Thematic Survey of Historic Barns in Southeast Oklahoma

Atoka, Bryan, Choctaw, Coal, Haskell, Hughes, Latimer, Le Flore, McCurtain, Pittsburg, and Pushmataha Counties

Prepared for:

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CONTENTS **PAGE**

I. ABSTRACT

Under contract to the Oklahoma State Historic Preservation Office, Brad A. Bays of Oklahoma State University, Stillwater, conducted the Survey of Historic Barns in Southeastern Oklahoma (OK/SHPO Management Region Four) during the fiscal year 2013-2014. The survey examined 11 counties in southeastern Oklahoma encompassing 11,426 square miles. The area was examined during 30 days in the field, which allowed roughly two to four days per county. The goals of the survey were: (a) to develop an historic context of barns in the region; (b) to sample each county in the region to collect empirical data and report general (thematic-level) patterns of historic barn resources that will assist the preservation planning process; (c) to substantially increase the number of historic barns recorded in the Oklahoma Landmarks Inventory (OLI); and (d) to identify historic barns in the region that are eligible for National Register listing. A total of 110 properties were recorded at a minimal level of documentation for the Oklahoma Landmarks Inventory, including 21 properties deemed National Register-eligible.

II. INTRODUCTION

This report represents the results of a thematic historic and architectural survey conducted by Principal Investigator Brad Alan Bays, Ph.D., for the Oklahoma State Historic Preservation Office (OK/SHPO) under Project 14-402. The PI meets the qualifications described in the Secretary of the Interior's Professional Qualifications Standards and the survey met the specifications of the Secretary of the Interior's Standards and Guidelines for Historic Preservation.

This study was the final stage of a five-year OK/SHPO project to survey Oklahoma's historical barns, which is a first approximation of the statewide patterns of barn types and conditions. This fifth survey covered an 11-county area covering 11,426 square miles in southeastern Oklahoma. Following several months of preparation, nearly 6,600 sites were targeted for field inspection over the course of 30 days in the field during the first half of 2014. This resulted in roughly 1,500 field observations, photo-documentation of 302 targets, and the minimum level of documentation of 110 representative properties for the Oklahoma Landmarks Inventory. Twenty-one (21) of the 110 were determined eligible for listing in the National Register of Historic Places.

Property-specific research was not a component of this survey, so only preliminary assessments of National Register eligibility could be determined. Historic property names were only recorded when it was possible to ascertain them from informants who happened to be on site at the time of photo-documentation; typically these were residents or neighbors. Final determinations of National Register eligibility will require additional archival work pertinent to each resource.

III. RESEARCH DESIGN

This survey's research design was the most sophisticated and successful of the five conducted for the OK/SHPO's statewide historic barn survey project. The survey invested much heavier in pre-fieldwork preparation by way of incorporating an historical geographical information system (HGIS). Working at the scale of individual counties, this involved (a) raster data acquisition, (b) processing historical maps to allow their utilization within the GIS platform, (c) locating targets and digitizing, (e) target culling, and (f) route planning.

The raw data upon which this survey is based were the oldest versions of historical U.S.G.S. topographical maps available for the study area. Of 228 historical maps examined, approximately 95 percent consisted of 7.5-minute (1:24,000) series U.S.G.S. quadrangles published between the late 1940s and the early 1980s. In addition to these, about a dozen older, rarer, smaller scale (1:63,360 and 1:125,000) topographical maps from the late nineteenth and early twentieth centuries were utilized where available. Analysis of the entire study area was not possible due to the limited coverage of available historical topographical maps. Moreover, areas for which the oldest quads were published after 1970 were not prioritized for fieldwork.

A total of 30,589 potential targets were digitized from the 228 historical maps into separate county datasets. County totals ranged from 768 for Coal County (the smallest county in land area) to 5,189 for Pittsburg County. Target totals, of course, reflect not only county land area and map availability, but also varying population densities due to differing study area land uses.

Targeted Outbuildings Identified from Old Maps and Verified with New Imagery

County	Area (sq. mi.)	Maps Used	Potential Targets	Verified Targets	Percent Verified	Total Documented	NRE
Atoka	978	25	1,817	546	30%	15	1
Bryan	909	21	4,699	557	12%	17	-
Choctaw	774	15	3,114	564	18%	18	1
Coal	518	10	768	245	32%	10	-
Haskell	577	11	1,314	270	21%	24	-
Hughes	807	12	1,804	648	36%	40	6
Latimer	722	13	1,125	401	36%	33	1
Le Flore	1,586	33	4,360	1,149	26%	33	5
McCurtain	1,852	44	4,354	765	18%	32	2
Pittsburg	1,306	29	5,189	817	16%	31	1
Pushmataha	1,397	15	2,045	637	31%	49	5
	11,426	228	30,589	6,599	22%	302	22

County datasets of potential targets were then subjected to overlay analysis with 2010 aerial imagery in order to confirm the presence of historical buildings. Targets spatially associated with extant historical buildings were copied to a database of verified targets. This resulted in a reduction of the number of potential targets by 78 percent, from 30,589 to 6,599. Although it is surmised that the proportion of extant targets roughly correlates with the age of the historical base map, it became apparent that there may be notable regional variation in the survival rates of farm outbuildings. While Hughes and Latimer Counties—both located in the northern part of the study area—retained 36 percent of their targets, Bryan, Choctaw, and McCurtain Counties—the southernmost tier of counties—retained only 12-18 percent.

This fieldwork planning method generated a much more selective set of targeted sites, which allowed more efficient use of time and resources in the field between 23 January and 28 May 2014. Fieldwork entailed routing of verified targets loaded into a mobile GIS platform with an integrated GPS tracking/recording system. When a site observation led to

identification of a property worthy of photo-documentation, the PI photographed the building and recorded the location with a GPS receiver. In the case of a few counties, virtually every verified target was able to be observed, a hitherto impossible feat in only a few days in the field. The result is a robust sample of southeastern Oklahoma's extant historical vernacular farm buildings.

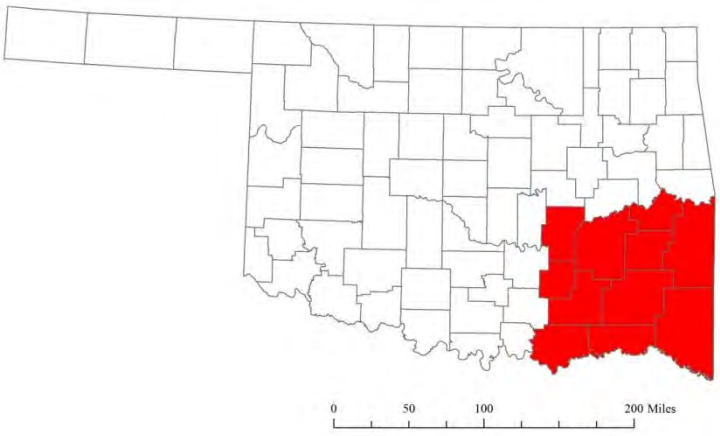
For a study of this type—surveying properties in an area of 11,426 square miles—other than historical maps, very few primary sources were useful. Secondary sources used to develop the historical context are primarily writings in local history; among these the most useful source for this scale of analysis was Dianna Everett's *Encyclopedia of Oklahoma History and Culture*. Source providing architectural context were more far more numerous and specialized, and found primarily in academic journal articles and scholarly books.

IV. PROJECT OBJECTIVES

Four primary objectives directed this study. The main objective of the Thematic Survey of Historic Barns in Southeastern Oklahoma was to identify individual properties in the study area which, because of their construction before 1964, as well as their particular design, and their retention of historical and architectural integrity, warranted nomination to the National Register of Historic Places. A second objective was to identify and photo-document individual properties and potential districts eligible for National Register listing. The third objective was to enable an analysis of the types of extant historical barns and comparable agricultural outbuildings within the study area. The final objective was to develop an historical and architectural context in which to accurately interpret the survey findings, and to identify and annotate useful references on the topic.

V. AREA SURVEYED

The Thematic Survey of Historic Barns in Northeastern Oklahoma encompassed OK/SHPO Historic Resource Management Region #4. Eleven counties comprise this region: Atoka, Bryan, Choctaw, Coal, Haskell, Hughes, Latimer, Le Flore, McCurtain, Pittsburg, and Pushmataha Counties. As the map below illustrates, this 11,426-square mile area comprises 16.8 percent or about one-sixth of the total area of the State of Oklahoma.



Study Area: Management Region 4 (Historic Component)

VI. METHODOLOGY

The methodology employed by the PI to locate, identify, and record historic resources followed professional research standards. Prior to beginning fieldwork the PI developed a bibliography on the subject of barns relative to the American Middle West, South, and Great Plains regions. Most of this research was conducted at the Edmon Low Library at Oklahoma State University in Stillwater, which is ideal for researching Oklahoma's agricultural history and farm buildings.

After developing the bibliography, the PI read extensively in the secondary and primary sources. This allowed the bibliography to be annotated and provided essential knowledge regarding barns in the context of southeastern Oklahoma's agricultural history. This led to an understanding of the diagnostic traits of certain barn types, the architectural features of barns, their basic components and basic functions, and how barns became obsolete in the wake of technological innovations and agricultural change during the 20th Century. On the basis of this information, the PI developed an essay examining the architectural significance and historical development of barns in Management Region Four.

Time and financial limitations of the project required systematic sampling rather than a complete inventory of properties within study area. The PI was directed by OK/SHPO personnel to attempt, if at all possible, to locate and record a sample of 10 representative properties per county that met the 50-year age requirement.

Having no basic list of properties to seek in the field, the PI developed his own method for locating historic barns, which is detailed in the previous Research Design section of this report.

Examination of OK/SHPO records was conducted in October 2013. To date, there is only one barn within the study area that is included on the National Register. This is the barn, which is a contributing resource, on the property of the Peter Conser House, located west of Heavener in Le Flore County. The PI also went through the files of the Centennial Farm and Ranch Program and discovered that only a handful of barns were ever documented in that program.

Field survey began in January 2013 in Atoka County after pre-fieldwork preparation was completed and the study area's deciduous forest cover had been significantly reduced so as to allow better photo-documentation. A GPS-GIS guidance system was used to navigate to target sites and prevent backtracking on county roads by recording routes. Approximately 200 square miles can be covered this way during a single 7.5 hour winter field day when road conditions are dry. The time available for quality elevation photography is limited during the winter due to low sun angle. At Oklahoma's latitude, the best conditions occur between 9:00AM and 4:30PM during winter months.

At each barn site the PI inspected around the building and, where possible, measured exterior wall dimensions and took notes on primary features. Unless invited to do so by a property owner, he did not enter the interior of the barn. When the occasion allowed he visited with occupants to learn about the building's history. He then took at least two elevation photographs and recorded the location using a GPS receiver.

After each field session photographs and GPS waypoints and tracks were uploaded to a GIS. Photo information and notes were input into Historic Preservation Resource Identification Forms in the Microsoft Access database. Resource location data (section, township, range) were derived from the GIS, entered into an Excel spreadsheet, and uploaded

to the OK/SHPO Access database. The recorded properties were then mapped in conjunction to other data layers in order to conduct spatial analysis.

One complication of conducting a survey of rural properties in 11 counties was determining appropriate historic resource names of recorded properties. These were elicited from occupants whenever available, but it was more often the case that historic owners were unknown. To standardize the naming system, a "Resource ID" number was assigned, since identifying actual historic resource names would require conducting chains of title in 11 different courthouses. The Resource ID is provided on the forms as the Property Name. The Resource ID is coded using the specific county's FIPS code followed by an alphabetical letter (A-J) indicating the chronological order in which the resource was recorded.

At the conclusion of field recording and data processing, photograph prints were ordered, labeled, and filed. Photos were also uploaded to an internet file-sharing site that allowed the architectural consultant, Jana Phillips, AIA, to view them online. Her written assessment is included in Section 7, or "Results," of this report.

VII. RESULTS

The Thematic Survey of Historic Barns in Southeastern Oklahoma was successful in sampling the types of extant barns in the 11-county, 11,426 square-mile study area. Approximately 3,000 sites, or about 45 percent of verified target sites, were visited during the field season. The vast majority of these failed to warrant photo-documentation because they had lost integrity through dilapidation or recent alteration. Others proved not to meet the minimum age requirement of 50 years, or were confirmed not to be barns. In a number of memorable cases, targeted properties had been completely razed and/or burned sometime since 2010, the year of the verification imagery. In all, some 302 resources were photo-documented and of these, 110 (the best 10 examples per county) were recorded at a minimal level of documentation for the Oklahoma Landmarks Inventory. Of the 110 recorded resources, all were determined to be constructed before 1960. **Among the 110 properties recorded are 21 barns in eight counties are eligible for National Register listing.**

National Register eligibility was determined using the National Register Criteria for Evaluation. Properties were evaluated to: (1) have been built before 1960; (2) represent an outstanding example of style or workmanship; and (3) have retained historical and architectural integrity. OK/SHPO survey forms and elevation photographs were prepared for all 110 resources. Survey form data were entered into the OK/SHPO Access database for uploading to the Oklahoma Landmarks Inventory.

The survey revealed a number of significant observations regarding barns in central Oklahoma:

1. **The most important finding was that the vast majority of historic barns surveyed are in a state of neglect, abandonment, or ruin**. As the survey data (Historic Resource Identification Forms and accompanying photos) reveal, some of the most architecturally significant properties recorded are in a state of severe dereliction. Certainly many extant properties have the potential for rehabilitation, but unlike residential or commercial buildings, historic barns are functionally antiquated. Neither are they ever very visible to a wider public; they suffer the fate of obsolescence quietly and out-of-sight in the rural Oklahoma landscape. The few properties that have been rehabilitated are exceptions representing significant private investment made out of affinity for the historic building or for commercial use. Most of these are rare exceptions that have survived near the fringe of growing metropolitan and micropolitan zones.

2. Interviews revealed that historic barns are treasured components of the rural landscape. In many conversations with rural residents the PI was able to garner the idea that **residents of Management Region Four consider historic barns to be treasured local components of the rural cultural landscape and most wish to preserve their integrity**. Many longtime residents have strong attachments to these local icons of regional cultural heritage, and many want to keep them even if they do not own them or have direct family connections to them. The PI, however, rarely encountered owners who understood how their barns might be preserved.

3. Plainly, **there is a dearth of authoritative, classification-oriented secondary sources available to guide the study of barns west of the Mississippi River.** The most-popular field guide, Noble and Cleek (2005) was not very relevant to the study area, as it is derived from data in the eastern one-third of North America. For this study the most useful book-length analyses were: Vlach (2003), which is a coffee table-type selection of archival photos, but usefully organized by region; Visser (1997), which is an exceptionally well-done field guide that focuses on New England; and Ensminger (1992), which is an extensive classification of the Pennsylvania Barn. Southeastern Oklahoma has interesting regional and local patterns that warrant further study.

4. Fieldwork suggests that **patterns of barn design are often highly localized**. Curious patterns of similar barn types and construction features were observed in relatively small areas, a fact that supports the idea that individual barn builders left their marks on local landscapes. One of the more curious examples of this was the clustering of drive-in corn cribs in the Kiamichi Valley from southern Le Flore County to southwestern Pushmataha County. Only additional intensive-level study will be able to account for this distribution.

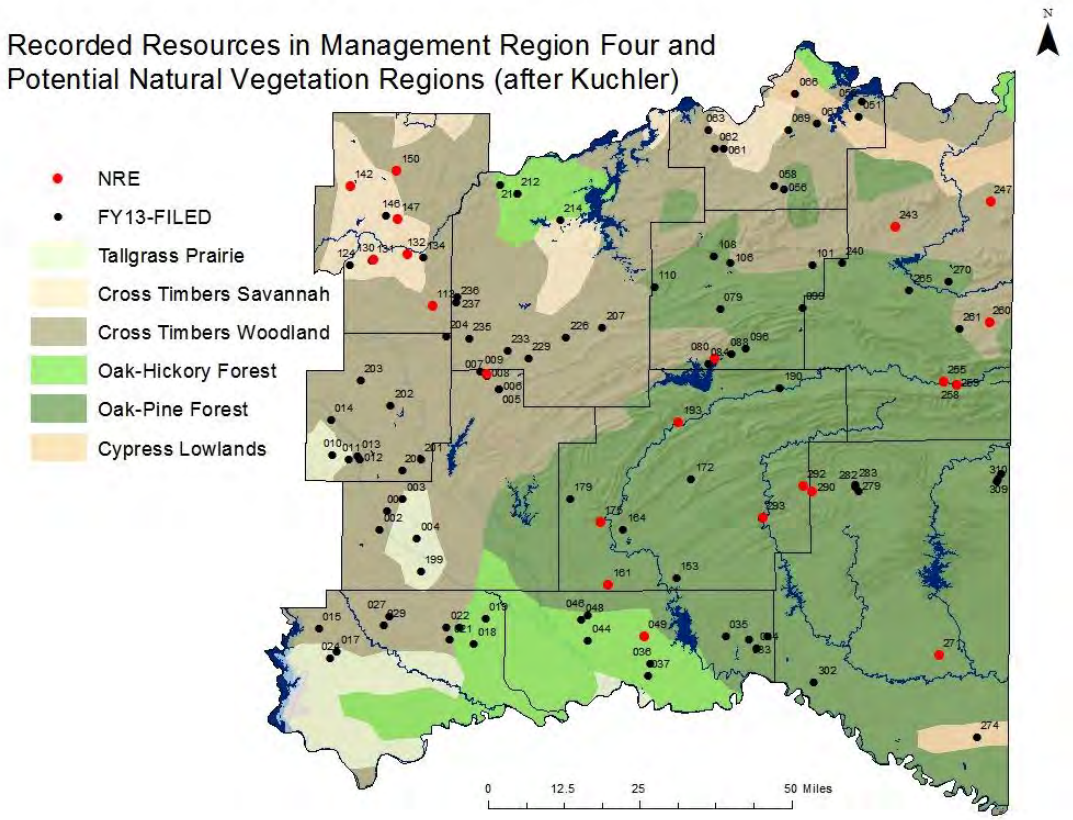
5. **Several very rare barn forms were recorded in this study.** In particular were two examples of log transverse-crib barns, a log four-crib barn, and a log drive-in corn crib. Other forms were recorded that are essentially absent from the literature, notably a double-decker log single-crib barn and several examples of multiple-crib barns containing internal walls that were joined to the main exterior walls with notching.

Log Transverse-crib barns, Properties 127-I (above) and 127-J, in Pushmataha County. The only true log Transverse-crib barns known to exist in Oklahoma are these two examples, which were built by two brothers around the time of statehood, are only nine miles apart.

6. Despite a pervasive affinity for barns, **most people, even longtime locals, rarely know much about isolated barns in their locales or their histories**. Younger residents usually know very little about architecturally significant properties within a few miles of

their homes. Data on barn construction and uses before 1960 may only survive in the memories of elderly farmers and ranchers living in Management Region Four. The PI frequently discovered that occupants of rural properties, typically renters, were altogether ignorant of historical agricultural patterns and uses of farm buildings on the property that they occupied.

7. **Among the 11 survey counties, three counties stand out as containing larger densities of historically and architecturally-exceptional properties.** Considerable variation of resource quality exists within Management Region Four. Two or fewer National Register-eligible (NRE) resources were identified in most counties. These lower-priority counties are Atoka, Bryan, Choctaw, Coal, Haskell, Latimer, McCurtain and Pittsburg Counties. Three of the 11 counties—Hughes, Le Flore, and Pushmataha—each contained at least five NRE resources. It is recommended that future intensive-level barn surveys be directed to these three counties. The higher densities of historic resources seem to be inversely correlated with population growth and agricultural intensity, but other factors may also be responsible for this surprising level of variation. It was particularly surprising to find an abundance of resources in Hughes County.



Distribution of Recorded Resources in Management Region Four. Considerable variation of resource quality exists within Management Region Four. Two or fewer National Register-eligible (NRE) resources were identified in Atoka, Bryan, Choctaw, Coal, Haskell, Latimer, McCurtain and Pittsburg Counties. However, three of the 11 counties—Hughes, Le Flore, and Pushmataha—each contain at least five National Register-eligible resources. Intensive-level surveys should be conducted in these counties.

8. **Transverse-crib barns are the most common larger barn type in the study area.**

Transverse-crib barns of varying size are found in the study area and constitute the most-common barn plan after the single-crib barn. Transverse-crib barns diffused from the Upland South and are smaller than Midwest feeder barns, which have more hay storage capacity. The secret of the Transverse-crib barn's success is its simple design and adaptability to a variety of uses and this is especially true in the subsistence-farming areas of southeastern Oklahoma.

Typical Transverse-crib Barn, Swink vicinity, Choctaw County (023-A). This typical example in the Ouachita foothills contains the three diagnostic traits identified by Jordan-Bychkov of: (a) stalls, (b) grain bins, and (c) hayloft, as well as a tack room. The central runway remains in use for storage, with a single board to deter wandering cattle.

9. **Midwest Livestock Feeder Barns are rare in Management Region Four.** Midwest Livestock feeder barns are roughly defined as large barns that do not conform to the Transverse-crib plan and in which a large majority of the interior volume is devoted to hay storage. While these are common in central and northwestern Oklahoma, which is part of the Midwest-oriented Winter Wheat Belt, they are all but completely absent in Management Region Four, which is the cultural domain of the Upland South.

10. **The original walls and roofs of historic barns throughout the study area are frequently covered by a skin of corrugated sheet metal**. Covering wood shake roofs and weatherboard or vertical barn board walls with sheet metal has definitely increased

the lifespan of the study area's historic barns. In determining National Register eligibility, the integrity of a barn was not dramatically reduced by minimal application of sheet metal to the roof and walls, since the practice was usually done before 1960 to preserve the barn's functionality. The application of sheet metal disqualified a property from eligibility if it was determined that it dramatically altered the original appearance. However, application of modern materials, namely aluminum or vinyl siding, did disqualify a property from eligibility.

11. **Barns throughout Management Region Four are smaller, simpler, less-specialized, and retain a greater degree of folk cultural influence than in any other part of the state.** Southeastern Oklahoma is the state's purest Upland Southern folk landscape and contains obvious evidence of a long-surviving folk log building tradition. While northeastern Oklahoma contains a significant amount of folk log buildings, southeastern Oklahoma retains more of a frontier character and has a greater degree of isolation, which has allowed the survival of older building forms that would have likely been replaced with agricultural mechanization and increased efficiencies.

12. **Bank ("Basement") barns are extremely rare in Management Region Four.** Bank barns appear to be very uncommon south of the Arkansas River, which suggests they may be associated with Midwestern settlers.

13. **Despite a significant Old Order Amish presence in southwestern Coal County, no sign of Amish barns were located.** The Amish population derives from Missouri, Iowa, Colorado and Canada. They did not begin arriving in the area until the 1970s.

14. **Use of native stone in barn construction is uncommon in the study area.** Properties that did utilize native stone were usually quite small, unelaborate, or built after World War II. In every case, the material used was locally-quarried polychromatic sandstone.

Use of Native Sandstone, Haw Creek vicinity, Le Flore County, 079-G [260]. This small potato barn in an isolated, spectacular Ouachita valley was built in 1922. Like most observed examples of the use of native stone in southeastern Oklahoma, the specimen is small, functional, and unelaborate.

15. **A large number of log single-crib and double-crib barns were observed in Management Region Four.** Single-crib barns are the most common log-clad resources in every county of the study area. Double-crib barns were also common, and included both frame and log examples. The smaller scale of farms and less reliance on hay storage made small crib barns satisfactory in the corn and cotton system of the region. The cultural landscape Management Region Four is clearly Upland Southern in character.

Single-crib log barn, Miller vicinity, Pushmataha County, 127-F [179]. Located on the western edge of the Choctaw Ouachitas, the cultural landscape is undeniably older and Upland Southern. Century-old log buildings such as this survive against the odds, often abandoned and unprotected. This specimen exhibits saddle-notching and contains a small hayloft.

16. **Hay hoods are nearly absent from Management Region Four, even on larger barns.** Hay hoods are the familiar triangular extensions at the top of a barn's gable that supports the block and tackle system of the ridgeline hay trestle. Incredibly, only a handful of hay hoods were observed during the entire field season, and the historical integrity of the one recorded resource containing a hay hood was later considered to be suspect. The absence of hay hoods is perhaps representative of a several factors, such as Little Dixie's lesser need for winter fodder, the smaller size of barns, and the absence of Midwestern influences observed elsewhere in Oklahoma.

17. **No barns in the study area contain murals or painted designs.** No single example of barn murals or motifs, which ornament barns in the eastern United States, were observed anywhere in southeastern Oklahoma.

VIII. ARCHITECTURAL REVIEW -- SUBMITTED BY JANA PHILLIPS, AIA

The barns in this survey show little variety of size and materials across the eleven (11) county survey area. This survey area spans similar topography, climate and soil types. Notable trends seen in this survey area include various crib barn layouts, log/heavy timber construction, simple gable roofs, and perimeter foundations. This region has a number of barns that appear to be similar to the Midwestern Feeder Barns found in other regions of the state. Upon closer review, most are log crib barns that have a loafing shed addition.

Barns are the signature building on a farm. They are the essence of farm life, utilitarian structures that are a reflection of the agrarian lifestyle. They can signify the priorities of a farm, whether cultivation of crops or ranching is the main enterprise. Barns tend to be the first permanent structure erected on a farm. The success by which a barn serves the farm directly impacts the success of that farm. A successful barn structure protects resources of livestock, feed and crops. In some cases, barns provide living quarters for people until a more permanent house structure can be erected. They can also be indicators of the seasonal, economic, and cultural changes that occur in a region. Agrarian buildings more than other building types, follow the "form follows function" mantra of America Architect, Louis Sullivan.

One of the first observations made of a barn are the construction materials. Material availability and construction technologies greatly affect the size and type of structure built. Not surprisingly this survey area includes a large number of log barns. This forested area contains both hardwood and pine trees. Southeast Oklahoma has some of the oldest barn structures indicative of the early settlements of Southeast Oklahoma compared to the remainder of the state.

The other initial observation is the size of the barn. The size is dependent on many factors. Often the most significant factor is the size of the farm. Barn size is typically directly proportional to the size of the farm/scale of operation. Other factors effecting size of a structure include; what materials are available locally; how much can the land owner invest in the barn at the time of its erection; was the structure to provide shelter for large farm animals, smaller poultry, or for crops; did the requirements stipulate a hayloft? The wooded terrain in this area, as well as farming/ranching and construction technologies at the time of settlement, were not conducive to large scale operations, thus producing smaller scale structures when compared to regions of the state settled later.

It is interesting to note some of the trends observed in Southeast Oklahoma. The Crib Barn layout appears most often. There are single cribs, single cribs with side or front drives, double cribs with central aisle, and a couple of four cribs. Most have simple lower sloped gable roofs with metal roof cladding. Wood siding is the predominate cladding system. Approximately half of the survey subjects have some type of foundation. Both Northwest and Northeast Oklahoma surveys yielded large percentages of multipurpose barns, referred to as Midwest Livestock Feeder Barns. Southeastern Oklahoma has a few of these types of multipurpose barns with haylofts, but they are not the most common type in the region.

While other regions in Oklahoma have similar climate with either high humidity or moderate average temperatures, this survey yielded very few cupolas or specific ventilation systems. There are a large number of log structures that are not chinked, do not have daub to cover the openings between the logs, allowing these structures to have a very effect passive ventilation technique that helps maintain the integrity of the log structures.

The architectural features of ventilation and perimeter foundation contribute to the longevity of many of these structures. Allowing air to flow effectively through the structure is especially important when storing fodder of hay or grain. Fodder needs to be protected from moisture to remain a viable food source for animals. This type of passive circulation of air allows fodder to stay dry, and hay in particular not to overheat. This keeps hay from molding and becoming unfit for animal consumption. The benefit to the structural and cladding systems are similar. Proper air flow allows building components to maintain their integrity and function as intended.

It is interesting to note what is absent from these survey subjects in Southeastern Oklahoma when compared to other regions, namely large hay lofts. This may be reflective of the mild climate that allows fodder feed to be available in pastures for most of the year. The number of days that a rancher or farmer would need to feed hay to livestock in this region is much less than in the more harsh and arid climates in the other regions studied in Oklahoma. The ventilation that is important to keep the hay fit for livestock consumption, is also important to protect grains or any implements from rot. The wooded terrain is not conducive to high winds, therefore, there is not a need to control the ventilation as in other Oklahoma climates.

Having a perimeter foundation constructed from an impervious material such as stone or concrete provides stability, as well as protection from moisture for the structural and cladding components. A perimeter foundation which runs continuously around a structure, except for door openings, allows an even distribution of gravity and wind forces to the ground.

The materials and style are common characteristics of the structures. Most of these barns still have wood siding as the cladding system. The above mentioned architectural features of ventilation and perimeter foundations are a contributing factor to the longevity of the original cladding materials of siding, split or whole log. By keeping the cladding well drained and ventilated, protective coats of paint are all that is needed to maintain cladding. The traditional barn paint colors of red or white are the predominate paint colors used. Architecturally, one might anticipate seeing more metal siding, as it is a "newer" technology, being more moisture resistant than the wood siding, especially in a more moist climate than the western areas previously surveyed. When the need arises for replacement, wood cladding is more readily available from local sources than in the western areas of Oklahoma. This difference in topography is likely as much a factor of the wood siding as the architectural features to preserve the materials. Further observations of metal roofing replacing original wood shingles; support this theory of using locally available materials.

It is also possible that other contributing factors to the continued use of wood cladding rather than making the switch to metal siding are the size of the farms, type of farming/ranching, and the more mild climate. Farming can be more time intensive, time specific according to the growing seasons than ranching. The more area the agricultural endeavor requires, the more time it takes to perform the livelihood tasks, which leaves less time for maintenance. The topography of the Southeastern Oklahoma has productive soil which equates to a smaller acreage being able to support a family. Due to the comparatively smaller size farms in the southeastern areas of the state less maintenance is required. The mild climate provides more opportune days for maintenance.

A couple of symbiotic features noted in this survey area are the large number of barns that have both a foundation and some sort of passive venting technique employed. As previously mentioned, this area has more annual rainfall than western and central areas surveyed. Yet it does not experience the range of high and low temperatures of the other regions. This more mild climate and the availability of wood materials, both likely contribute to why a majority of the structures still have wood siding when compared with the number of barns especially in Northwest Oklahoma that have metal siding. The configuration of a masonry type of foundation with the ventilation benefits of either a cupola or ventilator hood, help protect the construction materials and contribute to the number of barns in relatively good condition.

A vast majority of the barns have a wood structural system in common, both load-bearing walls and frame-type. A particularly interesting observation to note is the use of the heavy timber and log structures that are cataloged in this area. The topography in this area is mostly wooded. The locally available timber material at the time of this region being settled combined with the building technologies of that time; all point toward smaller, load bearing construction that could be accomplished with simple hand tools, aided by block and tackle, along with horse or mule power. Most of the migrating settlers came from forested areas and were familiar with these construction techniques, thus making this area of resources a desirable area to settle.

Wood frames can only survive if protected from moisture. Moisture whether from above or below, is the most damaging single decomposition agent of structures. The log construction type has been successful for centuries as the natural form of the log will repel moisture, particularly if the bark is left on the log. Many of the barns also have a

composition of stone base/foundation that supports the wood frame. There is an observed depth of overhang in these subjects similar to Northeast Oklahoma. This is no doubt due to a need to shed water off the barn. The lesser winds in this region do not exert as much uplift on these overhangs; therefore they did not evolve to small, or no, overhang as seen in Northwestern counties.

A small number of the survey subjects have load bearing masonry construction. The masonry tends to be native sandstone, ranging in color from tan to shades of brown. The barns in the survey that incorporate native stone use cut stone. A noteworthy example is the potato barn in the haw Creek vicinity in Le Flore County. It is a unique structure in that it is a specialty single crib structure with a side drive. It is considered specialty in that its purpose combines root crop storage with a hay loft.

The most common recurring feature of this survey area was the simple gable roof. This profile is expected with the timeframe of settlement and the corresponding available construction technologies. Some of the crib barns that have loafing sheds or drives added, continued the simple gable or have a lower slope shed roof to cover the addition. The roof configurations are not as of much significance as the interior configuration of the barns in telling us about life on these farms. There are few Gambrel rooflines in this area.

