

THE 1997– 2001 EXCAVATIONS AT FORT PIERRE CHOUTEAU



VOLUME 1: THE EXCAVATIONS

BY MICHAEL FOSHA

**SOUTH DAKOTA STATE HISTORICAL SOCIETY
ARCHAEOLOGICAL RESEARCH CENTER
RESEARCH REPORT NO. 3**

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Preface

It takes a great deal of effort to conduct an excavation and the associated lab work. A project like the Fort Pierre Chouteau excavation could not have been undertaken without the help a great number of people and agencies. We appreciate the assistance of the Oahe Project Office of the U.S. Army Corps of Engineers, which provided staff, extra supplies, lab tents and comfort stations, ice water, free camping for volunteers, and backfilling at the end of each session. The Pierre Chapter of the South Dakota Archaeological Society was always there to help with the set up and take down each season, and First Dakota National Bank supplied canopies that afforded shade for the excavators. The State Historic Preservation Office of the South Dakota State Historical Society secured funding for a large portion of the project. The principal investigator for the years 1997–2001 was the author. The staff included:

1997

Field Director: Ed Brodnicki

Lab Director: Rose Estep

Laboratory Assistant: Margie Goodman

Field Supervisors: Richard Harnois, Linda Palmer, Jeff Kinney, Becky Otto, Steve Gilbert, Lynn Edgel, Mike Larson and Richard Berg

1998

Field Director: Richard Harnois

Laboratory Director: Rose Estep

Laboratory Assistant: Margie Goodman

Field Supervisors: Linda Palmer, Richard Berg, Mike Larson, Tim Nowak, James Haug, and Ray Pysarsky

Assistant Supervisors: April Blazevec, Karry Bradbury, Chad Williams, Tammy Davis, and Marty Dewitt

1999

Field Director: Richard Fox, and Richard Harnois

Laboratory Director: Rose Estep

Laboratory Assistant: Margie Goodman

Field Supervisors: Linda Palmer, Richard Berg, Richard Fox, and Ray Pysarsky

Assistant Supervisors: April Blazevic, Heidi Deters, and Tammy Davis

2000

Field Director: Richard Fox

Laboratory Director: Rose Estep

Laboratory Assistant: Margie Goodman

Field Supervisors: Linda Palmer, Richard Berg, Richard Fox, and Ray Pysarsky

Assistant Supervisors: April Blazevic, Heidi Deters, Tammy Davis, and Chris Leatherman

2001

Field Director: Richard Fox

Laboratory Director: Rose Estep

Laboratory Assistant: Margie Goodman

Field Supervisors: April Blazevic, Heidi Deters, Ray Pysarsky, and Dan Watson

A number of individuals donated their time and expertise to the project. Heidi Sieverding, Tammi Davis, and Terri Holts were responsible for the creation of the many maps and profile drawings. Richard Berg compiled the data in the appendix. Special thanks for all their efforts also to Steve Holen, Mike Larson, and Richard Harnois. Wil Husted donated his library of Fort Union publications to the project. Bess Brown took on the formidable task of proofreading the copy.

While the investigations were directed by the professional archaeological community, the work was largely accomplished by volunteers. A debt of gratitude is owed for the support of the South Dakota Archaeological Society members as well as the volunteers from across the nation that made the investigations possible. My sincere thanks go to each of you and my apologies if anyone from the list below is omitted. The field volunteers included:

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Anthony Jastrzembski, Conrad Jensen, Eunice Jensen, Ed John, Connie Johnson, Dean Johnson, Stefan Jones, Chad Jones, Wyatt Jones, Jed Jones, Rebecca Jungman, Jason Jurgena, Jerome Kisor, Canton Keison, Andrea Kelly, Sarah Ketteler, Justin Kimberley, Jason Kimble, Ryan King, Ed King, Mary Kirchenman, Jennifer Kirkpatrick, Carol Kjar, Sheryl Kjarr, Dawnita Knight, Kaid Knox, Peggy Kotila, Earland Kristenberg, Susan Krogstrand, Penny Krogstrand, Mark Krogstrand, Kevin Kruse, Lawrence Lancaster, Joyce Lane, Judy Lane, Dave LaRoche, Joyce Larsen, Jan Larson, Vern Lauer, Chris Leatherman, Hailey Lee, Kristie Lee, Shan Lehrkamp, Amanda Lemberg, Vicki Leonard, Peggy Lightfield, Trevor Lightfield, Michael Linch, Jill Linn, Judy Litsey, Fay Littlefield, Steve Littlefield, Heather Lockwood, John Lockwood, Cassandra Lout, Ben Lowin, Suzy Lowin, Tom Lowin, Pat Lowin, Linda Lowin, Mark Lowin, Amanda Ludwig, Dan Manning, Joseph Martin, Steve Marxon, Taver Mathison, Jim McKillop, Jerry McQuay, Jerry Meendering, Tami Merrill, Zachary Merrill, Casey Michael, Jay Michelson, Judith Miller, Doreen Miller, Robert Mills, Kelci Moeller, John Moret, Mike Moscrip, Denise Mozley, Jean Nauss, Jarod Nelson, Lauren Nelson, Larry Ness, Joni Newharth, Andy Nicodým, Rick Nikodým, Marlyn Nilleronse, Peter Nord, James Nord, Mary Norman, Katrin Nowak, Alpha Nybo, Alisea Nybo, Anne Nybo, Martha Nystrom, Peder Ode, Linda Olinger, Sarah Olson, Bob Onger, Katie Ortman, Tiffany Ortman, Cornelius O'Sullivan, Joe O'Toole Jr., Steve Owens, Bill Palmer, Britt Palmer, Kathryn Patten, Phillip Patten, Vicki Peck, Kaytlin Pelton, Mike Perkarch, Phyllis Petersen, Doug Peterson, Elsa Pierce, Jennifer Pogany, Sarah Pogany, Rin Porter, Chad Powell, Lynn Prendergast, Kathy Price, Brent Pries, Allan Pries, Ashley Pries, Brent Priess, Zane Priess, Tanner Pryess, Ray Pysarsky, Gary Quigg, Amber Quissell, Justin Randall, Valerie Richter, Corey Roach, Mary Robbennolt, Rebecca Robbennolt, Liz Roberts, Kate Robertson, Aimee Rosario, Darcy Runestad, Annika Russel, Catherine Salazar, Josh Salazar, Shirley Sandberg, Cindy Sanford, Gwen Schaunaman, Tara Schipke, Kaycee Schmidt, Kay Schmidt, Barry Schmidt, Theresa Schmidt, Maressa Schoenfelder, Sheryl Schoenfelder, Susan Schrag, Amber Schrag, Angela Schulz, Larry Schulz, Chris Schumacher, Maria Scott, Ryan Seaverson, Cheri Shafer, Dee Sharp, Jean Shay, Lexi Sheldon, Pam Sheldon, Steve Sheldon, Pauline Siebel, Kayla Siefert, Margaret Siefert, Derek Simon, Dane Slater, Barry Smith, Tara Smith, Linda Smith, Art Smith, Casey Smith, Zack Smith, Darin Smith, Diane Smith, Heather Smith, Justin Snider, Ashley Spencer, Amanda Stastny, Jim Stein, Karen Stein, Diane Stofferahen, Heather Storm, Paula Stout, Sheryl Stroh, Val Stroh, Ole Stroh, Xana Stroh, George Stubbs, Altman Studeny, Leah Swanson, Shirley Swanson, Trevor Swanson, Josh Swan-

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Michael Fosha
August 2010

Introduction

Recovery of the site of Fort Pierre Chouteau and any remaining associated artifacts "may well become the center around which to build one of the principal monuments of history. . ."

Robinson 1902

Since the end of the 19th century Fort Pierre Chouteau, located just north of the modern city of Fort Pierre, South Dakota (Figure 1), has been among the most significant historical sites on the Plains. As early as 1894, people have considered the rebuilding of the fort as a realistic goal (Wilson 1902:273). The status of Fort Pierre Chouteau has not changed, and many groups would like to see the fort developed beyond its current condition. When the South Dakota Historical Society was given title to the property in 1933, a monument was placed near the west wall of the fort. Since that time, additional signage near the entrance to the site and an asphalt walkway from the parking lot to the monument have been added. These limited enhancements, while a step in the right direction, have done little to put the site on the radar screen for potential visitors.

During 1980 and 1981, initial archaeological work was conducted by Steven Ruple of the S.D. State Historical Preservation Center, State Archaeologist Dr. Robert Alex, and a large contingent of South Dakota Archaeological Society (SDAS) volunteers (Ruple 1990). As much an outreach program as it was a research project, Fort Pierre Chouteau was the first time the Archaeological Society had attempted integrating large numbers of amateurs into an archaeological project in the central part of the state.

The publication of Harold Schuler's *Fort Pierre Chouteau* (1990) generated renewed, widespread public interest in the site. In 1997 Jay D. Vogt, director of the South Dakota State Historical Society (SDSHS), made development of the site a priority and contacted the senior author regarding conducting further investigations at Fort Pierre Chouteau as part of a pro-

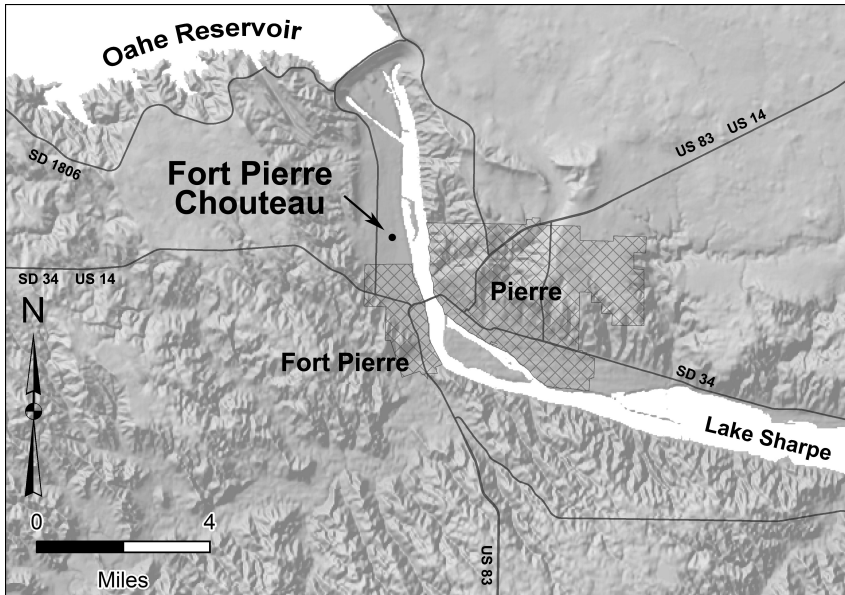


Figure 1: Fort Pierre Chouteau and its environs.

cess to develop a management plan. That same year, the U.S. Army Corps of Engineers (USACE) was seeking a location for a volunteer project, so the SDHS and Corps conducted the 1997 excavation as a joint project. The research design (Fosha 1997a) addressed specific questions regarding the fort and was designed to help in the development of an overall management plan. Like Ruple's earlier investigations, the 1997–2001 crews were largely volunteers. These included local volunteers (many of the original volunteers from the Middle Missouri Chapter of the SDAS 1980–1981 excavations) as well as enthusiasts from across the nation. This effort made the Fort Pierre Chouteau program one of the largest volunteer excavations in the Midwest.

Environmental Background

Geology and Landscape

Fort Pierre Chouteau is located in central South Dakota, within the physiographic region known as the Missouri River Trench, a prominent landscape in the Northern Plains. It is estimated that the Trench was formed near the end of the Illinoian glaciation or the Sangamon interglacial about 700,000 years ago (Flint 1955). The massive James lobe of the ice sheets blocked the east-flowing rivers, diverting them to the south along the ice margin. This diversion and subsequent downcutting resulted in the creation of the Missouri Trench.

Within the project area the Trench is approximately 3.8 miles (6.1 km) wide from bluff top to bluff top at an elevation of approximately 1760 ft AMSL (536 m). The uplands bordering the Trench to the east and west, respectively, are the physiographic regions of the Coteau du Missouri and the Pierre Hills (Westin and Malo 1978:11–12). The Coteau du Missouri is an uneven, plateau-like highland between the James River Lowlands and the Missouri River Trench. The main body of the Coteau is Cretaceous-age Pierre Shale that is overlain in places by Tertiary-age Ogallala Formation sandstones, in turn covered by a mantle of Wisconsin-age glacial drift (Flint 1955:12–13). Uplands between the eastern and western slopes of the Coteau are covered with ground moraine and occasional end moraines. Topography is largely swell and swale with shallow depressions and gentle slopes. For the most part, the Coteau du Missouri is well drained, but there are a few areas with interior drainage that form shallow intermittent lakes and marshes. Creeks of the Coteau interior drain westward, into the Missouri; only the very eastern slope of the Coteau drains into the James River.

To the west of the Missouri River Trench is the Pierre Hills physiographic zone, which is underlain almost entirely by Pierre Shale (Flint 1955:15–16). The topography is rolling hill country with hills and ridges

which are typically smooth due to the rapid weathering and mass wasting of the soft shale bedrock. The region is sometimes referred to as “gumbo country” because of the plastic clay sediments that weather from the bedrock (Hananberger et al. 2004). North to south, the major drainages of the Pierre Hills are the Cheyenne River, the Bad River, Medicine Creek, and the White River. In a few places, the Pierre Hills have isolated buttes of Tertiary-age sandstones. Uplands near the Missouri River valley are covered by a thin mantle of scattered boulders of Illinoian-age glacial till (Flint 1955:27–30). In some areas, a mantle of Late Pleistocene/Early Holocene loess overlies the local bedrock and till.

Five terraces, designated MT-4 through MT-0, are present along the valley near Fort Pierre Chouteau. MT-4 is the highest of these and found at the valley crests adjacent to upland settings at elevations approximately 300 feet (92 m) or more above the pre-dam river. It is described as a cut or strath terrace formed when the Trench was initially incised into the pre-existing surface (Coogan 1987:53). It was mantled and modified by subsequent glacial and glaciofluvial deposits consisting of glacial till and erratics.

The MT-3 terrace sits approximately 200 feet (61 m) above the pre-dam river. Coogan (1987:53) defines this terrace, like the MT-4 as a remnant of Pleistocene downcutting of the Trench. While younger than the MT-4, the MT-3 may also be mantled with glacial or glaciofluvial deposits which are typically covered by Early Holocene (or possibly Late Pleistocene) aeolian sediments of the Oahe Formation.

The MT-2 terrace is the most readily recognizable, continuous, and widespread of all the terraces of the Missouri River. It is the location of numerous cultural resources; most conspicuous are those of the Plains Village period (Coogan 1987:54). The terrace surface is approximately 80–100 feet (24–31 m) above the pre-dam river. It is observed near the project area in the Antelope Creek vicinity south of Pierre, and in a long continuous stretch in the Chamberlain vicinity. The MT-2 terrace is submerged by lake waters above the Oahe Dam at Pierre. Unlike MT-4 and MT-3, MT-2 is a cut-and-fill terrace. It is suggested that the terrace began to form as a result of Late Pleistocene ice jams or glacial dams along the lower Missouri River in South Dakota (cf. Flint 1955; Coogan 1987). Clearly, much of the lower portion of the terrace that equates to the early terrace formation is fluvial and possibly lacustrine-derived fill. The upper portions of the terrace fill are mantled in many locations by episodic loess-derived soils of the Oahe Formation, which was formed from about 14,000 yrs B.P. to recent (Clayton et al. 1979; Coogan 1987; Donohue 2000). Given its age, this terrace fill can contain cultural information on some of the earliest human inhabitants of the region as well as subsequent occupations. The climatic

and paleontological records are also well established in this terrace fill in South Dakota for the last 14,000 years (Fosha and Holen 2003, Fosha and Donohue 2005).

The MT-1 terrace is the setting for the community of Fort Pierre, as well as one of the reasons for the clustering of fur trade posts in that vicinity. While the terrace is mainly covered by reservoirs along the Missouri River, it is clearly expressed from below Oahe Dam to the mouth of the Bad River. The terrace is approximately 35–45 feet (11–13 m) above the pre-dam level of the river in the Fort Thompson area but is nearly at the lower MT-0 level in the Fort Pierre area (Coogan 1987:61). It is hypothesized that the MT-1 terrace was formed by lacustrine deposits as a result of ice flow blockage of the Missouri River near Yankton, SD during the Late Pleistocene (Flint 1955). Excavations on the MT-1 near Fort Pierre indicate that at least the upper sediments accumulated as a result of silts and clays settling out of slow moving flood deposits—some of them quite recently. A bison skull found just southwest of the fort at a depth of about 3 m has been dated to 720 ± 40 B.P. (Martin 2003), which makes at least the upper fill of the MT-1 terrace near modern in age. The clays and silts observed in the excavations at Fort Pierre Chouteau also suggest a recent genesis of soil accumulation for this terrace as a result of slow moving flood deposits, or water backed up by downstream blockage, dropping the clay-size particles on the terrace surface with a fairly quick aggradation rate in the recent past. In fact, much of the remains of Fort Pierre Chouteau were buried by these flood deposits during the last 150 years.

The MT-0 is essentially part of the flood plain of the pre-dam Missouri River and would have been present at elevations up to 15 feet (4.5 m) above the river (Coogan 1987:62). It would have been episodically inundated by high waters during floods. Within the project area directly below the dam, terrace-forming events are no longer taking place. Currently, the flood plain is being developed for residential and commercial usage. Archaeological surveys have shown the presence of prehistoric use, including abandoned villages and campsites noted by Lewis and Clark.

Climate

Climate has played a large part in movement of populations and change of settlement systems in the project area. This report focuses on the more recent climate of the Late Holocene. For a more detailed description of past climatic events and human adaptation the reader is directed to other studies (e.g. Bryson et al. 1970; Wendland and Bryson 1974; Kay 1998; Meltzer 1999). The last major climatic episode is the Late Holocene Neoglacial

which began at the end of the Altithermal about 4,500 year ago and continues to the present. The Neoglacial introduced a cooler and wetter climate which instigated a return of mixed grass regime to the central Northern Plains. The Neoglacial is divided into at least six climatic fluctuations (Table 1).

Table 1: Climatic episodes of the Late Holocene Neoglacial of the Great Plains. Adapted from Wedel (1986:43).

Episode	Description
Sub-Boreal	Cooler in the northern plains. Desiccation and increase in grass pollen... to ca. 2900 B.P. (950 B.C.)
Sub-Atlantic	Summers considerably wetter, winters possibly stormier... to ca. 1600 B.P. (A.D. 300–400)
Scandic	Return to Atlantic conditions, warmer and probably drier on northern plains... to ca. 1225 B.P. (A.D. 700–750)
Neo-Atlantic	Continued warm but also moisture; influx of tropical air to the Plains, with increased summer rains in northern sectors. Prairies spread westward at expense of steppe. Tree pollen increases. Maximum westward spread of maize cultivations west of Missouri River; increased drought-like conditions beginning A.D. 850 in portions of the northeastern plains... to ca. 800 B.P. (A.D. 1150–1200)
Pacific	Strengthening westerlies around A.D. 1200 bring seasonally dry air into the northern plains, with lower temperatures and decreased precipitation in central and northern parts; steppe conditions spread eastward as prairie retreats. Deteriorating climatic conditions lead to withdrawal of native horticultural peoples from western portions of the west-central and west-northern plains, possibly moving to Missouri River trench bottoms in search of potential farm land... to ca. 400 B.P. (A.D. 1500).
Neo-Boreal	Colder and moister conditions, with cool summers, cold autumns; glaciers forming again in Rockies. The Little Ice Age... to ca. 100 B.P. (A.D. 1883)
Recent	About 1883, strengthening westerlies result in drier and warmer conditions in the Plains, ending the Little Ice Age and leading into today’s warmer climate.

The most recent four episodes have had a profound effect on human adaptations and populations in the area. The Neo-Atlantic had been a time of mild climates, warmer winters, and plentiful precipitation. It facilitated the spread of horticulture throughout the region, and Plains Village cultures flourished. The succeeding Pacific sub-period saw a general change to in-

creasing drought-like conditions—especially in the Central Plains, where many of the Plains Village populations are hypothesized to have moved to the north to take advantage of potentially better farming conditions of the Missouri River bottoms. Since this region was already occupied by distinctly separate populations, conflicts grew out of the struggle for resources. In addition, growing dry conditions on the Northern Plains may have contributed to diminished bison herd size.

The Neo-Boreal or Little Ice Age brought an end to the drought, a return of a stable grassland community, and possibly the greatest numbers of bison ever to inhabit the Northern Plains. Greater winter snow depth may have also influenced Native American lodge construction techniques as well having been a determining factor in construction techniques of fur trade posts and forts. Large stands of grass would have been favorable for grazing of horses and livestock brought in to support the needs of these Euro-American businesses.

The Recent period, about 1883 to today, witnessed strengthening west-erlies resulting in a warmer, dryer climate that continues to affect large areas of the Plains with increased draught-like conditions to this day.

The modern climate is classified as cool semi-arid steppe (BSk) in the Köppen-Geiger climatic classification system (Peel et al. 2007). The term “cool” refers to a mean annual temperature less than 18°C (64.4°F). Summers tend to be hot and winters very cold. The coldest month is January and the warmest is July; most of the precipitation falls during the warmer half of the year (Table 2)

Fauna

The intersection of the river bottoms and mixed grass prairies in the region led to a very diverse fauna. Large herbivores included bison, whitetail deer, mule deer, elk, and pronghorn antelope. Carnivores included black bear, grizzly bear, gray wolf, mountain lion, red fox, and coyote. Other common mammals include the cottontail rabbit, jackrabbit, deer mouse, porcupine, prairie dog, brown bat, beaver, red squirrel, striped skunk, raccoon, pocket gopher, prairie vole, and various weasels and ferrets (Over and Churchill 1945, Smith et al. 2002).

A variety of birds inhabited the region in historic times. Game birds included grouse, prairie chicken, and bobwhite quail. The Missouri River is situated on the migration path of many species of ducks and geese and other migratory waterfowl. Predatory birds included several species of hawks and owls, American kestrel, turkey vulture, golden eagle, and bald eagle. Many species of songbirds and other birds were also present (Rumble et al.

Table 2: Monthly averages for Pierre, SD (source: <http://www.weather.com/weather/wxclimatology/monthly/57501>, accessed August 25, 2009).

Month	Temperature	Precipitation	Record High	Record Low
Jan	-8°C	13.2 mm	20°C (1981)	-36°C (1966)
Feb	-4°C	13.7 mm	24°C (1992)	-37°C (1994)
Mar	2°C	30.2 mm	31°C (1988)	-28°C (1998)
Apr	8°C	51.3 mm	37°C (1980)	-16°C (1975)
May	15°C	79.8 mm	41°C (1969)	-6°C (1954)
Jun	21°C	88.6 mm	44°C (1988)	2°C (1969)
Jul	24°C	69.8 mm	47°C (2006)	6°C (1971)
Aug	23°C	47.2 mm	46°C (1988)	4°C (1974)
Sep	17°C	39.4 mm	42°C (1983)	-6°C (1995)
Oct	10°C	41.7 mm	37°C (1997)	-16°C (1991)
Nov	1°C	17.8 mm	27°C (1975)	-28°C (1959)
Dec	-6°C	12.2 mm	21°C (1948)	-35°C (1990)

1998, Smith et al. 2002).

Reptiles were represented by box turtle, painted turtle, snapping turtle, western rattlesnake, bull snake, garter snake, and skinks. Amphibians included a variety of toads, frogs, and tiger salamanders (Over 1943).

Flora

The plant populations in the study area reflect the bottomland and mixed grass prairie biomes. The Missouri River bottoms historically were typical of the Northern Floodplain Forest (Küchler 1964) biome, which is dominated by cottonwood, black willow, and American elm. Minor components include boxelder, green ash, and several other willow varieties.

Unlike the lower Missouri Valley, the slopes and breaks of the valley are rarely wooded and are dominated by mixed grasses of the Wheatgrass-Needlegrass biome (Küchler 1964, Johnson and Nichols 1970). Dominant species include western wheatgrass, blue grama, needle-and-thread grass, and green needlegrass. Minor components include sage, sedges, American vetch, prickly pear, prairie turnip, chokecherry, buffaloberry, and wild onion. Scattered stands or individual Rocky Mountain junipers are found in breaks and sheltered areas along the valley walls.

Culture History

The project area is situated in the cultural subdivision of the Great Plains known as the Middle Missouri (Figure 2). For cultural resource planning purposes, South Dakota archaeologists have divided the state into 24 archaeological study units or regions based for the most part on geographical areas. Fort Pierre Chouteau is located in the Bad-Cheyenne Archaeological Region (Winham and Hannus 1991). The prehistory and history of the region spans approximately 10,000 years, from the earliest documented presence of humans in the area until the closing of the dams in the mid-twentieth century.

The Bad-Cheyenne Region can be subdivided into four major pre-contact cultural episodes: the Paleoindian tradition (9500 to 6000 B.C.), the Archaic tradition (6000 B.C. to A.D. 1), the Woodland tradition (A.D. 1 to 1000) and the Plains Village pattern (A.D. 1000 to 1800). The Contact period (A.D. 1650 to ca. 1800) is transitional between the area’s prehistory and history and envelops the end of Plains Village settlements. The Historic period opens with the beginning of the Upper Missouri Fur Trade period (ca. 1800 to 1868) and ends with the Reservation period (A.D. 1868 to ca. 1960). Table 3 summarizes the cultural components in the Bad-Cheyenne region. The number of site components for chronological periods is summarized in Table 4. The components, site types and chronological affiliations are classifications used in Archaeological Research Center site forms and described in the South Dakota site form manual.

Table 3: Cultural components of the Bad-Cheyenne Archaeological Region by property type (source: ARMS database).

Site Type	Total	Site Type	Total
Alignments		Fort	
Undifferentiated Prehistoric	49	Euro-American	4
Artifact Scatters		Foundation	
Euro-American	65	Euro-American	18
African American	1		

Table 3: continued

Site Type	Total	Site Type	Total
Euro-American/Native American	6	Hearth	
Late Prehistoric	6	Euro-American	2
Sioux	1	Undifferentiated Prehistoric	1
Plains Village	18	Extended Coalescent	1
Coalescent	2	Middle Woodland	1
Extended Coalescent	6		
Initial Coalescent	1	Isolated Find	
Extended Middle Missouri	1	Euro-American	6
Post-Contact Coalescent	1	Oneota	1
Woodland	1	Middle Archaic	1
Archaic	1	Late Archaic	1
Late Archaic	6	Paleoindian	2
Middle Archaic	3	Undifferentiated Prehistoric	40
Paleoindian	1		
Undifferentiated Prehistoric	152	Kill	
Unknown	4	Late Prehistoric	1
Burials		Monument	
Unknown	9	Euro-American	2
Euro-American	5		
Undifferentiated Prehistoric	19	Mound	
Initial Middle Missouri	1	Woodland	1
Post-Contact Coalescent	3	Undifferentiated Prehistoric	2
Sioux	2	Unknown	1
Plains Village	1		
		Non-Farm Ruins	
Cabin		Euro-American	14
Euro-American	4	Euro-American/Native	1
Cairn		Occupation	
Euro-American	5	Euro-American	2
Undifferentiated Prehistoric	8	Sioux	1
Unknown	69	Plains Village	5
		Post-Contact Coalescent	2
Depression		Extended Coalescent	1
Euro-American	50	Initial Middle Missouri	1
Undifferentiated Prehistoric	3	Avonlea	1
Unknown	22	Woodland	3
Euro-American/Undifferentiated	5	Middle Archaic	2
Prehistoric			
		Undifferentiated Prehistoric	49
Dump			
Euro-American	13	Railroad	5
Euro-American/Native American	1		
Undifferentiated Native American	1	Road	3
Unknown	1		
		Rock Art	3
Earthlodge Village			
Plains Village	89	School Foundation	3
Post-Contact Coalescent	15		
Initial Middle Missouri	21	Stone Circle	
Initial Coalescent	3	Post Contact	1
Extended Middle Missouri	7	Woodland	1
Extended Coalescent	17	Undifferentiated Prehistoric	69
Bad River Phase	2		

Table 3: continued

Site Type	Total	Site Type	Total
Arikara	1	Townsite	
Earthwork		Euro-American	2
Euro-American	5	Trading Post	
Undifferentiated Prehistoric	1	Euro-American	6
Unknown	1	Village	
Farmstead		Woodland	2
Euro-American	72	Undifferentiated Prehistoric	11
Euro-American/Undifferentiated	2		
Native American		Well/Cistern	
Native American	5	Euro-American	2
		Total Components	1062

Paleoindian Period

The Paleoindian period is made up of nine contexts and subcontexts including pre-Clovis, Clovis, Goshen, Folsom, Midland, Plainview, Early Plano (Agate Basin, Hell Gap, Alberta, Cody, Angostura), Late Plano (Fredrick, James Allen, Eden, Scottsbluff, Lusk, Milnesand), and Unassigned Paleoindian.

The first occupants of the Great Plains represent an issue debated in North American archaeology. It is overwhelmingly argued that people of the Clovis culture, dating to after 11,500 years ago, are the first inhabitants. Sites of this nature have been typically associated with extinct forms of fauna in the Plains and have what is observed as a tool kit and lithic technology that is repeated throughout much of North America. While many pre-11,500 age sites are present in the American continent, suggesting entry into the new world as early as 30,000 years ago, Clovis remains the earliest “well-defined” culture in North America.

Other cultures of the Paleoindian period are identified through diagnostic projectile points which follow Clovis in time. Nothing can be said for the lifeways of this period for the Bad-Cheyenne Archaeological Region. While collectors undoubtedly have many tools associated with this period from the region, very little has been recorded. Three components within this region contain Goshen and Early Plano projectile points from beaches formed by wave erosion (Fosha 1997b, Fosha and McQuay 2002). Site types are listed as one artifact scatter and two isolated finds.

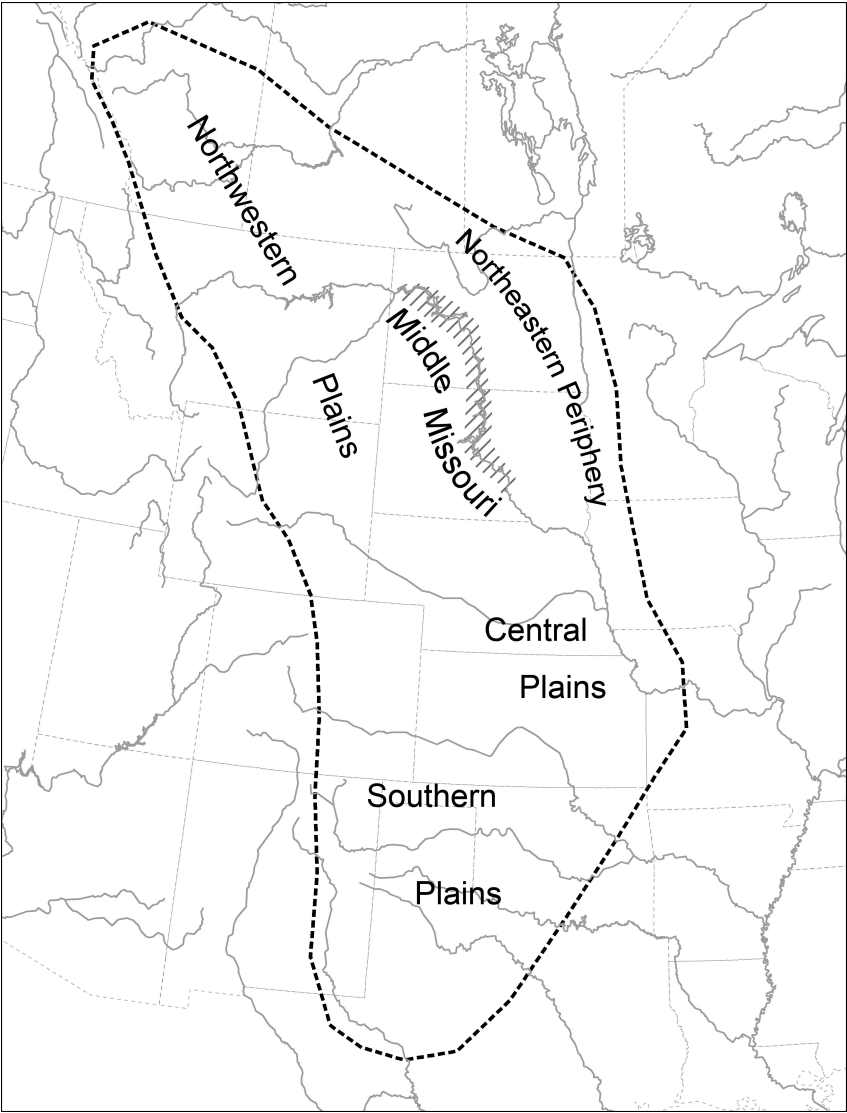


Figure 2: Spatial divisions of the Plains area (after Lehmer 1971:Figure 20).

Table 4: Cultural components identified in the Bad-Cheyenne Archaeological Region by major cultural period (source: ARMS database).

Cultural Component	Count
African American	1
Euro-American	288
Historic Native American	10
Late Prehistoric	7
Paleoindian	3
Plains Archaic	14
Plains Village	199
Plains Woodland	10
Prehistoric	405
Unknown	125
Total	1062

Plains Archaic Period

The Plains Archaic follows the Paleoindian in time and is identified by three major periods including the Early Plains Archaic (which dates to around 7000–5000 years ago), Middle Plains Archaic (5000–2500 years ago), and the Late Plains Archaic (dates range from 2500 years ago to A.D. 900). No Early Plains Archaic sites have been identified within the Bad-Cheyenne Archaeological Region. Site types for Middle Archaic sites consist of 3 artifact scatters, 2 occupations, and 1 isolated find; those for the Late Plains Archaic period include 6 artifact scatters and 1 isolated point. A single undifferentiated Archaic period site is identified as an artifact scatter.

The Early Archaic period is closely identified with long-term drought conditions on the Plains, with consequent reductions in large game herds and human populations. Early Archaic populations appear to have survived by a mixed lifestyle of opportunistic large-game hunting and foraging of smaller game and diverse plant foods. Middle to Late Plains Archaic cultures may represent the movement of new peoples into the region following climatic improvement, which led to the return of large game herds. Little is known about the types of structures or settlement system for these populations in the Bad-Cheyenne Archaeological Region. They are distinguished on the basis of the types of projectile points they fashioned.

