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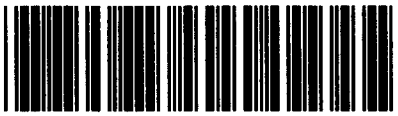

Item Number: 591

Addendum StartPage: 0

SOAH DOCKET NO. 473-10-1097
PUC DOCKET NO. 37448

APPLICATION OF LCRA TRANSMISSION SERVICES CORPORATION TO AMEND ITS CERTIFICATE OF CONVENIENCE AND NECESSITY FOR THE GILLESPIE TO NEWTON 345 KV CREZ TRANSMISSION LINE IN GILLESPIE, LLANO, SAN SABA, BURNET, AND LAMPASAS COUNTIES, TEXAS	§	**BEFORE THE** **STATE OFFICE OF ADMINISTRATIVE** **HEARINGS**

LCRA TRANSMISSION SERVICES CORPORATION'S RESPONSE TO J17 RANCH' FIRST REQUEST FOR INFORMATION

COMES NOW LCRA Transmission Services Corporation (LCRA TSC) and files this, its Response to J17 Ranch's First Request for Information. This Response is timely filed. LCRA TSC agrees and stipulates that all parties may treat these responses as if the answers were filed under oath.

Respectfully submitted,

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By: _____
William T. Medaille

ATTORNEYS FOR LCRA TRANSMISSION SERVICES CORPORATION

CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing document was served on the propounding party (pursuant to Order No. 1) on this the 11th day of January 2010, by email, facsimile, First-Class U.S. mail, or by hand delivery.

_____
William T. Medaille

SOAH DOCKET NO. 473-10-1097
PUC DOCKET NO. 37448

APPLICATION OF LCRA TRANSMISSION SERVICES CORPORATION TO AMEND ITS CERTIFICATE OF CONVENIENCE AND NECESSITY FOR THE GILLESPIE TO NEWTON 345 KV CREZ TRANSMISSION LINE IN GILLESPIE, LLANO, SAN SABA, BURNET, AND LAMPASAS COUNTIES, TEXAS	§	**BEFORE THE STATE OFFICE OF ADMINISTRATIVE HEARINGS**

LCRA TRANSMISSION SERVICES CORPORATION'S RESPONSE TO J17 RANCH'S FIRST REQUEST FOR INFORMATION

Question No. 1-1:

Do you object to or disagree with any of Recommendations or Comments, (or portions thereof), contained in the referenced Texas Parks & Wildlife Department's letter? If so, identify each such Recommendation or Comment (or portion thereof) and specifically state each point of objection or disagreement.

Response No. 1-1:

At the time of this response, LCRA TSC has not formulated a position on the referenced letter by the Texas Parks & Wildlife Department (TPWD).

LCRA TSC intends to address TPWD's recommendations in its rebuttal testimony on or before January 26, which testimony will be filed with the Commission, and be entered into the Commission's evidentiary record in this proceeding. See Order No. 4 at 2-3 (Dec. 4, 2009).

Preparer: Bill Medaille — Title: Associate General Counsel, LCRA
Sponsor: Dennis Palafox — Title: Sr. Regulatory Case Mgr, LCRA

SOAH DOCKET NO. 473-10-1097
PUC DOCKET NO. 37448

APPLICATION OF LCRA TRANSMISSION SERVICES CORPORATION TO AMEND ITS CERTIFICATE OF CONVENIENCE AND NECESSITY FOR THE GILLESPIE TO NEWTON 345 KV CREZ TRANSMISSION LINE IN GILLESPIE, LLANO, SAN SABA, BURNET, AND LAMPASAS COUNTIES, TEXAS	§	**BEFORE THE STATE OFFICE OF ADMINISTRATIVE HEARINGS**

LCRA TRANSMISSION SERVICES CORPORATION'S RESPONSE TO
J17 RANCH'S FIRST REQUEST FOR INFORMATION

Question No. 1-2:

State specifically all actions you intend to take in response to referenced Texas Parks & Wildlife Department's letter.

Response No. 1-2:

Please see the response to Question 1-1

Preparer: Bill Medaille
Title: Associate General Counsel, LCRA
Sponsor: Dennis Palafox
Title: Sr. Regulatory Case Mgr, LCRA

SOAH DOCKET NO. 473-10-1097
PUC DOCKET NO. 37448

APPLICATION OF LCRA TRANSMISSION SERVICES CORPORATION TO AMEND ITS CERTIFICATE OF CONVENIENCE AND NECESSITY FOR THE GILLESPIE TO NEWTON 345 KV CREZ TRANSMISSION LINE IN GILLESPIE, LLANO, SAN SABA, BURNET, AND LAMPASAS COUNTIES, TEXAS	§	**BEFORE THE STATE OFFICE OF ADMINISTRATIVE HEARINGS**

LCRA TRANSMISSION SERVICES CORPORATION'S RESPONSE TO
J17 RANCH'S FIRST REQUEST FOR INFORMATION

Question No. 1-3:

For each item of action listed in response to the preceding RFI, please identify the persons or person who has performed or will perform that action and the dates or expected dates that action will be initiated and completed.

Response No. 1-3:

Please see the response to Question 1-1.

Preparer: Bill Medaille — Title: Associate General Counsel, LCRA
Sponsor: Dennis Palafox — Title: Sr. Regulatory Case Mgr, LCRA

SOAH DOCKET NO. 473-10-1097
PUC DOCKET NO. 37448

APPLICATION OF LCRA TRANSMISSION SERVICES CORPORATION TO AMEND ITS CERTIFICATE OF CONVENIENCE AND NECESSITY FOR THE GILLESPIE TO NEWTON 345 KV CREZ TRANSMISSION LINE IN GILLESPIE, LLANO, SAN SABA, BURNET, AND LAMPASAS COUNTIES, TEXAS	§	**BEFORE THE STATE OFFICE OF ADMINISTRATIVE HEARINGS**

LCRA TRANSMISSION SERVICES CORPORATION'S RESPONSE TO
J17 RANCH'S FIRST REQUEST FOR INFORMATION

Question No. 1-4:

State separately for each named person a complete explanation for his or her recommended preferred route in August 2009. If more than one route was recommended, provide separate explanations and the order, if any, of the preferences of the recommended preferred routes.

Dan Prikryl
Andy Maloff
David Payne
Lenny Jasinski
Larry Clendennen
Larry Dollgener
Erik Huebner
Ken Barnard
Craig Johnson
Dave Tyler
Gina Rubio
Dennis McDonald
David Turner
Curtis Symank
Dennis Palafox

Response No. 1-4:

After individual inquiry with each of the listed persons, except Larry Clendennen who has retired, the explanations included in LCRA TSC's response to W. Hinckley's 1st RFI, Question 1-3 Attachment 1 are accurate explanations for each person's preferred route recommendation.

Five individuals listed multiple routes in their recommendations for preferred routes in the Attachment 1. Dan Prikryl and Andy Malof listed in order of preference their preferred routes as

GN6, GN7, and GN3. Messrs. Prikryl and Malof agree that their preferred route was GN6 for the following reasons: 1) use of existing ROW, 2) the archaeology team had already studied much of the existing LCRA TSC ROW that the segments of GN6 parallel or use, and 3) Links C29 and C31A were considered the best approach to the Newton Station. They both agree that their second recommended preferred route was GN7 for the same three reasons, with the provision that GN7 uses less existing ROW than GN6. They both agree that their third best route was GN3. Factors 1 and 2 provided above do not apply in their selection of GN3 as the third recommended route. GN3 was their third recommended route because it was the only remaining route that used segments C29 and C31A.

Erik Huebner, Ken Barnard, and Craig Johnson recommended routes GN11 and GN6 as preferred routes. Messrs. Huebner, Barnard, and Johnson did not intend for routes GN11 or GN6 to be listed in any particular order of preference. Mr. Huebner believes that the reasons for recommending routes GN6 and GN11 as preferred routes listed in LCRA TSC's response to W Hinckley 1st RFI, Question 1-3 Attachment 1 are accurate. Messrs. Johnson and Barnard recommended GN6 and GN11 as preferred routes because routes that use existing ROW require less maintenance (i.e., vegetation clearing). Under building does not apply to the Gillespie to Newton project.

Preparer: Dennis Palafox	Title: Sr. Regulatory Case Mgr, LCRA
Co-Sponsor: Dennis Palafox	Title: Sr. Regulatory Case Mgr, LCRA
Co-Sponsor: Curtis Symank	Title: Engineering Supervisor, LCRA

SOAH DOCKET NO. 473-10-1097
PUC DOCKET NO. 37448

APPLICATION OF LCRA TRANSMIS-	§	**BEFORE THE**
SION SERVICES CORPORATION TO	§	
AMEND ITS CERTIFICATE OF CON-	§	
VENIENCE AND NECESSITY FOR THE	§	**STATE OFFICE OF ADMINISTRATIVE**
GILLESPIE TO NEWTON 345 KV CREZ	§	
TRANSMISSION LINE IN GILLESPIE,	§	
LLANO, SAN SABA, BURNET, AND	§	**HEARINGS**
LAMPASAS COUNTIES, TEXAS	§	

LCRA TRANSMISSION SERVICES CORPORATION'S RESPONSE TO
J17 RANCH'S FIRST REQUEST FOR INFORMATION

Question No. 1-5:

For each named person, identify and provide copies of all documents reviewed or relied upon for the recommended preferred route(s).

Dan Prikryl
Andy Maloff
David Payne
Lenny Jasinski
Larry Clendennen
Larry Dollgener
Erik Huebner
Ken Barnard
Craig Johnson
Dave Tyler
Gina Rubio
Dennis McDonald
David Turner
Curtis Symank
Dennis Palafox

Response No. 1-5:

The following individuals solely reviewed or relied upon for the draft EA for their recommended preferred route:

David Payne
Lenny Jasinski
Larry Dollgener
Ken Barnard

Craig Johnson
Dave Tyler
Gina Rubio
Dennis McDonald

A final version of the EA has already been provided, and no draft copies exist.

