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EXPLORATORY ARCHEOLOGY AT
HOLMES' FORT, THE BLOCKHOUSE, AND JAIL REDOUT AT NINETY SIX

Stanley South

Historical Perspective

In May 1780, Charleston fell to the British under Sir Henry Clinton, and Lord Cornwallis was assigned the task of ending the rebellion in South Carolina. Particular attention was focused on the South Carolina militia under Brigadier General Andrew Williamson, and a march was made toward the village of Ninety Six by Lieutenant Colonel Nisbet Balfour, senior field commander under Cornwallis (Bass 1962:2). Before he reached Ninety Six, however, General Williamson surrendered his force to the British with no resistance, and three days later Andrew Pickens did the same.

On June 22, 1780, Balfour reached Ninety Six and made the settlement the headquarters for the British in the Back Country. The Ninety Six regiment was placed under the command of Colonel Robert Cunningham who was to play an important role in the British cause, and exactly five months after marching into Ninety Six, Balfour would make him the only brigadier general appointed by the British while they were in South Carolina (Bass 1962:4,31).

Within a month after the surrender of his militia and supplies, General Williamson was cooperating with the British. To get him completely committed "Cornwallis used the old money trick," and gave him 200 guineas (Bass 1962:7). Andrew Pickens was paroled, and in the months to follow, both the British and his Tory neighbors pressed Pickens to declare his loyalty to the king. The Whigs also worked on this leader of proven ability in an effort to get him to break his parole promises and join in the American cause. For months he had periodic conferences with both sides without committing himself, but finally in December 1780, he made up his mind and gathered members of his old regiment around him, and, with the help of a diversion to tie down Cunningham's force at Fort Williams to allow them to move unresisted, marched to join General Morgan and the cause of the Revolution. His decision was a significant one and a blow to the British cause in the Ninety Six district, for the regiment under Pickens had been considered "the best in the rebel service" (Bass 1962:52).

Lieutenant Colonel John Harris Cruger, commander of the New Jersey Volunteers, was ordered by Cornwallis to take charge of the important district of Ninety Six, and he urged Cruger to keep possession of the Back Country, for "the success of the war in the Southern district depends totally upon it" (Bass 1962:7).
During the year from the time of his arrival at Ninety Six until the end of the month-long siege by General Nathaniel Greene's army from May 22 to June 19, 1781, Colonel Cruger was involved with the fortification of Ninety Six. The village of Ninety Six itself was palisaded and protected with flanking blockhouses, and two blockhouses were built utilizing log barns on the hill west of the town to protect the water supply and this side of the village. This stockaded fort, with a ditch and parapet in the shape of a hornwork, was Holmes' Fort, connected to the town by a covered way. The jail was fortified by ditching and embankments, as well as a palisade (MacKenzie 1787:142-64; SCA, BPRO, Cornwallis Papers F220, 50/11/2). By the latter part of November, Cruger was disillusioned regarding the ability of the militia to be of much help in an encounter, and expressed these reservations to Lord Cornwallis. This news did not cheer Cornwallis regarding the safety of Ninety Six, so he sent his senior officer of engineers, Lieutenant Henry Haldane, who was also his Aid de Camp, to check on the fortifications Cruger had constructed (Bass 1962:35; MacKenzie 1787:143). Haldane found the works in a much better state than he had expected. For additional protection he ordered construction of a star shaped redoubt on a hill to the northeast of the town, and ditches were opened to create embankments connecting it with Cruger's works (MacKenzie 1787:143; SCA, BPRO, Cornwallis Papers, December 1780, 30/11/4, F296).

These works, composed of the fortified town protected by blockhouses, the Star Fort, and related ditches and parapets on the east of the town, with Holmes' Fort on the hill to the west of the town, were surrounded by the army of General Nathaniel Greene on May 22, 1781, and besieged by him until June 19th. On June 18th, Greene assaulted the Star Fort, while Colonel Henry "Light Horse Harry" Lee attacked and captured Holmes' Fort. Greene was repulsed from the Star Fort and withdrew from Ninety Six rather than face the army of Lord Rawdon which was only a few miles away (MacKenzie 1787:142-64; SCA, BPRO, Ordnance-Colonies, 1787, 5/103/5).

