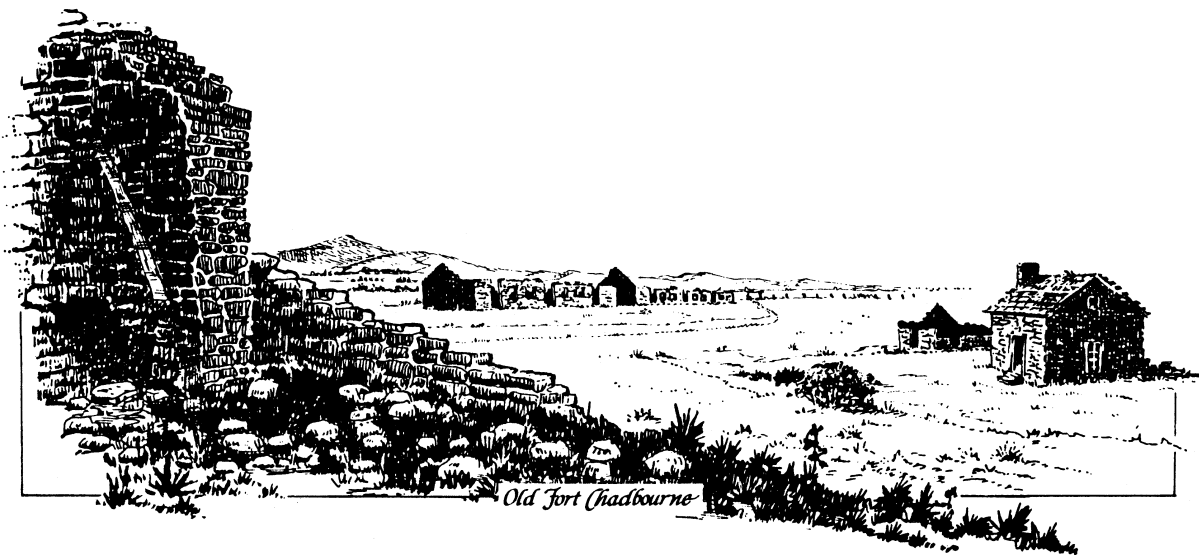


# ARCHEOLOGICAL INVESTIGATIONS AT FORT CHADBOURNE AND THE FLAT ON OAK CREEK, COKE COUNTY, TEXAS

by  
Douglas K. Boyd



Texas Archeology Academy Report  
Prepared for the Texas Archeological Society  
December 2004

**TEXAS ARCHEOLOGY ACADEMY REPORT**

**ARCHEOLOGICAL INVESTIGATIONS  
AT FORT CHADBOURNE AND THE FLAT ON OAK CREEK,  
COKE COUNTY, TEXAS**

by  
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*in conjunction with*

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Prepared for  
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## **ABSTRACT**

The Texas Archeological Society's 2004 Archeology Academy in west Texas included a day of field investigations at Fort Chadbourne, 41CK129, a United States Army post used by the military from the 1850s through the 1870s. The fort is now operated as a public historic site by the Fort Chadbourne Foundation. Archeological work involved hand excavation of five test units inside a reconstructed barracks building. Additional activities included site survey and recording of a large prehistoric and historic site in the alluvial terrace of Oak Creek below the fort. Information on the prehistoric component of 41CK258 is limited because most of the archeological work focused on the historic deposits. Investigations include controlled surface collection and recording of surface features that likely represent structural remains. Site 41CK258, herein named the "Flat on Oak Creek," may represent a substantial civilian occupation that is contemporaneous with the military occupations at Fort Chadbourne.

## ACKNOWLEDGEMENTS

The Texas Archeological Society's Archeology Academy at San Angelo and Fort Chadbourne in February 2004 was a collaborative effort that involved many people and organizations. For the Texas Archeological Society, executive director Pam Wheat was instrumental in the creation and launching of the academy classes around the state, and she helped in the planning of this one too. Karen Fustes was the principal organizer for this academy, and her superb organizational skills made my job much easier. I know she put in untold numbers of work hours, many late at night, to make sure this academy went smoothly. Her only reward is knowing that it did indeed happen exactly as she planned and was a great success. Since his retirement from Texas A&M University, my former professor Harry Shafer has become the primary instructor for the Texas Archeology Academy classroom activities. His audience may have changed, but Shafer continues to inspire a diverse group of people with only one thing in common—an interest in archeology.

The Texas Archeology Academy at San Angelo and Fort Chadbourne was made possible in part by a grant from the Curtis Tunnell Memorial Fund from the Friends of the Texas Historical Commission and by a grant from Humanities Texas, a state partner of the National Endowment for the Humanities.

Four groups played big roles in this academy. The classroom activities were hosted by the College of Education at Angelo State University. Members of the Concho Valley Archeological Society and the Midland Archeological Society volunteered and served in various capacities for the two days of classroom activities and the field day. And finally, the field day was hosted by the Fort Chadbourne Foundation. The many volunteers who made the Academy possible were:

### Concho Valley Archeological Society and Midland Archeological Society

Nelda Cranford (Midland)  
Tommy Cranford (Midland)  
Marilyn Eisenwine (San Angelo)  
Ward Gregory (San Angelo)  
Claude Hudspeth (San Angelo)  
Ginger Hudspeth (San Angelo)  
Margaret Loveless (Eden)  
Jack Poole (San Angelo)  
Brownie Roberts (San Angelo)  
Louis "Pinky" Robertson (Andrews)  
Barth Robbins (Midland)  
Steven Schooler (San Angelo)  
Teddy Stickney (Midland)  
Alice Stultz (San Angelo)  
Evans Turpin (Iraan)  
Andrew Verley (San Angelo)  
Fred Wilson (San Angelo)  
Jimmie Wilson (San Angelo)  
Bill Yates (San Angelo)

Fort Chadbourne Foundation  
Garland Richards, president  
Lana Richards, secretary/treasurer  
Annie Gill  
Steve Clark  
Eric Johnson

Special thanks go to several people who handled all of the logistical arrangements. Marilyn Eisenwine, assistant professor in the School of Education, made all of the local arrangements at Angelo State University and arranged for use of the Carr Education and Fine Arts building for the classroom activities. Claude Hudspeth of the Concho Valley Archeological Society (also regional director for the Texas Archeological Society), served as the local arrangements coordinator and was extremely helpful in organizing the volunteers and the field day activities. I particularly thank Andy Verley for his efforts above and beyond the call of duty. When we didn't get all of the planned excavation work inside the barracks completed on the academy field day, Andy took on the task of arranging for help and supervising a second day of digging to complete the test units. He did great work and made excellent notes and records of the excavations. His help is greatly appreciated.

The field investigations provided Archeology Academy participants with an experience in both archeological excavation and site survey. Although the cold weather and intermittent rain prevented us from doing some outside activities we planned, the participants learned that flexibility in the face of adversity is a key part of doing archeology. The participants in the Archeology Academy were:

C. R. Barbian (San Angelo)  
Kimbell Bennett (Andrews)  
Bonnie Brewster (Eden)  
Tim Brewster (Eden)  
Becky Cornell (San Angelo)  
John Crisp (San Angelo)  
Trudy Darling (San Angelo)  
Roy Dudley (San Angelo)  
Joshua Hochberg (San Angelo)  
Julia Hochberg (San Angelo)  
Zane Laws (Blackwell)  
Betty Miller (San Angelo)  
Sue Mims (San Angelo)  
Damon Minnix (San Angelo)  
Barba O'Donnell (Boerne)  
Vic O'Donnell (Boerne)  
Dawnella Petrey (Miles)  
June Proctor (Paris)  
Richard Proctor (Paris)  
Rose Mary Rogers (Iran)  
Kathy Seidel (Christoval)  
Cindy Smyers (Odessa)  
Pamela Underwood (San Angelo)  
Anne Williams (San Angelo)

For new students of archeology, many experiencing fieldwork for the first time, the opportunity to work at a historically significant Indian Wars army post is unique. I hope it was a day they will all long remember. Sincere thanks go to Garland and Lana Richard of the Fort Chadbourne Foundation for hosting the academy and for the tremendous hospitality they displayed. Garland and Lana put in many days of work before, during, and after the field day. I think all of the academy participants enjoyed the field day and came away with a greater appreciation for the study of archeology. The only downside to the experience of the newcomers is, as I see it, that many of them may be totally disillusioned during their next archeological experience when their hosts fail to provide a bar-b-que lunch, hot drinks, and a warm fire next to their excavation area.

Finally, I would like to thank those who provided logistical support for this endeavor. Prewitt & Associates, Inc. supplied some of the field equipment, including the total station for site mapping, and personnel for laboratory processing of artifacts and records. My daughter, Jena, finished the washing and sorting of the artifacts, and Jon Grant catalogued them and created the initial inventory. Karen Gardner assisted in the artifact processing and records curation. Sandy Hannum drafted all of the maps that appear in this report. Wood from the barracks excavation was identified by Dr. Leslie Bush, an archeobotanist from Austin, Texas. Mike Quigg identified the faunal remains. Thanks also to historian Martha Freeman, whose previous research provides all of the contextual background for understanding Fort Chadbourne and the archeological investigations reported here.

