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## Archaeological Survey of Southwest Block and Selected Roads and Firebreaks at Camp Maxey, Lamar County, Texas

David L. Nickels  
tierrasantiguas@gmail.com

Lee C. Nordt  
*Center for Archaeological Research*

Timothy K. Perttula  
tkp4747@aol.com

C. Britt Bousman  
bousman@txstate.edu

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# Archaeological Survey of Southwest Block and Selected Roads and Firebreaks at Camp Maxey, Lamar County, Texas

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Archaeological Survey of  
Southwest Block and Selected Roads  
and Firebreaks at Camp Maxey,  
Lamar County, Texas

David L. Nickels, Lee C. Nordt, Timothy K. Perttula,  
C. Britt Bousman, and Kristi Miller

Robert J. Hard and C. Britt Bousman  
Principal Investigators

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## **Abstract**

In June, July, and September 1998, The Center for Archaeological Research (CAR) of The University of Texas at San Antonio (UTSA) conducted an archaeological survey of approximately 1,000 acres for the Texas Army National Guard (TXARNG) on Camp Maxey, a TXARNG training facility in north-central Lamar County, Texas, under Sections 106 and 110 of the National Historic Preservation Act and the Antiquities Code of Texas. The TXARNG had identified the 1,000-acre area for possible impact associated with the construction of firebreaks, road improvements, and subsequent military training with tracked and wheeled vehicles. Thirty archaeological sites were found and documented. Twenty-three sites contained a prehistoric component only, five sites contained a historic component only, and two sites contained both a prehistoric and historic component.

Based on the results of the pedestrian survey and limited shovel testing, CAR recommends that the following sites are insignificant and therefore ineligible for inclusion in the National Register of Historic Places or for designation as State Archaeological Landmarks: 41LR149, 41LR150, 41LR151, 41LR169, 41LR171, 41LR172, 41LR173, 41LR174, 41LR176, 41LR178, and 41LR179. CAR recommends that because the significance of the following sites is unknown, the TXARNG either avoid further impact to them, or conduct test excavations to determine their significance: 41LR152, 41LR153, 41LR154, 41LR155, 41LR156, 41LR157, 41LR158, 41LR159, 41LR160, 41LR161, 41LR162, 41LR163, 41LR164, 41LR165, 41LR166, 41LR167, 41LR168, 41LR175, and 41LR177.

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CAR crew members in the field were Chris Butler, Donna Edmondson, Lance Lamb, Brian Langner, Rodney "Bo" Nelson, and Kristi Miller. The project archaeologist was David L. Nickels. Timothy K. Perttula served as a consulting archaeologist. Lee C. Nordt and C. Britt Bousman conducted the geoarchaeological investigations while Charles Little of Little Backhoe Services skillfully operated the backhoe. The principal investigator was Robert J. Hard and the co-principal investigator was C. Britt Bousman.

Jim Steely freely offered his in-depth knowledge of the area and informed us of several archival sources. Dr. Jim Conrad, University Archivist at the Gee Library, Texas A&M University, Commerce, was extremely helpful in providing old maps and documents of northeast Texas, particularly from the Steely Collection. We are most appreciative of the drafting expertise provided by Chris Butler, Brian Langner, and Bruce Moses. And finally, our editor William Bishel is thanked for patiently and carefully preparing this report for publication.

# Chapter 1: Introduction

David L. Nickels

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## Introduction

In May 1998, the Center for Archaeological Research (CAR) of The University of Texas at San Antonio (UTSA) contracted with the Texas Army National Guard (TXARNG) to survey approximately 1,000 acres of mostly undisturbed land on Camp Maxey, a TXARNG training facility in north central Lamar County, Texas (Figure 1-1). The area is 11 km south of the Red River, in the Northeast Texas Archeological Study Region (Kenmotsu and Perttula 1993). Information from this survey was used to recommend each cultural resource for eligibility of inclusion in the National Register of Historic Places (NRHP) and for designation as State Archeological Landmark (SAL). Each cultural resource was categorized as either 1) eligible, 2) not eligible, or 3) further archival or archaeological investigations are warranted to make a determination for inclusion into the NRHP; and/or 1) warranted, or 2) not warranted for SAL designation. This information was submitted in a report for review and approval by both the TXARNG and the State Historic Preservation Officer (SHPO). Comments by the TXARNG and the SHPO on the report have been addressed and this final report provides the cultural resource inventory and eligibility recommendations necessary to support the TXARNG's cultural resource management plan for Camp Maxey.

## Project Description

This report discusses the results of an archaeological survey performed at Camp Maxey by CAR in May, June, and September 1998. The archaeological investigations were accompanied by geomorphological studies. Lee C. Nordt of Baylor University served as the consulting geomorphologist during the project.

The TXARNG is the agency charged with oversight management of archaeological compliance-related activities during the duration of the project. Because the project involves federal funds, it falls under the purview of the National Historic Preservation Act (NHPA) of 1966 (as amended). The National Register of Historic Places (NRHP) and the Advisory Council for Historic Preservation (ACHP) were created by the NHPA. Section 106 of the NHPA states that the ACHP must be given an opportunity to comment when any cultural resources eligible for inclusion in or listed on the NRHP are located in an area to be affected by the actions of a federal agency, or actions funded, permitted, or licensed by federal agencies.

Under Sections 106 and 110 of the NHPA, the protection of cultural resources is related to their eligibility for inclusion in the NRHP, which is in turn dependent on their NRHP significance as defined in 36 CFR 60. The NHPA Amendments of 1992 clarified Section 110 and directed federal agencies to establish preservation programs corresponding to their activities and effects on historic properties. Under Section 110, federal agencies may evaluate the significance of cultural resources not currently threatened to assist with the development of preservation planning. At the state level, the State Historic Preservation Officer (SHPO) at the Texas Historical Commission consults with and advises the lead agency (TXARNG in this case) about the implementation of the Section 106 and Section 110 processes. The THC administers the Antiquities Code and oversees compliance with rules and procedures. The federal regulatory process is described in detail in 36 CFR 800.

The purpose of this project was to identify and, with limited shovel testing, evaluate the eligibility of archaeological sites, because they were threatened by planned military training activities. Texas Antiquities permit number 2009 was issued for the project because the TXARNG is a political subdivision of the state and the Camp Maxey is property of the State of

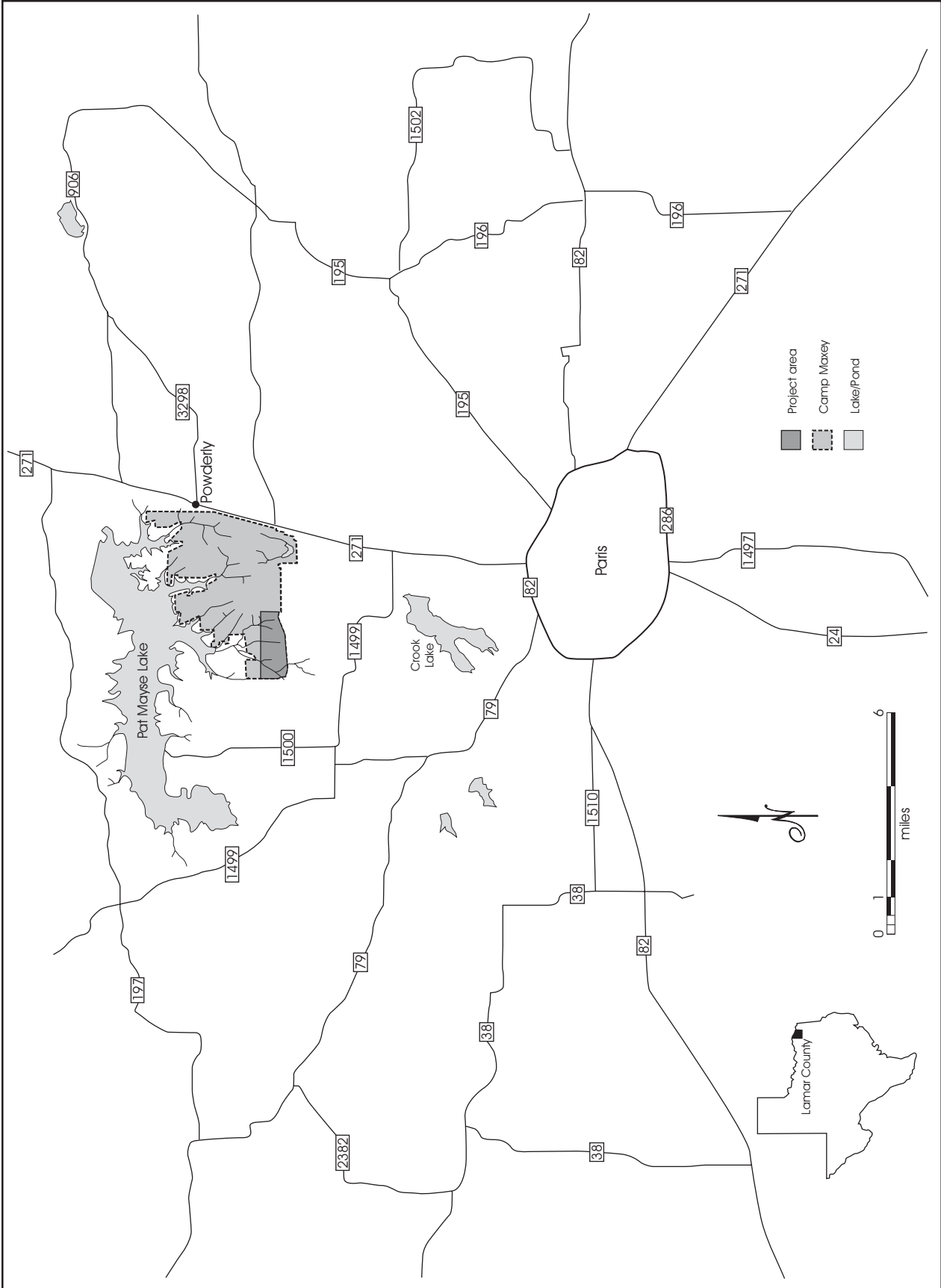


Figure 1-1. Camp Maxey project area, north-central Lamar County.

Texas. Robert J. Hard served as principal investigator and C. Britt Bousman acted as co-principal investigator. Timothy K. Perttula served as the regional consulting archaeologist, and daily field operations were directed by the project archaeologist David L. Nickels. CAR crew members who worked on the project included Chris Butler, Donna Edmondson, Lance Lamb, Brian Langner, Kristi Miller, and Rodney “Bo” Nelson. Field activities included pedestrian survey, shovel testing, backhoe trenching, and site recording.

Laboratory analysis of the prehistoric artifacts was performed by Timothy K. Perttula. The historic artifacts were analyzed by Kristi Miller and David L. Nickels. The artifacts, records, and other materials recovered or generated during the fieldwork and subsequent laboratory analysis were forwarded for curation to the Texas Archeological Research Laboratory (TARL) at the University of Texas at Austin.

## **Report Organization**

This report is divided into 12 chapters and two appendices. The project area description and environmen-

tal background for the project area are discussed in Chapter 2. Chapter 3 is an overview of the geomorphological investigations. Chapter 4 synthesizes previous archaeological research and the cultural historic contexts in the Camp Maxey region. The prehistoric research design is addressed in Chapter 5. Pertinent research issues concerning the historic land use at Camp Maxey are addressed in Chapter 6. Chapter 7 discusses the field and laboratory methodology employed during the survey project. The prehistoric sites and the artifacts, including isolated finds, are described in Chapter 8. Chapter 9 includes a discussion of the research findings concerning the prehistoric sites. The historic sites and the artifacts recovered during the survey are described in Chapter 10. An analysis of the historic data and research issues are included in Chapter 11. A project summary and specific recommendations about the eligibility of the archaeological sites for inclusion in the NRHP and SAL designation are presented in Chapter 12. Supporting artifact data are included at Appendix A. Geoarchaeological backhoe trench profile descriptions are provided in Appendix B.

# Chapter 2: The Project Area

David L. Nickels

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## Location and Modern Environment

Lamar County is one of the northernmost counties along the Red River boundary that separates Texas from Oklahoma. It is comprised primarily of ranch and farm land ranging between 400 and 635 feet above sea level. A subtle east-west ridge in the southern portion of Camp Maxey separates the northern half of the county from the southern half, and directs rainfall flow into tributaries of the Red River to the north or the North Sulphur River to the south. Among the many springs that have attracted people for millennia are Garrett Springs near the Garretts Bluff community, Ragtown Springs in Ragtown, Fulton Springs northwest of Arthur City, Pierson Springs northeast of Novice, Record Springs in northeast Paris, Moore Springs east of Paris, and Long Spring west of Roxton (Brune 1975:282–283). The Blackland Prairie, with its clayey vertisols, covers southern Lamar County, gradually changing into oak-hickory woodland on the loams that generally comprise the northern half of the county. Geologically, the area provides abundant outcrops of limestone and gravels. Large fluctuations in average temperatures throughout the year range from around 94°F during August to around 31°F in January. Nevertheless, the potential for agriculture is good because of a 228-day annual growing season (Ludeman 1996:39).

The 1,000-acre survey at Camp Maxey was divided into Areas 1 and 2 by CAR surveyors. Areas 1 and 2 consisted of a large (approximately 900-acre) rectangular parcel in the western portion of the facility that is covered with woodlands and grasslands. This 900-acre parcel is commonly referred to as the southwestern block. The remaining nearly 100 acres consisted of firebreaks and trails in the northern portion of the facility. Approximately 40 percent of Areas 1 and 2 is covered with woodlands with very low surface visibility, and the remaining 60 percent is grasslands.

Roughly 80 percent of the grasslands have recently burned, providing good surface visibility, but the unburned portions have a thick grass cover consisting mostly of little bluestem. The woodlands were not burned. The approximate coverage for each vegetation type is listed in Table 2-1.

Table 2-1. Estimated acreage and visibility by vegetation type in Areas 1 and 2.

Vegetation Type	Estimated Acreage	Visibility
Woodlands	360	<20%
Burned Grasslands	430	>20%
Unburned Grasslands	110	<20%

## Soils

The woodland areas are divided into upland and floodplain components and the soil survey for Lamar County shows that the soils in each of these two components differ (Ressel 1979). Guyton and Lassiter soils occur on stratified and unstratified alluvial sediments in the westernmost, Visor Creek floodplain in Area 1. Other drainages appear to have similar soils on alluvial sediments, but these were too limited to be included in the soil survey map. In the uplands all soils consist of an A–Bt epipedon and the A horizons are all relatively thin (Ressel 1979). The A horizons can contain historic and prehistoric cultural materials (some recent interpretations argue that this cultural material can be *in situ*), but the Bt horizons formed in much older sediments and do not bear *in situ* cultural materials. Loamy upland soils consist of Annona (20–25 cm thick A horizon), Freestone-Hicota (35–40 cm thick A horizon), and Woodtell (10 cm thick A horizon) series. Fine sandy loam soils consist of Whakana (35–40 cm thick A horizon) and Whakana-Porum (15–40 cm thick A horizon) series. Thin (10–30 cm thick) A horizons predominate across Areas 1 and 2.

## Lithic Resources

The geomorphic surfaces in the project area consist of floodplains, fluvial terraces, slopes, and ridge crests (Barnes 1979). Nordt's geomorphological investigations (see Chapter 3) determined that the fluvial terraces are concomitant with the Qt4 and Qt5 Red River terraces. The Qt4 contains gravel deposits and the Qt5 has a residual gravel veneer (Barnes 1979). Artifacts found during the survey were primarily made from Ogallala quartzite. The sole lithic quarry (41LR158) found during the Camp Maxey survey consisted of an outcropping of Ogallala quartzite gravels. However, artifacts made from Arkansas Novaculite and Red River cherts were observed; both are available in Red River gravels to the north.

## Paleoenvironment

### Introduction

The changing scope and depth of paleoenvironmental studies provides broadly applicable schemes on climatic and vegetation shifts that have occurred over the past 18,000 years in Texas. More recent research, particularly during the past decade, has contributed immensely toward understanding the paleoenvironment of Texas (e.g., Bousman 1998; Brown 1998; Caran 1998; Frederick 1998; Fredlund et al. 1998; Kibler 1998; Ricklis and Cox 1998). These studies continue to refine (and complicate) the larger context of Late Quaternary climatic change.

### Late Pleistocene

The paleoclimate of Texas contains significant gaps "primarily due to the scarcity of deep, finely stratified, and well-dated deposits" (Stahle and Cleaveland 1995:51). In Central Texas, pollen spectra from Boriack Bog suggest a shift from grasslands before 16,500 BP (BP; years before 1950) to woodlands before 12,500 BP in a moist and cool climate (Bousman 1994:79). The same spectra reveal a decline in spruce (probably cold-adapted) pollen by 15,000 BP, indicating a trend toward a warmer climate. Bousman's

(1992) oxygen isotope evidence from South Texas complements the bog pollen data and suggests early warming by 15,000 BP.

Beetle fossils from pond sediments in North Texas (Elias 1994) suggest a much cooler (10°C lower) than modern average climate between 14,200 and 13,500 BP. Toomey et al. (1993) argue that the data from Hall's Cave in the Edwards Plateau in Central Texas indicates summer temperatures in the Late Pleistocene were 6°C cooler than present averages, and that by 13,000 BP (or 12,500 BP [Toomey and Stafford 1994]) the wetter interval became warm and more arid. Between 12,500 and 11,800 BP, the Boriack Bog data indicate that a drier episode stimulated a brief shift to grasslands, corroborated by oxygen-isotope ratios showing a cooler setting in South Texas (Bousman 1992, 1994:80). The Hall's Cave record indicates a wetter interval around 11,000 BP (Toomey and Stafford 1994).

Although the oxisols and alfisols, high quantities of microbes in tree duff, and a high amount of rainfall in East Texas make the collection of measurable pollen samples difficult, the available evidence indicates there has been little change in East Texas habitats. While no East Texas bog or swamp has as yet yielded adequate paleoenvironmental samples dating to this time period, some data is available from western Louisiana and southeastern Oklahoma. Fossil pollen from Louisiana suggests that deciduous woodlands taxa such as spruce were predominant in the area through the end of the late-glacial period, around 11,000 BP (Bryant and Holloway 1985:55).

### Early Holocene

Pollen samples from the Llano Estacado and the dry caves of the trans-Pecos region prompted Bryant and Shafer (1977:15–19) to suggest a gradual warming and drying trend throughout the Holocene (after about 10,000 BP). Others, including Aten (1979), Gunn and Mahula (1977), and McNeish (1958:199) use data from Oklahoma, eastern Texas, and the Sierra de Tamaulipas in Mexico to propose a more variable change from the colder, wetter Pleistocene to the modern climate.



Innovative research in opal phytolith analysis from archaeological sites on the Coastal Plain of South Texas (Robinson 1979) also showed that, at least since the Early Holocene, climatic change has been highly variable. Climatic fluctuations in the Holocene are also suggested by Bousman (1998), again based on the Boriack and Weakly Bog data from Central Texas. Toward the Pleistocene-Holocene boundary at about 10,000 BP, arboreal species in the Boriack Bog spectra show a return of woodlands up to 9500 BP, followed by their decline and a reestablished predominance of open vegetation communities. Woodlands that had been reestablished by 8750 BP were again replaced by grasslands by 7500 BP (Bousman 1994:80). Robinson (1979:109) associated his oldest phytolith sample, although poorly dated, with "Late Paleo-Indian or Pre-Archaic" and suggested an age of about 8000 BP. The predominance of tall grass species, white oak phytoliths, a generally high frequency of other tree species (unidentifiable), and the generally small size of the grass phytoliths indicated a wet environment. Closer to East Texas, fossil pollen counts from Ferndale Bog in southeastern Oklahoma indicate grasslands were predominant in that area around 11,000–8,000 BP (Bryant and Holloway 1985).

### **Middle Holocene**

The continuous decline of the woodlands in the Early Holocene was briefly checked around 6000 BP, but resumed its slide until 5000 BP when arboreal pollen slowly increased with the appearance of a wetter climate (Bousman 1994:80). This Mid-Holocene arid period indicated at Boriack Bog agrees with data presented by Nordt et al. (1994) from the Applewhite project in San Antonio, where a dry period for roughly the same time frame (6000 to 4800 BP) is indicated. Humphrey and Ferring (1994) discovered the same arid episode in North Central Texas, but with greater duration (6500–4000 BP), agreeing with the revised interpretation from Hall's Cave of an arid episode between 7000 and 2500 BP (Toomey and Stafford 1994). A later occurrence between 5000 and 2500 BP (calibrated) is reported by Johnson and Goode (1994). The opal phytolith records from the Wilson-Leonard site in Central Texas (Fredlund 1994), and two sites on Coletto Creek in South Texas (Robinson 1979:111),

agree with increasing aridity in the Middle Holocene, indicated by spreading grasslands around 4400 BP and ca. 4500 BP, respectively. However, a sample from slightly higher in the Coletto Creek strata with roughly the same age argues for a quickly appearing, yet brief, wet episode (Robinson's [1979:111] Sample 4), followed by a return to an arid climate up to ca. 2750 BP.

Phytolith analysis of sediments from the Choke Canyon project (Robinson 1982:597–610) add to the claim of considerable climatic variability. Between 5300 and 4300 BP, Robinson (1982:598) infers a cool, mesic climatic regime that shifts to a more arid period and then returns to conditions both cooler and wetter than today's by 3250 BP.

Fossil pollen counts from Ferndale Bog is again used to infer the Middle Holocene environment of East Texas. Although not supported by fossil pollen, Bryant and Holloway (1985:55) believe that percentages of taxa such as oak, sweetgum, and pine, which adapt to drier conditions, may have increased. As the grasses and weeds decreased, oak, which was present at the end of the late-glacial period, has steadily increased. Percentages of sedge pollen, which thrives in moist environments, also began to increase with the decline of grasses and weeds, peaking at around 6,500 BP, dropping off slightly, and then peaking again a few hundred years ago (Bryant and Holloway 1985:55).

### **Late Holocene**

There are indicators that climate continued to fluctuate in the Late Holocene. Nordt et al. (1994) suggest a warm and dry episode between 3000 and 1500 BP based on stable carbon ratios from deposits at Applewhite Reservoir. Toomey and Stafford (1994) see a wet period appearing about 2500 BP at Hall's Cave. Their observations agree with those of Robinson (1979:112), suggesting a very wet episode. Ricklis's and Cox's (1998) study of oyster-growth patterns on the Texas Gulf coast tentatively implies a shift to a cooler climate at ca. 3000 BP, emerging out of a much warmer Middle Holocene. The Gulf Coast data tend to agree with the Choke Canyon analysis that points to mesic conditions (similar to today's) by 2450 BP (Robinson 1982:598–599). Afterward, a shift to more xeric con-

ditions occurred by 1000 BP, but Robinson suggests that they may have been more mesic than modern conditions. The predominance of short grass species agrees with large quantities of bison remains documented in archaeological context at Choke Canyon (Robinson 1982: 599). Grass pollen frequencies in the Boriack and Weakly Bog pollen spectra indicate drying episodes at 1600–1500 BP and 500–400 BP (Bousman 1994:80).

Brown (1998) demonstrated that the mean oxygen isotope values ( $^{18}\text{O}$ ) for fresh water mussel shells from Denton Creek (41DL270) in north central Texas can

be used to make general inferences about past air and water temperatures, rainfall, and evaporation. Higher isotope values occurring in mussel shells from dated contexts suggests a cool and wet climate around 3500 BP a warm, dry climate around 2850 BP, then cooling off and becoming wetter between 2500 and 1500 BP, and finally a warming trend occurring after 1500 BP (Brown 1998:164). The conclusions reached from Brown’s study of fresh water mussels are generally comparable to those of Humphrey and Ferring’s (1994) study of soil carbonate stable isotopes. The carbon isotope data from north central Texas indicates that between 4500 and 2000 BP the climate was moist, but

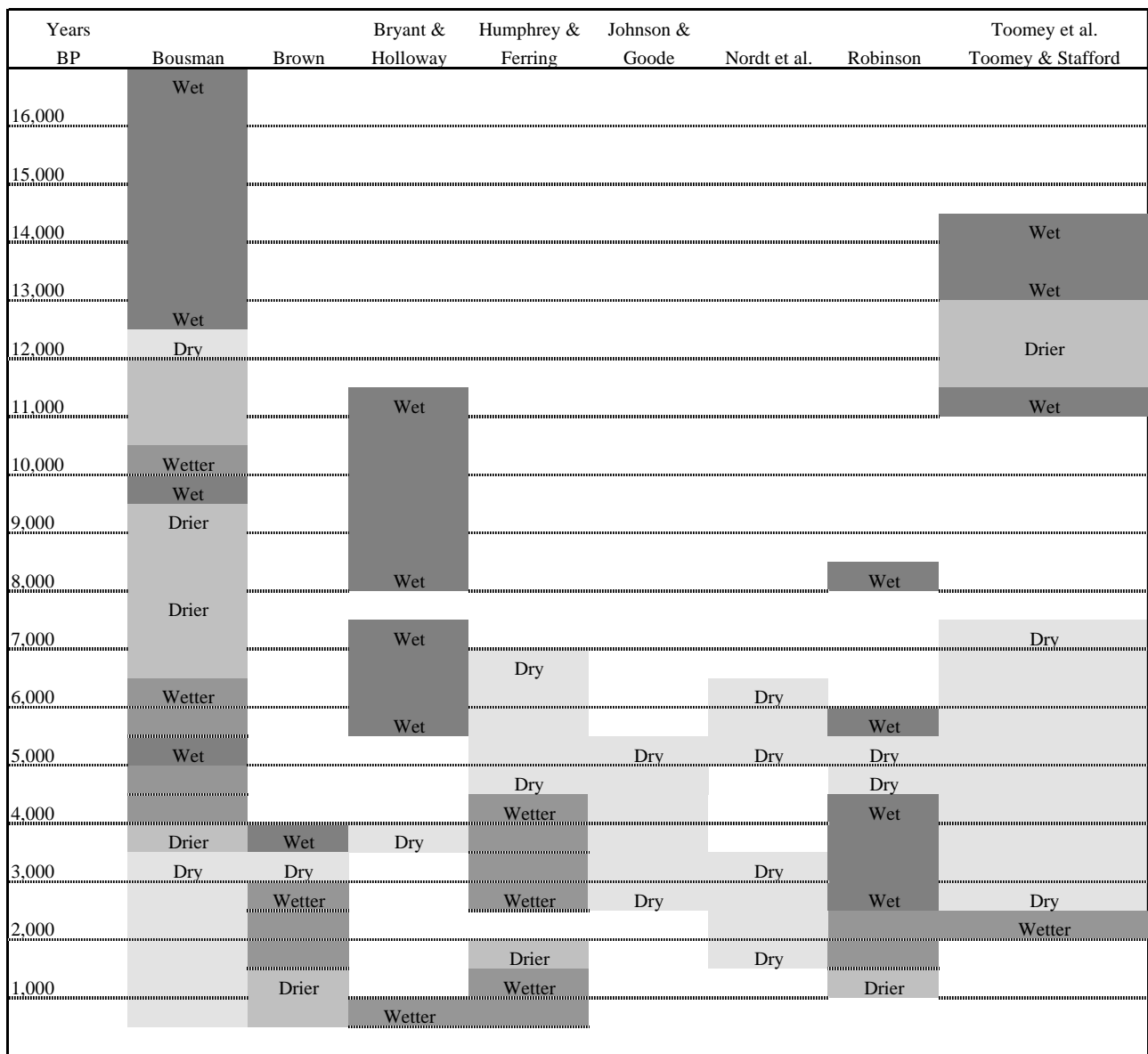


Figure 2-1. Various researchers’ contrasting views on the episodic changes in Texas paleoclimate.



began drying by 2000 BP, and for the next 500 years the area was much drier. However, around 1500 BP another shift occurred, and after 1500 BP the climate again returned to wetter conditions. Data from Ferndale Bog and Buck Creek Marsh suggest oaks and pines, which adapt to drier conditions, peak around 700 years ago, dropping in quantity slightly through the present, while sedges have increased significantly in the past few hundred years (Bryant and Holloway 1985; Holloway 1987).

## Summary

The paleoenvironment of Texas is as varied as the landscape. The waning of the Pleistocene, or late-glacial period, marked a transition from a cooler, wetter environment to one that steadily grew warmer and drier, with intermittent moist periods through about 6000 BP. Most researchers agree that the next 1000-1500 years was a period of drier conditions although Bousman's research suggest that, on the contrary, this period was wetter than normal (Bousman 1994). At least in Cen-

tral and East-Central Texas the period between 2,000 and 3,000 years ago appears to have been warm and dry, while intermittent moist and dry intervals characterize the past 2,000 years (see Figure 2-1).

It is likely that the climatic changes that have occurred during the Middle and Late Holocene have effected the composition and distribution of vegetation and faunal communities in Northeast Texas particularly since the region is an ecotonal setting between three major vegetation subregions, the oak woods, piney woods, and the Blackland Prairie. The degree or manner in which these changes in resources may have affected the prehistoric utilization of Camp Maxey and the larger area has not yet been defined. What is clear, however, is that the clearing of wooded areas for agricultural purposes during historic times has had dramatic impact on the plant and animal communities of the region. Although there are still many seeps, streams and swampy areas on the facility, they most probably flowed with greater abundance during wetter intervals than exist at the present time, providing an abundant resource for prehistoric occupants.

# Chapter 3: Fluvial Geomorphology and Geoarchaeology of Visor Creek

Lee C. Nordt and C. Britt Bousman

---

## Introduction

The first objective of the geoarchaeological investigation was to provide a general geomorphic and stratigraphic framework for the Camp Maxey project area in northern Lamar County. The second objective was to infer surface and buried preservation potentials of the prehistoric archaeological record based on previously established geological relations.

## Geoarchaeological Research Issues

One of the most important research topics that can be initiated during a survey in this portion of Texas is the understanding of Quaternary geology for defining the context of prehistoric and historic sites (Collins and Bousman 1993). Areas with high or low potential for preserving buried sites can be inferred with published sources (geological maps and soil surveys) and by preliminary in-field investigations. Any potentially informative cutbank profiles can be described with standard soil survey and geomorphic nomenclature. Also, any areas that appear to offer the potential for paleoenvironmental information, such as natural bogs, should be recorded.

One of the important issues in this part of Texas is whether prehistoric sites are in situ within the so-called sandy mantle that covers much of Central and East Texas (Bousman and Fields 1988; Brown 1975; Fields 1987, 1990; Fields et al. 1988, 1991; Largent 1991; Perttula et al. 1986; Thoms 1993; Waters and Nordt 1996). The dominant characteristics in the sandy mantle are: 1) A-E-Bt soil horizons with clay lamella in the E and underlying Bt; 2) an abrupt, and irregular to smooth, textural boundary between the upper sandy mantle and the underlying Bt (clay) horizon; 3) varying thickness and sometimes irregular surface of the sandy mantle; 4) apparent gullies eroded into the un-

derlying clay and filled with sand; 5) waterworn siliceous gravels in the sandy mantle but not in the underlying clay layer; and 6) cultural materials in the sandy mantle but never in the underlying clay horizons.

Two models that attempt to account for buried archaeological materials in the sandy mantle are currently in vogue. The first argues that the sands were created by pedogenic processes (elluviation and illuviation) that form the characteristic A-E-Bt horizons (Waters and Nordt 1996). Often the A-E (elluvial) horizons are very thick and as a result of translocation contain clay lamella that increase in frequency and thickness down profile. The clay lamella eventually coalesce to form the underlying Bt (illuvial) horizons. The proponents of this model argue that the sandy mantle and the underlying clay horizons are all a function of weathering and pedogenesis, and thus they are the same age. This model assumes that all cultural material has worked its way down profile through pedogenic (turbation) processes (Brown 1975; Bruseth and Perttula 1981). Thoms (1993) suggests that “reconstituted” cultural stratigraphy occurs when successive surface occupations are turbated over long periods of time. This could account for the apparent stratigraphic cultural sequences at many archaeological sites in sandy deposits.

The second model argues that colluvial and eolian depositional processes buried prehistoric occupations, especially those that occur in toeslopes and upland settings that would allow for the accumulation of colluvial, and in some cases eolian, deposits. The strongest evidence to support this model is the existence of in situ buried cultural features (Fields 1987, 1990; Largent 1991; Rogers 1994) and buried A horizons (Fields et al. 1988) at some sites. Moreover, at certain archaeological sites erosional features (gullies and small-scale escarpments) have been buried by the

sandy mantle (Fields 1990; Fields et al. 1988; Thoms 1993). These erosional features could not have formed by pedogenic processes. The proponents of this model are not suggesting that all sites are in situ, but rather that some of the sites provide evidence of in situ occupations. Within this framework, Thoms (1993) has proposed a third model called “graviturbation,” which combines portions of the two models discussed above. Graviturbation is the “slow downslope movement of masses of loose bedrock, unconsolidated sediment and soil under the influence of gravity and without the aid of running water (Waters 1992:301-304).” Thoms (1993:73-78) suggests that over long periods of time the sandy surface mantle slowly moves across the landscape due to gravity and bioturbation processes and the formation of the underlying Bt horizon forms as clays are translocated down profile. Thoms (1993:78) suggests a number of criteria that could test this model. First, sandy mantle on landform crests should be thin; second, most well-developed Bt horizons would be on these crests; third, there should be lithological and mineralogy similarities in the sand fraction between A, E and Bt horizons should occur; fourth, clay lamella should form the Bt horizons; and fifth, there should be evidence of “reconstituted” cultural stratigraphy.

This issue has renewed importance because of the recent comments by Texas Historical Commission archaeologists concerning “problem sites” (CRM News and Views 1998). The crux of the issue is whether archaeological sites represent in situ stratified occurrences, turbated sequences, or “reconstituted” stratified occurrences. The significance of each type of site is clearly related to determinations of site NRHP eligibility. In most settings, determination of in situ stratified occurrences, turbated sequences, or “reconstituted” stratified occurrences requires intensive geoarchaeological investigation and analysis.

The first step in this process is to determine if buried prehistoric or historic artifacts and/or features are present. This is a clear objective of shovel tests. One potential problem at Camp Maxey is the apparent thinness of the sandy A horizons and E horizons. One important goal of the shovel tests is to identify any areas that have thick sandy A horizons. At the same time indications of buried soil horizons can be made, at least in a limited fashion, from the shovel tests. The

second step is to determine if and to what degree turbation has affected a given site. Again, this can be addressed in a limited fashion with artifact distribution data from shovel tests, especially at those sites that might contain historic and prehistoric components where overlapping vertical distributions can be examined. Even at those sites with only prehistoric components, an inspection of vertical size sorting of artifacts can provide an indication of mixing, and even in multiple occupation settings (Vierra 1998). Additional assessment of the applicability of the three models to the Camp Maxey sites would require testing-level data that could be collected in a different phase of investigation in order to more accurately determine site context.

## Methods

The geomorphic surface map (Figure 3-1) was constructed from a combination of the Texarkana geologic atlas (Barnes 1979), the Soil Survey of Lamar and Delta Counties (Ressel 1979), and the Pat Mayse Lake East 7.5 minute topographic map. Geomorphic surfaces represent periods of landscape formation, have unique distributions in space and time, and often have erosional and depositional elements (Daniels and Hammer 1992). Soil-stratigraphic descriptions were written from exposures provided by six backhoe trenches dug to depths of 2 to 3 m. Procedures and standards of the Soil Survey Division Staff (1993) were followed.

## Study Area

### Geology

The study area is situated in north central Lamar County within the southwest corner of Camp Maxey. The tributary network consists of low-order creeks that flow northward toward the Red River. The modern channel of Visor Creek in the northwest portion of the project area is entrenched by about 2 m relative to the adjacent floodplain surface.

Two geological formations, both Cretaceous, are mapped within the project area (Barnes 1979). The

This page has been redacted because it contains restricted information.

Eagle Ford Formation underlies most of the area. It consists of gray clays and shales that grade into channel sands in the far eastern part of Lamar County. The Bonham Formation contains marl and clay, and outcrops to the south of the project area in the upper reaches of low-order tributaries that flow through Camp Maxey.

The Quaternary stratigraphic history of the region is poorly understood. Approximately 3 km to the northwest of the project area, an area of Qt4 is mapped (Barnes 1979). This is a terrace of the Red River situated 110 to 120 feet above the floodplain, or at an elevation of 510 to 520 feet. Furthermore, Qt5 deposits are mapped several km to the east and west of the project area at elevations of about 160 feet above the Red River floodplain. Although no diagnostic terrace tread and risers are visible in the project area, it is within the elevations of the high Red River terraces, and thus may contain erosional and colluvial remnants of Pleistocene alluvial deposits.

### Geomorphology and Soils

Three geomorphic surfaces containing erosional and depositional elements were mapped in the project area. The oldest geomorphic surface (G1) is situated above an elevation of 540 feet and is mapped in the southern part of the project area (Figure 3-1). This surface is near the elevation of the Qt5 terrace of the Red River, although it is an erosional element and probably post-dates deposition of the Qt5 terrace. The Freestone soil series coincides with the G1 geomorphic surface (Ressel 1979). It is a fine-loamy, siliceous, thermic Glossaquic Paleudalf. This soil has a thick A-E-E/B-Bt profile with fine sandy loam to loam upper layers (A-E-E/B) and clay loam to clay lower layers (Bt), assumed to be pedogenically related. Stratigraphic position and soil development strongly indicate that the G1 geomorphic surface is Pleistocene in age.

The second geomorphic surface (G2) is mapped between the older G1 surface and the Holocene G3 surface elevations of 500 to 540 feet (see Figure 3-1). This surface contains the headwaters of some local tributaries that occur above Holocene knickpoints of the G3 surface. Erosional elements make up most of the surface, but depositional elements occur along the

local tributaries. This surface is within the range of the Qt4 terrace of the Red River. The bulk of the G2 surface is mapped as the Whakana soil series, a fine-loamy, mixed, thermic, Glossic Paleudalf (Ressel 1979). This soil differs from the Freestone in that it contains more clay in the subsoil and is somewhat better drained. Based on stratigraphic position and degree of soil development, this geomorphic surface is also Pleistocene in age.

The youngest geomorphic surface in the project area is mapped as the G3 (see Figure 3-1). This surface includes not only the modern floodplains but the steep erosional slopes that grade into floodplains or tributary channels. It occurs at elevations below 520 feet. The small drainages within the G3 surface contain mainly steeper slope phases of the Whakana soil series. The area delineated as floodplain in the northwest part of the project area (see Figure 3-1) is mapped as the Lassiter soil series (fine-silty, mixed, non-acid, thermic, Aquic Udifluvents) adjacent to the creek channel and as the Annona (fine, montmorillonitic, thermic, Vertic Paleudalf) where the valley broadens on the east side of the channel (Ressel 1979). The Lassiter soils are frequently flooded and often contain a buried soil between depths of 50 and 100 cm (Ressel, 1979). The Annona soils are clayey upland or terrace soils, indicating that part of the broad floodplain valley was created as a strath terrace.

An alluvial fan emanates onto the floodplain in the northwest part of the project area (see Figure 3-1). Although not mapped as a separate soil unit, the surface morphology from the topographic map coupled with the fact that the area is at the mouth of two gullies entering the floodplain, suggests the presence of a fan.

### Stratigraphy

The stratigraphic sequence in the project area was divided into two broad units: Pre-Holocene and Holocene. This is necessary pending the future discovery of diagnostic artifacts or collection of samples for C-14 assays.

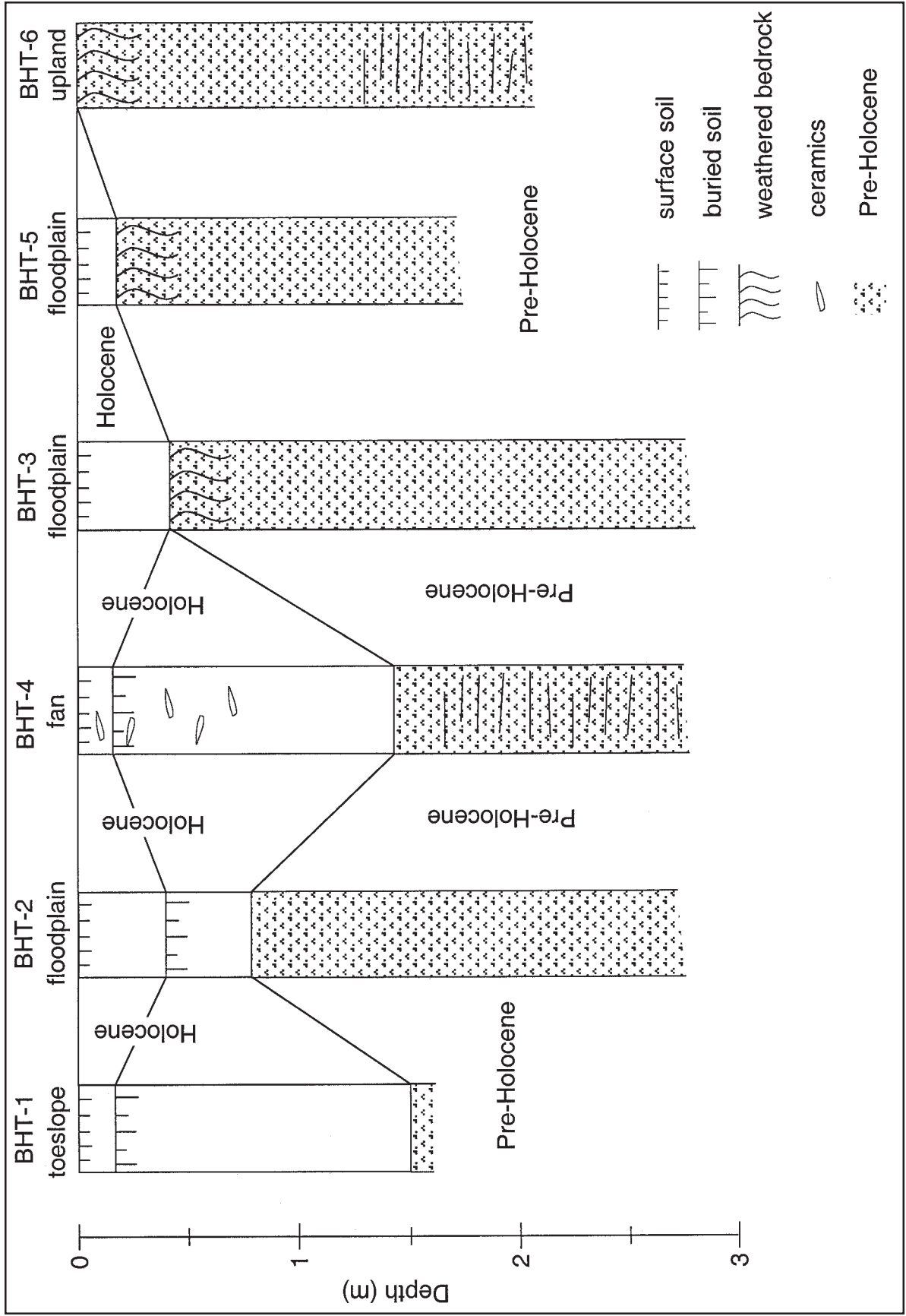


Figure 3-2. Backhoe trench profiles.