During the siege, a number of classic moves in besieging and defending a fortification were used. A mine was dug by Greene's engineer, Count Kosciuszko, in an attempt to tunnel beneath the Star Fort to blow it up; flaming "African arrows" were used in an attempt to set fire to buildings inside the fort; Greene and Lee both cut approach ditches and parallels for moving troops and artillery close to the fortifications; Mayham towers were used to raise sharpshooters and artillery high enough to fire down into the Star Fort; and an attempt was made to set fire to the stockade around Holmes' Fort (MacKenzie 1787:142-64; Lee 1812:120-30). Cruger in the town and Major Greene in the Star Fort defended their works with equal ingenuity. The roofs of the buildings were removed to prevent their catching fire from the "African arrows"; an attempt was made to heat shot to use in destroying the Mayham towers; a counter-ditch was dug inside the Star Fort to provide additional protection from the sharpshooters in the towers and to intercept the mine when it came beneath the fort (amputating a point of the star, so to speak). A well was dug inside the Star Fort in an
unsuccessful effort to reach water for the besieged garrison, and water was obtained by sending naked blacks crawling into the night with buckets to the stream which was under the watchful eye of the pickets of Lee's Legion. Sandbags were used to raise the parapet at the Star Fort and to casemate the artillery pieces to reduce the effect of the sharpshooters in the towers, and sallies by small groups outside of the fort to attack the besiegers and backfill the approach trenches were outstandingly successful (MacKenzie 1787:142-64). These features of the besieged and the besiegers make the Ninety Six Site one of the most fascinating in the annals of the Revolution.

The historical account of the events surrounding the 1781 Battle of Ninety Six has been presented by many historians. The account upon which most of these have been based is that provided us by Roderick MacKenzie in his 1787 publication Strictures on Lt. Col. Tarleton's History of the Campaigns of 1780 and 1781, in the Southern Provinces of North America. This account is from a witness, Lieutenant Hatton of the New Jersey Volunteers, who was at Ninety Six (MacKenzie 1787: 132-64). Another first hand version of the battle is provided by a letter from General Nathaniel Greene (SCA, BPRO, Ordnance-Colonies, 5/103/5, June 20, 1781). Lt. Colonel John Harris Cruger reported on the siege by Greene in letters to Lords Cornwallis and Rawdon, and these too are an important report on the events at Ninety Six (SCA, BPRO, Cornwallis Papers, F). From these accounts the reader can obtain good first hand summaries of the events at Ninety Six in 1781. Another basic source of primary information regarding correspondence of Lord Cornwallis is a manuscript by Robert Duncan Bass entitled "Lord Cornwallis and Ninety Six", in the files of the Greenwood County Historical Society, the Star Fort Historical Commission, and the Institute of Archeology and Anthropology at the University of South Carolina (Bass 1962:M.S.). In this manuscript Bass has included extracts of letters from the Cornwallis Papers that are not available elsewhere.

Exploratory Archeology at Holmes' Fort (38GN2)

As we have seen, Holmes' Fort was the defensive bastion on the high ground to the west of the village of Ninety Six. It was often referred to as a stockaded fort (MacKenzie 1787:155) containing abatis before a ditch (Lee 1812:122,128). The maps all indicate that Holmes' Fort was a square with corner bastions or blockhouses, yet only two blockhouses are known to have been in the fort (BPRO, Greene, June 20, 1781, Ordnance-Colonies, V:103-05); (see map in jacket pocket, Figure 1). Other than this we know little about the physical appearance of the fort, except that provided by archeology.

We do have a reference that may well apply to Holmes' Fort, and if it does, it will be of importance in the excavation of the fort site. After Holmes' Fort was captured and then abandoned by Lee, Cruger set about the demolition of the works. On July 3, 1781, a servant of Colonel O. H. Williams, who had been held at Ninety Six by the British, made his
escape. The servant, Dominique, had heard orders given to march soon and had seen "all their swivels ... broken off before he came away ...." Another man reported to Williams that iron and other articles which could not be transported were covered in the trenches. Another report stated that the British were to move out on July 10th (Cann 1969: 58-59). From these observations of the last days at Ninety Six we can expect some interesting artifacts to emerge from the fort ditches.

