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By
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ABSTRACT

The Texas Department of Transportation (TxDOT) will widen US 259 from FM 71 to 2.3 miles south of FM 561, in Bowie County, Texas. The project will affect portions of archaeological sites 41BW318 and 41BW410, both of which are on the east side of the road north of the Sulphur River. The two sites were examined in July 1992 using hand-dug test units, and trenches excavated by machine. The cultural deposits at 41BW318 were generally shallow and sparse. Although several soil anomalies were tentatively identified as features during excavation, most of them proved to be natural and/or recent in origin. The site appears to have been disturbed by about 60 years of earlier highway construction and maintenance activities, and by its proximity to a sawmill that was in operation in the 1940s just east of the site. Site 41BW410 was on a high terrace of the Sulphur River. Although there is little evidence of disturbance, cultural deposits were shallow and very little material was recovered from the test units. Based on the observations made at these two sites, neither one is considered eligible for inclusion on the National Register of Historic Places or designation as a State Archeological Landmark.

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ENVIRONMENTAL SETTING

Bowie County is within the Austroriparian biotic province (Blair 1950), which extends throughout east Texas from Harris County northward to Red River County. Within this environmental zone pine-oak forests predominate. Blair notes that the vegetation is similar to that found eastward to the Atlantic coast. Gould identifies roughly the same portion of Texas as the Pineywoods area (Gould 1969), and notes that the pines are probably a subclimax or fire disclimax vegetation for the region. Soils of the Pineywoods are generally sandy and acidic.

Carr (1977) characterizes most of northeast Texas, including the study area, as a single climatic area typified by summer droughts with peaks in rainfall during April and May, and again during November and December. Total annual precipitation is typically 48 in., with 50% falling between April and September (Roberts 1983:2-3, 82).

Sites 41BW318 and 41BW410 are on terraces on the north side of the Sulphur River. Site 41BW318 is near a slough just north of the river and on the second terrace above the slough. Site 41BW410 is further to the north on a third or fourth terrace.

Both sites are in pasture which may have been plowed at one time. In the mid-1920s, during construction of US 259, topsoil was removed from 41BW318 to build up the bridge and approaches over the Sulphur River. In the 1940s, a sawmill was adjacent to the right-of-way and to the east of the roadway. Trucks and other vehicles were parked on, and drove over, the site at that time. Today, there is little evidence of the sawmill. During our testing, a metal storage building was being erected at about the same location.

Site 41BW410 appears to be less disturbed than 41BW318. A corral is on the eastern portion of the site just outside the right-of-way. A barn and corral were within the new right-of-way during the initial survey, but have since been removed by the landowner. Other evidence of disturbance is limited to that caused by burrowing animals and tree-roots.

CULTURAL SETTING

Previous Archaeological Research

There is a long history of archaeological research in northeast Texas which has been summarized elsewhere (Wyckoff and Ragland-Fisher 1985:7-8, Gilmore and McCormick 1980, Guy 1988). The first inventory of archaeological sites in the region was made by Edward Palmer, a botanist from the Peabody Museum (Putnam 1880). In 1879 and 1880, he travelled to Texas and northern Mexico and described several east Texas sites.

In the early part of the twentieth century, Moore (1912) compiled a catalog of sites along the Red River and adjacent areas. Among the sites Moore recorded are 41BW2 (Moores Site), 41BW3 (Hatchel Site), and 41BW14 (McCabe Mounds). Harrington (1920) investigated about 20 sites in southwest Arkansas beginning in 1916 and continuing through the 1930s (Guy 1988:23)

The first detailed scientific studies of archaeological sites in Texas were conducted by J.E. Pearce beginning in 1919 (Guy 1988:24-52, Pearce 1919). Affiliated with UT, Pearce organized a program of intensive reconnaissance and excavation in northeast Texas between 1929 and 1932 (Pearce 1932a, 1932b). A.T. Jackson, working for Pearce, excavated at Sites 41BW1, 41BW2, 41BW3, and 41BW4 (Mitchell Site) in Bowie County in 1932. He continued working in the region throughout the 1930s (Jackson 1933, 1938). E.B. Sayles also worked at Site 41BW3 during the 1930s for Gila Pueblo (Sayles 1935). The Works Progress Administration funded research by Beatty at Site 41BW3 and Woolsey at Site 41BW4 (Duffen et al. 1940).

During World War II, funding was limited and archaeologists were forced to cease field work and reassess all of the data collected over the previous 20 years. In attempting to make sense of this data, Krieger (1946) developed chronological schemes and artifacts typologies, many of which are still used today in one form or another.

In the 1950s, archaeologists continued to be concerned with chronology and typology (Bell and Baerreis 1951; Suhm, Krieger, and Jelks 1954; Suhm and Jelks 1962). However, there was a resurgence of field work associated with the construction of reservoirs. Texarkana Reservoir (the eastern portion of what is now Lake Wright Patman) was the subject of several archaeological studies in the 1950s and 1960s. In 1949, Stephenson surveyed Lake Texarkana (Guy 1988:141-142). In 1952, Jelks (1961) excavated Sites 41CS8, 41CS14, and 41CS26 on the Cass County side of the reservoir flood pool. In 1970, the Texas Historical Survey Committee examined the western portion of Lake Wright Patman (Briggs and Malone 1970).

Sites abound along the Red River, Sulphur River, and Barkman Creek. Since 1970, those which have gotten the most attention include Hatchel Mounds/Paul Mitchell Farm (Creel 1984, Dow 1987, Lanning 1968) and Roseborough Lake (Miroir et al. 1973, Wedel 1978, Gilmore 1986). Gilmore and McCormick surveyed the Red River in Bowie, Red River, and Lamar Counties in the late 1970s (Gilmore and McCormick 1980, 1982).

Site 41MX5 was excavated in 1987 on Murphy Branch, about 1 mile to the south of 41BW318 (Wormser 1987, Brewington, Dockall and Shafer n.d.). This site consists of a Middle Caddoan cemetery and probable farmstead. Three graves were identified along with one partial adult skeleton. Pottery from 41MX5 indicated that the site dates to the middle of the Caddoan prehistoric periods and may be affiliated with the Texarkana Focus of Caddo IV.

Chronology

The chronology presented below (Table 1) has been adapted from studies by Gilmore and McCormick (1980) and Davis (1970). Although I have chosen to use the terms "stage" and "phase", most Texas archaeologists continue to use the less exact term, "period", interchangeably with the former terms.

TABLE 1. Chronological sequence for northeast Texas.

MODERN CHRONOLOGY: STAGE	PHASE	MCKERN SYSTEM: ASPECT	FOCUS	DATES:
Historic	Caddo V	Fulton	Kinsloe Allen Glendora Norteño Late Belcher	A.D. 1600-1800
Formative	Caddo IV		Titus (TX) Belcher (LA)	A.D. 1500-1600
			Texarkana (TX)	
	Caddo III		Whelan (TX) Bossier (LA)	A.D. 1400-1500
	Caddo II	Gibson	Haley Sanders	A.D. 1200-1400
	Caddo I		Alto Gahagan	A.D. 700-1200
Early Formative "Early Ceramic"	Fourche Maline Coles Creek Troyville Marksville Tchefuncte	"Pre-Caddo"		A.D. 400-700
Archaic		La Harpe		4000 B.C.-A.D. 400
Paleoindian				Before 4000 B.C.

INVESTIGATIONS AT 41BW318

Field Methods

At Site 41BW318, a total of eleven (11) 1-meter-by-1-meter test units (Fig. 2) were excavated in 10 cm levels measured from the surface. All of the test units were excavated with shovels and trowels. The units were scraped with a trowel at the end of each level in order to reveal any stains that might indicate features, disturbances, or natural stratigraphy. All soil from the test units was passed through 1/4-inch mesh hardware cloth and all artifacts found in situ were plotted on standardized level forms. Cultural material was collected from the screens and approximate material counts were noted on the level forms at the end of each level. When each test unit was completed, a profile sketch was made of the stratigraphy of one wall.

In addition to the test units, a total of seven (7) trenches were excavated using a Gradall. All trenching was monitored to document any features or other anomalies that might be found. Two of the trenches (GT-2 and GT-5) were widened to expose soil anomalies that were encountered. When each trench was completed, a profile sketch was made of a portion of one wall illustrating a typical stratigraphic profile.

Horizontal control was maintained with a transit and measuring tape. Vertical control was maintained with a transit and (for profile sketches) a string, line level, and tape. An arbitrary datum was established on the site and designated with an assumed elevation of 100 meters. All elevations were made relative to this point. The datum was later tied-in to a permanent datum of known elevation AMSL at the northwest corner of the existing Sulphur River bridge.