## Pre-Holocene

A Pre-Holocene unit was identified in each of the six backhoe trenches (BHT) excavated in the project area (see Figure 3-1 and Appendix B). In BHT-6 in the uplands of the G2 geomorphic surface, the Cr horizon consists of light gray matrix colors with reddish iron concentrations. Horizontal bedding and lithification indicate that this material is bedrock of the Eagle Ford Formation. The bedrock in BHT-6 is remarkably similar to that exposed in the lower profiles of the floodplain trenches (Figure 3-2). In most areas of the floodplain, however, a transition zone occurs where textures are loamy, colors mixed, and bedding planes obliterated. This is apparently an intensively weathered section of bedrock.

The parent material (Cr horizon) in BHT-6 is weathered into the Whakana soil containing an A-E-BA-Bt profile sequence (Appendix B). The A and E horizons are fine sandy loams, the BA horizon a sandy clay loam, and the Bt horizons clays. It is unclear if the A through BA horizons are pedogenically related to the underlying Bt horizons or whether there is an unconformity separating the two zones. The absence of fine to medium sand grains in the Cr horizon suggests that the surface layers may constitute a colluvial or eolian veneer, possibly of Holocene age.

## Holocene

The Holocene alluvial unit is mapped primarily in the floodplain and in colluvial toeslopes of the G3 geomorphic surface (Figures 3-1, 3-2, and Appendix B). BHT-1, -2, and -4 contain a buried soil between depths of 14 to 39 cm. In BHT-1 and BHT-4, this buried soil has an A-E-BT profile with fine sandy loam over sandy clay loam textures. This suggests that the paleosol may have formed over at least a several-thousand-year interval before being buried. BHT-1 was excavated in a toeslope position and BHT-4 in what may be the distal end of an alluvial fan (see Figure 3-1). In contrast, BHT-2 is immediately adjacent to the creek channel and inset to the broader floodplain at a slightly lower elevation. Here, a buried soil consists of an over-thickened A horizon that appears to be welded into the underlying bedrock at a depth of 78 cm (see Appendix B). This paleosol is tentatively correlated with the

paleosol in BHT-1 and BHT-4. Redoximorphic features indicate the paleosols were (and still are) saturated and reduced for extended periods of time each year.

All backhoe trenches in the floodplain have a veneer of more recent Holocene alluvium that forms the surface (see Figure 3-2 and Appendix B). This deposit ranges in thickness from 14 to 39 cm and consists of A-Bw profiles with fine sandy loam and sandy clay loam textures. In BHT-1 the surface veneer probably consists of a mix of flood alluvium and hillslope colluvium. On the east side of the floodplain, the alluvial surface veneer thins towards the valley wall where the buried soil is missing (see Figure 3-2). Minimal pedogenesis indicates that the surface veneer may be historic in age.

## Geoarchaeology

Geomorphic surfaces strongly influence the distribution of surface archaeological sites (Figure 3-1). This relationship works under the assumption that significant eolian or colluvial activity has not occurred since development of the individual geomorphic surfaces. With this assumption in mind, the G1 and G2 surfaces are Pleistocene in age. Consequently, cultural materials spanning all of Texas prehistory could potentially be compressed on parts of this surface. The G3 geomorphic surface is inferred to be Holocene in age. Thus, cultural materials dating to much of Texas prehistory could also be found on this surface. However, if parts of this landscape formed in the Late Holocene, this would greatly limit the antiquity of sites found on the G3 surface. This is particularly true of the floodplain component of the G3 surface, which may be historic in age.

Recognition of a Pre-Holocene deposit that spans the floodplain valley at shallow depths greatly diminishes the probability of finding deeply stratified sites in this context (see Figure 3-2). In BHT-3 and BHT-5, it appears that the complete soil-weathering zone that penetrates the Pre-Holocene surface is intact. Thus, sites dating to the early part of Texas prehistory could be preserved on this surface. The primary area for discovering prehistoric sites in stratified contexts appears to be in the thicker Holocene sediments exposed in

colluvium/alluvium (BHT-1) and in fan deposits (BHT-4). In fact, Early to Middle Caddoan ceramics were discovered in the upper 80 cm of the alluvial fan deposit exposed in BHT-4. It is unclear at what depth the ceramics originated, but the geomorphic context suggests that it was from the buried soil beginning at a depth of 14 cm. It appears that fan sediments can be traced into upland gullies to the south of the fan. Colluvium is probably widespread along the G3 surface bordering the tributary network.

Holocene alluvium appears to veneer the entire floodplain on the east side of the valley (see Figure 3-1). Prehistoric cultural materials will thus be only partially stratified within the upper 50 cm of deposits in this area. In the uplands near BHT-6, it is unclear whether the upper fine sandy loam layers (<50 cm) are Holocene colluvial or eolian deposits, or whether

they are Pre-Holocene soil horizons formed from pedogenic clay translocation. If the layers are Pre-Holocene, then the potential for finding buried cultural materials will be remote in the uplands. If, however, the layers are Holocene, much of the uplands could contain buried features within the upper 50 cm.

## **Conclusions**

Prospecting for prehistoric sites in stratified contexts should yield the greatest results in colluvial toeslopes and alluvial fans entering the tributary floodplain in the northwest part of the project area. The alluvial thickness is remarkably thin in the remainder of the floodplain at less than 1 m. More work is needed to verify or reject the hypothesis that the uplands contain a Holocene eolian or colluvial veneer.



## Chapter 4: Previous Archaeological Research and Historic Context

Timothy K. Perttula

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### Previous Archaeological Research

Camp Maxey is situated near the headwaters of several small streams that drain into Sanders Creek, a northward-flowing tributary of the Red River. Archaeological research in the middle reaches of the Red River, in the western portions of the Northeast Texas Archeological Region (Kenmotsu and Perttula 1993), has been ongoing since the early 1900s, but unfortunately the research has been relatively sporadic in the immediate vicinity of Camp Maxey (see Story 1990). In this chapter, the history of previous research in the Camp Maxey area will be discussed, focusing on the 1960s investigations of several prehistoric sites prior to the construction of Pat Mayse Reservoir (Lorrain and Hoffrichter 1968; Shafer 1966), followed by a review of the native history of this part of Northeast Texas. Because of the nature of research in the area, this review will concentrate on the last 2,000 years of prehistoric settlement of the middle Red River area, as this period is well known by comparison to the preceding 10,000 years.

Prior to the archaeological work conducted at Pat Mayse Reservoir, just north of Camp Maxey, prehistoric and historic Caddoan research in the general area consisted of early 1930s investigations at the important T. M. Sanders mound site (41LR2), at the mouth of Bois d'Arc Creek and the Red River, and the early historic Womack site (41LR1) at Garrett's Bluff, both by the University of Texas (Guy 1990: Table 3). Dallas Archeological Society members also worked at Sanders, excavating a multiple burial in the burial mound (see Guy 1990:45; Hamilton 1997), and documenting burials and other features at Womack (Harris et al. 1965). In 1946, Alex D. Krieger synthesized the findings from the Sanders site in conjunction with an overview of Caddoan archaeology in northern Texas (Krieger 1946).

Investigations at Pat Mayse Reservoir were conducted by The University of Texas (Shafer 1966) and Southern Methodist University (Lorrain and Hoffrichter 1968) in 1965 and 1967, respectively. A total of 23 prehistoric sites were recorded during the work along Sanders Creek and tributaries, most of them of either Woodland (ca. 200 B.C.–A.D. 800) and Caddoan (post-dating A.D. 800) age, but significant Archaic and Paleoindian artifacts and/or deposits were also present at several of the sites. The Archaic deposits include middens with discarded and broken tools, fire cracked rocks, and other items.

The 1967 excavations by Lorrain and Hoffrichter (1968) examined nine sites on upland (Emberson [41LR10], Charles Watson [41LR25] and Cundleff [41UR29]), floodplain rise (Snapping Turtle [41LR11], Charles Price [41LR12], and Gold Bug [41LR13]), and low terrace (Drowned Head [41LR27], Weekend Warrior [41LR31], and Water Snake [41LR32]) landforms in the Sanders Creek valley. Although the work was not extensive (only a total of 81 m<sup>2</sup>, 16 backhoe trenches, and two small machine-scraped areas were completed at the nine sites), Lorrain and Hoffrichter (1968) did document a fairly intensive use of the Sanders Creek valley in the Woodland, Early Caddoan, and Middle Caddoan periods. The Caddoan settlements appear to be closely affiliated with communities to the north a few miles away on the Red River.

These components, particularly the Caddoan occupations, appear to be residential in nature (either seasonally or year-round), with midden deposits, and/or baked clay concentrations from hearths and/or collapsed house walls, although no structures were defined during the limited work. The recovery of bison bones at the Gold Bug and Weekend Warrior sites in apparent ca. A.D. 900–1300 Caddoan midden contexts indicates exploitation of this important prairie resource

by Caddoan hunters. At the Drowned Head site, however, a Late Archaic component with a shallow midden was identified with a basin-shaped hearth and much fire-cracked rock.

In Camp Maxey itself, archaeological efforts have been limited to a few cultural resource management survey projects associated with proposed developments and ground-disturbing activities on the Texas Army National Guard facility. Corbin (1992) completed a survey of an 8.8-mile pipeline that bisected the facility, and documented several prehistoric and historic sites, including 41LR137, which has a Paleoindian component. Structural remains associated with the use of Camp Maxey during World War II were recorded as 41LR139. Three small surveys have subsequently been conducted by archaeologists from the Adjutant General's Department of Texas (AGD) in 1993, 1997, and 1998 (Adjutant General's Department 1993, 1997; Sullo and Stringer 1998), and four historic late nineteenth to early twentieth-century sites with cisterns (41LR145–41LR148) were recorded. Most recently AGD archaeologists have investigated an apparent Early to Middle Caddoan period prehistoric residential Caddoan site (41LR170) on Camp Maxey and Corps of Engineers Tulsa District lands at Pat Mayse Reservoir (Shellie Sullo, 1998 personal communication).

## Historic Context

### Paleoindian

This part of northeast Texas was settled first by mobile hunter-gatherers as early as 12,000 years ago (the Paleoindian period), and used by Archaic foragers for millennia (Fields and Tomka 1993). Much of what is known about these periods comes from the study of lithic tools and lithic raw materials found in surficial, mixed, and multi-component sites across the region, as discrete Paleoindian components in this area have been difficult to recognize and define.

The wide dispersion, but relatively sparse archaeological record, of Paleoindian artifacts on many different landforms suggests that the Paleoindian groups were very mobile hunters and gatherers rather than

specialized hunters of extinct megafauna (Fields and Tomka 1993:82). Although mixed with other materials, the Snapping Turtle site (41LR11) on Sanders Creek has a fairly substantial Late Paleoindian tool assemblage of Dalton and Plainview points, Quince-style bifacial scrapers (Lorrain and Hoffrichter 1968:Figure 9a–m), and a drill.

### Early Archaic

Although evidence of the Early Archaic occupations is rather limited from northeast Texas, it appears that group mobility remained high for hunting-gathering foragers during this period, and group territories were large and poorly defined, with most sites conforming to what Thurmond (1990:41) called “heavy” and “limited-use” areas; that is, repeated and recurrent occupations by small groups. Anderson (1996) suggests that such Archaic groups had highly mobile foraging adaptations along the Red River, with expedient lithic technologies. Most sites of this age were briefly used, but tended to concentrate in the larger drainages within the region.

### Middle Archaic

By the Middle Archaic period, fairly substantial and extensive occupations are recognized within the major basins, with a rather limited use of smaller tributaries and headwater areas. Burned rock features (possible hearths, ovens, and cooking pits) and burned rock concentrations are present in Middle Archaic contexts at a few sites in the Sulphur River drainage (see Fields et al. 1997; Cliff et al. 1996), suggesting that an important activity was the cooking and processing of plant foods. Lithic raw material data from a possible Middle Archaic assemblage at Lake Fork Reservoir in the upper Sabine River basin indicates that the exchange of non-local materials (particularly finished tools) was commonplace, although “patterns in raw material use were not uniform across Northeast Texas” (Fields and Tomka 1993:92).

## Late Archaic

Late Archaic sites are widely distributed in the Pineywoods and Post Oak Savanna of northeast Texas, occurring along the major streams, near springs, on spring-fed branches, upland ridges, and on tributary drainages of all sizes. In fact, the distribution of Late Archaic sites suggests these groups moderately to extensively used almost every part of the region, and in particular, major concentrations of Late Archaic sites have been noted along the Red and Little Rivers in southwest Arkansas and northwest Louisiana (Anderson 1996). Similar densities of Late Archaic sites can be expected in the Red River valley in northeast Texas. Some Late Archaic occupations contain earthen middens (for example, the Yarbrough site along the Sabine River; see Johnson 1962), but sites of this age generally contain burned rock features and/or concentrations of burned rocks, as well as small pits.

These settlement data are compatible with higher population densities during the Late Archaic, more limited group mobility, the possible establishment of delimited territorial ranges, and an economy based on the hunting and gathering of local food resources. No paleobotanical evidence is available that indicates the Late Archaic populations in Northeast Texas cultivated native plant species (such as sumpweed, sunflower, and chenopod), as was the case ca. 2,000–3,000 years ago in many parts of eastern North America (Fritz 1994:25–27). Nutshells and prairie turnips are documented in Late Archaic components along the lower Sulphur River, however (Cliff et al. 1996). The high use of local lithic raw materials during the Late Archaic speaks to a more confined interregional interaction at this time (Fields and Tomka 1993; Perttula and Bruseth 1995).

About 2,000 years ago, during the Woodland period along the Red River in northeast Texas, however, the prehistoric Native Americans living in the middle reaches of the Red River basin began to settle down in small hamlets and camps dispersed across recognizable territories (Perttula et al. 1993; Schambach 1982). These Native American groups made thick and plain grog-tempered pottery, and used Gary and Kent dart points for hunting and other tasks (Story 1990). About A.D.

700, these groups began to make and use small stemmed arrowpoints for hunting. One of the better known late-Woodland sites in the region is the Ray site (41LR135), situated on a small terrace of Nolan Creek, a tributary of Big Pine Creek in the Red River basin (Bruseth 1998:53). Excavations there document that the site was a “small hamlet occupied by one or two families for a few generations (Bruseth 1998:55), with house patterns and trash midden deposits, mainly plain grog-tempered ceramics, Gary points, and an abundance of Homan arrowpoints.

## Late Prehistoric/Early Historic

The principal occupation of Red River and Lamar counties in prehistoric and early historic times (up to about A.D. 1800) was by Caddo-speaking groups (specifically the Kadohadacho and affiliated groups) that lived in settled horticultural and agricultural communities (principally farmsteads and small hamlets). Larger villages were also situated along the Red River during much of the prehistoric and early historic era along the Red River (see, for example, Story 1990; Perttula 1992; Bruseth 1998:55–62). The current chronology of Caddoan periods and phases in the middle Red River valley is provided in Table 4–1.

## Caddoan Archaeological Sites

Caddo archaeological sites in the region are known to be located on elevated landforms (alluvial terraces and rises, natural levees, and upland edges) adjacent to the major streams, as well as along the minor tributaries and spring-fed branches. They are also located on

Table 4-1. Periods and Phases in the Middle Red River Valley\*

<b>Period</b>	<b>Phase</b>	<b>Time</b>
Formative Caddoan	—	A.D. 900–1100
Middle Caddoan	Sanders	A.D.. 1100–1300
Late Caddoan	early McCurtain	A.D. 1300–1500
	late McCurtain	A.D. 1500–1700
<b>Historic Caddoan</b>	—	<b>A.D. 1700–1730+</b>

\*After Bruseth 1998:Figure 3–4

or in proximity to arable sandy loam soils, presumably for cultivation purposes. These Caddo groups were powerful theocratic chiefdoms that built mounds for political and religious purposes and functions, traded extensively across the region and with non-Caddoan-speaking groups, and, in certain settings, developed intensive maize-producing economies (see Perttula 1996).

Formative Caddoan sites along the Red River are common in the main valley and tributaries of the river, and are also present in the southern flanks of the Ouachita Mountains (Bruseh 1998:Figure 3-7). Settlements comprise villages, hamlets, and single households, and an occasional village (such as the A. C. Mackin and Arnold Roitsch sites) has a house and/or burial mound. Also present at the larger villages are substantial cemeteries (as at Cemetery No. 2 at the Holdeman site, with more than 30 burials), and the Bentsen-Clark site (Banks and Winter 1975) contains two large shaft tombs with numerous grave goods. Common kinds of grave goods include arrowpoint quivers, large chipped bifaces, celts, long-stemmed clay pipes, and Spiro Engraved, Holly Fine Engraved, Crockett Curvilinear Incised, Kima Incised, Pennington Punctated Incised, East Incised, and other decorated and plain vessels (Bruseh 1998:57 and Table 3-1).

Middle Caddoan period sites in the middle Red River Valley of Northeast Texas appear to have cultural affiliation with the Sanders phase/focus originally recognized by Krieger (1946). Sanders phase components are distributed in the Middle Red, Kiamichi, and Upper Sabine River basins of southeast Oklahoma and northeast Texas (see Bruseh et al. 1995:Figure 3). In the Middle Red River valley, components at key sites include the A. C. Mackin (41LR36), Fasken (41RR14), Roitsch (41RR16; previously known as the Sam Kaufman site), Dan Holdeman (41RR11), T. M. Sanders (41LR2), and Harling (41FN1) sites (Mallouf 1976; Bruseh 1998).

Middle Caddoan period settlements along the middle Red River include dispersed farmsteads and hamlets with structures, middens, and cemeteries, as well as large communities such as the Roitsch and Holdeman sites with single and multiple mounds; these include

substructure mounds, flat-topped platform mounds, and burial mounds (see Perino 1995; Hamilton 1997). Sites may have had from one to as many as three mounds at the larger communities or villages.

Burials in mound and non-mound contexts were typically in extended supine position, with large numbers of grave goods in association. At the Holdeman site, for example, Sanders phase burials contained an average of 6.5 grave goods, mainly ceramic vessels, per individual (Perttula 1995:Table 1), with even more substantial grave good associations (shell conch dippers, gorgets, and beads, bone beads, projectile points, and ceramic vessels) from Class I and II elite or high status burials at the Sanders site (Hamilton 1997:Table 2). The mortuary component at the Sanders site also includes plain and engraved shell gorgets, dippers, beads, triangular inlays, and conch pendants, as well as bone beads, pigments, and copper-covered siltstone earspools (Krieger 1946:202–203). Green pigments were a common inclusion in Sanders phase burials at the Holdeman site (Perttula 1995:Table 6).

Regarding the subsistence pursuits of the Middle Caddoan populations in the Middle Red River valley, tropical domesticates (maize) are present in archaeological context. Stable carbon isotope data from the Holdeman and Sanders sites suggests that the dependence on maize was not uniform, and ranged from an apparently high dependence at Sanders (Wilson and Cargill 1993), but not necessarily so at Holdeman ca. A.D. 1200. Dental paleopathologies at the Sanders site confirm the fact that the Sanders population had a carbohydrate-rich diet (Wilson 1997), and caries are also common in the Holdeman site dentition (Loveland 1987, 1994).

Among the lithic artifacts found in Middle Caddoan period contexts are Bonham, Morris, and Scallorn sattler arrowpoints (see Brown 1996:442), grinding stones, flake tools, celts, and sandstone abraders (Krieger 1946; Perino 1995). There are long-stemmed Red River, Haley variety pipes, as well as clay and stone elbow pipes present (Perttula 1997:Figure 2a–b), and a wide assortment of ceramic vessels. Vessels of the types Canton Incised, Macey Noded Redware/Blackware, Paris Plain, Sanders Engraved, and Sanders Plain are relatively common in Middle Caddoan



period contexts in the middle reaches of the Red River, along with East Incised and Monkstown Fingernail Punctated. At the Sanders site, for example, of the 461 classified vessels, Sanders Engraved accounts for 15.8 percent of the assemblage; Canton Incised accounts for 29.1 percent; Maxey Noded Redware accounts for 8.3 percent; and red-slipped plain (Sanders Plain) bowls comprise another 4.6 percent of the assemblage (Krieger 1946:Table 5). More than 15 percent of the vessels at the site have a red slip. At the Holdeman site, 23 percent of the Sanders phase vessels have a red slip, plain V-shaped and carinated bowls and jars are very common (comprising 67 percent of the 109 vessels in the Middle Caddoan component), while Maxey Noded Redware and Canton Incised are predominant (see Perttula 1995:Table 9). Other vessel characteristics/attributes include increased red-slipping of bowls and bottles; bowls with scalloped rims; red-slipped neckless bottles; rim effigy heads and tabtails; rim peaks; strap handles; incised, punctated, and appliqued jars; and interior thickened rims on many red-slipped bowls (see Perttula 1997:Figures 3 and 4).

Certainly the best-known prehistoric Caddoan period in the middle Red River valley is the Late Caddoan period and the McCurtain phase. Bruseth (1998) provides the most up-to-date discussion of the archaeological character of the Late Caddoan McCurtain phase. From stable isotope analyses and bioarchaeological evidence of health and dietary conditions, the McCurtain phase Caddo were agricultural peoples, depending heavily on the cultivation of maize as the main staple of the diet (Rose et al. 1998; Colby 1997). Like other Late Caddoan groups on the Red River, the McCurtain phase settlement pattern includes numerous habitation sites (with household cemeteries) and mound centers—such as the Roitsch, Dan Holdeman (Perino 1995), and Rowland Clark (Perino 1994) sites—although the mounds appear to have mainly been constructed and used between ca. A.D. 1300–1500. Bruseth (1998:62) suggests that the Caddo settlements along this stretch of the Red River resembled the Teran-Soule model (see, for example, Schambach et al. 1983; Trubowitz 1984) in that Caddo villages were composed of individual compounds of houses and other structures associated with mounds and the residence of a *caddi* or chief. The density of McCurtain phase sites indicates that “greater numbers of people were living in closer

proximity than before” (Bruseth 1998:64). At the Roitsch site (previously known as the Sam Kaufman site), the mound in McCurtain phase times was used as a place for the burial of the social elite, as a shaft tomb with 10 individuals and many grave goods was located near the center of the mound (Skinner et al. 1969). Special purpose salt-processing sites (such as the Salt Well Slough site [41RR204]) are also common in the vicinity of the Roitsch site. The distribution of McCurtain phase settlements along the middle Red River suggests that these westernmost Caddoan farmers did not permanently (or perhaps even intermittently?) occupy the valley upstream from the mouth of the Kiamichi River (see Bruseth 1998:Figure 3–9), some miles downstream from the Camp Maxey area.

During the Late Caddoan period there is evidence of extensive trade or exchange. The recovery of Gulf Coast conch shell artifacts (gorgets, beads, and pendants) points to southern connections, while Kay County flint in one burial indicates that the late Caddoan McCurtain phase groups at Roitsch (Perino 1995) had exchange relationships with Plains Village groups (the Great Bend cultures) along the Arkansas River in southern Kansas and northern Oklahoma. Red River McCurtain phase ceramics have also been found in Great Bend sites dating after ca. A.D. 1500.

Due to diseases introduced by Europeans and the incursions of the Osage into the Red River valley to obtain deer hides and Caddo slaves, Kadohadacho groups had abandoned the middle and lower Red River basin by the late 1700s (see Smith 1998). These Caddo groups subsequently moved to the Caddo Lake area along the Louisiana and Texas border. In the Camp Maxey area, however, an early eighteenth-century Caddo settlement or hunting camp at the Womack site (Harris et al. 1965) indicates that the Caddo were exploiting this part of the Red River basin for deer hides in the French fur trade. The Womack artifact assemblage is dominated by stone scrapers, large knives, and triangular projectile points, along with iron knives, gun parts, lead shot, and native and French gun flints; other French trade goods also were abundant (Harris et al. 1965; Perttula 1992). Based on the recovery of European trade goods, stone scrapers, and plain shell-tempered pottery, other possible historic Caddoan sites may be present, such as the Sanders and Harling sites on the Red River.

# Chapter 5: Background and Research Design for Prehistoric Sites

Timothy K. Perttula

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## Prehistoric Research Issues

Several pertinent northeast Texas research issues can be addressed using the archaeological site and artifact assemblage information obtained from the Camp Maxey survey, and we will discuss each in turn. The available regional archaeological information for this part of the Red River basin suggests that, first, Late Paleoindian and Late Archaic sites are relatively common, particularly Late Archaic components (see Lorrain and Hoffrichter 1968; Johnson 1989; Story 1990), which tend to occur in a wide diversity of settings, including an intensive use of forested and prairie uplands; second, Woodland period sites, including components that may contain middens and structures from sedentary occupations, are abundant along the Red River and its alluvial floodplain, but less common along the tributaries near their headwaters, although these (such as the Ray site) may also contain structures and middens (Bruseeth 1998); and, finally, Caddoan sites dating between ca. A.D. 800–1700 are well represented in this part of the Red River Basin, especially hamlets, villages, and mound centers along the Red River and its principal northward-flowing tributaries (such as Sanders Creek). Major changes in Caddoan land-use and subsistence patterns after ca. A.D. 1300, where intensive maize-producing economies had evolved in parts of the Red River basin and other parts of the Caddoan area (see Perttula 1996:313–322), suggest that the upper part of the Red River (in Lamar and Fannin counties) was not intensively occupied by Caddoan groups (Bruseeth 1998: Figures 3–9 and 3–10), and was not reoccupied until the eighteenth century by Caddoan and Wichita groups, and an occasional French trader.

## Paleoindian and Archaic Mobility Patterns and Landscape Use

An important issue for understanding the archaeology of the Red River basin and its tributaries is the use of the land by many generations of mobile hunters-gatherers during the Paleoindian and Archaic periods. The available evidence, while slim and based primarily on differences in occupation intensity, toolkit composition, lithic assemblage diversity, and the use of local versus non-local raw materials (Fields and Tomka 1993), suggests significant differences over time in residential and non-residential settlement patterns within the northeast Texas region. In particular, it appears that there were increased population densities by Late Archaic times, with a more intensive use of the landscape that was accompanied by decreasing territory sizes (Fields and Tomka 1993:85). Fields and Tomka (1993) also suggest that the western portions of northeast Texas (like the Camp Maxey area) were less-intensively used for residential purposes than other parts of northeast Texas.

Based on the general setting, we would expect that the use of Camp Maxey during Paleoindian to Archaic times would have been less intensive than along either the Red or Sulphur rivers, but would have peaked in use during the Late Archaic. It is probable that residential and non-residential use by these broad-spectrum hunter-gatherers occurred at some time on virtually every level landform near available water and forest resources. Lithic quarries and procurement sites should also be present, with abundant chipping debris and burned rocks from heat-treating of the poor quality quartzites and cherts. The identification of Paleoindian and Archaic occupations at Camp Maxey, and the study of their lithic assemblages (most notably what information they contain on the range of activities, occupation length, frequency of reoccupation,

technology, and raw material procurement and use) will contribute important information on Paleoindian and Archaic hunter-gatherer mobility in the Red River basin of northeast Texas.

### **Sedentary Woodland Groups**

The Woodland or Fourche Maline period (ca. 200 B.C. to A.D. 800) was apparently a time of significant change in settlement permanence among local hunter-gatherer groups in the Red River basin, as they became more sedentary. It was also a period when there were major innovations in technology, including the introduction and adoption of the bow and arrow and ceramic containers; there is some evidence that tropical cultigens, as well as the use of local seed plants, began to be more commonly used in the diet toward the end of the period. Schambach (1997) also indicates that the Caddoan mound-building tradition actually began as a burial mound tradition in the Woodland Fourche Maline period along the Red River (perhaps between A.D. 600–900), and that the first construction of flat-topped temple mounds dates several hundred years later. Such sites in the Red River basin are characterized by thick grog-tempered ceramics with flat bottoms and stilted bases, Gary dart points, and chipped stone axes; during the latter part of the period (ca. A.D. 600–700), arrow points first appear, along with Coles Creek-style vessels.

The identification of Woodland period sites at Camp Maxey, and a determination of their character (that is, presence of middens, types of ceramics, and so forth) and landform setting, are significant both in documenting the range of settlements in this part of the Red River basin and in their potential to address settlement subsistence, material culture, and technology questions posed in “The Emergence of Sedentism in Northeast Texas” (Perttula et al. 1993). At present, “there is a critical need for information about the Woodland period in the Red River drainage” (Perttula et al. 1993:101). Questions of settlement distribution and permanence during the Woodland period are thus key to understanding the tempo and character of cultural change that took place in the subsequent Caddoan tradition.

### **Caddoan Settlements and Communities**

The Caddoan people lived in sedentary, dispersed communities; there is a preponderance of small sites. These communities consisted of single homesteads and/or farmsteads with one or two structures and small family cemeteries; small hamlets with a few houses, trash midden deposits, and family cemeteries; and a few larger villages with a patterned arrangement of houses and middens around plazas, and also with cemeteries. Occasionally the villages included small earthen mounds, and these apparently capped important public structures.

The dispersed communities, at least through much of Caddoan prehistory, were associated with civic-ceremonial centers containing earthen mounds and public architecture (see Story 1990). The homesteads, farmsteads, and self-sufficient hamlets could be as much as 30 km from the centers. The most current model of Caddoan settlement—the Terán-Soule model (Schambach 1983:7)—is based on the Terán de los Rios map of the Nasoni village on the Red River (1691), and Soule’s 1874 photographs of a Caddoan village (Long Hat’s Camp) in western Oklahoma (Nye 1968:400–401). The Terán map shows that the village was divided into individual compounds containing one to three grass or cane-covered structures, above-ground granaries, outdoor ramadas or arbors, as well as compound cultivated plots, and Soule’s photographs capture the relationship between the structures, ancillary facilities, and open plaza-like areas within the compound.

Recent broad-area excavations at Caddoan hamlets or farmsteads (such as the McLelland, Spoonbill, Deshazo, Musgaño, Cedar Grove, and Hardman sites) in northwest Louisiana, northeast Texas, and southwest Arkansas show that they were occupied year round, contained sturdy household structures, smaller wood granaries or ramadas (about 3–5 m in diameter), as well as extramural cooking and working areas near the houses (Bruseh and Perttula 1981; Clark and Ivey 1974; Early 1993; Kelley 1994; Story 1982; Trubowitz 1984). Midden deposits from household refuse are common in and around the structures and work areas, as are household cemeteries (with both adults and subadults).

Archaeological investigations of Caddoan sites at Camp Maxey may consider the social aspects of changes in Caddoan domestic settlement patterns, specifically the extent to which connections can be made between large-scale social change and changes evident in the archaeological record at the domestic level. Of particular importance in addressing this research issue in survey level investigations is to obtain from surface and shovel testing basic information on the internal character of Caddoan settlements, looking at spatial details of ceramic (including daub and burned clay, which are good signatures for Caddoan houses) and lithic distributions, midden size (if present), spacing between middens and ceramic/lithic concentrations, and determining temporal relationships between associated features and artifact assemblages at homestead and hamlet levels. Current archaeological evidence from the Red River suggests that during the period A.D. 850–1300 there was a shift from multi-family residential groups, to groups approximating nuclear families after A.D. 1300. Caddoan settlement data from Camp Maxey should be relevant to examining this postulated residential shift.

### **Sociopolitical Dynamics in Caddoan Groups**

Between about A.D. 900 and 1600 in the Caddoan area, there is clear archaeological evidence for the development of complex and socially ranked societies, well-planned civic-ceremonial centers, elaborate mortuary rituals and ceremonial practices, and evidence for extensive interregional trade. This development certainly occurred along the Red River (see Bruseth 1998) and its major tributaries, but the archaeological evidence for social complexity among Caddoan groups living in hinterland and marginal areas (stream headwaters, prairie/woodland-edge habitats) is not well known. Archaeological investigations at Camp Maxey provide an opportunity to examine to some extent the sociopolitical character of the Caddoan groups that lived along Sanders Creek and its tributaries by determining whether civic-ceremonial centers are present, or if there is a likely hierarchy of sites (Perttula 1993:138), such as community centers, villages, hamlets, and farmsteads, that can be identified within or near the survey area.

### **The Development of Caddoan Agricultural Economies and the Use of Prairie Edge/Woodland Habitats**

The appearance of maize among Caddoan peoples seems to have occurred after A.D. 700–800. Unlike the Mississippi Valley and much of eastern North America, where the appearance of maize between A.D. 700 and 900 is interpreted as the primary addition that nurtured the growth of Mississippian societies, the development of Caddoan agricultural economies—based primarily on maize, beans, and squash—is not synchronous with the early growth and elaboration of Caddoan culture. Rather, the significance of the tropical cultigens to Caddoan economies becomes most apparent only after ca. A.D. 1200, then intensifying after A.D. 1300–1400 in the Late Caddoan period, some several hundred years after the initial development of Caddoan culture in the trans-Mississippi South.

An intensification of maize agriculture after A.D. 1300–1400 in the Caddoan area may be responsible in part for the demise of many of the Caddoan civic-ceremonial centers, the abandonment of habitats where maize agriculture could not be successful, and the changes in social and political relationships within Caddoan culture, through the development of predictable maize surpluses. It is probable, then, that the relative success in agricultural production realized by the Caddoans led to a social homogeneity among some Late Caddoan period groups (particularly those outside the major river valleys) in that household agricultural sufficiency among dispersed sedentary communities negated the primary role of the elite-controlled social and political economy. After this time, therefore, social and political integration was regionally and locally redefined (see Story 1990:340), and much of the emphasis on mound-building and renewal was discontinued.

Although we would not expect much direct evidence for Caddoan agriculture to be acquired during the course of the archaeological survey, there are clues in the record that can indicate whether particular Camp Maxey archaeological sites have the potential to address this research issue. Critical would be identifying Caddoan sites that contain midden deposits and/or have the potential to contain features with charred



plant remains and animal bones. Such archaeological contexts point to long-term residential settlements with structures, trash middens, and storage features, and these are the types of settings where plant remains (including tropical cultigens) can be expected to be

preserved. While the absence of such sites during a single archaeological survey would not be conclusive, it would at least establish a framework of research potential for any of the Caddoan sites that would be recorded during the investigations.

# Chapter 6: Background and Research Design for Historic Sites

David L. Nickels

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## Introduction

A number of research issues can be addressed for the historic period at Camp Maxey. What is the nature of the early historic occupation of the region, and what is the evidence for land use during this period? Is there evidence for Native American–European contact at Camp Maxey? What is the history of nineteenth-century settlement of the area? What is the social and historic background of these occupants? How was Camp Maxey used during World War II, and were any historically significant individuals stationed there?

## Historical Background

### Seventeenth and Eighteenth Centuries

#### *The Spanish*

The first non-Indians in Texas were Spaniards under the command of Cabeza de Vaca, whose ship wrecked near Galveston Island on November 5, 1528. While Cabeza de Vaca left a historic account of his three years among Indians in Texas (Covey 1984), his travels probably had little impact on Texas Indian groups. In the 1540s Francisco Vázquez de Coronado led a large expedition into New Mexico, Texas, Oklahoma, and Kansas (Winship 1897). With its hundreds of horses and other livestock, Coronado's expedition could have left countless numbers of strays in Texas. It is also likely that cattle may have strayed into Texas in the latter 1500s as herds numbering in the hundreds of thousands were being tended in northern Mexico after the mid to late sixteenth century (Chipman 1992:54). Thus, the early Spanish influence in Texas includes the introduction of livestock as well as people.

In part to stop the French from encroaching from the east and also to convert the Caddo Indians (both Tejas and Kadohodachos) to Catholicism, the Spanish decided to establish up to seven missions in what is now east Texas. In 1689 the first Spanish mission, Mission San Francisco los Tejas, was established west of the Neches River for the Tejas Indians near Alto (Chipman 1992:89). Two years later, while isolated in East Texas, Fathers Bordoy and Jesús María founded a second mission, Santísimo Nombre de María, about five miles northeast of San Francisco los Tejas (Chipman 1992:97). These missions were founded while Bordoy and Jesús María were waiting for Father Massanét and Terán de los Rios to help establish the other missions. Terán made it to the Kadohodachos, but the remaining missions were not attempted. After that Terán left Mission San Francisco and returned by ship to Vera Cruz, leaving only “three religious and nine soldiers” at the two missions (Chipman 1992:97–98). Hostile attacks finally forced the demise of the mission, and after burying the mission bells and military cannon at Mission San Francisco los Tejas, the three padres remaining there set it on fire and fled back toward Coahuila in October 1693 (Chipman 1992:99).

Mission San Francisco was reestablished in 1716 for the Neches Indians and others, east of the mission established in 1690 on the other side of the Neches River. It was renamed Nuestro Padre San Francisco de los Tejas (Chipman 1992:113). In July 1716, Mission Nuestra Señora de la Purísima Concepción was established on the Angelina River, about 15 miles west of Nacogdoches, to serve the Hainai Indians. Later in July 1716, Mission Nuestra Señora de Guadalupe was founded at modern-day Nacogdoches to serve the Nacogdoche tribe (Chipman 1992:113). Mission San José de los Nazonis was established north of modern-day Cushing in July 1716 to serve the Nazoni Indians (Chipman 1992:113). In early 1717, Mission Nuestra Señora de los Dolores was established near modern-day San Augustine to serve the Ais Indians. Also in

early 1717, Mission San Miguel de los Adaes was established near modern-day Robeline, Louisiana to serve the Adais Indians (Chipman 1992:114). In 1721 Governor San Miguel de Aguayo established Presidio Señora del Pilar on the Red River in western Louisiana near Natchitoches and then re-founded Presidio Dolores near San Augustine to protect the “re-established” six east Texas missions (Chipman 1992:123).

In 1718 the first mission, San Antonio de Valero, was established in San Antonio, and San José y San Miguel de Aguayo was established in 1720. On May 13, 1721, the new Governor San Miguel de Aguayo crossed the Rio Grande en route to San Antonio with 500 men, 2,800 horses, 4,800 cattle, and 640 sheep and goats to supply Mission San José in San Antonio. He then departed for east Texas. His was the first cattle drive through Texas, and the beginning of Spanish ranching in Texas (Chipman 1992:121). However, by their own admission, early Spanish settlements in east Texas produced only enough agricultural goods to feed themselves, most likely due to the remoteness of the area and not because of a lack of rainfall or fertile soil (Chipman 1992:6). The remoteness, reluctance of the Indians to stay in the missions, and disease led to the ultimate decline of the east Texas missions. Finally, in July 1730 the Presidio de los Tejas was closed at the recommendation of Father Miguel Sevillano de Paredes. Three east Texas missions, Nuestra Señora de la Purísima Concepción de Acuña, San Francisco de la Espada, and San Juan Capistrano, were also closed and moved first to modern-day Barton Springs in Austin in July 1730, and then relocated to San Antonio from March to May 1731 (Chipman 1992:131).

### *The English*

After a disastrous sea battle between the English slave trader Sir John Hawkins and the Spanish navy off the port of Vera Cruz in 1568, a crew of 114 that included David Ingram landed on northern Mexican shores. They walked through Texas en route to Cape Breton off Nova Scotia, but only three men survived. David Ingram eventually reported vast riches in land, minerals, and fur to the English authorities. Yet the English were wary of Spain’s dominance in the Gulf of Mexico and would not attempt organized expeditions into

Texas until after the end of the Seven Years’ War and the Treaty of Paris in 1763 (Cutrer 1985:7–12). Although small numbers of Englishmen were reported near Natchitoches and the Trinity River in 1772, the Spanish did not find them. However, they did encounter Indians with English-made guns. In 1774 one group of Englishmen farmed for a season on the Neches River, possibly attempting colonization in northeast Texas, and in 1777 a boat loaded with bricks ran aground in the Neches (Cutrer 1985:7–12). These early activities by the English did not result in permanent settlements in Texas.

### *The French*

France’s first notable attempt at colonizing Texas came with the building of La Salle’s fort on Garcitas Creek near Matagorda Bay in 1687 (Chipman 1992: 79). The expedition was a failure and La Salle was murdered in east Texas near the Trinity River in 1687 (Chipman 1992:84). The sixth land expedition to look for LaSalle’s fort was led by the Spanish explorer Alonso de León, Jr., accompanied by Father Damián Massanét. They found the ruins on April 22, 1689. They later returned to Fort St. Louis (La Salle’s fort) en route to establish a new mission (San Francisco los Tejas) in east Texas, and Father Massanét is the one alleged to have set fire to the ruins (Chipman 1992:89). Frenchman Sieur d’ Pierre Lemoyne Iberville sailed into the mouth of the Mississippi and established a French fort near modern-day Baton Rouge in April 1699, further threatening Spain’s fledgling efforts to protect its interests in Texas (Chipman 1992:101).

Alliances were formed between early French traders and Native American tribes for economic reasons during the first half of the eighteenth century. In an attempt to extend their trade network from Louisiana to Santa Fe, French traders sought peaceful relations and trade agreements with Wichita villages in Oklahoma. The Wichitas provided valuable otter, mink, beaver, and muskrat furs, as well as buffalo robes in exchange for French guns, ammunition, knives, cloth, and other hardware (Morris 1970:79–80). In 1747, the French were instrumental in helping the Wichitas form a trade alliance with the Comanches, who were encroaching

on the western periphery of the Wichita's territory in modern-day western Oklahoma. The wide-ranging Comanches were able to provide more furs from territories they controlled to the west. The Wichitas acted as middlemen in the French-Comanche trade; the Wichitas accepted Comanche furs in exchange for French muskets and other goods. The Osage raids and hunting forays from Missouri into northeastern Oklahoma occupied by the Taovaya, a band of the Wichitas, forced most of the Taovaya into southeastern Oklahoma in 1757, joining other Wichita bands in the area and establishing Twin Villages across the Red River from each other, in Jefferson County, Oklahoma, and Montague County, Texas. In response, a new French trading post was established at Natchitoches on the Red River (Morris 1970:80–81).

The French/Wichita/Comanche alliance proved costly to both the French and Spanish. In 1758 the Comanche, Wichita, and Tawakoni Indians (a Wichita group) attacked Mission San Sabá on the San Saba River, near Menard in south-central Texas. The mission was established at the request of the Apaches, enemies of the Comanches. The massacre of the mission inhabitants by the Comanches and Wichitas was carried out with French muskets (Weddle 1964). In retaliation, Spanish Colonel Diego Ortíz Parrilla led an expedition into north Texas where he enjoined the Wichitas in battle. His command was defeated and he retreated to San Antonio (Chipman 1992:158–161). French and Spanish relations in Texas were strained from that time forward. Across the Atlantic, however, Spain and France had forged a different relationship. In return for Spain's support of France in the Seven Years' War, France ceded Louisiana to Spain in 1763.

The Spanish wisely appointed Athanase De Mézières, a Frenchman, as the lieutenant governor of Louisiana. De Mézières enforced Spanish laws against trading with the Indians for guns, ammunition, horses, mules, and Indian slaves. This in effect curtailed the French and Taovaya Indian trade. Reluctantly, the Taovaya agreed to Spanish rule in 1771. De Mézières then allowed Spanish traders access to the Taovaya at Twin Villages. However, the Taovaya preferred the guns, horses, and mules that French traders could provide them, and trade with the French generally increased. De Mézières countered by offering higher

payments to the Taovaya for deer skins and buffalo robes, which returned favored trading status to the Spanish. After De Mezieres died in 1779, Spanish traders refused to pay the higher prices, and trade with the Taovaya effectively ceased (Morris 1970:81).

