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by

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## ABSTRACT

Sites 41HL67 and 41HL35 are prehistoric campsites located in west-central Hall County, Texas. Situated about 3 miles apart, these sites have several key elements in common. Each site occurs near a prong of the Red River, each was partially destroyed by the building of FM 657, and each will be further destroyed by the proposed roadwork on FM 657. Also, the cultural material at each site was covered by eolian sand deposits, and in both cases the artifact sample recovered during test excavations was quite small. A complete hearth was found at Site 41HL67 and hearth remnants were found at both sites. Based on depth below surface alone, there is a chance that some of the hearths from both sites are of comparable age; however, there is very little evidence to determine the time of occupation at either site.

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# INTRODUCTION

During a routine survey of FM 657 by the author in April 1991, Site 41HL67 was found and subsequently recommended for test excavation. Site 41HL35, recorded in 1973 by Jack L. Hughes, also occurs within the limits of the proposed project and was recommended for testing as well. Test excavation of archaeological Site 41HL67 commenced on May 14, 1991 and was concluded on May 20, 1991. The testing of Site 41HL35 began during the afternoon of May 20, 1991 and continued through May 23, 1991.

The proposed roadwork which will destroy a section of Site 41HL67 involves a new approach to a new bridge over the Prairie Dog Town Fork of Red River, locally known as the "Big Red." It is to be built on the upstream side of the existing structure., The same kind of work is planned at the FM 657 crossing of Little Red River. There, a new bridge will be built on the downstream side of the existing structure and the approach to it will impact a large section of Site 41HL35.

All of the cultural material recovered at Site 41HL35, although undated, is probably relatively ancient in comparison to events of historical interest which occurred near here in the late nineteenth and early twentieth centuries. This crossing of Little Red River is known as the "Oxbow Crossing," a name in use since the cattle drives of the late nineteenth century. There are differing accounts of the name's derivation, but probably the one which is historically accurate refers to an oxbow-shaped bend in the river located near the crossing site. Supposedly, repeated crossings at the same place hardened the sandy bottom of the river, creating a safer crossing for the herds. According to Mr. Otho Stubbs of Turkey, Texas, the crossing was near the old county road (pre-FM 657) crossing of the Little Red, a mile or so downstream from the present road. In this vicinity today the river has the configuration of an oxbow, possibly the feature of legend.

The test excavation of achaeological Sites 41HL67 and 41HL35 was performed in accordance with 36CFR, Part 800, and the Memorandum of Understanding between the Slate Department of Highways and Public Transportation (SDHPT) and the Texas Antiquities Committee. The investigations were supervised by Glenn T. Goode of the Department's Environmental Staff, with assistance provided by the local SDHPT offices in Childress, Wellington, and Matador: Particularly helpful in completing the project in a timely manner were Danny Brown, Doug Campbell, Clay Davenport, Gene Garcia, and Dennis Seal. Approximately 40 man-days were spent in the investigation.

## DESCRIPTION O F SITES

Site 41HL67 (Fig. 1) is located on a high terrace along the northern valley margin of the Prairie Dog Town Fork of Red River, the Big Red. The site is bisected by FM 657, a two-lane roadway which removed a 120-ft.-wide (36.57 meters) section of the terrace to a depth of about 40 ft. (12.2 meters). By far, the greatest portion of the site lies west of the roadway. Sparse cultural remains can be seen eroding from the terrace face up to the point where a deep ravine has dissected the terrace, some 125 meters west of FM 657. West of the ravine, cultural material picks up again and continues for another 200 meters or so. East of Fm 657 the terrace extends only a short distance beyond the right-of-way fence, then gives way to an eroded area which is several hundred meters broad. Since the proposed roadwork does not include the east side of FM 657, only a brief surface survey was conducted here, enough to confirm the presence of cultural material.

On each side of the road, a biface, lithic debitage, and burned rock were found during the initial investigation. Although this was a comparatively small amount of material overall, it seemed to be enough to predict a significant return of artifacts from an excavation. All surface artifacts were found along the sparsely vegetated and eroded face of the terrace. They were widely distributed almost to the bottom of this relatively steep surface of 10 to 12 meters height, but a majority lay within the upper 3 or 4 meters of the deposit. With only a sparse cover of mesquite and grasses, the terrace face is heavily eroded at Site 41HL67 and near the site, both to the east and west, the terrace is dissected by broad, deep ravines. Atop the terrace where the excavations were conducted, mesquite and a variety of grasses are the principal members of the floral community. According to local residents, the landscape has changed significantly since the 1950s. The grass cover has been reduced and erosion and mesquite growth have increased considerably.

Another topographic feature which has changed since the 1950s, but in much the opposite way, is an active sand dune field which begins about 1/2 km upstream of Site 41HL67. During the drought of the 1950s, as the vegetation died, blowouts were common in these dunes and a number of concentrations of artifacts were observed by local residents, including Mr. Otho Stubbs of Turkey, Texas. Since that time, with the regrowth of vegetation, the dunes have stabilized and reclaimed the aboriginal sites. Reportedly, no artifacts areexposed today, and during a brief visit none were observed along the dunes' eastern margin. Toward the western margin of the dune field, but still within it, is a small tributary branch which reportedly was a road used by wagons. From a crossing of the Big Red, it led northward to the uplands. This also may be the vicinity where cattle drovers crossed the river on the way to Deep Lake. Deep Lake, situated within a large playa, is a waterhole located about 4.5 km north of the river. According to Mr. Otho Stubbs, Deep Lake was known to the Comanches as "Medicine Lake," and was a reliable water source for them as well as their chief antagonist, Colonel MacKenzie.

Site 41HL35 (Fig. 1) also is situated upon a prominent topographic feature, a high point of land that stands along the south margin of the narrow valleyof Little Red River. From the north, west, and east, this landform resembles a small hill; however, to the south the terrain continues a gradual rise in elevation. Therefore, the "hill" is more a protruding erosional remnant attached to the uplands than an isolated hilltop. Because it is the high point nearest the river for some distance, this feature was attractive to aboriginal groups--possibly for thousands of years. Very likely, it was also a vantage point from which cattle drovers surveyed the condition of the Little Red prior to crossing.

To the east and northeast, the topography gradually slopes downward into a broad dale of fairly smooth terrain. Apparently, it was through this corridor that the cattle drovers made their approach to the river. To the west, the terrain is much rougher, following a sharper slope down into a deep, narrow canyon, then on to a series of larger canyons farther westward. Identical to Site 41HL67, vegetation at this site consists of mesquite trees and a variety of grasses. Although mesquite is abundant on the rangeland here, it is still fairly spread out without dense concentrations. Starting at the east right-of-way fence, the smoother terrain east of the site is terraced and cultivated. The only vegetation in this field was a sparse stand of winter wheat.

## ARCHAEOLOGICAL BACKGROUND

Beginning in the 1950s with the work of Curtis Tunnell and Jack Hughes (1955) at the Twilla Site, 41HL1, a number of important sites--mostly bison kills--have been investigated in the southeastern corner of the Texas Panhandle. Of these sites, the closest to the present study area is Twilla, located about 4 miles east of Turkey, Texas. This was a Late Archaic bison kill where the remains of 23 animals were found. In association with the bones were large, broad-bladed points which resemble the Castroville and Marshall types. Just 3 miles north of Turkey is another bison kill, the Bell Site, investigated by Tunnell and Hughes in the early 1960s. The dart points found at this site bear more resemblance to Marcos, another of the widely distributed types of the Late Archaic. A third imporrant site located near Turkey--4 miles south on Kent Creek--also was recorded by Curtis Tunnell. This is the Jim Arnold Site, 41HL2 (Tunnell 1964), where two human burials were uncovered, along with artifacts of bone, shell, and stone.

In the early 1970s, two projects were conducted in Tule Canyon of western Briscoe County. During the first of these (Malone 1970) a total of 77 sites, mostly open campsites, was recorded. The diagnostic artifacts found there included Harrell and Fresno points, Borger Cord-marked ceramics, and Late Archaic dart points. Later, both survey and testing were conducted in Lower Tule Canyon (Katz and Katz 1975). Of the 90 sites recorded during this project, only nine were selected for test excavation. The findings from one of these sites, 41BI83, included bison bone, a hearth dated around AD. 1600, and ceramics. Other diagnostic artifacts from this project are a Paleo-Indian point, Late Archaic corner-notched points similar to those from the Twilla Site, as well as Ensor and Ellis points, and Harrell and Fresno points from the Late Prehistoric period.

Also in the early 1970s, a total of 77 sites was recorded in a survey by Jack T. Hughes (1973a). One of these sites is 41HL35, the testing of which is reported in this volume. Evaluating these sites strictly from surface findings, it was deduced that the Archaic Stage was much better represented than the Late Prehistoric Stage. The kinds of corner-notched dart points found suggest that the Archaic sites were mainly of the Late Archaic era. The most common Late Prehistoric diagnostics were Fresno and corner-notched arrowpoints.

A short time later, in the mid-1970s, David T. Hughes (1977) completed his study of bison kills in the Texas Panhandle. The sites he examined include Twilla, Bell, Strong, and Collier. All of these sites produced the remains of at least several bison, and all but the Strong Site had large corner- or basally-notched dart points. Some of the other sites investigated by Hughes also produced a variety of dart points from the same time period, the Late Archaic. Hughes concluded that most of the bison kills occurred between **AD.** 1 and **AD.** 500, and that the method of kill usually was by jump or impoundment in natural traps.