There are some wonderful examples of log construction in the survey area, which was harvested on site. There are examples of log construction in nine counties; namely Atoka, Coal, Haskell, Hughes, Latimer, Leflore, McCurtain, Pittsburg, and Pushmataha. This area has a healthy native forest, and is an extension of the Ozark region of Arkansas. The log structures are smaller structures, limited by the size of the timber, available tools, and method

of construction. Simple tools such as block and tackle and handheld tools appear to have created these structures. Saddle-joint and V-groove joinery are used in some of these barns.

These are bearing wall construction, similar to the masonry structures, but using a more primitive method of this construction type. The crib barns surveyed use early methods of Midland log construction employing vee-notching and saddle notching. Some uniquely detailed structures have under sided saddle notching and there is one with vertical double notching. The Matthew Brantly single-crib barn in the Hill Chapel vicinity of McCurtain County employs the rare form of detailing known as vertical double notching not common in the area.

The best preserved examples of the log structures can be found in Pushmataha, and Hughes Counties. The Jerry Baggs Log Barn in the Cloudy vicinity and James Martin Baggs Log Barn in the Clebit vicinity are double crib barns with center aisles and loafing sheds and are a little over 100 years old. These two also have the gable roof ridge running parallel to the center aisle. They are very good examples of American Midland log construction.

The Emory Condit Double-Crib Barn in the Cross Roads vicinity of Hughes County is a very well maintained log barn. It has a center-aisle and loafing sheds, and dates to approximately 1900. The logs are joined by undersided saddle-notching and have sandstone piers. Another well preserved log barn in Hughes County near the Holdenville vicinity employs vee-notching, rests on sandstone piers, and has a center aisle running perpendicular to the gable ridge.

There are only three bank barns observed in this survey area. While the topography could lend itself to more, the low number may be attributed to the time frame of settlement in Southeastern Oklahoma. These bank barns can be found in Coal, Haskell, and Hughes

counties. One subject is an English Side-Hill Bank barn. It is located in the Yeager vicinity of Hughes County. It is unique to the area, having three levels, a hayloft over the wagon access middle level and a lower level with southern exposure for livestock shelter.

This area receives generous rainfall for Oklahoma. This generates a greater need to keep feed dry and provide the farmer with work space protected from the elements. In other areas of Oklahoma, the Midwestern Feeder Barn type developed to serve this need. In Southeastern Oklahoma many of the log crib barns have been adapted to fulfill a similar need. The single crib barn structures have additions of side or front drives, while many of the two crib structures with central aisles. The four crib log structures also effectively provide shelter from rain, but the passive ventilation gives a nod toward the humid climate that requires a barn to protect grain and fodder from molding or souring.

An impressive and rare four-crib barn was identified it the Atwood vicinity of Hughes County. It is rather large for the area and has a hayloft overhead. The construction method uses saddle and vee-notching in the 10'x10' cribs. The cribs are well preserved as they rest on sandstone piers.

The Francis Cross Barn in the Clebit vicinity of McCurtain County is an interesting two-story crib barn with a side drive and loafing shed flanking it to create a large log barn with a long sloping fable roof. This barn served many functions and is impressive in its size, configuration, and construction.

Another two-story crib barn was observed in the Rock Creek vicinity of Hughes County. It also contains a hay loft above its double cribs. This particular structure is adjacent to an early military road and may have additional historical significance beyond its high profile and unique symmetry of center aisle perpendicular to the ridge.

Few dairy barns are documented in this survey area. This observation reinforces the theory that this area was settled early when compared with the remainder of Oklahoma. There would not have been established trading centers for large dairy operations. Families owned livestock to support their family needs. One of the dairy barns found is the Jack Cornelius Dairy Barn in the Greenwood vicinity of Pushmataha County. It employs sandstone as a rustic base with modular masonry units above. This barn is not architecturally significant, but is historically significant due to its association with former Secretary of Agriculture for Oklahoma, Jack Cornelius.

A number of wood construction standalone Granaries were observed in this survey area. This is yet another indicator that this area was settled early. There would not have been main established towns to trade and purchase grain; rather the smaller farms in this area were more self-sustaining. Whatever grain crops were cultivated then needed to be safely stored for rationed feeding to livestock. The oldest subject surveyed is the Old Hammer Place Barn in the Moyers vicinity of Pushmataha County. It is estimated to have been constructed around 1870, which would make it approximately 150 years old. Very few structures in the state of Oklahoma are this age and make it significant.

The largest barn in the survey is the John McClure Barn in the Gilmore vicinity of LeFlore County. It is a transverse crib barn and was built around 1910. It is of timber frame construction with balloon frame infill.

Previous surveys found Northwest and Central Oklahoma barns tend to have loafing sheds added to their sides presumably for shade in the areas noted. The loafing sheds found in the barns surveyed in Northeast Oklahoma were likely added for a different reason; a dry area protected from a healthy average rainfall. A considerable number of single crib barns

have either side drives or loafing sheds added to them. This offers additional protection for farm implements or perhaps a wagon. This also provides a dry area for feeding livestock. Several of the survey subjects had stantions built into these areas.

A unique barn for this survey area is the Mule Barn in the Hugo vicinity of Choctaw County. It is unique in this area as a large, multipurpose barn. It has architectural features more commonly found in the ranching areas where many animals were housed. It does have metal ventilators complete with weather vanes and lighting rods. It boasts a long history of electricity as evidenced by the glass insulators that remain. This barn is most significant for its contribution to the early logging industry in Southeastern Oklahoma.

A significant factor in the survival of many of these barns is that they have remained a vital part of farm life. For the most part, these subjects have been well preserved by maintenance, and timely repairs. In the cases where the barns have become antiquated and not adapted to a modern use, their intrinsic design has preserved them. The obvious clumping of styles and construction techniques are indicative of settlers bringing their techniques and skills from previous locations to the Oklahoma landscape. This is illustrated most notably in this survey in the log structures.

Many of the barn structures in the Southeastern Oklahoma area have been adapted to remain relevant in daily farm life. This may be a reflection of society in more recent times than industrialization on the farm. The smaller scale farms in Southeastern Oklahoma are not so close to growing urban areas as to create a lot of change in land use. Much of the population in rural areas will maintain their rural residence and its proximity for outdoor recreation when their livelihood relocates to a community. Many people raised in the solitude of country life prefer that familiarity when their lifestyle changes to one of an

employee rather than a self-employed farmer/rancher. This region of Oklahoma is known for its abundance of outdoor activities with more opportunities to hunt, fish and/or water sports. The barns surveyed in Southeastern Oklahoma provide a very distinctive connection to their location on the planet. They are most definitely of their place.

Barns are wonderful examples of sustainable design. Study of the daily workings on a farm will quickly indicate much labor is required even when using the latest technology available. Any methodologies that conserve energy, labor, and maintain material resources are considered sustainable. Structures are to aid the building users in their activities, even if those activities seem mundane. Often it is the mundane tasks for which buildings can be the most useful. The construction materials come from local resources. They are designed for natural ventilation; orientation considering sun exposure and prevailing winds. They are designed to use a minimum amount of energy to serve their daily purposes. All of these are concepts architects incorporate into sustainable building design. Successful sustainable buildings are simplistic. Minimal input for maximum output is the goal of sustainability; a goal shared by any agrarian endeavor. Sustainable buildings are unique to their time and location on the planet.

Trends in these barns are that of utility and sustainability. Their longevity lends to their adaptability, thus remaining relevant. The adaptability of a barn structure in a rural setting is similar to the reclaimed brick warehouses in many older urban neighborhoods, or the revitalization of Main Street Oklahoma. Just as the revitalization of Bricktown in Oklahoma City, or the Brady District in Tulsa, are perfect examples of sturdy building stock continuing to serve urban dwellers, the barns of rural Oklahoma continue to serve the rural

population. As the brick warehouses provide history and pride for the urban dwellers, so do the surviving barns provide a similar sense of history in rural areas.

Barns show us that ingenuity can find adaptive uses for existing structures. It is almost always more advantageous to remodel an existing structure, capitalizing on its kinetic energy, rather than removing and replacing it. Farm life is the epitome of sustainability and efficiency. Preservation and rehabilitation of these structures also preserve history of a region. The barn structures can be indicators of what was successful in the past, as well as what activities became obsolete. Barns by their sheer personality, typify the values of their communities. Farming and Ranching communities value economy, and stewardship of the natural resources available in the region. Cultures thrive when they know and understand their history.

IX. KINDS OF HISTORIC RESOURCES IN THE SURVEY AREA

Rural southeastern Oklahoma is a land of crib barns. This facet of the cultural landscape of "Little Dixie," confirms the region's identity as a western portion of the Upland South. This survey recorded several subtypes of single-crib barns as well as examples of double-crib, four-crib, and Transverse-crib barns. Where they are common, barns with subterranean basements or 'banks' can be classified into any number of varieties (English bank barns, Pennsylvania German barns).

There exists a body of academic research on barns and related agricultural outbuildings. Most of this work has been conducted by folklorists and cultural geographers. The most significant scholarship on North American barns and farm outbuildings is found in several periodicals published by the Pioneer America Society. Geographers Fred B. Kniffen and folklorist Henry Glassie are regarded as having influenced second- and third-generation barn researchers. The most prolific barn scholars of recent decades include Allen G. Noble, Alvar W. Carlson, Hubert G. H. Wilhelm, Keith R. Sculle, Robert Ensminger, Terry G. Jordan-Bychkov, John B. Rehder, Charles F. "Fritz" Gritzner, Malcolm L. Comeaux, John Morgan, Matti Kaups, Karl B. Raitz, John Fraser Hart, H. Wayne Price, Peter O. Wacker, James Shortridge, Richard V. Francaviglia, and Wilbur Zelinsky. Because they focus on Texas, the mountain West, and Kansas, the works of Jordan-Bychkov and Shortridge are most relevant to this study of Oklahoma. Their useful works are listed in the annotated bibliography of this report.

Except for the work of Terry G. Jordan-Bychkov and his students and collaborators, most of this research focuses on the eastern one-third of North America. Researchers

conducting fieldwork in the western states have few guideposts in the way of typologies or terminology. In 1995 cultural geographers Allen G. Noble and Richard Cleek published a much-reprinted field guide to barns and outbuildings titled *The Old Barn Book*, which contains many good drawings and is helpful in understanding the basics of pre-1890 barns east of the Great Plains. While this work is not a very useful source for identifying barn types of Oklahoma, it is useful as a guide to barn components, and is for barns the closest analogy to *A Field Guide to American Houses* by Virginia and Lee McAlester. The Noble and Cleek guide is used only minimally in this survey to suggest typologies; many properties do not conform in any way to those presented in *The Old Barn Book*.

A more helpful, though less-authoritative, work is John Michael Vlach's simply-titled *Barns*. *Barns* is useful because it organizes barns regionally. Vlach uses Depression-era barn photographs housed at the Library of Congress and downplays barn typology, arguing that, upon close inspection, barns are rarely identical and, by doing so, implies that barn classification is a complicated endeavor. Other accomplished barn scholars, notably John Fraser Hart, Terry Jordan-Bychkov, and James Shortridge, concur that only the most basic typology of barns is useful. They are reluctant, due to their own field experiences, to "split hairs" in classifying barns in the manner of Noble and Cleek.

For this survey I have attempted to arrive at a compromise between being too general and too specific regarding barn typologies. The following barn typology was developed after weighing Noble and Cleek's field guide with my own field observations. What I hope to provide is a consistent, simple-to-use, first approximation of barn types of Oklahoma.

Transverse-Crib Barns

The transverse-crib barn has been well-documented as an American barn type that originated around 1815 in the Great Valley of southwestern Virginia and Upper East Tennessee. Some barn scholars believe that it is the direct descendant of the archaic four-crib log barn with a gabled roof in which the ridgeline was perpendicular to the main entry (similar in form to a double-pen dogtrot house with a connecting passageway). The theory is that Upland Southern Appalachian farmers developed the transverse-crib barn by merely rotating the ridgeline 45 degrees so that the central aisle or "runway" ran parallel to the ridgeline. The eave sides of the resulting structure were enclosed to create six cribs, which allowed additional cribs to be added, as needed, to the gable ends. No other scholar has studied the transverse-crib barn more than cultural geographer Terry G. Jordan-Bychkov. Jordan-Bychkov remains skeptical about the evolution of the barn, but he is fairly certain of its geographic origins.

Jordan-Bychkov defines the Transverse-crib barn as containing:

(a) gables facing front and rear;

(b) a central runway beneath the roof ridge having wagon access at both ends;

(c) four to ten cribs (typically six) on either side of the runway;

(d) a loft positioned above the cribs;

(e) multipurpose functions, essentially granaries, stalls, and hay storage.

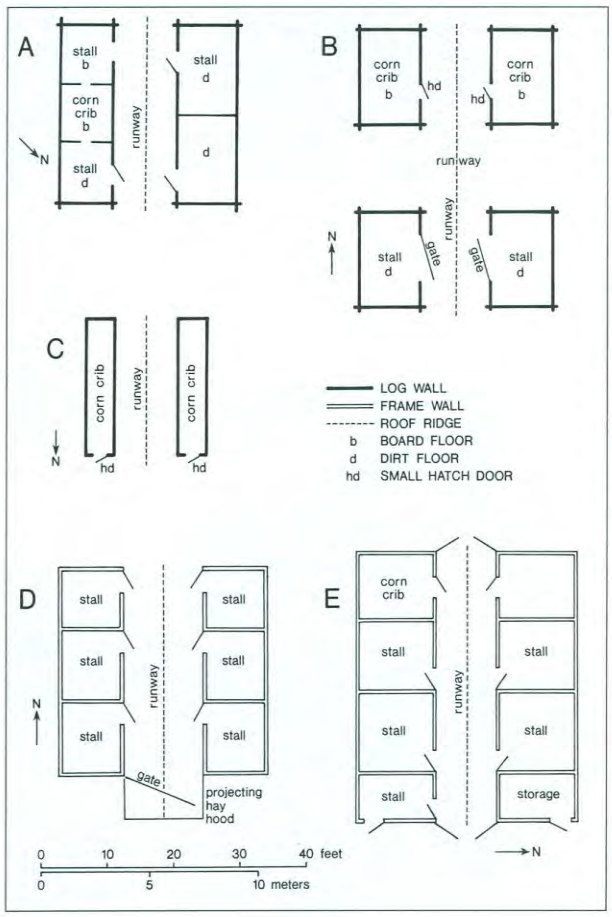
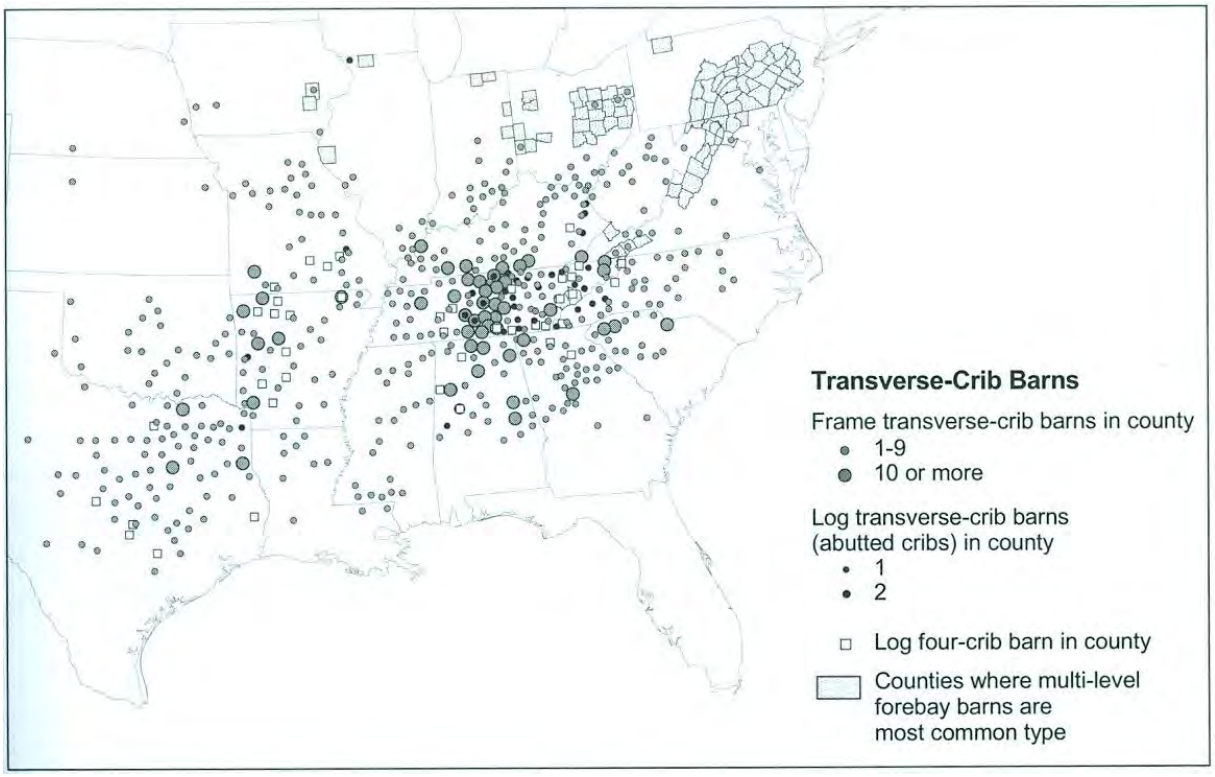


FIGURE 4.5 *Plans of representative barns: A = transverse-crib near Paintsville, Johnson County, Kentucky, built of saddle-notched, round poplar logs; B = four-crib barn near Flower Mound, Denton County, Texas, ca. 1880, with elongated cribs made of saddle- and V-notched post oak logs; C = drive-in corncrib at Brattonsville, York County, South Carolina, consisting of hewn, half-dovetailed logs; D = frame transverse-crib, Hardin County, Illinois; and E = frame transverse-crib, ca. 1850, near Yates, Howard County, Missouri. All shed additions and frame additions to log barns have been deleted from the plans, to emphasize the basic barn. (Sources: Marshall 1981, 73; Sculle and Price 1993, 18; Jordan-Bychkov 1998, 8.)*

Transverse-crib barn plan evolution. Source: Jordan-Bychkov, *The Upland South*, p. 47.

Transverse-crib barns became widespread in the Upland South by the latter 1800s and diffused widely to the southern section of the Middle West. Indeed, Jordan-Bychkov declared the transverse-crib barn to be a "diagnostic" trait of the Upland Southern landscape. After 1890 most transverse-crib barns were built with sawn lumber rather than logs. Presumably, the transverse-crib barn was taken wherever Upland Southerners and Midwesterners settled, including all of Oklahoma. The transverse-crib barn's simple form allowed many practical alterations. One of the most common was the addition of flanking sheds to the eave sides.



Transverse-crib Observations. Source: Jordan-Bychkov, The Upland South, p. 55.

Transverse-crib barns are ubiquitous in the southeastern Oklahoma study area. Barn scholars do not agree on how to distinguish a transverse-crib barn from the larger, more complex Midwest livestock feeder barn that retains the transverse-crib form. Therefore, for this survey I have opted to define a transverse-crib barn as any small to medium-size, multiuse (not complex), rectangular, end-entry barn originally containing granaries, stalls and a hay loft.

Typical Southeast Oklahoma Transverse-crib Barn, Kennady vicinity, upper Mountain Creek Valley, Le Flore County. Note gabled roof, prominent open runway and loft door in gable wall. Eave-side lean-to additions are common.

The orthodox interpretation of barn scholars is that roof type, wall-cladding, wall color, and other component variations that are usually employed in the classification of domestic architecture are inconsequential with regard to barns. However, it was observed that nearly all of the Transverse-crib barns in the study area contained gabled roofs, most were clad in vertical barn board, and all but one did not contain a hay hood. The basic fact that such regional patterns exist demands that the orthodox view should be revisited.

The most significant find of this survey was the discovery of two log Transverse-crib barns constructed around the time of Oklahoma statehood. Both are located in very isolated areas of Pushmataha County.

James Martin Baggs Barn (1909), Clebit vicinity, Pushmataha County. Rarer perhaps than even the four-crib barn, this barn type was not believed to have existed in Oklahoma prior to this survey. This survey located two, and only a few miles apart, built by brothers over a century ago. These two log Transverse-crib barns are only the fifth and sixth documented examples west of the Mississippi River.

Old Simpson Place Barn, Tushka vicinity, Atoka County (ca. 1920). This specimen is contains a relatively large haymow to support livestock through the winter. While large Midwest Livestock feeder barns are the norm in northwestern Oklahoma, they are rare in southeastern Oklahoma. This particular example is among the smallest examples observed in the state.

Midwest Livestock Feeder Barns

Midwest livestock feeder barn evolved in the Ohio Valley. From about 1870 these large barns became associated with the Corn Belt from Ohio to Nebraska. They usually followed the plan of the subsistence-derived transverse-crib barn, but grew in size due to needs for more hay storage, space for housing work stock, milking, and sheltering stock over longer northern winters. They provided substantial interior workspace and sometimes stored cash grains. This barn type represents the apex of pre-mechanization U.S. farm productivity. Door placement may resemble distinct types noted in the literature as "three-bay barns," "three-portal barns," "Appalachian barns."

Single-crib Log Barns

Single-crib barns are the oldest, smallest, and simplest form of American barn. Originally constructed of logs, these rectangular gabled buildings continued to be built of lumber well into the twentieth century. The only difference between a single-crib barn and a mere corncrib or granary is that the single-crib barn is always constructed of wood and has more uses than simply storing grain. It must also shelter livestock, store hay, or provide workspace for the farmer.

Single-crib barn, Fanshawe vicinity, Le Flore County. Small, single- and double-crib barns, including log specimens such as this one, are especially are found throughout the study area.

Double-crib Log Barns

Terry G. Jordan-Bychkov found that the double-crib barn form has Old World antecedents in both Scandinavia and Alpine Europe. Apparently one or both prototypes were transferred to North America by way of immigration, but the Scandinavians are favored, since it is accepted that they introduced most if not all log building traditions to the Delaware Valley by 1650. Southeastern Oklahoma contains more double-crib barns than any other part of the state.

Emory Condit Double-Crib Barn (ca. 1900), 063-I [147], Cross Roads vicinity, Hughes County. Dozens of double-crib barns, ranging from fully-exposed ruins to well-sheltered and preserved specimens such as this ca. 1900 example, are found throughout Management Region.

Four-crib Log Barns

One example of a four-crib log barn, among the rarest of all log crib barn types, was observed in Management Region Four, bringing the total to two known examples in Oklahoma. Four-crib barns are most common in southwest Virginia and east Tennessee. They are considered the precursor of the Transverse-crib barn. A superior design, the Transverse-crib barn quickly replaced the four-crib plan to become the ubiquitous folk barn type of the Upland South.

Interior view of the four-crib log barn, 063-C [130], Atwood vicinity, Hughes County. Four-crib barns are perhaps the rarest of log barn types in Oklahoma. This inconspicuous, metal-covered example is among only two known to exist in the state and contains a large haymow. The other specimen, which was discovered near Kingston, in Marshall County, is located 80 miles to the south-southwest.

Bank Barns

Despite sloping terrain and abundant native stone, bank barns are all but absent from Little Dixie. Three were observed, all different subtypes, with the most impressive located on the periphery of the study area.

Side-gabled Bank Barn 063-J [150], Yeager vicinity, Hughes County. Bank barns are exceedingly rare in Management Region Four. This one is located on the extreme northwest periphery of the region and is probably more associated with Midwestern settlement in central Oklahoma.

Raised Barns

Raised barns typically have floor plans similar to Transverse-crib barns and three-bay threshing barns, but they are characterized by lower walls constructed of stone or masonry. Nearly all are used as dairy barns and are found on level terrain.

Jack Cornelius Dairy Barn, Greenwood vicinity, Pushmataha County (ca. 1945). Raised barns tend to be aligned to the east and west, as is this one, with a single row of milking stanchions along the south wall in order to utilize light during cold winter mornings. Note washing room on southeast corner (right) of this postwar example.

Drive-in Log Corn Cribs

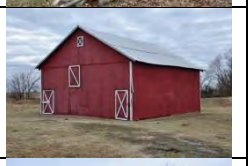
Drive-in corn cribs are clustered in some of the more inaccessible areas of Management Region Four. They are a type of double-crib in which two rectangular cribs are separated by a central runway that is parallel to and centered beneath the ridgeline rather than perpendicular to it. The National Register-eligible Old Hammer Place Barn in Moyers, Pushmataha County, is an ancient frame example of a drive-in corn crib. Log specimens are also found in places.

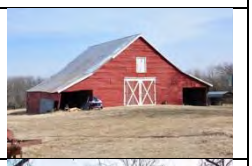
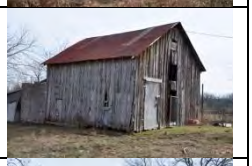
Drive-in corn crib, Old Hammer Place Barn, (ca. 1870), 127-E [175], actually a drive-in corn crib, Pushmataha County. Numerous examples of drive-in corn cribs were observed in the valleys of Pushmataha County, including both log and frame specimens.

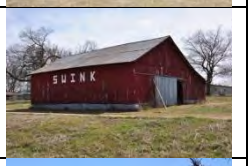
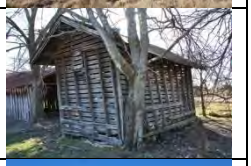
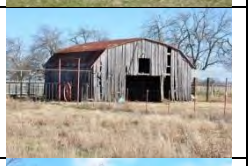
X. SPECIFIC PROPERTIES IDENTIFIED

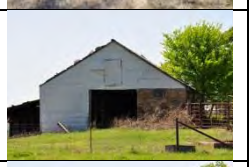
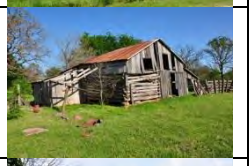
During the course of the Thematic Survey of Historic Barns in Southeastern Oklahoma, 302 resources over the age of 50 years were photo-documented. Of these, 110, or 10 per county, were recorded at a minimal level of documentation for the Oklahoma Landmarks Inventory.

Each property is listed and illustrated below by county according to its Resource ID number. The Resource ID number is a unique identifier of this survey that begins with the county FIPS code, which is a three-digit numerical code for counties used by the United States Bureau of the Census (005 for Atoka County through 127 for Pushmataha County). The FIPS code is followed by a letter (A-J) indicating the chronological order in which the property was recorded in the county. The Resource ID number determines the filing order of the 110 property files. Although this ordering system deviates from OK/SHPO contract guidelines, it provides an easier format for locating files of disparate rural properties than the usual one designed for urban properties with street addresses. In addition to Resource ID numbers, each property also contains a bracketed three-digit GPS waypoint reference number [026] recorded during the site visit. Because a total of 302 properties were photo-documented, the 110 that were documented at the minimal level range between 001 and 310 (eight were mistakes). Properties are also identified by their legal descriptions (Township, Range, and section number) within the United States Land Survey system to the nearest 160-acre parcel. In the case of southeastern Oklahoma, all legal descriptions are referenced to their location relative to the Indian Meridian (IM).

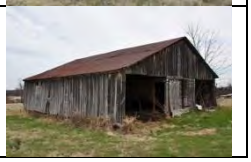
COUNTY: ATOKA			
FILE [GPS]	PROPERTY		PHOTO
005-A [001]	REASOR DOUBLE-CRIB BARN (CA. 1930) SEC. 29 (SW4) T2S-R10E (IM) ATOKA		
005-B [002]	SEC. 7 (SW4) T3S-R10E (IM) (CA. 1900) TUSHKA		
005-C [003]	SEC. 23 (NW4) T2S-R10E (IM) (CA. 1950) ATOKA		
005-D [004]	OLD SIMPSON PLACE BARN (CA. 1920) SEC. 19 (NW4) T3S-R11E (IM) TUSHKA		
005-E [005]	SEC. 21 (NW4) T2N-R13E (IM) (CA. 1940) KIOWA		
005-F [006]	SEC. 21 (NW4) T2N-R13E (IM) (CA. 1900) KIOWA		
005-G [007]	OLD SEXTON PLACE DOUBLE-CRIB BARN (CA. 1900) SEC. 6 (SW4) T2N-R13E (IM) KIOWA		
005-H [008]	OLD SEXTON PLACE SINGLE-CRIB BARN (CA. 1900) SEC. 6 (SW4) T2N-R13E (IM) KIOWA		
005-I [009]	SEC. 2 (NE4) T2N-R12E (IM) (CA. 1900) KIOWA		
005-J [199]	SEC. 17 (SW4) T04S-R11E (IM) (CA. 1940) CANEY		

COUNTY: BRYAN			
FILE [GPS]	PROPERTY		PHOTO
013-A [015]	SEC. 4 (NW4) T6S-R8E (IM) (CA. 1930) SILO		
013-B [017]	SEC. 24 (SW4) T6S-R8E (IM) (CA. 1910) DURANT		
013-C [018]	SEC. 14 (SW4) T6S-R12E (IM) (CA. 1920) BENNINGTON		
013-D [019]	SEC. 25 (SE4) T5S-R12E (IM) (CA. 1930) BENNINGTON		
013-E [020]	SEC. 32 (SE4) T5S-R12E (IM) (CA. 1940) BOKCHITO		
013-F [021]	SEC. 12 (SE4) T6S-R11E (IM) (CA. 1910) BOKCHITO		
013-G [022]	SEC. 36 (SW4) T5S-R11E (IM) (CA. 1900) BOKCHITO		
013-H [024]	SEC. 26 (SW4) T6S-R8E (IM) (CA. 1920) DURANT		
013-I [027]	SEC. 29 (NE4) T5S-R10E (IM) (CA. 1920) CADDO		
013-J [029]	SEC. 31 (SE4) T5S-R10E (IM) (CA. 1940) CADDO		

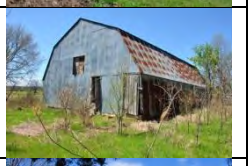
COUNTY: CHOCTAW			
FILE [GPS]	PROPERTY		PHOTO
023-A [032]	SEC. 12 (SW4) T6S-R20E (IM) (CA. 1920) SWINK		
023-B [033]	SEC. 17 (NE4) T6S-R20E (IM) (CA. 1950) FORT TOWSON		
023-C [034]	SEC. 22 (SW4) T6S-R20E (IM) (CA. 1940) SWINK		
023-D [035]	SEC. 11 (SW4) T6S-R19E (IM) (CA. 1910) FORT TOWSON		
023-E [036]	SEC. 34 (SW4) T6S-R17E (IM) (CA. 1940) HUGO		
023-F [037]	SEC. 10 (SW4) T7S-R17E (IM) (CA. 1940) HUGO		
023-G [044]	MATTHEW AND KIM SMITH BARN (CA. 1945) SEC. 13 (NW4) T6S-R15E (IM) SOPER		
023-H [046]	SEC. 24 (SW4) T5S-R15E (IM) (CA. 1930) SOPER		
023-I [048]	SEC. 27 (SE4) T5S-R15E (IM) (CA. 1920) SOPER		
023-J [049]	WILKINS-FRAZIER MULE BARN (CA.1910) SEC. 9 (NE4) T6S-R17E (IM) HUGO		
COUNTY: COAL			
FILE	PROPERTY		PHOTO

[GPS]			
029-A [010]	SEC. 11 (SW4) T1S-R8E (IM) (CA. 1920) COALGATE		
029-B [011]	EVAN ROWLAND SINGLE-CRIB BARN (CA. 1900) SEC. 18 (SE4) T1S-R9E (IM) COALGATE		
029-C [012]	SEC. 16 (SE4) T1S-R9E (IM) (CA. 1920) COALGATE		
029-D [013]	SEC. 9 (SE4) T1S-R9E (IM) (CA. 1930) COALGATE		
029-E [014]	SEC. 14 (NW4) T1N-R8E (IM) (CA. 1940) TUPELO		
029-F [200]	SEC. 27 (NE4) T01S-R10E (IM) (CA. 1940) LEHIGH		
029-G [201]	SEC. 17 (SW4) T01S-R11E (IM) (CA. 1950) LEHIGH		
029-H [202]	SEC. 32 (SE4) T02N-R10E (IM) (CA. 1930) CENTRAHOMA		
029-I [203]	SEC. 09 (SE4) T02N-R9E (IM) (CA. 1900) CENTRAHOMA		
029-J [204]	SEC. 01 (NW4) T03N-R11E (IM) (CA. 1900) ASHLAND		