Meanwhile, the Taovaya were harassed by their dreaded Osage enemies. In 1782, gifts in the form of guns, ammunition, and assorted sundry articles from the Spanish village of Nacogdoches to the Taovaya helped forge an uneasy and short-lived trading alliance. The Nacogdoches firm of Barr and Davenport, formed in 1798, successfully lobbied the Spanish government to grant an exception to the trade laws. This allowed them to trade Louisiana goods for east Texas Indian furs, horses, and hides. The firm was also granted a legal exemption that allowed them to export horses to Louisiana (Faulk 1964:96–97).

Because of the many changes in political possession of northeast Texas and Louisiana and the almost constant warfare between Indian tribes, the smuggling of tobacco, cloth, and horses was commonplace throughout the eighteenth century. Ironically, Spanish law encouraged this activity. First, the laws denied Spanish citizens the right to trade with French Louisiana. Second, as goods moved between Mexico and Texas, they were taxed heavily as they crossed each provincial boundary. Finally, unscrupulous governors and presidio captains would often ignore the laws (Faulk 1964:97–98).

## Nineteenth Century

### *Taovayan Abandonment of the Area*

Although trade relations were reestablished with the Taovaya after 1782, the Spanish broke the alliance by transferring ownership of Louisiana back to France in 1800. Three years later France sold Louisiana to the United States in the Louisiana Purchase (Morris 1970:82). Although Spain objected, the United States quickly took control of the Red River and began trading with the Taovaya. However, constant attacks by the Osage on trading parties, most notably that of Captain Anthony Glass, again stemmed the Indian

trade. The Wichitas had also had enough of the relentless Osage; in 1811 they abandoned Twin Villages and headed south to join with the Tawakonis, presumably around present-day Waco and Palestine (Krieger 1996:213; Morris 1970:82).

### *European Immigrant Nineteenth-Century Settlements: Pre-Civil War*

Early European settlers (ca. 1815–1816) in the area around Pine Creek and Pecan Point (downriver from Lamar County) sustained Indian depredations as well as other frontier hardships (Ludeman 1996:40–41). In spite of the hardships, the natural beauty and abundant wildlife attracted new settlers. For example, John Emberson and Carter Clift hunted and trapped in the area around Sumner and Emberson's lake, a few miles southwest of Camp Maxey, as early as 1815. Emberson left, but returned to the Sumner area with his wife in 1823. Clift also left, but returned in 1836 to Rocky Ford with his wife and slaves whom she had inherited (Strickland 1930:262–263). Other early accounts of settlers in today's Lamar County are detailed in White (1982).

Before Lamar County was established, Arthur Goodall Wavell attempted unsuccessfully between 1826 and 1841 to colonize an area that included all of modern-day Lamar, Red River, and Bowie counties, along with portions of Fannin and Hunt counties, in Texas, and Miller County in Arkansas. He and Ben Milam did manage to entice 140 families to the colony (Cutrer 1996:853). The early homesteaders traditionally used readily available logs as building material, and later replaced the logs with sawed lumber for Folk houses (Arbingast et al. 1976:40). Some areas in the northern part of the county were surveyed by the Long-lot method, but the majority of the area was surveyed using the Irregular Rectangular method (using metes and bounds terminology). The Long-lot method was the French method; the Irregular Rectangular method is a combination of the Rigid Rectangular method adapted from the midwestern United States, using only metes and bounds (Arbingast et al. 1976:41).

Prominent citizen George W. Wright moved to the area in 1839, during the Republic of Texas period (1836–

1845). At that time Lamar County did not exist; it was still a part of Red River County. In 1840, Red River County politicians led by Wright saw a need to separate the increasing population from Red River County. On December 17, 1840, the Fifth Republic of Texas Congress voted to establish a new and separate county from Red River County land. On February 1, 1841, a vote of the citizens of Red River County favored creating the new county and naming it Lamar County, after the fourth president of Texas, Mirabeau B. Lamar. A small community northwest of Paris, called Lafayette, was the original county seat, followed by Mount Vernon, and finally Paris in 1844 (Ludeman 1996:40–41).

In the 1800s, and for probably uncounted millennia before, major navigable rivers were like today's Interstates; they were avenues of major thoroughfare from which to base settlements. The Red River was no exception. Merchants from the United States were commonly shipping goods into Texas via the Red River by 1843. In one particular incident, Captain Joseph Scott docked his steamboat at Fort Towson at Brierly's Landing in Rowland, Red River County, on March 15 and did not report his \$50,000 worth of merchandise to James Bourland, the Collector of Customs for the Red River District. The district was made up of Fannin, Lamar, Bowie, and Red River counties. Captain Scott unloaded his goods into a warehouse where Bourland ordered them seized and the door padlocked. Scott's men broke open the door, tied up Bourland, and held him at gunpoint while they reloaded the goods back on the ship (United States Congress 1846).

River transportation gave way to major ground thoroughfares which could operate with more proven efficiency at the time. Increasing numbers of Anglo travelers ventured into northeast Texas (Sibley 1967). Englishmen and Irishmen coming from Kentucky dominated the mid-nineteenth-century immigrants to Lamar County coming to establish small farms. As more settlers arrived (see White 1982), the turmoil involving political boundaries and land ownership between the United States and Texans living along the Red River intensified to such a degree that the matter had to be addressed by the 29th session of Congress in 1845–1846 (United States Congress 1943). By 1850, there were 3,978 white settlers who owned 1,085 black slaves (21.4 percent of the population; Steeley 1985).



Despite the number of slaves employed in Lamar County in 1850, there was still a demand for labor. A good farm hand could make \$12 per month in 1850, plus free meals and a room. Other workers who could not find steady work as farm hands hired out by the day at a going rate of \$0.75 cents per day if meals were included; if not, he could make \$1 per day. Carpenters were more specialized and thus could command \$3 per day (Steeley 1985:V–VI).

The following ten years saw a significant influx of both white landowners and slaves, so at the beginning of the Civil War in 1860, Lamar County had 10,136 citizens, of which 7,298 were free and 2,838 were slaves (28 percent of the population). Although the percentages of slaves to free people seems high, the figures need to be explained. In actuality, four out of five citizens in Lamar County at the time did not own slaves in 1860. The majority (60 percent) of the households that employed slaves claimed from one to five servants. Nevertheless, small plantation slave operations existed within Lamar County, as evidenced by the 41 owners who claimed indentured servants of at least 20 in number (Ludeman 1996:40–41).

William Johnson, Lemuel Williams, and George Wright (mentioned previously) were sent as delegates representing Lamar County to the Secession Convention of Texas. Their votes cast apparently did not reflect the preponderance of voter beliefs and sentiments in Lamar County at the time; they all voted against secession of the state of Texas from the Union of the States (the votes in Lamar County tallied 663 for secession, 553 against).

Despite the close votes, Lamar County citizens rallied around the Confederate cause. The local citizenry did not hesitate to join Samuel Bell Maxey's Lamar Rifles. Maxey was a West Point cadet who rose to the rank of Brigadier General in the Confederate Army and commanded the controversial Indian Territory soldiers during the Civil War (Neville 1948, 1983, 1986; Ludeman 1996). He later became a Texas Senator, and Camp Maxey as well as other landmarks and buildings have been named in his honor, for example, the Maxey Home in Paris, which is open to tourists (Black 1981), and Maxey Creek, which meanders through Lamar County (USGS 1980). Additional in-

depth information on the life and contributions of General/Senator Maxey and the Confederate volunteers from Texas and the Camp Maxey area can be found in Hobson (1974) and Horton (1974).

The citizens at the time were not all clearly God-fearing, with only 30 percent declaring memberships in the 16 churches established in Lamar County. Those who did declare a church affiliation were Protestant, the first Protestant church being recognized in 1843, and the first Catholic church organized 30 years later in 1873 (Ludeman 1996:40–41).

### *Nineteenth and Twentieth-Century Settlements: Post-Civil War*

After the Civil War and through the turn of the century, the number of Lamar County residents increased to just under 50,000; however, the percentage of black residents declined from an overall 27 percent at the beginning of the Civil War to around 23 percent (ca. 11,500) in 1900. At the same time (1900), four of every five citizens lived in isolation or in small, rural communities such as Blossom and Roxton. Figure 6-1 illustrates the mix of large and small land holdings in the Camp Maxey area near the end of the nineteenth century (Lamar County General Land Office Map, 1878, John F. Dexter, Drafter. Skipper Steeley Collection, Box 40, Gee Library, Texas A&M University, Commerce). Terry Jordan (1981) details the potential for trailing cattle from and through Lamar County during the last part of the nineteenth and early part of the twentieth centuries. Ten school districts were sufficient to educate the young citizens in the area. The increasing population of Paris (10,000) was devastated by a 10-acre fire in 1877; and although a consoling piece of legislation resulted in the use of brick for construction, in 1916 another fire in Paris destroyed more than 1,400 buildings. Dirt roads were the norm for transportation by about 1840 until gravel and paved roads connected Paris, Clarksville, Sherman, and Commerce by 1925.

By 1900 Lamar County had 6,514 farms worth around \$7 million, increasing to 6,831 farms with an estimated worth of over \$56 million by 1920. Thirty-nine of the smaller communities had managed to obtain post offices

by 1900, but a revamping of the postal system resulted in closing 28 of those by 1910. Northeastern Lamar County social life and customs during the late nineteenth and early twentieth centuries, specifically the community of Pin Hook, have been documented by Owens (1966, 1973). As with the rest of the country, the Great Depression took a devastating toll on Lamar County land values and farmers, with only 4,176 farm owners managing to maintain ownership, out of the recorded 6,831 owners in 1930 (Ludeman 1996:40–41).

As with most of the American West and Texas in the boom of the late nineteenth century, the railroad’s insurgency through north Texas and Lamar County had a significant impact on the economy and populace (see Figure 6–2). The first steam engine entrada into the area came with the Texas and Pacific (T&P), which extended its railway eastward through Paris to Texarkana in 1875; the second was the Gulf, Colorado and Santa Fe rail’s extension from Ladonia into Paris in order to connect with the T&P; the third was the Paris and Great Northern’s extension from Paris to the Red River where it met the St. Louis and San Francisco line. In the late nineteenth century, another short-line railway named the Texas Midland was laid from Commerce to Paris. And finally, in 1909, the Paris

and Mount Pleasant rail line began operation (Ludeman 1996:40).

The effects of the Great Depression can be seen in population and agricultural changes. The number of residents in Lamar County had increased to over 55,000 by 1920, but slowly decreased over the following 40 years to less than 36,000. During the same period, the percentages of blacks in rural Lamar County decreased to a low of 19 percent, while the majority (60 percent) of Lamar County citizens resided in Paris, which by 1960 counted over 21,000 people (Ludeman 1996:41).

Where the Blackland Prairie covers the south half of Lamar County is where most of the cotton is grown and livestock are raised. In the northern half is the East Texas Farming Region, which mainly produces livestock, poultry, dairy products, and cotton (Arbingast et al. 1976:117). In 1930 Lamar County employed between 7,500 and 10,000 persons in agriculture; by 1970 the figure dropped to between 2,500 and 5,000. Cotton production dropped dramatically from a maximum 100,000 bales in 1899 through 1929, to a maximum of 5,000 bales in 1974 (Table 6–1). The reduction in growing cotton and peanuts as cash

crops after the Great Depression is mirrored by the increase in cattle, from 25,000 to 100,000 head by the 1960s. The increase in the number of cattle meant that more grain sorghum had to be grown as feed, and that milk production rose in the county (Table 6–1).

### *The Development of Camp Maxey*

As discussed above, the Great Depression took its toll on Lamar County, and the area that was to become

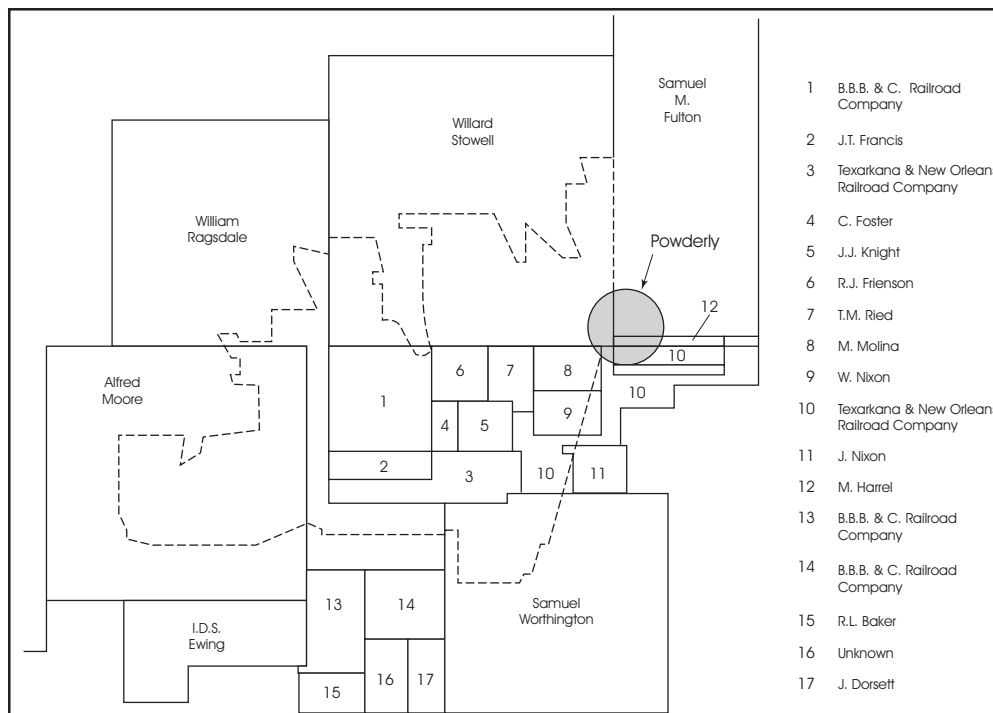


Figure 6-1. Land ownership in the Camp Maxey area in 1878.

Camp Maxey was no exception. In the late 1930s and early 1940s most communities were looking for ways to improve their local economy. The leaders of Paris saw an opportunity to obtain an economic boost during the defense buildup for World War II. They petitioned the Defense Department and political leaders

to establish a military training camp north of Paris. The 70,000 acres of land that was to become the Camp Maxey infantry training facility were procured by the government in the 1940s. The camp was activated on July 15, 1942. During World War II, Army service and air units served at the camp in support of the infantry

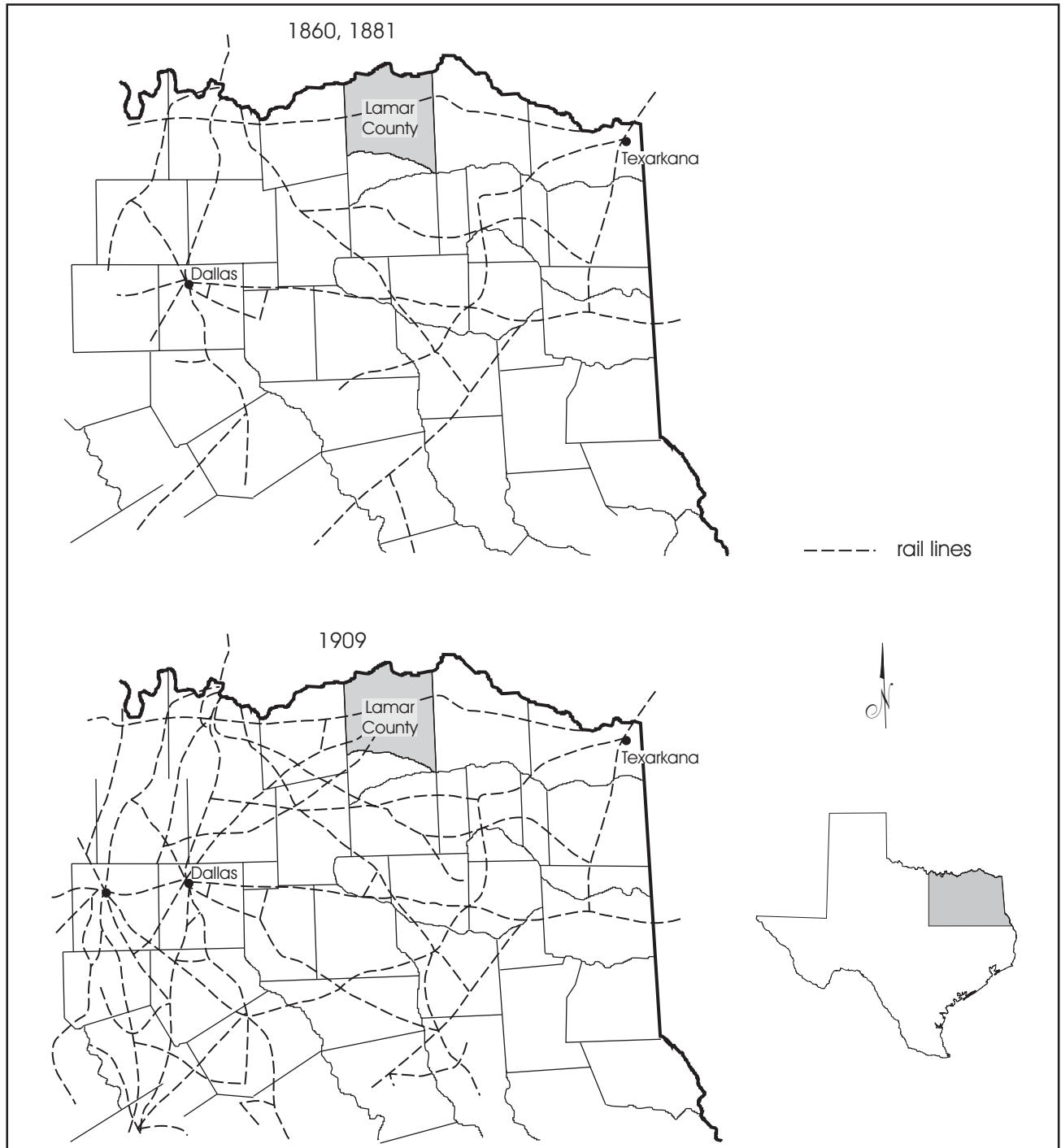


Figure 6-2. Rail lines in Lamar County (after Arbingast et al. 1976:56).



Table 6–1. Changes in Lamar County agriculture.

	1899/1900	1929/30	1964/65	1969/70	1974
Cotton (bales)	100,000	100,000	25,000		5,000
Peanuts (pounds)	50,000	500,000		50,000	50,000
Wheat (bushels)	100,000	100,000	250,000		100,000
Cattle (head)	50,000	25,000	100,000		100,000
Sorghum (bushels)		10,000			100,000
Milk (gallons)		500,000			800,000
Horses & Mules		25,000		5,000	
Hogs		15,000			5,000
Chickens		250,000		100,000	
Turkeys		50,000		1,000	

units. Although the facility could accommodate nearly 45,000 troops, about 200,000 rotated through the camp (Major Michael Diltz, personal communication 1998). In addition to troop training, nearly 7,500 German prisoners of war were detained at the camp. Air transportation facilities for Camp Maxey were located at Cox Field, southeast of Paris. The demand for services brought an additional 53,000 new workers to the area at one time. The camp’s activities transformed its hinterland agriculturally (cotton) based economy to an economy based on industry (Steely 1992).

The camp was deactivated on October 1, 1945. With its deactivation the Paris community leaders sought ways to keep the industrial-based economy from collapsing. The DeKalb chicken hatchery took over some of the buildings for use, and the city took over the water and sewer treatment plants. The city also took over Cox Field as its new airport facility. After 1950, most of the buildings in the camp were either torn down or moved to surrounding areas. Although most of the land was offered for sale back to the original landowners, the Corps of Engineers assumed ownership of 10,000 acres for the construction of Pat Mayse Lake, which with its abundant water supply attracted Campbell’s Soup Company to locate a major facility in Paris.

The remainder of the approximately 6,500-acre camp was turned over to the Texas Army National Guard for use as a military training center (Steely 1992; Anonymous 1996:942).

## Specific Historical Research Questions

### *Research Question 1: Spatial Relationships*

Survey and limited testing were expected to reveal additional homestead foundations or site features in the area. If recovered, some of these indices were expected to clarify the intra- and inter-site spatial relationships of an early farming/livestock-raising community. Not only would this evidence provide insight into a turn-of-the-century European-American settlement, but it would also contribute to an understanding of the economic activities dated to this particular era.

### *Research Question 2: Economic Activities*

This research problem focuses on classes of data that can suggest economic status. The goals are conjoined

with the first research problem in attempting to qualify specific economic activities at a European-American homestead, or groups of homesteads. Subtle changes in types of artifacts and construction or economic activities such as farming or cattle raising could be present in the area of study.

*Research Question 3: Earliest European Immigrant and Pre-Civil War Occupation at Camp Maxey*

Although evidence of early European settlers (ca. 1815–1816) in the area around Pine Creek and Pecan Point (downriver from Lamar County) is most probable, CAR surveyors were alert to metal artifacts, decorated ceramics, and ephemeral evidence of wooden fortifications and/or homesteads, which would suggest early nineteenth-century settlements in today's Lamar County as detailed in White (1982).

An on-site inspection with the Camp Maxey facility manager (Major Michael Diltz) of the 1,000 acres to be surveyed revealed several abandoned historic roads through the otherwise partially heavily wooded terrain of the camp. In fact, some of the proposed “new” firebreaks and roads follow those same trails. Cattle ranching and trails through the area that dominated the economy and terrain features may be investigated in the Camp Maxey area.

*Research Question 4: Post-Civil War Occupation at Camp Maxey*

During an on-site visit CAR staff members inspected the remains of a turn-of-the-century homestead which included late nineteenth-century ceramics and glass, metal, foundation stones, a possible privy location, and a marked grave with the name “Draper” inscribed on the headstone. The site lies next to an old road, now heavily overgrown, but still discernible. The presence of Casey Cemetery located along the camp's northern perimeter attests to the likelihood that other homestead sites exist in the areas to be surveyed. Records of land ownership and deaths prior to World War II can be found in the Lamar County courthouse in Paris (County Records 1979). Additional archival research is needed to determine the ownership of the homestead and the possibility that other unmarked graves may exist in the area.

# Chapter 7: Methods

David L. Nickels

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## Project Description

The purpose of the project was to conduct a pedestrian survey, supplemented by archival documentation, to locate and record both historic and prehistoric cultural resources contained within the 1,000 acres of Area 1, selected roads, and fire breaks at Camp Maxey. CAR's investigation included site discovery during the pedestrian survey, then revisiting and recording sites. The fieldwork was conducted by staff archaeologists under the direct supervision of the project archaeologist and periodic visits by a principal investigator and the archaeological consultant. Six backhoe trenches and 905 shovel tests were excavated during the course of the survey (Figure 7-1).

## Prefield Planning

Before the project began we met with representatives from TXARNG, and contacted the SHPO to establish acceptable and required fieldwork and reporting standards for the project. More detailed archival research, soil survey, geology and topographic maps, aerial photographs, and an initial site visit to assess the geomorphological conditions were used to fully delineate non-survey areas or low probability areas prior to initiation of actual fieldwork. Based on field observations, these areas could change if the conditions warranted a shift in survey procedures. To insure systematic recording procedures, the archaeological consultant, co-principal investigator, and project archaeologist met before the field work began to review artifact classifications and recording procedures.

A review was conducted of the current literature for the Northeast Texas Archeological Region. Prehistoric sites to be expected include: Caddo hamlets, Caddo mounds, open campsites, lithic quarries, or Native American burials. Caddo hamlets have ceramics, daub, and lithic artifacts (tools and debris), as well as evi-

dence of structures. Caddo mound sites have either platform or burial mounds and borrow pits, plus they can have residential components like Caddo hamlets. Open campsites often contain varying quantities of fire-cracked rock from possible small-hearth features and lithic scatters. Lithic quarries are characterized by the presence of gravel exposures. Exploitation of the exposure is indicated by light to heavy scatters of chipped stone debris, including artifacts such as cores, quarry blanks, preforms, flakes, and (rarely) informal or formal tools. Native American burials will not be marked and are often discovered in an erosional context. CAR would not disturb Native American human remains if they were encountered. Upon locating such a site, CAR personnel would avoid further impacts to that location, and would immediately notify Mr. Alan J. Wormser at the TXARNG.

Farmsteads, trash dumps, isolated graves, cemeteries, early historic trading sites, and World War II sites associated with Camp Maxey are the types of historic sites that might be encountered during the survey. During the initial visit we observed a late nineteenth to early twentieth-century farmstead with a marked grave as well as World War II features associated with the developed core of Camp Maxey.

## Fieldwork

### *Pedestrian Survey*

The Camp Maxey landscape was subdivided by a number of criteria, which we judged significant for conducting an archaeological survey of the property. The first distinction we made was burned versus unburned areas. Surface visibility in the burned areas was good and extremely common gopher burrows provided exposure of subsurface materials over a large area. Also, as the soil survey indicated and as we observed dur-

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ing the survey, most upland soils are thin and gopher burrows and even ant burrows were transporting culturally sterile Bt horizon sediments to the surface. Unburned areas (both grasslands and woodlands) had poor surface visibility and shovel testing/probing was required. A second criterion for dividing the survey area was identification of high and low site probability zones (see Figure 7-1). The patterning of sites was well known, especially for Caddo sites, and sites were considered most likely to occur on interfluvial ridges between creeks. Sites were unlikely to occur in flat upland stream divides between streams. Floodplains, even the small ones that occur at Camp Maxey, were the most likely locations for finding *in situ* buried sites, and these areas were inspected carefully. Other criteria included highly disturbed versus moderate to no disturbance areas. Much of the burned areas had been used for vehicle turns or parking, and 20–40 cm-deep tire ruts were common. However, this disturbance was not so severe to warrant eliminating these areas from survey. Another criterion that was identified was extremely steep slopes and severely eroded areas, but these were not common and comprised very little of the area. Eliminating these areas would not have saved time and therefore they were surveyed, but no shovel tests/probes were excavated in these areas. The final criterion was the division of Area 1 versus all roads and fire breaks. The roads and fire breaks were walked by the survey crews and shovel tests/probes excavated in areas of low surface visibility or in areas of high site potential.

CAR crews conducted the pedestrian survey of Areas 1 and 2 in transects. The project archaeologist delineated manageable parcels of land by using natural and artificial boundaries such as the major drainages, firebreaks, roads, or fence lines. Then the project archaeologist calculated transect degree headings using a hand-held compass. Each transect end point was marked with flagging tape. Survey area, transect letter, orientation, and date were noted on each strand of tape by the survey team. Whether in a low or high probability zone, survey transects were spaced at 30-m intervals. The designated roads, firebreaks, and trails identified for improvement north of Areas 1 and 2 were surveyed by one or two crew members. The pedestrian survey was conducted using the same criteria and protocol for shovel testing as described above for Areas 1 and 2.

CAR survey teams worked in ten-day shifts during the pedestrian survey phase with no limitations due to inclement weather or restricted access to the camp. Extremely dense vegetation sometimes required that two crew members walk transects together, for both safety and accuracy. This involved one surveyor using a hand-held compass to sight-in and orient the other member (the front runner) along the designated bearing. In areas of less-dense vegetation and unhampered visibility such as burned grassland areas, transects will be walked by one person alone. Field notes were made regarding vegetation type and density, topography, surface sediments, and naturally or artificially disturbed areas. All cut banks, road cuts, and exposed slopes were inspected for archaeological materials.

On some occasions, when the parcel of land requiring survey was a narrow band, or was small and irregular in shape (floodplains, for example), a sweep survey was conducted. In these cases, crew members were evenly spaced in a line at the designated starting point and then systematically moved through the survey area while maintaining a constant lateral formation.

Each station was marked with white toilet paper. This helped maintain even spacing between transects and stations, and although it initially proved quite useful in relocating sites, after a few rains the toilet paper decayed and disappeared. All artifacts from shovel probes and shovel tests were collected and labeled with their appropriate field provenance and transported to CAR for analysis and curation.

### *Shovel Tests*

In areas where there was less than 20 percent surface visibility or in high probability areas, CAR surveyors excavated a shovel test every 30 meters (see Figure 7-1). Shovel tests were numbered by transect and station (for example, ST A-5 is the shovel test excavated at station 5 on transect A). Transect positions, and all shovel test locations along each transect were plotted on field maps. A shovel test was defined as a 30–50-cm diameter unit, excavated, screened, collected, and recorded in levels no more than 20 cm in thickness to a depth of 80 cm, or until bedrock or sterile Bt horizons were encountered. Additional levels below 80

cm were removed if artifacts were encountered throughout the deposit and the potential for subsurface cultural strata was deemed high, as in floodplain sediments or thicker sandy sediments on ridge crests. All sediment was be screened through ¼-inch wire mesh and the results of shovel tests recorded on a standardized form.

### Site Recording

When an artifact-bearing location was identified, the position was well marked with flagging tape, noting transect, station, and date. Crew members then intensively surveyed the area, flagged artifacts, and made a preliminary assessment on quantity and type of artifacts. Often a quick field observation was adequate to determine if enough artifacts were present to constitute a site.

Managing sites identified during the survey required constructing categories in which cultural properties could be systematically defined. For prehistoric sites these categories were sites and isolated finds (Table 1). For the purpose of this survey sites had at least five artifacts within a 25 m<sup>2</sup> area, or had two or more positive shovel tests in the same area, or contained a single cultural feature. Isolated find designations were given to locations of fewer than five artifacts, one or no positive shovel test, and no cultural features.

Table 7-1. Size Definitions for Prehistoric Archaeological Occurrences.

<b>Occurrence Size</b>	<b>Artifact Density /25m<sup>2</sup></b>	<b>Shovel Test</b>	<b>Features Present</b>
Site	5	2 + positive	present
Isolate	1-4	negative or 1 positive	absent

A strategy for site recognition was used for historic sites that included presence of features and five surface artifacts in 25 m<sup>2</sup>.

If the artifacts did not constitute a site, as detailed above, they were classified as isolated finds. In all cases, isolated finds were recorded on separate forms

prepared for this project, noting location and type of artifact. The formal documentation of isolated finds were completed during the site discovery phase, and these areas were not revisited during the site-recording phase. At the conclusion of the site discovery phase of the fieldwork, CAR survey teams reviewed locations that had sufficient artifact density to be labeled as potential sites. Revisiting these locations for detailed inspection formed the second phase of fieldwork.

### Revisiting and Documenting Sites

The project archaeologist and four crew members made up the site-documenting team. Once a potential site was relocated, crew members intensively examined the ground surface, flagged artifacts, and noted any high-density concentrations. After the location was confirmed as a site, boundaries were established according to artifact distribution. A site boundary was defined by a significant drop-off in surface or subsurface artifact densities. Crew members rotated through the various tasks of properly documenting the site. The tasks included the following procedures:

- 1) A field copy of the State of Texas Archeological Site Data Form was completed. Each site was assigned a temporary field number until given a trinomial site designation in the lab.
- 2) Shovel tests were conducted at each site to test for subsurface cultural materials and examine the geomorphology. The survey crew excavated a sufficient number of shovel tests within the site to determine the horizontal and vertical extent of the archaeological deposit, the horizontal and vertical extent and severity of disturbance present, and to develop a preliminary understanding of the nature of the soils and depositional history at the site. The project archaeologist then determined the number of shovel tests, taking into consideration site size, artifact frequency over the site surface, and topographical variation over the site surface. Levels were removed in arbitrary 20-cm increments to a depth of 80 cm or to culturally sterile deposits. All sediment was screened through ¼-inch wire mesh. Notes were be made on a stan-



standardized form regarding sediment texture, Munsell color, structure, as well as gravel size and frequency, and artifact content. Artifacts removed from subsurface contexts were bagged and logged.

3) Site recording crews used one of two methods to sample the artifact assemblage at each site. A complete inventory was taken at each site. Each artifact was recorded on a work sheet specifying flake types, cores, quarry blanks, preforms, utilized and retouched pieces, and diagnostic artifacts. Counts of fire-cracked rock, tested cobbles, and raw chert or quartzite cobbles were also made. Temporally diagnostic artifacts and unusual or unique items from sites were collected and logged in the field, either on a site or as isolated finds. All artifacts collected from the sites were labeled with their appropriate field provenance and transported to CAR for use in interpreting the site and its eligibility for the National Register.

4) To establish the site datum, a nail was hammered into a tree at the site's center or the best vantage point. USGS 7.5' topographic maps and a Trimble Geo Explorer II Global Positioning System (GPS) were used to determine UTM coordinates. CAR surveyors took a GPS reading from the datum of the site and from enough points along the perimeter to define the estimated site boundary. This data was differentially corrected by CAR-UTSA.

5) Site maps, showing site boundaries, datum locations, shovel tests, dogleashes, collected items, features, areas of high artifact density, directions to visible landmarks, and physical features on the landscape, were recorded. Mapping was done by GPS, and by pace and compass. Landforms, road, or streams that would be helpful in relocating the site were shown. Survey areas with site locations and boundaries were plotted on the field map and on 7.5' Series USGS quadrangles.

6) Archival quality 35-mm black-and-white prints, and 35-mm color slides were made of all sites and artifacts where appropriate.

### *Backhoe Trenches*

The project geomorphologist conducted investigations using a backhoe in selected areas and profiles were recorded with standard soil survey staff procedures. Six backhoe trenches were dug between two and three meters deep, and were strategically placed in the northwest corner of the project area (see Chapter 3).

## **Laboratory Methods**

Cultural materials recovered from the survey were inventoried at the CAR laboratory. All artifacts recovered from the survey were identified and analyzed. Provenances for the materials entering the CAR laboratory were verified through the use of a field sack (FS) number, which was recorded on a Master Data Recovery Form during the field investigation. FS numbers, along with Unique Item (UI) numbers, were assigned to all artifact bags in the field. Artifacts and samples were separated by artifact type and recovery context to facilitate analysis. Processing of recovered artifacts began with washing and sorting into appropriate categories. These data were entered into an Excel spreadsheet.

All cultural material collected from Camp Maxey was prepared for storage in accordance with federal regulation 36 CFR Part 79, and in accordance with current guidelines of the Texas Archeological Research Laboratory. Lithic, metal, and ceramic artifacts processed in the CAR laboratory were washed, air-dried, and stored in archival-quality bags. Acid-free labels were placed in all artifact bags. Each bag was labeled with a provenance or corresponding bag number. Tools were labeled with permanent ink and covered by a clear coat of acrylic. Other artifacts were separated by class and stored in acid-free boxes. Boxes were labeled with standard labels. Field notes, forms, photographs, and drawings were placed in labeled notebooks. Photographs, slides, and negatives were placed in archival-quality sleeves. All notebooks were stored in acid-free boxes. Documents and forms were printed on acid-free paper. A copy of the survey report and all computer disks pertaining to the investigations at Camp Maxey were stored in an archival box and

curated with the field notes and documents. Upon completion of the project all cultural materials were returned to TXARNG for permanent storage.

### **Site Forms and Mapping**

State trinomials were obtained from TARL for each site identified during the survey. The information recorded on the site recording forms in the field was transferred to TexSite software for filing with the

SHPO and TARL. Site and artifact data used in analyses were provided in database form compatible with Microsoft Excel. In addition to the general maps in this report, two sets of maps of the project area were prepared for TXARNG. One set shows the locations and site boundaries for all cultural resources in the inventory plotted on 7.5' Series USGS quadrangles. A second set of maps, also plotted on 7.5' Series USGS quadrangles, shows surveyed areas and shovel test locations keyed to information contained in this report and on site forms.



# Chapter 8: Prehistoric Sites and Isolated Finds

David L. Nickels and Timothy K. Perttula

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## Introduction

Thirty archaeological sites and fifteen isolated finds (Figure 8-1) were found during the survey of 1,000 acres at Camp Maxey. This chapter describes the 25 prehistoric site components and 11 prehistoric isolated finds in terms of physiographic setting and the artifacts recovered from them. Shovel tests were performed on and around archaeological sites to determine the horizontal and vertical extent of cultural materials, as well as their integrity. The maximum depths of shovel tests at each site are presented in Table 8-1. The artifact data can be found in Appendix A. The approximate percentage of each site that remains intact is a very rough estimate based on limited shovel testing and surface visibility.

## Prehistoric Archaeological Sites

### 41LR149

#### *Site Description*

41LR149 (Figure 8-2) was discovered because of an ephemeral surface scatter of chipped stone. The presence of two bifaces, a temporally diagnostic dart point tip, and fire-cracked rock (Appendix A) suggest it was used as a short-term Archaic/Woodland-period open campsite.

It is located in a grassy field with scattered Sumac trees on a slight rise of Freestone series mollisols. The rise lies at the confluence of two intermittent drainages, with a 3 to 5-percent slope toward the drainages. Because of the moderately dense vegetation, surface visibility is 50 percent. The site was tested with 18 shovel tests (Table 8-1) and found to cover approximately 4,000m<sup>2</sup>, with a maximum depth of 60 cm. The nearest water emanates from seeps in an un-

named north-south drainage 700 m to the northwest. Slope erosion, bioturbation, and military-training activities with tracked vehicles have caused considerable damage, with approximately 30 percent of the site's cultural deposits remaining intact.

#### *Artifacts*

Nine prehistoric artifacts were collected from shovel tests at 41LR149 (1.8 artifacts/positive shovel test), along with a broken coarse-grained quartzite biface and a heat-treated Ogallala quartzite untypeable dart point tip from surface contexts. The dart point tip suggests the site was used during the Archaic and/or Woodland periods. Also recorded from surface contexts were two cortical flakes and five non-cortical flakes, all less than 3 cm in length; the raw material type was not noted.

The artifacts found in the shovel testing include three quartzite fire-cracked rocks (total weight, 0.2 kg) from shovel tests W-1 and S-1 at the western end of the site, along with five flakes and a chunk (lithic raw material without a bulb of percussion, no flake terminations, and with an irregular shape). The chunk is a heat-treated piece of Ogallala quartzite with cortex; the other four flakes were also of Ogallala quartzite, two cortical and two non-cortical. The remaining flake is a non-cortical flake of a dark brown chert available in the Red River gravels.

### 41LR150

#### *Site Description*

41LR150 (Figure 8-3) was identified when two flakes were discovered on a gopher mound. After closer examination a ceramic sherd was also found on the surface. The presence of the single temporally diagnostic pottery sherd with chipped stone flakes (Appendix A)

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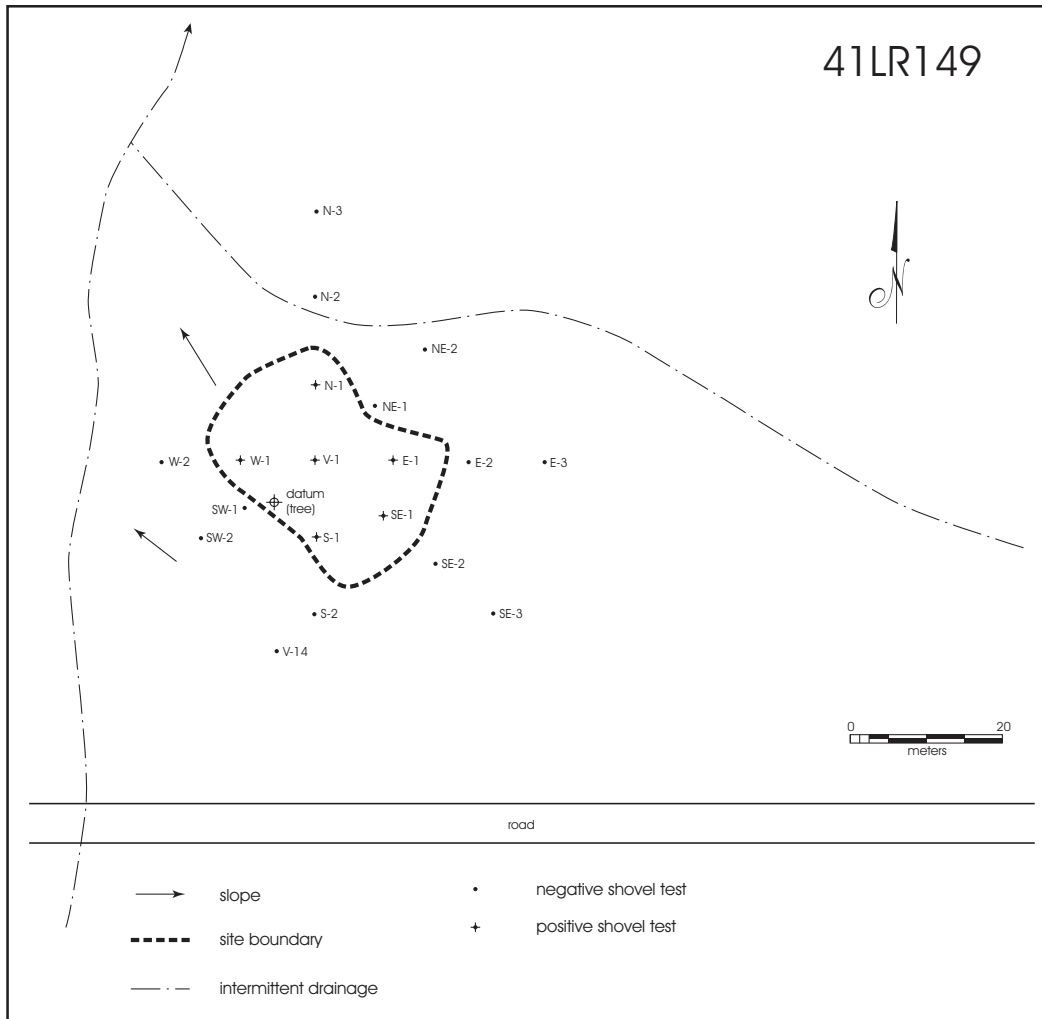


Figure 8-2. Site map—41LR149.

suggests it was used as a short-term Early-Middle Caddoan period open campsite.

This site is located in a grassy field with scattered Sumac trees on a slight rise of Annona series mollisols. The moderately dense vegetation covers approximately 60 percent of the surface. The site was tested with 19 shovel tests (Table 8-1) and covers approximately 5,000m<sup>2</sup>, with a maximum depth of 40 cm. The nearest water comes from seeps in an unnamed north-south drainage 850 m to the northwest. The site lies along the southern edge of an intermittent drainage, with a 1 to 3-percent slope. Slope erosion, bioturbation, and military-training activities with tracked vehicles have caused considerable damage, with approximately 40 percent of the site's cultural deposits remaining intact. An erosional gully has cut through the middle

of the site, and a military vehicle track enters the site from the south.

### Artifacts

Two cortical flakes and a non-cortical flake, all less than 3 cm in length and made of Ogallala quartzite, were present on the site surface, but not collected. Also, a single decorated pottery sherd (Figure 8-4a) was collected from the surface near ST NE-1. The sherd is grog-tempered, and has a tool punctated decoration. It is 9.2 mm thick, and the core cross-section indicates that the sherd is from a vessel that was incompletely oxidized during firing (cf. Teltser 1993:Figure 2E). The use of grog temper, and the free punctated design on the vessel, probably a jar, indicates that

Table 8-1. Maximum depth of shovel tests on sites.