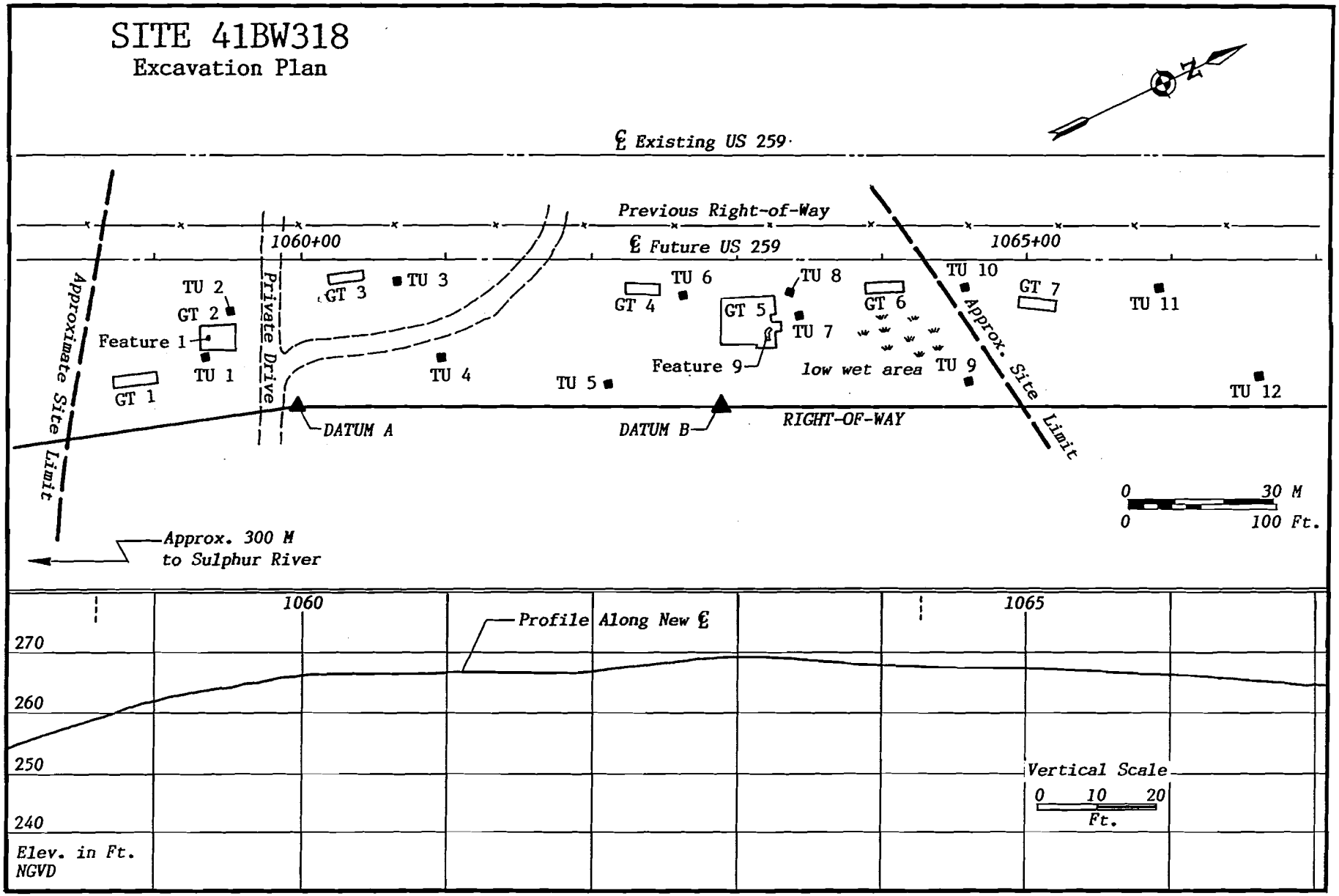


FIGURE 2. Location of test units and trenches at 41BW318.

Stratigraphy

Typical profiles are shown in Figures 3 and 4. Generally, there is an upper A-horizon consisting of brown sand overlying a reddish or yellowish red sandy clay B- or C-horizon. In Trenches 4, 6, and 7, a deeper C-horizon occurred below the red sandy clay and consisted of a light brownish gray clay. The A-horizon can be divided between a brown epipedon and a yellowish brown zone, and the division between the two is usually gradual. Artifacts tend to occur only in the A-horizon. Depths for the various soil zones are shown in Figures 3 and 4.

In Test Unit 2, two soil zones were identified. The upper zone (A-horizon) extends from the surface to about 25 cm below the surface and consists of brown to dark brown (10YR 4/3) sand with many rootlets in the upper 10 cm. Worm holes (and earthworms) and FeMg nodules are common and all the artifacts recovered from Test Unit 2 were from this zone. The lower zone (B- or C-horizon) is a yellowish red (5YR 4/6) clay or sandy clay. FeMg nodules, while present, are less frequent than in the upper zone. The lower zone is culturally sterile.

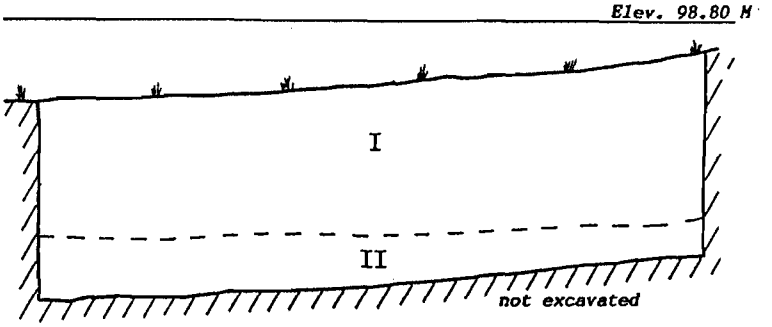
In Test Unit 5, which was the deepest test unit excavated, three soil zones were identified. The upper zone (A-horizon) extends from the surface to about 20 to 30 cm below the surface and consists of brown (10YR 4/3) sand with small amounts of yellowish brown (10YR 4/6) mottling. Rootlets are common in the upper 10 cm of Zone 1. In Zone 2 (lower A-horizon), the sand changes to yellowish brown (10YR 6/4) with red mottling. The mottling is more apparent and may represent disturbance which has mixed Zone 1 with Zone 3. Zone 2 is about 20 to 35 cm thick and contains few artifacts. Krotovinas are common in the lower portion of Zone 1 and in Zone 2. The third zone (B- or C-horizon) is a yellowish red (5YR 4/6) sandy clay with brown sandy mottles and appears to be culturally sterile.

In Gradall Trench 3, only two soil zones were identified, although the trench was 90 cm deep. These are the same zones observed in the test units. Zone 1 (A-horizon) consists of a light brownish gray (10YR 6/2) sand about 10 cm deep. Zone 2 (B- or C-horizon) is in excess of 80 cm thick and consists of reddish yellow (10YR 6/6) sandy clay.

In Gradall Trench 4, four soil zones were identified. Zone 1 (upper A-horizon) is light gray (10YR 7/2 fine sand and is about 10 cm thick. Zone 2 (lower A-horizon) is brownish yellow (10YR 6/6) sand and is about 40 cm thick. Zone 3 (B- or C-horizon) consists of yellowish red (5YR 5/8) sandy clay. Zone 3 (lower C-horizon) is light gray (10YR 7/2) clay.

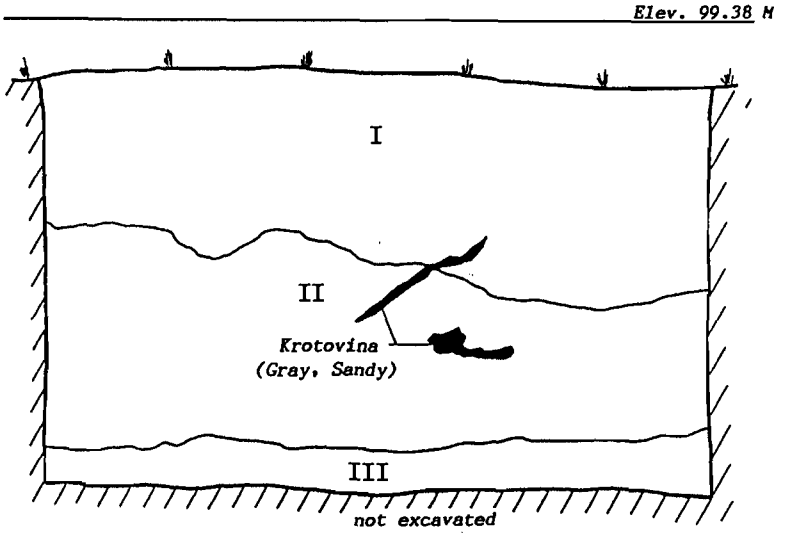
41BW318

Test Unit 2
West Wall Profile



I 10YR 4/3, Sand, Brown to Dark Brown, with rootlets common in the upper 5 to 10 cm. Worm holes (and worms) common. A few FeMg nodules. All artifacts found in this soil zone.
II 5YR 4/5 Clay/Sandy Clay, Yellowish Red. Few roots, No Artifacts.

Test Unit 5
West Wall Profile



I 10YR 4/3, Sand, Brown, with flakes & sherds found during excavation. Upper 10 cm has many rootlets, a few FeMg nodules.
II 10YR 6/4, Sand, mottled with 5YR 4/6 Sandy Clay, Yellowish Red. Some FeMg Nodules, no artifacts.
III 5YR 4/6, Sandy Clay, Yellowish Red, mottled with Brown Sand. Some FeMg nodules, no artifacts.

FIGURE 3. Typical stratigraphic profiles from test units at 41BW318.