COUNTY: HASKELL			
FILE	PROPERTY		PHOTO

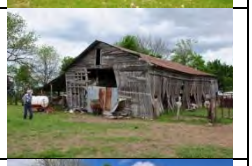
[GPS]			
061-A [050]	SEC. 28 (NW4) T10N-R23E (IM) (CA. 1920) KEOTA		
061-B [051]	SEC. 5 (SE4) T9N-R23E (IM) (CA. 1930) KEOTA		
061-C [056]	SEC. 5 (SW4) T7N-R21E (IM) (CA. 1940) MCCURTAIN		
061-D [058]	SEC. 1 (NE4) T7N-R20E (IM) (CA. 1930) KINTA		
061-E [061]	SEC. 3 (NW4) T8N-R19E (IM) (CA. 1940) WHITEFIELD		
061-F [062]	SEC. 32 (SE4) T9N-R19E (IM) (CA. 1920) WHITEFIELD		
061-G [063]	SEC. 18 (SE4) T9N-R19E (IM) (CA. 1940) STIGLER		
061-H [066]	SEC. 22 (NW4) T10N-R21E (IM) (CA. 1930) STIGLER		
061-I [067]	SEC. 18 (NE4) T9N-R22E (IM) (CA. 1920) KEOTA		
061-J [069]	SEC. 17 (SE4) T9N-R21E (IM) (CA. 1920) STIGLER		

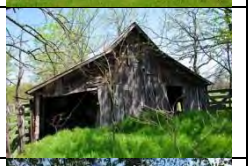
COUNTY: HUGHES			
FILE [GPS]	PROPERTY		PHOTO
063-A [113]	SEC. 09 (NE4) T04N-R11E (IM) (CA. 1890) ROCK CREEK		
063-B [124]	SEC. 06 (SE4) T05N-R09E (IM) (CA. 1900) ATWOOD		
063-C [130]	SEC. 36 (SW4) T06N-R09E (IM) (CA. 1890) ATWOOD		
063-D [131]	RUSSELL DESHIELD DOUBLE-CRIB BARN (CA. 1890) SEC. 02 (NE4) T05N-R09E (IM) ATWOOD		
063-E [132]	WILLIAM HERBERT ("HUB") BOYCE BARN (CA. 1940) SEC. 35 (NE4) T06N-R10E (IM) CALVIN		
063-F [134]	SEC. 32 (NW4) T06N-R11E (IM) (CA. 1890) CALVIN		
063-G [142]	SEC. 32 (SW4) T08N-R09E (IM) (CA. 1900) HOLDENVILLE		
063-H [146]	SEC. 29 (SW4) T07N-R10E (IM) (CA. 1920) HORNTOWN		
063-I [147]	EMORY CONDIT DOUBLE-CRIB BARN (CA. 1900) SEC. 24 (NE4) T07N-R10E (IM) CROSS ROADS		
063-J [150]	SEC. 21 (NE4) T08N-R10E (IM) (CA. 1930) YEAGER		

COUNTY: LATIMER			
FILE [GPS]	PROPERTY		PHOTO
077-A [079]	SEC. 15 (NW4) T04N-R19E (IM) (CA. 1950) VETERANS COLONY		
077-B [080]	WATSON ANDERSON BARN (CA. 1870) SEC. 28 (NW4) T03N-R19E (IM) YANUSH		
077-C [084]	SEC. 31 (NE4) T03N-R19E (IM) (CA. 1900) YANUSH		
077-D [088]	A. L. WILMOTH SINGLE-CRIB BARN (CA. 1900) SEC. 23 (NE4) T03N-R19E (IM) YANUSH		
077-E [096]	SEC. 17 (SW4) T03N-R20E (IM) (CA. 1920) YANUSH		
077-F [099]	SEC. 14 (NE4) T04N-R21E (IM) (CA. 1940) BENGAL		
077-G [101]	SEC. 07 (NW4) T05N-R22E (IM) (CA. 1940) DENMAN		
077-H [106]	SEC. 02 (SW4) T05N-R19E (IM) (CA. 1950) WILBURTON		
077-I [108]	SEC. 32 (NE4) T06N-R19E (IM) (CA. 1930) CENTER POINT		
077-J [110]	SEC. 27 (NE4) T05N-R17E (IM) (CA. 1950) GOWEN		

COUNTY: LE FLORE			
FILE [GPS]	PROPERTY		PHOTO
079-A [240]	SEC. 02 (SE4) T05N-R22E (IM) (CA. 1900) FANSHAWE		
079-B [243]	SEC. 04 (SW4) T06N-R24E (IM) (CA. 1900) KENNADY		
079-C [247]	JOHN MCCLURE BARN (CA. 1900) SEC. 19 (NW4) T07N-R27E (IM) GILMORE		
079-D [255]	WALTER W. MCBRIDE BARN (CA. 1900) SEC. 14 (NW4) T02N-R25E (IM) BIG CEDAR		
079-E [258]	JOHN WILLIAM FIELDS GOAT HOUSE (CA. 1900) SEC. 18 (SW4) T02N-R26E (IM) BIG CEDAR		
079-F [259]	JOHN WILLIAM FIELDS DOUBLE-CRIB BARN (CA. 1900) SEC. 18 (SW4) T02N-R26E (IM) BIG CEDAR		
079-G [260]	SEC. 30 (SW4) T04N-R27E (IM) (1922) HAW CREEK		
079-H [261]	SEC. 32 (SW4) T04N-R26E (IM) (CA. 1900) ZOE		
079-I [265]	PATRICIA NAYLOR SINGLE-CRIB BARN (CA. 1885) SEC. 35 (NW4) T05N-R24E (IM) REICHERT		
079-J [270]	SEC. 26 (NE4) T05N-R25E (IM) (CA. 1900) HEAVENER		

COUNTY: MCCURTAIN			
FILE [GPS]	PROPERTY		PHOTO
089-A [271]	MATTHEW BRANTLY SINGLE-CRIB BARN (CA. 1900) SEC. 27 (SE4) T06S-R25E (IM) HILL CHAPEL		
089-B [274]	SEC. 02 (NW4) T09S-R26E (IM) (CA.1940) BOKHOMA		
089-C [279]	SEC. 09 (SW4) T02S-R23E (IM) (CA. 1920) BATTIEST		
089-D [282]	SEC. 08 (NE4) T02S-R23E (IM) (CA. 1900) BATTIEST		
089-E [283]	SEC. 05 (SE4) T02S-R23E (IM) (CA.1940) BATTIEST		
089-F [290]	FRANCIS CROSS BARN (CA. 1900) SEC. 07 (SE4) T02S-R22E (IM) CLEBIT		
089-G [302]	CLIFFORD "WAYNE" WILLIAMSON BARN (CA. 1900) SEC. 19 (NE4) T07S-R22E (IM) MT. ZION		
089-H [307]	SEC. 33 (NW4) T01S-R27E (IM) (CA. 1900) PLUNKETVILLE		
089-I [309]	SEC. 05 (NW4) T02S-R27E (IM) (CA. 1940) PLUNKETVILLE		
089-J [310]	C. K. SMITH BARN SEC. 05 (SW4) T02S-R27E (IM) (1946) PLUNKETVILLE		

COUNTY: PITTSBURG			
FILE [GPS]	PROPERTY		PHOTO
121-A [207]	WARREN SPAHN BARN (CA. 1950) SEC. 32 (NW4) T04N-R16E (IM) ARCH		
121-B [210]	SEC. 33 (SW4) T08N-R13E (IM) (CA. 1940) ULAN		
121-C [212]	SEC. 11 (NE4) T07N-R13E (IM) (CA. 1940) ULAN		
121-D [214]	SEC. 36 (NE4) T07N-R14E (IM) (CA. 1900) MEKKO		
121-E [226]	E. F. COKER BARN (CA. 1940) SEC. 05 (SW4) T03N-R15E (IM) BLANCO		
121-F [229]	J. N. SMYTH BARN (1902) SEC. 30 (NE4) T03N-R14E (IM) PITTSBURG		
121-G [233]	DEGRUGHEY-PHIPPS BARN (CA. 1930) SEC. 15 (SE4) T03N-R13E (IM) KIOWA		
121-H [235]	SEC. 03 (SW4) T03N-R12E (IM) (CA. 1960) ASHLAND		
121-I [236]	SEC. 06 (SE4) T04N-R12E (IM) (CA. 1930) STUART		
121-J [237]	SEC. 31(SE4) T05N-R12E (IM) (CA. 1960) STUART		

COUNTY: PUSHMATAHA			
FILE [GPS]	PROPERTY		PHOTO
127-A [153]	SEC. 29 (NE4) T04S-R18E (IM) (CA. 1910) BELZONI		
127-B [161]	JACK CORNELIUS DAIRY BARN (CA. 1945) SEC. 28 (SW4) T04S-R16E (IM) GREENWOOD		
127-C [164]	SEC. 11 (SE4) T03S-R16E (IM) (CA. 1900) ANTLERS		
127-D [172]	SEC. 35 (SW4) T01S-R18E (IM) (CA. 1920) SNOW		
127-E [175]	OLD HAMMER PLACE BARN (CA. 1870) MOYERS		
127-F [179]	SEC. 17 (SE4) T02S-R15E (IM) (CA. 1900) MILLER		
127-G [190]	SEC. 19 (NE4) T02N-R21E (IM) (CA. 1920) KIAMICHI		
127-H [193]	SEC. 16 (SW4) T01N-R18E (IM) (CA. 1910) STANLEY		
127-I [292]	JAMES MARTIN BAGGS LOG BARN (1909) SEC. 11 (NE4) T02S-R21E (IM) CLEBIT		
127-J [293]	JERRY BAGGS LOG BARN (CA. 1910) SEC. 02 (NW4) T03S-R20E (IM) RATTAN		

XI. NATIONAL REGISTER ELIGIBILE PROPERTIES

During the course of the Thematic Survey of Historic Barns in Southeastern Oklahoma, a total of 22 properties were found eligible for listing in the National Register of Historic Places. For a resource to be National Register eligible, it had to meet both of the following criteria:

1. The resource must be at least 50 years of age;
2. The resource must retain its historical and architectural integrity, meaning that it must not have been relocated or significantly altered from its original form during the last 50 years.

Resources that retained their integrity were classified as National Register-eligible, since they met at least one of the following National Register Criteria for Evaluation:

A. (Event) Association with events that have made a significant contribution to the broad patterns of our history;

B. (Person) Association with the lives of significant persons in or past;

C. (Design/Construction) Embodiment of distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction;

D. (Information Potential) Have yielded or may be likely to yield, information important in history or prehistory.

All resources are National Register-eligible under Criterion C (Design/Construction). Three (3) resources were identified as also eligible under Criterion A, and one (1) resource was identified as also eligible under Criterion B. All resources determined to be National Register-eligible retain a high degree of their architectural and historical integrity, having not been moved or significantly altered in appearance in the last 50 years. Resources that did not retain their architectural integrity, and were therefore ineligible for individual listing, were classified as "warranting further study" for possible inclusion as contributing resources to potential historic districts. Many log buildings recorded by this survey fall into the latter category.

The historic barns of southeastern Oklahoma that were determined to be National Register-eligible are detailed below with thumbnail sketches that identify the most obvious characteristics that make it eligible. These characteristics include brief identification of how the resource (a) provides a tangible connection to significant historical events and patterns of history (Criterion A), (b) is associated with a person of historical significance (Criterion B), embodies characteristics of a particular type, design, or method of construction that makes it an excellent representative of such (Criterion C). Moreover, each thumbnail sketch identifies the scale of significance for listing (local, state, or national). All National Register-eligible resources identified are significant at the local scale, but some were identified to have an additional and broader significance at the state scale; therefore any resources identified as significant at the state level should be presumed to also hold significance at the local level.

005-H Old Sexton Place Single-Crib Barn (ca. 1900)
Atoka County, Kiowa vicinity
Local significance under Criterion C

This single-crib log barn measures 16 feet by 13 feet and is 9.5 feet tall at the ridgeline of the gable roof. It is constructed of medium-width, unhewn oak logs joined with v-notched corner-timbering. It contains a haymow and loading door in the gable wall. It has lean-to sheds attached to the north and south eaves and rests on a foundation composed of native sandstone and locally-mixed concrete. This property is National Register-eligible for its significance as an excellent example of typical, pre-modern Midland American folk log construction in the Choctaw Nation.

023-J, Wilkins-Frazier Mule Barn (CA.1910)
Choctaw County, Hugo vicinity
Local significance under Criterion A and C

This is a large mule barn associated with the early twentieth-century timber industry in the Hugo area. Prior to the advent of improved roads and logging trucks, mule teams moved timber from isolated logging sites to narrow-gauge rail collector lines and portable sawmills. Barrens—the name for a herd of mules—were housed in large drayage barns, such as this excellent example, during the first half of the 20th Century before trucks and road improvements transformed the scale of logging in Oklahoma. The barn retains a high level of integrity with its metal ventilators, wind vanes, and lightning rods, the latter of which are complete with glass globe insulators. It is significant at the local level as an excellent example of a large Transverse-crib barn. It is primarily National Register-eligible at the local level for its association with southeastern Oklahoma's early twentieth-century timber industry.

063-A (ca. 1890)
Hughes County, Rock Creek vicinity
<u>Local</u> significance under Criterion C;
Possible <u>State</u> significance under Criterion A

This property is a well-constructed, 38' x 23' double-crib log barn with a hayloft, which makes it taller than typical double-crib barns in the study area. It has a shake-covered gabled roof and a central runway running perpendicular to the ridgeline. The barn has an interesting dimensional symmetry. Both east and west cribs measure 13.5 feet (east-west) by 11.5 feet (north-south) and are 13.5 feet tall (grade to hayloft floor). The central runway measures 11 feet wide. The north eave side contains an 11.5 foot-wide shed addition to make a total width of 23 feet. Walls consist of large, unhewn oak logs joined with well-crafted, uncrowned, v-notched corner-timbering. A lean-to shed on the south eave side was supported by rough-cut cedar posts. The building rests on sandstone block piers approximately one foot above grade, which is a foundation that has well-protected its structural integrity. The estimated (ca. 1890) construction date is very rough. An 1894 railroad map of Indian Territory places this barn on the old military road connecting Fort Smith to Fort Arbuckle, so it may be associated with the California Road or Beale's Fort-Smith-to-Albuquerque wagon road, which would make it significant at the state level under Criteria A. Intensive-level examination is needed to investigate this possibility. As surveyed in the field, it is National Register-eligible as an excellent and rare example of Midland folk log construction (Criterion C) in the northwest Choctaw Nation.

063-C (ca. 1890)
Hughes County, Atwood vicinity
State significance under Criterion C

This property is one of only two specimens of log four-crib barns known to exist in Oklahoma. Only three of these are known to exist in Texas. It is perhaps one of only a dozen known surviving examples located west of the Mississippi River. It consists of four 10-foot by 10-foot, unhewn and unpeeled oaken and pine log cribs joined by both v- and saddle-notching. The two intersecting runways are also 10 feet wide, making the primary structure 30 feet by 30 feet. Two 10-foot-wide shed additions flank each eave side to produce a total width of 50 feet on the gable end by 30 feet along the eave sides. The barn contains a full haymow above the four cribs and two runways. Cribs rest on short piers of sandstone blocks. This rare barn type is National Register-eligible (Criterion C) at the state level for its architectural significance as a representative example of Midland log construction in the Shawnee Hills region of Hughes County.

063-E William Herbert ("Hub") Boyce Barn (ca. 1940)
Hughes County, Calvin vicinity
Local significance under Criterion A and C

This large, sprawling barn was the primary outbuilding of the Bill Boyce Ranch, a 2,500-acre cattle operation occupying the level, sandy floor of the Salt Creek valley east of Calvin. The barn is located at the ranch headquarters on the south bank of the Canadian River at the mouth of Salt Creek, a site bounded by the rugged uplands of the Shawnee Hills to the east and west. As a multiuse facility for an open-range beef cattle ranch, the barn primarily sheltered quarter horses, fodder, feed, and tack. Nearby is a bunkhouse where cowboys lived during much of the year. It represents the survival of open-range ranching into the mid-20th Century in areas of rough terrain, which in this case involved the Shawnee Hills. This property is National Register-eligible at the local level for its historical (Criterion A) significance to the history of ranching in Hughes County.

063-G (ca. 1900)
Hughes County, Holdenville vicinity
Local significance under Criterion C

This property is a well-preserved example of a typical-sized, folk-constructed, southeastern Oklahoma log two-crib barn. As was common practice, this barn likely originated as a single-crib barn before being enlarged with a second crib, which is suggested by differences in crib dimensions, log types, timber shaping, and corner notching. The east crib, which appears to be the earlier of the two, measures 12 feet by 12 feet and is composed of large, split pine timbers expertly-joined with semi-lunate notching. The west crib measures 13 feet by 13 feet and is composed of small, unhewn, Postoak logs joined by v-notching. Since pine timbers were preferred, it is presumed that the crib with the punier, oaken logs was the later addition, perhaps after virgin pine timber had disappeared from this locale. The central runway measures 11.5 feet wide. Cribs rest on sandstone piers. This barn is National Register-eligible (Criterion C) at the local level for its architectural significance as a representative example of Midland log construction in the Wewoka District of the southern Creek Nation.

063-I Emory Condit Double-Crib Barn (ca. 1900)
Hughes County, Cross Roads vicinity
Local significance under Criterion C

This property is a fine example of an average-size, folk-constructed, two-crib oak log barn in the Cross Timbers of east-central Oklahoma. The west crib measures 13.5 feet by 11.5 feet and the east crib measures 14 feet by 11.5 feet. Both cribs are 10 feet tall and the runway is seven feet wide. Cribs are constructed of unhewn, post oak logs joined by *undersided* saddle-notching, the most common, and one of the more durable, forms of corner-timbering that emanated from the Midland culture hearth. Cribs rest on native sandstone blocks. This barn is National Register-eligible (Criterion C) at the local level for its architectural significance as an excellent example of Midland log construction in the Wewoka District of the southern Creek Nation.

063-J (ca. 1930)
Hughes County, Yeager vicinity
Local significance under Criterion C

This large, well-preserved English Side-Hill Bank Barn is a highly unusual barn type for southeastern Oklahoma. It contains three levels: (a) a haymow, (b) a middle grade-level area with wagon access, and (c) a subterranean native sandstone basement with a south-facing loafing shed and vertically-loading hay manger. This barn is located on the northwestern fringe of the study area in the old Wewoka District of the southwestern Creek Nation. Similar barn types are found in limited numbers in central and western Oklahoma. This barn is National Register-eligible (Criterion C) at the local level for its architectural significance as an excellent example of an English Side-Hill Bank Barn.

077-B Watson Anderson Barn (ca. 1870)
Latimer County, Yanush vicinity
Local significance under Criterion C

This single-crib barn is constructed of large pine logs hewn into narrow planks and joined by expertly-crafted half-dovetail corner timbering. The owner is a descendant of the builder, a Choctaw Nation citizen named Watson Anderson. According to family history, Anderson built the barn a few years after the Civil War. The skill of timber and notch workmanship agrees with such an early construction date. A smokehouse and large pine planked-log dogtrot house are also located on the property and are reported to also have been Watson's work. This barn is National Register-eligible (Criterion C) at the local level for its architectural significance as an excellent example of Midland log construction from the Reconstruction-Era Choctaw Nation.

079-B (ca. 1900)
Le Flore County, Kennady vicinity
<u>Local</u> significance under Criterion C

This double-crib log barn contains internal dividers connected with saddle notches, giving it two cribs in addition to a full loft. It is constructed of round pine logs and joined with well-crafted v-notching. It measures 18.5 feet by 15 feet. Its floor plan is unusual and without a known prototype in the literature. It is National Register-eligible (Criterion C) at the local level for its architectural significance as an unusual example of Midland log construction in the Choctaw Nation.

079-C John Henry McClure Barn (ca. 1900)
Le Flore County, Gilmore vicinity
<u>Local</u> significance under Criterion B and C

This transverse-crib barn is the largest barn observed in the 11-county study area. An interview with the property caretaker revealed that it was built circa 1900 on the John Henry McClure (1841-1907) plantation using full-cut yellow pine lumber salvaged from a demolished livery stable in Poteau. McClure was a prominent citizen of the Choctaw Nation. The large plantation house located west of the barn was in the process of restoration when this resource was recorded. It is constructed with a timber superstructure, rather than a balloon frame, and contains a full loft. The barn measures 35 feet wide (excluding a 10-foot wide shed on the east eave side) by 104 feet long and is 30 feet tall at the ridgeline, which places it among the ten largest historic barns in the state. It is National Register-eligible under Criterion C at the local level and also eligible under Criterion B at the local level for its association with John Henry McClure of Le Flore County.

079-D Walter W. McBride Barn (ca. 1900)
Le Flore County, Big Cedar vicinity
Local significance under Criterion C

The Walter W. McBride Barn is architecturally significant as a double-crib log barn constructed of hewn pine logs joined by half-dovetail corner timbering on the east side of Big Cedar Creek. The internal divider wall is also hewn and joined to the exterior wall timbers by v-notching. It is National Register-eligible under Criterion C at the local level. It is located near the site visited by President John F. Kennedy for the dedication of the Ouachita National Forest Highway (U.S. 259) on October 29, 1961.

079-E John William Fields Goat House (ca. 1900)
Le Flore County, Big Cedar vicinity
<u>Local</u> significance under Criterion C

John William Fields built this small single-pen log house upon his arrival to the area in 1903 from Arkansas. Originally from Alabama, Fields was highly-skilled in piney woods log construction. Eventually he disassembled the cabin and relocated it about 50 yards to the southeast and demoted to a single-crib barn. At some point in recent decades it was used to shelter goats, and the name stuck. Measuring 16 feet by 16 feet, the building is constructed of thinly-planked pine logs joined with full- and half-dovetail notching. Planks average a width of 18 inches, which is by far the most extreme example of timber planking known to exist in Oklahoma. Extreme planking tradition reached its zenith in the southern Appalachians and is a rare Midland log construction trait west of the Mississippi. The John William Fields Goat House is National Register-eligible (Criterion C) at the local level for its architectural significance to Le Flore County.

079-G (1922)
Le Flore County, Haw Creek vicinity
Local significance under Criterion C

According to the date etched into the mortar joint to the left of the south gable loft door, this native sandstone potato barn was built in 1922. It provided storage for root crops and also has a hay loft, which insulated it during the winter. The rectangular building measures 15 feet wide by 20 feet long and is 16.5 feet tall at the ridgeline. This specialized outbuilding is National Register-eligible (Criterion C) at the local level for its architectural significance to Le Flore County.

089-A Matthew Brantly Single-Crib Barn (ca. 1900)
McCurtain County, Hill Chapel vicinity
State significance under Criterion C

This single-crib log barn constructed of planked timbers is joined at the corners by a technique termed *vertical double notching*, which is a diagnostic type found in the Spanish-American ethnic homeland of the upper Rio Grande valley. It also occurs in the Yukon and eastern Alaska, but it is virtually unknown in the southern Appalachians or Central Uplands. Further investigation as to the origin of this specimen is highly warranted. Given its unique corner-timbering, this crib barn is National Register-eligible (Criterion C) at the state level for its architectural significance to McCurtain County.

089-F Francis Cross Barn (ca. 1900)
McCurtain County, Clebit vicinity
Local significance under Criterion C

This two-story rectangular, single-crib log barn has an unusual design. There is no mention of such a design in the literature on Midland log construction, and this is the only example of this design observed in five years of surveying barns in Oklahoma. It measures nine feet wide by 20 feet long and is 17 feet tall. Walls are built of large, split yellow pine logs joined with semi-lunate corner timbering, although the base plates are joined by half-dovetail notches. This barn is National Register-eligible (Criterion C) at the local level for its architectural significance to McCurtain County.

127-J Jerry Baggs Log Barn (ca. 1910)
Pushmataha County, Cloudy vicinity
Local significance under Criterion C

This Transverse-crib log barn is one of only two such examples known to exist in Oklahoma. It is constructed of old-growth yellow pine logs. It is not in the best shape structurally, but because of its rare design, this barn is National Register-eligible (Criterion C) at the local level for its architectural significance.

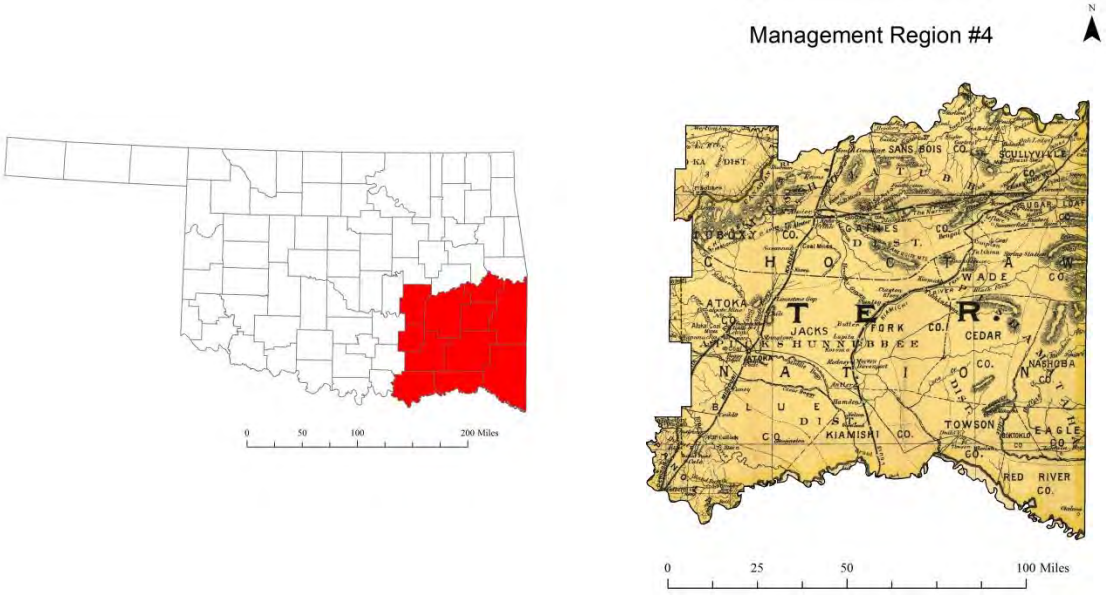
XII. HISTORIC CONTEXT

ABSTRACT

This historical context is a narrative history of the development and importance of agriculture, barns, and architecture associated with OK/SHPO Management Region Four in southeastern Oklahoma. The narrative provides an overview of the social and economic context in which agriculture developed and the influence agricultural development had on the study area to approximately 1960. The narrative takes into consideration information in other OK/SHPO historic contexts that examine agriculture, ranching, and architecture in Management Region Four. Field observations of historic barns in the study area revealed that the built environment as a whole substantially differs from most of the rest of Oklahoma, primarily because of the region's earlier settlement, isolation from urban markets, relative scarcity of arable land, and the prevalence of timber production and coal mining. This history of Management Region Four provides an outline of the region's significant historical trends as they relate to the empirical data produced by the field survey of historic barns.

LOCATION

Management Region Four includes Atoka, Bryan, Choctaw, Coal, Haskell, Hughes, Latimer, Le Flore, McCurtain, Pittsburg, and Pushmataha in southeastern Oklahoma. The region conforms closely to the historical boundaries of the Choctaw Nation as it existed between 1855 and 1907, including all of the area settled by the Choctaw from 1831 after their removal from their southeastern homeland.[1] Management Region Four is 11,426 square miles in area and encompasses about one-sixth of the State of Oklahoma.

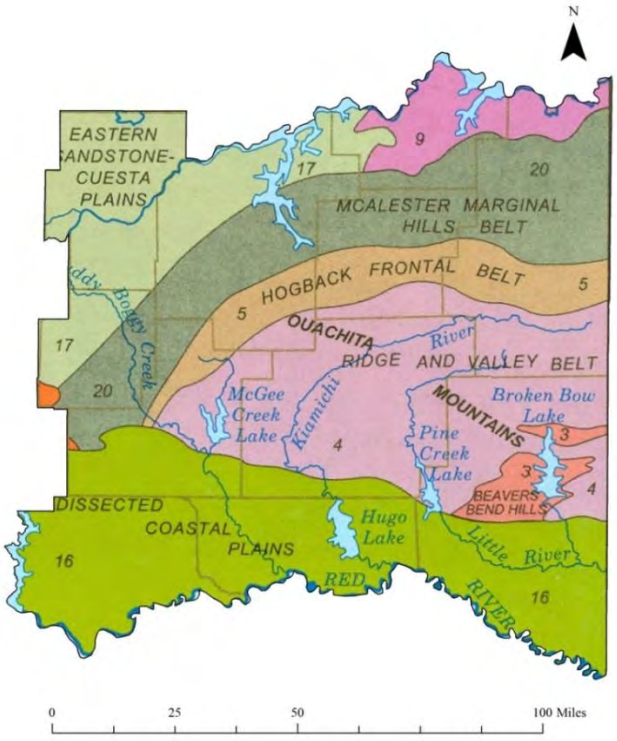


Historic Management Region Four.

ENVIRONMENTAL SETTING

Management Region Four contains the greatest range of physiographic diversity in the state. It contains both the lowest elevation and the greatest vertical relief in Oklahoma. The lowest elevation above sea level is 289 feet in the Little River Valley at the Arkansas boundary in southeast McCurtain County in the Dissected Coastal Plains region. The area of greatest vertical relief is in the Ridge and Valley Belt of the Ouachita Mountains in southern Le Flore County, which also contains the state's highest elevations above sea level outside the Panhandle. This physiographic diversity stems from the region's position at the junction of three major North American physiographic regions: (a) the Atlantic Plain, which covers Bryan, Choctaw, and southern parts of Atoka, Pushmataha, and McCurtain Counties; (b) the

Interior Plains, which covers Hughes County, northwestern Coal and Pittsburg Counties, and northern Haskell and Le Flore Counties; and (c) the Interior Highlands, which covers all of Latimer County, nearly all of Le Flore and Pushmataha Counties, and most of McCurtain, Pittsburg, and Atoka Counties, half of Coal County, and the southern part of Haskell County.[2]



Physiographic Provinces of Management Region 4. Source: Johnson, Kenneth S., "Geomorphic Provinces," in Goins, Charles R. and Danney Goble, *Historical Atlas of Oklahoma*, Fourth Edition (Norman: University of Oklahoma Press, 2006), p. 5.

The Atlantic Plain contains the Dissected Coastal Plains geomorphic province, a relatively flat to rolling region with dendritic drainage located in the southern part of Management Region Four between the Red River and the Ouachita Mountains. Land use in

the Dissected Coastal Plains is marked by the predominance of grass cover for pasture and hay interspersed with riparian deciduous lowland forest. Cultivated cropland makes up a small share of the area and is concentrated on the sandy northern sides of the Red River floodplain.[3]

The Eastern Sandstone Cuesta Plains is a broken, hilly upland region that encompasses approximately 16 percent of the study area in the northwest, including all of Hughes County. The terrain is very rough in places and upland sections of the region are covered by dense Post Oak and Blackjack Oak woodland. The Shawnee Hills, which is an especially rugged upland area along the Canadian River, covers eastern Hughes County and northwest Pittsburg County.[4] The more level lands of northwest Hughes and Coal Counties have some decent grazing lands, but cultivation is restricted to valleys and hindered by clayey shale soils that were denuded by intensive cotton farming prior to World War II. Most cultivation was replaced at midcentury by extensive small cow-calf operations.[5] The Eastern Sandstone Cuesta Plains province is the only part of Management Region Four underlain by giant oil fields—the Bowlegs and Allen fields—which were developed between the 1920s and 1940s and supported the growth of Holdenville.[6]

The Arkansas Hill and Valley Belt region covers most of Haskell County and northernmost Le Flore County. It is a low-elevation region flanking the broad, alluvial bottomlands of the Arkansas Valley. Drainage is directed by low, linear ridges trending east-west. Most of the region is covered by good grazing land interspersed with thin deciduous forests on elongated slopes. Cultivated land is limited to broad sections of the Arkansas floodplain, mostly in extreme northern Le Flore County, where large crops of soybeans, corn, and alfalfa are grown.