Also in the mid-1970s, excavations were conducted at some of the most important sites known in the region. The mitigation of the MacKenzie Reservoir project in Tule Canyon (Hughes and Willey 1978) included excavations of the Rex Rodgers Site, the County Line Site, and the Deadmans Shelter Site. At Rex Rodgers, late Paleo-Indian points were found in association with a bison bone bed. In addition to the Plainview type, which is relatively common in this area, there were found **side/corner-notched points** (side-hollowed) which are not at all common in this area. And only rarely have they been found in central Texas, but several varieties of this form occur in the eastern part of the state and beyond. Another important site in this project, Deadmans Shelter, produced significant findings from the opposite end of

the temporal spectrum. This is the type site for the Deadman's arrowpoint. Also found here were Jornada Brownware and a variety of fauna, but relativelylittle bison bone. The County Line Site produced Late Archaic dart points, as well as corner-notched arrowpoints and Fresno points. The kind and amount of bison bone found indicate that bison processing occurred here.

Of the several important sites investigated in Briscoe County, one of the most significant is Lake Theo (Harrison and Killen 1978) near Quitaque, Texas. Unlike the sites in Tule Canyon, Lake Theo is located east of the caprock but in a similar topographic selling where bison were killed and butchered. Folsom points and butchering tools were found with the bones of ***Bison antiquus.*** Another bed of bison bone, apparently dating to Late Paleo-Indian times, also was found here.

In a synopsis of the Panhandle Archaic, Hughes (1976) pointed out the weak database of the region and mentioned several important features of the Archaic record. The "earlier" sites, apparently few in number and especially poorly known, are characterized by a low number of dart points in contrast to an "abundance" of Clear Fork gouges. Choppers and hammers also occur in these assemblage. According to Hughes, the gouges are much more common in the Red River breaks than elsewhere in the Panhandle. Coincidentally, the same is true of Archaic bison kill sites, but all of these seem to date to the Late Archaic. If some Clear Fork gouges were wood-working tools, they should exhibit the distribution described by Hughes, because in this terrain along the streams is where wood was available. Bison hunters used the rough terrain to trap their prey.

## EXCAVATION PROCEDURES AND SOILS

Due to relatively dense grass cover at both sites. a formal surface collection was not attempted. In areas where the surface was more visible, it was observed that artifacts were extremely scarce; therefore, it is unlikely that greater effort would have contributed much to the project. Because the site area at both locations was comparatively large and the potential artifact-bearing deposits were deep, a backhoe was used to dig deep profile trenches as well as broader exposures in search of features.

At the first site to be tested, 41HL67, a total of 13 1-meter-by-1-meter hand-dug units and four backhoe exposures were excavated (Fig. 2). Of the 13 hand-dug units, two sets of two 1-meter-by-I-meter units were situated near the margin of the terrace where almost all of the surface materials were found. After a well-preserved hearth was found in Backhoe Trench 1, five 1-meter-by-1-meter units (Fig. 2, TP 6-10) were placed near the feature. Working within the broad backhoe exposure, the excavation of these units commenced at 80 cm below ground level. The remaining three test units were widely spaced to the north of Backhoe Trench 1, and excavated to a depth of 1 meter. As noted, the hand-dug units were 1-meter squares. All units were excavated in 10-cm increments and the matrix was screened through 1/4-in. hardware cloth. This procedure was used at both sites, 41HL67 and 41HL35.

At Site 41HL67 most of the cultural material is contained within the upper 2 meters of a 5-meter deposit of fine sandy loam (Fig. 3). This Holocene-age deposit belongs to the Enterprise Series (Soil Survey of Hall County), which is derived from calcareous, eolian, sandy loams that were blown out of the river channels. Typically, deposits of the Enterprise Series show relatively little soil development, and this is true of the deep section at Site 41HL67. The sandy Holocene deposit lies upon a fluviatile terrace deposit of red sandy clay loam. Although its age was not confirmed during this project, this deposit is of Pleistocene age (Geologic Atlas of Texas, Plainview Sheet). It is characterized by pronounced calcium carbonate development and an absence of cultural material.

Because artifacts and cultural refuse were scarce, and the deposit was not stratified, there was little chance of isolating cultural episodes. However, it appears that at least one stable surface existed for some time at the 80 to 90 cm level. This is the depth at which the above-mentioned hearth was found, as well as a probable hearth remnant, a dart point base, and one of the two unifacial tools. If the dart point is of Late Archaic age, as believed, and was in good context, then perhaps 1 meter of sand accumulated on the site during the last **2000** years. This would amount to perhaps 20% of the total eolian deposition during the Holocene.

To test Site 41HL35 adequately for depth and character of deposit and cultural affiliation, 11 hand-dug units and 12 backhoe trenches were excavated (Fig. 4). Most of these were placed within the existing right-of-way of FM 657, with four hand-dug units located in the 25-ft. (7.6 meter) strip of new right-of-way. The latter area lies within a cultivated field which contains the eastern margin of the site. An area of approximately 25 meters width at the hill's apex was found to be the most productive part of the site, sampled by Test Pits 5-11 and Backhoe Trenches 7-12. A great majority of both artifacts and burned rocks, the only cultural remains, was found here. However, in terms of artifacts, this is a miniscule sample of little significance. The burned rock sample was comparatively large, with six clusters apparently representing disturbed hearths; but, its value is minimal as there were no associated diagnostic artifacts, floral or faunal remains, or datable material.

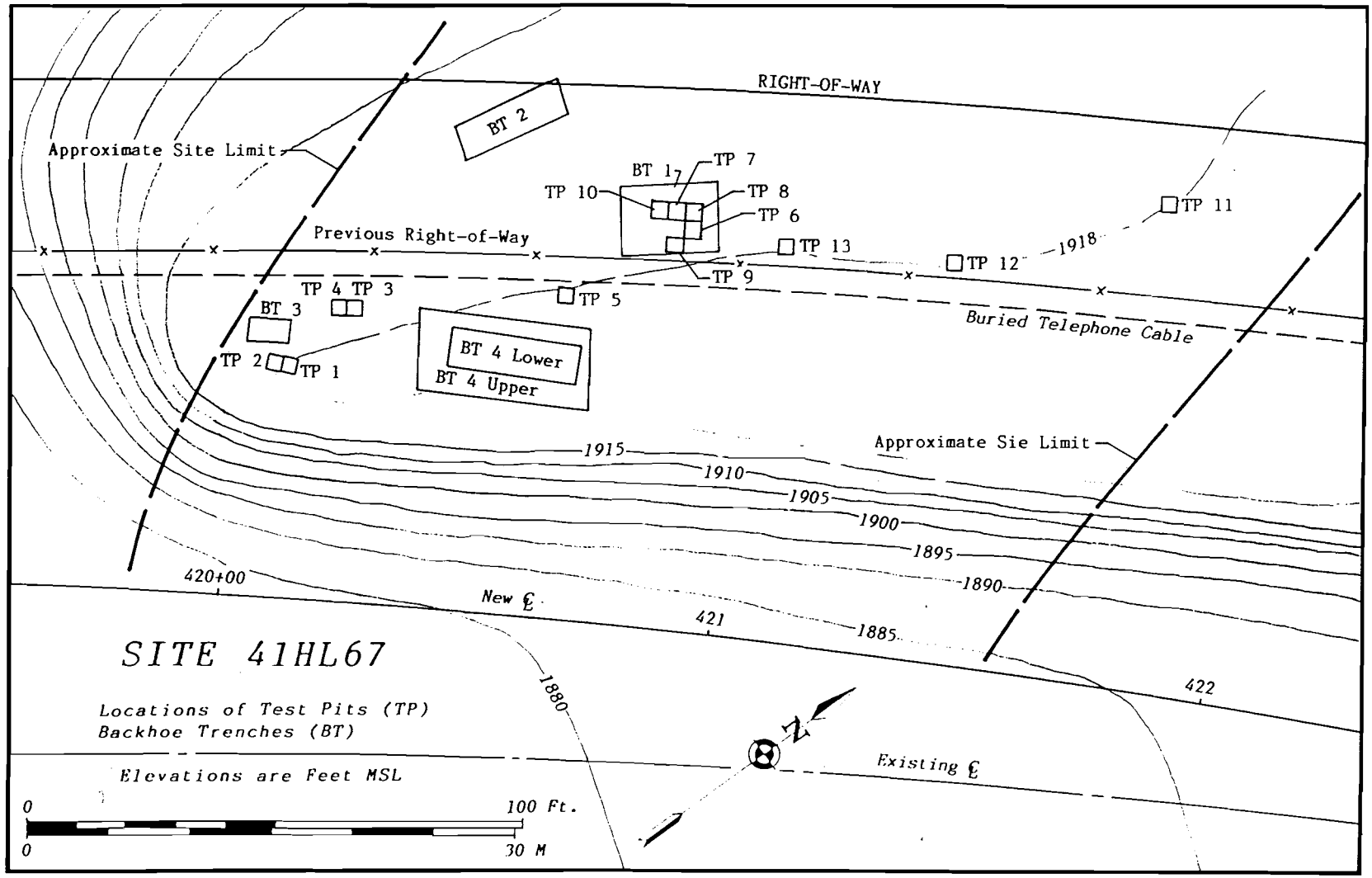


FIGURE 2. Excavation units at Site 41HL67.