In addition to the draft EA, Curtis Symank and David Turner reviewed or relied upon the cost estimates for the routes. These have been provided as Exhibit CDS-2 to the Direct Testimony of Mr. Curtis Symank.

In addition to the draft EA, Erik Huebner reviewed or relied upon habitat mitigation cost estimates and the Loomis report, which have been provided in LCRA TSC's response to Hinckley's 2nd RFI, Question 2-12.

In addition to the draft EA, Dennis Palafox reviewed or relied upon questionnaires and letters from county and municipal governments, and organizations. Questionnaires are available in the voluminous room. Please contact Gina Eddy or Janet McNutt at (512) 473-3287 to make an appointment to view questionnaires. Letters and resolutions from county and municipal governments and other organizations are presented in Appendix B to the EA included as Attachment 1 to the Application.

In addition to the draft EA, Dan Prikryl and Andy Malof reviewed or relied upon several cultural resource reports written by LCRA Archaeology Services staff.

The following reports have previously been provided in LCRA TSC RFI responses:

-A Cultural Resources Survey of the Lampasas-Buchanan Dam Transmission Line Replacement Project, Burnet and Lampasas Counties, Texas (see Hinckley's 7th RFI, Question 7-2, Attachment 1); and
-A Cultural Resource Survey and Assessment of the Lower Colorado River Authority's Proposed Fence and Vegetation Clearing at Buchanan Dam in Burnet County, Texas (see LPG's 1st RFI, Question 1-20, Attachment 1).

The following documents are provided as Attachment 1 to this RFI response:
-T-130/191/192 Transmission Line Maintenance - Phase I;
-T-130/191/192 Transmission Line Maintenance - Phase 2;
-A Cultural Resource Survey of the Proposed Land Grading around the Gillespie Substation, Gillespie County, Texas; and
-An Intensive Cultural Resource Survey of the LCRA's Proposed Gillespie Substation Expansion, Gillespie County, Texas.

The following documents were also reviewed and relied by Messrs. Prikryl and Malof: the Geologic Atlas of Texas Brownwood Sheet and the Geological Atlas of Texas Llano Sheet, which are available to the public; and various 7.5' USGS maps, which are also available to the public. Messrs. Prikryl and Malof also reviewed the Texas Historical Commission's computer Site Atlas for their review for routes. Access to the Site Atlas is restricted, and only archaeologists and oth-

er cultural resource professionals can obtain permission from the Texas Historical Commission to use it.

Preparer: Dennis Palafox	Title: Sr. Regulatory Case Mgr, LCRA
Co-Sponsor: Dennis Palafox	Title: Sr. Regulatory Case Mgr, LCRA
Co-Sponsor: Curtis Symank	Title: Engineering Supervisor, LCRA

Project No. 44.07

County: Burnet, Gillespie

Project Description: T-130/191/192 Transmission Line Maintenance- Phase I

Map Reference: 4, 167

Type of Cultural Resource Investigation(s): Field survey

Date of Investigation(s): September 28, 2007

Introduction

The Lower Colorado River Authority's (LCRA) Archaeology Services staff has completed a cultural resource assessment for Phase 1 of the proposed clearing and maintenance work on Transmission Lines T-130 and T-191/192. Phase 1 consists of the portions of these two transmission lines that run parallel from the Gillespie Substation to the Eckert Substation in Gillespie County, Texas for a total length of 13.5 approximately miles. The assessment consisted of a file search of the Phase 1 portions of the two transmission lines followed by field survey of select areas of the corridor having a high probability for unrecorded cultural resource sites.

The file search showed that there are two previously recorded archaeological sites within the transmission line corridor, and that the vast majority of the corridor of the two transmission lines had not ever been investigated by professional archaeologists. Review of topographic maps suggested that there are a number of locations within the transmission line corridor that have high probabilities for unrecorded archaeological sites. Therefore, a cultural resource field survey was undertaken of select areas along the transmission line right-of-way (ROW) in September 2007 by the LCRA Archaeology Services staff.

Site Descriptions

The two previously recorded archaeological sites, 41GL279 and 41GL280, were originally recorded in 1994 at the south end project area [redacted]. Both of these sites are prehistoric upland lithic scatters. Site 41GL279 was revisited more recently by LCRA Archaeology Services staff in 2005 for a land grading project at the Gillespie Substation. At that time 41GL279 was determined to have been heavily damaged by previous construction activities and the portion still intact was assessed as not significant. For this reason the site was not revisited during the current project.

Site 41GL280, however, was revisited to determine if anything new was visible on the ground within the transmission line corridor. The field investigation showed that, as previously described, much of the portion this site within the T-130 and 191/192 corridors has been destroyed by a gravel mining operation. As a result of the current field visit the northeast boundary of the site was extended about 120 meters [redacted] Creek so that prior to the gravel mining the site may have extended for a length of 440 meters within the transmission corridor. Overall, the prehistoric materials are diffuse and there is little to no depth of deposits. No diagnostic artifacts or features were observed. The portion of 41GL280 within the project area continues to be assessed as not significant.

Ten new archaeological sites were recorded in the T-130 and 191/192 corridor north of the tie-in with T-266. New sites 41GL383-385 are prehistoric lithic scatters [redacted] 41GL382 is situated on the first terrace on the northeast side of this creek channel. Diffuse chert debitage was seen on the eroded edge of the terrace. A shovel test about 10 meters north of the terrace edge produced three pieces of chert debitage from 20 to 45 cm below ground surface. Overall, cultural materials were seen over an area measuring 28x52 meters. However, the northeast boundary of the site was not clearly established during the current fieldwork because it is an open pasture where no maintenance activities are anticipated anyway. Although 41GL382 will not require any avoidance restrictions for the current project, LCRA should be aware that additional work would be needed at this site should any ground disturbing activities be planned in the future. That archaeological work would include additional shovel testing to determine the northeast boundary of the site, and further assess the significance of the buried deposits.

Sites 41GL383 and 384 are prehistoric lithic scatters that are situated on the [redacted] Creek. The boundary between the two sites is [redacted] Creek just downstream from the southeast edge of the transmission right-of-way (ROW). 41GL383 has been heavily damaged by previous LCRA construction activities that included the use of heavy machinery to cut down into the terrace to depths of 4 to 5 feet. [redacted] line was also constructed within the site. Other parts of the site that were not bladed appear to contain an ephemeral scatter of chert chipping debris. The site was recorded as covering a 26x52 meter area within the transmission ROW. No diagnostic artifacts or features were observed, however. Based on the current work, the portion of 41GL383 within the ROW is assessed as not significant. 41GL384 has also been heavily damaged by previous LCRA construction activities, and it has been further disturbed [redacted] One prehistoric tool, a large biface fragment, was found at this site along with a diffuse scatter of chert debitage. Although chert cobbles are strewn across the slopes of both 41GL383 and 3, no cores or tested cobbles were found at either site. The portion of the site within the ROW measures 55x25 meters horizontally. Because of the disturbed nature of deposits, and the lack of time diagnostics or features, the portion of 41GL384 within the transmission ROW is likewise assessed as not significant.

41GL385 is another light scatter of prehistoric chert chipping debris. It is situated on the edge of the 2nd terrace on the northeast side of [redacted] Creek. The site area is a good vantage point that overlooks the broad first terrace on the north side of the creek. [redacted] has been constructed within the site. The chert debris includes some cores so that it can be classified as a lithic scatter/procurement area. Topsoils on this terrace top are thin (less than 10 cm thick) to non-existent as limestone bedrock is visible on ground surface in many spots. The archaeological materials were observed over a 30x52 meter area, but the northeast boundary of this site was not defined due to the presence of thick grass and the fact that it does not appear that any maintenance work will be needed in this area for the current project. 41GL385 is assessed as not significant due the sparseness of materials, and the lack of diagnostic artifacts and features.

41GL386 is a prehistoric lithic scatter that is located on the [redacted] creeks. [redacted] is located within the site. About 15 pieces of chert chipping debris were found in eroded spots within a 70x35 meter area on the heavily vegetated terrace. Several pieces of burned rock were also noted, but it is not certain whether these are the result of prehistoric activities or the recent burning of brush. A shovel test that was excavated on the terrace crest showed that 27 cm of brown sandy loam is present above solid limestone rubble/gravel. Several chert flakes and chips were found in the subsurface deposits of the shovel test.

The boundaries of the portion of 41GL386 within the transmission line corridor were not firmly established during the current work because there does not appear there will need to be any maintenance

work such as tree trimming/removal in this portion of the transmission line ROW. It is possible that potentially significant buried cultural deposits could be present, especially [redacted] the transmission line corridor in the direction of [redacted] Creek. However, no special restrictions appear to be needed for the current project.

41GL387 is situated on the southwest side of [redacted] Creek on the boundary between the first terrace and the upland slope. The portion of the site examined covers a 60x52 meter area in the ROW, but the site most probably extends northeastward inside the corridor and outside the transmission line corridor in other directions for unknown distances. The site is a prehistoric lithic scatter/procurement area with better ground surface visibility than most of the other sites recorded. An Early Archaic Period triangular projectile point and a side/end scraper were noteworthy tools that were seen on the surface of the site. The majority of the chert debitage is heavily patinated, thus suggesting that it has laid on ground surface exposed to sunlight for a long period. A shovel test did indicate about 17 cm of light brown loam above limestone bedrock but no subsurface cultural materials were recovered from the test. Perhaps most importantly, the northeast boundary of the site was not established during the current fieldwork because it does not appear that any maintenance work will need to occur in the open pastureland. Buried cultural material in deeper terrace deposits that could be potentially significant may be present in that area. Although the materials found on the surface are of interest, that part of the site has been heavily damaged by LCRA's previous construction activities and by natural erosion to the extent that no special restrictions are needed for the current maintenance work.

