AN ARCHAEOLOGICAL SURVEY OF PROPOSED SYSTEM IMPROVEMENTS FOR THE ALTO RURAL WATER SUPPLY CORPORATION IN SOUTHEAST CHEROKEE COUNTY, TEXAS

Antiquities Permit 3126

by

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BVRA Project Number 03-13

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ABSTRACT

An archaeological evaluation of a proposed 59.44 mile water line in southeast Cherokee County, Texas was performed by Brazos Valley Research Associates in May 2003 under Texas Antiquities Permit 3126. This project was reviewed by the Texas Historical Commission, Archeology Division. Federal involvement is through the United States Department of Agriculture, Rural Development. The background check revealed four archaeological sites (41CE19, 41CE51, 41CE66, and 41CE73) within or near the project area right-of-way. A visit to the project area prior to the field survey, identified 15 areas as likely settings for prehistoric sites. However, no previously recorded sites were found during the field survey. The two areas within the boundaries of previously recorded sites 41CE19 and 41CE66 are recommended for monitoring. Otherwise, it is recommended that the Alto Rural Water Supply Corporation be allowed to proceed with construction as planned with no further archaeological investigations. Copies of this report are on file at the Texas Archeological Research Laboratory; Texas Historical Commission, Archeology Division; Alto Rural Water Supply Corporation in Alto, Texas; and Brazos Valley Research Associates in Bryan, Texas.

ACKNOWLEDGMENTS

Brazos Valley Research Associates is appreciative of the assistance provided by those whose efforts made this project possible. At the Alto Rural Water Supply Corporation (WSC) in Alto, Texas I am grateful to the following for their support: Jack G. Bennett, President of the Board; Teresa Click, Office Manager; Kim Bradshaw, Operator; and Tommy Deal, Assistant. Mr. Bradshaw and Mr. Deal accompanied the Project Archaeologist to the cross-country areas to make sure that the correct route was investigated. At the engineering firm J. F. Fontaine & Associates, Inc. in Palestine, Texas Hollie H. Nowlin and Laura Fontaine Moody are acknowledged for providing maps and other logistical support. Jean Hughes, Records Conservator at the Texas Archeological Research Laboratory (TARL), is thanked for conducting the records check for previously recorded sites in the project area. Edward P. Baxter (Project Archaeologist) assisted with the preliminary reconnaissance and performed the field survey. Debra L. Beene at the Texas Historical Commission, Archeology Division, served as the reviewer for this project. The figures appearing in this report were prepared by Lili Lyddon of LL Technical Services in North Zulch, Texas.

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INTRODUCTION

Brazos Valley Research Associates (BVRA) was retained by Alto Rural Water Supply Corporation (WSC) through J. F. Fontaine & Associates, Inc., Consulting Engineers of Palestine, Texas, to conduct a cultural resources survey of a proposed water line that will service the residents of rural southeast Cherokee County (Figure 1). The project area is depicted on six USGS 7.5' topographic maps: Alto (1973; 31095-F1), Atoy (1973; 31095-G1), Douglass (1983; 31094-F8), Forest (1973; 31095-E1), Pryor Mountain (1973; 31095-F2), and Weches (1973; 31095-E2). The 15 areas investigated during this study are depicted on the relevant topographic maps as Appendix I.

Improvements to the distribution system will consist of adding approximately 313,835 feet (59.44 miles) of new water line throughout the existing service. The majority of the line will be installed along state and county roads within existing rights-of-way and on private property where easements have been obtained. Two segments will traverse cross-country. Elevations within the service area range from a low of 220 feet to a high of 740 feet. Large trees within paths of pipelines will be avoided where possible by either rerouting around or boring under to prevent damage to the trees. Creek crossings by the proposed water lines will be encased and creek bottoms restored to their original condition.

Overall, Cherokee County is located in Northeast Texas in the Eastern Planning Region, an area known to contain significant archaeological sites. Because of this archaeological potential, a cultural resource study by professional archaeologists was warranted according to Section 106 of the National Historic Preservation Act. The Federal agency involved in this project is the United States Department of Agriculture, Rural Development office. Since a portion of the project area is within rights-of-way owned by the State of Texas, an antiquities permit was required, and Antiquities Permit 3126 was issued to BVRA by the Texas Historical Commission, Archeology Division. The project number assigned by BVRA is 03-13. The field survey was conducted on May 26-27, 2003 by Edward P. Baxter. William E. Moore was the Principal Investigator.

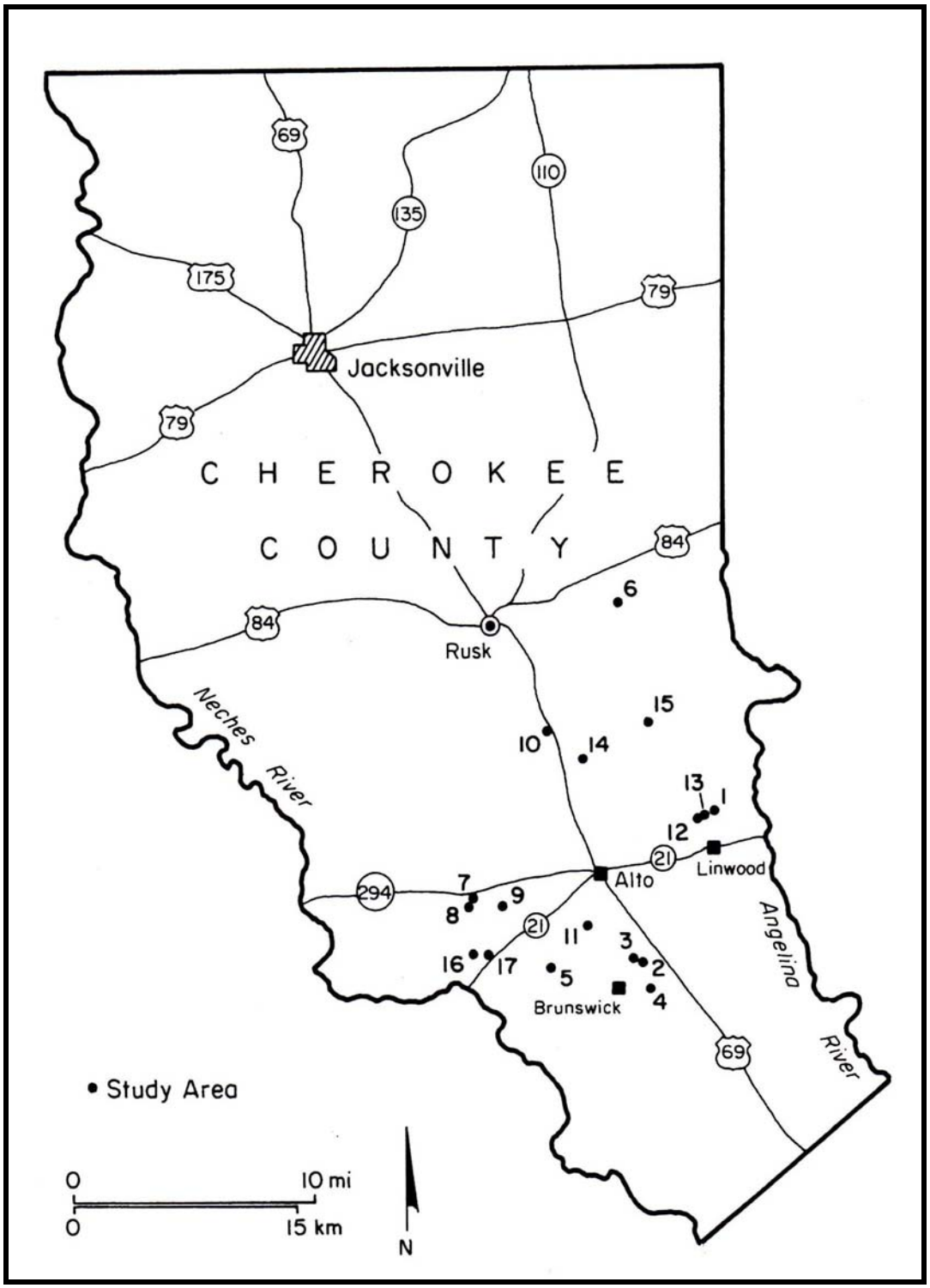

Figure 1. Project Area Map

ARCHAEOLOGICAL BACKGROUND

Cherokee County is located in Northeast Texas within the Eastern Planning Region as defined by Kenmotsu and Perttula (1993). The following comments are taken from their comprehensive document for this area, and the interested reader is referred to this volume for more detailed information. As of 1993, Cherokee County had less than .037 recorded sites per kilometer, ranking it last in the area (Kenmotsu and Perttula 1993:Figure 2.1.2). The county is described as rural with 0.15 - 0.29 people per square kilometer (Kenmotsu and Perttula 1993:Figure 1.2.3) and a population growth of less than 5% (Kenmotsu and Perttula 1993:Figure 1.2.4). Environmentally, it is situated within the Piney Woods, Mixed Pine-Hardwood Forest area of East Texas. Artificial disturbance in the county consists mainly of lignite mines from the Deep Basin Wilcox formation and reservoirs such as Lake Fork Reservoir. In 1991, the county had a total of 134 recorded archaeological sites, of which 14 were regarded as significant (kenmotsu and Perttula 1993:Table 2.1.1). At the time of this survey, 352 sites were known to exist in the county (TARL site files).

One of the major problems regarding our understanding of the archaeology of Northeast Texas lies in the lack of data for sites with isolable Paleoindian or Archaic components. "Despite the existence of a potentially rich data base, the body of useful information on these time periods is small" (Kenmotsu and Perttula 1993:70). The authors credit this to the fact that most early materials have been found mixed with later components. When found, they are difficult to interpret because of limited absolute dating; poorly defined artifact chronologies; limited preservation of economic data such as faunal and botanical remains, and the typically low density nature of the cultural remains. No sites with isolable Paleoindian or Archaic components have been reported for Cherokee County as recently as 1993 (Kenmotsu and Perttula 1993:Table 2.3.1). One site (41CE261) attributed to the Hunter-Gatherer period (prior to sedentism) has been identified in Cherokee County (Kenmotsu and Perttula 1993:Table 2.3.2). Site 41CE261 is listed as a possible Archaic site containing faunal remains and a probable midden. One of the problems with these early sites is that they usually contain only lithic artifacts; rarely, some sites have yielded hardwood nutshells and burned rock concentrations. "The scarcity of remains other than lithic artifacts is due mostly to the relatively great age of these deposits and the poor preservation of organic remains and nondurable features" (Kenmotsu and Perttula 1993:75). The minimum criterion for significance of these sites is the presence of non-artifactual data such as cultural features and faunal and botanical remains and diagnostic projectile points that allow confident chronological assessments.