Exploratory trenching on the suspected site of the fort was done during four days in May 1970, and as a result, the south ditch of the fort was located (South, September 1970:11,35). The October-November Project of 1970 was designed to locate, through exploratory trenches, the shape of the entire fort, and hopefully begin excavation of the contents of the ditches. One week was devoted to trenching on the site to locate the ditch outline of the fort, and the evidence found was drawn onto a map (jacket pocket, Figure 1). From this map it was possible, for the first time since the Revolution, to know the actual shape of the ditch around Holmes' Fort. The fort was not at all shaped like the historical documents had indicated, but like a British horn-work, typical of those of the mid-eighteenth century (Vauban 1740: in Rothrock 1968:94). The main ditch was found to be in the form of two bastions, a large one enclosing an area of slightly over 50 feet across, with a smaller bastion half the size. The overall size of the fort including the ditches was 100 by 200 feet. It was built on the edge of the high hill overlooking the town of Ninety Six, and in general outline is like that of a large mitten. Hornworks were connected to the town by covered ways or ditches, by means of which free travel between the hornwork and the town was possible. Muller (1746:98) has stated the purpose of a horn or crown-work:

When there is neceffity to conftruct horn or crown-works, either to cover a gate, or to occupy a fpot of ground which might be advantageous to the befiegers, and which can no other ways be taken into the fortification... (Muller 1746:98).

From Figure 1 we can see that the ditch for Holmes' Fort was eight feet wide, with a parallel, burned, firing wall trench located 12 feet inside of it. In interpreting these parallel features we see that the earth taken from the ditch was likely placed on the inside on the 12 foot space between the ditch and the smaller trench in which vertical post impressions could be seen. The small trench held vertical posts for a firing wall and allowed the inside of the parapet wall to be a vertical one. The fact that the subsoil around this trench was burned would clearly point to the picketed firing wall having been burned. We suspect that this burning took place in July 1781 when we know Cruger was destroying the works at Ninety Six before withdrawing his force after having withstood the siege of General Nathaniel Greene's army (Cann:1969:58-59).
Inside the outline formed by the main fort ditch, a short ditch at a right angle to the axis of the smaller bastion was found to measure from six to eight feet wide and 35 feet long. This may have been a ditch for obtaining earth for building a traverse to provide additional cover for the entrance to the covered way leading to the town of Ninety Six. Similar traverses are seen in the hornworks of the eighteenth century. Another ditch was found extending from the north fort ditch a distance of 70 feet, allowing only four feet remaining between the end of this ditch and the west wall of the large north bastion, possibly as a passageway. This ditch very likely also represents a traverse thrown up to provide added protection for the covered way entrance inside the fort.

The two blockhouses known to have been inside the fort have been tentatively positioned on the map (Figure 1) based on the evidence at hand. Further work will be necessary to test the accuracy of these conjectures.

To the north of the small bastion on the west ditch of the fort an additional ditch extends from the fort ditch toward the west. The function of this ditch is not known as yet, and it is conjectured to be an additional traverse or protective arm to provide added protection. Further work will be needed to properly interpret this and any related features.

To the northeast of the large bastion, near the edge of the drop-off of the hill, a trench was found to parallel the main ditch. This may have been a palisade around the outside of the larger ditch. An abortive attempt was made to burn the stockade by a squad composed of a sergeant and nine infantrymen of Lee's Legion. They were discovered, however, and six of the men were killed, including the sergeant (Lee 1812:122). It is interesting to note that Sergeant Major William Seymour of Lee's Legion reporting on the successful capture of Holmes' Fort by Lee on July 18, 1781, said that Holmes' Fort was captured "with the redoubt therein", indicating an inner "redoubt" inside the main wall line of Holmes' Fort (Seymour 1910:28).

The plan of excavation at Holmes' Fort has been as follows: The exploratory slot-trench work to constitute the first phase of the project, during which time the outline of the fort is determined. The second phase is the machine removal of the blanket of plowed soil over the site in a one hundred yard square area so the outline of the fort can be studied in greater detail and additional maps drawn of the features. The third phase is the actual cleaning and dressings of the subsoil level to reveal the features, those already discovered through slot-trenching and any others not revealed before. This work requires the services of a large crew with shovels to properly achieve the smoothness of the ground required to reveal the archeological features. The fourth phase involves the excavation of the ditches and other features recovered, with profiles being reached through drawings and photographs so that an understanding of the deposition of the soil in the features can be achieved for proper interpretation of the events that took place on the site. In this process
artifacts are recovered from the various layers examined, with drawings, measurements, and photographs recording the position of these in relation to significant associated features. The fifth phase of the project is the rebuilding of parapets, replacing of firing wall and palisade posts, and the ditches and embankments covered with protective sod to prevent erosion. The sixth and final stage in the process is the analysis and writing of the report on the project, with a correlation of the data discovered through archeology with the historical documents to produce a greater understanding of the site than has been possible since it was last seen intact at the time of the Revolution.