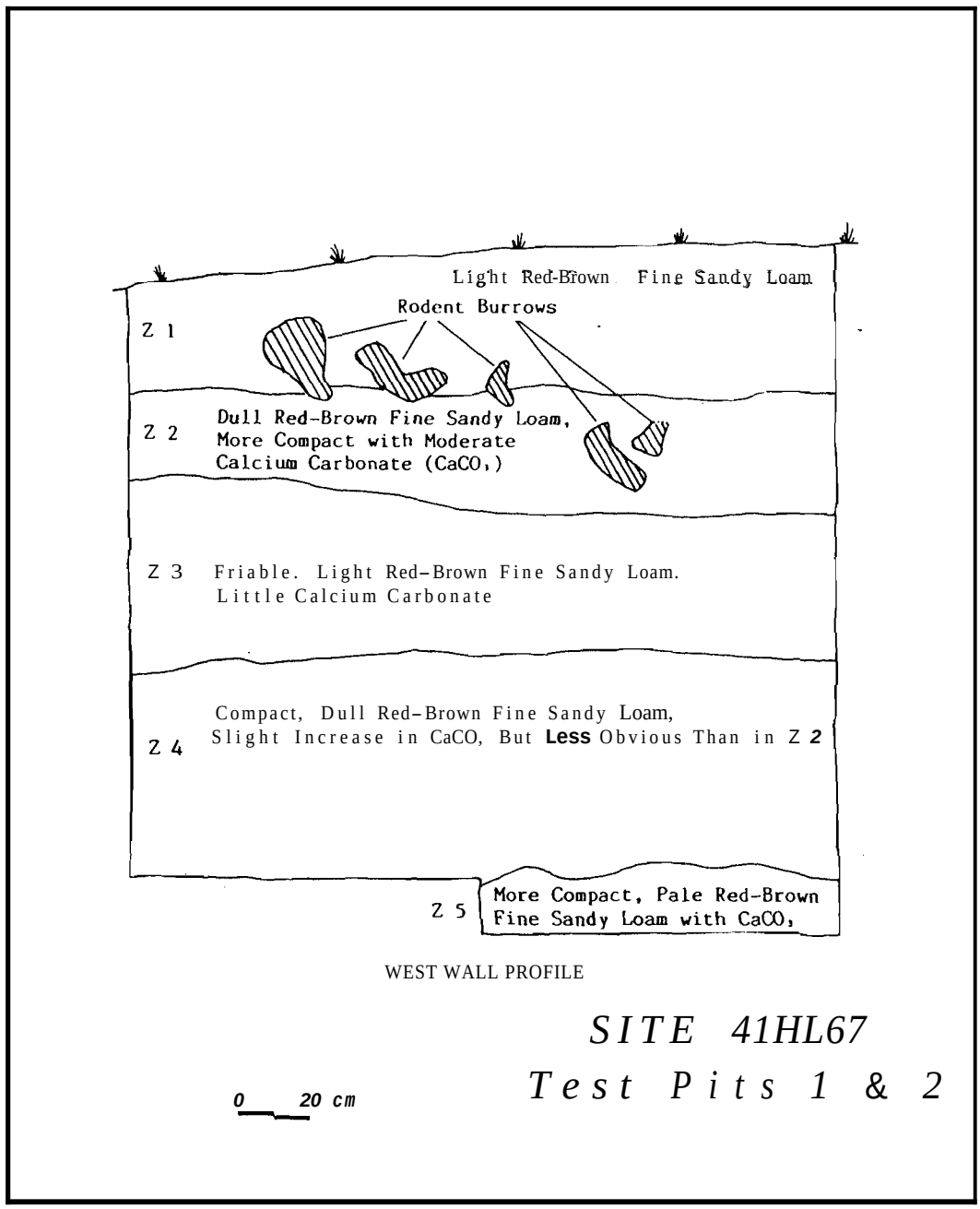


**FIGURE 3. Typical soil profile at Site 41HL67 .**

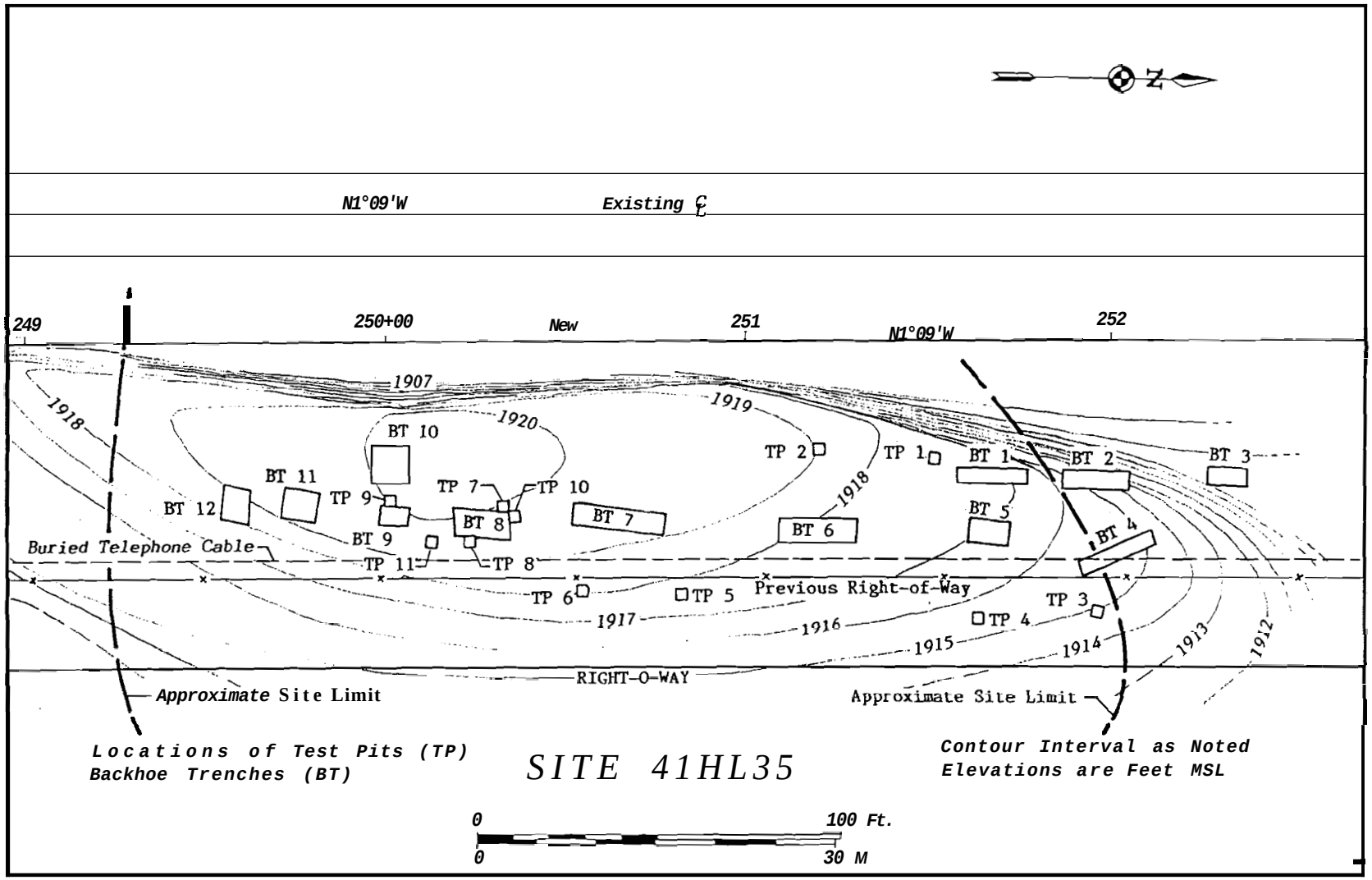


**FIGURE 4. Excavation units at Site 41HL35 .**

At Site 41HL35 the cultural materials also were contained within fine sandy loam of the Enterprise Series, but here the eolian-derived matrix was only a fraction as thick as the massive deposit at Site 41HL67. Also, this deposit (Fig. 5) was more variable in thickness, ranging from about 50 cm at the south end of the site to a little more than 2 meters along the north side and slope, which faces Little Red River. Another major difference in the profile at 41HL35 is that the eolian Holocene deposit does not cover an alluvial deposit of Pleistocene age. Instead, it lies on Permian age bedrock, formations known as Cloud Chief Gypsum and Whitehorse Sandstone (Geologic Atlas of Texas).