Following the hunter gatherer period (circa 500 B.C.), the emergence of sedentism arrived in Northeast Texas and lasted until A.D. 1000. Sedentism is defined by Kenmotsu and Perttula (1993:97) as "cultural systems where all or part of the population resides at the same location for all or most of the year." Until recently, very little research had been directed toward the emergence of sedentism in Northeast Texas. Factors that are believed to have been causal in terms of this change include population growth, territorial constriction, environmental change, technological innovation, modifications in social organization, and/or changes in subsistence strategies (Kenmotsu and Perttula 1993:97).

During this time a major technological innovation, the emergence of pottery and the bow and arrow, appeared. Sites dating to this period are often referred to as Early Ceramic. The George C. Davis site (41CE19) is one of the major sites of this period in Cherokee County to be excavated.

The next period is referred to as the development of agriculture in Northeast Texas before A.D. 1600. Study questions for this period should focus on the processes that influenced the development of agriculture in Northeast Texas among prehistoric Caddoan populations with agriculture defined here as a maize-based economy as described in Fritz (1990). Major sites of this period include Caddoan archaeological sites, particularly habitation locales with associated burials and burial furniture (usually pottery). More than 4700 prehistoric archaeological sites have been recorded in both the Northeast Texas region and adjoining counties where associations exist with the Caddoan archaeological tradition (Kenmotsu and Perttula 1993:124).

Approximately 80% of the significant sites in this region are prehistoric Caddoan sites which were occupied sometime between A.D. 800 and A.D. 1600. These sites include multiple and single mound centers; cemeteries; habitation sites such as villages, hamlets, and farmsteads; and possible extractive/processing locations. Most of these sites, unfortunately, are on private land and are not protected from vandalism. Between 5 and 9 important Formative-Middle Caddoan sites were known to exist in Cherokee County as of 1993 (Kenmotsu and Perttula 1993:Figure 2.5.1). The number of important Late Caddoan Period sites as of 1993 for Cherokee County is, however, greater at 30 (Kenmotsu and Perttula 1993:Figure 2.5.2). In 1993, 39 Caddoan Period archaeological sites with excellent faunal and floral preservation were known to exist. Although only five are in Cherokee County (Kenmotsu and Perttula 1993:Figure 2.5.3), no county in Northeast Texas had a higher number at that time. Cemeteries and burial mounds are common throughout Northeast Texas, and these archeological phenomena are viewed as extremely significant research data sets because of the bioarchaeological, cultural, and sociopolitical information relevant to the development of agriculture encoded in the mortuary practices, associated grave goods, and pathologies/infections preserved in the skeletal remains (Kenmotsu and Perttula 1993:127).

In 1993, 21 archaeological sites in Cherokee County had produced human remains (Kenmotsu and Perttula 1993:Figure 2.5.5); two single mound sites and one multiple mound site are recorded in the county (Kenmotsu and Perttula 1993:Figure 2.5.6).

Fifty-three Critical Resource Zones have been defined in the Northeast Texas region for sites that are relevant to the research on the development of agriculture prior to A.D. 1600. Five of these zones are in Cherokee County (Kenmotsu and Perttula 1993:Figure 2.5.7). One of these zones is in the southeast portion of the county not far from the current project area.

The final archaeological period is that of European contact with native Indian groups, especially the historic Caddo (circa A.D. 1685 - A.D. 1859). The infusion of material goods and cultural traits brought to the area by the Europeans changed forever the lifeways of the native Caddoan peoples. At least 89-90 Caddoan sites of this period are known in Northeast Texas. In Cherokee County, six sites have produced historic materials in association with native Indian artifacts (Kenmotsu and Perttula 1993:152). These include brass bells and European gunflints (41CE6), glass beads and brass tinkler (41CE12), majolica pottery (41CE19), glass beads (41CE20), 18th century gun found on the surface (41CE48), and glass beads (41CE293). Two Critical Resource Zones have been identified for Historic Contact Period sites in Cherokee County. These are Killough Creek and Bowles Creek (Kenmotsu and Perttula 1993:Table 2.6.2). The major historic Indian groups in Cherokee County in the early 18th Century were probably the Hasinai (Kenmotsu and Perttula 1993:Figure 2.6.6).

PREVIOUS INVESTIGATIONS

Numerous large-scale reservoir surveys have been conducted in Northeast Texas. Our knowledge of the prehistory of this area is based largely on the results of these surveys and subsequent testing and excavation of sites found within their boundaries. Reservoir studies which involve portions of Cherokee County are Lake Palestine (Anderson 1971; Anderson et al. 1974) to the northwest of the project area (Figure 1).

Several archaeological investigations have recorded sites in or near the project area. Of interest to this project are sites 41CE19, 41CE51, 41CE66, and 41CE73. They are discussed below.

The George C. Davis site (41CE19), the southernmost Caddoan mound site in Texas, is the largest and most significant site in the county. It was first examined by the landowner using prison labor in 1904 (Shafer 1973:10). In 1939-1941, The University of Texas, Works Progress Administration carried out the first controlled excavations at the site. The first detailed analysis of the site was performed by University of Texas archaeologist Alex D. Krieger (Newell and Krieger 1949). Later work was performed under the direction of Dee Ann Story in 1968, 1969, and 1970 (Story 1972); Darrell Creel (1978); Dee Ann Story in 1979 and 1980 (Story 1981), and Davis et al. in 1987 (1992). It is located in Area 17.

In 1969, George B. Kegley and Daniel C. Witter recorded sites 41CE51 and 41CE66 while conducting an archaeological survey for the State Building Commission (Kegley 1969). This survey was conducted along the middle course of the Neches River in order to collect comparative data for the George C. Davis site (41CE19). Very little information is available for these sites. The following discussions are taken from the report by Kegley.

Site 41CE51 is referred to as an artificial earthen mound or a resistent old island remnant on the floodplain of Larrison Creek. The original shape and size is difficult to estimate since the mound has been truncated by a bulldozer. Little artifactual material is present on the surface but (some) may be buried under the alluvium. The investigators observed 2 potsherds, 2 utilized flakes, 1 grinding implement, and 1 "problematical" artifact. It is in Area 4

Site 41CE66 is a prehistoric site on a rise on the flood plain of Bowles Creek 0.4 miles west of Mound B at the George C. Davis site. Test pits (number not specified) yielded two pieces of pottery and lithic debris at a depth of one meter below the surface. The route of the proposed water line passes very close to this site. This site is located on both sides of County Road 2907 (Weeping Mary Road) on a terrace overlooking Bowles Creek to the east. It is in Area 16.

These sites were in the path of a water line route investigated by James E. Corbin (1987) during a survey for the Alto Rural WSC in 1987. Corbin did not conduct any work at these sites because they were considered "sensitive" by the Texas Historical Commission who recommended monitoring during construction.

Site 41CE73 is a historic site that dates to the early 19th century Mexican Land Grant homestead. In 1979, during the University of Texas field school, a two story log cabin known as the Berryman Cabin, a small log spring house, and out buildings were still standing. Behind the cabin is a family cemetery where members of the Berryman family are buried. According to the site form this site should be placed on the National Register of Historic Places. No report documenting the work of the 1979 field school was found at TARL. It is outside the construction corridor and, therefore, not in one of the areas surveyed.

At the time of this survey, archaeologists from The University of Texas at Austin were conducting a magnetometer survey at the George C. Davis site (41CE19). Although they did not work in the area where the proposed water line will pass through the site at Area 17, they were in the immediate area.

METHODS

Prior to entering the field, a records check for previously recorded sites in or near the project area was conducted by Jean Hughes at TARL, the state repository for site records. Archaeological sites found to be within or near the construction corridor were plotted on project maps for use in the field (Appendix II). In addition, relevant reports were checked in order to become familiar with the kinds of sites known to occur in the area. Prior to conducting the field survey, the Principal Investigator and Project Archaeologist drove the entire line (59.44 miles) in order to identify high probability areas for the presence of significant archaeological sites. As a result of this endeavor, 23 areas were plotted on the project area maps as high probability areas if the water line is to be placed on private property in undisturbed soil. According to the engineering firm, J. F. Fontaine & Associates, Inc., the water line will be placed in the disturbed county right-of-way in 6 of these areas. Based on this information, BVRA eliminated these areas from survey. Thee Texas Historical Commission, Archeology Division concurred with this decision, and 15 areas were selected for survey. The 23 original areas were renumbered for this project as areas 1-15. Two areas where the water line will pass through known sites (41CE19 and 41CE66) were selected for monitoring (areas 16 and 17). During the initial reconnaissance, the investigators looked for historic cemeteries close to the project area, and not one was found.

The 15 high probability areas were examined through shovel testing. All excavated dirt was screened using 1/4" hardware cloth, and a shovel test log (Appendix II) was kept. The approximate location of each test appears on the topographic maps as Appendix IV. In all, 61 shovel tests were excavated. Each of the 15 areas examined had good exposed profiles in the ditch within the right-of-way. These areas were visually inspected for cultural materials. The Project Archaeologist documented the field survey with a digital camera, and GPS plottings were taken of shovel test locations for more accurate recording on the topographic maps.

RESULTS AND CONCLUSIONS

A check of site records at TARL revealed numerous sites in the general area. Four sites are in or near the project area. They are 41CE19, 41CE51, 41CE66, and 41CE73 (see *Previous Investigations* above).

The proposed water line will be placed within the boundaries of sites 41CE19 and 41CE66. These areas were recommended for monitoring; therefore, no shovel testing was conducted in these locations.

Site 41CE51 is a prehistoric site located on the east side of County Road 2707. The water line will be placed on the west side of this road. Shovel testing in this area did not produce evidence of this site.