With the first phase of this sequence completed at the end of the first week on the site in October 1970, machines were brought to the site to begin the second phase, the removal of the plowed soil zone. However, as soon as they were on the site rain began and continued off and on for some three weeks, thus putting a large dent in the excavation schedule at Holmes' Fort. During this time it was impossible to work on the red clay subsoil of Holmes' Fort, exploratory slot-trenching was carried out in the area north of the intersection of the roads inside the village of Ninety Six. This type work is possible with wet ground whereas the work at Holmes' Fort was not possible under wet conditions. During this alternate work program, an impressive blockhouse ruin was discovered which will be discussed in the next section of this paper.

When the rain stopped and the ground dried enough to support the machines, a belly-loading, scoop-type, self-loading, earth moving machine was brought to the site to remove the plowed soil. A road grader was then used to cleanly cut the subsoil surface so that a minimum of hand labor would be necessary to reveal the features. This process was carried out on the west half of the fort, including both the bastions. At this time the rain began again and work was continued on the exploratory trenching on the blockhouse site. Two weeks later some cleaning of the Holmes' Fort Site was possible, during which brick footings and a cellar hole for a structure north of the main fort bastion were discovered. This ruin probably represents a house of the town of Cambridge of the late eighteenth and early nineteenth century which was located on the site of Holmes' Fort. With only two weeks remaining and rain still being a factor, the work at Holmes' Fort was discontinued for the season, with the final emphasis being placed on the blockhouse site and exploratory work at the site of the jail.

Since we have an account of a witness who saw destruction taking place at the Ninety Six fortifications in July 1781 (Cann 1969:58-59), and we have found evidence that the firing wall burned, and since we have seen that in 1821 when the map of Ninety Six was made no one recalled, apparently, that the fort was a hornwork, and since the town of Cambridge replaced the town of Ninety Six as a center for the area after the Revolution, we are led to suspect that the ditches of Holmes' Fort were filled in by Cruger in 1781, or by the time Cambridge was begun in 1784, thus accounting for the lack of specifics remembered about this feature.
only a few decades later. Archeology will be able to answer this question for us through an examination of the artifacts from the fort ditch.

The artifacts found in this project at Holmes' Fort were all from the plowed soil zone, so have a limited usefulness. However, they do provide a clue to the period of occupation of the site and from these we see that the site was occupied from the 1780's to the mid-nineteenth century, judging from the pearlware, creamware, banded ware, transfer printed ware, and small amount of ironstone present on the site. An analysis of these and all other artifacts recovered will be included in later reports, when more work has been carried out on the site.

The major effort of the 1971 excavation will be the revealing of Holmes' Fort in its full visual outline as represented by the ditches which formed its main defense. This archeological expedition is expected to cost about $20,000. If funds are made available for stabilization of these ditches once they are opened through archeology and for replacing the embankments accompanying the ditch, as well as the palisades around the outside of the fort and the posts in the firing wall, Holmes' Fort will emerge as an impressive companion to the well-known ruin of the Star Redoubt.

The Palisade and Ditches Around the Town of Ninety Six (38GN5)

Exploratory trenching in the area of the intersection of the roads just north of the ruins of the town of Ninety Six revealed palisade trenches, fortification ditches, and a cellar hole. At the junction of the ditch from the Star Fort with the northeast corner of the town, a palisade trench was found to form a small bastion 18 feet wide, located just north of a fortification ditch eight feet wide. Twelve feet south of this fortification ditch another palisade trench was found to parallel the large ditch. The fort ditch angled toward the north near the Charleston Road to form what may have been a protective arm flanking the entrance to the town at this point (Map in Jacket Pocket, Figure 2). A smaller ditch and trench just south of this entrance may well represent a structure from the town of Ninety Six. The palisade trench along the east side of the town was followed for several hundred feet. From the evidence found at the junction of the ditch to the Star Fort with the northeast corner of town, a fortification ditch has been postulated as paralleling the east palisade wall to the outside of this wall (Figure 2).