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## INTRODUCTION

The Texas Archeological Society (TAS) hosted an Archeology Academy in west Texas in 2004. The classroom portion of the academy was held on the campus of Angelo State University in San Angelo on February 21 and 22, 2004. On the following Saturday, February 28, 2004, the field day for the academy was held at Fort Chadbourne, located in the northeastern corner of Coke County, Texas (Figure 1). Archeological work included excavation of five 1x1-m test units inside the reconstructed Barracks No. 2 at the fort. Additional work was done in the alluvial terrace of Oak Creek below the fort, where survey activities documented a large prehistoric and historic site designated as 41CK258. Investigations there included excavation of shovel tests and controlled surface collection of artifacts associated with the historic component. Historical evidence suggests that this site, herein named the “Flat on Oak Creek” or simply the “flat,” was occupied by civilians who lived near and provided support services for the army post. This report documents the methods and results of the TAS Archeology Academy archeological investigations at Fort Chadbourne and in the Flat on Oak Creek.

**Figure 1.** Map of the Texas Frontier from 1852 to 1861 showing location of Fort Chadbourne (from “Frontier Forts” on Texas Beyond History at [www.texasbeyonhistory.net](http://www.texasbeyonhistory.net)).

It is noteworthy that the field investigations reported here represent a huge amount of volunteer labor by members of the Concho Valley Archeological Society (CVAS), the Midland Archeological Society (MAS), and the Fort Chadbourne Foundation. A conservative estimate of the time that these volunteers worked for the field day, the academy planning sessions, field preparation work, and follow-up field activities is more than 400 hours.

## ENVIRONMENTAL SETTING

Fort Chadbourne is situated at the northern edge of the Edwards Plateau region of central Texas. Geologically, the fort rests on an upland knoll and is underlain by the Permian-age San Angelo Formation (Bureau of Economic Geology 1974). These deposits include sandstones, shales, and conglomerates of dolomite and siliceous pebbles. According to the *Soil Survey for Coke County, Texas* (U.S. Department of Agriculture 1974), the soils in the vicinity of the fort are classified as Weymouth and Kimbrough series soils. Weymouth loam is found on upland hills and gentle slopes and is characterized by a classic upland soil profile with a thin A horizon (5 to 9 inches of light to dark brown loam), a B horizon (15 to 33 inches of light brown to brown clay loam with common carbonate films, threads, and concretions that increase in frequency with depth), and a well developed C horizon (15 inches or more of pink to reddish brown clay loam that is heavily calcareous with abundant carbonate nodules). Kimbrough soils are found on steeper upland slopes and are characterized by a thin A-horizon (4 to 14 inches of a brown to dark grayish brown loam, clay loam, or gravelly clay) over several feet of pinkish white indurated caliche. These are both soils that formed through weathering of San Angelo Formation deposits over many thousands of years, perhaps with some deposition of wind-blown sands contributing to the mix.

In contrast to the upland, the soils in the Oak Creek valley to the south of the fort are classified as Colorado loam found on deep, nearly level flood plains. A typical profile consists of an A horizon consisting of 5 to 14 inches of reddish brown loam overlying at least 36 inches of C horizon described as calcareous reddish brown loam. Within the C horizon are stratified layers of 1- to 4-inch-thick loamy fine sand or silty clay sand. Each of these stratified layers represents a discrete deposit from an individual flood episode.

Fort Chadbourne is located within the Mesquite Plains district of the Kansan biotic province

(Blair 1950), and is characterized by mesquite woodlands and prairie grasslands. It is at the southern end of the Rolling Plains. Coke County receives an annual rainfall of 23 inches and has a growing season of about 226 days (Dallas Morning News 1999:154). Previous reports by Creel (1978, 1990) present more detailed information on the flora and fauna of the region.

## **FORT CHADBOURNE HISTORY**

The story of Fort Chadbourne has two important phases, its military history and the subsequent civilian ranching history. Both are described in more detail in a comprehensive report by Austin historian Martha Doty Freeman (2000), and much of the information in this section is derived from that source. Additional information is from the *Handbook of Texas Online* (Davis 2002a; 2002b) and from the internet web site of the Fort Chadbourne Foundation (2004).

Fort Chadbourne was an important U.S. Army post on the Texas frontier that was occupied from 1852 to 1868, followed by sporadic military use through 1874. Soldiers of the Eighth Infantry established the post in October of 1852, and it figured prominently in the history of the region for almost two decades. From 1852 until the Civil War, most of the army activity at Fort Chadbourne was related to building the fort and occasional skirmishes with Indians. Plans drawn in 1853 depict a large post with five long barracks opposite 14 sets of officer's quarters, along with a guardhouse, quartermaster storehouses, commanding officer's quarters, surgeon's quarters, a hospital, and other buildings. The 1853 plans were ambitious but never came to fruition. By 1856, the fort consisted of only about ten buildings, and only four were of stone construction—two company quarters (barracks), a hospital, and one officer's quarters. Most of the other buildings were less substantial and included structures built out of post oak lumber or of jacal construction. An 1859 report describes the post as having about 24 buildings, but only five were made of stone. The rest were of adobe, oak timber, or post oak pickets (jacal-like). Many of these had only canvas roofs, some were old and dilapidated, and others were "uninhabitable" (Freeman 2000:Table 5). Throughout its history, Chadbourne suffered from the army's inability to commit sufficient resources to develop and maintain the frontier fort. The post also was hampered by a water supply that was not dependable and poor in quality.

The southern route of the Butterfield Overland Mail opened in 1858, and a Butterfield stage stop operated at Fort Chadbourne until 1861. During the Civil War, Federal troops abandoned Fort Chadbourne, and Confederate troops occupied the post for a time. Following the Civil war, the U.S. Army reoccupied Fort Chadbourne in 1867. As the troops reoccupied the fort that year, a board of officers inspected it and recommended that Fort Chadbourne be abandoned in favor of a more suitable location on the Concho River. In November 1867, they selected the location of what would become Fort Concho, and Fort Chadbourne was finally abandoned a year later (Freeman 2000:87-93). Use of the old post was sporadic from 1868 through 1874, but various army detachments camped there occasionally on route to other forts.

Once it was abandoned by the military, the Fort Chadbourne property was purchased by Thomas L. Odom in 1874 and became part of the Chadbourne Ranch. Today, the ranch is owned by Odom's descendants—Garland Richards, and his wife, Lana. Garland grew up at the fort and played and worked in the shadows of the rock ruins without ever giving them much thought. As time passed, he developed a greater appreciation for the history of the region and the fort. In 1999, the Richards created the Fort Chadbourne Foundation, a nonprofit group dedicated to preserving the military post and interpreting it for the public. Since then, the foundation has raised funds and undertaken many different projects, including:

- Intensive archival research resulting in a comprehensive history of Fort Chadbourne by Freeman (2000)
- Reconstruction of an enlisted men's barracks (Barracks No. 2)

- Reconstruction of an officers' quarters (called the "Fountain House")
- Archeological excavations at the Fountain House officers' quarters by the Concho Valley Archeological Society; reported by Riemenschneider (2002)
- Comprehensive mapping of military and nonmilitary features at the fort, begun by the Texas Historical Commission and completed by Prewitt and Associates, Inc.
- Hosting an annual "Fort Chadbourne Days" fundraising event

The Fort Chadbourne Foundation remains actively involved in the preservation of the post and continues to work on its development plans aimed at increasing public visitation. The long-term plans include construction of a visitors center and museum, but the short-term plans include placing a wooden floor in the reconstructed barracks and creating temporary public exhibits. The fort is currently open for public visits during daylight hours, and people can see the many structural ruins and reconstructed buildings associated with the frontier military post (Figure 2). Fort Chadbourne is located on the Texas Forts Trail, which is described in a brochure called *Texas Forts Trail Region* produced by the Texas Historical Commission (2001) and Texas Department of Transportation as part of the Texas Heritage Trails Program.

**Figure 2.** Plan view of military structures and features at Fort Chadbourne. The map shows all of the known ruins and reconstructed buildings associated with the U.S. Army occupations (data current as of June 2003). The reconstructed barracks building is designated as Barracks No. 2 in this report.

During her archival research project, Martha Freeman discovered and analyzed several important historical documents that shed light on the military activities and early development of Fort Chadbourne. Key among these documents are a preconstruction plan map drawn in 1853, two sketch maps of the post drawn in 1856 (see Freeman 2000:Figures 4, 6 and 7) and several verbal descriptions of the post. Freeman (2000:104-120) discusses these maps and other historical documents in an attempt to determine the sequence of building construction at Fort Chadbourne. She notes the problems encountered when comparing the two 1856 Fort Chadbourne maps (Freeman 2000:112). While the two maps show the locations of the buildings on the post and share many similarities, they also display many differences that cannot be fully explained. There are many gaps in the records, and much of the story remains a mystery. In addition, when the various historic maps of Fort Chadbourne are compared with the modern map of presumed structural ruins and archeological features (see Figure 2), many more questions arise.