41GL388 is a prehistoric lithic scatter/procurement area that appears to contain one area in which chipping debris and broken chert tool fragments are denser than in other areas. The site is located on a terrace slope on the west side of the [redacted] Creek drainage and [redacted] Overall, the site extends for length of about 150 meters within the T-130 and T-191/192 corridor. The area with denser material is in midsection of the site, and it covers an area measuring about 40 x 20 meters. Materials there include three finished biface fragments, on dart point fragment, two biface performs, and two other more or less complete bifacial tools.

41GL388 has been previously damaged by LCRA's construction activities and also by natural sheet erosion. Topsoils are shallow to non-existent. Despite the one area of interest, the site is rated as not significant due to the lack of more temporally specific diagnostic artifacts, the lack of features, and disturbed nature of the deposits.

41GL389 is another prehistoric lithic scatter/procurement area. It is located on the opposite side of [redacted] and it is of interest because of an apparent clustering of chert debitage within a 20x10 meter area at the southwest end of the site [redacted] Other widely scattered prehistoric debris was noted as far as 60 meters northeastward. As with other sites, the lack of diagnostics, features, and substantial soil deposits leads to rating the portion of the site within the transmission line corridor as not significant.

41GL390 is located on a flat terrace top that overlooks [redacted] The site is a prehistoric lithic scatter that appears to include one area containing a cluster of broken bifaces and biface performs in the area [redacted] A chert core and an Early Archaic Gower projectile point fragment were also found. The site covers an area of at least 40 meters on a NE-SW line by 52 meters. Additional materials may extend northward within the transmission ROW but are obscured by thick grasses. The site has been previously damaged by LCRA's construction of the two transmission lines and by land clearing by the property owner. Like the other lithic scatters in the vicinity, the portion of this site is rated as not significant.

41GL391 is an ephemeral prehistoric lithic scatter that is situated [redacted] Less than 10 pieces of chert debitage were seen over an area measuring 52x100 meters. The finds were disappointing because the [redacted] The site area has been badly damaged by recent land clearing activities by the landowner. This fact along with the sparseness of cultural materials suggests that the portion of the site within the transmission ROW is not significant.

Summary

In conclusion, two previously recorded archaeological sites (41GL279 and 41GL280) and ten new archaeological sites (41GL382-391) were recorded during the cultural resource field survey of the Phase 1 portion of the T-130 and T-191/192 Maintenance Project. All of these sites are prehistoric lithic scatters with several also showing evidences of procurement of locally available chert cobbles. Aside from chert flaking debris, cores, and broken chert tool fragments no other artifact categories such as burned rock or bone were seen. No features were recorded, although some clustering of broken tools suggests specific artifact manufacturing areas at 41GL388 and 41GL390. Time diagnostic artifacts were found at only two of the sites, 41GL387 and 41GL390. Although both of the diagnostic artifacts date to the Early Archaic Period, it is probable that each of these sites was repeatedly utilized through time over the course of many thousands of years. Given the inability to assign more specific dates to the sites, along with the lack of buried deposits and the previous damages caused by the previous transmission construction, land clearing, and natural erosion, no restrictions are recommended for the current upcoming maintenance activities. Elsewhere, should the personnel conducting the work uncover any presently unknown buried archaeological materials, then work should cease in the immediate area of the discovery and the LCRA Archaeology Services staff should be contacted at 1-800-776-5272 ext. 6714 so that the find can be assessed and a determination can be made as to whether any avoidance/mitigation measures are needed.

Additionally, should LCRA someday plan more substantial ground disturbing activities, such as rebuilding the lines or widening the ROW corridor, then additional investigations at several sites including 41GL382, 41GL386, 41GL387, and 41GL390 would be warranted to more adequately assess the significance of these sites.

Work has since begun on this project.

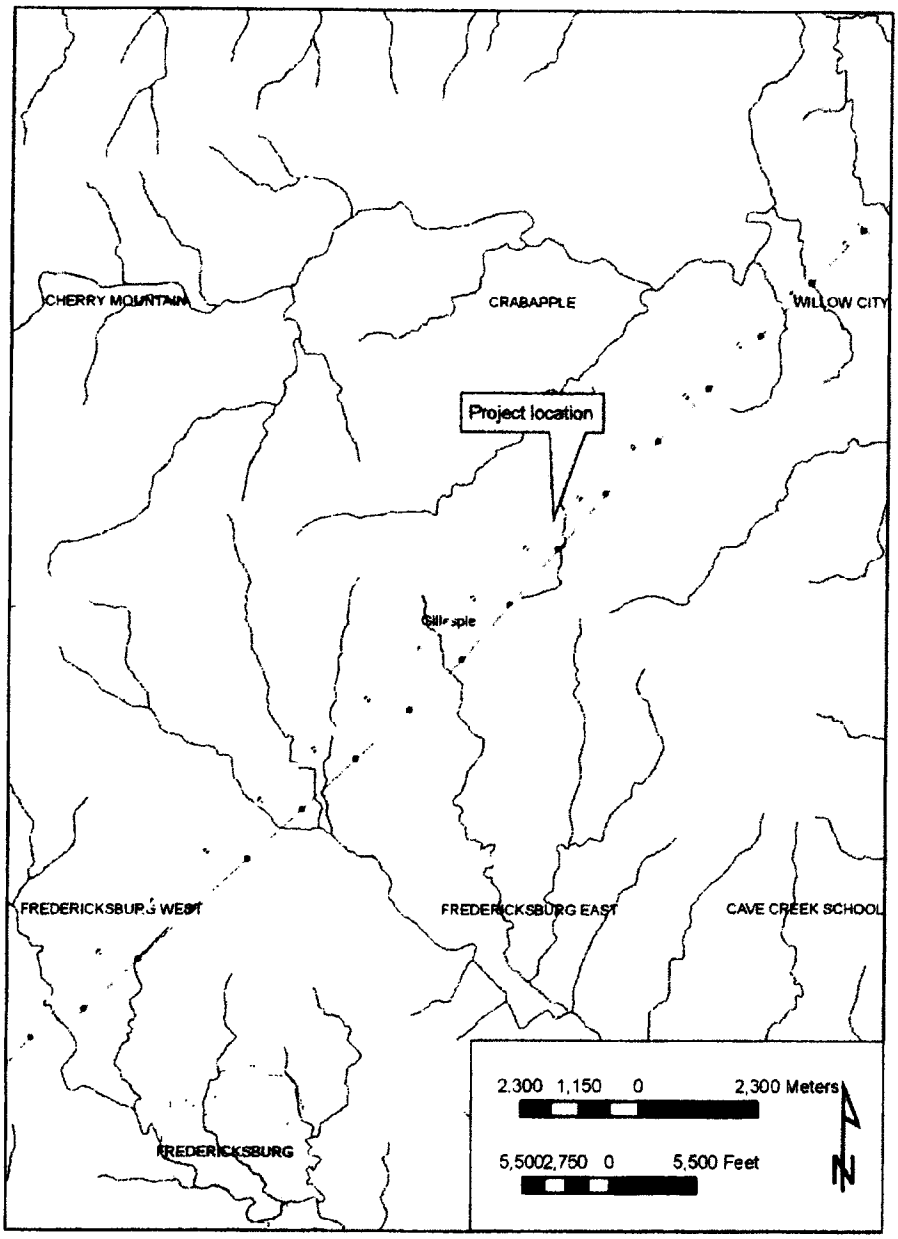

Figure 167. Location of Project 44.07 in Gillespie County.

Project No.	17.08
County:	Gillespie, Llano
Project Description:	T-130,191/192 Transmission Line Maintenance. Phase 2
Figure References:	4, 165
Type of Investigation(s):	Field survey
Date of Investigations:	April 2008

Introduction

In September 2007, the Lower Colorado River Authority (LCRA) Archaeology Services staff completed a cultural resource assessment for maintenance work on the portions of the T-130 and T-191/192 transmission lines that extend from the Gillespie Substation to the Eckert Substation. The LCRA Transmission Services staff is proposing to conduct maintenance and clearing activities on the remaining parts of the T-130 and T-191/192 transmission lines. This second phase of work includes all portions of these transmission lines extending north and east of the Eckert Substation. The LCRA Archaeology Services staff has now completed fieldwork on a majority of the high probability areas in the Phase 2 areas. Nine new cultural resource sites were recorded and assessed during the second phase investigations. Data on the new cultural resource sites are provided in the following paragraphs. Recommendations are then provided both on these sites and on other high probability areas that could not be accessed during the field investigation.

Cultural Resource Site Descriptions

41GL393
41GL393 is located on the right (south) bank of [redacted] Creek, [redacted]
In this area the T-130 and T-191/192 lines run parallel to each other within an approximately 200 ft wide ROW. The area within the ROW is primarily grasses, and appears to have been bulldozed. [redacted] is located about 30 meters southwest of the south edge of the site.