Plains Woodland Period

The Plains Woodland period includes Middle and Late Plains Woodland manifestations in the Bad-Cheyenne Archaeological Region (dating from around A.D. 1–1000). Plains Woodland is identified largely by the occurrence of ceramics as part of the archaeological inventory. Often, little can separate Plains Woodland sites from earlier Late Archaic sites without excavation to determine the presence of ceramics. Typically, Plains Woodland populations are viewed as being more sedentary than populations preceding this. This is probably related to the climatic conditions which saw increased water to the lakes and streams of the region and increased animal and plant life. Plains Woodland period sites also are seen as the beginnings of horticultural practices which help sustain a more sedentary life style. It is also during the Plains Woodland period that the first use of burial mounds is suggested for the region and the initial use of the bow and arrow. Middle Plains Woodland site types include one hearth. Late Plains Woodland site types include one occupation. Undifferentiated Plains Woodland site types include: one artifact scatter, one mound, three occupation, two villages, and one stone circle site for the region.

Plains Village Period

Plains Village Tradition (dates from approximately A.D. 900–1860) has been the focus of major studies of the Bad-Cheyenne Archaeological Region during the years prior to and during the construction period of dams on the Missouri River. Partially as a result of this attention, and the ease in which these sites can be identified, they represent the most numerous of all prehistoric affiliations. A total of 199 components represent this time period. The major tradition of the Plains Village is divided into two lesser traditions referred to as the Middle Missouri and the Coalescent (Table 5). These are further subdivided into variants defined by culture or technological change, time, and, in some cases, space. A major increase in garden tools and storage facilities implies a greater dependence upon horticulture than earlier periods; and permanent villages, substantial earthlodges, and, in some cases, village fortifications imply a higher degree of sedentism. Plains Village Tradition site types consist of 155 Earthlodge village components, 29 artifact scatters, nine occupations, five burials, and one hearth.

Table 5: Chronological Model of Plains Village Culture Traditions and Variants in the Middle Missouri Subarea (adapted from Winham and Hanus 1991:7–6) [from Ahler and Toom 1989:Table 2.2].

Major Tradition	Tradition	Variant	Estimated Date Range
Plains Village	Middle Missouri	Initial	A.D. 950–1350
		Extended	A.D. 1000–1500
		Terminal	A.D. 1500–1675
	Coalescent	Initial	A.D. 1300–1500
		Post Contact	A.D. 1675–1780
		Disorganized	A.D. 1780–1862

Historic Period

Historic (greater than 50 years in age) and Post-contact Period sites (1675–1780) are products of movements of populations into this region by Native American, African American and European settlers. Euro-American sites older than 50 years are the largest category and number 288 components. Site types for this cultural episode include: 65 artifact scatters, five burials, four cabins, five cairns, 50 depressions, 13 dumps, five earthworks, 72 farmsteads, four forts, 18 foundations, two hearths, six isolated finds, two monuments, 14 non-farm ruins, two occupations, five railroads, three roads, three school foundations, two townsites, six trading posts, and two well/cisterns. Native American sites of this period number 10 components and include sites identified as Sioux as: one artifact scatter, two burials, and one occupation. Undifferentiated Native American sites include: five farmsteads and one stone circle. One African American component is identified as an artifact scatter.

Other Classifications

Remaining chronological or cultural components of the Bad-Cheyenne Archaeological Region include categories identified as Undifferentiated Prehistoric, Late Prehistoric and Unknown. Undifferentiated Prehistoric components are usually attributed to sites that have not been dated through either organic dating processes or have no temporally diagnostic artifacts in association. This is the largest category of this region and includes 405 components. Site types associated with this category include: 49 alignments, 152 artifact scatters, 19 burials, 8 cairns, 3 depressions, 1 dump, 1

earthwork, 1 hearth, 40 isolated finds, 2 mounds, 49 occupations, 69 stone circles, and 11 villages.

Late Prehistoric sites are identified through observations that are not limited to 1) nondiagnostic projectile points that were used through the form of bow and arrow (postdates ca. A.D. 400), 2) sites occurring in recent sediments, 3) or sites containing nondiagnostic ceramics. Seven site types associated with this category include: 6 artifact scatters, 1 kill site, and 1 isolated find.

Sites of the unknown period number 125; they are culturally unknown and could represent any population of the modern era. Site types associated with this category include 10 artifact scatters, 9 burials, 69 cairns, 27 depressions, 2 dumps, 1 earthwork, 2 farmsteads, 1 mound, and 1 non-farm ruin.

History of the Fort

Schuler's *Fort Pierre Chouteau* (1990) provides a detailed history of the fort. Fort Pierre Chouteau has a colorful and rich story which is not limited to the brief summary provided. Construction, rebuilding, and remodeling of the site of Fort Pierre Chouteau was continuous over the years it was occupied.

The earliest documented utilization of the Fort Pierre Chouteau site area was during a period known as the Post Contact Coalescent period (ca. A.D. 1650–1780), when the surface was occupied by Native American village-dwelling farmers. This designation is based upon ceramics recovered during hand excavations. Additionally, sites in the immediate vicinity of the post show Extended Coalescent period (ca. A.D. 1450–1650) populations made extensive use of the Fort Pierre terrace as well.

Fort Pierre Chouteau was constructed as a fur trade post in 1832 by the American Fur Company (AFC) after continued spring floods of the Missouri River threatened Fort Tecumseh, located approximately two miles to the south near the present town of Fort Pierre. The fort was in use later that year but was not formally complete until the spring of 1833 (Schuler 1990). The fort was replatted in July of 1843. By September of that year, some of the original buildings may have been dismantled, with new buildings erected in their place and construction beginning on others (Schuler 1990:41–43). The process of remodeling must have continued for a number of years as specific buildings fell into a state of disrepair.

The U.S. Army began negotiations with AFC in 1855 and purchased the fort that same year. Correspondence of the period depicts the hardships the military faced due to the dilapidated condition of many of the structures and palisade. Troops were sent to cantonments in the wooded areas upstream from the fort. To more adequately house the troops, the U.S. Army sent 37 recently designed portable cottages (12 barracks, 18 of officers' quarters, 2 barracks-sized cottages for the hospital, and 5 barracks-size cottages for store houses) as well as the designer, Captain Turnley, by two steamships to their newly acquired post location (Nowak 1998).

Rather than completely rebuild the fort, the army decommissioned it in 1856. Portable cottages and other fort materials were dismantled and sent downstream by raft for the construction of Fort Randall. By 1857 the fort was abandoned. However, rifle cartridges located during a metal detecting sweep exterior to the post suggest that the military continued to use the location for intermittent training and bivouac through at least 1874. Post-military occupation of the fort by other interests may also have occurred. It has been stated that the fort was the location for the James “Scotty” Philips ranch sometime after 1890 (Philip 1935:27–28). After a period of time, Philips moved his residence to a point beneath the hills northwest of the site (Ruple 1990:13). While this location is disputed, early ranch period artifacts do make up part of the artifact assemblage from the post.

Several flood events occurred at this location over the years, with the best documented of these occurring in 1952. During these events the terrace margins were reduced to their current position. Before the 1997–2001 excavations were undertaken, it was unknown how much of the fort remained, and what effects these events might have had on the integrity of the site.

Historic Documentation

Documents pertaining to the structural changes the post, its buildings, and how the buildings functioned are crucial to the physical understanding of the fort. Unfortunately, these documents are scarce and are of varying forms of usefulness. Documents include maps, artists' renderings of Fort Pierre Chouteau, and brief accounts of the fort by visitors. Selected annotations and sketches include:

1832: George Catlin (1973:208) described the fort as "...two or three hundred feet square, enclosing eight or ten of their factories, houses and stores, in the midst of which he occupies spacious comforts and luxuries of life..." From the summit of the bluffs a mile or two distant, looking southeast, Catlin painted a scene depicting the post and "an encampment of over six hundred tents or skin lodges around the fort" (Catlin 1973:209).

1833: Alexander Maximilian, Prince of Wied, traveling with Swiss artist Karl Bodmer, stayed at the fort. Maximilian's sketch of the fort (Figure 3) correctly places the bastions at the northwest and southeast corners of the post, while his description incorrectly places them at the northeast and southwest corners. Maximilian's annotations are the most detailed description of the early fort period (although his dimensions of the enclosure are probably not very reliable):

Fort Pierre is one of the most considerable settlements of the Fur Company on the Missouri, and forms a large quadrangle, surrounded by high pickets... At the north-east and south-west corners there are block-houses, with embrasures f,f, the fire of which commands the curtain; the upper story is adapted for small arms, and the lower for some cannon; each side of the quadrangle is 108 paces in length; the front and back, g,g, each 114 paces; the inner space eighty-seven paces in diameter. From the roof of the blockhouses, which is surrounded with a gallery, there is a fine prospect over the prairie; and there is a flag-staff on the roof, on which the colours are hoisted. The

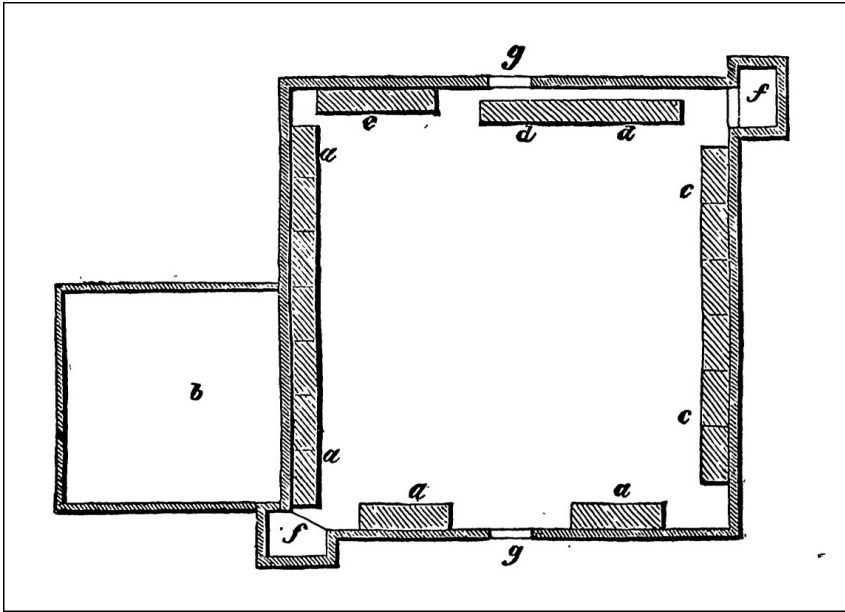


Figure 3: Prince Maximilian's 1833 sketch of Fort Pierre showing many of the interior buildings next to the palisade wall. North is to the right.

timber for this fort was felled from forty to sixty miles up the river, and floated down, because none fit for the purpose was to be had in the neighbourhood. Mr. Laidlaw's dwelling-house d,d, consisted of one story only, but was very conveniently arranged, with large rooms, fire-places, and glass windows. Next this house was a smaller building, e, for the office and the residence of a clerk. The other clerks, the interpreters for the different Indian nations, the *engagés* and their families, altogether above 100 persons, lived in the other buildings, a,a,a,a. Opposite, in c,c, were the stores, at that time of the value of 80,000 dollars; and in other rooms, the furs obtained from the Indians by barter. The fort has two large doors, g,g, opposite each other, which are shut in the evening; in b there was an enclosed piece of garden ground [Maximilian 1843:317].

Karl Bodmer documented their expedition through sketches and paintings. One of these (Figure 4) is painted from the bluffs looking southeast across the Missouri River floodplain to the fort. It shows an artistic rendi-



Figure 4: Sketch of Fort Pierre Chouteau from 1832 by Karl Bodmer (Library of Congress, Washington, D.C.)

tion of the interior buildings of the fort as they appeared at the time.

Several descriptions of the fort were made; many of these were most likely from recollection, since the sizes differ dramatically. Approximately ten years after the fort was constructed, renovations began to give the fort a more pleasant appearance in the face of a growing number of competitors' posts.

1843: A letter from William Laidlaw, newly appointed bourgeois, to Pierre Chouteau, Jr. indicated a new row of buildings with six adobe chimneys was erected, the carpenter's shop was rebuilt, and numerous minor improvements were made (Schuler 1990:37). Sometime between 1847 and 1850, the bourgeois' house was remodeled and either had a half-story added or was completely rebuilt (Culbertson 1952:76). The fort was visited that year by John Audubon and artist Isaac Sprague. Edward Harris, also traveling with Audubon, described the fort as "235 feet square, occupying more than an acre, made of strong pickets planted close together to a depth of four and one-half feet and twenty-two feet high above the ground. There were two bastions, and all buildings, dwellings, warehouses, and stabling for horses and cattle were within" (McDermott 1951:83).

1847: John Palliser visited the fort and described it as consisting "of a large space about 120 yards square, enclosed by piles of timber 24 feet high driven well into the ground. The roofs of the stores and trading houses are attached to two of the sides, with the stables, straw-yards, carpenters'

and blacksmiths' shops, and a dairy" (Palliser 1853:103). Father Nicholas Point made three paintings, two of which are of the fort. The first shows the proximity to the river, two blockhouses and the palisade. To the right of the fort (north) is a single log cabin (also shown in earlier renderings of the post). The other is an interior view of the post with a large central yard. A row of buildings is shown to the north and south which clearly appear to be built with back walls against the palisade. In the front of the west wall is a large one-and-a-half-story building with dormer windows in a gable roof. To the left of this building is a small detached structure (Suplee 1999).

Other depictions and descriptions of the fort reflected the remodeling or replacement of structures over the next few years. The primary change is identified as rebuilding of structures at a distance from the palisade walls. While somewhat useful in regard to the remodeling event, their dimensions are quite speculative. De Girardin (1936:56) described the palisade as two hundred meters square (656 feet) in 1849. Thaddeus Culbertson's journal entry of May 27, 1850 incorrectly estimates the palisade walls to be "500 feet on each side with bastions at the N.W. and S.E. corners" (McDermott 1952:75, Nowak 1998:2). By and large, the majority of the remodeling of the fort was probably accomplished by 1850.

1854: Pierre Chouteau, Jr. began making plans to sell the fort and all its property to the military. Multiple sketches and one watercolor of the fort were made at this time and a number of descriptions of the fort were produced during this transaction. The most popular of these is an 1854 watercolor painted by Frederick Behman that was reproduced on the cover of Schuler's 1990 publication *Fort Pierre Chouteau* (Figure 5).

1855: A record group in the National Archives (Record Group 94, Maps and Sketches, Fort Pierre Plan file) includes correspondence dated April 7, 1855 between Pierre Chouteau, Jr. and Quartermaster General Thomas S. Jesup which places the fort on the market to the military. The letter includes a sketch of the fort with numbered buildings (Figure 6) and a text description of each of the structures:

Enclosure 280 x 300 feet
 Palisade 15 Feet high above ground
 Bastions 24 Feet Square, Two Stories high
 Houses No 1 & 2 are 24 Feet Square each with attics
 Row of Houses No 3: 100 Feet front by 24 feet deep with attics
 Row of Houses No 4: 90 Feet front by 24 feet deep with attics
 Houses No 5 & 6 Each 40 Feet front by 24 deep containing
 Two rooms each
 Row No 7 Store houses, 100 Feet front by 24 feet deep



Figure 5: Frederick Behman's 1854 watercolor of Fort Pierre (National Archives, Washington, D.C.)

Houses No 8 & 9 Store houses Each 24 feet Square
 No 10 Stable Yard & Sheds
 No. 12 Stable containing 40 Stalls
 No 13 Hen House
 No 14 Saw Mill Complete
 Bank of Buildings No 3 is a Row of Houses used as Kitchens
 40 feet by 20 deep
 Open Space between Buildings 200 feet Square
 No 15 Milk and Ice House
 Powder Magazine

In addition to the foregoing there is deposited at or near the fort, ready for use, a quantity of building Materials, which can be profitably used in the erection of new buildings. There are also, as appendages to the Fort about 300 Head of Cattle, as also Horses and Mules. Note: Stone is found in the Bluffs on the opposite Side of the River; Timber for building purposes, 20 or 30 miles above. Wood for fuel has to be rafted from 5 to 10 Miles. The Winters are exceptively [sic] cold; Snow usually covers the ground from the Middle of November to

that of April. Grass springs up early in May & for Hay it is found in patches on the Low Lands at accessible distances. The Company found no difficulty in providing for the Stock named above [cited in Nowak 1998:2–3].

Lt. G.R. Warren accompanied Harney’s expedition in 1855; in his map of the Fort Pierre Military Reservation he included a small inset map of the fort (reproduced in Schuler 1990:Figure 12). Capt. P.T. Turnley, Harney’s quartermaster, produced a second plan of the fort; this version provided a scale (“tho’ not with great accuracy”) and labeled the buildings by use

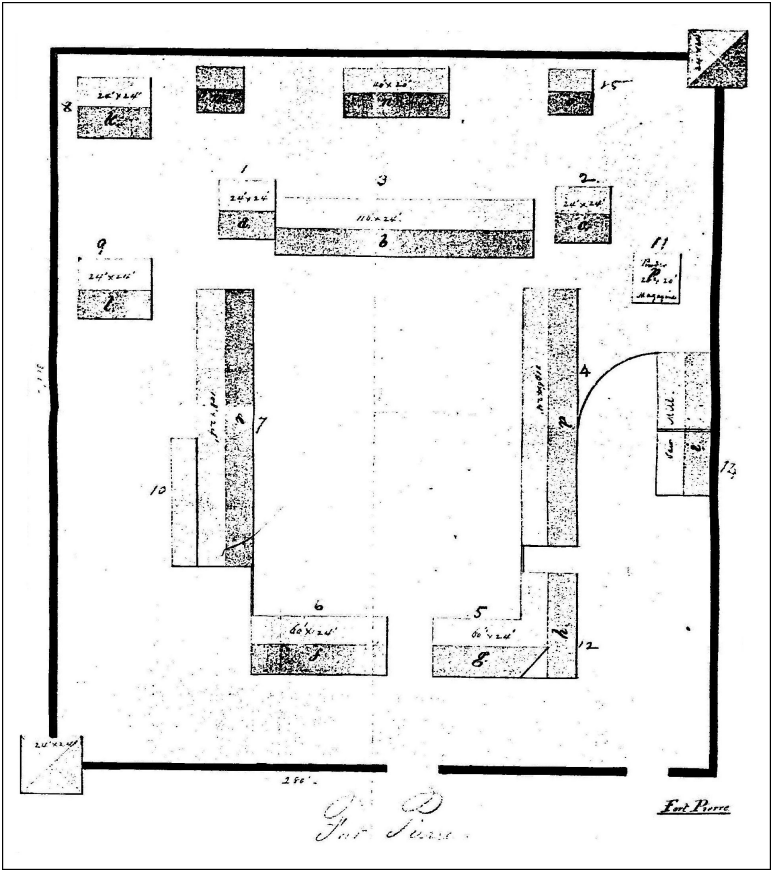


Figure 6: Plan view of fort by Pierre Chouteau, Jr., sent to Quartermaster General Jesup (National Archives, Washington, D.C.)

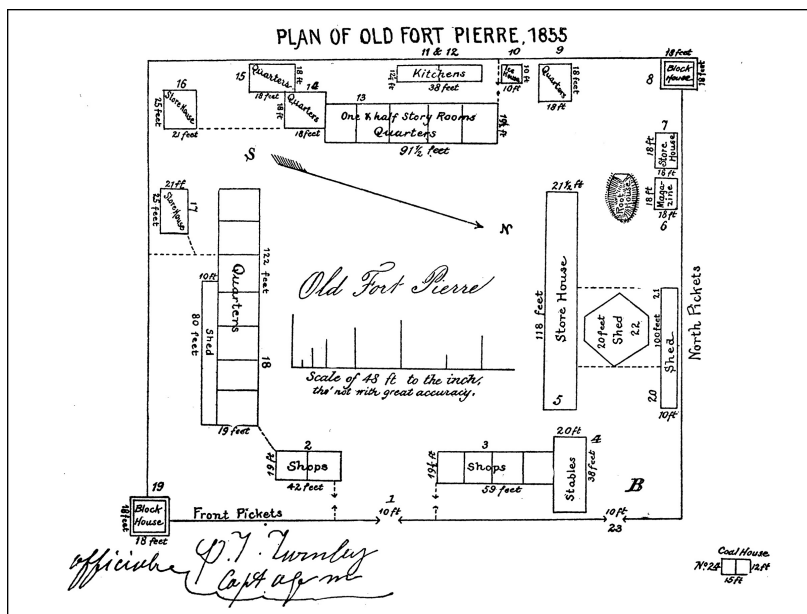


Figure 7: Turnley's 1855 plan of the fort (Wilson 1902).

(Figure 7). Figure 8 depicts another map prepared by the army in 1855, showing the plan of the military camp and the old fort—the latter was copied from Warren's map (Nowak 1998:13).

1856: After the military purchased the fort property, two revealing watercolor sketches were made by Alfred Sully, then a lieutenant stationed at the fort. Both are located in the Gilcrease Museum in Tulsa, Oklahoma. One is entitled *Fort Pierre looking South*, which shows portable cottages that were brought to the site by steamboat (Nowak 1998) to the west (rear) of the fort and barn-like buildings to the north (Suplee 1999). The second image is a bird's-eye view of the fort entitled *Inside of Fort Pierre Nebraska Territory now Dakota 1856* (Figure 9). Army portable cottages are present to the west (rear) of the fort and barn-like structures and tipis to the north. After a new location for a military post was acquired (Fort Randall), demolition of the post began, and the portable cottages were disassembled and shipped to the new post (Schuler 1990).

1857–1960: Suplee (1999) and Wilson (1902) address the accounts of partial reconstruction of portions of the fort. Little is known concerning the final abandonment of the structures. Based upon various accounts, portions of the post may have been occupied as late as 1860.

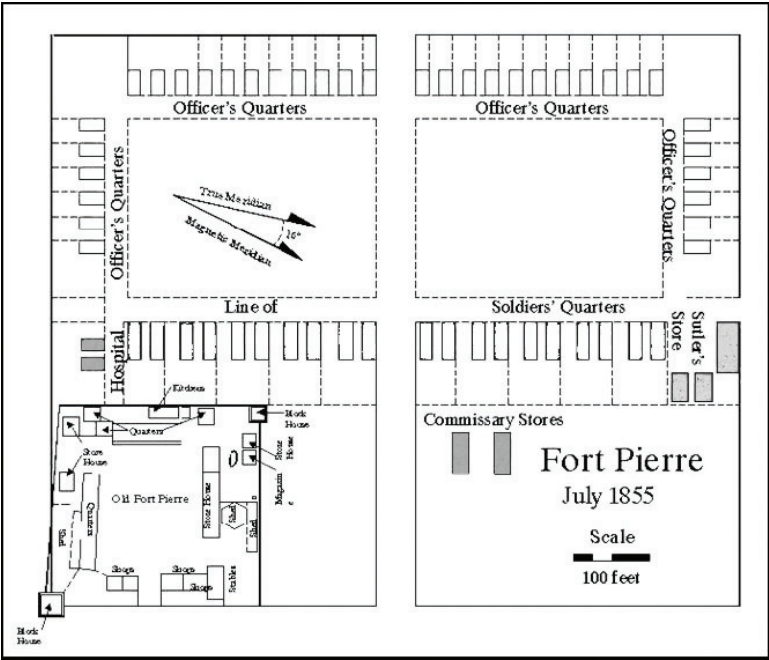


Figure 8: Captain Turnley's 1855 stores distribution plan (redrawn from Nowak 1998).



Figure 9: Watercolor of Fort Pierre Chouteau by Lt. Alfred Sully, 1856 (Gilcrease Museum, Tulsa, Oklahoma).

Research Goals

The research goals for the 1997–2001 excavations were primarily designed to identify the structural extent of the fort, examine the integrity of archaeological deposits, and ascertain the extent of damage due to past flooding and erosional events. Archaeological excavations were conducted in areas in order to locate exterior walls of the fort, address questions of integrity, and collect information that could be used to aid future, more directed, investigations.

Investigation Strategy and Field Methods

The first task for the field team in 1997 was to set up a reference grid over the site. The grid was laid out on a magnetic north axis, and permanent markers were placed. Following the goals established in the research design (Fosha 1997a), archaeological excavations were conducted in selected areas of the fort. The excavations were designed to explore what was perceived to be the most likely locations to meet the project objectives.

The excavations were largely exploratory trenches made up of consecutive 1×1 -meter squares. The reference datum for each unit was the southwest corner. These units were hand excavated in arbitrary 10-centimeter levels until a feature was encountered, the excavations had reached a culturally sterile surface, or a decision was made to stop by the director to avoid unnecessary excavation. During the 1997 season, excavations were discontinued when a feature was identified. This practice was utilized to preserve the feature for future investigations. This method of “feature preservation” proved not as hoped. The practice made it difficult to determine feature function.

All soil was sifted through a minimum of a quarter-inch (6.35-millimeter) mesh. At the discretion of the area supervisor or the site director, soil samples were retained for flotation or water screening. This usually included feature fill, unusually high densities of botanical or faunal remains,

or in areas rich in artifacts that were not recoverable by quarter-inch screen.

A field laboratory was used to process as much of the archaeological assemblage as possible using volunteer labor and to stabilize sensitive materials. Artifacts were sorted by class, counted and/or weighed, described, and entered onto specimen catalog sheets. This data was later entered into the Archaeological Research Center's Hierarchical Artifact Catalog (HACS) database program by year as time permitted.

All data pertaining to soil descriptions, artifacts, and features present were placed on test excavation level and feature forms. Grid paper was used to map the plan views of the excavation, as well as the wall profiles of the excavation units or trenches. Color slides and black-and-white photographs were taken to record the results of the excavations. Typically, photographs were taken at the completion of each 10-centimeter unit and of all profiles at the end of the excavation. Beginning in 1999, black-and-white photographs were replaced by digital photographs. All artifacts, field notes, forms, databases, photographs and digital images are on file at the Archaeological Research Center, Rapid City.

Areas of Investigation and Related Features

The 1997–2001 investigations were exploratory in nature. They incorporated the excavation of test trenches, test blocks, as well as isolated 1×1 -meter units. Field designations in the form of area numbers were assigned to the various clusters of excavation units. During the 2000 season the nomenclature was changed to incorporate the year into the area designation (e.g. Area 2000-1). The target area as well as field designations are used in this text as references to specific study areas. Index maps (Figures 10–12) were created that show the various areas discussed in this report overlaid by the estimated outlines of the fort at different times. The outlines of the fort come from the drawing created by Maximilian in 1933 (described in this report as the *early fort* period) and Warren’s 1855 map (the *late fort* period). The investigations were designed to identify, if possible, the fort dimensions, construction methods, and the location of a limited number of interior structures to assist in future investigations.

Because the work was exploratory, features, when encountered, were usually not excavated to their basal or aerial extent but left as intact as possible for the benefit of future investigations. Therefore, while features are present, much of their function and dimensions will remain unclear until future exactions are undertaken. Furthermore, many stains in the soil were encountered in the investigations are suspect as to their cultural origin. Features reported in this volume are those felt to clearly reflect activities associated with the fort, its construction, and architectural genesis. Information on these “less telling” phenomena are available in GIS format, maps, and field notes stored at the Archaeological Research Center. Builder’s trenches were the key focus of the investigations. When ever possible, these were excavated to their vertical limits and profiled. The following sections provide descriptions of the various areas, their goals, and descriptions of features identified in each area.

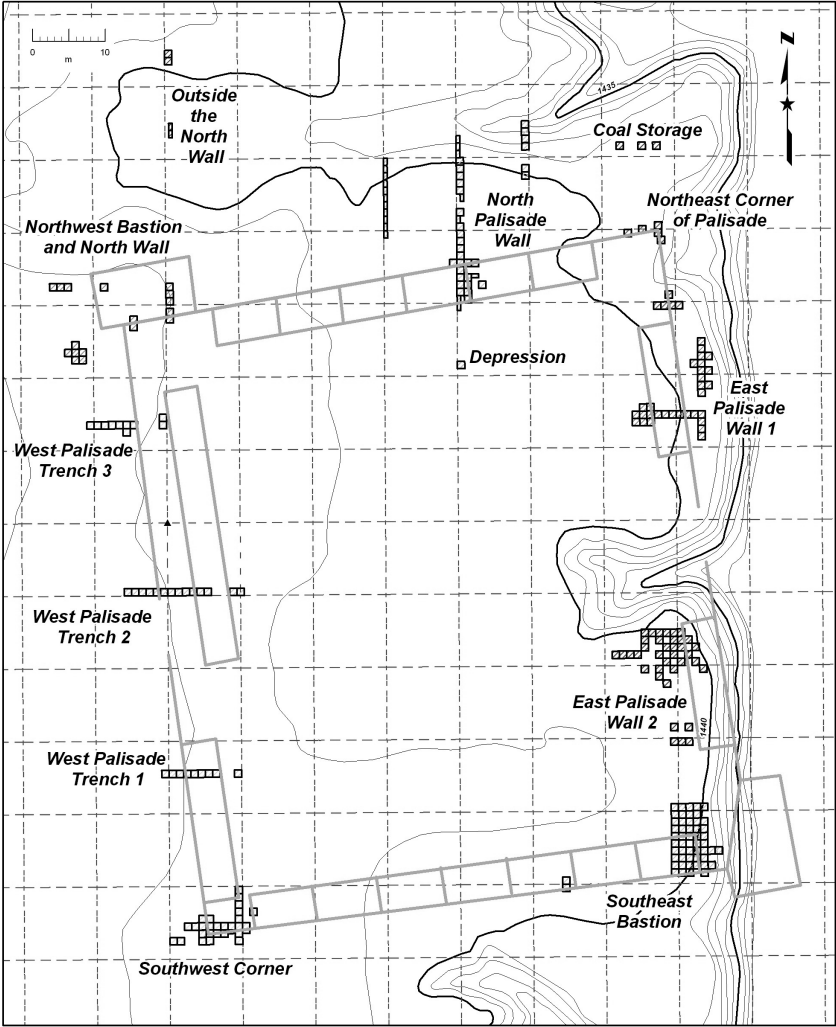


Figure 10: Key to excavation areas described in the text based on 1833 fort plan (georeferenced and rubbersheeted to fit results of excavations).

Southwest Corner

The area referred to as the Southwest Corner (Figure 13) was assigned Field No. Area 1 for the 1997 and 1998 field seasons and Area 2000-4 for

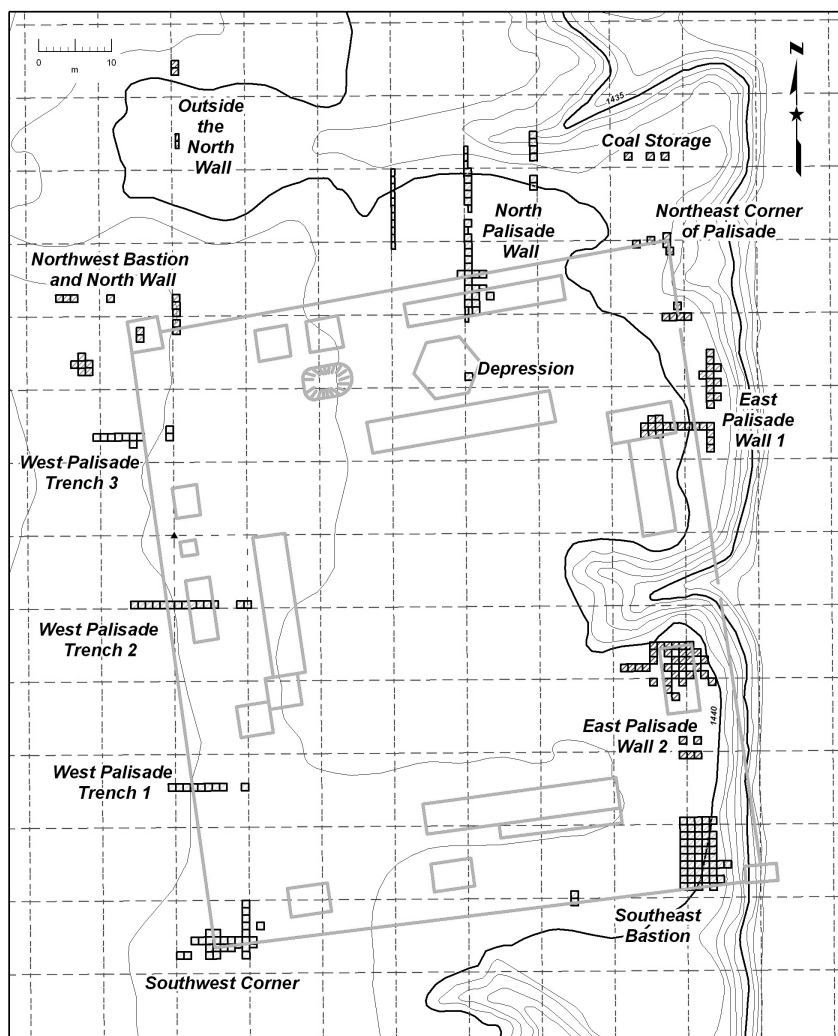


Figure 11: Key to excavation areas described in the text based on Warren's 1855 fort plan (georeferenced and rubbersheeted to fit results of excavations).

the 2000 season. Supervisors were Michael Fosha (1997, 1998), Michael Larson (2000), and Ray Pysarsky (2000). It was initially investigated in 1997 in an attempt to identify the south palisade wall, and later the south-

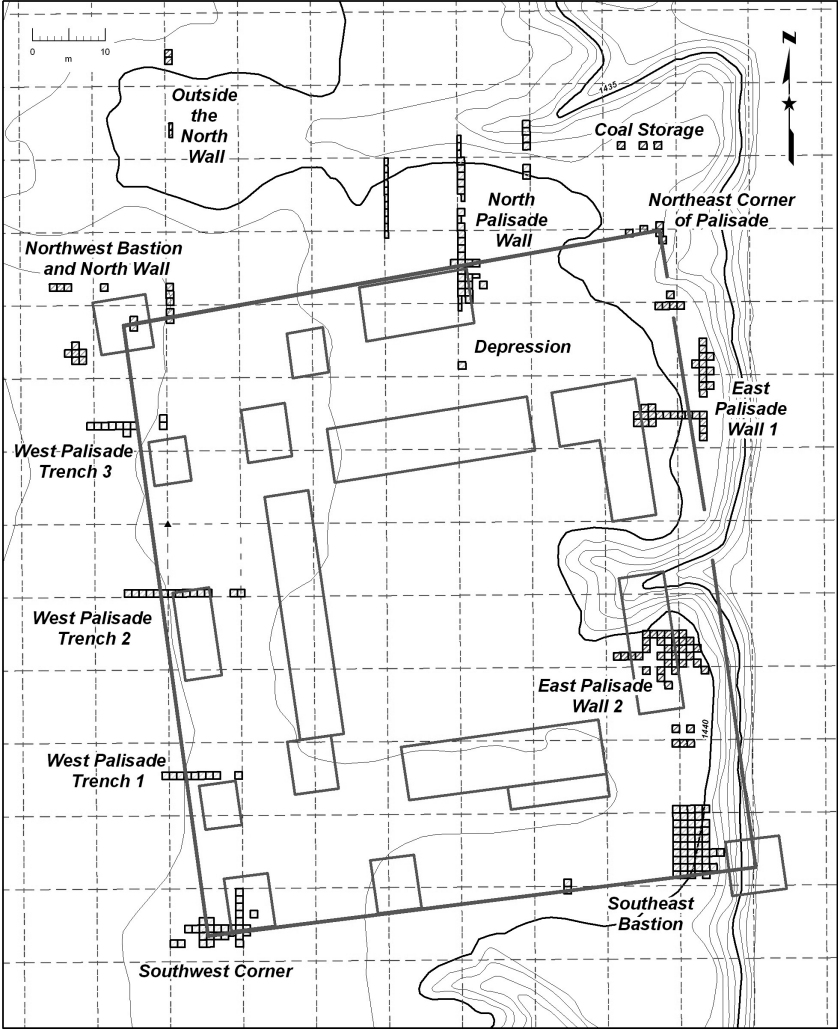


Figure 12: Key to excavation areas described in the text based on Chouteau's 1855 fort plan (georeferenced and rubbersheeted to fit results of excavations).

west corner of the palisade. Additional work was conducted in this area in 1998 and again in 2000, bringing the total to 31 excavation units. The first two years of work in this part of the site were continually flooded by rain

for many of the units. A lot of time was spent bailing, removing mud, and waiting for the units to dry before resuming excavations. These necessary activities may have obscured subtle features.