It is thought that the palisade trench seen along this side of town, along with the northeast corner bastion, represents the original defensive palisade built by Cruger in 1780. On October 13 of that year he stated:

I Have Palisaded ye Courthouse & the Principal houses in about one hundred yards square, with Block House flankers... (GCL, BPR0, 30/11/2, Cornwallis Papers, Cruger to Cornwallis: October 13, 1780:F220).
On the opposite side of the Charleston Road this palisade trench was found to intersect at the corner of the fort ditch, and after 23 feet, make a right angle turn toward the south and continue to the edge of the bank at the north edge of the connecting road to Augusta (Figure 2). This palisade line parallels that on the east side of the town of Ninety Six and is 220 feet away from it. It is thought that this palisade represents the original palisade around the houses of Ninety Six. This palisade should continue on toward the south, forming a west protection to the houses located along the west side of the Charleston Road, until it intersects with the south palisade around the entire area found in the earlier exploratory survey of the site (Figure 3). If this is the case, the town palisade built by Cruger would measure 220 by 400 feet, which fits his description of "about one hundred yards square" for his palisade. At the junction of this west palisade with the south palisade trench found earlier, it is thought that a comparable bastion should be located, like that found at the northeast corner of the area.

Along the west side of the Charleston Road, north of the fort ditch found on this side of the road, the edge of what is thought to be a ditch comparable to that across the road, was found. This may, however, be merely the edge of an old road bed to the town, but more archeology can answer this question. At a point 60 feet north of the north palisade trench for the town, a separate trench was discovered extending toward the west from the Charleston Road. This palisade trench was followed by cutting slot-trenches and was found to extend for 330 feet, at which point it made a right angle turn toward the south and extended for 125 feet more until it ended about half way down the side of the steep bank beside the road to Augusta (Figure 2). This compound is thought to have enclosed the encampment area for the Royal Provencials defending Ninety Six. This conjecture is supported by the fact that during the visit of Lt. Anthony Allaire of Major Ferguson's Corp to Ninety Six in June 1780 he:

Took quarters in town, opposite the jail, where I have the constant view of the Rebels peeping through the grates, which affords some satisfaction to see them suffer for their folly (Draper 1954:499).

This clearly refers to a point to the north of the jail, which would be inside the compound outlined by this palisade trench.

Cornwallis sent his Aid de Camp, Lt. Henry Haldane, to inspect Cruger's works in December 1780, and he ordered the Star Fort built and the ditches connecting it with the town palisade built by Cruger (GCL, BPRO, 30/11/4, Cornwallis Papers, December 9, 1780:F296, 394; MacKenzie 1787:143). When this was done the ditch was apparently dug inside Cruger's north town palisade, causing an intrusion of the large ditch across the neck of the northeast palisade bastion of Cruger (Figure 2). A new trench for a firing wall of vertical posts was then dug 12 feet south of Haldane's ditch along the north side of town. On
the east side, however, slot-trenching tends to indicate that Cruger's fort ditch extended along the outside of Cruger's east palisade wall. This would allow this palisade wall to be used as a firing wall protected by a parapeted embankment from the soil from Haldane's ditch, thus making the east wall much better protected against artillery fire.

This interpretation is supported by the fact that MacKenzie states that the town of Ninety Six was surrounded by a stockade, and that:

The commandant immediately set the whole garrifon, both officers and men, to work, to throw up a bank, parapet high, around this stockade, and to ftrengthen it with an abbatis (MacKenzie 1878:142).

Since we know that during Haldane's visit he ordered ditches dug and abatis placed in front (GCL, BPRO, 30/11/4, Cornwallis Papers, December 9, 1780:F394), we see that MacKenzie is mistaken as to who ordered the earth thrown against the stockade; it was not the commandant, Cruger, who ordered this done, but Haldane. The important fact is not this, however, but the bank that was thrown against the stockade "parapet high." This surely fits the situation as we see it archeologically along the east wall of the town. The job that now needs to be done to check out this hypothesis is to cut trenches along the outside of the east palisade wall in order to locate the large fort ditch ordered by Haldane to be dug along the outside of the stockade to provide a bank "parapet high."

A profile of "...a field Work such as we have generally built..." was drawn by Major Patrick Ferguson in February 1780 (WCL, Clinton Papers, February 1780). This profile fits well with what we see the evidence along the east wall of the town of Ninety Six as representing. The only change was the insertion of the palisade post into Ferguson's profile to indicate how the parapet high embankment would appear against the palisade wall (Figure 2). As was mentioned above, more archeological work will need to be done in this area to determine whether the large fort ditch does indeed continue along this east wall as conjectured.