The site was first seen when a number of flakes were seen within a gravel road leading to the ROW, about 150 m south of the creek. Further inspection found a few flakes and some apparent burned rock, along with a small gouge Figure 166) in an area with visibility along a fenceline some 60 m north of the road. Tall grasses made visibility poor. Two shovel tests (STs 4 and 5) were placed near the creek channel, in areas originally thought to be minimally disturbed. Both found large amounts of recent charcoal in the upper 20 cm of soil, and both were excavated through fine loams to depths 80 and 50 cm, respectively, with no artifact recovery in either. Two shovel tests (ST 6 and 7) were placed on either side of the flake scatter seen within the road. This scatter contained at least one hundred interior flakes of various types and colors, and was densest within about a 30 m length of road. St 6, just south of the road, had one flake in Level 1 and two very small chips in Level 2. The test was terminated at 30 cm in reddish brown sandy loams with high calcium carbonate content and increasing clay. Shovel test 7 had a similar profile, but no artifacts were recovered. These two tests suggest that the flakes within the road were imported along with crushed granite road base, as it seems highly unlikely a single road cut would have exposed this amount of debitage in such an isolated area. The gouge, flakes and burned rock along the fence are likely representative of an actual site, but it appears that any such site within the ROW as been essentially destroyed by private land clearing activities. The general paucity of surficial materials indicates that the site was ephemeral to begin with, and unless there are deeply buried deposits, the site lacks the integrity for formal listing as a State Archeological Landmark (SAL) or nomination to the National Register of

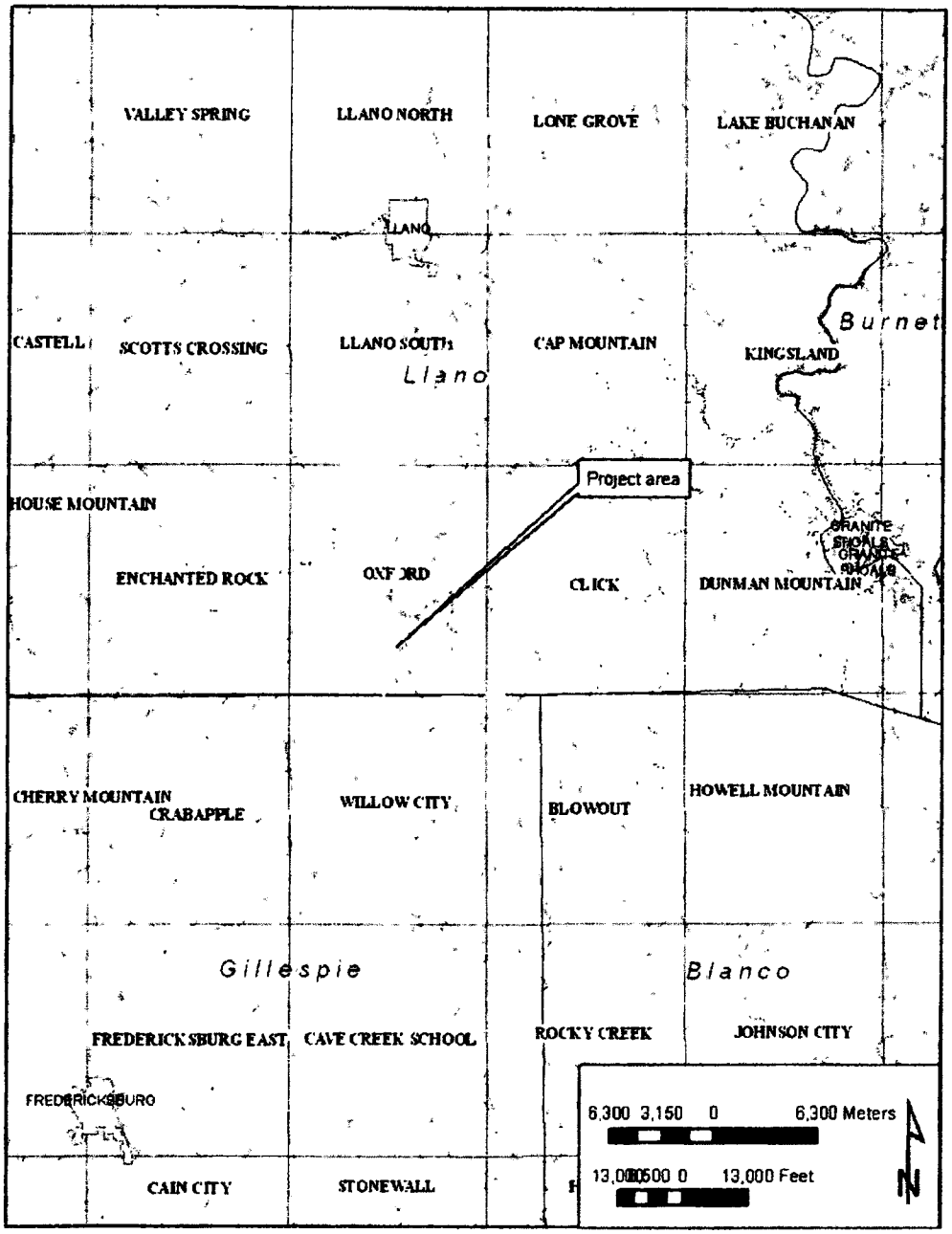

Figure 165. Project 17.08. T-130, 191/192 Maintenance, Phase 2, in Gillespie and Llano counties.

Historic Places (NRHP). Any proposed maintenance activities will not adversely impact the site, and there is no need for any type of additional work or oversight at this time.

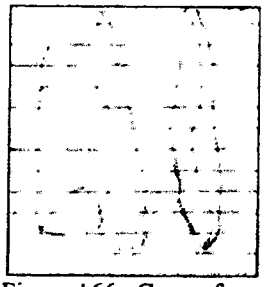

Figure 166. Gouge found at 41GL393.

41GL394 is located immediately across [redacted] within the combined T-130 and T-191/192 corridor. [redacted] of the north edge of this site. One biface fragment, an apparent dart point preform (Figure 167), four flakes, and a likely burned rock were seen within a 30 m diameter area. Two shovel tests (STs 1 and 2) were placed within this area. Both had a profile of about 15 cm of dark sandy loam over decomposing granite. ST 1 had a single possible burned piece of sandstone, and ST2 had one small chert chip and two possible burned rocks. One additional shovel test (ST 3) was placed about 30 north of this area, above an exposed limestone ledge where it appeared there was potential for soil development. Its profile was similar and no artifacts were recovered. Disturbance was les severe here then at 41GL393, although [redacted]. Careful examination of the soil around the stock tank failed to find any significant amounts of artifacts. This site is therefore interpreted as a minor lithic scatter with little interpretive potential, and ineligible for formal listings. There are no concerns with maintenance activities at this location.

Figure 167. Dart point preform from 41GL394.

41LL475

The site is located within the LCRA T-130 transmission line right-of-way [redacted] is located on the opposite side of the tributary from the site. The transmission line corridor has been cleared of trees so that the current vegetation is short grasses, cacti, and brush. Outside of the transmission line corridor there is a narrow band of live oak trees bordering the creek channel. Topsoil is a gravelly sandy loam.

The portion of the site within the LCRA T-130 right-of-way appears to be a prehistoric lithic scatter. Of the approximately 20 artifacts seen at the site, most of the artifacts are small secondary and tertiary flakes and chips. No definite prehistoric burned rock fragments or other artifact classes were seen. Nor were

any features or diagnostic artifacts found within the right-of-way. The soils are rocky and the site probably has little depth of deposits. The site probably [redacted] The portion of the site within the transmission line corridor is assessed as not eligible for the NR or SAL listing.

41GL395

41GL395 is located [redacted] Creek at point where the T-130 transmission line runs over the creek [redacted] The ROW is [redacted] The entirety of the known portion of the site is no more than 10 m in diameter. The site is located within [redacted] at a point where [redacted] The cutbank profile consists of approximately 70 cm fairly coarse granitic loams over very fine grayish brown silts. The badly decomposed mandible of a large grazing animal, presumed to be bison, is eroding out of the granitic portion of the cutbank (Figure 168). Scattered about the lower portion of the bank are several flakes and two edge modified flakes, one of which was made into an informal biface. The medial section of an untypeable dart point was seen upon the upper portion of the bank, and a single vertebra was within the cut some 8 m south of the mandible. Some other few bones were also located on the upper portion of the terrace, and at least some are almost certainly recent. A single shovel test (ST 9) was placed on the terrace top near the mandible. It was excavated through 90 cm of reddish brown sandy/gravelly loam. No artifacts were recovered. This site is interpreted as a single-event animal processing location, although it is possible that the association of the buried mandible and stone artifacts is coincidental. The site is probably mostly destroyed through natural erosion, although it is possible additional bones and artifacts remain buried. For this reason the site is considered potentially eligible for formal listing as an SAL and nomination to the NRHP. It is not expected that there will be any maintenance-related activities in this area. If any such become scheduled, the site should be avoided, and if it cannot be avoided, then additional investigations are warranted.

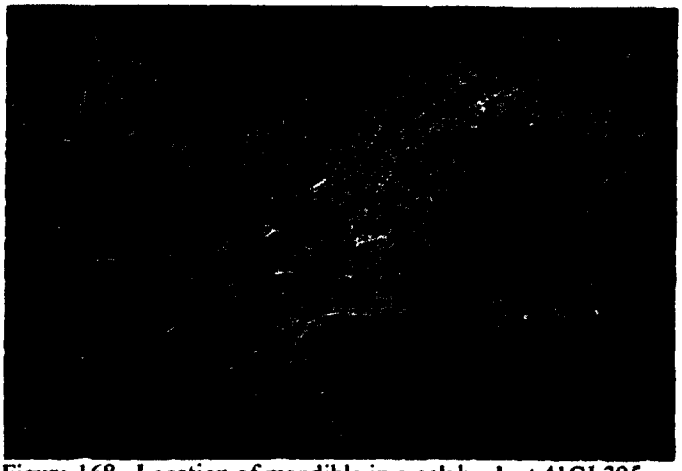

Figure 168. Location of mandible in creek bank at 41GL395, pencil for scale. Note profile.

41LL476

41LL476 is located on the T-130 line on a relatively high bluff overlooking a [redacted] Creek. [redacted] within the northern part of the site. The site consists of flakes and flake fragments as well as at least two biface fragments and apparent scattered burned rock. The site extends for a distance of about 100 m [redacted] There is some soil development in places, and a single shovel test (ST 11) was placed at the southern end of the site. It encountered brown sandy

loam that graded to pale yellowish brown silty loam over decomposing limestone at about 50 cm. Level 1 had two small decorticate flakes, a piece of chert shatter, and an apparent flake of pure quartz, as well as seven burned rocks. Level 2 had two flakes and four burned rocks. The site probably lacks the integrity that would make it significant in the regulatory sense, but would need additional testing before such a statement could be formalized. Maintenance activities, including potentially improving the existing stream crossing, are not considered to produce negative impacts. If more intensive impacts (e.g., a rebuild) are necessary, then additional investigations are warranted prior to ground disturbing activities. (Note: a lens of possible burned rock was visible in the cutbank opposite 41LL476. No definite cultural material was visible, however. This area should be looked at more closely if future work included intensive ground disturbance.)

41LL477

41LL477 is located on the T-130 ROW on [redacted] Creek. The site extends for a total length of 590 meters making it the largest site documented during the survey. The site area encompasses areas on both sides of [redacted] within the site area.