Site	ST	Depth (cm)	Bottom
41LR149	1	60	Clay
"	E1	35	Clay
"	E2	25	Clay
"	E3	4	Clay
"	N1	34	Clay
"	N2	25	Clay
"	N3	43	Clay
"	NE1	20	Clay
"	NE2	11	Clay
"	S1	25	Clay
"	S2	20	Clay
"	SE1	35	Clay
"	SE2	35	Clay
"	SE3	60	Clay
"	SW1	20	Clay
"	V14	35	Clay
"	W1	36	Clay
"	W2	20	Clay
41LR150	AA15	72	Clay
"	BB11A	70	Clay
"	BB11B	67	Clay
"	E1	40	Clay
"	E2	25	Clay
"	E3	60	Clay
"	N1	44	Clay
"	N2	17	Clay
"	NE1	67	Clay
"	NE2	50	Clay
"	NE3	20	Clay
"	NE4	35	Clay
"	S1	28	Clay
"	S2	20	Clay
"	SE1	80	Clay
"	SW2	54	Clay

Site	ST	Depth (cm)	Bottom
"	SW2	54	Clay
"	W1	20	Clay
"	W2	30	Clay
41LR151	E1	60	Iron Ore
"	E2	55	Clay
"	N1	57	Sandstone
"	N2	37	Sandstone
"	N3	15	Clay
"	S1	20	Sandstone
"	S2	35	Clay
"	ST1	30	Clay
"	* SW1	60	Iron Ore
"	W1	30	Clay
"	W2	20	Sandstone
41LR152	* E1	51	Clay
"	E2	31	Clay
"	E3	22	Clay
"	* N1	84	Clay
"	N2	32	Clay
"	N3	32	Clay
"	NW1	80	Clay
"	NW2	80	Clay
"	S1	100	Clay
"	* S2	80	Clay
"	* SE1	80	Sandy Clay
"	SE2	72	Sandy Clay
"	SE3	47	Clay
"	* SSS7	100	Sandy Loam
"	* TTT7	90	Clay
"	* W1	20	Clay
"	W2	90	Clay
41LR153	E1	5	Clay
"	E2	20	Clay
"	* E3	18	Clay

Site	ST	Depth (cm)	Bottom
"	N1	10	Clay
"	* N2	40	Clay
"	N3	30	Clay
"	N4	20	Clay
"	* OOO34	40	Clay
"	S1	25	Clay
"	S2	15	Clay
"	* S3	35	Clay
"	W1	8	Clay
"	W2	20	Clay
41LR154	E1	30	Clay
"	E2	31	Clay
"	N1	35	Sandstone
"	N2	22	Sandstone
"	S1	30	Clay
"	S2	35	Clay
"	* W1	30	Clay
"	W2	20	Clay
41LR155	E1	70	Clay
"	E2	35	Clay
"	N1	40	Clay
"	* N2	51	Clay
"	* N3	60	Clay
"	* NW1	40	Clay
"	* NW2	30	Clay
"	NW3	10	Clay
"	* WWW43	80	Sandy Clay
"	N1	37	Clay
41LR156	E1	66	Clay
"	E1A	40	Clay
"	E2	46	Clay
"	E2A	30	Clay
"	E3	40	Clay
"	E4	82	Clay

Table 8-1, continued.

Site	ST	Depth (cm)	Bottom
41LR161	1	80	Clay
"	2	52	Iron Ore
"	3	71	Clay
"	4	70	Iron Ore
"	5	80	Clay
"	6	65	Clay
"	7	60	Clay
41LR162	BBB2	73	Clay
"	CCC49	20	Clay
"	DDD47	80	Clay
"	EEE34	40	Clay
"	S1	50	Clay
"	SE1	90	Clay
"	W1	71	Clay
"	W2	40	Clay
"	W3	66	Clay
"	W4	100	Clay
41LR163	E1	60	Sandy Loam
"	E2	30	Clay
"	E3	20	Clay
"	N1	35	Sandy Clay
"	N2	55	Clay
"	S1	100	Sandy Loam
"	S2	80	Clay
"	UUU6	80	Clay
"	W1	60	Clay
"	W2	70	Clay
41LR164	H56	51	Clay
"	H39	25	Clay
"	H43	23	Clay
"	I39	40	Clay
"	I41	60	Clay
"	J27	80	Clay
"	J29	20	Clay

Site	ST	Depth (cm)	Bottom
"	FFF20	35	Roots
"	HHH25	61	Clay
"	N1	50	Sandstone
"	NE1	20	Clay
"	NE2	50	Clay
"	S1	10	Clay
"	S2	80	Clay
"	W1	25	Clay
41LR160	E1	95	Iron Ore
"	E2	90	Clay
"	N1	70	Clay
"	N2	60	Clay
"	N3	30	Clay
"	SSS17	75	Clay
"	SSS18	80	Clay
"	SSS19	83	Clay
"	SSS20	100	Sandy Loam
"	SW1	47	Clay
"	SW2	57	Clay
"	SW3	65	Clay
"	TTT10	44	Clay
"	TTT11	50	Clay
"	TTT12	50	Sandstone
"	TTT13	50	Sandstone
"	TTT14	60	Clay
"	TTT15	20	Iron Ore
"	TTT16	40	Sandstone
"	UUU13	100	Sandy Loam
"	UUU14	40	Clay
"	UUU15	60	Clay
"	UUU16	60	Clay
"	UUU17	50	Clay
"	W1	37	Clay
"	W2	47	Clay

Site	ST	Depth (cm)	Bottom
41LR156	N2	43	Sandy Clay
"	N3	45	Clay
"	NW1	40	Clay
"	UUU38	50	Clay
"	W1	30	Clay
"	W2	30	Clay
"	W3	40	Clay
"	XXX7	65	Clay
41LR157	N1	30	Clay
"	N2	50	Clay
"	NE1	15	Clay
"	NE2	50	Clay
"	NE3	60	Clay
"	S1	40	Clay
"	ST1	10	Clay
"	W2	60	Clay
"	YYY5	100	Sandy Clay
"	YYY7	60	Clay
"	ZZZ4	60	Clay
41LR158	AAAA6	8	Clay
"	AAAA7	40	Clay
"	EEEE26	20	Clay
"	EEEE27	20	Clay
"	FFF36	40	Clay
"	N3	30	Clay
"	N4	10	Clay
"	W1	60	Clay
"	W3	23	Clay
"	W4	20	Clay
"	W5	10	Clay
"	W6	60	Clay
41LR159	E1	60	Sandy Clay
"	E2	70	Clay
"	EEEE18	20	Clay

Table 8-1, continued.

Site	ST	Depth (cm)	Bottom
"	4	15	Clay
"	5	5	Clay
"	6	10	Clay
<b>41LR174</b>	E1	70	Clay
"	N1	20	Clay
"	* N2	80	Iron Ore
"	N3	60	Iron Ore
"	S1	14	Clay
"	U4	25	Iron Ore
"	U5	28	Sandstone
"	U6	15	Sandstone
"	U7	20	Sandstone
"	U8	20	Sandstone
"	V2	100	Clay
"	V3	40	Clay
"	V4	40	Clay
"	* V5	20	Sandy Clay
"	V6	40	Clay
"	* W5	58	Clay
"	W6	24	Clay
"	W7	23	Clay
"	W8	13	Clay
"	W9	4	Clay
<b>41LR175</b>	A	60	sandy Clay
"	B	83	Clay
"	C	60	Clay
"	D	75	Clay
"	* W3	101	Sandy Loam
<b>41LR176</b>	E1	60	Clay
"	E2	60	Clay
"	W1	73	Clay
"	W2	76	Clay
"	S1	71	Clay
"	N1	70	Clay

Site	ST	Depth (cm)	Bottom
"	O2	25	Sandstone
"	O4	15	Clay
"	O5	30	Sandy Clay
"	O6	35	Sandstone
"	O7	20	Sandy Clay
"	O8	30	Clay
"	* O9	50	Gravels
"	P36	18	Clay
"	P38	29	Clay
"	P39	21	Clay
"	P40	16	Clay
"	P41	32	Clay
<b>41LR165</b>	1	35	Clay
"	* 2	45	Clay
"	* 3	60	Clay
"	4	28	Clay
"	5	35	Clay
"	6	40	Clay
"	7	40	Clay
"	* XXX44	45	Clay
"	XXX46	40	Clay
<b>41LR168</b>	* 1	68	Clay
"	* 2	45	Clay
"	3	40	Clay
"	4	20	Clay
"	5	23	Sandstone
"	6	23	Sandstone
"	7	40	Clay
"	8	50	Clay
"	9	30	Clay
"	10	40	Clay
<b>41LR169</b>	1	8	Clay
"	2	50	Clay
"	3	5	Clay

Site	ST	Depth (cm)	Bottom
<b>41LR164</b>	J30	15	Gravels
"	J31	20	Clay
"	J34	10	Clay
"	* J37	30	Clay
"	K34	30	Sandstone
"	K37	35	Sandstone
"	* L11	60	Clay
"	* L12	41	Clay
"	* L13	30	Clay
"	L14	30	Clay
"	L16	70	Iron Ore
"	* L3	43	Clay
"	L6	36	Clay
"	* M12	40	Clay
"	M13	50	Iron Ore
"	M2	30	Clay
"	* M3	30	Clay
"	* M5	50	Clay
"	* M6	50	Clay
"	M7	60	Clay
"	* M9	40	Clay
"	N1	40	Clay
"	N10	50	Clay
"	N2	20	Clay
"	N3	50	Clay
"	N4	40	Clay
"	N5	50	Clay
"	N6	40	Clay
"	* N7	40	Clay
"	* N8	30	Clay
"	O1	30	Sandstone
"	O10	45	Sandstone
"	O11	22	Sandstone
"	O12	15	Sandstone

Table 8-1, continued.

Site	ST	Depth (cm)	Bottom
41LR176	N2	70	Clay
41LR177	* LLL25	100	Sandy Loam
"	N1	60	Clay
"	N2	80	Sandstone
"	* S1	86	Clay
"	S2	60	Clay
"	E1	80	Clay
"	* E2	55	Clay
"	W1	77	Clay
"	W2	88	Clay

Site	ST	Depth (cm)	Bottom
41LR178	* JJJ18	20	Clay
"	N1	40	Clay
"	N2	40	Clay
"	S1	26	Clay
"	* S2	44	Clay
"	S3	21	Clay
"	W1	30	Clay
"	W2	30	Clay

Site	ST	Depth (cm)	Bottom
41LR179	SSS19	30	Clay
"	N1	40	Clay
"	N2	40	Clay
"	S1	37	Clay
"	S2	34	Clay
"	E1	32	Clay
"	* E2	25	Clay
"	W1	35	Clay
"	W2	39	Clay

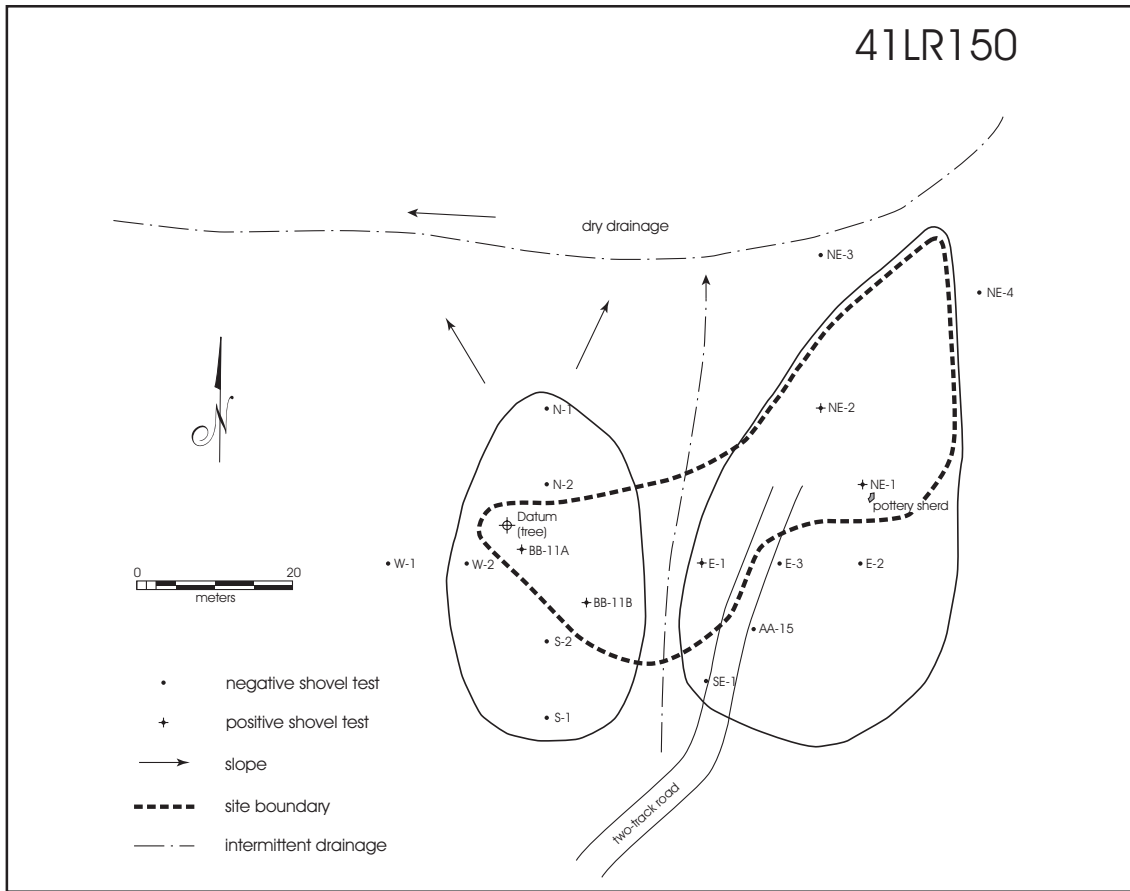


Figure 8-3. Site map—41LR150.

41LR150 was used during the Early to Middle Caddoan period (ca. A.D. 900–1300).

Five shovel tests at 41LR150 contain prehistoric lithic artifacts (1.0 artifacts/positive shovel test). There are five lithic flakes from the site's subsurface, four of Ogallala quartzite and one non-cortical flake of heat-treated petrified wood. Three of the four (75 percent) are small, non-cortical, Ogallala quartzite flakes and three of four (75 percent) have been heat-treated pieces, probably from tool maintenance and resharpening activities.

## 41LR151

### Site Description

41LR151 (Figure 8-5) was discovered when an ephemeral, or light scatter of flakes were observed on go-

pher mounds. The presence of chipped stone flakes with no fire-cracked rock (Appendix A) suggests it was used as a short-term lithic processing site sometime during the prehistoric period.

It is located in a grassy field with scattered Sumac trees and blackberry briars on an upland landform of Whakana series mollisols. With the dense vegetation, surface visibility was only 30 percent. The site was tested with 11 shovel tests (Table 8-1) and found to cover approximately 3,650m<sup>2</sup>, with a maximum depth of 20 cm. Seeps in an unnamed north-south drainage 160 m to the west provide the nearest existing water source. Bioturbation and military-training activities with small arms-launched practice grenades have caused considerable damage, with approximately 50 percent of the site's cultural deposits remaining intact. In addition, a range fire has recently scorched the area, with burned roots recovered in the shovel tests.



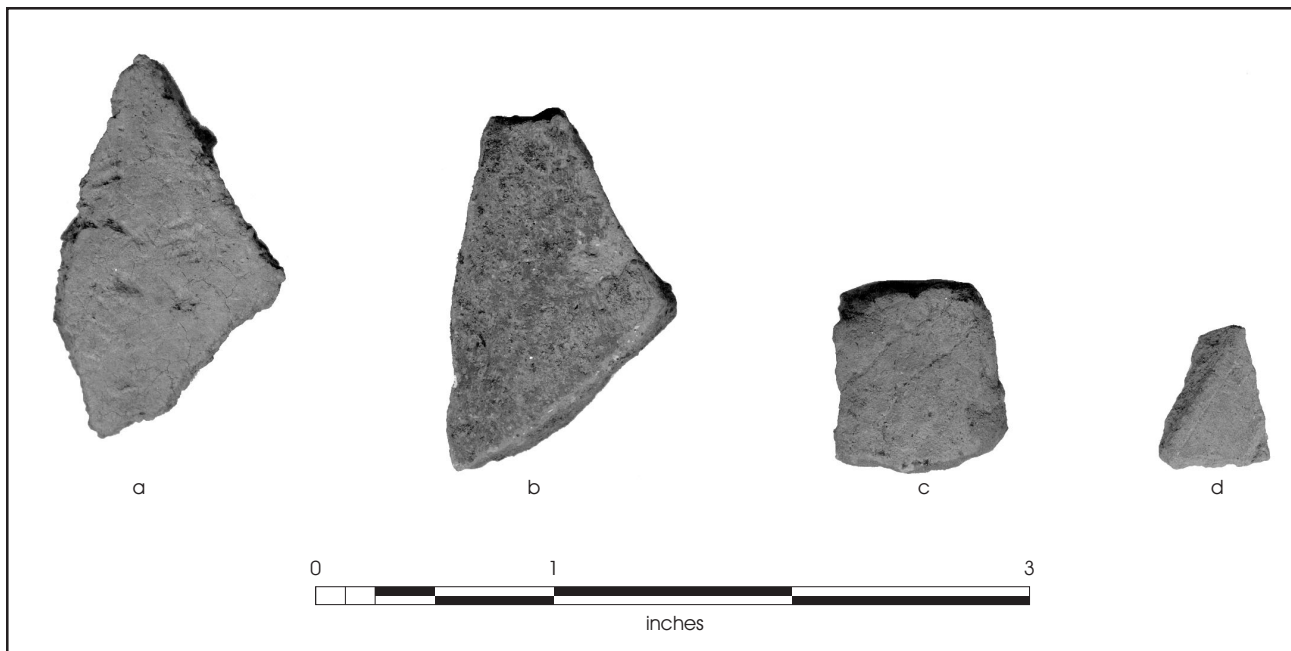


Figure 8-4. a. Decorated sherd from 41LR149; b. red slipped sherd from 41LR152; c. engraved sherd from 41LR152; d. engraved sherd from 41LR157.

### *Artifacts*

Only a single prehistoric lithic artifact has been recovered from 41LR151 during the shovel testing (1.0 artifacts/positive shovel test). It is a non-cortical flake of novaculite or Frisco chert, and it has not been heat-treated. A total of nine flakes, three cortical and six non-cortical, have been noted on the site surface, however. All are less than 3 cm in length. The non-cortical flakes are made of chalcedony and novaculite, while the cortical flakes are all made of Ogallala quartzite.

## **41LR152**

### *Site Description*

Identification of 41LR142 (Figure 8-6) began with the discovery of a ceramic sherd in a shovel test. The presence of temporally diagnostic pottery sherds along with flakes (Appendix A) suggests it was used as a Middle Caddoan period residential site.

The site has dense grasses, scattered Sumac trees, and blackberry briars on a small rise of Lassiter series mollisols. With the dense vegetation, surface visibility was less than 20 percent. The site was tested with

17 shovel tests (Table 8-1) and found to cover approximately 4,200m<sup>2</sup>, with a maximum depth of 60 cm. The nearest water is in Visor Creek on the western edge of the site. Although most of the site appears to be intact, bioturbation and a military-vehicle track cut to 30 cm deep have caused considerable damage to the eastern edge of the site. However, approximately 95 percent of the site's subsurface cultural deposits are believed to be intact.

### *Artifacts*

Thirteen artifacts, primarily prehistoric pottery sherds, were collected during the shovel test investigations at 41LR152. The density of artifacts is 1.9 artifacts/positive shovel test, and most of the prehistoric artifacts are from shovel tests in the southeastern portion of the site (see Figure 8-6).

Lithic artifacts from 41LR152 include four flakes and a flake tool. Ogallala quartzite (n=2) and local reddish-brown chert (n=2) raw materials are represented in the flakes, and both of the Ogallala quartzite flakes have been heat treated; one of them is also cortical. The flake tool has bilateral retouch and/or use wear, and is made on a non-cortical flake of local chert; it is 15.5 mm wide and 3.3 mm thick.

The eight sherds from the site include six that are plain, one (see Figure 8-4b) with an exterior red slip (made from a hematite-rich clay), and one (probably from a carinated bowl) with a rectilinear-curvilinear engraved decoration (see Figure 8-4c). The sherds are from well-made coiled vessels, with thin walls ( $5.4 \pm 0.5$  mm thick), and are grog-tempered. Twenty-five percent also have finely crushed bone (including the red-slipped sherd from ST E-1) and another 25 percent have grit or crushed pebbles added as temper. Core cross-sections indicate that the sherds are from vessels that were fired in a reducing environment, but cooled in a high-oxygen environment (that is, they have a dark core with a very thin oxidized layer on the exterior; see Teltser 1993:536 and Figure 2 F–G).

The plain grog-tempered red slipped body sherd is probably from a Sanders Plain vessel, which according to Brown (1996:401) is a “grog tempered slipped and undecorated ceramic.” Without a plain slipped rim sherd, however, the typological identification must be considered tentative. Red-slipped ceramics, particularly plain red-slipped wares, are abundant along the middle reaches of the Red River valley during the Middle Caddoan period, ca. A.D. 1100–1300 (see Krieger 1946; Bruseth 1998). The rectilinear-curvilinear engraved sherd is also consistent with a Middle Caddoan age for the 41LR152 ceramics.

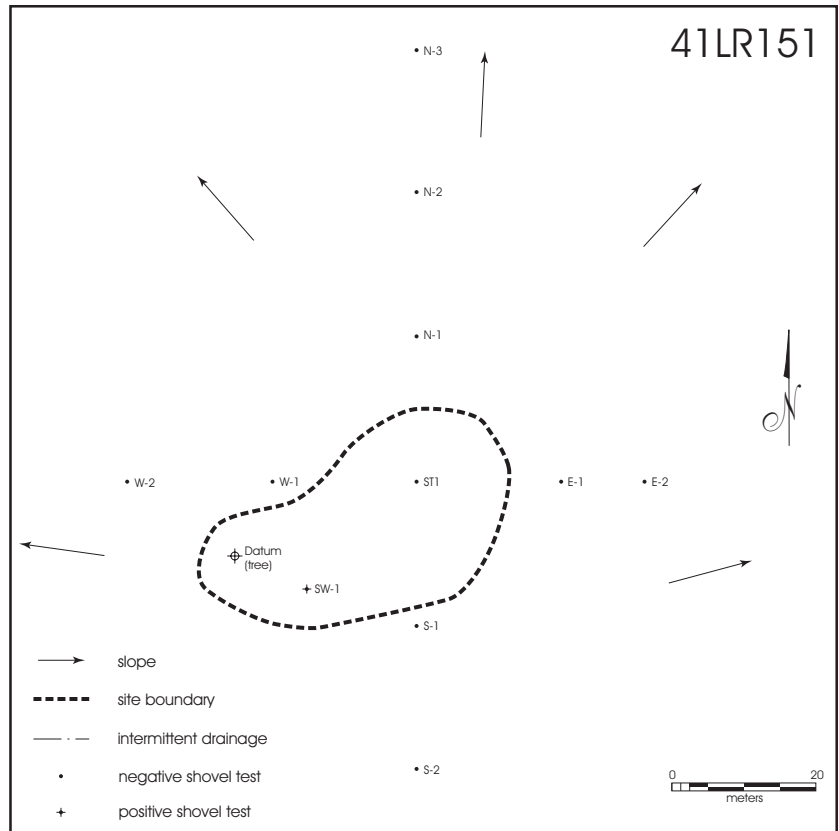


Figure 8-5. Site map—41LR151.

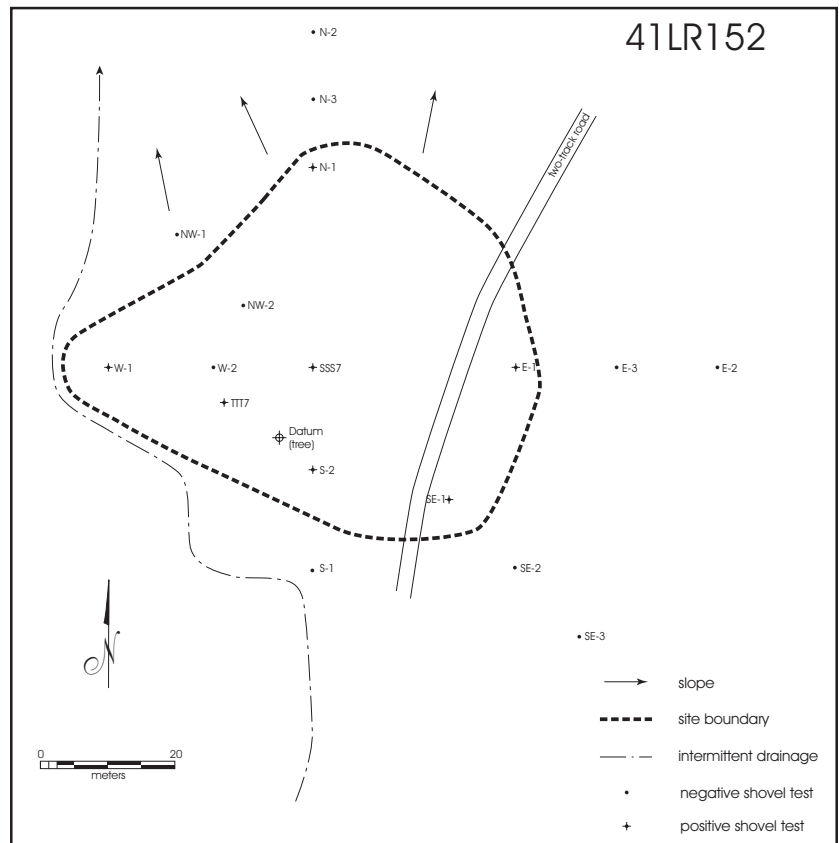


Figure 8-6. Site map—41LR152.

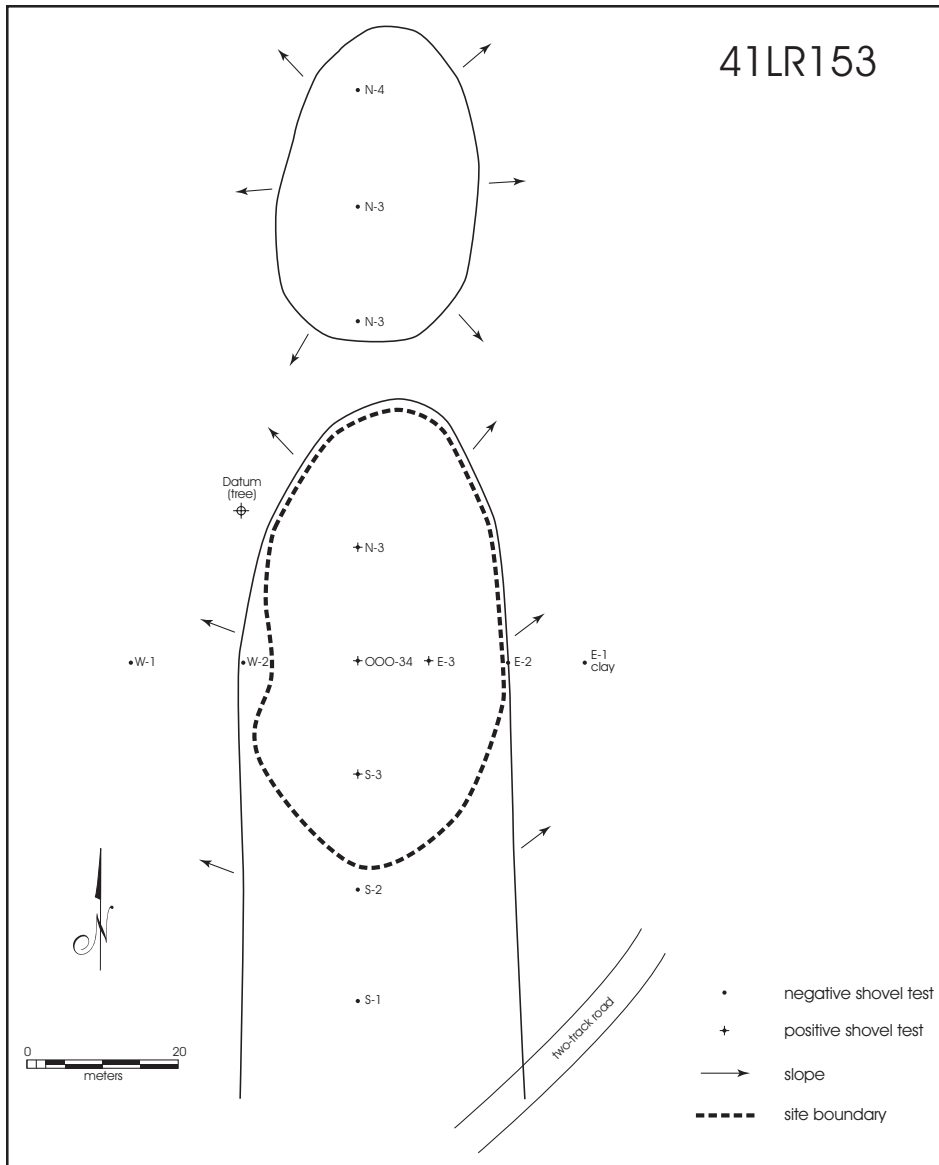


Figure 8-7. Site map—41LR153.

## 41LR153

### Site Description

Further investigations of the area that was designated as site 41LR153 (Figure 8-7) were warranted when two flakes were discovered in a shovel test. Twelve additional shovel tests were then excavated to establish the site's horizontal and vertical dimensions. The presence of flakes and fire-cracked rock (Appendix A), as well as an arrow point, suggest it was used as a short-term, possibly Middle Caddoan, open campsite.

It is located in a grassy field on a finger slope and slight rise, with scattered Sumac trees on Annona series mollisols. With the dense vegetation, surface visibility is less than 5 percent. Shovel testing (see Table 8-1) established that the site covers approximately 1,900m<sup>2</sup>, with a maximum depth of 60 cm. The nearest water is in Visor Creek, approximately 200 m to the west. Bioturbation has caused only minimal damage to the site's archaeological deposits, with approximately 90 percent of the site's cultural deposits remaining intact.

### Artifacts

A serrated and corner-notched Early Caddoan arrowpoint with its stem missing (Figure 8-8a) was found on the surface. It is made of Red River chert. It is 2.6 mm thick, 12.8 mm wide at the barbs, and 7.7 mm wide at the stem. No other artifacts were observed on the surface.

Prehistoric lithic artifacts found in the 41LR153 shovel testing include two fire-cracked rocks and five flakes, a density of 1.75 artifacts/positive shovel test. Both pieces of fire-cracked quartzite (0.1 kg) are from shovel tests on the northern portion of the ridge.

Unlike most of the sites recorded during the Camp Maxey survey, 80 percent of the lithic flakes are on chert or chalcedony rather than the local quartzites (coarse-grained and Ogallala quartzite). Two of the chert flakes are brownish-yellow (non-cortical) and reddish-brown (cortical piece) and are probably from

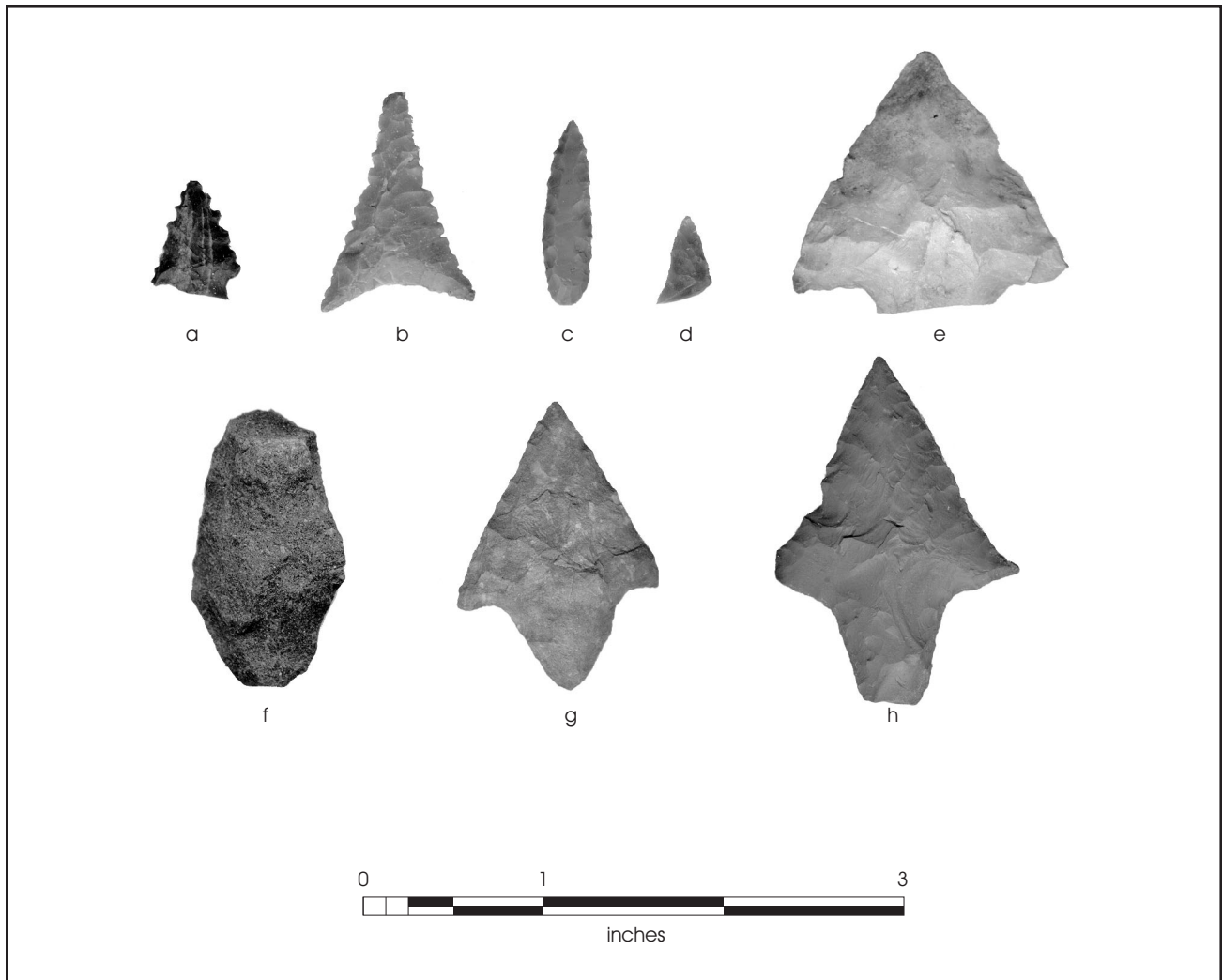


Figure 8-8. a. Serrated arrow tip from 41LR153; b. Talco point from 41LR155; c. bifacial tool from 41LR157; d. arrow point tip from 41LR158; e. possible Gary point from 41LR168; f. Gary var. LeFlore from 41LR169; g. Gary var. Camden from 41LR169; h. Gary var. Camden from 41LR169.

local gravel sources present along the Sulphur River and Red River interfluvium not far from Camp Maxey. The chalcedony (non-cortical) and black chert (cortical) flakes are from Red River gravels. The single Ogallala quartzite flake is a non-heat-treated cortical piece.

### 41LR154

#### *Site Description*

41LR154 was first recognized as an ephemeral surface lithic scatter (Figure 8-9). The presence of flakes

with no diagnostic lithic artifacts, ceramics, or fire-cracked rock (Appendix A) suggests that the site was used as a lithic-processing area sometime during the prehistoric period. Historic ceramic and glass sherds were also observed on the surface (see Chapter 10 for a discussion of the historic component).

There are moderately dense grasses and scattered Sumac trees on the site, which has gradually sloping Freestone series mollisols. Surface visibility is approximately 50 percent. The site was tested with eight shovel tests (Table 8-1) and covers approximately 8,000m<sup>2</sup>, with a maximum depth of 20 cm. The nearest water emanates from springs in an unnamed south-north drainage 600 m to the northeast. Although most

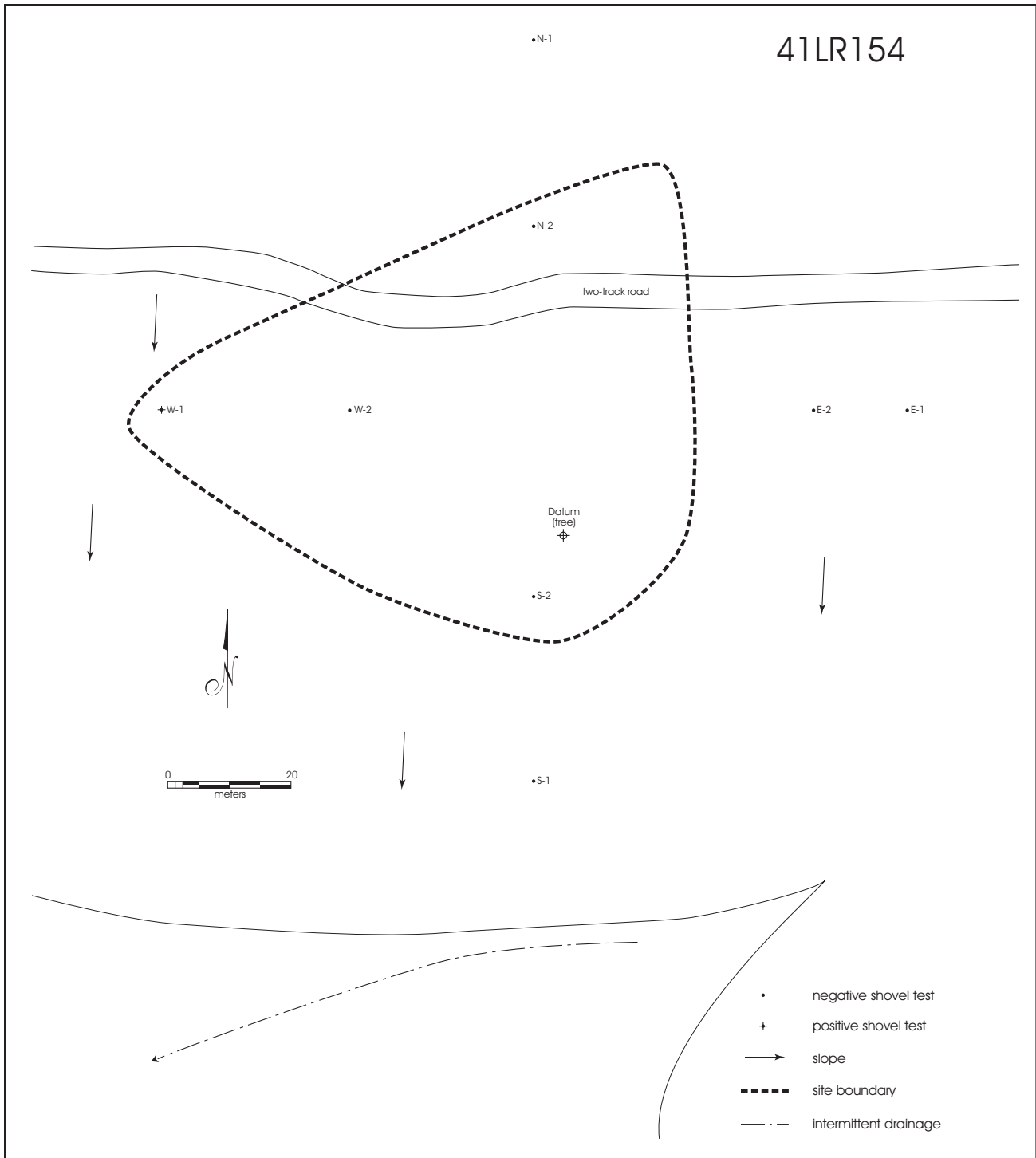


Figure 8-9. Site map—41LR154.

of the site appears to be intact, bioturbation and a two-track road running through the middle of the site have caused moderate damage, with approximately 70 percent of the site's cultural deposits remaining intact.

### Artifact

One prehistoric lithic artifact was recovered from 41LR154 during the shovel testing (1.0 artifacts/positive shovel test). The flake from test W1 is a non-

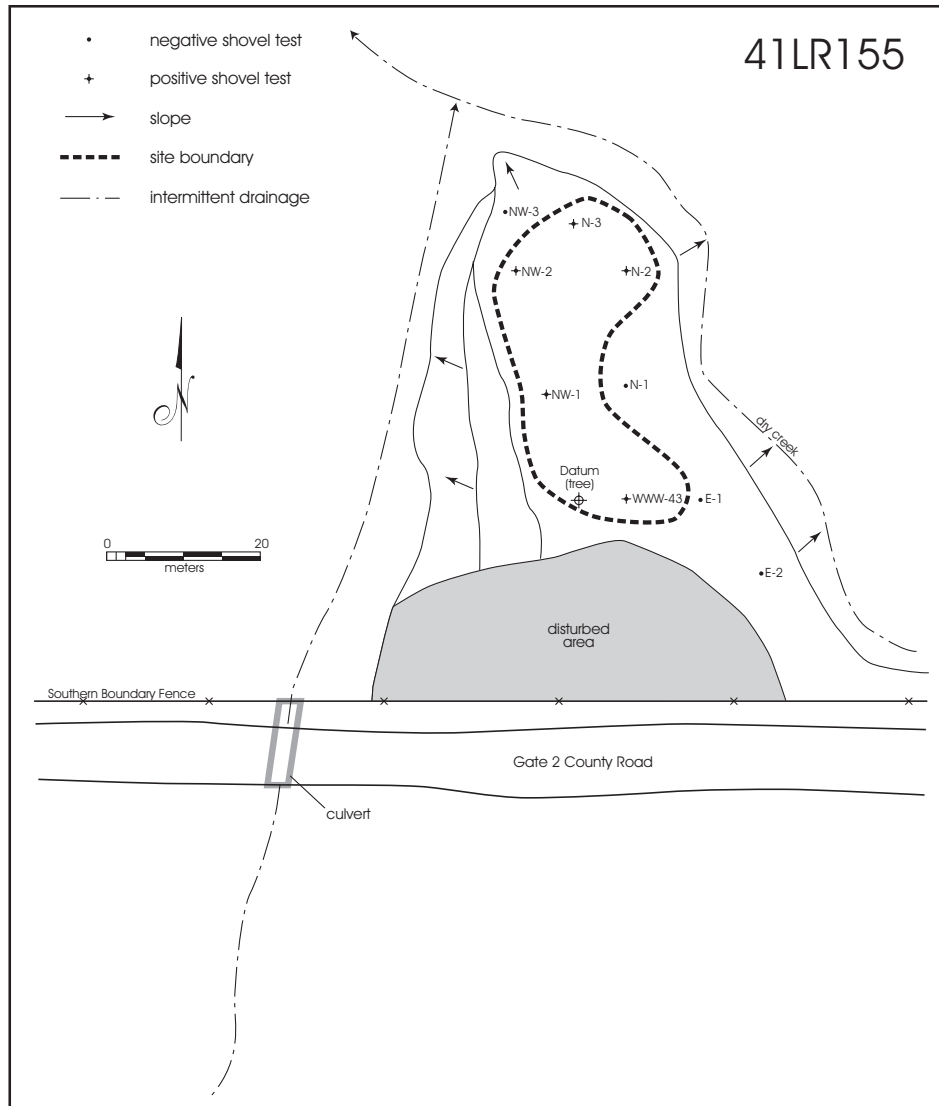


Figure 8-10. Site map—41LR155.

cortical piece of Ogallala quartzite, and it has been heat treated. Five non-cortical flakes are present on the site surface; three are Ogallala quartzite, one is an unidentified opaque chert (probably from local gravels), and one is a gray/reddish chert.

