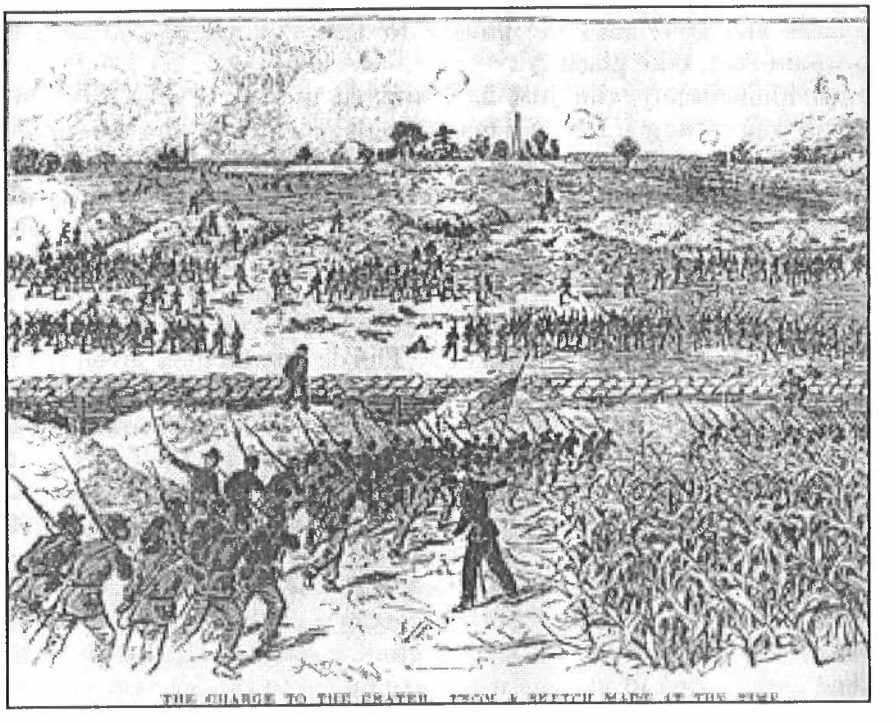
Life in the Trenches:
The Archeological Investigation of the Federal Picket Line near the Crater, Petersburg National Battlefield



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for
Petersburg National Battlefield

2000

Life in the Trenches: The Archeological Investigation of the Federal Picket Line near the Crater, Petersburg National Battlefield

by

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Report for the Cultural Resource Overview and Assessment
of Petersburg National Battlefield,
Main Unit

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2000

Abstract

Archeologists from the University of Maryland conducted an excavation of the Federal picket line within Petersburg National Battlefield as part of the Overview and Assessment of archeological resources within the battlefield's Main Unit. The goal of the Overview and Assessment is to provide basic background information on the archeological resources within the battlefield park. This includes, describing the area's environmental and culture history; list, describe, and evaluate known archeological resources; describe the potential for as-yet-unidentified archeological resources; outline relevant research topics; and provide recommendations for future research.

As part of the Overview and Assessment project, National Park Service staff and University of Maryland archeologists agreed that part of the project should provide a public component. To help further both goals of evaluating archeological resources and public visibility, project directors decided to explore the archeological potential of the Federal picket line near the Crater. The Federal picket line, in this area of the battlefield, played a vital role in the Battle of the Crater on July 30, 1864. The picket line also served as a key area because of its proximity, 100 yards, from the Confederate defenses. This was one of the closest points between the two armies.

This report contains details from the excavation and public interpretation portions of the project. Excavation details focus on the data recovered from the four excavation units used to bisect the picket trench. Archeologists were able to excavate and record a seven foot section of the Federal picket trench, and features associated with the Battle of the Crater. Archeological features and data also provide details on the post-war filling and history of the picket trench area. Artifacts recovered from the trench, including pieces of preserved canvas, leather, tin cups, ink well fragments, food tins, and other militaria, provide clues to the daily lives of soldiers posted in the trench. Details on the public interpretation portion include information on the development, methodology, and success of the major components of the public program. These details, including descriptions of the project web site, tour brochures, exhibit, and site tours, provide a template for future archeology interpretative programs.

Acknowledgments

I would like to thank Paul Shackel and Brooke Blades of the University of Maryland along with David Orr of the National Park Service who were very instrumental in developing, funding, and overseeing this project. Special thanks to Superintendent Michael Hill and the entire staff of Petersburg National Battlefield for their support during this project. The staff was not only helpful in planning this project, but also in supporting our public interpretation programs, helping in creating GIS images, historic research, protecting the project site, providing essential equipment and supplies, backfilling the excavation trench with their grade-all, helping us excavate, and most of all providing us with Gatorade and popsicles during the hottest summer we have ever experienced.

A very special thank you to our crew. This project would not have been possible without the strong support of our volunteer crew. Regina Shaw, Michelle Niedzwiadek, Teresa Cabanilla, Brandon Bies, Michael Wilkins, and Karen Ackerman helped in the excavation phase of the project. They also made themselves readily available to answer visitors' questions and explain the work we were conducting. Michelle and Teresa also assisted in processing material in the laboratory. Because of the crew's dedication and hard work, especially in the very oppressive, hot weather, this project has been a success. Thank you!

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Introduction

On June 18, 1864, Federal troops continued their attack upon the Confederate defenses outside Petersburg, Virginia. General Grant had changed his objective from destroying Lee's Army of Virginia to the capture of the Confederate Capital of Richmond (Sommers 1981: 1; Trudeau 1991: 16). Grant hoped to capture Richmond's key supply point of Petersburg, thus weakening the Confederate capital. However, after several failed attacks, both armies began to settle into siege warfare in the country side surrounding Petersburg. For nine and a half months, both armies continued to build and reinforce their protective fortifications.

It was on June 18 that elements of the Army of Potomac's Ninth Corp. began to dig a protective earthwork only one hundred yards away from the Confederate fort at Elliot's Salient. This protective trench would eventually become the Federal picket line within the larger Federal works. It was from this picket line that Federal troops began to excavate the mine tunnel that would destroy the Confederate fort creating the Crater and leading to the Battle of the Crater on July 30, 1864 (Pleasants and Straley 1961: 48).

The Crater became an instant tourist stop after the Civil War. However, the Federal picket line would not receive the same attention. As farmers returned after the war, they quickly began filling the miles of trenches around Petersburg to begin their farming operations again (Wallace 1983: 20). Most of the Federal picket line near the Crater suffered this fate.

For one hundred and thirty-four years the picket trench remained buried holding within it clues to the daily lives of the soldiers who spent close to a year living within it. Now the picket line is a part of Petersburg National Battlefield, and the Crater that lies close by still remains a major tourist stop (Wallace 1983: 90). However, it is difficult for visitors to truly understand how close the two armies were and how that nearness effected soldiers lives.

In the summer of 1999, archeologists from the University of Maryland excavated a part of this Federal picket line as part of the larger Overview and Assessment project of Petersburg National Battlefield. The goal of the Overview and Assessment project is to provide basic background information on the archeological resources within the battlefield park. The Federal picket line excavation helped this project by defining the archeological potential of the now buried picket trench.

Archeologists also revealed what other information it could provide. They believed information from the trench could shed new light on the daily lives of the soldiers. Archeologists explored how soldiers within a dangerous position, constantly exposed to enemy fire, coped with life under these conditions. Archeologists also revealed how soldiers constructed the picket trench, and they recognized how this construction effected the digging of the Federal mine tunnel and the subsequent attack during the Battle of the Crater. By understanding the lives of the troops stationed in the trench and the role the trench played in their lives, researchers gained a better grasp of life during the Civil War.

While gaining an understanding of the impact of the Civil War on soldiers life, project archeologists shared this new information with the public. Archeologists developed an

interpretative program that made visitors aware of the changes that occurred on the battlefield since the Civil War, and how those changes effected the Federal picket line. Researchers wanted visitors to feel the excitement of discovery, not only as excavators uncovered new artifacts, but also the meaning of those artifacts in the historic record and our contemporary lives.

This report on the Federal picket line contains data recovered during the two and half week excavation and a description of the public interpretive program. Section one provides details on the project area's history and places it into its Civil War context. Section two describes the current condition of the project area and how it effected the excavation. The third section explains the methodology for the excavation and subsequent analysis of the data. In section four I have divided the excavation summary into several smaller parts examining each excavation unit, the project area's stratigraphy, and each feature excavators encountered. Section five uses the data from both the archeology and historic documentation to explore soldier life in the Federal picket line. The sixth section describes the public interpretative program, and finally section seven provides final thoughts and recommendations on the project area.

Section One

Project Area History

Petersburg

The history of the Crater area begins well before the first English settlers arrived in the Petersburg region. The earliest known settlement of the American Southeast dates to around 12,000 BP (before present era) and 10,000 BP. From this first period of settlement, the Paleo period, Native American groups highly utilized the James River area through the time of the English settlers arrival (Shackel and Blades 1998: 3).

It is unclear when the English first settled in the Petersburg area, however, historians do know they were in the area before 1643, when they established Bristol Parish (Wallace 1983: 1). By the mid-18th century two towns developed in the Petersburg vicinity, Petersburg and Blandford (Wallace 1983: 1). Petersburg's importance grew as it developed into a vital chain in the Virginia economy.

Because Petersburg's location near the deep water port of City Point and its own port on the Appomattox River, combined with several major railroads running through the city, Petersburg became a major shipping point. Agricultural goods from the surrounding country side including, tobacco, cotton and grains were shipped by merchants through the ports to foreign and domestic markets (Wallace 1983: 4). Manufactory goods produced in Petersburg's factories and iron foundries were also transported by ship and train. Products like cotton, agricultural implements, and locomotive equipment helped Peterburg's economy prosper (Wallace 1983: 3). Petersburg's economic success, however, would also make it a target for the Union Army during the Civil War.

When the State of Virginia seceded from the Union in 1861, and joined the Confederate States of America, Petersburg continued to play a vital role in the regional economy. The railroads and the diverse industries became important to the Confederacy's war efforts. Local iron works and foundries produced weapons and other military materials, including cannon, knives, swords, lead, gun powder, and rope (Wallace 1983: 7).

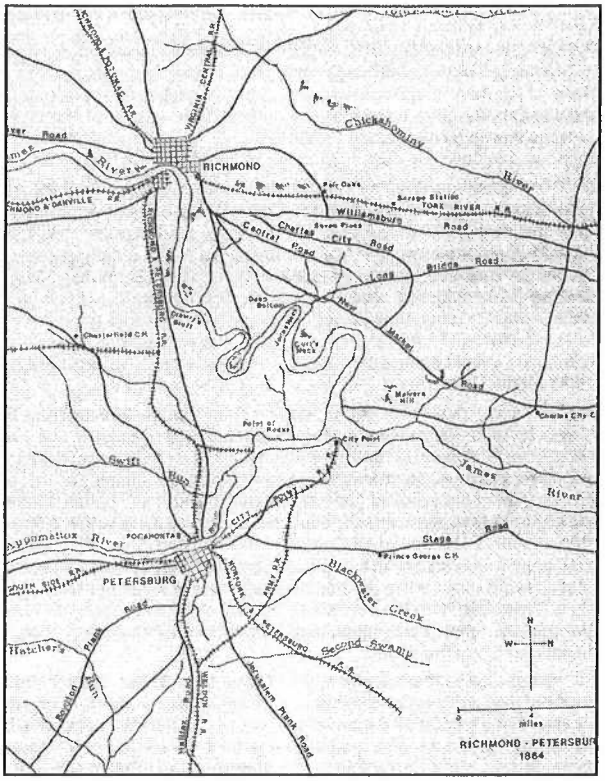


Figure 1. Map of Richmond and Petersburg Area. (Cavanaugh and Marvel 1989: 2).

After McClellan threatened Richmond in 1862, Petersburg officials decided to build a fortification around the city (Wallace 1983: 8). Under the supervision of Captain Charles H. Dimmock, C.S. Engineer Bureau, the construction of the fortifications began in August 1862. More than 200 enslaved and free blacks, whom the Common Council of Petersburg sent upon Dimmock's request, built the fortifications. Later, they impressed hundreds of more blacks from surrounding counties to work on the fortifications (Wallace 1983: 8). When completed in 1863, the "Dimmock Line" as the defensives were called, stretched for 10 miles around the city of Petersburg, containing fifty-five artillery batteries (Wallace 1983: 8).

The Union Army approached Petersburg in May of 1864. Troops from Butler's Army of the James attacked the Richmond defenses between the James and Appomattox Rivers and on May 6, they occupied the port of City Point, just eight miles east of Petersburg (Wallace 1983: 8). It was not until mid June when the main Union force under General Grant arrived on the outskirts of Petersburg.

After being repulsed by the Confederates at Cold Harbor on June 3, Grant switched objectives from the destruction of the Army of Northern Virginia to the capture of Richmond (Wallace 1983: 9). Grant saw Petersburg, with its several railroads and crossroads supplying Lee's Army and Richmond, as the gate to Richmond. By capturing Petersburg and cutting the lines of supply, Grant felt Richmond would soon surrender.

The attack on Petersburg began on June 15, near the battery five section of the Dimmock line, near the current National Park Service visitor's center. The vastly outnumbered Confederate forces put up a stubborn defense, but soon had to surrender part of the Dimmock Line. As Union and Confederate reinforcements arrived, the fighting intensified along the eastern portion of Petersburg. By June 18, the Confederates had pulled back to newly established positions closer

to Petersburg. That morning Union forces again attempted to take the city. In the area that now encompasses the Crater, units of the Army of Potomac's Ninth Corp. under General Ambrose Burnsides ran into stiff resistance from the Confederate defenders.

The Crater Area

Before the war, the land surrounding the Crater and containing the project area belonged to William Griffith. Griffith and his family lived in a house in the angle of the Jerusalem Plank Road and Baxter Road (Cavanaugh and Marvel 1989: 112; Wallace 1983: 31). Most of the farm land once belonged to Griffith's wife Rebecca Raines, and another 35 acres had belonged to the Taylor farm of Spring Garden (Wallace 1983: 31).

The Griffith family probably witnessed the construction of Dimmock Line just a little more than a mile from their home. They, along with the rest of Petersburg, prepared for the worst as the Union Army occupied City Point. Though it is not clear when the Griffiths retreated from their home as the Union Army advanced on Petersburg in June 1864, their home was burned during the early days of the siege (Cavanaugh and Marvel 1989: 112).

Confederate forces had constructed new defensive works across the Griffith property just above the Norfolk and Petersburg Railroad. On June 18, 1864, two divisions of the Union Ninth Corp. advanced upon these freshly dug defenses facing strong opposition. The Ninth Corp.'s Second Division, lead by Brigadier General Robert Potter, crossed the enfiladed cut of the Norfolk and Petersburg Railroad and Taylor's Creek, to within a hundred yards of the Confederate lines (Cavanaugh and Marvel 1989: 4). As the advance became bogged down, Union officers ordered their men to dig in.

> . . . we made a vigorous charge down to, and across the cut, through a ravine beyond, driving the rebels before us, almost into their works . . . Finding their position too strong to assail successfully, the line halted, and immediately commenced to fortify (Wells in Gould 1908: 206).
>
> As they reached the same hill which the enemy occupied, they laid down on their stomachs and within one hundred and fifty yards of the enemy's fortifications . . . it began entrenching itself, each man with the aid of his tin cup, plate or spoon, scratching a little soil together and pilling it up in front of his head; this was a dangerous piece of work, for the enemy poured volleys of musketry into them incessantly (Parker 1869: 563-571).

This line would become the Union picket line, the farthest advance Union line in Petersburg, only a mere one hundred yards away from their Confederate counterparts (Pleasants and Straley 1961: 46).

On the morning of June 19, General Potter peered over his embanked trench to see a new

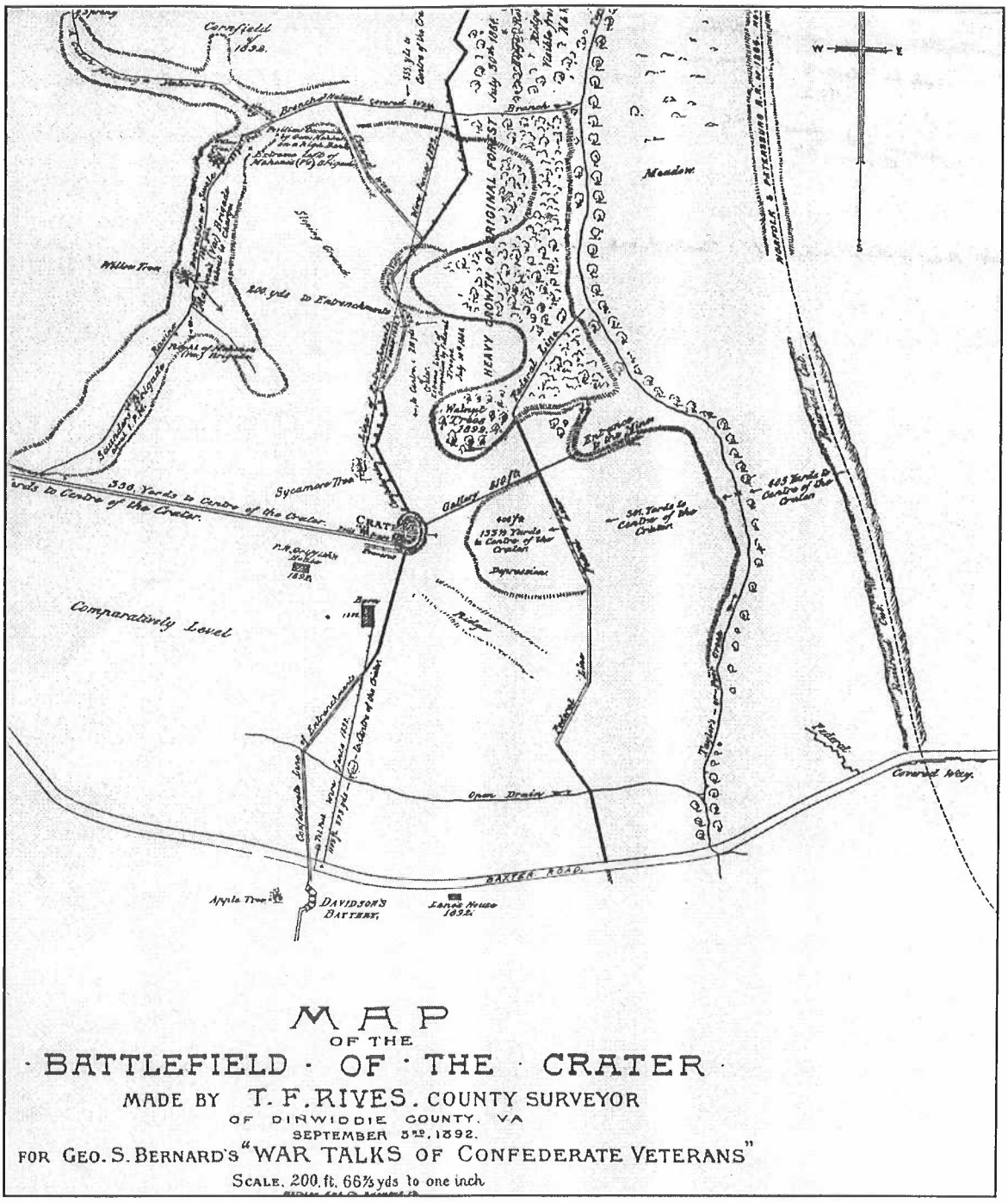


Figure 2. Map of the Crater Battlefield (Bernard 1982).