[redacted] and based on vegetation within them, appear to be spring fed. The site consists of a scatter of lithic artifacts, primarily flakes, with a possible disrupted hearth [redacted] On the north side of this tributary two arrow points were found, one a Scallorn and the other with a broken base but which is presumed to also be a Scallorn point (Figure 169). Approximately 120 meters further northward, the distal part of a dart point was found.

Figure 169. Arrow point fragments seen at 41LL477.

Two shovel tests (STs 12 and 13) were excavated [redacted] Shovel test 12 was placed near the apparent hearth [redacted]. It was found about 30 cm of grayish brown silty loam over limestone cobbles. One chert chip and one burned chunk were in the upper 20 cm, and one flake was found in the lower 10 cm. Several angular pieces of limestone and granite were also recovered, and may be fire-cracked. Shovel test 13 was placed [redacted] in an area with apparent soil deposition. It was excavated through 40 cm brown silty loam with high calcium carbonate content. Final soil depth is unknown. The upper 20 cm had nine small flakes and flake fragments, and importantly, a mussel shell fragment. The second level two fairly large flakes and six smaller fragments.

This site is considered to be potentially eligible for formal listing as a State Archeological Landmark based on the potential for horizontal and/or vertical separation of components, presence of features, and preservation of organic material (the mussel shell, the most likely source being either the Colorado or Llano Rivers). Maintenance activities, however, are not expected to impact previously undisturbed components of the site. [redacted] Should it be determined that a stream

crossing is necessary, additional investigations are warranted, as well as if any future projects impact the site to greater extent than standard maintenance procedures.

41LL478

41LL478 is located near the north end of the T-130 line with [redacted]. The site lies on the [redacted]. The property [redacted], and much of the ROW has been cleared and root plowed (Figure 170). At the site location [redacted]. Within the plowed field was found a surprising number of artifacts, given the lack of known readily available chert resources in the immediate vicinity. It is possible that [redacted] provided sufficient raw materials to explain the relatively causal discard seen at the site. Present were a core with crushed edges (a crusher), 30 to 40 flakes both corticate and decorticate, a large edge modified blade, a late stage biface/possible knife, and a broken dart point probably of Late Archaic age (Figure 171). These were all in an area approximately 40 m in diameter, and clearly decreased in frequency towards the north. No shovel tests were excavated due to the excellent visibility and the obvious lack of any maintenance needs. The site is probably destroyed within the ROW, although there is a slight possibility that there are deeper, undisturbed deposits. The site is significant in that it aids in interpreting the local settlement patterning, but it is doubtful it is eligible for formal state or national listings. No special restrictions are needed for the upcoming maintenance activities. However, should a major ground disturbing project falling under the formal review process become necessary, limited testing to confirm the nature of the surface deposits is warranted.

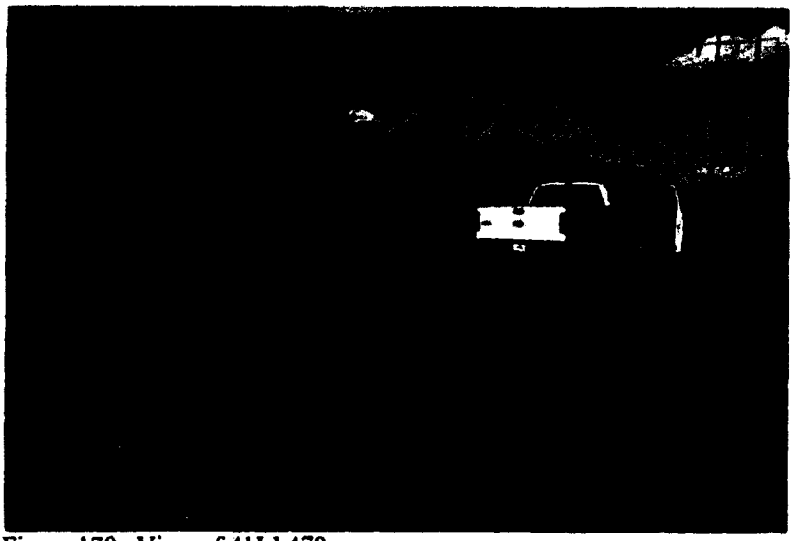

Figure 170. View of 41LL478.

Figure 171. Dart point at 41LL478.

41LL479

This prehistoric site extends for a length of 200 meters on the [redacted]. The [redacted] the southern part of the site and [redacted] edge of the site. Moderately dense prehistoric materials consisting mostly of chert debitage and tool fragments are exposed on eroded portions of ROW corridor, particularly on the eastern half of the corridor in the central part of the site. Diagnostic tools that were seen at the site consist of an Ensor point fragment, a Darl point stem, and an arrow point preform possibly of the Alba type. Several broken biface fragments were also seen. Some sandstone and limestone rocks present on ground surface have characteristics of burned rocks, but it is not certain as to whether these are prehistoric hearthstones or result from tree and brush burning during land clearing activities.

Although no shovel testing was conducted, there appears to be good potential for buried deposits on the western edges of the transmission corridor in the central and northern parts of the site. Even better deposits may be present [redacted] At the south end of the site, soils are shallow and rocky [redacted] Therefore, no special precautions are needed should this area need to be bladed for an improved [redacted] While other standard maintenance level activities should not have any adverse impacts on the site, additional investigations would be needed in the central and northern parts of the site should LCRA propose more intensive ground-disturbing activities such as rebuilding the line or widening the ROW.

41LL480

This prehistoric site is situated on the T-130 corridor on [redacted] opposite 41LL479. The site is a prehistoric lithic scatter that consists of chert debitage. A very small number of burned rocks were also seen, but these may have been burned during recent land clearing operations. No features or diagnostic artifacts were seen, and artifact density is lower than that at nearby 41LL479. Overall, the surface exposure of artifacts extends for a length of about 70 meters within the ROW. The topsoil consists of a sandy deposit of unknown depth. [redacted] with the area between the site [redacted] being mostly exposed bedrock. No special conditions are needed for maintenance work within the boundaries of 41LL480.

Recommendations for Maintenance Activities

Special conditions are recommended at 2 of the 9 cultural resource sites that were recorded. At 41GL395, the maintenance crews need to avoid impacting an area that is a 30 foot diameter area [redacted] It consists of a gully and cutbank where animal bones are exposed. At 41LL477, should it be determined that ground-disturbing activities are needed to create [redacted] then additional cultural resource investigations will be needed before [redacted]

Additionally, there are number of high probability areas that could not be investigated due to access and scheduling problems on the T-191/192 line. These consist of the terrace areas on either side of [redacted] the first [redacted] the first [redacted] the terraces on [redacted] the [redacted], the first [redacted] the [redacted] the [redacted] the terrace of the [redacted]. Should the maintenance work require any low water crossings at any of these areas, then the LCRA Archacology

Services staff should be contacted in advance so that the archaeologists can conduct a field visit to ensure that no significant or potentially significant cultural resource sites are present in areas that will require ground-disturbing activities for construction of the low water crossings.

Additional Concerns for Future Projects Such as Rebuilds or Widening the ROW Corridors

There appear to be very deep soils on either side of [redacted] Creek. The T-130 line crosses very near [redacted], on the [redacted] Two shovel tests in this area found no artifacts, and there were no visible signs of the site. Any future projects with intensive ground disturbance would likely require more intensive investigations on either side of this creek.

A few flakes were seen in the vicinity of [redacted] on the T-130 line. These were in areas of excellent visibility and relatively high disturbance. The artifacts were too widely scattered to warrant a site designation.

A mapped spring near [redacted] the T-130 was found to [redacted] Much of this area had been bulldozed, and no artifacts were seen. One low spot near the [redacted] of the ROW, [redacted] appeared to have intact soils, but it was not tested as no impacts are expected. This location should be revisited if future work involves intensive ground disturbance.

On the T-130 line, a number of [redacted] were examined, and no sites were discovered, although seemingly randomly occurring isolated finds of flakes, an early stage biface and the medial section of a biface were plotted. Future major projects might require at least spot checking of some of [redacted].

Overall, this project recorded a fairly large number of sites in an area containing few to no chert resources, but one that probably had a predictable water supply. It appears that some of the tributary creeks that [redacted] and this fact may account for greater density of sites than is suggested by the present statewide database. The artifact assemblage at most of these sites was limited, both in numbers of artifacts and diversity of tool types with 41LL479 being an exception. The actual lithic material used to produce chipped stone tools, however, is quite diverse, with a wide variety of colors including white from an unknown source, pinks and browns from lag cobble sources, and black tabular chert similar to that seen in the Lampasas area (e.g. quarry 41GL3951LM44), as well as the quartz flake possibly coming from the Lake Buchanan area (or perhaps the feature called Quartz Knob further east along Sandy Creek). The small sizes and low counts of the flakes at the majority of the sites indicate that chert was being used conservatively, as would be expected when it is difficult to replenish supplies. It also suggests that these sites were short term camps or resource acquisition locales, with the frequency of the sites indicating fairly extensive use of the wider landscape at a minimally intensive level.

A Cultural Resource Survey of the Proposed Land Grading around the Gillespie Substation, Gillespie County, Texas

By
Charles A. Hixson

Daniel J. Prikryl, Principal Investigator

Texas Antiquities Committee Archeology Permit # 3674
Interim Report # 11.05
Project # 41.05
Lower Colorado River Authority
Community and Natural Resources Services
July 15, 2005

Abstract

The Lower Colorado River Authority is proposing to grade areas upslope from their existing Gillespie Substation near Fredericksburg in Gillespie County in order to control silting within the facility. An existing ditch on the south side of the substation will also be reshaped and a temporary silt fence will be placed downslope from the project area. An intensive archeological survey was conducted by the LCRA's Archeology Services of the areas that will be disturbed during this project. The survey found prehistoric lithic scatters in four areas, however previous contouring of the substation grounds has displaced most of these artifacts. Due of the geology of the site area, any cultural deposits would have been surficial. This cultural material is considered part of a previously recorded site, 41GL279, located [redacted]
Because of the poor integrity of the site [redacted], we recommend that the project proceed as planned. There was a no collection policy and therefore there are no artifacts to be curated.