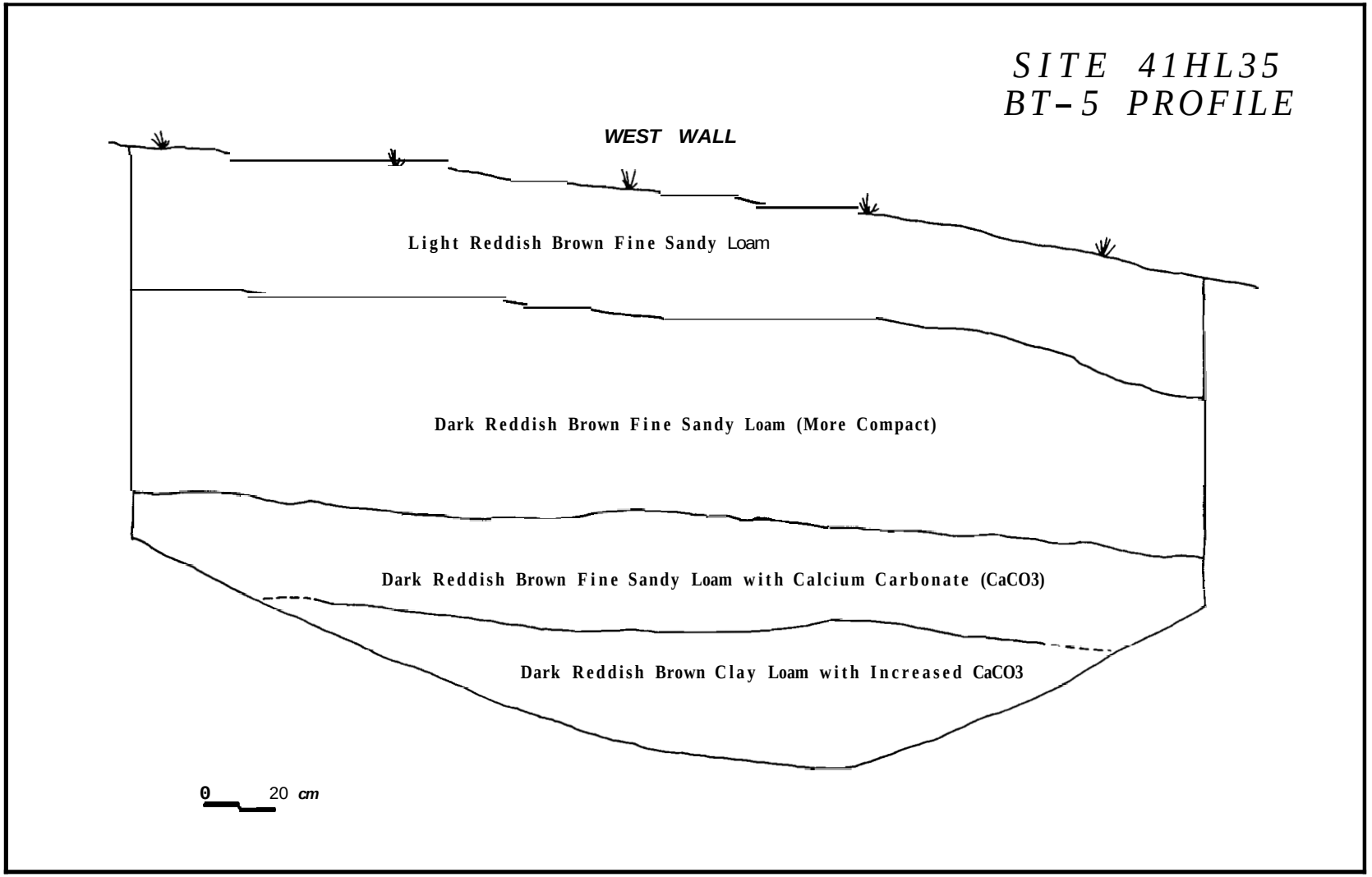


FIGURE 5: Typical soil **profile at Site 41HL35.**

## ARTIFACT ANALYSIS

### Tools

A total of 109 artifacts, all flaked stone, was recovered during the investigation of Site 41HL67. Of this number, 89 specimens are from the excavations and the remaining 20 were found on the surface. A great majority of the artifact assemblage, 104 specimens, is catagorized as lithic debitage--the waste flakes of tool manufacture and rejuvenation. Comprising the remainder of the collection are three bifaces and two unifaces. Included in this small complement of tools are the only two timediagnostic artifacts found at this site.

Of the three bifaces found at Site 41HL67, two were found out of context on the eroded face of the terrace. The smaller of these is a broken arrowpoint (Fig. 6A). The small triangular blade, all that remains, has straight, keen edges to which a discontinuous serration was added. Its dimensions are 24 mm long by 14 mm wide by 3 mm thick It is made of light yellowish to reddish brown Tecovas jasper. With the barbs and the entire stem missing, it is not possible to type this specimen, but it clearly had corner/basal notches. Obviously, this rules out the side-notched types such as Harrell. The Perdiz type, however, cannot be discounted on the same grounds, but Perdiz is very rare this far north (R. Mallouf, personal communication, 1991). Although only two collectors from the vicinity of Sites 41HL67 and 41HL35 were questioned, both said that Perdiz does not occur locally. And, Mr. Otho Stubbs of Turkey has only two Perdiz in his collection, both found in that vicinity some 25 km southwest of this project.

The larger biface found on the surface (Fig. 6B) appears to be a blank for a tool such as a small dart point. Its dimensions are: length, 52 mm; width, 32 mm; thickness, 8 mm. With the shape of an elongated oval, it lacks the key features of a completed or rejuvenated dart point or knife, such as: pointed distal section, trimmed and sharpened lateral edges, and trimmed/shaped base. If the maker intended this biface to be a dart point, he did not impart any diagnostic feature which would place it in time. Its contracting basal section would limit the range of possible templates, but it could still be worked into a wide variety of forms which have a considerable range in age.

The siliceous material is Tecovas jasper, with a color range including yellowish brown, brown, and reddish brown. In view of the scarcity of flaking stone in this locale, it is notable that this specimen was not further worked into a formal tool. Perhaps the nearest primary source of this material is along the caprock in the vicinity of Quitaque, Texas, about 35 km westward.

The only biface found in the excavations at 41HL67 is the proximal section of a Late Archaic dart point (Fig. 6C). Broken by heat fracture and with a large potlid on one face, this specimen has a basal section that lacks only pan of one barb. The short expanding stem has a strongly convex base which was shaped by mostly unifacial trimming. Since these flakes were quite short, they produced a beveled effect rather than serving to thin the stem. The stem has the general shape of specimens that have been called Palmillas in other parts of the state.

The other two formal, or at least shaped, tools from 41HL67 are unifaces. These specimens were found in the two contiguous 1-meter-by-1-meter units (TP 1 and TP 2), which were placed near the terrace margin where dislodged artifacts were found. The first specimen (Fig. 6D) is a subtriangular uniface fashioned

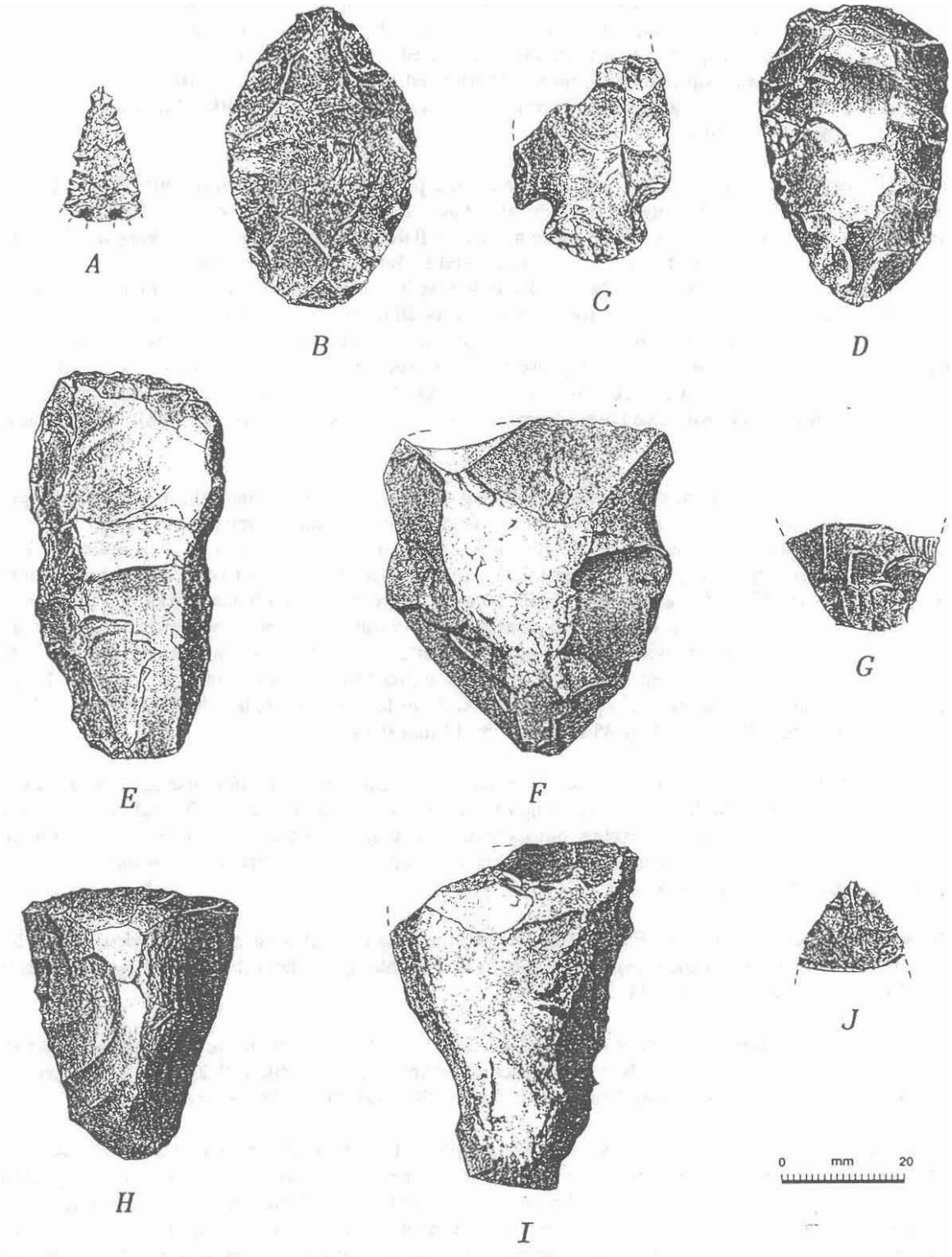


**FIGURE 6. A-G, bifacial, unifacial, and edge-modified tools from Site 41HL67; H-J, unifacial and bifacial tools from Site 41HL35.**

from a lustrous piece of red and yellow Tecovas jasper. This appears to be a high-quality material except for a sizeable impurity which ruined one of the possible working edges, the distal. Due to the extent of damage and overall irregular shape, it is not clear whether the convex distal edge was ever finished and used. If some of the damage resulted from use, it removed any obvious signs of use wear. Of the lateral edges, only the right was sufficiently thinned and trimmed to have been an effective tool. As such, it could have been used as a "side scraper," but there is little if any use wear. This uniface measures 53 mm long by 33 mm wide by 13 mm thick

Although technically classified as a uniface, the second possible scraping/planing tool (Fig. 6E) exhibits a good deal of thinning or shaping on the ventral surface. This work removed most of the flake's ventral surface, but seems to have been aimed more at further flattening that surface--removing the bulb of percussion, etc--than at producing a biface. The distal section is thinned on both faces from the basal edge, perhaps to facilitate hafting. The relatively thin wedge shape which resulted should have been easy to haft. Along its entire length the left lateral edge was modified by steep (70 to 80 degrees) chipping, but it was done in a way which left a rough, irregular edge. This seems to have been followed by discontinuous trimming which did not regularize or improve the edge. Perhaps this edge could have been used with the motion of a side scraper, but it lacks the wear which would have resulted from such use. The right lateral edge is covered by a reddish olive cortex from-base to bit and was used only as a platform to remove a few flakes on the ventral surface.