Confederate redoubt (Elliot's Salient) looming in front of him. As his troops continued to improve their position, they were laying plans to mine the Confederate redoubt and blow it up, allowing Union troops to rush in and capture Petersburg. Members of the 48th Pennsylvania Regiment began to excavate the mine tunnel behind the picket line on June 25. At first, Union troops used the excavated refuse in sandbags along the Union picket line, however, a surplus of material quickly built up and had to be hidden elsewhere behind Union lines (Cavanaugh and

Marvel 1989: 6). Members of the 48th Regiment along with the Union pickets in the trench above them faced constant sniper fire and the occasional mortar shell falling among them (Cavanaugh and Marvel 1989: 6). On July 28, 1864, Colonel Pleasants of the 48th Pennsylvania informed General Potter that the mine was finished and ready to be exploded.

On the morning of July 30, Union forces exploded the mine creating a crater 170 ft in length, 60 ft wide, and 30 ft deep where the Confederate redoubt once stood. Divisions of the Union Ninth Corp., including companies of African-American troops, rushed to breach the Confederate lines, but the shock of the carnage and strong Confederate counter attack halted the Union attack. By the end of the day more than 3,000 Union troops were killed, wounded, or missing while the Confederates suffered only around 1,500 casualties (Cavanaugh and Marvel 1989: 108).

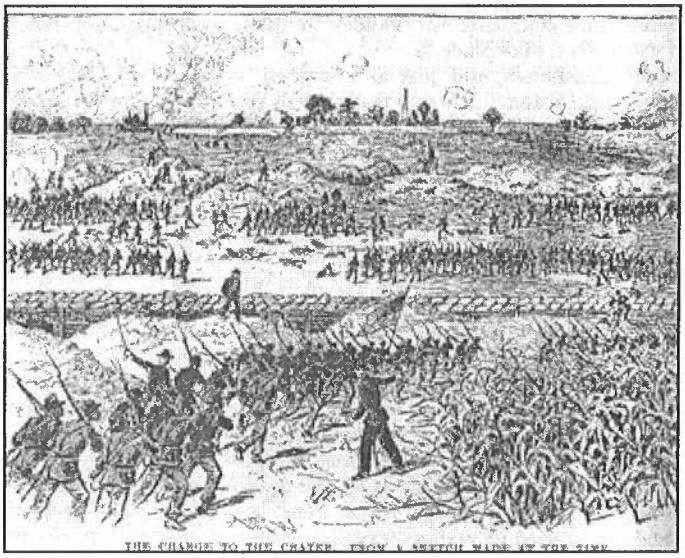


Figure 3. Explosion of the Crater by A.R. Waud. Notice the picket trench in the center of the sketch.

The following morning, under a flag of truce, Union and Confederate troops met in the no mans land between the lines to bury the dead. They buried two hundred and twenty Union troops in a mass grave between the lines (Cavanaugh and Marvel 1989: 105). For the remaining months of the siege, except for occasional sniper fire, very little occurred in this section of picket line as the military campaign moved to the south and west of Petersburg.

Postwar Occupation

The Siege of Petersburg ended on April 3, 1865, and General Lee's surrender of the Army of Northern Virginia occurred several days later on April 9 at Appomattox. The vestiges of the nearly ten month long siege covered the countryside around Petersburg. Nearly 70 miles of earthworks stretched east of Richmond to southwest of Petersburg (Wallace 1983: 16). Among the works laid the waste of war. Spent ammunition, broken equipment, deserted huts, abatis, gabions, fraise, and the dead were on display for all to see.

Local residents and curious tourists returned to the battlefield to scavenge souvenirs (Wallace 1983: 16). Others collected scrap metals and spent ammunition to sell and subsidize their

income (Wallace 1983: 16). Residents began several ventures to take advantage of the many visitors coming to Petersburg. Among these ventures was William Griffith's Crater Museum.

Griffith returned to find his fields and pastures destroyed by trenches, mines, and earthen forts. However, he noticed the large number of people passing over his property to view the famous Crater. To take advantage of this popular attraction on his property, Griffith enclosed the Crater with a fence and built a booth where he could charge admission to the Crater (Cavanaugh and Marvel 1989: 112). Griffith also added a relic shop where visitors could purchase pieces of the former war (Cavanaugh and Marvel 1989: 112). As the years passed, Griffith steadily improved the visitor facilities near the Crater to include the "Crater Saloon" (Cavanaugh and Marvel 1989: 112; Wallace 1983: 32). Two accounts after the war describe the Crater area and Griffith's improvements.

> He found the mouth of the mine tunnel, largely hidden by weeds, and noted that the mine tunnel was partly caved, and that the mouth of the Confederate countermine was still visible, a deep, dark, narrow cavern supported by framework in the lower side of the crater. Lying around, he observed, were rusted bayonets, canteens, and shell fragments and "all around were graves." (Trowbridge in Wallace 1983: 32).

> About a year since, being in needy circumstances, Mr. Griffith, encouraged by the number of visitors, conceived the idea of preserving the crater intact, as the war had left it...; and with that view he enclosed it, and added some conveniences and attractions. Walks were laid out, and steps planted by which the mouth of the crater is reached. Several tenements were built--one, the "Crater Saloon" where visitors can refresh themselves; and the other a museum .... A small fee is expected but not demanded (Annonmous in Wallace 1983: 32).

The Crater drew many visitors including veterans in the decades following the war and provided Griffith with a steady stream of income.

Griffith, though preserving the Crater for the tourist industry, did not preserve the remains of the battlefield on the rest his property. On the remaining portions of his property, Griffith reclaimed his fields for the purpose of agriculture. Cavanaugh and Marvel report, "Mr. Griffith, whose plow unearthed a mass grave of Negroes . . ." (Cavanaugh and Marvel 1989: 113). A photograph from April 1891 of the mine tunnel entrance shows the area around the entrance and picket line under cultivation, the soil churned by a plow (Collection of Petersburg National Battlefield: Unknown photographer 1891; Collection of Montgomery County Historical Society, Ohio: Unknown photographer 1897).

Few probably came to see the picket line of the Union army, the large Crater and the infamous mine tunnel dug by Union troops appeared to be the major attraction. By scavenging the Union picket line, Griffith and his family were probably able to supply their relic shop and museum with military memorabilia. Upon William Griffith's death in 1873, he transferred the property to his son Timothy Rives Griffith (Wallace 1983: 33). Timonthy Rives Griffith maintained the Crater and the various tourist services near it until his death in 1903 (Wallace

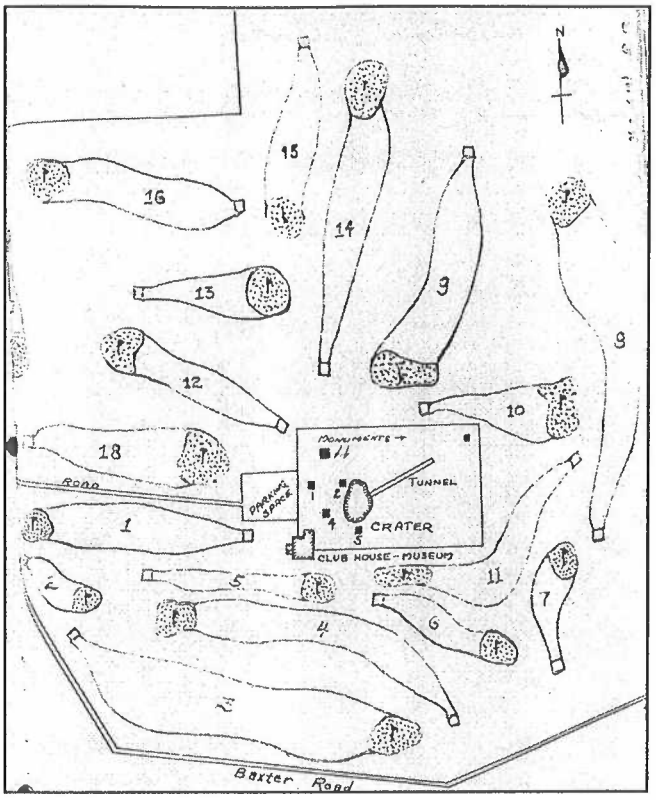


Figure 4. Sketch of Crater golf course constructed in 1926 (Toms 1929: 45).

1983: 34). By 1918 all of the Griffith heirs had passed away and the property passed from the families ownership (Wallace 1983: 34). The new owners, who are unknown to researchers, continued the Griffith's practice of using the Crater as a tourist site until they sold the land to the Crater Battlefield Association (Cullen 1975, 6).

In 1925 the Crater Battlefield Association, Inc. acquired the Crater area (Wallace 1983: 34-35). A year later the association built a 18-hole golf course around the Crater and constructed a club house near where Griffith's post war home stood (Figure 2). The Crater and tunnel were fenced in to separate them from the surrounding golf course (Cullen 1975, 7). Part of the Union picket line became part of the fairway for the 11th hole (Figure 4).

National Park Service

Remnants of earthen fortifications and associated army encampments constitute the primary physical evidence of the Civil War siege at Petersburg. Some of these works are remarkably well preserved and represent and enduring legacy to the rapid and brutal transformation of the rural agricultural landscape. Formal dedications for the creation of Petersburg National Military Park occurred on June 20, 1932, at Battery Five. Several thousand people attended the event. A large number of Confederate veterans attended since they were on their way to Richmond for the 42nd Annual Reunion of the United Confederate Veterans. The city of Petersburg declared a full holiday and schools closed in order for students to participate in the event (Wallace 1983:78).

On August 10, 1933, Petersburg National Military Park was transferred from the War Department to the National Park Service (Wallace 1983: 81). In April of 1936, the Crater property was transferred from the Crater Battlefield Association to the National Park Service (Wallace 1983: 96). Upon its acquisition, the National Park Service began to blend the Crater area into the larger park atmosphere by removing all vestiges of the former golf course and planting new trees and shrubs to help screen modern intrusions from the nearby highways (Wallace 1983: 96-97). In 1937 National Park Service began excavations in the area where they believed the original mine entrance was located. These initial investigations found the remnants of the mine tunnel. Further excavations in 1958 and 1962 assisted the Park Service in reconstructing the mine entrance (Cullen 1975: 7). The reconstructed mine tunnel allowed the

Park Service to visually interpret the mine in their interpretation of the Crater area.

Over the next thirty years changes occurred in the landscape surrounding the Crater area, most occurring on the western edge of the Crater. Additions to the former golf course club house, then the battlefield museum, where made to increase services to visitors and provide improved interpretation of the event (Wallace 1983: 100-103). The next series changes of to the landscape occurred during Mission 66 and these alterations gave the Crater area its current appearance.

Superintendent Brooks laid out the following plans for the Crater area.

> In visiting the Crater and tunnel site at that time I came to the conclusion interpretation was carried out in reverse order; first one showed the visitor the Crater--or the result of the explosion and then we led the visitor to the tunnel entrance site. I propose a reorientation of the visitor. Under the MISSION 66 program a parking overlook is proposed that will present the story of the Crater in general terms, i, e., the Union problem, the Pennsylvania miners' solution, viz., the tunnel and the explosion which created the Crater. The road would then lead to a parking area near the tunnel entrance and Crater site. This would necessitate no change in MISSION 66 except a slight relocation of the parking area. From the parking area a one-way loop trail would lead the visitor to the covered way and the tunnel entrance site and the generally along the present trail to the Crater and back to the parking area (Brooks in Conway 1983: 11).

This slight relocation of the parking area and the construction of the current road system in 1964 covered a portion of the Union picket line south of the mine entrance. In 1967 the National Park Service reconstructed the tunnel entrance and developed an interpretive trail around the Crater. After a 1974 realignment of the tour road near the Crater, no other activities took place in the Crater and Union picket line areas.

While the Crater is one of the most visible feature on the landscape, visitors can still see the remains of the Union mine tunnel, which is collapsing, and mine entrance. Visitors can still see remnants of the golf course through the large expanses of level lawn space around the Crater. The Mission 66 improvements are still very visible as they still serve the needs of the visitors as they have since their construction.

What is missing on the landscape is any sign of the Union picket line. Though we can still see some small remains in the surrounding wooded areas, William Griffith and the subsequent development of a golf course successfully removed any above ground remains of these earthworks. Today only a slight rise in the topography and a wayside sign mark its location.

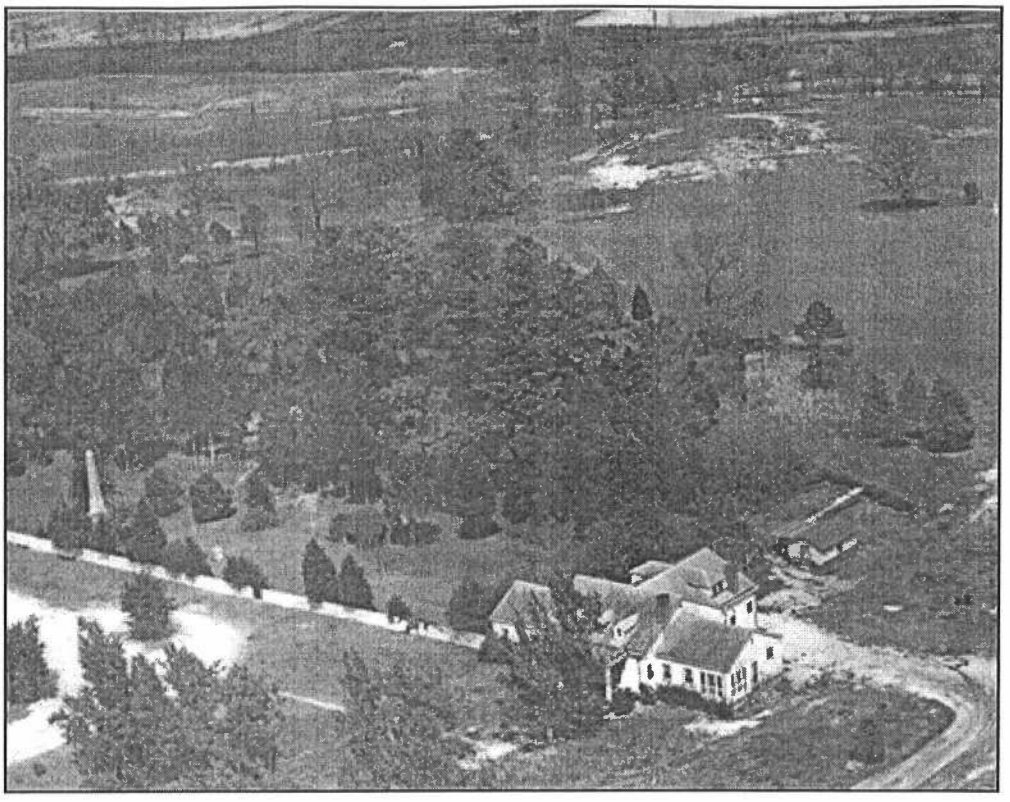


Figure 5. National Park Service photo showing the Crater area (the Crater is in the grove of trees in the center of photo), including the former Battlefield visitor's center in the foreground. The project area lies in the upper right hand corner (Cullen 1975).

Section Two

Description of Project Area

The project area is located within the southwestern corner of Petersburg National Battlefield. This portion of the battlefield is found to the southeast of Blanford Cemetery just outside the City of Petersburg, Virginia (Figure 6).

'X' denotes the project area.

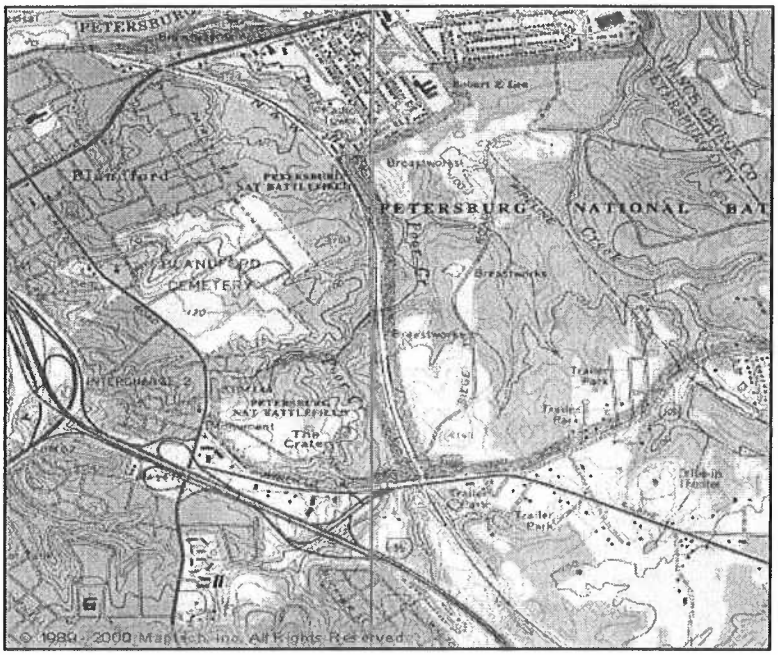


Figure 6. USGS Topographic Map Petersburg National Battlefield.
The corners of the map have the following Latitude and Longitude.
NW - 37 14' 15" N; 77 23' 32" W
NE - 37 14' 15" N; 77 21' 12" W
SE - 37 12' 24" N; 77 21' 12" W
SW - 37 12' 24" N; 77 23' 32" W

The project area is located around one hundred yards to the northeast of the Crater, which is a major landmark within Petersburg National Battlefield (Figure 6). Though the majority of the battlefield has returned to forest, this portion of the park remains open and park like (Figure 7). This is due partially to the use of the project area as agricultural fields and a golf course after the Civil War. The project area is mown frequently to maintain the manicured appearance of this popular and highly visited area with the battlefield park. By not allowing thick undergrowth or trees to grow in this area, the National Park Service is able to maintain several view sheds with surrounding related features, including the Taylor home site (Figure 7).

