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AN ARCHAEOLOGICAL SURVEY OF SELECTED LOCALITIES WITHIN  
THE OBION - FORKED DEER DRAINAGE, WEST TENNESSEE

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Prepared for the Memphis District, U. S. Army Corps of Engineers

by

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Division of Archaeology

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## Introduction

This report describes an archaeological survey conducted in October, 1984 at selected sites within the Obion-Forked Deer drainage in west Tennessee. The survey was conducted at the request of the Memphis District, U. S. Army Corps of Engineers in conjunction with a Section 404 permit application filed by the Obion-Forked Deer Basin Authority (OFDBA). If issued, this permit would authorize the OFDBA to remove major channel blockages, to conduct channel maintenance, to install lateral drains, and to construct small watershed lakes at six specified localities within the drainage. Further, the OFDBA would be authorized to dispose of dredged and fill material in wetlands within the Obion-Forked Deer River Basin. At the direction of the State Archaeologist, Robert C. Mainfort, Jr. served as Principal Investigator for the project. Facilities and equipment were provided from the West Tennessee Regional Office, Tennessee Division of Archaeology.

### THE SURVEY AREA AND FIELD WORK

The designated survey areas encompass approximately 25 km of stream channels in Carroll, Gibson, Henderson, and Madison Counties, all of which had been channelized. All lands surveyed were, so far as could be reasonably ascertained, in private ownership. Investigations were limited to areas immediately adjacent to the six proposed project sites.

Pre-field research and planning for the survey was accomplished on an intermittent basis during the spring and summer of 1984. This included archival research in the State site files, topographic evaluation, and preliminary reconnaissance of the project areas. Between October 5 and November 1, 1984, the Principal Investigator, assisted by Robert Thunen, examined the six project localities. Investigations were limited to pedestrian surveys; no subsurface testing was undertaken. No previously unrecorded archaeological sites were found within the project area.

It should be noted field conditions throughout the survey area were poor to extremely poor. Much of the land adjacent to the project localities was covered by mature row crops or pasture and other areas were submerged to various degrees. Hence, the results presented here cannot be considered definitive, although they do provide a basis for formulating guidelines that should protect extant (including undiscovered) archaeological resources.

## Natural Environment

### GEOLOGY AND SOILS

The study area lies within the West Tennessee Plain, a subunit of the Gulf Coastal Plain, which is the dominant topographic feature in the western third of the state. Characterized by a gently rolling to nearly flat terrain, the West Tennessee Plain extends from the hilly West Tennessee Uplands on the east and slopes gently to the low loess bluffs adjacent to the Mississippi River floodplain. Surface geology consists primarily of sands, clays, and silts deposited during the Tertiary Period (Miller 1974).

Loess, a Pleistocene deposit of silty, windblown alluvium, forms the parent material for most of the soils in the study area. Soils of the Grenada-Memphis-Loring group are predominant throughout most of the area, although the Lexington-Grenada-Memphis-Ruston group and, to a lesser extent, the Ruston-Lexington-Providence group are present along the eastern periphery. Silty soils of the Falaya-Waverly-Collins group occur the river bottoms (Springer and Elder 1980).

Prior to channelization, the Obion and Forked Deer Rivers were meandering streams with numerous oxbow lakes and seasonal backwater ponds. Topographically, lands adjacent to major channels are typified by a broad floodplain that is bounded on the north and/or east by relatively steep bluffs and by gently rising slopes on the south and/or west.

### FLORA AND FAUNA

West Tennessee lies within the Mississippi embayment section of the Western Mesophytic Forest Region (Braun 1950: 157) and the Carolinian Biotic Province (Dice 1943: 16). In the uplands, pre-settlement vegetation was dominated by an Oak-Hickory Forest (Delcourt and Delcourt 1981), which seasonally produced an abundant nut crop, while wetland species such as bald cypress, sweet gum, cottonwoods, and willows occupy the river bottoms. Several species of seed-producing plants are also common within the floodplain and, to a lesser extent, in the uplands. These include lamb's quarters (*Chenopodium album*), knotweeds (*Polygonum* sp), and wild bean (*Strophostyles levisperma*), which were intensively harvested and, in some instances, cultivated by prehistoric populations elsewhere in

eastern North America. A rich faunal community is supported by the waterways and adjacent bottom lands. Among the principal game fish are channel catfish, drum, white crappie, and smallmouth bass, while aquatic mammals include beaver, otter, and muskrat. Ducks are present seasonally in substantial numbers and white-tailed deer frequent both the bottoms, as well as the uplands. Other notable mammals are raccoons, opossums, and several species of rabbits and squirrels (U. S. Army Corps of Engineers 1975).

It is important to note that the biotic community described above did not become established in the study area until approximately 3000 B. C. Paleo-climates will be discussed briefly below in conjunction with an outline of prehistoric culture periods in west Tennessee.

## Summary of West Tennessee Prehistory

Although there has been little systematic archaeological research conducted in western Tennessee, sufficient work has been performed that broad chronological and areal trends have been formulated and widely accepted. The prehistoric record may be divided into 11 time segments that are, for the most part, common to the study area. These are: Paleo-Indian, Dalton, Early Archaic, Middle Archaic, Late Archaic, Transitional, Early Woodland, Middle Woodland, Late Woodland, Early Mississippian, Late Mississippian.

### **PALEO-INDIAN PERIOD (10,000 - 8500 B. C.)**

Although there is increasing evidence for much earlier human occupation of the New World, it is during the Paleo-Indian period that there is the first unequivocal evidence of widespread prehistoric habitation. By about 10,500 B. C., a major post-glacial climatic amelioration had begun and the Spruce Forest of the middle south was replaced by a Gum-Cypress Forest, which was the environment into which the first inhabitants of west Tennessee entered (Delcourt and Delcourt 1981). Paleo-Indian occupations are characterized by the presence of large, well-made, fluted spear points (including Clovis, and later, Cumberland, Redstone, and Quad), as well as blades, unifacial scrapers, burins, and knives. Paleo-Indian peoples were probably organized into small hunting and gathering bands of 25-50 individuals. Although fluted points have been found in association with extinct fauna in various parts of North America, no associations are known for Tennessee. Outside of the Tennessee River valley, Clovis horizon campsites are very rare, while the higher frequency of the later fluted point variants suggests a population increase (Walthall 1980; Smith 1980).

### **DALTON PERIOD (8500 - 7500 B. C.)**

The Dalton period/horizon has traditionally been subsumed under the Early Archaic period but, following Morse and Morse (1983), it will be treated as a distinct entity here. During this time period, a cool, moist climate produced a Mixed Hardwood Forest over much of the mid-south (Delcourt and Delcourt 1981). White-tailed deer were the focus of hunting activities, but the presence of grinding

stones attests to the importance of plant foods (especially nuts). Many lithic tool types carry over from the Paleo-Indian period, but a number of new forms, such as the Dalton adze, were produced. The Dalton point itself functioned as both a serrated knife and a saw (Morse and Morse 1983). Smith (1979) reports that Dalton assemblages appear to have "halo" distributions, as confirmed by an intact Dalton component at 40FY13. Intact Dalton components may be present on relic terraces within floodplains.