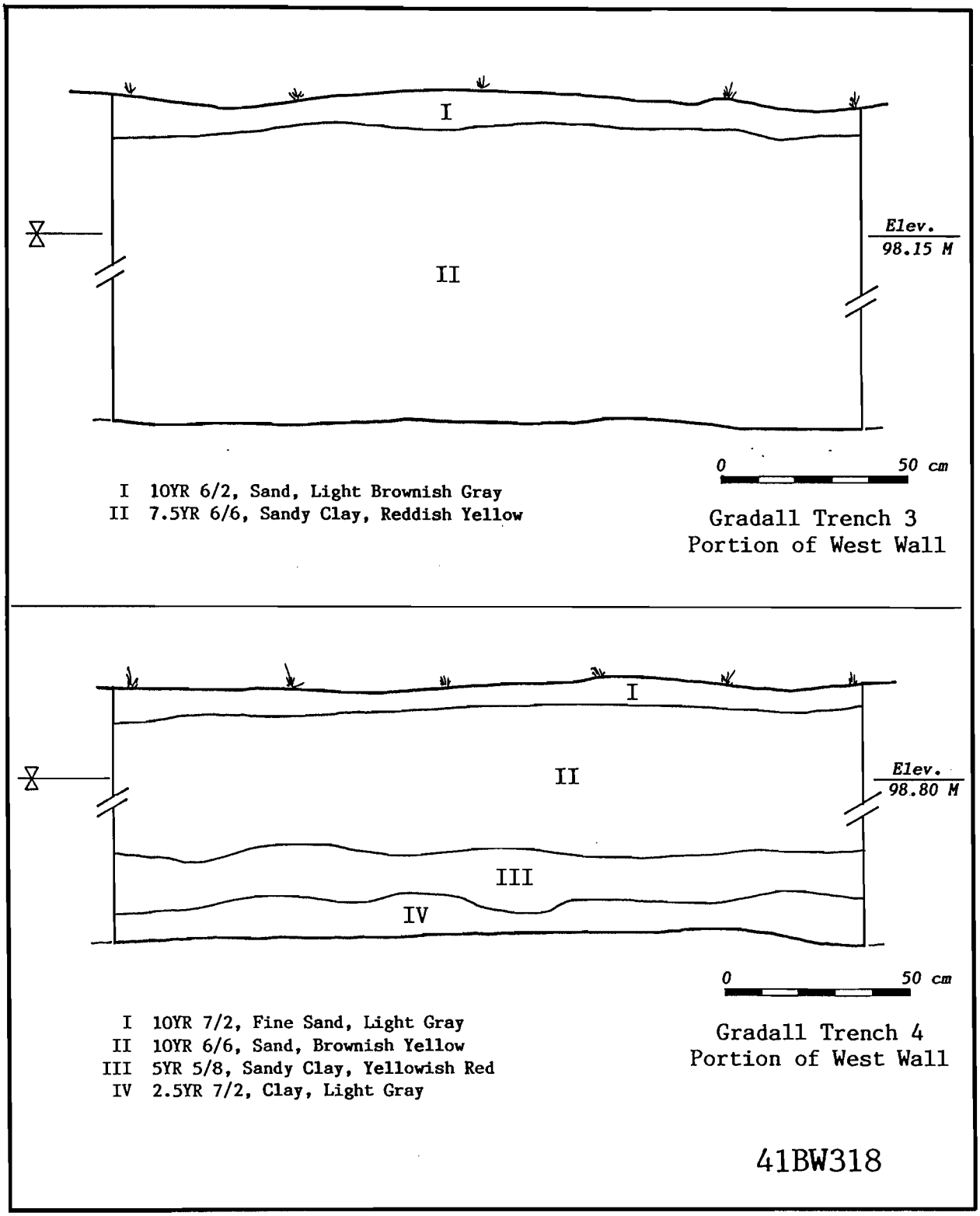


FIGURE 4. Typical stratigraphic profiles from Gradall trenches at 41BW318.

Artifact Descriptions

Flakes (Table 2)
Few flakes were found at the site overall. Those which were found were from the upper 10 or 20 cm of the test units. Few flakes were found more than 20 cm below the surface. As described in the previous section on stratigraphy, the lower soil zone (B- or C- horizon) was culturally sterile and all artifacts were recovered from the A-horizon. Test Unit 7 had more flakes than other test units, but this test unit also had the most apparent and severe animal disturbance. Almost all of the flakes are small tertiary flakes.

Burned Rock/Shatter (Table 2)
A few pieces of burned rock and rock shatter were found. Most of the burned rock was found in Test Unit 7. Other units had very little, if any, burned rock or shatter.

Dart Point (Fig. 5)
One dart point was found in Test Unit 8, Level 3. It appears to be a small Trinity point, and would therefore represent a Middle Archaic component. The point is made from gray chert, and is 33 cm long, 20 cm wide (at the base), and 7 cm thick.

Biface Fragment (Fig. 5)
One biface fragment was found in Test Unit 4, Level 2. It represents the tip portion of a knife or similar tool. The fragment is triangular in outline and has a biconvex cross-section. It is made from quartzite and is 38 cm long (incomplete), 26 cm wide, and 12 cm thick.

Prehistoric Pottery (Table 3)
A total of 13 pottery sherds were found. All of them came from Test Unit 1, Level 1, and Test Unit 5, Levels 1 and 2. The sherds from Test Unit 1, Level 1 are plain and tempered with bone and grog. Of the sherds found in Test Unit 5, Level 1, four (4) are plain, four (4) are red-slipped, and one (1) is decorated with a small lug and is unslipped. All are tempered with grog, or bone and grog. The sherd from Test Unit 5, Level 2 is plain and is grog-tempered. The presence of pottery indicates a Late Prehistoric component, and the fact that the pottery is grog and bone tempered *may* indicate a Middle or Late Caddoan period. However, the pottery is too fragmentary and the sample is too small to accurately assess the time period represented.

Historic Debris (Table 3)
Historic debris was found in Test Unit 2, Level 1, and Test Unit 6, Level 1. The specimen in Test Unit 2 is a piece of clear bottle glass that may represent part of a soda bottle. In Test Unit 6, 63 pieces of brown bottle glass were found; possibly representing a crushed soda or beer bottle. Aside from the bottle glass, no artifacts were found in Test Unit 6.

Hematite and Ochre (Table 3)
Hematite and yellow ochre occur naturally throughout eastern Texas. Small pebbles of hematite and ochre were collected as they were encountered during screening. However, none appear to occur in association with any features. These items are probably not artifactual.

TABLE 2. Chipped debitage and burned rock from 41BW318.

Unit	Level	Primary Flakes	Secondary Flakes	Tertiary Flakes	Burned Rock and Shatter
TU-1	1	.	.	3	.
	2	.	1	1	.
	3	.	.	.	.
TU-2	1	.	.	5	.
	2	.	.	2	.
	3	.	.	.	.
TU-3	1	.	1	1	.
TU-4	1	1	3	4	.
	2	.	2	2	1
	3	.	1	1	.
	4	.	.	.	.
	5	.	.	.	.
TU-5	1	1	2	2	1
	2	.	.	3	.
	3	.	.	.	.
	4	.	.	.	.
	5	.	.	.	.
	6	.	.	.	.
TU-6	1	.	.	.	.
	2	.	.	.	.
	3	.	.	.	.
TU-7	1	.	5	7	5
	2	.	1	1	2
	3	.	2	1	10
	4	.	.	.	1
TU-8	1	1	1	2	2
	2	.	1	2	.
	3	.	.	.	.
	4	.	.	.	.
TU-9	1	.	.	9	.
	2	.	.	.	.
TU-10	1	.	.	.	.
	2	.	.	.	.
TU-11	1	.	.	.	.
	2	.	.	.	.

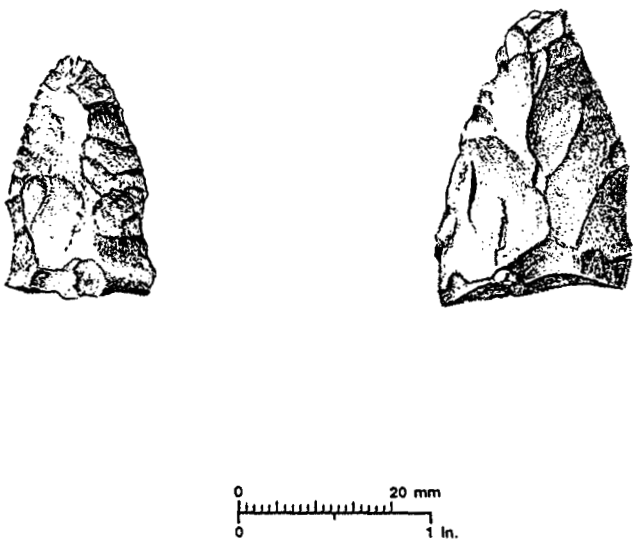


FIGURE 5. Dart point and biface fragment from 41BW318.

TABLE 3. Prehistoric pottery, historic debris, hematite, and ochre from 41BW318.

Unit	Level	Prehistoric Pottery	Burned Clay	Historic Debris	Hematite	Ochre
TU-1	1	3	.	.	.	.
	2	.	.	.	.	.
	3	.	.	.	.	.
TU-2	1	.	.	1	.	.
	2	.	.	.	.	.
	3	.	.	.	.	.
TU-3	1	.	.	.	.	.
TU-4	1	.	.	.	.	.
	2	.	.	.	.	.
	3	.	.	.	1	.
	4	.	.	.	.	.
	5	.	.	.	.	.
TU-5	1	9	.	.	.	.
	2	1	.	.	.	.
	3	.	.	.	.	.
	4	.	.	.	.	.
	5	.	.	.	.	.
	6	.	.	.	.	.
TU-6	1	.	.	43	.	.
	2	.	.	.	.	.
	3	.	.	.	.	.
TU-7	1	.	4	.	39	3
	2	.	.	.	5	.
	3	.	.	.	9	.
	4	.	.	.	.	.
TU-8	1	.	.	.	.	.
	2	.	.	.	.	.
	3	.	.	.	.	.
	4	.	.	.	.	.
TU-9	1	.	.	.	.	.
	2	.	.	.	.	.
TU-10	1	.	.	.	.	.
	2	.	.	.	.	.
TU-11	1	.	.	.	.	.
	2	.	.	.	.	.