The project area lies on a slight slope that drops toward the east, ending at the railroad cut and Taylor's Creek. The highest point of the slope is located to the west at the Crater. The project area is 120.737 ft (southwest corner) and 119.517 ft (southeast corner) above sea level (GPS

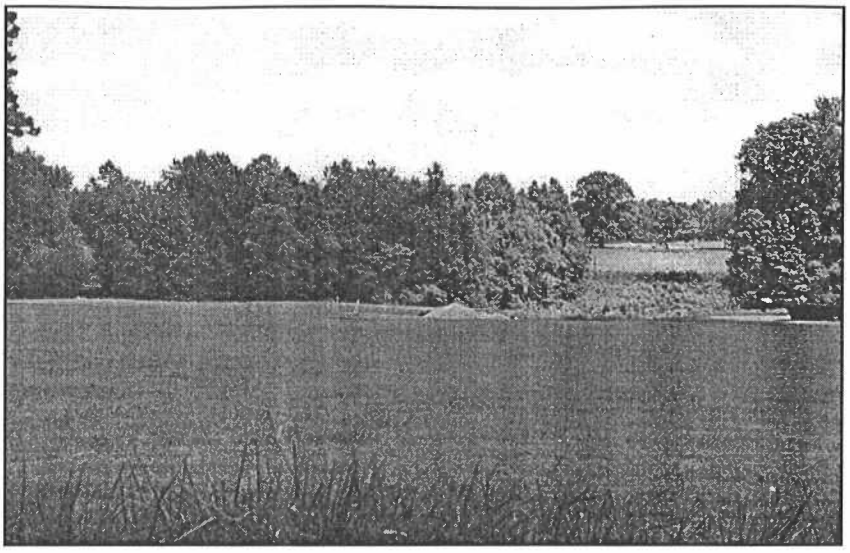


Figure 7. View of project area from the Confederate picket line near the Crater. The Taylor house and Fort Morton were located in the distance through the modern view shed (Photo by: Michael Wilkins, 1999).

elevations supplied by Richard Easterbrooke, GIS Specialist, Petersburg National Battlefield). The UTM coordinates of the four corners of the Excavation Trench are,

Northwest - 289149.928 , 4121771.828
Northeast - 289155.663 , 4121773.893
Southeast - 289156.386 , 4121771.886
Southwest - 289150.642 , 4121769.818
(Data supplied by Richard Easterbrook, GIS Specialist, Petersburg National Battlefield, Virginia)

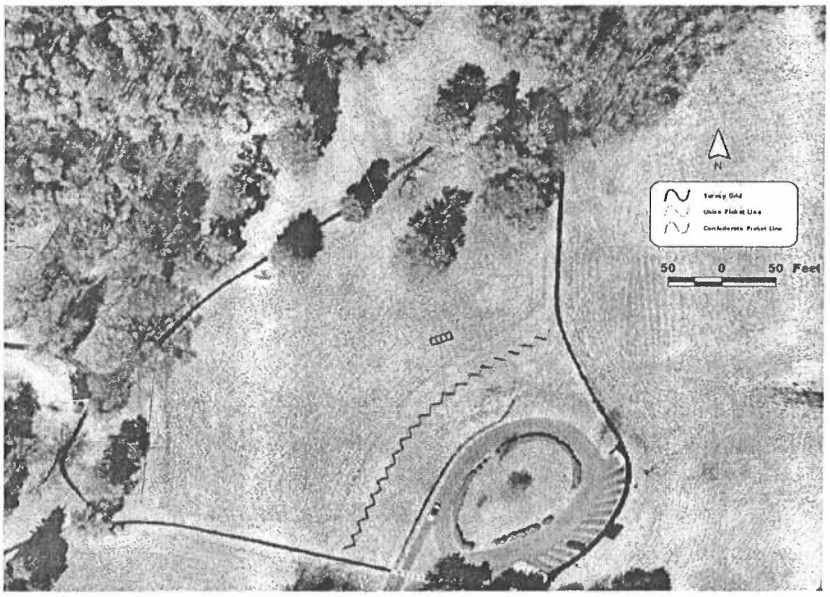


Figure 8. Geo-referenced photo showing the project area and excavation trench (Created by Richard Easterbrook, Petersburg National Battlefield).

The National Park Service has constructed a portion of the park's tour road and a parking lot for the Crater area to the south of the project area. The Crater interpretive trail begins at this parking lot and runs to the east of the project area, leading visitors to the mine tunnel entrance. The interpretive trail then follows the mine tunnel to the north of the project area going to the Crater (Figure 8).

Because of the openness and central location within the established interpretive trail, the project area is highly visible and readily accessible to visitors. This

accessibility lead, partially, to the success of the public interpretive program. Visitors were able to view the project from all four sides, and from within three feet on the roped off north side of the excavation trench. This allowed them to closely observe the process of archeology (excavation and record taking) and ask questions of project archeologists.

The open nature of the project area also made it very easy for archeologists to excavate. Excavators did not have to contend with larger tree roots and underbrush. The lack of shade made it possible to notice fine variations in soil color, which assisted in recording the complex features. The only detriment to the lack of shade was the short amount of time it would take for the soil to dry out, making excavating difficult in some situations.

Section Three

Methodology

The goal of the excavation component of the Federal picket line project was to sample a cross section of the filled picket trench. Project archeologists bisected the picket trench using a limited number of excavation units. The data recovered from the excavation provide information on the location, construction, and filling of the picket trench. The archeology also provided some insight into the daily lives of the troops who were stationed on the picket line.

To bisect the Federal picket line, project archeologists used four 5 x 7 ft excavation units to create a 20 x 7 ft long excavation trench. Archeologists assumed that the picket trench would be around 6.0 ft wide and that a 20-ft trench would successfully bisect the feature. By bisecting the picket line, researchers revealed the overall dimensions of the picket line, discovered construction and fill sequences, and found the remains of soldiers' daily life on the picket line.

Though no physical remains of the picket trench exist in the project area, considerable above ground evidence was present to help identify its location. Portions of the original trench exist around 200 ft to the north (grid north) of the project area. Historic interpretive signs marking the location of the trench exist around 100 ft away from the project area. Also, slight breaks in the slope of the hill containing the project area follows the path of the picket trench. Using these markers and historic maps, project archeologists chose the best possible location for placing the excavation units.

Archeologists established a random datum point at the southwest corner of Excavation Unit 1, which also served as the southwest corner of the entire excavation trench. Researchers established grid north 344 degrees from magnetic north so the excavation units could bisect the picket line perpendicularly, instead of diagonally. We established the remaining excavation units in numerical sequence to the east of Excavation Unit 1 and the datum point (Figure 8). The southwest corner stake for each excavation unit served as that unit's datum point.

The ground level of the datum point determined the base elevation for each excavation unit (Table 1). Researchers measured level lines from the datum point to each excavation unit's SW corner, marking the base elevation on each unit's datum stake. Archeologists took all measurements in reference to these points and elevation. All measurement readings were in tenths of feet.

Table 1. Excavation Unit Datum and Corner Elevations

	String Height (SW Datum)	SW	NW	NE	SE
Excavation Unit 1	0.1 ft (Above ground Level)	0.15 ft	0.00 ft	0.00 ft	0.17 ft
Excavation Unit 2	0.18 ft	0.3 ft	0.00 ft	0.46 ft	0.43 ft

Excavation Unit 3	0.53 ft	0.84 ft	0.31 ft	0.74 ft	1.05 ft
Excavation Unit 4	1.09 ft	1.23 ft	0.81 ft	1.1 ft	1.41 ft

String heights were measured from the ground level at the SW corner stake. Each corner stake was located on a bulk wall. Excavation unit heights were measured approximately 0.3 ft. from corner stakes to denote the distance caused by the bulk wall.

Researchers removed the sod cap by shovel skimming and screened the material. They excavated the underlying strata by changes in the soil. Natural level transformations were noted by changes in soil color, texture, or type of material encountered. If natural layers were not encountered, excavators used arbitrary 0.5 ft levels, numbering each level numerically (1, 2, 3, ...). Features were also numerically noted, based upon the order in which they were found. Units were excavated by hand using trowels, and shovel skimming and all materials were screened through 1/4 inch wire mesh. All artifacts were saved.

Researchers washed, labeled, and cataloged the artifacts in the Archaeology Heritage Resource Lab at the University of Maryland. The artifacts were catalogued using the Automated National Cataloging System. The artifacts, photographs, and field notes are stored at Petersburg National Battlefield.

Section Four

Excavation Summary

Project archeologists excavated four 5 x 7 ft excavation units that combined to form a 20 x 7 ft excavation trench. Researchers hoped to bisect the Federal picket line somewhere in this excavation trench. They were successful as the filled picket trench came into view within Excavation Units 2 and 3. Excavators also found several other features that attest to the project areas pre and post Civil War periods.

This section contains the data recovered from these excavation units. The first section describes each excavation unit in terms of the arbitrary levels excavated by archeologists. This includes the description and interpretation of these levels and encountered features and how they are related. The second section examines the natural stratigraphy, including its description, interpretation, and historic context. The third section takes a closer look at the features encountered by excavators.

Excavation Unit Summaries

Excavation Unit 1 Summary

Karen Ackerman, Regina Shaw, Gail Brown, Michelle Niedzwiadek

Excavation Unit 1 was the western most unit of the 20-ft trench excavation. Excavators hoped that this unit would display evidence of the earthen mound that would have protected the picket line behind it. Excavators also expected to find some evidence of the picket trench itself.

Level 1 is the overlaying sod cap and topsoil. The soil is a 10YR3/2 very dark grayish brown, sand loam. Researchers excavated the level to a depth of 0.26 ft in the southwest corner. The recovered artifacts include slag, brick fragments, charcoal, small pieces of metal, glass, and a percussion cap.

Level 2 is 0.46 ft deep in the southeast corner and it consists of a 10YR3/2 very dark grayish brown, mottled with 10YR3/4 dark yellowish brown, sandy loam. A small soil stain running through the middle of the unit had a 10YR2/2 very dark brown color. The level contains solarized glass, coal, slag, brick, a burnt nail, oyster shell, small iron pieces, small pieces of lead, and percussion caps. With the soil stain and burnt nature of the artifacts, it appears that refuse was being disposed in this area, or a possible fire occurred nearby. This level likely represents a pre and post war plow zone due to the mottled nature of the soil.

Level 3 is 0.86 ft deep in the southeast and southwest corners. The level consists of 2.5YR4/4 olive brown sandy loam and contains many coal fragments. Feature 2, a possible post hole was found in the middle of the western half of the unit. Artifacts found in association with the level, include coal, burned shell, glass, metal/iron pieces, two iron balls, and ceramic. Again this may be a refuse pile disposed along a fence line. This level is also part of a pre and post war plow

zone, with the post war refuse being mixed into the soil by agricultural activity.

Level 4 is 1.35 ft deep from the ground surface. Artifacts from the level include, glass, coal, pieces of lead and iron, percussion caps, two buckles, an artillery shell fragment, and a bullet. Feature 2 disappeared as *Level 4* ended. However, excavators discovered plow scars running from north to south on the unit floor. These plow scars contain a 10YR4/3 brown, sandy loam compared with the 2.5Y5/4 light olive brown, sandy loam of the surrounding soil. A small animal burrow existed in the northeast corner consisting of 2.5Y4/2 dark grayish brown, sandy loam. Feature 4 intrudes into Unit 1 in the southeast corner containing a mottled 2.5Y4/4 olive brown and 2.5Y5/4 light-olive brown soil. Researchers left this corner unexcavated so they could investigate it separately.

Level 5 is the unexcavated southeast corner consisting of the fill material from what was intially believed to be Feature 1, but was actually Feature 4. This level consists of 2.5Y4/4 olive brown and 2.5Y5/4 light-olive brown sandy loam and it was excavated to a depth of 1.45 ft. The level disappeared into the wall as archeologists excavated it. Artifacts recovered from this level include coal and percussion caps. In the southeast corner, two metal pieces protruded from an unexcavated level of Excavation Unit 2. These metal artifacts are 0.8 ft from the southeast corner along the east wall. This darker spot may be an extension of a feature from Excavation Unit 2.

Level 6 is 1.56 ft deep and contains 10YR5/4 yellowish brown and 10YR4/2 dark greyish brown sandy loam. The dark spot in the southeast corner contains a very dark greyish brown, sandy loam. This level exists below the plow zone and archeologists recovered only one piece of coal, except in the southeast corner. The level represents a possible transition to the underlying subsoil.
Level 7 is 1.9 ft deep, except the southeast corner, which was excavated separately. The soil consists of 2.5Y5/4 light olive brown, sandy loam with some traces of clay. The northern half of the unit contains more clay. Three small quartz flakes are in this level and they may be of prehistoric origin, but researchers will need to conduct further analysis. Excavators recovered no other artifacts from this level. At the end of this level the soil is orange and clayey.

Level 8 is the continued excavation of the darker stain in southeast corner (Feature 4). Archeologists excavated the level to a depth of 2.01 ft and it contains 10YR4/3 brown sandy loam. The soil becomes sandier as the level increases in depth. Within the level, excavators recovered preserved leather and several metal artifacts. The metal artifacts are still in situ because they protrude from un excavated portions of Excavation Unit 2. The leather artifacts include part of a leather strap attached to a buckle. The other leather artifact is a strip of leather with five brass rivets. Researchers believe the latter artifact is a portion of a bayonet scabbard, the former a strap from a knapsack. Excavators initially believed this darker stain was a portion of Feature 1, the picket trench fill, but upon further investigation classified it as a separate feature, Feature 4.

Level 9 contains 2.5Y5/4 light olive brown, sandy loam with an increased clay content. Archeologists excavated the level to a depth of 2.45 ft. They recovered two quartz flakes, which may be prehistoric. Because of the natural appearance and the lack of artifacts, excavators began

screening only every other bucket from the unit. Researchers have not included the southeast corner in this level.

Level 10 is the excavation of the northern half of Excavation Unit 1. Excavators tested to see if they had reached undisturbed soil without damaging the possible feature in the southeast corner. They excavated the level to a depth of 3.0 ft and it contains 2.5Y5/4 light olive brown, sandy loam with an increased amount of clay. The level contains no artifacts and is identical to the natural soil in Excavation Unit 4. It is very likely this level is natural subsoil.

Level 11 is a 1 x 1 ft excavation in the northwest corner of the unit. Researchers excavated it to a depth of 4.12 ft and it contains 2.5Y5/3 light olive brown, loamy sand, mottled with 10% 5YR4/6 yellowish red and 2.5Y5/2 greyish brown loamy sand with some clay. Excavators also encountered a loosely packed gravel. This is natural subsoil and the unit excavation ceased.

Feature 4 Levels A and B were excavated to a depth of 2.04 ft and consisted of 10YR5/4 yellowish brown, sandy loam mottled with 5% 10YR5/8 yellowish brown sand and a pocket of 2.5Y7/6 yellow sand. The soil is pebbly and fine. Artifacts associated with the feature include a canteen half, knapsack hook and leather, percussion caps and bone. The soil layers were very hard packed. The clay and pebbles used in the trench fill caused the fill material to become very hard and compact.

Feature 4 Level C was excavated to a depth of 2.4 ft consisting of 10YR5/4 brown sandy loam mottled with 50% 2.5Y6/4 yellowish brown sandy loam with patches of 2.5Y4/2 dark grey brown sandy loam and 2.5Y5/4 clay. Level C came down on Level 6 of Unit 2 which contained an olive brown clay and Level D. The feature sloped down toward the south wall of Excavation Unit 2.

Feature 4 Level D consisted of 2.5Y5/6 light brown olive brown clay. Researchers excavated the level to a depth of 2.54 ft. They recovered only one percussion cap, a second percussion cap was found but disintegrated upon recovery. Feature 4 is very evident within the south wall of Units 1 and 2. The feature consists of many compact layers of greasy grey and brown soil with many inclusions of decaying leather or rubberized canvas. This feature extended west approximately 2.5 ft from Feature 1, the picket trench.

Feature 4 Level E was excavated to a depth of 2.9 ft and consisted of 10YR5/4 yellowish brown, sandy loam mottled with 50% 2.5Y6/4 light yellowish brown sandy loam with patches of 2.5Y4/2 dark grey brown, sandy loam, 2.5Y5/4 sandy clay and 2.5Y5/6 light olive brown clay. The feature slopes to its deepest point of 2.88 ft at the southern wall of Excavation Unit 2. Feature 4 may be a remnant of the Battle of the Crater where Union troops attacked the Confederate position after the detonation of the Crater mine. The troops excavated a path through the Union works that allowed soldiers to pass through to attack the Confederate works one hundred yards away. After the failed attack, Union troops probably filled the exposed portion of their line with dirt from the trench floor and discarded equipment.

Feature 2 was a post hole feature encountered around 0.66 ft below datum and excavated to a depth of 1.29 ft. Archeologists excavated the feature separately from the surrounding soil

matrix. A mixture of soils was associated with the feature including, 10YR3/1 dark grey, sandy loam; 10YR4/3 brown, sandy loam; 2.5Y4/4 olive brown, sandy loam; and 10YR5/4 yellowish brown, sandy loam. Artifacts recovered from the feature include, two pieces of charred slate, a large piece of class, burned ceramic, bone, and metal. This may be a post hole associated with postwar farming activity by William Griffith or the fencing in of the Crater area in order to separate it from the surrounding twentieth century golf course.

Unit 1 Level Summary			
Level	Open Elev.	Close Elev.	Soil Type
Level 1	0.14 ft	0.26 ft	10YR3/2 Very dark greyish brown, sandy loam
Level 2	0.26 ft	0.46 ft	10YR3/2 Very dark greyish brown, sandy loam mottled with 30% 10YR3/4 dark yellowish brown sandy loam
Level 3	0.46 ft	0.86 ft	2.5YR4/4 Olive brown, sandy loam
Level 4	0.86 ft	1.35 ft	10YR4/3 brown, sandy loam; 2.5Y5/4 light olive brown, sandy loam; 2.5Y4/2 dark grayish brown, sandy loam; 2.5Y4/4 olive brown and 2.5Y5/4 light-olive brown soil
Level 5	1.18 ft	1.45 ft	2.5Y4/4 Olive brown and 2.5Y5/4 light olive brown, sandy loam
Level 6	1.35 ft	1.56 ft	10YR5/4 Yellowish brown, sandy loam mottled with 10YR4/2 dark greyish brown, sandy loam
Level 7	1.56 ft	1.9 ft	2.4Y5/4 Light olive brown, sandy loam with minute amount of clay
Level 8	1.54 ft	2.01 ft	10YR4/3 Brown, sandy loam
Level 9	1.91 ft	2.45 ft	2.5Y5/4 Light olive brown, sandy loam with increased clay
Level 10	2.45 ft	3.0 ft	Very loose, 2.5Y5/4 light olive brown, sandy loam with increasing clay, and few pebbles
Level 11	3.0 ft	4.12 ft	2.5Y5/3 Light olive brown, loamy sand mottled with 10% 5YR4/6 yellowish red and 2.5Y5/2 greyish brown, loamy sand; increasing clay and loosely packed gravel
Feature 4 Level A-B	1.58 ft	2.04 ft	A. Pebbly, 10YR5/4 yellowish brown, sandy loam mottled with 5% 10YR5/8 yellowish brown. B. Fine, 10YR5/8 yellowish brown, sandy loam
Feature 4 Level C	2.04 ft	2.4 ft	10YR5/4 Brown, sandy loam mottled with 25-50% 10YR5/8 yellowish brown, sandy loam with patches of 2.5Y4/2 dark greyish brown sandy loam and 2.5Y5/4 sandy clay

Feature 4 Level D	2.4 ft	2.54 ft	2.5Y5/6 Light olive brown sandy loam
Feature 4 Level E	2.54 ft	2.9 ft	10YR5/4 Yellowish brown, sandy loam mottled with 25-50% 2.5Y6/4light yellowish brown, sandy loam with patches of 2.5Y4/2 dark greyish brown, sandy loam, 2.5Y5/4 sandy clay, and 2.5Y5/6 light olive brown clay
Feature 2	0.66 ft	1.29 ft	10YR3/1 dark grey, sandy loam; 10YR4/3 brown sandy loam; 2.5Y4/4 olive brown, sandy loam; 10YR5/4 yellowish brown, sandy loam.