Site 41CE73 is a historic site located on the north side of County Road 2525. Although the water line will be placed on this side of the road, the standing structures and cemetery are well outside the construction corridor. The site was observed during the initial reconnaissance, and no features were observed within the proposed right-of-way.

No cultural materials (prehistoric or historic) were found in any of the 15 areas shovel tested by the Project Archaeologist. Although deep sandy soil was present in a few locations, the sandy mantle overlying sterile clay was not deep at most of the areas shovel tested. The photograph on the cover of this report illustrates the shallow sandy mantle overlying sterile clay in Area 2.

RECOMMENDATIONS

No previously unrecorded archaeological sites were found within the project area. Two previously recorded sites (41CE19 and 41CE66), however, are located within the construction corridor as currently planned. Site 41CE19 is the very significant George C. Davis site, and site 41CE66 is an unknown site in close proximity to 41CE19. It is recommended that monitoring be conducted at these sites (areas 16 and 17) during the construction of the proposed water line. It is also recommended that the results of the magnetometer survey conducted by The University of Texas at Austin in the vicinity of the water line route where it passes through 41CE19 be examined to determine the potential for buried features in this area prior to monitoring.

No additional work is recommended for the rest of the project area. It is always possible that areas containing cultural resources are missed during any archaeological survey. Should any evidence of an archaeological site be encountered during construction of the proposed water line, work in that area should be halted until the situation can be evaluated by the Texas Historical Commission in consultation with BVRA and Alto Rural WSC.

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Story, Dee Ann

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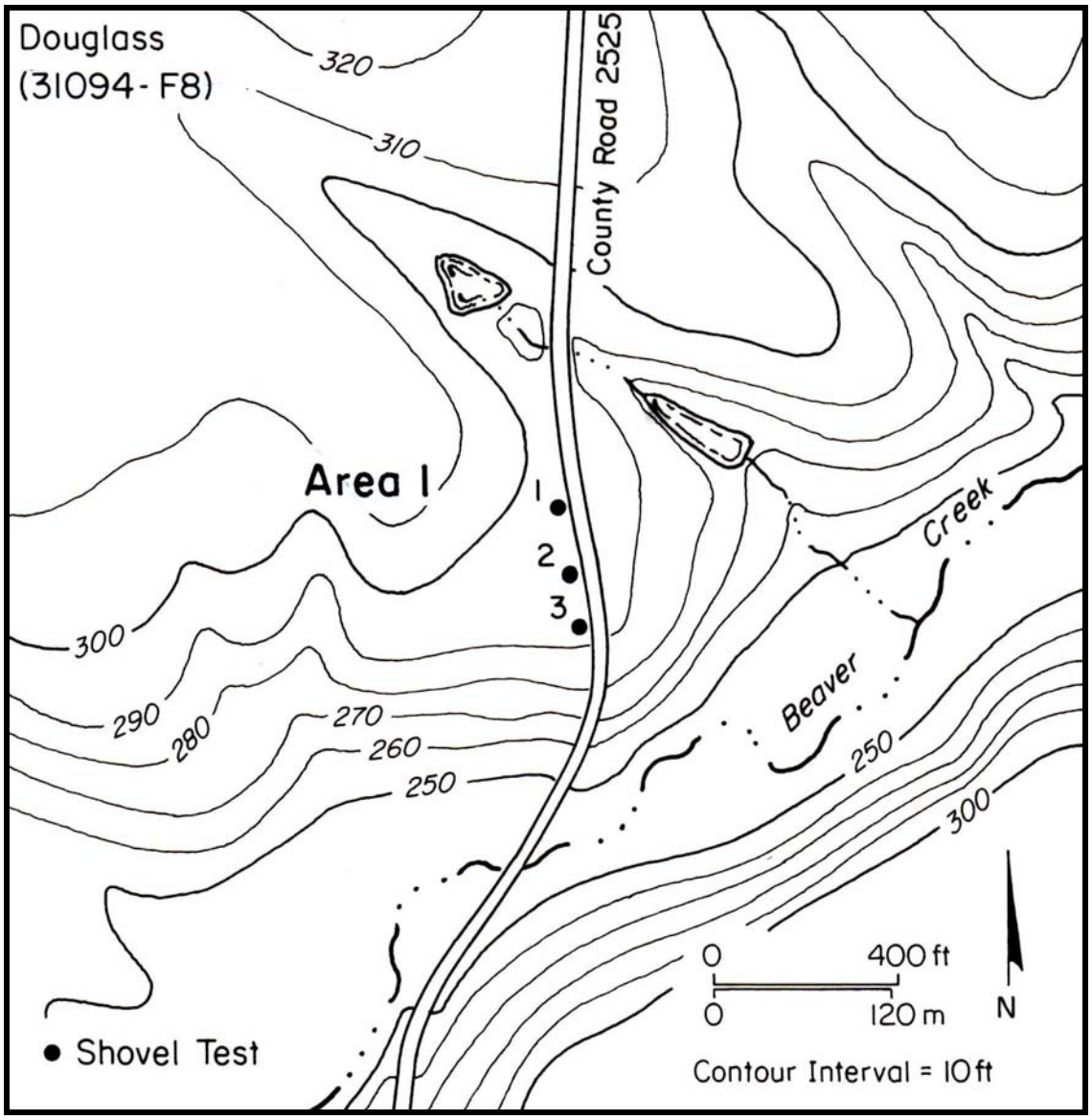
APPENDIX I