## 41LR155

### *Site Description*

A Talco point found in a shovel test placed on a small pimple mound was the first piece of evidence that led to designating the area as a site (Figure 8-10). The

point, along with flakes, but no fire-cracked rocks or pottery sherds (Appendix A), suggests that 41LR155 was used as a lithic-processing area during the Late Caddoan period.

The site is located on a wooded finger slope of Annona series mollisols at the confluence of two intermittent drainages. Surface visibility was only about 30 percent due to dense vegetation and leaf litter. The small pimple mound rises approximately 50 cm above the upper, southwestern portion of the finger ridge (see Figure 8-10). The slope accentuates to the north and west toward one intermittent drainage, and a four-meter steep bluff overlooking a second intermittent drainage defines the eastern boundary. The Camp



Maxey perimeter fence and a county gravel road comprise the artificial southern boundary. It appears that the southern portion of the site was bulldozed during the construction of the road, fence, and stream culvert. Much of the portion of the site that was not destroyed during construction appears to be intact, with only moderate disturbance caused by slope erosion and bioturbation, leaving approximately 50 percent of the site's cultural deposits intact. The site was tested with a total of ten shovel tests (Table 8-1) and found to cover approximately 1,500m<sup>2</sup>, with a maximum depth of 80 cm. The nearest water emanates from springs in upper Visor Creek, 700 m to the northwest.

### Artifacts

There were no artifacts observed on the surface of 41LR155; however there are eight prehistoric lithic artifacts from the shovel tests; seven flakes and a Late Caddoan period Talco arrowpoint (Turner and Hester 1993:233). This is a density of 1.60 artifacts/positive shovel test.

The distribution of Talco points in northeast Texas mortuary contexts suggests that they date after ca. A.D. 1500–1600 (Perttula and Nelson 1998; Perino 1994).

The Talco point (see Figure 8-8b) was found between 60–80 cm bs in ST WWW-43, at the southern end of the site. It is made on a flake of grayish-brown chert, probably from the Red River gravels, and appears to have been heat treated. The point has a deep concave base and well-serrated blades, has been bifacially flaked for thinning and shaping on the blade, and is 32 mm long, 21.7 mm wide at the base, and only 3.0 mm thick.

Ogallala quartzite dominates the lithic flakes from 41LR155, comprising 85.7 percent of the total flakes, and 83.3 percent of the Ogallala quartzite flakes are cortical pieces. Fifty percent of the Ogallala quartzite flakes are also from heat-treated cobbles. The other flake is a cortical brown chert raw material, probably from a local gravel source. It has not been heat treated.

## 41LR156

### Site Description

41LR156 (Figure 8-11) was found with the recovery of two flakes from a shovel test. The presence of heat-treated flakes, and a partially burned turtle shell

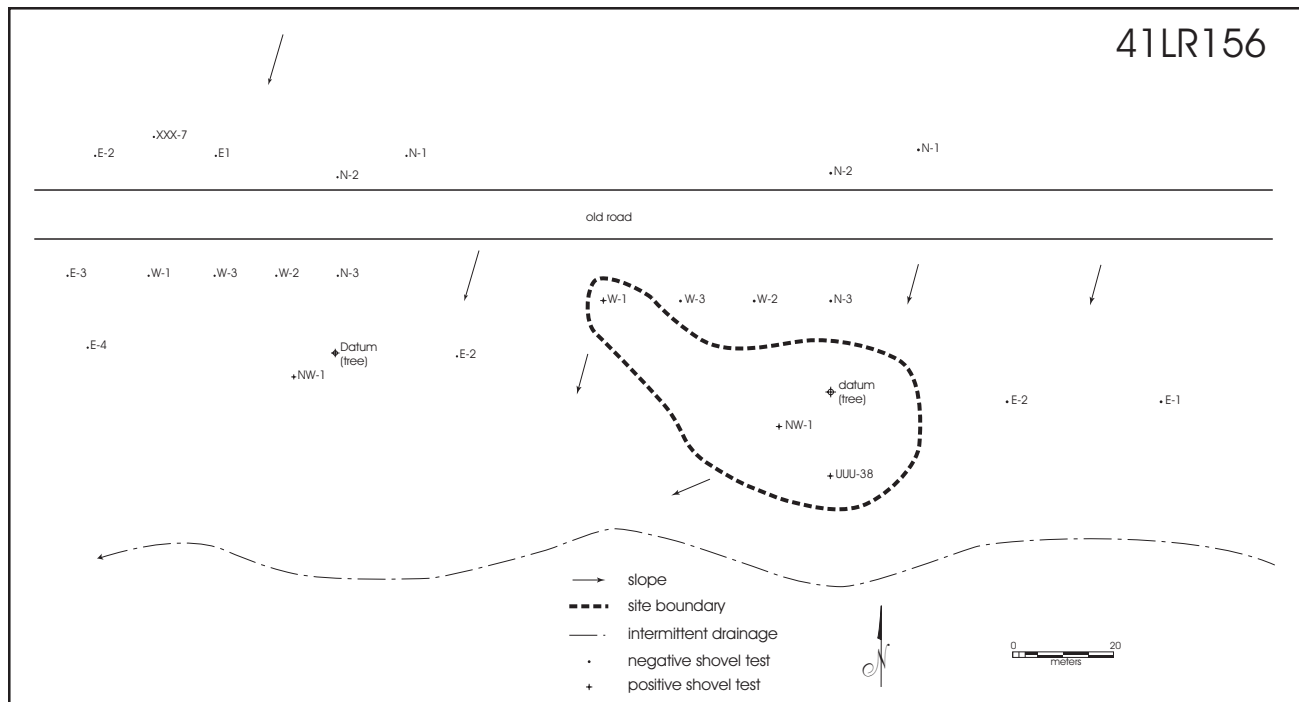


Figure 8-11. Site map—41LR156.

fragment found in subsequent shovel tests (Appendix A), suggests that the site was used as a short-term campsite during an unknown part of the prehistoric period.

41LR156 is located in a wooded area on Woodtell series mollisols that slope toward an intermittent drainage, which forms the southern boundary of the site. The dense vegetation and leaf cover limits surface visibility to 10 percent. The site was tested with 15 shovel tests (see Table 8-1) and found to cover approximately 1,600m<sup>2</sup>, with a maximum depth of 60 cm. The nearest water emanates from springs along upper Visor Creek, 630 m to the northwest. A deeply cut (ca. 1 m) and overgrown (ca. 1900s) roadbed runs 20 m north of the site. Approximately 90 percent of the site's cultural deposits remain intact, although bioturbation, slope erosion, and cutbank erosion from the adjacent drainage have caused minimal disturbance.

### *Artifacts*

Prehistoric artifacts at 41LR156 are confined to three shovel tests, with a density of 2.33 artifacts/positive shovel test. The artifacts include one burned turtle shell fragment from ST NW-1 (20–40 cm bs), one chunk, and five lithic flakes. The chunk is a non-heat-treated cortical piece of Ogallala quartzite, while the five flakes are comprised of Ogallala quartzite (n=4) and novaculite (n=1). The novaculite flake is a non-cortical piece, and the Ogallala quartzite flakes are equally divided between cortical and non-cortical pieces; 50 percent of the Ogallala quartzite flakes are heat treated, one each with cortex and no cortex.

## **41LR157**

### *Site Description*

41LR157 was discovered when a pottery sherd was recovered from a shovel test on a finger ridge (Figure 8-12). The presence of additional pottery sherds, along with fire-cracked rocks, a hammerstone, and a temporally diagnostic bifacial tool in subsequent shovel tests (Appendix A) suggest that the site was used as a resi-

dential site area during the Early-Middle Caddoan period.

It is located in a wooded area adjacent to an intermittent drainage and an early 1900s road (see Figure 8-12). Scattered Sumac trees provide the canopy over Whakana series mollisols on a landform that slopes 3 to 5 percent to the southwest. Surface visibility is approximately 20 percent. The site was tested with 11 shovel tests (see Table 8-1) and found to cover approximately 2,250m<sup>2</sup>, with a maximum depth of 1 m. The nearest water emanates from seeps in upper Visor Creek, 575 m to the northwest. Although bioturbation, slope erosion, and the ca. 1900s road cut running through the middle of the site have caused considerable damage, there appear to be discrete areas of intact cultural deposits in approximately 60 percent of the site.

### *Artifacts*

One non-cortical flake was found on the surface, and a total of 25 prehistoric artifacts have been recovered during the shovel-test investigations at 41LR157. The artifacts include one bifacial tool, 14 flakes and chunks, one possible hammerstone, four fire-cracked rocks, and five sherds. They are concentrated in the three shovel tests at the southern end of the landform, adjacent to a small creek drainage. The density of artifacts (6.25 artifacts/positive shovel test) is higher here than at the remainder of the prehistoric sites found during the Camp Maxey survey investigations.

Four of the five sherds from the site are plain, and the fifth (from ST ZZZ-4) has a single engraved line of indeterminate orientation (see Figure 8-4d). The sherds are from thin ( $5.1 \pm 1.1$  mm), grog-tempered vessels, although the engraved sherd also has small amounts of finely crushed bone temper. A light reddish-orange core cross-section indicates that this sherd is from a vessel that has been fired in an oxidizing environment, while the others are from vessels with dark cores with thin oxidized layers (fired under low-oxygen conditions and cooled in a high-oxygen environment).

The bifacial tool (see Figure 8-8c) is a small (26 mm in length, 7 mm in width, and 3.0 mm in thickness) bi-pointed drill or perforator of Big Fork chert, green

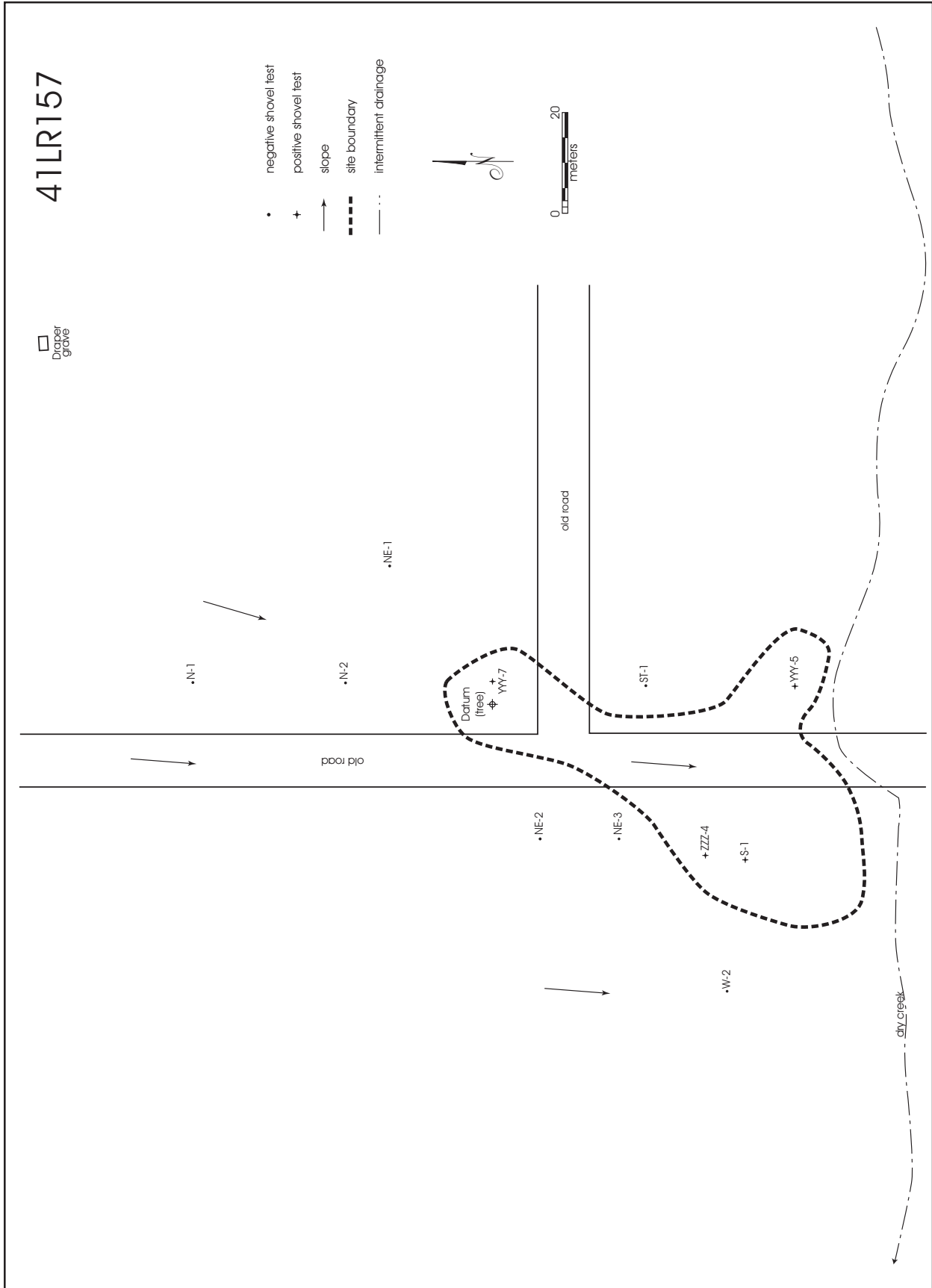


Figure 8-12. Site map—41LR157.

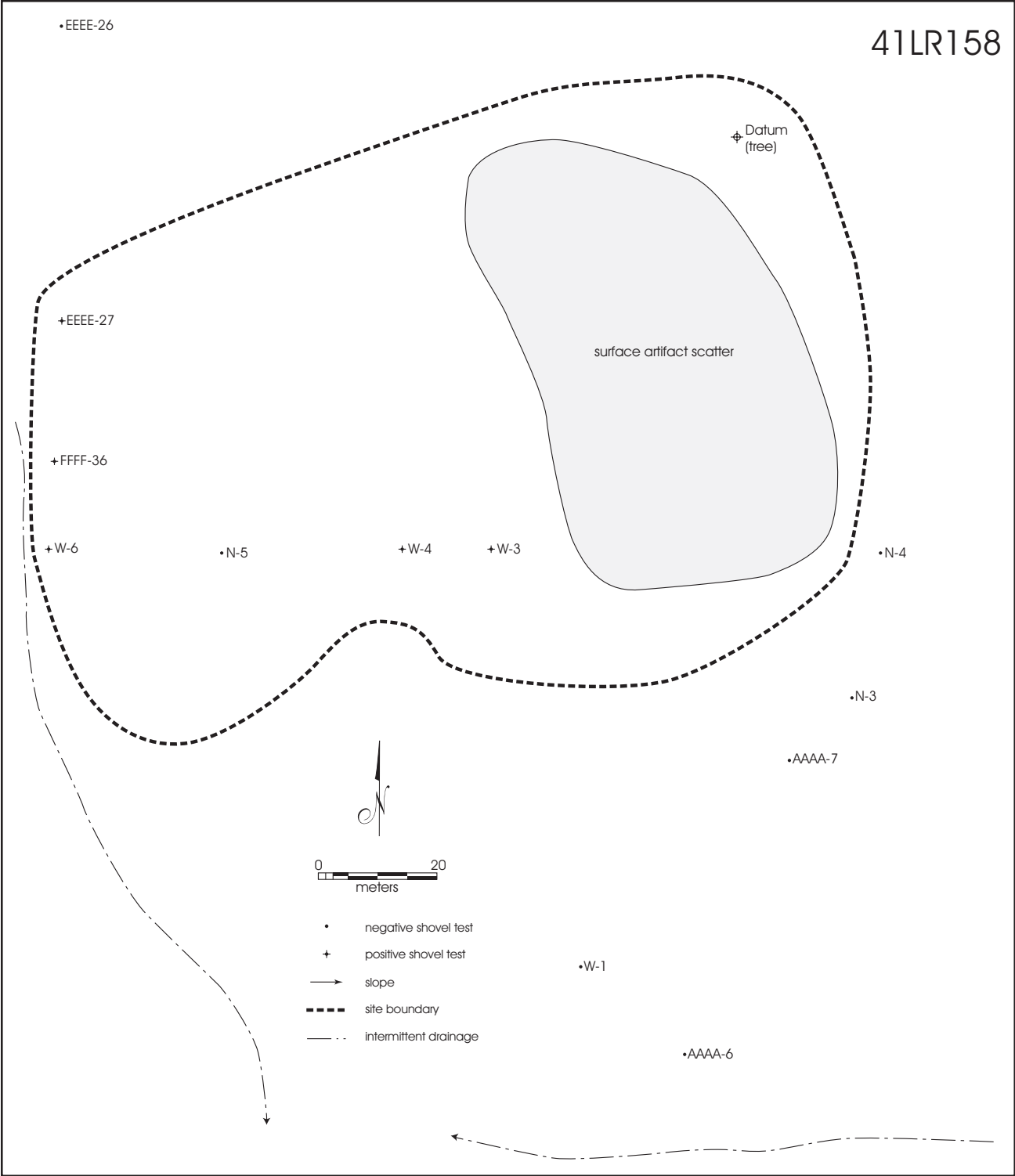


Figure 8-13. Site map—41LR158.

variety (Mallouf 1976:49). According to Mallouf (1976), this material is available in Red River gravels below the confluence of the Red and Kiamichi rivers. The size and form of the 41LR157 drill or perforator is relatively consistent with similar tools from Early Caddoan contexts in the region (see Story 1981:Figure 34).

Lithic raw materials represented among the 12 flakes found in the shovel testing from 41LR157 include Ogallala quartzite (n=9), petrified wood (n=1), a brownish-yellow local chert (n=1), and Big Fork chert (n=1) from the Red River gravels. Cortical flakes comprise 67 percent of the flakes, including the local chert and the Big Fork chert specimens, and 67 percent of the Ogallala quartzite sample. Heat treating of Ogallala quartzite cobbles was apparently common at the site, as 67 percent of the flakes of this material have been heat treated, including 56 percent of the flakes with cortex and 33 percent of the non-cortical Ogallala quartzite flakes.

The possible hammerstone (from ST S-1) is a coarse-grained quartzite cobble with a small amount of battering on opposing ends of the cobble. It is 75 mm in length, 55 mm wide, and 37 mm in thickness. The two chunks are from Ogallala quartzite and a coarse-grained quartzite, and both are heat treated. Most of the fire-cracked rock (from quartzite cobbles, and weighing less than 0.2 kg) is from ST S-1 at the western end of the site, with one piece also coming from ST ZZZ-4.

## 41LR158

### *Site Description*

41LR158 was found because of a large quantity of chipped-stone artifacts lying on the surface (Figure 8-13). The presence of a relatively large number of cores and flakes with a broken arrow point tip (Appendix A) suggests that the site was used as a lithic quarry or procurement area, possibly during the Early-Middle Caddoan period.

It is located in a grassy field with scattered trees and blackberry briars. Whakana series mollisols slope 3

to 5 percent to the southwest, and finger-like gullies have incised the slope (see Figure 8-13). With the sporadic grass cover, surface visibility is about 50 percent. The site was tested with 12 shovel tests (see Table 8-1). Based on the surface and subsurface distribution of artifacts, 41LR158 is one of the larger sites recorded on Camp Maxey to date; although having deposits only about 20 cm thick, it covers approximately 22,400m<sup>2</sup>. The nearest water emanates from seeps in upper Visor Creek, forming the western boundary of the site. Although bioturbation, slope erosion, cutbank erosion, and 30 cm-deep cuts from track vehicles have caused moderate to little damage, there appear to be discrete areas of intact cultural deposits in approximately 80 percent of the site.

### *Artifacts*

41LR158 contained the highest quantity of surface artifacts (n=95) of any site recorded during this project: 78 flakes (65 percent cortical), 12 tested cobbles, four cores, and a gray chalcedony arrow point tip (see Figure 8-8d) were collected (Table 8-2). The surface assemblage was made from Ogallala quartzite, except for two flakes that were made from brown chert, and the arrow point. Approximately 50 percent of the quartzite flakes appeared to have been heat-treated.

Table 8-2. Surface inventory of chipped stone artifacts at 41LR158.

	<3 cm	3 to 5 cm	5 to 7 cm	Total
Cortical Flakes	14	30	7	51
Non-cortical Flakes	2	12	13	27
Cores				4
Tested Cobbles				12
Arrow Point Tip				1

Four shovel tests at 41LR158 contained prehistoric lithic artifacts, at a density of 1.75 artifacts/positive shovel test. These artifacts are cortical flakes of Ogallala quartzite (n=5), chalcedony (n=1), and a reddish-gray local chert (n=1). The local chert flake is from a heat-treated cobble, as are 40 percent of the Ogallala quartzite flakes.

41LR159

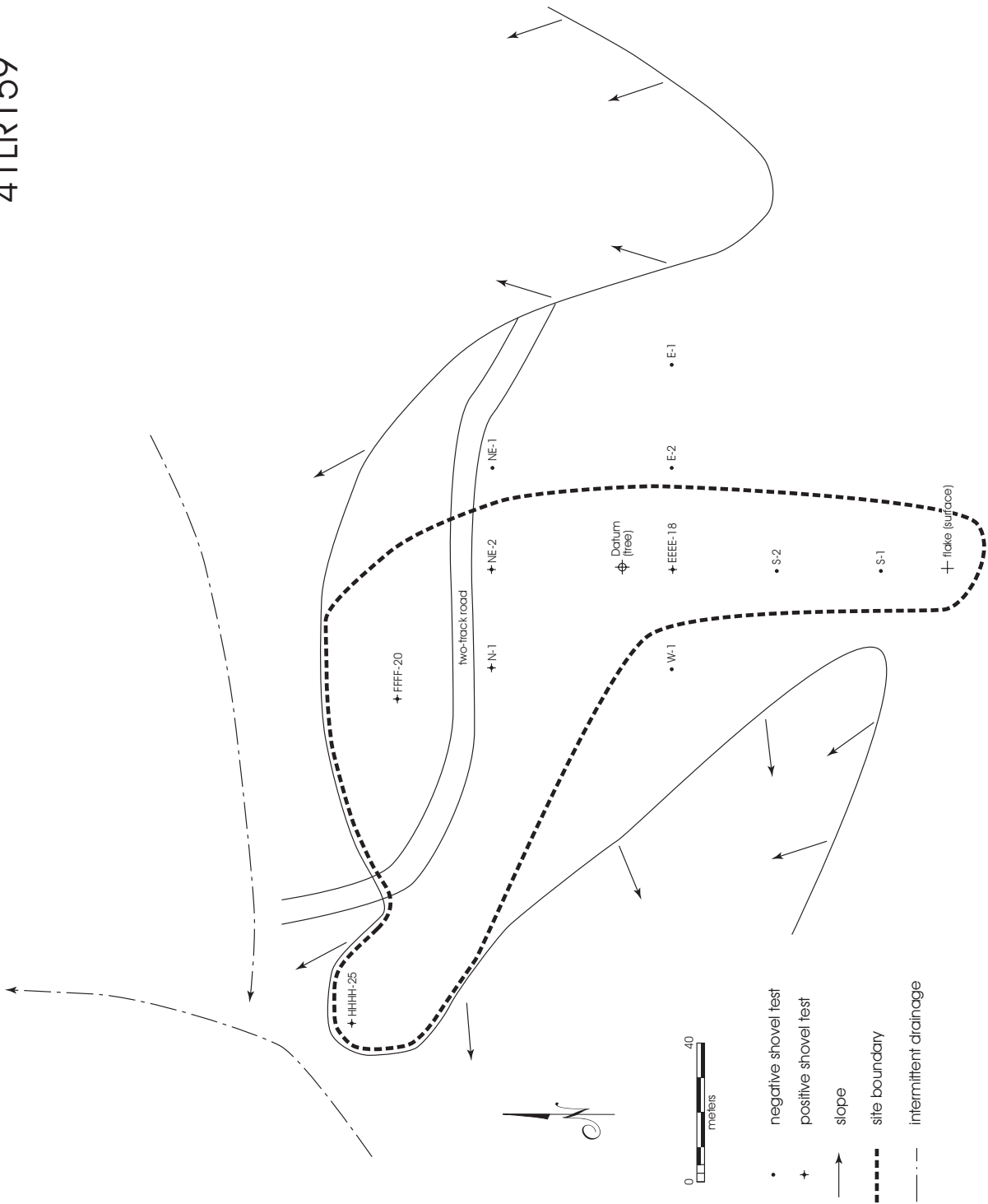


Figure 8-14. Site map—41LR159.



## 41LR159

### *Site Description*

41LR159 (Figure 8-14) was discovered when one of the CAR surveyors observed a flake on a gopher mound and dug a shovel test there that was found to contain artifacts. The presence of flakes and chunks, but no fire-cracked rock or ceramics (Appendix A), suggests this site was used as a short-term lithic processing area.

It is located at the confluence of two creeks, in a grassy field with scattered trees and blackberry briars. Whakana series mollisols slope 1 to 3 percent to the southwest. The northern and western natural boundaries are formed by bluffs overlooking Visor Creek and an intermittent drainage (see Figure 8-14). Surface visibility is 50 percent. The site was tested with 11 shovel tests (see Table 8-1). Based on the surface and subsurface distribution of artifacts, 41LR159 is approximately 25,600m<sup>2</sup>, and as thick as 80 cm in some areas. The nearest water emanates from seeps in upper Visor Creek, forming the western boundary of the site. Although bioturbation, slope erosion, cutbank erosion, a two-track road, and 30 cm-deep cuts from track vehicles have caused moderate damage, there appear to be discrete areas of intact cultural deposits in approximately 80 percent of the site.

### *Artifacts*

Twelve flakes (33 percent cortical) are noted from surface contexts. Eight are of brown, white, reddish-orange, or green/banded chert, three others are Ogallala quartzite, and the remaining one is novaculite.

Twelve prehistoric artifacts were recovered from shovel testing at 41LR159, nine flakes and three chunks. The density is 2.4 artifacts/positive shovel test. The artifacts are concentrated between 0–15 cm and 30–40 cm in ST N-1, near the center of the site.

All three chunks are cortical Ogallala quartzite pieces, and two of them have been heat treated. The raw material among the flakes is diverse, including coarse-grained quartzite (n=2), Ogallala quartzite (n=3), local brownish-gray chert (n=1), petrified wood (n=1), Red

River chert (n=1), and red claystone/siltstone (n=1). Of the coarse-grained quartzite, one piece from ST HHHH-25 has a “sugary” texture, common among the quartzites in Red River gravels in Montague County, Texas. Cortical flakes are represented among the quartzite (100 percent), the local chert, and the Ogallala quartzite (67 percent), and the coarse-grained quartzite and Ogallala quartzite cortical flakes also have come from heat-treated cobbles.

## 41LR160

### *Site Description*

41LR160 was discovered with a positive shovel test in an area with less than 20 percent surface visibility (Figure 8-15). Subsequent shovel testing produced additional cultural materials. The presence of lithics with fire-cracked rock (Appendix A) suggests this site was used as a short-term open campsite during an unknown part of the prehistoric period.

It is located on a landform with 3 to 5 percent sloping Whakana-Porum soils alongside Visor Creek, which is fed by seeps in the immediate area. The area is heavily wooded, with dense grasses and brush, limiting ground surface visibility to less than 10 percent. The site was tested with 27 shovel tests (see Table 8-1). Based on the distribution of shovel tests containing artifacts, 41LR160 is approximately 30,000 m<sup>2</sup>, with cultural material as deep as 20 cm below the surface. Although bioturbation, slope erosion, cutbank erosion, a two-track road, and 30 cm-deep cuts from track vehicles have caused moderate damage, there appear to be discrete areas of intact cultural deposits in approximately 90 percent of the site.

### *Artifacts*

There were no artifacts observed on the surface at 41LR160. Of the 15 lithic artifacts recovered from subsurface contexts, most (67 percent) are from ST E-1 and ST E-2 in the east-central portion of the site, near a small creek drainage (see Figure 8-15). The artifact density is 2.14 artifacts/positive shovel test. Fire-cracked quartzite pebbles comprise 33 percent of the small assemblage, and all five pieces (weigh-

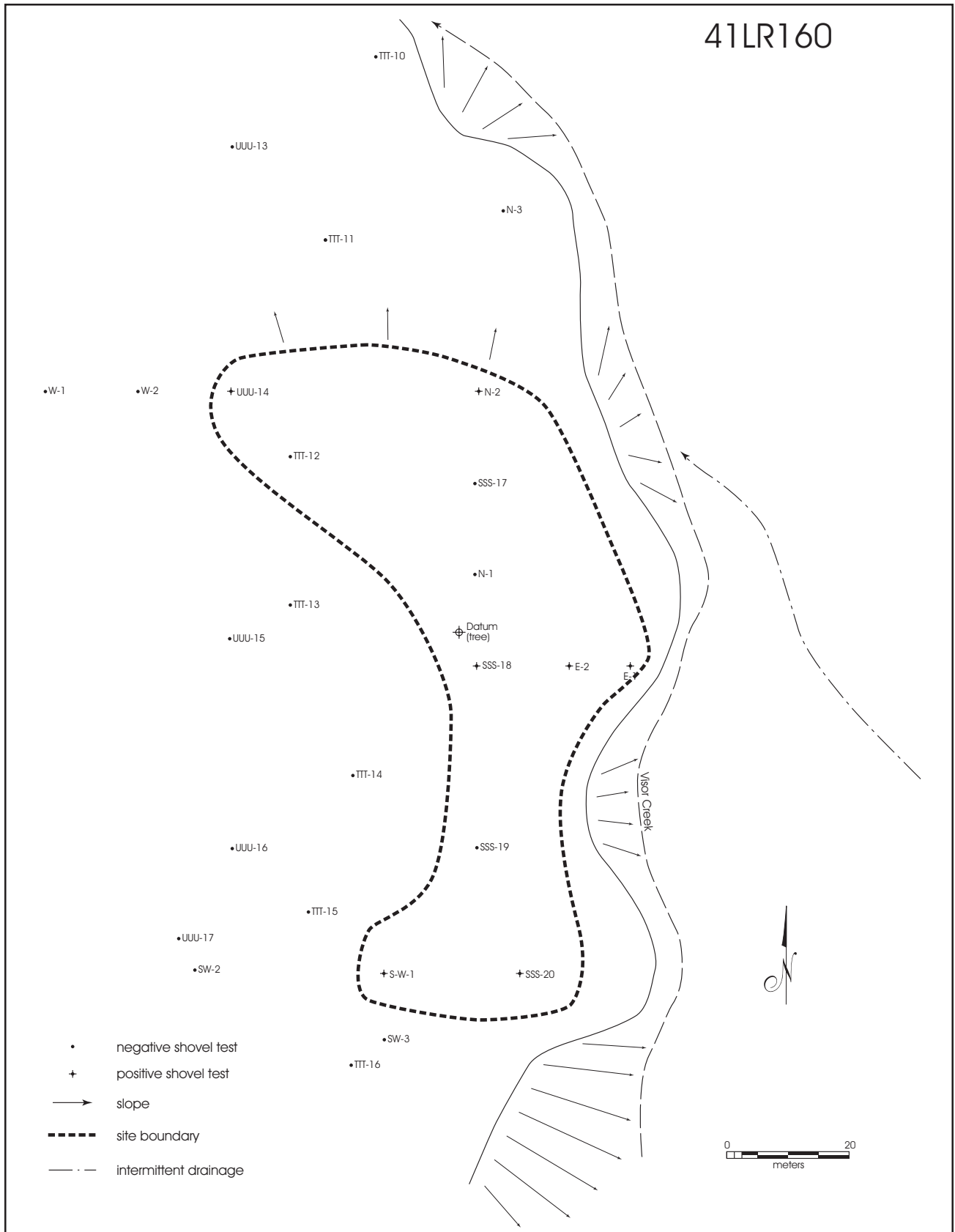


Figure 8-15. Site map—41LR160.

ing 0.24 kg) are from ST E-2. This localized distribution of fire-cracked rock suggests that a rock feature is present in this part of 41LR160.

The remainder of the lithic artifacts from the site are flakes of coarse-grained quartzite (n=3), including two with a “sugary” texture that is a common material upstream in Montague County (Daniel E. McGregor, 1997 personal communication), Ogallala quartzite (n=6), and a banded red-brown chert (n=1) of local derivation. Two of the three quartzite flakes are cortical and heat-treated, while 83 percent of the Ogallala quartzite flakes are cortical, and 67 percent are heat-treated. The local chert is not heat-treated, and lacks cortex.

## 41LR161

### *Site Description*

Site 41LR161 (Figure 8-16) was identified in a positive shovel test on a finger ridge landform. Subsequent shovel testing produced sufficient quantities of cultural material to warrant a site designation. The presence of flakes with no fire-cracked rock or prehistoric ceramics (Appendix A) suggests this site was used as a short-term open campsite during an unknown part of the prehistoric period. Historic artifacts were also found at the site (see Chapter 10 for a discussion of the historic component).

It is located on a wooded finger slope between two drainages with 3 to 5 percent sloping Whakana-Porum sandy loam mollisols. Visor Creek, which is fed by seeps in the immediate area, flows 15 m west of the upper portion of the site. The area is heavily wooded, with dense grasses and brush, and the surface visibility is less than 10 percent. The site was tested with seven shovel tests (see Table 8-1). Based on the distribution of shovel tests containing artifacts, 41LR161 is approximately 8,000m<sup>2</sup> in size and contains cultural material to a maximum depth of 80 cm. Bioturbation, slope erosion, and a one-meter deep road cut have caused moderate damage, but there appear to be discrete areas of intact cultural deposits in approximately 80 percent of the site.

### *Artifacts*

No artifacts were observed on the surface at 41LR161. The five positive shovel tests yielded seven prehistoric lithic artifacts, 1.40 artifacts/positive shovel test. No shovel test had more than two artifacts (STs 1 and 4). The small lithic assemblage includes a grayish-brown chert (probably from the Red River gravels) core fragment, a split quartzite pebble, and five flakes. Two of the flakes are non-cortical pieces of non-heat-treated Ogallala quartzite; one is a cortical flake of coarse-grained quartzite (also non-heat-treated); one is a non-cortical piece of Red River chert, and; the fifth flake is a cortical piece of Red River chert.

## 41LR162

### *Site Description*

This site was discovered by shovel testing on a finger slope landform that looked to be typical of Caddoan site locations in the region (see Figure 8-17), in an area with less than 20 percent surface visibility. Subsequent shovel testing produced additional cultural material to warrant a site designation. The presence of chipped stone with fire-cracked rock (see Appendix A) suggests this site was used as a short-term open campsite during an unknown part of the prehistoric period.

It is located on a wooded finger slope alongside an intermittent drainage with 1 to 3 percent sloping Annona sandy loam mollisols. The nearest water emanates from seeps in upper Visor Creek, 630 m to the northwest. The area is heavily wooded, with dense grasses and brush. The dense vegetation and leaf cover accounts for a ground surface visibility of less than 10 percent. The unnamed intermittent drainage forms the northern and eastern boundaries of the site. The site was tested with ten shovel tests (see Table 8-1). Based on the distribution of shovel tests containing artifacts, 41LR162 is approximately 7,100m<sup>2</sup> and contains artifacts to a depth of 60 cm. Bioturbation, slope erosion, and a one-meter deep road cut have caused considerable damage, but there appear to be discrete areas of intact cultural deposits in approximately 30 percent of the site.

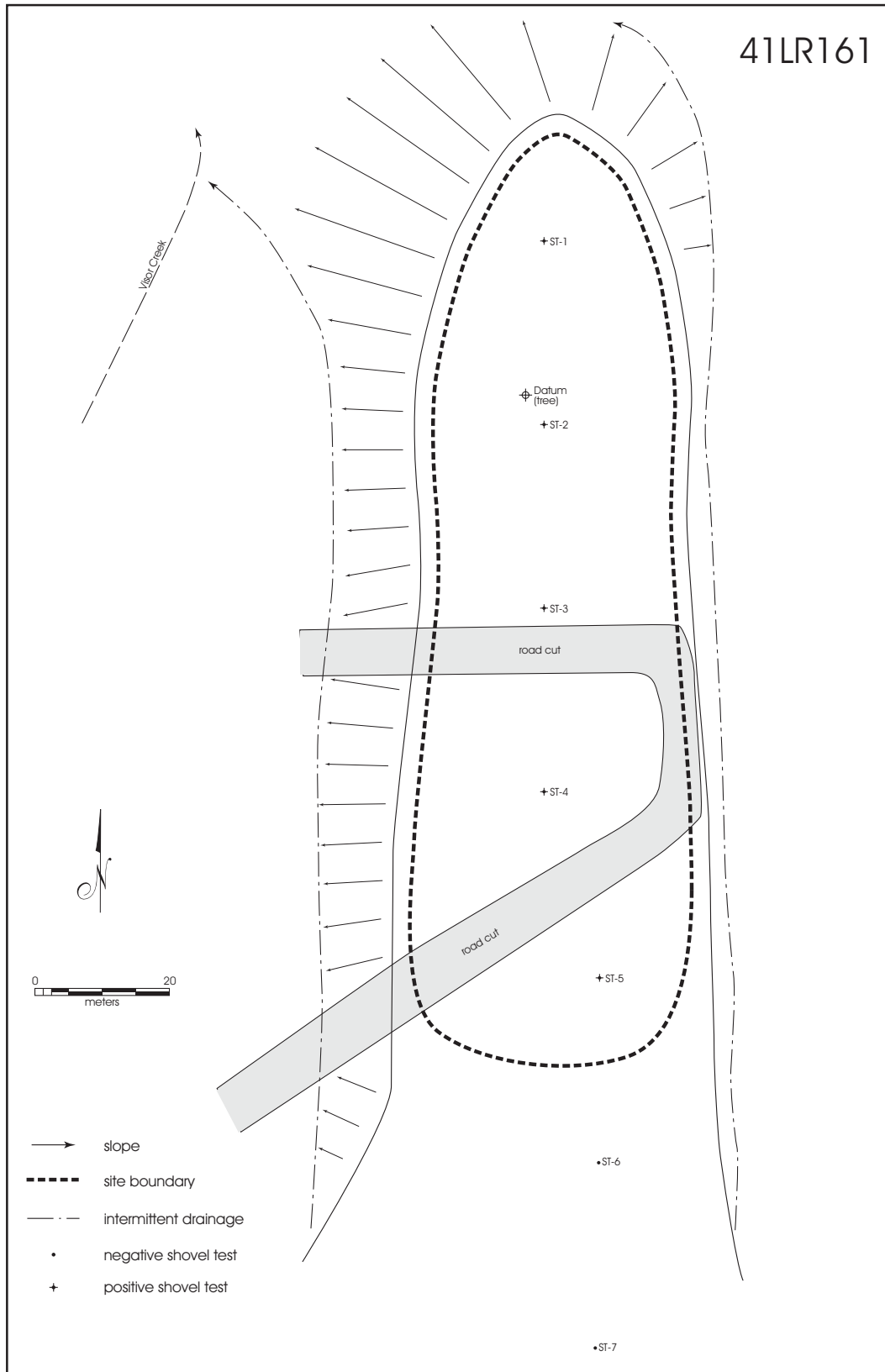


Figure 8-16. Site map—41LR161.

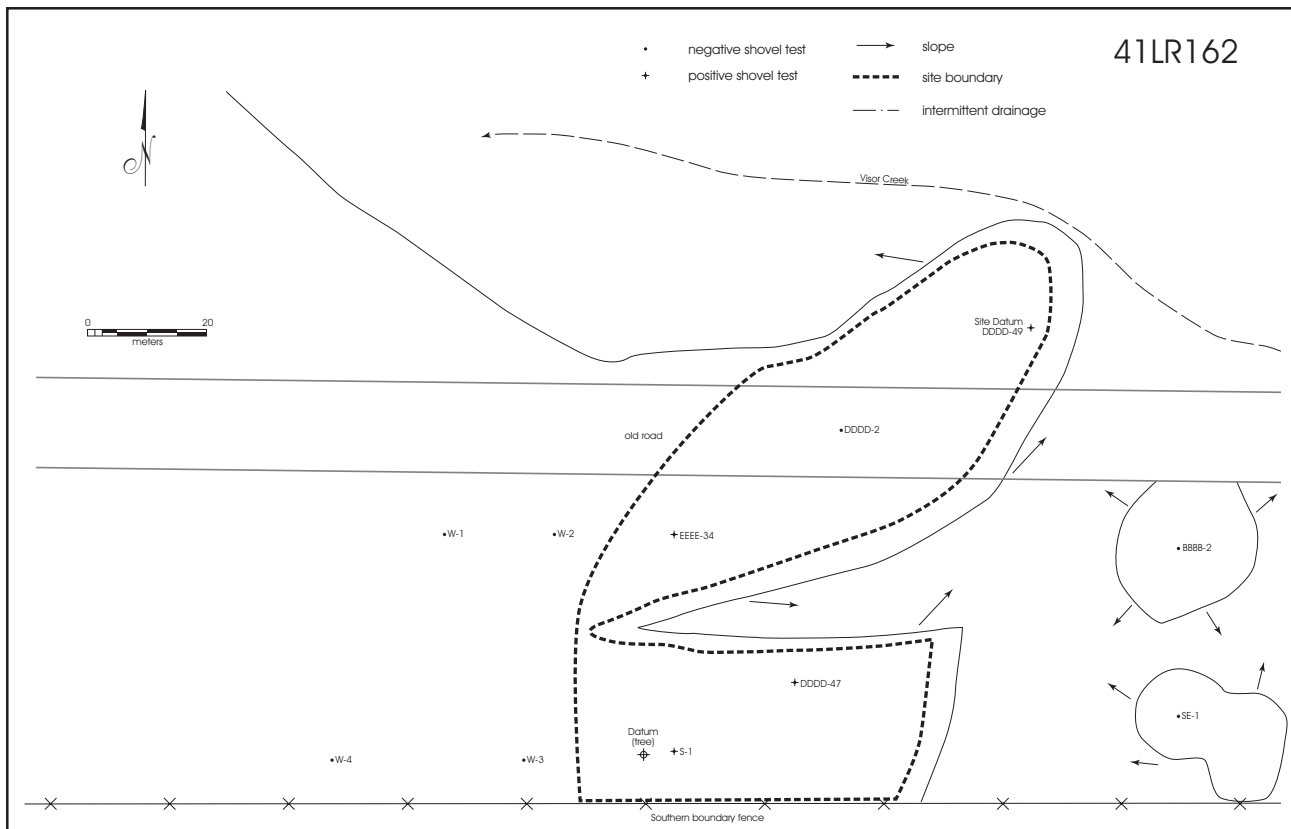


Figure 8-17. Site map—41LR162.