Excavation Unit 2 Summary

Teresa Cabanilla and Michael Wilkins

Excavation Unit 2 was between Excavation Units 1 and 3 along the 20-ft excavation trench.

Level 1 consists of 10YR3/2 very dark greyish brown, loamy sand, and researchers excavated it to a depth of 0.59 ft. The level contains the sod cap and mostly grass roots. Artifacts from the level include, ten pieces of glass, three nails, six pieces of coal, one stoneware sherd, two pieces of iron, and one oyster shell.

Level 2 is 0.76 ft deep. It contains 10YR3/2 very dark greyish brown, loamy sand mottled with 30% 10YR5/3 brown, loamy sand. As the level increases in depth, the amount of gravel also increases. Excavators also recovered a larger number of artifacts from this level compared with Level 1. Artifacts from this level include, glass fragments, one bullet, one iron buckle, six nails, coal, iron fragments, one button, and slag. It appears that this level is associated with a plow zone, however, it does contain a larger number of military artifacts. The artifacts may have come from agricultural activity disturbing the underlying trench feature.

Level 3 is 0.97 ft deep. The unit floor contains a slight soil difference dividing the unit with 1/3 10YR5/3 brown, sandy loam and 2/3 10YR5/4 yellowish brown with considerable more gravel. The lighter soil covers the eastern 2/3 of the unit. The brown soil covers the western 1/3. The artifacts from this layer mainly came from the yellowish brown soil. The artifacts include, one Union eagle button, a Confederate bullet, percussion caps, and glass fragments. The lighter colored soil with gravel is possibly the picket trench fill. This yellowish brown soil is Feature 1, and archaeologists investigated it separately from the surrounding brown soil.

Level 4 consists of very loose, 10YR5/4 yellowish brown, sandy loam and researchers excavated it to a depth of 1.36 ft. Artifacts include percussion caps, shell, coal, glass, and a possible quartz flake. A dark stain, a root stain, was found in the northwest corner. The stratum ends at a sandy level of light yellowish brown, sandy loam mottled with light olive brown, sandy loam. This level is to the west and runs parallel to Feature 1, the picket trench. This level is associated with agricultural activity and is likely associated with the plow scars found in the same level in Excavation Unit 1.

Level 5 is 2.19 ft deep and contains very loosely packed, 2.5Y5/3 light olive brown, sandy loam mottled with 40% 2.5Y4/3 olive brown, sandy loam. The soil has an increase in clay. Recovered artifacts include, two nails, one buckle, percussion caps, lead, coal, and possible quartz flakes. Most of the artifacts come from the area near Feature 1. Feature 1 sloped toward the southern wall and did not continue in the northern portion of the unit at this depth.

Level 6 contains 10YR5/6 yellowish brown, loamy sand mottled with 50% 2.5Y5/4 light olive brown, loamy sand. Project archeologists excavated it to a depth of 2.39 ft. Archeologists retrieved only one piece of coal and it appears that sterile subsoil was reached. This level covers most of Excavation Unit 2. Feature 4 is still visible in the southern portion of the unit, and Feature 1 is in the eastern quarter of the Unit. Excavators identified the bottom of the picket

trench floor as the surrounding sterile soil surrounding the trench feature increased.

Level 7 is only in the northern half of the unit as much of the southern portion contains Feature 4 and a portion of Feature 1. Archeologists excavated the level to a depth of 2.84 ft and it contains 2.5Y6/4 light yellowish brown, sandy loam mottled with 50% 10YR5/8 yellow brown, sandy loam. Excavators noticed an increase of clay and pebbles within the soil that corresponds with natural subsoil, which was also noted in Excavation Unit 1 and 4. No artifacts were recovered. Excavators closed the unit upon reaching the natural subsoil.

Unit 2-Feature 1 Level A began at 0.96 ft and was excavated to a depth of 1.29 ft. The soil consisted of very lose, 2.5Y6/4 light yellowish brown, sandy loam mottled with 2.5Y5/4 light olive brown, sandy loam. The entire level contained very compact, dense gravelly soil. Artifacts recovered include bullets, percussion caps (25 lost to disintegration during recovery), buttons, glass fragments from an ink well, pieces of iron, nails, grape shot, a cow bone, an iron screw, and coal. Further portions of the feature were found underlying Level 4, extending Feature 1 to the western portion of the unit. The trench fill was gravel and compact clay. This fill was perhaps from the embankment that would have been toward the front (west) of the trench. It is possible that this soil came from the excavated mine tunnel and therefore the very gravelly, clayey natural subsoil.

Unit 2-Feature 1 Level B was excavated to a depth of 1.61 ft. It contained 2.5Y5/4 yellowish brown sand mottled with 5% 7.5YR6/8 reddish yellow-sandy clay, and 5% 2.5Y6/4 light yellowish brown, very fine sand. The soil became less gravelly, but it had more patchy sand deposits. Artifacts recovered from this level include a cartridge box tin, cuff button, three bullets, iron nails, bone, glass, percussion caps. The feature covered the eastern two thirds of Excavation Unit 2 at this level. However, the feature tapered toward the east in the northern half of the unit.

Unit 2-Feature 1 Level C contained a 2.5Y5/4 light olive brown, sandy loam mottled soil with 10% 2.5Y6/4 light yellowish brown sand, 5% 2.5Y4/3 olive brown loamy sand, and 5% 7.5YR5/6 strong brown, sandy clay. The soil was still gravelly with increasing sand pockets in the southern half of the unit. Researchers excavated this level to a depth of 1.75 ft. Excavators recovered an Enfield bullet, percussion caps (27 disintegrated during recovery), a glass fragment, coal, and wood fragments.

Unit 2-Feature 1 Level D was excavated to a depth of 2.31 ft and it contained a 10YR5/4 yellowish brown, sandy loam soil that was mottled with 5% 2.5Y7/3 pale yellow sand, and 5% 5YR5/8 yellowish, red sandy clay. The soil became less gravelly with more sandy fill. Artifacts found include fired bullets, percussion caps, and bone. This level came down on two levels along the western edge of the unit of predominantly olive brown clay mottled with 20% strong brown clayey sand. This soil is probably associated with Feature 4, which extends to the west from Feature 1. This area may be an extension of the picket trench or an excavated path leading out of the trench. Excavators noted that the stratigraphy in this area is very muddled with many different layers of soil coming together.

Unit 2-Feature 1 Level E contained 2.5Y5/4 light brown, sandy clay mottled with 10% 2.5Y4/3

sandy clay, and 5% 7.5YR5/8 sandy clay. Archeologists excavated the level to a depth of 2.85 ft. Excavators recovered pieces of iron, bullets, percussion caps, and two Spencer casings. The feature at this level covered only the eastern quarter of Excavation Unit 2. Feature 4 extended to the west from Feature 1 in the southern half of the Unit. The Feature sloped to the south as the feature moved 0.5 ft from the northern wall of the unit. The bottom of the picket trench was reached.

Unit 2-Feature 1 Level F was excavated to a depth of 3.23 ft. The level contained 2.5Y5/4 sandy clay mottled with 10% 2.5Y4/3 sandy clay, and 5% 7.5YR5/8 sandy clay. The soil became very gravelly and excavators encountered patches of olive brown clay. This matrix represents subsoil. Excavators also dug a small window in the underlying soil and encountered sterile subsoil (high clay content with gravel). The feature was closed.

Feature 5 was found near the northwestern edge of Feature 1. The feature contained 2.5Y5/4 light olive brown sandy loam mottled with 2.5Y6/4 light olive brown sandy loam. It was found around a depth of 2.86 ft. and was excavated to a depth of 3.45 ft. No artifacts were found associated with the feature, but the feature was very constant throughout. The feature may represent a post hole used to support a canvas shelter over the picket trench. No other explanation for the feature exists, unless it is simply an animal burrow.

Excavation Unit 2 Level Summary			
Level	Open Elev.	Close Elev.	Soil Type
Level 1	0.0 ft	0.59 ft	10YR3/2 Very dark greyish brown, loamy sand / sod level
Level 2	0.59 ft	0.76 ft	10YR3/2 Very dark greyish brown, loamy sand mottled with 30% 10YR5/3 brown, loamy sand
Level 3	0.76 ft	0.97 ft	10YR5/3 Brown, sandy loam and 10YR5/4
Level 4	0.97 ft	1.36 ft	Very loose, 10YR5/4yellowish brown, sandy loam
Level 5	1.36 ft	2.19 ft	Very loosely packed 2.5Y5/3 light olive brown, sandy loam mottled with 40% 2.5Y4/3 olive brown sandy loam
Level 6	2.19 ft	2.39 ft	10YR5/6 Yellowish brown, loamy sand mottled with 50% 2.5Y5/3 light olive brown loamy sand
Level 7	2.39 ft	2.84 ft	2.5Y6/4 Light yellowish brown, loamy sand mottled with 50% 10YR5/8 yellowish brown, loamy sand with clay and pebbles increasing
Feature 1 Level A	0.96 ft	1.29 ft	2.5Y6/4 Light yellowish brown, very loamy sand mottled with 15% 2.5Y5/4 light olive brown, loamy sand; soil very gravelly and compact

Feature 1 Level B	1.29 ft	1.61 ft	Not as gravelly, 2.5Y5/4 yellowish brown sand mottled with 5% 7.5YR6/8 reddish yellow, sandy clay, and 5% 2.5Y6/4 light yellowish brown, very fine sand
Feature 1 Level C	1.61 ft	1.75 ft	Gravelly with increasing sand pockets, 2.5Y5/4 light olive brown, sandy loam mottled with 10% 2.5Y6/4 light yellowish brown sand, 5% 2.5Y4/3 olive brown loam, and 5% 7.5Y5/6 strong brown, sandy clay
Feature 1 Level D	1.75 ft	2.31 ft	Less gravelly, 10YR5/4 yellowish brown, sandy loam mottled with 5% 2.5Y7/3 pale yellow sand and 5% 5YR5/8 yellowish red, sandy clay
Feature 1 Level E	2.31 ft	2.85 ft	2.5Y5/4 light brown, sandy clay mottled with 10% 2.5Y4/3 sandy clay, 5% 7.5YR5/8 sandy clay
Feature 1 Level F	2.85 ft	3.23 ft	Very pebbly 2.5Y5/4 sandy clay mottled with 10% 2.5Y4/3 sandy clay, 5% 7.5YR5/8 sandy clay
Feature 5	2.86 ft	3.45 ft	2.5Y5/4 light olive brown sandy loam mottled with 2.5Y6/4 light olive brown sandy loam.

Excavation Unit 3 Summary

Brandon Bies

Excavation Unit 3 is the third excavation unit in a four-unit excavation trench running perpendicular to the Federal picket line.

Level 1 ends at a depth of 0.88 ft. The level contains the sod level with grass roots and 10YR3/2 very dark greyish brown loamy sand. A high gravel content exists on the eastern side with a possible feature in the southeast corner containing considerable gravel. Recovered artifacts include oyster shell, coal and charcoal, a percussion cap, bottle glass, iron pieces, and three 5 inch long nails found lying in a right triangle pattern. It is unclear why the nails were found in this pattern.

Level 2 contains 5Y5/3 olive, loamy sand mottled with 25% 2.5Y4/3 olive brown sandy loam. The level is highly mottled with the soil being very loamy sand. A circular iron stain 4 inches in diameter was found in the northwest corner approximately 1.5 ft from the west wall and 0.5 ft from the north wall. Researchers excavated the level to a depth of 1.01 ft. Recovered artifacts include, glass fragments, ceramic, twenty percussion caps, a nail, four bullets, 40 pieces of iron, coal, four pieces of lead bullet fragments, and a possible quartz flake (highly doubtful). The iron stain was part of Feature 1 and it was excavated separately. Excavations came down on a fill area that contained gravel and sandy patches. The majority of this level is associated with post war landscape use, including agricultural activity and golf course grading.

Level 3 contains 2.5Y4/3 olive brown, very loamy sand highly mottled with 20% 2.5Y3/2 very dark grey brown, loamy sand. The level came down on a level containing a stain consisting of highly compacted, 2.5Y6/4 light yellowish brown sand containing gravel 1-2 inches in diameter. This stain covers the western two thirds of the unit. The eastern third of the unit contains looser, loamy sand. Archeologists excavated the level to a depth of 1.33 ft. Though artifacts were found within and outside the stain, only military artifacts (percussion caps) were found within the stain. Excavators designated the stained area the eastern portion of Feature 1 (See Excavation Unit 2 Summary) the filled picket trench. Excavators noted that the feature is very defined in the northern portion of the unit, but it is less defined in the southern half. Artifacts recovered from the level include percussion caps, pieces of iron, glass fragments, and coal.

Level 4 is the soil surrounding Feature 1 within Excavation Unit 3. This soil comprises approximately the eastern third of the unit. The level contains 2.5Y4/4 olive brown, very sandy loam lightly mottled with 7% 2.5Y6/4 light yellowish brown, loamy sand. This level is increasingly mottled with very little gravel and loose sandy soil. This matrix is similar to what was found in Excavation Unit 4 Level 4. This soil may represent a plow zone layer surrounding the picket trench. Researchers excavated the level to a depth of 1.52 ft. Artifacts recovered from the unit include a bullet, a piece of iron, charcoal, and one percussion cap. Many of these artifacts are from the transition area between Feature 1 and the surrounding soil.

Level 5 is 1.91 ft deep and contains 2.5Y7/4 pale yellow sand mottled with 40% 2.5Y5/4 light olive brown sand. The sand is very loose in texture. This level covers the eastern half of the unit

with Feature 1 Levels C and D comprising the western half. There is a very low artifact count similar to what was found in the same level in Excavation Unit 4. Artifacts include one percussion cap and one piece of charcoal.

Levels 6 and 7 end at a depth of 2.48 ft. These levels cover the eastern half of the unit with Feature 1 comprising the western half. These levels contain 2.5Y7/4 pale yellow sand mottled with 40% 2.5Y5/4 light olive brown sand. The soil is loose in texture. Excavators recovered no artifacts from these levels. When compared with similar levels in Excavation Units 1 and 4 it is evident that this level is natural subsoil. There is only an arbitrary difference between levels 6 and 7. These levels did cover more than half of the unit floor as Feature 1 sloped down toward the west.

Level 8 contains 10YR5/4 yellowish brown, sandy clay and 10YR6/3 pale brown sandy loam. Gravel appears throughout the level. Feature 1 remained only in the western 0.5 ft to 1.0 ft section of the unit. Researchers excavated the level to a depth of 2.85 ft and recovered no artifacts. Based upon similar findings in Excavation Unit 1 and 4 this is natural subsoil and the unit (except Feature 1) was closed.

Unit 3-Feature 1 Level A began around 0.96 ft and was excavated to a depth of 1.44 ft. The level contained 2.5Y6/4 light yellowish brown sand and 2.5Y5/4 light olive brown, loamy sand. The level is very gravelly and compact. This matrix is very similar to Feature 1 in Excavation Unit 2. The feature's edge was not very well defined. Artifacts recovered from this level include percussion caps (thirty-one disintegrated during recovery), glass, iron, two bullets, and coal.

Unit 3-Feature 1 Level B was excavated to a depth of 1.59 ft and contained 2.5Y6/4 light yellowish brown sandy loam mottled with 15% 7.5YR5/6 strong brown, clayey sand. The soil is less gravelly and compact with 20% of the level filled with pebbles. The edge of the feature became more defined with the feature covering the western half of the unit. Artifacts recovered from this level include twenty-five percussion caps (fifteen disintegrated during recovery), glass fragments, lead fragments, iron fragments, a tin button, and an iron nail.

Unit 3-Feature 1 Level C consisted of 2.5Y5/4 light olive brown loamy sand mottled with 15% 5YR5/6 yellowish red, sandy clay and 2.5Y4/3 olive brown, sandy loam in the southwest corner. The level is gravelly with clay inclusions and a sand pocket in the southwest corner. Researchers excavated the level to a depth of 2.03 ft. The feature is sloping to the south as the feature was no longer found near the north wall. The feature sloped toward the west as it receded from the eastern portion of the unit. Excavators recovered a fired bullet, an iron nail, percussion caps (twenty disintegrated during recovery), wood fragments, and a tin button. The compactness and gravel content of the soil made it very difficult to recover percussion caps.

Unit 3-Feature 1 Level D was excavated to a depth of 2.4 ft. The level contained 2.5Y5/4 light olive brown, sandy loam mottled with 30% 10YR5/8 yellowish brown, sandy clay, 20% 2.5Y4/1 dark grey, sandy loam, and 5% 2.5Y6/1 light grey clay. The soil had a sandy loam texture with pockets of clay and many pebbles throughout. The feature stretched from the southern wall to within 1. 7 ft of the north wall. The northern edge of the feature had a square shape. Artifacts recovered include a dropped Union bullet, percussion caps, glass, and preserved canvas in the

southwest corner. Canvas was found throughout the southern 2.0 ft of the feature. This level was close to the floor of the picket trench. Soldiers probably caused the highly mottled soil matrix on the trench floor by walking through the trench when it was muddy.

Unit 3-Feature 1 Level E was excavated to a depth of 2.8 ft and contained a mixture of soils. The level contains 40% 2.5Y5/4 light olive brown, sandy loam, 30% 2.5Y6/4 light yellowish brown sand, 20% 2.5Y4/2 dark greyish brown, sandy loam, 5% 2.5Y5/1 grey clay, and 5% 10YR5/8 yellowish brown, sandy clay. Soldiers may have caused this mixture of soils by walking on the trench floor when the soil was muddy. Recovered artifacts include bullets, percussion caps, and a Spencer cartridge casing.

Unit 3-Feature 1 Level F was excavated to a depth of 3.12 ft. The level contained 10YR5/4 yellowish brown, sandy loam and 10YR4/4 dark yellowish brown, sandy loam. Artifacts recovered from this level include a bullet, percussion caps, charcoal, and canvas. The feature bottomed out and excavators encountered natural subsoil. Archeologists excavated a small window to test the underlying soil, and based upon findings in Excavation Units 1 and 4 and the surrounding matrix they determined they reached subsoil.