#### **EARLY ARCHAIC PERIOD (7500 - 6000 B. C.)**

Around 7000 B. C., climates in the middle south became significantly warmer and drier. This climatic episode, known as the Hypsithermal, continued for about 4,000 years and produced major vegetational changes which undoubtedly had a profound effect on prehistoric populations in the area (Delcourt and Delcourt 1981; Morse and Morse 1983). The Big Sandy horizon (ca. 7500 - 7000 B. C.), which is characterized by well-made side notched projectile points, represents an outgrowth of Dalton technology. In northern Alabama, there is a demonstrable increase in numbers of sites over the Dalton period (Walthall 1980), but the Big Sandy horizon is poorly documented in west Tennessee. Partially overlapping Big Sandy, the Kirk horizon has been securely dated elsewhere at ca. 7400 - 6500 B. C. (Chapman 1977). Serrated Kirk points clearly served functions other than as projectile tips; edge wear analysis suggests their use as cutting tools. Kirk points seem to be concentrated in forested areas, suggesting their use in a woodland adaptation (Walthall 1980). A wide range of bone and antler tools are associated with the Kirk horizon, as are cane matting and mortars. An apparent development out of Kirk, the Bifurcate horizon is characterized by St. Albans and LeCroy points and dates between approximately 6700 and 6000 B. C. Excavations at Rose Island in eastern Tennessee revealed evidence of hearths and storage pits that reflect a system of nut procurement, processing, and storage that implies increased sedentism and a shift in economic scheduling (Chapman 1975). In southwestern Tennessee, Early Archaic sites seem to be concentrated on river terraces (Peterson 1979a, 1979b). At some extensively collected localities, points representing several Early Archaic, as well as Middle Archaic, horizons are present, indicating a long occupational history (cf. Smith 1979).



## MIDDLE ARCHAIC PERIOD (6000 - 3000 B. C.)

Middle Archaic cultures represent adaptations to the peak of the Hypsithermal climatic episode that saw the establishment of an Oak-Hickory Forest over most of western Tennessee by 3000 B. C., although some areas of prairie may have existed during this period. The Middle Archaic witnesses the development of what Walthall (1980) has called "narrow spectrum economies", which focused on deer, mussels, and nuts on a seasonal basis. In the Tennessee River valley, the earliest use of large shell mound sites occurs later in this period. Numerous burials, some bearing evidence of violent death, have been excavated at Middle Archaic sites. Finely-crafted ground stone bannerstones (which did not function as atlatl weights) were developed and dogs were domesticated. Two projectile point horizons have been defined for this time period. The Morrow Mountain horizon (ca. 5500 - 4000 B. C.) is characterized by short to medium length points with triangular blades and short, tapered stems. Outside of the Tennessee River valley, Morrow Mountain sites are relatively rare in surveyed areas of west Tennessee. If Morrow Mountain points are associated with an economy based on shellfish exploitation, their absence is understandable. The Benton horizon is fairly well-established in the 4000 - 3000 B. C. time range. Benton points are fairly common throughout western Tennessee; in the Wolf and Loosahatchie drainages, they are concentrated on river terraces (Peterson 1979a, 1979b).

## LATE ARCHAIC PERIOD (3000 - 1000 B. C.)

By about 3000 B. C., modern climates had been established and present-day sea level had been reached. Most, if not all, of west Tennessee was covered by an Oak-Hickory Forest and rainfall was more abundant than during the Hypsithermal (Delcourt and Delcourt 1981; Morse and Morse 1983). It was during the Late Archaic that the large Tennessee River shell mounds, which were the product of a narrow spectrum economy, were created and many areas in the middle south saw substantial population increases. The subsistence base for inhabitants of the Coastal Plain is not presently known, but it could be speculated that fish from seasonal backwater lakes served the same role as shellfish. Early experiments with cultigens were taking place in various parts of eastern North America, but it is

not known if the Late Archaic people of western Tennessee had cultigens. Projectile points of this period are typologically assigned to the Little Bear Creek cluster (Ensor 1981), which includes Little Bear Creek, Gary, Mulberry Creek points, although there are numerous local type designations for points of this general style. In the Loosahatchie and Wolf River drainages, virtually all Late Archaic sites occur on river terraces (Peterson 1979a, 1979b), but data from the Obion-Forked Deer drainage suggest that hunting camps were located in all zones, with gathering camps on the slopes between the river bottoms and the uplands (Smith 1980).

#### **TRANSITIONAL PERIOD (1000 - 400 B. C.)**

Several significant changes occurred among the prehistoric populations of western Tennessee between 1000 and 400 B. C. One of these was the development or adoption of ceramics; the other, the appearance of very distinctive regional cultures within the area. The term "Transitional Period" is used here to subsume the Middle and Late Gulf Formational cultures of the Tennessee River valley, as well as cultures to the west that were contemporary with the Poverty Point and Tchula periods of the Lower Mississippi Valley (cf. Peterson 1979a). Diagnostic projectile points are those of the Wade and Flint Creek clusters (Ensor 1981), with the usual plethora of local type designations. Riverine resources ceased to be intensively exploited in the Tennessee River valley (Walthall 1980). Although baked clay "Poverty Point objects" are found throughout west Tennessee during this period (Smith 1979), ceramics of the Wheeler and Alexander series are, with very few exceptions, confined to the Tennessee River valley and it is not until the succeeding Early Woodland period that ceramics became common throughout the area (cf. Mainfort 1982). Lithic continuity with previous periods is evident in all areas.

#### **EARLY WOODLAND PERIOD (400 B.C. - A. D. 1)**

This term is used, with some reservations, to refer to the cultural manifestations that immediately precede the emergence of societies exhibiting similarities with classic Hopewell. An important horizon marker for this period is the introduction of fabric marked pottery, tempered with limestone, sand, grog, or combinations of these. Limestone tempered Long Branch ware was present in the Tennessee River valley by at least 300 B. C. and its sand tempered counterpart (Saltillo Fabric

Impressed) has been recovered from a pre-200 B. C. stratum at the Pinson Mounds site (Walthall 1980; Mainfort, Broster, and Johnson 1982). Projectile points of the Flint Creek cluster may be diagnostic for the Early Woodland period in west Tennessee (Ensor 1981). Fairly large, elaborate burial mounds were constructed by early Woodland populations in northern Mississippi (Cotter and Corbett 1951; Bohannon 1972), but this does not seem to be the case in west Tennessee. In the Tennessee River valley, shell mounds were intensively occupied, perhaps on a permanent basis (Walthall 1980). These sites exhibit numerous hearths, storage pits, ovens, and structural remains. Milling equipment is common, suggesting that plants such as *Chenopodium* were intensively collected and/or harvested. Subsistence and settlement data is meager for the Coastal Plain, but it appears that base camps were located along the ecotone between the river bottoms and uplands. Ellipsoidal, fabric marked, baked clay objects have been found in association with fabric marked ceramics at the Pinson Mounds site and are fairly common throughout west Tennessee (Mainfort [ed.] 1980; Smith 1979).

