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RESEARCH DESIGN AND DATA RECOVERY PLAN FOR

ARCHAEOLOGICAL SITE 41KR243

State Department of Highways and Public Transportation

Austin, Texas

August 1988
Introduction

Site 41KR243, the Camp Pearl Wheat Site, is located along FM 783 in Kerr County along the south bank of Town Creek (Fig. 1). The site was located and recommended for testing by the State Department of Highways and Public Transportation in response to plans for realigning a dangerous curve on FM 783. Test excavations were performed in June 1988 and consisted of the hand excavation of three 2 meter units within the proposed 120 foot wide right-of-way. Although testing was somewhat limited by the use of the site as a summer camp, Camp Pearl Wheat, sufficient data was recovered to suggest that the site contains intact features at depths of 40 to 50 cm. A hearth eroding from an existing roadcut was recorded and an intact hearth was found at a depth of 50 cm in Test Unit 1. The single diagnostic artifact from the testing phase, a Martindale dart point type closely resembles a dart point found on the surface when the site was originally located.

Testing indicated that the site contains approximately 30 cm of dark gray silty clay with occasional subrounded limestone pebbles overlying a dark brown silty loam. The 2 meter square test units were excavated in 10 cm deep levels which indicated that the upper soil zone contains a very small amount of lithic debitage. No burned rocks, bone, mussel shell, or tools were found: Flake totals ranged from 1 to 25 in this upper zone and suggest a very minor occupation. However, the dark brown silty clay level, the level which contained the exposed hearth and the Martindale dart point, had a higher flake
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count than the upper zone. Burned rock was noted in all units within the
deeper zone but no bone, mussel shell, or charcoal was evident.

Although testing was limited to the western one-half of the proposed right-
of-way, there is speculation that the site will extend across the right-of-way
with about 1000 square meters of relatively undisturbed deposits within the
project limits. Test Unit 3, the southernmost unit dug, is located either at
or very near the southern margins of the site (Fig. 2).

The site falls within the Central Texas Archaeological Region and appears to
contain an intact Early Archaic component. Based on the diagnostic artifacts,
it would fall into Weir's (1976) San Geronimo Phase or Prewitt's (1981)
Jarrell Phase. Habitation sites of this age are uncommon in Central Texas and
their occurrence at sites lacking burned rock middens is even rarer. Because
of its Early Archaic representation, the intact deposits, and the artifact
yield, site 41KR243 is considered eligible for inclusion within the National
Register of Historic Places. This purpose of this research design is to
present the research goals, methods, and strategies for extracting information
from the site.

Description of the Site

Site 41KR243 is located along a Pleistocene second terrace at the Town Creek-
FM 783 crossing about 2.5 miles north of Kerrville, Texas. The site is
situated along the western end of a long and flat terrace and is limited on
the west by FM 783 and on the north by Town Creek. Test Unit 3 is located
FIGURE 2. Contour map of Site 41KR243 showing location of test units and features.
near the southern limits of the site. There was a very low flake recovery rate from that unit and an absence of flakes in the roadcut and on the surface south of this square. The terrace and the site area have been a part of Camp Pearl Wheat for at least 25 years and some disturbances to the original area may be expected.

Except for a few large native cedar trees, almost all of the arboreal vegetation has been removed from the terrace along the present right-of-way and along the creek edge. There are native live oak trees just south of the right-of-way which shade the volleyball courts. A private caliche roadway crosses the site within the proposed right-of-way effectively dividing the site into east and west halves. The westernmost 4 meters of the proposed right-of-way includes current highway backslopes and the site has been effectively removed from this area. In addition, the northernmost 4-8 meters appear to have been eroded severely. This area has large basal gravels on the surface which are identical to those located at 45 cm depth in Test Unit 2. Finally there is a small cement lined drainage ditch extending from the roadway toward the creek which eliminates a small portion of the site.

These disturbances are minor and most have had no adverse impact on the Early Archaic zone. A small portion of the site has been eroded by the gully and a larger area has been removed by highway construction and maintenance activities over the years. It appears that the 120 feet wide right-of-way contains roughly 1000 square meters of undisturbed area which may contain intact cultural deposits.
Summary of Eligibility

Archaeological Site 41KR243, the Camp Pearl Wheat Site, is considered eligible for inclusion within the National Register for the information it contains relating to the Early Archaic period (Criterion D, 36CFR Part 60.4). Broad research topics important to the study of this period include cultural chronology, cultural adaptations, and definition of the resource base. The possible presence of an Early Archaic occupation zone represents an opportunity to examine the remains of a cultural adaptation for that time period. This site also presents the opportunity to compare non-burned rock midden site utilization to sites of the same general period containing burned rock middens.

Research Domain

Much of the previous research into Kerr County archaeology has dealt with the excavation of burned rock midden sites (Skinner 1974, 1979a, 1979b, 1979c; Beadles 1971b, Luke 1980) or with establishing a chronology for the immediate area (Briggs 1971, Sollberger and Hester 1972). Skinner (1974) represents the largest scale research in the county. This research involved a survey of much of the Turtle Creek watershed and excavations of burned rock middens. Model testing of the function of burned rock midden sites and of the watershed as a natural area where all activities associated with the seasons were conducted. Virtually all of the research in the county has dealt with later cultural-temporal periods than the Early Archaic habitation of 41KR243.
Several major research objectives are proposed for the Camp Pearl Wheat Site. These include the following goals:

(1) To determine the appropriate placement of the site in relation to the proposed chronologies for the Central Texas Archaeological Region (Weir 1976, Prewitt 1981). Efforts should be oriented towards obtaining charcoal dates with a valid context as well as diagnostic artifacts in association wherever possible. Efforts should also be made to cross date the component(s) present by comparing diagnostic projectile types in context to other early Central Texas sites such as Wilson-Leonard (41WM235), 41KR107, 41KR109, and 41BC65.