Introduction

In late summer of 2005, the Lower Colorado River Authority (LCRA) plans to reshape the grounds outside their Gillespie Substation near Fredericksburg to alleviate colluvial silting along the interior of the facility's northeast fence (Figure 1). When the substation was originally constructed, a large rectangular area of the naturally southwesterly-trending slope was cut away to provide a level foundation. Part of the current project will involve reshaping the face of the slope-cut that extends around three sides of the substation perimeter and adding "rip rap" or crushed limestone for stabilization. The ground uphill from the substation to the northeast property line will be graded and a temporary silt fence within a shallow ditch will be placed along the downslope side parallel to U.S. Highway 87. A 5-foot-wide level area will be cut around the substation's chainlink fence and then graveled. A large existing ditch which diverts rainwater runoff southeast of the substation will be reshaped and stabilized with rip rap. In addition to these extramural modifications, the silt and dirt accumulations along the northeast side of the substation interior will be removed and the entire area will be graveled. In all, approximately 5.5 acres will be affected by this project.

The cultural resource investigation was conducted on July 6, 2005 by Charles A. Hixson with Daniel J. Prikryl serving as the Principal Investigator. The investigation was conducted under TAC Blanket Permit # 3674 , which was issued to the LCRA by the Texas Historical Commission for Calendar Year 2005, and in accordance with methods for fieldwork and reporting as proposed by the Texas Council of Archeologists (1992).

Environmental Setting

The project area is located on the Edwards Plateau approximately 20 miles south of the Llano Uplift region in a rural area of scattered homes, farms, and small businesses on the western outskirts of Fredericksburg. The area lies on the northeast margin of low valley formed by Barons Creek, which flow 1200 feet to the west. To the south, east, and north rise stairstep ridges typical of the Glen Rose Limestone (Barnes 1981) while to the west and southwest across the highway the ground slopes steadily down to a broad floodplain. Most of the project area itself rests on the Hensell Sand, a friable mix of sand, silt, clay, and conglomerate except for the extreme southeastern portion which merges into the base of a Glen Rose Limestone hill. Before the substation was built, a series of natural drainages originated in the area and carried runoff from the hills beyond to creek (Allison 1975). When the substation was built, these drainages were apparently filled in and artificial ditches constructed which now divert rainwater along the south side of the substation.

Deep clayey Krum soils have developed on the Hensell sand (Allison 1975). The A horizon of these soils is composed of a dark grayish-brown silty clay two feet thick over a B horizon of lighter-colored silty clay 30 inches thick with soft masses of calcium carbonate. The C horizon is grayish brown clay with many hard and soft calcium carbonate masses. On the extreme south end of the project area along the base of the limestone ridge the soil cover is sparse at best. In the more level areas on the south side of the artificial ditch are small areas of Brackett soils. These are composed of grayish brown loams no more than 14 inches thick over the fracture limestone bedrock.

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Figure 1. Aerial view of Gillespie Substation showing proposed water control improvements

The woody vegetation over most of the project area has long since been cleared, allowing many opportunistic species including such non-natives as tamarisk and Johnson grass to thrive. Small ash junipers also are frequent. Only at the south end along the main ditch grow trees, mostly live oak and juniper, of any size and some have basal trunks a foot and a half or more in diameter. On the limestone slope along the south property line grow scattered yuccas, prickly pears, and small junipers.

Cultural Background

The project area is located in the central Texas archeological region (Ellis et al. 1995). Central Texas prehistory has typically been divided into three main subdivisions, known variably as eras or periods: the Paleoindian, the Archaic, and the Late Prehistoric, which are subdivided further into phases or subperiods. These subdivisions combine to begin to describe 11,500 years of history. A longstanding chronology of Prewitt (1981, 1985), has recently been revised by Johnson and Goode (1994) and Johnson (1995), who utilized new lines of evidence based on climatic and geomorphological data to redefine period divisions. This can be contrasted with Collins (1995), who indicates climatic variables at times were somewhat different than those of Johnson and Goode. The ultimate goal of many modern archaeologists is to transcend the culture history of an area and attempt to explain why change occurred in various cultures and regions. To this end carefully revised chronologies are to be expected and encouraged.

Prehistoric site types in Central Texas consist of camps, caches, isolated artifacts, interments, cemeteries, kill/butcher locales, quarry/workshops, lithic scatters, and rock art sites (Collins 1995:363). Central Texas is perhaps best known for the many burned rock midden sites that occur on the Edwards Plateau. Numerous excavations of major campsites have been conducted along the larger streams and rivers (cf. Peter et al. 1982; Prewitt 1982). Such excavations have demonstrated that Central Texas was occupied for at least 11,500 years prior to the coming of Europeans. These also show that throughout these millennia, prehistoric peoples were nomadic hunter-gatherers who moved across the landscape exploiting seasonally available plant and animal resources.

Historic Background

The site of the settlement that would become known as Fredericksburg was chosen by John O. Meusebach in 1845 as one of a proposed series of stops along the route to the Fisher-Miller Land Grant north of the Llano River (Kohout 2005). Meuseback was a commissioner of the Adelsverein, a society formed by German nobleman to establish colonies in Texas for German immigrants. German settlers began arriving to the site the next year and soon after Meuseback named the settlement Fredericksburg after Prince Frederick of Prussia, a member of the Adelsverein. Because of its distance from the coast, the Fisher-Miller Land Grant was never settled by the Adelsverein and instead Fredericksburg became the Adelsverein's second colony after New Braunfels.

Fredericksburg grew rapidly to a population of 1000 in only two years. The establishment of Fort Martin Scott in 1848 by the U.S. military provided a market for agricultural goods. Fredericksburg was also the last town before El Paso for travelers along the Upper El Paso Road. During the Civil War, the town remained loyal to the United States which prompted the Confederates to impose marshal law in1862. Lawlessness was also problem during the Confederate period. Because of what they experienced during the war, the people of Fredericksburg developed an isolationist philosophy towards the rest of the state and held on the German traditions and language. The town became more open to outsiders later in the 19th

century when the county fairs began to be held in town. The railroad reached the area belatedly in 1913 and was only in operation for less than 30 years, being unable to compete with the automobile (Kohout 2005).

Previous Investigations

The first archeological excavation in Gillespie County was conducted by the University of Texas in 1936 at Lehman Rockshelter (now designated as 41GL1) near the town of Doss. Arthur Woolsey supervised the excavations and the findings were later reported by J. Charles Kelly (Kelly 1947). The cave contained cultural deposits belonging to the Late Archaic and Late Prehistoric. In addition to stone artifacts, Woolsey and his crew recovered potsherds which appeared to a highly polished red slip. Kelly in his report gave these sherds the typological name "Doss Redware." Lehman Rockshelter is also a significant rock art site with a variety of figurative and abstract pictographs in red, black, and white paint. The artist Leland Kirkland made watercolor paintings of many of the pictographs which were later published by University of Texas Press (Kirkland and Newcomb 1999).

In the early 1970s during a routine archeological survey conducted ahead of a proposed widening of State Highway 16, a prehistoric site was located along a small nameless stream one mile north of Fredericksburg (Denton 1976). The investigators christened it the No-Name Creek Site and excavated five and a half five-foot square units within the highway ROW. The excavations uncovered shallowly buried camping debris one small, disturbed burned rock feature all primarily belonging to the period when Pedernales and Marshall points were in use. The report attemped to show an evolutionary link in the technology between the Pedernales type and the later Marshall type.

Numerous cultural resource surveys have been carried out in the county in recent years. The one geographically closest to the current project area was conducted by Espey, Huston, and Associates (EH&A) along the corridor of a proposed transmission line running from the Gillespie Substation to the then-proposed Nimitz Substation (EH&A 1994). During the survey, three sites were located, all representing prehistoric lithic scatters confined for the most part to the surface. One of these sites, 41GL279, appears to extend into the southeast edge of the current project area. The site is reported to contain mostly small interior flakes with a smaller percentage of larger cortical flakes. One flake appeared to show unspecified used wear. The absence of soil in the area precluded buried deposits.

Methodology

A preliminary file search showed that a previously recorded site, 41GL279, [redacted]

From the engineering plans showing one-foot counter lines, it was evident that a large section of the slope had been cut out for the substation foundation. On the northwest, northeast and southeast sides of the facility, a 40-foot gap exists between the perimeter fence and the top cutbank. This gap was verified during the actual survey (Figure 2). Even though work will be done on the perimeter fence and within the substation facility, it is obvious that the upper soil zone – in places down to a depth of several meters - no longer is present. Because of this fact and because the geology precludes deeply buried archeological deposits, this portion of the project area was not surveyed.

Figure 2. East corner of Gillespie Substation looking south.

The US Soil Conservation Service map of the area done before the substation was built shows several branches of a presumably natural drainage coming together into a single channel meandering towards Baron Creek to the west. These drainages are no longer shown on the current 7.5' USGS topographic map which was revised after the Gillespie Substation was built.

The survey consisted of a close inspection of the ground within the project area. Shovel tests were placed wherever ground visibility was poor and the upper zone appeared intact. Very few intact surfaces were noted within the project area and two of the four shovel tests were dug into truncated soils. Each test was a circular hole 20 cm in diameter dug in 20 cm levels. All fill was screened through a ¼" wire mesh.

Survey Results

The survey found four discrete lithic scatters (Figure 3), the three [redacted] having been thoroughly disturbed by [redacted] the substation. Other [redacted] may once have contained shallow archeological deposits as well and it seems probable that prehistoric

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Figure 5. Aerial of Gillespie Substation showing artifact scatters (red) and observed disturbances (crosshatched blue areas represent existing berms or fill piles, solid blue areas represent existing ditches). All artifact scatters are considered belonging to 41GL279.

cultural material extended across the entire property. No artifacts were recovered from the four shovel tests dug during the survey and all cultural material was observed on the ground surface.