Krotovina and Other Soil Anomalies

In total, nine (9) soil anomalies were tentatively designated as "features" during test excavations. Each anomaly was plotted and cross-sectioned. Based on these cross-sections, only Features 1 and 2 could arguably be called features. However, tree roots, animal runs, and burned stumps were in close proximity to Features 1 and 2, so it is probable that all of the anomalies are natural and/or recent in origin. Their designations as prehistoric features is therefore inconclusive. Feature 1 was found while excavating Gradall Trench 2 (Fig. 6). The others appeared in Gradall Trench 5 (Fig. 7). Trench 1 and 2 each began as a long, narrow trench, but was expanded horizontally into broader, scraped areas when the presence of features was suspected.

Feature 1 (Fig. 6) appears in plan view as a circular stain about 20 cm in diameter. The top of the feature was apparent at 30 cm below the surface - about the same depth that a recent, burned tree stump appeared about 4 meters to the north. The feature was filled with brown (10YR 4/3) sand typical of the soil near the surface. The surrounding soil was a yellowish-red sandy clay (5YR 4/6). In cross-section, the feature extends to a depth of about 43 cm below the surface. The bottom portion was rounded. While the feature *may* be a post mold, its designation as a cultural feature is questionable due to the disturbed nature of the surrounding deposits.

Feature 2 (Fig. 8) appears in plan view as an ovoid stain about 20 cm long and 15 cm wide. The top of the feature was apparent at 18 cm below the surface. It is filled with dark brown (10YR 4/4) sand and is surrounded by yellowish-red (5YR 4/6) sandy clay. In cross-section, it is semicircular and extends to a depth of about 28 cm below the surface. While the feature *may* be a post mold, its designation as a cultural feature is questionable due to the disturbed nature of the surrounding deposits.

Feature 3 (Fig. 8) appears in plan view as a circular stain about 18 cm in diameter. The top of the feature was apparent at about 19 cm below the surface. It is filled with dark brown (10YR 4/4) sand and is surrounded by yellowish-red (5YR 4/6) sandy clay. In cross-section, it narrows with depth to form a tubular shape about 5 cm in diameter, extending to more than 44 cm below the surface. The "feature" is an animal run.

Feature 4 (Fig. 9) appears in plan view as a circular stain about 15 cm in diameter. The top of the feature was apparent at 34 cm below the surface. It is filled with dark brown (10YR 4/4) sand and is surrounded by yellowish-red (5YR 4/6) sandy clay. In cross-section, it is circular and extends to a depth of about 46 cm below the surface. The "feature" appears to be an animal run.

Feature 5 (Fig. 9) appears in plan view as a small, circular stain about 7 cm in diameter. The top of the feature was apparent at about 20 cm below the surface. It is filled with dark brown (10YR 4/4) sand and is surrounded by yellowish-red (5YR 4/6) sandy clay. In cross-section, it forms a tubular shape about 5 cm in diameter. It extends, downward and laterally, to a depth of more than 40 cm below the surface. The "feature" is an animal run.

Feature 6 (Fig. 10) appears in plan view as an ovoid stain about 20 cm long and 15 cm wide. The top of the feature was apparent at about 17 cm below the surface. It is filled with dark brown (10YR 4/4) sand and is surrounded by yellowish-red (5YR 4/6) sandy clay. In cross-section, it is tubular and extends diagonally to a depth of 37 cm below the surface. From its cross-section it appears to be either a tree root, or possibly an animal run.

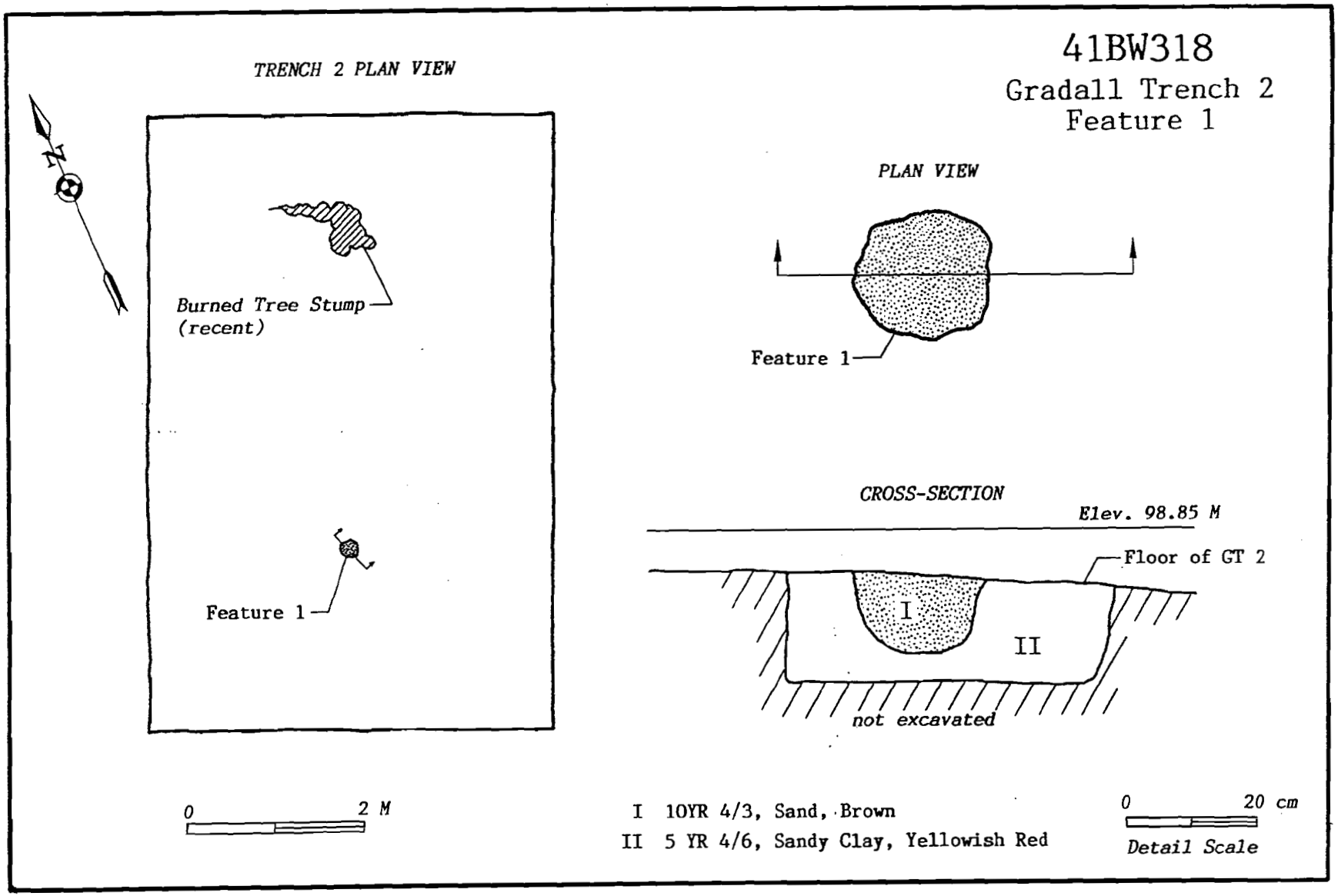


FIGURE 6. Gradall Trench 2 and Feature 1 at 41BW318.