Excavation Unit 3 Level Summary			
Level	Open Elev.	Close Elev.	Soil Type
Level 1	0.7 ft	0.88 ft	10YR3/2 Very dark greyish brown, loamy sand / sod level
Level 2	0.88 ft	1.01 ft	5Y5/3 Olive, very loamy sand mottled with 25% 2.5Y4/3 olive brown, loamy sand
Level 3	1.01 ft	1.33 ft	2.5Y4/3 Olive brown, very loamy sand mottled with 20% 2.5Y3/2 very dark greyish brown, loamy sand
Level 4	1.33 ft	1.52 ft	2.5Y4/4 Olive brown, very sandy loam lightly mottled with 7% 2.5Y/4 light yellowish brown, slightly loamy sand
Level 5	1.52 ft	1.91 ft	2.5Y7/4 Pale yellow, loose sand mottled with 40% 2.5Y5/4 light olive brown, loose sand
Level 6 & 7	1.91 ft	2.48 ft	2.5Y7/4 Pale yellow, loose sand mottled with 40% 2.5Y5/4 light olive brown, loamy sand
Level 8	2.48 ft	2.85 ft	10YR5/4 Yellowish brown, sandy clay and 10YR6/3 pale brown, sandy loam containing some pebbles
Feature 1 Level A	0.96 ft	1.44 ft	Very gravelly and compact, 2.5Y6/4 light yellowish brown sand and 2.5Y5/4 light olive brown, very loamy sand
Feature 1 Level B	1.44 ft	1.59 ft	2.5Y6/4 Light yellowish brown, sandy loam mottled with 15% 7.5YR5/6 strong brown, clayey sand; less gravelly 20% pebbles

Feature 1 Level C	1.59 ft	2.03 ft	2.5Y5/4 Light olive brown, loamy sand mottled with 15% 5YR5/6 yellowish red, sandy clay and 2.5Y4/3 olive brown, sandy loam; gravel increasing with clay inclusions
Feature 1 Level D	2.03 ft	2.4 ft	Gravelly, 2.5Y5/4 light olive brown, sandy loam mottled with 30% 10YR5/8 yellowish brown, sandy clay, 20% 2.5Y4/1 dark grey, sandy loam, and 5% 2.5Y6/1 light grey clay
Feature 1 Level E	2.4 ft	2.8 ft	Gravelly, 40% 2.5Y5/4 light olive brown, sandy loam; 30% 2.5Y6/4 light yellowish brown sand; 20 % 2.5Y4/2 dark greyish brown, sandy loam; 5% 2.5Y5/1 grey clay; and 5% 10YR5/8 yellowish brown, sandy clay
Feature 1 Level F	2.8 ft	3.12 ft	10YR5/4 Yellowish brown, sandy clay mixed with 10YR4/4 dark yellowish brown, sandy loam with some gravel.

Excavation Unit 4 Summary

Michelle Niedzwiadek and Brandon Bies

Excavation Unit 4 was located on the eastern end of the 20-ft trench excavation.

Level 1 is 1.45 ft deep and consists of 10YR3/2 very dark greyish brown, loamy sand. This level contains the sod level with many roots. Artifacts recovered from Level 1, include one piece of canister, six percussion caps, five pieces of coal, two pieces of glass, one nut, four pieces of iron, a piece of brick, and an oyster shell. It was surprising to find several military artifacts near the surface. This portion of the trench excavation is the beginning of the downward slope of a hill, and the artifacts may have been exposed by erosion or possibly grade leveling after the Civil War.

Level 2 ends at a depth of 1.66 ft and contains 5Y5/3 olive sandy loam with 25% mottled with 2.5YR4/3 olive brown loamy sand. The southwest quadrant has a very high concentration of gravel. Artifacts found in this level include, percussion caps, coal, brick, oyster shell, iron, lead, a piece of cannister, and a bullet. The mixed and mottled nature of this level displays the appearance of a plow zone level.

Level 3 is 1.82 ft deep and contains 7.5YR4/3 brown, loamy sand with 15% mottled with 10YR5/4 yellowish brown loamy sand. This level has an increase of yellowish soil and the brown decreases marking a change in levels. The number of artifacts recovered decreases with only nine pieces of coal, eleven pieces of iron, glass, two nails, and three percussion caps being found.

Level 4 is 2.2 ft deep and contains less gravel than preceding levels. It consists of 10YR5/4 yellowish brown, loamy sand with 30% mottled with 7.5YR4/3 brown, loamy sand and 15% mottled with 10YR4/2 dark greyish brown, loamy sand. No artifacts were found in this level, though the southwest quadrant contained a few flecks of charcoal (possibly decaying plant mass). Excavators discovered a rodent burrow and Feature 3 in this level. The burrow runs through the center of the unit from north to south. Feature 3 was along the northern wall a little over 1.0 ft from the northwest corner. Feature 3 may be another possible post hole.

Level 5 ends at a depth of 2.65 ft. It contains 10YR5/4 yellowish brown, loamy sand mottled with 15% 10YR6/4 light yellowish brown, loamy sand and 10% 10YR5/8 yellowish brown, loamy sand. Excavators encountered no artifacts in the level, however, the stratum contains gravel toward the bottom of the level. Feature 3 continues to run through the level. This level is probably the beginning of the natural subsoil or a transition zone to the subsoil.

Level 6 contains 2.5YR6/4 yellowish brown, loamy sand mottled with 15% 2.5YR5/4 light olive brown, loamy sand and 5% 2.5YR 6/3 light yellowish brown, loamy sand. Archeologists excavated the level to a depth of 3.02 ft. Again, no artifacts were found. The level ends as new level containing small gravel is encountered. It is very likely that this level is part of the natural subsoil.

Level 7 is a small test window in the northeast corner of the unit. Excavators believe they had come to sterile soil and wanted to test the stratigraphy of the layers below Level 6. Archeologists excavated the level to a depth of 3.65 ft and it contains 10YR5/6 yellowish brown loamy sand mottled with 10% 2.5Y7/2 light grey loamy sand. They recovered no artifacts. The gravel content of the soil increased as the level went deeper.

Level 8 is an excavation within the small test window in the northeast corner of the unit to a depth of 4.42 ft. It contains 10YR5/6 yellowish brown, sandy clay mottled with 15% 2.5Y7/2 light grey loamy sand. The level contained no artifacts, but did have 1-2 inches diameter loosely packed gravel. Excavators determined this was sterile soil and closed out the unit.

Feature 3 was located along the north wall of the unit about 1.0 ft from the northwest corner of the Excavation Unit 4. The feature was first encountered at the bottom of Level 4 at 1.7 ft and was excavated separately from the surrounding strata. Feature 3 was excavated to a depth of 3.9 ft and consisted of 10YR4/2 dark greyish brown, very sandy loam. The soil was very loosely packed and only contained 3 pieces of coal. The feature is most likely associated with a rodent burrow as excavators saw many connecting burrows in the lower layers of the feature. It is very unlikely associated with human activity.

Unit 4 Level Summary			
Level	Open Elev.	Close Elev.	Soil Type
Level 1	1.15 ft	1.45 ft	10YR3/2 Very dark greyish brown, loamy sand / sod level
Level 2	1.45 ft	1.66 ft	5Y5/3 Olive, sandy loam mottled with 25% 2.5Y4/3 olive brown loamy sand
Level 3	1.66 ft	1.82 ft	7.5YR4/3 Brown, loamy sand mottled with 15% 10YR5/4 yellowish brown loamy sand
Level 4	1.82 ft	2.2 ft	10YR5/4 Yellowish brown, loamy sand mottled with 30% 7.5YR4/3 brown, loamy sand, and 15% 10YR4/2 dark greyish brown loamy sand
Level 5	2.2 ft	2.65 ft	10YR5/4 Yellowish brown, loamy sand mottled with 15% 10YR6/4 light yellowish brown, loamy sand, and 10% 10YR5/8 yellowish brown loamy sand
Level 6	2.65 ft	3.02 ft	2.5YR6/4 Light Yellowish brown, loamy sand mottled with 15% 2.5Y5/4 light olive brown, loamy sand, and 5% 2.5YR6/3 light yellowish brown, loamy sand
Level 7	3.02 ft	3.65 ft	10YR5/6 Yellowish brown, loamy sand mottled with 10% 2.5Y7/2 light grey, loamy sand
Level 8	3.65 ft	4.42 ft	Loosely packed gravel with 10YR5/6 yellowish brown, sandy clay mottled with 15% 2.5Y7/2 light grey loam.

Feature 3	1.7 ft	3.9 ft	Very loosely packed, 10YR4/2 dark greyish brown, very sandy loam

Stratigraphy Summary

Excavators encountered four basic soil strata plus associated features. These layers were most apparent in the north and south wall profiles. The following section summarizes these soil strata and features in greater depth.

North Wall Profile

Researchers were able to record the entire profile of the excavation trench's north wall. The trench was 20 ft long and around 3.25 ft deep, nearly 4.5 ft in its deepest point. Researchers recorded four major soil strata, a cultural feature, and one natural feature.

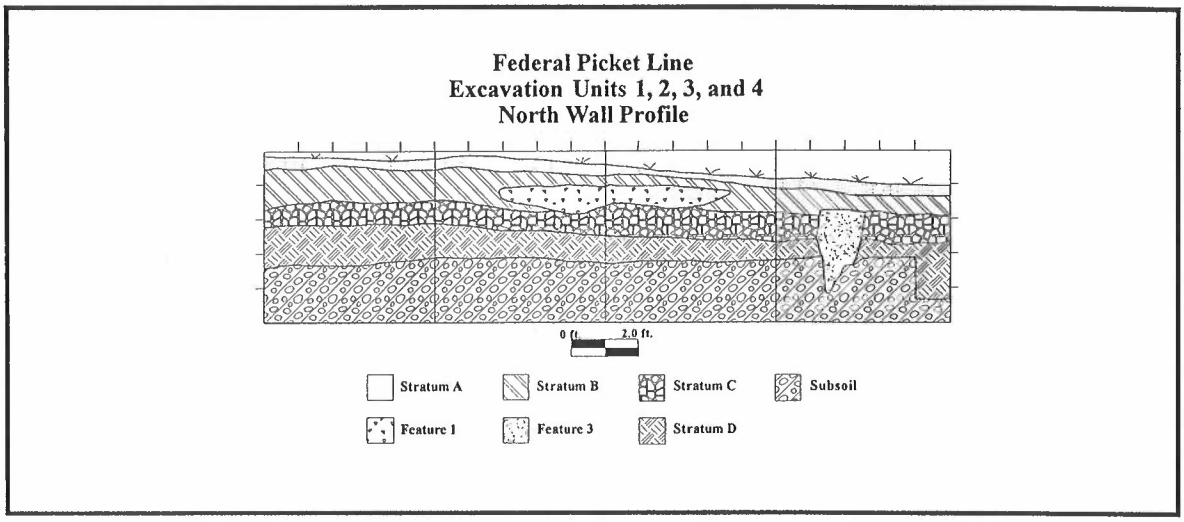


Figure 9. North Wall Profile

Stratum A - Stratum A is a topsoil layer including the sod cap and root mass with a 2.5Y4/3 olive brown, sandy loam. The average depth of the stratum is 0.25 ft. The layer was very consistent with no large inclusions stretching into lowers layers. Excavators recovered a variety of artifacts dating from the late nineteenth and early twentieth centuries. Some military artifacts were recovered from this stratum especially percussion caps. These military artifacts were probably deposited in this layer through agricultural and landscape grading activities.

Stratum B - Stratum B is a plow zone layer that averages 1.0 ft in depth. Agricultural activity before and after the Civil War combined with landscape grading associated with the Crater golf course are the factors creating this layer. Researchers believe this layer is associated with both pre and post war activity because the layer encases Feature 1, which is associated with the Siege of Petersburg. Plow scars found in Excavation Unit 1 near the interface with Stratum C display the pre war, agricultural origin of this layer (Figures 10 & 11). The soil in this layer consists of 2.5Y5/3 light olive brown, sandy loam that becomes increasingly mottled with 10YR5/4 and 2.5Y5/2. The sandy soil had a very loose consistency with very little gravel mixed in.

Stratum C - Stratum C is an interface layer with the underlying subsoil. The soil is a 2.5Y6/4

light yellow brown, loose, sandy silt that contains little gravel. The presence of clay and gravel increased as researchers excavated the layer. The soil also has a greater compacted texture than other layers. Excavators recovered only a few artifacts from this stratum, and most of them were found in the interface with Stratum B and Feature 1. The stratum's average depth is 0.4 ft. The layer ends upon a very compact, clay and gravel filled subsoil.

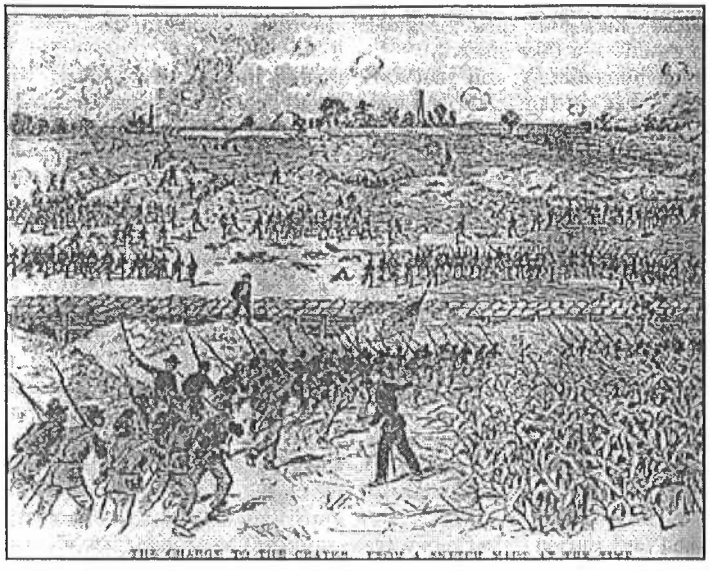


Figure 10. The Charge to the Crater by A. R. Waud. Note the corn growing in the foreground attesting to the agricultural use of the area before the siege.

Stratum D/Subsoil - Stratum D is the excavated portion of the subsoil. Soil from this layer was very compact and filled with clay and gravel. The soil consisted of 10YR6/3 yellowish brown, silty sand. Excavating this level was very difficult, and excavators had to remove large chunks at a single time as they troweled the soil. No artifacts were found in association with the stratum.

Feature 1 - Feature 1 was the filled Federal picket trench. The feature is in the middle of the profile showing that the picket trench had a slope to the south (See south wall profile). The feature on the north wall has an average depth of 0.8 ft. The soil found in the feature had a lighter color and very compact, sandier texture then the surrounding matrix. The feature also had a higher concentration of gravel present than the soil surrounding it. Some historical accounts describe soil being excavated from the mine tunnel being used in sandbags upon the trench's parapets. Gravel taken from the subsoil within the mine tunnel could have been redeposited in the picket trench as the parapets were eroded or pushed into the

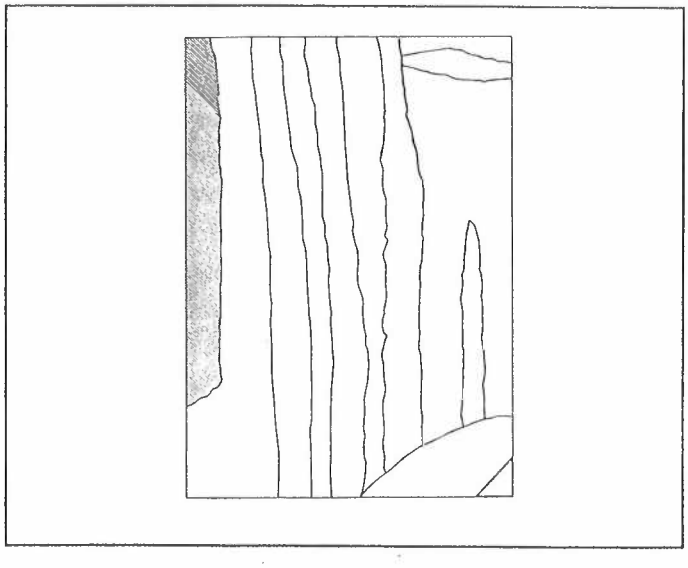


Figure 11. Planview of Unit 1 Level 4 showing plowscars

trench. Excavators recovered the greatest amount of artifacts from this feature.

Feature 3 - We believe Feature 3 was a mammal burrow. An animal probably created the feature while the Griffiths were using the project area as an agricultural field. The feature contained darker, loosely packed, loamy soil and averaged about one ft in width. The feature is 2.5 ft in depth. Though they do not appear on any maps of the feature, small horizontal tunnels branch off from the main feature at its bottom. Agricultural activity probably filled the feature.

South Wall Profile

Researchers were able to record the entire profile of the excavation trench's south wall. The excavation trench along the south wall was around 3.0 ft deep with the deepest section near 3.4 ft deep. Excavators recorded four soil strata, 2 features, and 2 inclusions.

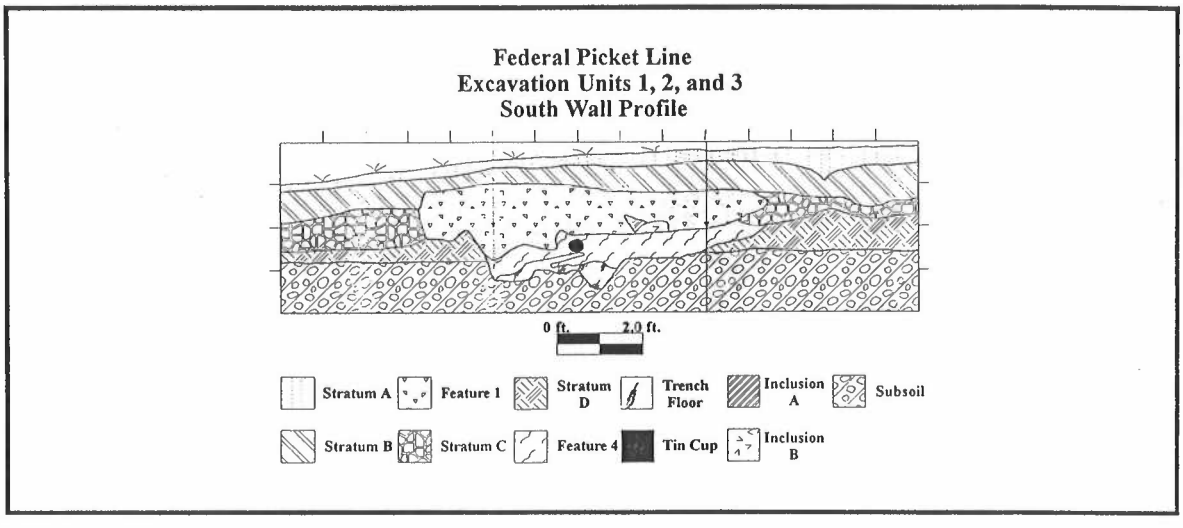


Figure 12. South Wall Profile

Stratum A - Stratum A is a topsoil layer including the sod cap and root mass with a 2.5Y4/3 olive brown, sandy loam. The average depth of the stratum is 0.25 ft. The layer was very consistent with no large inclusions stretching into lowers layers. Excavators recovered a variety of artifacts dating from the late nineteenth and early twentieth centuries. Some military artifacts were recovered from this stratum especially percussion caps. These military artifacts were probably deposited in this layer through agricultural and landscape grading activities.

Stratum B - Stratum B is a plow zone layer that averages 1.0 ft in depth. Agricultural activity before and after the Civil War combined with landscape grading associated with the Crater golf course are the factors creating this layer. Researchers believe this layer is associated with both pre and post war activity because the layer encases Feature 1, which is associated with the Siege of Petersburg. Plow scars found in Excavation Unit 1 near the interface with Stratum C display the pre war, agricultural origin of this layer. The soil in this layer consists of 2.5Y5/3 light olive brown, sandy loam that becomes increasingly mottled with 10YR5/4 and 2.5Y5/2. The sandy soil had a very loose consistency with very little gravel mixed in.