The 1997 investigations included an exploratory 1×8 -meter (N442/E509–N450/E509) trench (Trench 1), from which the top of the south palisade wall was delineated. The profile showed the ground surface prior to burial by flood deposits and that the builder's trench would have been expressed as a shallow and narrow ditch prior to the flood event. Soil consistency and artifact content north and south of the builder's trench was markedly different, with low cultural material content in test units south of this feature and high content in units to the north or interior side of the feature.

Two meters east of Trench 1, a single 1×1 unit (N446/E511) was excavated to investigate a strong signal identified during a geophysical survey. The signal came from the presence of a cast iron stove door. A post mold and artifacts similar to those from the units to the north of the palisade in Trench 1 suggests that this area may represent a portion of the employees' residence as depicted in sketches of the early fort period.

After the palisade wall was defined, six additional units were excavated to identify the southwest corner of the palisade. The first attempt consisted of a 1×2 -meter unit (N442/E500–N442/E501) taken to a depth of 50 cm. These units were later identified as being located south (outside) of the fortification wall. One feature was identified consisting of alternating black and gray/brown stains. These were interpreted as relict wagon tracks outside the southwest corner of the fort. Additional units were placed to the east of this location. Along the east edge of N444/E504 a dark line of feature fill and traces of wood were interpreted as a portion of the palisade line. A 2×4 -meter block was opened in 1998 (N442–445/E504 and N442–445/E505) to identify the feature and open up a large enough area to determine the nature of the wall. At this time the southwest corner of the feature was identified, which consists of a builder's trench and the buried remains of timbers used in the palisade. Additional features located in this area include a pavement of adobe blocks, two areas of adobe-derived soil, a zone of ash, a square stain, and three post molds.

This area and adjacent units were re-opened in 2000 to obtain additional information on the depth of the palisade posts and the dimensions of the individual timbers. Units N443–444/E506–507, N443.5–444/E508 and 510 were excavated or re-exhumed to below the original ground surface of the fort, which was approximately 55–60 cm. Units N444/E508–510 were taken to a depth of approximately 2 m to expose the base of the builder's trench and expose a three-meter section of the posts.

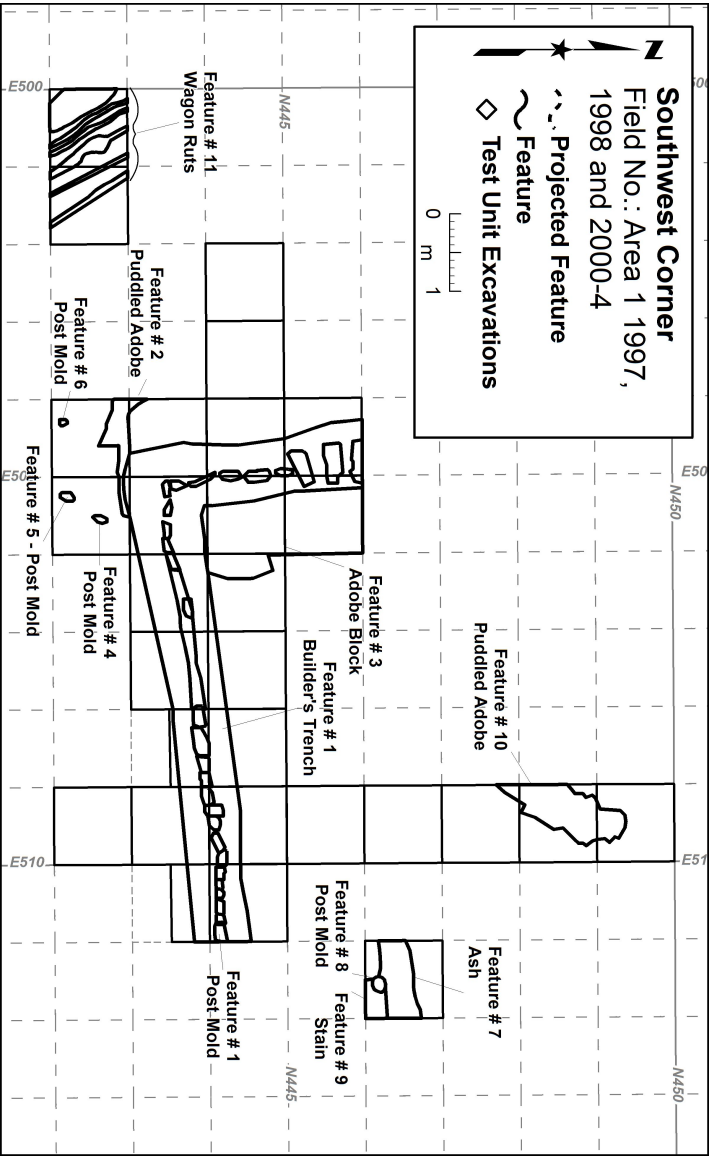


Figure 13: Plan view of the Southwest Corner excavations.

Table 6: Features identified in the area of the Southwest Corner.

Feature	Feature Type	Comments
1	Builders Trench/Palisade wall	Trench and posts
2	Puddled Adobe	Possibly from walls or decomposed bricks
3	Adobe Block	Internal to the palisade wall.
4	Post mold	Exterior to palisade wall
5	Post mold	Exterior to palisade wall
6	Post mold	Exterior to palisade wall
7	Ash Layer	Parallel to palisade wall. Very rich in artifacts.
8	Post mold	Possible part of an interior structure.
9	Rectangular stain	Dark Sand, possibly location of structure
10	Puddled Adobe	Unknown dimensions
11	Possible Wagon Ruts	Exterior to the southwest palisade.

Feature 1

The builder's trench for the south palisade was identified in 1997 in an exploratory trench including units N443–445/E509 (Figure 14). A very slight variation in surface vegetation was observable in early May of 1997 which was determined to be due to a deep rooted plants feeding on the decaying wood of the palisade. Excavations revealed the upper portion of the builder's trench at a depth of 45 cm where the two opposing slopes of the fortification trench became visible. The trench varies in width according to depth. At a depth of 50 cm, where the tops of the palisade timbers become visible, the builder's trench averages 38 cm in width (Figure 15). Depth of the trench from the interpreted ground surface would have varied between 80 and 100 cm (Figure 16).

The bases of palisade timbers were present throughout the entire excavation at this location. Timbers have been absent in all other areas of the fort where the assumed fortification trench has been encountered. Along the south fortification trench in this area, timbers range in width from 10 to 40 cm in width, averaging around 24 cm. Several of these timbers may be sections of the same planks, which appear to be isolated due to decay. The thickness of the timbers is approximately 20 cm at the top but may become thicker in depth due to differential preservation and decay. One of the timbers along the south wall was recovered for further studies. The palisade posts along the south fortification were vertical, in contrast to those located north of the southwest corner. The west wall timbers were protruding to the west from the builder's trench at approximately 30°, probably the result

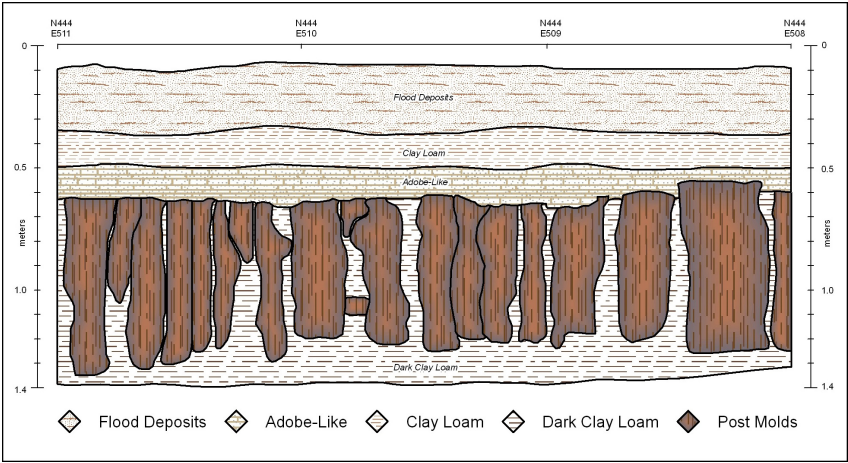


Figure 14: Profile of Feature 1, Southwest Corner.

of attempting to pull this section of timbers out of the ground as a group with a team of horses.

Feature 2

Along the exterior portion of the southwest corner of the palisade trench was a layer of soft adobe-derived soil located at a depth of approximately 40 cm. Portions of this feature may have been inadvertently removed while removing rain water and mud from the excavations after a thunderstorm. Several other locations where a palisade line was intersected also exhibited a puddled adobe on the exterior side of the builder’s trench. Also incorporated into the fine sandy silt were numerous pieces of wood, probably from cutting the timbers off at ground level after attempts to pull them out had failed.

Feature 3

Adobe block was observed at a depth of approximately 40 cm in units N444–445/E505 adjacent and interior to Feature 1. The blocks measured approximately 40 cm wide and varied in length from 40 to 35 cm. The function of this feature at this location is currently unknown. It is likely that these blocks represent a building floor, exterior pavement, or part of a support for the corner of the palisade. Several other locations where a palisade line was intersected also exhibited an adobe pavement on the



Figure 15: Photograph of the surface of Feature 1. The view is to the west showing the tops of the palisade wall timbers.



Figure 16: Base of Feature 1, Southwest Corner, north palisade wall trench N444/E508–510.

interior side of the builder's trench. While no records indicate that the walls were adobe covered, the presence of puddled adobe (Feature 2) on the exterior portion of the palisade trench suggest that adobe was used in some form along the palisade wall.

Feature 4

A post mold is located at N442.6/E505.53. The post mold is round and measures 8×6 cm. It is located 80 cm outside the palisade. Its depth is undetermined. The function of this feature is unknown.

Feature 5

Feature 5 is a post mold located at N442.2/E505.15. It is round and measures 8×6 cm. It is located 120 cm outside the palisade. Its depth is undetermined. The function of this feature is unknown.

Feature 6

This post mold is located at N442.15/E504.29. It is oval and measures 10×8 cm. It is located 125 cm outside the palisade. Its depth is undetermined. Its function is unknown.

Feature 7

An ash layer running parallel to the palisade was designated Feature 7. It is located in N446/E511. The ash was encountered at a depth of 38 cm and continued to 55 cm. The deposit is approximately 40 cm wide. Its length is unknown. Its function is not known. Given its location higher in the profile than Features 8 and 9, it may be a portion of a builder's trench or other feature related to a shed depicted in late fort period plans of the fort.

Feature 8

A post mold located at N446.17/E511.58 was designated Feature 8. It is oval and measures 18×20 cm. It was identified at 65 cm in the northwest corner of Feature 9. The depth of the post is undetermined. Its function is unknown. Its location in the corner of Feature 9 suggests it may be a corner post of what is currently interpreted as the possible location of the employees' quarters in a sketch of the early fort period plan view.

Feature 9

Feature 9 is a deposit of dark gray clayey sand located in the southeast corner of N446/E511. The feature continued into adjacent unexcavated units. The shape of the excavated portion of the feature is rectangular, with a large post mold in the northwest corner. Its function remains unknown. It may represent the northwest corner of a series of employees' quarters identified in an early fort period plan view.

Feature 10

An amorphous accumulation of what appears to be puddled adobe is located in the west wall of E509 in units N447–N448 toward the northeast, terminating in N449/E509. It was designated Feature 10. The accumulation is approximately 60 cm wide. It was encountered at a depth of 40 cm. The dimensions are undetermined. Its function is not known. Puddled adobe can be generated from the decomposition of an adobe brick chimney or an adobe-covered roof. Based on records of the early fort, the nearest

building to this feature is the westernmost edge of a series of structures built against the south palisade walls, referred to as employee's residences.

Feature 11

This feature is a series of alternating dark clayey silts separated by lighter clay running in a southeast to northwest line in N443/E500–501. The feature is located 3 m outside the southwest corner of the palisade. It was encountered at a depth of 41 cm below the surface. Feature 11 has been interpreted as wagon ruts.

West Palisade Trench 1

The West Palisade Trench 1, supervised by Richard Berg and Linda Palmer, was designated Field No. Area 2000-2. The investigations were conducted in an attempt to locate the west palisade wall. Other features which could be encountered included the clerk's office, quarters from the early fort period, and the living quarters for one of the fort clerks from the late fort period plan of the fort (Figure 17). Eight units were excavated to varying depths between 40 and 65 cm. The excavation included a 1×7 -meter trench along the N465 line from E499–E506 and a 1×1 -meter unit at E509, also on the N465 line.

A very dense accumulation of building materials in the form of wood, glass, metal flashing as well as personal items and bone were recovered in this area. Eight features were identified in this area (Table 7). The features include two builder's trenches, three zones of puddled adobe, a zone of sandy ash, a zone of adobe block, and a post mold.

Feature 95

This feature was an artifact-rich layer of sandy ash to adobe-like material located in N465/E499.8–501.35. The zone was encountered at 25 cm in depth and is 7 cm thick. The feature is assumed to be located exterior to the west palisade wall. The function of this feature is unknown. Puddled adobe can be generated from the decomposition of an adobe brick chimney or an adobe-covered roof. The nearest potential structure to this feature is the west palisade wall. It may be adobe that eroded off the palisade wall with later fill mixed into the matrix.

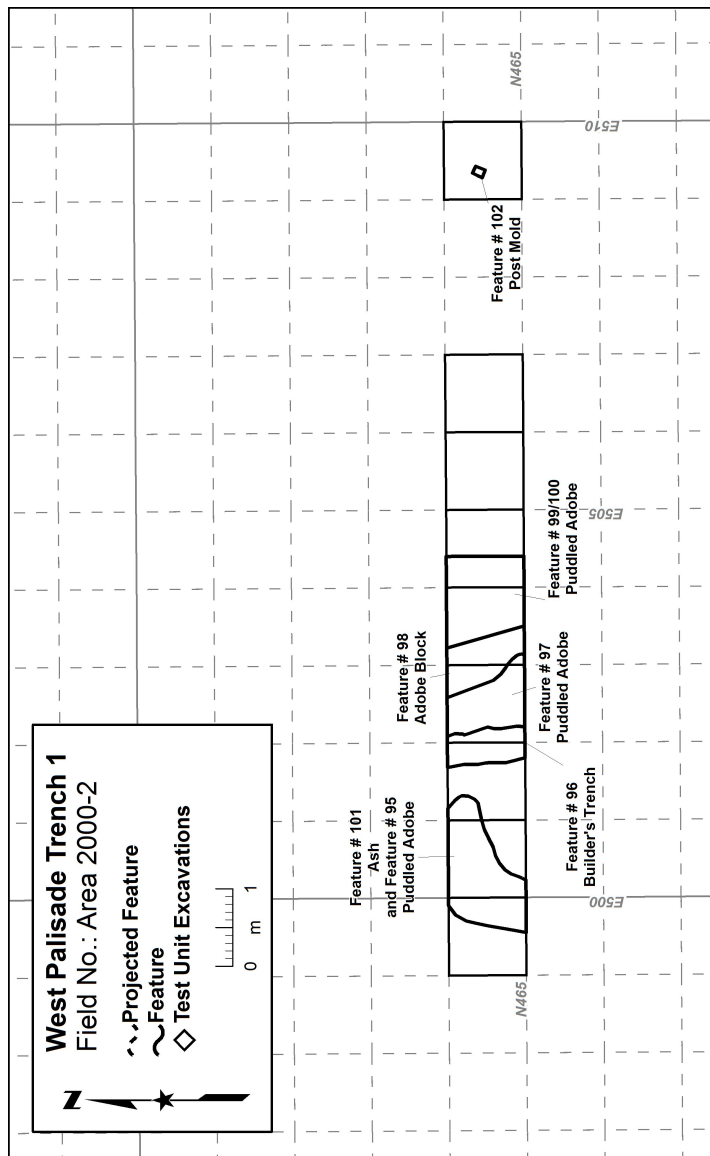


Figure 17: Plan view of West Palisade Trench 1 excavations.

Table 7: Features identified in the area of West Palisade Trench 1.

Feature	Feature Type	Comments
95	Puddled Adobe	Exterior to the palisade wall, artifact rich.
96	West Palisade Builders Trench	No post remaining.
97	Puddled Adobe	Internal to the palisade wall.
98	Adobe Block	Interior to palisade wall
99	Puddled Adobe	Interior to palisade wall, adjacent to Feat. 98, mantles Feat. 100
100	Builders Trench	Interior to the west palisade wall.
101	Sandy Ash	Parallel to palisade wall. Very rich in artifacts.
102	Rectangular Post mold	Possible part of an interior structure.

Feature 96

Feature 96 was A north-to-south builder's trench in N465, located between E501.88–E502.30 (Figures 18 and 19). The top of the feature was encountered at a depth of 40 cm, where an accumulation of building debris and artifacts had collected (Figure 20). The feature continued into the floor at a depth in excess of 70 cm. The feature is 60–80 cm in width at 40 cm. No posts were visible, although there is a heavy concentration of wood splinters and decomposed wood. The trench fill consisted of a dark silty clay loam. The lowest 10 cm of fill is an ash and charcoal-rich silt. A dense accumulation of building debris and artifacts was adjacent to this feature, indicating they were discarded while a wall was in place. Based upon the general direction of the palisade line leading from the southwest palisade corner and the depth of this trench, it is suggested that this feature represents the builder's trench for the west palisade.

Feature 97

An adobe-like derived sandy silt/clay at N465 was observed adjacent to Feature 96 in E502.10–502.70, where it joins an adobe block/brick pavement (Feature 98) and is interior to the west palisade line. The top of the feature was observed at a depth of 35 cm. The length of this feature is undetermined. Puddled adobe can be generated from the decomposition of adobe brick chimney or an adobe-covered roof. The nearest potential building to this feature is the west palisade line, and it is assumed to be the location of the clerk's office and residence during the early years of the fort.

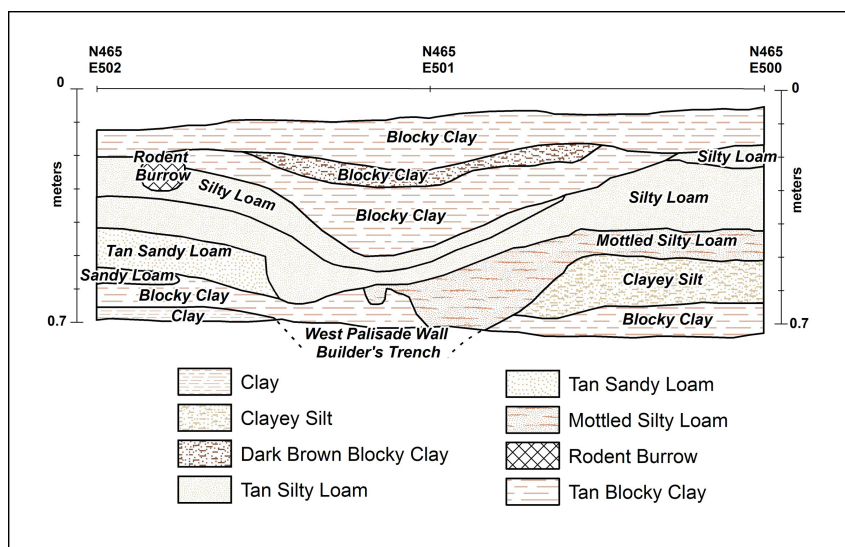


Figure 18: Profile of Feature 96, west palisade wall builder's trench.

Possible origin of this material may have derived from roofs, chimneys or interior floors. It may also be part of the adjacent zone of adobe block, Feature 98, and has been weathered to the point where individual blocks/bricks are not discernable. This feature type has generally been observed adjacent to adobe block features.

Feature 98

Feature 98 is an area of adobe block/brick situated on the N465 line between E502.60–E503.40. The top of the feature was observed at a depth of 35 cm and continued to a depth of 50 cm. It appears that much of the adobe block is separated by fine dark silt. Several of the individual blocks are obscured. The function of this feature is not known, although it is conceivable that it may have functioned as a sidewalk following interior west palisade.

Feature 99

An adobe-derived sandy silt/clay at N465 was observed east of and adjacent to Feature 98 in the eastern half of E503 and the western half of E504 at 35 cm. Puddled adobe can be generated from the decomposition



Figure 19: Top of Feature 96, west palisade builder's trench exposed in West Wall Trench 1. Note debris along interior of the builders trench and adobe block.

of adobe brick chimney or an adobe covered roof. The nearest structure to this feature is the west palisade line, and it is assumed to be the location of the clerk's office and residence during the early fort period. It may also be part of the adjacent zone of adobe block, Feature 98, and has been weathered to the point where individual block/brick are not discernable. The feature mantles trench feature 100.

Feature 100

A poorly defined trench or builder's trench is located at N465/E503.4–504.4. The feature was observed in the profile at a depth of 50 cm and continues to below the 70-centimeter depth of excavation. The feature was mantled by Feature 99 and is approximately 1 m wide at 50 cm, narrowing in depth at 70 cm. The feature may represent an earlier palisade wall or it may be part of a building identified as the clerk's office and quarters from the early fort period.



Figure 20: Volunteer Doyle Crume exposing the top of Feature 96, west palisade builder's trench, West Wall Trench 1.

Feature 101

An artifact-rich zone of sandy ash and charcoal at N465 was observed at E504.4–E506 and labeled Feature 101. Occasional adobe block and adobe-derived soil and concentrations of window glass were observed within the feature fill. The fill was observed at a depth of 10 cm and continued to 30 cm. Its proximity to the surface suggests it is late in the occupation of the fort. This same zone with similar concentrations was observed in N465/E509 three meters to the east.

Feature 102

This feature is a post mold located at N465/E509.43. It is rectangular and measures 17×11 cm. It was encountered at a depth of 35 cm and continued into the floor at 40 cm, where excavations were terminated. While the large size of this post suggests it is architectural in function, there is no structure known to be located at this location. The nearest structure is identified as the clerk's office and quarters from the early fort period; it is located approximately three meters to the west.

Table 8: Features identified in the area of the West Palisade Trench 2.

Feature	Feature Type	Comments
82	Puddled Adobe	Adobe derived deposits containing occasional adobe block/brick exterior to the west palisade wall.
83	Builder's Trench	West palisade wall, post molds present in base of trench.
84	Ash layer	Internal to the palisade wall.
85	Adobe block/brick	Interior to the west palisade wall, possible pavement.
86	Builders trench	Interior structure or relict palisade
87	Ash Layer	Adjacent to Feat. 86. Artifact rich sandy ash.
88	Rectangular post mold	Identified in trench profile.
89	Puddled Adobe	Possibly from the roof of interior structures.
90	Rectangular post mold	Associated with interior structure.
91	Ash Layer	Artifact rich sandy ash.
92	Plaster concentration	Some plaster still has paint.
93	Plaster concentrations	Some plaster still has paint
94	Rectangular post mold	Large post mold for structural support.

West Palisade Trench 2

The West Palisade Trench 2 area was designated Field No. Area 2000-3; excavations were conducted under supervisor Rich Fox. Investigations in this area were conducted in an attempt to locate the west palisade builder's trench. Other potential archaeological features could include remnants of the post manager's residence or the west entry gate from the early fort period and a structure identified as a kitchen and one as quarters of the late fort period (Figure 21). Fourteen 1×1 -meter units were excavated to depths between 40–80 cm. The excavation included a 1×12 -meter trench along the N490 line from E490–E501 and a 1×2 -meter unit at E508.5–E509.5, also on the N490 line.

Thirteen features were identified in this area (Table 8). The features included two zones of artifact-rich sandy ash, two builder's trenches, three zones of adobe-like or adobe-derived soil, and a zone of adobe block/brick,

Feature 82

A mass of adobe and adobe-derived soil and scattered adobe brick/block was found in a concentration beginning at N490/E494.40 and ending at N490/E496.50, exterior to what is interpreted as the west palisade wall

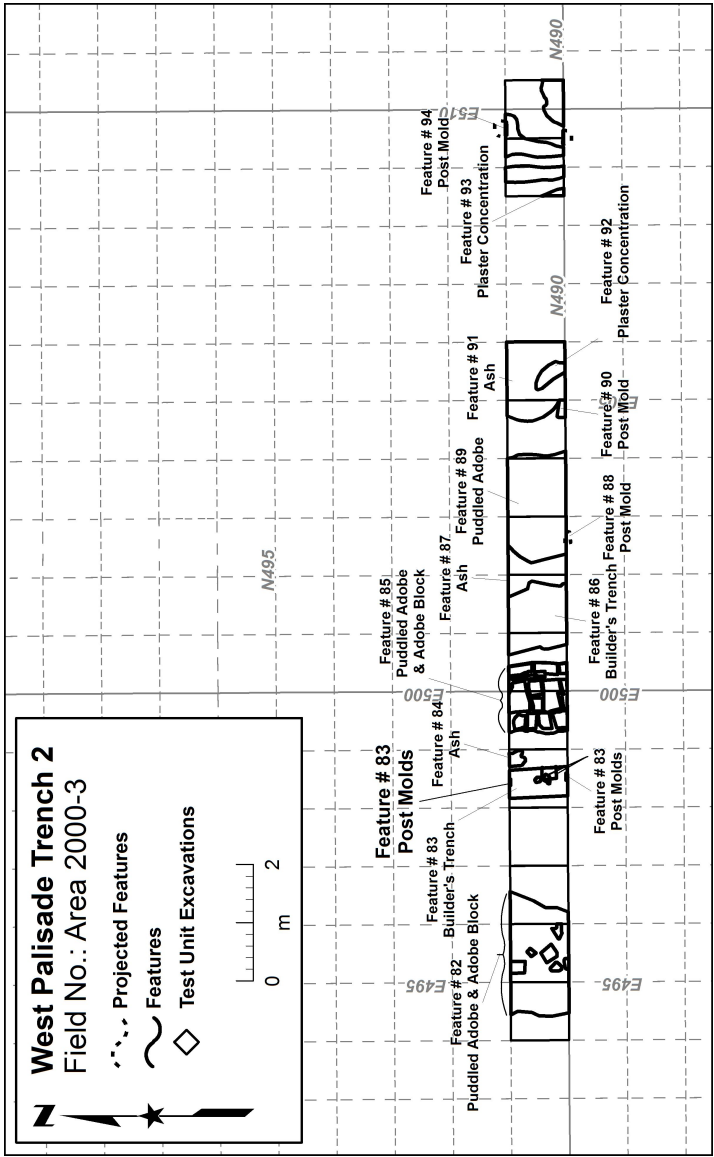


Figure 21: Plan view of West Palisade Trench 2 excavations.

builder's trench (Feature 83). The feature was observed in Level 3 (20–30 cm) and was not visible at 40 cm. Puddled adobe can be generated from the decomposition of adobe brick chimney or an adobe covered roof. The nearest potential structure to this feature is the west palisade line. As in other features of this type, it is typically found outside and inside the palisade line or along a builder's trench or adjacent to an adobe block pavement.

Feature 83

A north-to-south trending trench is located at N490 between E498.07–E498.70 (Figure 22). The top of the feature was encountered at a depth of 40 cm and the base was at 102 cm below surface. Several post molds, and the bases of two partial posts were observed in the feature fill and wall profiles (Figure 23). Near the base of the trench the width of the feature is 25 cm. The remains of five posts or post molds were encountered. Two of these were small round post remains approximately 10 cm in diameter. Three appear to be rectangular post molds. Two were observed in the wall profile and were approximately 14 cm wide. One was observed in the floor and measured 24 cm wide and 20 cm thick. One of the round posts intruded into this post suggesting maintenance of the structure.

Feature 84

An area of sandy ash was identified in the northwest corner of N490/E498. The artifact-rich ash layer was encountered in Level 4 (30–40 cm). Its size and shape is unknown. The function is not known.

Feature 85

Feature 85 is an area of adobe block/brick located on N490 line between E499.30–E500.40. The top of the feature was observed at a depth of 15 cm and continued to 35 cm. It appears that the adobe feature represents an in situ adobe pavement. Each block is separated by fine dark silt. The feature consists of two layers of adobe brick resting upon a very thin layer of sand. It may have functioned as an interior sidewalk following Feature 83, the presumed west palisade wall.

Feature 86

A builder's trench is located at N490 between E500.60–E501.90 (Figure 24). The top of the feature was observed at a depth of 52 cm and

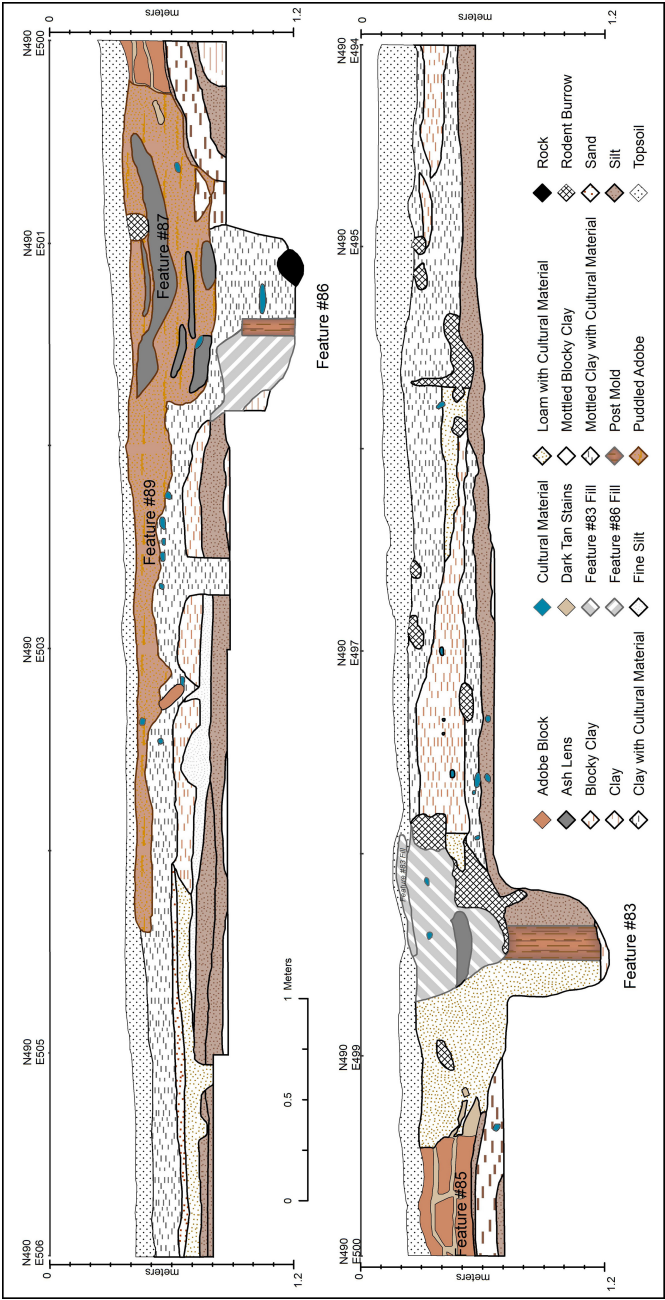




Figure 23: Photograph of Feature 83, west palisade wall builder's trench, N490/E498, West Palisade Trench 2 excavations. Note wood posts in floor of feature.

continued to a depth of 95 cm. The trench is 90 cm across with nearly straight walls and a basin-like floor. A post mold was observed along the south wall profile that was 8 cm wide and reached 22 cm above the base of the feature. Fill in the west half of the feature consisted of ash and charcoal-rich dark silt. The fill from the east half of the feature consisted of a dark, blocky clay. This dichotomy could represent two periods of use. The west wall of two structures could have been located at this position. These include the residence of the manager in the early fort period or the kitchen in the late fort period. It is also possible that this trench may represent an early fort period fortification trench.

Feature 87

Feature 87 consists of several layers or bands of charcoal-rich sandy ash located at N490 between E500.45–E501.90. An upper band is approximately 10 cm thick containing concentrations of mortar, brick fragments, and charcoal that mantles Feature 86. The upper layer was observed at 12 cm. The base of the lower layer is much smaller and is located just

above the surface of Feature 86 at 52 cm. These zones most likely represent building debris accumulation which filled the depression left by the builder's trench.

Feature 88

A post mold is located in the south wall profile of N490 located at E502.65. It is rectangular and measures 18 cm wide. It was encountered at a depth of 30 cm below surface and extends into the floor at a depth of 60 cm, where excavations terminated. It is most likely related to residence of the manager in the early fort period or the kitchen in the late fort period.

Feature 89

An adobe-derived sandy silt/clay was observed at N490 in E500.20 adjacent to Feature 85 and extending to E504.40. The top of the feature varied between 5 cm deep in E504 to 10 cm in E500, where it stops at Feature 85. Puddled adobe can be generated from the decomposition of adobe brick chimney or an adobe covered roof. The two nearest potential structures include the residence of the manager in the early fort period or the kitchen in the late fort period.

Feature 90

This feature is a post mold located in the south wall profile of N490 at E505.05. It is rectangular and measures 15 cm wide. It was encountered at a depth of 30 cm below surface and extends into the floor at a depth of 40 cm, where excavations terminated. It possibly served as a support post for the residence of the manager in the early fort period or the kitchen in the late fort period.

Feature 91

A layer of artifact-rich sandy ash with charcoal covers the floor of units along the N490 line extending from N504.70 to E506. The top of the ash was encountered at 14 cm and is 5 cm thick. The relative near-surface appearance of this material suggests it is related to the late fort period at the site.



Figure 24: Builder's trench, Feature 86, west palisade wall trench 2 excavations. Note bone and fill in floor of unit.