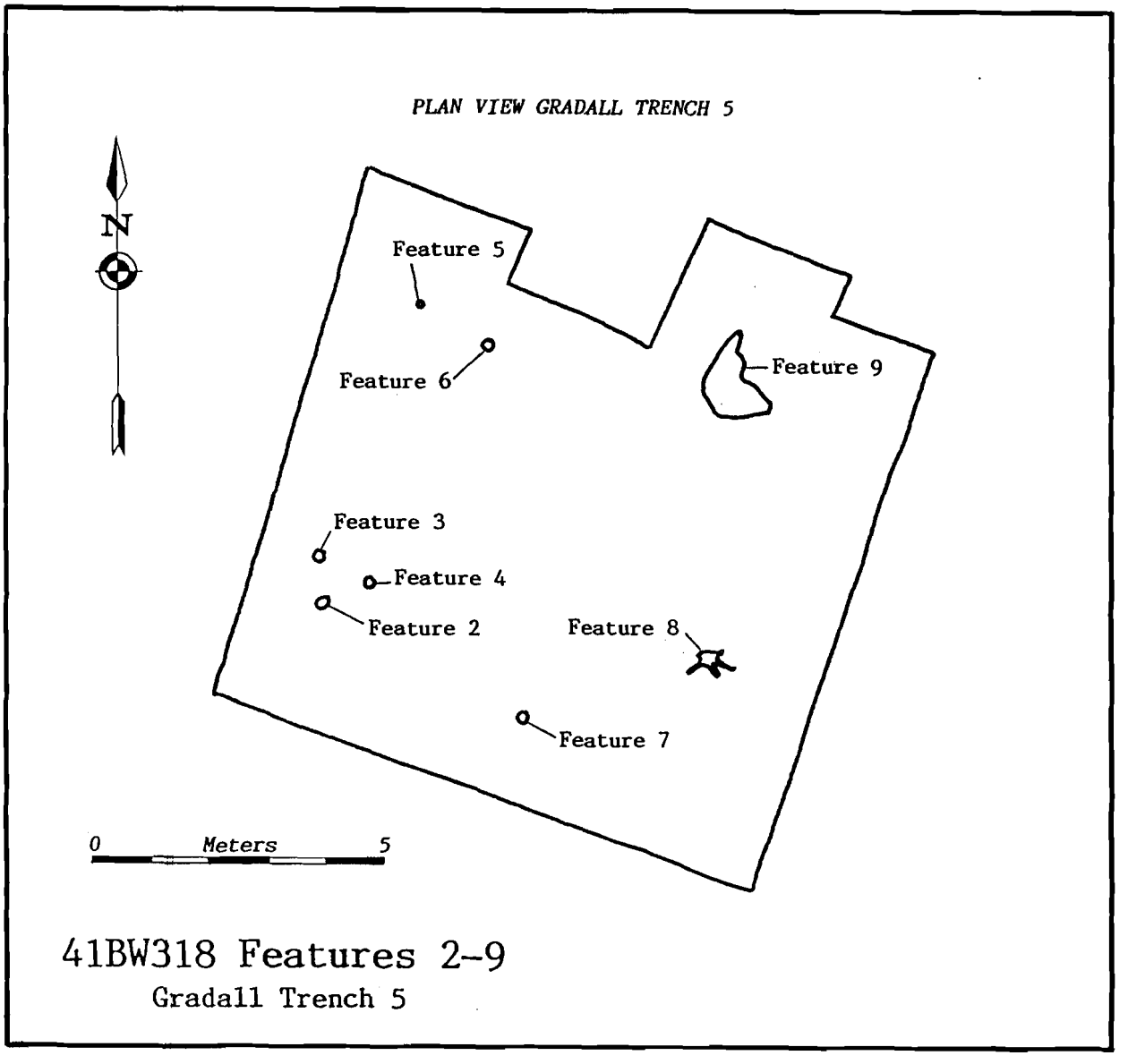


FIGURE 7. Gradall Trench 5 and the locations of Features 2-9 at 41BW318.

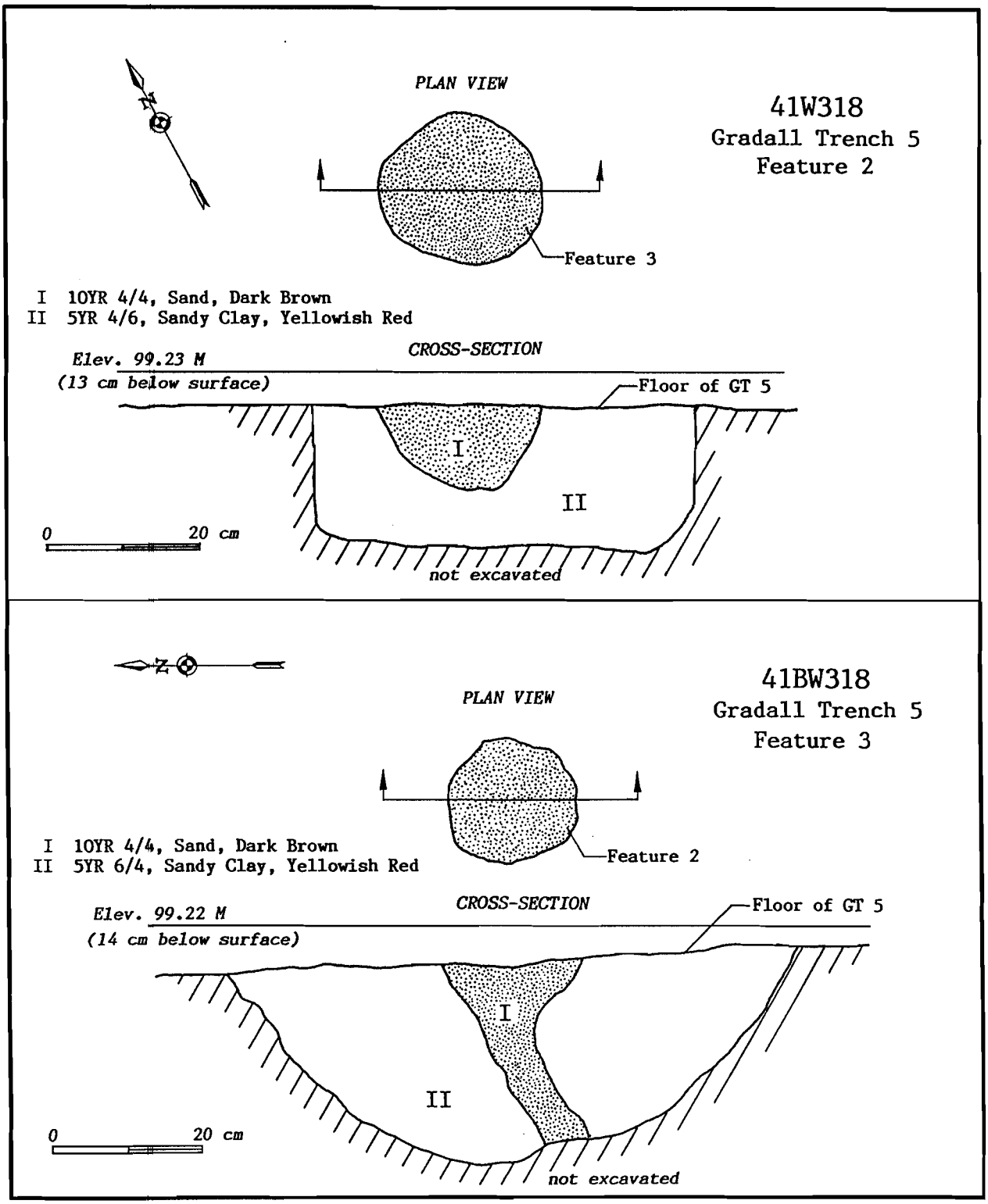


FIGURE 8. Features 2 and 3 at 41BW318.

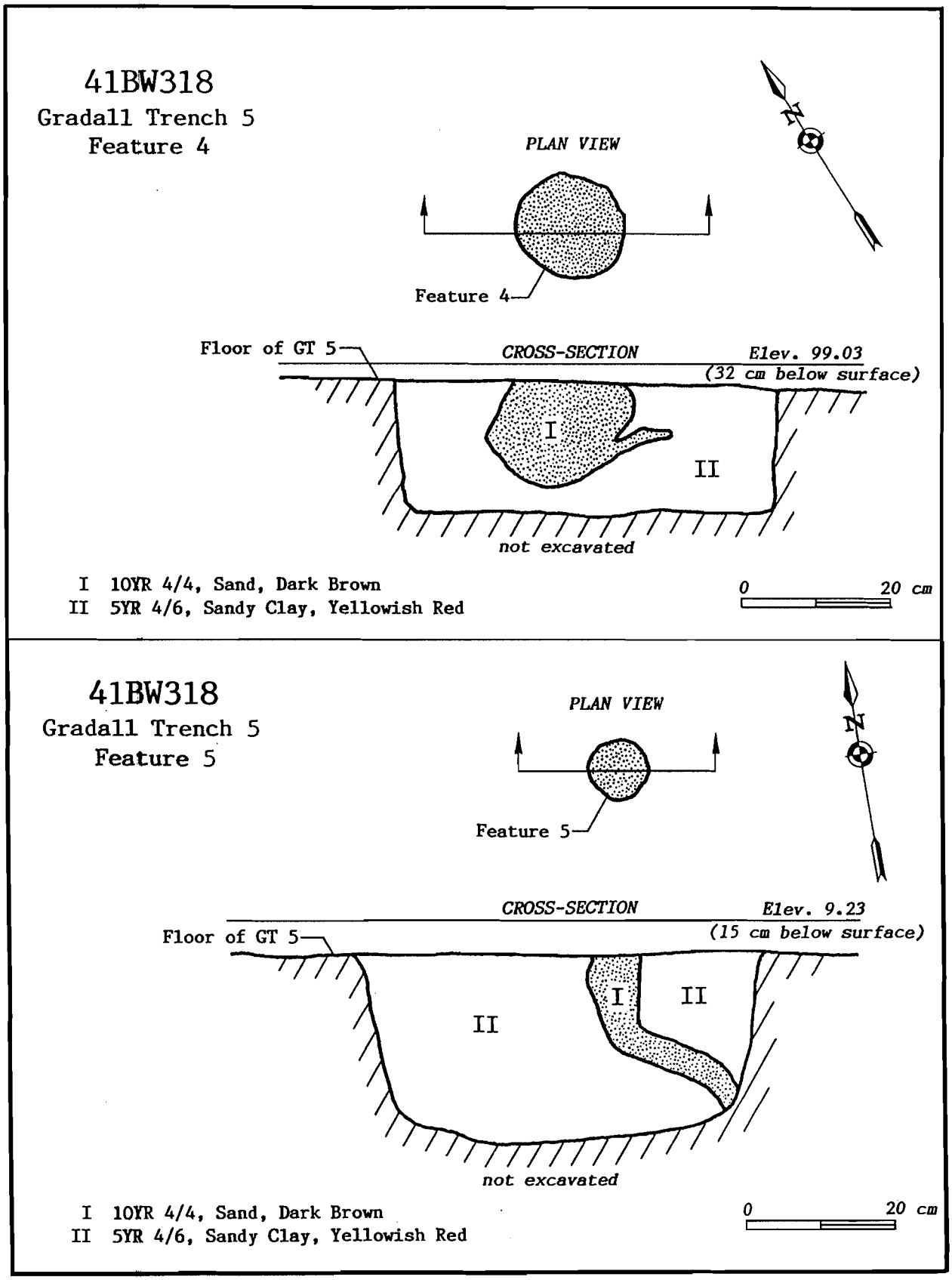


FIGURE 9. Features 4 and 5 at 41BW318.