The McAlester Marginal Hills Belt is transitional between the lower Arkansas Valley and the Hogback Frontal Belt province of the Ouachita Mountains. Highly resistant sandstone, such as that found at Robbers Cave State Park, produce low mountains covered by dense deciduous forests surrounded by broad valleys of mostly open grazing lands.

A small tongue of the Arbuckle Plains physiographic province overlaps an area of about 60 square miles in southwestern Coal County. Its limestone bedrock creates an area of superior soils around Clarita, which is the focus of recent settlement by Old Order Amish. The landscape around Clarita contains ruins of dairy farms that mostly likely served the large mining population of Coal County during the early 20th Century.[7]

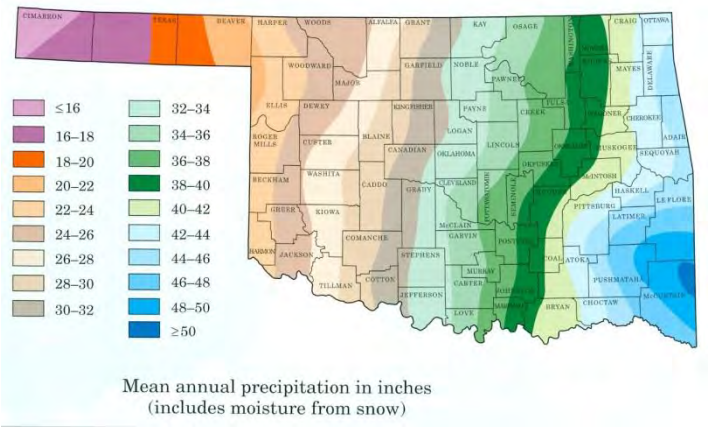
The Ouachita Mountain system contains three distinctive geomorphic provinces as well as countless local variations of terrain. The Ridge and Valley Belt, as well as the Hogback Frontal Belt, make up the Ouachita Mountains proper. These provinces are the most mountainous and heavily-timbered parts of the Ouachita system.[8] They are also the most architecturally-significant parts of southeastern Oklahoma with regard to historical agricultural outbuildings and folk construction. Despite its predominate land use—commercial timber production—the Ouachita region harbors dozens, if not hundreds, of log outbuildings, typically employing pine round and half-log construction. Pine logs were apparently preferred over hardwoods for their superior length, straightness, workability, lighter weight. Although pine is not as rot resistant as oak, if kept dry with an adequate foundation and skillful corner-timbering, it is adequately durable.

The Beavers Bend Hills province is a very small but geologically distinctive area of tightly-folded sandstone, shale, and metamorphic rock forming narrow series of east-west

trending parallel ridges that are drained by the Mountain Fork River. This beautifully-rugged region is devoid of cultivation and grazing land, and most timber production is prohibited.

CLIMATE AND WEATHER HAZARDS

Management Region Four is the only part of Oklahoma that is clearly within the humid subtropical (Cfa) climate. Average annual precipitation in the study area reaches the state's highest, 54 inches, at Hochatown in McCurtain County. Rainfall declines toward the northwest to about 39 inches at Holdenville in Hughes County. Generally, rainfall is more plentiful and reliable in Management Region Four than any other part of the state.[9]



Source: Johnson, Howard L., "Precipitation," in Goins, Charles R. and Danney Goble, *Historical Atlas of Oklahoma*, Fourth Edition (Norman: University of Oklahoma Press, 2006), p. 19.

The study area is located within the general region containing the world's highest incidence of tornadoes. Tornado Alley, as it is referred, is where conditions frequently produce frontal thunderstorms, dry lines, and powerful wind shear. The tornado hazard exists year-round, but is worst in April, May, and June. Damaging winds and hail accompanying thunderstorms are more frequent than tornadoes and can severely damage

barn roofs and introduce water damage. Heavy snows are not as frequent as ice storms; both produce heavy loads that can damage historic barns. Wildfires initiated by dry conditions and high winds are not as common as in other parts of the state.

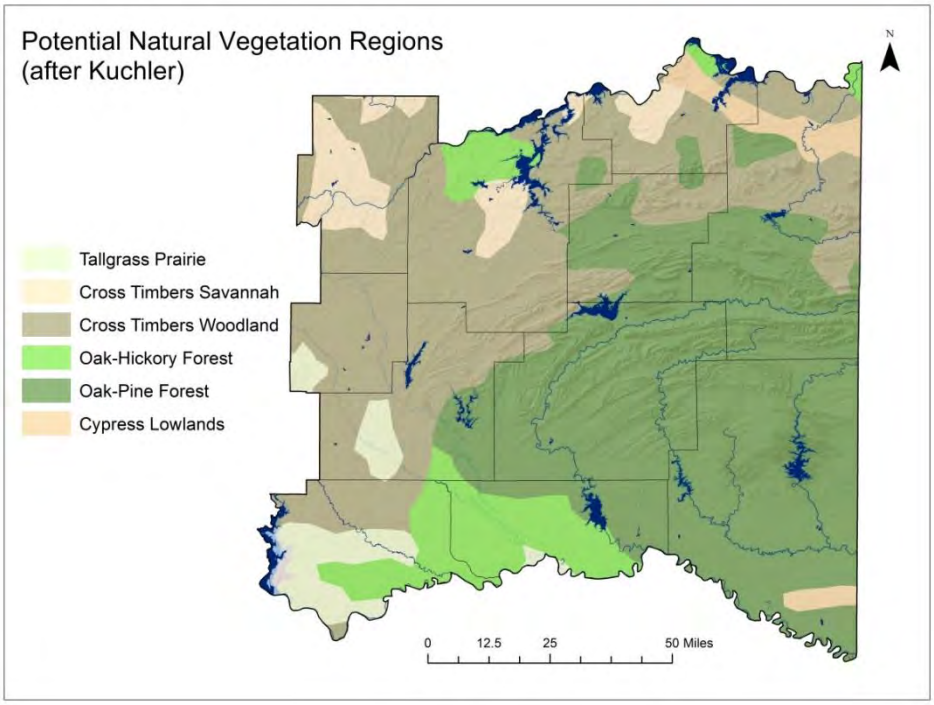
WATER RESOURCES

Water resources are abundant in Management Region Four. Three-quarters of the region is drained by the Red River. Major tributaries to the Red are the Little, Kiamichi, Muddy Boggy and Blue Rivers and their many tributaries. Tributaries of the Little and Kiamichi flow out of the Ouachitas and are among the state's most scenic streams. The northern quarter of Management Region Four is drained by the Arkansas River, primarily by tributaries of the Canadian and Poteau-Fourche Maline systems that converge in the northern half of Le Flore County. This area, focusing on Spiro, was a western outpost of the Mississippian culture complex as early as 1,100 years ago.[10] Management Region Four usually receives enough precipitation to make irrigation unnecessary, although water surpluses stored in reservoirs are important resources for recreation and urban uses.

NATURAL VEGETATION AND SOILS

In most of Oklahoma annual precipitation is the key determinate of vegetation patterns, but this is less the case in the moister southeast, where soil structure, slope, and drainage also work to shape six distinctive vegetation regions. The Ouachita Mountains are heavily timbered by varying mixes of oak-pine forest. It is the only area in the state where shortleaf and southern yellow pine can support a thriving timber industry. Non-forestry agricultural activities have always been relegated to the region's many valleys. Here, market

inaccessibility and limited farm size largely prevented agricultural mechanization after 1930. As a result, the region contains the highest concentrations of rare folk buildings, especially pine log buildings, found anywhere in Oklahoma.



Natural Vegetation Patterns of Management Region Four.

Tallgrass Prairie

Patches of tallgrass prairie are found along the western margin of the study area in southwestern Coal, western Atoka, and Bryan Counties. These areas consist of level, well-drained land that is suited to growing prairie hay and small grains. Big bluestem, little bluestem, Indian grass, and switch grass composed the native grass species. By the mid-19th Century, this region was occupied by Chickasaw and Choctaw ranchers who drove their cattle to markets in Missouri along the East Shawnee Trail.[11]

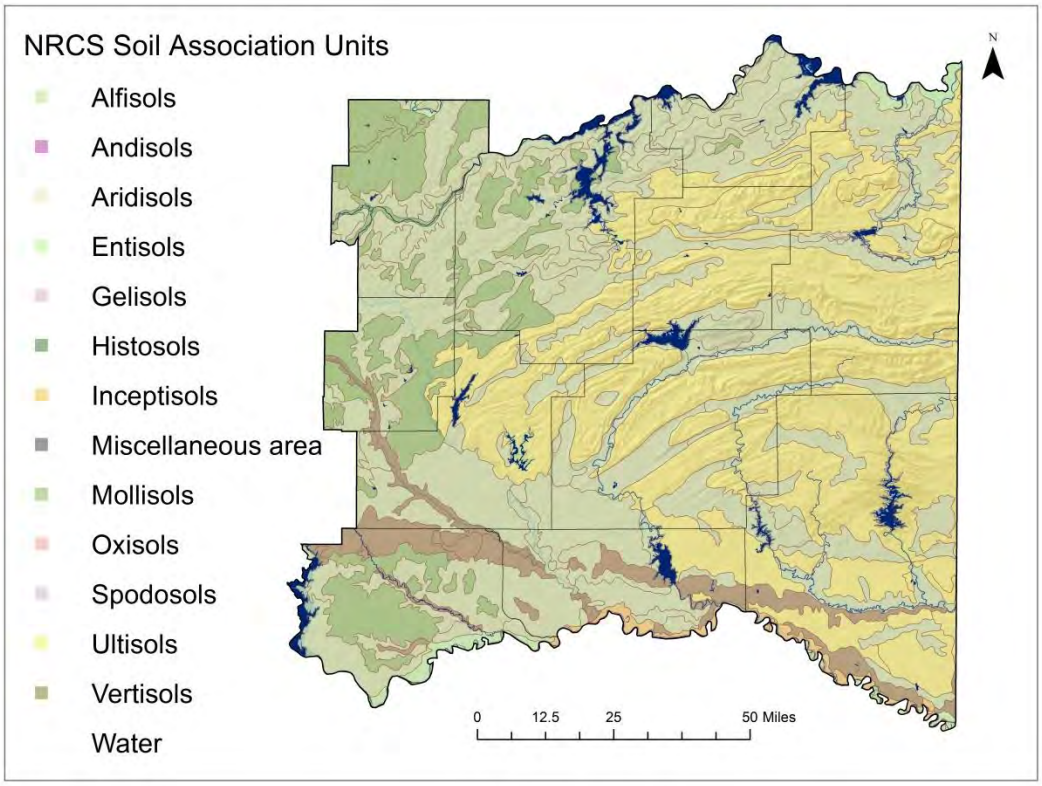
Cross Timbers Savannah and Woodland

The Cross Timbers vegetation complex represents a transition between the eastern deciduous forests and the grasslands of the Great Plains. It is strongly associated with the Eastern Sandstone Cuesta Plains physiographic province. Cross Timbers vegetation is composed of a mosaic of small prairie and oak forests. Native hardwoods such as Postoak and Blackjack oak predominate amid riparian species like cottonwood and willow, invasive Eastern Redcedar, as well as understory trees, shrubs, and vines. As a rule of thumb, hardwoods in the Cross Timbers occupy the sandier uplands, while tallgrass prairie is found in the less-resistant shale valleys. Although the Cross Timbers contains areas of old-growth forest with some trees surpassing ages of 300 years, trees are relatively short and not harvested commercially. However, farmers in the more remote districts have depended on the deciduous forest for fuel and logs for buildings. Essentially all the log buildings found outside the Ouachitas is constructed of hardwood and most commonly made of oaken logs. The Cross Timbers today is a ranching country where small cow-calf operations predominate.[12]

SOILS

Perhaps the most important factors affecting soil quality and overall agricultural potential in Management Region Four are slope and rockiness. The terrain of southeastern Oklahoma frequently dictates land use potential; areas of steep slopes within zones of productive soils have either been denuded of soil in the past or have been avoided by farmers. Many parts of the study area that once contained excellent soils have been intensively cultivated and stand abandoned because of erosion and the loss of topsoil.

Likewise, areas of less-than-ideal soil containing extremely flat terrain may retain their productivity as farmers adjust with engineered drainage systems and chemical fertilizers. Unless it cannot be properly drained, flatter land tends to remain farmland.[13]



Major Soil Associations of Management Region Four. Source: U.S.D.A. Natural Resources Conservation Service.

Four of the state's seven major soil associations are found in large areas of Management Region Four. Mollisols are found in the western part of the study area in most of Bryan, Coal, northern Hughes, and western Pittsburg Counties. Mollisols are formed in grassland and characterized by their dark, highly organic O-horizon and neutral to slightly alkaline pH, which makes them among the world's most productive soils. Thus the western

counties of the study area contain the best prospects for agriculture and mechanization. Ultisols are thin, acidic soils associated with steep slopes. In Management Region Four they are associated with Ouachita Mountains. Ultisols are formed in areas with a high degree of chemical weathering due to high levels of leaching from precipitation and acidic coniferous forest litter. They are generally classified as unsuitable for cultivation. Alfisols are a common soil family and are widely distributed in the study area. They generally fill the interstices between the excellent Mollisols and the poor Ultisols. Alfisols are usually associated with deciduous forest cover and usually contain high levels of important minerals, such as calcium, magnesium, and potassium. They are nearly as valuable as Mollisols, but have slightly higher moisture contents. A linear zone of Vertisols runs through the southern tier of counties as well as parts of Atoka and Coal Counties. These soils contain high clay content and are known for their shrink-swell potential. Because they do not drain well, they are usually considered second-rate for cultivation, although they work fine for grazing. A small area of Inceptisols is found along the north bank of the Red River. Inceptisols are young soils without distinctive horizons, very little organic matter, minimal weathering, and poor fertility. They are essentially sands in Management Region Four.[14]

HISTORICAL BOUNDARIES AND AMERICAN INDIAN SETTLEMENT

The political geography of Management Region Four took shape almost entirely during the nineteenth century. In 1800 the Treaty of San Ildefonso transferred Louisiana—including what would become Oklahoma—from Spain to France. It became a part of the United States after Jefferson's purchase of Louisiana 1803. By 1824, Jefferson's idea to remove peaceful Indians beyond the frontier so as to await American expansion began to take

shape with the establishment of the Territory of Arkansas. That year the United States began creating incentives and applying pressure to induce the removal of the Cherokee, Creek, Choctaw, and Chickasaw to the region west of Arkansas. To assist removal and reduce violence with the region's tribes, the United States established Forts Washita and Towson in the Red River Valley to protect Choctaw and Chickasaw settlers from marauding Comanche and Kiowa war parties responding to these intruders from the east.[15]

In comparison to northeastern Oklahoma, which contained a complex Native American historical geography, Management Region Four has been quite culturally uniform since the 1830s. All but seven percent of Management Region Four was part of the historical Choctaw Nation, which was settled during the early 1830s following the tribe's forced removal from Mississippi and Louisiana. The half of Hughes County located north of the Canadian River was the southern extension of the Muscogee Creek Nation. After the partition of the Chickasaw and Choctaw Nations 1855, approximately 200 square miles on the western peripheries of Hughes and Coal Counties fell under the authority of the Chickasaws. The vast majority of the study area has been the homeland of the Choctaw people for more than 180 years.[16]

Choctaw Nation in 1887. This government map made prior to systematic survey, portrays significant settlements in the southeast, northeast, and southwest, numerous overland trails (dashed lines) and the route of the M.K.&T. ("Katy") Railroad, which was constructed in 1871. Note how inaccurate Ouachita topography and rivers are as late as 1887. The Glover and upper Little River are highly erroneous. Source: Indian Territory (1887). McCasland Maps, Serial Set 2432, 49th Congress, 1st session, House Misc Document 15, pt, 2, p. 852.

Choctaw removal was accompanied by tremendous mortality, but by 1833 approximately 11,000 Choctaw people had settled in Indian Territory. Three initial settlement foci were dispersed around the northern, southern, and western edge of the Ouachita Mountains. These three areas were known as (a) Skullyville, near present Spiro in

extreme northeastern Le Flore County, (b) Boggy Depot, located in present southwestern Atoka County, and (c) Doaksville, near present Fort Towson in the southeastern corner of Choctaw County. Eagleton was located northeast of Doaksville, near the Arkansas border. Each location was the focus of transport modes into and out of the Choctaw country.[17]

The Skullyville district in the northeast focused on the confluence of the Poteau and Arkansas Rivers. Entering southwest along the Arkansas Valley by way of central Arkansas, settlement was directed south, up the Poteau Valley and then west up the valley of Fourche Maline Creek. This watershed united a region encompassing the northern two-thirds of present-day Le Flore County, the southern and western sections of Haskell County, and the northeast half of Latimer County. Primary towns of this functional region today include Fort Smith, Spiro, Panama, Poteau, Heavener, and Wilburton. The historical economic orientation of the area focused on Fort Smith, where continuous steamboat service began down the Arkansas River to Little Rock, Memphis and New Orleans. The area was also crossed by the Butterfield Overland stage route, which connected the Skullyville area with Boggy Depot.[18]

The Boggy Depot district arose later than Skullyville and Doaksville. It was located on the upper reaches of Clear Boggy Creek at the western tip of the Ouachitas, west of the present-day town of Atoka in an area where Choctaw and Chickasaw settlement overlapped. About five years after its founding the United States constructed a military road through Boggy Depot that linked Fort Washita, near present-day Durant, with Fort Gibson and Muskogee, in the Creek and Cherokee country. The Butterfield Overland Stage route, the Texas Road, and the East Shawnee Trail all followed the early military route through Boggy Depot, connecting it to Fort Smith, Fort Gibson, and Baxter Springs, Kansas, as well as

Denison and Sherman, Texas. Hence, despite its more westerly location, Boggy Depot was well-connected (and perhaps better connected) than any other settled Choctaw district. This rolling Cross Timbers landscape of oaks and tallgrass prairie emerged as a cattle ranching district by midcentury. After the war, the Missouri, Kansas, and Texas (M.K.T. or Katy) Railroad would follow the well-worn route north from Sherman and open the Choctaw coalfields.[19]

Doaksville was located on a portage between the middle section of the Little River and the mouth of the Kiamichi where it entered the Red River. The settlement was near Fort Towson, the U.S. Army outpost built in 1831 to protect Choctaw settlers from marauding bands of Comanche and Kiowa. The location commanded entry into the heart of the Choctaw Ouachitas through the valleys of the upper Little River watershed (Glover, Mountain Fork) and the great Kiamichi River, all containing dozens of clear tributaries. This region of mixed oak and pine forest contained fantastic stands of old-growth yellow pine and would eventually become the focus of a softwood timber industry. Movement out of the Choctaw high country converged upon the Doaksville area, where transport focused on downstream routes to Natchitoches and New Orleans via the Red and Little River. Below the fall lines of the Kiamichi, Little, Glover, and Mountain Fork, the flat, sandy soils of the Gulf Coastal Plain would by 1835 develop into the biracial Choctaw and African plantation country with its light packet service to the New Orleans cotton market.[20]

COTTON PLANTATION AGRICULTURE

The Dissected Coastal Plains region, which dominates Bryan, Choctaw, and southern McCurtain Counties, became Oklahoma's earliest cotton plantation district. The Choctaws and Chickasaws planted cotton crops shortly after they arrived in the 1830s. Cotton remained a major cash crop of the region for the better part of a century. Choctaw planters brought their slaves from Mississippi and put them to clearing timber from the sandy alluvial bottomlands along the Red and Little River Valleys. By 1840 they were regularly exporting cotton by riverboat to New Orleans. Among the greatest planters was Colonel Robert M. Jones, who in 1851 exported 700 bales of cotton from his 5,000 acre holding worked by 227 slaves. The economy of the Antebellum Choctaw Nation was driven by revenue generated from cotton exports, and much of the profit was invested in slave imports. Plantation agriculture was thus responsible for the growth of an African-American population concentrated in the low, level lands along the Red River.[21]

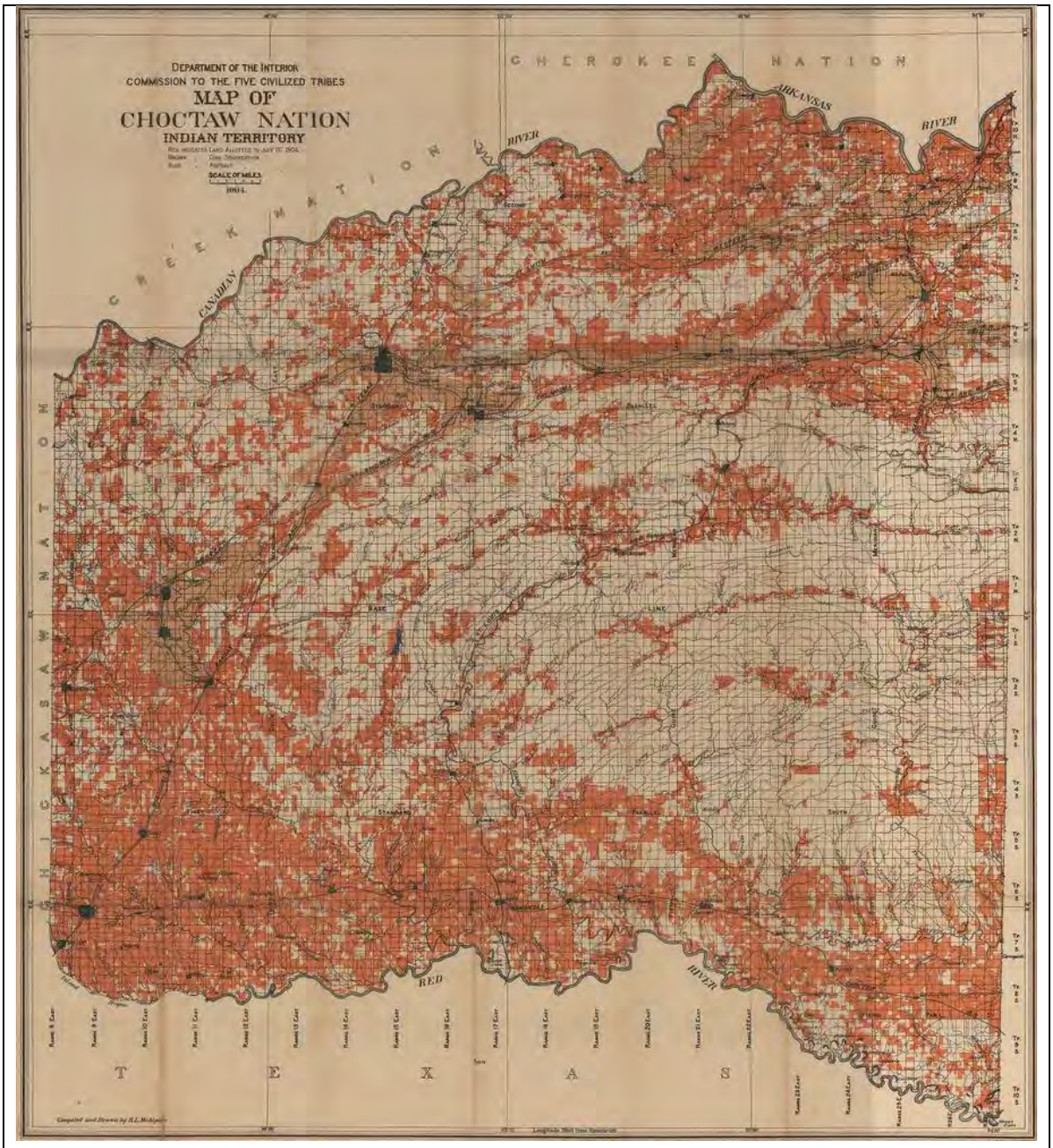
By 1860 the Choctaw Nation was a western frontier district of the cotton plantation South, and when war broke out in 1861, there was no question about where Choctaw loyalties lay. Indeed, the Choctaw elite looked forward to finally getting some respect as an autonomous nation and sending their delegates to the Confederate congress. The war, however, laid waste to much of Indian Territory, especially in terms of civilian property losses from border looting. Federal occupation of the Cherokee Nation sent southern sympathizers south and transformed the wealthiest part of the Choctaw Nation into a refugee zone. Those who could afford to fled across the Red River into Texas. By 1865 Choctaw plantations were in ruin and without labor or market access, recovery during the Reconstruction years was exceedingly slow.[22]

Reconstruction treaties required of the Five Tribes in 1866 had opened Indian Territory to railroad construction. Young white males began migrating to the Choctaw Nation during the late 1870s, some of whom stayed afterward to work for Choctaws planters and ranchers. Choctaw citizens ameliorated their capital shortfalls with vast landholdings claimed under tribal law, and this set into motion a process by which non-citizen whites exchanged their labor for the right to settle on land claimed by Choctaw planters and ranchers. Demand for new cotton land, the potential profits from cotton production, and the system in which white settlers were encouraged to develop farms for Choctaw landlords continued into the 1890s and were responsible for the emergence of a white majority by that decade. Farm settlement expanded beyond the lowlands into the highland valleys. Settlers from Arkansas and beyond easily moved in from the east, following valleys west into the headwaters of the Kiamichi basin.[23]

ALLOTMENT

After the Choctaw, Chickasaw and Creek Nations began to be allotted to individual citizens after 1898, much of the land remained unsellable because of its status as restricted Indian land. Federal policy placed restrictions on the sale of allotted lands for various periods, such as 25 years in the case of land used as homesteads, so as to protect Indian property owners, who were assumed to be ignorant of property values, from losing their lands to unscrupulous non-Indian buyers. But since title to restricted land remained with the United States and could not be alienated until the restriction period expired, the land could not be used as collateral and could not be mortgaged. This meant that allottees had land to use, but for all practical purposes, the land was dead capital until restrictions were removed.

Unable to make capital expenditures to improve their land, the best alternative allottees had was to lease their land to whomever was willing to use it without needing to invest in improvements. This usually meant ranching or tenant farming, which accounts for the fact that early in the 20th Century, eastern Oklahoma had the highest rates of farm tenancy in the United States. Tenant farmers, especially those engaged in cotton production, were prone to poor land use practices that eventually proved disastrous. Farmers who did not own the land and raised row crops—corn and cotton—in order to maximize short-term profits, usually cultivated as intensively as possible and without regard for long term sustainability. By the 1920s, it was clear that high rates of farm tenancy were ruining the land and causing some of the worst soil erosion problems in the country.[24]



Choctaw Allotments, 1904. This map indicates parcels selected and assigned to individual Choctaw allottees. Note the segregated coal lands hinging on McAlester and spanning the width of the nation as well as the absence of allotments within the highland interior, where timberlands were reserved from distribution. Map of Choctaw Nation, Indian Territory (1904), Serial Set 4799 58th Congress, 3d session House Document 5 p. 198 Exhibit 5, Oklahoma State University Libraries.

SMALLHOLDER SEMI-SUBSISTENCE FARMING

Cotton production in Management Region Four expanded between 1890 and 1920 as more southerners immigrated into the region. Importantly, this heyday of cotton production was marked by frontier conditions and farms best described as smallholder, semi-subsistence operations. Moreover, many of those in Management Region Four were exceptionally isolated. Cotton was often a cash crop, but in no way the only crop. Except for perhaps the better districts adjacent to railroad towns, most farms in the region between 1870 and 1940 were small-scale operations of 40-160 acres, non-mechanized, and dependent on family members for labor. The farther removed from railroad access, the less likely cotton was grown at all, given the difficulty of transporting a bale or two to market. Farmers located deep in isolated Ouachita valleys who produced corn surpluses could more easily market it in the form of hogs or whisky, the latter of which had been an Upland Southern option for centuries.[25]

Prior to WWII, the construction of good roads in the Ouachita highlands, and dependence on a cash economy, farmers—especially those in the most isolated districts of Management Region Four—had to be self-sufficient. They lived off the land by growing their own gardens, corn and feed crops, and livestock, and they supplemented their diets with fish and game. They made many of their own tools and clothing, and constructed their own houses and outbuildings out of logs. Upland Southerners' log construction tradition had evolved in backcountry Virginia during the late 1600s. Introduced by Swedes and Finns in the Delaware Valley and perhaps augmented by ideas brought by Germanic settlers, log construction technology diffused into Appalachia and beyond to establish what has come to be known as the American Midland tradition. The Ouachita Mountains were perhaps the last

area of implantation of these self-sufficient building traditions east of the Great Plains, the evidence for which is found in this survey.[26]

Twentieth-century cotton production in eastern Oklahoma would not last long. The boll weevil invaded the state in 1905 and began to diminish yields, which forced farmers to increase their debt by expanding production. Since the majority of cotton producers were small-scale tenant farmers using family labor, they sought the quickest returns possible. Fluvial soil erosion became a major problem during World War I, and this was followed by a decline in cotton prices during the 1920s. Farmers tried to hang on until the Great Depression finished them off and forced many off the land and out of state. Those who stayed began to diversify production by planting leguminous crops such as alfalfa and peanuts, but the most significant change was the replacement of cultivation with hay and beef cattle production, which is more sustainable land use. Other minor non-cultivation activities, such as pecan production, are also found in the area. Today the vast majority of Management Region Four's agricultural land is devoted to perennial hay crops, pasture land, and cow-calf operations.[27]

TRANSPORT ROUTES

The historical geography of transportation in Management Region Four evolved along well-worn lines and has been guided by many topographic barriers. These routes continue to be associated more with passage through the region and extraction of resources from the region. Settlement patterns were directed by these routes, which began with the broad Red and Canadian Rivers, and their larger tributaries. Antebellum overland transport routes crossed the region as quickly as possible between points outside the region. The most

significant and durable routes were carved by railroad construction, which last half a century beginning in 1871, and established most of the region's permanent settlements. Highway construction began in earnest in the 1920s by following earlier railway routes, before greatly accelerating after 1945 to fill the interstices with dense networks of highways, roads, and eventually high-speed turnpikes. Air travel left its mark on the landscape in the form of airfields beginning in the 1920s before greatly multiplying in the 1930s and 1940s.[28]

Initial Riparian Approaches

The Choctaw, Chickasaw, and Creek peoples arrived in Indian Territory by land and river. The Creek Nation portion of Management Region Four, northern Hughes County, was organized into the Wewoka District, the southernmost district of the Creek Nation, an area of predominately traditionalist Upper Creeks. The small area of Management Region Four that, after the 1855 partition of the Choctaw and Chickasaw country, included the Chickasaw Nation, encompassed most of Panola County in present-day Bryan County, Oklahoma, and abutted the U.S. installation at Fort Washita. Panola County was an important area for the Choctaw and Chickasaw because it was an area of dense Chickasaw plantation settlement and contained the best river crossing at Colbert's Ferry. Initial settlement of the Choctaw Nation, comprising the remainder of Management Region Four, involved three primary regions. The area north of the Red River, Little River, and Kiamichi River received the heaviest traditional Choctaw settlement and became the base of the Choctaw planter elite. The settlements of Eagletown and Doaksville were important centers, the latter of which abutted Fort Towson. Settlements expanding from this base followed the Mountain Fork, Glover, Upper Little, and Kiamichi north into the scenic, well-watered valleys of the

Ouachita Mountains. In the north, Choctaws arriving via the Arkansas River valley settled the low, level lands on the south side of the river opposite the Cherokees. Their primary settlement was Skullyville, but they had easy access to Fort Smith. These settlements eventually expanded south, up the Poteau River and Fourche Maline Creek valleys in present-day Le Flore and Latimer Counties. The third focus of settlement was in the southwest of the Choctaw Nation, west of the low, chaotically-drained Boggy River system, between Colbert's Ferry and Boggy Depot. By the mid-19th Century, this was a multicultural zone containing Chickasaw, Choctaw, African, Shawnee, and Anglo-Americans, with strong ties to Sherman and northeast Texas.[29]

Despite its relegation as a refuge (or dumping ground) for unwanted indigenous peoples, Indian Territory, and especially Management Region Four, became heavily traversed by Americans almost as soon as the Indians arrived. Standard histories record the names of at least six different roads or trails, but essentially these adhered to just two routes, one angling northeast-to-southwest to connect southwest Missouri to north Texas, and the other crossing east through the Canadian valley from Fort Smith. These routes would last into the present and, in fact, mark the region's present high-speed overland traffic into the present. But these routes' historical significance lay in how they exposed the region to hundreds of thousands of adventurous, literate American travelers who would come to realize the inaccuracy of the New England-generated myth of the Great American Desert and who would in time covet Indian Territory as the last bastion of good land mistakenly and unjustly withheld from white settlement.[30]