The Blockhouse Site at the Northwest Corner of the Town of Ninety Six (38GN5)

Inside the northwest corner of the palisaded compound for the town of Ninety Six, a fortification ditch eight to ten feet wide was found to form a corner angle inside a similar angle formed by the palisade trench forming the northwest corner of the town palisade. Twelve feet inside this fortification ditch another palisade trench was found, and this also formed a right angle paralleling the large ditch. This trench is thought to be a firing wall such as was found at the Holmes' Fort Site, the measurements at both sites being virtually the same. This inner palisade trench held pickets or vertical posts designed to hold back the dirt taken from the fort ditch.
Inside of this firing wall and a distance of eight feet from it on the west and 15 feet on the north, a cellar hole was found (Figure 2). This dark cellar fill outline measured 20 by 33 feet, with a seven foot wide step-well extending a distance of four feet from the northwest corner. This cellar hole would represent a structure 15 by 30 feet if the foundation wall were placed inside the cellar, or it would probably represent a building about 25 by 35 feet if the cellar were totally enclosed inside a structure whose footing was wider than the cellar. Since there are two palisade walls, a fortification ditch and a firing wall trench surrounding this cellar, all inside an outer ditch built by Haldane, we might begin to suspect that this cellar was something more than merely a cellar for a house in the town of Ninety Six in which a store of wine and potatoes was cached. For this reason we have conjectured that this cellar represents Cruger's blockhouse site in this corner of town (Figure 2).

To the east of this cellar hole the edge of a disturbance was seen that may represent a trench along this side of the blockhouse, and the interpretive parapet embankment is shown here on the map (Figure 2). The entire area between this edge and the Charleston Road is disturbed to a considerable depth (In one test hole to a depth of over three feet), indicating a feature deeper than a roadbed along this side of the blockhouse. Extensive work in this area is needed to determine the exact nature of this disturbance.

In most cases we would not expect to find evidence for a blockhouse other than perhaps a cellar, particularly when horizontal logs are used, as was the case with most blockhouses. The early nineteenth century blockhouse at Fort Hawkins in Macon, Georgia, had a stone-lined cellar, with horizontal logs above, in association with a palisade wall, which is the usual case. However, a blockhouse accompanied by major fortification ditches, parapets, firing wall, and cellar is not the usual combination of features.

For an interpretation of this type blockhouse we have an excellent written description provided by Patrick Ferguson, as well as profile drawings. Ferguson was in Savannah in February 1780 and drew his plans for an improved type blockhouse. In May of the same year he outlined a "Plan for Securing the Province of South Carolina" (WCL, Clinton Papers, May 1780) which provides details of value in addition to the February plan. Ferguson suggests that in South Carolina, where roads cross each other, that four or five "Block house redoubts" be built to command all the principle avenues. He explains that:

These block houses are singularly advantagious as forming at once barrack Citadel & Cassmate, they may be raised of strong rough Timbers by means of Negroes in 4 or 5 Days & covered from cannon by a redoubt, which could not be looked at without a force deliberately assembled with Cannon, nor taken or maintaine whilst ten men remained in the Block house within. For each Post 30
Invalided Soldiers with as many Militia & 2 Iron Guns would prove Sufficient (WCL, Clinton Papers, May 1780).

This summarizes Ferguson's opinion of what he considered a major improvement on the blockhouses of the time. Fortunately we have his profile drawings and description to demonstrate what he was talking about. He illustrates two trenches set close together with obstructions set in the bottom of these, along with brush abatis placed in front of the counterscarp of the main ditch. The main ditch is somewhat different from those usually seen in that it has in the bottom four parallel ditches set close together, also having brush and obstructions set in and above these ditches. Near the toe of the scarp he illustrates an outward sloping palisade pole set deeply into the bottom of the fort ditch, behind which was another small trench at the toe of the scarp. Palisade or fraize poles are placed on the surface of the ground with the pointed end facing, and extending over, the ditch. Above this and slightly back from the edge of the ditch is the embankment of earth thrown from the ditch over the butt ends of the fraize. The embankment earth is allowed to lie at a natural angle rather than being shored up with fascines. Back of this is the firing wall and step, and then inside of this, the cross-section of his blockhouse is shown. The firing ports point upward in line with the top of the parapet so as to intercept anyone coming over the parapet. Two levels are shown, both having firing ports, the bottom story being entirely below ground surface with the firing ports along the top of the cellar level being all that is above ground. The second floor was to be covered with a thick layer of earth three to four feet thick. An alternative to this was suggested where the upper story could serve as a barracks for the men. Ferguson says of his countersunk, low profile, earth-covered, bunker-type structure:

This Block house being entirely covered by the Rampart from direct shots is not in any degree to be injured by artillery from without; as the wall being made of 18 Inch Oak Timbers dove tailed at the Angles would not be pierced by ricochet shot, and the roof being Beams well supported in the center, would resist any shell when covered with 3 or 4 feet of Earth (WCL, Clinton Papers, February 1780).

He reiterates the advantages of this type of casemated blockhouse, pointing out that a work without casemates can be reduced without trouble or delay by a few howitzer shells. He states that the usual casemated structures are of masonry construction and are therefore expensive and not suited to the quick need for fortification sometimes found in outlying areas. Yet, something must be done, he says, if England is to have remote colonies. He offers the solution:

Happily the abundance of Timber & of rough Carpenters in America enable an Engineer to procure by contract without any Trouble in a very short time & a Trifle of Expense block houses to answer every purpose of Casmates & to secure the Garrison from assault.
These Block houses should have five sides Bastion Fashion. The Timbers both of the walls & roof of Oak Eighteen Inches square, & dove tailed at the corners, so as to resist ricochet shot & shells. One block house upon this Principle for every Bastion of the Fort placed within & sheltered by the Ramparts from Direct shots, with a loop holed stockade by way of Curtain to run from the one to the other, would for a mere song of expence form at once Barracks that would last forever (without affording a pretence for repairs & last longer than the Band Boxes usually erected)...

(WCL, Clinton Papers, February 1780).

According to Ferguson, it "would be madness to assault a Citadel with blockhouse Bastions". Such a blockhouse would be utterly covered from musketry and could pour:

"...a continued loop-holed fire of Musketry rejoining on all sides, to destroy the assailants as fast as they could Possibly crowd within the ramparts, where indeed a Rat could not exist for many Seconds, from the multiplicity of the fires, the shortness of the distance & the unerring safety of the Defendants" (WCL, Clinton Papers, February 1780).

With this it surely appears that Ferguson was sold on his concept, but whether Cornwallis and others were equally impressed remains to be seen. We do know, however, that Ferguson was at Ninety Six in June 1780 (Bass 1862:5), and that in July he wrote to Cornwallis asking that he be allowed to build a works, such as he had proposed, at Ninety Six (GCL, BPRO, 30/11/2, Cornwallis Papers, July 1780:F269). Lieutenant Colonel John Harris Cruger and his New Jersey Volunteers arrived at Ninety Six late in June (Bass 1962:6-7), and we might suspect that Ferguson discussed with the new commander of the fort his ideas regarding fortifications. Cruger may not have responded as enthusiastically as Ferguson had expected, and this may have resulted in Ferguson's letter to Cornwallis urging that he be allowed to build the fortification at Ninety Six. Just how much effect Ferguson's plans had on Cruger is not known, but the archeological evidence at the blockhouse site certainly appears to closely parallel Ferguson's plans for a casemated blockhouse.

On September 3, 1780, Cruger reported to Cornwallis that he had thrown up two redoubts and was building a blockhouse (Bass 1962:10). These were probably the redoubt at Holmes' Fort, a redoubt around the brick jail (to be discussed next) and the blockhouses represented by the archeological evidence discussed here. It is suspected that he later built a second blockhouse at the southeast corner of the palisaded area of the town, for he mentions on October 13, 1780, that the palisaded houses and courthouse had blockhouse flankers, which would indicate more than one blockhouse, probably on opposite diagonal corners of the palisaded area (GCL, BPRO, 30/11/2, Cornwallis Papers, Cruger to Cornwallis:

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October 13, 1780: F220).

In summary of the yet to be excavated blockhouse site at the northwest corner of the town of Ninety Six, once detailed excavation is completed it would appear that we have excellent evidence for use in making reconstruction drawings and possibly a diorama of the appearance of this blockhouse. It is not often that we have such excellent correlation between the historical and archeological data with which to work in making conjectural reconstruction drawings. The artifacts recovered in this exploratory phase of the project at the blockhouse are primarily of the 1760's to the 1780's and will be covered in detail in a later project on the blockhouse site.