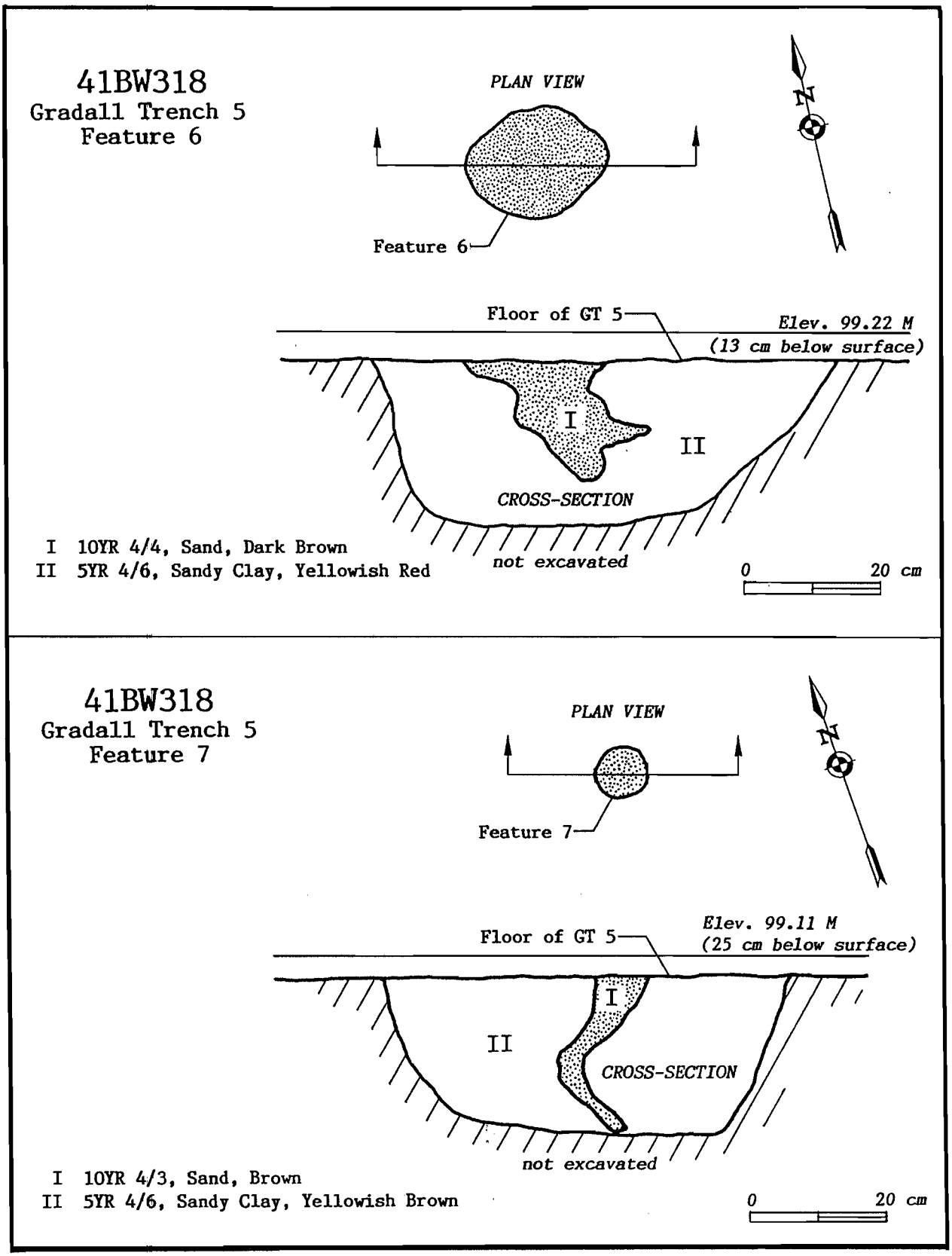


FIGURE 10. Features 6 and 7 at 41BW410.

Feature 7 (Fig. 10) appears in plan view as a small, circular stain about 7 cm in diameter. The top of the feature was apparent at about 28 cm below the surface. It is filled with dark brown (10YR 4/4) sand and is surrounded by yellowish-red (5YR 4/6) sandy clay. In cross-section, it forms a tubular shape about 3 to 5 cm in diameter. It extends to a depth of more than 40 cm below the surface. It is obviously a transverse cross-section of an animal run.

Feature 8 (Fig. 11) appears in plan view as an irregular stain consisting of a circular portion, about 10 cm in diameter, with root-like extensions. The top of the feature was apparent at about 23 cm below the surface. It is filled with dark brown (10YR 4/4) sand and is surrounded by yellowish-red (5YR 4/6) sandy clay. In cross-section, it is tubular and extends to a depth of 53 cm below the surface. From its cross-section it appears to be either a tree root, or possibly an animal run.

Feature 9 (Fig. 12) appears in plan view as a large, irregular stain about 150 cm long and 110 cm wide. The top of the feature was first apparent at about 5 cm below the surface. It is filled with dark gray (5YR 4/1) loam or clay loam is surrounded by yellowish-red (5YR 4/6) sandy clay. The fill is oily in texture and there is no evidence of charcoal or ash. No artifacts were found in the fill, although it was screened through 1/4-inch hardware cloth. In cross-section the anomaly forms a shallow, basin shape and extends to a depth of about 35 cm below the surface. Just below the main portion of the stain is a thin, leached zone. Based on the shape of this anomaly; the nature of its fill; the lack of charcoal, ash, or artifacts of any kind; and the fact that the site area has been disturbed and has had heavy equipment parked on it at various times in the past 60 years; the "feature" probably represents oil or fuel which has leaked from machinery of some sort.

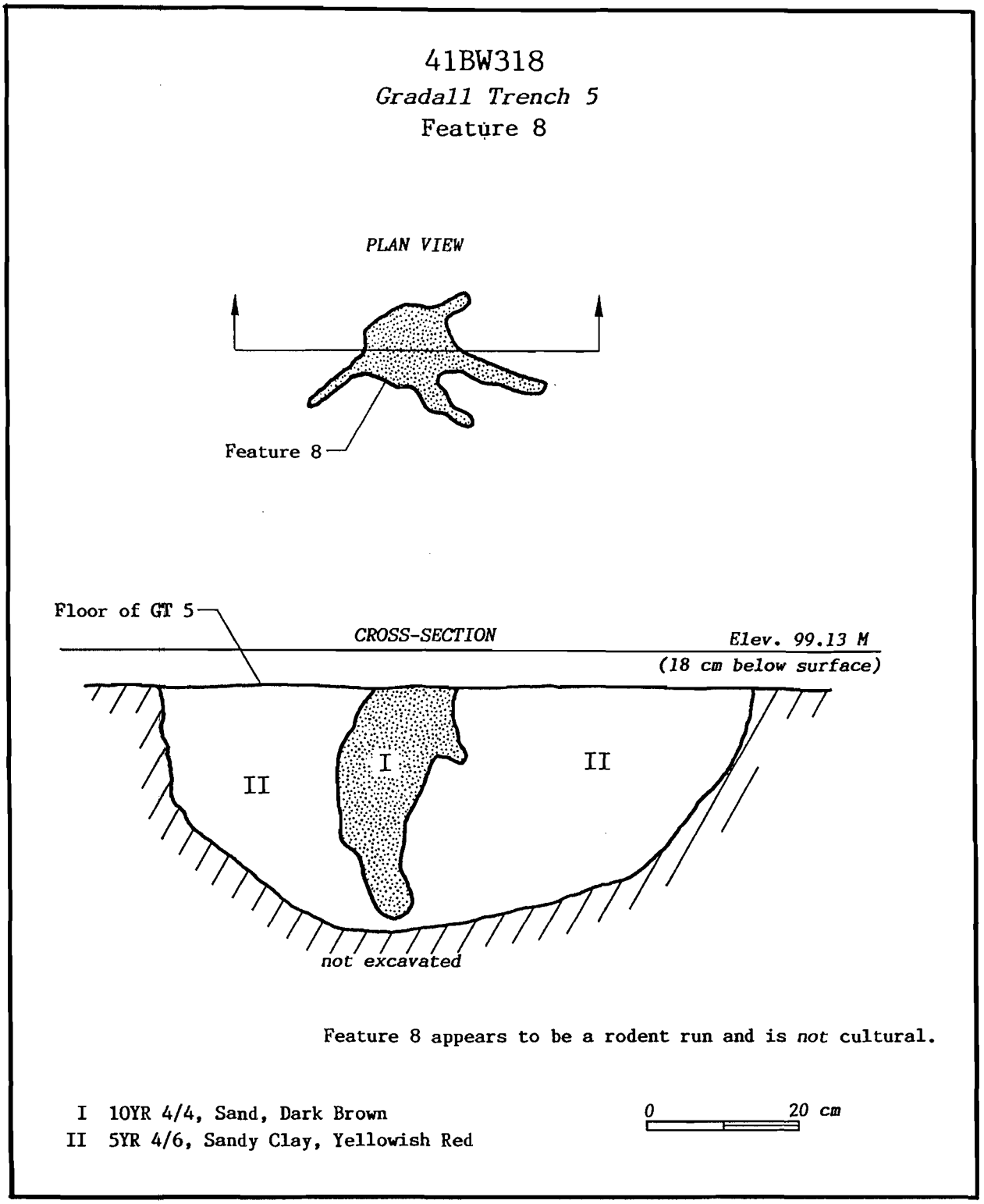


FIGURE 11. Feature 8 at 41BW318.