Feature 92

A plaster concentration located in the south central portion of N490/E505 was designated Feature 92. The plaster may have come from an interior wall. Some of the fragments still retain white paint. The concentration was observed around 20 cm. The near-surface appearance of this material suggests it is related to the late fort period at the site, which would associate it with the late period kitchen.

Feature 93

This feature consists of multiple zones of plaster concentrations in N490/-E508.5–509.5. As with Feature 92, located 2.5 m to the west, the plaster appears to have come from an interior wall. It was identified at a depth of 15 cm and continued as a concentration to 25–30 cm. It most likely came from a building identified as the residence of the manager in the early fort period or the kitchen in the late fort period.

Feature 94

Feature 94 consists of a post mold located in the south wall profile of N490 at E509.50 and a second in the north wall profile of N490 at E509.30. The post molds are rectangular and are 25 cm wide. They were encountered at a depth of 25 cm below surface and extend into the floor at a depth of 40 cm. The post mold in the south wall is clearly rectangular in contrast to the surrounding disturbed clay. The opposing feature on the north wall is a cut in the disturbed clay. They may represent support posts for three nearby structures, including a building identified as the residence of the manager in the early fort period, the kitchen, or a residence in the late fort period. It is possible that the opposing post molds are part of a single sill plate that was not observed in the excavations.

West Palisade Wall Trench 3

Excavations in the West Palisade Wall Trench 3 area (designated Field No. Area 2) were carried out under the direction of Linda Palmer and Jeff Kinney. The efforts in this area were intended to locate the west palisade builder's trench (Figure 25). Other archaeological features that could be encountered in this unit include the remains of the residence of the post manager during the early and late fort periods. A total of 10 1×1 -meter units were excavated to define possible features at this location. The excavation included a line of seven 1×1 -meter units (N513/E489–495), one 1×1 -meter unit (N512/E494) and two contiguous *1times1*-meter units (N513–541/E499).

Features encountered include an adobe brick pavement, three possible builder's trenches and four post molds (Table 9). At least one of the possible builder's trenches in the 1×7 -meter line of units is the likely location of the west palisade wall—or perhaps two or more of them could represent successive palisade walls.

Feature 12

An adobe brick pattern was observed oriented to 336° beginning at the west edge of N513/E495, extending to the east approximately two meters terminating along the eastern edge of N513/E492 (Figures 26 and 27). The pattern is most clearly defined at 30 cm. Adobe brick averaged 25 cm in length, 12 cm in width. The brick was first observed at 27 cm and was no longer visible at 39 cm in one unit where excavations continued to the base of the feature. It may be a sidewalk adjacent to the palisade wall or a

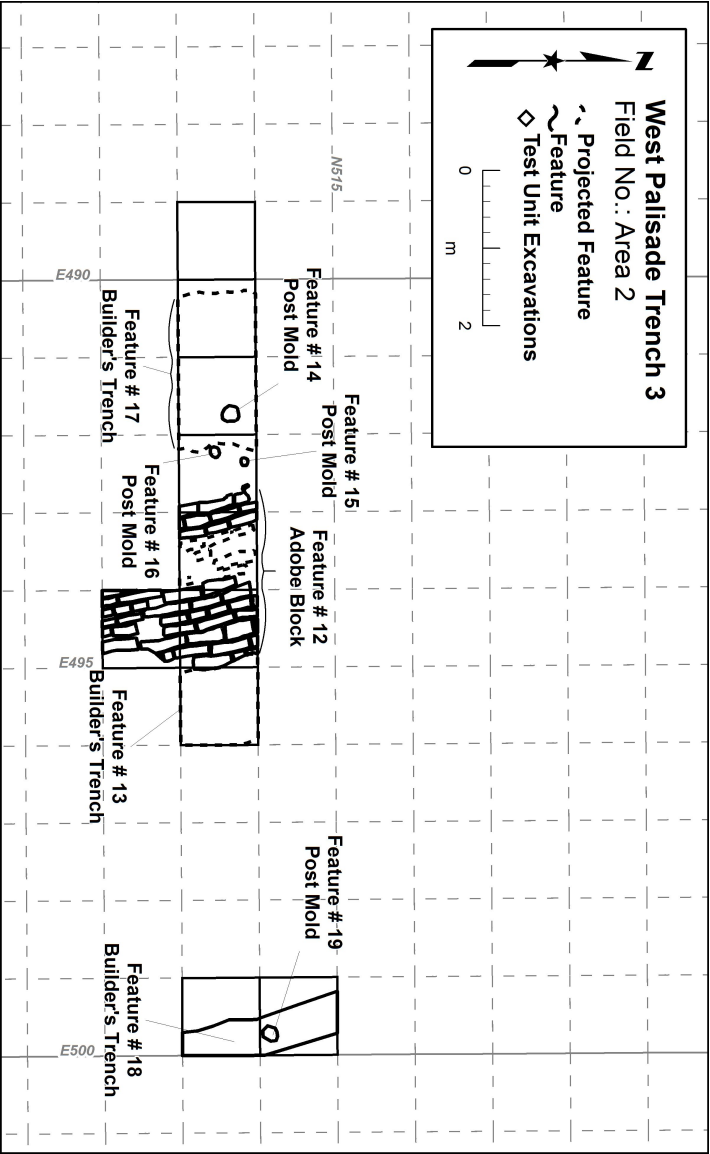


Figure 25: Plan view of West Palisade Trench 2 excavations.

Table 9: Features identified in the area of the West Palisade Trench 3.

Feature	Feature Type	Comments
12	Adobe block/brick	Walk way or floor
13	Possible builder's trench	Needs to be better defined
14	Post mold	Possible post mold
15	Post mold	Possible post mold
16	Post mold	Possible post mold
17	Possible builder's trench	Needs to be better defined
18	Builder's trench	Probably assoc. with interior structure
19	Post mold	Possible part of an interior structure

building. It is assumed at this time that the feature is exterior to the west palisade. No fort plans show any structure at this location. It is possible that it is related to an unknown military structure or that it is associated to an undetermined palisade wall.



Figure 26: Photograph of Feature 12, adobe block, N513/E494, West Wall Trench 3 excavations.

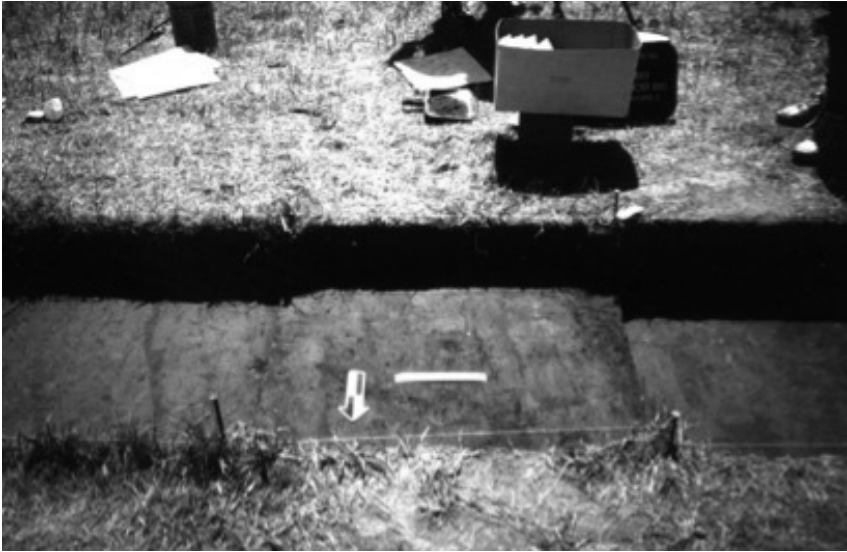


Figure 27: General view of West Wall Trench 3 excavations exposing adobe brick.

Feature 13

Feature 13 is a possible trench located to the east of and adjacent to Feature 12 in N513/E495. It extends from the adobe brick pattern across the entire unit. Due to the limited depth of excavation in this unit, little is known about this feature. However, its location—in conjunction with other assumed west palisade builder's trenches—makes this the likely location of the west palisade.

Feature 14

A possible post mold located at N513.70/E491.75 was designated as Feature 14. It is circular and approximately 13 cm in diameter. The post mold was observed at 20 cm and was not present at 30 cm. Given its limited footprint, it may be a post-fort phenomenon or perhaps a non-critical support post for an unknown structure. The feature is within part of the feature fill of a possible builder's trench (Feature 17).

Feature 15

This is a possible post mold located at N513.85/E492.35. It is circular and approximately 8 cm in diameter. The post mold was observed at 29 cm, at which point excavations were terminated. The function of this feature is unknown.

Feature 16

This feature is another possible post mold, located at N513.46/E492.23. It is circular and approximately 8 cm in diameter. The post mold was observed at 29 cm, at which point excavations were terminated.

Feature 17

Feature 17 is a possible builder's trench located at N513/E490.11–492.10. Artifacts were quite sparse in this feature. Excavation notes suggest that this is a builder's trench, but it could also be a disturbed area like a walkway outside the west palisade wall, and that the builder's trench may be positioned to the east between the eastern extension of this possible feature and the adobe brick pavement. The fact this feature is located exterior to the assumed west palisade wall suggests the possibility of successive construction of the west palisade, or construction associated with the military occupation. No interpretation can be established until excavations are taken to lower levels and/or expanded.

Feature 18

A trench located in N513–514/E499 was designated Feature 18. The trench was encountered at a depth of 39 cm, at which point the feature was 50 cm wide. At 60 cm in depth, the trench was approximately 70 cm wide. The trench depth exceeds the 60 cm base of excavations. It may represent a builder's trench. The nearest structure to this feature is the residence of the post manager during the early fort period.

Feature 19

This is a post mold located at N514.15/E499.72. It is circular and measures 19 cm in diameter. The feature was observed at a depth of 50 cm and continued into the floor at 60 cm. It is located near the center of Feature 18 and is most likely a structural element related to this feature. If this is the

case, it is possibly related to the residence of the post manager during the early fort period.

Northwest Bastion and North Wall

This area was assigned Field No. Area 6 and was excavated in 1998 under the supervision of James Haug and Tim Nowak. Rich Fox returned to this location in 1999 to oversee subsequent work. The 1998 investigations were conducted in an attempt to identify the northwest bastion (Figure 28) and consisted of a small block of six test units (N523/E486, N522–524/E487 and N522–523/E488), two 1×3 trenches (N532/E484–486 and N530–532/E500), and a 1×1 -meter unit (N532/E491). Most of the units contained varying amounts of adobe. The easternmost portion of the block excavation did contain adobe block in addition to the adobe matrix. The excavations to the north of this block contained minor post molds but no discernable palisade or bastion features. One of the 1×3 -meter trenches (N530–532/E500) did contain a thick zone of adobe. The excavations in this area determined that subsurface features exist and a footprint of the northwest bastion is possible with more intensive investigations.

The 1999 investigations focused on the identification of the north palisade wall. Two 1×2 -meter trenches (N527.5–528.5/E500 and N526.5–527.5/E495) were excavated. A builder's trench was observed in N526.5–527.5/E495, but not in the 1×2 -meter unit to the west, suggesting that this feature stops someplace between these two locations; this could mark the location of the eastern edge of the northwest bastion. Based on the construction methods employed in other AFC fur trade forts, delineation of the northwest bastion will require a block excavation in order to locate construction data.

Feature 47

This post mold is located at N532.42/E491.32. It is nearly rectangular and measures 18×16 cm. It was observed at a depth of 42 cm and continued into the floor at 50 cm, where excavations terminated. The feature was located in an adobe-like soil (Feature 49). The position of this feature suggests it is related to the northwest bastion. Otherwise, this feature may be associated with a military structure constructed near the fort wall.

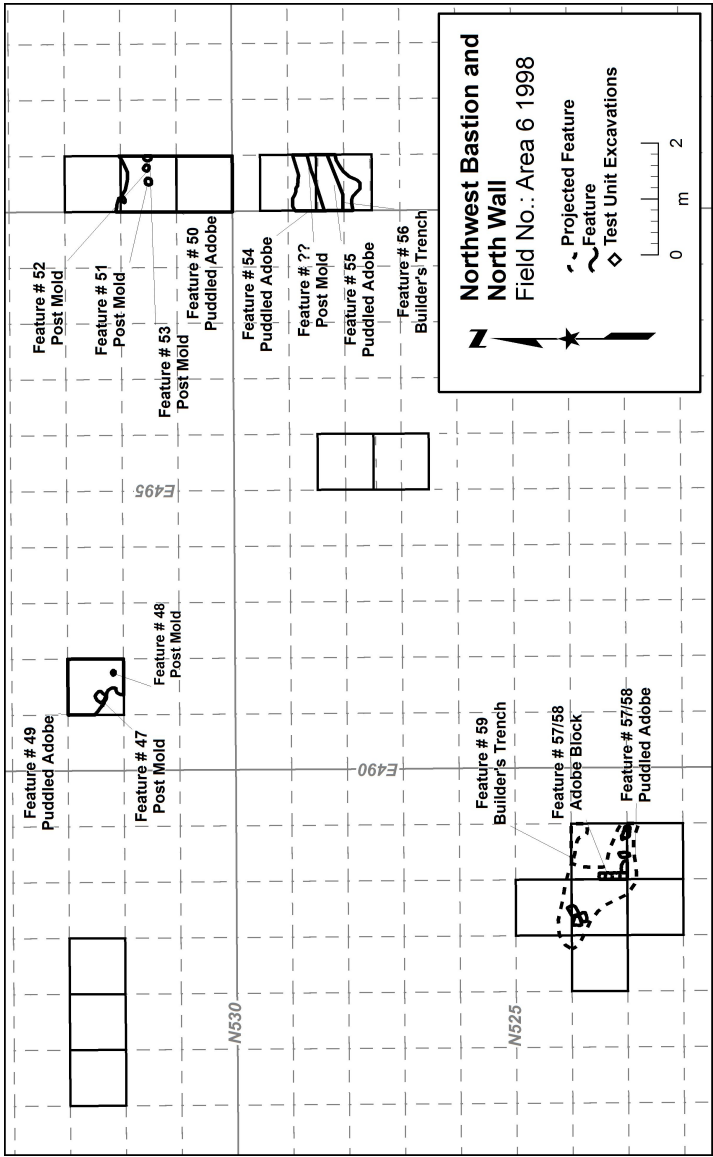


Figure 28: Plan view of Northwest Bastion and North Wall excavations.



Figure 29: General view of block excavation N422/E486–489, Northwest Bastion-North Wall excavations.

Feature 48

A post mold located at N532.17/E491.76 was designated Feature 48. It is circular and has a diameter of 8 cm. The post mold was observed at a depth of 43 cm and continued to a depth of 50 cm, where excavations terminated. The feature was located in an adobe-like soil (Feature 49). As with Feature 48, association of this feature with the northwest bastion or possibly with a military structure constructed late in the fort's history.

Feature 49

Feature 49 consists of a well-packed, adobe-like soil covering the majority of the floor of N532/E491. The feature was most prevalent at 40–50 cm. It is presumed to be a prepared surface or an accumulation of adobe generated from eroding off a nearby adobe plastered wall or roof. This feature may have been associated with the northwest bastion of the fort, or with the later military occupation.

Table 10: Features identified in the area of the Northwest Bastion.

Feature	Feature Type	Comments
47	Rectangular post mold	In an area of puddled adobe.
48	Circular post mold	In an area of puddled adobe.
49	Puddled adobe	Well packed, possible floor.
50	Puddled adobe	
51	Circular post mold	
52	Circular post mold	
53	Circular post mold	
54	Puddled adobe	
55	Puddled adobe	
56	Builder's trench	North Palisade Wall
57	Puddled adobe	Contains some block/brick. Rainfall may have obscured the identification of additional block/brick.
58	Puddled adobe	Contains some block/brick. Rainfall may have obscured the identification of additional block/brick.
59	Builder's trench	Possible builder's trench. Needs to be verified with additional excavation.

Feature 50

A zone of puddled adobe, labeled Feature 50, covers the majority of the floor of N530–532/E500. The feature was first observed at 19 cm and was replaced by clay at 45 cm. The two nearest potential structures include the northwest bastion or the north wall palisade. The feature might have similar associations as those interpreted for Feature 49.

Feature 51

Feature 51 is a post mold located at N531.50/E500.55. It is circular and measures 13 cm in diameter. It was observed at a depth of 42 cm after the adobe surface was removed and continued to a depth of 50 cm, where excavations terminated. The feature was located in the adobe-like soil of Feature 49.

Feature 52

This feature is a circular post mold located at N531.55/E500.79; it measures 10 cm in diameter. The post mold was observed at a depth of 46 cm after the adobe surface was removed and continued to a depth of 50 cm,

where excavations terminated. The feature was located in the adobe-like soil of Feature 49.

Feature 53

Feature 53 is a post mold at N531.55/E500.99. It is circular and measures 14 cm in diameter. It was observed at a depth of 46 cm after the adobe surface was removed and continued to a depth of 50 cm, where excavations terminated. The feature was located in Feature 49.

Feature 54

A zone of fine sandy silt with a density and soil consistency identical to adobe brick encountered elsewhere in the fort was designated Feature 54. It is located at N528/E500 at a depth of 35 cm. The zone was observed along the north edge Feature 56, the possible north palisade builder's trench and is 30–50 cm in width. The two nearest potential structures from which the adobe might have been derived include the northwest bastion or the north wall palisade. When palisade walls have been identified along the west and south line, features like this have typically accompanied the paliside on the exterior side.

Feature 55

Feature 55 consists of a zone of fine, sandy silt with a density and soil consistency identical to the adobe brick encountered elsewhere in the fort. It is located in the north 25 cm of N527/E500 and the south 20 cm of N528/E500 at a depth of 35 cm. The zone was observed along the south edge Feature 56, the possible north palisade builder's trench and is 14–34 cm in width. As was the case with Feature 54, adobe or puddled adobe is typically found flanking the builder's trench along the palisade lines.

Feature 56

This builder's trench is located in N528/E500 (Figures 30 and 31). The trench was observed at a depth of 35 cm and is 62 cm wide at a depth of 60 cm, where excavations were terminated. Like the two surrounding bands of adobe-derived silts which flank this feature (Features 54 and 55), it runs in a northeast-southwest orientation and corresponds well to other locations along this line where the north palisade wall is interpreted to be located. The feature was not observed 4 m to the west. It is assumed that the east wall of the northwest bastion stood between these locations.

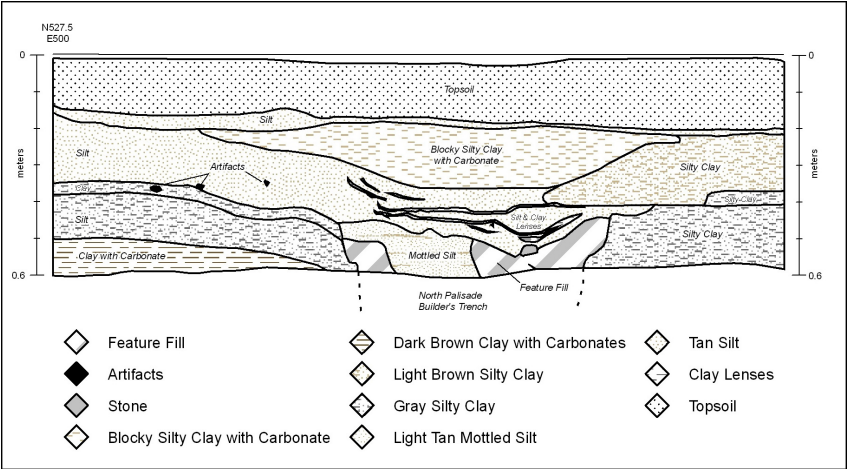


Figure 30: Profile of Feature 56, north palisade wall builder's trench.



Figure 31: Photograph of Feature 56, the north palisade builder's trench N528/E500.

Feature 57/58

This feature is comprised to two combined features, 57 and 58. It consists of a zone of fine sandy silt with a density and soil consistency identical

to the adobe brick encountered elsewhere in the fort. It was observed in N522–524/E486–488. The zone was observed at 25 cm and continued to a depth of 35–40 cm. In two of the units, N523/E487–E488, a clear pattern of adobe brick was observed at a depth of 25 cm and continued to 40 cm. It is presumed that the brick covered a larger area, but due to heavy rains and repeated removal of mud from the excavation units, evidence of this was obscured in other units and appeared as adobe-derived soil. Its location, based upon maps of the site, suggests that it is located outside the fort and is far enough removed from our current understanding of the locations of the northwest bastion not to be a contributing feature to this structure. This interpretation may change should additional data establish the possibility of two separate west palisade walls.

Feature 59

Feature 59 is a possible builder's trench; it was observed in the northeast corner of N523/E488. Since the excavations were not expanded to the north, no determination as to the function of this feature can be made. Its location suggests that, based upon maps of the site, it is located outside the fort and probably not associated with the northwest bastion. As was the case with the previous feature, it cannot be firmly identified with a known structure.

Outside the North Wall

The excavation of two 1 × 1-meter units (N563–564/E5500) and two 1 × 0.5-meter units (N553–564/E500.5) in the northern end of the project area was designated Area 6. It was excavated in 1997 under the supervision of Richard Berg and Linda Palmer. The work was conducted in an attempt to locate the north palisade wall based on early period occupation fort dimensions. While a light scatter of artifacts such as nails and glass and prehistoric items were encountered, no features were observed.

North Palisade Wall

Excavations in the North Palisade Wall region were assigned the Field No. Area 3. Richard Berg supervised the excavations in 1997–2000, along with Steve Gilbert in 1997 and Tim Nowak in 1998. Three field sessions were spent excavating 22 1 × 1-meter and 17 1 × 0.5-meter units in an area within N529–N549 E530–E549 in an attempt to identify the north palisade line

Table 11: Features identified in the area of the North Palisade Wall.

Feature	Feature Type	Comments
20	Builder's trench	North palisade wall
21	Rectangular depression	Possible saw pit
22	Rectangular post mold	Exterior to the north palisade.
23	Rectangular post mold	May post-date the fort occupation
24	Circular post mold	Exterior to the north palisade.
25	Circular post mold	Possibly associated with pre-fort occupations
26	Circular post mold	Possibly associated with pre-fort occupations

(Figures 32 and 33). From these 39 units, 13.49 cubic meters of fill were excavated. In 1997 three trenches were excavated on a north-to-south line at E530, E540 and E549. All the trenches yielded small amounts of fort period and prehistoric artifacts. Trench 1 contained two post molds, and one pit feature of unknown dimensions.

The 1998 investigations consisted of a continuation of Trench 1 to the east and south to help in the identification of a pit feature identified the previous year. The expansion of Trench 1 demonstrated that the feature extended to the south for a distance of approximately four meters in a south/southeasterly direction. Features identified in the 1998 investigations consist of three post molds thought to be prehistoric in age.

The 1999 investigations expanded upon the pit feature to locate the dimensions, depth, and possibly identify the function of the pit. Nine additional units were opened (N535/E539–542, N530–533/E541, N533/E542, and N532/E543) which identified the dimensions of the feature and an east-to-west trending builder's trench.

Feature 20

An east-to-west trending builder's trench was located in N535/E539-542 and designated Feature 20 (Figures 34, 35, and 36). It was encountered at a depth of approximately 45 cm and is 40 cm in width at a depth of 50 cm. Its depth is unknown due to time restrictions, and it is also unknown if wood posts remain in the ground past this depth. The fill consists of largely of tan and dark silt. This feature appears to have been part the north palisade. Unlike other locations where the palisade wall has been intersected, no visible puddled adobe was identified on either side of the fortification.

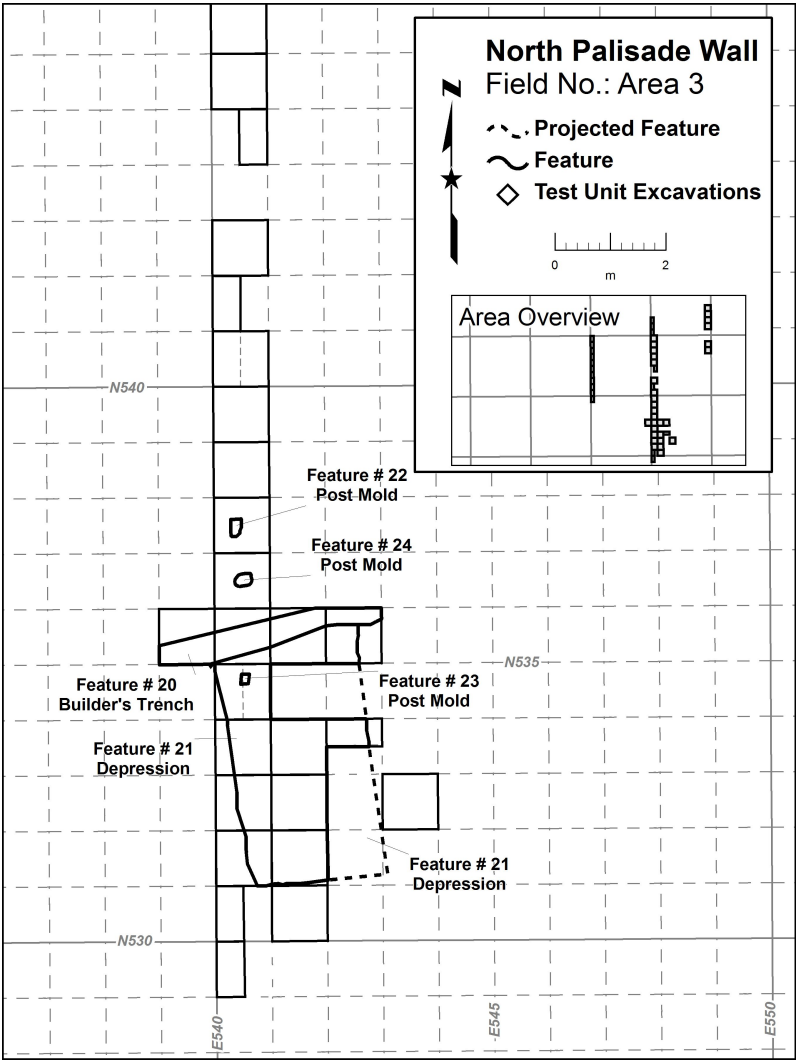


Figure 32: Plan view of central area of North Palisade Wall excavations.

Feature 21

A rectangular depression extended south of Feature 20 for 4.2 m (Figures 35 and 36). The depression is 2.5 m wide east to west. It was en-

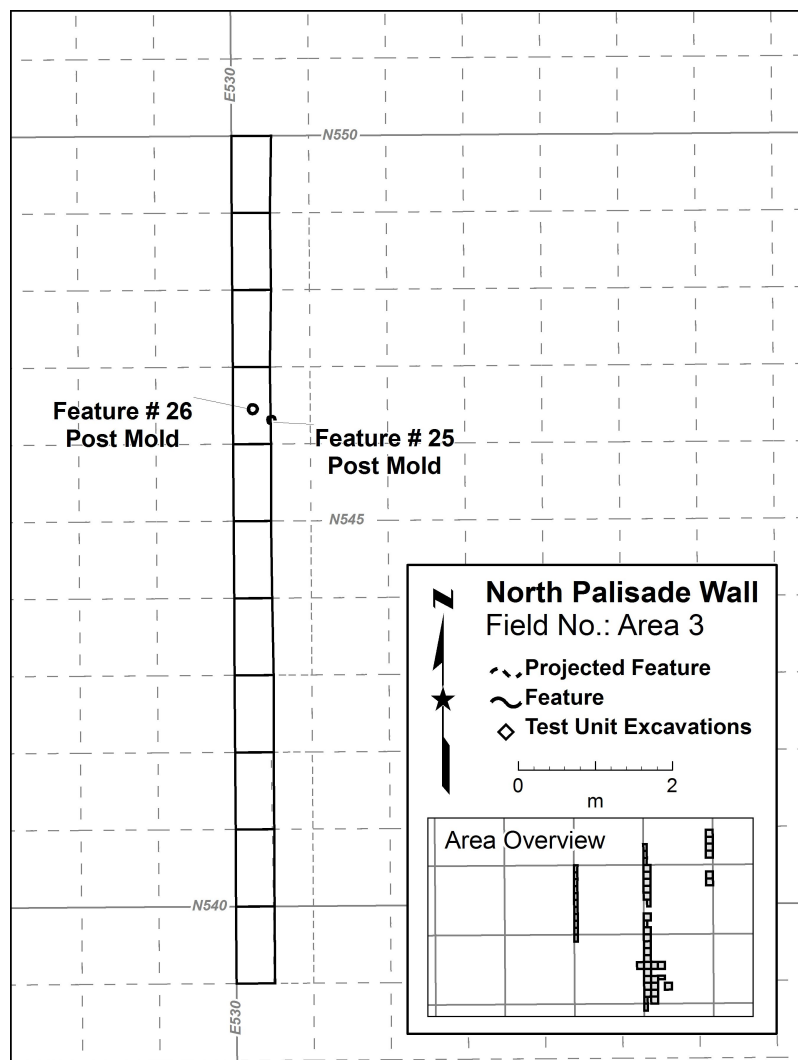


Figure 33: Plan view of west area of North Palisade Wall excavations.

countered at a depth of approximately 25 cm and continued to a depth of 86 cm. The walls of the feature sloped outwards from the floor. The fill consisted of clay and silty clay. The nearest structures to this location in-

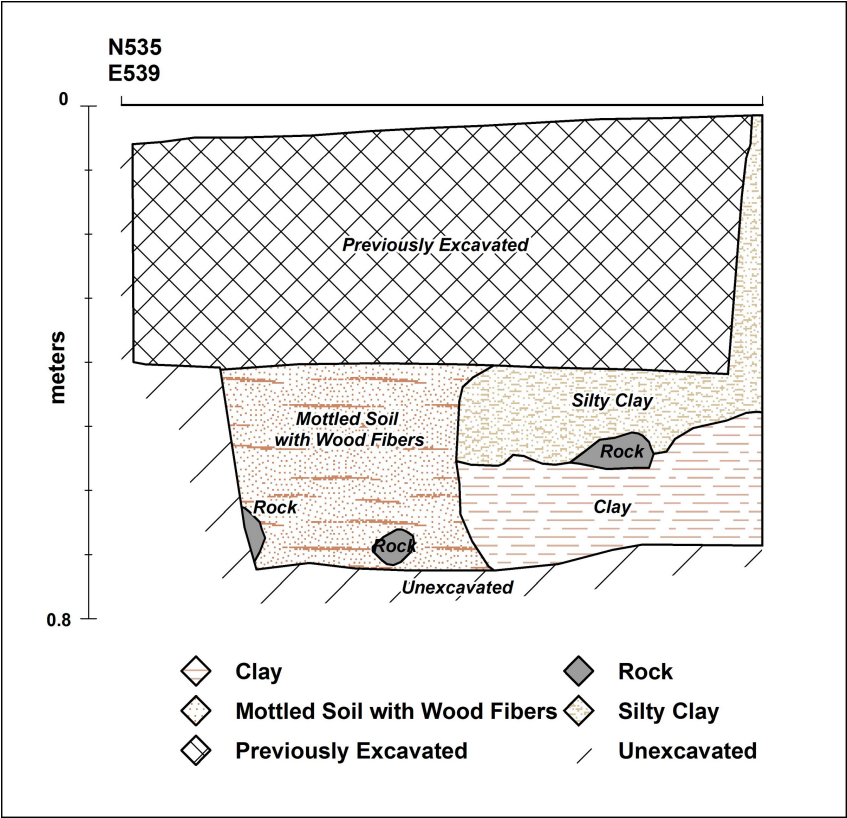


Figure 34: Profile of Feature 20, north palisade wall builder’s trench.

clude a series of sheds built against the palisade line at this location during the early fort occupation, and a sawmill constructed and used during the late fort occupation. The feature may relate to either of these structures, but a sawpit during the late fort occupation stands out as the most likely explanation.

Feature 22

Feature 22, a post mold, is located at N537.45/E540.40. It is rectangular and measures 30 cm north-to-south and 20 cm east-to-west. It was located at a depth of 15 cm. Depth of the post and its function was not established. The post is located exterior to the north fortification wall. There are no



Figure 35: Photograph of Feature 20, the north palisade builder's trench (upper half of picture) and Feature 21, a possible saw pit (lower half of picture).

known fort structures identified at this location. It may have served as a brace for the north wall or have been related to a structure built during the military occupation or ranching period.



Figure 36: West wall profile of N535/E539 showing Feature 20 (floor of excavation to the right) and Feature 21 (left half of wall and floor).

Feature 23

This post mold is located at N534.75/E540.65. It is rectangular and measures 19 cm by 11 cm, oriented to grid north. The post mold was found above the floor of Feature 21. Its location above Feature 21 suggests that it may have been related to a post-fort occupation, possibly associated with the ranching period of the site.

Feature 24

Feature 24 is a post mold located at N536.52/E540.50. It is circular, measuring approximately 27 cm across. It was observed at a depth of 15 cm; its depth was not determined. Its proximity to Feature 22 suggests it may have shared a similar function.

Feature 25

This feature is a post mold. It is located in the wall and floor at N546.35/-E530.5. The post mold is circular and measures 15 cm in diameter. It was found at 33 cm at a level containing mostly prehistoric artifacts; it may relate to the pre-fort occupation of the area.

Feature 26

A post mold located in the wall and floor at N546.45/E530.25 was designated Feature 26. It is circular and measures 15 cm in diameter. It was found at 33 cm at a level containing mostly prehistoric artifacts, so, like Feature 25, it may be associated with the pre-fort occupation of the area.

Coal Storage

The Coal Storage excavations were assigned Field No. Area 7. It was excavated in 1998 under the supervision of Linda Palmer. This area included the excavation of three 1 × 1-meter units (N551/E562, 565, and 567) in the northeast portion of the project area. These excavations were positioned to identify the remains of a coal storage feature present on maps and drawings of the late fort period occupation. While artifacts such as nails and glass and prehistoric items were encountered, no features were observed. It should be noted that, although the investigation failed to identify physical remains of a coal shed, a quantity of coal fragments were observed, which affirms the likelihood of the shed having been in this vicinity.

Northeast Corner of Palisade

In 1999 Richard Fox supervised excavation of the northeast corner of the palisade (Field No. Area 8). Eleven units of varying size were opened in an effort to locate the northeast corner of the fort. Some of the units overlapped by 20, 50, or 60 cm. From the 11 units 5.03 cubic meters of earth was excavated in an area encompassing N529–N539.5 E563–E570 (Figure 37). A builder's trench was exposed by the excavation of a 1 × 4-meter trench (N529/E567–570). Following this, additional 1 × 1-meter units were excavated to the north following the builder's trench to the northeast corner. Two additional 1 × 1-meter units were excavated to the west from the corner, which also identified the builder's trench. The only features identified in this area were the builder's trenches and a post. The remains of wood palisade posts were absent.