The North Texas-to-Southwest Missouri Longitudinal Route

The older of these two routes is the longitudinal route linking southwest Missouri and north-central Texas caused by the Ozark-Ouachita barrier. In the mid-1830s two divergent frontiers of American settlement—one in the Middle West and the other in the South—were, in the 1830s, making their way along either side of the Central Highlands when the Republic of Texas declared its independence from Mexico. Those in Missouri, who had come from Kentucky and Virginia, faced an uncertain future with the future of slavery in question and a semiarid, "Permanent Indian Frontier" ahead of them. Diverting south to Texas, where questions of slavery and Indian presence would not be pondered, and where cotton promised wealth under the old system, they headed southwest to create the Texas Road. The road passed through the southwest corner of Missouri, angling south-southwest across the Cherokee, Creek, and Choctaw-Chickasaw Nations. Traffic along the Texas Road increased in 1845 with the annexation of Texas and became a major route of troop movements during the Mexican War (1846-48).[31]

During the 1850s, Texans worked to integrate their economy with the rail network expanding out of Chicago. This began in earnest in the late 1850s by way of the first long-distance cattle drives from Texas to railheads in central Missouri. Joel Nail, an enterprising Texas rancher, began driving herds north along the Texas Road, which began to be redubbed the Shawnee Trail. During the Civil War control of the North Texas-to-Southwest Missouri route often directed military actions in Indian Territory. After the war, cattle drives resumed on a grander scale and solidified the route through the Choctaw Nation. Herds crossed the Red River at Colbert's Ferry, proceeded to Boggy Depot, continued northeast to Perryville, and crossed the Canadian just above the mouth of the North Canadian. In 1871 the same

route was used by the Union Pacific, Southern Branch for the mainline of the new Missouri, Kansas and Texas (M.K.T. or "Katy") Railroad, which began service in 1872. The Katy and its subsidiary lines integrated Texas and Indian Territory into the national economy by greatly increasing the volume and reducing the time needed to move people, cattle, crops, raw materials, and information between Texas and the Middle West. In 1919, the federal government opened the Jefferson Highway, today better known as U.S. 69, along the same route to move people even faster. Today, the route continues as a regional arterial for overland freight movement between Missouri and Texas, with only the bulkiest commodities (petrochemicals, coal, scrap metal, construction materials, etc.) moving by rail and everything else moving by semi tractor-trailer.[32]

The Transcontinental Latitudinal Route

The other route, primarily an East-West route, connected the Mississippi valley with California and would emphasize crossing Management Region Four more than integrating it into the national economy. The California Road emerged in 1849 as Americans bound for the California gold fields left Fort Smith to cross Indian Territory and continued as a route across the southern Great Plains. The "road" actually consisted of three different trails across the Choctaw Nation. The most northerly of these followed the Canadian River valley through northern Le Flore, Haskell, and Pittsburg Counties. The middle route crossed through the Choctaw Agency and Skullyville (east of Spiro in Le Flore County) and continued west-southwest to Perryville (southwest of McAlester, Pittsburg County) and points west. The third branch diverted southwest from Skullyville to Boggy Depot and south to Colbert's Ferry to pass through Texas. This last route, which traversed the heart of the

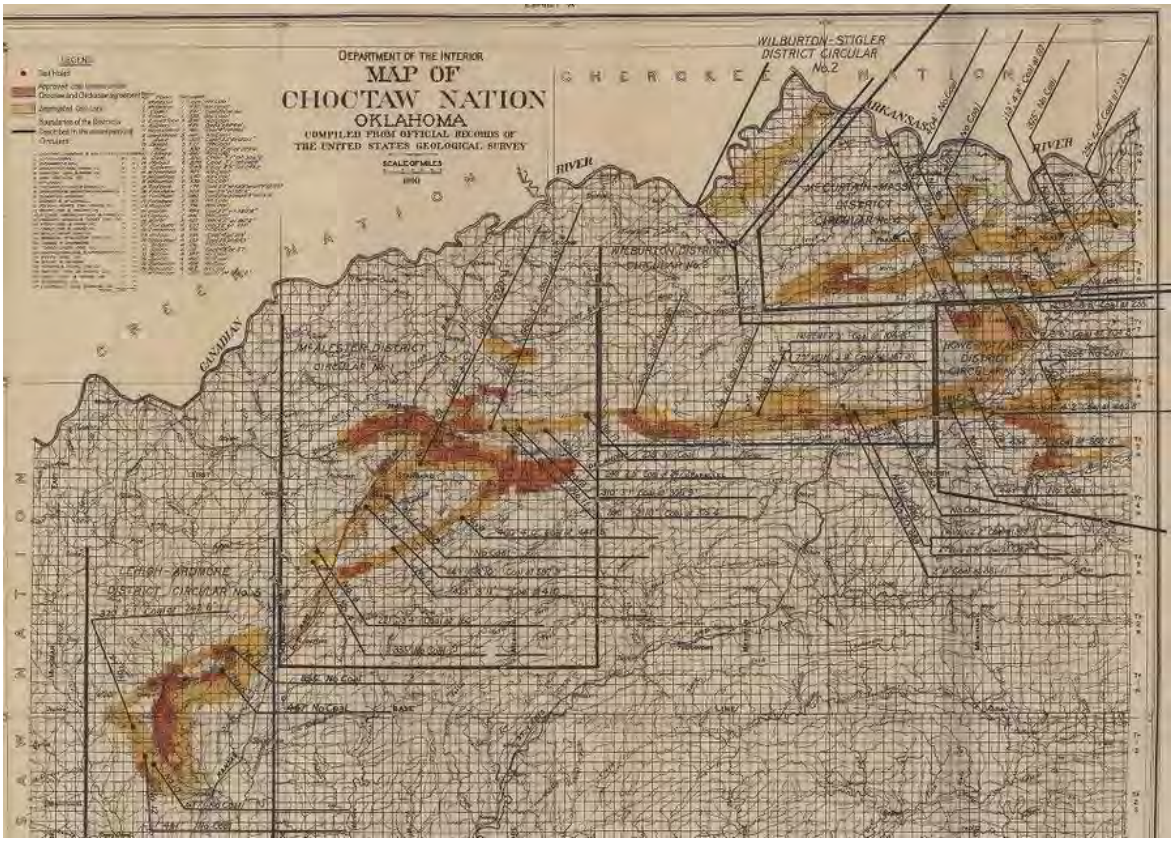
Choctaw Nation along the northern edge of the Ouachitas, was in 1857 adopted by John Butterfield for his St. Louis to San Francisco Overland Stage and Mail Line, which operated until the outbreak of the Civil War. Although running only four years, the Butterfield line was a catalyst of settlement in the Choctaw Nation that increased geographic information and interest in the resource potential of the region. During the 1890s the Choctaw, Oklahoma and Gulf Railroad followed part of the old Butterfield route to open new coal mining districts in Latimer and Le Flore Counties.[33]

Additional transport routes within Management Region Four would be constructed by private corporations for commercial reasons, and they generally took paths of least resistance. An example is the St. Louis and San Francisco (Frisco) Railroad, which built from Hugo to Talihina up the Kiamichi Valley. But perhaps the study area's most memorable opening of a new route, involved an extremely difficult one and was built by the government for completely different reasons, over half a century later. On October 29, 1961 at the hamlet of Big Cedar, in Le Flore County, President John F. Kennedy visited Oklahoma for the first time to mark the opening of the Ouachita National Forest Road. Some 25,000 people converged on the tiny hamlet to catch of glimpse of the president, who arrived by helicopter and delivered a speech within site of an old log barn.[34]

COAL MINING AND EUROPEAN ETHNIC GROUPS

Industrial scale coal production in Management Region Four got started in 1872 and was active for about 35-40 years between the late 1880s and the 1920s and was directly associated with railroad development. Southeastern Oklahoma may be ethnically complex, but until the 1880s this complexity remained a tripartite mixture of Native Americans,

African-Americans, and Anglo-Americans, all of whom shared an intertwined Southern folk culture. Little Dixie gained ethnic complexity with immigration associated with coal mining. Coal mining in the region began when James J. McAlester, a Fort Smith native and Confederate veteran, learned about Choctaw coal from a friend who had worked as a surveyor in Indian Territory. McAlester moved into the northwest Choctaw Nation, took a job as a trader, located the coal seams, and married a Chickasaw debutant, which afforded him citizenship status and allowed him to claim land and conduct business. After gaining rights to the coal under tribal law, McAlester convinced the Union Pacific Railroad Southern Branch to build through the area to access coal, which it did in 1871 with the construction of the Katy Railroad. The Katy and later lines soon found labor scarce, so they began recruiting immigrants from European mining regions. By 1900 Choctaw Nation mineworkers from Great Britain, Eastern Europe, and northern Italy could be found in mining camps centering on the McAlester coal district, which extended from McAlester southwest toward Kiowa and Lehigh, as well as due east to Wilburton. During the early 20th Century, striking laborers were replaced by African-American and Mexican miners, adding additional ethnic diversity to the area.[35]



Choctaw Nation Coal Region, 1910. This map portrays the coal mining region during its heyday, including, from west to east, the Lehigh, McAlester, Wilburton, McCurtain-Massey, and Howe-Poteau districts. Source: Department of the Interior map of Choctaw Nation, Oklahoma, 1910. McCasland Maps, Serial Set 5649 61st Congress, 2d session Senate Document 390 p. 124, Oklahoma State University Libraries.

Today Management Region Four's Italian ethnic island is well-known to focus on Krebs, which celebrates its historical cultural connections to Italy, and Hartshorne retains a Russian Orthodox church building as a local landmark. In terms of ethnic group distribution, the area is one dominated by Anglo-Americans, with a ubiquitous rural and urban minority population of Native Americans ranging between 10-20 percent. The third largest urban and rural minority are Hispanics, primarily Mexican immigrants, who make up 2-4 percent of the rural population most everywhere and are concentrated in a few small towns. Since the 1990s, Hispanics have arrived into the rural areas, particularly in the intensive poultry production area around Heavener. The largest concentration of Hispanics is located on the

east side of Heavener. Rural Hispanics and Blacks can also be found southwest of Heavener. The other area with a significant rural Black population is along the Red River in southern McCurtain County. Most Blacks in the region live in a handful of urban census block groups in Hugo, Idabel, and Broken Bow in Choctaw and McCurtain Counties. Management Region Four's largest single concentration of Blacks (28 percent) and Hispanics (10 percent) living within the same urban census block group is the one located on the northwest side of McAlester.[36]

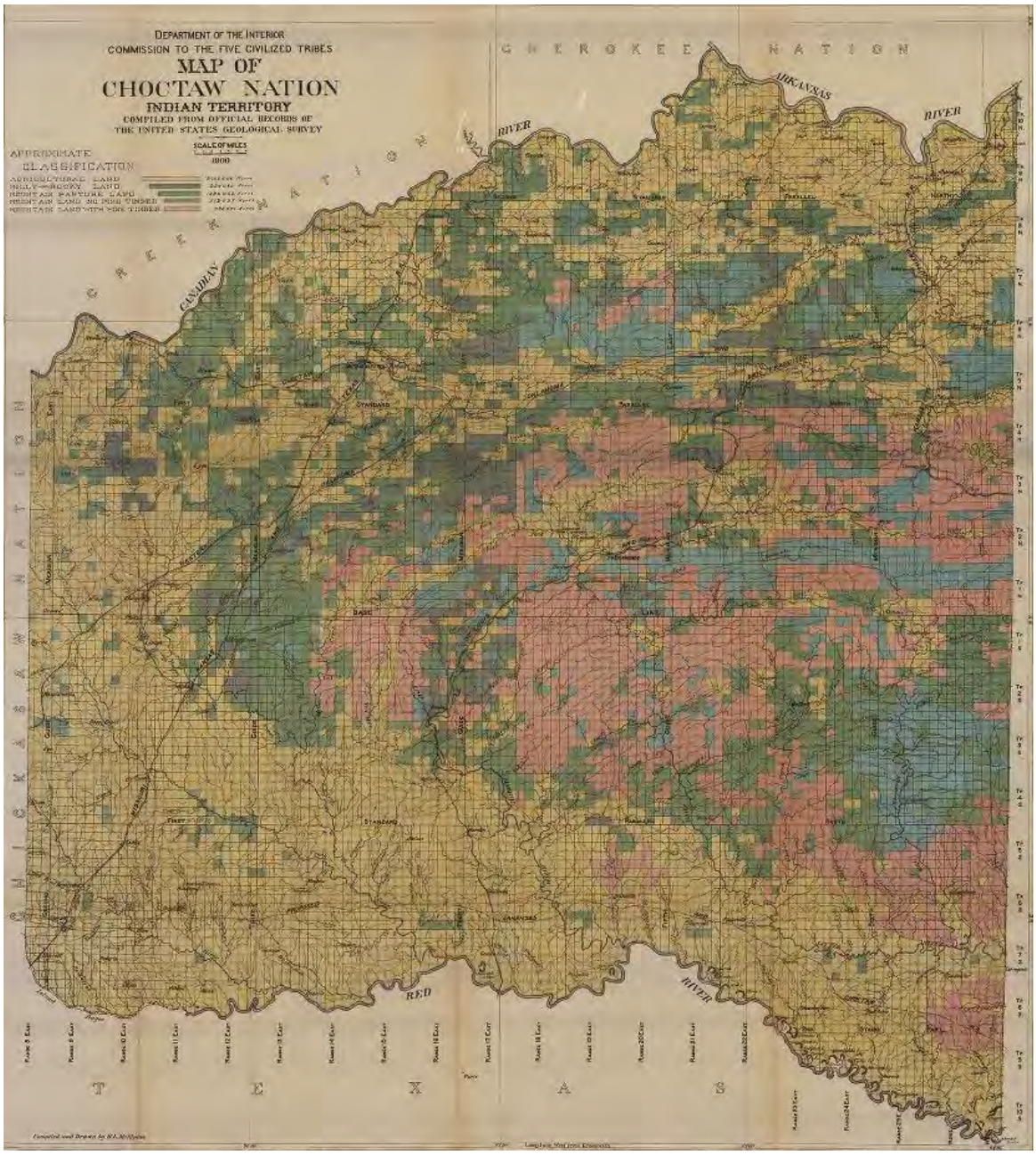
Old Order Amish

Management Region Four contains a growing population of Old Order Amish in southwest Coal County near Clarita, which is the most diverse Amish community in Oklahoma. Amish families began arriving in the mid-1970s from several disparate existing Amish regions. They maintain their outward identities and low-tech traditions, including use of horse and buggy, plain attire, and Shenandoah beards. Coal County Amish do not drive automobiles, but they have revised their particular *Ordnung* to allow the use of small gasoline-powered tractors for farming and transport. They do not construct traditional Amish barns, but instead prefer prefabricated metal buildings.[37]

DEVELOPMENT OF THE TIMBER INDUSTRY

The commercial timber industry of southeastern Oklahoma is largely situated in McCurtain and Le Flore Counties. It began in McCurtain County in 1906, under the name of Choctaw Lumber Company, a southern branch of Dierks Coal and Lumber Company of Kansas City. Originally based in Lincoln, Nebraska, Dierks was a family business run by

four brothers who supplied coal and lumber to the rapidly-expanding Corn Belt. They worked to acquire timber rights in the county and in 1909 designated a site for a company mill town northeast of present-day Valliant, where the Little River levels out of the highlands. The location was sited between the mouths of Cypress Creek, Rock Creek, and Horsehead Creek—all tributaries of the Little River—where logs could be collected from the western slopes of the Cedar Mountains. From this site, which they named Bismarck (renamed Wright City in 1918), Dierks built the Texas, Oklahoma and Eastern Railroad east to Broken Bow and, in 1921, connected the line to DeQueen, Arkansas, their southern headquarters. Mule teams were used to transport logs from the hinterland into Bismarck/Wright City, but otherwise the mill was state-of-the-art for 1911. As the company expanded operations northward it built additional company mill towns at Clebit in northwest McCurtain County and Pine Valley in southern Le Flore County. When Weyerhaeuser purchased Dierks in 1969, the company owned 2,800 square miles of timberland in Oklahoma and Arkansas (McCurtain County, by comparison, has a total land area of 1,852 square miles). Weyerhaeuser continues to be the chief industrial employer in McCurtain County.[38]



Pre-allotment Land Classification, Choctaw Nation, 1900. Pink areas demarcate valuable stands of lumber-quality pine forests, and yellow indicates land suitable for agriculture. Source: Map of Choctaw Nation, Indian Territory (1900), McCasland Maps, Serial Set 4291 57th Congress, 1st session House Document 5 p. 221 Exhibit 8, Oklahoma State University Libraries.

COMMERCIAL GRAIN FARMING

Management Region Four contains only very small patches of small grain and corn production restricted to areas in the Red and Arkansas River bottoms or associated with Mollisols in the western tier of counties. Overall, however, the region did not exhibit large scale grain production prior to the period when agriculture was largely mechanized around World War II. Small scale general farming was the rule and large barns were not needed to shelter valuable teams of draft horses, their fodder, or feed. Tractors became available in 1925 but were really not affordable until after 1945. After 1950 modernization and a transition to more emphasis on beef production had outmoded the small, multi-use barns that sheltered horses, hay, and feed under the same roof. Modernization encouraged construction of specialized buildings such as machine sheds, pole barns for baled hay, granaries and sanitary milking parlors. Whenever possible, traditional pre-1940 barns were converted to provide storage of equipment and baled hay. The widespread adoption of using large round bales during the 1980s ended the usefulness of many barns that could not be converted for hay storage. In 2014 few pre-1940 barns in the study area were being used for more than storage or cattle sheds, and many were completely abandoned.

DAIRY

A few dairy farms operated outside towns large enough to support a grocery store. Around larger towns, where creameries processed various dairy products, a zone of dairy farms—miniature dairy belts—supplied the local market. Fresh milk is a bulky, highly-perishable commodity; while production, transport, and processing remained relatively slow and inefficient, dairy farming in the first half of the century was tightly bound to singular

local markets. As a result, at least a few dairy barns constructed before mid-century can usually be found within a few miles of most towns in the study area. Moreover, settlements where large industrial workforces were based, such as oilfield boom towns and mining districts, appear to have supported larger dairy zones, more farms, and more and larger barns.

CATTLE RANCHING

Beef cattle ranching in Management Region Four was initiated with the settlement the Choctaw, Chickasaw, and Creek elites in the 1830s. Anglo-African ranching practices, which were introduced to the Low Country between Charleston and Savannah in the late 1600s, diffused to the southern Indians within a century and by the time of removal all five of the southern tribes were engaged in the beef cattle industry to some degree. The Creek and Chickasaw were particularly known for their herds and Antebellum Indian Territory travelers often wrote of their large ranches and black cowboys who performed most of the work. Few specifics are known about Antebellum Choctaw ranching other than that the upper class planters typically had sizeable herds. Open-range ranching was also a pull factor for white and black immigrants after 1870. Certain Choctaws were known for their large ranches in the latter nineteenth century. For example, Chief Wilson N. Jones of Caddo, a wealthy rancher and store owner in the region, earned the name "cattle king" of the Choctaw Nation.[39]

THE GREAT DEPRESSION

The stock market crash of October 1929 and the onset of the Great Depression was not so much a shock to people in Management Region Four as it was the prolongation of a severe economic downturn that had begun a decade earlier. Railroads and firms such as

Dierks did fall into receivership during the period, but rural farm families had been fighting to stay afloat since commodity prices had begun to decline after the First World War. The Depression worked to eliminate cotton farming from the region, which was probably a good effect in the long run. Farmers deep in the Ouachita Mountains were less affected due to their ability to remain self-sufficient. Oilfield production in Hughes County actually continued somewhat unabated during the 1930s. And since the region was wholly aligned to the Democratic Party, plenty of make-work programs helped sustain men in constructing roads, parks, reservoirs, airstrips, and other public infrastructure.[40]

WORLD WAR II

After December of 1941 American life and work rapidly oriented to supporting the war effort. The most significant development in Management Region Four was the construction of the U.S. Naval Ammunition Depot (U.S. Army Ammunition Plant after 1977) between 1942 and 1943. A combination of a central, inland location, easily-acquired land of lesser value, low population density, and adequate connections to the rail network made it defendable, cheap, safe, and efficient. When completed the facility was 70 square miles in area and composed of hundreds of concrete bunkers. Some eight thousand workers produced, stockpiled, and shipped naval ordnance through the end of the war in 1945. Activity and employment at the Depot have periodically risen and fallen with United States involvement in military conflicts ever since.[41]

Camps for German prisoners of war were established in management Region Four. The military leased the state prison at Stringtown to house German POWs and later built facilities at McAlester for alien internment and POWs. Other POW camps were established

at Wetumka in Hughes County and Caddo in Bryan County. POWs were assigned work detail on farms and ranches, as well as park and reservoir construction. The election of Governor Robert S. Kerr in 1942 repaired relations between the Roosevelt administration and the state so that federal outlays in the form of military spending significantly increased and solidified Oklahoma's position in what Eisenhower would later call the military-industrial complex.[42]

XIII. RECOMMENDATIONS

1. The most significant finds of the survey included (a) an outstanding example of a log Transverse-crib barn constructed of old-growth yellow pine and (b) a rare four-crib log barn. These two properties warrant immediate nomination to the National Register.

2. Each of the 23 National Register-eligible properties identified in this study warrant individual nomination due to their architectural and/or historical significance.

3. A large number of folk log barns *and houses* were located throughout Management Region Four. A thematic survey of log buildings in Management Region Four is highly warranted.

4. Although most old barns are obsolete, most people *overwhelmingly* consider historic barns to be the most significant components of the rural landscape and would like to preserve their integrity. Many people have strong emotional attachments to these icons of place of heritage, even if they do not own them. Information about incentives and procedures for barn preservation should be better communicated with property owners and preservation groups in the study area.

5. There is no guide to barns and other farm outbuildings relevant to Oklahoma. Photographs and OLI data should be utilized to develop the field guide.

XIV. ANNOTATED BIBLIOGRAPHY

Auer, Michael J. "The Preservation of Historic Barns," Preservation Brief #20, National Park Service. < http://www.nps.gov/history/hps/tps/briefs/brief20.htm> Last accessed 24 November 2010.

This older website could be updated considerable to reflect better classifications of barns.

Calkins, Charles F. *The Barn as an Element of the Cultural Landscape of North America*. Monticello, IL: Vance Bibliographies, 1979.

This bibliography contains over 100 scholarly sources (articles, monographs and books) written primarily by cultural geographers and folklorists. It is valuable because it lists sources from local and state-scale journals as well as obscure publishers.

Calkins, Charles F., and Martin Perkins. "The Three-Bay Threshing Barn." In *Barns of the Midwest*, edited by Allen G. Noble and Hubert G. H. Wilhelm, 40-61. Athens: Ohio University Press, 1995.

This chapter in the Noble and Wilhelm anthology is the premier source on the three-bay English threshing barn. It describes the basic diagnostic traits and the diffusion of the form into the Great Lakes plains and the Midwest as the wheat belt expanded from New England.

Carlson, Alvar W. "Bibliography on Barns in the United States and Canada." *Pioneer America* 10, no. 1 (1978): 65-71.

This brief bibliography compiled by a cultural geographer was instrumental in encouraging scholars to pursue barn research in the 1980s.

Dieffenbach, Victor C. "Building a Pennsylvania Barn." *Pennsylvania Folklife* 12, (1961): 20-24.

Covers the construction of a Pennsylvania barn with a bank and a forebay.

Dornbush, Charles E. *Pennsylvania German Barns*. Allentown, Penn.: German Folklore Society, 1956.

This is a very early attempt to examine the forms and functionality of the many Pennsylvania barn forms.

Durand, Loyal. "Dairy Barns of Southeastern Wisconsin." *Economic Geography* 19, no. 1 (1943): 37-44.

This is an important early work by an historical geographer who spent a career investigating dairy production in the U.S. In this article Durand systematically examines the function of barns as they relate to local production type.

Ellsworth, J. O., and F. F. Elliott. "Types of Farming in Oklahoma." *Oklahoma Agricultural Experiment Station Bulletin* 181 (1929): 70-75.

An early day examination of agriculture just before the Great Depression. Helps one understand conditions of the 1920s, such as tenancy.

Endersby, Eric, Alexander Greenwood, and David Larkin. *Barn: Preservation & Adaptation*. New York: Universe Publishing, 2003.

This coffee table book examines the barn as an architectural element of romantic, intrinsic interest. Regional variations are discussed, but most of the book examines conversion of barns to contemporary non-farm use.

Endersby, Eric, Alexander Greenwood, David Larkin, and Paul Rocheleau. *Barn: The Art of a Working Building*. Boston, Mass.: Houghton Mifflin, 1992.

An excellent aesthetically-oriented overview of outstanding barns in the eastern United States.

Ensminger, Robert F. *The Pennsylvania Barn: Its Origin, Evolution, and Distribution in North America*. Second ed. Baltimore: John Hopkins University Press, 1992.

This revised source is the most important and reliable source on Pennsylvania (forebay) barns to date. Ensminger, a cultural geographer, has spent a career examining the Pennsylvania barn in its numerous varieties. The book details construction characteristics and is chock-full of original maps.

Foley, Mary Mix. "The American Barn." *Architectural Forum* 95, (1951): 170-77, 214-20.

An early essay and vernacular examination of the barn by the well-known author of The American House.

Francaviglia, Richard V. "Western American Barns: Architectural Form and Climatic Considerations." Yearbook of the Association of Pacific Coast Geographers 34, (1972): 153-60.

This is an analytical article investigating questions relating to diffusion and the cultural ecology of barn forms in the Mountain West. It is one of only a few scholarly studies to examine barns west of the Great Plains.

Glass, Joseph W. *The Pennsylvania Culture Region: A View from the Barn*. Ann Arbor: UMI Research Press, 1986.

This study is both an examination of barn types and an examination of a formal culture region. The author utilizes the Pennsylvania forebay barn type as a diagnostic cultural trait to map and interpret the extent of the greater Pennsylvania folk culture region. His sample size is 530 barns extending from Pennsylvania to Virginia.

Glassie, Henry. "The Old Barns of Appalachia." *Mountain Life & Work* 40, (1965): 21-30.

Glassie was an eclectic, pioneering scholar in the area of landscape interpretation. This article inspired a generation of cultural geographers to classify barn forms emanating from the Upland South. The Transverse-Crib barn type, which is so common in the study area, originated here.

———. *Pattern in the Material Folk Culture of the Eastern United States*. Philadelphia: University of Pennsylvania Press, 1968.

This classic book is Glassie's seminal work on American folklife. In it he examines early American material culture and using examples to show how folk cultural patterns evolve. Among the most important chapters is the one on barns.

———. "The Variations of Concepts within Tradition: Barn Building in Otsego County, New York." *Geoscience and Man* 5, (1974): 177-235.

By far Glassie's most theoretically sophisticated examination of barns, this micro-scale study demonstrates many of the problems inherent in developing classifications of barn types based solely on visual exterior elements such as roof types.

Halberstadt, April. *Farm Memories: An Illustrated History of Rural Life*. Osceola, Wisc.: Motorbooks International Publishers & Wholesalers, 1996.

This trade book is actually very useful for its straightforward descriptions of farm activities (including activities centered on the barn) and photographs.

Hall, Charles L. "Stone Barns of the Flint Hills." *Kansas Country Living* (A Publication of the Kansas Electric Cooperatives, Inc.) 17, no. 9 (1972): 12-A, 12-D.

An early popular account of the native stone barns of eastern Kansas.

Hanou, John T. *A Round Indiana: Round Barns in the Hoosier State*. West Lafayette: Purdue U. Press, 1993.

This book is devoted to the non-orthogonal barn type. Round barns are perhaps the most visually striking and interesting of barns, yet their actual significance in terms of numbers and functionality is miniscule.

Hart, Arthur A. *Barns of the West: A Vanishing Legacy*. Boise, Idaho: Historic Idaho, Inc., 1996.

This coffee table book contains over 200 photos of from Alaska, Washington, Idaho, Montana, Oregon and California and touches on barn construction, regional features, and addresses why barns are endangered today.

Hart, John Fraser. "Types of Barns in the Eastern United States." *Focus* 43, no. 1 (1993): 8-17.

———. "On the Classification of Barns." *Material Culture* 26, no. 3 (1994): 37-46.

———. *The American Farm: How Farming Shaped the Landscape of America*. New York: Barnes & Noble, 1998.

———. *The Rural Landscape*. Baltimore: Johns Hopkins University Press, 1998.

Professor Hart is a longtime student of barn form throughout the United States. He has conducted fieldwork in the U.S. Southeast, Midwest, and Northeast. He is particularly knowledgeable about barn forms of the Corn Belt. His philosophy on barn classification, which reflects the realism and pragmatism of the American farmer, is to lump them together based on function, not subdivide them into myriad types based on external characteristics. His works are also respectful of the changing economic conditions of American farming.

Haystead, Ladd, and Gilbert C. Fite. *The Agricultural Regions of the United States*. Norman: University of Oklahoma Press, 1955.

Although now somewhat dated, this is an outstanding regional examination of agricultural economic geography of the United States.

Horsburgh, Patrick. "Barns in Central Illinois." *Landscape* 8, no. Spring (1959): 12-13.

This is an empirical study of Midland barn types.

Hromas, Irene. *The Barn Book, Including Pioneer Barns and Other Pioneer Structures*. Enid, Okla.: The Dougherty Press, nd.

This is a locally-published gem and one of the few books on Oklahoma.

Jordan, Terry G. *Texas Log Buildings: A Folk Architecture*. Austin, Texas: University of Texas Press, 1978.

———. *American Log Buildings: An Old World Heritage*. Chapel Hill, N.C.: University of North Carolina Press, 1985.

Jordan-Bychkov, Terry G. "Transverse-Crib Barns, the Upland South, and Pennsylvania Extended." *Material Culture* 30, no. Summer (1998): 5-31.

———. *The Upland South: The Making of An American Folk Region and Landscape*. Santa Fe, N.M.: Center for American Places, 2003.

Jordan-Bychkov probably knew more than any single scholar about European origins, overseas diffusion, and ecological adaptation to the new environment of most types of American vernacular buildings, including barns. Heavily influenced by Fred Kniffen and Henry Glassie, Jordan-Bychkov's major contribution to barn scholarship is his work on the Transverse-Crib form that developed in the Upland South.

Keitham, Mary. *Michigan's Heritage Barns*. East Lansing: Michigan State University Press, 1999.

This wonderful coffee table book of barn photos was developed during the 1990s and includes good field notes. Non-scholarly, commercially-produced books like these turned out to be some of the very best sources for studying barns in Oklahoma.

Kiefer, Wayne E. "An Agricultural Settlement Complex in Indiana." *Annals of the Association of American Geographers* 62, (1972): 487-506.

This innovative study inventoried farm buildings in a small Midwest study area in order to document the process of agricultural change from general farming to specialized cash grain production. Similar processes took place in the western Oklahoma study area.

Klamkin, Charles. *Barns, Their History, Preservation, and Restoration*. New York: Hawthorne Books, Inc., 1973.

One of the first attempts to examine the American barn and encourage adaptive reuse in the early days of the preservation movement.

Kniffen, Fred B. "Folk Housing: Key to Diffusion." *Annals of the Association of American Geographers* 55, no. 4 (1965): 549-77.

This groundbreaking article is among the most influential works in American cultural geography. It lays out the analytical framework for using empirical data from the built environment to understand regional migration and settlement patterns. It is one of the most-cited articles in the discipline.

Larkin, David. Farm: *The Vernacular Tradition of Working Buildings*. New York: Monacelli Press, 1995.

This photographic work examines European and American cultural traditions, building forms, and ethnic influences that may be seen in agricultural settlements.

Marshall, Howard W. *Folk Architecture in Little Dixie: A Regional Culture in Missouri* 1991.

Using a sample of about 100 folk buildings, this author attempts to define the boundaries of a small vernacular region in southeastern Missouri.