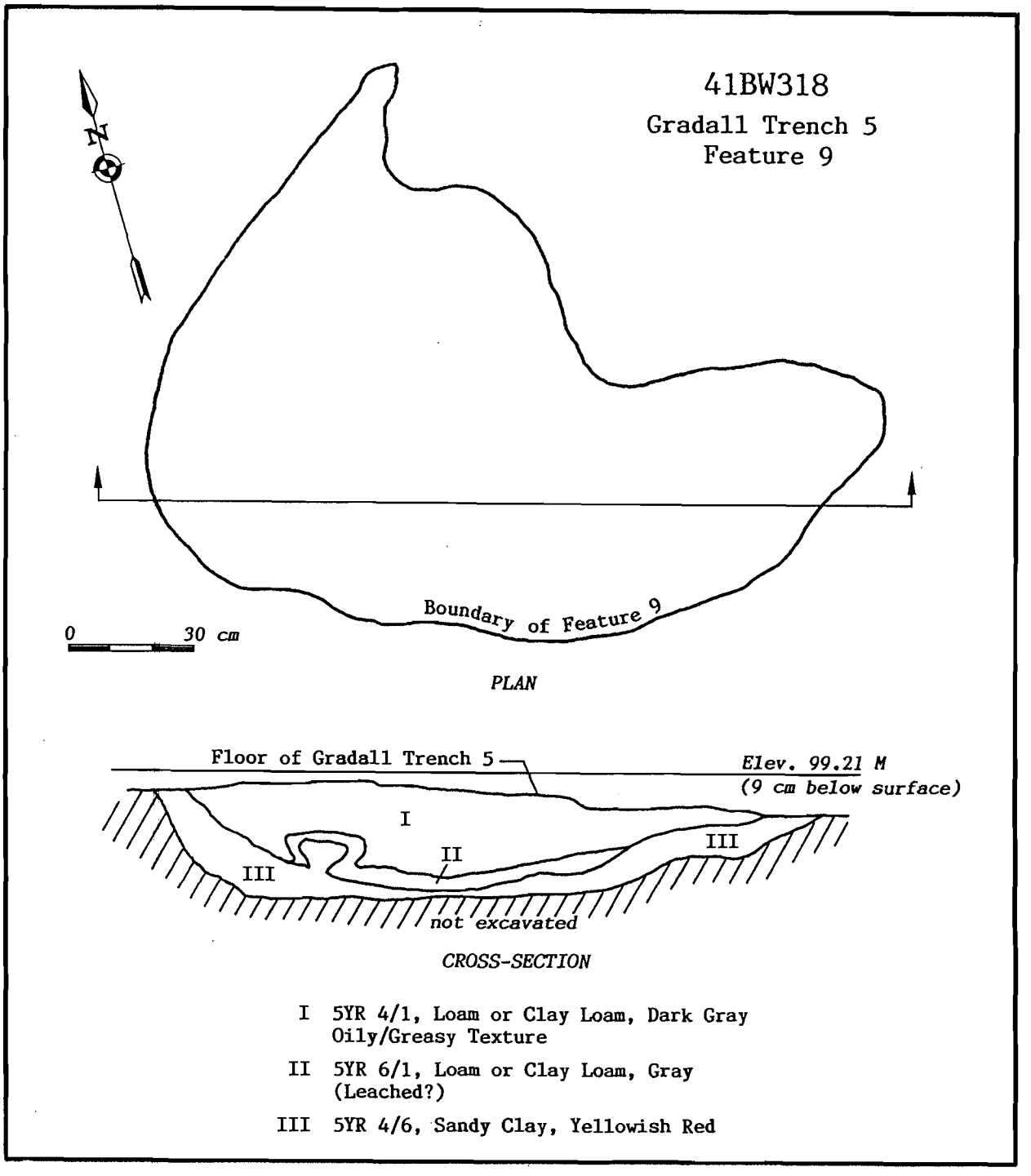


FIGURE 12. Feature 9 at 41BW318.

INVESTIGATIONS AT 41BW410

Field Methods

At Site 41BW410, a total of nine (9) 1-meter-by-1-meter test units were excavated in 10 cm levels measured from the surface. All of the test units were excavated with shovels and trowels. The units were scraped with a trowel at the end of each level in order to reveal any stains that might indicate features, disturbances, or natural stratigraphy. All soil from the test units was passed through 1/4-inch mesh hardware cloth and all artifacts found in situ were plotted on standardized level forms. Cultural material was collected from the screens and approximate material counts were noted on the level forms at the end of each level. When each test unit was completed, a profile sketch was made of the stratigraphy of one wall.

In addition to the test units, a total of five (5) trenches were excavated using a Gradall. All trenching was monitored to document any features or other anomalies that might be found. When each trench was completed, a profile sketch was made of a portion of one wall illustrating a typical stratigraphic profile.

Horizontal control was maintained with a transit and measuring tape. Vertical control was maintained with a transit and (for profile sketches) a string, line level, and tape. An arbitrary datum was established on the site and designated with an assumed elevation of 100 meters. All elevations were made relative to this point. The datum was later tied-in to the datum used at 41BW318, which in turn was tied-in to a permanent datum at the northwest corner of the existing Sulphur River bridge.

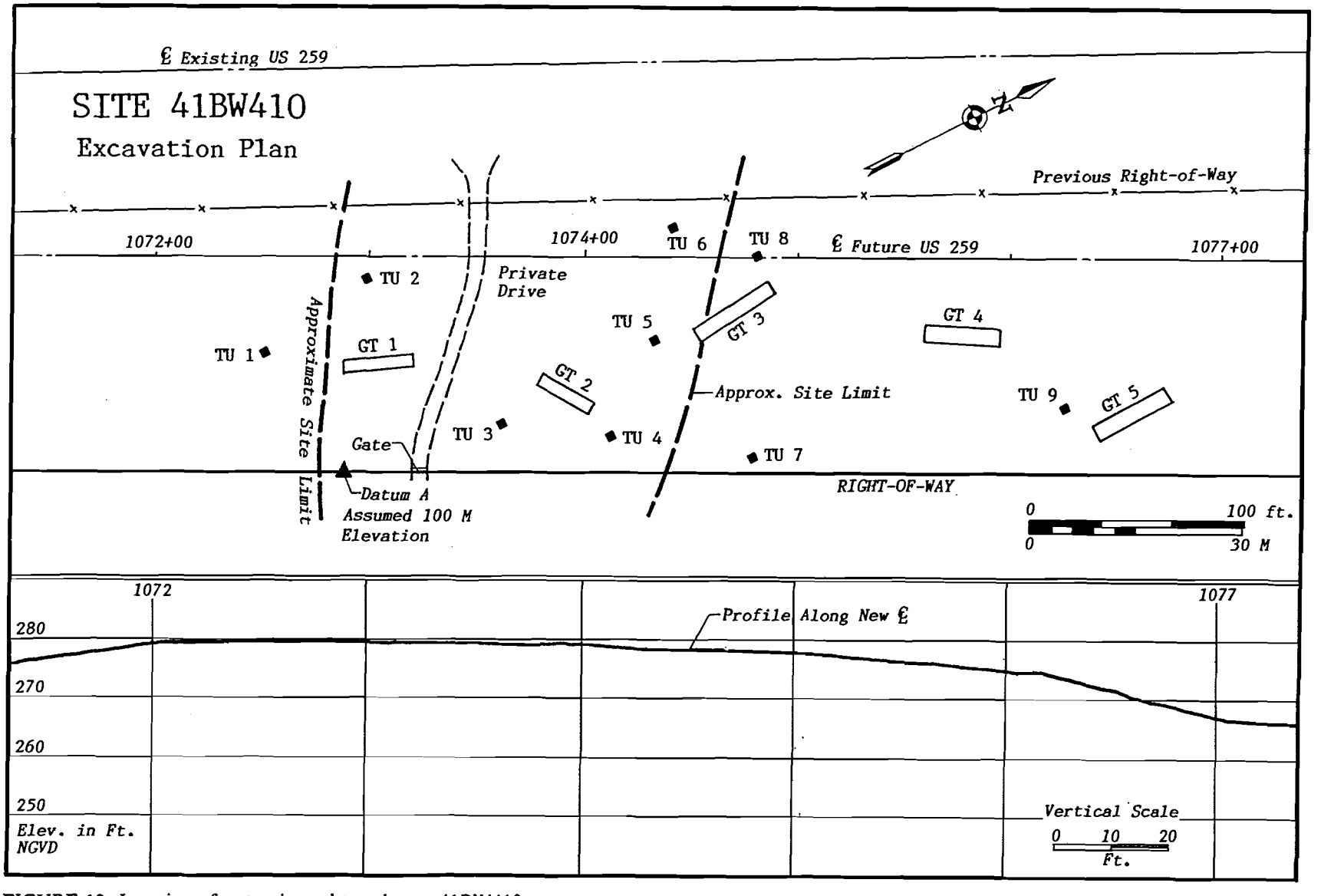


FIGURE 13. Location of test units and trenches at 41BW410.

Stratigraphy

Typical profiles from 41BW410 are shown in Figure 14. The soils tend to be similar throughout the site, and any differences encountered from north to south are probably due to differences in slope. The southern end of the site is at the edge of an old upper terrace of the Sulphur River. All artifacts came from the uppermost 20 or 30 cm of deposits.