The fact that Fort Chadbourne immediately became part of a working cattle ranch and was used extensively for more than a century has many implications for understanding archeology at the post. Some buildings were not used and fell into ruins, while others were maintained and used for other purposes up through the middle of the twentieth century. A variety of different ranching activities occurred on the post after the army left, but exactly where and when these activities happened, especially in the late nineteenth and early twentieth centuries, is not well documented. While the subsequent ranch-related activities helped preserve some of the fort's buildings, the continued use of the post also had a significant impact on the military-period archeological remains. Ranching activities have disturbed the original depositional context of military artifacts and features in many areas, the fort now contains a mix of military and later civilian artifacts.

Directly associated with the army fort was the community of Fort Chadbourne, Texas (Davis 2002b). The settlement emerged in the 1850s, at which time its existence was entirely tied to the army post. The people who lived there were probably employed by the army or provided other services for the soldiers. A post office operated at the town from 1859 to 1866. In its early days, the community may have been concentrated primarily on the Oak Creek terrace south of the fort (see discussion of site 41CK258 below). At some point after the Civil War, and probably after the army abandoned the post, the town of Fort Chadbourne reportedly moved to a location about four miles to the southwest of

the fort. In reality, it may have been a collection of scattered homes all around the old fort. In 1892, the town had a post office, a general store, and 25 people living there. A 1959 newspaper article (Greene 1959) stated that Conda Wylie “recalls well that in 1909 there were foundations or traces of 75 houses around the fort. The town moved west about then when the Orient Railroad built through.”

Freeman (2000:Figure 5) discovered an important 1854 lithograph during her research, and it is reproduced here because it is a key document for understanding some of the civilian activities that occurred along Oak Creek south of the fort (Figure 3). The image, looking to the north from the bluffs on the south side of Oak Creek, shows that many stone structures had been built at the fort by 1854. It also shows a small settlement existed on the Oak Creek terrace below the fort. A cluster of tents is shown on the left, but several more substantial houses and fenced fields also are scattered about the terrace. There are several isolated features, just right of center, that look like rock-walled ovens or kilns. These may have been used for baking bread for the army. This lithograph provides evidence of an early and substantial civilian occupation on the “flat” on Oak Creek (Freeman 2000:51, 108).

**Figure 3.** “Fort Chadbourne, Texas” lithograph from January 1854 (Bailey 1963, figure opposite page 13). This image was reproduced in Freeman (2000:Figure 5).

## ARCHEOLOGICAL BACKGROUND

Since the focus of this report is primarily the historic period, no summary of the regional prehistoric chronology or archeology is presented here. The reader is referred to Creel (1990) for detailed information on archeology and prehistory of the San Angelo area. One notable archeological site located very close to Fort Chadbourne is worth mentioning. On the banks of Oak Creek west of the army fort are a series of overhanging ledges of sandstone that contain some unusual Native American petroglyphs. The images there are described as the “Fort Chadbourne type” of rock by Kirkland and Newcomb (1967:166-169). In all likelihood, these images are relatively late and were made by protohistoric or historic Indians sometime in the last three or four hundred years.

Historians and archeological researchers have long been interested in Fort Chadbourne, but systematic investigation of the site did not begin until recently. The fort was recorded as an archeological site and assigned number 41CK129 about 1968, but no site form exists in the records at the Texas Archeological Research Laboratory in Austin, Texas. The site was listed on the National Register of historic places in 1973. The first substantial onsite documentation was done by Darrell Creel in 1980 and includes measured sketch maps of the site and many of the structural ruins (Creel 1980). These sketch maps have proven very useful to the Fort Chadbourne Foundation to help document changes in the condition of particular ruins at the site.

## ACADEMY GOALS AND METHODS

The TAS began hosting Archeology Academy sessions in 2003 as a means of providing training for TAS members and others interested in learning about basic archeological field techniques. Academy sessions are held in different parts of the state and may teach field techniques or focus on specific types of material culture such as lithics or ceramics. The Archeology Academy planned for February 2004 at San Angelo was a general field archeology course that involved two days of classroom training and one day of field activities. This academy was attended by 48 people, including academy participants, instructors, and local volunteers. I served as the principal investigator for the field day, which was held at historic Fort Chadbourne.

Three main types of activities—excavation, laboratory methods, and site recording—were planned for the field day to expose participants to a wide range of common archeological techniques.

Because the number of academy participants and volunteers was so large, we split them into two groups for the field day activities. In the morning, one group stayed in the barracks to learn excavation and laboratory work, while the other group went to the Oak Creek terrace south of the fort to learn site recording. Everyone returned to the barracks for lunch, and the groups switched activities for the afternoon.

Academy participants learned basic archeological excavation and recording techniques by digging 10-cm levels within 1x1-m test units located inside the reconstructed Barracks No. 2 (Figure 4). A laser level was used to keep elevations consistent between the units, and string line levels were used to measure elevations within each unit. Artifacts were mapped in place when possible, and all fill was screened through 1/4-inch mesh. Level records were filled out, and artifacts were bagged by provenience. Features were mapped and documented using a separate feature form. Excavations were photographed using color slide film and digital images.

**Figure 4.** Photograph of enlisted men’s barracks at Fort Chadbourne, ca. 2000. View is to the north, and the ruins of Barracks No. 1 on the left (west) have been stabilized. Barracks No. 2 on the right (east) has been completely reconstructed. The central chimney of Barracks 2 divides the east and west rooms. The flag pole is located in the center of the parade ground close to the original location of the fort’s flag pole. Photo by Lana Richards, ca. 2000.

On the academy field day, Andy Verley supervised the barracks excavations. Most of the work was done inside the barracks’ east room, and three test units were excavated and nearly completed. Two test units were laid out in the west room, but on the academy field day only one unit was started and neither unit excavation was completed. Since we had intended to get the two test units in the west room completed, Andy Verley organized another workday about three months later. On May 8, 2004, Verley, Garland Richards, Mark Hoskins (another Concho Valley Archeological Society member), and a group of Boy Scouts under Scoutmaster Hoskins’ direction, completed the work on the two units inside the west room of Barracks No. 2.

The second goal was met by setting up a temporary laboratory inside the barracks to teach academy participants basic procedures for cleaning and cataloguing artifacts, as well as demonstrating techniques for photographing artifacts. CVAS member Alice Stultz set up and directed the field laboratory.

For the third goal of teaching site recording, we concentrated on the Oak Creek terrace to the south of the main fort, and I supervised the activities with lots of assistance from CVAS and MAS members. In the morning, one academy group worked in Area A in the east end of the site. The second academy group worked in Area B in the afternoon. Cold rainy weather prevented us from doing some activities, but by the end of the field day we had completed controlled surface collections and detailed sketch maps of both areas, dug and recorded five shovel tests, and made notes on features and artifact scatters all across the site. More importantly, the team made many significant observations about features and artifacts there, and we learned a great deal about the Flat on Oak Creek (41CK258).

The artifact analysis was geared primarily toward identifying the form and function of specimens and dating the time of manufacture and period of common usage. A comprehensive artifact inventory and database was created but is not included as part of this report. Artifact identification and dating was aided by a number of useful publications including:

Bottles and Glass	Bureau of Land Management (2004), Fike (1987), Wilson (1981)
Buttons	Pool (1991)
Ceramics	Miller (1980), Pollan et al. (1996), Price (1979), Wetherbee (1980)
Firearms	Barnes (1980), Flayderman (1980)
Nails	Nelson (1968)

Tin Cans  
Various Military

Busch, Jane (1981)  
Herskovitz (1978), Reimenschneider (2002)

## **BARRACKS NO. 2 AT FORT CHADBOURNE (41CK129):**

The archeological investigations and findings inside the barracks at Fort Chadbourne cannot be fully understood without understanding some of the history of the structure. Its use as a military barracks was relatively brief compared with its long history of use for ranching purposes. These historical uses have important implications for interpreting the features and artifacts found during the academy investigations.

### **History of Barracks No. 2**

The following summary details what is known about the barracks' initial construction, its various uses for subsequent ranching activities, its eventual fall into ruins, and the recent efforts to stabilize the walls and reconstruct the building. All of the details of the ranching period are taken from an interview with Garland Richards (2004), who grew up at Fort Chadbourne and has intimate knowledge of the history of Chadbourne Ranch and what happened to the fort buildings through time.

According to Freeman (2000:46-48), the original plan for Fort Chadbourne proposed a row of five barracks. Barracks No. 1 was constructed in 1853, and its ruins have now been stabilized. Barracks No. 2 was probably built in 1854, and it has been completely reconstructed. There are three other stone foundations of similar size in this same row, one to the west of Barracks No. 1 and two to the east of Barracks No. 2 (see Figure 2), but it is not known if these were ever built or occupied. It may be that these foundations were constructed according to the 1853 master plan (Freeman 2000:Figure 4), but the subsequent construction never happened.

When the Fort Chadbourne Foundation reconstructed Barracks No. 2 from 1999 to 2002 (see Figure 4), much was learned about its construction in the process. Most of the structure's walls were still standing just prior to the reconstruction, and some portions were still standing at their original height. Some wall segments were essentially intact and required only minimal stabilization, while other sections had to be reconstructed completely. However, several historical photographs of the building, including one taken in 1918 (Figure 5), aided in the reconstruction of the walls and the roof. This photo later proved to be important for interpreting one of the archeological features found inside the east room of Barracks No. 2.