Moffett, Marian, and Lawrence Wodehouse. *East Tennessee Cantilever Barn*. Knoxville: University of Tennessee Press, 1993.

This is a beautifully-done and fascinating book developed from a survey of 316 specimens of a rare type of barn found only in a few parts of southern Appalachia. It is filled with excellent photographs.

Mook, Maurice A., and John A. Hostettler. "The Amish and Their Land." *Landscape* 6, no. Spring (1957): 21-19.

This is a wonderfully insightful article on Amish and Mennonite agricultural landscapes and settlement tendencies that is relevant to several locales in the study area.

Nall, Gary L. "King Cotton in Oklahoma, 1825-1939." In *Rural Oklahoma*, edited by Donald E. Green, 37-55. Oklahoma City: Oklahoma Historical Society, 1977.

This article is exceptionally useful for understanding the agricultural history of cotton production in southwestern Oklahoma. Cotton was the staple crop for a brief period, yet it had profound impacts on the land and settlement patterns. Areas where cotton dominated tended not to contain many barns other than single-crib types.

Noble, Allen G. "Barns and Square Silos in Northeast Ohio." *Pioneer America* 6, no. July (1974): 12-21.

Allen Noble is one of the patriarchs of barn research who is considered a pioneer of field classification and research on rural ethnic landscapes in Ohio. This early article lays the groundwork for many other scholars.

———. Wood, Brick, and Stone: The North American Settlement Landscape, Vol. 2: Barns and Farm Structures. Amherst, Mass.: University of Massachusetts Press, 1984.

This is Noble's most careful and comprehensive work on barns and among the most important sources on barns in the eastern United States. No student of barns should overlook Noble's *Wood, Brick, and Stone*.

Noble, Allen G., and Richard K. Cheek. *The Old Barn Book: A Field Guide to North American Barns and Other Farm Structures*. New Brunswick: Rutgers U. Press, 1995.

This work is intended as a rough field guide to North American barns, but it is most useful for barns constructed east of the Mississippi River. Its utility is not ideal for barns constructed after 1890 and it is minimally useful for the Great Plains. Nevertheless, it is a useful guide to barn elements, such as door placement, hayhood types, and roofs.

Noble, Allen G., and Richard K. Cleek. "Sorting out the Nomenclature of English Barns." *Material Culture* 26, no. 1 (1994): 49-63.

This article provides a detailed, albeit perhaps not that useful, classification of barns related to the Three-Bay Threshing barn variety.

Noble, Allen G., and Victoria Hosler. "A Method for Estimating Distribution of Barn Styles: Indiana as a Case Study." *Geographical Survey* 6, no. July (1977): 14-31.

This is an excellent article outlining an approach that preservationists might use to plan efficient field surveys.

Noble, Allen G., and Gayle A. Seymour. "Distribution of Barn Types in the Northeastern United States." *The Geographical Review* 72, (1982): 155-70.

This academic article lays a foundation for understanding the major barn types found in the New England and Middle Atlantic regions. The region was a secondary source of barn types that diffused to the study area by way of Anglo-American settlers from the Midwest.

Noble, Allen G., and Hubert G.H. Wilhelm, eds. *Barns of the Midwest*. Athens: Ohio U. Press, 1995.

Professor Allen G. Noble has published more works on barns in the United States than any other scholar. A cultural geographer, his works are most useful in studying the eastern United States. Less of his work is relevant to states west of the Mississippi. The Old Barn Book, one of his collaborations with Richard K. Cheek, is a noble attempt to provide a useful field guide for the novice barn hunter, but it contains much overlap and is in places confusing regarding typologies. Noble and his collaborators have been accused of unnecessarily splitting hairs by John Fraser Hart.

Perrin, Richard W. E. "Circle and Polygon in Wisconsin: Early Structures of Unconventional Design." *Wisconsin Magazine of History* 47, no. Autumn (1963): 50-58.

This early popular account examines round and non-orthogonal barn designs. Round barns are idiosyncratic freaks that attract much more attention than they deserve. According to John Fraser Hart, round barns never became popular with farmers because they rarely functioned as well as conventional barns.

Rader, J. L. "Oklahoma County Histories." *Chronicles of Oklahoma* 20, no. 2 (1942): 1.

Rader provides an early listing of county histories, many of which can only be found in special collections today.

Ramsey, Lynda. "End of the Trail: The Barn." *Oklahoma Today*, Sept./Oct. 2009, 34-41.

This well-illustrated essay examines the history and preservation efforts of a selection of barns examined by the author in her Master's thesis.

Ridlen, Suzanne S. "Bank Barns in Cass County, Indiana." *Pioneer America* 4, no. July (1972): 25-43.

This report examines bank barns in a single county resulting from a historic preservation survey. It links architectural form to ethnic diffusion.

Roberts, Warren E. *Log Buildings of Southern Indiana*. Bloomington: Trickster Press, 1996.

This monograph examines folk building traditions and ethnic settlement history of southern Indiana using a database of over 400 log buildings observed over decades of field observation in the region.

Schlebecker, John T. *Whereby We Thrive: A History of American Farming, 1607-1972*. Ames, Iowa: The Iowa State University Press, 1975.

This is a highly valuable, chronologically and regionally-organized source of information regarding agricultural change in the United States. It explains the technological and political reasons for the largest changes in farming for the study period.

Schultz, LeRoy G. *Barns, Stables and Outbuildings: A World Bibliography in English, 1700-1983*. Jefferson, NC: McFarland and Co., 1986.

This is the largest and most extensive bibliography available for barns. It has international breadth, but a huge section includes U.S. sources in historical periodicals. It is an invaluable source for locating popular writings in the late nineteenth and early twentieth century.

Shoemaker, Alfred L., and Don Yoder. *The Pennsylvania Barn*. Lancaster: PA Dutch Folklore Center, 1955.

The Pennsylvania forebay barn has been written about more than any other barn type, and this is the earliest attempt to provide a comprehensive overview of it.

Shortridge, James R. "Kansas Barns in Time and Place." *Kansas History* 22, no. 1 (1999): 2-25.

Shortridge is a cultural geographer who produced this article after a statewide survey of barns for the Kansas SHPO. This account devotes much discussion to the diffusion of Midland forms and especially to construction innovations of the early twentieth century, such as the introduction of prefabricated trusses.

Sloane, Eric. *An Age of Barns*. New York: Funk and Wagnalls, 1967.

Sloane provides an earthy, folklore-filled discussion of barn use and construction in this coffee table publication. It contains black and white illustrations of many North American types.

Soike, Lowell J. *Without Right Angles: The Round Barns of Iowa*. Iowa City: Penfield Press, 1983.

This is the standard book-length work on round barns in one of the states where they are most common.

———. "Affordable Barns for the Midwest: Beginnings." In *Barns of the Midwest*, edited by Allen G. Noble and Hubert G. H. Wilhelm, 80-98. Athens, Ohio: Ohio University Press, 1995.

This chapter in the Noble and Wilhelm anthology examines the introduction of commercially-manufactured components and the transformation of the barn from a folk building to various standardized designs.

Thollander, Earl. *Barns of California*. San Francisco: California Historical Society, 1974.

This monograph provides a first approximation of barn types in the Golden State.

———. "California Barns." *California Historical Quarterly* 53, no. Spring (1974): 41-51.

This article in the state's historical quarterly outlines some of the basic barn types to be found in California.

Trewartha, Glenn T. "Some Regional Characteristics of American Farmsteads." *Annals of the Association of American Geographers* 38, (1948): 169-225.

This article sampled farmsteads to develop a model of farm building layout and related characteristics for regions of the United States.

Van Ravenswaay, Charles. *The Art & Architecture of German Settlements in Missouri: A Survey of a Vanishing Culture*. Columbia: University of Missouri Press, 1977.

This is a regional monograph of the folk culture and building traditions of the Germans in Missouri.

Visser, Thomas Durant. *A Field Guide to New England Barns and Farm Buildings*. Hanover: University Press of New England, 1997.

Although it does not pertain to the study area, this little field guide is an excellent source of information on barn form, components, and construction. It is filled with excellent photos.

Vlach, John Michael. *Barns*. New York: W. W. Norton & Company, 2003.

This source looks like a coffee table book, but it is probably the best single source on barns in the United States. It is a collection of HABS/HAER photos, organized regionally, which does not over-classifying barn types. Excellent!

Warkentin, John. "Mennonite Agricultural Settlements of Southern Manitoba." *The Geographical Review* 49, no. 49 (1959): 342-68.

Useful article for recognizing Mennonite settlement traits.

Welsh, Roger L. "The Nebraska Round Barn." *Journal of Popular Culture* 1, no. Spring (1968): 403-09.

———. "Nebraska's Round Barns." *Nebraska History* 51, no. Spring (1970): 49-92.

Nebraska's best-known folklorist examines the state's collection of round barns.

Whitney, Stephen T. "Round Barns." *Vermont Life* 25, no. Summer (1971): 8-15.

This is one of the earliest sources on round barns. Round barns are the rarest type of barn. They are not as functional as the academics who invented them thought.

Whyte, Bertha Kitchell. "Octagonal Houses and Barns." *Wisconsin Magazine of History* 34, no. Autumn (1950): 42-46.

Some non-orthogonal barns were frequently intended to be used for milking. Many are hexagonal or octagonal in shape. Wisconsin has many because of its important dairy industry.

Wilhelm, Hubert G. H. "The Pennsylvania-Dutch Barn in Southeastern Ohio." *Geoscience and Man* 5, (1974): 155-62.

———. "Amish-Mennonite Barns in Madison County, Ohio: The Persistence of Traditional Form Elements." *Ohio Geographers* 4, no. 1-8 (1976).

———. "Midwestern Barns and Their Germanic Connections." In *Barns of the Midwest*, edited by Allen G. Noble and Hubert G. H. Wilhelm, 62-79. Athens: Ohio University Press, 1995.

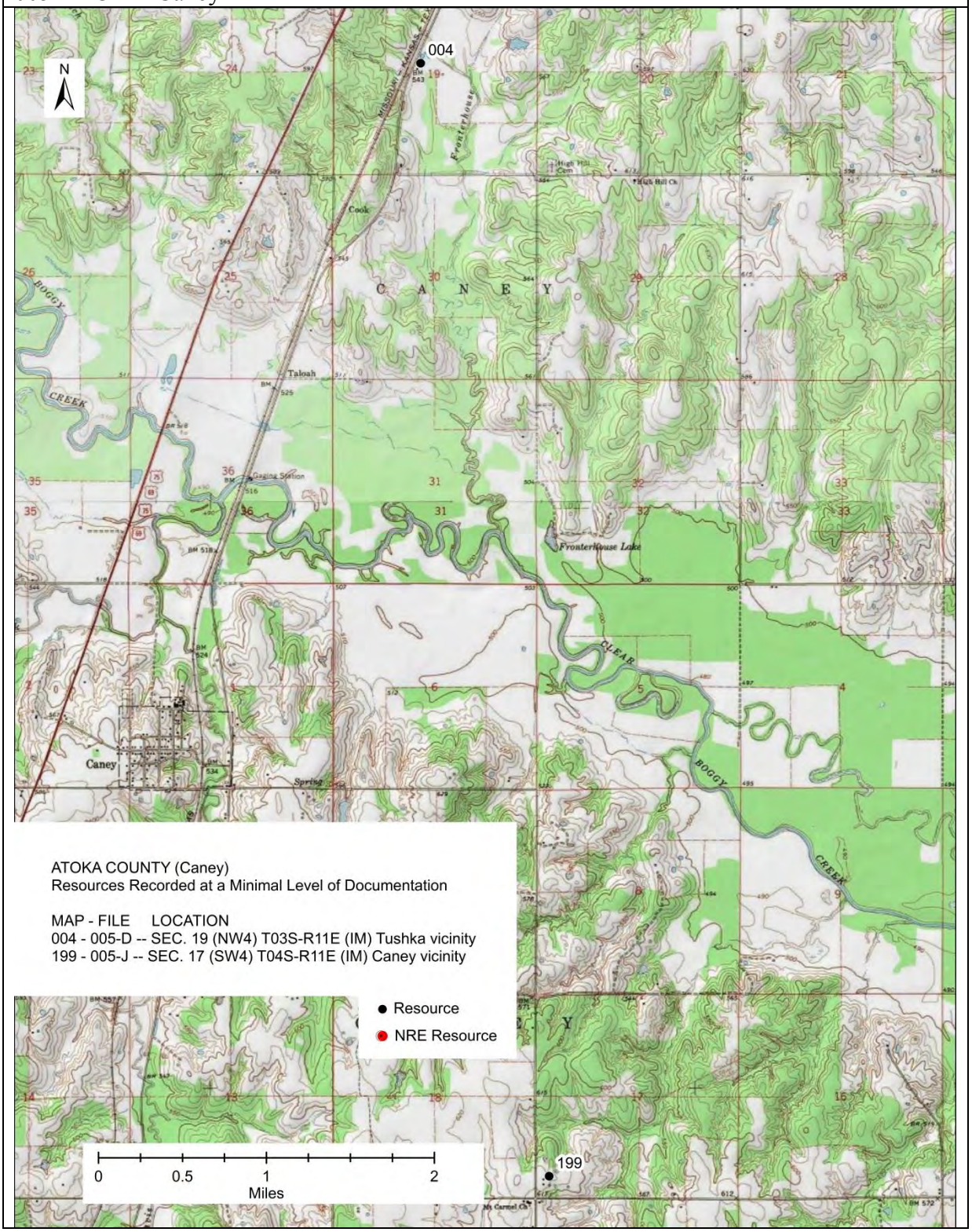
Hubert Wilhelm wrote extensively about German barns in his home State of Ohio. He was a professor of geography at Ohio University, from where he conducted fieldwork throughout the state. These three pieces are among his more influential works.

Zelinsky, Wilbur. "The New England Connecting Barn." *The Geographical Review* 48, (1958): 540-53.

Wilbur Zelinsky, a well-known cultural geographer examined barns in New England. His study was among the first geographical analyses of barns.

XV. APPENDIX A: PROPERTY LOCATOR MAPS

005-ATOKA-Caney



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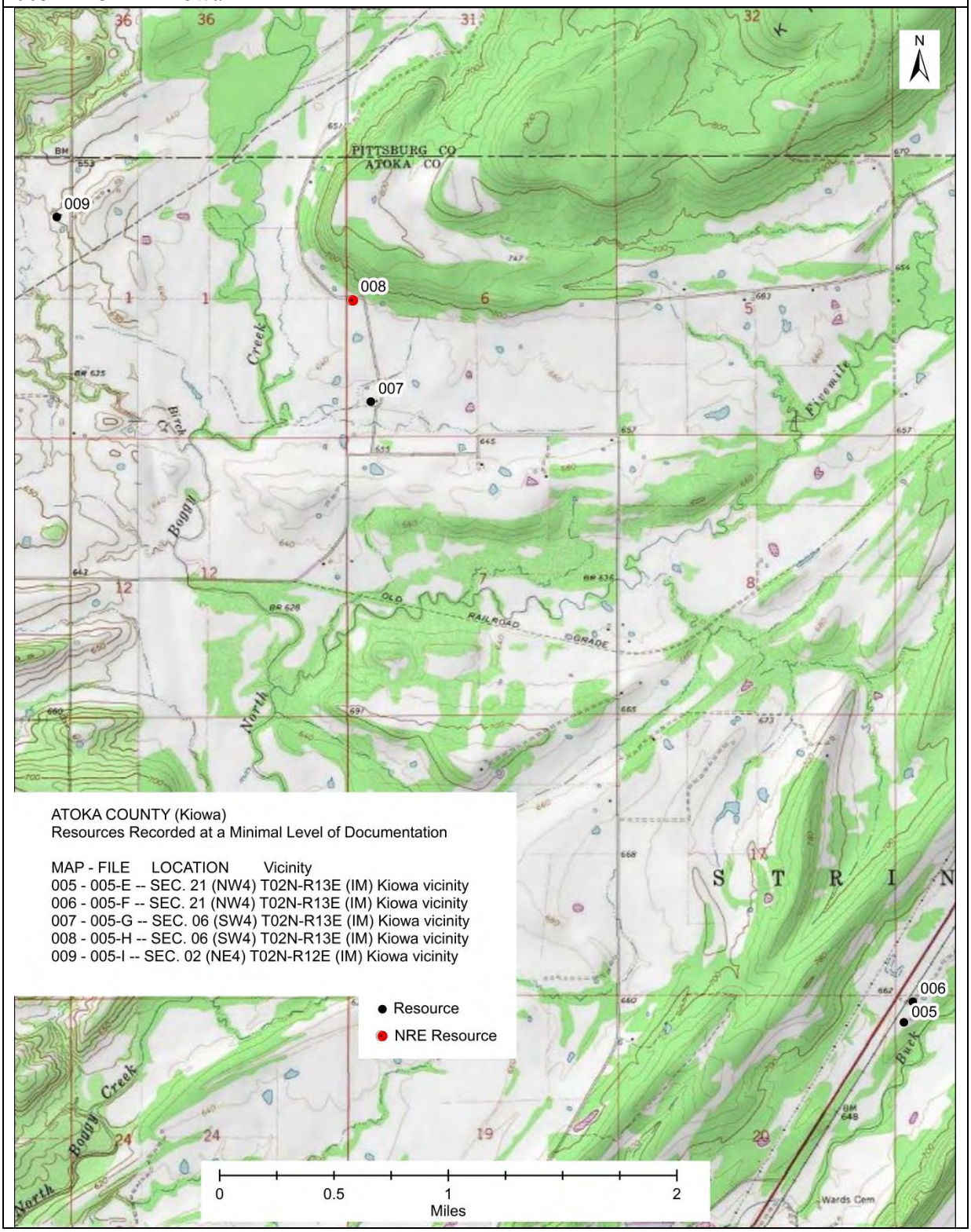
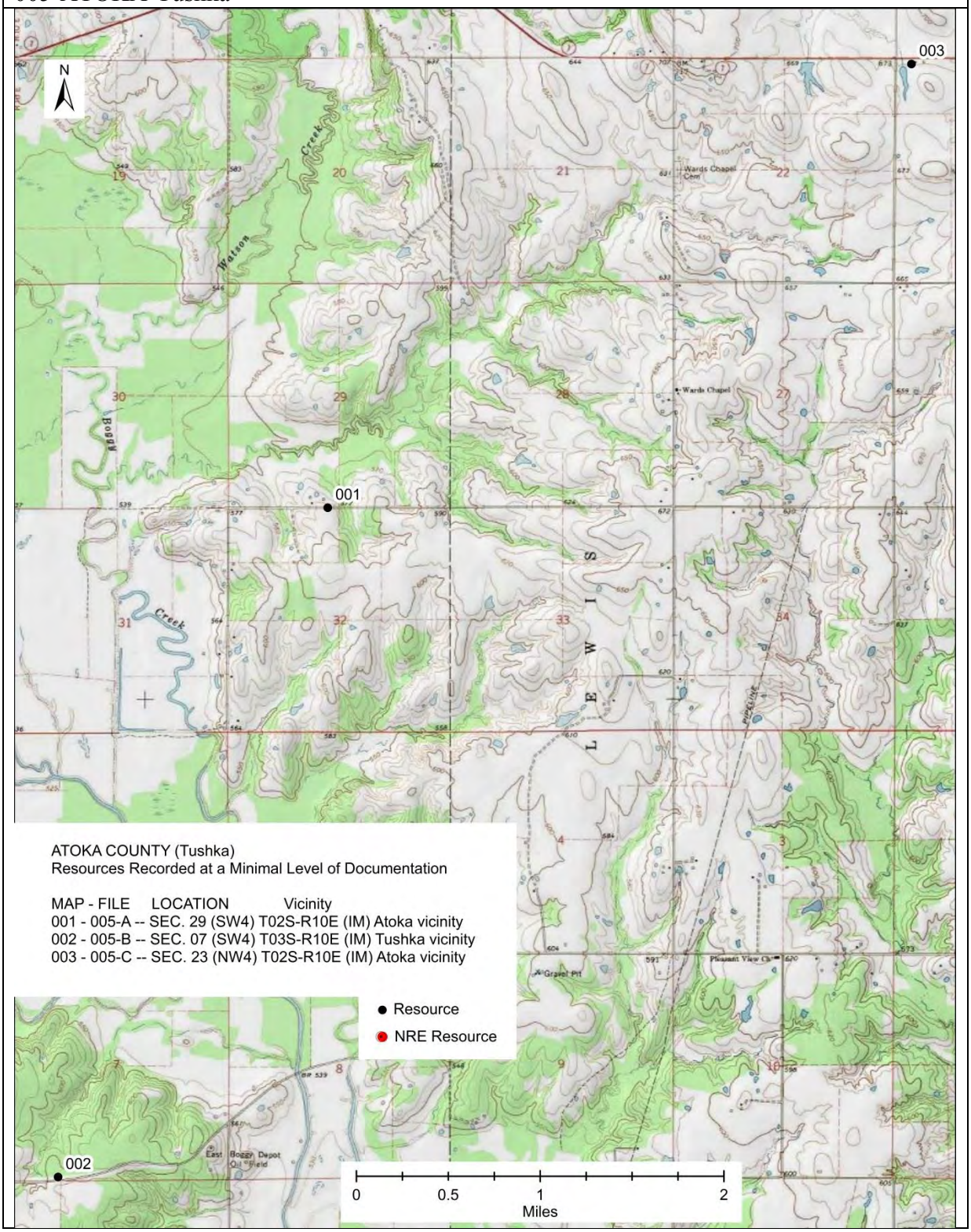
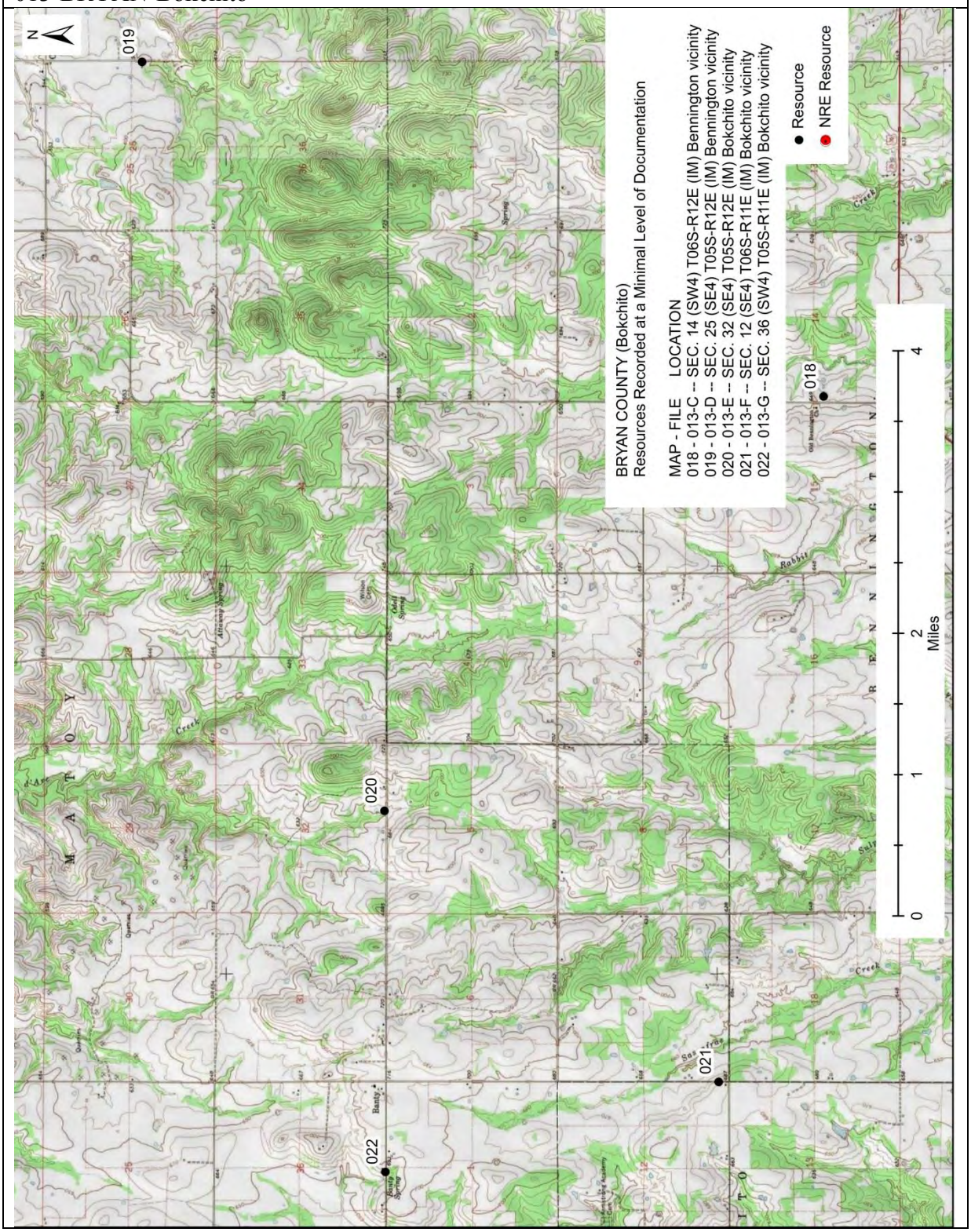