The distal edge apparently was the primary working edge, or bit, as it is much more precisely shaped than the lateral edge. As the distal section was thin to begin with, the flakes removed in shaping the bit were comparatively small. The three series of flake scars there range from 1 mm to 10 mm in length. The final trimming by flakes of 1mm to 5 mm length left a convex edge that has an irregularly serrated appearance and is fairly sharp. The edge angle varies from 70 to 77 degrees. The configuration of the bit is that of a tool such as a gouge or plane, instead of a scraper. The ventral surface is convex rather than flat and curves upward at its juncture with the beveled dorsal surface. Depending on whether or not, or how, it is hafted, a tool with such a bit can be used in a motion either toward or away from the worker. Displaying only minor rounding of edges, there is insufficient wear to identify the material and method of use. This specimen measures 68 mm long by 35 mm wide by 12 mm thick.

From Site 41HL67 the only other specimens which exhibit any sign of possible use as tools are two flakes. Of these, the almost complete specimen (Fig. 6F) is a thick secondary flake of Ogallala quartzite. After removal, it was not modified by flaking, but has minor nicking along the distal edge. Lacking any other form of use wear, it is not certain that the nicking was created by use. This specimen measures 61 mm long by 50 mm wide by 20 mm thick.

The second possible flake tool (Fig. 6G) is the proximal fragment of what may have been a fairly large, interior flake, made of Tecovas jasper. It has light nicking along one lateral edge, but lacks any rounding or polish which would confirm this as use wear.

The tool/worked specimen category from Site 41HL35 is even smaller than the sample just described. This sample consists of 2 unifacial tools, 1 thin biface fragment, 1 edge modified flake, and 1 reduced flake fragment from a total (both excavation and surface) artifact sample of 78 specimens.

Of the two unifaces, one (Fig. 6H) is a classic example of the unifacial variety of Clear Fork gouge. Mildly convex to flat, its ventral side appears to be a natural rather than a flake surface--smoothed apparently from the effects of weathering. This tool measures 50 mm long by 38 mm wide by 20 mm thick. Probably considerably shortened due to resharpening, this specimen has a subtriangular outline and is-symmetrical in all dimensions. From a fairly narrow, rounded base, the lateral edges curve inward somewhat, then outward as the piece broadens toward the bit. In horizontal section, the thickest point occurs near the bit, then the median ridge follows a gradual downward slope toward the base. At a point about 10 mm forward

of the base, the median ridge drops sharply to the base. The strong median ridge was created by the removal of flakes of equal length from the lateral edges. These flakes of about 25 mm length were followed by another series of 10 to 15 mm length, and, finally, by short trimming flakes under 5 mm length. The result is carefully trimmed, precisely shaped lateral edges which are almost as sharp as the distal bit. This suggests the possible use of more than one edge, with more than one motion. The little wear on these edges is limited to light rounding and smoothing. Edge angles range from 55 to 70 degrees.

The distal bit exhibits the same flake scar pattern described above, but the edge is more evenly convex and sharper. The latter feature and the general lack of use wear suggest that the tool was little used following the last resharpening. Commonly assigned to the functional category of "gouge," this tool probably would have worked best as a plane or adze. It is made of a reddish brown quartzite which probably derives from the Ogallala Formation, but is not the same material which is called Ogallala quartzite, or Potter chert. The angle of the bit ranges from 70 to 78 degrees.

The other uniface (Fig. 61) from Site 41HL35 belongs to the same family of adze/plane tools, but is significantly different from the Clear Fork tool. Made of an unidentified variety of chert, an olive gray material of poor quality, it lacks the precision workmanship of the first specimen. With a ventral surface much rougher than ordinary for a flake, this specimen may be a cobble fragment which split along an internal flaw. Other flaws are visible in the material. There is a fair amount of reduction on this face, but it seems to have been aimed at flattening the surface, not creating a biface. Both lateral edges are rough and irregular, with very little smoothing which could be construed as haft or use wear. The flaking which originated from these edges, intended to shape the dorsal face, could also be described as rough and irregular. The scars lack any patterning, and, since they do not meet, the dorsal ridge is a flat surface of olive brown cortex. A relatively flat surface beginning where the bit surface ends, the ridge or cortex gradually, then sharply drops to the base. The unmodified basal edge is covered by cortex and is canted in relation to the long axis of the tool.

Although more than half of the bit is missing, presumably to use damage, enough remains to discuss its primary features. In longitudinal section, the ventral surface is markedly convex in the distal half; therefore, its juncture with the flaked dorsal surface creates a bit configuration much like that of a celt. However, it probably was used more as an adze or plane, but with enough force to break away more than half the bit with a single spall. The minor use wear which was detected under low-power microscopy consists of edge rounding and light polish. The bit was shaped by initial flakes of 15 mm length and secondary flakes of 1 to 5 mm length. The bit angle ranges from 70 to 75 degrees.

The only bifacial tool (Fig. 6J) from Site 41HL35 was found on the surface. It is the distal section of an extremely thin (3 mm) and presumably well-made dart point or knife. The edges are jagged, sinuous, and quite sharp--without use wear. The primary colors of this variety of Tecovas jasper are purple and blue. The most likely age range of this piece includes the Late Archaic and the Late Prehistoric.

The other worked specimen from Site 41HL35 is a fragment of a flake which was ineffectively reduced to a small ovoid shape of little utility. A small portion of the ventral surface remains, and on the dorsal surface there is a small patch of cortex This specimen lacks any obviously useful edges and displays haphazard workmanship. It is a high quality flint which possibly originated in the Callahan Divide, a good distance to the south.

The only flake tool recognized in the assemblage is made of another material of non-local origin, from the northwest in this case. It is the distinctive "bacon" variety of Alibates agate. Although the platform is missing, the curvature of this interior flake suggests that it resulted from biface reduction. Use wear on this specimen is limited to the left lateral edge. It starts near the crushed platform and extends for 16 mm along the edge, to the point where the flake is broken. Entirely on the dorsal surface, the wear consists of

continuous fine nicking which creates an extremely fine serrated effect. The flake was not used enough to dull or polish the edge.

## Debitage

Typical of open campsites of the region, lithic debitage comprises the largest artifact category at Sites 41HL67 and 41HL35. In both cases, however, the samples are extremely small, and, while they may accurately reflect the magnitude and diversity of lithic tool production at these sites, they contribute relatively Little to the regional database.

At least the materials and their sources, for the most part, are easy to identify. More than 90% of the flake sample--there are no cores--is Tecovas jasper. This is a varicolored, fine-grained material which may have been found occasionally in recent or ancient gravels. But a more reliable primary source lies about 35 km westward, along the caprock in Briscoe County. The other materials found in small percentages at these sites are Ogallala quartzite, chert, and silicified wood. Next to Tecovas (which includes a quartzite), the most common local material for chipped stone tools is fine-grained Ogallala quartzite from the Ogallala Formation. The coarser of this material was the primary source of hammerstones and hearth stones. At Ieast two specimens of the very small sample of chert probably originated along the northern fringe of central Texas in the Callahan Divide. The other material that is barely represented here, silicified wood, occurs in small quantities in the vicinity of MacKenzie Reservoir.

The 86 flakes recovered from Site 41HL67 excavations (Table 1) comprise the entire debitage sample, as there are no cores or fragments of manufacture losses such as bifaces. It is the horizontal distribution of this material which is recorded in Table 1, along with the formal tools and bone in the categories of Biface, Uniface, and Bone. Also in Table 1, the flakes are separated by probable method of manufacture--hard- or soft-hammer percussion, or undetermined method--and fragmentary condition. Within these groupings the amount of cortex also is recorded. The standard categories of Primary, Secondary, and Tertiary are used here, but for the Fragmentary specimens only the presence or absence of cortex is recorded.

Among the three categories of flakes with platforms, it was found that only four specimens (8%) have distinctive signs of hard-hammer percussion, while the soft-hammer percussion category has the largest sample (55%), and flakes produced by undetermined methods (37%)--probably all by percussion--make up the second largest category. As usual, fragmentary specimens without platforms (43%) comprise the most numerous category of debitage.