**Figure 5.** Photograph of an enlisted men's barracks at Fort Chadbourne in 1918 (courtesy of the Fort Chadbourne Foundation). The view is looking south at the north side of what is now called Barracks No. 2, which was reconstructed from 1999 to 2002. Note the sagging roof.

The walls of Barracks No. 2 are made of cut sandstone blocks neatly set in mortar. The sandstone was quarried from the San Angelo Formation bluffs located south of the fort and just east of the Flat on Oak Creek. The barracks is a two-room building, and its exterior dimensions are 100 feet (east-west) by 21 feet (north-south). The interior dimensions of the east room are 57 ft 7 inches by 18 ft 4 inches, and the west room measures 37 ft 7 inches by 18 ft 4 inches.

Garland Richards (2004) said that the tops of the chimneys were knocked off in the 1930s and tin was put over the shingle roof. The underlying shingle roof, which may have been the original roof of the barracks, was present until 1964 when a severe straight-line wind or a small tornado blew the roof off. The roof was not repaired after this, and the building began to deteriorate rapidly after that. Garland said his father was happy when the roof blew off because he wouldn't have to get on top of it

to repair it any more. It had become dangerously unstable and was a constant maintenance hassle.

Before the roof was blown off in 1964, the east room was used a saddle room and had a wooden floor. The floor was in bad shape and had holes in it, but it may have been the original floor of the building. The west room was used for oat storage. There were lots of mice in it, and they attracted snakes. When the Barracks No. 2 reconstruction work was done, trenches were dug down to bedrock all around the foundation and concrete was poured to provide additional stability. The excavations revealed evidence that mice had burrowed into the soft mortar in some places around the foundation.

The original Barracks No. 2 had four fireplaces, one on the east end, one on the west end, and two on either side of the interior wall dividing the east and west rooms. The latter two fireplaces shared a common chimney as seen in the modern reconstruction (see Figure 3). It had always been known that there were fireplaces located on the opposite ends of the building, but the presence of the two fireplaces on either side of the interior wall was not known for many years. In 1980, Darrell Creel observed no evidence of these fireplaces when he drew sketch maps of this barracks (Creel 1980), and Garland Richards did not know about them until the Fort Chadbourne Foundation did the reconstruction. When they removed the wall rubble from the base of the interior wall, they discovered remnants of two fire boxes on either side of the interior wall. They also discovered that a tunnel had been dug through the interior wall to create an opening between the two chimneys. It is not known when this occurred, but it seems likely that this opening between the rooms was created so that the oats stored in the west room could be taken out from inside the east room.

### **Archeological Investigations and Results**

Archeological testing inside Barracks No. 2 at 41CK129 consisted of hand excavation of five 1x1-m test units—three in the east room and two in the west room (Figure 6). On the day before the Archeology Academy, several people (Garland Richards, Steve Clark, Eric Johnson, Claude Hudspeth, and Jack Poole) assisted in preparing the barracks for the excavations. We laid a string line down the long axis of each room, and it was set exactly two meters south of, and parallel to, the north wall. The test units were then laid out to the south of this at even meter intervals as measured to the east from the west wall. By doing this, the units were spaced out across the central portion of both rooms, and it established metric grids that are oriented with the structure and begin in the northwest corner of each room. We made permanent cut marks in the foundation concrete at the east and west ends of the string lines in both rooms so that the lines could be relocated and the grid could be expanded in the future if additional archeological excavations are undertaken.

The placement of these initial test units down the long axis of each room was quite intentional. The Fort Chadbourne Foundation intends to put a reconstructed wooden floor inside both rooms, as the original barracks once had, and the excavations will allow them to place blocks and vertical support piers at strategic points down the centerline of each room. In each room, blocks and piers will be put into the excavated units to anchor an east-west horizontal beam, and additional support blocks will be placed along the bases of the walls and on top of the concrete ledge that was put in to stabilize the foundation during the reconstruction. A wooden framework of floor joists will be constructed on top of the support blocks and vertical piers. Wooden slats will then be laid over the joists to complete the floor. This design allows for the whole floor to be constructed without altering the building foundation or the integrity of the structure, and it can be easily removed if necessary.

For elevation control inside the barracks' rooms, we established a point on the wall and near the floor and assigned it an arbitrary elevation of 10.0 m. A laser level placed on the bottom door sill between the east and west rooms was used to calculate elevations, and a wooden stake with a known elevation was placed beside each test unit. Strings and line levels were then used for elevation control at each unit. We also established several permanent elevation points on the interior of each room by cutting and "X" in the concrete to mark each spot. The elevations of these vertical datum points were

recorded in the site notes. A total of 826 artifacts were recovered from the excavations in the east and west rooms (Table 1).

### *East Room, Barracks No. 2*

The three units located inside the east room of Barracks No. 2 are designated as Test Units E1, E2, and E3 (see Figure 6) and were excavated on February 28, 2004. These excavations yielded 494 artifacts (see Table 1). A wood log was found in Test Unit E1 lying horizontal, with its top at 26 to 30 cm below surface (Figure 7). This log is about 8 cm in diameter, is very well preserved, and was left in place. It runs east–west through the unit and is parallel with the long axis of the east room. This log is a remnant of the support framework for the barracks’ floor. Using a pin flag to probe beneath the soil, we learned that this log extends well beyond this unit and that there are many others preserved beneath the ground in the east room. A significant portion of the floor framework is probably preserved. It is likely that this feature is part of the original flooring that was built in 1854, although it is possible that it represents a floor added later.

**Figure 6.** Plan view of Barracks No. 2 showing locations of the five test units in the east and west rooms.

**Figure 7.** Wooden log found in Test Unit E1 in the east room of Barracks No. 2. View is to the west, and the log runs east to west and parallel with the long axis of the building. The log is part of the framework for supporting a floor in the barracks and may be associated with the original wooden floor from the 1850s.

A fragment of wood from the floor beam exposed in Test Unit E1 was submitted to Dr. Leslie Bush for archeobotanical analysis. She identified the wood as *Juniperus* sp., and she notes that only two species of juniper—Ashe juniper (*J. ashei* Buchh.) and Pinchot’s juniper (*J. pinchotii* Sudworth)—are currently known from Coke County (Turner et al. 2003). Bush also consulted with Dr. Thomas Harlan, a researcher at the Laboratory of Tree Ring Research at the University of Arizona, who examined the specimen and suggested that it was probably Pinchot’s juniper because it exhibited termite damage that is usually not seen in Ashe juniper. It is likely that the wood was cut locally by soldiers at the time the floor was built.

An unexpected feature was encountered in Test Unit E2 (Figure 8). It consisted of a shallow pit containing a large rock. The pit was circular except for one flat edge, and it measured about 48 by 30 cm. It was filled with very soft, unconsolidated sediment and one large sandstone rock (measuring 35 by 20 cm). The rock appeared to have cut marks, perhaps from being quarried, but it was irregular in shape. While the function of this feature is not certain, it is likely that it represents a post hole and where a roof support post was placed, and the rock was used to support the post or act as a shim. The feature is located in the approximate center of the east room, and a post may have been put there to prop up a sagging roof. This may have occurred not long after the 1918 photo showing the sagging roof line was taken (see Figure 5).

**Figure 8.** Photograph of a large rock and pit feature found in Test Unit E2 in the east room of Barracks No. 2. The view is to the north, and the unit is located in the center of the east room. The rock was probably placed in the pit to support or shim a wooden post used to support the sagging roof sometime in the twentieth century. Photo by Bill Yates.

<b>Table 1. Artifacts recovered from excavations in Barracks No. 2.</b>							
Material Group	Material Type and Classification	Test Unit E1	Test Unit E2	Test Unit E3	Test Unit W1	Test Unit W2	Total
<b>Ceramic</b>							
	Whiteware, undecorated sherd	2				1	3
<b>Glass</b>							
	Button, self shank				1		1
	Container glass fragment (various colors)	13	10	11	10	9	53
	Container glass fragment (dark green)	8	3	1	1	13	26
	Bottle neck with hand-finished lip	1					1
	Wine bottle base fragment (dark green)					1	1
	Flat window glass fragment (clear or light green)		5	1	2	11	19
	Unidentifiable glass (all colors)	19	3	8	13	10	53
<b>Metal (brass)</b>							
	Cartridge case; .56-50 Spencer				1	1	2
<b>Metal (iron)</b>							
	Barbed wire		2				2
	Cut nail	21	4	2	26	58	111
	Fence staple		2				2
	Grommet	1				1	2
	Wire nail	3	3		4	3	13
	Wood screw				1		1
	Unidentified iron fragment	59	174	24	67	18	342
<b>Metal (other)</b>							
	4-hole button; white metal (pewter?)			1			1
	Button cover, overall type; white metal			1			1
<b>Hard rubber or plastic</b>							
	Comb tooth		1	1			2
<b>Stone</b>							
	Chert, unifacial tool	1					1
	Chert, unmodified flake	2	2	2	1		7