AREAS SURVEYED AND SHOVEL TEST LOCATIONS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(31094 - F8)
320
310
County Road 2525
Area I
1
2
3
Creek
Beaver
300
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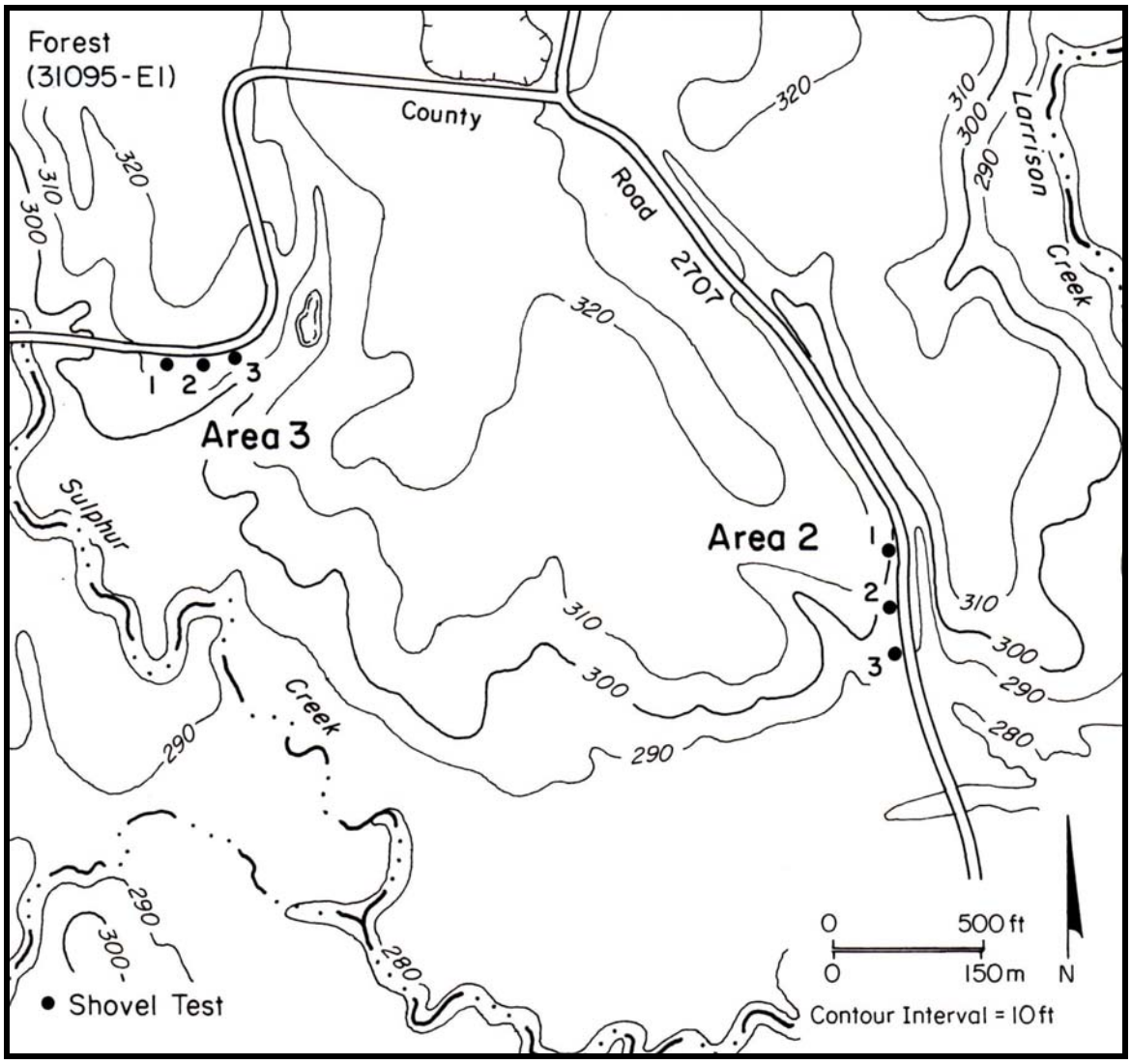
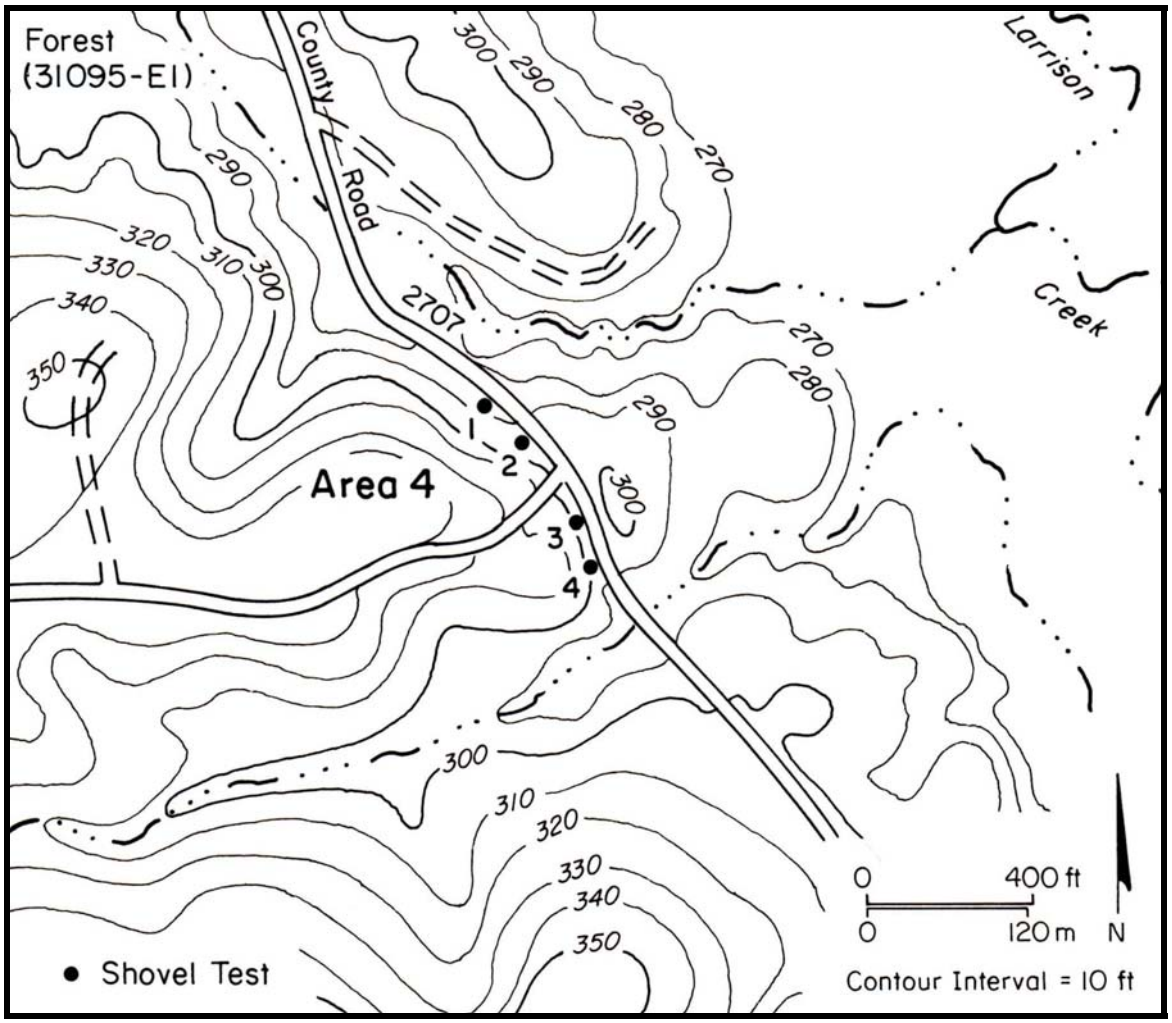
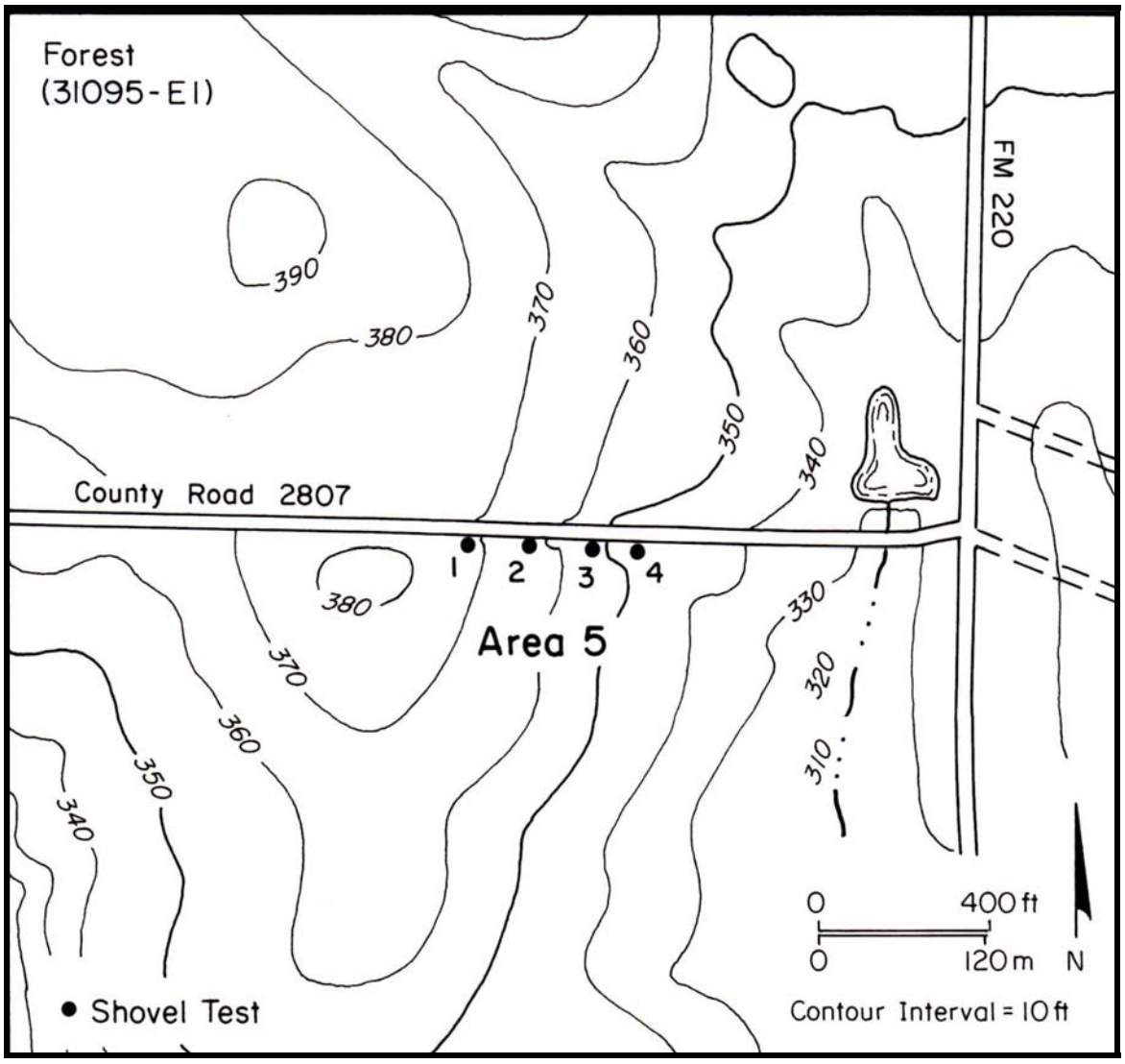
280
270
260
250
250
300
0
400 ft
0
120 m
N
Shovel Test
Contour Interval = 10 ft


Forest
(31095-E1)
County
Road
2707
Harrison
Creek
Area 3
Area 2
Sulphur
Creek