Four zones were identified in the south end of Trench 2 (Fig. 14). The upper zone (A-horizon) consists of very pale brown (10YR 3/3) sand with lots of grass and tree roots. This zone extend from the surface to a depth of about 20 cm. Below this was a dark brown (7.5YR 4/4) silt or fine sand (lower A-horizon). Zone 2 is about 45 cm thick. Zone 3 is a white to pale gray (10YR 8/1), leached, silty clay (E-horizon?). The lowest soil zone observed was a dark yellowish brown (10YR 3/6) clay, which probably represents an argillic B-horizon or alluvial C-horizon. Trench 3 had a very similar profile. Trench 1, the north end of Trench 2, and Trench 4 were similar, but without the leached zone (Zone 3).

Trench 5 had a slightly different appearance from the others. In this trench, there was a thin zone of brown (7.5YR 5/3) sand from the surface to a depth of about 5 cm. Beneath this was a zone of dark brown (7.5YR 4/4) silt or fine sand, similar to that seen in Zone 2 in other profiles. Instead of a leached zone, Zone 3 consisted of strong brown (7.5YR 5/8) sandy clay. Zone 4 consisted of dark yellowish brown (10YR 3/6) clay, which probably represents an argillic B-horizon or alluvial C-horizon, similar to that observed in the other profiles.

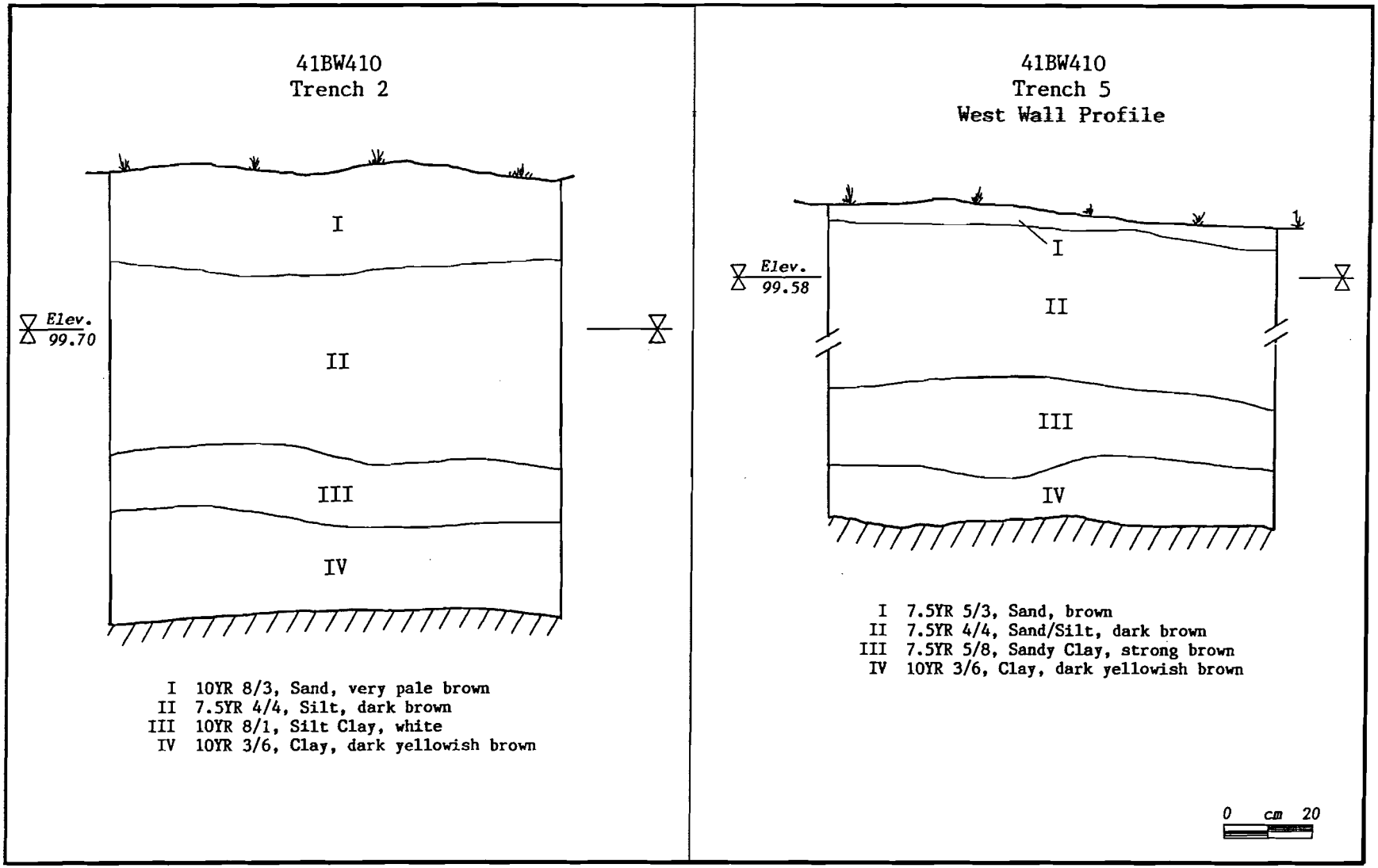


FIGURE 14. Typical stratigraphic profiles at 41BW410.

Artifact Descriptions

All of the artifacts recovered from testing are presented in Table 4. No material was recovered below a depth of 30 cm, and Test Units 1, 6, 7, and 9 were completely sterile. Artifacts counts from the other five (5) test units tended to be low.

Flakes and Burned Rock

Most of the 30 flakes are small tertiary flakes, but 12 (40%) of the flakes are secondary. No primary flakes were recovered. Pieces of burned rock/shatter were only found in Test Unit 3.

Prehistoric Pottery

Small, prehistoric pottery sherds (each less than 3 cm diameter) were found in Test Unit 3, Levels 2 and 3. All of the sherds are plain with bone and grog temper. The sherds found in Level 3 came from the southern half of the test unit. The presence of this type of pottery may indicate a Middle or Late Caddoan component.

Historic Debris

Only one piece of historic debris was found, and occurred near the surface in Test Unit 4. It is a small piece of clear bottle glass and is probably of recent origin.

Hematite and Ochre

Hematite and yellow ochre occur naturally throughout eastern Texas. Small pebbles of hematite and ochre were collected as they were encountered during screening. However, none appear to occur in association with any features. These items are probably not artifactual.

TABLE 4. Material recovered from 41BW410.

Unit	Level	Secondary Flakes	Tertiary Flakes	Burned Rock and Shatter	Prehistoric Pottery	Historic Debris	Hematite	Ochre
TU-1	1	.	.	.	.	.	.	.
TU-2	1	1	1	.	.	.	.	.
	2	5	4	.	.	.	.	.
	3	.	.	.	.	.	.	.
	4	.	.	.	.	.	.	.
TU-3	1	2	3	1	.	.	.	1
	2	1	2	.	5	.	2	.
	3	1	1	1	5	.	2	.
	4	.	.	.	.	.	.	.
	5	.	.	.	.	.	.	.
	6	.	.	.	.	.	.	.
TU-4	1	2	2	.	.	1	.	.
	2	.	2	.	.	.	.	.
	3	.	.	.	.	.	.	.
TU-5	1	.	2	.	.	.	.	.
	2	.	.	.	.	.	.	.
	3	.	.	.	.	.	.	.
	4	.	.	.	.	.	.	.
	5	.	.	.	.	.	.	.
TU-6	1	.	.	.	.	.	.	.
	2	.	.	.	.	.	.	.
TU-7	1	.	.	.	.	.	.	.
	2	.	.	.	.	.	.	.
	3	.	.	.	.	.	.	.
TU-8	1	.	1	.	.	.	.	.
	2	.	.	.	.	.	.	.
	3	.	.	.	.	.	.	.
	4	.	.	.	.	.	.	.
	5	.	.	.	.	.	.	.
TU-9	1	.	.	.	.	.	.	.
	2	.	.	.	.	.	.	.
	3	.	.	.	.	.	.	.
	4	.	.	.	.	.	.	.

CONCLUSIONS

Site 41BW318

Site 41BW318 appears to be a disturbed site with shallow, mixed components and low artifact yield. Diagnostic artifacts include a Trinity dart point and sherds of plain and red-slipped pottery with bone and grog temper. These items indicate Middle Archaic and Middle to Late Caddoan components. Although a total of nine (9) soil anomalies were identified tentatively as features, seven (7) are obviously the result of natural animal and root disturbances, or the result of recent, man-made disturbance. The other two (2) are possible post mold features, but their proximity and similarity with the seven (7) krotovina makes this designation speculative. Animal disturbance was frequently encountered during test excavations.

Because of the shallow, mixed cultural deposits, and evidence of disturbance, the portion of the site within the proposed right-of-way is not considered eligible for the National Register of Historic Places. It is not recommended for designation as a State Archeological Landmark.

Site 41BW410

Site 41BW410 has very shallow cultural deposits and low artifact yields. Of the nine test units excavated, four (4) were sterile and the other five (5) had no cultural material below 20 or 30 cm. In addition, no features were encountered. Bone and grog tempered pottery suggests the presence of a Middle or Late Caddoan component. However, no other diagnostic artifacts were found during testing.

Because of the shallow nature of the cultural deposits and lack of features, the site is not considered eligible for the National Register of Historic Places. It is not recommended for designation as a State Archaeological Landmark. Neither site is recommended for further investigation.

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