The area [redacted] was surveyed first. Ground visibility was good over most of this area. A considerable amount of ground disturbances was seen in this area, including a long berm to control runoff, large piles of fill, and extensive bladed surfaces where calcium carbonate masses were exposed, apparently the B-or C-horizon of the Krum soils. A shovel test (ST 1) indicated that the calcium carbonate masses, both hard and soft, continue for at least 20 cm below the surface. No cultural material was seen in the southern half of this area [redacted] The chert artifacts were completely covered by a light, nearly white patina and had a waxy feel. The dart point fragment was made of fine-grained purplish gray chert with a light patina on one side.

The area [redacted] the substation was surveyed next. This area [redacted] appeared to retain much of its natural vegetation. On the [redacted], which lies at the base of a low knoll, the soils are thin or absent over the Glen Rose limestone bedrock (Figure 4). A moderate amount of chert debitage was noted on the surface [redacted]. The greatest concentration of debitage, along with a Stage 2 biface, was found south [redacted] A shovel test (ST 2) placed in the area struck bedrock at 10 cm below the surface recovered no artifacts. Another test (ST 3) was placed 15 meters to the northwest close to edge of the ditch where the soil appeared deeper. This test reached bedrock at 17 cm, again recovering no artifacts. A fourth test (ST 4) was placed at the eastern end of the ditch. The level surface in this area seemed to indicate that it had been graded and the shovel test profile down to 30 cm appeared to represent a B-or C-horizon.

Figure 4. Area [redacted] looking east. [redacted]. The ground at this location had been previously bladed and two low berms and a second ditch created to divert runoff into the main

ditch. A moderate amount of debitage was seen along the [redacted]. Also found in this area was an end scraper created on a large secondary chert flake with two carefully flaked notches on one lateral edge (Figure 6). A very light scatter of chert debitage was noted [redacted]

Figure 5. Bladed area and push-pile beyond, looking east.

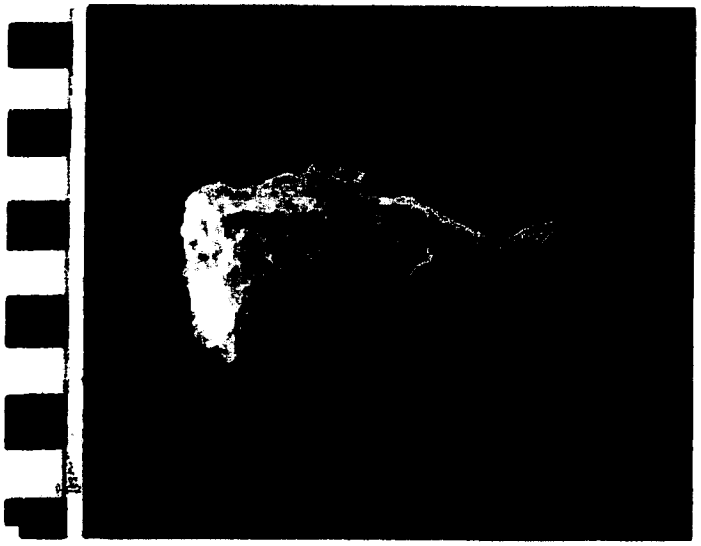

Figure. 7 End scraper with notches on lateral edge. Artifact photographed in field. Scale in cms.

The walls of the main ditch were then inspected. The ditch appears to have been excavated into the marly bed of the Glen Rose limestone (Figure 7). The gray clayey soil on top of the marls is as much as 30cm thick in places along the edge of the ditch. No artifacts were seen protruding from the soil zone. The ditch itself is two to five meters wide and one meter deep at the east end and five to six meters wide and up to 3.5 meters deep at the lower west end. Concrete rubble and old ceramic insulators have been dumped in the ditch perhaps to impede erosion.

Figure 7. South wall of main diversion ditch

The area to the southwest between the substation and US Highway 87 where the silt fence will be constructed was surveyed last (Figure 8). The ground was found to have been bladed with no upper soil zone present. No artifacts were seen on the scraped surface which had an excellent visibility of over 60 %.

Conclusions

The survey found disturbed conditions throughout nearly the entire project area. Natural drainages have been filled in and the ground surface contoured to control runoff. Several berms and a side ditch had been built years ago to divert rainwater runoff into a main ditch south of the substation. Many if not all these land-altering operations were probably carried out when the substation was built, [redacted]. Artifacts - mainly debitage - were found on the surface in more or less primary context only in the [redacted] of the project area within or very near the previous limits of site 41GL279. This site was considered by the original investigators to have a low research value. A moderate amount of chert debitage and a couple of tools were seen on bladed surfaces and on fill piles in three discrete areas [redacted] There is no way of

Figure 8. Southwest grounds of Gillespie Substation looking north

knowing the exact provenience of these artifacts since that have been displaced by blading equipment. These artifacts probably are part of an extensive but shallow site that covers the [redacted] Due to the findings of the current survey, the limits of site 41GL279 have been extended [redacted]. These newly recorded portions of 41GL279 have been thoroughly disrupted by previous grading operations and no intact archeological deposits are left to be harmed by any future ground-disturbing operations around the substation. For this reason, it is recommended that the project proceed as originally engineered.

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n.d. Gillespie County File.

An Intensive Cultural Resources Survey of the LCRA's Proposed Gillespie Substation Expansion, Gillespie County, Texas

By
Charles A. Hixson

Daniel J. Prikryl
Principal Investigator

TAC Permit #5141
Interim Report No. 5.09
Project No. 21.09
Lower Colorado River Authority
Parks and Resource Conservation
June 2009

Management Summary

The Lower Colorado River Authority's (LCRA's) Transmission Services Corporation plans to expand their existing Gillespie Substation located on the western outskirts of Fredericksburg in Gillespie County (Figure 1). The expanded facility will be constructed on 11 acres of an adjoining undeveloped property northwest of the existing substation (Figure 2). Only one small portion of this area has ever been surveyed for cultural resources. In 1982 the T-214 Transmission Line corridor, which runs through a small portion of the current project area, was surveyed by the Texas Archeological Survey prior to the line's construction (Nightengale 1982). During this survey, no sites were identified in the section of T-214 ROW that overlaps the current project area, however three isolated artifacts were noted on the surface. As was standard practice at the time, no subsurface testing was done.

On June 15, 2009, LCRA's Archeology Services staff conducted an intensive archeological survey of the entire project area for the substation expansion. The survey found that nearly all the southeastern half of the project area (here referred to as Area A) has experienced severe sheet erosion (Figure 3). A series of berms runs northwest to southeast across Area A, which inclines moderately to the south, perhaps built at the time of the original Gillespie Substation construction. [redacted] No evidence of a house site was seen in Area A. Shovel testing found no buried cultural deposits.

The northeastern half of the project area, here referred to as Area B, has a more level ground surface and a patchy grass cover. This area shows signs of disturbances caused by recent brush clearing (Figure 4). The one positive test out five placed in Area B recovered one flake in the plow zone above a depth of 20 cm. Unmodified chert cobbles occur in the northeast corner of Area B, originating from the Edwards Limestone exposed at a higher elevation to the north and east. A few unmodified cobbles were also noted in Area A.

The site represented by the lithic scatter in [redacted] appears to be a northern extension of a previously recorded site, 41GL279, which was originally recorded as a lithic scatter (Espey, Huston, and Associates 1995) and later as a lithic scatter/procurement site [redacted] of the original substation tract (Hixson et al. 2006). The present survey generally found the same types of artifacts - debitage, early stage bifaces, unifaces, projectile point fragments - perhaps in somewhat higher densities due to site deflation and excellent visibility. A hitherto unknown Historic component containing late 19th century household trash is now recorded for this site as well. The new site area for 41GL279 is shown in Figure 5.

Land contouring and subsequent erosion in the southwestern half of the project area and plowing and brush clearing elsewhere has probably displaced nearly all the artifacts. The site offers little research value because of the disturbances and the high probability that the material was temporally mixed to begin with because of the area's geology. For these reasons, the site is assessed as not being eligible for SAL designation. It is recommended that the project proceed as planned.

No artifacts were collected for curation during the survey.

REDACTED

Figure 1. Section of the Fredericksburg West Texas 7.5' USGS topographic quad showing the project area in solid red.

RECATED

Figure 2. Aerial with project area outlined in red, showing shovel test locations.

Figure 3. Eroded surface of Area A.

Figure 4. Brush/earth pile from land clearing in Area B

REDACTED

Figure 5. Expanded site area of 41GL279 resulting from the current survey..

Environmental Background

Geology

Stairstep ridges typical of the Glen Rose Limestone rise to the north, south, and east above the project area (Barnes 1981). To the west and southwest across the highway the ground slopes steadily down to the broad floodplain of Barons Creek. Most of the project area itself rests on the Hensell Sand, a friable mix of sand, silt, clay, and conglomerate except for the extreme northeastern portion which merges into the Glen Rose Limestone. The Fort Tarrett member of the Edwards Limestone is exposed further upslope to the north and east and is most likely the source of the chert cobbles seen in the project area.

Soils

Although now severely eroding, most of the project area was originally covered by deep clayey Krum soils that have developed on the Hensell sand (Allison 1975). The A horizon of these soils is composed of a dark grayish-brown silty clay two feet thick over a B2 horizon of lighter-colored grayish-brown silty clay 17 inches thick with soft masses of calcium carbonate and a B3 of brown silty clay with soft masses of calcium carbonate. The C horizon is grayish brown clay with many hard and soft calcium carbonate masses.

The eastern one-third of the project area was originally covered by Luckenbach soils that developed on calcareous clay loam and clay. These soils have very dark grayish brown to dark brown clay loam A horizons 18 inches thick over reddish brown to brown clay B horizons that are 20 inches thick. The C horizons are very pale brown clays. Both the B and C horizons contain calcium carbonate concretions.

At the extreme northeast corner of the project area are small areas of Brackett soils. These are composed of grayish brown loams no more than 14 inches thick over the fracture limestone bedrock.