Stratum C - Stratum C is an interface layer with the underlying subsoil. The soil is a 2.5Y6/4 light yellow brown, loose, sandy silt that contains little gravel. The presence of clay and gravel increased as researchers excavated the layer. The soil also has a greater compacted texture than other layers. Excavators recovered only a few artifacts from this stratum, and most of them were found in the interface with Stratum B and Feature 1. The stratum's average depth is 0.4 ft. The layer ends upon a very compact, clay and gravel filled subsoil.

Stratum D - Stratum D is the excavated portion of the subsoil. Soil from this layer was very compact and filled with clay and gravel. The soil consisted of 10YR6/3 yellowish brown, silty sand. Excavating this level was very difficult, and excavators had to remove large chunks at a single time as they troweled the soil. No artifacts were found in association with the stratum.

Feature 1 - Feature 1 was the filled Federal picket trench. The feature is in the middle of the profile showing that the picket trench had a slope to the south (See north wall profile). The feature on the south wall has an average depth of 1.0 ft. Soil found in the feature had a lighter color and very compact, sandier texture then the surrounding matrix. The soil consisted of 10YR6/4 light yellowish brown, sandy loam. The feature also had a higher concentration of gravel present than the soil surrounding it. Some historical accounts describe soil being excavated from the mine tunnel being used in sandbags upon the trench's parapets. Gravel taken from the subsoil within the mine tunnel could have been redeposited in the picket trench as the parapets were eroded or pushed into the trench. Excavators recovered the greatest amount of artifacts from this feature.

Feature 4 - Feature 4 was a separate sequence within the Federal picket trench and averaged 0.8 ft in depth. The feature consisted of 2.5Y5/4 light olive brown clay mottled with 2.5Y6/6 olive yellow fine sand. The mottling has the appearance of horizontal linear bands. This strata may show the trench floor demonstrating the mixing caused by soldiers walking in mud. Since Feature 4 did not occur across the excavation units, excavators may have nicked the northern portion of a larger feature. Only further testing to the south of our excavation units would confirm this hypothesis and support the idea that this is the trench floor.

Inclusion A - Inclusion A consists of 2.5 Y8/4 pale yellow sand mottled with 2.5Y6/6 olive yellow sand, and averages 0.3 ft. in depth. The nature of this inclusion is unclear. The only appearance of this inclusion is in the profile. Excavators may have only excavated a small portion of the inclusion with the remainder located further south. It may represent a different type of soil used in backfilling the picket trench, however, no conclusive evidence was found.

Inclusion B - Inclusion B consists of 10YR5/4 yellowish brown clay containing leather. Similar to Inclusion A, the nature of this inclusion is unclear. Again, the only appearance of the inclusion was in the profile. Because of the presence of leather in the inclusion, excavators may have nicked a portion of another feature. However, the leather and different soil type may also represent a different period in the backfilling sequence of the picket trench.

East and West Wall Profiles

The strata encountered within the east and west walls correspond to the strata found in the north and south profiles. All four strata A, B, C, and D are continuous at the intersections between the various trench walls. The major finding from the examination of the east and west walls is the possible amount of erosion that has occurred over time.

Strata A and B have much greater depth on the west wall. By comparison, the same stratum in the east wall have 50% less depth. Two possible explanations exist that may explain this phenomenon. The first is the amount of erosion that has occurred in the project area due to agricultural activity and landscape grading after the Civil War. The east wall is on the downward slope, and heavy rains may have washed portions of the topsoil and plowzone away. However, the west section of the trench is also on the same downward slope, and should have experienced the same effect.

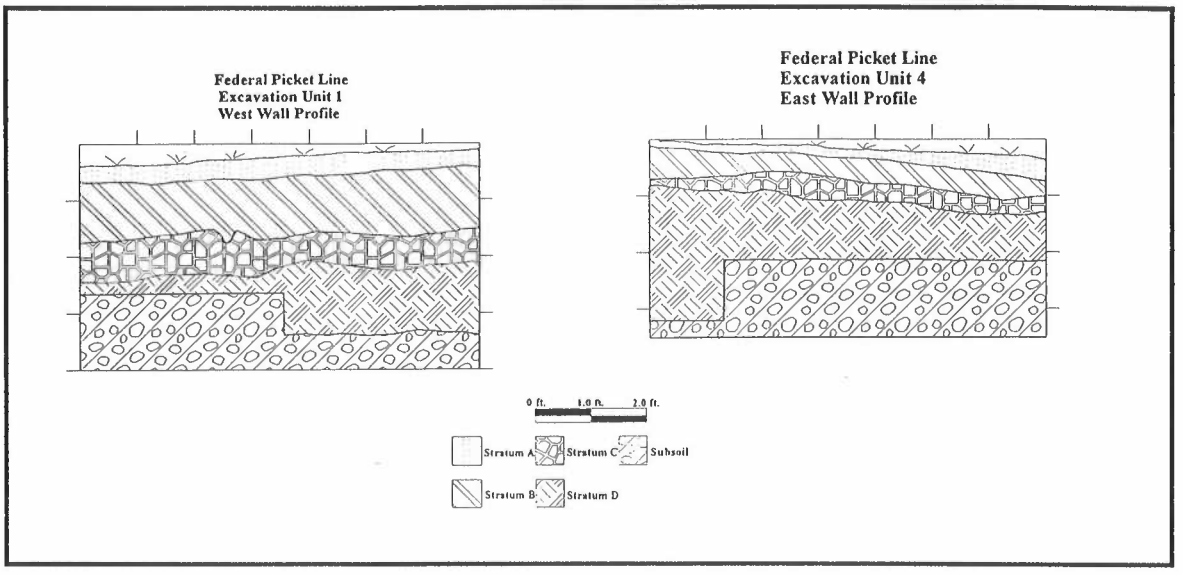


Figure 13. East and West wall profiles.

The second and more probable explanation is the build up of the Federal picket line. Federal troops would have piled excavated material from the picket trench and mine tunnel in the front of their position to form an earthen berm, which would have existed on the western portion of the excavation trench. Though the majority of this earthen berm would have been used by William Griffith to fill the picket trench, some of the material would have remained. This remaining material would have caused Strata A and B to have a greater depth. The mixed, mottled, nature of Stratum B corresponds to agricultural activity and the mixed nature of excavated soil.

Feature Summary

Feature 1

Feature 1 is the filled Federal picket trench. The feature was found in Excavation Units 2 and 3 (Figure 14) around a depth of 1.0 ft, and was excavated to a depth of 3.23 ft. It consisted of 2.5Y6/4 light yellowish brown, sandy loam with a considerable amount of gravel. The soil was very compact and hard to excavate. The feature crossed the excavation units north to south with a downward slope toward the south (See North and South Wall profiles above) where it connected to Feature 4. The picket trench would have been an average one foot deep with the excavated material plus refuse excavated from the mine tunnel placed in the front to form a protective earthen berm.

Some historical accounts note the use of wood to shore up the trench wall, but no archeological evidence was found to support this assumption. However, archeological evidence does support the use of excavated material from the mine tunnel in sandbags on the earthen berm. The trench was probably filled by William Griffith pushing the earthen berm into the trench. This fill contained a large number of pebbles and clay, which is very consistent with the underlying subsoil of the area. This material probably came from not only the trench excavation but also the mine tunnel excavation.

The trench appears to have been filled during one short period rather than being a product of steady erosion. Some slumping of the trench wall is apparent, however the consistency of the fill material and lack of naturally eroded material on the trench floor suggest one short fill period.

The majority of Civil War period (military) artifacts were recovered within Feature 1 and Feature 4. Civil War artifacts found outside of these features were likely deposited around the picket trench in the plow zone and further mixed and eroded during agricultural activity after the war. Though the majority of military artifacts were recovered from the picket trench, researchers were expecting to find a larger number. Very few large, unbroken pieces were recovered and only 48 bullets were recovered (Table 2). Since troops occupied this position for close to ten months and historic documents indicate constant rifle fire, one would expect more military artifacts. However, historic documents indicate that local residents and William Griffith collected military pieces after the war (Wallace 1983: 32). Perhaps before filling the picket trench, Griffith collected many of the relics from the trench for inclusion in his Crater Museum. Also, local residents may have collected the metal artifacts to sell as scrap metal. Several Petersburg residents relied upon the selling of scrap metal for their livelihood after the Civil War until economic conditions improved (Wallace 1983: 9).

Excavators were surprised to find large amounts of preserved leather and canvas in the trench fill. The compact clayey nature of the fill prevented air and water from reaching these artifacts, thus helping to preserve them. The leather pieces are from various uniform accouterments used by troops in the front lines, cap boxes, cartridge cases, and haversacks. The canvas also possibly came from haversacks, but could also have been tent halves used as shelters over the picket trench. Troops on both sides were constantly exposed the elements and depended upon makeshift shelters to provide some relief. Portions of the canvas tent halves were trampled into

the muddy trench floor where they were preserved.

Other sections of the Federal picket trench still contain a large amount of research potential. Feature 1 suppled details on the structure of the picket trench and soldier life, but it also helped to create many other questions. Why did the picket trench grow deeper in the southern half of the excavation units? Did troops occupy the entire trench or only deeper, well fortified sections? Did they cook in the trench? How did the Battle of Crater effect the trench? What other activities occurred in this dangerous position? Further research in the future can explore these questions and others.

Table 2: Bullet Type and Distribution

Catalog #	Bullet Type	Cal.	Description	Provenience
PETE 07906	3-ring Minie Ball	.58	Dropped, conical cavity, flat sprue	Unit 1 Level 4
PETE 07930	3-ring Minie Ball	.58	Dropped, conical cavity, pointed tip	Unit 1 Level 9
PETE 07931	3-ring Minie Ball	.58	Fired, impacted, distorted, conical cavity	Unit 1 South Wall Cleanup
PETE 07972	Enfield Bullet	.57	Fired, impacted, distorted, rounded tip, no rings	Unit 2 Level 2
PETE 08003	3-ring Minie Ball	.58	Fired, impacted, distorted,	Unit 2 Level 3
PETE 08045	3-ring Minie Ball	.58	Dropped, conical cavity, pointed tip	Unit 2 Feat 1 L A
PETE 08046	3-ring Minie Ball	.58	Dropped, conical cavity, pointed tip	Unit 2 Feat 1 L A
PETE 08047	3-ring Minie Ball	.54	Dropped, conical cavity, pointed tip, base sliced by trenching tools	Unit 2 Feat 1 L A
PETE 08072	3-ring Minie Ball	n/a	Fired, impact, heavily distorted, ellipsoidal cavity	Unit 2 Feat 1 L B
PETE 08073	3-ring Minie Ball	n/a	Fired, impacted, heavily distorted, truncated cone	Unit 2 Feat 1 L B
PETE 08074	3-ring Minie Ball	n/a	Fired, heavily distorted, wooden plug in cavity	Unit 2 Feat 1 L B
PETE 08089	Enfield Bullet	.58	Fired, rifled, impacted, distorted, rounded tip,	Unit 2 Feat 1 L C
PETE 08103	3-ring Minie Ball	.58	Dropped, pointed tip, conical cavity	Unit 2 Feat 1 L D
PETE 08104	3-ring Minie Ball	n/a	Fired, heavily distorted, flattened, round sprue,	Unit 2 Feature 1 Level D
PETE 08105	3-ring Minie Ball	n/a	Fired, heavily distorted, ellipsoidal cavity	Unit 2 Feature 1 Level D
PETE 08106	Minie Ball	n/a	Fired, heavily distorted, rear impacted, pointed tip,	Unit 2 Feature 1 Level D

PETE 08107	Enfield Bullet	n/a	Fired, heavily distorted, tip impacted, conical cavity	Unit 2 Feature 1 Level D
PETE 08108	Confederate 3-ring	n/a	Fired, heavily distorted	Unit 2 Feat 2 L D
PETE 08109	3-ring Minie Ball	n/a	Fired, heavily distorted, fragment, portion of side missing	Unit 2 Feature 1 Level D
PETE 08110	Gardner Bullet	n/a	Fired, heavily distorted, 2-rings	Unit 2 Feat 1 L D
PETE 08119	3-ring Minie Ball	.58	Dropped, conical cavity, rounded tip,	Unit 2 Feature 1 Level E
PETE 08120	3-ring Minie Ball	n/a	Fired, heavily distorted, tip impacted,	Unit 2 Feature 1 Level E
PETE 08121	3-ring Minie Ball	n/a	Fired, heavily distorted, tip impacted	Unit 2 Feature 1 Level E
PETE 08122	Williams Type	n/a	Cleaning pin from bullet cavity	Unit 2 Feat 1 L E
PETE 08126	(2) Spencer Cartridge Cases	.58	Rim fired	Unit 2 Feature 1 Level E
PETE 08144	Enfield Bullet	n/a	Fired, heavily distorted, rounded, tip, rifling	Unit 2 Feature 4 Level B
PETE 08146	(2) Spencer Cartridge Cases	.58	Rim fired	Unit 2 Feature 4 Level B
PETE 08154	3-ring Minie Ball	.58	Fired, distorted	Unit 2 Feat 4 L E
PETE 08160	3-ring Minia Ball	.58	Dropped, truncated cone, pointed tip	Unit 2 Feature 1 Level A, Datum Bulk Wall
PETE 08177	3-ring Minie Ball	.58	Dropped, conical cavity, pointed tip	Unit 3 Level 2
PETE 08178	3-ring Minia Ball	.58	Dropped, conical cavity, pointed tip	Unit 3 Level 2
PETE 08179	Minie Ball (unknown rings)	n/a	Fired, heavily distorted, possible rings	Unit 3 Level 2
PETE 08180	3-ring Minie Ball	n/a	Fired, distorted, round sprue	Unit 3 Level 2
PETE 08181	Minie Ball	n/a	fired, bullet fragment	Unit 3 Level 2
PETE 08215	3-ring Minie Ball	.58	Dropped, conical cavity, pointed tip	Unit 3 Level 4
PETE 08221	3-ring Minie Ball	.54	Dropped, pointed tip	Unit 3 Feat 1 L A
PETE 08222	3-ring Minie Ball	n/a	Fired, heavily distorted	Unit 3 Feat 1 L A
PETE 08250	Minie Ball (unknown rings)	n/a	Fired, heavily distorted, conical cavity	Unit 3 Feature 1 Level C
PETE 08261	3-ring Minie Ball	.58	Dropped, conical cavity, pointed tip	Unit 3 Feat 1 L D
PETE 08274	Spencer Cartridge Case	n/a	Rim fired, distorted	Unit 3 Feat 1 L E

PETE 08275	3-ring Minie Ball	.54	Dropped, conical cavity, pointed tip	Unit 3 Feat 1 L E
PETE 08276	3-ring Minie Ball	n/a	Fired, rifling, distorted, pointed tip	Unit 3 Feat 1 L E
PETE 08299	3-ring Minie Ball	.58	Dropped, conical cavity, pointed tip	Unit 4 Level 2
PETE 08300	3-ring Minie Ball	.60	Dropped, conical cavity, pointed tip	Unit 4 Level 2
PETE 08301	3-ring Minie Ball	n/a	Fired, heavily distorted, conical cavity, pointed tip	Unit 4 Level 2
PETE 08302	3-ring Minie Ball	n/a	Fired, heavily distorted, rammed	Unit 4 Level 2

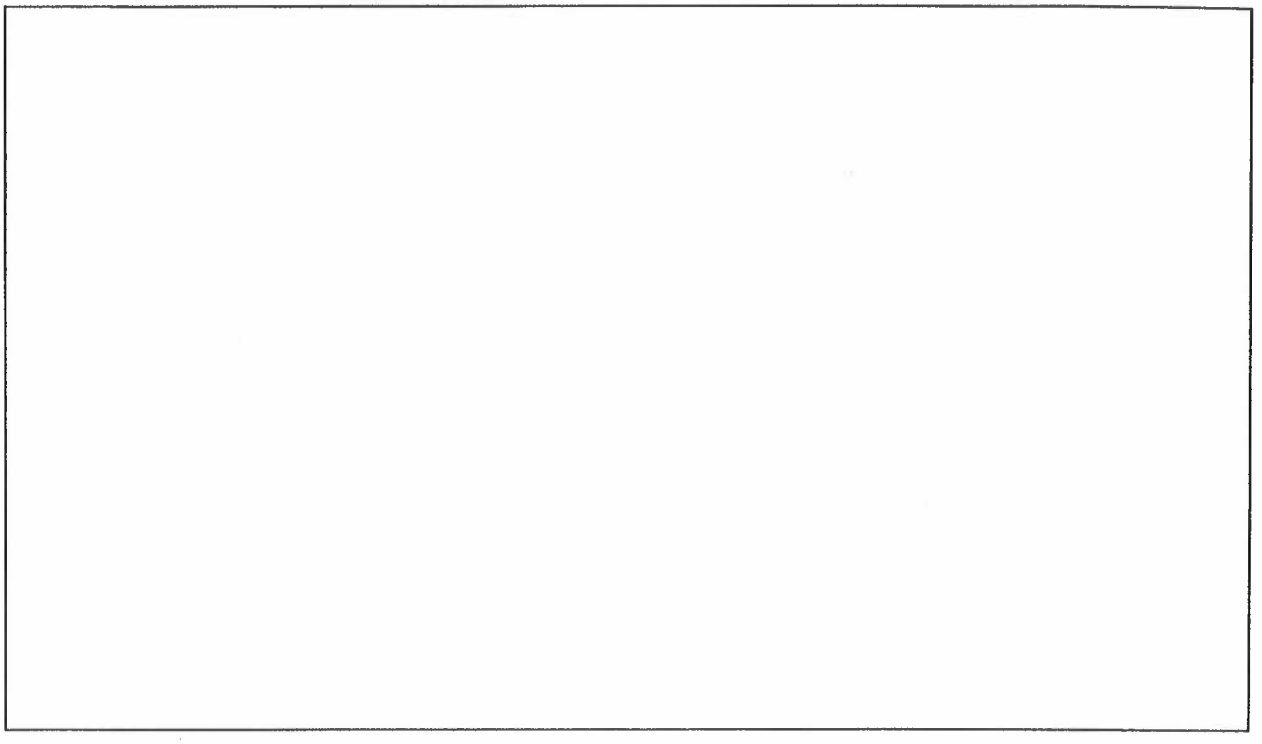


Figure 14. View of Feature 1

Feature 2

Feature 2 was located within the western half of Excavation Unit 1. The feature appeared as a darker oval stain compared with the surrounding soil. The soil consisted of 10YR3/1 very dark grey, sandy loam. Excavators bisected the feature to observe a cross-section of the feature before excavating the entire feature. The feature was first noticed at a depth of around 0.68 ft and it was excavated to a depth of 1.29 ft. The feature had a rounded appearance when viewing it from above (Figure 15).