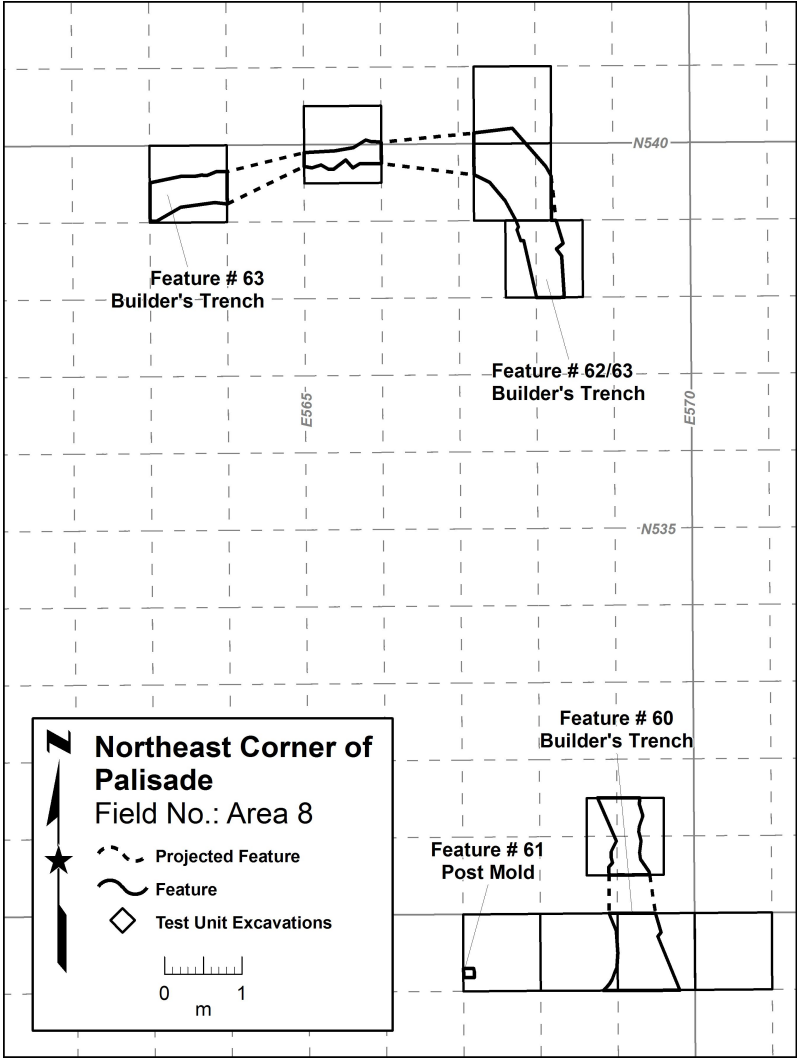


Figure 37: Plan view of Northeast Corner of Palisade excavations.

Feature 60

Feature 60 consists of a north-south trending builder's trench located between N529/E568.8–E5569.8 and N530.5–N531.5/E568.72–569.60 (Figure 38). The trench was observed at a depth of approximately 30 cm. At

Table 12: Features identified in the area of the Northeast Corner of the Palisade Wall.

Feature	Feature Type	Comments
60	Builder's trench	East palisade wall
61	Post Mold	Function unknown
62	Builder's trench	Northeast corner of the palisade wall
63	Builder's trench	North palisade wall

40 cm the trench is 80 cm in width. The trench continues to below this level. The fill consists of light tan silt from 15–27 cm, where it is replaced by laminated dark clays. The function of this feature is interpreted as the east palisade wall. Its shallow nature suggests either that much of this surface has been removed by erosion or that a different type of wall construction occurs at this location, utilizing occasional large posts excavated deep into the ground at unknown intervals, filled with posts buried at a shallower depth. This type of construction technique would require additional bracing on the interior portion of the palisade wall. Unlike other locations where the palisade wall has been intersected, no visible puddled adobe was identified on either side of the fortification; however, the light silt mantling the feature may have been derived from similar circumstances.

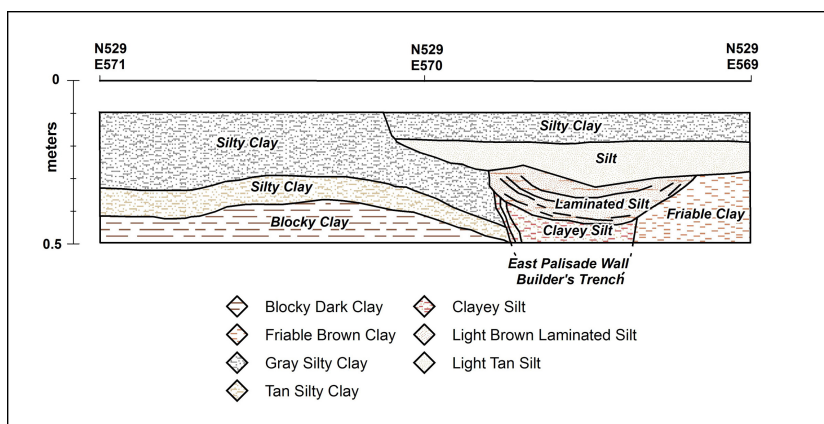


Figure 38: Profile of Feature 60, east palisade wall builder's trench.

Feature 61

Feature 61, a possible post mold, is located at N529.23/E567. It is rectangular and measures 12×15 cm and extends into the unexcavated excavated unit to the west. The stain was observed at 15 cm and terminated at 25 cm below ground surface. Its function is not known. The nearest structure was a series of shops that were built against the east palisade during the early fort occupation.

Feature 62

A builder's trench, designated Feature 62, is located in units N538–539/E567.8–567 (Figure 39). It was observed at a depth of 15 cm and continues to a depth of 33 cm, where excavations were terminated. The trench varies in width from 100 cm at the intersection of the east and north walls to 40 cm west of the intersection. The feature appears to be the northeast corner of the palisade wall. Its depth is unknown due to time restrictions, and it is also not known whether wood posts remain in the ground past this depth. The feature was covered by tan silt. Near the base of the excavation, this silt was replaced by laminated dark clays, suggesting filling of the feature during flood episodes. Unlike other locations where the palisade wall has been uncovered, no visible puddled adobe was identified on either side; it is conceivable that the light silt mantling the feature might have been formed by weathering of an adobe-like substance.

Feature 63

Feature 63 is an east-west trending builder's trench located in N539.50/E565 and N539/E563. The trench was readily observable at 25–20 cm and continued into the floor beyond the depth of excavation at 50 cm. Its depth is unknown due to time restrictions, and it is also unknown if wood posts remain in the ground past this depth. The trench is approximately 40 cm wide at 50 cm. The fill consists of largely of tan and dark silt from 15–50 cm. This feature seems to have been the north palisade and is a continuation of Feature 62. As was the case with the latter feature, no puddled adobe was present. The light silt fill in the trench might represent a weathered adobe-like material.

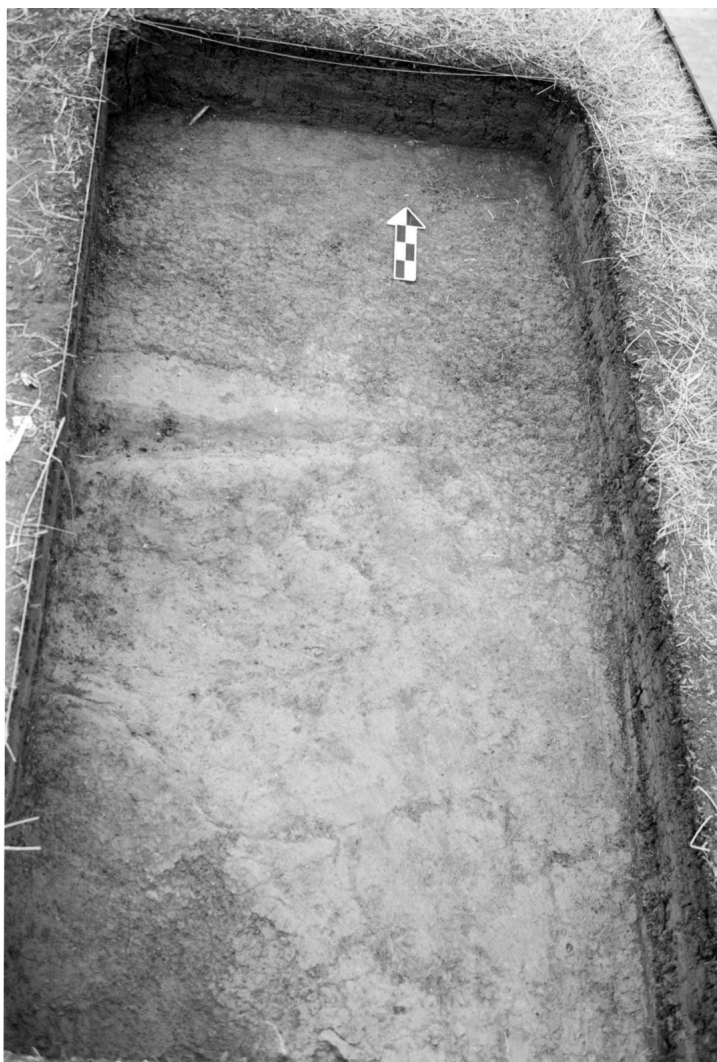


Figure 39: Photograph of the top of Feature 62, the northeast bastion, at a depth of 30 cm (light-colored silt from the right to bottom center is the feature).

East Palisade Wall 1

This area was designated Field No. Area 3 in 1997 and Area 4 in 1998. The work in the former year was supervised by Jeff Kinney and Becky

Otto; the 1998 work was overseen by Linda Palmer (Figure 40). The 1997 investigations followed the east edge of the modern terrace tread. These investigations were exploratory in nature, aimed at identifying the presence or absence of features, and to evaluate what impact past and present erosion is having on the archaeological record. Excavations showed that erosion is a present concern along the terrace margin. It was obvious that some stripping of the soil has occurred and that the cultural record is very near surface. Artifacts were largely prehistoric and post-fort historic assemblages with few fort-period artifacts. In 1997 it was not known if the excavations were located within the palisade or to the east of it. Based on the low density of fort-period artifacts it was assumed that they were outside the fortification. The 1997 investigations consisted of the excavation of 12 1×1 -meter units along the E573 line (N511–514/E573 and N517–524/E573) and one 1×1 -meter unit at N521/E572. The east palisade wall was not encountered. Two features identified as possible post molds were located.

In 1998 an exploratory trench (N514/E564–572) was excavated in order to extend the excavation west of the terrace scarp. Several features—a builder's trench, post molds, wooden sill plates and a hearth—were identified. Excavations were expanded (N513/E564–566 and N515/E565–566) at the west end of the trench to allow for the identification of the sill plates or wood foundation observed in the trench. None of the 1998 excavations were taken to a culturally sterile surface in order to preserve the existing features.

Table 13: Features identified in the area of the East Palisade Wall.

Feature	Feature Type	Comments
27	Builder's trench	East palisade wall
28	Puddled adobe	Exterior to the east palisade wall
29	Puddled adobe	Interior to the east palisade wall
30	Square post mold	Associated with early fort period buildings
31	Rectangular post mold	Associated with early fort period buildings
32	2 adjacent square post molds	Associated with early fort period buildings
33	Rectangular post mold	Associated with early fort period buildings
34	Fire reddened area	Inside late fort period building. Possible location of stove
35	Square cut timber	Sill plate for late period building
36	Square cut timber	Sill plate for late period building
37	Square cut timber	Sill plate for late period building
38	Circular post mold	Interior to the late period building
39	Circular post mold	Interior to the late period building
40	Circular post mold	Exterior to east palisade. Possibly location of military guard house

Table 13: continued

Feature	Feature Type		Comments
41	Circular post mold		Exterior to east palisade. Possibly location of military guard house
42	Circular post mold		Exterior to east palisade. Possibly location of military guard house
43	Circular post mold		Exterior to east palisade. Possibly location of military guard house
44	Circular post mold		Exterior to east palisade. Possibly location of military guard house
45	Circular post mold		Exterior to east palisade. Possibly location of military guard house
46	Rectangular area	reddened	Possible location of stove in military guard house

Feature 27

A north-to-south trending builder's trench was identified in N514/E571 and designated Feature 27 (Figure 41). The trench was identified at a depth of 30 cm and continued beyond a depth of 50 cm. The feature is 60 cm wide at a depth of 50 cm. Its final depth and whether wood posts are present remain unknown. The builder's trench is interpreted as the location of the east palisade wall. Features 28 and 29, consisting of an adobe-like soil, are located directly to the east and west of this feature.

Feature 28

Feature 28 is a band of puddled adobe located exterior to and adjacent to the east palisade wall trench in N513–514/E571–572. The feature is approximately 40 cm wide and was identified at a depth of 10 cm. Its location adjacent to the palisade wall suggests an eroded adobe brick walkway or an accumulation generated from adobe washing off the palisade wall.

Feature 29

An artifact-rich layer of fine, sandy silt was observed beginning along the west edge of the east palisade wall trench at N514/E571.4 to N514/E567; it was designated Feature 29. The feature was observed at a depth of 15 cm and continued to a depth of 40 cm. The sandy silt has the same consistency as puddled adobe found at several other locations near the palisade wall. The feature may have been an adobe floor or roof-derived material from a structure depicted as a dwelling from the early fort occupation.

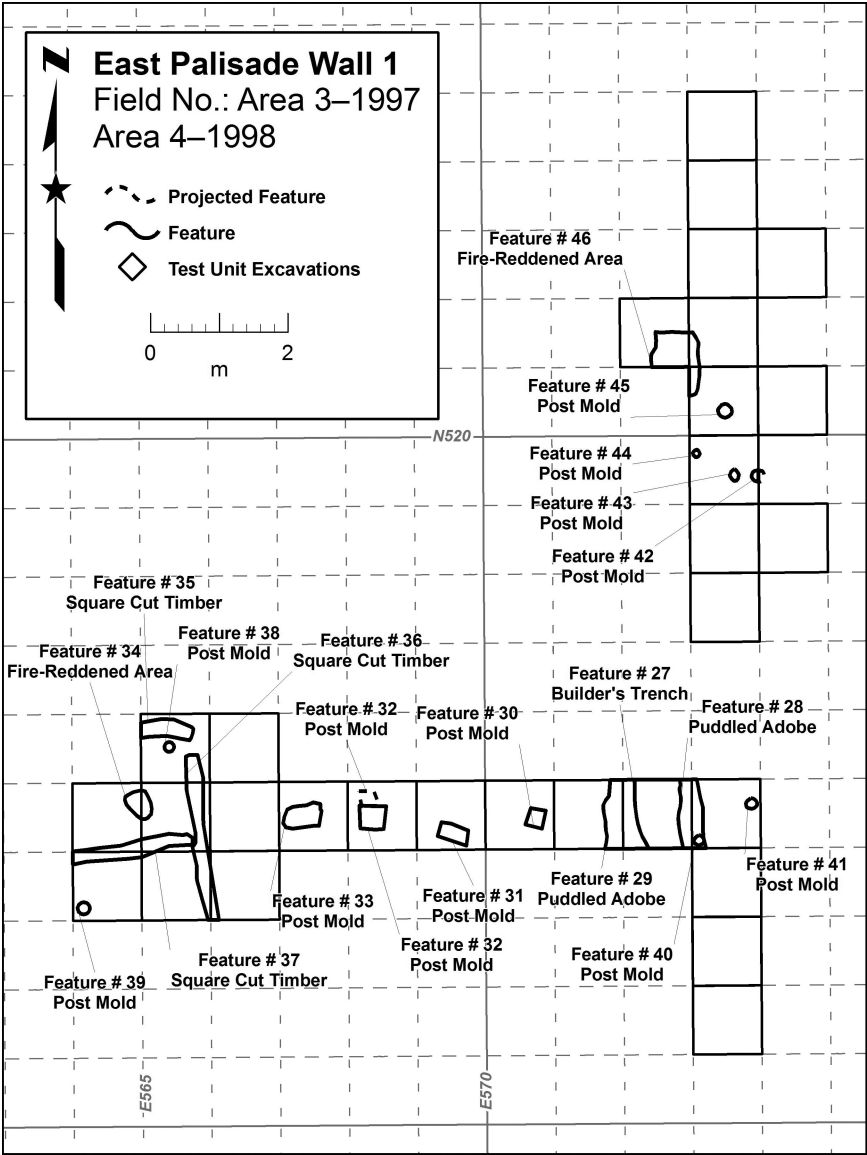


Figure 40: Plan view of East Palisade Wall 1 excavations.

Features 30, 31, 32, and 33

Feature 30 is a post mold located at N514.46/E570.74. It is square and measures 26 cm on a side. It was identified at 20 cm and continues beyond



Figure 41: View of Features 27 and 31–33. Dark stain near bottom of image is Feature 27, the east palisade builder's trench. Dark stains on floor of trench are Features 30–33. Facing west.

the early fort occupation.

Feature 31, like Feature 30, is a post mold; it is located at N514.25/-E569.55. It is rectangular and measures 46×26 cm. It was identified at a depth of 20 cm and continues beyond 30 cm. A faint line in the plan view suggests that this is possibly two adjacent square posts.

Feature 32 consists of two adjacent posts molds (Feature 32a and 32b). They are located at N514.48/E568.45 and N514.75/E568.30. The post molds are square and measure 38 cm in width (Feature 32a) and 24 cm in width (Feature 32b). A second post can be interpreted as maintenance or repair.

Feature 33 is a post mold located at N514.50/E567.36. It is rectangular and measures 52×32 cm. It was identified at 20 cm and continues beyond 30 cm.

Feature 34

A reddened area at N514.7/E564.96 was designated Feature 34. It measures approximately 40×58 cm and was located at a depth of 25 cm. It is located within what is interpreted as a late period shop and may be the former location of a stove, or perhaps a post-fort surface hearth.

Feature 35

Feature 35 is a cut wood timber located in N515/E565 (Figure 42). It is square to rectangular in cross-section and is 28 cm wide. It extends from the west wall of the unit to E565.78. A sketch of the late fort occupation identifies a series of shops located at this location. The feature is interpreted as a sill or foundation for this structure.

Feature 36

A cut wood timber located in N513-515 was identified as Feature 36 (Figure 42). The timber is square to rectangular in cross section; it is 26 cm wide and extends from the south wall of N513 to N515.42, where it apparently was connected to Feature 35. A sketch of the late fort occupation identifies a series of shops located at this location. The feature is interpreted as a sill or foundation for this structure.

Feature 37

This feature consists of a cut wood timber. It is located in N513-514/E564-565. The timber is square to rectangular in cross section and is 28 cm



Figure 42: Features 36 and 37 partially exposed at 25 cm, N514/E564-565, East Palisade Wall 1 excavations.

wide. It extends from the west wall N513/E464 to N514.15/E565.74, at which point it attaches to Feature 36. The feature is interpreted as a sill or foundation for this structure.

Feature 38

Feature 38 is a post mold located at N515.54/E565.42. It is circular and measures approximately 18 cm in diameter. The post mold was observed at a depth of 25 cm. It may have been a support post for the line of shops that had been constructed at this location late in the fort's occupation.

Feature 39

This post mold is located at N513.18/E564.16. It is circular and measures approximately 18 cm in diameter. The post mold was observed at a depth of 25 cm. It likely served a similar function as Feature 38.

Features 40–45

Feature 40 consists of a post mold located at N514.11/E573.10. The post mold is circular and measures 12 cm in diameter; it was observed at a depth of 20 cm, where excavations terminated. It is located east of the east palisade wall. The last recorded representation of the fort, Lt. Alfred Sully's 1857 painting, shows a rectangular structure near this location (Figure 9). Because this does not show up on early drawings of the fort, the structure is suggested as a military building built in 1856 and may have functioned as a guard post. This post mold, along with the post molds of Features 41–45, may be associated with this structure.

Feature 41 is a post mold located at N514.64/E573.87. It is circular and measures 24 cm in diameter. It was observed at a depth of 20 cm, where excavations terminated.

Feature 42 is a post mold at N519.40/E573.0. The post mold is circular and measures 19 cm in diameter. The post mold was observed at a depth of 20 cm, where excavations terminated.

Feature 43 is a post mold located at N519.44/E573.65. It is circular and measures 18 cm in diameter. The post mold was observed at a depth of 20 cm, where excavations terminated.

Feature 44 is a post mold located at N519.74/E573.10. It is circular measures 11 cm in diameter. It was observed at a depth of 20 cm, where excavations terminated.

Feature 45 is yet another post mold; it is located at N520.35/E573.51. It is circular and has a diameter of 20 cm. This post mold was observed at a depth of 20 cm, where excavations terminated.

Feature 46

A reddened area located in N520–521/E572–573 was designated Feature 46. It is rectangular and measures 90×75 cm. The heat-reddened area was observed at a depth of 15 cm and continues to 20 cm, the point at which excavations terminated. It is interpreted as the location of a stove. It is located east of the east palisade wall and may have been associated with the rectangular structure depicted in Sully's 1857 painting.

East Palisade Wall 2

The East Palisade Wall 2 excavations, designated Field No. Area 9 in the 1999 season and Area 2001-2 in 2000, focused on locating the east palisade wall and to determine the integrity of features and artifacts near the east edge of the terrace tread. Linda Palmer supervised the work in 1999 and Richard Fox in 2001. In 1999, work was conducted in an area between N569–N484 E561–E571 (Figure 43). Twenty 1×1 -meter units removed 7.27 cubic meters. Depths of the excavations in the area ranged from 20 cm to 50 cm. The east palisade builder's trench was not observed in this area, which indicates that this portion of the terrace was removed as one or more high-velocity flood events caused lateral shifting of the terrace margin.

The north part of this area consists of three trenches and three 1×1 -meter units (N484/E565–570, N481/E561–564, N482–483/E565, N483/E570, N479/E565, and N479/569). Defined features or potential features were usually discovered at around 15 cm but were not entirely apparent until 25–30 cm. These included stains, possible and confirmed post molds, and a hearth. One of the posts is similar to those found along the east wall to the north of this area and appears to be associated with the early fort occupation. Stains and presence or absence of certain classes of artifacts suggest the location of a late fort period blacksmith shop. The expressions of the features in this location are quite subtle and would require a block excavation to determine the nature of the stains which may represent a former structure.

The south portion of this area consists of a 1×3 -meter trench (N469/E569–571) and two 1×1 -meter units (N471/E569 and N471/571). Features located include one post and one possible post, a possible builder's trench, and staining. Additional block excavations are needed to interpret

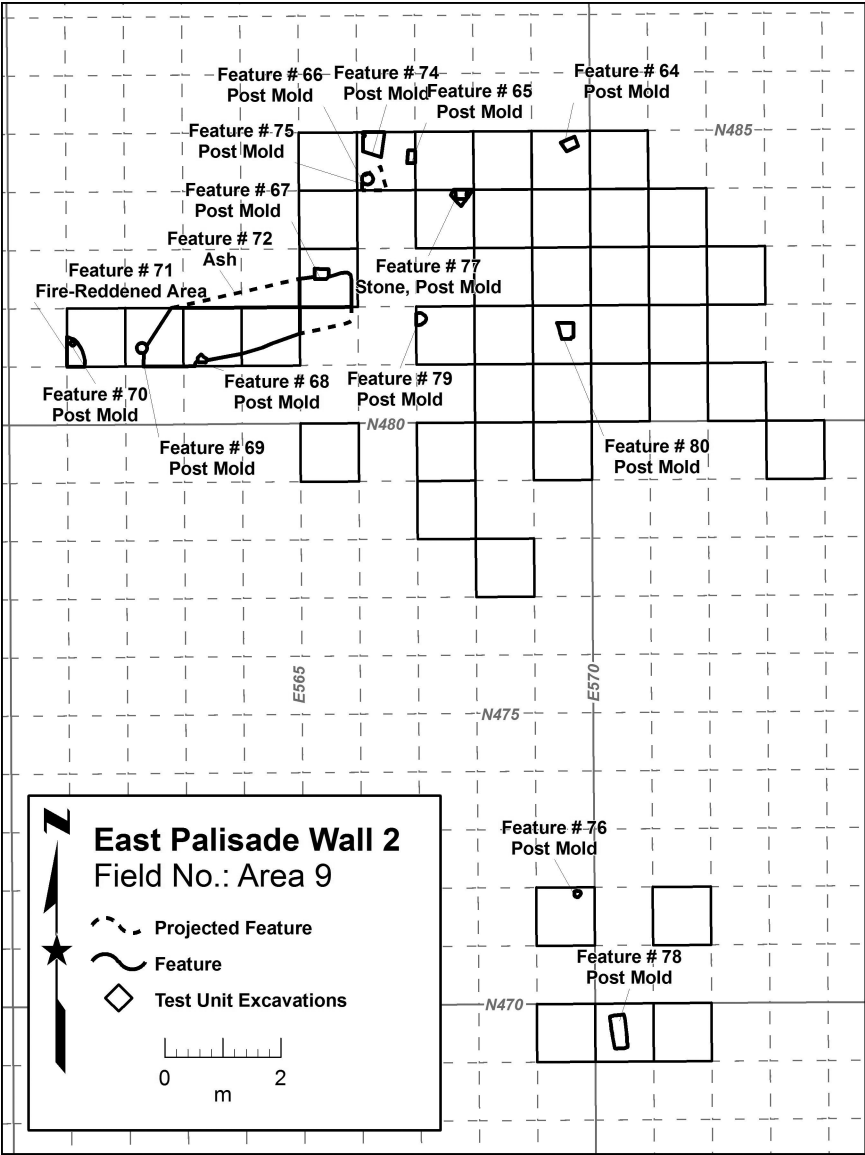


Figure 43: Plan view of East Palisade Wall 2 excavations.

this area. Also, because the archaeological features in this area are located near the surface, ongoing erosion poses a distinct threat to the integrity of

Table 14: Features identified in the area of the East Palisade Wall 2.

Feature	Feature Type	Comments
64	Rectangular post mold	Possibly associated with early fort period warehouse
65	Rectangular post mold	Unknown association
66	Circular post mold	Unknown association
67	Rectangular post mold	Unknown association
68	Circular post mold	Unknown association
69	Circular post mold	Unknown association
70	Circular post mold	Unknown association
71	Reddened area	Probable late fort period stove or hearth location
72	Ash layer	Artifact rich silty sand with ash, charcoal, daub
73	Puddled adobe	Well packed "adobe like" soil. Possible floor
74	Square post mold?	Large square feature. Possible post mold/floor support
75	Square post mold?	Large square feature. Possible post mold/floor support
76	Circular post mold	Unknown association
77	Square post mold?	Possible floor support, has large stone as well
78	Rectangular post mold	May be two square posts suggested as floor support
79	Circular post mold	Unknown association
80	Rectangular post mold?	Unconsolidated fill with artifacts. Possibly floor support

the remains.

The 2001 investigations in this area were intended to provide additional data on artifact densities and features in order to make informed decisions concerning future preservation or enhancement plans; these might include partial burial of the site or archaeological mitigation. A total of 20 1 × 1-meter units were excavated in this area in a checkerboard fashion. The area contained a high density of historic artifacts, including items related to metallurgy, giving additional support to the interpretation of this having been the approximate location of the blacksmith shop. Features included posts and rectangular stains suggesting architectural features.

Feature 64

Feature 64 consists of a rectangular post mold located at N484.78/E569.65. It measures 26 × 16 cm. It was identified at 37 cm, where excavations were terminated. Two structures are identified in this vicinity in sketches of the

early and late fort period—a dwelling built against the east palisade, and a late period occupation structure identified as the blacksmith shop. The position of Feature 64 indicates it is most likely associated with the early period dwelling.

Features 65, 66, 67, 68, 69, and 70

Several post mold features, based on their locations, are likely to have been associated with the late period blacksmith shop.

A post mold, located at N484.57/E566.94, was designated Feature 65. It is rectangular and measures 20×12 cm. It was identified at a depth of 30 cm and disappeared by 40 cm. The function of this feature at this location is currently unknown.

Feature 66 is a possible post mold located at N484.18/E566.10. It is circular and has a diameter of 14 cm. The post mold was identified at 30 cm and disappeared by 40 cm.

Feature 67 is a possible post mold. It is located at N482.57/E565.34. It is rectangular and measures 14×20 cm.

Feature 68 is a post mold is located at N481.13/E563.31. It is circular and measures 15 cm in diameter. It was observed at a depth of 35 cm and continued into the floor at a depth of 40 cm.

Feature 69 is located at N481.30/E562.30. It is a circular post mold and measures 20 cm across. It was observed at a depth of 35 cm and continued into the floor at a depth of 40 cm.

Feature 70 is a possible post mold. It is located at N481.40/E561.11. It is circular and has a diameter measuring 9 cm.

Feature 71

A soil reddened by heat in the southwest corner of N481/E561 was designated Feature 71. It was observed at a depth of 35 cm and continued into the floor at a depth of 40 cm. It is not clear if this feature represents an unprepared hearth or the location of a forge of the late period.

Feature 72

Feature 72 is a roughly linear feature composed of sandy silt with charcoal, ash, and burned earth. The northeast corner of the feature is located at N482.50/E565.90, and it extends to the west for 3.6 m, where it appears to turn to the south. This artifact-rich feature is very well delineated from the surrounding matrix of well-packed silty sand. The feature was observed at

a depth of 35 cm and continues into the floor at a depth of 40 cm. Sketches of the late fort occupation identify this location as the blacksmith shop. This feature is a possible work area for blacksmithing activities. Features 67–69 appear to be associated with it.

Feature 73

A compact silty sand located in units N481/E561–564 and N482–484/E565 was assigned to Feature 73. The soil has the texture of a well-packed floor. Its location suggests that it may be associated with a late fort occupation structure identified as a blacksmith shop.

Feature 74

This feature consists of a stain in the northwest corner of N484/E566. The feature is rectangular and measures 35 cm in width and extends 40 cm from the north wall of the unit. It is very distinct from the surrounding soil matrix. It was mapped at a depth of 40 cm and was no longer observable at 50 cm. It is in the location of the late period blacksmith shop and may represent the location of blacksmith furnishings.

Feature 75

Feature 75 is a stain located in the south half of N484/E566. The feature is a rectangular and rectilinear stain very distinct from the surrounding soil matrix. It is 35 cm wide and extends 40 cm from the north wall of the unit. The feature was mapped at 40 cm and was not observed at 50 cm. This feature also appears likely to be part of the blacksmith shop.

Feature 76

This feature is a possible post mold at N471.90/E569.68. It is circular and measures 10 cm in diameter. It was observed at a depth of 10 cm and continued to a depth of 20 cm.

Feature 77

A rock and possible post mold located at N483.9/E567.9 was designated Feature 77. The post mold is square and measures 25 × 30 cm; a stone with a diameter of about 20 cm sat on top. Wood was found underlying the stone. It was encountered at a depth of 37 cm and continued to the base of

the excavations at 40 cm. The location of this feature is in the vicinity of the east wall of the late period blacksmith shop.

Feature 78

This is a post mold located at N469.50/E570.40. The post mold is rectangular and measures 70×30 cm. It was identified at 19 cm and continues to a depth of 40 cm. The post mold may represent a block of wood used to support a floor, or possibly two adjacent smaller upright posts. The closest structure to this location is the early period dwelling.

Feature 79

This is a possible post mold located at N481/E567. It is circular and has a diameter of 21 cm. It was identified at a depth between 30 and 40 cm and continues into the base of the excavations at a depth of 40 cm. Its location and shape cannot be attributed to either the late period blacksmith shop or the early period residence in the this vicinity.

Feature 80

Feature 80 is a roughly rectangular stain measuring approximately 20×28 cm. It is located at N481.55/E569.60. The feature consists of loose, unconsolidated fill containing numerous artifacts; it might represent the location of a deteriorated post. The top was observed between 20 and 30 cm and continued into the base of the excavations at a depth of 40 cm. The location of Feature 80 suggests it is associated with the early period residence.

Southeast Bastion

The area of the assumed southeast bastion was assigned Field No. Area 2001-1. It was excavated in 2001, with Ray Pysarsky and Michael Larson serving as supervisors. It consisted of a large block area within N451–460/E569-575 made up of 52 1×1 -meter units (Figures 44 and 45). The investigations in this area were intended to give additional data on artifact densities and features near this location in order to make informed decisions concerning future preservation or enhancement plans, which may include partial burial of the site or archaeological excavation. The majority of these were started and taken down no deeper than 20 cm do to a large number of volunteers who showed up and left before target depths could be

Table 15: Features identified in the area of the Southeast Bastion.

Feature	Feature Type	Comments
81	Builder's trench	South builder's trench
105	Post mold	Circular
106	Square post mold	Large post mold, possibly associated with bastion
111/112	Builder's Trench	May be two trenches of different episodes
117	Hearth	Post occupation
126	Uniform stain	May be abandoned lumber or a wood walk-way
128	Square post mold?	Adjacent to Feat. 111/112. May represent a post
134	Square post mold	

attained. Because of this, limited information was gleaned concerning the precise size and shape of a number of possible features or stains. Erosion, in the form of gullies, may have occurred during and after the fort occupation and may also play a part in what appears to be cultural features at this location. The features in this area include two large posts and two stained areas that may be the remains of builder's trenches.

Feature 81

An east-to-west trending trench observed in N451/E573 and N449/E554 was designated Feature 81. It was observed in N449/E554 at a depth of 25 cm. Palisade posts were beginning to appear at a depth of 40 cm, where excavations terminated. The trench is approximately 60 cm wide. The trench was also observed in N451/E573. Since this was the location of an earlier excavation (Ruple 1990), the unit was terminated once the outline of the trench was observed. The feature is interpreted as the builder's trench for the south palisade wall.

Feature 105

This feature is a possible post mold located at N452.7/E572.36. It is oval and measures 10×17 cm. It was identified at a depth of 5 cm and was no longer observed at 20 cm. Its function is not known.