The Jail Redoubt at Ninety Six

Exploratory excavation was carried out in the area around the site of the brick jail, and the slot trenches here revealed a fortification ditch from four to ten feet wide forming a pointed bastion 80 feet across around the site of the jail. The shape of this bastion or redoubt was much the same as the large bastion seen on the hornwork at Holmes' Fort. A particularly interesting fact was that it was located about half-way down the slope of the hill, rather than on more level ground.

Two ditches were found to the east of Reference Point 38, south of the jail redoubt, that appear to be palisade trenches. These may have accompanied the fortification ditch around the side of the hill as an additional defense. Also to the south of the jail redoubt, to the east of Reference Point 37, a palisade trench was seen extending from the fortification ditch toward the southeast. Slot trenching followed this ditch for some 80 feet, revealing that this trench probably represents the west palisade around the entire area. This trench may be a continuation of the palisade around the area thought to be the Royal Provincials' encampment area north of the road to Augusta. This could have been built by Cruger before the fall of 1780 as an outer defense line connecting the jail redoubt to the stockade around the town, or it may well have been suggested by Haldane at the time of his visit in December of that year (Figure 2). Considerable excavation on the jail redoubt site is needed before further conjectures as to its details are made. One question that further excavation would surely answer is the nature of the narrow jail redoubt ditch after it turns toward the south, appearing to form a ditch along the west side of the town area inside the palisade wall. This would be expected, but only excavation can answer this question.

Plans for Further Work at Holmes' Fort

Additional work is planned on the Holmes' Fort Site in an expedition beginning June 7, 1971, and ending November 5, 1971. During this period, a great deal of work can be done on the important western bastion of the Ninety Six complex of fortifications. A report on these extensive excavations at Holmes' Fort will be written during the winter of 1971-72.
Hopefully questions raised in this exploratory excavation can be answered in that report.

**A Note on the Exploratory Slot Trenching - One Hundred Yard Square Stripping Method**

The exploratory slot-trenching method used here, and at the Charles Towne Site reported on previously in Volume 4 of these papers, is seen to be a method highly recommended for obtaining the maximum amount of data in the shortest time. This can then be utilized to outline archeological projects of greater scope with much greater efficiency and assurance than if the slot-trenching exploration is not undertaken prior to launching the major expedition. With the maps based on the exploratory work in hand, the archeologist can more realistically build a long-range archeological proposal or outline a more intensive research program to reveal the archeological data. As can be seen from the maps, these exploratory trenches do not need to follow the traditional five-foot-wide trench pattern so ingrained into our archeological practice, nor do they have to religiously follow the right angle lines of the master grid system. This method provides for maximum speed, efficiency, and flexibility in data recovery for exploratory projects. It does require that the archeologist competently utilize the standard tools of the profession, either the transit or the alidade. He should manage these with facility if he is to undertake to recover data from sites such as towns, cities, and forts whose features sprawl over many acres through woods and fields, valleys and hills. It is time to look beyond the womb-like comfort of the involvement with dissecting burials, cellar holes and five foot squares if we are to meet the interpretive challenge presented by villages, ceremonial centers, towns, cities and fortified areas.

Too long have we practiced the ritual of the cult of the square, impotently arriving at feeble interpretations of complex cultures in extensive settlements from the meager evidence presented by a few postholes and a stratigraphic sample from a five foot square. We have often failed to adapt our tools to the scope of the project. We have used a spoon on villages and towns as well as burials. We have looked at cultures through keyholes when we should have been opening doors. This does not suggest the abandonment of the five foot square, but it does emphasize that there are times when it is a totally inadequate tool, like excavating a village with a spoon. Through exploratory trenching to determine the nature and scope of the features, then totally removing large blankets of topsoil from extensive areas of the site, stripping football field size "squares" instead of minuscule five foot areas, we can begin to open a few doors. Once the archeologist is rewarded by the view of the culture revealed through such doors he is thereafter highly unsatisfied by peeping through keyholes.

The maps accompanying this article and those illustrating the Charles Towne article in Volume 4 of these papers should clearly demonstrate the value of the exploratory slot-trenching method as a preliminary phase in historic site archeology projects, laying the groundwork for the removal of one-hundred-yard squares, allowing the archeologist the luxury of the view in the light of an open door.
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<td>BPRO</td>
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