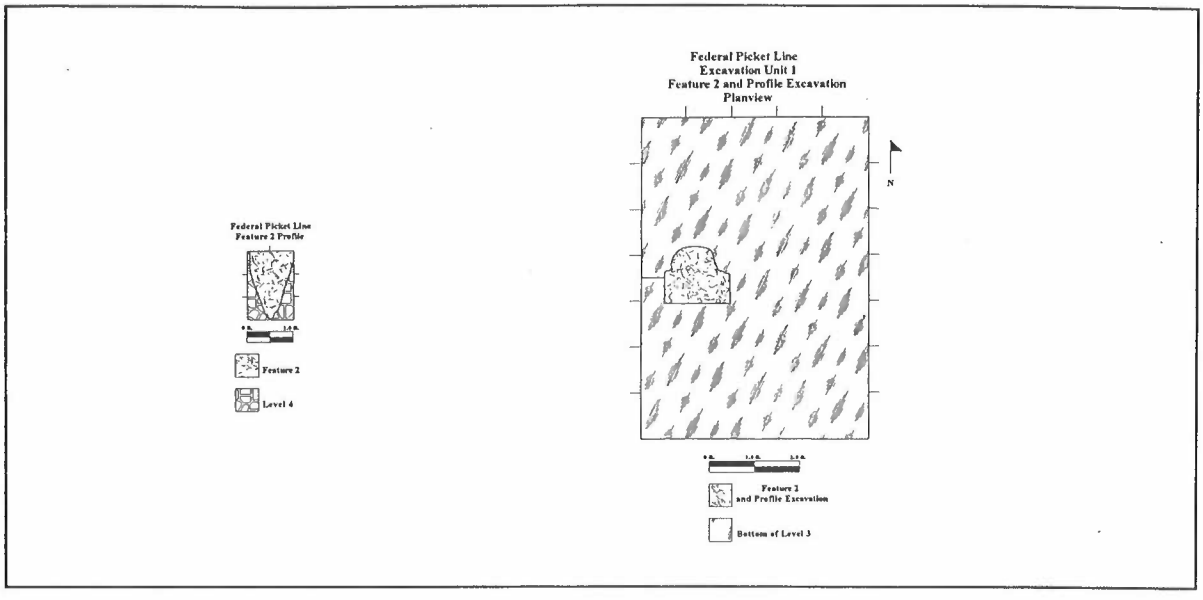


Figure 15. Profile and Plan view of Feature 2

The feature appeared to be a post-Civil War post hole. The upper portions of the post hole were probably destroyed by landscape grading for the golf course in the 1920s, leaving the bottom 0.5 ft of the feature intact. The feature contained several fragments of coal and charcoal, charred slate, bone, glass, ceramic, and metal. The material appears to have been deposited in the post hole upon the removal of the fence. It is a possibility that the Griffith family or other property owners used refuse, probably from the household or from another portion of the farm, to fill the post hole.

Historic accounts note that the Griffiths fenced in the Crater and mine tunnel entrance to separate it from the surrounding farm land (Cullen 1975: 7). It is possible this post hole may be associated with this fence. However, further research is needed to support this assumption.

Feature 3

Feature 3 was located within Excavation Unit 4 along the north wall. The feature consisted of 10YR4/2 dark greyish brown, very sandy loam soil that was very loosely packed. The feature was encountered around a depth of 1.7 ft and was excavated to a depth of 3.9 ft. Because of its location along the north wall, only about half of the feature was excavated. This allowed excavators to view the feature's profile. Upon viewing this profile, researchers noted that the soil fill was constant throughout the entire feature.

The feature had a rounded appearance when viewing it from above. It maintained a rounded shape as it was excavated. When excavators reached the bottom of the feature several smaller tunnels branched off from the feature. Because of these smaller tunnels and lack of any artifacts associated with the feature, researchers feel it is simply a large animal burrow.

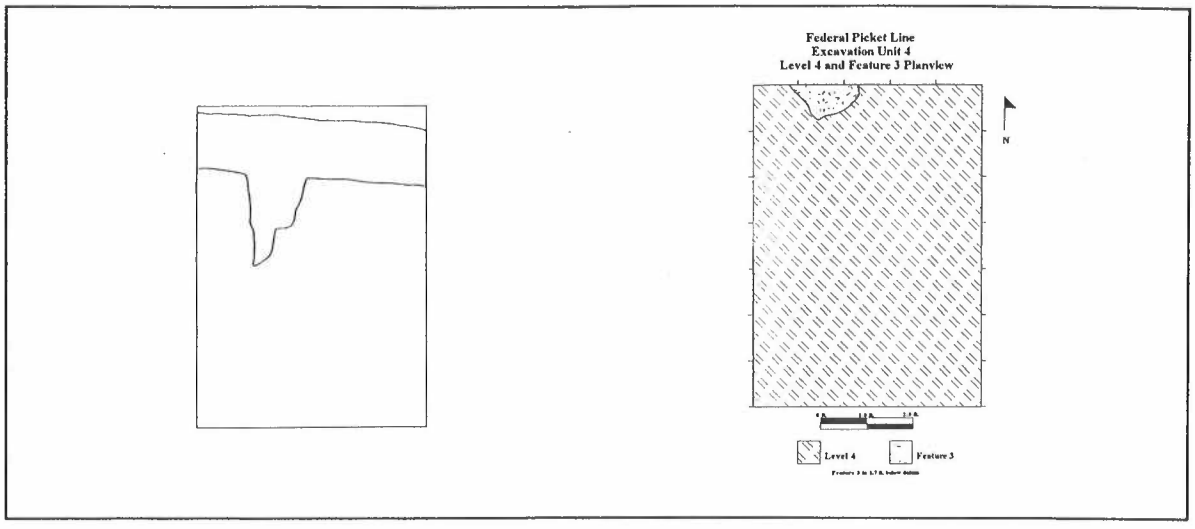


Figure 16. Profile and Planview of Feature 3

Based upon the north wall profile (Figure 9), it appears the burrow was dug either during the beginning phases of agriculture on the site or years prior. The burrow then was simply filled either by erosion or by agricultural activity. The feature has no cultural significance and does not warrant future research.

Feature 4

Feature 4 was found in Excavation Units 1 and 2. The feature was encountered around a depth of 1.5 ft and was excavated to a depth of around 2.88 ft. The feature consisted of 10YR5/4 yellowish brown, sandy loam mottled with 2.5 Y6/4 light yellowish brown, sandy loam, 2.5Y5/4 sandy clay, 2.5Y4/2 dark greyish brown, sandy loam, and 2.5Y5/6 light olive brown clay. The mixed nature of the soil increased with depth. The clay content of the fill also increased as excavators neared the bottom of the feature.

The feature lies below sections of Feature 1 and extends west into Excavation Unit 1. The feature appears to be an early expansion of the picket trench, and may be associated with the Battle of the Crater. Historic accounts describe attempts to dig a covered way toward the Crater to rescue soldiers trapped in the Crater after the Federal attack failed.

> By direction of officers in the crater the men began a deep trench toward our lines. Another, by direction of General Burnside, had been started from our lines to meet it (Thomas in *Battles and Leaders* Vol. 4 1956: 567).
>
> . . . putting some of Ferrero's escaped troops to the task of digging three covered ways to the Crater (Cavanaugh and Marvel 1989: 97).

The feature may also represent troops attempting to scale the picket trench as the Battle of the Crater began. Historic accounts note the picket trench was not prepared to allow troops to pass

through it to attack the Confederate position.

> As no part of the Union line of breastworks had been removed (which would have been an arduous as well as hazardous undertaking), the troops clambered over them as best they could (Powell in Battles and Leaders Vol. 4 1956: 551).
>
> These front-line trenches were deep, and somehow no one had given much thought to the problem of evacuating them. Sandbags were heaped up to facilitate scaling, ladders were improvised from bayonets thrust into the walls (Pleasants, Jr. 1961: 126).

It is possible a segment of the picket trench was dug up to allow troops to pass through after the problem was noticed. Both accounts are possible as the feature extends from the main body of the picket trench toward the Crater.

After analyzing the south wall profile (figure 12), it does appear that Feature 4 is older than Feature 1. Feature 4 contains a portion of the picket trench floor and the extended trench excavation. A possible sequence of events that created the feature could be 1) Federal troops from the picket line excavate a portion of the trench during the Battle of the Crater, 2) at the end of the battle this excavated section is filled to again protect the troops behind it, 3) the excavated material is churned into the still existing trench floor.

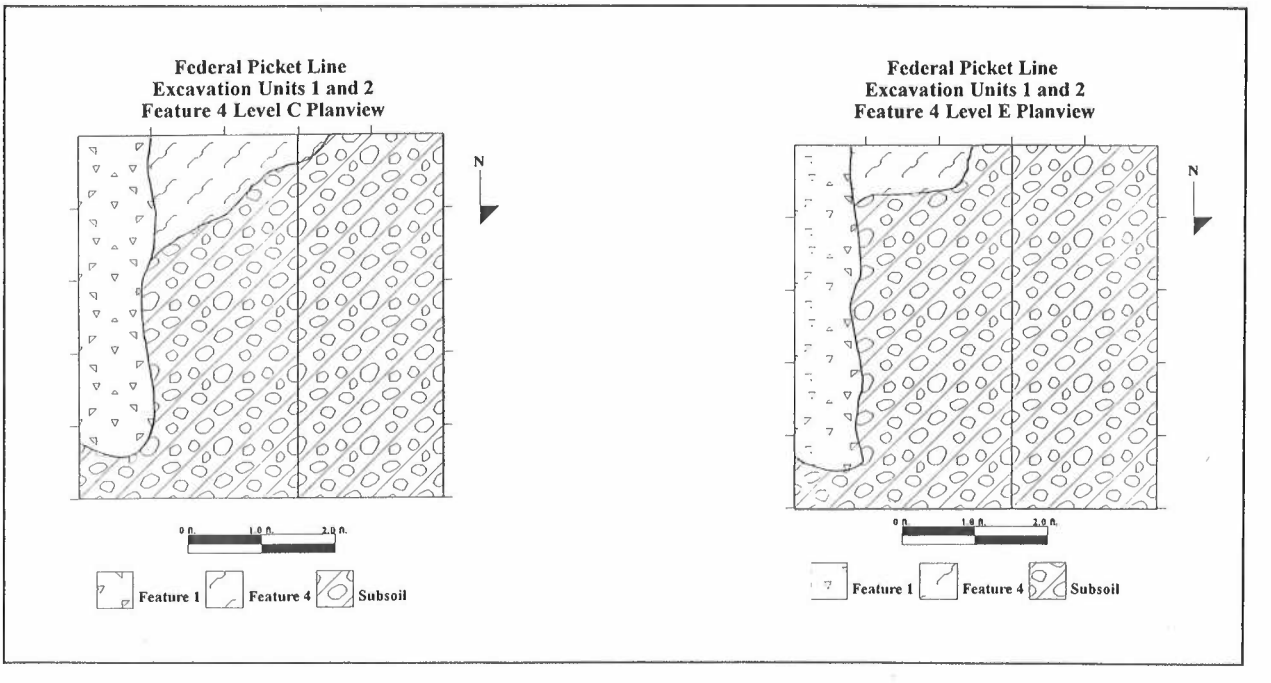


Figure 17. Feature 4

From the artifacts associated with Feature 4, it does appear that this section of the trench was filled quickly. The majority of larger military artifacts were recovered from this feature, including a canteen half, tin cups, a food tin, and several pieces of preserved leather (Figure 17).

These artifacts were probably lost by troops during the battle and were thrown into the fill as troops tried to plug the hole as quickly as possible.

The fill material encountered in Feature 4 also separates this feature from Feature 1. Feature 1 contained very hard and compact sandy loam and gravel, and Feature 4 contained a wider mixture of soil that was not very constant throughout. The soil in Feature 4 was also less compact.

Researchers were only able to excavate a small portion of Feature 4 in their excavation units. In the south wall profile, project archeologists could see layers of preserved and decomposing leather and canvas, as well as, small portions of metal military objects. Feature 4 could extend a considerable distance to the south of Excavation Units 1 and 2. Only through further testing can its use and size be determined. However, the feature does contain a considerable amount of material culture that could provide information on life in the picket line around the time of the Battle of the Crater.

Feature 5

Feature 5 was located within Excavation Unit 2 below Feature 1. The feature consisted of 2.5Y5/4 light olive brown loam mottled with 2.5 Y6/4 light grey brown, sandy loam. The feature was discovered at a depth of 2.86 ft and was excavated to a depth of 3.45 ft. No artifacts were recovered from the feature and the fill was constant throughout. It had a rounded appearance when viewed from above, and it measured about 0.5 ft in length and width.

It is unclear what the function of this feature may have been. Because of the absence of artifacts, it appears that the feature may be another animal burrow hole. However, because of its location beneath Feature 1, it could possibly be a posthole from the Civil War era. The post may have been used by soldiers to support a canvas shelter over the picket trench. Further research is needed along other sections of the picket line to see if a pattern exists for the placement of similar features.

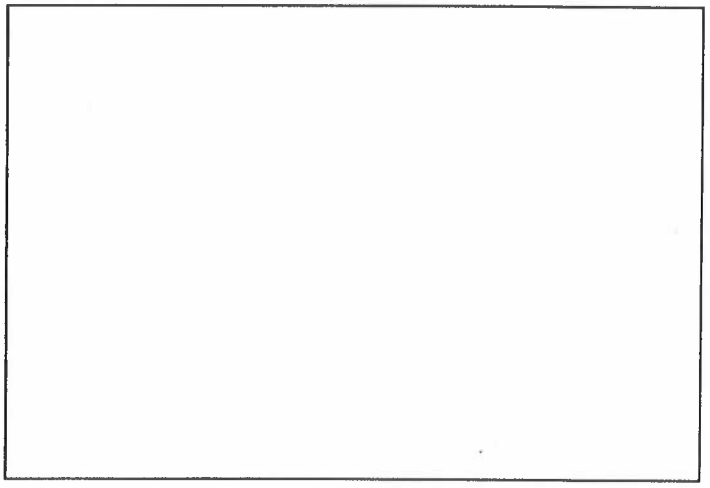


Figure 18. Feature 5

Section Five

Life in the Trenches

> It is extremely difficult to describe the feelings and sensations aroused during the tedious days of the siege. Life was counted of little worth--the familiarity with death almost bred contempt of the grim monster. Still the presence of the great destroyer was daily manifested. Sometimes more vividly and closely than at other (Bosbyshell 1895: 162).

This quote perhaps sums up the Federal soldiers' feelings in the trenches around Petersburg. For nine and a half months Federal troops dug new positions and continued to reinforce old ones while under constant sniper fire. If they were not involved in an active fight, they were either resting in positions toward the rear, or manning and digging the trenches in the front. Most troops alternated in forty-eight hour shifts. They would spend forty-eight on duty in the front and the next forty-eight resting in camp (Beauge in Albert 1912: 142; Jackson 1965: 146-147). Though in some portions of the siege lines truces were formed to end the sniper fire, this was not the case near the Crater (Bosbyshell 1895: 179; Jackson 1965: 143).

> In the progress of the siege, somewhat friendly and amicable arrangements came to be made between the outposts of the two armies in portions of the line, but this was never the case in the Ninth Corps. (Houston 1903: 292).

This constant fire made traveling from the main Federal line to the picket trench very hazardous.

> The duty of relieving the picket line was extremely hazardous . . . The men were obliged to crawl out singly from the railroad-cut, and the men relieved were exposed to a close and merciless fire in leaving the lines (Hodgkins 1884: 219).

> After daylight it was impossible for a man to look over the top of the pits (Hodgkins 1884: 219).

To protect themselves from this constant fire, Federal troops continued to improve their advanced picket line and the route that took them to it.

> The line had been made continuous and much improved. Abatis had been place in front, and a covered way continued from the main line. This covered way was very deep, and protected with high embankments and gabions (Hodgkins 1884: 223).

> The men labored hard, and with but little cessation, in the erection of new works and the strengthening of those already constructed (Houston 1903: 295).

> As a general thing the two brigades of our division relieved each other at the front every 48 hours. At first the changes were made in the night to avoid attracting the attention of the enemy. In a few days, however, we had dug

a ditch or covered way and could go back and forth with comparative safety (Beauge in Albert 1912: 142).

Even though defenses were improved, danger and discomfort continued.

> . . . lying down in a pit about seven feet square and two feet deep for protection against the bullets of the enemy that were constantly flying through the air (Lord in Albert 1912: 238).

> The breastworks were covered with bags of sand with small openings between to fire through, and often the enemy would shoot into these holes and wound our men (Lord in Albert 1912: 239).

The discomfort in soldiers' lives was not merely caused by the enemy's bullets, but by the weather which they were constantly exposed to.

> Several days and nights in the lines with intense heat (Bosbyshell 1895: 179).

> And even to those in health, the discomfort of the heat and the annoyance of the stifling dust had become almost intolerable (Houston 1903: 297).

> The annoyance of dust, too, was materially alleviated for the time as the rain was sufficient to throughly penetrate the heaps, which under the tread of so many feet, had become ankle-deep in the camps (Houston 1903: 310).

Figure 19. Photo of canvas found in the Picket Trench.

Federal troops attempted to cover themselves from the elements as best as they could. As can be seen in Figure 20, troops used their canvas tent halves as shelters securing them for use as a roof. This practical application would at least afford them some protection from the sun and rain. These shelters were very ephemeral and left little trace in the archaeological record. However, many large fragments of rubberized canvas were found throughout the excavation units, especially within the filled picket trench (Figure 19). Though no historical account notes the use of tent halves for shelters in this section of the picket line, archeological evidence suggests that they were used in this section of the battlefield.

Though soldiers' lives in the trenches around Petersburg were filled with discomfort, there were occasions when life was made more bearable. Federal troops were constantly supplied with the necessities of life, food,

clothes, shelter and equipment. Grant and his Quartermasters Corp. constructed a complex supply network stretching from the port at City Point where hundreds of northern ships would bring tons of supplies daily to the railroad specially built behind Federal lines to that carried the goods from City Point to just a mile behind most of the Federal defenses (Trudeau 1991: 132). The Sanitary Commission also tried to bring small luxuries to troops in the form of food, books, and entertainment (Battles and Leaders 1956: 90; Herek 1998: 206-209).

> Other unexpected luxuries that came to us during the early stages of the siege of Petersburg were daily allowances of pickles, dried apples, cabbages, radishes, etc., furnished by the Sanitary Commission (Beauge in Albert 1912: 144).

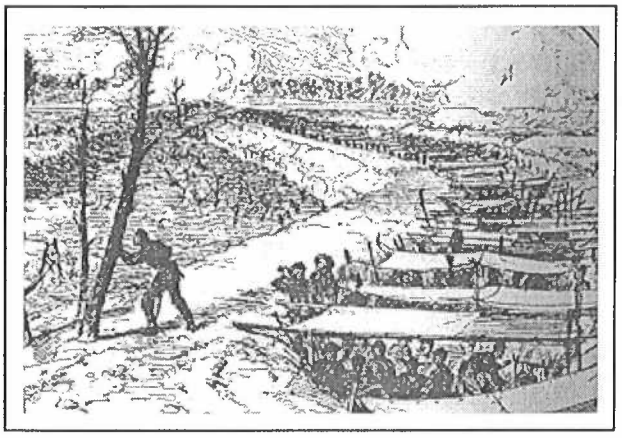


Figure 20. Image of main Federal line with canvas used to cover the trench (A.R. Waud)

It appears that some of these luxuries may have made their way to the picket trench in the project area. A food tin can and a fragment from a beer bottle were recovered from the excavation units. Troops probably brought the luxuries given to them in camp to the picket trench to help them make the best of a poor situation. Troops also had one of the necessities of life brought to them in the picket line, coffee.