### Artifacts

There were no artifacts observed on the surface; however, four shovel tests contained prehistoric lithic artifacts (n=15), for a density of 3.75 artifacts/positive shovel test. Most of the artifacts (67 percent) are from ST EEEE-34 at the western end of the site. Of the 15 prehistoric lithics, two are fire-cracked quartzite cobbles (0.03 kg) found between 0–20 cm bs in ST CCCC-49 and ST EEEE-34. The remainder of the artifacts include three chunks and 10 lithic flakes.

The cortical chunks are of a coarse-grained quartzite, Ogallala quartzite, and Red River chert, respectively. The raw materials represented in the flakes include gray and grayish-brown chert (n=2), probably from Red River gravels, Ogallala quartzite (n=7), and a coarse-grained quartzite (n=1). Both chert flakes are small non-cortical pieces that have not been heat-treated. The quartzite flake and 14.3 percent of the Ogallala quartzite flakes have been heat-treated at 41LR162. Cortical flakes are represented by 42.9 percent of the Ogallala quartzite materials; and one of

these is heat treated; none of the non-cortical Ogallala quartzite flakes have been heat treated, however.

## 41LR163

### Site Description

The discovery of 41LR163 (Figure 8-18) began with the discovery of two flakes and a lithic chunk in a shovel test in an area with less than 20 percent surface visibility. Subsequent shovel testing produced additional cultural materials. The presence of chipped stone with fire-cracked rock (Appendix A) suggests this site was used as a short-term open campsite during an unknown part of the prehistoric period.

It is located on an alluvial terrace alongside Visor Creek, with 1 to 3 percent sloping Lassiter silt loam mollisols. The nearest water is in Visor Creek, which forms the western boundary of the site. The area is heavily wooded, with dense grasses and brush. Sur-

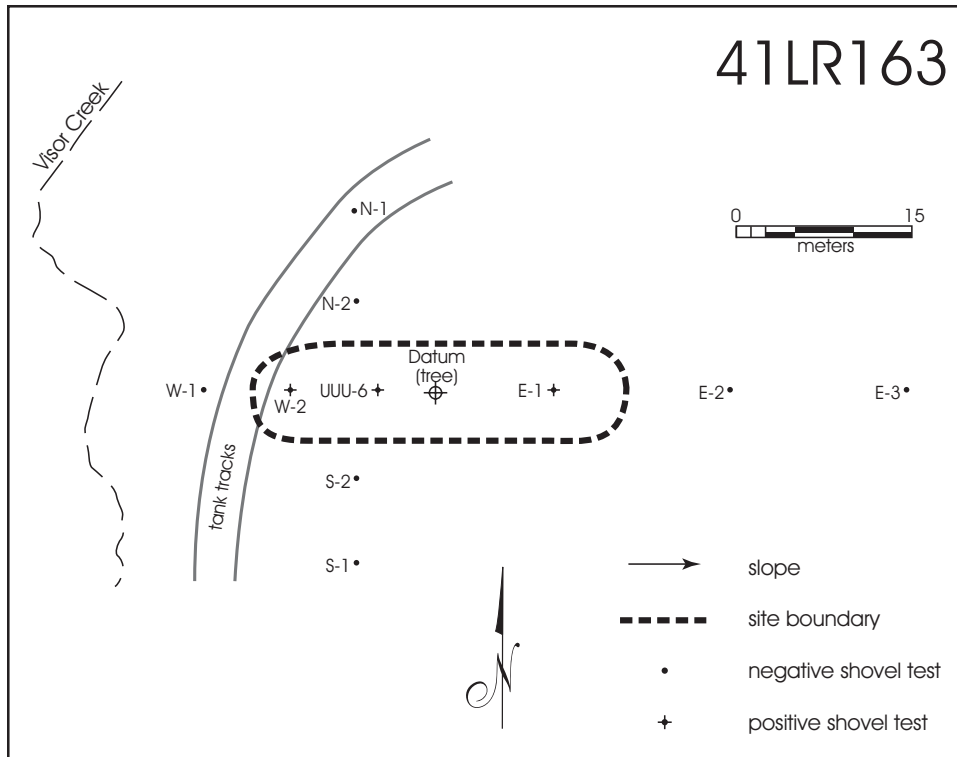


Figure 8-18. Site map—41LR163.

face visibility is less than 10 percent. The site was tested with ten shovel tests (Table 8-1). Based on the distribution of shovel tests containing artifacts, 41LR162 is approximately 300m<sup>2</sup>, with cultural material as deep as 60 cm below the surface. Bioturbation, and 30-cm deep cuts from tracked vehicles have caused some damage, but there appear to be discrete areas of intact cultural deposits in approximately 90 percent of the site.

### Artifacts

No artifacts were observed on the surface at 41LR163. Eleven prehistoric artifacts found in shovel tests were collected during the investigations at 41LR163, resulting in 3.67 artifacts/positive shovel test. Most of the artifacts are from ST W-2, nearest the creek drainage. The artifacts include one quartzite fire-cracked rock from ST W-2, a cortical chunk of non-heat-treated Ogallala quartzite (ST UUU-6), and nine flakes.

Raw materials represented in the flakes are Ogallala quartzite (77.8 percent), petrified wood (11.1 percent), and white novaculite (11.1 percent) from Red River

gravel sources. The Ogallala quartzite flakes are predominantly heat-treated (55.6 percent) and non-cortical (only 28.6 percent have cortex remnants on the dorsal face) flakes, and both the petrified wood and the novaculite are non-cortical pieces.

## 41LR164

### Site Description

41LR164 (Figure 8-19) was discovered during shovel testing on an upland landform in an area with less than 20 percent surface visibility. The presence of lithic artifacts with fire-cracked rock (Appendix A)

suggests this site was used as a short-term open campsite during the prehistoric period, possibly during the Late Archaic.

It is located on an upland slope, with 1 to 3 percent sloping Whakana-Porum sandy loam mollisols, and the landform has a steep (10 m) bluff overlooking Visor Creek. Although Visor Creek forms the northern and eastern boundary of the site, it is dry in the immediate area; seeps are currently running farther downstream, 225 m to the north. A gravel road and the Camp Maxey perimeter fence form the artificial southern boundary of the site. The area is heavily wooded, with dense grasses and brush. Ground surface visibility is less than 10 percent. The site was tested with 53 shovel tests (Table 8-1). Based on the distribution of shovel tests containing artifacts, 41LR164 is the largest site recorded to date on Camp Maxey, approximately 378,000 m<sup>2</sup>, with cultural material as deep as 60 cm below the surface. Bioturbation, slope erosion, cutbank erosion, and road construction have caused moderate damage, but there appear to be discrete areas of intact cultural deposits in approximately 90 percent of the site.



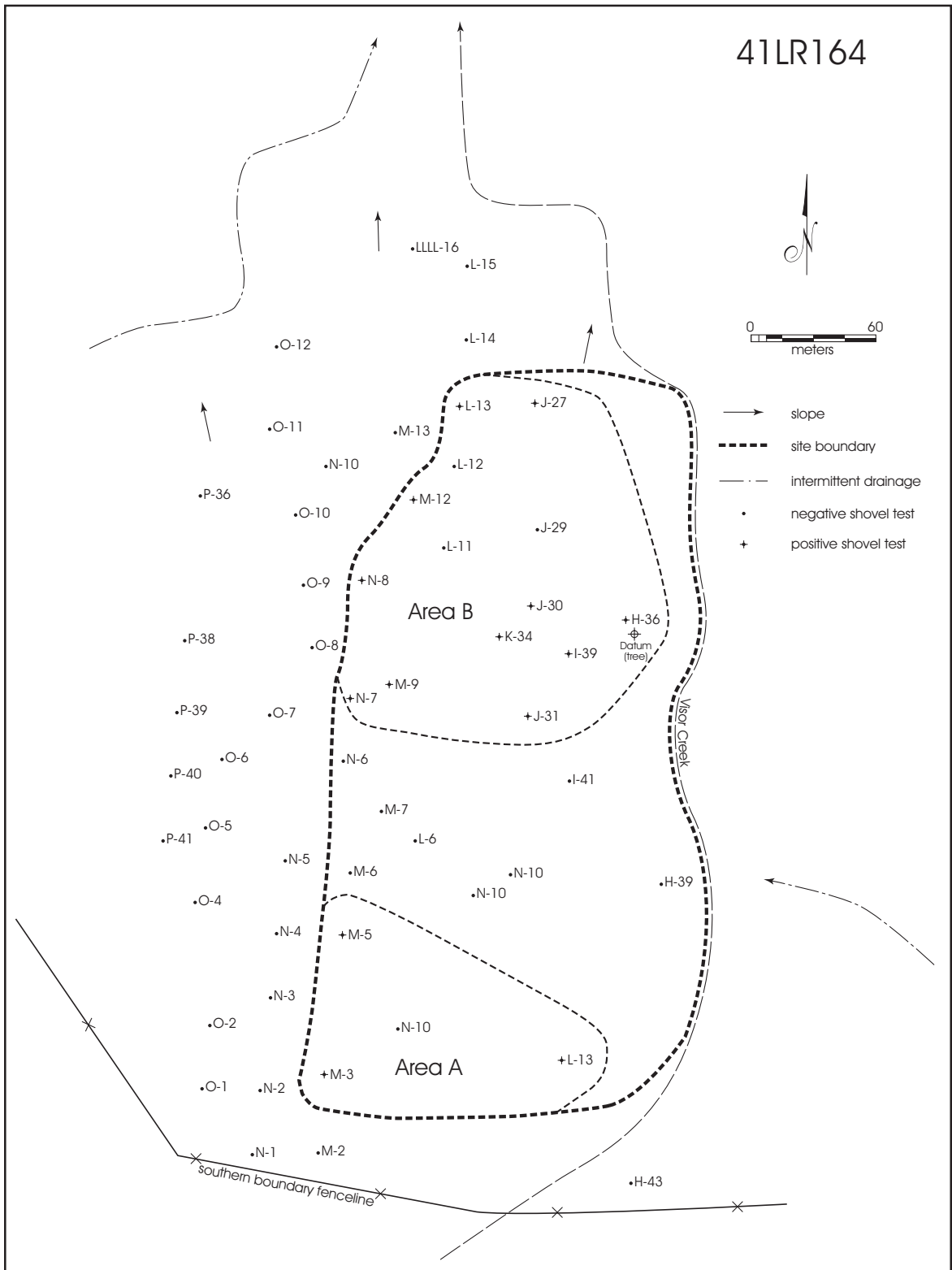


Figure 8-19. Site map—41LR164.

## *Artifacts*

Only one non-cortical flake made from white novaculite was recovered from the surface, on the northern toe slope of the site. However, a relatively large number of prehistoric flakes, tools, and fire-cracked rock have been recovered during the shovel testing in two areas at 41LR164; Area A near the crest of the upland ridge (1.2 artifacts/positive shovel test) and Area B near the northern ridge and toe slope (2.16 artifacts/positive shovel test). Both areas contain moderate amounts of fire-cracked rock (area A, n=2 [.22 kg] and area B, n=2 [.11 kg]), suggesting fire-cracked rock features may be preserved at the site. Also present from Area B are two biface fragments, both of heat-treated Ogallala quartzite, along with a Ogallala quartzite core fragment from ST NNNN-7. Of the 26 flakes from the shovel testing, three are from Area A, and the remainder are from Area B.

All three flakes from Area A are Ogallala quartzite, and two are cortical and non-heat-treated pieces, while the third is a non-cortical and heat-treated specimen. By contrast, Area B has a wide assortment of lithic raw materials represented in the flakes, including Ogallala quartzite (n=12), siltstone (n=2), local red and brown chert (n=4), possible Frisco chert (n=2), Red River chert (n=1), a coarse-grained and “sugary”-textured quartzite (n=1) common along the Red River in the Montague County area (Daniel E. McGregor, 1997 personal communication), and an unidentified material with a thick chalky cortex. This diversity in raw materials may be characteristic of Late-Archaic technologies in the area (see Chapter 9). Each area also has one non-heat-treated Ogallala quartzite chunk.

Over 52 percent of the lithic flakes in Area B are cortical (compared to 67 percent in Area A), particularly the local chert (100 percent) and the Ogallala quartzite (41.7 percent), and heat treating of the lithic raw material is also common in this part of the site, with more than 56 percent of the flakes having come from heat-treated cobbles. Eighty-three percent of the Ogallala quartzite flakes from Area B have been heat treated, along with 25 percent of the local chert, and both possible Frisco chert flakes. The heat treating

was done to improve the knappability of the local fine-grained quartzites.

## **41LR165**

### *Site Description*

41LR165 (Figure 8-20) was found during shovel testing in an area with less than 20 percent surface visibility. The presence of lithic artifacts with no fire-cracked rock or pottery (Appendix A) suggests this site was used as a short-term lithic processing area during an unknown part of the prehistoric period.

It is located on an alluvial terrace, with 1 to 3 percent sloping Lassiter silt loam mollisols on a small rise at the confluence of Visor Creek and a relict channel. Water currently flows in Visor Creek from seeps in the immediate area. The area is heavily wooded, with dense grasses and brush. The site was tested with nine shovel tests (see Table 8-1). Based on the distribution of shovel tests containing artifacts, 41LR165 is approximately 5,850 m<sup>2</sup>, with cultural material as deep as 40 cm below the surface. Bioturbation and cutbank erosion have caused moderate damage, but there appear to be discrete areas of intact cultural deposits in approximately 90 percent of the site.

### *Artifacts*

There were no artifacts observed on the surface; however, the subsurface artifacts from 41LR165 consist of four non-cortical lithic flakes from three shovel tests at the southern tip of the rise, resulting in 1.33 artifacts/positive shovel test. Three of the flakes appear to be a white novaculite, available in the Red River gravels below Muddy Boggy Creek, and the other (from ST 3) may be Frisco chert; it is a white creamy color with black inclusions (Banks 1990:Plate 13H-D). Frisco chert is also present in Red River gravels below the Washita and Blue rivers.

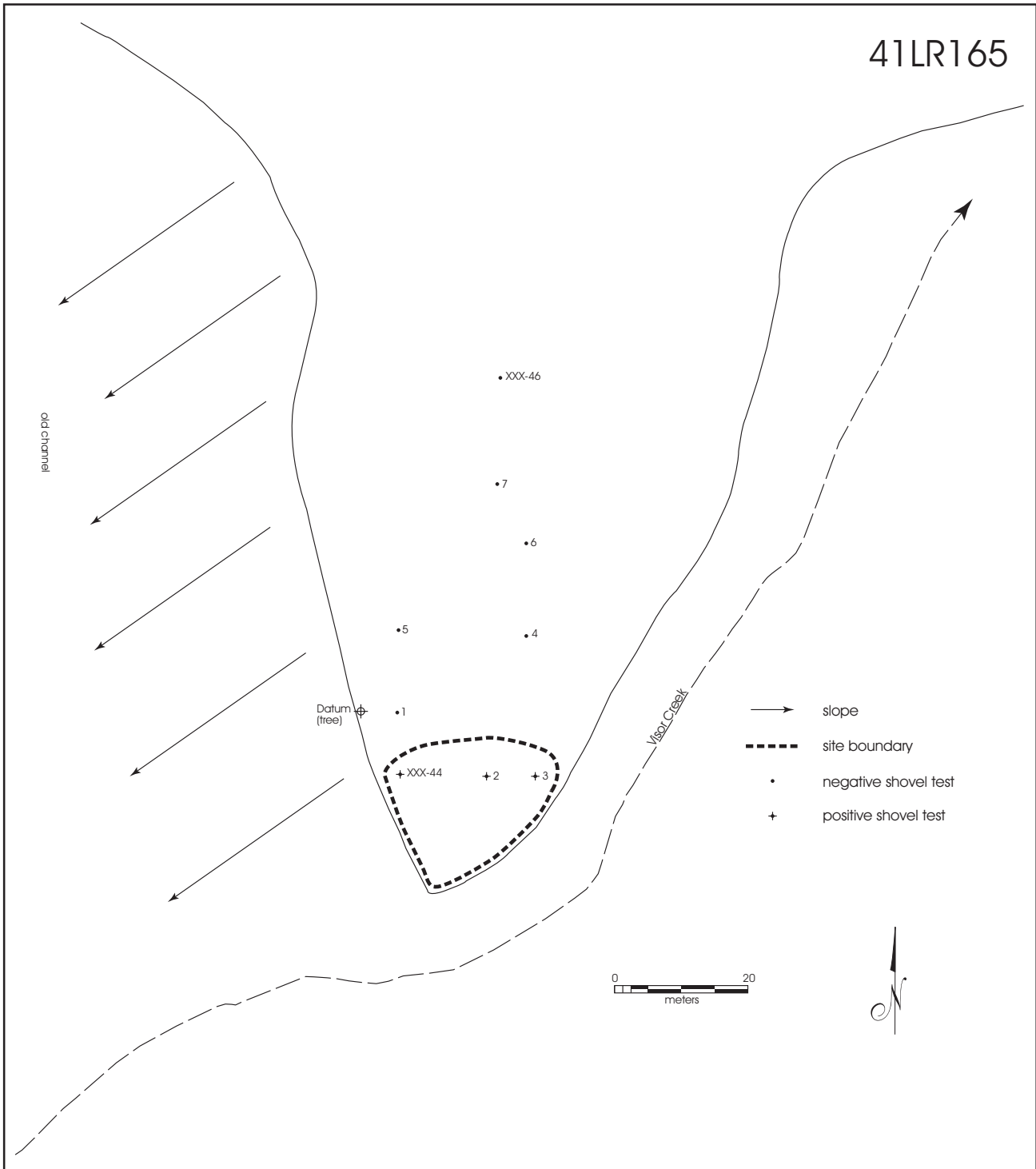


Figure 8-20. Site map—41LR165.

## 41LR168

### Site Description

41LR168 was first identified with the discovery of a possible Gary dart point on an old roadbed surface (Figure 8-21). The presence of the point, along with fire-cracked rock (Appendix A), suggests this site was used as a short-term open campsite during the Late-Archaic and/or Woodland periods.

It is located on an oblong upland landform, with 1 to 3 percent sloping Whakana sandy loam mollisols covered by a grassy field. Water from seeps currently flows in Visor Creek, 800 m to the northwest. The moderately dense grass limits surface visibility to 50 percent. The site was evaluated with ten shovel tests (see Table 8-1). Based on the distribution of the two shovel tests containing artifacts and the surface scatter, 41LR168 is approximately 13,800 m<sup>2</sup>, with cultural material as deep as 60 cm below the surface. Bioturbation, slope erosion, and an old road cut have caused moderate damage, but there appear to be dis-

crete areas of intact cultural deposits in approximately 70 percent of the site.

### Artifacts

In addition to the dart point, twelve pieces of chipped stone and five pieces of fire-cracked rock in no apparent pattern were observed on the surface. The chipped stone surface assemblage consisted of three Ogallala quartzite cortical flakes, one Ogallala quartzite non-cortical flake, one gray quartzite non-cortical flake, one white chert non-cortical flake, one white chalcedony non-cortical flake, one brown chert non-cortical flake, one novaculite non-cortical flake, and one Ogallala quartzite core. The dart point (see Figure 8-8e) is missing most of the stem, but what remains suggests that it is contracting (Gary?) in shape. The blade has been resharpened from use.

Two shovel tests at the eastern end of the site have prehistoric artifacts, including three quartzite fire-cracked rocks (weighing 0.25 kg) and a cortical flake of heat-treated Ogallala quartzite. This is 2.0 artifacts/positive shovel test.

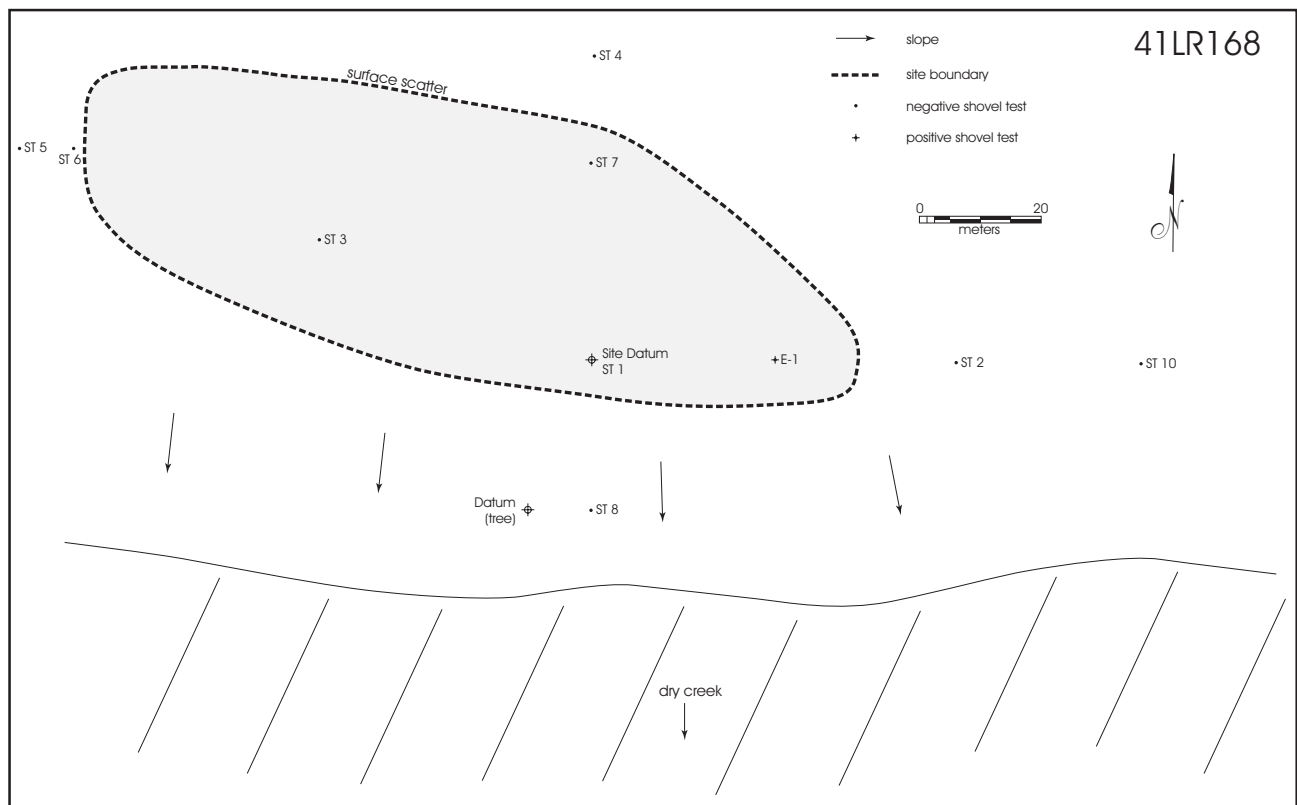


Figure 8-21. Site map—41LR168.

## 41LR169

### Site Description

41LR169 was first identified with the discovery of two Gary points on an old roadbed surface (Figure 8-22). A third Gary point was found after further examination of the surface. The presence of the Gary points, along with fire-cracked rock (Appendix A) suggests

this site was used as a short-term open campsite during the Late-Archaic/Woodland periods.

It is located on an eroded 1 to 3 percent sloping landform with Freestone sandy loam mollisols covered by a grassy field, pines, and briars. Downward slope erosion has exposed the reddish clay B-horizon, particularly in an old roadcut. The Sanders Creek channel (now covered by Pat Mayse Lake) lies 2 km to the

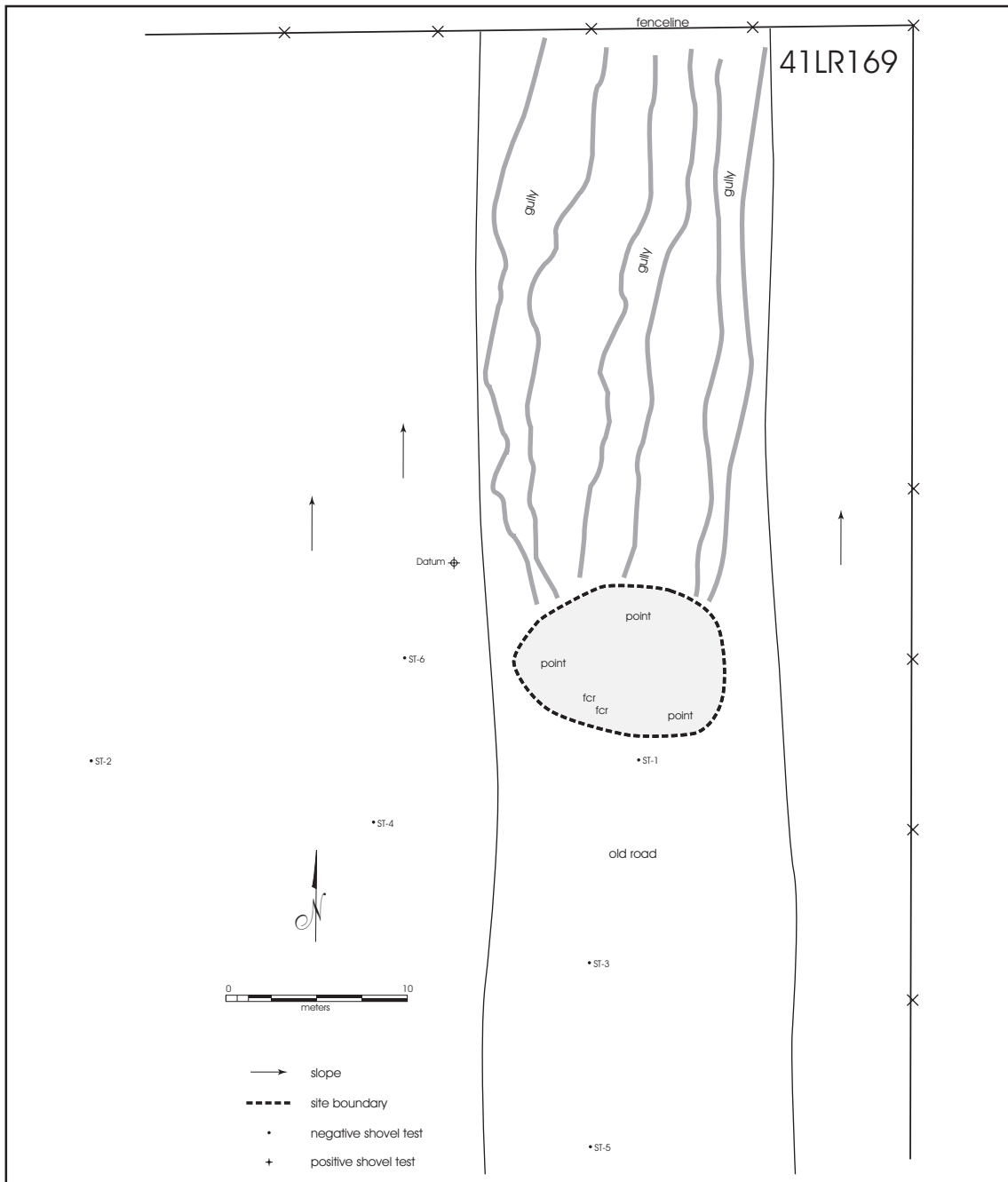


Figure 8-22. Site map—41LR169.

north. Because of the sparse grass cover, ground surface visibility is 70 percent. The site was tested with six shovel tests (see Table 8-1) and it is apparent that the cultural material is limited only to the eroded, exposed surface. Based on the distribution of surface artifacts, 41LR169 is approximately 1,125 m<sup>2</sup>. Bioturbation, slope erosion, and an old road cut have caused considerable damage, with perhaps 40 percent of the site still containing traces of intact cultural deposits.

### *Artifacts*

Although no cultural material was found in any of the shovel tests, three dart points were found on the surface of 41LR169, along with six pieces of fire-cracked rock, ten flakes (20 percent cortical), and one tested cobble. The flakes and tested cobble were made from Ogallala quartzite. All three dart points are the Gary type (Turner and Hester 1993:123). Based on stem width and thickness measurements, two of the Gary points are Gary var. Camden (dated ca. 1700–1200 B.P.) and one is a var. LeFlore (dated ca. 2400–1700 B.P.; see Schambach 1982:Table 7-1). Accordingly, it appears that 41LR169 was used between ca. 2400–1200 B.P.

The Gary var. LeFlore specimen (see Figure 8-8f) has been manufactured from a greenish-gray coarse-grained quartzite, probably originating in the Red River gravels from a source in the Ouachita Mountains such as the Stanley and Jackfork Formations (Banks 1990:41). The tip is broken, but the blade has not been resharpened or serrated. It has a stem width of 18.0 mm and a maximum thickness of 9.0 mm. One of the Gary var. Camden points (see Figure 8-8g) is on a yellow claystone/siltstone from the Red River gravels (Mallouf 1976:48, 50), and the other (see Figure 8-8h) is made from a non-heat-treated Ogallala quartzite. Both Gary var. Camden points have resharpened blades, probably from use as knives as well as projectiles. They range in length from 41 to 49 mm, with a stem width of 15.5 mm, and a thickness range of 5.5 to 7.0 mm.

## 41LR174

### *Site Description*

41LR174 was first identified with the discovery of a flake in a shovel test on a landform with a high potential for a site location (Figure 8-23). Subsequent shovel testing yielded two additional flakes. The presence of chipped stone, with no fire-cracked rock or pottery (see Appendix A), suggests this site was used as a short-term lithic processing area during an unknown part of the prehistoric period.

It is located on a partially wooded upland landform, with 1 to 3 percent sloping landform with Whakana sandy loam mollisols with a dense grass and weed cover. Downslope erosion has exposed the reddish clay B-horizon, particularly in an old roadcut on its eastern slope. Seeps in upper Visor Creek 1.6 km to the northwest provide an extant water source. The dense grass cover limited ground surface visibility to 20 percent. The site was evaluated with 20 shovel tests (see Table 8-1). Based on the distribution of subsurface artifacts in three shovel tests, 41LR174 is approximately 4,800 m<sup>2</sup>. Bioturbation, slope erosion, tracked vehicles, and an old road cut have caused considerable damage, with perhaps 30 percent of the site still containing discrete areas of intact cultural deposits.

### *Artifacts*

No artifacts were observed on the surface at 41LR174. However, three of 22 shovel tests (12 percent) contained a total of three artifacts, producing an artifact density of 1.0 per positive test. An Ogallala quartzite non-heat-treated core fragment was recovered from 0–20 cm in test V5. A non-heat-treated red jasper core fragment was found between 0 and 20 cm in test W5, and a non-heat-treated Ogallala quartzite cortical flake was collected from test N2 between 40 and 60 cm.

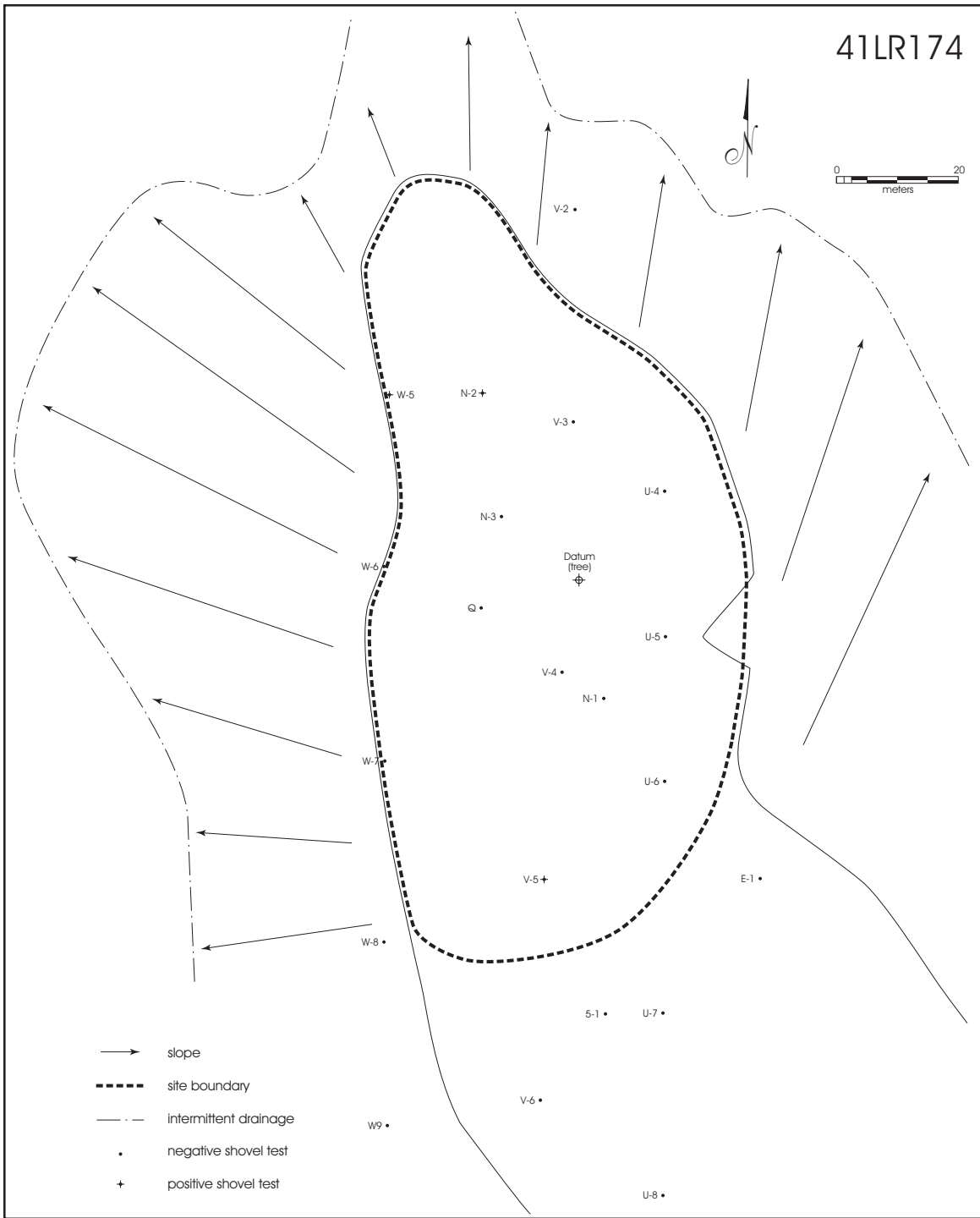


Figure 8-23. Site map—41LR174.



## 41LR175

### Site Description

41LR175 was first identified with the discovery of a flake in a shovel test on a landform with a high site potential (Figure 8-24). Although subsequent shovel testing did not yield additional cultural material, the density of artifacts within the single shovel test on the small landform met the criteria for site designation. The presence of chipped stone, but with no fire-cracked rock or pottery (Appendix A), suggests this site was used as a short-term lithic processing area during an unknown part the prehistoric period.

It is located in a heavily wooded area, on a ca. 20 m diameter, circular rise with Whakana sandy loam mollisol. Seeps in an unnamed drainage 570 m west provide the nearest extant water source. With the dense grass and leaf cover, ground surface visibility is less than 10 percent. The site was tested with five shovel tests (Table 8-1). Based on the distribution of subsurface artifacts, 41LR175 is approximately 25 m<sup>2</sup> in size. Bioturbation, and creek and slope erosion have caused minimal damage to the site, with approximately 80

percent of 41LR175 having a relatively deeply buried and intact deposit.

### Artifacts

No artifacts were observed on the surface at 41LR175. However, a single shovel test (ST W3) contained four artifacts; an artifact density of 4.0 per positive test. A cortical Ogallala quartzite flake was found from 0–20 cm, a cortical Ogallala quartzite heat-treated chunk and a cortical coarse-grained Quartzite flake were recovered from 40–60 cm, and a second cortical Ogallala quartzite heat-treated chunk came from 60–80 cm.

## 41LR176

### Site Description

41LR176 (Figure 8-25) was first identified with the discovery of a flake on the surface adjacent to an old two-track road. After closer examination a second flake was found on the surface. Subsequent shovel testing did not yield additional cultural material. The presence of chipped stone, but with no fire-cracked rock or pottery (Appendix A), suggests this site was used as a short term lithic processing area during an unknown part of the prehistoric period.

It is located on a ca. 80 m-long, oblong upland rise with Whakana fine sandy loam mollisols. Seeps in Visor Creek 300 m west provide the nearest water source. With the dense grass cover, approximately 30 percent of the ground surface is visible. The site was tested with seven shovel tests (see Table 8-1), and all were negative. Based on the known distribution of surface artifacts, 41LR176 is mapped as approximately 100 m<sup>2</sup>, but is probably larger. Testing was limited to along the two-track road planned for improvement. Bioturbation, and the two-track road have caused minimal damage.

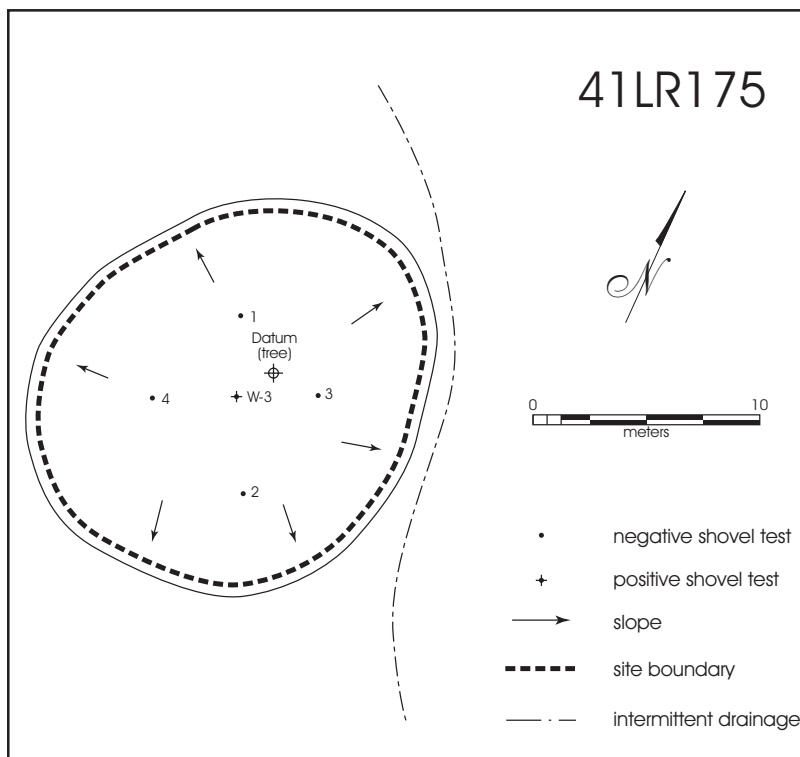


Figure 8-24. Site map—41LR175.

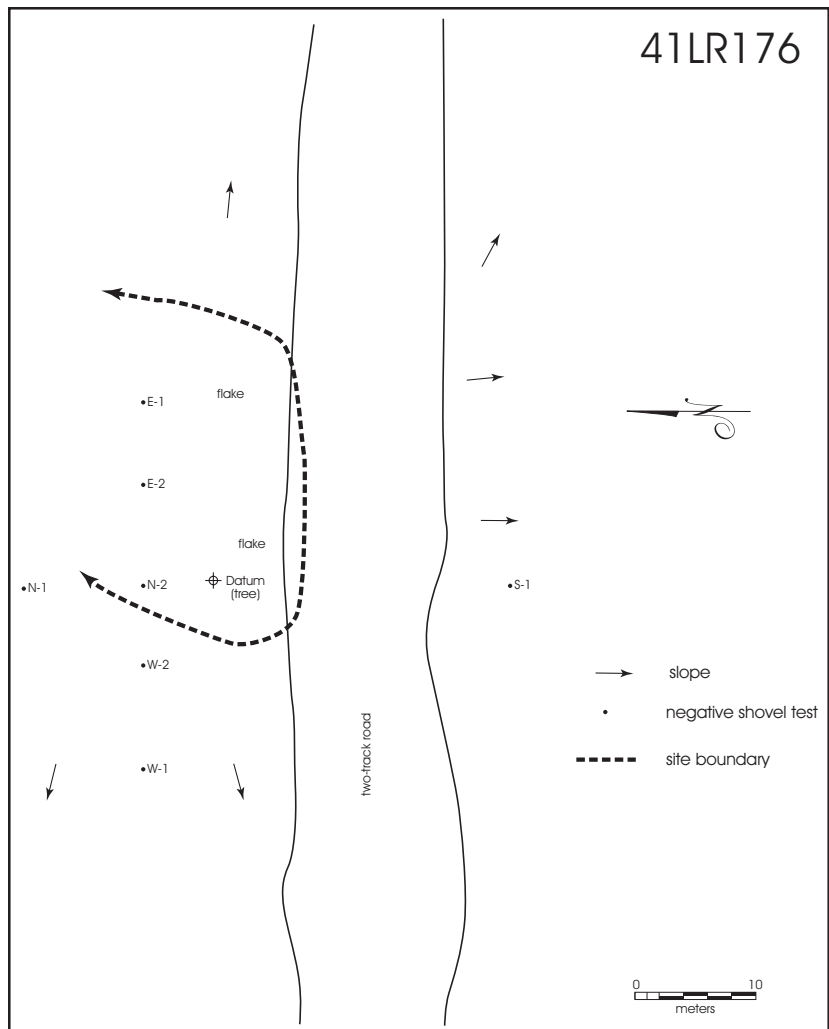


Figure 8-25. Site map—41LR176.

*Artifacts*

Two artifacts were observed on the surface at 41LR176. Both are cortical, not heat-treated, and made of tan chert, most likely from the local upland gravels. No artifacts were recovered in seven shovel tests at the site.

**41LR177**

*Site Description*

41LR177 (Figure 8-26) was first identified with the discovery of a flake in a shovel test (LLLL-25) on a

landform with a high site potential. Subsequent shovel testing yielded additional cultural material. The presence of chipped stone, but with no fire-cracked rock or pottery (Appendix A), suggests this site was used as a short term lithic processing area during an unknown part of the prehistoric period.

It is located on a grassy finger slope with Whakana fine sandy loam mollisols. Seeps in Visor Creek 250 m east provide the nearest existing water source. Ground surface visibility is approximately 30 percent. The site was tested with nine shovel tests (see Table 8-1). Based on the distribution of subsurface artifacts, 41LR177 is approximately 160 m<sup>2</sup>. Bioturbation and slope erosion have caused minimal damage, with the likelihood that approximately 90 percent of 41LR177 has a relatively deeply buried and intact deposit.

*Artifacts*

No artifacts were observed on the surface at 41LR177, however a total of four lithic artifacts were recovered in shovel testing at the site, 1.33 artifacts/positive shovel test. They include three pieces of Ogallala quartzite lithic debris (one cortical and two non-cortical, including one that was heat-treated) and a cortical piece of coarse-grained local quartzite.