#### MIDDLE WOODLAND PERIOD (A. D. 1 - 500)

The Middle Woodland period witnessed a peak of ceremonialism and inter-regional trade in eastern North America. Numerous conical burial mounds and the presence of non-local materials in graves indicate participation in this pan-regional phenomenon. The large and unique ceremonial center of Pinson Mounds was the largest site in eastern North America between A. D. 1 - 200 and is critical to understanding the Middle Woodland period in west Tennessee. The appearance of cordmarked ceramics and the decline in fabric marked wares provides a fairly reliable chronological marker over much of the eastern United States (cf. Jenkins 1982). Projectile points of the Middle Woodland Tapered Shoulder cluster, Lanceolate Expanded Haft cluster (Baker's Creek, etc.), and Lanceolate Spike cluster, all of which tend to be poorly made, are securely dated to the Middle Woodland period (Ensor 1981). The use of shellfish decreased in the Tennessee River valley; the ceramics from this area continued to be tempered with crushed limestone (Walthall 1980). Sand, grog, and mixed tempered ceramics predominate most of west Tennessee, including the study area. In the Coastal Plain, some areas, including the Forked Deer drainage, experienced marked population increases, while little or no increase

is suggested by data from the Wolf and Loosahatchie drainages (Jolley 1984; Peterson 1979a, 1979b). Base camps in this area occupy the tablelands overlooking the river bottoms, with extractive camps recorded on the slopes and in the uplands (Broster and Schneider 1977). The river bottoms were undoubtedly of great importance in economic scheduling, but evidence of this is probably buried under silt deposits.

#### **LATE WOODLAND PERIOD (A. D. 500 - 900)**

During the Late Woodland period, the inter-regional trade and elaborate mortuary ceremonialism of the preceding period disappeared or were severely curtailed in most areas. However, cultural continuity is evident, as utilitarian ceramics and stone tools are stylistically similar to their Middle Woodland counterparts. Some degree of agriculture, focusing on corn and squash, was almost certainly practiced during the Late Woodland period. Although population size remained constant or increased in the Tennessee and Mississippi River valleys, parts of the Coastal Plain seem to have been virtually abandoned (Walthall 1980; Peterson 1979a; Smith 1980). The Late Woodland period is not well-documented in western Tennessee, a situation that has created some difficulty in identifying diagnostic artifact types; this is especially true of ceramics. Throughout west Tennessee, Late Woodland ceramics are characterized by grog tempering, although, based on evidence from west of the Mississippi River, some sand tempered wares probably also occur. Small to medium sized triangular projectile points (Hamilton, Madison) are diagnostic of both Late Woodland and Mississippian cultures (Morse and Morse 1983).

#### **EARLY MISSISSIPPIAN PERIOD (A. D. 900 - 1200)**

The Mississippian period saw the development of economies based on corn agriculture and the rise of hierarchical settlement systems that were controlled by large, multi-mound political and ceremonial centers. Large, permanent settlements are found in areas of high agricultural potential. These centers pooled the resources of a variety of environments and insured against crop failure by maintaining a system of dispersed farmsteads. Although Mississippian ceramics are generally tempered with shell, potters at the Obion site produced grog tempered wares from the locally available Porters

Creek Clay (Baldwin 1966). The use of shell temper in pottery represents a technological innovation that liberalized vessel shape and increased strength (Morse and Morse 1983). Small, triangular projectile points were used as arrow tips, while large chert agricultural implements and ground chunky stones are also diagnostic Mississippian artifacts. Rectangular wall-trench houses are characteristic of this time period. Few Mississippian sites have been recorded in the Coastal Plain; the Obion and Denmark mound groups are the only demonstrable ceremonial centers. A single wall-trench house excavated at Pinson Mounds appears to represent an isolated farmstead (Morse and Polhemus 1963; Mainfort, in press). Early Mississippian sites are more numerous in the Mississippi River valley and adjacent bluffs, with a notable concentration in the vicinity of Reelfoot Lake.

#### **LATE MISSISSIPPIAN PERIOD (A. D. 1200 - 1600)**

This is a period during which marked population nucleation occurred throughout the middle south, with large areas being virtually abandoned. In western Tennessee, Late Mississippian settlements appear to be confined almost exclusively to the Mississippi and Tennessee River valleys and the adjacent bluffs. Apparent horizon markers for Late Mississippian include Nodena points, chunky stones with one flat and one concave face, and the ceramic types Parkin Punctated and Barton Incised (Morse and Morse 1983). Intricately engraved ceramics are characteristic of the Walls phase in the Memphis area.

## The Project Localities

### BLOCKAGE #1

This project locality encompasses 5.3 km of the Middle Fork, Forked Deer River in Crockett and (primarily) Gibson Counties. The Forked Deer River exhibits a fairly wide, swampy floodplain throughout the project area. As is typical for the drainage, the floodplain is bounded on the north by fairly steep bluffs, while the land rises gently to the south. State Route 54 crosses the river slightly to the west of the project area, but offers no ready access to this locality. To the south, SR 152 parallels the project area and a number of secondary and field roads provide access. Eleven archaeological sites have been recorded on lands immediately adjacent to the project area and additional sites are present in the general vicinity. Most of these (CT25, GB83, GB84, GB85, GB86, GB87, GB88, GB91, GB92, GB103) are located within the floodplain or on the first terrace to the south of the river channel.

Since access from the north would be impractical for a contractor, only areas to the south of the project area were examined. The area surveyed was confined to several field roads and the interface between the floodplain swamp and the cleared agricultural fields. Mature row crops covered most of these lands, to the detriment of making surface collections at previously recorded sites. Siltation from recent heavy rains further reduced visibility. Only a small quantity of lithic debitage was observed, none of which represented a definable concentration.

### BLOCKAGE #2

Located to the southeast of Trenton in Gibson County, Blockage #2 extends 8.1 km along the North Fork, Forked Deer River. Throughout the project area, the floodplain is wide and swampy. A paved secondary road (Gibson Rd.) parallels the project area to the south and several unimproved and field roads run north into the project area. The steep terrain to the north of the river was judged to be unsuitable for access by a contractor and we did not examine these lands, with the exception of several parcels at the extreme east end of the project area. Only a single site, 40GB37, has been recorded in the immediate project area; this is a highly significant multicomponent site.