(2) To determine site function through an analysis of features and recovered artifacts. Attempts should be made to determine the organization of the portion of the site within the highway right-of-way. Organic materials, if present, should be analyzed to determine the species exploited and an effort made to correlate these species within resources zones such as riverine habitat, steep slopes or upland areas. Site function should also be examined by an analysis of the types and frequencies of tools present as well as absent. The absence of certain tool types may be important towards understanding site function.

(3) To perform a linear lithic reduction analysis in order to compare the results with sites in the immediate area relating to different cultural-temporal periods as well as to the same period. Research goals should include attempts to determine how chipped stone tools were produced during the Early Archaic and to delineate changes in technology through time.
(4) To compare the data from this site with burned rock midden sites of the same age to determine any functional differences. A considerable amount of research has been directed at analyzing burned rock middens to determine their function. An alternative viewpoint is to compare burned rock midden sites to non-midden sites to determine if there actually are differences in function which can be detected through archaeological data.

(5) To gather data on climatic fluctuation. This can be accomplished by an analysis of snail shells to determine if there is a shift in frequencies from the Early Archaic to later time periods. Attempts should also be made to retrieve pollen although the soils of Central Texas are not conducive to pollen preservation.

**Methods**

The proposed right-of-way contains approximately 1000 square meters of intact deposits. Excavation plans call for the hand excavation of 15-20 two meter square units. Tentative unit placement is indicated in Fig. 3. A grid oriented magnetic north will be superimposed over the site and aligned so Test Unit 1 falls within the grid system. This grid system will encompass all of the proposed right-of-way south of Town Creek and will allow placement of units on both sides of the private drive.

Excavations will be confined to the area south of Town Creek and north of Test Unit 3 within the proposed right-of-way. Records will be kept for each level and each unit. Soils will be screened using 0.25 in. or smaller mesh hardware cloth, with materials bagged appropriately.
FIGURE 3. Contour map of Site 41KR243 showing test units and features plus the proposed locations of additional excavations units. Disturbed areas are indicated by hatchure.
The data recovery effort is expected to require a period of six weeks. Excavation will be by 1 by 1 m units within a 2 by 2 m grid using arbitrary 10 cm levels. Features will be excavated as a cultural unit, rather than incorporated into arbitrary units. Isolatable associated surfaces or contextual associations will be excavated using finer techniques. Surfaces will be troweled with tools piece-plotted, when possible and appropriate. Care will be taken to isolate the occupation zones from the other fill. Elevations of all levels and piece-plotted tools and features will be taken from the site datum. This will maximize potential for identifying activity areas and episodes of occupation.

Feature fill will be water-screened through 1/16" mesh, except for constant volume samples to be taken from each feature, as well as equal volume samples from designated 2 by 2 m units. This will maximize the potential for recovery of macroflora, fauna, and smaller lithic debitage fragments and provide comparative data for feature and nonfeature areas. The constant volume sample from each feature will be analyzed by specialists for pollen, organic material, soil constituents and artifacts. Processing the constant volume sample from designated 2 by 2 m squares will include water-screening one half through 1/16" mesh; the other half, equal in volume to feature samples, will be processed in the same manner as the constant volume feature fill. Ten samples will be processed to evaluate the effectiveness of this procedure; if there are negative results, further routine processing will not occur. In all instances, samples will be collected. Feature 1 in Test Unit 1 will be included in this process.
A scaled topographic map will be made of the site indicating the site grid, features, elevations, and disturbed areas. Piece plotting with tool and other significant artifact elevations will be done to scale on plan maps, each 2 by 2 m unit; this will allow for a reasonable scale and better control of recording spatial separation of materials. Profiles of at least 2 faces of each 2 meter square will be drawn along with feature profiles. Immediately following the field period there will be a post field conference between the contractor, SHPO, SDHPT, and FHWA.

Analysis

The analysis of materials will be multistaged. Site materials will be processed and prepared for analysis and special samples will be sent to appropriate laboratories. Lithic materials will be analyzed using a linear reduction method. Contrasts of assemblages between sites will be done. A spatial analysis of recovered tools and debitage will be made in order to understand the site's role in the settlement system.

Site data will be compared to Central Texas sites of the same period and those of different time periods. The analysis will include sites with burned rock midden and sites without. This evaluation should indicate some of the differences between the evolution of the sites through time as well as the functional differences between midden and nonmidden sites.

Report of data recovery efforts in draft and final form will be submitted for SHPO comment.
Consultants and Special Studies

Geology

Faunal Analysis

C-14

Lithics

Flotation and

Botanical analysis

Consultant services will be obtained

Dr. Gentry Steele, Texas A&M University

Beta Analytic of Coral Gables, Florida

Research laboratory of contracting agency

Research laboratory of contracting agency
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