1
2
3
320
310
300
290
280
0
500 ft
0
150m
N
Contour Interval = 10 ft
Shovel Test


Forest
(31095-E1)
County Road
Area 4
Larrison
Creek
2707
1
2
3
4
300
290
280
270
320
310
330
340
350
0 400 ft
0 120 m N
Contour Interval = 10 ft
Shovel Test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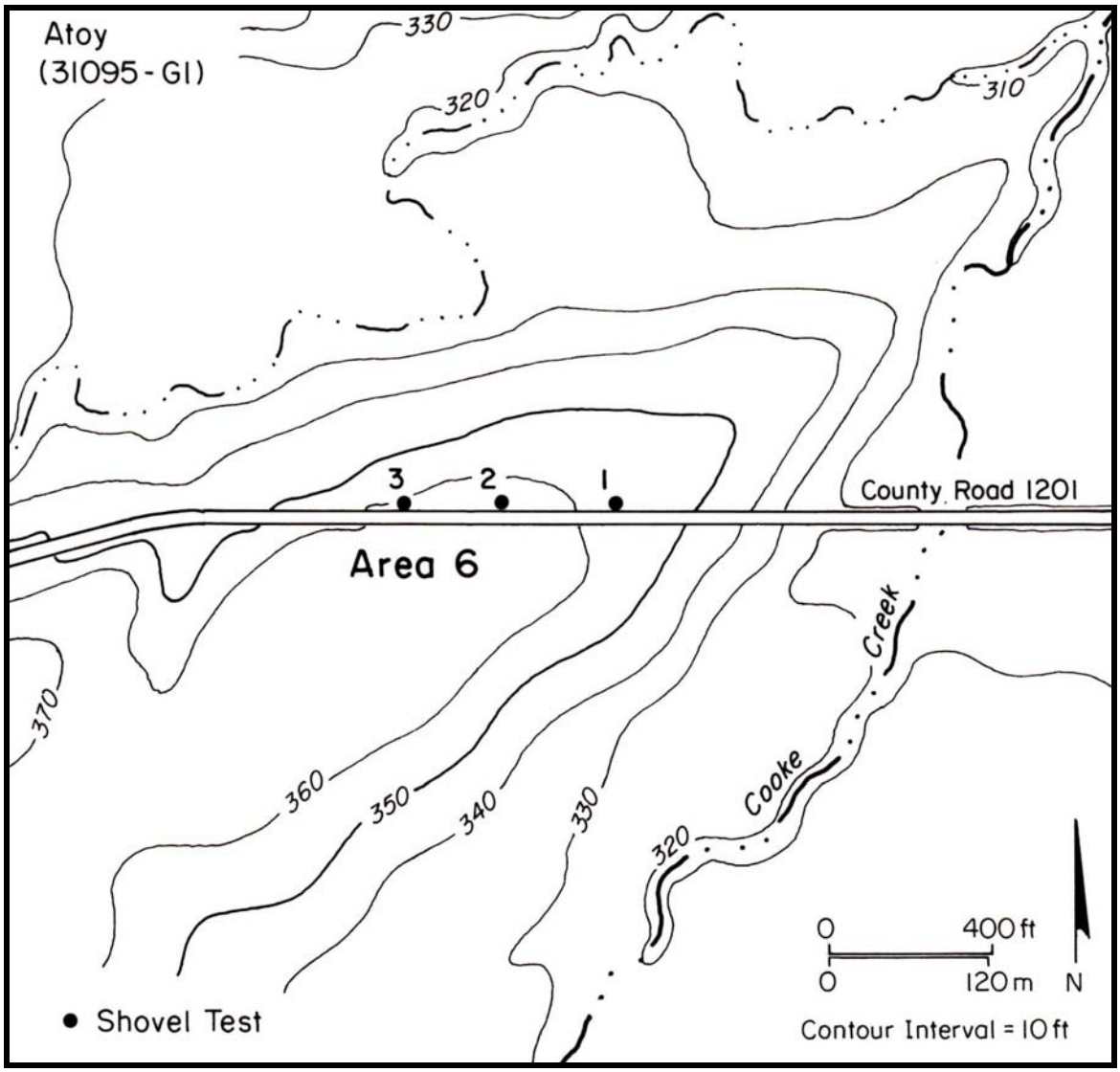
(31095-E1)
FM 220
390
380
370
360
350
340
County Road 2807
1
2
3
4
380
370
360
350
340
Area 5
330
320
310
0
400 ft
0
120 m
N
Shovel Test
Contour Interval = 10 ft