**41LR178**

*Site Description*

41LR178 (Figure 8-27) was first identified with the discovery of a flake in shovel test JJJJ-18 in alluvium deposits. Subsequent shovel testing yielded additional cultural material. The presence of chipped stone, but with no fire-cracked rock or pottery (Appendix A), sug-

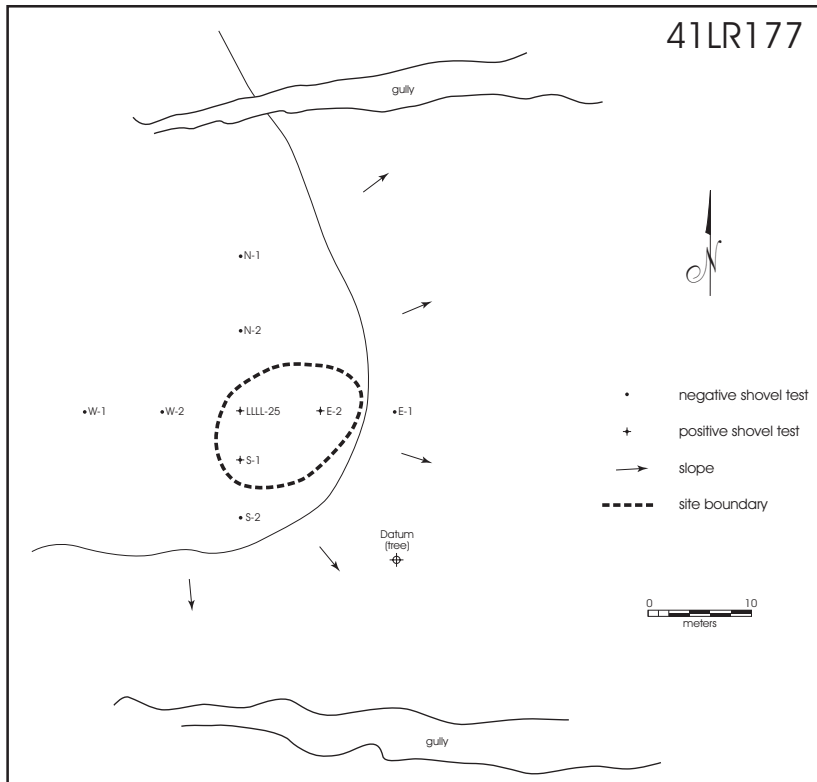


Figure 8-26. Site map—41LR177.

cent of 41LR178 may contain a buried, intact deposit.

### Artifacts

No artifacts were observed on the surface at 41LR178, however two pieces of Ogallala quartzite lithic debris were found in the shovel tests at the site, 1.0 artifacts/positive shovel test. Both pieces (one cortical and one non-cortical) were not heat-treated.

## 41LR179

### Site Description

41LR179 (Figure 8-28) was first identified with the discovery of a flake on a gopher mound on an upland rise. Subsequent shovel testing yielded additional cultural material from one shovel

gests this site was used as a short term lithic processing area during an unknown part of the prehistoric period.

It is located in a wooded area adjacent to Visor Creek, on what appears to be the first terrace. Seeps in Visor Creek provide an existing water source. With the dense leaf cover, approximately 30 percent of the ground surface is visible. The site was tested with eight shovel tests (Table 8-1). Based on the distribution of subsurface artifacts, 41LR178 is approximately 120 m<sup>2</sup>. Erosion has caused moderate damage, with the likelihood that approximately 50 per-

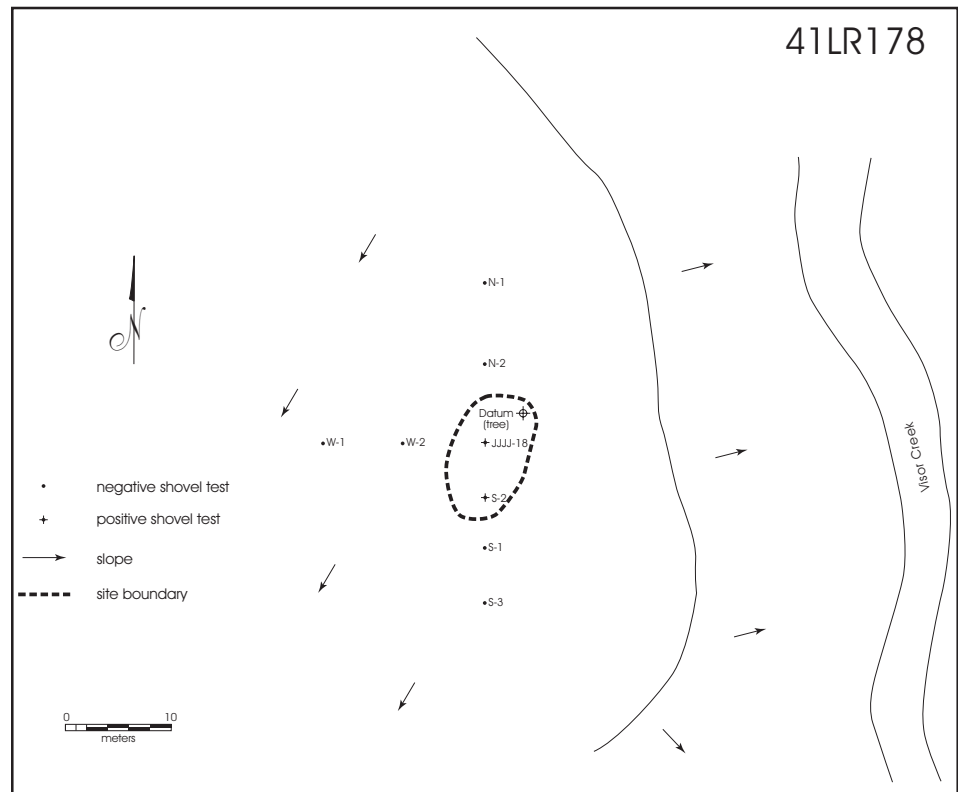


Figure 8-27. Site map—41LR178.

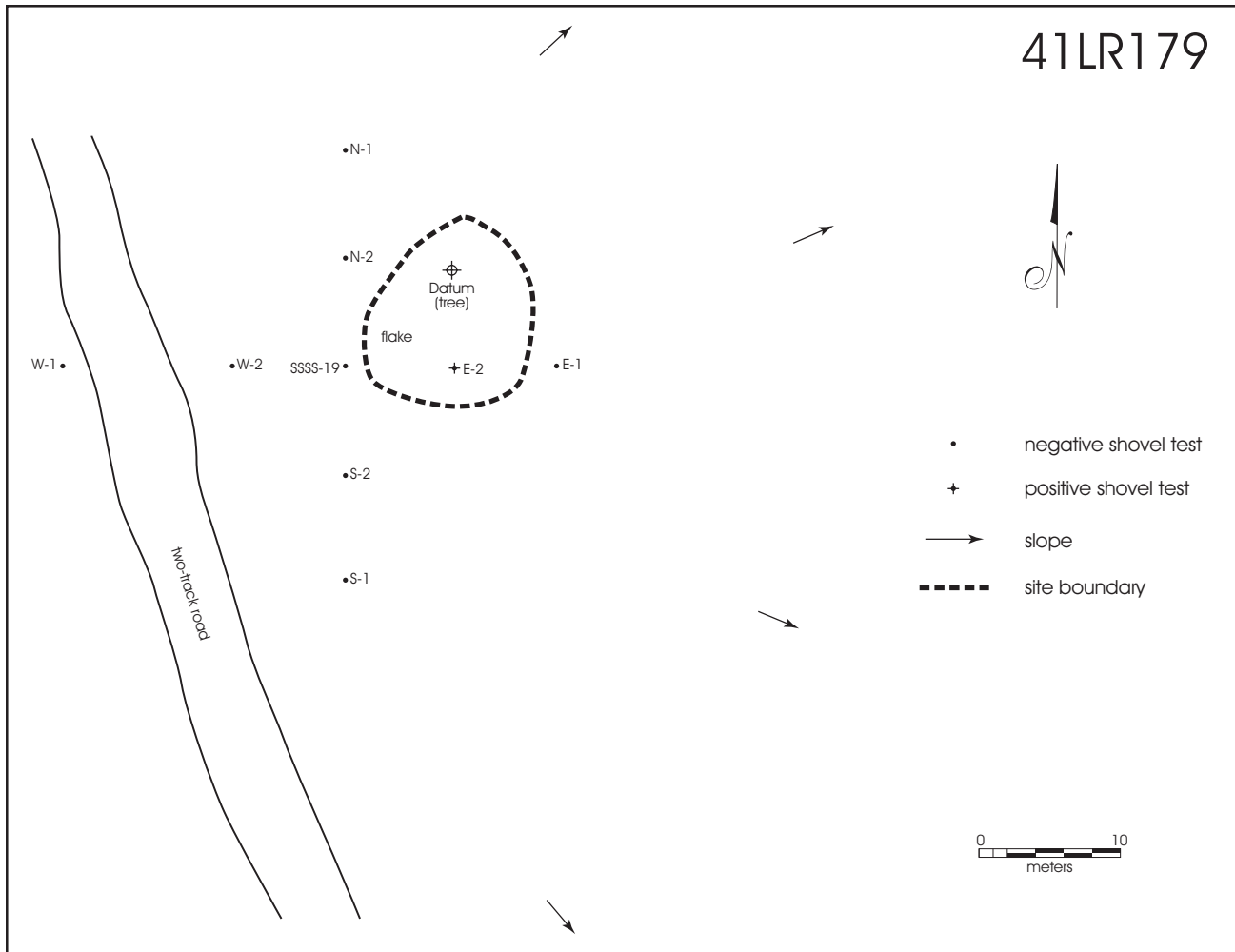


Figure 8-28. Site map—41LR179.

test. The presence of chipped stone, but with no fire-cracked rock or pottery (Appendix A), suggests this site was used as a short term lithic processing area during an unknown part the prehistoric period.

It is located in a grassy area on a high point overlooking Visor Creek. Seeps in Visor Creek 400 m to the east provide an existing water source. Approximately 30 percent of the ground surface is visible. The site area was evaluated with nine shovel tests (Table 8-1), only one of which contained cultural material. Based on the distribution of surface and subsurface artifacts, 41LR178 is approximately 200 m<sup>2</sup>. Erosion, bioturbation, and a deeply cut two-track road running through the northern edge of the site have caused moderate damage, with the likelihood that approximately 70 percent of 41LR178 may contain a shallowly buried, intact deposit.

### Artifacts

The single artifact observed on the surface at 41LR179 is a dark brown non-cortical flake made from chert commonly found in the Red River gravels. A single shovel test at the site had two pieces of lithic debris, both non-heat-treated. One was a chunk of quartzite and the other was a non-cortical piece of Ogallala quartzite.

### Prehistoric Isolated Finds

Eleven prehistoric isolated finds (IF) were documented during the project (see Figure 8-1 and Table 8-3). Forty-nine prehistoric isolated finds initially recorded and numbered in the field were later determined to be within site boundaries or after closer examination were

determined to be non-cultural; the IF numbers in Table 8-3 represent the finalized isolated artifact occurrences. Surface artifacts were not collected and only a brief description was recorded in the field. All material recovered from shovel tests, as well as possibly diagnostic artifacts found on the surface (such as projectile points, bifaces, formal tools, and some historic items), were collected and numbered sequentially. Subsequent examination in the laboratory allowed for a more detailed artifact description.

IF2—This white, non-cortical flake was found on top of a gopher mound in an overgrown old roadbed. Surface visibility was approximately 30 percent. A shovel test placed under the flake revealed no additional cultural material, and iron ore gravels with clay at 20 cm below the surface. A field observation was that the specimen was probably relocated from another site up or down the road.

IF10—This non-cortical chert flake specimen was found in the Casey Cemetery Road cutbank. The cutbank and roadbed were subsequently examined by four members of the survey crew and no other cultural material was observed. Surface visibility

was approximately 50 percent, and there was little or no soil remaining on the surface in the survey area along the south side of the roadway.

IF18—This end scraper was found in the middle of a gravel road (Cemetery Road). The project archaeologist examined the roadbed and cutbanks for 60 m and observed no additional cultural material. The gravels covering the roadbed appeared to have been hauled in from elsewhere.

IF19 and 21—These non-cortical flake specimens were found in old roadbeds cut into clay. No other cultural material was observed within the limits of the right-of-way survey area. The field observations were that the flakes were in heavily disturbed contexts.

IF34—After finding this non-cortical flake in a shovel test, four additional shovel tests were placed within 5 m in each of the cardinal directions. The four additional tests produced no cultural material.

Table 8-3. Prehistoric Isolated Finds (IF). Missing IF #s represent IFs that were later combined into sites.

IF#	Artifacts	Context	Collected
2	1 non-cortical flake	Surface	
10	1 non-cortical flake	Surface	
18	1 end scraper on a cortical flake of Red River chert; 39 mm in length, 22 mm in width, 8.0 mm in thickness; 22 mm working edge, approximately 70° edge angle	Surface	X
19	1 non-cortical flake	Surface	
21	1 non-cortical flake	Surface	
34	1 non-cortical grayish-brown chert (Red River chert?) flake, non-heat-treated	Shovel test (0–20 cm)	X
36	1 Ogallala quartzite chunk, with cortex, non-heat-treated	Shovel test (40–60 cm)	X
39	1 cortical Ogallala quartzite flake, heat-treated	Shovel test (0–20 cm)	X
40	1 Ogallala quartzite biface preform fragment, non-heat-treated; 8.4 mm thick, 25 mm maximum blade width	Shovel Test (20–40 cm)	X
44	1 cortical chalcedony flake, heat-treated	Shovel test (40–60 cm)	X
45	1 non-cortical coarse-grained Quartzite flake, non-heat-treated	Shovel test (0–20 cm)	X

IF36—After finding this quartzite chunk in a shovel test, the crew placed an additional eight shovel tests around it, and found no other cultural material.

IF39—This cortical flake was found in a shovel test. An additional eight shovel tests around the hole with the flake failed to produce any other cultural material.

IF40—After this biface was recovered from a shovel test the survey crew dug an additional ten shovel tests around it and found no further evidence of cultural material.

IF44—This cortical flake was found in a shovel test in the far southwest corner of the project area

on a bluff overlooking a creek. The crew dug four additional shovel tests on the very small landform limited by the creek to the north and the Camp maxey perimeter fence top the south. The four additional shovel tests produced no cultural material.

IF45—This non-cortical flake was found in a shovel test on a very small pimple mound in an upland grassy area. Three additional shovel tests on this spatially discrete landform failed to produce any additional cultural material.

## Chapter 9: Analysis of the Prehistoric Data

Timothy K. Perttula

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### The Temporal Record

Based on evidence recovered of a few diagnostic stone tools and plain and decorated ceramic sherds from the prehistoric sites and isolated finds in the southwestern block of the survey area, these lands were used intermittently by Late Archaic through Late Caddoan peoples, from ca. 1000 B.C. to A.D. 1600. The sample of diagnostic artifacts is small, and only nine sites have reasonably adequate temporal information. Consequently, patterns discerned in the archaeological data must be considered preliminary in nature.

Three of the 25 sites—41LR149, 41LR168, and 41LR169—have Late Archaic to Woodland-period components marked by dart points and dart point tips. Another six (41LR150, 41LR152, 41LR153, 41LR155, 41LR157, and 41LR158) sites have Early, Middle, or Late Caddoan components, suggesting an increased overall use of the landscape after ca. A.D. 900, either for permanent settlement or for hunting activities from communities along Sanders Creek or the Red River. The number of sherds recovered in shovel testing at 41LR152 and 41LR157 suggest these sites were residential in nature; arrowpoints and little to no sherds at 41LR150, 41LR153, 41LR155, and 41LR158 suggest these may be camp sites of Caddoan hunters. Site 41LR152 appears to have been occupied during the Middle Caddoan period (ca. A.D. 1100–1300), a time when there was a peak in settlement along the Red River and its major tributaries (see Chapter 4).

### The Spatial Record

In the southwestern block of the survey area, 21 of 22 prehistoric sites (95.5 percent), and all nine of the prehistoric isolated finds, are on the G2 (Pleistocene) and G3 (Holocene) geomorphic surfaces defined by Nordt and Bousman (Chapter 3). Moreover, they are con-

centrated in the western half of the southwestern block, along a third-order tributary (Visor Creek) to Sanders Creek with a relatively wide Holocene valley (Figure 8–1). The other prehistoric site is on the G1 (Pleistocene) geomorphic surface in the south central part of the survey block (see Figure 3-1).

There are spatial differences between the prehistoric sites and isolated finds by geomorphic surface, with a much higher proportion of the isolated finds occurring on the G2 geomorphic surface than is the case with the sites:

	Sites	Isolated Finds
G1	4.5%	0.0%
G2	36.4%	55.6%
G3	59.1%	44.4%

The known Archaic/Woodland sites are distributed on the G2 and G3 geomorphic surfaces, with 66.7 percent of the three components on the Holocene surface. Including three other sites (41LR153, 41LR164, and 41LR165) that may also have Archaic components (based on the types of raw materials, bifaces, and fire-cracked rock found there) does not change the proportion of possible Archaic/Woodland sites that are found on the G3 Holocene geomorphic surface (66.7 percent), but heightens the temporal-geomorphic relationship.

Conversely, the six post–A.D. 900 Caddoan sites/components are equally concentrated in both the G2 Pleistocene and G3 Holocene geomorphic surfaces. In particular, they are situated in landform settings in the G2 geomorphic surface that immediately overlook the G3 Holocene surface and the third-order stream valley (see Figure 8–1), or are found on alluvial landforms in the valley itself. The two possible residential Caddoan sites, 41LR152 and 41LR157, are on the G2 and G3 geomorphic surfaces, respectively. In general, the distribution of Caddoan sites suggests preference



for elevated and well-drained landforms in proximity to (but not necessarily in) the stream valley habitat and sources of fresh water.

## Lithic Technology and Raw Material Use

There are clear preferences in the selection of raw materials for the manufacture and use of different tools in the small southwestern survey block lithic assemblages. These preferences probably are closely related to the availability of raw materials and the range of task performances for which the tools have been designed (e.g., Hayden et al. 1996:9 and Figure 1).

A wide variety of lithic raw materials are available in the Camp Maxey area. Foremost are gravels of quartzite, petrified wood, and brown-tan chert cobbles found on high terraces and interfluvies (see Banks 1990:56–57), along with sandstone and coarse-grained quartzite rocks that ended up as heating elements (and then as fire-cracked rocks) in hearths and ovens. Banks (1990:57) includes these gravel materials among the Uvalde Gravel deposits widespread in the region. Red River terrace deposits have been reported to contain yellow and red jasper and claystone/siltstone deposits (see Mallouf 1976).

Higher-quality siliceous raw materials originate in the Ouachita Mountains of southeastern Oklahoma and can be found in gravel deposits in the Red River from the mouth of Muddy Boggy Creek (which comes into the Red River a few miles above Sanders Creek and the Camp Maxey area to the south in the headwaters of Sanders Creek). These Ouachita Mountains lithics include Big Fork chert (in black and green varieties; see Mallouf 1976); Arkansas novaculite; Pinetop chert; greenish-gray quartzites from the Stanley and Jackfork formations; Woodford Formation chert; and the Johns Valley shale (Banks 1990:33–47). The Johns Valley shale deposit is “perhaps the most important single source of chert in the western Ouachitas” (Banks 1990:46), and “are superior in quality and size to their original sources of geologic origin.” The Johns Valley contains redeposited cobbles and boulders of novaculite, Big Fork chert, Woodford chert, and Pinetop chert. These lithic materials would have been abun-

dant in the Muddy Boggy Creek drainage, and in the Red River gravels, only a few miles north of Camp Maxey.

The hammerstone is on a coarse-grained and dense quartzite cobble that is durable, and could withstand pounding and battering. Also made on the coarse-grained quartzite are a biface (probably a dart point preform) and one dart point; the latter quartzite (a greenish-gray Ouachita Mountains quartzite) may have been obtained from Red River gravel sources. Another lithic raw material of poor quality is petrified or silicified wood, and a few flakes (3.1 percent) and no tools are present in the southwestern survey block sites.

Ogallala quartzite, a fine-grained quartzite, is the most common raw material represented in the lithic flakes (60.8 percent) and cores (66.7 percent), and it has been consistently heat-treated (50–70 percent of the Ogallala quartzite flakes) to improve its knappability. However, only 33 percent of the tools are on Ogallala quartzite, and these tools include two dart points and three biface fragments. The disparity in raw material use between lithic debris and tools suggests that this material is locally abundant, but not preferred for the manufacture of a wide range of tools. Its use may have been predicated on difficulties in obtaining more fine-grained raw materials for tool stones, and having to rely on a lower-quality resource (even when heat-treated) during stone tool manufacturing activities in the southwestern survey block.

The fact that the only tools found of Ogallala quartzite are dart points and the remnants of dart-point manufacture (bifaces and biface preforms) is circumstantial evidence that the use of this material was more common during the Archaic and Woodland periods. Lithic raw material data from excavated contexts at Pat Mayse Reservoir support this possibility. At the Snapping Turtle site, only 23 percent of the arrowpoints (n=22) were manufactured on quartzite, compared to 64 percent of chert, while 47 percent of the dart points (n=158) and 50 percent of the bifaces (n=64) were made of quartzite (Lorrain and Hoffrichter 1968). At this site, predominantly Late Archaic in age, more than 65 percent of the lithic debris was of quartzite.

The arrow points, flake tools (including an end scraper), and bifacial drill, all from post-A.D. 900 Caddoan sites in the southwestern survey block, have been manufactured on fine-grained chert, chalcedony, and siltstone/claystone. These fine-grained materials are available in upland gravels and especially along the Red River, only about seven miles north of the southwestern survey block. One jasper core was present as well, along with a dart point of local chert and another of claystone/siltstone.

Fine-grained siliceous materials are not abundant in the lithic debris, comprising only about 27 percent of the debris from the 21 sites. Red River gravel cherts, available as a wide variety of knappable materials in gravels below the mouth of Muddy Boggy Creek (Banks 1990:Figure 1.20), and local cherts are the most abundant, along with novaculite, possible Frisco chert, claystone/siltstone, and chalcedony.

There is a clear preference in the Caddoan sites for fine-grained siliceous materials, and tools of these materials are more common than is the case with the lithic debris. The higher proportion of tools of fine-grained cherts compared to the lithic debris suggests that completed tools of these materials were brought into the southwestern survey block from Red River settlements and campsites, and that the fine-grained

debris is the product of resharpening and maintenance activities.

## Ceramic Technology

A total of 14 ceramic sherds have been recovered from three prehistoric sites, 41LR150 (n=1), 41LR152 (n=8), and 41LR157 (n=5). The sherds are from well-made, coiled, and thin-walled Early to Middle Caddoan vessels tempered with grog (crushed sherds) and/or finely crushed bone. The technology of ceramic manufacture that existed was quite uniform or homogeneous, rather than diverse in character, because 86 percent of the sherds are from vessels fired in a reducing environment and then cooled in a high-oxygen environment; the others were oxidized or incompletely oxidized during firing.

Four of the sherds are decorated: one tool punctated (41LR150); two engraved (41LR152 and 41LR157), and one red-slipped (41LR152). The use of a hematite-rich red clay slip, and the styles of decorated ceramics, are consistent with Early and Middle Caddoan ceramics also being made on the middle reaches of the Red River (cf. Krieger 1946) and the upper Sulphur River basin.

# Chapter 10: Historic Sites and Isolated Finds

David L. Nickels and Kristi Miller

## Introduction

Seven historic site components and five isolated finds were discovered during the Camp Maxey survey. Five sites (41LR166, 167, 171, 172, and 173) had historic components only, while two sites (41LR154 and 161) contained both prehistoric and historic cultural materials. This chapter describes the sites in terms of physiographic setting and the recovered artifacts. Site locations and isolated finds within the areas surveyed are shown on Figures 8-1a and b. The artifact data can be found in Table 10-1, and the five historic isolated finds are listed in Table 10-2.

## Historic Archaeological Sites

### 41LR154

#### *Site Description*

Historic ceramic and glass sherds were observed on the surface of 41LR154 (see Figure 8-9).

The surface has moderately dense grasses and scattered Sumac trees on a gradual slope, with approximately 50 percent surface visibility. Based on surface

artifacts and brown glass recovered in a shovel test, the historic component of the site covers approximately 800m<sup>2</sup>, with a maximum depth of 20 cm. The nearest water emanates from springs in an unnamed south-north drainage 600 m to the northeast. Most of the site appears to be intact, although bioturbation and a two-track road running through the middle of the site have caused moderate damage.

#### *Artifacts*

Two thin, brown glass sherds were recovered from Shovel Test (ST) W1 (see Figure 8-9) between 0 and 20 cm below the surface, along with a chipped stone artifact. Two clear bottle glass and a whiteware ceramic sherd were found on the surface. The brown glass sherds have no patina. The ceramic piece is a hard-paste whiteware sherd that appears to be from a plate. Whiteware without a hue or tint was being produced in Britain by the 1830s (Miller 1991), was primarily used after 1850, and was a popular dinnerware through the 1950s (Hard et al. 1995). The clear glass bottle sherds lacked maker's marks and therefore could not be traced to their place or date of manufacture. Clear glass bottles were commonly produced after about 1875, when Manganese was used as a decolorizer (Munsey 1970:55), and of course are most common today.

Table 10–1. Historic site artifact presence.

41LR	Purple Glass	Clear Glass	Aqua Glass	Brown Glass	Window Glass	Whiteware	Stoneware	Brick	Metal	Button
154		X		X		X				
161						X				X
166		X			X			X		
167	X		X			X	X		X	
171		X				X		X	X	
172	X	X	X			X	X			
173	X	X	X			X	X			

## 41LR161

### *Site Description*

Historic artifacts were found in one of seven shovel tests (Figure 8-16; Table 8-1) on a finger toe slope. The landform is located between two drainages with

3 to 5 percent sloping Whakana-Porum sandy loam mollisols. Visor Creek, which is fed by seeps in the immediate area, flows 15 m west of the upper portion of the site. The area is heavily wooded, with dense grasses, brush and leaf cover; thus the less than 10 percent ground surface visibility. Bioturbation, slope erosion, and a one-meter deep road cut have caused moderate damage to the site.



Figure 10-1. a. Metal army button from 41LR161; b. whiteware sherd from 41LR161.



Historic artifacts recovered include a metal button and one ceramic sherd from 0–20 cm in ST #1. The metal button (Figure 10-1a) is identified as a copper, two-piece, general service, series B, Type 1, great-coat button manufactured for the military ca. 1820 to 1840. On its face it has the initials “US” with a five-pointed star separating the letters, and an oval wreath of olive leaves below the letters. An eagle appears above the the letters, with a branch in its right talon and three arrows pointing away from its body in its left talon. The eagle’s head is turned toward the arrows. The button’s first piece is the 20-mm diameter button, and the second piece is a loop attached to the back. On the back is inscribed “L. H. & Scovill \* TEN--- O ---”, indicating it was manufactured by L. H. & Scovill. Records indicate that on September 5, 1820, L. H. & Scovill made 75 gross of large (ca. 23 mm) great-coat buttons for the military (Albert 1969:33–34). The button predates the roadcut running through the site, but may have been curated over a considerable period and discarded by later occupants of the site.

The ceramic piece (Figure 10-1b) recovered from ST #1 is a hard-paste whiteware sherd that appears to be from a plate. Although classified as whiteware, its exterior has a slight gray hue most likely from being exposed to high temperatures. Whiteware without a hue or tint was being produced in Britain by the 1830s (Miller 1991). This specimen, however, has a distinct lipped base which suggests a post-1850 date of manufacture (Anne Fox, personal communication).

### Description

41LR166 is a cobble-lined cistern (Figure 10-2) with a nearby drainage ditch, a rock alignment, and a small mound (Figure 10-3). The cistern has been filled with natural debris so that it is now only 4.5 ft deep. It is circular in shape from top to bottom, and 4 ft in diameter. The drainage ditch is approximately 2 ft deep on its west end but flattens out as it runs downslope toward a pond. A cobble and dirt berm rises about 1 ft on both sides of the ditch. A rock alignment is barely visible to the south of the ditch, but appears to represent a collapsed wall or fence. An oval-shaped rock mound lies just west of the rock alignment. Red brick fragments are sparsely scattered across the site. Finally, a borrow pit is just north of the cistern.



Figure 10-2. Photograph of the cobble-lined cistern at 41LR166.

### Artifacts

Historic artifacts include four clear window glass sherds, red brick fragments with no maker’s marks, and two clear glass bottle sherds. One bottle glass sherd is from the base of a rectangular shaped base with a raised “N” inside a raised square. This mark indicates that it was manufactured by the Obear-Nester

Glass Co., East St. Louis, Illinois, sometime after 1915. The second clear glass bottle sherd is from the base of a round, machine-made jar, probably a Mason Jar. The sherd bears some raised numbers, probably signifying a patent or product number, but no maker's mark.

Each of the four window glass sherds were of different thicknesses. Using Moir's (1987: 77, 1988: 271) regression equation of  $I = 84.22(T) + 1712.7$  (in which  $I$  = the initial date of construction and  $T$  = the mean thickness in millimeters) dating window glass by thickness has been successfully tested in urban San Antonio and Fredericksburg (Gross and Meissner, 1996: 240–241; Nickels and Fox 1997:11; Nickels et al. 1998). The mean thickness of the sherds is 2.075 mm. The thickness was analyzed using Moir's equation:  $I = 84.22(2.075) + 1712.7 = 1887.46$ . The regression coefficient of .93 and a 95% confidence level of  $\pm 7$

years was produced from Moir's data. The thickness of the window glass recovered suggests that the glass was manufactured sometime between 1880 and 1894.

### 41LR167

#### Description

41LR167 is a historic farmstead with remnants of a concrete foundation approximately 12 ft long (Figure 10-4), and a 25 in-long x 19 in-wide, oval-shaped concrete base nearby. The concrete base has four upright, rusted bolts that would have been used as supports for a wooden frame, possibly a privy. The most prominent feature at the site is a marked grave surrounded by a barb wire fence (Figure 10-5). The grave is marked by a headstone inscribed "ALVEN son of TA and LG Draper, Born Dec. 1, 1908, Died Jan 24,

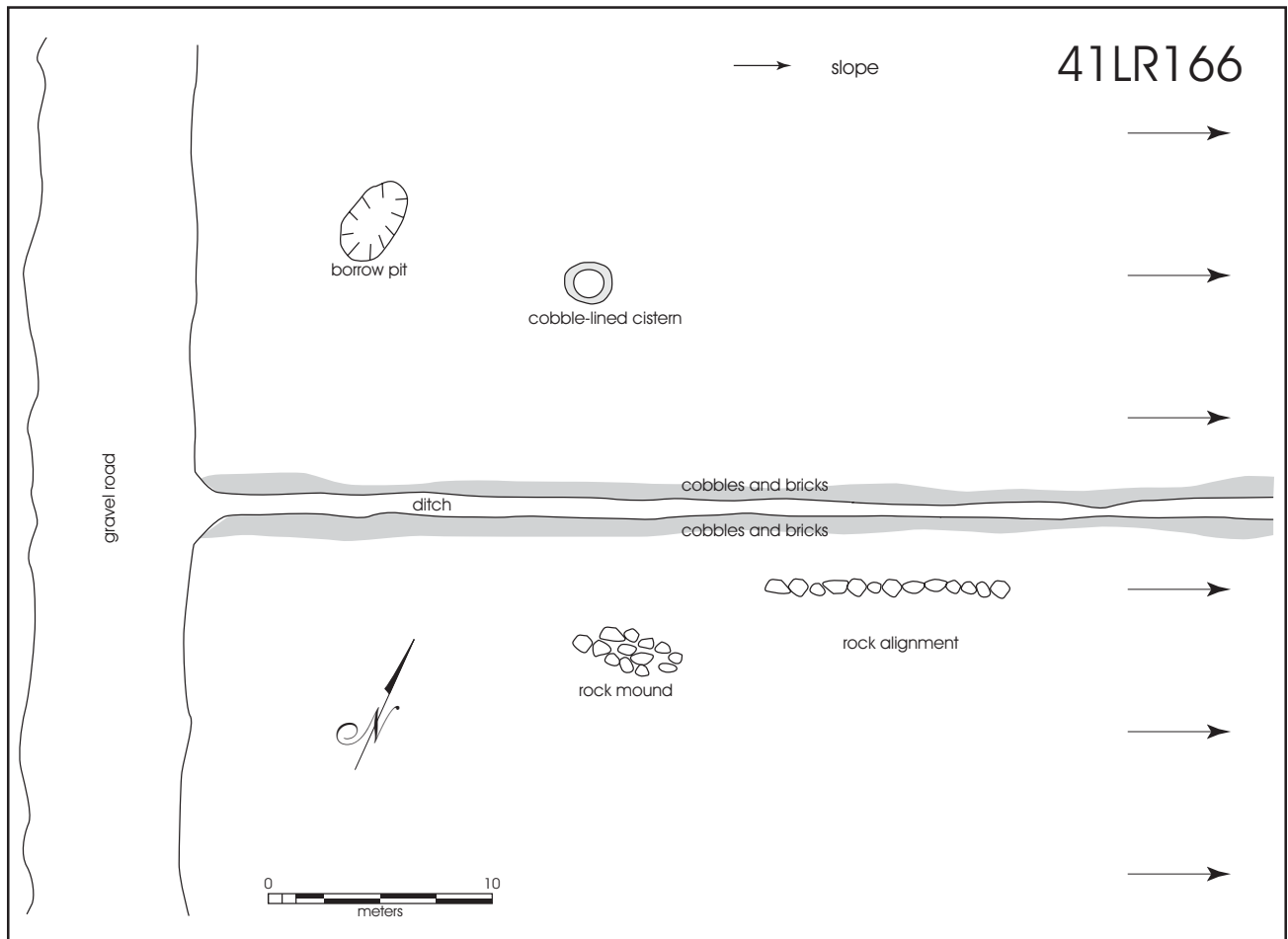


Figure 10-3. Site map—41LR166.

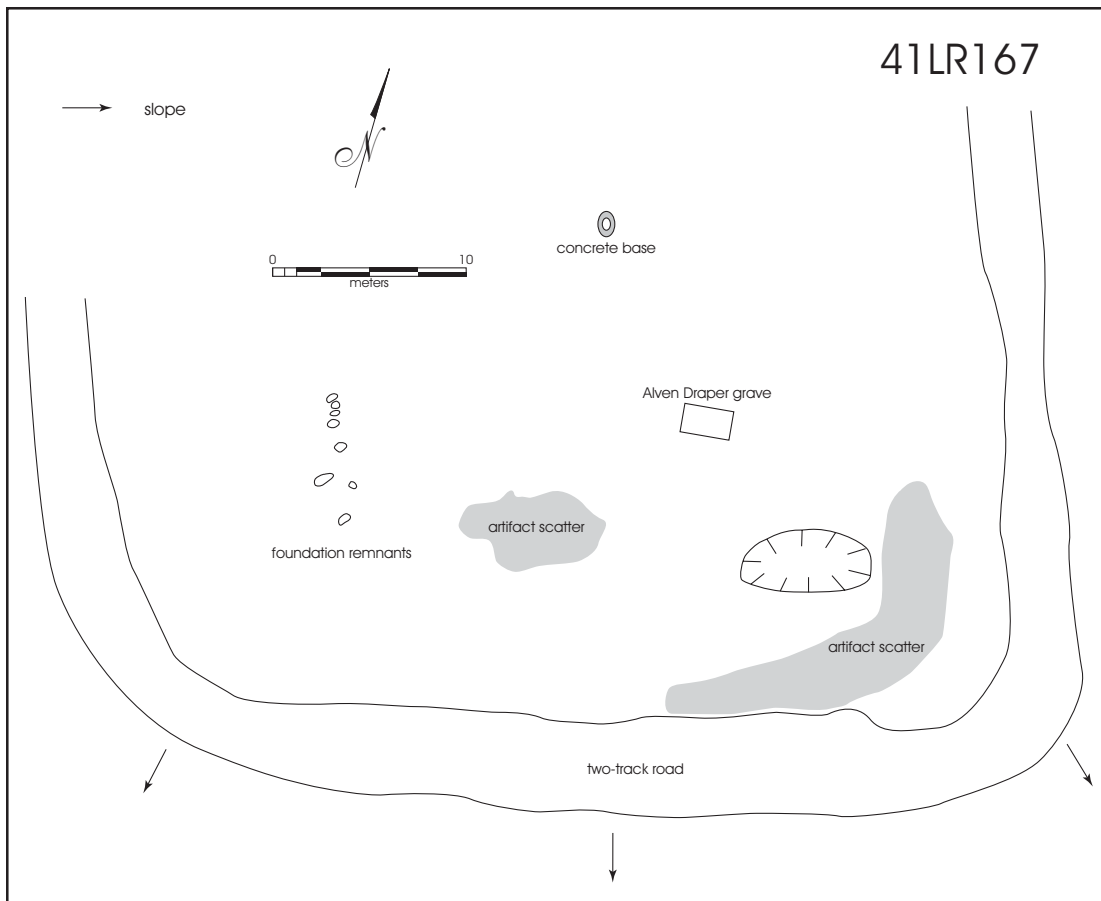


Figure 10-4. Site map—41LR167.

1911". The footstone is inscribed with the letters (initials) "AD". The farmstead sets near the intersection of an early 1900s county road and a two-track road encircles the site. A small mott of large, mature trees shade the site, domesticated flowers dot the area, and a large blackberry briar patch is growing just to the east.

### Artifacts

Historic artifacts observed on the surface include a base and side of a whiteware cup or mug and five whiteware plate sherds (three of which



Figure 10-5. Photograph of Alven Draper headstone and grave—41LR167.



are decorated), all which could date between ca. 1830 and the present (Hard et al. 1995; Miller 1991). Six Salt Glaze stoneware sherds were found. Salt Glaze pottery has been produced since colonial times in America—around 1830 in Texas—and was popular through about 1900 when it was gradually replaced by Albany and Bristol Glaze (Ellis 1989). Three bottle sherds are aqua-colored, a color commonly produced until about 1875, when Manganese was used as a decolorizer (Munsey 1970:55). Three purple bottle glass sherds are a color that was commonly produced ca. 1880–World War I. No maker’s marks were present on any of the artifacts. Finally, rusted thin metal pieces that appear to be from a bucket are scattered across the site.

### 41LR171

#### Description

41LR171 (Figure 10-6) is an ephemeral surface scatter of glass, brick fragments, and iron stove parts that

are eroding approximately 30 m down the face of a steep incline. They are in an old roadbed that now deadends at the Camp Maxey north perimeter fence, 50 m to the north. Pine trees and grasses line both sides of the road. Additional evidence of a trash dump may exist on either side of the old roadbed. The extended bluffline also looks to be a good place for a homesite. The nearest water is in Visor Creek, approximately 900 m to the west.

#### Artifacts

The surface scatter consists of three whiteware sherds, three red brick fragments, two clear glass sherds, and two iron stove parts in no apparent pattern. As addressed above in the artifact descriptions for 41LR166 and 167, these artifacts suggest a late nineteenth or early twentieth-century affiliation.

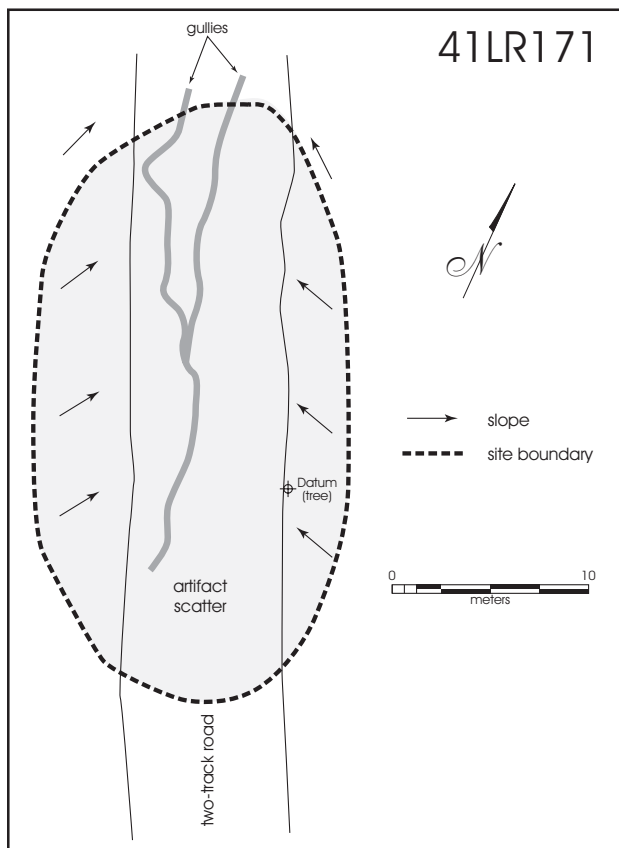


Figure 10-6. Site map—41LR171.

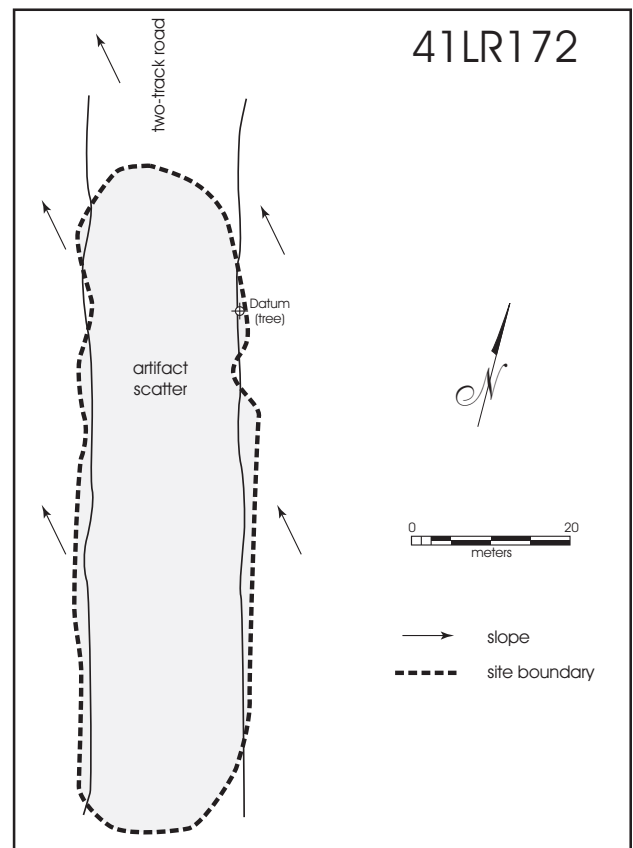


Figure 10-7. Site map—41LR172.

## 41LR172

### Description

41LR172 (Figure 10-7) consists of an ephemeral scatter of glass and ceramics strewn along an old roadbed. Dense grass and trees line both sides of the road where surface visibility is less than 10 percent. The land slopes gently to the north. The nearest water is in Visor Creek, about 1 km to the west. The site as currently recorded is approximately 100 m (n-s) x 10 m (e-w). The artifacts are most likely part of a historic trash dump, or related to a structure in the area.

### Artifacts

The surface scatter consists of two whiteware sherds, four clear glass bottle sherds, two aqua bottle glass sherds, three purple glass sherds, and one glazed stoneware crockery sherd in no apparent pattern. As addressed above in the artifact descriptions for 41LR166, 167, and 171, these artifacts suggest a late nineteenth or early twentieth-century affiliation.

## 41LR173

### Description

41LR173 (Figure 10-8) consists of an ephemeral scatter of glass and ceramics strewn along an old bladed roadbed. Dense grass and trees line both sides of the road, and surface visibility is less than 10 percent. The land slopes gently to the northwest. The nearest water is in a swampy area about 1,100 m to the north. The site as currently recorded is approximately 50 m (n-s) x 10 m (e-w). The artifacts are most likely part of a historic trash dump, or related to a structure in the area; however the context is unclear because the survey was restricted to the roadway.