With such a small sample--the greatest number of artifacts from a unit is 21 (Table 2)--it is difficult to gain much insight into the tool-making process. However, providing that a small sample is a representative one, it may be possible to at least identify likely trends in a given assemblage. For example, the dearth of hard-hammer flakes in itself is a good indication that little if any initial stage reduction occurred here. To make the case stronger, add to this the small amount of cortex, the small size of individual specimens, the absence of core/biface fragments, and the case is essentially proven. Furthermore, using these same criteria, there is very little material here which would derive from a secondary stage of biface reduction, either, and there was virtually no core/flake industry. Therefore, a majority of the material must be from such activities as the final stage of biface reduction, possible uniface shaping, possible arrowpoint manufacture, and tool maintenance.

Recording the presence of cortex is one of the most accurate ways of determining certain significant features of a lithic assemblage, such as stages of reduction and origin of or distance to raw material

**TABLE 1. Horizontal distribution of cultural material at Site 41HL67.**

| Test Pit Number | HARD | SOFT | UNDT | FRAG | BIFACE | UF | BONE |
|---|---|---|---|---|---|---|---|
| | P S T | P S T | P S T | P A | | | |
| 1 | 2 | 8 | 1 2 | 8 | 1 | 1 | 5 |
| 2 | | 4 | 2 | 3 | | 1 | |
| 3 | 1 | 2 | 1 | 1 | | | |
| 4 | | | | | | | |
| 5 | | 1 1 | 2 | 3 | | | |
| 6 | | | 1 1 | 1 | | | |
| 7 | | 1 | 1 | 2 | | | |
| 8 | | 1 | 1 2 | 3 | | | |
| 9 | | | | | | | |
| 10 | | 3 | 1 | 1 | | | |
| 11 | | 1 | 1 | 3 | | | |
| 12 | 1 | 1 | 2 | 5 | | | |
| 13 | | 4 | | 1 6 | | | |
| Total:89 | 4 | 1 26 | 3 15 | 1 36 | 1 | 2 | 5 |
| 0 (Surface) | 2 | 3 | 2 1 | 3 7 | | 2 | |
| Total:20 | | | | | | | |

**TABLE 2. Vertical distribution of cultural material from Site 41HL67, TP1.**

| Test Pit 1 | Flakes | Cores | Biface | Uniface | Bone | Burned Bone | Burned Rock |
|---|---|---|---|---|---|---|---|
| Level: | | | | | | | |
| 1 | | | | | | | |
| 2 | 1 | | | | | | |
| 3 | | | | | | | |
| 4 | 2 | | | | | | |
| 5 | | | | | | | |
| 6 | 4 | | | | | | |
| 7 | 2 | | | | | | 1 |
| 8 | 3 | | | | | | |
| 9 | 2 | | 1 | 1 | | | 2 |
| 10 | 1 | | | | | | |
| 11 | 2 | | | | | 1 | 3 |
| 12 | 2 | | | | | | 2 |
| 13 | | | | | | | 1 |
| 14 | | | | | | | |
| 15 | 2 | | | | 2 | | |
| 16 | | | | | 1 | | |
| 17 | | | | | | | 2 |
| 18 | | | | | 1 | | |
| 19 | | | | | | | |
| 20 | | | | | | | 1 |
| Total | 21 | | 1 | 1 | 4 | 1 | 12 |

sources. Such information, especially when used in conjunction with the method of production data mentioned above, is essential to a reasonable reconstruction of what is often the only extant manifestation of hunting and gathering societies.

Of the 86 specimens recovered through excavation, only five pieces (6%) have cortex. This statistic might be somewhat misleading, since a majority of the specimens are fragmentary; nevertheless, it is thought to be a reasonably accurate account of the material used at this site. If the 18 specimens found on the surface (5 with cortex) are included for a grand total of 104, then the percentage of specimens with cortex rises to nine. Comparatively, this is still a low figure, and the percentage of cortex on most specimens also is small; there are no primary flakes.

A dearth of cortex usually is interpreted as meaning that the raw material sources were not close by. Lithic materials that were transported to distant places usually were reduced as closely as possible to the desired form for obvious reasons. In this case, a great majority of the debitage is the distinctive Tecovas jasper whose sources are well known, outcropping about 35 km to the west in Briscoe County. Some of this exceptional material may have been found locally in river gravels, but a majority of the Tecovas must have been transported from the sources, arriving at this site in some reduced state of relatively small size. Therefore, it is likely that the small percentage of cortex in the sample is indeed a reflection of the distance between quarry and campsite.

As was the tool inventory, so is the debitage sample from Site 41HL35 (Table 3) smaller than the sample from Site 41HL67. It consists of 65 flakes and fragments and 1 small object which may be a biface fragment. This is the sample recovered from the excavations. An additional 11 specimens were found on the surface for a grand total of 77.

Since the two sites are from the same locale and are similar physically, it is not surprising that their artifact assemblages for the most part are very similar. Physically, both samples are on the small size, with only 19 pieces larger than 20 mm and 1 larger than 50 mm at Site 41HL35. Also, the 41HL35 sample is made up of the same kinds of lithic materials found at 41HL67, in about the same percentages. Tecovas jasper is the dominant material by far, followed by Ogallala quartzite. A few pieces of chert and silicified wood complete the sample.

The percentages of the various debitage categories are close as well, with soft-hammer flakes holding a solid majority among flakes with platforms. In the latter category, 24% (Table 3) of the 41 specimens have cortex--about the only figure which varies significantly from the 41HL67 assemblage. This may be an important difference but such small samples are difficult to evaluate. The Little Red, along which Site 41HL35 is situated, heads in the caprock northwest of Quitaque, Texas, an area rich in Tecovas jasper. On the Big Red upstream of Site 41HL67 it may be farther to substantial lithic sources, or the river may have carried less material. In some way, the dispersal of raw material to these sites may be reflected by the amount of cortex, with the site farther away having less of it. Given the small samples and relative closeness of these two sites, however, it is difficult to believe that the cortex statistics have any significance.

TABLE 3. Horizontal distribution of cultural material at Site 41HL35.

| Test Pit # | Hard | Soft | Undt | Frag | Core | Biface | Total |
|---|---|---|---|---|---|---|---|
| | P S T | P S T | P S T | P A | | | |
| 1 | 1 | 1 | 1 | 2 | | | 5 |
| 2 | | 1 | 1 1 | 1 | | | 4 |
| 3 | | | 1 | 1 | | | 2 |
| 4 | | | | | | | 0 |
| 5 | | 1 | 1 | 1 | | | 3 |
| 6 | | | 1 | | | | 1 |
| 7 | | 7 | 2 | 2 2 | | | 13 |
| 8 | | 1 6 | 2 3 | 2 7 | | | 21 |
| 9 | | 1 | | | | | 1 |
| 10 | | 1 1 | 1 | 1 2 | | | 6 |
| 11 | 1 | 2 | 1 2 | 1 2 | | 1 | 10 |
| | 1 1 | 3 19 | 1 5 1 1 | 7 17 | | 1 | 66 |
| Surface | | | | | | | |
| | 1 2 | 3 | | 4 | 1 | 1 | 12 |

Platforms: 41

## VERTICAL DISTRIBUTION OF CULTURAL MATERIAL

Another difference in the artifact assemblages of these sites, perhaps more significant than the amount of cortex, concerns their vertical distribution. At 41HL67, a majority of the cultural residue lay more than 80 cm below the surface, primarily from 80 to 100 cm. Included in this zone were one dart point, another tool, an intact hearth, and a hearth remnant. Added to these larger items, the occurrence of a significant amount (51%) of the lithic debitage in levels 8, 9, and 10 further confirms the existence of at least one stable surface at this elevation. The usual conclusion from these findings would be that they represent the heaviest activity at this site.

The cultural and faunal remains which lay deeper in the sandy deposit were not represented by diagnostic materials of any kind. The deepest artifact was at the 170-cm level and two bison long bone fragments were at the 180-cm level. If these materials have not moved downward through time, then they may represent an occupation substantially older than the zone at 80 to 100 cm, which is interpreted as being of Late Archaic age. However, the Late Archaic covers hundreds of years and the overall spread of the cultural residue, including the bone, might be the result of a period of intensified eolian deposition. Bison bone is common in Late Archaic sites in this region but, apparently, virtually nothing is known of Middle Archaic sites, or Early Archaic sites.

The sparse cultural remains which overlay the tentatively dated "Late Archaic" zone also lack any diagnostic traits. None of the small sample of tools occurred above the Late Archaic zone. Also of interest is the fact that virtually no cultural material was found in the upper 30 cm, only 4 flakes and 2 burned rock fragments. This uppermost deposit is an A horizon of light reddishbrown fine sandy loam. It is underlain by a B horizon which has a moderate degree of calcium carbonate buildup (Fig. 3**).**

At Site 41HL35 a majority of the artifacts (67%) occurred in the upper 30 cm, with another 21% in the next 20 cm (Table 4). However, in places the upper 20+ cm of this deposit had been removed, and overall it was much shallower than the deposit at Site 41HL67. Also, at Site 41HL35 there did not seem to be a zone in which a majority of both artifacts and burned rock occurred. Perhaps these differences reflect certain natural processes such as rate of deposition and movement of materials within a sandy matrix.