Atoy
(31095-GI)
330
320
310
3
2
1
County Road 1201
Area 6
Creek
Cooke
370
360
350
340
330
320
0
400 ft
0
120 m
N
Shovel Test
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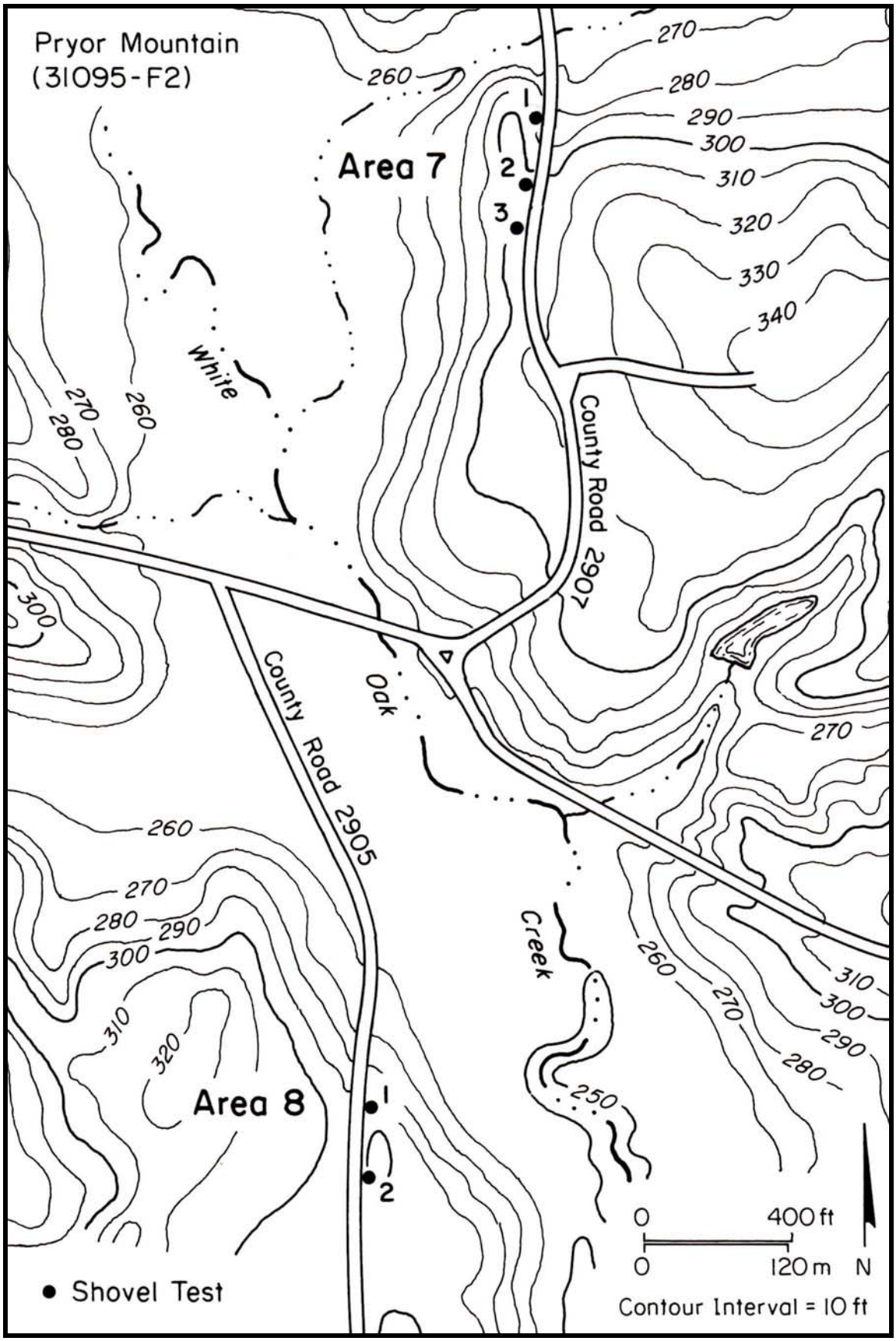
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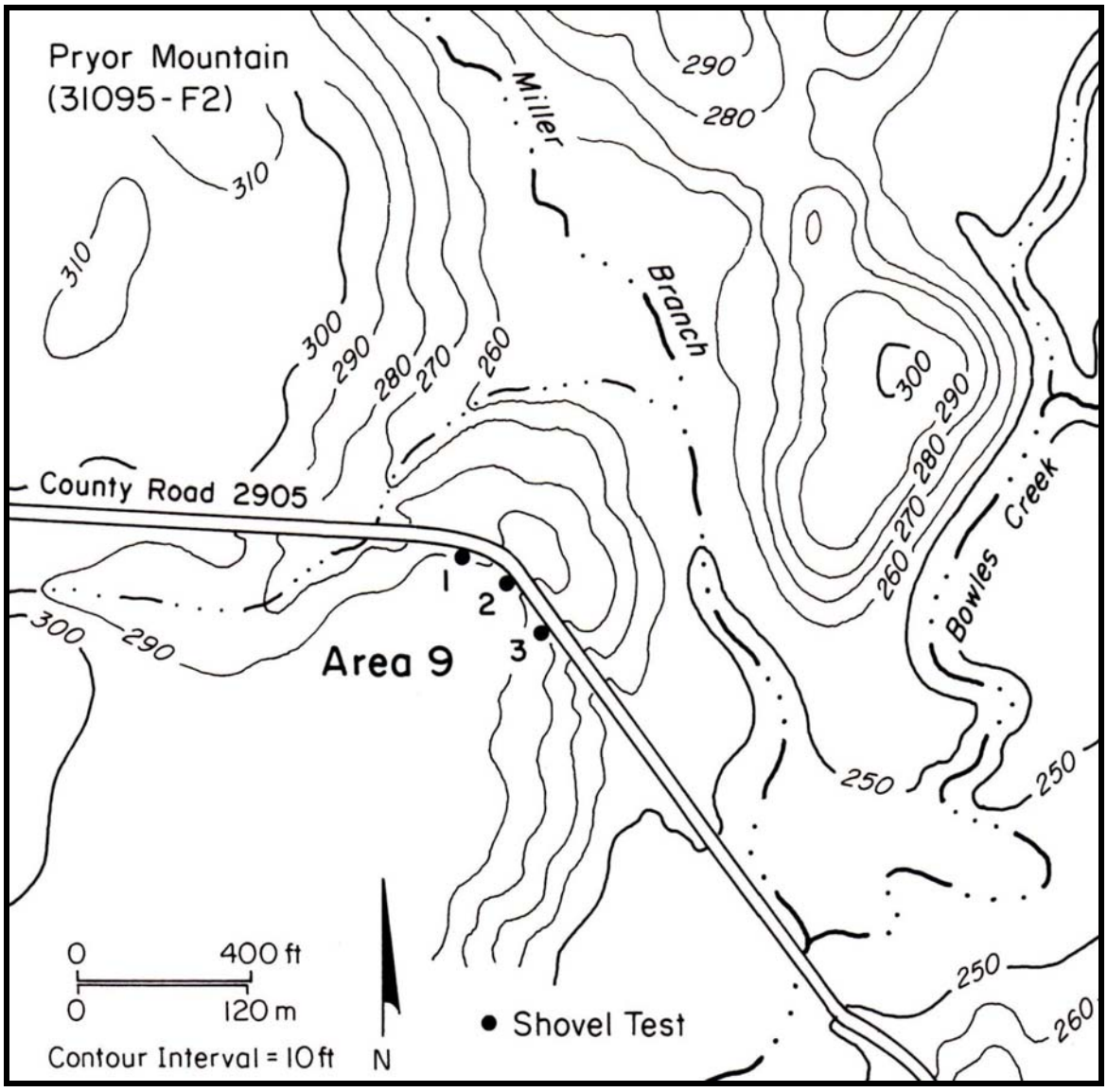
(31095-F2)
Area 7
Area 8
White
Oak
Creek
County Road 2907
County Road 2905
260
270
280
290
300
310
320
330
340
250
1
2
3
0 400 ft
0 120 m N
Contour Interval = 10 ft
• Shovel Test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Miller
Branch
Bowles Creek
County Road 2905
Area 9
1
2
3
310
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270
260
250
0
400 ft
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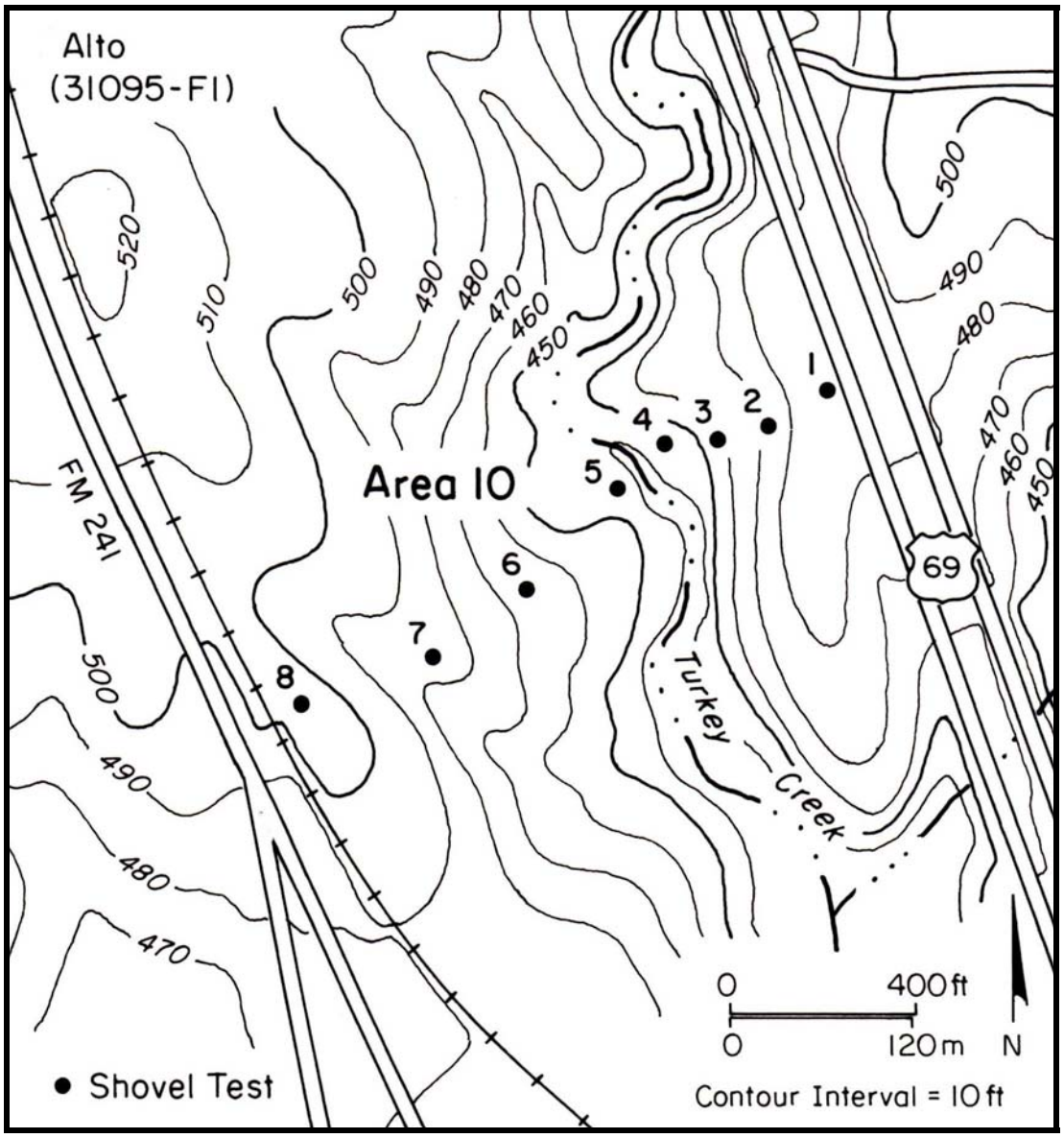
N
Shovel Test


