we followed it in slot 208.

Friday
July 8, 2005
The motel free breakfast eggs didn’t arrive so we ate at the Ferris Restaurant in Ninety Six and enjoyed talking with the local people there. Mike drew the profile of slot 200 and Feature 203. It is a beautiful, cool, and sunny day! Renee Wheeler, a summer NPS intern at the site came by yesterday for a chat with Mike. An article about her interest in archaeology appeared this week in the local paper (the 4th article mentioning our work here at Ninety Six National Historic Site.
We think a dark feature crossing slot 200 at the west edge may be where posts were located, but only the bottom of the posthole disturbance remains. However, we can see what appears to be a posthole in profile, which reinforces this idea. Opening other slots along the west edge of the Fea. 203 fortification ditch can test this observation regarding a possible palisade along the west edge of the ditch.
We extended slot 206 westward, but found only subsoil. Mike chased the east edge of 203 in slot 208, and found that it came to an end. Why does 203 end here? What protected the town further to the south in the southeast corner of the fortification ditches? Stay tuned. The ditch ended at the same position as the bastion on the west side of town.
A group of young people from Cowpens came with Eric Williams and I gave them a talk on our work. Two employees of the South Carolina Department of Archives and History showed up and I gave them a summary of our work. Mike cut slot 211 and found the southwest corner (end) of the fortification ditch of Feature 203.

Saturday
July 9, 2005
Worked 3 hours on drafting the map of the slots we have dug.

Sunday
July 10, 2005
Worked eleven hours on drafting a new map of our slot-trenching project to twice the scale to make the slot and fort ditch relationships much clearer. Plotted what I interpret as a “flèche” ditch mentioned by Nathanael Greene as part of the fortifications of Ninety Six [Feature 169], and I found it is oriented toward the end of the ditch Fea. 203, where I have conjectured a roadway entered the town through the Haldane stockade fort wall. This could account for the ditch ending where I have conjectured a bastion ditch should be found. Tomorrow we will dig slots to check out this bastion hypothesis. Hurricane Dennis may produce rain tomorrow.

Monday
July 11, 2005
I met Mike at 7 a.m. Arrived in Ninety Six and cut a slot (212) to locate the junction of Cruger’s stockade ditch at the SE corner (Fea. 202), which was drawn and photographed. There is a southward addition to this corner, so this junction is seen as a “T. After lunch we transit mapped slots. Laura Litwer helped us in the A. M. It was a hot-humid day after Hurricane Dennis. I plotted the slots we dug last week, because we have the transit back from Chester this week. Cut an extension to the south off the west end of slot 206 in a search for a conjectured bastion ditch, but such was not found. I just noticed that the “flèche” trench is parallel with the Hamilton 1751 survey line.

Tuesday
July 12, 2005
Opened an extension of slot 198 toward the south to intercept the south ditch fortification, but did not find it. Cut slot 213 to try to re-locate the south town ditch ordered by Haldane. Mike found the north edge and then cut slot 213 toward the south a distance of 27 feet, helped by Laura Litwer. Her brother, Gabriel Litwer, helped us in the a.m. Mike’s boots filled with sweat. Our primary challenge now is to locate some kind of bastion ditch at the southeast town fortification corner. We will cut new slots tomorrow to follow the one seen in 213, to address this goal before we end the project. This may take some doing because Mike had to dig slot 213 to a depth of 1.5 ft. in order to see the south town fortification ditch Fea. 214!

Wednesday
July 13, 2005
Mike completed exposing both sides of the south Haldane ditch (Fea. 214), and found that the ditch is 7.3 feet wide beneath overburden fill 1.5 feet deed. Transit-mapped the
ditch (214) in slot 213 and Mike drew a plan view. It seems to be angling toward the northeast, so Mike cut slot 215, and found a similar angle apparently having the fill on the North sided, which is a surprise. Could this be the south edge of 214? If so, some surprising turn of the ditch is taking place. Stay tuned! We cut slot 217 and connected it to 216 and found the edge continuing—apparently making a bastion? We cut slot 218 to follow 214 toward the southeast, and found it. A heavy shower cooled things off for half an hour. Gray Wood and his YCC (Youth Conservation Corp) crew came and backfilled a number of slots. As we were leaving the site we saw in the distance, Eric Williams leading a tour group.

Thursday  
July 14, 2005  
Mike began the day by testing slot 198 to see if we had gone deep enough previously. We did this because slot 219, not far away to the west, was much deeper to ditch fill than we had dug in slot 198. He found red subsoil at 1.0 ft. This is an example of the difficulty of reading the dirt at Ninety Six. In 1971, my slogan was, “Dig until you see the red that underlies the top zone.” We have again adopted that slogan. Red subsoil is all we found. No ditch was seen in slot 198.

We then cut slot 220 to see where it went after we saw the edge in slot 218. We found the ditch (214) there, then we extended slot 219 to the north and also found it. We then cut slot 221 to the northeast of 219 to follow the north ditch edge of feature 214. We found several brick bats in brown fill, and extended 221 to the northwest to look for the north end of 214. We found cast iron pot fragments, indicating refuse from dwellings nearby.

Friday  
July 15, 2005  
Last day of the dig—for now. Mike Stoner extended slot 219 to the south at a depth of 1.5 ft., and found the south edge of Fea. 214. Laura Litwer came again to volunteer and I bought a trowel to give her for helping with digging and helping with transit work. Gray Wood and his YCC crew came and backfilled slots. Bert Dunkerly came and helped again by digging slot 225, which was designed to reveal the edge of Feature 214 ditch. Mike and Laura opened slot 224, but we saw only red subsoil. Mike widened slot 223 to get a better understanding of what ditch 214 is doing there.

Ditch 214 has taken a sharp turn to the northwest after leaving slot 225, revealing both the north and south edges—a much narrowed ditch than it was in slot 219/225. Slot 221, just to the northeast of slot 223, verified the narrow end of ditch 214. Slot 222 showed no sign of the Feature 214 ditch. This leaves a gap of 70 feet between the south ditch 214 and the east ditch (Feature 203). This indicates another defensive structure (barn or blockhouse?) must have formed a defensive bastion at this corner of the town. Archaeological evidence for such a corner defense between the south and east ditches, must await further excavation in this southeast corner of the Ninety Six town site.

Thursday  
August 11, 2005  
Mike Stoner and I returned to cut two slots (226 and 227) to see if the ditch I found south of the southwest corner of the Ninety Six fortification around the town (that angles NW
to the jail site), continues on the east side of the Charleston Road. No ditch was found in either slot. Two fragments of creamware were found in slot 226, but Mike has already tabulated the 365 artifacts found in the previous 75 slots into the Carolina Pattern spreadsheet, so these two sherds are not included there.

We also checked to see if the slot 159 orientation was as I had mapped it. We remembered that that slot was parallel to the woods edge, and at a right angle to the Charleston Road. However, we found that my map was correct and that slot angled toward the southeast as I had mapped it.

I met with Eric Williams and Gray Wood and showed them my map of the work we did on the project. We left to return to Columbia at 3 p.m. I now turn to writing the preliminary report of the project—and beyond that, the final report.
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