**TABLE 4. Vertical distribution of debitage and gouges at Site 41HL35.**

| Unit | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Level: | | | | | | | | | | | |
| 1 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 7 | 1 | 2 | 2 |
| 2 | 0 | 0 | 2 | 0 | 1 | 0 | 4 | 5 | 0 | 2 | 2 |
| 3 | 3 | 0 | 0 | 0 | 1 | 0 | 1* | 4 | | 2 | 1 |
| 4 | 1 | 1 | 0 | 0 | 0 | | 3 | 3 | | 0 | 2 |
| 5 | 0 | 1 | 0 | 0 | 0 | | 3 | 2 | | 0 | 2 |
| 6 | 1 | 0 | 0 | 0 | 0 | | | | | | |
| 7 | 0 | 0 | 0 | 0 | 0* | | | | | | |
| 8 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 9 | 0 | 0 | | 0 | | | | | | | |
| 10 | 0 | 1 | | | | | | | | | |
| 11 | | 1 | | | | | | | | | |
| 12 | | 0 | | | | | | | | | |
| Total | 5 | 4 | 2 | 0 | 3 | 1 | 13 | 21 | 1 | 6 | 9 |

*one gouge found in this level

## FEATURES

A small number of features, all burned rock hearths, was found at each of the sites described in this report. Of the two found at Site 41HL67, one (Fig. 7) seemed to be fairly structurally intact and well preserved. Found at a depth of 80 to 90 cm below ground surface, it was circular with a diameter of approximately 75 cm. For the most part, this hearth was a single layer of burned quartzite cobbles. In some places, though, there were overlapping rocks which may be a clue to its original thickness. In other places there were no rocks at all, perhaps an indication that the last use of the hearth or some subsequent disturbance modified its original condition somewhat. About five rocks were removed from the hearth's western margin upon discovery by the backhoe bucket, but this did not seriously alter its appearance.

As noted, Feature 2 was composed of quartzite cobbles, mostly of small- and medium-cobble size. Though burned to the point of discoloration, very few of these rocks were fractured; and almost all of the rocks had a fairly heavy coating of calcium carbonate. During this project, sources of these rocks were observed a short distance west of the site, occurring in gravel lenses at the base of the Pleistocene terrace. A cross section excavation of Feature 2 removed the eastern half, revealing a shallow basin shape at its base. There was no fire discolored or hardened soil here but a moderate sample of charcoal was collected. Most of the matrix from the section was collected as well. The seemingly well-preserved condition of Feature 2 is thought to be an indication of how intensely or how long it was used, and possibly how soon it was covered following its final use. The fact that the rocks are unfractured probably indicates a minor degree of usage. As there were no small burned rock fragments at the base, it is unlikely that there was a previous episode of use and rock fracturing, followed by replacement of the thermally fractured rocks. Its shallow basin construction and good condition suggests that during use most of the hearth might have lain slightly below ground level and following use it was quickly covered by windblown sand.

Since no diagnostic artifacts were found in the immediate vicinity of Feature 2, its age could not be determined by relative means. However, the one diagnostic artifact found in the excavations, a Late Archaic dart point, may provide a rough approximation of the hearth's age. The dart point was found in TP 1, about 25 meters away, but at the same elevation as Feature 2, 1915 ft. AMSL. From the sufficient sample of charcoal it should be possible to establish the hearth's age by absolute dating, but it will be some time before the results are available.

Of the six concentrations of burned rock found at Site 41HL35, only Feature 1 (Fig. 8) was sufficiently intact to provide an idea of its original size and structure. It was found, and disturbed, by the backhoe, the southern half absorbing most of the damage. From the rocks which were not disturbed, it appears that Feature 1 had a circular shape and was probably more than 75 cm in diameter. Judging by the relatively low number and spread pattern of the rocks, it is likely that Feature 1 was also disturbed in prehistoric