### Artifacts

The surface scatter consists of one whiteware sherd, two clear glass bottle sherds, one aqua glass sherd, one purple glass sherd, and one glazed stoneware crockery sherd. As addressed above in the artifact discussions for 41LR166, 167, and 171, these artifacts suggest a late nineteenth or early twentieth-century affiliation.

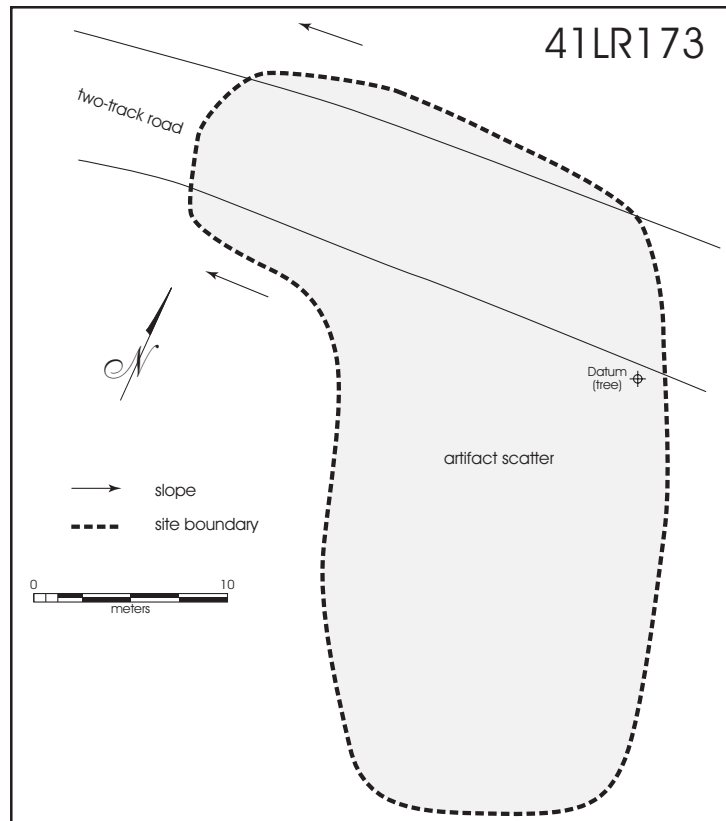


Figure 10-8. Site map—41LR173.

## Historic Isolated Finds

Five historic isolated finds (IF) were documented during the project (see Figures 8-1a and b, and Table 10-2). Some historic isolated finds initially recorded and numbered in the field were later determined to be artifacts at a site; the IF numbers in Table 10-2 represent the finalized isolated historic artifact occurrences. Some historic items were collected and numbered sequentially. Subsequent examination in the laboratory allowed for a more detailed artifact description.

A brief description and analysis of unique historic isolated finds (IF) follow:

IF 20 consisted of three purple bottle glass sherds with no maker's mark. Although difficult to date more specifically, colored glass bottles were commonly produced until about

Table 10–2. Historic Isolated Finds (IF)

IF#	Artifacts	Context	Collected
20	purple bottle glass (3 sherds)	Surface	
47	1 round nail; window glass (1 sherd) (0–20 cm)	Shovel Test	X
48	whiteware (1 sherd)	Surface	X
49	1 metal grate	Surface	X
50	1 ceramic gravy server	Surface	X

recovered suggests that the glass was manufactured sometime between 1878 and 1892.

IF 48 (Figure 10-9) is a whiteware plate sherd manufactured by D. E. McNicol Pottery in

Clarksburg, West Virginia. The “U.S.Q.M.C” and series of letters and numbers indicate it was manufactured for the United States Army Quartermaster Corps under a contract dated April 24, 1941. In addition to toilet seats, the McNicol Pottery commonly manufactured hotel dinnerware including semi-porcelain dinner sets, common china, and some limited decorative wares after 1920 (Lehner 1988:290–292).

IF 49 (Figure 10-10) is a machine-made wrought iron grate 12 in long x 6 in wide. It appears to be a vent covering for the foundation of a structure. The grate was either nailed or screwed into the foundation. It bears the name “KOKEN,” believed to be the manufacturer, but no record of such a company was found.

IF 50 (Figure 10-11) is a ceramic gravy server or “boat” manufactured for the United States Army Quartermaster Corps (U.S.Q.M.C) by Shenango China of Newcastle, Pennsylvania. Shenango China took control of the Newcastle Pottery Company Plant in 1912. Shenango China was listed in 1902 as manufacturing semi-porcelain dinner sets, toilet seats, and other assorted sets of odd dishes, some decorated. Over the years Shenango tried to produce finer wares, but the Depression forced the company to produce durable hotel ware until around 1936. By 1949 Shenango grew approximately tenfold in ten years primarily because of governmental sales.

The gravy server recovered during the Camp Maxey survey is most likely an example of the durable wares that Shenango produced for the government. It lacks a date code, but was probably produced sometime after 1948, when rubber stamps were used to make commercial ware similar to the one on the Maxey specimen (Lehner 1988:419–423).

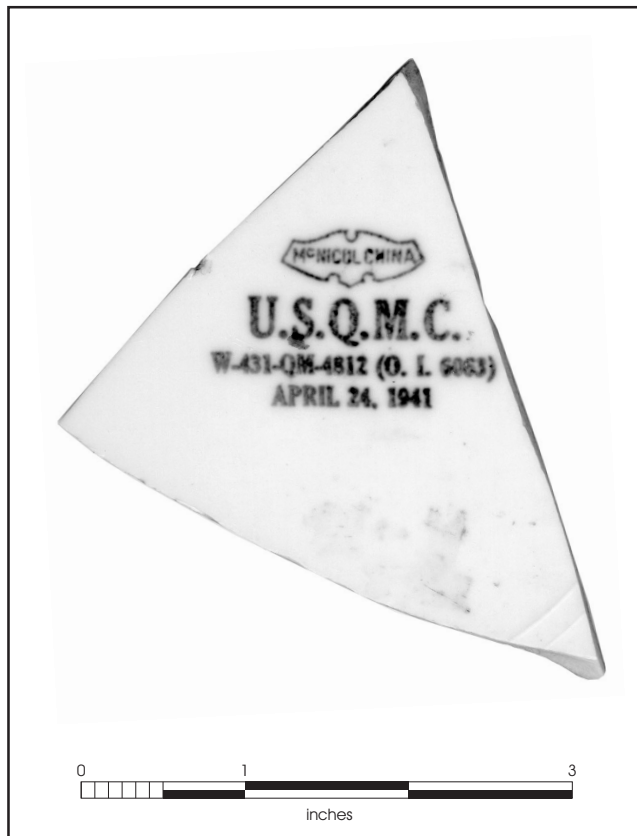


Figure 10-9. Isolated Find #48—McNicol Pottery dinnerware.

1875, when Manganese was used as a decolorizer (Munsey 1970:55).

IF 47 consists of a rusted round wire nail and a single window glass sherd. Wire nails did not become the dominant type until the 1890s, though they were introduced prior to the 1850s (Nelson, 1968: 1–10). Many builders preferred using cut nails well into the twentieth century. The greater holding power of cut nails was a factor which delayed the acceptance of wire nails. Using Moir’s (1987: 77, 1988: 271) regression equation the thickness of the window glass



Figure 10-10. Isolated Find #49—Wrought iron grate.



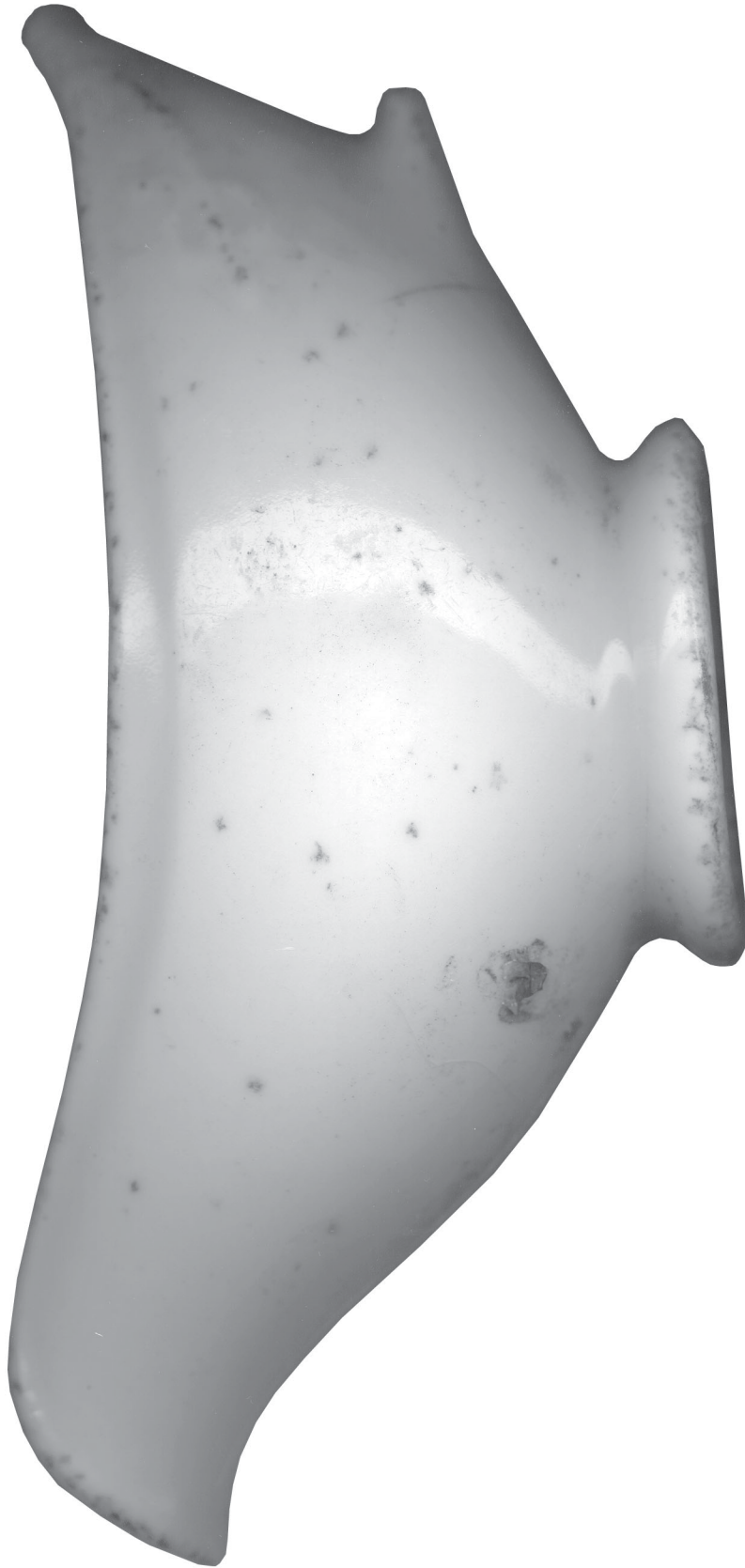


Figure 10-11. *Isolated Find #50—Shenango China gray server.*

# Chapter 11: Analysis of the Historic Data

David L. Nickels

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## Historic Development

An increase in use of the land in and around Camp Maxey was stimulated by a growing demand for agricultural consumer goods in the early twentieth century. Visor Creek and hand-dug cisterns provided good sources of water, while the soils were suited for producing abundant crops and grasses for grazing. Historical accounts of land usage during the nineteenth and twentieth centuries around Camp Maxey describe primarily ranching activities. Traders in the late eighteenth century ferried goods up and down the Red River, trading guns, ammunition, knives, and other items for valuable fur pelts acquired by the Wichita Indians. Although faced with Indian depredations, early nineteenth-century European settlers were attracted to Lamar County by the abundant game, hunting, fishing, and trapping. They constructed log cabins out of the plentiful timber available, and later used sawed lumber. By the mid-nineteenth century, small plantation operations were thriving in Lamar County. By 1900 there were over 6,500 farms in the county, and four out of every five citizens lived in a rural area. Although the number of farms increased to over 6,800 in 1920, that number was slashed to fewer than 4,200 in the aftermath of Great Depression. The agricultural based economy of the area was stimulated by an increase in cattle herds and grain crops for feed. Still, the local civic leaders were anxious to further stimulate the economy. The acquisition of 70,000 acres of farmland by the U.S. government and the construction of Camp Maxey in 1941 marked a transition from an economy based on agriculture to one based on industry.

## Camp Maxey Sites and Artifacts

### 41LR154

The small number and type of artifacts recovered from this site provide few clues as to the site's function. Clear and brown glass with whiteware suggest either the existence of a twentieth-century trash dump or the performance of household-related activities in the area, yet no evidence of a structure was found during the survey. An old county road about 100 m to the south of the site would have provided easy access in the early 1900s.

### 41LR161

The U.S. military button and a whiteware sherd found buried at 41LR161 suggest it may have been used as early as 1820, but more likely it was much later, probably in the early twentieth century. Both artifacts could have been curated by temporary occupants of the site, as no evidence of a structure was found. It is an ideal camping spot between two streams, and overlooks an open field. It is also adjacent to the intersection of two early 1900s roads.

### 41LR166

41LR166 appears to be the remains of a farmstead, although window glass and red brick fragments scattered within cobble alignments and a small mound, possibly a chimney, were the only construction materials observed at the site. It is not known whether the structure was a house or barn. The absence of household-related artifacts suggests that the structure was probably agriculturally related. The cobble-lined cistern and irrigation channel at this site indicate it would have provided a good source of water for both animals and crops. Based on the bottle and window glass sherds observed at the site, the time of occupation is

estimated to be around the beginning of the twentieth century.

#### **41LR167**

The headstone of Alven Draper's grave at 41LR167 gives his date of death as 1908. The purple and aqua glass, whiteware, and glazed stoneware scattered around the site are temporally contemporaneous with the date of death. Alven was three years and one month old when he died, and may have been the son of Asberry and Lizzie Draper, married on June 10, 1905, in Lamar County (Lamar County Marriage Records). Concrete rubble and flowering plants indicate an approximate location of the house structure. The farmstead sits just northeast of the intersection of two early 1900s roads.

#### **41LR171**

The clear bottle glass, whiteware and stoneware sherds, brick fragments, and iron stove parts indicate that 41LR171 was either a trash dump or the remains of a farmstead. The temporal affiliation of the artifacts is probably early to mid-twentieth century. They were found in an old 1900s roadbed, so it is highly likely that a structure may have existed nearby.

#### **41LR172 and 41LR173**

Purple and aqua glass, whiteware, and glazed stoneware suggest that 41LR172 and 41LR173 were used during the latter part of the nineteenth, and early twentieth centuries. The artifacts at both sites were found on old roadbeds. The absence of construction items indicates that there were probably no structures in the immediate area, so the sites may have been used as a trash dump for a home just off the old roads.

## **Discussion**

### **Land Usage**

Evidence of historic occupation was found at seven sites over a survey of 1,000 acres, or one site per 143 acres. Given the fact that there were ca. 6,800 farms in Lamar County in 1920 (which totaled 588,160

acres), a mean of one farmstead per 86 acres could have been expected at that time. The fewer number of historic sites may be due to the distance of the Camp Maxey area from Paris, the nearest large settlement. A second factor may be that the land is more suitable for grazing than for producing farm crops. Finally, intensive military-training and land-clearing activities may have destroyed or buried evidence of existing farmsteads. Construction material was found at only three of the seven historic sites: red brick and window glass at 41LR166, red brick at 41LR171, and concrete foundation remnants at the Draper site (41LR167). The military button found at 41LR161, with an absence of construction materials at the site and its close proximity to old roads, implies that the button may have been lost by travelers stopping for a short time. No other artifacts associated with the pre-U.S. Army occupation period were found that would suggest that the land was used for anything other than agriculture.

### **Temporal and Economic Affiliations**

The oldest diagnostic artifact found to date at Camp Maxey is the U.S. military button (see Figure 10-1a) manufactured between 1820 and 1840, found beneath the surface at 41LR161. There is also evidence that farmsteads were developed in the area by the latter part of the nineteenth century; the Alven Draper grave definitely dates the site to 1908. The presence of purple and aqua glass, stoneware, and whiteware at 41LR167, 41LR172, and 41LR173, represents the presence of late nineteenth-century to WWI economically modest farmsteads at Camp Maxey. By examining the types of ceramics and other diagnostic artifacts it is possible to formulate a range of probable deposition dates. In addition, the larger proportion of the least-expensive ceramics (lead-glazed, stoneware, and modest whiteware) to those considered more expensive (porcelains) enable conjecture of the economic and social status of the former residents of a site. Distribution over locations helps determine land use (Fox and Cox 1990:11-18). No porcelain was found during the survey; however, the most common artifact found was undecorated whiteware (six of seven sites), a light-colored hard paste refined earthenware (Dial 1992:38-39). Whiteware was first introduced in Britain in the late 1700s and became a popular import to America



during the 1800s as a replacement for wooden and pewter tableware. Undecorated whiteware was less expensive than, for example, transfer-printed whiteware, because it required less effort to produce, and the time and effort required to produce a ceramic product was reflected in its cost (Miller 1980:4). The approach of the 1860s brought an increase in the demand for plain undecorated tableware, and a large proportion of undecorated whiteware sherds signifies post-1860s deposition (Fox et al 1989:45). Stoneware is a strong utilitarian pottery that has been used in

America since colonial times, particularly in the kitchen and dairy. Stoneware occurs mostly in the form of heavy crocks and wide bowls.

The occupation of Camp Maxey by the military as represented by IF 48 (Figure 10–9) is a whiteware plate sherd manufactured for the United States Army Quartermaster Corps (USQMC) under a contract dated April 24, 1941, and a gravy server (IF 50), also manufactured for the USQMC, probably around 1948.

## Chapter 12: Summary and Recommendations

**Timothy K. Perttula and David L. Nickels**

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The Center for Archaeological Research, The University of Texas at San Antonio, completed the pedestrian survey, intensive shovel testing, and backhoe trenching of approximately 1,000 acres at Camp Maxey, Lamar County, Texas, for the Adjutant General's Department and the Texas Army National Guard in July 1998. As a result of the archaeological investigations, 30 previously unrecorded archaeological sites (41LR149–169 and 41LR171–179) have been identified in the project area.

Twenty-five of the archeological sites are of prehistoric age. Of the prehistoric sites where temporal affiliation could be determined (sites 41LR149, 41LR150, 41LR152, 41LR153, 41LR155, 41LR157, 41LR158, 41LR168, and 41LR169), only Late Archaic/Woodland (ca. 500 B.C. to A.D. 800) and Late Prehistoric (ca. A.D. 800 to A.D. 1700) components were identified; among the latter are several of Early-Middle Caddoan age (41LR150, 41LR152, 41LR157, and 41LR158) and one of Late Caddoan age (41LR155).

Seven sites had historic components: 41LR154, 41LR161, 41LR166, 41LR167, 41LR171, 41LR172, and 41LR173. Site 41LR161 may possibly date to the first quarter of the nineteenth century. Sites 41LR166, 41LR167, 41LR172, and 41LR173 were probably used during the latter part of the nineteenth and early part of twentieth centuries, and site 41LR154 may have been used somewhat later in the twentieth century, but prior to 1950.

Summaries of the sites found at Camp Maxey, and our assessments of National Register of Historic Places and State Archeological Landmark eligibility, are presented in Table 12–1. Because of the necessarily limited investigation, the sites received during the pedestrian survey and shovel testing, we are of the opinion that none of the sites of unknown eligibility (see Table 12–1) should presently be considered for formal designation as State Archeological Landmarks

under the Antiquities Code of Texas or warrant inclusion in the National Register of Historic Places. Only further investigations will determine if they meet any of the criteria for State Archeological Landmark status specified in Section 26.8 of the Texas Historical Commission's Rules of Practice and Procedure for the Antiquities Code of Texas, or the criteria specified in 36 CFR Part 60.4 for the National Register of Historic Places.

Nevertheless, many of the prehistoric sites possess fair to good contextual integrity. Consequently, the prehistoric sites of unknown eligibility appear to have the research potential to contribute important archaeological information relevant to addressing many of the study units posed in the Historic Contexts “Hunter-Gatherer Mobility in Northeast Texas, 10,000–200 B.C.” (Fields and Tomka 1993), “The Emergence of Sedentism in Northeast Texas, ca. 500 B.C. to A.D. 1000” (Perttula et al. 1993), and “The Development of Agriculture in Northeast Texas before A.D. 1600” (Perttula 1993).

In particular, archaeological data (including lithic tools and debris of local and non-local origin, and site locational and intra-site information) available from the possible Late Archaic/Woodland period components at 41LR153, 41LR164, 41LR165, and 41LR168 have the potential to contribute toward a better understanding of both Archaic period Settlement Systems and Site Planning (SU 2), Trade and Exchange (SU 4), and Technological Change/Material Culture (SU 5) (Fields and Tomka 1993:93–94), and Woodland period study units: Settlement Systems (SU 2), Intra- and Inter-regional Exchange and Interaction (SU 7), Material Culture Characterizations (SU 8), and Technological Change (SU 9) (Perttula et al. 1993:113–118). In turn, the Early-Middle Caddoan and Late Caddoan period components at 41LR152, 41LR153, 41LR155, 41LR157, and 41LR158 may contain comparable archaeological data sets to provide new and

important information on Chronology and Typology (SU 1), Settlement Systems (SU 2), Social and Political Complexity (SU 4), Local and Extra-local Trade and Exchange (SU 7), Technological Change (SU 8), and Material Culture (SU 9) (Perttula 1993:137–140). Of particular significance with respect to the Caddoan period components at Camp Maxey is the presence of prehistoric Caddoan pottery in good contexts at several sites, which should permit research focusing on “the hierarchical arrangement of community mound centers, villages, hamlets, and farmsteads in the Red River basin prior to A.D. 1400” (Perttula 1993:138).

Because of their poor contextual integrity, the following prehistoric sites are considered ineligible for State Archeological Landmark or National Register of Historic Places designation (see Table 12–1): 41LR149, 41LR150, 41LR151, 41LR169, 41LR174, 41LR176, 41LR178, and 41LR179. It is our opinion that they do not have any potential to contribute to a better understanding of the prehistory of northeast Texas, or to add new and important information that would address pertinent research issues developed in the Regional Preservation Plan for Archeological Resources in the Northeast Texas Archeological Region (Kenmotsu and Perttula 1993:35–187). They have been previously disturbed by land clearing, cultivation, and military activities, are extensively eroded, and have poor contextual integrity (see Table 12–1). Therefore, they do not merit or warrant further work. We recommend that the Texas Army National Guard be allowed to proceed with its proposed use of these areas for military-training purposes.

We recommend that each of the prehistoric sites of unknown eligibility (see Table 12–1) be avoided by the Texas Army National Guard during any proposed military training and/or related development or ground-disturbing activities. In the case of the prehistoric sites, if they cannot be avoided by such activities, then a program of archaeological test excavations is recommended as the next step in further and formally evaluating their research significance under both the National Historic Preservation Act and the Antiquities Code of Texas permit process. The boundaries of these sites should be well marked by Texas Army National Guard surveyors in consultation with a professional archaeologist familiar with the sites to in-

sure that accurate boundaries are established for these areas to be avoided prior to any future military-training activities.

Because of their poor contextual integrity, the historic sites 41LR171, 41LR172, and 41LR173, and the historic component of 41LR154, as defined by the current survey project, are considered ineligible for State Archeological Landmark or National Register of Historic Places designation (see Table 12–1). It is our opinion that they have been disturbed by previous road construction and they do not have the potential to contribute to a better understanding of the history of northeast Texas, or to add new and important information that would address pertinent research issues. Therefore, they do not merit or warrant further archaeological work, and we recommend that the Texas Army National Guard be allowed to proceed provided any proposed construction upgrades follow the existing roadbeds.

We recommend that each of the historic sites of unknown eligibility (see Table 12–1) be avoided by the Texas Army National Guard during any proposed military training and/or related development or ground-disturbing activities. If these historic sites cannot be avoided by such activities, then a program of archaeological test excavations is recommended as the next step in further and formally evaluating their research significance under both the National Historic Preservation Act and the Antiquities Code of Texas permit process. The boundaries of these historic sites should be well marked by Texas Army National Guard surveyors in consultation with a professional archaeologist familiar with the sites to insure that accurate boundaries are established for these areas to be avoided prior to any future military-training activities.

Table 12-1. Site Summaries and NRHP and State Archeological Landmark Assessments.

Site	Site Size*	Artifact Density**	Contextual Integrity+	Known Components	NRHP/SAL Assessment	Recommendation
41LR149	1.0	1.80	Poor	Archaic/Woodland	Not Eligible	No further work
41LR150	1.25	1.00	Poor	Early-Middle Caddoan	Not Eligible	No further work
41LR151	0.9	1.00	Poor	Unknown prehistoric	Not Eligible	No further work
41LR152	1.1	2.00	Fair	Middle Caddoan	Unknown	Avoidance or Test Excavations
41LR153	0.5	1.75	Good	Archaic?/Early Caddoan?	Unknown	Avoidance or Test Excavations
41LR154	2.0	1.00	Fair	Unknown prehistoric	Unknown	Avoidance or Test Excavations
41LR154	2.0	N/A	Poor	Historic	Not Eligible	No further work
41LR155	0.4	1.60	Fair	Late Caddoan	Unknown	Avoidance or Test Excavations
41LR156	0.4	2.33	Fair	Unknown prehistoric	Unknown	Avoidance or Test Excavations
41LR157	0.55	6.25	Fair	Early-Middle Caddoan	Unknown	Avoidance or Test Excavations
41LR158	5.6	1.75	Fair	Early-Middle Caddoan?	Unknown	Avoidance or Test Excavations
41LR159	6.4	2.75	Fair	Unknown prehistoric	Unknown	Avoidance or Test Excavations
41LR160	7.5	2.14	Fair	Unknown prehistoric	Unknown	Avoidance or Test Excavations
41LR161	2.0	1.40	Fair	Unknown prehistoric	Unknown	Avoidance or Test Excavations
41LR161	2.0	2.0	Fair	Historic	Unknown	Avoidance or Test Excavations
41LR162	1.8	3.75	Fair	Unknown prehistoric	Unknown	Avoidance or Test Excavations
41LR163	0.07	3.33	Fair	Unknown prehistoric	Unknown	Avoidance or Test Excavations
41LR164A	94.3 for	1.20	Fair	Unknown prehistoric	Unknown	Avoidance or Test Excavations
41LR164B	Entire Site	2.16	Fair	Late Archaic?	Unknown	Avoidance or Test Excavations
41LR165	1.45	1.33	Fair	Archaic?	Unknown	Avoidance or Test Excavations
41LR166	0.2	N/A	Fair	Historic	Unknown	Avoidance or Test Excavations
41LR167	1.0	N/A	Fair	Historic	Unknown	Avoidance or Test Excavations
41LR168	3.45	2.00	Fair	Archaic/Woodland	Unknown	Avoidance or Test Excavations
41LR169	0.3	N/A	Poor	Archaic/Woodland	Not Eligible	Avoidance or Test Excavations
41LR171	0.1	N/A	Poor	Historic	Not Eligible	No further work
41LR172	0.1	N/A	Poor	Historic	Not Eligible	No further work
41LR173	0.1	N/A	Poor	Historic	Not Eligible	No further work
41LR174	1.2	1.00	Poor	Unknown prehistoric	Not Eligible	No further work
41LR175	<0.01	4.00	Good	Unknown prehistoric	Unknown	Avoidance or Test Excavations
41LR176	0.06	N/A	Poor	Unknown prehistoric	Not Eligible	No further work
41LR177	0.04	1.33	Fair	Unknown prehistoric	Unknown	Avoidance or Test Excavations
41LR178	0.02	1.00	Fair	Unknown prehistoric	Not Eligible	No further work
41LR179	0.03	2.00	Fair	Unknown prehistoric	Not Eligible	No further work

\*Site Size in acres. \*\* Average number of artifacts/positive shovel test. + Contextual integrity criteria are as follows:

Good = Site appears to be largely intact, with limited disturbance from bioturbation, erosion, etc.; appears to contain intact horizontal and vertical artifact patterning; faunal materials present.

Fair = Site appears to be only partially intact, with several kinds of disturbances; unknown if site contains horizontal and vertical artifact patterning; no faunal materials.

Poor = Site appears to be only minimally intact, with evidence of heavy disturbances and erosion.

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# Appendix A: Artifact Data Table

Site # (4ILR)	Surface Artifacts								Fire Cracked Rock	Shovel Test #	Shovel Test Artifacts					Total Artifacts in Test	Fire Cracked Rock						
	Cortical Flakes	Non-Cortical Flakes	Cores	Tested Cobbles	Bifaces	Projectile Points	Polishing Stone	Pottery Sherds			Total Surface Artifacts	0 - 20 cm	20 - 40 cm	40 - 60 cm	60 - 80 cm		80 - 100 cm	0 - 20 cm	20 - 40 cm	40 - 60 cm	60 - 80 cm	80 - 100 cm	Total
149	2	5			2			9		N1	1c				1								
										S1						2						2	
										E1	1n					1							
										W1		1n	1n			2		1	1				2
										SE1	1c					1							
150	2	1					1	4		BB11A		1n			1								
										BB11B	1n				1								
										E1	1c				1								
										NE1		1n			1								
										NE2		1c			1								
151	3	6						9		SW1	1n				1								
152										SSS7	1s				1								
										N1			1n		1								
										E1	4s	1s			5								
										W1	1n				1								
										SE1	1n, 1c				2								
										S2			2s		2								
										TTT7			1c		1								
153					1			1		OOO34			1c		1			2				2	
										N2	1c				1	1						1	
										S3		1n			1								
										E3	1n				1								
154	5						5		W1	1n				1									

## Key

b - biface  
 bs- battered stone  
 c - cortical flake

ch - chunk  
 cf - core fragment  
 n - non-cortical flake

p - projectile point  
 s - pottery sherd  
 t - turtle shell fragment

Site # (41LR)	Surface Artifacts								Total Surface Artifacts	Fire Cracked Rock	Shovel Test #	Shovel Test Artifacts					Total Artifacts in Test	Fire Cracked Rock				
	Cortical Flakes	Non-Cortical Flakes	Cores	Tested Cobbles	Bifaces	Projectile Points	Polishing Stone	Pottery Sherds				0 - 20 cm	20 - 40 cm	40 - 60 cm	60 - 80 cm	80 - 100 cm		0 - 20 cm	20 - 40 cm	40 - 60 cm	60 - 80 cm	80 - 100 cm
155										WWW43		1c	1c	1p		3						
										NW1	1c, 1n					2						
										N2		1c				1						
										NW2	1c					1						
										N3	1c					1						
156										UUU38		1c, 1n	1n			3						
										W1	1c					1						
										NW1		1n, 1ts, 1ch				3						
157		1						1		YYY5	1s	1c		3c, 1cf	1ch	7						
										YYY7		1c				1						
										ZZZ4	1b, 1n, 1s	1n				4	1				1	
										S1	3c, 2n, 3s, 1bs					9	1	2			3	
158	51	27	4	12				95		EEEE27	2c					2						
										W3	1c					1						
										W4	1c, 1n					2						
										W6	2c					2	1				1	
159	4	8					12		EEEE18	2n					2							
159										FFFF20	1c					1						
										HHHH25		1c, 1n				2						
										N1	2c, 1ch	1n, 2ch				6						
										NE2	1c					1						
160										SSS18	1c					1						
										SSS20			1c			1						
										UUU14	1n					1						
										E1				2c		1						
										SW1	1c					1						
										N2	1c					1						
									E2	1c	1c		1n		3	2	2		1	5		

**Key**

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t - turtle shell fragment



Site # (41LR)	Surface Artifacts							Total Surface Artifacts	Fire Cracked Rock	Shovel Test #	Shovel Test Artifacts					Total Artifacts in Test	Fire Cracked Rock					Total			
	Cortical Flakes	Non-Cortical Flakes	Cores	Tested Cobbles	Bifaces	Projectile Points	Polishing Stone				Pottery Sherds	0 - 20 cm	20 - 40 cm	40 - 60 cm	60 - 80 cm		80 - 100 cm	0 - 20 cm	20 - 40 cm	40 - 60 cm	60 - 80 cm		80 - 100 cm		
165									XXX44	1n					1										
									N1	2n					2										
									3		1c				1										
168	3	7	1			1		12	5	1			1c		1							3		3	
										2	1c				1										
169	2	8		1		3		14	6																
174										V5	1cf				1										
										W5	1cf				1										
										N2		1c			1										
175										W3	1c		1c,1ch	1ch	4										
176	2							2																	
177										LLLL25		1n			1										
										S1				1n	1										
										E2	2c				2										
178										JJJJ18	1c				1										
										S2	1n				1										
179		1						1		E2	1c,1ch				2										

**Key**

b - biface  
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t - turtle shell fragment



## Appendix B: Soil Stratigraphic Descriptions

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BHT-1; west side of Sanders Creek tributary; toeslope position; noncalcareous throughout.

- A 0-7 cm; **Holocene**; dark grayish brown (10YR 4/2) fine sandy loam; moderate fine and medium subangular blocky; friable; 2% brown (7.5YR 4/4) iron pore linings; gradual smooth.
- Bw 7-16 cm; brown (10YR 5/3) sandy clay loam; moderate medium subangular blocky; firm; 25% soft yellowish red (5YR 4/6) iron masses and 2% gray (10YR 5/1) iron depletions; clear wavy.
- Abl 16-38 cm; very dark grayish brown (10YR 3/2) and very dark brown (10YR 3/3) fine sandy loam; moderate medium and coarse subangular blocky; firm; 3% soft brown (7.5YR 4/4) iron masses and 2% grayish brown (10YR 5/2) iron depletions; gradual wavy.
- Bw/Ebl 38-55 cm; brown (10YR 4/3) fine sandy loam; moderate coarse subangular blocky; friable; 2% soft brown (5YR 4/6) iron masses and 3% light yellowish brown (2.5Y 6/3) iron depletions; gradual smooth.
- Btg1bl 55-92 cm; yellowish brown (10YR 5/6, 5/8) sandy clay loam; moderate coarse subangular blocky; friable; clear smooth.
- Btg2bl 92-120 cm; yellowish brown (10YR 5/6) fine sandy loam; moderate coarse subangular blocky; friable; 10% brown (7.5YR 4/4) soft iron masses; 2% gray (2.5Y 6/1) iron depletions; gradual smooth.
- Btg3bl 120-151 cm; yellowish brown (10YR 5/6) sandy clay loam; moderate coarse subangular blocky; firm; 10% gray (2.5Y 6/1) iron depletions; clear smooth.
- Btgb2 151-160 cm; **Pre-Holocene**; gray (2.5Y 7/1) and red (2.5YR 4/8) sandy clay loam; moderate coarse subangular blocky; friable.

BHT-2; west side of Sanders Creek tributary; floodplain; noncalcareous throughout.

- A 0-12 cm; **Holocene**; dark grayish brown (10YR 4/2) fine sandy loam; moderate medium subangular blocky; friable; 1% strong brown (7.5YR 4/6) soft iron masses; 2% dark gray (10YR 4/1) iron depletions; clear smooth.
- A 12-22 cm; brown (10YR 4/3, 5/3) and gray (10YR 6/1) sandy clay loam; moderate medium subangular blocky; friable; clear smooth.
- Bw 22-39 cm; brown (10YR 4/3) and light yellowish brown (10YR 6/4) fine sandy loam; moderate medium subangular blocky; friable; clear smooth.
- Albl 39-55 cm; brown (10YR 4/3) and pale brown (10YR 6/3) sandy clay loam; moderate coarse subangular blocky; friable; 3% dark yellowish brown (10YR 4/4) soft iron masses; 2% iron manganese stains; gradual smooth.
- A2bl 55-78 cm; brown (10YR 4/3) and pale brown (10YR 6/3) sandy clay loam; moderate coarse subangular blocky; firm; 3% dark yellowish brown (10YR 4/4) soft iron masses; 5% iron manganese stains; gradual smooth.

- Btglb2 78-90 cm; **Pre-Holocene**; light gray (10YR 7/1) clay loam; moderate coarse subangular blocky; firm; 4% dark yellowish brown (10YR 4/6) soft iron masses; 5% iron manganese stains; clear smooth.
- Btg2b2 90-121 cm; light gray (10YR 7/1) clay loam; moderate coarse prismatic; firm; 10% yellowish brown (10YR 5/6) soft iron masses; gradual smooth.
- Btb3b2 121-160 cm; light gray (10YR 7/1) clay loam; moderate coarse prismatic; firm; 5% yellowish brown (10YR 5/6) soft iron masses; extended to 340 cm.

BHT-3; east side of Sanders Creek tributary; floodplain; noncalcareous throughout.

- A 0-11 cm; **Holocene**; brown (10YR 4/3) fine sandy loam; moderate fine and medium subangular blocky; hard; gradual smooth.
- Bw 11-41 cm; brown (10YR 5/3) fine sandy loam; weak coarse subangular blocky; hard; abrupt smooth.
- A/E1b 41-59 cm; **Pre-Holocene**; dark grayish brown (10YR 4/2) clay; moderate medium angular blocky; hard; 2% dark yellowish brown (10YR 4/6) soft iron masses; 20% very pale brown (10YR 7/3) clay and iron depletions; gradual wavy.
- A/E2b 59-70 cm; grayish brown (10YR 5/2) clay; moderate medium angular blocky; hard; 8% dark yellowish brown (10YR 4/6) soft iron masses; 20% very pale brown (10YR 7/3) clay and iron depletions; few iron manganese stains; clear wavy.
- Btglb 70-110 cm; gray (10YR 5/1) clay; moderate medium prismatic; very firm; 5% dark yellowish brown (10YR 4/6) soft iron masses; 2% very pale brown (10YR 7/3) clay and iron depletions; 5% iron manganese stains; gradual smooth.
- Btg2b 110-153 cm; gray (10YR 5/1) clay; weak coarse prismatic; very firm; 8% dark yellowish brown (10YR 4/6) soft iron masses; 5% iron manganese stains and concretions; gradual smooth.
- Btg3b 153-180 cm; gray (10YR 6/1, 5/1) clay; weak coarse prismatic; very firm; 15% dark yellowish brown (10YR 4/6) and yellowish brown (10YR 5/6) soft iron masses; 8% iron manganese stains and concretions; extended to 340 cm.

BHT-4; east side of Sanders Creek tributary; floodplain fan; noncalcareous throughout; ceramics in upper 80 cm.

- A 0-14 cm; **Holocene**; brown (10YR 4/3) fine sandy loam; moderate fine subangular blocky; very friable; few medium iron manganese nodules, detrital; clear smooth.
- Abl 14-26 cm; dark brown (7.5YR 3/3) fine sandy loam; moderate fine subangular blocky; very friable; few medium iron manganese nodules, detrital; gradual smooth.
- E1bl 26-40 cm; brown (7.5YR 4/4) fine sandy loam; moderate medium subangular blocky; slightly hard; few medium iron manganese nodules, detrital; gradual smooth.
- E2bl 40-65 cm; brown (7.5YR 4/4) fine sandy loam; moderate medium subangular blocky; slightly hard; few medium iron manganese nodules, detrital; gradual smooth.
- Bt1bl 65-95 cm; strong brown (7.5YR 4/6, 5/6) sandy clay loam; moderate coarse subangular blocky; firm; 2% reddish yellow (7.5YR 6/6) sandy pockets; iron manganese gravel line in upper 1/3 of horizon, angular, 1 to 2 cm diameter; common faint to distinct clay films; gradual smooth.
- Bt2bl 95-120 cm; strong brown (7.5YR 4/6) sandy clay loam; moderate coarse subangular blocky; firm; 2% brownish yellow (10YR 6/6) sandy pockets; common faint to distinct clay films; gradual smooth.

- Bt3bl 120-143 cm; brown (7.5YR 4/4) and yellowish brown (10YR 5/6) sandy clay loam; moderate coarse subangular blocky; firm; common faint to distinct clay films; gradual smooth.
- Btlb2 143-155 cm; **Pre-Holocene**; brownish yellow (10YR 6/6) sandy clay loam; moderate coarse subangular blocky; firm; 3% red (2.5YR 4/8) soft iron masses; common faint to distinct clay films; clear smooth.
- Bt2b2 155-340 cm; brownish yellow (10YR 6/6) sandy clay loam/sandy clay; moderate coarse subangular blocky; firm; 5% red (2.5YR 4/8) soft iron masses; gradual smooth.
- Crb2 340+ cm; red and gray horizontally bedded clay.

BHT-5; east side of Sanders Creek tributary; floodplain; noncalcareous throughout.

- A 0-10 cm; **Holocene**; very dark gray (10YR 3/1) and dark gray (10YR 4/1) clay loam; moderate fine and medium subangular blocky; friable; 2% brown (7.5YR 4/4) iron pore linings; clear smooth.
- Bw 10-18 cm; gray (10YR 5/1) and 20% brown (10YR 5/3) loam; moderate medium subangular blocky; friable; 4% brown (7.5YR 4/4) iron pore linings; clear smooth.
- Ab 18-29 cm; **Pre-Holocene**; gray (10YR 5/1); moderate medium subangular blocky; firm; 3% brown (7.5YR 4/4) iron pore linings; gradual smooth.
- Btg1b 29-70 cm; gray (10YR 5.5/1) clay; weak coarse prismatic; very firm; 2% brown (7.5YR 4/4) iron pore linings; gradual smooth.
- Btg2b 70-92 cm; gray (10YR 6/1) clay; weak coarse prismatic; very firm; 3% yellowish brown (10YR 5/6) soft iron masses and 10% red (2.5YR 4/8) soft iron masses; gradual smooth.
- Btg3b 92-175 cm; gray (10YR 6/1) clay; weak coarse prismatic; very firm; 20% red (2.5YR 4/8) soft iron masses and plinthite.

BHT-6; uplands east of Sanders Creek tributary; noncalcareous throughout.

- A 0-12 cm; **Pre-Holocene**; brown (10YR 4/3) fine sandy loam; moderate fine and medium subangular blocky; very friable; few fine iron manganese concretions; gradual smooth.
- E 12-26 cm; dark yellowish brown (10YR 4/4) fine sandy loam; weak medium subangular blocky; very friable; few fine iron manganese concretions; gradual smooth.
- BA 26-37 cm; strong brown (7.5YR 4/6, 5/6) fine sandy loam; weak medium subangular blocky; friable; few fine iron manganese concretions; iron manganese gravel line at lower boundary; abrupt smooth.
- Btl 37-52 cm; yellowish brown (10YR 5/6) clay; weak medium angular blocky; very firm; 10% red (2.5YR 4/8) soft iron masses; gradual smooth.
- Bt2 52-78 cm; yellowish brown (10YR 5/6) clay; weak coarse angular blocky; very firm; 20% red (2.5YR 4/8) soft iron masses; gradual smooth.
- Btg 78-130 cm; light gray (2.5Y 7/1) clay; weak coarse prismatic; very firm; 20% red (2.5YR 4/8) soft iron masses and plinthite; iron manganese gravel line at lower boundary; clear smooth.
- Cr 130-210 cm; light gray (2.5Y 7/1) clay; faintly horizontally bedded; very firm; 10% red (2.5YR 4/8) soft iron masses and plinthite; clear smooth.