At the time of our initial survey (mid-October), all of the tillable land south of the river was covered with mature row crops and pastures. The area was re-surveyed several weeks later, but by that time the fields had been planted in winter wheat that was already several inches tall. We were able to examine only field roads and the margins of fields. Recent heavy rains had silted these areas over and visibility was poor. Only a few isolated flakes were observed.

### **BLOCKAGE #3**

Blockage #3 consists of two short segments (3.2 km total length) of the South Fork, Obion River in Carroll County. This area is situated within a broad expanse of marshland that appears to be the product of causeway construction. Recent heavy rains created additional standing water. The project area is bounded on the east by U. S. 79 and on the west by an unnamed, paved secondary road. The river channel itself is virtually inaccessible, except by boat. A concentration of twelve archaeological sites (CL208, CL209, CL210, CL211, CL212, CL213, CL214, CL215, CL216, CL217, CL218, CL219) has been recorded immediately to the south of the project area along the first terrace above the bottomlands.

Ground cover in the non-submerged lands immediately adjacent to the project area consisted of mature row crops, pasture, and overgrown fields. Surface visibility was virtually non-existent in most areas and some of the recorded sites were apparently partially under water. No prehistoric cultural material was observed.

### **BLOCKAGE #4**

This project locality consists of two segments (approximately 5.5 km in length) of the Middle Fork, Forked Deer River in Madison and Carroll Counties to the north and northwest of Spring Creek. The river exhibits a wide, swampy floodplain throughout the area. State Route 152 crosses the river near the western end of the project area. A field or logging road follows the south bank of the river along most of the blockage. No archaeological sites had been previously recorded in this area.

The area surveyed was essentially limited to the field road, as the most of the floodplain heavily overgrown and swampy. Since the adjacent uplands were covered with a mature cotton crop, it was judged imprudent to examine these lands. No prehistoric cultural remains were observed.

**BLOCKAGE #5**

A 2.3 km segment of Crooked Creek (headwaters of the Obion River) in Carroll County, northwest of Huntingdon, comprises Blockage #5. State Route 22 crosses the river somewhat to the east. This project area is situated in a broad marshland that appears to be partially submerged during most of the year, rendering the area nearly inaccessible without a boat. Most of the lands adjacent to the floodplain are gently sloping, with bluffs being located some distance north of the river. Although twelve archaeological sites have been recorded slightly to the east, none have been recorded within the limits of the blockage.

Surface visibility was extremely poor. Ground cover in the adjacent non-submerged lands consists primarily of pastures and untended fields. No archaeological materials were observed.

**BLOCKAGE #6**

This short segment of the Middle Fork, Forked Deer River (0.4 km in length) is located in Henderson County. The marshy floodplain is quite wide, with a fairly wide expanse of land on the east side of the river under cultivation; non-submerged lands to the west are heavily overgrown. No archaeological sites have been recorded within the project boundaries.

Access to the east side of the project area is provided by an unimproved secondary road and several field roads, but the west side is not readily accessible and, consequently, was not examined. At the time of our visit, the accessible areas were covered with mature row crops. Hence, we were able to examine only field roads and the borders of fields; these were heavily silted due to recent rains. No prehistoric cultural remains were found.



## Summary and Recommendations

During October, 1984, six USCOE blockage clearance project sites on the Obion and Forked Deer Rivers were surveyed for archaeological resources. Previous surveys at these localities ranged from moderately intensive to none at all. A number of archaeological sites had previously been recorded in these areas and the archaeological potential of all lands adjacent to the project areas is fairly high. However, due to limited access to the adjacent lands and very poor field conditions, no additional archaeological sites were located. Clearly, an intensive survey of the project areas under adequate field conditions would result in the discovery of previously unrecorded sites. Additionally, it is likely that intact, buried archaeological components are present in the floodplain; a major sub-surface testing program would be required to locate these.

### GENERAL RECOMMENDATIONS

Although the actual clearance of blockage material from stream channels is unlikely to impact any archaeological sites, the disposal of this material, as well as the creation of vehicle access roads, could potentially cause significant damage to archaeological resources within, and immediately adjacent to, the proposed project localities. In order to minimize potential impact on archaeological sites, blockage materials should be disposed of by piling or, if necessary, burning; areas in which archaeological sites have been recorded should not be utilized as disposal sites. **Burial of blockage material would probably cause significant damage to subsurface archaeological sites.** Existing roads should be used for access into the project areas. In cases where it is deemed necessary to create new access roads, these should not be routed through or adjacent to areas in which archaeological sites have been recorded. **In such instances, the State Division of Archaeology should be notified in advance and arrangements should be made for an on-site representative to be present during construction.** Specific recommendations are as follows:

#### **BLOCKAGE #1**

Existing field roads should be used for access into the project area. Blockage material should not

be disposed of within cleared agricultural fields. The cluster of sites on the terraces to the south of the channel should be completely avoided.

#### **BLOCKAGE #2**

Access to the project area via existing field roads should not endanger any archaeological sites. Blockage materials should be disposed of within the floodplain. Higher ridges within the floodplain should be avoided. Although the area around 40GB37 might appear attractive to a contractor as an access site, it is of utmost importance that this locality be avoided.

#### **BLOCKAGE #3**

The concentration of recorded sites on the east end of the project area should be completely avoided. The density of recorded sites suggests that additional sites are present on the lower terraces above the floodplain; heavy equipment should not be operated in these areas. If at all possible, blockage material should be disposed of within the submerged portion of the floodplain.

#### **BLOCKAGE #4**

The field/logging road along the south bank of the channel provides access to the project area and its use by heavy equipment should not endanger any archaeological sites. Blockage material should be disposed of in the swampy areas south of the channel.

#### **BLOCKAGE #5**

Based on prior surveys in the vicinity of Blockage #3, there are probably a number of sites on the terraces adjacent to the floodplain within the project area. Lands adjacent to the mouth of Beaver Creek have particularly high potential and should be avoided. Higher ridges within the floodplain should also be avoided and, if at all possible, blockage material should be disposed of within the submerged portion of the floodplain.

#### **BLOCKAGE #6**

Use of existing field roads for access should not endanger any archaeological sites. Blockage material should be disposed of in a non-cultivated part of the floodplain, away from the mouth of Cane Creek.