Physiography and Landforms

The project area is located at the extreme south end of the Great Plains province near the geographic center of the Edwards Plateau. Before the substation was built, a series of natural drainages originated in the area and carried runoff from the hills beyond to creek (Allison 1975). When the substation was built, these drainages were apparently filled in and artificial ditches constructed which now divert rainwater along the south side of the substation. The ground northwest of the substation where the expansion will be built rises gently to north and northeast towards a series of prominent hills.

Vegetation

Considering that the soils in the project area are suitable for agriculture, it is probable that it was once under cultivation. The southeastern half (Area A) is covered by a somewhat open cedar forest with approximately 60% canopy cover. Almost no vegetation grows close to the ground in Area A because of lack of top soil and ongoing erosion. The northwestern half (Area B) is still cleared of woody vegetation and was probably used for pasture in recent times. Some clearing has taken place in the last year leaving several large earth and brush piles (see Figure 3).

Cultural Background

Prehistoric Background

The project area lies in Central Texas Archeological Region, as defined by Prewitt (1981). The concept of an "archeological region" developed at a time (1950s and 1960s) when most Texas archaeologists held the normative view that a culture was defined by a series of shared traits. In the part of Texas where hunter-gatherers were though to have lived, the traits that concerned archaeologists the most were projectile point forms followed by site types and cooking features. Later, in the 1960s and 1970s, many processual archaeologists argued that culture operated as a system that allowed a population to adapt to its environment. Since Central Texas is an environmentally diverse region, many different cultural systems must have operated in the past. The population in the southern Plateau would have had a different adaptation than one that included the Blackland Prairie in their interactive sphere. With little ethnographic data on the indigenous population of the region, research in recent decades has focused on cultural ecology and the materialist aspects of culture, including lithic technology (e.g. Goode in Malof et al. 2007), cooking technology (Black et al. 1997), and subsistence (Derring in Collins et al. 1997), which can, to some degree, be understood using the "hard" sciences.

Chronological frameworks for Central Texas have been proposed by researchers over the years, with the one most commonly in use these days being that of Johnson and Goode (1992) with modifications by Collins (1998). As with all such frameworks for the region, projectile point forms are used as time markers within various time periods and subperiods.

Historic Background

The site of the settlement that would become known as Fredericksburg was chosen by John O. Meusebach in 1845 as one of a proposed series of stops along the route to the Fisher-Miller Land Grant north of the Llano River (Kohout 2005). Meuseback was a commissioner of the Adelsverein, a society formed by German nobleman to establish colonies in Texas for German immigrants. German settlers began arriving to the site the next year and soon after Meuseback named the settlement Fredericksburg after Prince Frederick of Prussia, a member of the Adelsverein. Because of its distance from the coast, the Fisher-Miller Land Grant was never settled by the Adelsverein and instead Fredericksburg became the Adelsverein's second colony after New Braunfels.

Fredericksburg grew rapidly to a population of 1000 in only two years. The establishment of Fort Martin Scott in 1848 by the U.S. military provided a market for agricultural goods. Fredericksburg was also the last town before El Paso for travelers along the Upper El Paso Road. During the Civil War, the town remained loyal to the United States which prompted the Confederates to impose marshal law in 1862. Lawlessness was also problem during the Confederate period. Because of what they experienced during the war, the people of Fredericksburg developed an isolationist philosophy towards the rest of the state and held on the German traditions and language. The town became more open to outsiders later in the 19th century when the county fairs began to be held in town. The railroad reached the area belatedly in 1913 and was only in operation for less than 30 years, being unable to compete with the automobile (Kohout 2005).

Previous Investigations

The first archeological excavation in Gillespie County was conducted by the University of Texas in 1936 at Lehman Rockshelter (now designated as 41GL1) near the town of Doss. Arthur Woolsey supervised the excavations and the findings were later reported on by J. Charles Kelly (Kelly 1947). The cave contained cultural deposits belonging to the Late Archaic and Late Prehistoric. In addition to stone artifacts, Woolsey and his crew recovered potsherds which appeared to have a highly polished red slip. Kelly in his report gave these sherds the typological name "Doss Redware." Lehman Rockshelter is also a significant rock art site with a variety of figurative and abstract pictographs in red, black, and white paint. The artist Leland Kirkland made watercolor paintings of many of the pictographs which were later published by University of Texas Press (Kirkland and Newcomb 1999).

In the early 1970s during a routine archeological survey conducted ahead of a proposed widening of State Highway 16, a prehistoric site was located along a small nameless stream one mile north of Fredericksburg (Denton 1976). The investigators christened it the No-Name Creek Site and excavated five and a half five-foot square units within the highway ROW. The excavations uncovered shallowly buried camping debris and one small, disturbed burned rock feature all primarily belonging to the period when Pedernales and Marshall points were in use. The report attempted to show an evolutionary link in the manufacturing technology between the Pedernales type and the later Marshall type.

Numerous cultural resource surveys have been carried out in the county in recent years. In 1982, the Texas Archeological Survey conducted a survey of the LCRA's T-214 Transmission Line that runs northwards from the Gillespie Substation to the Mason County line, a total distance of 14 miles (Nightengale 1982). The T-214 corridor crosses the current project area for a distance of 200 meters immediately north of the substation No sites were identified along that stretch, however two late-stage bifaces and a secondary flake were noted in the area.

Espey, Huston, and Associates (EH&A) surveyed the corridor of a proposed transmission line running from the Gillespie Substation to the then-proposed Nimitz Substation (EH&A 1994). During the survey, three sites were located, all representing prehistoric lithic scatters confined for the most part to the surface. One of these sites, 41GL279, [redacted] The site is reported to contain mostly small interior flakes with a smaller percentage of larger cortical flakes. One flake appeared to show unspecified used wear. The absence of soil in the area precluded buried deposits.

In 2005, an intensive archeological survey was conducted by the LCRA's Archeology Services of areas adjacent to the east and south sides of the Gillespie Substation that were planned for contouring to alleviate silting (Hixson et al. 2006). The survey found a moderate lithic scatter [redacted] This cultural material was considered part of the previously recorded site 41GL279, [redacted] The new boundaries of this site [redacted]

During a 2007 maintenance project on the transmission line (T-207) that runs in a southwesterly direction from the Gillespie Substation, LCRA's Archeology Services recorded a multi-component site [redacted] (Malof and Prikryl 2008). Burned limestone rocks and lithics were seen on the surface [redacted], and burned rocks were [redacted] The site has minor Historic components as well, an early 20th century trash dump [redacted] and a cement trough or tank [redacted].

Research Design and Methods

The purpose of the field investigation was to locate and record all cultural resources sites in the project area and to assess their eligibility or for formal designation as SALs. Because of its small size, the entire project area was surveyed intensively a two man crew walking transects approximately 30 feet apart. The Soil Survey map shows that the soils in the area developed on Lower Cretaceous Hensell Sand. Because these soils developed on ancient parent material that predates humans in North America and because the soils' clayey composition would impede downward movement of artifacts, we expect cultural material to be confined to the surface or near surface within the A Horizon (topsoil) if this soil zone has not eroded away. Shovel tests were to be placed in areas where ground visibility was poor. However since visibility was generally good to excellent and the topsoil of Area A absent due to blading and erosion, the tests were mostly placed in the northeastern half (Area B) of the project area where at least some topsoil appeared to be present. A total of eight shovel tests were dug; their locations are shown in Figure 2. Lack of top soil and good visibility made additional shovel tests unnecessary. Artifacts recovered during shovel testing were returned to the hole with the fill. No artifacts were collected for curation during the survey.

Results of Investigations

The survey found a moderate surface scatter of debitage and stone tools [redacted]. The extent and density of artifacts suggest low intensity use of the site over a long period of time.

Topsoil was absent [redacted] having been removed by previous blading to create a series of berms and by the subsequent sheet erosion. Wall profiles of the three shovel tests placed [redacted] show an absence of the dark brown A horizons of the Krum and Luckenbach soils. No artifacts were recovered from these shovel tests. Low growing vegetation was nearly absent resulting in an almost 100% ground visibility. The artifacts seen on the surface [redacted] included debitage, side scrapers, cores, early stage bifaces, and the proximal end of an Angostura point. Both sides of most of these artifacts were extensively covered by a white patina. A small amount of late 19th century household trash was seen [redacted] mixed with recent trash [redacted]. The trash scatter consisted of one amethyst glass fragment, one cut nail, and five shards from a whiteware dish. No evidence of a house site such as stone piers or bricks was seen anywhere in the project area.

The [redacted] surface was found to be nearly level except in the far northeast corner where the ground starts to rise towards prominent hills outside the project area. [redacted] had recently been cleared of brush and several large trees at the time of the survey. A light scatter of highly patinated chert debitage and one early-stage biface fragment were noted [redacted]. Four shovel tests placed [redacted] had no artifact recovery; a fifth test (ST 3) placed [redacted] recovered a single flake in the upper 20 cm of soil. No A horizon typical of Krum and Luckenbach soils was seen in the wall profiles of these tests and the upper 20 cm appeared disturbed, perhaps belonging to an old plow zone.

Recommendations

The cultural material found [redacted] probably represents [redacted] of the previously recorded 41GL279. The known areas of the site, including the portion surveyed for this report, contain a lithic scatter of moderate density without features or clearly-identified burned rock. The portion of 41GL279 within the current project area is situated [redacted] The cultural material there was probably already temporally mixed

before the area was bladed and eroded. Because of the extensive disturbances and mixing of cultural material, this portion of 41GL279 has little potential for research and is not eligible for SAL designation. Therefore it is recommended that the substation extension project be allowed to proceed.

As always, standard emergency discovery provisions are applicable to this project. Should the construction personnel uncover any presently unknown buried archeological features during construction work, then work should cease in the immediate area of the discovery and the LCRA Archeology Services staff should be notified at 1-800-776-5272, ext. 6714 so that the find can be assessed in consultation with the THC. In such a situation, work can continue in other areas where no archeological materials are present.

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