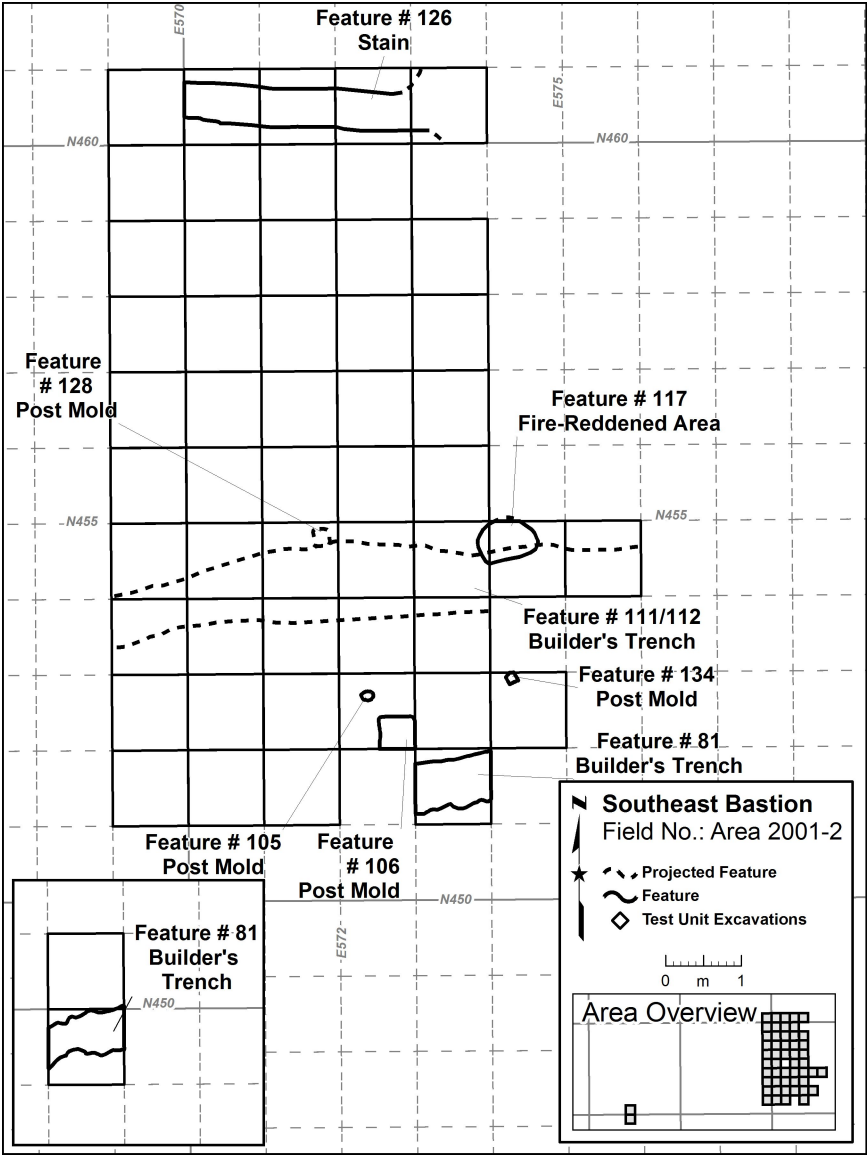


Figure 44: Plan view of Southeast Bastion excavations..

Feature 106

Feature 106 is a square feature exceeding 60 × 35 cm; it is located in the southeast corner of N452/E572 and the northeast corner of N453/E572,



Figure 45: Southwest Corner block excavation, facing east.

adjacent to the interior edge of the south palisade builder's trench. The feature was identified at a depth of 8 cm, where the fill consisted of a reddish brown, decomposing organic material—most likely wood—to a depth of 20 cm. At this point the fill changed to a grey, blocky clay to a depth of 35 cm, followed by a light tan silt containing sections of wood in various levels of decomposition. This fill, and its roughly square shape, continued to the base of the excavations at a depth of 51 cm. Few artifacts were recovered from this feature, with the exception of a concentration of decomposing wood between 30 and 50 cm. The feature is interpreted as a large, square post. It may have been associated with the southeast bastion or as support for the south palisade wall.

Feature 111/112

This feature consists of an east-west linear stain, extending from the west end of the block at N453 and N454/E569–N453 and N454/E575 (Figures 46 and 47). The feature appeared on the surface as a slight depression assumed to be derived from erosion. Its size varied in depth from nearly a meter wide at 10 cm depth to 48 cm at the base of the excavations at a depth

of 60 cm in N453–N454/E569, where the feature was cross-sectioned by a 50-centimeter wide trench. Depth of the feature was not determined at this location due to time constraints. The upper fill consists of light brown sandy silts of various textures and hues and dark clays. A cross-section of the feature at N453–N454/E571 suggests that portions of the feature map represent two adjoining parallel trenches due to different fills present in the cross-section. Until more work can be done specifically to address this question, the trench is combined. Unit N454/E574 was taken to a depth of 123 cm, where the base of the feature was encountered. What was interpreted as Feature 111 (the north half of the feature) was excavated separately from Feature 112 (the south half of the feature). It is possible the feature is a builder's trench and the differential fill may be seen as backfill of the trench and not sequential building episodes. This is the approximate location of the southeast bastion. Another possibility revolves around the fact that horses and livestock were kept in this area at night, and this feature may represent a slip trench to remove waste from the fort at this location. Without further work, the function of this feature remains unresolved.

Feature 117

A roughly oval stain, located at N454.8/E574.2, was designated Feature 117. The stain is approximately 40×70 cm in plan view and is 17 cm thick. The feature was identified at a depth of 8 cm and disappeared at 25 cm. The fill consists of orange, yellow, and purple-stained silt and is slightly more compact than surrounding fill, suggesting a soil color change due to heating. The location of this feature above Feature 111/112 suggests it is either late in the fort occupation or it relates to post-fort occupations.

Feature 126

Feature 126 is an east-west uniform linear stain; it was observed in N460/-E570 to N460/E573. The stain becomes visible in the 10–20-centimeter level. It is 50 cm wide and approximately 9 cm thick. Its length is undetermined and may extend further to the west. It terminates in N460/E573. It may be the result of a post-abandonment timber or functioned as a wood walkway during fort occupation.

Feature 128

This feature consists of a square stain, located in N454.80/E571.80. It measures 19×21 cm in plan view. It was identified at a depth of 38 cm and extends beyond 40 cm. The fill consists of black, sandy silt. The stain

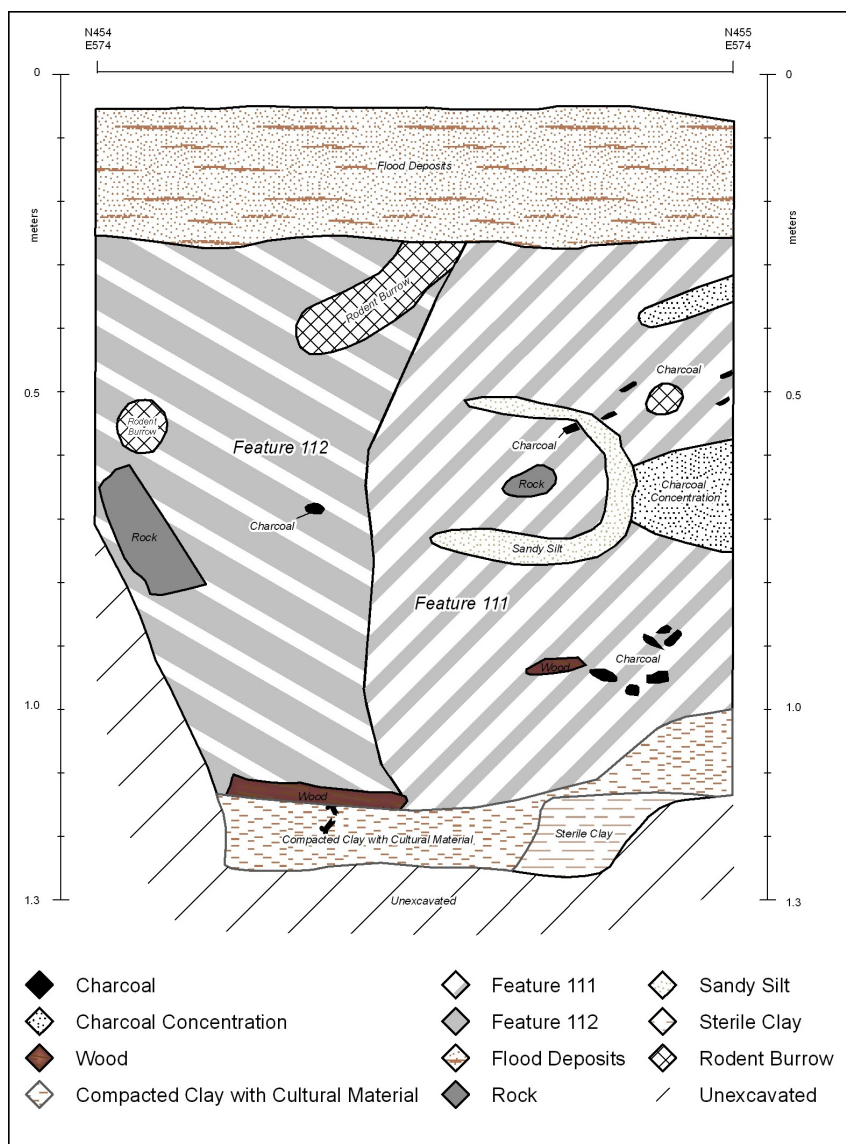


Figure 46: Profile of Features 111/112, trench of unknown association.

is characteristic in plan view to posts observed in other locations of the fort. Its location adjacent to Feature 111/112 is problematic. Its function is



Figure 47: Feature 111/112, west wall profile of N454/E573, at a depth of 123 cm below surface, facing west.

not known.

Feature 134

This is a square post mold located at N452.93/E574.28. It measures approximately 15×18 cm; it was encountered at a depth of 10 cm and continues to a depth of below 20 cm. The fill consists of silt and wood pulp. The outline becomes larger and amorphous in shape at 20 cm. Its function is unknown.

Depression

A single unit (N521/E540) was placed over part of depression in the north-central portion of the site in 1998 (Figure 36). The excavation was assigned Field No. Area 5. The work was supervised by Richard Harnois. This unit was excavated to 75 cm below datum in 5-centimeter levels. From Level 6

to Level 10, only the northern half of the unit was excavated. It contained a mix of fort-period and ranch-period artifacts. It was not taken to sterile soil matrix and may be a well or privy. Its association with the fort has not yet been determined. Local lore suggests it may be related to a household associated with Scotty Phillips, a local cattle and bison rancher of the late nineteenth century.

Feature Correlations

Eighty-nine archaeological features were identified during the 1997–2001 excavations. These features were identified to function when possible; they included building and architectural as well as features generated from normal occupation. Architectural-related features include builder's trenches, post molds and posts, areas of adobe block and adobe-like soil (puddled adobe), plaster concentrations, and selected stains. Features generated from non-construction events include hearths, selected stains and possible wagon ruts.

Of particular interest to this study was the identification of actual location and dimensions of the fort. This was determined based upon the builder's trench marking the fort palisade. A builder's trench for a palisade was identified on each side of the fort. While it is possible that features identified exterior to the trench may represent an early or late fort palisade, no journals or text describes changing the fort dimensions through time. The only noted changes in the palisade wall are documented in sketches and descriptions of the closing off of the west gate and adding an additional gate in the front of the fort as an entryway for livestock.

One principle pattern that was recognized in relation to the palisade builder's trench is the occurrence of adobe-derived soil and adobe block or brick. Block or brick was observed along from the southwest palisade corner and along the west palisade wall on the interior edge. Along the exterior side at this location, puddled adobe or adobe-derived soil was identified. This puddled adobe was identified both interior and exterior to the palisade line on the north, east, and south palisade line. While it is known that loess can accumulate along the exterior of a palisade—especially from the prevailing wind direction—and appear as eroded adobe (personal communication Dr. Richard Fox), the presence of this same matrix on the inside of the palisade argues for a different explanation. Some alternatives include: trampling of adobe block into a reduced or puddled matrix; adobe plastering being used along the palisade line and washing off to accumulate near the wall over time; or mantling the base of the palisade post to help prevent decomposition. In a sketch of the post by Lt. Sully in 1856, an area

of what could be interpreted as adobe is present on the interior palisade wall. Because the west palisade was adjacent to buildings housing important staff and visitors, the adobe block identified along this area may have functioned as a sidewalk. Other builder's trenches await further investigation to determine their function or association with a known structure.

Many of the post molds identified are currently unknown as to function, since they cannot be related to any known structure. Several of these exterior to the north and east palisade wall may be associated with pre-fort activities, as well as post-fort ranching activities.

Stains were ubiquitous throughout the excavations. When these were large, linear, or rectangular, they were typically given a feature number. Many of these may have been the result of a wood structure contacting the ground surface for a long enough period of time to change the nature of the soil and the content of the surrounding matrix. An alternative to this may indicate the opposite, and the demarcation of the stains may mark a location exterior to the above-mentioned placement of wood structures or formed by erosional processes.

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Excavation Records

Table 16: Southwest Corner (Area1 & 2000-1) Excavation Record.

Year	Unit/Depth	Screened	Floor Troweled	Wall Troweled	Plans	Photos	Comments
1997	N442 E500						
	L1-13 (0-30)	20cm to bot- tom	Y	Y	N	N	Outside palisade
	L4 (30-40)	Y	Y	Y	N	N	
	L5 (40-50)	Y	Y	Y	Floor at 42 cm	N	Level mislabeled L4
1997	N442 E501						Outside palisade
	L1-L3 (0-30)	Only cm	Y	Y	N	N	
	L4 (30-40)	Y	Y	Y	N	N	
1998	N442 E504						
	L1 (0-20)	N	?	?	N	N	Datum is SW corner. Outside palisade
	L2 (20-30)	?	?	?	N	N	Shoveled out topsoil deposit, no level form
	L3 (30-40)	?	?	?	N	Y	Cleaned out floodwaters
	L4 (40-50)	?	?	?	N	N	
	L5 (50-60)	Y	?	?	Floor at 53 & wall?	Y	Cleaned up flood. Features— postmolds & adobe stain
1998	N442 E504						Datum is SW corner. Outside palisade
	L1 (0-20)	?	?	?	N	N	Shoveled out 1952 flood de- posit; no level form
	L2 (20-30)	?	?	?	N	N	Cleaned flood waters out
	L3 (30-40)	?	?	?	N	N	Unit flooded
	L4 (40-50)	?	?	?	N	Y	
	L5 (50-60)	?	?	?	Floor at 53	Y	Flooded shoveled sludge out Features 2 postmolds and adobe stain

Table 16: continued

Year	Unit/Depth	Screened	Floor Troweled	Wall Troweled	Plans	Photos	Comments
1997	N442 E509						Outside palisade
	L1-L2 (0-20)	Y	Y	Y	N	N	
	L3 (20-30)	Y	Y	Y	Floor	N	
	L4 (30-40)	Y	Y	Y	N	N	Water screen sample 25 × 25 × 10 cm NE cor- ner. Feature—possible wall
	L5 (0-50)	Y	Y	Y	N	N	Feature—possible post (0-50cm) No floor plan with level form
	Bulk cleaning	Y	Y	Y	Floor	Y	Datum is SW corner. Outside palisade
1997	N443 E504						
	L1-L2 (0-20)	N	Y	Y	N	N	
	L3 (30-40)	Y	Y	Y	N	N	
	L4 (40-50)	Y	Y	Y	Floor at 32-34 cm	N	
1998	L5 (50-60)	Y	Y	Y	?	N	
	L1 (0-50)	N	?	?	N	Y	Scraped and cleaned out last years dirt
1998	L2 (50-60)	Y	?	?	E. wall	?	Feature—possible wall trench
	N443 E505						Datum is SW corner. Outside palisade
	L1 (0-20)	?	?	?	?	?	Shoveled out post for flood dirt: no level form
	L2 (20-30)	?	?	?	N	?	Pedestal begun in NW corner and cleaned floodwaters out
	L3 (30-40)	?	?	?	N	?	Feature—possible post
	L4 (40-50)	?	?	?	Floor	Y	Feature—possible wall

Table 16: continued

Year	Unit/Depth	Screened	Floor Troweled	Wall Troweled	Plans	Photos	Comments
	L5 (50–60)	?	?	?	Floor	Y	Features—west & south walls: The southwest corner of fort
1997	N443 E509						Outside palisade
	L1– L2 (20–30)	Y	Y	Y	N	?	Two level forms
	L3 (20–30)	Y	Y	Y	N	?	
	L4 (40–50)	Y	Y	Y	?	?	Water screen sample
	L5 (40–50)	Y	Y	Y	Floor (N445)	Y	25 × 25 × 10 cm NE corner. Feature—possible wall. Feature—possible wall. Several walls drawn together: N442-445
1997	N444 E502						Profiled N444 E502-504. Outside palisade
	L1–L2 (0–20)	N	Y	Y	N	N	
	L3? L4 (30–40)	Y	Y	Y	N, wall	N	
	N444 E503						Outside palisade
1997	L3 (20–30)	Y	Y	Y	N	N	
	L4 (30–40)	Y	Y	Y	N	N	
	L5 (40–50)	Y	Y	Y	N wall	N	
	N444 E504						
	L3 (20–30)	Y	Y	Y	Floor at 29–30 cm	?	Datum is SW corner. Palisade Feature—possible post hole
1998	L4 (30–40)	Y	Y	Y	Floor	N	Feature—possible wall
	L5 (40–50)	Y	Y	Y	N, & E, walls	N	Feature—Possible wall

Table 16: continued

Year	Unit/Depth	Screened	Floor Troweled	Wall Troweled	Plans	Photos	Comments
	L5 (50)	?	?	?	Floor	Y	Shovel scraped and cleaned out last year's dirt. Feature—possible wall
1998	N444 E505						Datum is SW corner. Part of 2 × 3 m Palisade
	L1 (0–20)	?	?	?	?	N	Shoveled out topsoil from post fort period: no level form
	L2 (20–30)	?	?	?	N	N	Pedestaled post but turned out to be a root; cleaned out floodwaters
	L3 (30–40)	?	?	?	N	?	Features—wall & adobe brick
	L4 (40–50)	?	?	?	L4–5 Floor & W. Wall	Y	Flooded, cleaned up with shovel. Feature—west wall Palisade
	L5 (50–60)	?	?	?		Y	
1997	N444 E509						
	L1–L2 (0–20)	Y	Y	Y	N	N	
	L3 (20–30)	Y	Y	Y	Floor at 25–26 cm	N	
	L4 (30–40)	Y	Y	Y	Floor at 40–42	N	Water screen sample 25 × 25 × 10 cm NE corner
	L5 (40–50)	Y	Y	Y	Floor	N	Feature—possible wall
1998	N444 E504–505						Datum is SW corner. Palisade
	L1 (0–20)	N	N	N	N	N	Shoveled out
1998	N444 E504						Datum is SW corner. Palisade
	L2 (20–30)	N	?	?	N	N	Mucked out flood water
	L3 (30–40)	Y last 4–10 cm	Y last 4–10 cm	?	N	N	Feature—possible trench wall

Table 16: continued

Year	Unit/Depth	Screened	Floor Troweled	Wall Troweled	Plans	Photos	Comments
	L4 (40–50)	?	?	?		Y	Troweled. Features—adobe brick and builders trench
1998	N445 E505						Datum is SW corner. Palisade
	L2 (20–30)	?	?	?	N	N	Mucked out flood waters
	L3 (30–40)	Y last 4–10 cm	Y last 4–10 cm	?	N	?	Troweled. Cleaned out flood waters
	L4 (40–50)	?		?	Floor	Y	Features—adobe brick and possible post
1997	N445 E509						Palisade?
	L1 (0–10)	N	Y	Y	N	N	
	L2 (10–20)	N	Y	Y	N	N	
	L3 (20–30)	Y	Y	Y	N	N	
	L4 (30–40)	Y	Y	Y	N	N	
	L5 (40–50)	Y	Y	Y	N	N	Water screen sample 25 × 25 × 10 cm NE corner
1997	N446 E509						Inside palisade
	L1 (0–10)	N	Y	Y	N	N	
	L2 (10–20)	N	Y	Y	N	N	
1997	N446 E511						Profile 0–70 cm. Inside palisade
	L1–L2 (0–20)	N	N	N	N	N	Shoveled sterile sod overburden
	L3 (20–30)	Y	Y	Y	Floor	Y	Chunked out level? Feature—possible midden
	L4 (30–43)	Y	Y	Y	Floor at 35 cm	Y?	Ash and charcoal bagged for lab. Two level forms
	L5 (43–50)	Y	Y	Y	Floor at 43 & 50 cm	N	

Table 16: continued

Year	Unit/Depth	Screened	Floor Troweled	Wall Troweled	Plans	Photos	Comments
	L6 (50–60)	Y	Y	Y	Floor at 55–60 cm	N	
	L7 (60–70)	Y	Y	Y	Floor & wall	?	Soil sample $25 \times 25 \times 10$ cm from 70–80 cm Inside palisade
1997	N447 E509						
	L1–L2 (0–20)	N	Y	Y	N	N	
	L3 (20–30)	Y	Y	Y	N	N	
	L4 (30–40)	Y	Y	Y	N	N	
1997	N448 E509						
	L1?						Inside palisade
	L2?						No level form
	L3 (20–30)	?	Y	Y	Floor at 28 & 30 cm	N	No level form Feature—possible living floor
2000	L4 (30–40)	Y	?	Y	Floor	N	
	N443.5 E506						
	L1 (0–30)	N	Y	Y	N	N	South palisade wall present 0–30 previously excavated. Tossed fill. Midden found out- side of builders trench. Adobe brick and wood palisade ob- served at 50 cm
2000	L2 (30–40)	Y	Y	Y	N	N	
	L3 (40–50)	Y	Y	Y	Y	Y	
	L4 (50–55)	Y	Y	Y	Y	Y	
	N443.5 E506						Inside palisade

Table 16: continued

Year	Unit/Depth	Screened	Floor Troweled	Wall Troweled	Plans	Photos	Comments
	L1 (0-30)	N	Y	Y	N	N	0-30 previously excavated. Tossed fill. Midden found inside of builders trench, especially 40-50 cm. Adobe derived silts present in floor at 50 cm. Charcoal and fire-cracked rock at 40 cm suggests a hearth
	L2 (30-40)	Y	Y	Y	N	N	
	L3 (40-50)	Y	Y	Y	Y	Y	
	L4 (50-55)	Y	Y	Y	Y	Y	
2000	N443.5 E508						
	L1 (0-30)	N	Y	Y	N	N	South palisade wall present 0-30 previously excavated. Tossed fill. Midden found inside of builder's trench. Most prevalent at 40-55 cm. Small portion of wood palisade observed at 50 cm. Artifacts continue at 55 cm
	L2 (30-40)	Y	Y	Y	N	Y	
	L3 (40-55)	Y	Y	Y	Y	Y	
2000	N443 E509						
							Small portion of south palisade wall present in extreme northern portion of unit

Table 16: continued

Year	Unit/Depth	Screened	Floor Troweled	Wall Troweled	Plans	Photos	Comments
	L1 (0-40)	N	Y	Y	N	N	0-40 previously excavated. Tossed fill. Limited midden deposit found outside of builders trench. Small portion of wood palisade observed at 50 cm. Artifacts continue at 55 cm but very sparse
	L2 (40-50)	Y	Y	Y	N	Y	
	L3 (50-55)	Y	Y	Y	Y	Y	
2000	N444 E509						
	L1 (0-40)	N	Y	Y	N	N	Inside palisade with portion of palisade wall in south portion of unit 0-40 previously excavated. Tossed fill. Light midden scatter found inside builders trench. Most prevalent at 40-55 cm. Small portion of wood palisade observed at 50 cm. Artifacts stopped 50 cm
	L2 (40-50)	Y	Y	Y	N	N	
	L3 (50-55)	Y	Y	Y	Y	Y	
2000	N443.5 E510						
	L1 (0-30)	N	Y	Y	N	N	Very small portion of south wall palisade present in north portion of unit 0-30 previously excavated. Tossed fill. Light midden found inside of builders trench, especially 40-50 cm

Table 16: continued

Year	Unit/Depth	Screened	Floor Troweled	Wall Troweled	Plans	Photos	Comments
2000	L2 (30–40)	Y	Y	Y	N	N	South wall palisade present in unit 0–30 previously excavated. Moderate midden found outside of builders trench, especially 30–50 cm. 55–200 excavated with backhoe to identify lower extent of wood palisade remaining. Base of posts at approximately 130 cm
	L3 (40–50)	Y	Y	Y	N	N	
	L4 (50–55)	Y	Y	Y	Y	Y	
	N444 E510						
	L1 (0–30)	N	Y	Y	N	N	
	L2 (30–40)	Y	Y	Y	N	N	
	L3 (40–50)	Y	Y	Y	N	N	
	L4 (50–55)	Y	Y	Y	Y	Y	
	L5 (55–200)	N	N	Y	Y	Y	

1997 Notes. Drawings: North wall of units N444 E502 504 (0–60 cm) and east wall N444–443 E504 (0–70 cm). East walls drawn of N444–442 E509 (0–60 cm). Floor plans on one sheet for N443 E505 (60 cm²), N444 E505 (60cm), and N444 E504 (50cm) west half.

1998 Notes. Drawings: East wall showing units N445 E505 (0–40), N444 E505 (0–50), N443 E505 (0–60), and N442 E505 (0–60). North wall showing units N445 E504 and N445 E505—no depths given. South wall showing units N442 E505 (0–60) and N442 E504 (0–50). West wall showing units N443 E504 (0–50), N443 E504 (0–60), then gap for the 1997 excavation, and N445 E504 (0–50). The first N443 must be N442. Area 1, Feature 1 floor plan for units n445–443 E504 and N445–443 E505. Feature 1 is the west wall and south wall (southwest corner). Builder’s trench with post north side of N444 E504 and N444 E505.

Table 17: Northwest Bastion and North Walls (Area 2) Excavation Record.

Year	Unit/Depth	Screened	Floor Troweled	Wall Troweled	Plans	Photos	Comments
1997	N442 E500						
	L1-13 (0-30)	20cm to bot- tom	Y	Y	N	N	Outside palisade
	L4 (30-40)	Y	Y	Y	N	N	
	L5 (40-50)	Y	Y	Y	Floor at 42 cm	N	Level mislabeled L4
1997	N442 E501						Outside palisade
	L1-L3 (0-30)	Only 20-30 cm	Y	Y	N	N	
	L4 (30-40)	Y	Y	Y	N	N	
1998	N442 E504						
	L1 (0-20)	N	?	?	N	N	Datum is SW corner. Outside palisade
	L2 (20-30)	?	?	?	N	N	Shoveled out topsoil deposit, no level form
	L3 (30-40)	?	?	?	N	Y	Cleaned out floodwaters
	L4 (40-50)	?	?	?	N	N	
	L5 (50-60)	Y	?	?	Floor at 53 & wall?	Y	Cleaned up flood. Features— postmolds & adobe stain
1998	N442 E504						Datum is SW corner. Outside palisade
	L1 (0-20)	?	?	?	N	N	Shoveled out 1952 flood de- posit; no level form
	L2 (20-30)	?	?	?	N	N	Cleaned flood waters out
	L3 (30-40)	?	?	?	N	N	Unit flooded
	L4 (40-50)	?	?	?	N	Y	

Table 17: continued

Year	Unit/Depth	Screened	Floor Troweled	Wall Troweled	Plans	Photos	Comments
	L5 (50–60)	?	?	?	Floor at 53	Y	Flooded shoveled sludge out Features 2 postmolds and adobe stain Outside palisade
1997	N442 E509						
	L1–L2 (0–20)	Y	Y	Y	N	N	Water screen sample 25 × 25 × 10 cm NE cor- ner. Feature—possible wall
	L3 (20–30)	Y	Y	Y	Floor	N	Feature—possible post (0–50cm) No floor plan with level form
	L4 (30–40)	Y	Y	Y	N	N	Datum is SW corner. Outside palisade
	L5 (0–50)	Y	Y	Y	N	N	
	Bulk cleaning	Y	Y	Y	Floor	Y	
1997	N443 E504						
	L1–L2 (0–20)	N	Y	Y	N	N	
	L3 (30–40)	Y	Y	Y	N	N	
	L4 (40–50)	Y	Y	Y	Floor at 32–34 cm	N	
	L5 (50–60)	Y	Y	Y	?	N	
1998	L1 (0–50)	N	?	?	N	Y	Scraped and cleaned out last year's dirt Feature—possible wall trench Datum is SW corner. Outside palisade
1998	N443 E505	Y	?	?	E. wall	?	
	L1 (0–20)	?	?	?	?	?	Shoveled out post for flood dirt: no level form
	L2 (20–30)	?	?	?	N	?	Pedestal begun in NW corner and cleaned floodwaters out

Table 17: continued

Year	Unit/Depth	Screened	Floor Troweled	Wall Troweled	Plans	Photos	Comments
	L3 (30–40)	?	?	?	N	?	Feature—possible post
	L4 (40–50)	?	?	?	Floor	Y	Feature—possible wall
	L5 (50–60)	?	?	?	Floor	Y	Features—west & south walls: The southwest corner of fort
1997	N443 E509						Outside palisade
	L1– L2 (20–30)	Y	Y	Y	N	?	Two level forms
	L3 (20–30)	Y	Y	Y	N	?	
	L4 (40–50)	Y	Y	Y	?	?	Water screen sample 25 × 25 × 10 cm NE corner. Feature—possible wall
	L5 (40–50)	Y	Y	Y	Floor (N445)	Y	Feature—possible wall. Several walls drawn together: N442-445
1997	N444 E502						Profiled N444 E502–504. Outside palisade
	L1–L2 (0–20)	N	Y	Y	N	N	
	L3? L4 (30–40)	Y	Y	Y	N, wall	N	
1997	N444 E503						Outside palisade
	L3 (20–30)	Y	Y	Y	N	N	
	L4 (30–40)	Y	Y	Y	N	N	
	L5 (40–50)	Y	Y	Y	N wall	N	
1998	N444 E504						Datum is SW corner. Palisade
	L3 (20–30)	Y	Y	Y	Floor at 29–30 cm	?	Feature—possible post hole
	L4 (30–40)	Y	Y	Y	Floor	N	Feature—possible wall

Table 17: continued

Year	Unit/Depth	Screened	Floor Troweled	Wall Troweled	Plans	Photos	Comments
	L5 (40–50)	Y	Y	Y	N, & E. walls	N	Feature—Possible wall
	L5 (50)	?	?	?	Floor	Y	Shovel scraped and cleaned out last year's dirt. Feature—possible wall
1998	N444 E505						Datum is SW corner. Part of 2 × 3 m Palisade
	L1 (0–20)	?	?	?	?	N	Shoveled out topsoil from post fort period; no level form
	L2 (20–30)	?	?	?	N	N	Pedestaled post but turned out to be a root; cleaned out floodwaters
	L3 (30–40)	?	?	?	N	?	
	L4 (40–50)	?	?	?	L4–5 Floor & W. Wall	Y	Features—wall & adobe brick
	L5 (50–60)	?	?	?		Y	Flooded, cleaned up with shovel. Feature—west wall Palisade
1997	N444 E509						
	L1–L2 (0–20)	Y	Y	Y	N	N	
	L3 (20–30)	Y	Y	Y	Floor at 25–26 cm	N	
	L4 (30–40)	Y	Y	Y	Floor at 40–42	N	Water screen sample 25 × 25 × 10 cm NE corner
1998	N444 E504–505	Y	Y	Y	Floor	N	Feature—possible wall Datum is SW corner. Palisade
	L1 (0–20)	N	N	N	N	N	Shoveled out
1998	N444 E504						Datum is SW corner. Palisade
	L2 (20–30)	N	?	?	N	N	Mucked out flood water

Table 17: continued

Year	Unit/Depth	Screened	Floor Troweled	Wall Troweled	Plans	Photos	Comments
	L3 (30-40)	Y last 4-10 cm	Y last 4-10 cm	?	N	N	Feature—possible trench wall
	L4 (40-50)	?	?	?		Y	Troweled. Features—adobe brick and builders trench
1998	N445 E505						Datum is SW corner. Palisade
	L2 (20-30)	?	?	?	N	N	Mucked out flood waters
	L3 (30-40)	Y last 4-10 cm	Y last 4-10 cm	?	N	?	Troweled. Cleaned out flood waters
	L4 (40-50)	?		?	Floor	Y	Features—adobe brick and possible post
1997	N445 E509						Palisade?
	L1 (0-10)	N	Y	Y	N	N	
	L2 (10-20)	N	Y	Y	N	N	
	L3 (20-30)	Y	Y	Y	N	N	
	L4 (30-40)	Y	Y	Y	N	N	
	L5 (40-50)	Y	Y	Y	N	N	Water screen sample 25 × 25 × 10 cm NE corner
1997	N446 E509						Inside palisade
	L1 (0-10)	N	Y	Y	N	N	
	L2 (10-20)	N	Y	Y	N	N	
1997	N446 E511						
	L1-L2 (0-20)	N	N	N	N	N	Profile 0-70 cm. Inside palisade
	L3 (20-30)	Y	Y	Y	Floor	Y	Shoveled sterile sod overburden
	L4 (30-43)	Y	Y	Y	Floor at 35 cm	Y?	Chunked out level? Feature—possible midden
	L5 (43-50)	Y	Y	Y	Floor at 43 & 50 cm	N	Ash and charcoal bagged for lab. Two level forms

Table 17: continued

Year	Unit/Depth	Screened	Floor Troweled	Wall Troweled	Plans	Photos	Comments
	L6 (50–60)	Y	Y	Y	Floor at 55–60 cm	N	
	L7 (60–70)	Y	Y	Y	Floor & wall	?	Soil sample $25 \times 25 \times 10$ cm from 70–80 cm Inside palisade
1997	N447 E509						
	L1–L2 (0–20)	N	Y	Y	N	N	
	L3 (20–30)	Y	Y	Y	N	N	
	L4 (30–40)	Y	Y	Y	N	N	
1997	N448 E509						
	L1?						Inside palisade
	L2?						No level form
	L3 (20–30)	?	Y	Y	Floor at 28 & 30 cm	N	No level form Feature—possible living floor
2000	L4 (30–40)	Y	?	Y	Floor	N	
	N443.5 E506						
	L1 (0–30)	N	Y	Y	N	N	South palisade wall present 0–30 previously excavated. Tossed fill. Midden found out- side of builders trench. Adobe brick and wood palisade ob- served at 50 cm
2000	L2 (30–40)	Y	Y	Y	N	N	
	L3 (40–50)	Y	Y	Y	Y	Y	
	L4 (50–55)	Y	Y	Y	Y	Y	
	N443.5 E506						Inside palisade

Table 17: continued

Year	Unit/Depth	Screened	Floor Troweled	Wall Troweled	Plans	Photos	Comments
	L1 (0-30)	N	Y	Y	N	N	0-30 previously excavated. Tossed fill. Midden found inside of builders trench, especially 40-50 cm. Adobe derived silts present in floor at 50 cm. Charcoal and fire-cracked rock at 40 cm suggests a hearth
	L2 (30-40)	Y	Y	Y	N	N	
	L3 (40-50)	Y	Y	Y	Y	Y	
	L4 (50-55)	Y	Y	Y	Y	Y	
2000	N443.5 E508						South palisade wall present
	L1 (0-30)	N	Y	Y	N	N	0-30 previously excavated. Tossed fill. Midden found inside of builder's trench. Most prevalent at 40-55 cm. Small portion of wood palisade observed at 50 cm. Artifacts continue at 55 cm
	L2 (30-40)	Y	Y	Y	N	Y	
	L3 (40-55)	Y	Y	Y	Y	Y	
2000	N443 E509						Small portion of south palisade wall present in extreme northern portion of unit

Table 17: continued

Year	Unit/Depth	Screened	Floor Troweled	Wall Troweled	Plans	Photos	Comments
	L1 (0-40)	N	Y	Y	N	N	0-40 previously excavated. Tossed fill. Limited midden deposit found outside of builders trench. Small portion of wood palisade observed at 50 cm. Artifacts continue at 55 cm but very sparse
	L2 (40-50)	Y	Y	Y	N	Y	
	L3 (50-55)	Y	Y	Y	Y	Y	
2000	N444 E509						
	L1 (0-40)	N	Y	Y	N	N	Inside palisade with portion of palisade wall in south portion of unit 0-40 previously excavated. Tossed fill. Light midden scatter found inside of builders trench. Most prevalent at 40-55 cm. Small portion of wood palisade observed at 50 cm. Artifacts stopped 50 cm
	L2 (40-50)	Y	Y	Y	N	N	
	L3 (50-55)	Y	Y	Y	Y	Y	
2000	N443.5 E510						
	L1 (0-30)	N	Y	Y	N	N	Very small portion of south wall palisade present in north portion of unit 0-30 previously excavated. Tossed fill. Light midden found inside of builders trench, especially 40-50 cm

Table 17: continued

Year	Unit/Depth	Screened	Floor Troweled	Wall Troweled	Plans	Photos	Comments
2000	L2 (30–40)	Y	Y	Y	N	N	South wall palisade present in unit 0–30 previously excavated. Tossed fill. Moderate mid-den found outside of builders trench, especially 30–50 cm. 55–200 was excavated with backhoe to identify the lower extent of wood palisade remaining. The base of the posts were at approximately 130 cm be
	L3 (40–50)	Y	Y	Y	N	N	
	L4 (50–55)	Y	Y	Y	Y	Y	
	N444 E510						
	L1 (0–30)	N	Y	Y	N	N	
	L2 (30–40)	Y	Y	Y	N	N	
	L3 (40–50)	Y	Y	Y	N	N	
	L4 (50–55)	Y	Y	Y	Y	Y	
	L5 (55–200)	N	N	Y	Y	Y	

Table 18: North Wall (Area 3) Excavation Record.