Alto
(31095-F1)
Area 10
FM 241
69
Turkey Creek
520
510
500
490
480
470
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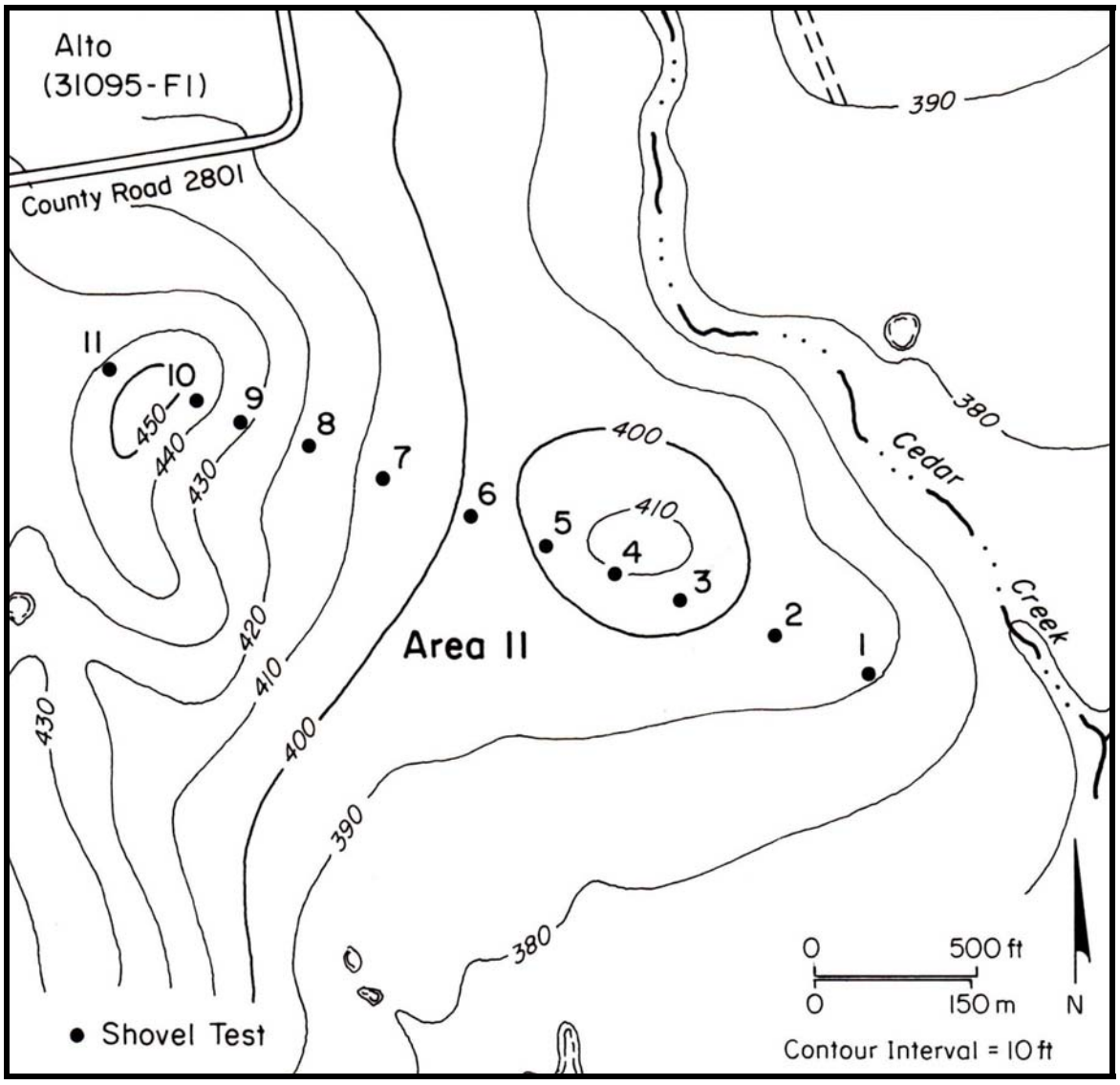
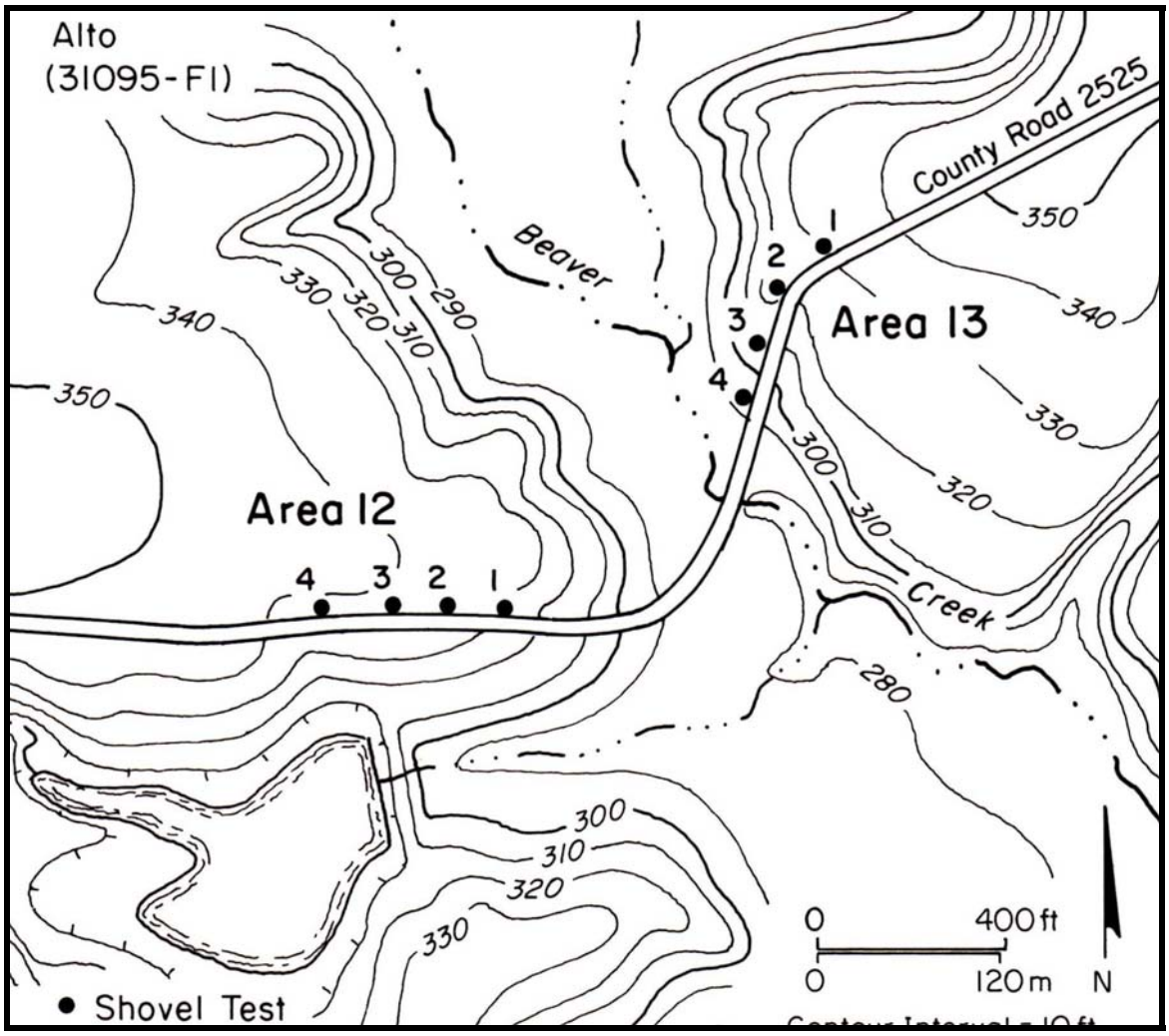
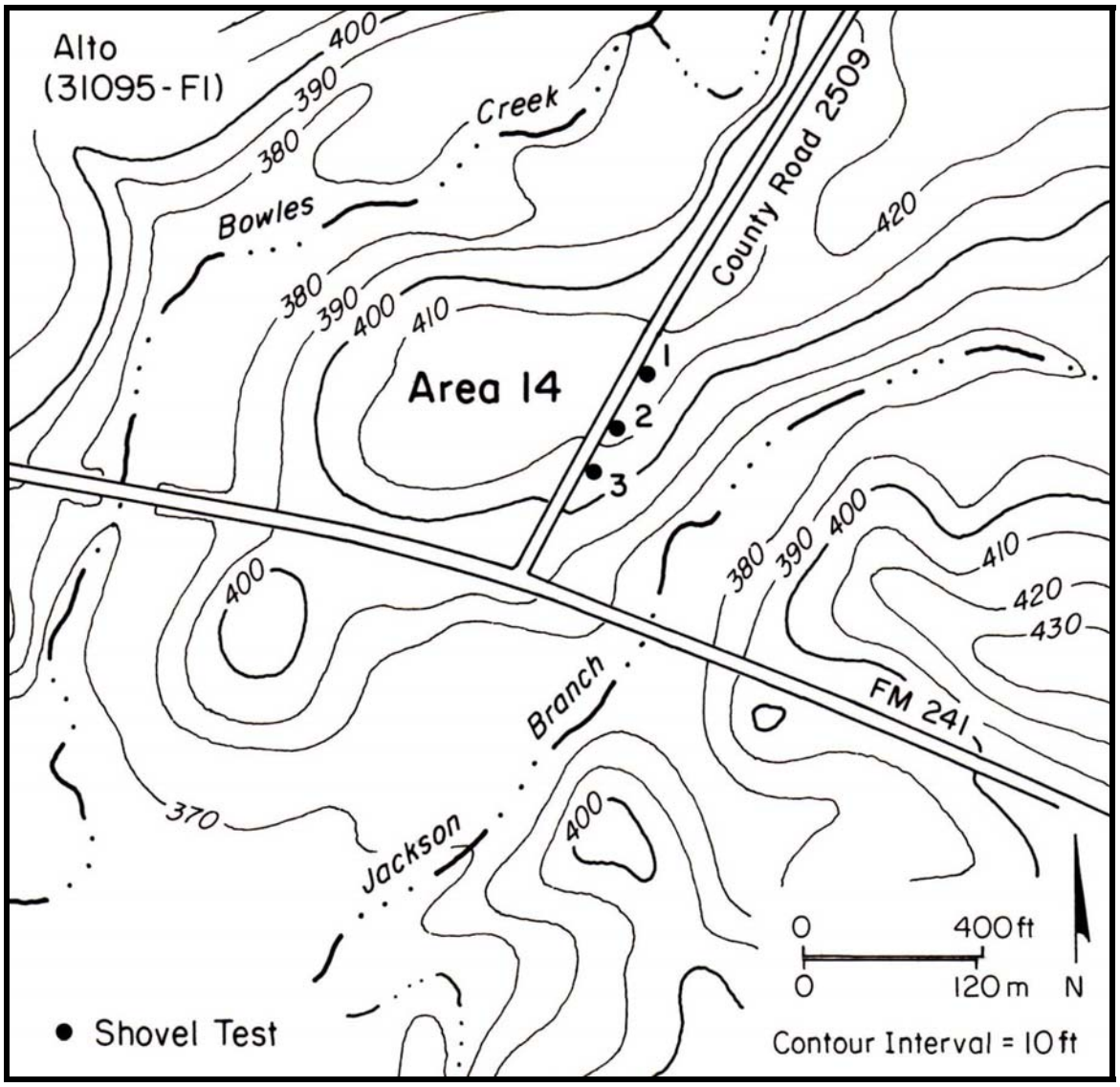
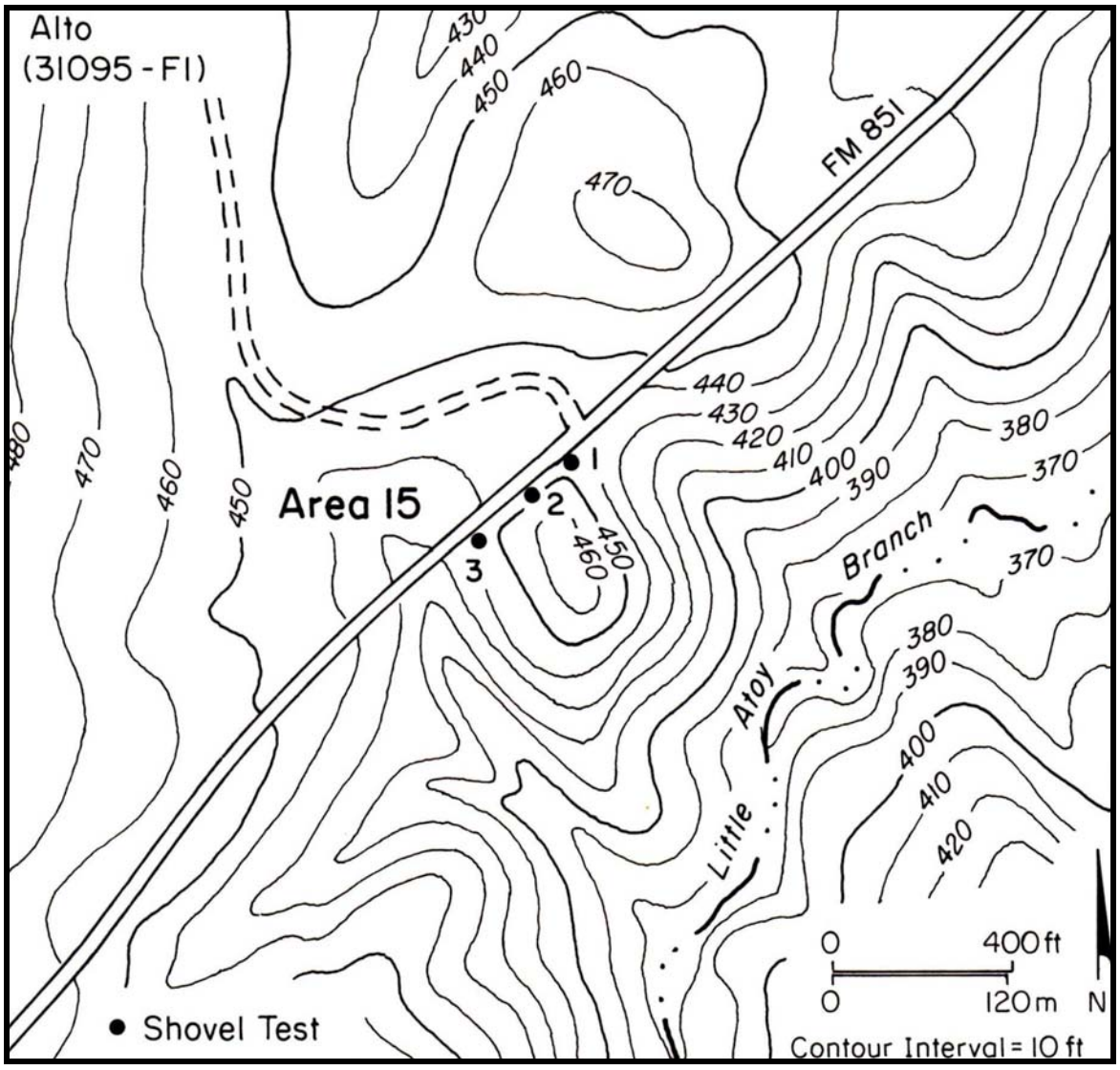
1
2
3
4
5
6
7
8
0 400ft
0 120m N
Contour Interval = 10ft
• Shovel Test