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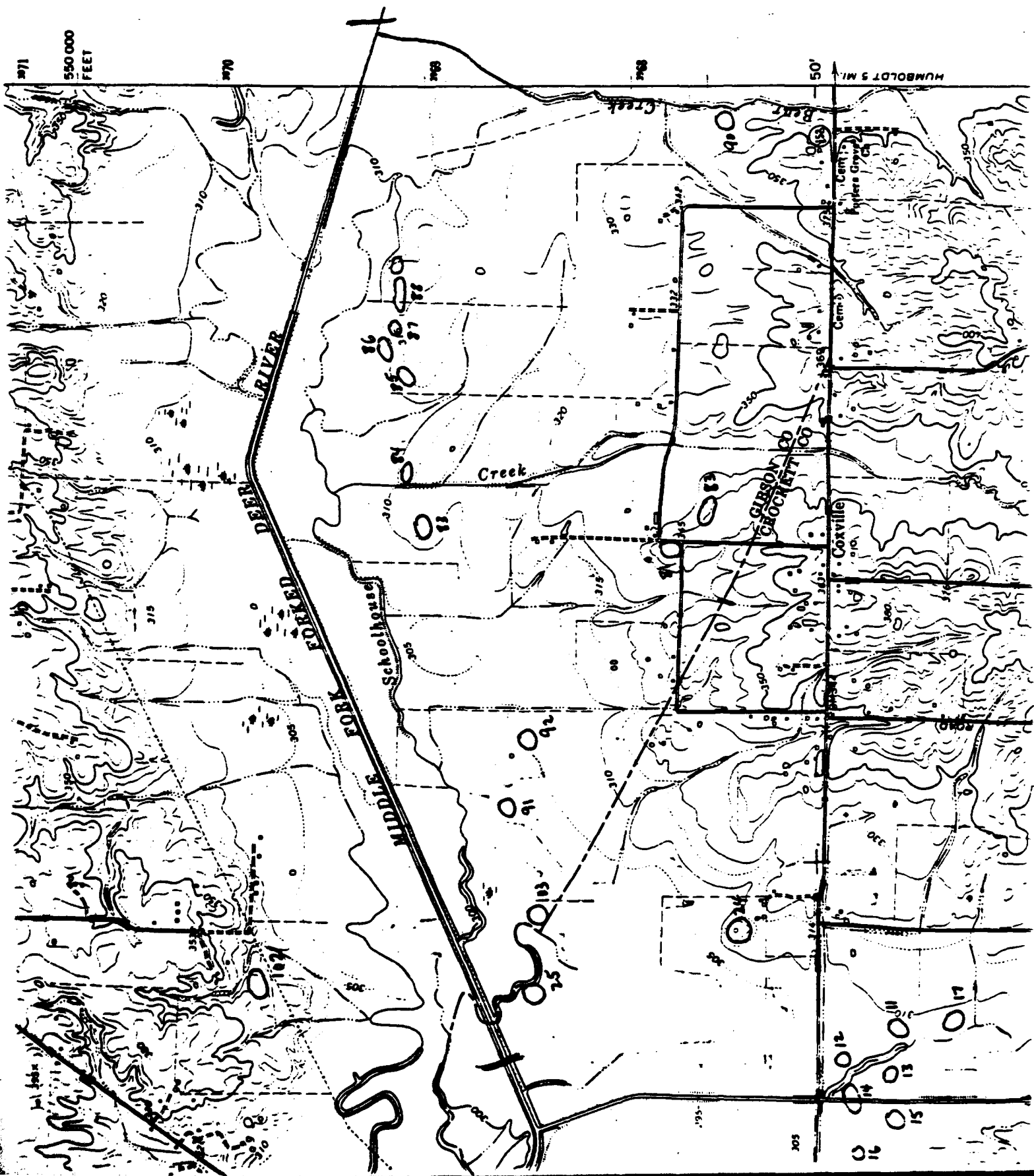
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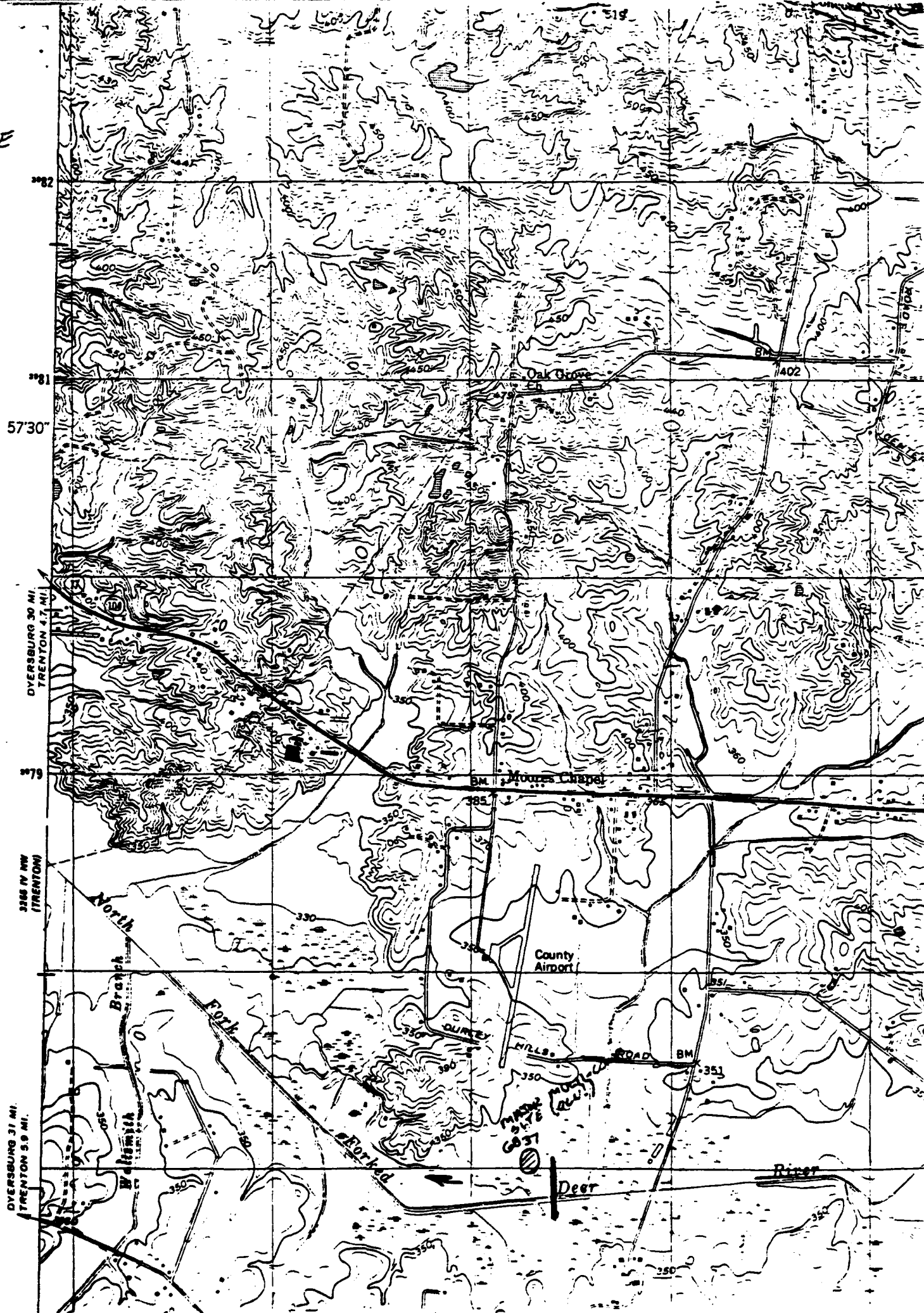