Year	Unit/Depth	Screened	Floor Troweled	Wall Troweled	Plans	Photos	Comments
1998	N529 E540 W ^{1/2}						Datum is SW corner. Inside palisade
	L1 (0-9.5/16)	Y	Y	Y	Floor	N	Shovel skimmed
	L2 (16-25.5)	Y	Y	Y	Floor & W. wall	N	Troweled
1998	N530 E540 W ^{1/2}						Datum is SW corner. Inside palisade
	L1(0-17.5/25)	Y	Y	Y	Floor	N	Shovel skimmed and Troweled
	L2 (17.5/25-20/28)	Y	Y	Y	Floor	N	Trowel by stratigraphic deposits
	L3 (20/28-33)	Y	Y	Y	Floor	N	Troweled
	L4 (33-39)	Y	Y	Y	Floor & W. wall	N	Troweled
1999	N530 E541						Datum is SW corner. Inside palisade
	L1 (0-10)	Y	Y	Y	Floor	N	Shovel skimmed
	L2 (10-20)	Y	Y	Y	N	N	Shovel skimmed
	L3 (20-30)	Y	Y	Y	N	Y	Shovel skimmed
	L4 (30-36)	Y	Y	Y	Floor & E. wall	?	Shovel skimmed
1998	N531 E540						Datum is SW corner. Inside palisade
	L1 (0-15)	Y	Y	Y	Floor	Y	Shovel skimmed
	W ^{1/2}						
	L1 (0-17.5)	Y/Not sod	Y	Y	Floor	N	Feature Area 3-98-1 buried depression. Shovel skimmed below sod.
	E ^{1/2}						

Table 18: continued

Year	Unit/Depth	Screened	Floor Troweled	Wall Troweled	Plans	Photos	Comments
1999	L2 (15-19/23)W ¹ / ₂	Y	Y	Y	Floor	N	Troweled by stratigraphic deposits
	L2 (17.5-22)E ¹ / ₂	Y	Y	Y	Floor	N	Feature Area 3-98-1 buried depression. Troweled.
	L3 (19/23-32)W ¹ / ₂	Y	Y	Y	Floor & wall	N	Troweled
	L3(22-31)E ¹ / ₂	Y	Y	Y	N	N	Feature Area 3-98-1 buried depression.-
	N531 E541						Datum is SW corner. Inside palisade
	L1 (0-20)	Y	Y	Y	Floor	Y	Feature 17?-buried depression.
	L2 (20-30)	Y	Y	Y	Floor	Y	Feature 17-buried depression
	L3 (30-35)	Y	Y	Y	Floor	N	Excavated SE quadrant to 45 cm
1998	L4 (35-36/45)	Y	Y	Y	Floor & wall	Y	Datum is SW corner. Inside palisade
	N532 E540						Troweled
	L1 (0-15)	Y	Y	Y	N	N	
	L2 (15-18/18.5)	Y	Y	Y	Floor	N	
1999	L3 (18/18.5-21/31)	Y	Y	Y	Floor	N	Feature Area 3-98-1 buried depression. Excavation slopes
	L4 (21/31-28/31)	Y	Y	Y	Floor & wall	Y	Feature area 3-98-1 buried depression. Excavation slopes
	N532 E543						Datum is SW corner. Inside palisade
	L1 (0-20)	0-10N/10-20Y	Y	Y	N	N	Shovel skimmed and troweled.

Table 18: continued

Year	Unit/Depth	Screened	Floor Troweled	Wall Troweled	Plans	Photos	Comments
	L2 (20-35-64)	Y	Y	Y	Floor & wall	N	Shovel skimmed and troweled. Excavate NW quadrant to 61-64 cm
1998	N533 E540						Datum is SW corner. Inside Palisade
	L1 (0-15/17.5)	Y	Y	Y	N	N	Troweled
	L2 (15/17.5-17.5/22)	Y	Y	Y	Floor	N	
	L3 (17.5/22-23.5/33)	Y	Y	Y	Floor	Y	Feature Area 3-98-1 buried depression.
	L4 (23.5/33-29/33)	Y	Y	Y	Floor at 29 cm	N?	Troweled. Feature Area 3-98-1 buried depression.
	L5 (29/33-60) N ^{1/2}	Y	Y	Y	N	N	Entire level sent for water screening 6 bags. Buried depression.
	L5 (29/33-35) S ^{1/2}	Y	Y	Y	N	N	Feature Area 3-98-1 buried depression.
	L6 (35-45) S ^{1/2}	Y	Y	Y	N	Y	Troweled. Feature Area 3-98-1 buried depression.
	L7 (45-81)	Y	Y	Y	Floor & N.walls	Y	Troweled. Feature Area 3-98-1 buried depression
1999	N533 E541						Datum is SW corner. Inside palisade
	L1 (0-10)	Y	Y	Y	N	N	Shovel skimmed
	L2 (10-20)	Y	Y	Y	Floor	?	Feature 17.
	L3 (20-30)	Y	Y	Y	Floor	Y	Troweled. Feature 17
	L4 (30-40)	Y	Y	Y	Floor	N	Feature 17.

Table 18: continued

Year	Unit/Depth	Screened	Floor Troweled	Wall Troweled	Plans	Photos	Comments
1999	L5 (40-50)	Y	Y	Y	Floor	N	Shovel skimmed and troweled. Feature 17
	L6 (50-56)	Y	Y	Y	Floor	Y	Feature 17.
	L7 (56-58/65)	Y	Y	Y	Floor	Y	Feature 17. Feature slopes.
	L8 58/65-70)	Y	Y	Y	N	Y	Feature 17.
	L9 (70-86)	Y	Y	Y	Floor & N. E. & S.walls	Y	Feature 17. Cored floor 13 cm
1999	N533.5 E542						Datum is SW corner
	L1 (0-30)	Y	Y	Y	Floor	Y	Feature 17
	L2 (30-41)	Y	Y	Y	Floor	N	Feature 17
	L3 (41-50)	Y	Y	Y	Floor & N. & E. walls	Y	Feature 17
1997	N534 E540						Inside palisade
	E ^{1/2}						
	L1 (0-20)	Y	Y	Y	N	N	Shovel skimmed then troweled.
	L2(20-30)	Y	Y	Y	N	Y	
	L3 (30-39)	Y	Y	Y	N	Y	Feature 17?-possible root cellar.
1999	s ^{1/2}						Feature 17?-possible root cellar.
	L3 (30-35)	Y	Y	Y	N	Y	Feature 17?-possible root cellar.
	N ^{1/2}						
	L4 (39/35-48)	Y	Y	Y	Floor	Y	Feature 17-possible root cellar.
	L5 (48-60)	Y	Y	Y	W. wall	Y	Feature 17-possible root cellar
	N535 E539						Datum is SW corner. Palisade
	L1 (0-10)	Y	Y	Y	Floor	N	Troweled
	L2 (10-20)	Y	Y	Y	Floor	N	
	L3 (20-30)	Y	Y	Y	Floor	Y	
	L4 (30-35)	Y	Y	Y	Floor & 2 W. walls	Y	Profiled W wall at E539.69

Table 18: continued

Year	Unit/Depth	Screened	Floor Troweled	Wall Troweled	Plans	Photos	Comments
1997	N535 E540						Palisade
	L1 (0-10)	Y	Y	Y	Y	Y	Feature 7-possible can.
	L2 (10-20)	Y	Y	Y	Y	Y	Features 7-possible can. and 9-possible post mold.
	L3 (20-30)	Y	Y	N	N	N	Feature 9-possible post mold.
	L4 (30-40)	Y	Y	Floor	Y	Y	Features 9-possible post mold and 17 possible palisade
	L5 (40-50)	Y	Y	Floor	Y	Y	Features 9-possible post mold and 17 possible palisade
	L6 (50-60)	Y	Y	W. wall	Y	Y	Features 9-possible palisade.
1999	L7 (60-68)	N	Y	Floor	Y	Y	Feature 17-north wall
1999	N535 E541						Datum is SW corner. Palisade and Feature 17.
	L1 (0-7/13)	Y	Y	Floor	Y	Y	Excavate natural layers
	L2 (7-13-20)	Y	Y	N	?	?	
	L3 (20-30)	Y	Y	Floor	Y	Y	
	L4 (30-37)	Y	Y	Floor	Y	Y	Feature 17?-possible palisade.
	L5 (35-40)	Y	Y	Floor	N	N	Feature 17-north wall.
	L6 (40-45)	Y	Y	N.E. & walls	S. & S.	Y	Troweled
1999	N535 E542						Datum is SW corner. Palisade
	L1 (0-20/22)	Y/not sod	Y	Y	N	N	Shovel skimmed. Feature 17-nort wall.
	L2 (20/22-30)	Y	Y	Y	N	N	Feature 17-north wall.
	L3 (30-40)	Y	Y	Y	N	N	Possible trench
	L4 (40-45)	Y	Y	Y	?	?	North wall
	L5 (45-47)	Y	Y	Y	Y	Y	North wall, possible building
	N536 E540						Palisade?

Table 18: continued

Year	Unit/Depth	Screened	Floor Troweled	Wall Troweled	Plans	Photos	Comments
1998 1997	L1 (0–10)	Y/not sod	Y	Y	N	N	Troweled. Features 8-timber and 9-possible post mold.
	L2 (10–20)	Y	Y	Y	Floor & w. wall	Y	Shovel skimmed north wall
	L2 (11–48.5)	Y	Y	Y	N	N	Outside palisade
	N537 E540 L1 (0–10)	Y/not sod	Y	Y	Floor	Y	Shovel skimmed to 10 cm
	L2 (10–20)	Y	Y	Y	Floor	Y	Troweled. Features 11 and 12-possible postmolds.
1997	L3 (20–30)	Y	Y	Y	N	N	Pedestaled features 11 and 12-possible postmolds
	L4 (30–40)	Y	Y	Y	Floor	N	Features 11 and 12-possible postmolds.
	L5 (40–50)	Y	Y	Y	Floor & w. wall	Y	Features 11 and 12 not features
	N537 E549 L1 (0–10)	?	?	?	N	N	Palisade
	L2 (10–20)	?	?	?	N	N	No level form, only floor plans/feature record.
1997	L3 (20–30)	?	?	?	Floor & w. wall	N	No level form, only floor plans/feature record.
	N538 E540 L1 (0–10)	Y/not sod	Y	Y	N	N	Only floor plan feature record. 25 × 24 × 10 cm water screen soil sample
	L2 (10–20)	Y	Y	Y	N	N	Outside palisade
	L3 (20–30)	Y	Y	Y	N	Y	Shovel skimmed, later troweled E ^{1/2}
							Troweled. Pedestaled wood & bone.
							Feature 15-possible post mold.

Table 18: continued

Year	Unit/Depth	Screened	Floor Troweled	Wall Troweled	Plans	Photos	Comments
1997	L4 (30-40)	Y	Y	Y	N	N	Outside palisade No level form, only floor plans/feature record. No level form, only floor plans/feature record. No level form, only floor plans/feature record. No level form, only floor plans/feature record. Datum is SW corner. Outside palisade Shovel skimmed Shovel skimmed
	L5 (40-50)	Y	Y	Y	W. wall	N	
	N538 E549	?	?	?	N	N	
	L1 (0-10)	?	?	?	N	N	
	L2 (10-20)	?	?	?	N	N	
1998	L3 (20-30)	?	?	?	N	N	Outside palisade No level form, only floor plans/feature record. No level form, only floor plans/feature record. Datum is SW corner. Outside palisade Shovel skimmed Shovel skimmed
	L4 (30-40)	?	?	?	W. wall	N	
	N539 E530						
	W ^{1/2}						
	L1 (0-30)	Y	Y	Y	Floor	N	
1997	L2 (30-38)	Y	Y	Y	Floor, W. & s. walls	N	Outside palisade Troweled NE quadrant only; shovel skimmed elsewhere.
	N539 E540						
	L1 (0-10)	Y/not sod	Y	Y	N	N	
	L2 (10-20)	Y	Y	Y	N	Y	
	L3 (20-30)	Y	Y	Y	Floor	?	
1998	L4 (30-40)	Y	Y	Y	W. wall	Y	Datum is SW corner. Outside palisade Shovel skimmed Outside palisade
	N540 E540						
	w ^{1/2}						
	L1 (0-45)	Y/not sod	Y	Y	Floor & wall	W. N	
	N540 E540						
1997	W ^{1/2}						Outside palisade

Table 18: continued

Year	Unit/Depth	Screened	Floor Troweled	Wall Troweled	Plans	Photos	Comments
1998	L1 (0-20)	Y	Y	Y	N	N	
	L2 (20-35)	Y	Y	Y	Floor & W. wall	N	
	N541 E530 W ^{1/2}						Datum is SW corner. Outside palisade
	L1 (0-30)	Y/not sod	Y	Y	Floor	N	Shovel skimmed
1997	L2 (30-45)	Y	Y	Y	Floor & W. walls	N	Shovel skimmed
	N541 E540						Outside palisade
	L1 (0-10)	Y	Y	Y	N	N	Troweled
	L2 (10-20)	Y	Y	Y	S. & w. walls	N	
1997	N541 E549						Outside palisade
	L1 (0-10)	N	?	?	N	N	Troweled and shovel skimmed. No level form, only floor plan/feature record.
	L2 (10-20)	?	?	?	N	N	Troweled. No level form, only floor plan/feature record.
	L3 (20-30)	?	?	?	N	N	Troweled. No level form, only floor plan/feature record
1998	L4 (30-40)	?	?	?	N	N	Troweled. No level form, only floor plan/feature record
	L5 (40-47)	Y	Y	Y	S. & W. walls	N	Troweled
	N543 E530 W ^{1/2}						Datum is SW corner. Outside palisade
	L1 (0-30)	Y	Y	Y	Floor	N	Shovel skimmed and troweled.
1997	L2 (30-40)	Y	Y	Y	Floor & w. wall	N	Shovel skimmed and troweled
	N542 E540						Outside palisade

Table 18: continued

Year	Unit/Depth	Screened	Floor Troweled	Wall Troweled	Plans	Photos	Comments
1997	L1 (0-24)	Y/not sod	Y	Y	N	N	Troweled
	L2 (24-30)	Y	Y	Y	N	N	
	W ^{1/2}						
	L3 (30-40)	Y	Y	Y	N	N	
	W ^{1/2}						
1997	L4 (40-50)	N	Y	Y	N. & W. walls	Y	Troweled
	W ^{1/2}						
	N542 E549						
	L1 (0-10)	?	?	?	N	N	Troweled. No level form, only floor plan/feature record.
	L2 (10-20)	?	?	?	W. wall	N	Datum is SW corner. Outside palisade
1998	N543 E530						
	W ^{1/2}						
	L1 (0-20)	Y	Y	Y	Floor	N	Shovel skimmed and troweled
	L2 (20-39)	Y	Y	Y	Floor	N	Shovel skimmed
	L3 (39-49)	Y	Y	Y	Floor & W. wall	Y	Shovel skimmed
1997	N543 E549						
	L1 (0-10)	Y	?	?	N	N	Outside palisade
	L2 (10-20)	Y	?	?	Floor	N	No level form, only floor plan/feature record.
	L3 (20-30)	Y	?	?	Floor	N	Troweled. No level form, only floor plan/feature record.
	L4 (30-40)	?	?	?	N	N	Troweled. No level form, only floor plan/feature record..

Table 18: continued

Year	Unit/Depth	Screened	Floor Troweled	Wall Troweled	Plans	Photos	Comments
	L5 (40-50)	?	?	?	Floor & wall	N	Troweled. No level form, only floor plan/feature record Datum is SW corner. Outside of palisade
1998	N544 E530 W ^{1/2}						
	L1 (0-20)	Y/not sod	Y	Y	Floor	N	Shovel sod then troweled
	L2 (20-38)	Y	Y	Y	Floor & wall	N	Shovel skimmed
1997	N544 E549						
	L1 (0-10)	Y; 1/2 toss	?	?	N	N	Outside palisade Shovel skimmed and troweled. Only floor plan/feature record.
	L2 (10-20)	Y	?	?	N	N	Troweled. No level form, only floor plan/feature record.
	L3 (20-30)	?	?	?	Floor	Y	Troweled. No level form, only floor plan/feature record
	L4 (30-40)	?	?	?	Floor & wall	Y	Troweled. No level form, only floor plan/feature record
1998	N545 E530 W ^{1/2}						
	L1 (0-20)	Y	Y	Y	Floor	N	Datum is SW corner. Outside palisade
	L2 (20-30)	Y	Y	Y	Floor	N	Shovel sod then troweled
	L3 (30-42)	Y	Y	Y	Floor & wall	N	Shovel skimmed. Shovel skimmed
1998	N546 E530 W ^{1/2}						
	L1 (0-23)	Y	Y	Y	Floor	N	Datum is SW corner. Outside palisade
	L2 (23-40)	Y	Y	Y	Floor E. & walls	Y	Shovel sod then troweled. Shovel skimmed; Feature Area 3-98-2-two postmolds

Table 18: continued

Year	Unit/Depth	Screened	Floor Troweled	Wall Troweled	Plans	Photos	Comments
1998	N547 E530 W ^{1/2} L1 (0-20)		Y	Y	N	N	Datum is SW corner. Outside palisade
	L2 (20-33.5)	Y	Y	Y	W. wall	N	Shoveled sod layer. Shovel skimmed
	N548 E530 w ^{1/2}						Datum is SW corner. Outside palisade
1998	L1 (0-20)	Y	Y	Y	Floor	N	Shoveled sod then troweled
	L2 (20-30)	Y	Y	Y	N	N	
1998	N549 E530 W ^{1/2}						Datum is SW corner. Outside palisade
	L1 (0-18)	Y	Y	Y	Floor & w. wall	Y	Shovel removal

Table 19: East Wall (Area 4) Excavation Record.

Year	Unit/Depth	Screened	Floor Troweled	Wall Troweled	Plans	Photos	Comments
1998	N511 E574						
	L1 (0-10)	?	?	?	Floor	N	Datum is SW corner
	L2 (10-20)	?	?	?	N	N	
	L3 (20-30)	?	?	?	E. wall	N	
1998	N512 E573						
	L1 (0-10)	?	?	?	N	N	No level forms, only floor plan/feature record
	L2 (10-20)	?	?	?	E. wall	N	No level forms, only floor plan/feature record
							No level forms, only floor plan/feature record
1998	N513 E564						
	L1 (0-10)	Y	Y	Y	Floor	?	Datum is SW corner
	L2 (10-20)	Y	Y	Y	Floor	Y	Water screen sample 20 × 20 cm SW corner
	L3 (20-30)	Y	Y	Y	Floor, W. & S. walls	Y	Feature 1-sill. Two water screen samples 40 × 40 cm NE corner
1998	N513 E565						
	L1 (0-10)	Y	Y	Y	Floor	?	Datum is SW corner
	L2 (10-20)	Y	Y	Y	Floor	Y	Feature 1 sill. Water screen sample 20 × 20 cm NW corner
	L3 (20-30)	Y	Y	Y	Floor & S. wall	Y	Feature 1- sill
1998	N513 E566						
	L1 (0-10)	Y	Y	Y	N	?	Datum is SW corner
	L2 (10-20)	Y	Y	Y	Floor	?	Feature 1 floor sill. Water screen sample 20 × 20 cm NW corner

Table 19: continued

Year	Unit/Depth	Screened	Floor Troweled	Wall Troweled	Plans	Photos	Comments
1998	L3 (20-30)	Y	Y	Y	E. & S. walls	?	Feature 1-floor sill Datum is SW corner
	N514 E564						
	L1 (0-10)	Y	Y	Y	Floor	?	Feature 1-wood sill
	L2 (10-20)	Y	Y	Y	Floor	?	Feature 1-wood sill. 40 x 40
	L3 (20-30)	Y	Y	Y	Floor	?	cm soil sample in NE corner
	L4 (30-40)	Y	Y	Y	Floor N & W. wall	?	Feature 1-wood sill. Two wa- ter screen samples? Datum is SW corner
	N514 E565						
	L1 (0-10)	Y	Y	Y	N	?	Feature 1-98 (floor plate)
1998	L2 (10-20)	Y	Y	Y	Floor	?	Feature 1-98 (floor plate).
	L3 (20-30)	Y	Y	Y	Floor	?	Water screen sample x6 Datum is SW corner
	N514 E566						
	L1 (0-10)	Y	Y	Y	Floor	N	
	L2 (10-20)	Y	Y	Y	N	N	
	L3 (20-30)	Y	Y	Y	N	N	
	L4 (30-40)	Y	Y	Y	Floor	?	
	N514 E567						
1998	L1 (0-10)	Y	Y	Y	N	N	Datum is SW corner
	L2 (10-20)	Y	Y	Y	N	N	
	L3 (20-30)	Y	Y	Y	Floor	N	
	L4 (30-42)	Y	Y	Y	Floor & S. wall	N	Feature 2-support posts. 40 x 40 cm x 12 soil sample from SE corner
1998	N514 E568						Datur is SW corner
	L1 (0-10)	Y	Y	Y	N	N	
	L2 (10-20)	Y	Y	Y	Floor	Y	Feature 2-postmold

Table 19: continued

Year	Unit/Depth	Screened	Floor Troweled	Wall Troweled	Plans	Photos	Comments
	L3 (20-25)	Y	Y	Y	Floor & S. wall	N	Feature 2-postmold
1998	N514 E569						
	L1 (0-10)	Y	Y	Y	Floor	N	Datum is Sw corner
	L2 (10-20)	Y	Y	Y	Floor	N	
	L3 (20-30)	Y	Y	Y	Floor	N	Feature 2-posts
	L4 (30-38)	Y	Y	Y	Floor & S. wall	N	Feature 2-posts; pedestaled
1998	N514 E570						
	L1 (0-10)	Y	Y	Y	N	N	Datum is SW corner
	L2 (10-20)	Y	Y	Y	Floor	N	Feature 2-post. Water screen sample
	L3 (20-30)	Y	Y	Y	Floor & S. wall	N	Feature 2-posts. All matrix sent for water screening and flotation
1998	N514 E571						
	L1 (0-10)	Y	Y	Y	N	N	Datum is SW corner
	L2 (10-20)	Y	Y	Y	N	N	
	L3 (20-30)	Y	Y	Y	N	N	
	L4 (30-40P)	Y	Y	Y	Floor	N	East wall trench
	L5 (40-50)	Y	Y	Y	Floor N & S. walls	N	East wall trench
1998	N514 E572						
	L1 (0-10)	Y	Y	Y	N	N	Datum is Sw corner
	L2 (10-20)	Y	Y	Y	Floor	N	Shovel skimmed and troweled
	L3 (20-30)	Y	Y	Y	Floor	N	East wall trench
	L4 (30-40)	Y	Y	Y	Floor	N	Shovel skimmed. East wall trench
	L4 (30-40)	Y	Y	Y	Floor	N	East wall trench

Table 19: continued

Year	Unit/Depth	Screened	Floor Troweled	Wall Troweled	Plans	Photos	Comments
	L5 (40-50)	Y	Y	Y	Floor N & S walls	N	East wall trench
1997	N514 E573						
	L1 (0-10)	Y	Y	Y	N	N	No level form
	L2 (10-20)	Y	Y	Y	Floor & East wall	N	Features 7 and 8 posts. No level forms
1998	N514 E574						Datum is SW corner
	L1 (0-10)	Y	Y	Y	N	N	Possible post?
	L (10-20)	Y	Y	Y	Floor	N	Datum is SW corner
1998	L3 (20-30)	Y	Y	Y	N	N	
	N515 E565						
	L1 (0-10)	Y	Y	Y	N	N	
	L2 (10-20)	Y	Y	Y	N	N	
	L3 (20-30)	Y	Y	Y	Floor	N	
	L4 (30-40)	Y	Y	Y	Floor & W. wall	N	Feature 1 (4-98-1) floor sill. All matrix in building saved for water screening and flotation
1998	N515 E566						Datum is SW corner
	L1 (0-10)	Y	Y	Y	N	N	Removed sod and dirt pile
	L2 (10-20)	Y	Y	Y	N	N	
1997	N517 E573						
	L1 (0-10)	Y	Y	Y	E. wall	N	No level form; floor plan/feature record only
	L2 (10-20)	Y	Y	Y	N	N	No level form; floor plan/feature record only
1997	N518 E573						

Table 19: continued

Year	Unit/Depth	Screened	Floor Troweled	Wall Troweled	Plans	Photos	Comments
	L1 (0-10)	Y	Y	Y	E. wall	N	No level form; floor plan/feature record only Datum is SW corner
1998	N518 E574						
	L1 (0-10)	Y	Y	Y	N	N	
	L2 (10-20)	Y	Y	Y	Floor	N	Troweled & screened to 18 cm; then troweled and not screened
	L3 (20-25)	Y	Y	Y	N. wall	N	
1997	N519 E573						
	L1 (0-20)	Y	Y	Y	Floor & wall	E. N	Features 4, 5 and 6-posts. No level form; floor plan/feature record only
1997	N520 E573						
	L1 (0-10)	Y	Y	Y	N	N	Feature 3-post. Only one level for both levels + floor plan/feature record
	L2 (10-20)	Y	Y	Y	Floor & ? wall	N	Feature 3-post. Feature part of 1932-1842? Datum is Sw corner
1998	N520 E574						
	L1 (0-10)	Y	Y	Y	N	N	Troweled & screened whole level
	L2 (10-20)	Y	Y	Y	N	N	
	L3 (20-22)	Y	Y	Y	N	N	
1997	N521 E572						
	L1 (0-10)	Y	Y	Y	N	N	No level form; floor plan/feature record only
	L2 (10-20)	Y	Y	Y	Floor at 15 cm	N	Feature 1 collected for water screening

Table 19: continued

Year	Unit/Depth	Screened	Floor Troweled	Wall Troweled	Plans	Photos	Comments
1997	N521 E573 L1 (0-20)	Y	Y	Y	Floor wall	N	Feature 1-burned area
1997	N522 E573 L1 (0-10) L2 10-18)	Y Y	Y Y	Y Y	Floor E.wall	N N	No level form; floor plan/feature record only Datum is Sw corner
1998	N522 E574 L1 (0-10) L2 (10-20) L3 (20-25)	Y Y Y	Y Y Y	Y Y Y	N N N	N N N	
1997	N523 E573 L1 (0-10)	Y	Y	Y	N	N	One level form for both lev- els; separate floorplan./feature record
1997	L2 (10-20) N524 E573 L1 (0-20) L2 (20-23)	Y Y Y	Y Y Y	Y Y Y	E. wall N E. wall	N N N	No level form; floor plan/feature record only

Table 20: Depression Inside Fort (Area 5) Excavation Record.

Year	Unit/Depth	Screened	Floor Troweled	Wall Troweled	Plans	Photos	Comments
1997	N532 E540						Datum is SE corner
	L1 (0-10)	Last 2 cm	Y	Y	Floor	N	15-20 cm soil sample for water screening
	L2 (10-20)	10-15 cm	Y	Y	Floor	N	Entire level sent for water screening
	L3 (20-25)	N	Y	Y	Floor	N	Entire level sent for water screening
	L4 (25-30)	N	Y	N	Floor	N	Entire level sent for water screening
	L5 (30-35)	N	Y	N	Floor	N	Entire level sent for water screening
	L6 (35-42)	N	Y	N	Floor	N	Entire half level sent for water screening
	N ^{1/2}						
	L7 (42-45)	N	Y	N	Floor	N	Entire half level sent for water screening
	N ^{1/2}						
	L8 (45-50)	?	?	?		?	Missing level sheets
	N ^{1/2}						
	L9 (50-55)	?	?	?		?	Missing level sheets
	N ^{1/2}						
	L10 (55-75)	?	?	?	Floor	N	Removed by natural layers all bagged for water screening. Feature continues to an unknown depth
	N ^{1/2}						

Table 21: Outside North Wall (Area 6) Excavation Record.

Year	Unit/Depth	Screened	Floor Troweled	Wall Troweled	Plans	Photos	Comments
1997	N553 E500 E1/2						Datum is NE corner (Area 6). Unit mislabeled N563 E500 E1/2
	L1 (0-20)	N	Y	Y	N	N	
	L2 (10-14)	Y	Y	Y	N	N	Cored floor another 10cm
1997	N564 E500 E1/2						Datum is NE corner (Area 6). Unit mislabeled N564 E 500 1/2
	L1 (0-20)	N	Y	Y	N	N	Shoveled
1997	N563 E500 L1 (0-10)	Sod Y	Y	Y	N	N	Datum is NE corner (Area 6) Shoveled sod then troweled
	L2 (10-14)	Y	Y	Y	N	N	Troweled
1997	N564 E500 L1 (0-10)	Sod Y	Y	Y	N	N	Datum is SW corner (area 6) Shovel sod then troweled
	L2 (10-20)	Y	Y	Y	N. wall	N	Troweled

Table 22: Outside North Wall (Area 7) Excavation Record.

Year	Unit/Depth	Screened	Floor Troweled	Wall Troweled	Plans	Photos	Comments
1998	N551 E562						
	L1 (0-10)	Y	Y	Y	N	N	Datum is SW corner (Area 7)
1998	L2 (10-20)	Y	Y	Y	N, wall	N	
	N551 E565						Datum is SW corner (Area 7)
1998	L1 (0-10)	Y	Y	Y	N	N	
	L2 (10-20)	Y	Y	Y	N, wall	N	
1998	N551 E567						Datum is SW corner (Area 7)
	L1 (0-10)	Y	Y	Y	N	N	
1997	L2 (10-20)	Y	Y	Y	N, wall	N	
	N551 E573						Datum is SW corner (Area 7)
	L1 (0-10)	Y	Y	Y	N	N	Trowel then shovel at 9cm
	L2 (10-20)	Y	Y	Y	N	N	

Table 23: Northwest Corner Area Excavation Record.

Year	Unit/Depth	Screened	Floor Troweled	Wall Troweled	Plans	Photos	Comments
1998	N551 E562						
	L1 (0-10)	Y	Y	Y	N	N	Datum is SW corner (Area 7)
1998	L2 (10-20)	Y	Y	Y	N, wall	N	
	N551 E565						
1998	L1 (0-10)	Y	Y	Y	N	N	Datum is SW corner (Area 7)
	L2 (10-20)	Y	Y	Y	N, wall	N	
1998	N551 E567						
	L1 (0-10)	Y	Y	Y	N	N	Datum is SW corner (Area 7)
1997	L2 (10-20)	Y	Y	Y	N, wall	N	
	N551 E573						
1997	L1 (0-10)	Y	Y	Y	N	N	Datum is SW corner (Area 7)
	L2 (10-20)	Y	Y	Y	N	N	Trowel then shovel at 9cm

Table 24: Blacksmith Shop Area Excavation Record.

Year	Unit/Depth	Screened	Floor Troweled	Wall Troweled	Plans	Photos	Comments
1999	N469 E569						
	L1 (0-10)	Y	Y	Y	N	N	Datum is SW corner
	L2 (10-20)	Y	Y	Y	Floor	Y	Level form mislabeled
	L3 (20-30)	Y	Y	Y	Floor & S. wall	Y	
1999	N469 E570						
	L1 (0-10)	Y	Y	Y	N	N	Datum is SW corner
	L2 (10-20)	Y	Y	Y	Floor	Y	Feature 2-floor joist
	L3 (20-30)	Y	Y	Y	Floor & S. wall	Y	Feature 2-floor joist. Feature record form completed
1999	N469 E571						
	L1 (0-?)	Y	Y	Y	N	N	Datum is SW corner
	L2 (?-30)	Y	Y	Y	S. wall	Y	Excavated by ground surface levels
1999	N471 E569						
	L1 (0-10)	Y	Y	Y	Floor	Y	Datum is SW corner
	L2 (10-20)	Y	Y	Y	Floor	N	
	L3 (20-30)	Y	Y	Y	Floor & E. wall	N	
1999	N471 E571						
	L1 (0-10)	Y	Y	Y	N	N	Datum is SW corner
	L2 (10-20?)	Y	Y	Y	N	?	No level record
	L3 (20-25?)	Y	Y	Y	W. wall	?	No level record
1999	N479 E565						
	L1 (0-10)	Y	Y	Y	Floor	Y	Datum is SW corner
	L2 (10-20)	Y	Y	Y	Floor	N	
	L3 (20-30)	Y	Y	Y	N	N	
	L4 (30-40)	Y	Y	Y	Floor	Y	Posthole?