<b>Table 1. Artifacts recovered from excavations in Barracks No. 2.</b>							
Material Group	Material Type and Classification	Test Unit E1	Test Unit E2	Test Unit E3	Test Unit W1	Test Unit W2	Total
<b>Bone Artifact</b>							
	Modified bone, possible smoking pipe stem			1			1
<b>Animal Bones</b>							
	Bison					2	2
	Cotton rat	1					1
	Deer	1					1
	Jack rabbit	1			2		3
	Mouse, unidentified		2				2
	Pig					1	1
	Rodent, unidentified				1		1
	Sheep	1				2	3
	Sheep/goat					3	3
	Turkey	1			2	3	6
	Turtle				2		2
	Unidentified bird, turkey size				1		1
	Unidentified, deer size	2	1				3
	Unidentified, rabbit size	1		2			3
	Unidentifiable, medium mammal				2		2
	Unidentifiable, large mammal			3		1	4
	Unidentifiable mammal, all sizes	2	7	8	14	31	62
<b>Other Faunal Remains</b>							
	Egg shell fragment	14	42	7	7	3	73
	Leather fragment	2	1	1			4
	Shell button		2				2
<b>Botanical Remains</b>							
	Pecan shell fragment				2		2
	Charred wood fragment	X	X	X	X	X	--
	Wood fragment	X	X	X	X		--
<b>Total</b>		<b>156</b>	<b>264</b>	<b>74</b>	<b>160</b>	<b>172</b>	<b>826</b>
NOTE: For wood and charred wood, presence is noted by an X.							

### ***West Room, Barracks No. 2***

The two units located inside the west room of Barracks No. 2 are designated as Test Units W1 and W2 (see Figure 6). These excavations yielded 332 artifacts (see Table 1). An unusual feature was discovered in Test Unit W1 in the west room (Figure 9). It is a linear pit feature that runs north to south across the west edge of the unit. The top of the feature was encountered at 20 cm below surface and it was traced down to 40 cm and the pit continued below this depth. Sediments inside the linear pit were loose sandy loam with larger sandstone rocks, including one large rock. The feature appeared to be an intrusive pit that had been dug down into the caliche-rich subsoil. The feature is interpreted as a wall trench that ran north to south across the west room, but it appears likely that the wall was never built. In Barracks No. 1, evidence indicates that two interior north-south walls were built. These walls were closer to each end of the building and divided the barracks into one large central room with two smaller rooms on each end (as shown in sketch maps by Creel [1980]). While the wall foundation for the western interior wall is still present in Barracks No. 1, the eastern wall had been built but was disassembled and moved farther east, presumably to enlarge the west room (Garland Richards, personal communication 2004). Since Barracks No. 2 was built after Barracks No. 1, it is possible that this wall trench was dug with the intent of building a wall there, but that the plans were changed. The Barracks No. 1 wall was probably moved after it was built, while the Barracks No. 2 interior wall trench was abandoned before the wall construction began. All archeological evidence suggests that Barracks No. 2 had only one north-south interior wall.

**Figure 9.** Photograph of a linear pit feature in Test Unit W1 in the west room of Barracks No. 2. The trench was probably dug for an interior wall that was never built. Photo by Andy Verley.

In the west room of Barracks No. 2, portions of wooden logs are exposed in the southwest corner of the room. As was noted with the buried log discovered in the east room, these logs are thought to be part of the original floor support framework. Pin flags were used to probe the soil in the west room, and several buried logs could be traced north to south and east to west across the room. The pin flag probing shows that the sediments and logs are shallow in the west end of the room but are deeper in the east end. It appears that a significant portion of the log framework supporting the wooden floor may be preserved in the west room of Barracks No. 2. It is possible that these logs represent the original floor support framework dating to the 1850s.

### ***Barracks No. 2 Artifacts***

The 826 artifacts that make up the Barracks No. 2 assemblage (see Table 1) are dominated by unidentifiable iron and glass fragments, but there are many functionally and temporally diagnostic specimens. Some modern items, such as metal deck screws, were collected but discarded in the lab and not counted in the artifact tables because they represent recent items that were dropped inside the barracks during or after its modern reconstruction.

Two brass cartridge cases (Figure 10) are the only specimens that are definitely of military origin. The cases are same size, but one is smashed. The intact cartridge case matches the measurements given by Barnes (1980:297, 299) for the .56-50 Spencer. It was designed in 1864 and saw limited use up through the 1920s, but it was most commonly used by the army in Spencer seven-shot repeating rifles and carbines in the western frontier after the Civil War (Barnes 1980:297; Flayderman 1980:505).

One unusual bone artifact (see Figure 10) is a 4-cm-long section of a machine-finished bone tube with transverse ridges and a threaded end. It has not been positively identified, but could be a bone stem for a smoking pipe and possibly is from the military period.

Five buttons were recovered and represent the types of small items that could easily be lost between the cracks in the wooden barracks' floor. Two are shell 4-hole buttons, one is a white metal compound button cover (like those used on overalls), one is a white metal 4-hole button, and the fifth one is a black glass button. The shell specimens could be shirt buttons and are similar to shell buttons recovered from the officers' quarters (Fountain House) at Fort Chadbourne (Riemenschneider 2002:Figure 16k-n). The 4-hole metal button is nearly identical to ones found in the Fort Chadbourne officers' quarters (Riemenschneider 2002:Figure 16x) and to a specimen described as a "suspender button" from Fort Bowie, Arizona (Herskovitz 1978:Figure 12t). The black glass button may be imitation jet, and its floral pattern suggests it may have been a woman's dress button.

**Figure 10.** Selected artifacts from Barracks No. 2 at Fort Chadbourne, 41CK129. Top images shows a .56-50 Spencer cartridge (left) and a machine-cut bone tube with a threaded end, possibly a smoking pipe stem (right). Bottom images shows clothing buttons, from left to right: a 4-hole white metal button; black glass button with floral design; a 4-hole shell button; and a white metal button cover.

Cut nails found in the barracks outnumber the wire nails 111 to 13. While these overlap in time around the end of the nineteenth century, machine-cut nails were most common in the latter half of the 1800s, and wire nails became more common after about 1890 (Nelson 1968). Other metal artifacts that are probably associated with ranching activities include wood screws, fences staples, fragments of barbed wire (modern double-strand), and unidentifiable leather fragments. A single sherd of undecorated whiteware was found, as were fragments of flat window glass and various container glass. Some glass fragments are from a dark green wine bottle, and one specimen is a green glass bottle neck with a hand-finished lip in a "ring" or "oil" neck shape (Fike 1987:Figure 2.11; Wilson:1981:111). The latter specimen is too small for positive identification, but it appears to be an applied finish rather than a tooled finish, which would indicate manufacture between 1820 and 1890 (Bureau of Land Management 2004: Bottle Dating).

The faunal remains are interesting and probably represent remains of animals living underneath the barracks' floor, living in the rock rubble of the ruins before the reconstruction, and remains dragged into these locations by scavenging animals. Excluding the possible bone pipe stem, 114 animal bones were recovered (see Table 1), and some of them exhibit gnawing marks, cut marks, or evidence of burning. Two bison foot bones were found and they probably date to the military period. Most of the other faunal remains probably postdate the military occupation and represent a wide range of animals common around a west Texas ranch. The skulls of a cotton rat and mouse (unidentified species) as well as other unidentified rodent and turtle bones were found, and these animals were probably living there. Rodents and other animals (such as cats, dogs, coyotes, skunks, etc.) may be responsible for dragging in most of the other animal bones, including remains of deer, jack rabbit, pig, sheep and sheep/goat, and turkey.

When considered as a whole assemblage, the Barracks No. 2 artifacts range from military to modern, but ranching period items appear to dominate. The faunal remains, including a variety of animal bones and egg shell fragments, represent things introduced or deposited underneath the barracks' floor by animals. The chert flakes and unifacial tool reflect the presence of an Indian occupation that predates the military activities.

### **THE FLAT ON OAK CREEK (41CK258):**

Site 41CK258 was recorded by the Texas Archeology Academy participants on February 28, 2004, but Garland and Lana Richards have know about this historic site for many years. They have long known about the rock-lined lime kiln along the north bank of Oak Creek. This feature is within the area recorded as 41CK258, but no work was done on the kiln during this investigation. The

Richards also were aware of several areas along the sandstone bluffs just west of the terrace where sandstone was quarried by hand (this area is just east of site 41CK258 and should be documented as a separate site). Historical evidence indicates that the lime kiln and the rock quarry were used by the U.S. Army to obtain building stones and make lime whitewash for painting the buildings at the fort. The Richards became even more interested in the location in 2000 when Martha Freeman discovered the 1854 lithograph showing a settlement on the Oak Creek terrace south of the fort (see Figure 3). Since then, Garland and Lana observed concentrations of artifacts across the terrace, along with some concentrations of sandstone rocks and mounded areas that might represent historic structures. Besides the historic remains, Garland also observed flint flakes on the terrace and bison bones eroding from the edge of the cutbank, as well as surface collected a Paleoindian dart point from near the terrace edge. The locations of the point and the bison bones were mapped during the academy investigations.