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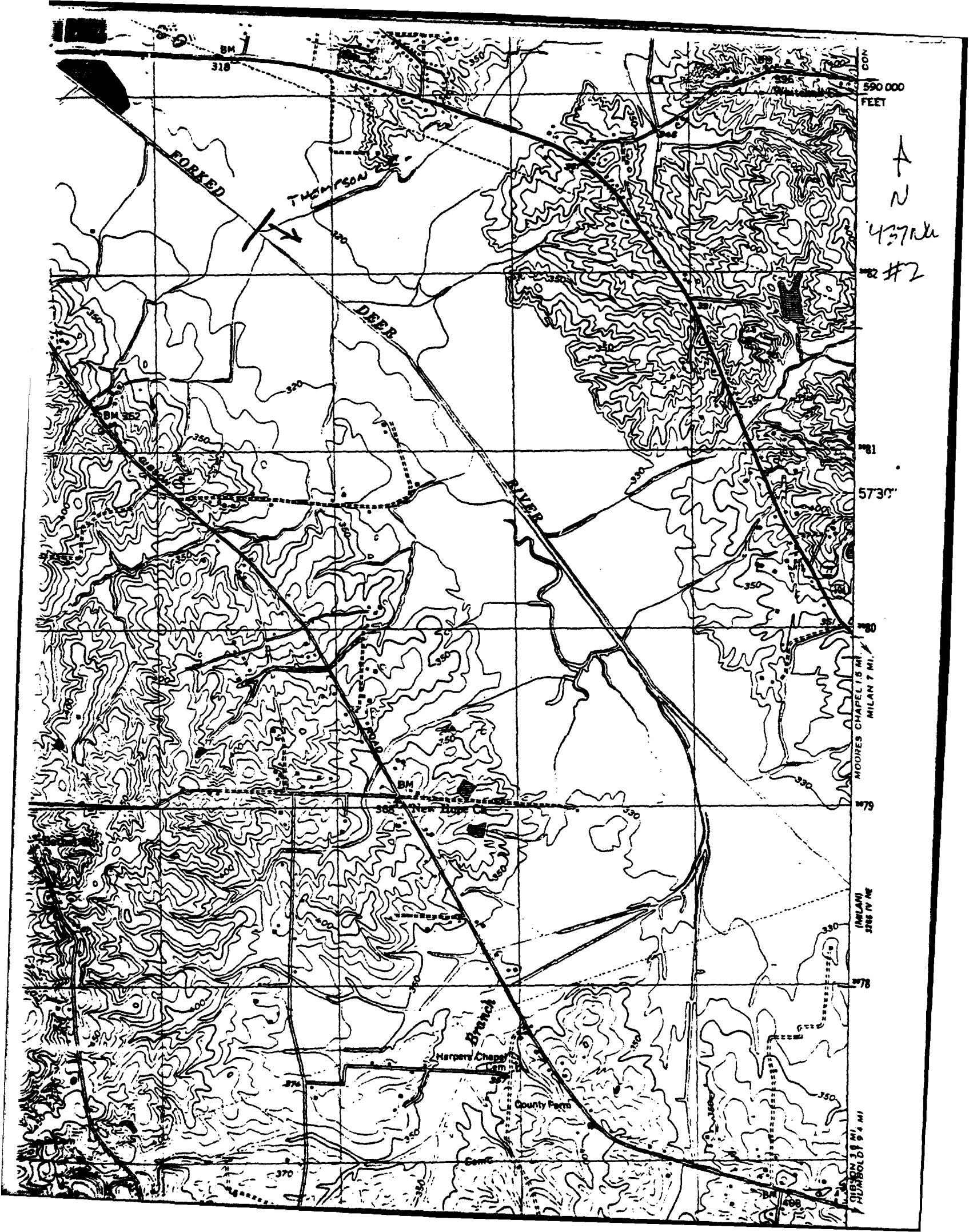
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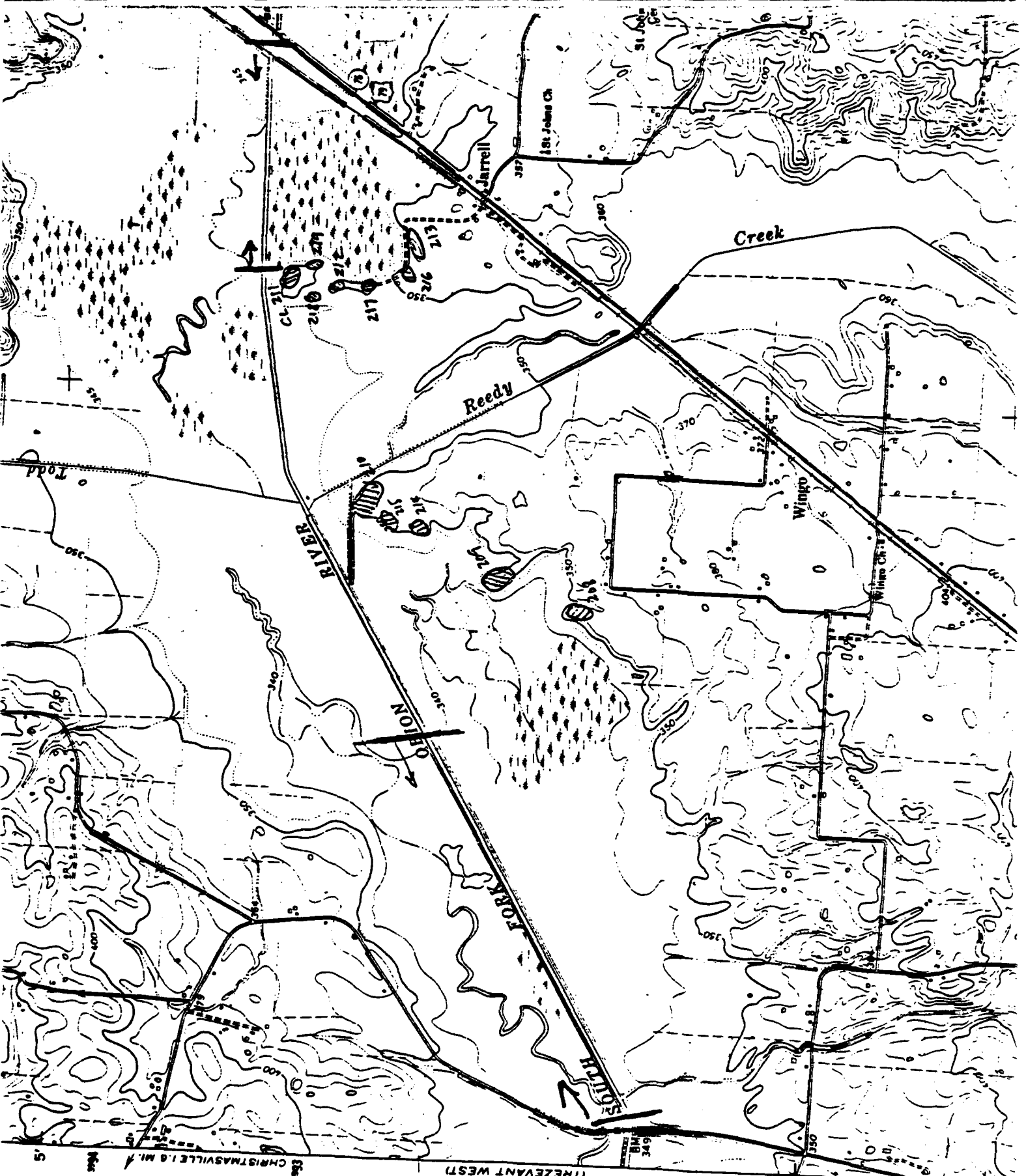
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#1