Table 24: continued

Year	Unit/Depth	Screened	Floor Troweled	Wall Troweled	Plans	Photos	Comments
1999	L5 (40-45)	Y	Y	Y	S.wall	N	Posthole? Datum is SW corner
	N479 E569						
	L1 (0-10)	Y	Y	Y	N	N	
	L2 (10-20)	Y	Y	Y	Floor	Y	
	L3 (20-30)	Y	Y	Y	N	N	
	L4 (30-40)	Y	Y	Y	N	Y	
1999	L5 (40-45)	Y	Y	Y	Floor & W. wall	N	Soil probe used
	N481 E561						
	L1 (0-10)	Y	Y	Y	N	N	Datum is SW corner
	L2 (10-20)	Y	Y	Y	N	N	
	L3 (20-30)	Y	Y	Y	Floor	N	
	L4 (30-40))	Y	Y	Y	Floor, E. & W. walls	N	
1999	N481 E562						
	L1 (0-10)	Y	Y	Y	N	N	Datum is SW corner
	L2 (10-20)	Y	Y	Y	N	N	
	L3 (20-30)	Y	Y	Y	N	N	
	L4 (30-40))	Y	Y	Y	Floor	N	
	N481 E563						
1999	L1 (0-10)	Y	Y	Y	Floor	N	Datum is SW corner
	L2 (10-20)	Y	Y	Y	N	N	
	L3 (20-30)	Y	Y	Y	N	N	
	L4 (30-40))	Y	Y	Y	Floor	N	
	N481 E564						
	L1 (0-10)	Y	Y	Y	Floor	N	Datum is SW corner
1999	L2 (10-20)	Y	Y	Y	N	N	
	L3 (20-30)	Y	Y	Y	N	N	
	L4 (30-40))	Y	Y	Y	Floor	?	
1999	N481 E564						
	L1 (0-10)	Y	Y	Y	N	N	Datum is SW corner
	L2 (10-20)	Y	Y	Y	N	N	
1999	L3 (20-30)	Y	Y	Y	N	N	
	L4 (30-40))	Y	Y	Y	Floor	N	

Table 24: continued

Year	Unit/Depth	Screened	Floor Troweled	Wall Troweled	Plans	Photos	Comments
1999	L4 (30-40))	Y	Y	Y	Floor	Y	
	N482 E565						
	L1 (0-10)	Y	Y	Y	N	N	Datum is SW corner
	L2 (10-20)	Y	Y	Y	N	N	
	L3 (20-30)	Y	Y	Y	N	N	
1999	L4 (30-40))	Y	Y	Y	Floor	Y	
	N483 E565						
	L1 (0-10)	Y	Y	Y	N	N	Datum is SW corner
	L2 (10-20)	Y	Y	Y	Floor	N	
	L3 (20-30)	Y	Y	Y	N	N	
1999	L4 (30-40)	Y	Y	Y	N	N	
	N483 E570						
	L1 (0-20)	Y	Y	Y	N	N	Datum is SW corner
	L2 (20-30)	Y	Y	Y	N	N	
	L3 (30-40))	Y	Y	Y	Floor & S. wall	N	
1999	N484 E565						
	L1 (0-10)	Y	Y	Y	N	N	Datum is SW corner
	L2 (10-20)	Y	Y	Y	N	Y	Troweled through sod
	L3 (20-30)	Y	Y	Y	Floor	Y	
	L4 (30-40)	Y	Y	Y	Floor & N. wall	N	
1999	N484 E566						
	L1 (0-10)	Y	Y	Y	N	N	Datum is SW corner
	L2 (10-20)	Y	Y	Y	N	Y	Sod removed by trowel
	L3 (20-30)	Y	Y	Y	Floor	Y	
	L4 (30-35)	Y	Y	Y	Floor	N	Shovel skim
	L5 (35-50)	Y	Y	Y	Floor & ? wall	N	

Table 24: continued

Year	Unit/Depth	Screened	Floor Troweled	Wall Troweled	Plans	Photos	Comments
1999	N484 E567 L1 (0–10)	Y	Y	Y	N	N	Datum is SW corner Removed sod with shovel & trowel
	L2 (10–20)	Y	Y	Y	Floor	N	Three levels forms for L3 and L4
	L3 (20–30)	Y	Y	Y	N	N	
	L4 (30–35)	Y	Y	Y	Floor 33 & 35 cm & N. wall	N	
1999	N484 E568 L1 (0–10)	Y	Y	Y	N	N	Datum is SW corner Removed sod with shovel Feature 1-hearth. Feature Record form
	L2 (10–20)	Y	Y	Y	Floor	N	
	L3 (20–30)	Y	Y	Y	Floor S. wall	N	
	L4 (30–35)	Y	Y	Y	Floor, N., E. & S. walls	Y	
1999	N484 E569 L1 (0–10)	Y	Y	Y	N	N	Datum is SW corner Removed sod
	L2 (10–20)	Y	Y	Y	N	N	
	L3 (20–30)	Y	Y	Y	N	N	
	L4 (30–37)	Y	Y	Y	Floor & N. wall	Y	
1999	N484 E570 L1 (0–20)	Y	Y	Y	N	N	Datum is SW corner Shovel skimmed 20–40 cm
	L2 (20–40)	Y	Y	Y	Floor & N. wall	Y	

1999 Note: North wall N481 E561–564; West wall N482–484 E565; and floor plan N484 E565–566

Table 25: West palisade/Kitchen/Residence (Area 2000-2) Excavation Record.

Year	Unit/Depth	Screened	Floor Troweled	Wall Troweled	Plans	Photos	Comments
2000	N465 E499						Outside palisade. East and west walls profiled
	L1 (0-10)	Y	N	Y	N	N	Artifact accumulation between 20-30 cm as if discarded near the west wall when last residents left. Wood and bark present at 40-50 indicating building episode. Nearly culturally sterile by 70 cm
	L2 (10-20)	Y	N	Y	N	N	
	L3 (20-30)	Y	Y	Y	Y	Y	
2000	L4 (30-45)	Y	Y	Y	N	Y	
	N465 E500						Outside palisade. East and west walls profiled
	L1 (0-10)	Y	Y	Y	N	N	Extremely rich midden between 20-30 cm as if thrown up against the outside of the palisade wall. Wood and bark present at 40-50 indicating building episode. Nearly culturally sterile by 70 cm
	L2 (10-20)	Y	Y	Y	N	N	
	L3 (20-30)	Y	Y	Y	Y	Y	
	L4 (30-40)	Y	Y	Y	N	Y	
	L5 (40-50)	Y	Y	Y	N	?	

Table 25: continued

Year	Unit/Depth	Screened	Floor Troweled	Wall Troweled	Plans	Photos	Comments
2000	N465 E503						Inside palisade. East and west walls profiled
	L1 (0-10)	Y	Y	Y	N	N	Fairly rich midden in lower 30 cm of unit
	L2 (10-20)	Y	Y	Y	N	N	Adobe present at 39 cm. Excavations stopped at 56 cm due to time. Portion of feature observed in unit to the east observed in west end of this unit
	L3 (20-30)	Y	Y	Y	Y	Y	
	L4 (30-40)	Y	Y	Y	N	N	
	L5 (40-50)	Y	Y	Y	N	N	
	L6 (50-56)	Y	Y	Y	Y	Y	
2000	N465 E504						Inside palisade. East and west walls profiled
	L1 (0-10)	Y	Y	Y	N	N	Extremely rich midden especially 40-70 and 40-50 cm
	L2 (10-20)	Y	Y	Y	N	N	Some adobe brick present at 50 cm. Possible trench like feature continuing beyond 70 cm
	L3 (20-30)	Y	Y	Y	Y	Y	Moderate increase in brick, mortar and large increase in window glass
	L4 (30-40)	Y	Y	Y	N	Y	
	L5 (40-50)	Y	Y	Y	Y	Y	
	L6 (50-60)	Y	Y	Y	Y	Y	
	L7 (60-70)	Y	Y	Y	Y	Y	

Table 25: continued

Year	Unit/Depth	Screened	Floor Troweled	Wall Troweled	Plans	Photos	Comments
2000	N465 E505 L1 (0–10)	Y	Y	Y	N	N	Inside palisade Extremely rich midden espe- cially 20–40 and 40–50 cm East and west walls profiled Possible beaded knife sheath at 40 cm
	L2 (10–20)	Y	Y	Y	N	N	
	L3 (20–30)	Y	Y	Y	N	Y	
	L4 (30–40)	Y	Y	Y	Y	Y	
2000	N465 E506 L1 (0–10)	Y	Y	Y	N	N	Inside palisade Extremely rich midden espe- cially 20–30 and 40–50 cm East and west walls profiled
	L2 (10–20)	Y	Y	Y	N	N	
	L3 (20–30)	Y	Y	Y	Y	Y	
	L4 (30–40)	Y	Y	Y	Y	Y	
	L5 (40–50)	Y	Y	Y	Y	Y	
2000	N465 E509 L1 (0–20)	Y	Y	Y	N	N	Inside palisade Extremely rich midden around 30–40 cm
	L2 (20–30)	Y	Y	Y	N	N	One rectangular post mold first observed at 31 cm
	L3 (30–40)	Y	Y	Y	N	Y	
	L4 (30–40)	Y	Y	Y	Y	Y	

Table 26: West palisade/Kitchen/Residence (Area 2000-3) Excavation Record.

Year	Unit/Depth	Screened	Floor Troweled	Wall Troweled	Plans	Photos	Comments
2000	N490 E494						Outside palisade. East and west walls profiled
	L1 (0-10)	Y	Y	Y	N	Y	Artifact accumulation at 20-30 cm as if discarded near the west wall when last residents left. Wood and bark present at 20-30 cm indicating removal of the palisade. Sandy silts in floor may be loess or adobe derived down to 40 cm. Not taken to sterile soil
	L2 (10-20)	Y	Y	Y	Y	Y	
	L3 (20-30)	Y	Y	Y	Y	Y	
	L4 (30-40)	Y	Y	Y	Y	Y	
	L5 (40-50)	Y	Y	Y	Y	Y	
2000	N490 E495						Outside palisade. East and west walls profiled

Table 26: continued

Year	Unit/Depth	Screened	Floor Troweled	Wall Troweled	Plans	Photos	Comments
	L1 (0-10)	Y	Y	Y	Y	Y	Artifact accumulation at 10-20 cm. Adobe brick/block observed randomly at 30 cm. Low artifact content 20-30 cm. Artifacts still present at 50 cm. Increase in mortar content. Possibly location of temporary building constructed by military. Not taken to sterile soil
	L2 (10-20)	Y	Y	Y	Y	Y	
	L3 (20-30)	Y	Y	Y	Y	Y	
	L4 (30-40)	Y	Y	Y	Y	Y	
	L5 (40-50)	Y	Y	Y	Y	Y	
2000	N490 E496						Outside palisade. East and west walls profiled
	L1 (0-10)	Y	Y	Y	Y	Y	Artifacts at 0-20 cm consist of building debris (brick, mortar, nails, glass) and limited midden debris. Mortar or plaster observed randomly to 50 cm. Wood accumulations present at 50 cm. Increase in mortar content. Possible exterior building not quite as apparent in this unit
	L2 (10-20)	Y	Y	Y	Y	Y	
	L3 (20-30)	Y	Y	Y	Y	Y	

Table 26: continued

Year	Unit/Depth	Screened	Floor Troweled	Wall Troweled	Plans	Photos	Comments
2000	L4 (30–40)	Y	Y	Y	Y	Y	Outside palisade. East and west walls profiled. Artifacts at 0–20 cm consist of building debris (brick, mortar, nails, glass) and rising midden debris. Large increase in mortar content between 20–40. Edge of west wall trench observed at 50 cm. Also quantities of loess or adobe derived silts between 40–50 cm
	L5 (40–50)	Y	Y	Y	Y	Y	
	N490 E497						
	L1 (0–10)	Y	Y	Y	Y	Y	
2000	L2 (10–20)	Y	Y	Y	Y	Y	Palisade wall trench encountered. East and west walls profiled
	L3 (20–30)	Y	Y	Y	Y	Y	
	L4 (30–40)	Y	Y	Y	Y	Y	
	L5 (40–50)	Y	Y	Y	Y	Y	
2000	N490 E498						Soil consists largely of a tan silt with heavy bioturbation. Building debris and midden present throughout
	L1 (0–10)	Y	Y	Y	Y	Y	
	L2 (10–20)	Y	Y	Y	Y	Y	
	L3 (20–30)	Y	Y	Y	Y	Y	
	L4 (30–40)	Y	Y	Y	Y	Y	
	L5 (40–50)	Y	Y	Y	Y	Y	

Table 26: continued

Year	Unit/Depth	Screened	Floor Troweled	Wall Troweled	Plans	Photos	Comments
2000	N490 E499						Portion of palisade wall trench encountered in west 15 cm.
	L1 (0-10)	Y	Y	Y	Y	Y	East and west walls profiled Adobe block/brick floor encountered across unit up the palisade trench beginning at 20 cm and ending before 40 cm. Building debris and midden present throughout
	L2 (10-20)	Y	Y	Y	Y	Y	
	L3 (20-30)	Y	Y	Y	Y	Y	
	L4 (30-40)	Y	Y	Y	Y	Y	
	L5 (40-50)	Y	Y	Y	Y	Y	
2000	N490 E500						Inside palisade. East and west walls profiled
	L1 (0-10)	Y	Y	Y	Y	Y	A second builders trench or slip trench was encountered in the east 1/2 of unit
	L2 (10-20)	Y	Y	Y	Y	Y	Adobe block/brick floor encountered across unit up the edge of the new feature trench beginning at 20 cm and ending before 40 cm. Building debris and midden present throughout although there is an increase in mortar
	L3 (20-30)	Y	Y	Y	Y	Y	
	L4 (30-40)	Y	Y	Y	Y	Y	

Table 26: continued

Year	Unit/Depth	Screened	Floor Troweled	Wall Troweled	Plans	Photos	Comments
2000	L5 (40-50)	Y	Y	Y	Y	Y	Inside palisade. East and west walls profiled Builders trench or slip trench present in majority of floor. Adobe encountered but not defined as brick or block to the east of the trench beginning at 20 cm and ending before 30 cm. Large amount of mortar at 30 cm. Also increase in bone in trench. Building debris and midden present throughout
	L6 (50-60)	Y	Y	Y	Y	Y	
	N490 E4501						
	L1 (0-10)	Y	Y	Y	Y	Y	
2000	L2 (10-20)	Y	Y	Y	Y	Y	Inside palisade. East and west walls profiled
	L3 (20-30)	Y	Y	Y	Y	Y	
	L4 (30-40)	Y	Y	Y	Y	Y	
	L5 (40-50)	Y	Y	Y	Y	Y	
	N490 E502						

Table 26: continued

Year	Unit/Depth	Screened	Floor Troweled	Wall Troweled	Plans	Photos	Comments
	L1 (0-10)	Y	Y	Y	N	Y	The west 20 cm of unit may mark location of building wall built on ground surface. A plank running n-s was observed at a contact of soil change. Large quantities of window glass. Dense midden at 20 cm. By 30 cm a large amount of bone (bos, deer, dog, rodent, large bird, catfish and fish scales located in a ash/charcoal concentration. Building debris and midden present throughout. Reached sterile at 56 cm
2000	L2 (10-20)	Y	Y	Y	Y	Y	
	L3 (20-30)	Y	Y	Y	Y	Y	
	L4 (30-40)	Y	Y	Y	Y	Y	
	L5 (40-50)	Y	Y	Y	Y	Y	
	L6 (50-56)	Y	Y	Y	N	Y	
	N490 E503						
	L1 (0-10)	Y	Y	Y	Y	Y	Inside palisade. East and west walls profiled 0-20 midden with little building debris. Mix of mammal, fish, and bird bone at 30 cm. Artifacts absent below 45 cm
	L2 (10-20)	Y	Y	Y	Y	Y	
	L3 (20-30)	Y	Y	Y	Y	Y	

Table 26: continued

Year	Unit/Depth	Screened	Floor Troweled	Wall Troweled	Plans	Photos	Comments
2000	L4 (30-40)	Y	Y	Y	Y	Y	Inside palisade. East and west walls profiled 0-30 midden with little building debris. Artifacts absent below 45 cm
	L5 (40-50)	Y	Y	Y	N	Y	
	N490 E504						
	L1 (0-10)	Y	Y	Y	Y	Y	
	L2 (10-20)	Y	Y	Y	Y	Y	
2000	L3 (20-30)	Y	Y	Y	Y	Y	Inside palisade. East and west walls profiled Dense midden appearing at 14 cm continuing to just above 40 cm. Building debris increasing. Mixed bone assemblage continuing
	L4 (30-40)	Y	Y	Y	Y	Y	
	L5 (40-50)	Y	Y	Y	N	Y	
	N490 E505						
	L1 (0-20)	Y	Y	Y	Y	Y	
2000	L2 (20-40)	Y	Y	Y	Y	Y	Inside palisade. East and west walls profiled Dense midden appearing at 14 cm continuing to just above 40 cm. Building debris increasing. Dense plaster accumulation. Abrupt changes in wall profiles suggest the location of wood foundations
	N490 E508.5						
	L1 (0-20)	Y	Y	Y	Y	Y	

Table 26: continued

Year	Unit/Depth	Screened	Floor Troweled	Wall Troweled	Plans	Photos	Comments
2000	L2 (20-40) N490 E509.5	Y	Y	Y	Y	Y	Inside palisade. East and west walls profiled
	L1 (0-20)	Y	Y	Y	Y	Y	Dense midden appearing at 14 cm continuing to just above 40 cm. Building debris increasing. Dense plaster accumulation. Abrupt changes in wall profiles suggest the location of wood foundations
	L2 (20-40)	Y	Y	Y	Y	Y	

Table 27: South Palisade Wall (Area 2000-4) Excavation Record.

Year	Unit/Depth	Screened	Floor Troweled	Wall Troweled	Plans	Photos	Comments
2000	N449 E554						South Palisade wall. West wall profiled
	L1 (0-10)	Y	Y	Y	N	N	Moderate midden throughout. Highest at 30-40 cm. Large scatter of charcoal. Wood posts present in the west palisade builders trench
	L2 (10-20)	Y	Y	Y	N	N	
	L3 (20-30)	Y	Y	Y	N	Y	
	L4 (30-40)	Y	Y	Y	Y	Y	
2000	N500 E554						Inside palisade. West wall profiled
	L1 (0-20)	Y	Y	Y	N	N	Moderate midden throughout. Field notes suggest that a well packed surface at 30-40 cm may be an interior floor
	L2 (20-30)	Y	Y	Y	N	N	
	L3 (30-40)	Y	Y	Y	Y	Y	

Table 28: East Palisade Wall (Area 2001) Excavation Record.

Year	Unit/Depth	Screened	Floor Troweled	Wall Troweled	Plans	Photos	Comments
2001	N483/E567						Inside palisade
	L1 (0-10)	Y	Y	Y	Y	Y	
	L2 (10-20)	Y	Y	Y	Y	Y	Wood Plank
	L3 (20-30)	Y	Y	Y	Y	Y	Large stone and stain. Possible floor support
2001	L4 (30-40)	Y	Y	Y	Y	Y	
	N484/E568	Y	Y	Y	Y	Y	Inside palisade
	L1 (0-10)	Y	Y	Y	Y	Y	
	L2 (10-20)	Y	Y	Y	Y	Y	
2001	L3 (20-30)	Y	Y	Y	Y	Y	
	L4 (30-40)						Sterile at 40 cm
	N483 E569	N	Y	Y	Y	Y	Inside palisade
	L1 (0-10)	Y	Y	Y	Y	Y	
2001	L2 (10-20)	Y	Y	Y	Y	Y	
	L3 (20-30)	Y	Y	Y	Y	Y	Heavy rodent turbation
	L4 (30-40)						
	N484 E570	Y	Y	Y	Y	Y	Inside palisade
2001	L1 (0-10)	Y	Y	Y	Y	Y	
	L2 (10-20)	Y	Y	Y	Y	Y	
	L3 (20-30)	Y	Y	Y	Y	Y	Possible feature, square and cored to 63 cm. Labeled F.140 in notes but no form
2001	L4 (30-40)						Inside palisade
	N483/E571	Y	Y	Y	Y	Y	
	L1 (0-10)	Y	Y	Y	Y	?	
	L2 (10-20)	Y	Y	Y	Y	Y	some aboriginal ceramics
2001	L3 (20-30)	Y	Y	Y	Y	?	
	L4 (30-40)						

Table 28: continued

Year	Unit/Depth	Screened	Floor Troweled	Wall Troweled	Plans	Photos	Comments
2001	N481/E567	Y	Y	Y	Y	Y	Datum is SW corner. Inside palisade
	L1 (0–10)	Y	Y	Y	Y	Y	
	L2 (10–20)	Y	Y	Y	Y	?	A portion of a thin board
	L3 (20–30)	Y	Y	Y	Y	Y	
	L4 (30–40)						Post mold, Feature 79 in re-port
2001	N481/E569	Y	Y	Y	Y	Y	Datum is SW corner. Inside palisade
	L1 (0–10)	Y	Y	Y	Y	Y	
	L2 (10–20)	Y	Y	Y	Y	Y	
	L3 (20–30)	Y	Y	Y	Y	Y	Feature 80, square stain, possible post
	L4 (30–40)						West 1/2 sterile at 36 cm, east 1/2 still contains cultural material
2001	N482/E570	Y	Y	Y	Y	Y	Inside palisade
	L1 (0–10)	Y	Y	Y	Y	Y	
	L2 (10–20)	Y	Y	Y	Y	Y	
	L3 (20–30)	Y	Y	Y	Y	Y	Feature 80, square stain, possible post
	L4 (30–40)						sterile at 36 cm
2001	N481/E571	Y	Y	Y	Y	Y	Inside palisade
	L1 (0–10)	Y	Y	Y	Y	Y	
	L2 (10–20)	Y	Y	Y	Y	Y	
	L3 (20–30)						Level forms show possible feature but insufficient data
							Inside palisade
2001	N482/E572	Y	Y	Y	Y	Y	

Table 28: continued

Year	Unit/Depth	Screened	Floor Troweled	Wall Troweled	Plans	Photos	Comments
2001	L1 (0–10)	Y	Y	Y	Y	Y	No pattern to darker stains
	L2 (10–20)	Y	Y	Y	Y	Y	Inside palisade
	L3 (20–30)	Y	Y	Y	Y	Y	Concentration of “rose head spikes”, possibly an old keg of abandoned spikes
	N479/E567	Y	Y	Y	Y	Y	heavy concentration of anti-facts
	L1 (0–10)	Y	Y	Y	Y	Y	some military items
2001	L2 (10–20)	Y	Y	Y	Y	Y	Considered sterile at 45 cm
	L3 (20–30)	Y	Y	Y	Y	Y	Inside palisade
	L4 (30–40)	Y	Y	Y	Y	Y	heavy concentration of anti-facts
	L5 (40–45)	Y	Y	Y	Y	Y	
	N480/E568	Y	Y	Y	Y	Y	
2001	L1 (0–10)	Y	Y	Y	Y	Y	
	L2 (10–20)	Y	Y	Y	Y	Y	
	L3 (20–30)	Y	Y	Y	Y	Y	
	N480/E570	Y	Y	Y	Y	Y	
	L1 (0–10)	Y	Y	Y	Y	Y	
2001	L2 (10–20)	Y	Y	Y	Y	Y	
	L3 (20–30)	Y	Y	Y	Y	Y	
	N480/E572	Y	Y	Y	Y	Y	
	L1 (0–10)	Y	Y	Y	Y	Y	
	L2 (10–20)	Y	Y	Y	Y	Y	
2001	L3 (20–30)	Y	Y	Y	Y	Y	hit pre-fort sediments at 26 cm
	N479/E573	Y	Y	Y	Y	Y	Inside palisade

Table 28: continued

Year	Unit/Depth	Screened	Floor Troweled	Wall Troweled	Plans	Photos	Comments
2001	L1 (0–10)	Y	Y	Y	Y	Y	south half of unit previously excavated
	L2 (10–20)	Y	Y	Y	Y	Y	hit pre-fort sediments at 26 cm
	L3 (20–30)	Y	Y	Y	Y	?	Inside palisade
	N478/E567	Y	Y	Y	Y	Y	very loose silt 0–5 cm, many spikes below this depth
	L1 (0–10)	Y	Y	Y	Y	?	dense metal concentration, forged chain recovered
	L2 (10–20)	Y	Y	Y	Y	N	more unused spikes and possible black smith residue
	L3 (20–30)	Y	Y	Y	N	N	
	L4 (30–40)	Y	Y	Y	N	?	
	L5 (40–45)	Y	Y	Y	N		not yet to sterile

Table 29: South East Bastion (Area 2001) Excavation Record.

Year	Unit/Depth	Screened	Floor Troweled	Wall Troweled	Plans	Photos	Comments
2001	N451/E569						Inside palisade
	L1 (0-10)	Y	Y	Y	N	N	
	L2 (10-20)	Y	Y	Y	Y	Y	
2001	N452/E569						Inside palisade
	L1 (0-10)	Y	Y	Y	N	N	
	L2 (10-20)	Y	Y	Y	Y	Y	
2001	N453/E569						Inside palisade
	L1 (0-10)	Y	Y	Y	N	N	
	L2 (10-20)	Y	Y	Y	N	N	Feature 111/112
	L3 (20-30)	Y	Y	Y	N	N	Feature 111/112
	L4 (30-40)	Y	Y	Y	Y	Y	Feature 111/112
	L5 (40-50)	Y	Y	Y	Y	N	Feature 111/112
	L6 (50-60)	Y	Y	Y	Y	Y	Feature 111/112
2001	N454/E569						Inside palisade
	L1 (0-10)	Y	Y	Y	N	N	
	L2 (10-20)	Y	Y	Y	N	N	Feature 111/112
	L3 (20-30)	Y	Y	Y	N	N	Feature 111/112
	L4 (30-40)	Y	Y	Y	Y	Y	Feature 111/112
	L5 (40-50)	Y	Y	Y	Y	N	Feature 111/112
	L6 (50-60)	Y	Y	Y	Y	Y	Feature 111/112
2001	N455/E569						Inside palisade
	L1 (0-10)	Y	Y	Y	N	N	
	L2 (10-20)	Y	Y	Y	N	N	Feature 111/112
2001	N456/E569						Inside palisade
	L1 (0-10)	Y	Y	Y	N	N	
	L2 (10-20)	Y	Y	Y	N	Y	Inside palisade
2001	N457/E569						Inside palisade
	L1 (0-10)	Y	Y	Y	N	N	

Table 29: continued

Year	Unit/Depth	Screened	Floor Troweled	Wall Troweled	Plans	Photos	Comments
	L2 (10–20)	Y	Y	Y	Y	Y	10 cm band of silt running east to west through unit Inside palisade
2001	N458/E569						
	L1 (0–10)	Y	Y	Y	N	N	
	L2 (10–20)	Y	Y	Y	N	Y	
2001	N459/E569						Inside palisade
	L1 (0–10)	Y	Y	Y	N	N	
	L2 (10–20)	Y	Y	Y	N	Y	
2001	N460/E569						Inside palisade
	L1 (0–10)	Y	Y	Y	N	N	
	L2 (10–20)	Y	Y	Y	N	Y	
2001	N451/E570						Silty loam west half, blocky clay east half Inside palisade
	L1 (0–10)	Y	Y	Y	N	Y	
2001	N452/E570						Inside palisade
	L1 (0–10)	Y	Y	Y	N	N	
	L2 (10–20)	Y	Y	Y	Y	Y	
2001	N453/E570						Inside palisade
	L1 (0–10)	Y	Y	Y	N	N	
	L2 (10–20)	Y	Y	Y	N	N	Feature 111/112
	L3 (20–30)	Y	Y	Y	Y	Y	
2001	N454/E570						Inside palisade
	L1 (0–10)	Y	Y	Y	N	N	
	L2 (10–20)	Y	Y	Y	Y	Y	Feature 111/112
2001	N455/E570						Inside palisade
	L1 (0–10)	Y	Y	Y	N	N	
2001	N456/E570						Inside palisade
	L1 (0–10)	Y	Y	Y	N	N	

Table 29: continued

Year	Unit/Depth	Screened	Floor Troweled	Wall Troweled	Plans	Photos	Comments
2001	N457/E570						Inside palisade
	L1 (0-10)	Y	Y	Y	N	N	
	L2 (10-20)	Y	Y	Y	Y	Y	
2001	N458/E570						Inside palisade
	L1 (0-10)	Y	Y	Y	N	N	
	L2 (10-20)	Y	Y	Y	N	N	
	L3 (20-30)	Y	Y	Y	Y	Y	
2001	N459/E570						Cluster of charcoal and plaster Inside palisade
	L1 (0-10)	Y	Y	Y	N	N	
	L2 (10-20)	Y	Y	Y	Y	Y	
2001	N460/E570						Inside palisade
	L1 (0-10)	Y	Y	Y	N	N	
	L2 (10-20)	Y	Y	Y	Y	Y	
	L3 (20-30)	Y	Y	Y	Y	Y	
2001	N451/E571						Feature 126 Feature 126 profile Inside palisade
	L1 (0-10)	Y	Y	Y	N	Y	
2001	N452/E571						Inside palisade
	L1 (0-10)	Y	Y	Y	N	N	
	L2 (10-20)	Y	Y	Y	Y	Y	
2001	N453/E571						Inside palisade
	L1 (0-10)	Y	Y	Y	N	N	
	L2 (10-20)	Y	Y	Y	N	N	
	L3 (20-30)	Y	Y	Y	Y	Y	
	L4 (30-40)	Y	Y	Y	Y	Y	
	L5 (40-50)	Y	Y	Y	Y	Y	
2001	N454/E571						Feature 111/112 Profile Inside palisade
	L1 (0-10)	Y	Y	Y	N	N	
	L2 (10-20)	Y	Y	Y	N	N	

Table 29: continued

Year	Unit/Depth	Screened	Floor Troweled	Wall Troweled	Plans	Photos	Comments
2001	L3 (20–30)	Y	Y	Y	Y	N	Feature 111/112
	L4 (30–40)	Y	Y	Y	Y	Y	Feature 111/112 & 128
	L5 (40–50)	Y	Y	Y	Y	Y	Feature 111/112 Profile
	N455/E571						Inside palisade
	L1 (0–10)	Y	Y	Y	N	N	Inside palisade
2001	N456/E571						Inside palisade
	L1 (0–10)	Y	Y	Y	N	N	
	L2 (10–20)	Y	Y	Y	N	Y	
2001	N457/E571						Inside palisade
	L1 (0–10)	Y	Y	Y	N	N	
	L2 (10–20)	Y	Y	Y	Y	Y	
2001	N458/E571						Inside palisade
	L1 (0–10)	Y	Y	Y	N	Y	
	L2 (10–20)	Y	Y	Y	Y	Y	
2001	N459/E571						Inside palisade
	L1 (0–10)	Y	Y	Y	N	Y	
	L2 (10–20)	Y	Y	Y	Y	Y	
2001	N460/E571						Inside palisade
	L1 (0–10)	Y	Y	Y	N	N	
	L2 (10–20)	Y	Y	Y	Y	Y	
2001	N452/E572						Inside palisade
	L1 (0–10)	Y	Y	Y	N	N	Feature 106 & 105
	L2 (10–20)	Y	Y	Y	Y	Y	Feature 106 & 105
	L3 (20–30)	Y	Y	Y	Y	Y	Feature 106 & 105
2001	N453/E572						Inside palisade
	L1 (0–10)	Y	Y	Y	N	N	
	L2 (10–20)	Y	Y	Y	Y	Y	Feature 111/112
2001	N454/E572						Inside palisade
	L1 (0–10)	Y	Y	Y	N	N	

Table 29: continued

Year	Unit/Depth	Screened	Floor Troweled	Wall Troweled	Plans	Photos	Comments
2001	L2 (10–20)	Y	Y	Y	Y	Y	Feature 111/112
	N455/E572						Inside palisade
2001	L1 (0–10)	Y	Y	Y	N	N	
	N456/E572						Inside palisade
2001	L1 (0–10)	Y	Y	Y	N	Y	
	N457/E572						Inside palisade
2001	L1 (0–10)	Y	Y	Y	N	Y	
	N458/E572						Inside palisade
	L1 (0–10)	Y	Y	Y	N	N	
	L2 (10–20)	Y	Y	Y	Y	Y	
2001	N459/E572						Inside palisade
	L1 (0–10)	Y	Y	Y	N	Y	
2001	N460/E572	Y	Y	Y	N	N	Inside palisade
	L1 (0–10)	Y	Y	Y	Y	Y	Feature 126
	L2 (10–20)						
2001	N451/E573						Inside palisade
	L1 (0–10)	Y	Y	Y	N	N	
	L2 (10–20)	Y	Y	Y	N	Y	Re-excavated to trench (Feature 81)
							Inside palisade
2001	N452/E573						
	L1 (0–10)	Y	Y	Y	N	N	
	L2 (10–20)	Y	Y	Y	N	N	
2001	N453/E573						Inside palisade
	L1 (0–10)	Y	Y	Y	N	N	
	L2 (10–20)	Y	Y	Y	Y	Y	Feature 111/112
2001	N454/E573						Inside palisade
	L1 (0–10)	Y	Y	Y	N	N	
	L2 (10–20)	Y	Y	Y	Y	Y	Feature 111/112

Table 29: continued

Year	Unit/Depth	Screened	Floor Troweled	Wall Troweled	Plans	Photos	Comments
2001	N455/E573						Inside palisade
	L1 (0-10)	Y	Y	Y	N	N	
2001	N456/E573						Inside palisade
	L1 (0-10)	Y	Y	Y	N	Y	
2001	N457/E573						Inside palisade
	L1 (0-10)	Y	Y	Y	N	Y	
2001	N458/E573						Inside palisade
	L1 (0-10)	Y	Y	Y	N	Y	
2001	N459/E573						Inside palisade
	L1 (0-10)	Y	Y	Y	N	Y	
2001	N460/E573						Inside palisade
	L1 (0-10)	Y	Y	Y	N	N	
	L2 (10-20)	Y	Y	Y	Y	Y	
2001	N452/E574						Cluster of fire cracked rock
	L1 (0-10)	Y	Y	Y	N	N	Inside palisade
	L2 (10-20)	Y	Y	Y	Y	Y	
	L3 (20-30)	Y	Y	Y			
2001	N454 E574						Inside palisade
	L1 (0-10)	Y	Y	Y	N	N	
	L2 (10-20)	Y	Y	Y	Y	Y	Feature 111/112
	L3 (20-30)	Y	Y	Y	Y	Y	Feature 111/112
	L4 (30-40)	Y	Y	Y	Y	Y	Feature 111/112
	L5 (40-123)						
2001	N454/E575						Inside palisade
	L1 (0-10)	Y	Y	Y	N	N	
	L2 (10-20)	Y	Y	Y	Y	Y	Large number of shingle nails
	L3 (20-30)	Y	Y	Y	Y	Y	Feature 111/112
	L4 (30-40)	Y	Y	Y	Y	Y	Feature 111/112