I first visited the site with Lana Richards on November 23, 2003, specifically to see if the location was a good spot for conducting Archeology Academy field training. Artifacts and rocks were concentrated in a relatively small in the east end of the site. We designated this as Area A and noted that it was a good location for field training because it had abundant surface artifacts that appeared to date to the mid to late 1800s as well as scattered sandstone rocks suggesting the presence of a historic structure. We found a Perdiz arrow point eroding out of the edge of the gully at Area A. We collected the specimen at that time but left a nail in its place. The location where the point was found was subsequently mapped during the academy investigations.

During the initial site visit, Lana and I also noted several concentrations of historic artifacts and looked at some concentrations of rocks and slight mounds that might represent structural remains. The greatest concentration of surface artifacts was found along the eroded edge of Oak Creek, and we decided this location was suitable for academy training activities and would be called Area B. Many of the ceramic sherds observed in this area appeared to date to the mid to late 1800s.

I returned to the site on February 27, 2004, to make final preparations for the Archeology Academy the next day. With many people helping (Garland Richards, Claude Hudspeth, Jack Poole, Teddy Stickney, Kimball Bennett, Pinky Robertson, Steve Clark, and Eric Johnson), we established a line of datum points laid out at intervals running from southeast to northwest across the Oak Creek terrace. The datum points, numbered from 1 to 4, were intended to serve as mapping stations across the large site. The points were set out in a line running northwest from Area A to a wooden telephone pole at the northwestern edge of the site. Line of sight and a metric tape were used to establish the permanent datum points, which are as follows:

- Datum 1, a rectangular aluminum cap set in concrete,  
located just east of the deep gully in Area A
- Datum 2, a rectangular aluminum cap set in concrete,  
located 110 m northwest of Datum 1
- Datum 3, a nail set in concrete,  
located 100 m northwest of Datum 2
- Datum 4, a rectangular aluminum cap set in concrete,  
located 100 m northwest of Datum 3

### **Work Accomplished**

On the morning of the field day, academy participants investigated Area A. They first spent time looking over the area and flagging artifacts. We observed numerous scattered sandstone rocks that were definitely out of place and thought to be associated with historic structures, but they did not form any discernable patterns. Based on the concentrations, we selected a relatively small area along the edge of the gully that had many artifacts mixed in with larger sandstone rocks. It is likely that this

area represents a historic structure, but the scattered rocks suggest that it had been disturbed. We laid out a grid of 1x1-m collection units. Participants then examined the surface on hands and knees and collected all of the artifacts in each unit. We also dug one shovel test south of the surface collection area. Shovel Test A1 was excavated to 80 cm below surface. The fill was screened (1/4-inch mesh), but no artifacts were recovered.

In the afternoon of the field day, the second group of academy participants investigated Area B. They walked transects across portions of Area B and flagged all of the artifacts encountered and made observations on possible features. Most artifacts seemed to be concentrated along the eroded edge of the Oak Creek terrace, and a large area was slated for surface collection. A row of seven 10x10-m units was established. Academy participants scoured each unit to recover all of the surface artifacts. Following this, four shovel tests were excavated in close proximity to a cluster of rocks thought to be a remnant of a structure. Shovel Test B1 to B4 were excavated in 20-cm levels to 80 cm below surface. The fill was screened (1/4-inch mesh), and recovered artifacts were collected by levels.

On Sunday, February 9, 2004, the day after the Archeology Academy field training, we returned to map the site using a Sokkia Set 5F electronic total station. The final site map (Figure 11) showed the locations of the mapping datum points, surface collection grids, and other natural and cultural features observed at the site. The site covers an area of almost 500 m east–west by about 200 m north–south. A variety of domestic artifacts was recovered, and many of them date from the mid to late 1800s (Figure 12).

**Figure 11.** Map of the Flat on Oak Creek, 41CK258.

**Figure 12.** Selected artifacts from the Flat on Oak Creek, 41CK258. All are whiteware sherds. Clockwise from upper left:

- 2 blue shell edge rim sherds (Area B on left; Area A on right)
- 2 blue sponge-decorated rim sherds (Area B)
- 1 red-line rim sherd (Area B)
- 1 blue transfer printed rim sherd (Area B)
- 1 black transfer printed body sherd (Area A)
- 2 brown transfer printed rim sherds (Area B)

### **Historic Features and Artifacts in Area A**

Most of the cultural remains in Area A were observed on the level portion of the alluvial terrace, and the surface collection grid consisted of 28 1x1-m units (Figure 13). Sandstone rocks were observed inside the surface collection grid and in several areas to the south of the grid. While the rocks tended to be somewhat clustered, they did not seem to form any coherent patterns. It is likely that this area may have been disturbed by mechanical vegetation clearing. Despite this, it is likely that the rocks represent foundation stones for wood frame structures that once stood in this area.

**Figure 13.** Map of Area A at 41CK258.

Shovel Test A1 did not recover any artifacts, but the cutbank edge and extent of surface materials indicate that the historic remains are surficial and shallowly buried while the prehistoric remains are probably more deeply buried. As summarized in Table 2, the 185 recovered artifacts include 12 prehistoric chert specimens (9 flakes, 2 tools, and a Perdiz point) and 173 historic specimens.

**Table 2. Artifacts from Area A at 41CK258, by provenience.\***

Material Group	Material Type and Classification	Cutbank Edge	SC Grid, Unit 9	SC Grid, Unit 12	SC Grid Unit 14	SC Grid Unit 15	SC Grid Unit 16	SC Grid Unit 17	SC Grid Unit 19	SC Grid Unit 20	SC Grid Unit 21	SC Grid Unit 22	SC Grid Unit 24	SC Grid Unit 25	SC Grid Unit 26	SC Grid Unit 27	SC Grid Unit 28	TOTAL
<b>Ceramic sherds</b>																		
	Whiteware, blue transfer printed				1					1								2
	Whiteware, black transfer printed													1				1
	Whiteware, blue sponge decorated														1			1
	Whiteware, blue shell edge decorated		1															1
	Whiteware, blue painted									2								2
	Whiteware, green painted						2											2
	Whiteware, undecorated			3			1			7	6			4		1	1	23
<b>Glass fragments</b>																		
	Wine bottle glass (dark green)		1									1						2
	Drinking glass fragment (clear)			1													1	2
	Container glass (various colors)				1	2	6	2	3	9	9	1	1	11	13	1	2	53
	Container glass (dark green)					6	2	1	4	16	6			2	14		3	54
	Flat window glass fragment										1	1			2	1	2	7
<b>Metal (iron)</b>																		
	Cut nail						1		1		10	2		4				18
	Wire nail									2	1							3
	Unidentified fragments														2			2
<b>Stone</b>																		
	Chert, Perdiz arrow point	1																1
	Chert, uniface										1							1
	Chert, edge-modified flake										1							1
	Chert, unmodified flakes				1	1	1			1	2		1	1	2			9
	<b>TOTAL</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>5</b>	<b>2</b>	<b>13</b>	<b>2</b>	<b>5</b>	<b>21</b>	<b>47</b>	<b>11</b>	<b>2</b>	<b>18</b>	<b>34</b>	<b>3</b>	<b>9</b>	<b>185</b>

\* SC = Surface Collection

The glass and ceramics (see Figure 12) are the most temporally diagnostic artifacts. Diagnostic whiteware sherds are from vessels manufactured and in common use during the middle to late nineteenth century. The ceramic types diagnostic of this period are blue transfer printed, black transfer printed, blue sponge decorated, and blue shell edge decorated (Pollan et al. 1996; Price 1979; Wetherbee 1980). Most of the glass artifacts are less distinctive, but all of them could date to the latter half of the 1800s. Two of the glass specimens are temporally diagnostic. They are bottle base fragments that exhibit pontil scars left during the process of hand blowing the glass containers. Such marks are diagnostic features on mid-nineteenth century glass bottles (Bureau of Land Management 2004: Dating Bottles). A large number of dark green glass fragments appear to come from a single, thick-walled wine bottle, and the base fragment has a pontil scar. The other pontil scar is on a light green glass bottle base, but the shape and function of this bottle are not known.

Most of the metal artifacts are nails. The 18 cut nails probably date to the late 1800s, while the 3 wire nails probably postdate 1890. Based on the ceramic, glass, and metal artifacts, the period of occupation for Area A appears to be the latter half of the nineteenth century, possibly into the early twentieth century. Functionally, the nails probably came from a wood frame structure near this location, as did the flat window glass. The presence of a structure(s) is further indicated by the scattered sandstone rocks that do not occur naturally on the alluvial terrace. The ceramics represent typical household vessels (plates and bowls), while the glass specimens are from containers (wine and food) and drinking glasses.

### **Historic Features and Artifacts in Area B**

Several different types of features were observed in Area B, which encompasses all of the site west of the gully near Area A. Investigations in this large area (Figure 14; see Figure 11) revealed three types of surface features that may represent historic structures. Depressions observed along the edge of Oak Creek are thought to represent dugouts, and historic artifacts appear to be most concentrated in these areas. Some of the depressions have large sandstone rocks or boulders in them or on their edges. Clusters of sandstone rocks on the terrace surface constitute the second type of possible structure. These rocks are obviously out of place and may represent disturbed foundation stones. Time limitations prevented a complete and thorough investigation of the entire terrace and many of the features observed in Area B. Although only two rock clusters appear on the Area B map (see Figure 14), others are present across the flat.