37 NE  
#2



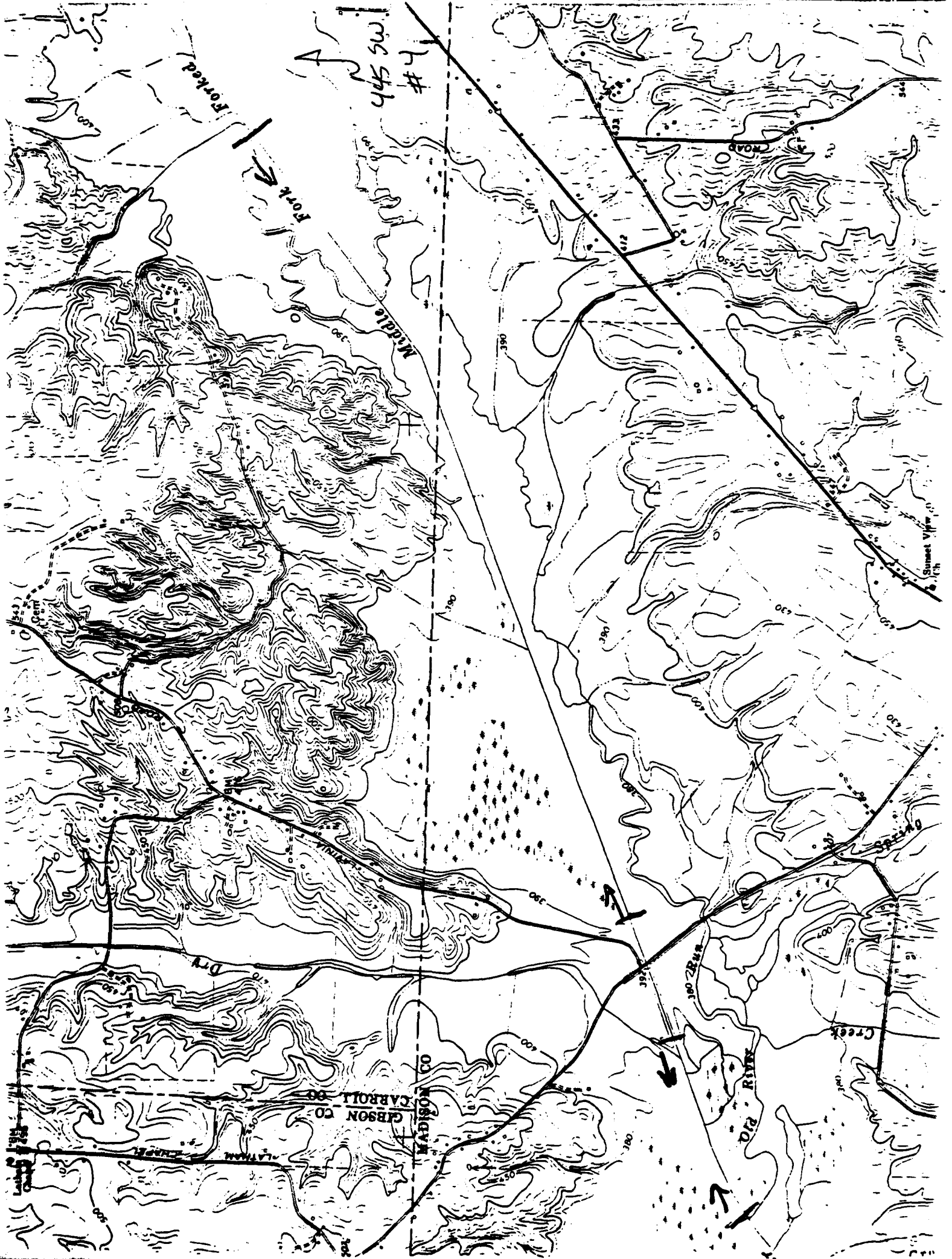




444 SE  
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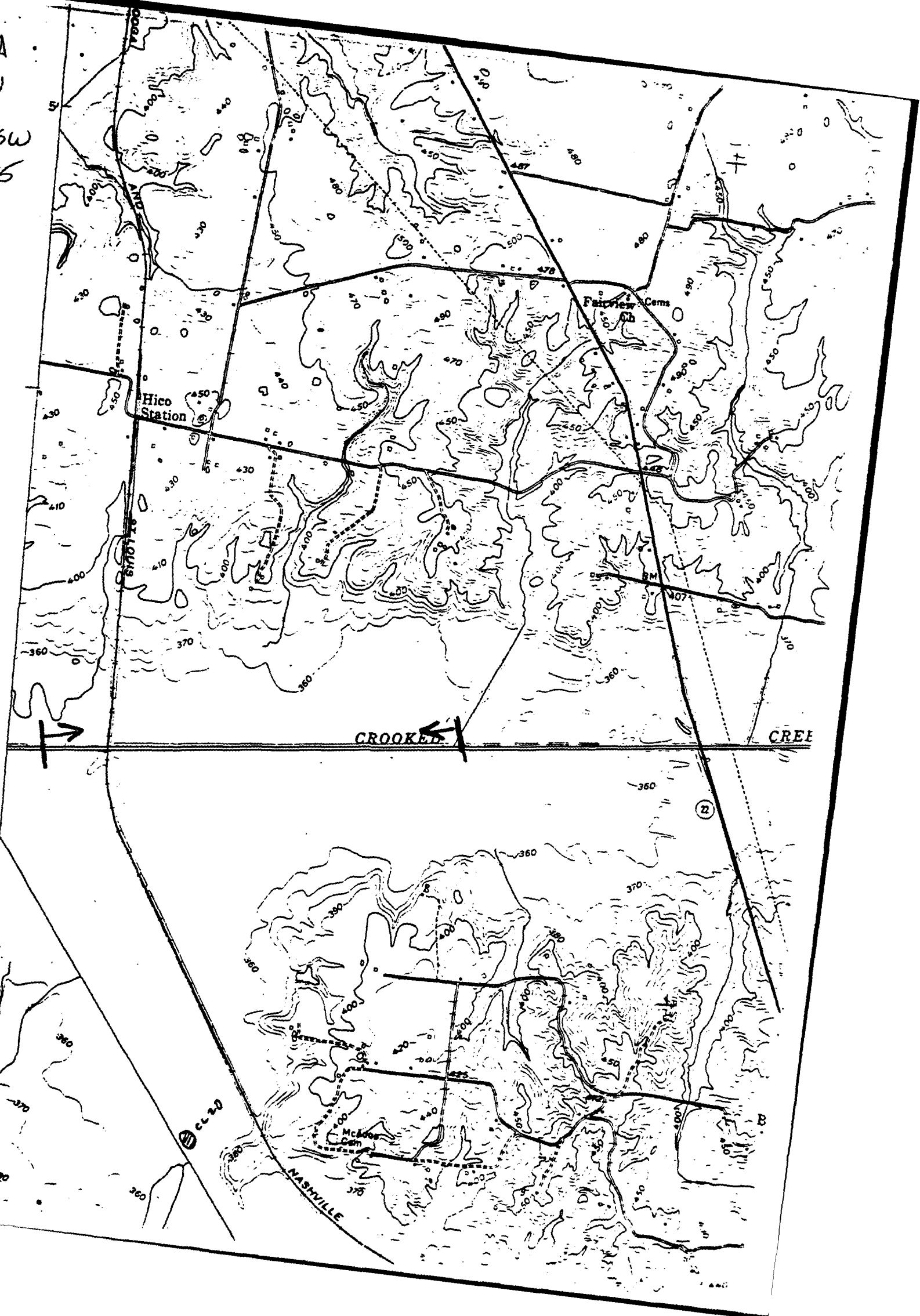
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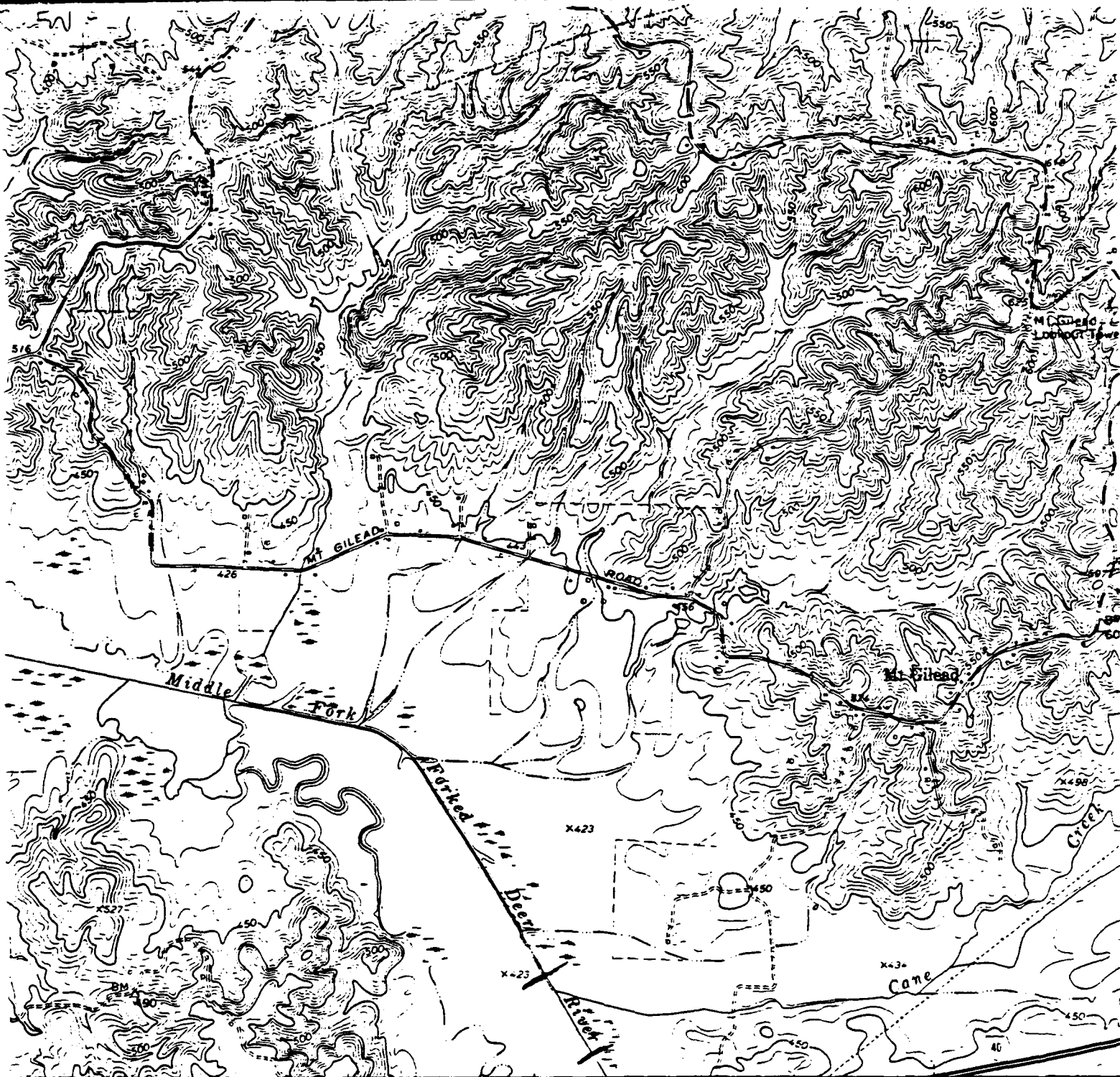




A  
J  
SW  
#5

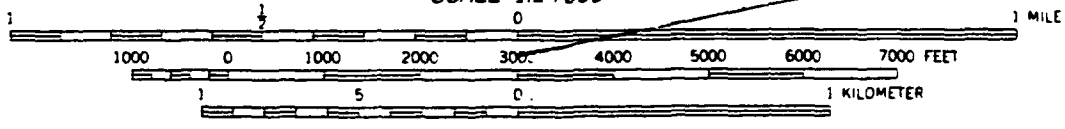
2'30"





35° 35' 357 358 (JUNO) 359 360 32° 30' 12 MI TO U.S. 70 JACKSON 20 MI 361

SCALE 1:24 000



CONTOUR INTERVAL 10 FEET  
DATUM IS MEAN SEA LEVEL

A  
N  
445 SE  
# 6

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS  
FOR SALE BY U.S. GEOLOGICAL SURVEY, WASHINGTON, D. C. 20242  
AND TENNESSEE DIVISION OF GEOLOGY, NASHVILLE, TENN. 37219  
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

TIC NORTH  
IF SHEET

— TENNE.  
QUADRANG.