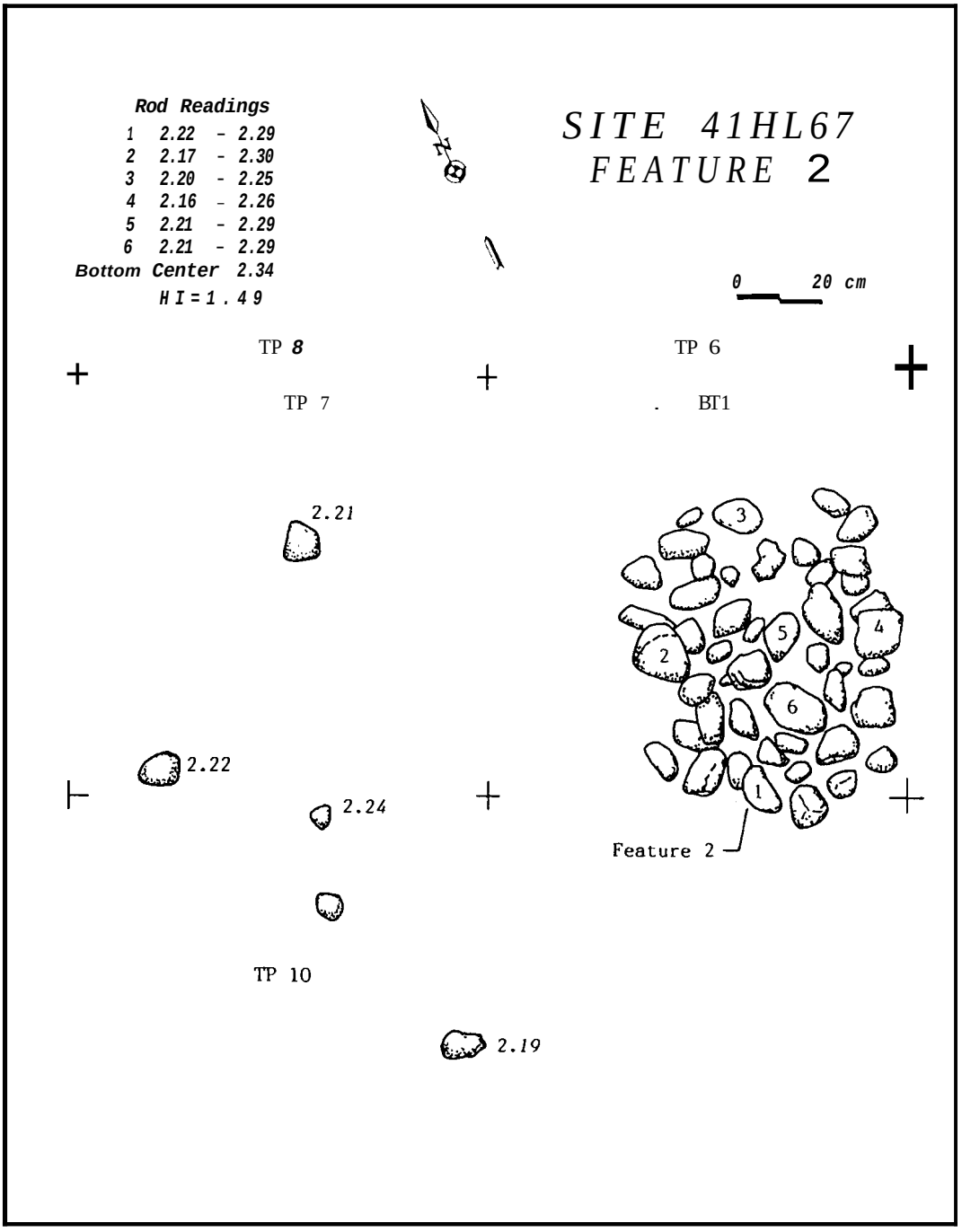


**FIGURE 7. Feature 2, burned rock hearth.**

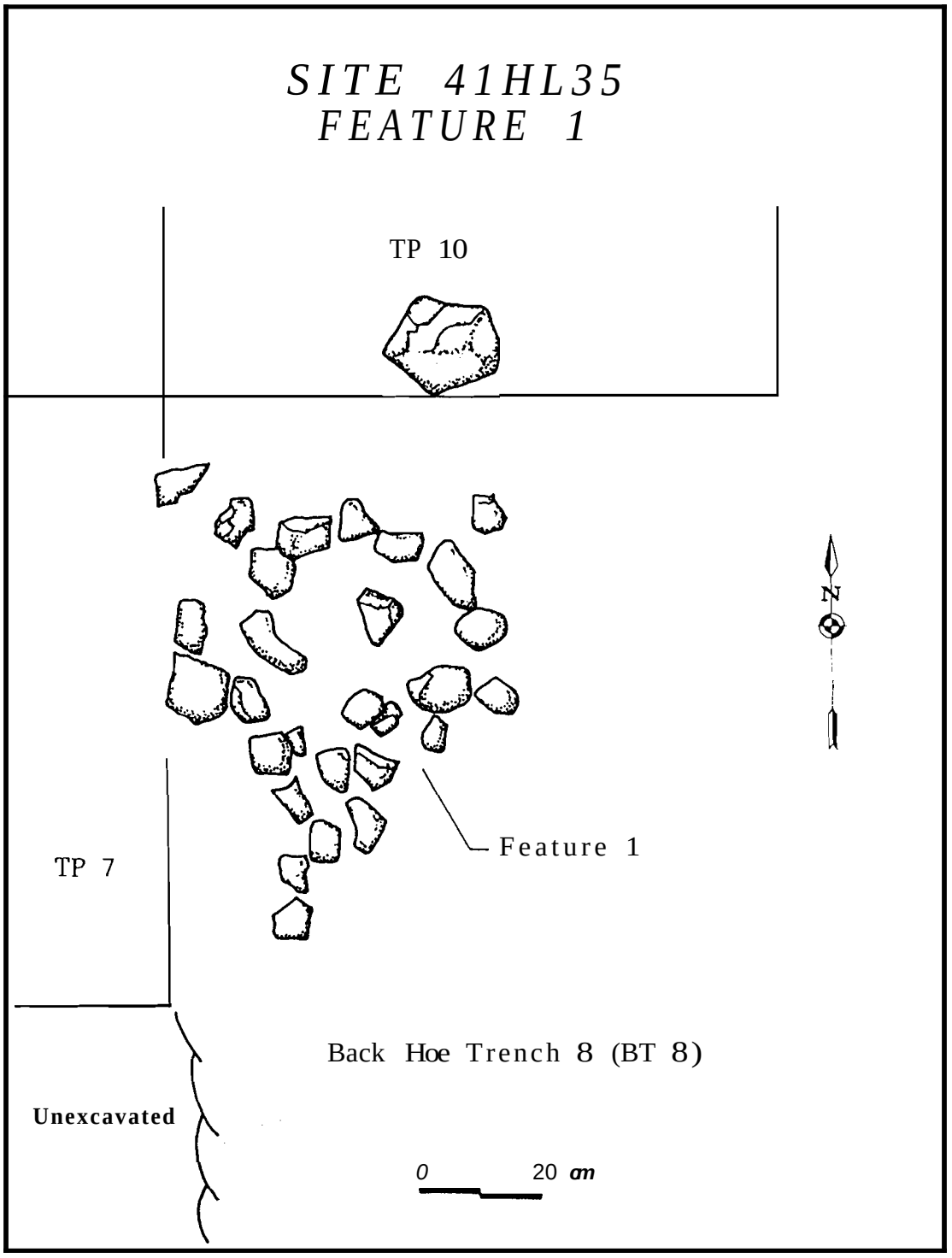


**FIGURE 8. Feature 1, burned rock hearth.**

times, perhaps before it was thoroughly covered by windblown sand. Most of the rocks were sufficiently heated to become fractured, ending up in the small-cobble size range. A majority of the rocks were quartzite, but several pieces of sandstone also were used. In its incomplete condition a positive determination was impossible, but Feature 1 may have had a very shallow basin shape and could have had two layers of rocks in places.

No artifacts or organic residue was found with Feature 1; no diagnostic artifacts at all were found at this site. Therefore, there are few clues to suggest a possible time range for Feature 1 or the multiple occupations which doubtless occurred here. The time period to which Feature 1 belongs might have seen the most substantial occupation at this site, since at least three of the other hearth remnants occurred at roughly the same depth. However, because an unknown amount of the upper soil deposit was removed by machinery in the past, the depth of these features could not be determined very precisely. By adding about 20 cm to the existing surface one might approximate the original surface of the deposit. This done, it seems that several of the burned rock features, all apparently disturbed in prehistoric times, had been covered by 50 to 70 cm of windblown sand. Although this is somewhat shallower than the "zone" of burned rocks (80 to 90 cm deep) at Site 41HL67, it is conceivable that these two occupational episodes--each the major one at its respective site--are roughly contemporaneous. Based on the very limited evidence at hand, the general time period of these occupations is thought to be the Late Archaic.

## SUMMARY AND RECOMMENDATIONS

The replacement of two bridges and the approaches of FM 657 leading to them will result in the partial destruction of two prehistoric archaeological sites in central Hall County, Texas. Large and possibly significant portions of both sites were destroyed when existing FM 657 and the bridges were built in the 1950s. Both of these structures have been seriously damaged by the high salt content of the Big Red and Little Red rivers.

Site 41HL67 is located on a high terrace along the valley margin of Big Red River. The portion of the site to be affected by construction lies to the west side of the existing roadway. A total of 17 excavation units, both hand-dug and mechanical, was dug to test the deep deposit of windblown sand which lies upon the terrace. From these excavations, it was determined that a majority of the cultural remains are contained within the upper 2 meters of this deposit. The findings at 41HL67 were comparatively sparse, the most significant of them being a hearth, a hearth remnant, one dart point, and two unifacial tools. All artifactual materials are flaked stone, the bulk of the excavation sample consisting of 86 pieces of lithic debitage. Toward the bottom of the cultural deposit, a small sample of bison bone was found, but it could not be tied to any cultural episode.

Reportedly, within a kilometer or two of this site there are at least three others which probably outrank it in significance. A diagnostic artifact from one of these sites is a Late Archaic dart point of a kind sometimes found with bison bone in this region, and in other areas far to the south.

About 3 miles to the south, Site 41HL35 is situated upon a prominent landform south of Little Red River, and mostly to the east side of FM 657. Test excavations here totalled 23, 11 by hand and 12 by machine. The kinds and amounts of materials recovered are very similar to the findings at 41HL67, and the materials also were contained within windblown sand deposits. The artifact sample is even smaller than the meager assemblage collected at 41HL67 and does not contain a single diagnostic specimen. Of the three formal tools found here, two are gouges which probabiy belong to the Archaic Stage. The gouge is one of the most common tool forms of this region, mostly found in the Red River breaks (Hughes 1976). Of the two found at 41HL35, the one which resembles a Clear Fork gouge (Fig. 6H) could date to the earlier half of the Archaic Stage, but there is no basis for refining its temporal position. Its stratigraphic position at the bottom of the cultural deposit might suggest an age of several thousand years. The only biface from this site is a distal fragment found on the surface. Though nondiagnostic, its extreme thinness is a trait more of the Late Archaic or Late Prehistoric than of earlier time periods. Discussed earlier, both of these periods were represented at 41HL67 and seem to be the most prolific in the local archaeological record.

Some of the most interesting information learned during this project is from a time period which considerably postdates most or all of the aboriginal activity. In the late nineteenth century, cattle drovers crossed the Little Red just downstream of Site 41HL35 and probably crossed what today is FM 657 as they headed toward the Big Red and Deep Lake on beyond. Then, from the early twentieth century, there is the boyhood home (known as "the place between the rivers") of the legendary western-swing musician, Bob Wills, standing about 600 meters east of FM 657 (Fig. 1).

The data extracted from the two sites reported here, though quite limited, do provide some insight into several interrelated aspects of the prehistoric cultures. First, a typical conclusion from such meager artifact assemblages--all lithic--is that the occupations were both infrequent and of low intensity. Although this

interpretation is probably fairly accurate for the investigated areas and their immediate surroundings, it should be stressed that these sites are by no means representative of the overall scope of local archaeology. Another possible conclusion from the artifact analysis is that the kinds of subsistence-related activities at these sites requiring stone tools were very limited in scope. At least, very few were discarded here, and certainly very few were made here. The low quantity of lithic artifacls may say more about the relative paucity of raw material in this locale, as well as something of its distribution. Other nearby sites reportedly have more substantial lithic assemblages, which very likely indicates a favored status above the sites in question. Knowing that Sites 41HL67 and 41HL 35 were most heavily occupied during the Late Archaic would be their greatest contribution, to an understanding of regional settlement patterns. Without other elements of the tool/refuse inventory, there is little ground for discussing the complex cultural processes which occasionally included these sites in the local/regional round of activities.

Located in a region which could stand considerably more work, the two sites reported herein, unfortunately, do not contribute much toward an understanding of the indigenous cultures. The deposits are not stratified and cultural materials are extremely sparse and mostly nondiagnostic. Therefore, it is thought unlikely that further work at these sites would significantly augment the recent findings, and none is recommended.

## REFERENCES CITED


**Bureau of Economic Geology**
1968 ***Geologic Atlas of Texas,*** Plainview Sheet, Scale 1:250,000. The University of Texas, Austin.

Harrison, Billy R. and Kay L. Killen
1978 Lake Theo: A Stratified, Early Man Bison Butchering and Camp Site, Briscoe County, Texas.

Hughes, David T.
1977 Analysis of Certain Prehistoric Bison Kills in the Texas Panhandle and Adjacent Areas. The University of Arkansas, Fayetteville.

Hughes, Jack T.
1973a Archeology. In ***Environmental Inventory and Assessment of Areas IX, XIII, XIV, and*** *XV,* Red River Chloride Control Project, Oklahoma and Texas: *2/26-2/86.* Report to the U.S. Army Corps of Engineers. West Texas State University, Canyon.

1976 The Panhandle Archaic. In ***The Texas Archaic: A Symposium.*** Center for Archaeological Research. Special Report No. 12. The University of Texas at San Antonio.

Hughes, Jack T. and Patrick S. Willey
1978 Archeology at MacKenzie Reservoir. Archeological Survey Report 24. Texas Historical Commission. Office of the State Archeologist.

Katz, Susanna and Paul K. Katz
1975 Archeological Investigations in Lower Tule Canyon, Briscoe County, Texas. Archeological Survey Report 16. Texas Historical Commission. Office of the State Archeologist. Texas Historical Foundation and Texas Tech University.

Mallouf, Robert J.
1991 Personal communication in offices of the State Archeologist.

Malone, James M.
1970 Archeological Reconnaissance in the MacKenzie Reservoir Area of Tule Canyon. Archeological Survey Report No. 8. Dec. 1970. Austin.

Stubbs, Otho
1991 Personal communication, Turkey, Texas.

Tunnell, Curtis
**1964** Two Burials from the Jim Arnold Site in northwest Texas. ***Bulletin of the Texas Archeological Society*** **35:83-94.**

**Tunnell, Curtis and Jack T. Hughes**

**1955** **An Archaic Bison Kill in the Texas Panhandle.** ***Panhandle-Plains Historical Review*** **28:64-70.**

**USDA-SCS**

**1967** ***Soil Survey of Hall County, Texas.*** **U.S Department of Agriculture. Soil Conservation Service, in cooperation with Texas Agricultural Experiment Station. U.S. Government Printing Office. Washington, D.C.**