**Figure 14.** Map of Area B at 41CK 258.

Low mounds of sediment and rocks constitute the third type of feature that probably represents historic structures. Three prominent mounds are present across the northern portion of the terrace (see Figure 11). They appear to be structural ruins, probably of stone-walled buildings. Some artifacts were observed at each of these mounds, and the vegetation on them was different from the surrounding areas and included concentrations of cacti and small shrubs. The vegetation differences are due, at least in part, to the fact that these mounds have not been plowed or cultivated like the rest of the flat.

In Area B, four shovel tests were excavated in close proximity to a possible structure (a cluster of sandstone rocks), and seven 10x10-m units were laid out and surface collected along the edge of the Oak Creek cutbank (see Figure 14). As summarized in Table 3, the artifacts from Area B include the Golondrina dart point (collected previously), 27 specimens from shovel tests, and 165 specimens from the surface collection units. The shovel tests yielded some historic glass, cut nails, and unidentifiable bones from 0 to 20 cm. Nothing was recovered from 20 to 40 cm, but 12 unmodified flakes were found at 40 to 60 cm.

**Table 3. Artifacts from Area B at 41CK258, by provenience.\***

Material Group	Material Type and Classification	Isolated Surface Find	SC Grid A	SC Grid B	SC Grid C	SC Grid D	SC Grid E	SC Grid F	SC Grid G	Shovel Test 1	Shovel Test 2	Shovel Test 3	Shovel Test 4	Total
<b>Ceramic sherds</b>														
	Whiteware, blue transfer printed			1										1
	Whiteware, black transfer printed				1									1
	Whiteware, brown transfer printed							2						2
	Whiteware, blue sponge decorated						2							2
	Whiteware, blue shell edge decorated				1									1
	Whiteware, green painted				1									1
	Whiteware, red line edge decorated				1			1						2
	Whiteware, undecorated		3	7	6		2	4	1					23
<b>Glass fragments</b>														
	Container glass (various colors)		2	7	12	3	1		3			2		30
	Container glass (dark green)		3	8	3	1		1	2			1		19
	Flat window glass fragment						1				1			2
	Unidentifiable glass											1		1
<b>Metal (lead)</b>														
	Lead ball								1					1
	Lead shot								2					2
	Unidentified lead fragment							1						1
<b>Metal (iron)</b>														
	Cut nail			4	1				1		3			9
	Fish hook					1								1
	Door hinge						1							1
	Tin can (soldered seam)							1						1
	Unidentified iron fragment		2	16	19		7		3					47

**Table 3. Artifacts from Area B at 41CK258, by provenience.\***

Material Group	Material Type and Classification	Isolated Surface Find	SC Grid A	SC Grid B	SC Grid C	SC Grid D	SC Grid E	SC Grid F	SC Grid G	Shovel Test 1	Shovel Test 2	Shovel Test 3	Shovel Test 4	Total
<b>Stone</b>														
	Chert, Golondrina dart point	1												1
	Chert, unifacial scraper								1					1
	Chert, uniface			1										1
	Chert, edge-modified flake		1		1									2
	Chert, unmodified flake		3	4			2	2		2	1	4	5	23
	Sandstone with mortar or whitewash		1											1
<b>Bone</b>														
	Unidentifiable, small to medium mammal												7	7
	Unidentifiable, small to large mammal								4					4
	Unidentifiable, medium to large mammal			1										1
<b>Shell</b>														
	Mussel shell fragment			2		2								4
<b>TOTAL</b>		<b>1</b>	<b>15</b>	<b>51</b>	<b>46</b>	<b>7</b>	<b>16</b>	<b>10</b>	<b>18</b>	<b>7</b>	<b>5</b>	<b>8</b>	<b>12</b>	<b>193</b>

\* SC = Surface Collection

The most temporally diagnostic specimens from the surface collection units in Area B are the ceramic sherds (see Table 3 and Figure 12). All are whiteware ceramics, and they include several mid to late nineteenth century types—blue, black, and brown transfer printed; blue sponge decorated; and blue shell edge decorated (Pollan et al. 1996; Price 1979; Wetherbee 1980). None of the glass specimens are particularly diagnostic, but none of them would be out of place in a late 1800s assemblage. Three lead balls are ammunition for firearms. Although flattened on one side, one specimen is a round ball that is .52 inches in diameter and may have been used in a .52 caliber rifle or carbine (see Flayderman 1980:436–437, 441–442). Two smaller lead balls are .28 inches and .32 inches in diameter and may be large buckshot (Barnes 1980:309).

Other metal artifacts include cut nails, a fish hook, a door hinge, and a tin can with soldered seam (Busch 1981). Any of these artifacts could date to the late 1800s, and the cut nails suggest that some wood construction may have been present. It is possible that facades made of cut lumber were used at the front entrance of some of the dugouts, or that nails were used in wooden frame roofs. Other evidence of structural remains includes a fragment of sandstone that appears to have mortar or whitewash adhering to it.

An overall assessment of the Area B assemblage is that it represents domestic remains associated with mid to late nineteenth century civilian occupations. Notably, none of the collected specimens can definitely be attributed to the twentieth century.

### **Historic Bridge Abutment**

One other large historic feature is present in Area B of 41CK258. The concrete abutment of a bridge is present along the north edge of Oak Creek (see Figure 11). This feature once supported a road bridge across the creek, but the bridge and road disappeared many years ago. The abutment was photographed, but no other documentation was done.

### **Prehistoric Cultural Remains**

Evidence for prehistoric occupations at 41CK258 consists of a Perdiz arrow point, a Golondrina dart point, and scattered flakes on surface and from shovel tests (see Table 2). Chert flakes were recovered from 40 to 60 cm in Shovel Tests B1 to B4 (see Figure 14). In addition, bison bones were found buried in the cutbank of Oak Creek (see Figure 11) at a depth of ca. 1 to 2 m below ground surface (the actual depth is difficult to determine because of erosion along the cutbank edge). While these bones could represent a natural death, they may well be cultural and associated with prehistoric occupations.

The Perdiz point was found along the eroded edge of a gully (see Figure 13) adjacent to the historic component in Area A. The point appears to have been buried at about 20 to 30 cm below the modern ground surface (its precise depth is difficult to determine because the edge of the gully is eroded and beveled). Chert flakes and some burned rocks were observed along the cutbank edge nearby. The Perdiz point is nearly complete (Figure 15) except that it is missing its distal tip and one barb. It measures 37.0 mm in maximum length, 20.5 mm in maximum width, 8.5 mm in maximum stem width, 12.7 mm in stem length, and 3.2 mm in thickness. One side of the point is covered with fine flake scars while the other side has a large flat surface indicating the point was made on a blade flake. Perdiz points date to about A.D. 1200 to 1500 (Collins 1995:Table 2; Turner and Hester 1999:227).

The Golondrina dart point was found on the terrace surface but near the cutbank edge by Garland Richards, but the location was mapped during the academy investigations (see Figure 11). The point (Figure 16) is complete except its distal tip is broken off in what appears to be an impact

fracture. It measures 49.5 mm in maximum length, 28 mm in maximum width, and 7.6 mm in thickness. Both blade edges have been reworked from just beyond the haft point to the distal end. The reworked edges are alternately beveled. The base and lower half of both lateral edges are ground smooth. This point style is from the late Paleoindian period and dates to about 9,000 B.P. (Collins 1995:Table 2; Turner and Hester 1999:126).

**Figure 15.** Perdiz arrow point surface collected from a gully cutbank in Area A at 41CK258. Scale in centimeters. Photo by Jack Rehm.

**Figure 16.** Golondrina dart point surface collected on the Oak Creek terrace in Area B at 41CK258. Scale in centimeters. Photo by Jack Rehm.

The prehistoric remains were not the focus of these investigations, but they are interesting nonetheless. They indicate that the Oak Creek terrace may contain buried stratified deposits from different cultural periods. There are several other prehistoric sites in the vicinity of Fort Chadbourne (Garland Richards, personal communication 2004).

## INTERPRETATIONS AND CONCLUSIONS

The TAS Archeology Academy investigations at Fort Chadbourne and the Flat on Oak Creek provided a learning opportunity for people interested in archeology as well as a fun social setting to make new friends with similar interests. The work also produced archeological data that is useful for understanding historic activities in and around Fort Chadbourne.

The excavations inside the barracks revealed some interesting details about the use of native juniper wood in the construction of the floor, as well as evidence of an abandoned interior wall trench and a possible roof repair episode. The archeological evidence seems to be consistent with the historical evidence for the construction and continued use and maintenance of the building into the twentieth century. The artifacts recovered from the test excavations are a mix of military and ranching period items, but it seems the latter are most common. Because of this mixing, it is impossible to isolate a discrete assemblage of materials associated with the military occupation.

Site 41CK258 has both prehistoric and historic components. While the prehistoric component was not examined closely during the academy investigation, the limited evidence indicates that the site probably contains stratified deposits from different time periods. In this alluvial setting, the prehistoric deposits could be significant.