About sunrise the cooks came out with coffee, and John L. Finney, cook of Company K, received a shocking wound in the face (Hodgkins in Committee 1884: 219).

Other small personal items recovered from the excavation units that also may have helped soldiers pass their time in the picket line include fragments of a smoking pipe and an ink well. Soldiers may have spent time writing letters home, making entries in their journals, or officers may have been writing their reports or orders. Excavators also recovered portions of a mirror. It is unclear in what context it was used, but the question of why a soldier would bring such an item to such a dangerous place is interesting. Troops may have taken part in other activities in the picket lines that helped them pass the time, but no archaeological evidence of those activities was recovered. Soldiers may have also spent most of their time sniping at their enemy or dodging Confederate bullets and artillery.

Federal troops faced many hardships within the trenches around Petersburg. Through the hardships, they attempted to make life as comfortable as they could. Even in the picket trenches near the Crater, where sniper fire was constant and the lose of life great, troops tried to alleviate some of the discomfort by bringing with them some of the comforts of life such as coffee, specialty food, and smoking and writing implements. The personal accounts and reminiscences usually reflect on the hardships.

> A great part of picket work is done in the night, amid all the exposure that comes from chilly and often miasmatic air, when limbs are weary and brain

is tired. Sometimes the duty is in pits, close up to the enemy, where every movement is liable to invite a bullet, where the body is cramped, the clothes soiled, the water scarce, the food scanty or half cooked, and where wakefulness must be preserved upon penalty of death for sleeping on the post (Cogswell 1891: 407).

Section Six

Public Archeology Program: A Trip Through a Changing Landscape

As part of the Federal picket line project, National Park Service and University of Maryland archeologists agreed that a public archeology program would greatly enhance the overall Overview and Assessment project. As plans for the field excavation project developed, project archeologists began to explore the goals, design, and content of the public program. Project archeologist Gail Brown, in discussion with Project Director Paul Shackel and Petersburg National Battlefield staff, designed an appropriate program that would incorporate the Federal picket line excavation, the Overview and Assessment, and all past archeological projects within the battlefield.

Goals

Program planners began to develop ideas that would allow the public to become involved in archeology or at least provide information concerning the importance of archeology, archeological methods, research foci, and how the data would be used in the future. Organizers decided not to ask for volunteers from the public due to the short amount of time allowed for planning, and the small scope of the project. Planners decided that the best strategy for public programming would be to supply as much information on past and ongoing archeology projects. They eventually decided to use four methods to provide information: a project web site, tour brochures, a project exhibit within the battlefield's visitor center, and site tours.

Program planners developed a central theme that would run throughout program material and tie the various stories together. The theme, "Archeology in Petersburg National Battlefield: A Trip Through a Changing Landscape" also became the title of the main tour brochure. The theme allowed archeologists to incorporate information from past archeological projects with information from the current Overview and Assessment and Federal picket line projects.

The archeological history of Petersburg National Battlefield is very diverse with investigations focusing on Civil War related sites, domestic sites from colonial, early federal, and pre and posts Civil War periods, prehistoric sites, African-American sites, and twentieth-century sites. By discussing these projects along with the modern National Park Service landscape context, we could share with the public not only information about archeology, but provide them with the tools to view historic landscapes.

It was our goal to have the visitor realize that the landscape around them was not static but an every changing entity. However, they were told that, though landscapes and the peoples' lives who shaped them change, segments of these past landscapes exist in the archeological record. The visitor could then see how archeology at the Federal picket line excavation could help shed light on the past.

Project Web Page

Project archeologists developed a project web site before the excavation to provide basic information on the Overview and Assessment project (Appendix C). Initially the site included information on up-to-date findings, history, and goals of the overview project. As reports and articles were finished they were also included for viewing on the web site. As project archeologists developed plans for the picket line excavation and interpretive program, they introduced these plans on the web site and invited the public to visit the site during the project dates.

As the public program developed, organizers discussed updating the web site as researchers made new discoveries during the excavation component. However, the resources were not available to update the web site daily. Planners decided that the web site would be updated as the excavation ended and when new data became apparent during the analysis phase. For future, longer term projects, using a web site that could be updated every day or every few days is advisable. Many web sites are also using web cams to show updated scenes from projects. This could also be another option during future projects.

Overall, a web site is an excellent way to combine the various components of a project. Not only were organizers able to advertise the upcoming project and invite the public to visit, but they could continuously update the web site with information. In the future, archeologists could combine basic findings from the excavation into structured lessons that teach the public more about archeology. We highly recommend the Internet's use in future projects.

Visitor's Center Exhibit

Since the excavation project was at the end of the park's tour road, project archeologists decided to create a small exhibit in the visitor's center (at the beginning of the tour road). The exhibit provided a short introduction to the excavation project and invited the public to visit the site.

The exhibit, which planners housed in a small exhibit case (Figure 21), informed the visitor on the ongoing Overview and Assessment project and it showed how the Federal picket line excavation fit into this larger project. The exhibit displayed the findings from an excavation that occurred at the Confederate picket line near the Crater, and described how the current project would allow researchers to compare and contrast soldiers' lives in both armies. Visitors could then view a few artifacts recovered from the Confederate picket line excavation. Program organizers believed that this display would pique the interest of the visitors and encourage them to visit the excavation site.

Along with the exhibit in the visitor's center, park staff included the excavation site on their daily list of activities in the park. Project archeologists felt this process was successful, as many

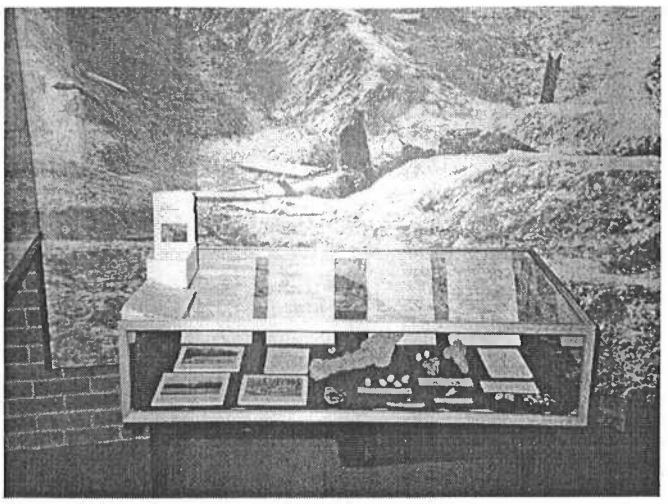


Figure 21. Visitor center exhibit.

mentioned seeing the exhibit or being told about the project by visitor center staff. Many of them also already had copies of the brochure passed out at the exhibit. The exhibit also helped visitors develop questions for project archeologists concerning past excavations, and the comparisons between the Federal and Confederate picket lines.

Tour Brochures

Organizers developed two brochures for the public program. The first brochure, titled *The National Park Service, Archeology and You* (Appendix B), addressed the continuing issues of looting in Battlefield parks and preservation. Because researchers believe many people are not aware of Federal laws protecting archeological resources on Federal property, they decided the brochure would discuss the Archeological Resource Protection Act. The brochure discussed this law in the context of a looting case that occurred in Petersburg National Battlefield. The brochure described the importance of preserving these sites for future generations. It also encouraged the public to become involved in the protection of these resources, by reporting any suspicious activity they may see to park rangers.

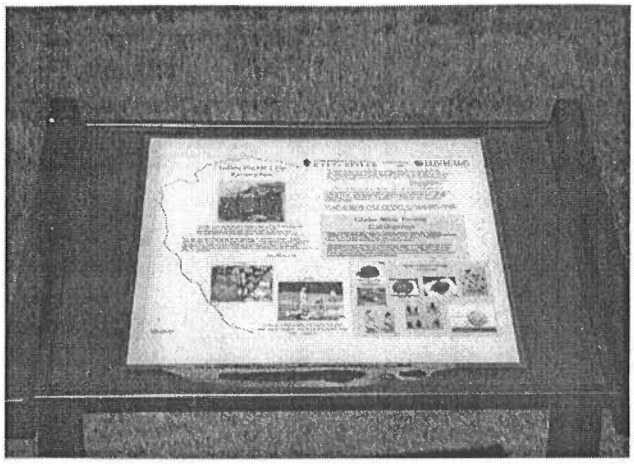
The second brochure linked the exhibit in the visitor's center to the excavation site, and it discussed past archeology projects in the park (Appendix B). The brochure, titled *Archeology in Petersburg National Battlefield: A Trip Through a Changing Landscape*, allowed archeologists the opportunity to discuss how the battlefield landscape changed and how archeology helps explore these changes. The goal was to show the visitor how the landscape is not a static entity.

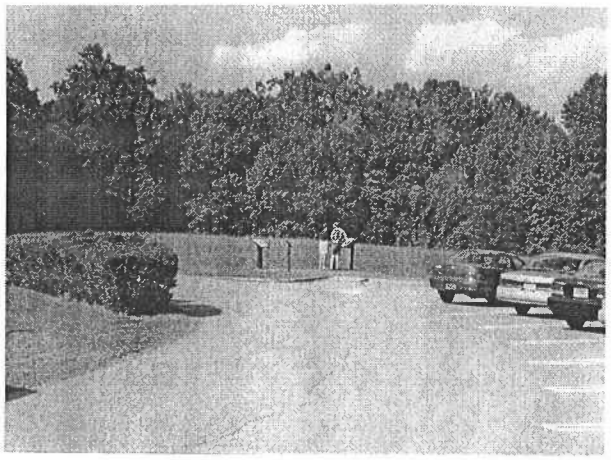
Both brochures contained the project's web site's address and invited visitors to find more information on both topics. Organizers feel the brochures worked well, as many visitors were seen carrying them around and asking questions based upon the information in the brochure. However in the future, visitors should be surveyed to test the brochure's and program's effectiveness further.

Wayside Exhibit

To reintroduce the excavation site, update visitors on significant finds, and tie the project into the larger Crater area, project archeologists and park staff developed a wayside exhibit at the head of

the Crater interpretative trail. The wayside exhibit consisted of text and images and informed





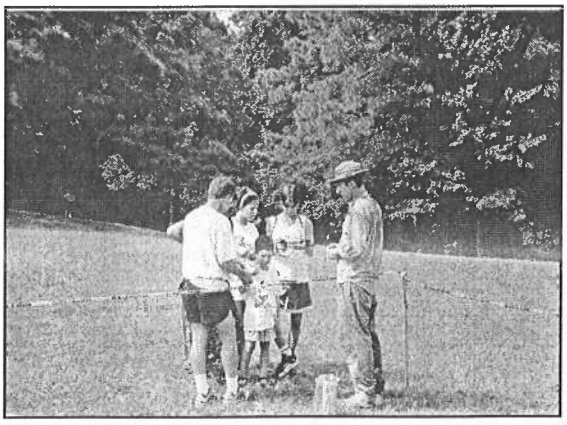
visitors about the excavation and invited visitors to question project archeologists.

Figures 22 and 23. Wayside exhibit used at the head of the Crater Interpretive trail tied the project into the Crater area, and invited visitors to visit the site.

The exhibit was easily updated by creating new text and adding new images of artifacts as they were discovered. Petersburg National Battlefield's GIS Specialist Richard Easterbrooke visited the project site often using a digital camera to photograph artifacts and features. He then used the images and text provided by project archeologists to create the exhibit. The new exhibit was then inserted into the wayside holder.

Site Tours

The main component of the public program was the site tour. Organizers originally planned to conduct two structured site tours in concert with the National Park Service's tours of the Crater area. Project archeologists were also be available to answer visitors' questions anytime. Because of the flow of people, they dropped the two structured tours, and decided to interpret the archeology throughout the day. Around 99% of visitors to the Crater area visited the excavation site. The site was usually their first stop along the Crater interpretive trail. At times the constant flow of visitors demanded that one or two members of the crew had to be continuously engaged in interpretation.



All members of the excavation crew were encouraged, but not forced, to talk with visitors at the site. The site tours were structured more as conversation. As visitors approached, crew members would provide the basic background information on the project (why we were excavating, what we hoped to find, what we were finding, soldier life, and the battlefield setting). The conversational approach

allowed us to talk about current findings using the excavation units as the visual aid.

Figure 24. On-site interpretation with battlefield visitors.

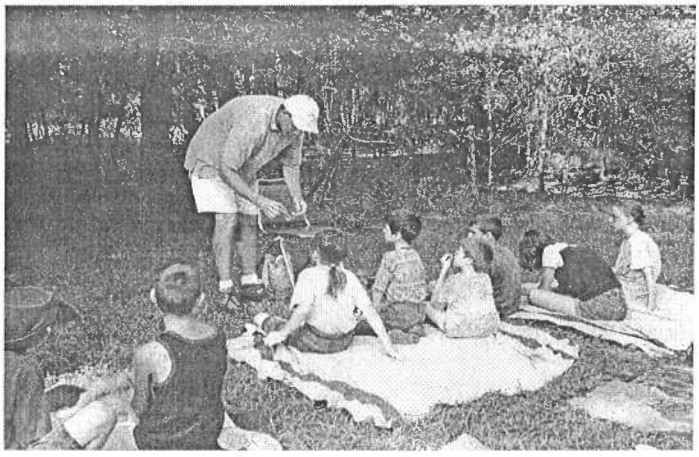
Visitors were also engaged by allowing them to hold recently excavated artifacts under close supervision of project staff. Staff were able to talk about the artifacts and show how they fit into the site's context.

By structuring the site visit with conversations instead of structured talks, a more relaxed setting resulted. This made it more comfortable for the visitors and crew to share information. This relaxed atmosphere resulted in conversations on a wide range of diverse topics, including the preservation of archeological sites, archeological theory and method, and the nature of our findings. The public was greatly engaged and enjoyed talking about the project and the topics mentioned above. Not every archeological project may have the time or resources to invest in such a public friendly program, however, future projects should include some sort of on site interpretation.

Park Service Day Camps

As the excavation and public programs began, a new interpretive opportunity presented itself to project archeologists. The National Park Service was offering a day camp for children called *Earthworks*. This camp focused on soldier life in the trenches. After talking with the park's educator, they decided to create a short archeology activity for the day campers.

The activity used plastic containers filled with dirt and artifacts representing fragments of soldier life. Campers, after discussing and learning about archeology, were allowed to dig for these artifacts. After, they found the objects, project archeologists challenged campers to figure out how the artifacts were used and what they meant using the process of deduction. Campers used their imagination to create their own interpretations of their mock site. Campers also enjoyed learning about the differences in their daily lives compared with those of Civil War soldiers.



Campers were then encouraged to visit the excavation site to observe an archeology project in progress. Many campers visited the site at the end of their camp where project archeologists showed them examples from the lesson they learned during the camp (i.e., what a feature looks like, recording data, mapping, etc.). The site visit not only reinforced the lessons learned earlier, but showed them how archeology is more than digging.

Figure 25. Project archeologists talking to day campers about

archeology during National Park Service organized camps. If provided with more time, organizers could have developed this program with more lessons, but it was a success with the time allowed. Campers and parents enjoyed the program while learning about archeology. They were also thrilled visiting a "real" archeology site when the camp finished. Again, not every archeology project may have the time or resources to work with such camps, but it does provide a fun, interactive way of learning for children and their parents. Future projects should keep this project in mind and work with park educators to create programs that will work for the specific project.

Project archeologists deemed the public interpretation program a success. All parties involved learned a great deal from one another and enjoyed the entire process. The comments and smiles project archeologists received on site support this conclusion. The public's enthusiasm supports the need for future public interpretation programs. By providing the public with these types of programs, it will not only build support for, and show the importance of archeology, but it will allow archeologists the chance to learn from the public.

Section Seven

Conclusions and Recommendations

The Federal picket line excavation met the goals that project archeologists established. Not only were researchers able to achieve locating and excavating the Federal picket trench, but they also revealed the archeological potential of this Civil War feature. Project archeologists gained an understanding of the history surrounding the project area, and learned how historical events played a role in the development of the project area. Using recovered data, researchers shed light on the daily lives of soldiers living in the trenches. Through the public interpretation program, project archeologists successfully interpreted to the public soldier life in the Federal picket line, as well as, the importance of archeology.

Though post war activity has affected the Federal picket line, the area still has high archeological potential. It appears William Griffith, who owned the area after the Civil War, filled the picket trench at one specific period using the earthen parapets in the front of the trench. However, because of a low number of recovered military artifacts, it appears that Mr. Griffith, or others, may have mined the trench for relics and scrap metal before they filled it. Without further testing we cannot prove or disprove this idea.

Beyond the possible scavenging of the picket trench, little else appears to have impacted its preservation. The site was probably used for agricultural activity after the war, causing the erosion of the upper portions of the feature. Further testing near the mine tunnel may help determine the effect of post war agricultural activities.

The artifacts recovered shed light on the daily lives of the troops stationed in the picket line. Evidence showed that troops tried to improve their uncomfortable position by bringing in small luxuries that would help them pass the time and help them relax. Further excavations should uncover further evidence of their lives and help describe life close to the enemy works.

Further archeological work to the south of our excavation units should also help further identify Feature 4. Researchers relate this feature to the Battle of the Crater, as Federal troops either dug a covered way toward the Crater or excavated a path that allowed troops to pass through the defenses. This feature contained some of the largest quantities of Civil War artifacts, and recovery of more data would help in further understanding the Federal picket line's construction, reinforcement, and functions.

Current National Park Service use and management of the project area opposes very little risk to the archeological resources. The interpretive trail leads visitors around the picket line and hence keeps many individuals from walking over, compacting, and eroding the resources. Current vegetation cover also appears to control erosion.

Because of the shallow nature of the archeological resources, park managers may consider not driving large machinery over the site (i.e., earthmoving equipment). The current program of lawn mowing poses little threat to the resource.

If park managers ever decide to work on the adjacent Crater parking lot, they should conduct studies to investigate the picket line in that area. The resources are found in deeper layers and may still be present under the current parking lot. This area would contain more information on life in the picket line, and it may contain features related to the Battle of the Crater.

Though the archeological resources in the picket line may have been effected by post war souvenir scavenging and agricultural activity, they still contain research potential. Park managers should take steps to preserve, protect and maintain these resources, and to include them in the interpretation of the Crater area. By allowing the current vegetation to grow (as is currently done on some buried earthworks), the Park Service could make the picket line a physical presence on the Crater landscape.

Our limited excavations have shown how well preserved the archeological resources are in the picket line, and how the archeological information they can provide insight into the daily lives of Federal troops. Archeology helps tell the story of the Crater area, and the artifacts provide insights into how troops faced death in one of the most dangerous locations on the battlefield. The resources show troops attempting to make a disagreeable situation comfortable by partaking in simple pleasures (smoking, eating, letter writing). Future excavations can further assist in understanding the life of human beings under distress. Future excavations can also help complement the understanding of the historic events that occurred here. The archeological resources are a well preserved, important resource that help provide an understanding of soldiers' life in the trenches around Petersburg. Park managers should preserve and protect them for future generations and research.

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