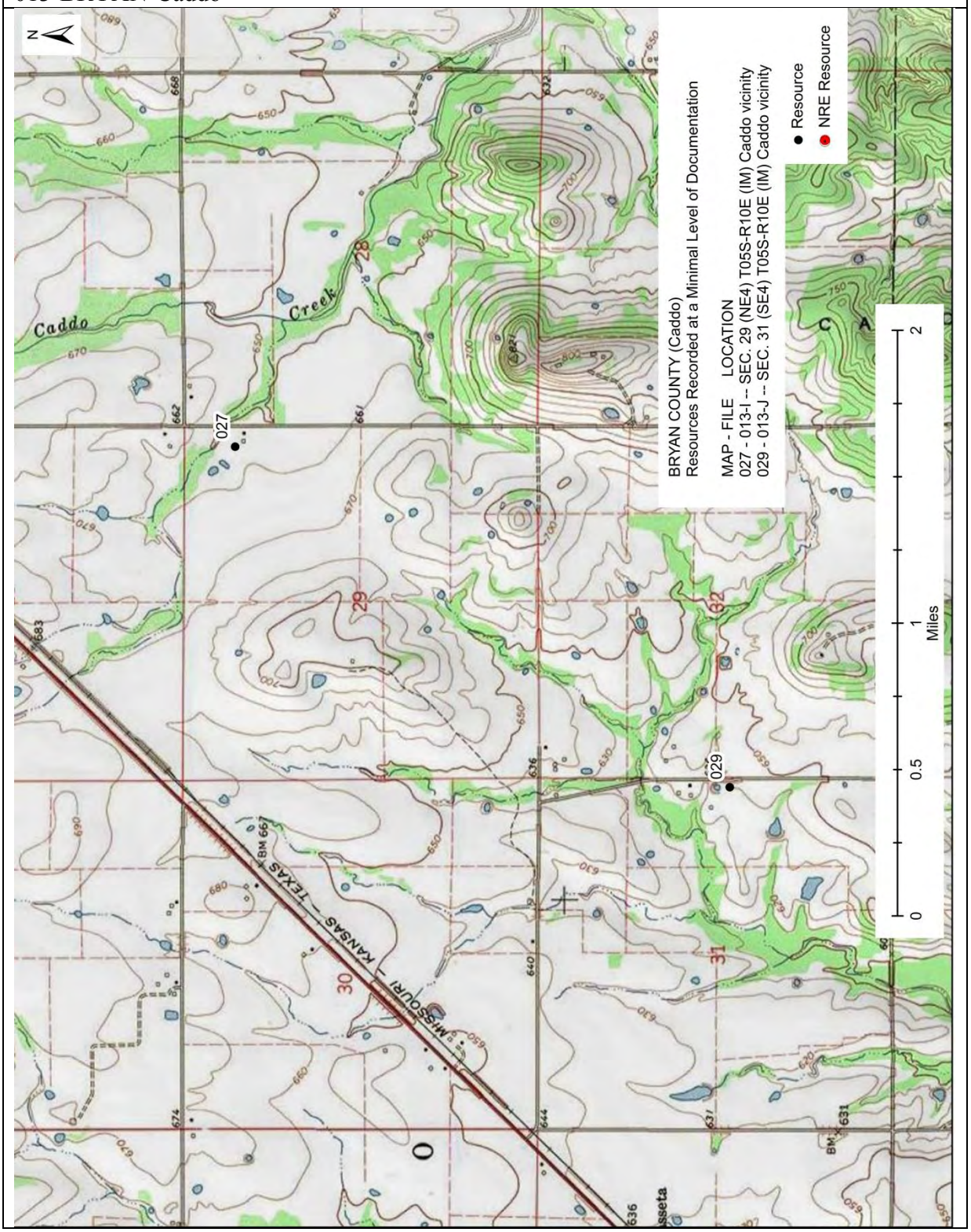
005-ATOKA-Tushka



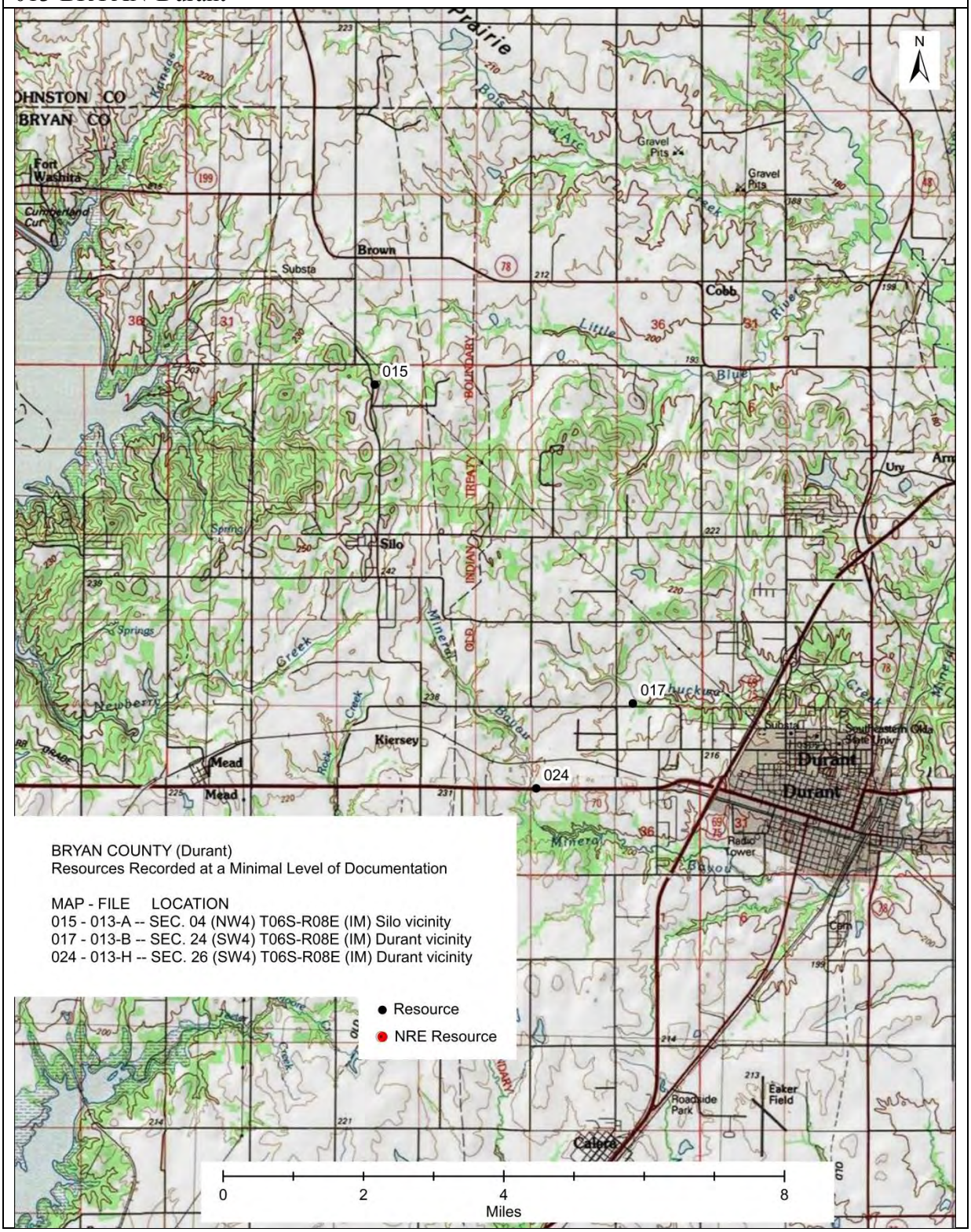
013-BRYAN-Bokchito



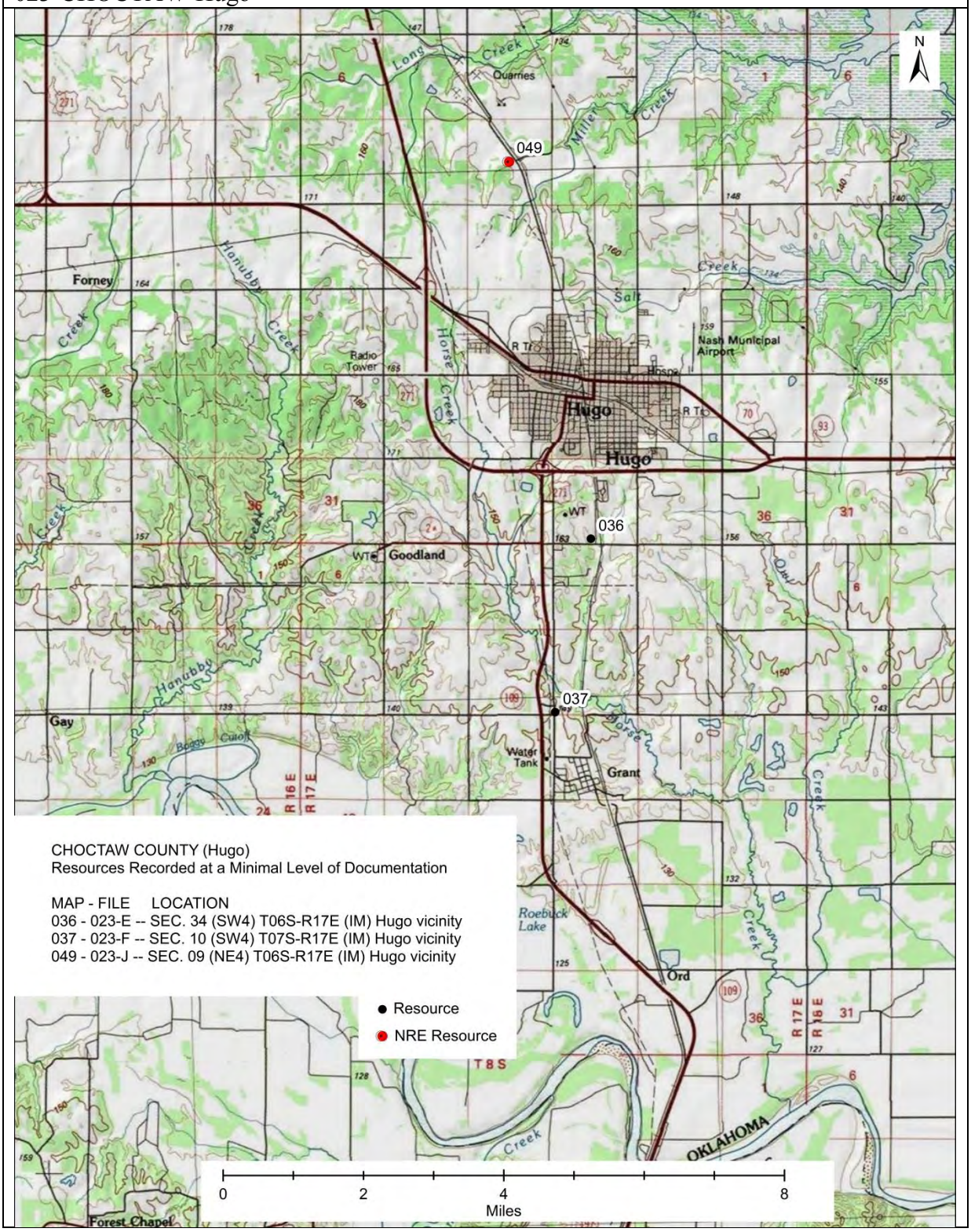
013-BRYAN-Caddo



013-BRYAN-Durant



023-CHOCTAW-Hugo



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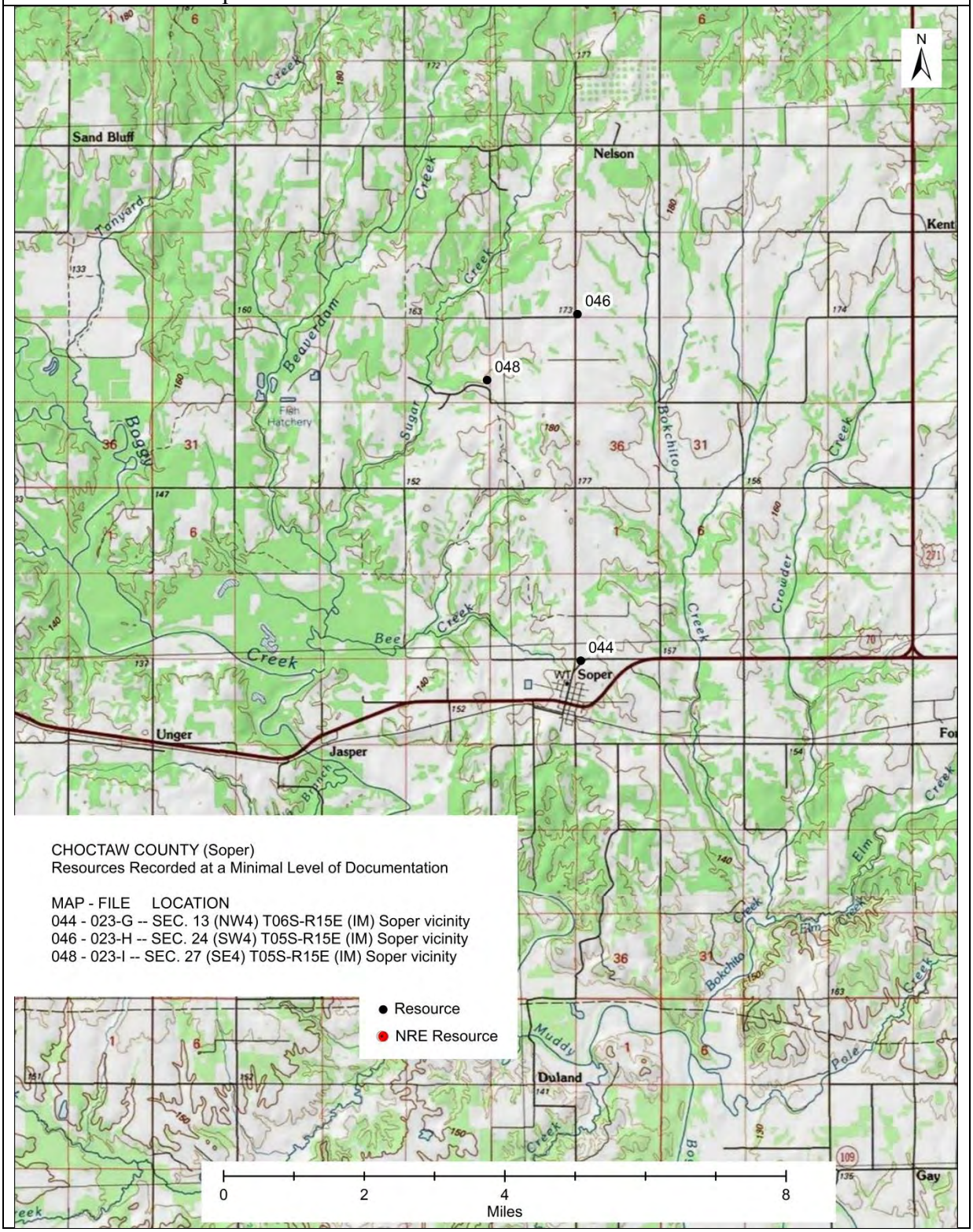

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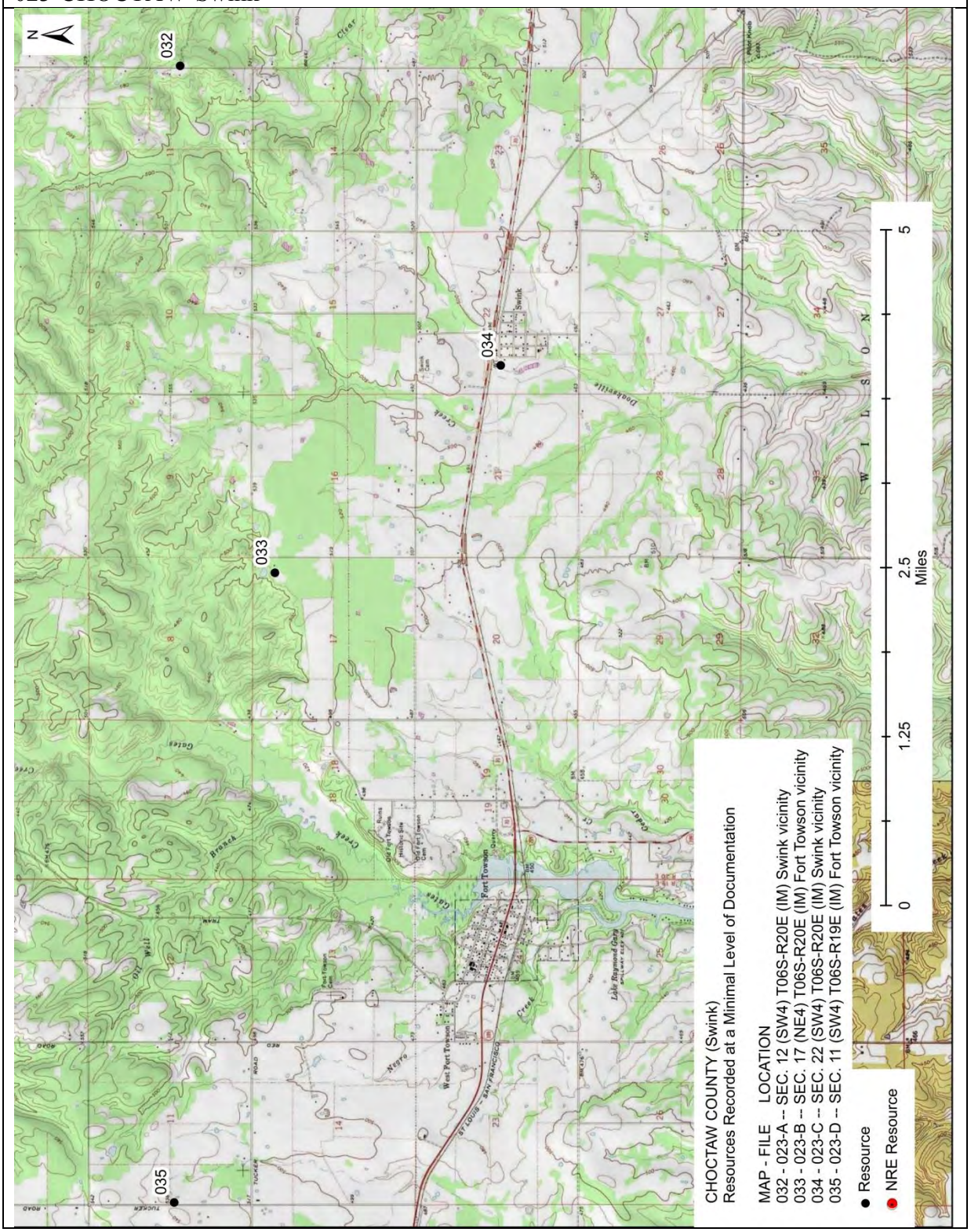
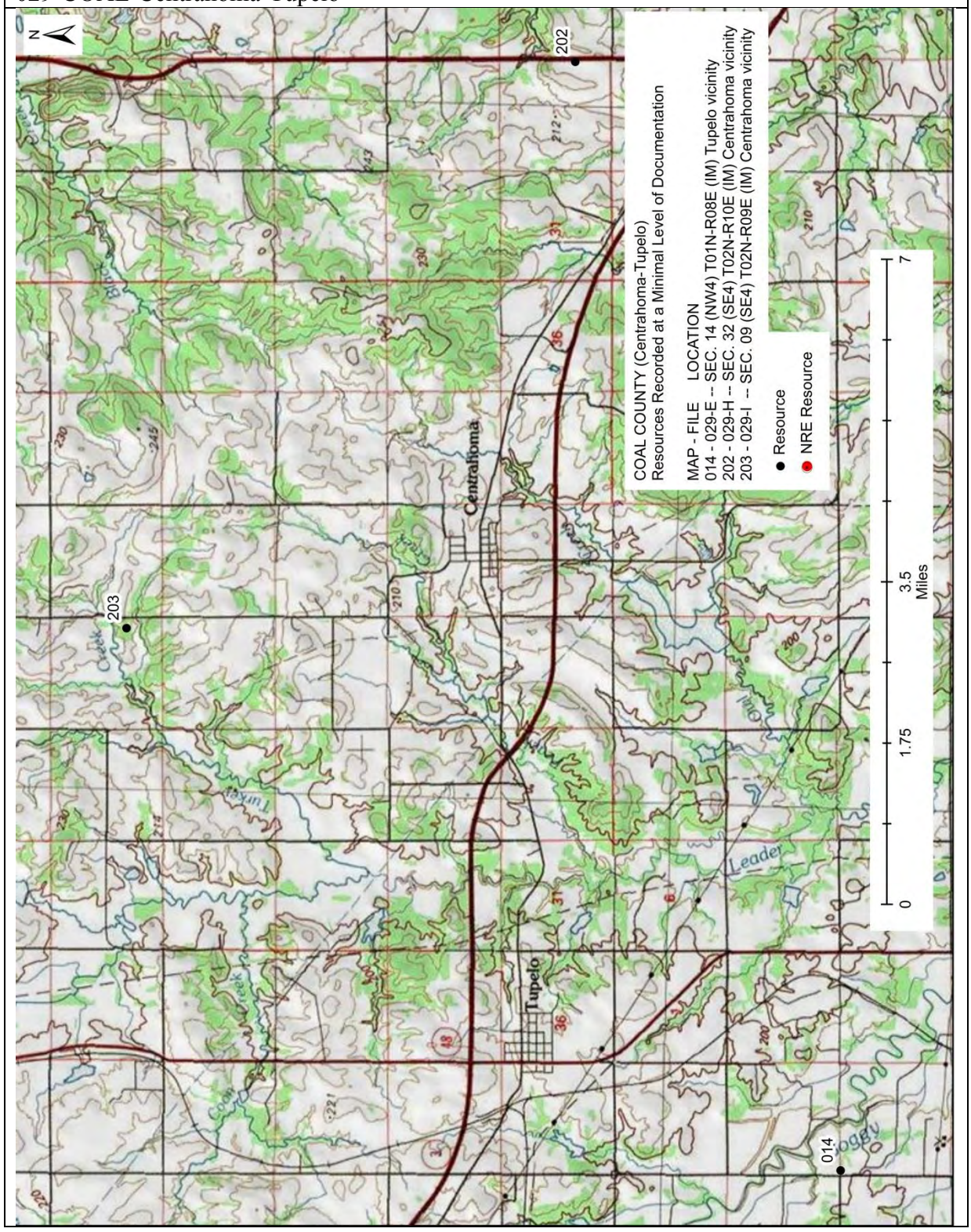


029-COAL-Centrahoma-Tupelo



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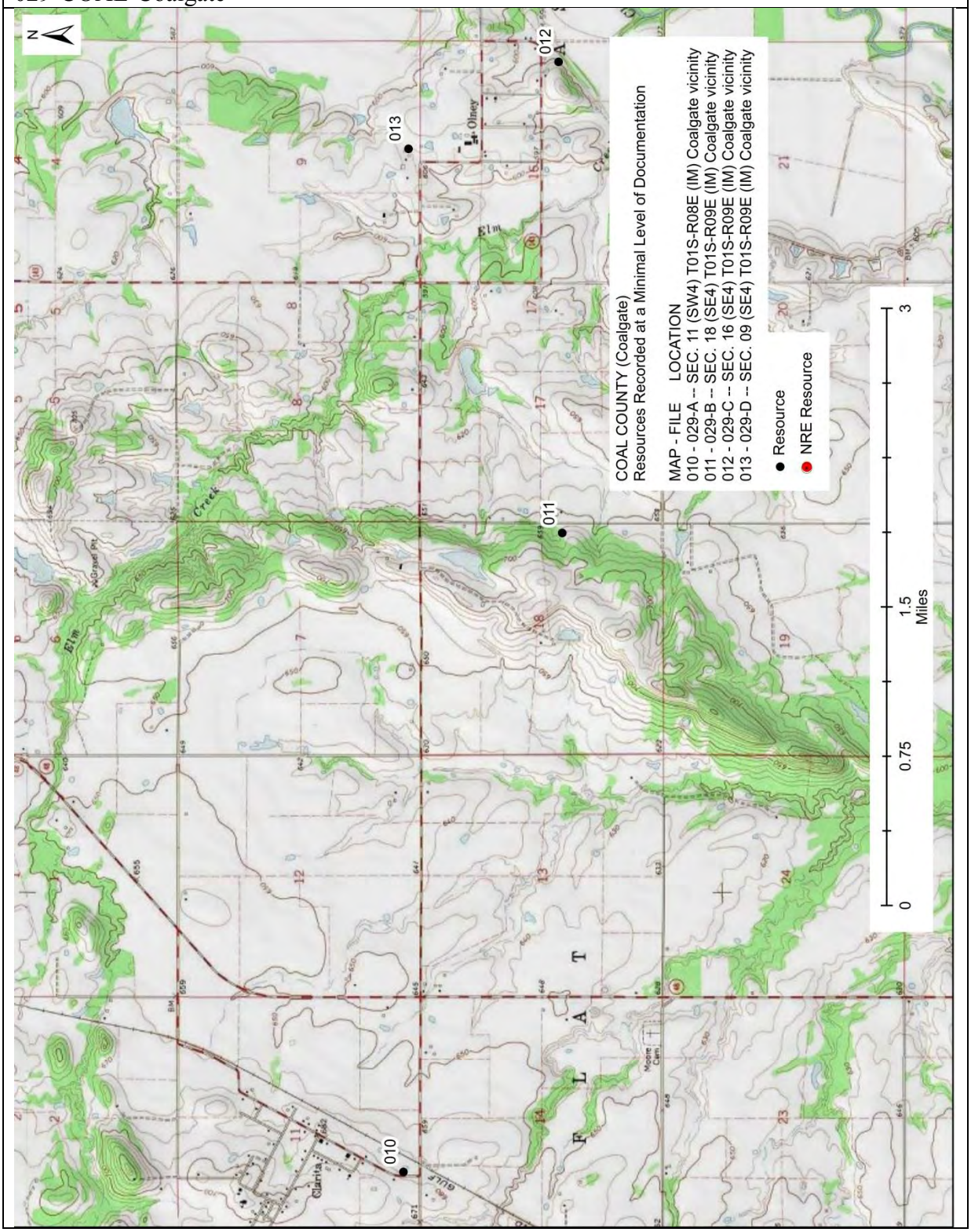

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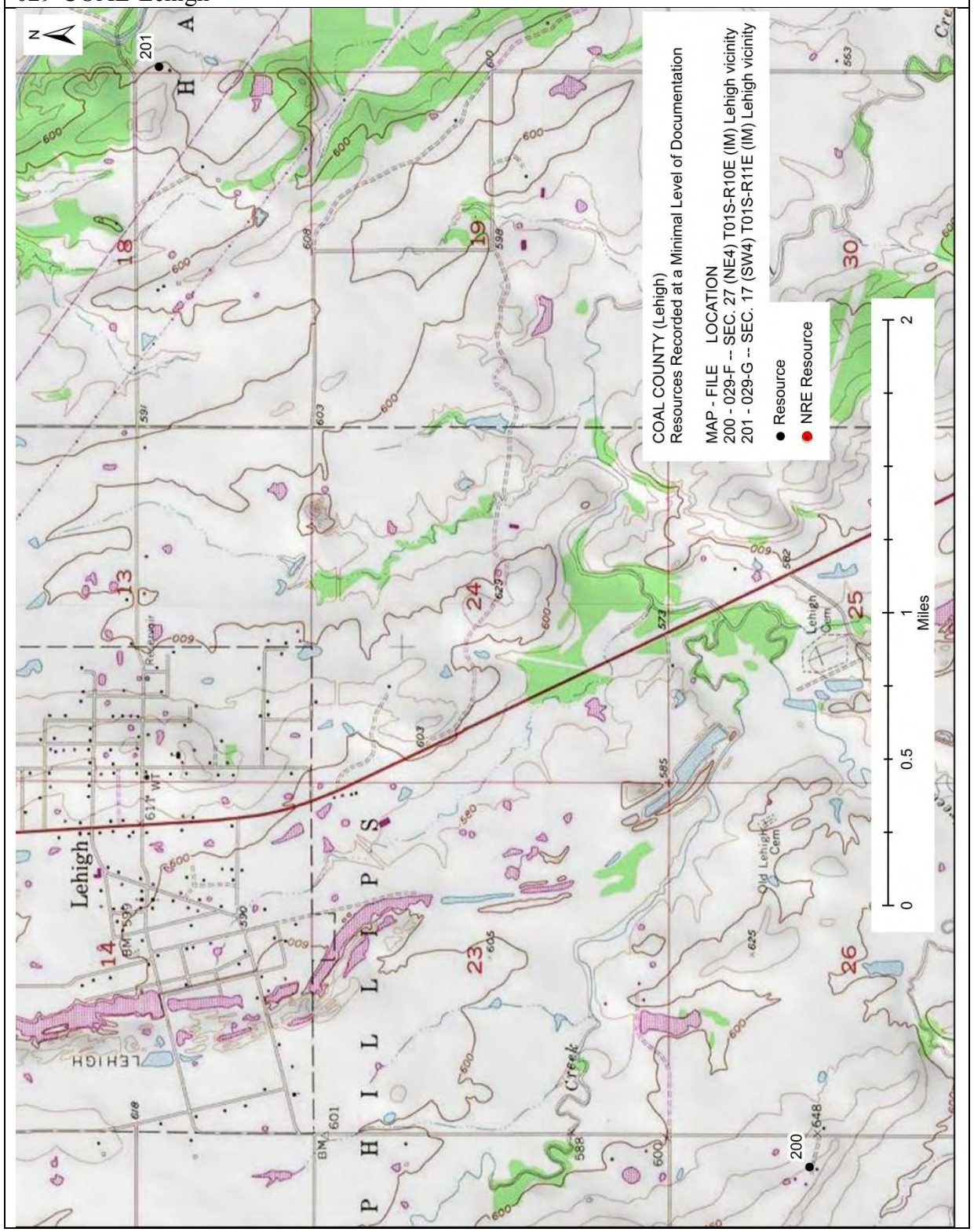
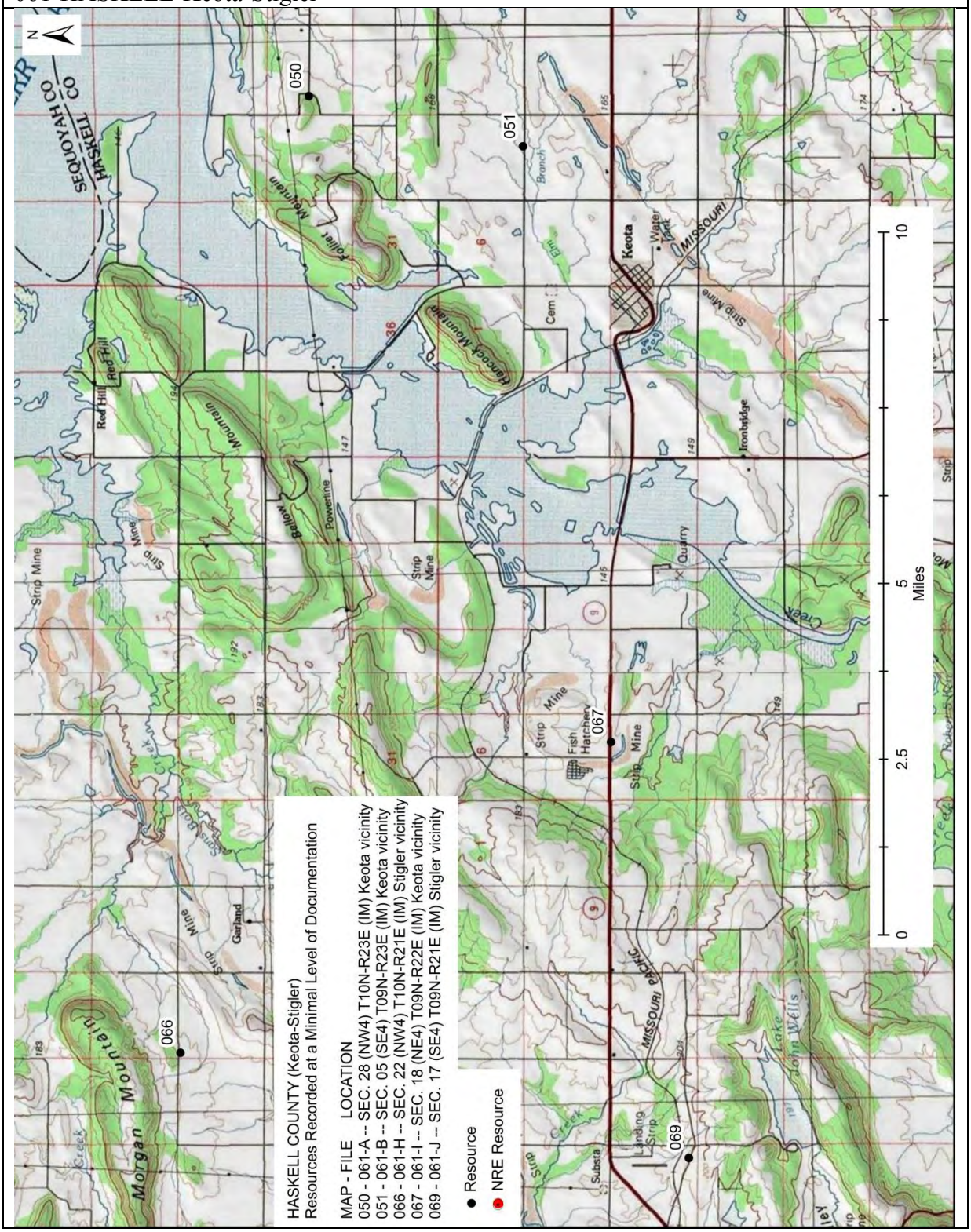


061-HASKELL-Keota-Stigler



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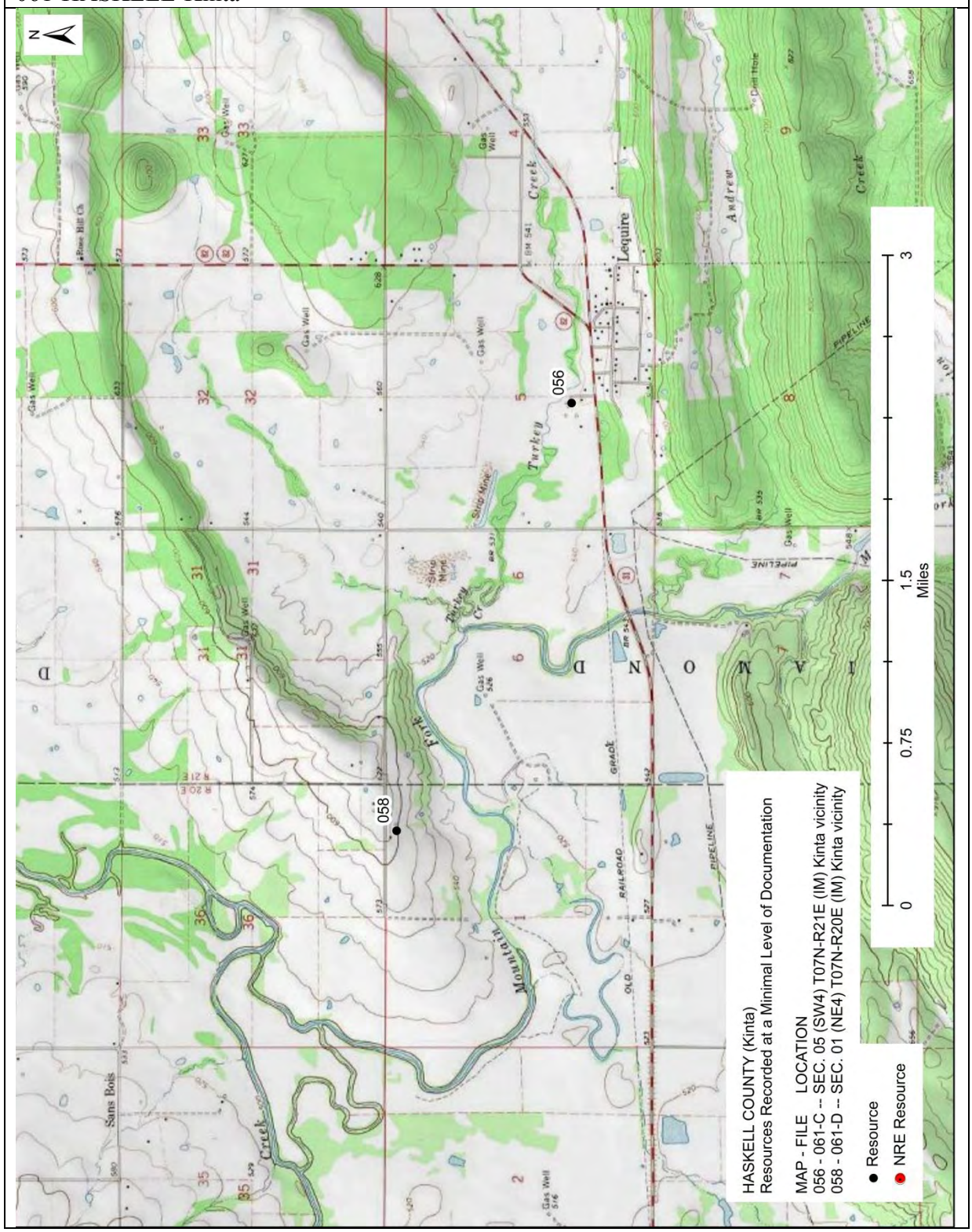