Alto
(31095-F1)
County Road 2801
390
380
Cedar
Creek
11
10
9
8
7
6
5
4
3
2
1
450
440
430
420
410
400
430
410
400
390
380
Area II
0
500 ft
0
150 m
N
Shovel Test
Contour Interval = 10 ft

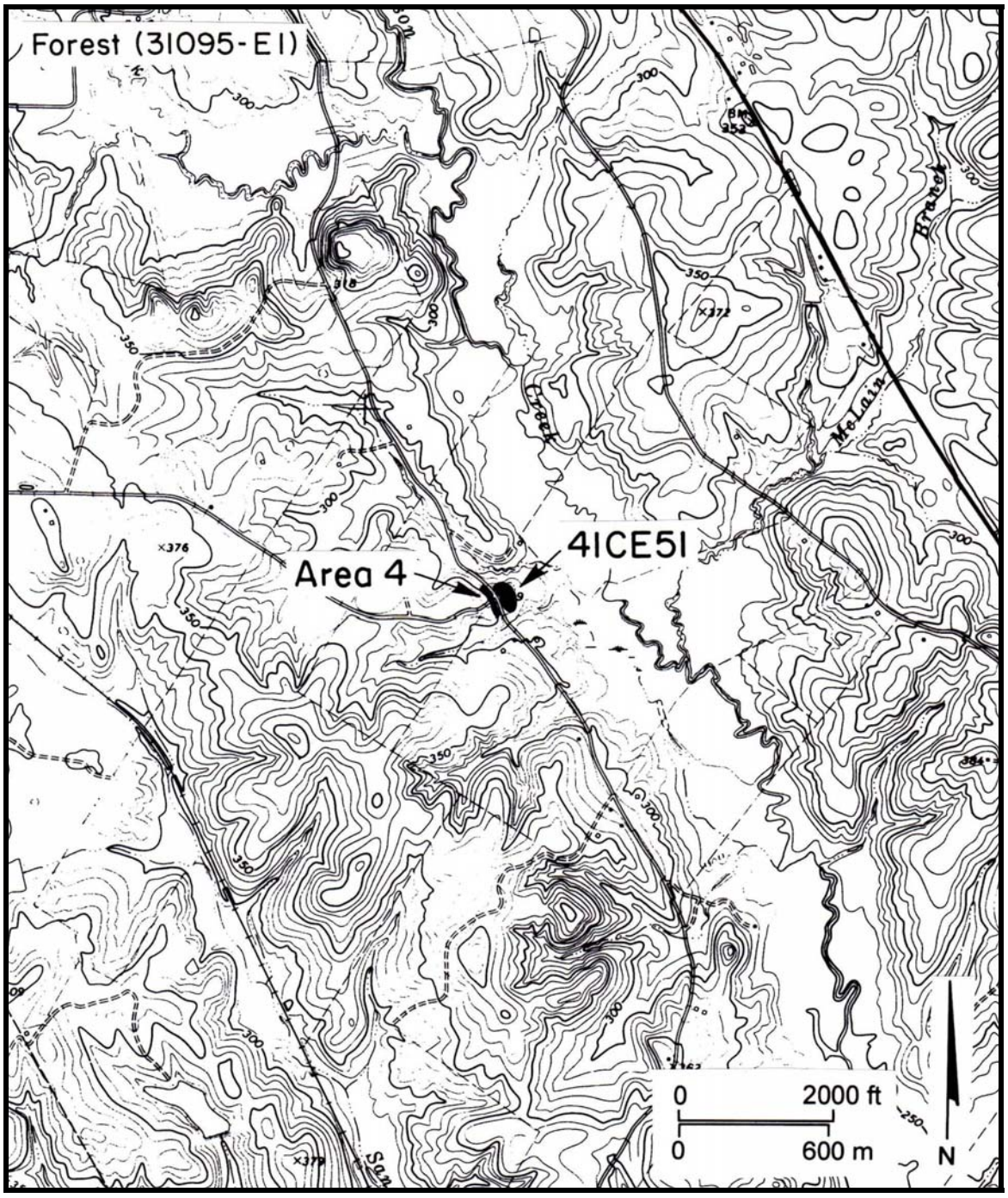

Alto
(31095-F1)
County Road 2525
Beaver
Creek
Area 12
Area 13
1
2
3
4
4
3
2
1
350
340
330
320
310
300
290
280
0
400 ft
0
120 m
N
Shovel Test

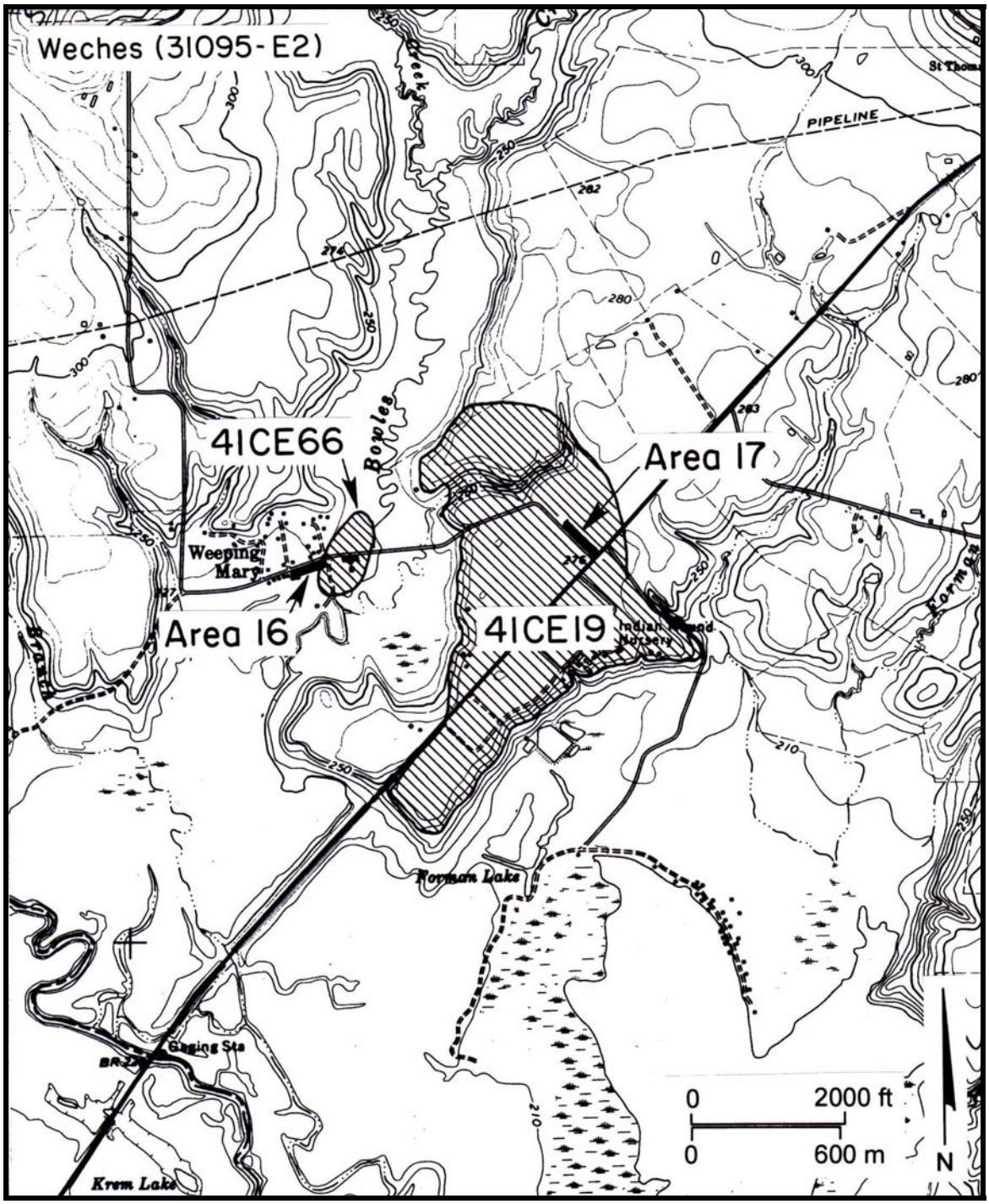

Alto
(31095-F1)
400
390
380
Creek
Bowles
County Road 2509
420
380
390
400
410
Area 14
1
2
3
400
380
390
400
410
420
430
FM 241
Branch
370
Jackson
400
0
400ft
0
120m
N
Shovel Test
Contour Interval = 10ft


Alto
(31095 - F1)
FM 851
Area 15
Branch
Atoy
Little
1
2
3
430
440
450
460
470
480
420
410
400
390
380
370
0
400 ft
0
120 m
N
Contour Interval = 10 ft
Shovel Test

APPENDIX II

ARCHAEOLOGICAL SITES IN OR NEAR THE PROJECT AREA


Forest (31095-E1)
Area 4
41CE51
Branch
McLain
Creek
0
2000 ft
0
600 m
N


Weches (31095-E2)
PIPELINE
41CE66
Area 17
Area 16
41CE19
Weeping Mary
Bowles
Indian Mound Nursery
Forman Lake
Krem Lake
Gaging Sta
0 2000 ft
0 600 m
N

APPENDIX III: SHOVEL TEST LOG

Test	Area	Depth	Description	Results
1	1	30 cm	sand over clay	negative
2	1	30 cm	sand over clay	negative
3	2	40 cm	sand over clay	negative
1	2	10 cm	sandy clay over clay	negative
2	2	10 cm	sandy clay over clay	negative
3	2	10 cm	sandy clay over clay	negative
1	3	40 cm	sandy clay over clay	negative
2	3	60 cm	sandy clay over clay	negative
3	3	30 cm	sandy clay over clay	negative
1	4	40 cm	sand over clay	negative
2	4	80 cm	sand	negative
3	4	80 cm	sand	negative
4	4	50 cm	sand over clay	negative
1	5	15 cm	sand over clay	negative
2	5	50 cm	sand over clay	negative
3	5	70 cm	sand over clay	negative
4	5	10 cm	sand over clay	negative
1	6	30 cm	sand over clay	negative
2	6	20 cm	sand over clay	negative
3	6	10 cm	sand over clay	negative
1	7	40 cm	sand over clay with gravels	negative
2	7	50 cm	sand over clay with gravels	negative
3	7	20 cm	sand over clay with gravels	negative
1	8	50 cm	sand with gravels	negative
2	8	50 cm	sand	negative
1	9	20 cm	sand over clay	negative
2	9	40 cm	sand over clay	negative
3	9	10 cm	sand over clay	negative

Test	Area	Depth	Description	Results
1	10	10 cm	red iron ore gravel surface	negative
2	10	10 cm	slope to creek	negative
3	10	10 cm	slope to creek	negative
4	10	20 cm	east side of creek	negative
5	10	40 cm	west side of creek flat area	negative
6	10	60 cm	top edge of slope	negative
7	10	80 cm	top of slope	negative
8	10	10 cm	next to road	negative
1	11	10 cm	clay and rock slabs	negative
2	11	10 cm	orange clay	negative
3	11	10 cm	sand over clay	negative
4	11	10 cm	sand over clay	negative
5	11	10 cm	sand over clay	negative
6	11	40 cm	sand over clay	negative
7	11	30 cm	sand over clay	negative
8	11	70 cm	sand over clay	negative
9	11	10 cm	orange clay	negative
10	11	10 cm	orange clay	negative
11	11	80 cm	tan sand	negative
1	12	10 cm	sand over clay	negative
2	12	15 cm	sand over clay	negative
3	12	10 cm	sand over clay	negative
4	12	10 cm	sand over clay	negative
1	13	40 cm	sand over clay	negative
2	13	70 cm	sand over clay	negative
3	13	30 cm	sand over clay	negative
4	13	50 cm	sand over clay	negative
1	14	20 cm	sand over clay with gravels	negative
2	14	20 cm	sand over clay with gravels	negative
3	14	20 cm	sand over clay with gravels	negative

Test	Area	Depth	Description	Results
1	15	30 cm	sand over clay	negative
2	15	20 cm	sand over clay	negative
3	15	20 cm	sand over clay	negative