Investigating the historic component at 41CK258 was priority of the academy investigations, and the surface features and artifacts provide important new data to help understand the history of Fort Chadbourne. The archeological and historical evidence suggest that 41CK258, herein named the Flat on Oak Creek, was part of a historic community that grew up adjacent to the army post, and its history was intimately tied to that of the Fort Chadbourne. As seen in the 1854 lithograph (see Figure 3), the Flat on Oak Creek was a small civilian community quite early in the fort's history, and it undoubtedly thrived while the army occupied the fort. This settlement was used for several decades, from the 1850s to 1870s, and its relationship with Fort Chadbourne was certainly symbiotic. The community could not have existed in this remote location without the protection of the army post, and the fort probably could not have thrived without the support of this nearby civilian settlement. While some civilian activities were closer to the fort (such as a saloon and sutler store), the Flat on Oak Creek may have provided many other services. As was common at many remote army posts in the west, the flat may have been a "hog town" where soldiers could find gambling, whiskey, and women. The community also was probably home to many civilians, including some who supported the army (e.g., laundresses, cooks, and freight haulers). The presence of fields on the flat as early as 1854 suggests that local

farmers and ranchers probably produced hay, beef, and other products under contract with the army (Freeman 2000:43, 66). The Flat on Oak Creek was the precursor to the community of Chadbourne that grew up around the fort but lived on long past the army occupations that ended in 1868.

What is most exciting about the flat is that the cursory examination by the Archeology Academy participants reveals an archeological site that is very much intact and appears to represent a relatively discrete time period. While the intensive ranching use of Fort Chadbourne for more than a decade after its military occupation means that most of the cultural deposits in the fort are heavily overprinted with later debris, this does not appear to be the case in the Flat on Oak Creek. The presence of structural mounds and possible dugout structures along the edge of Oak Creek is especially significant. While rock clusters provide evidence of other structures across the terrace, they have undoubtedly been impacted by land clearing and twentieth century farming activities. In contrast, the mounds and dugouts may well contain sealed features and artifacts that remain relatively undisturbed since they were abandoned.

It is unclear whether the army or civilians built the dugouts in the flat. Since the army arrived in October of 1852, it is possible that they constructed the dugouts to serve as temporary housing that winter and then began building the fort. More historical and archeological research would be needed to determine this.

In conclusion, the archeological investigations at the Flat on Oak Creek have barely scratched the surface of a site that is obviously important and warrants more intensive work. Additional investigations and mapping of the exposed surface features and artifact scatters would be helpful. This site offers a rare opportunity to examine and investigate a civilian frontier settlement associated with an Indian Wars frontier army post. The Flat on Oak Creek deserves more historical research attention, perhaps followed up with research-oriented archeology aimed at addressing specific gaps in the historical record. The archeological remains at site 41CK258 warrant protection and preservation and should be integrated into the overall site management plans being developed by the Fort Chadbourne Foundation.

## REFERENCES CITED

- Bailey, L. R. (editor)  
1963 *The A. B. Gray Report*. Westerlore Press, Los Angeles, California.
- Barnes, Frank C.  
1980 *Cartridges of the World*. DBI Books, Inc. Northfield, Illinois.
- Blair, W. Frank  
1950 The Biotic Provinces of Texas. *Texas Journal of Science* 2(1):93-117.
- Bureau of Economic Geology  
1974 Big Spring Sheet, Geological Atlas of Texas. Bureau of Economic Geology, University of Texas at Austin.
- Bureau of Land Management  
2004 *Historic Glass Bottle Identification & Information Website*. Online publication by the Bureau of Land Management, Department of the Interior. Available at [http://or.blm.gov/historic\\_bottles/index.htm](http://or.blm.gov/historic_bottles/index.htm) [accessed November 15, 2004].
- Busch, Jane  
1981 An Introduction to the Tin Can. *Historical Archaeology* 15(1):95-104.
- Collins, Michael B.  
1995 Forty Years of Archeology in Central Texas. *Bulletin of the Texas Archeological Society* 66:361-400.
- Creel, Darrell  
1978 An Archeological Survey in the South Concho River Area, West Central Texas. *Bulletin of the Texas Archeological Society* 49:241-307.
- 1980 Unpublished sketch maps of Fort Chadbourne, April 1980. Coke County file at the Texas Historical Commission, Austin, Texas.
- 1990 *Excavations at 41TG91, Tom Green County, Texas, 1978*. Publications in Archeology Report No. 38, Highway Design Division, State Department of Highways and Public Transportation, Austin, Texas.
- Dallas Morning News  
1999 *2000–2001 Texas Almanac*. Published by the Dallas Morning News, Dallas, Texas.
- Davis, Charles G.  
2002a "FORT CHADBOURNE." *The Handbook of Texas Online* at <http://www.tsha.utexas.edu/handbook/online/articles/view/FF/qbf8.html> [Accessed September 8, 2004 ].

- 2002b "FORT CHADBOURNE, TX." *The Handbook of Texas Online* at  
 <<http://www.tsha.utexas.edu/handbook/online/articles/view/FF/htf5.html>> [Accessed  
 September 8, 2004 ].
- Fike, Richard E.  
 1987 *The Bottle Book: A Comprehensive Guide to Historic, Embossed Medicine Bottles*. Peregrine  
 Smith Books, Salt Lake City, Utah.
- Flayderman, Norm  
 1980 *Flayderman's Guide to Antique American Firearms and their Values*. Second edition. DBI  
 Books, Inc., Northfield, Illinois.
- Fort Chadbourne Foundation  
 2004 "Fort Chadbourne Foundation" at <[www.fortchadbourne.org](http://www.fortchadbourne.org)> [Accessed September 8, 2004].
- Freeman, Martha Doty  
 2000 *A History of Fort Chadbourne, Coke County, Texas*. Unpublished manuscript prepared for the  
 Fort Chadbourne Foundation, Bronte, Texas, and the Summerlee Foundation, Dallas, Texas.
- Greene, A. C.  
 1959 Fort Chadbourne Built in '52, Switched Sides in Civil War. *The Abilene Reporter-News*  
 Monday, August 17, 1959.
- Herskovitz, Robert M.  
 1978 *Fort Bowie Material Culture*. The University of Arizona Press, Tucson, Arizona.
- Kirkland, Forrest, and W. W. Newcomb, Jr.  
 1967 *The Rock Art of Texas Indians*. University of Texas Press, Austin.
- Miller, George L.  
 1980 Classification and Economic Scaling of 19<sup>th</sup> Century Ceramics. *Historical Archaeology*  
 14:1-40.
- Nelson, Lee H.  
 1968 *Nail Chronology: An Aid to Dating Old Buildings*. Technical Leaflet 48, American  
 Association for the Advancement of State and Local History, Nashville, Tennessee (or)  
*History News* 23(11):detachable leaflet.
- Pollan, Sandra D., W. Sue Gross, Amy C. Earls, Johnney T. Pollan, Jr., and James L. Smith  
 1996 *Nineteenth-Century Transfer-printed Ceramics from the Townsite of Old Velasco (41BO125),  
 Brazoria County, Texas: An Illustrated Catalogue*. Prewitt and Associates, Inc., Austin,  
 Texas.
- Pool, Juliann C.  
 1991 An Overview of Nineteenth and Twentieth Century Buttons. *Historic Sites and Materials,  
 Number. 1*. Texas Parks and Wildlife Department, Austin, Texas. Original publication,  
 November 1986; revised March 1991.

Price, Cynthia R.

1979 *19<sup>th</sup> Century Ceramics...in the Eastern Ozark Border Region*. Monograph Series, No. 1. Center for Archaeological Research, Southwest Missouri State University, Springfield, Illinois.

Richards, Garland

2004 Historical facts pertaining to Barracks No. 2 at Fort Chadbourne. Interview with Douglas K. Boyd in Bronte, Texas, February 29, 2004.

Riemenschneider, Larry

2002 *Archeological Investigations: Fort Chadbourne (41CK129) Officers' Quarters (Fountain House), Coke County, Texas*. Fort Chadbourne Foundation, Bronte, Texas.

Texas Historical Commission

2001 *Texas Forts Trail Region*. Brochure published by the Texas Heritage Trails Program, Texas Historical Commission, Austin.

Turner, Billie L., Holly Nichols, Geoffrey Denny, and Oded Doron

2003 *Atlas of the Vascular Plants of Texas*. Sida, Botanical Miscellany, Number 24, Volume 2: Ferns, Gymnosperms, Monocots. BRIT Press, Fort Worth.

Turner, Ellen Sue, and Thomas R. Hester

1999 *A Field Guide to the Stone Artifacts of Texas*. Texas Monthly Press, Austin.

U.S. Department of Agriculture

1974 *Soil Survey of Coke County, Texas*. United States Department of Agriculture, Soil Conservation Service, in cooperation with the Texas Agricultural Experiment Station.

Wetherbee, Joan

1980 *A Look at White Ironstone*. Wallace Homestead Book Company, Des Moines, Iowa.

Wilson, Rex L.

1981 *Bottles on the Western Frontier*, edited by Edward Staski. University of Arizona Press, Tucson, Arizona, in collaboration with Southwest Parks and Monuments Association.