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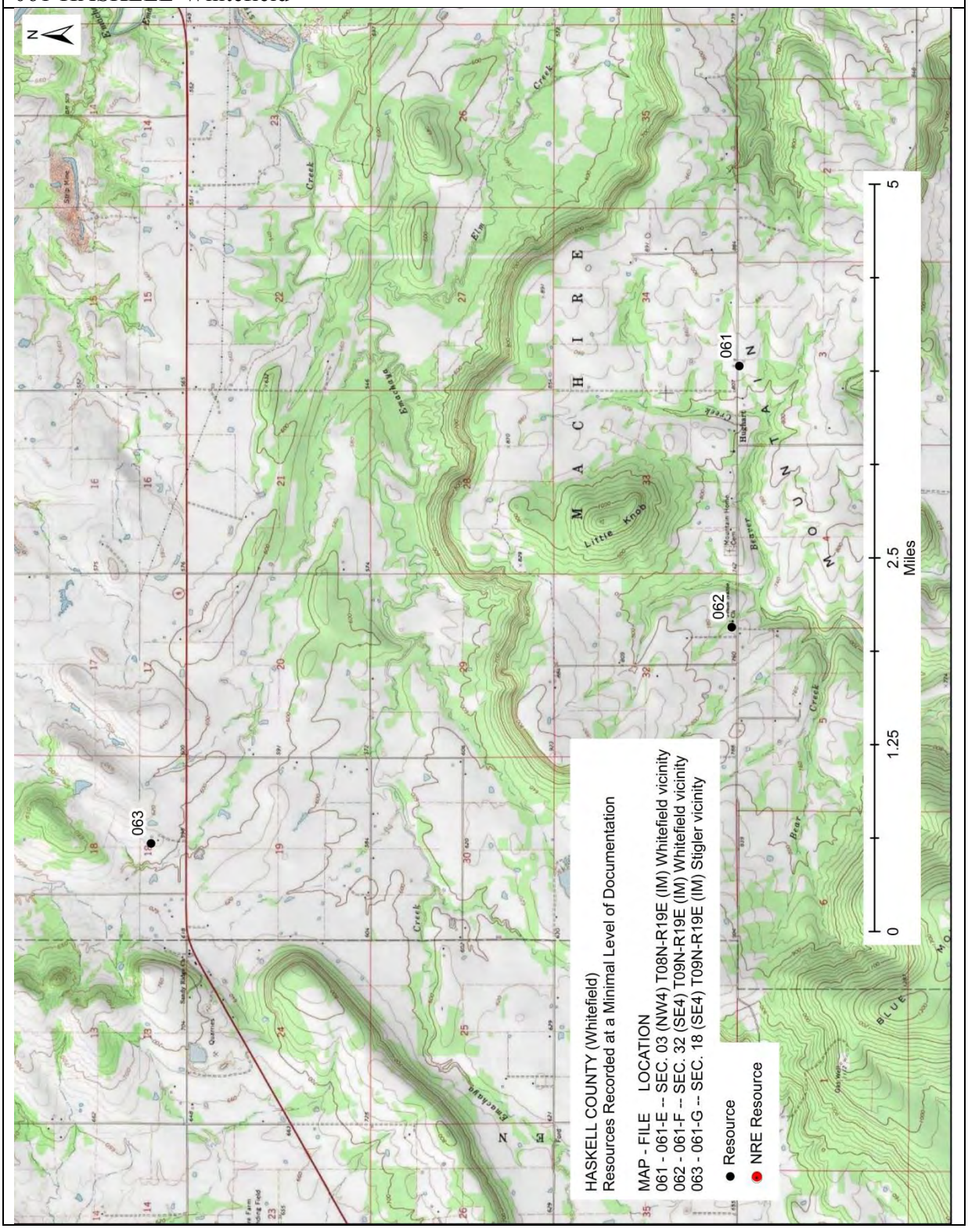
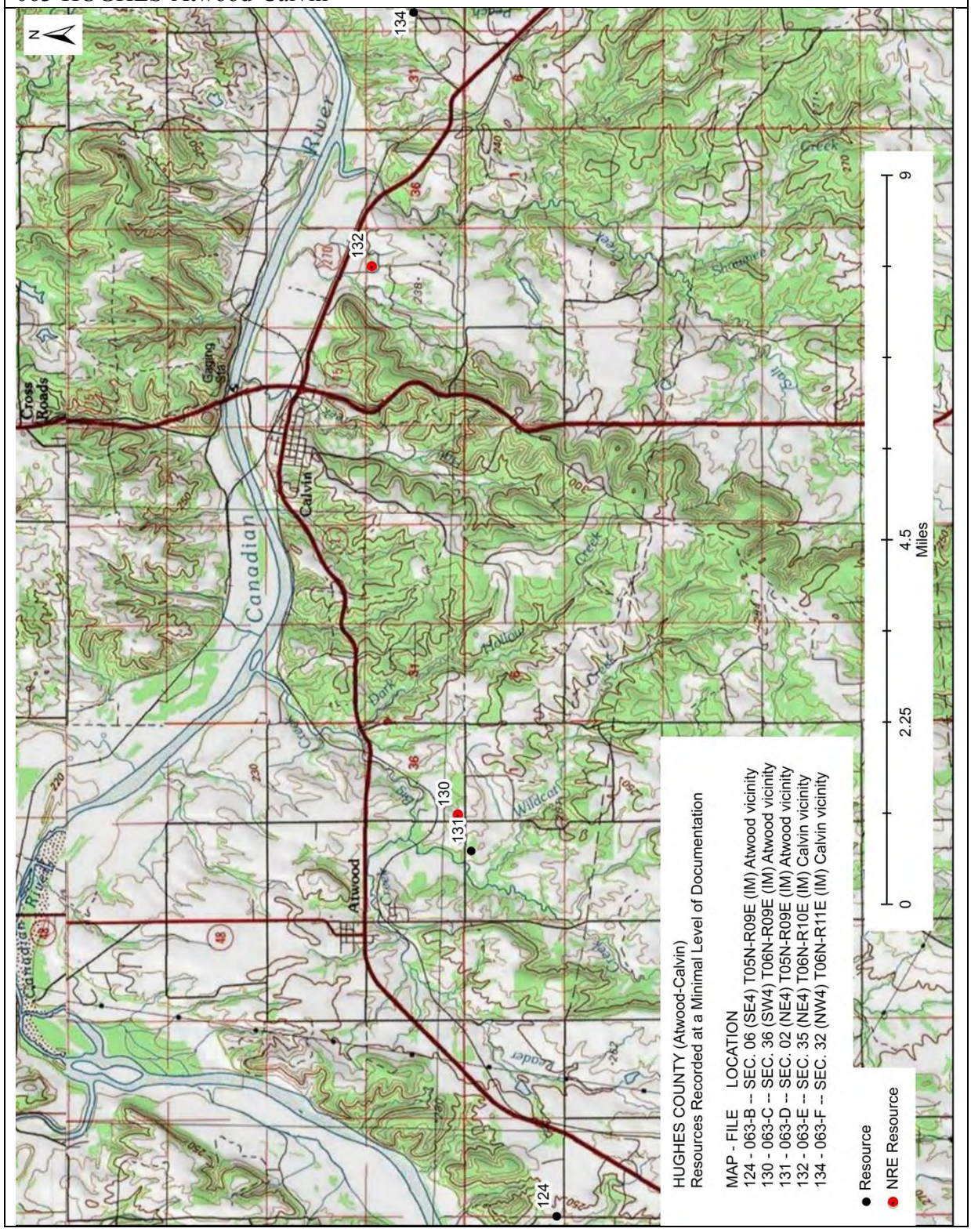
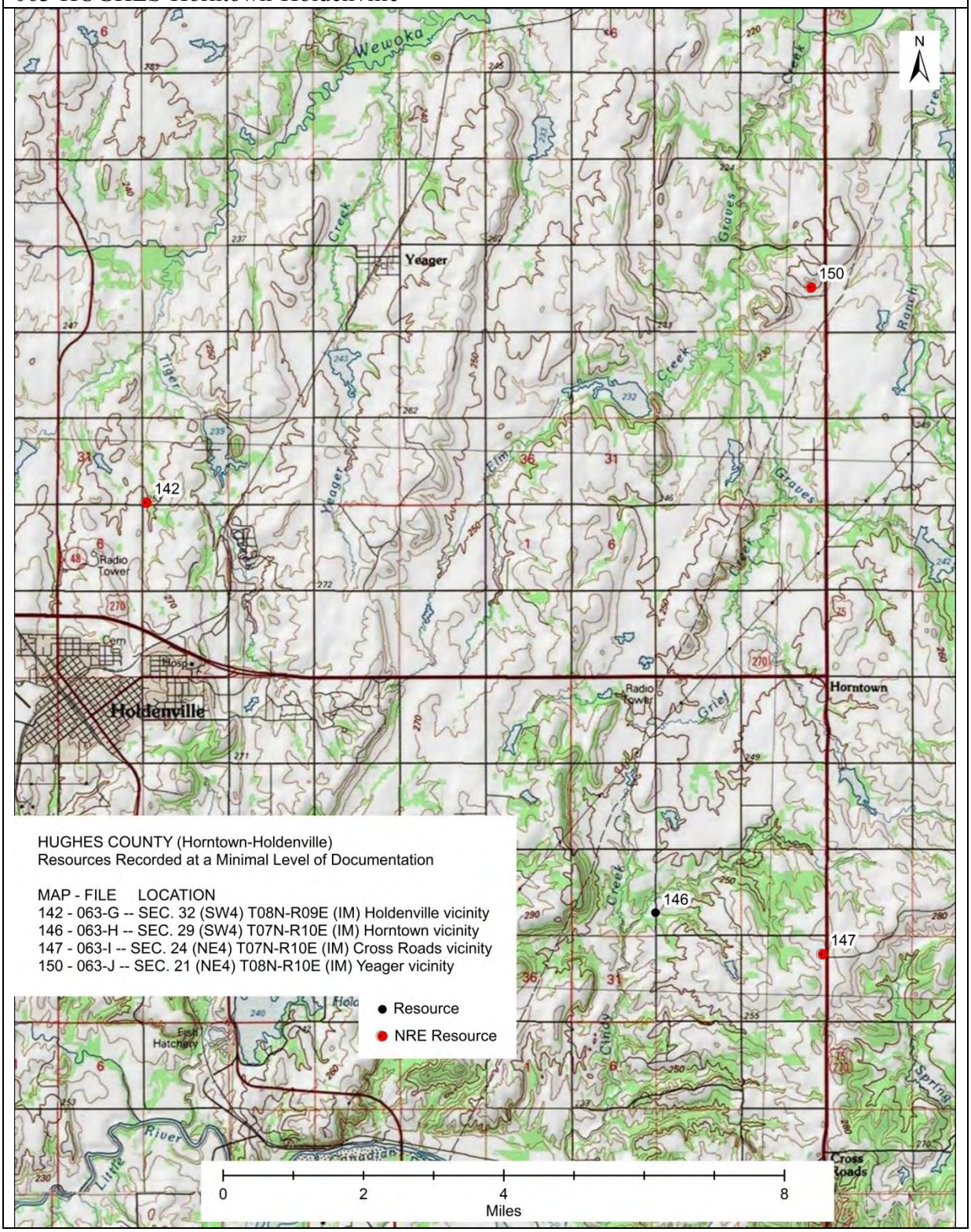


063-HUGHES-Atwood-Calvin



063-HUGHES-Horntown-Holdenville



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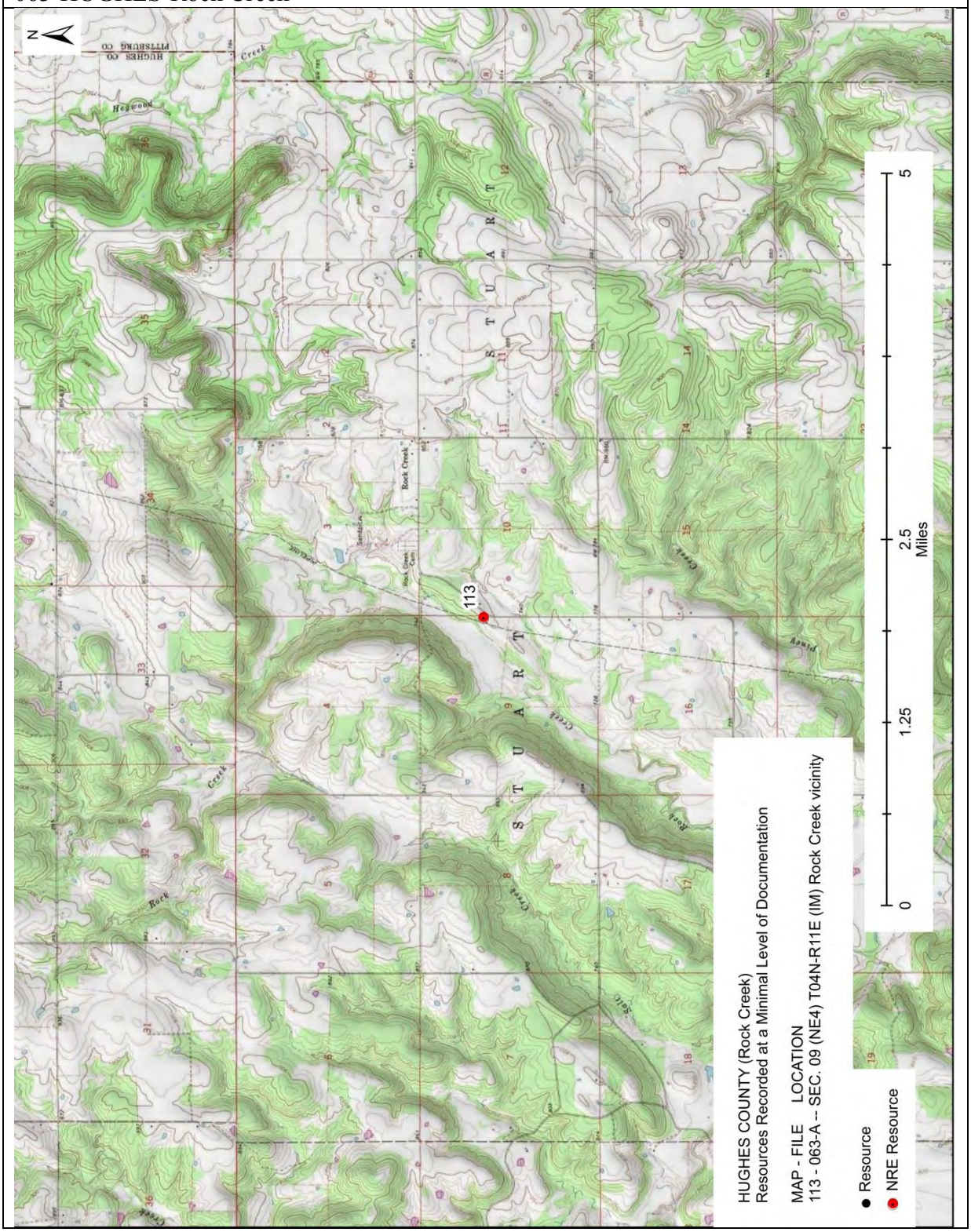

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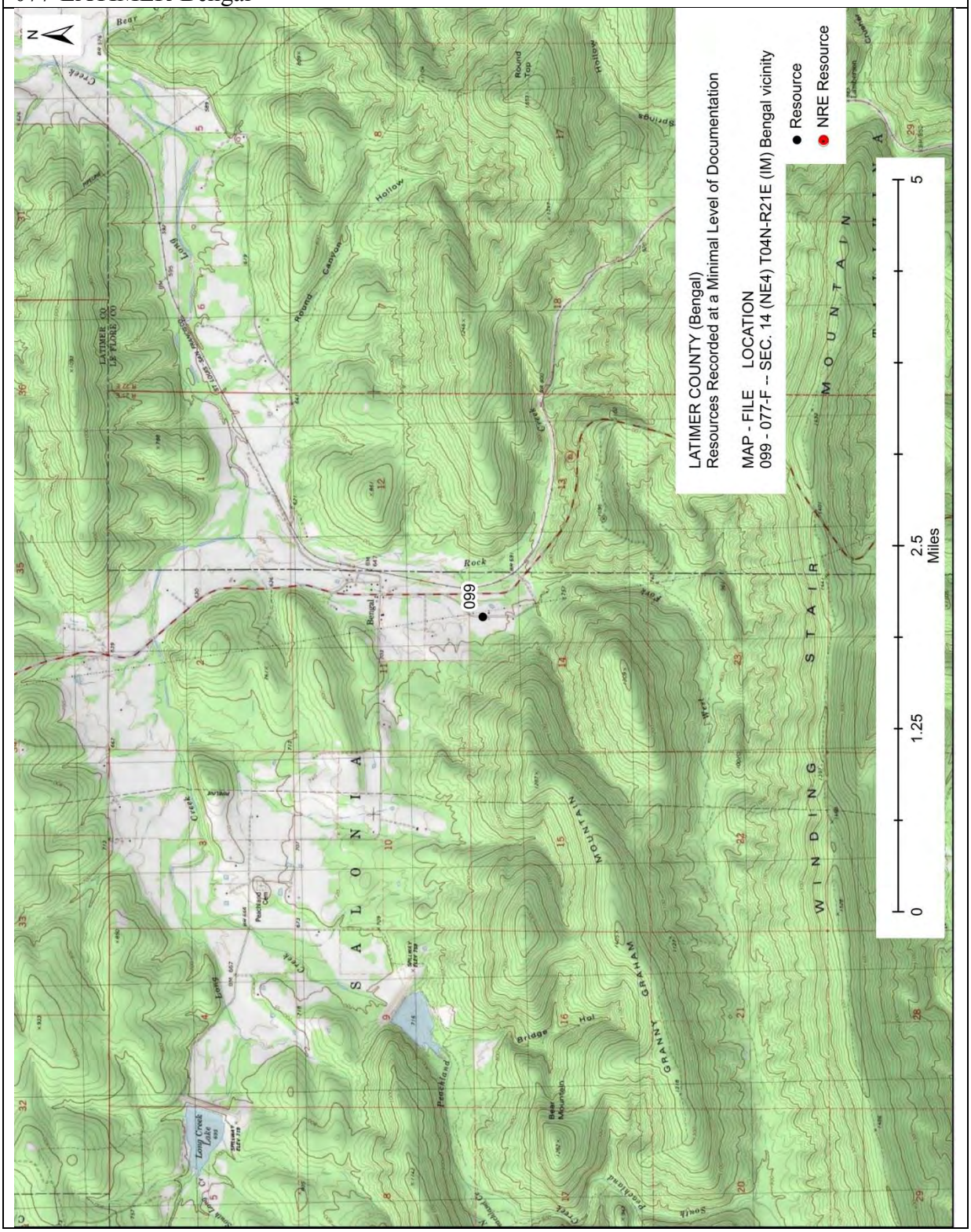

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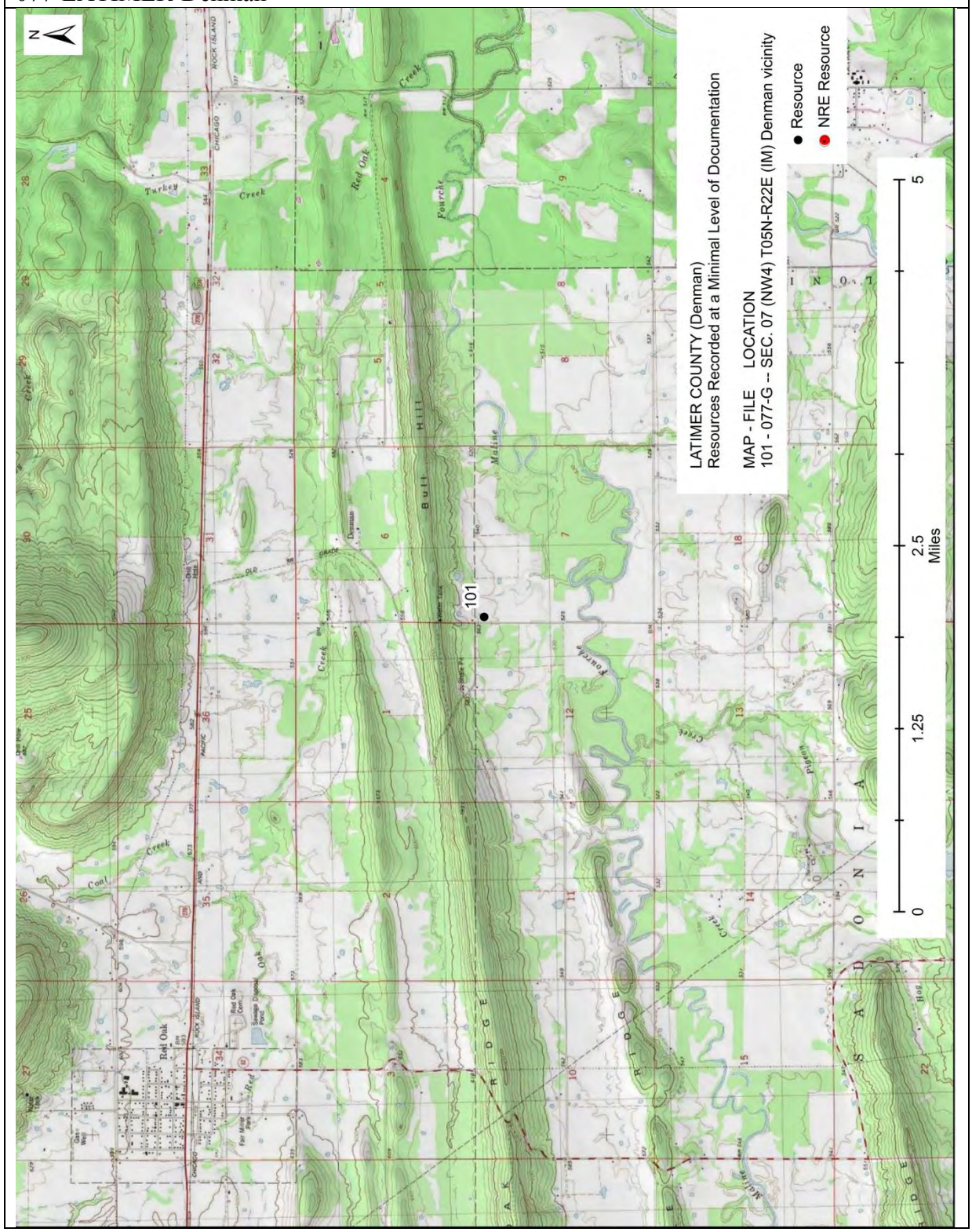

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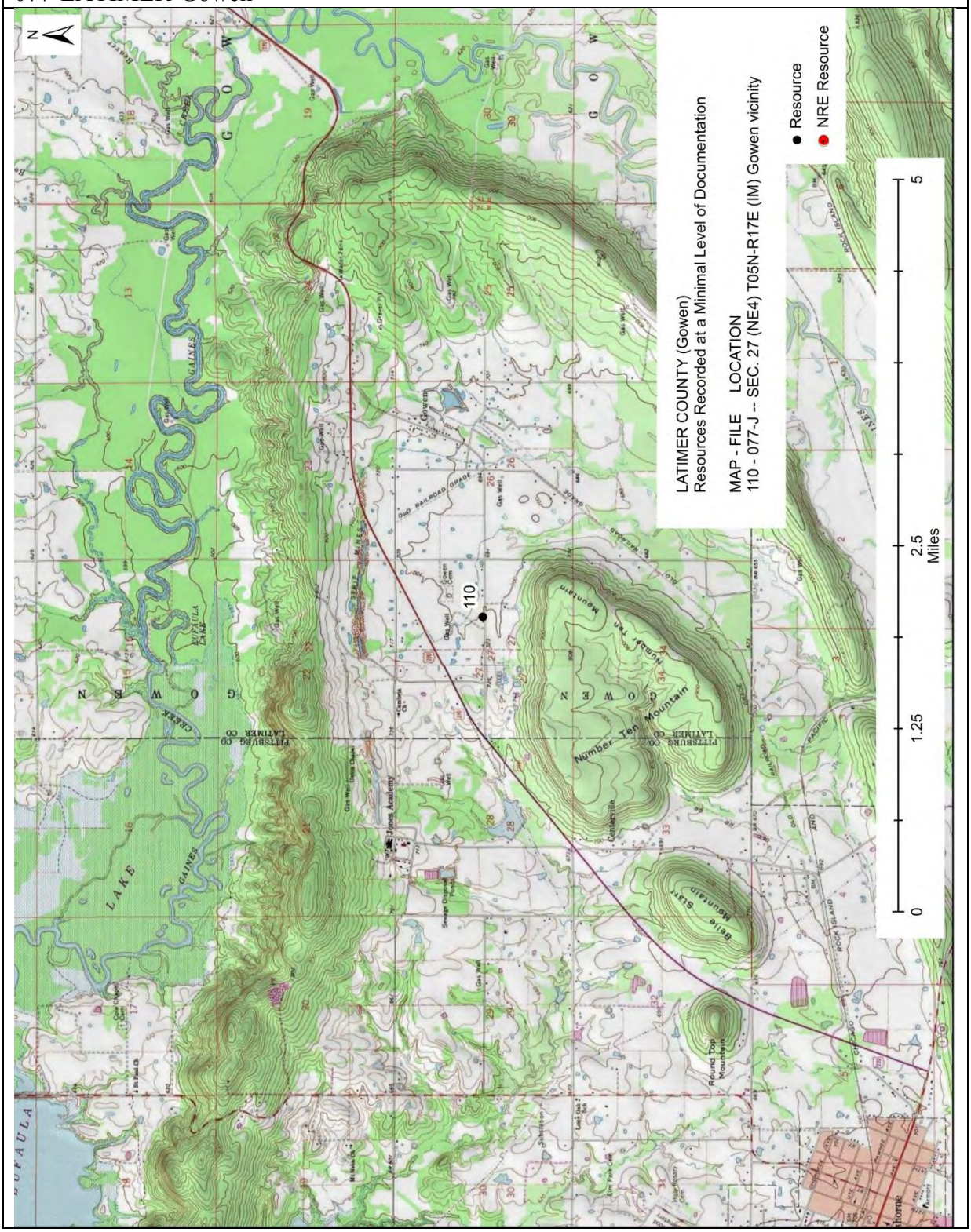

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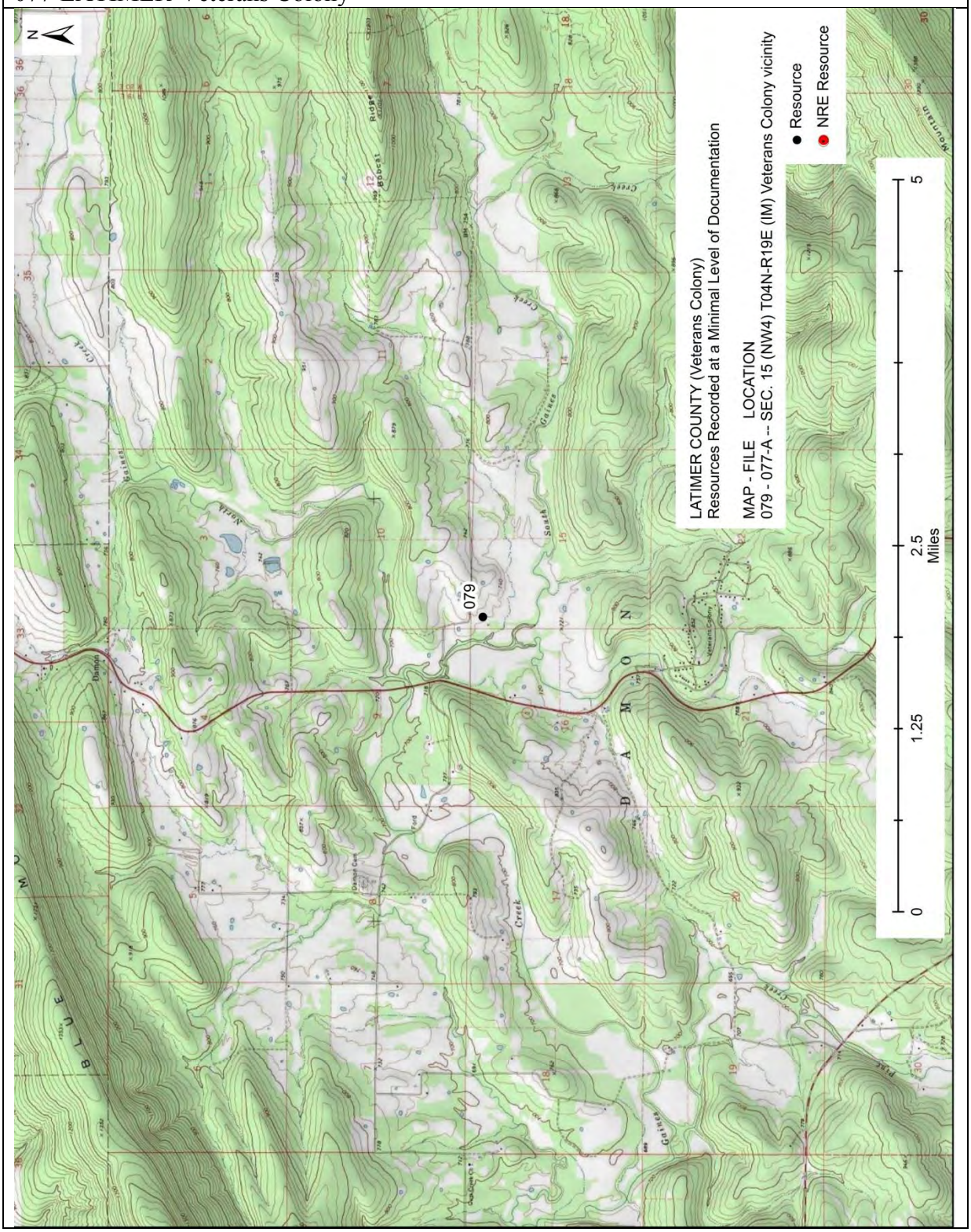

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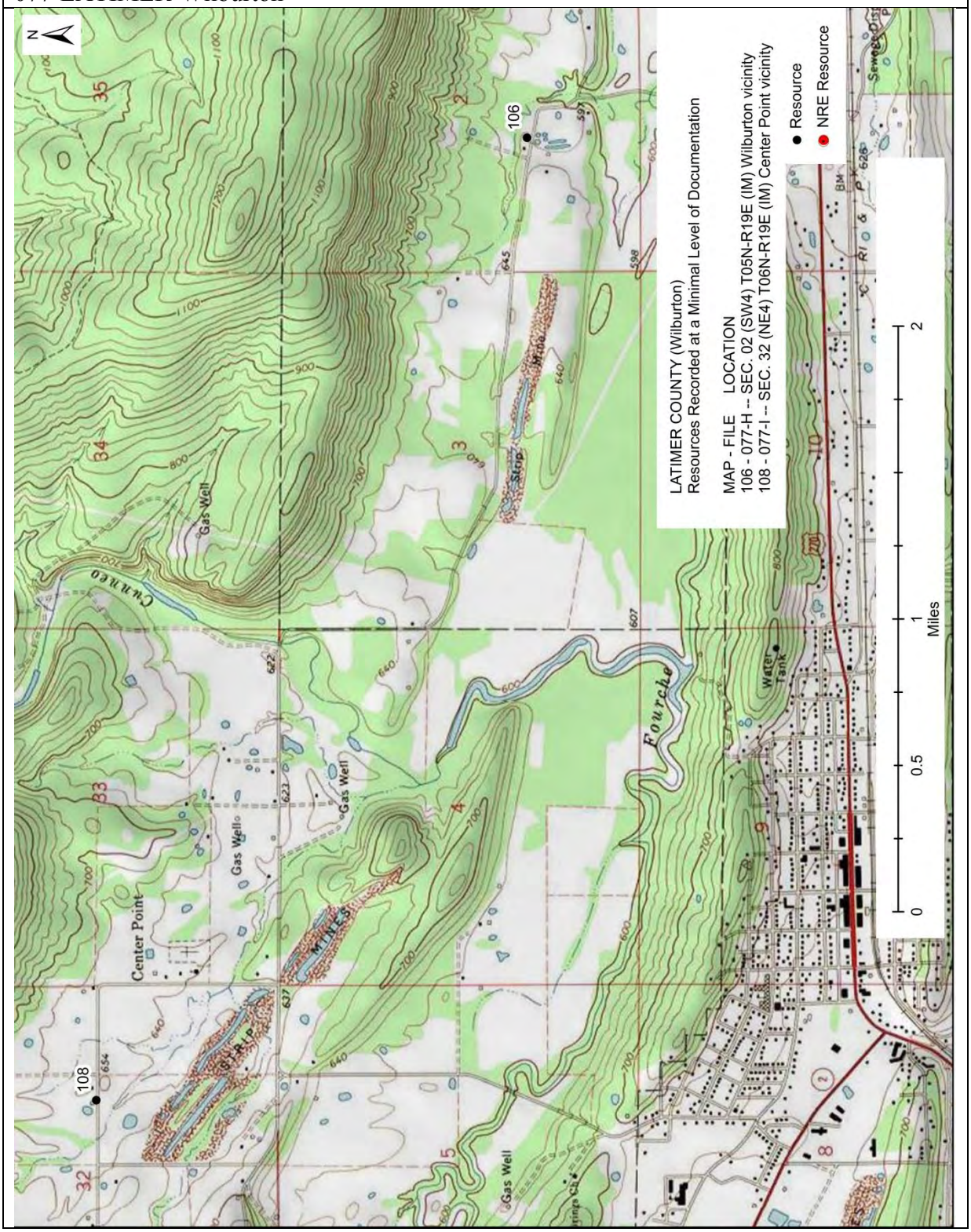

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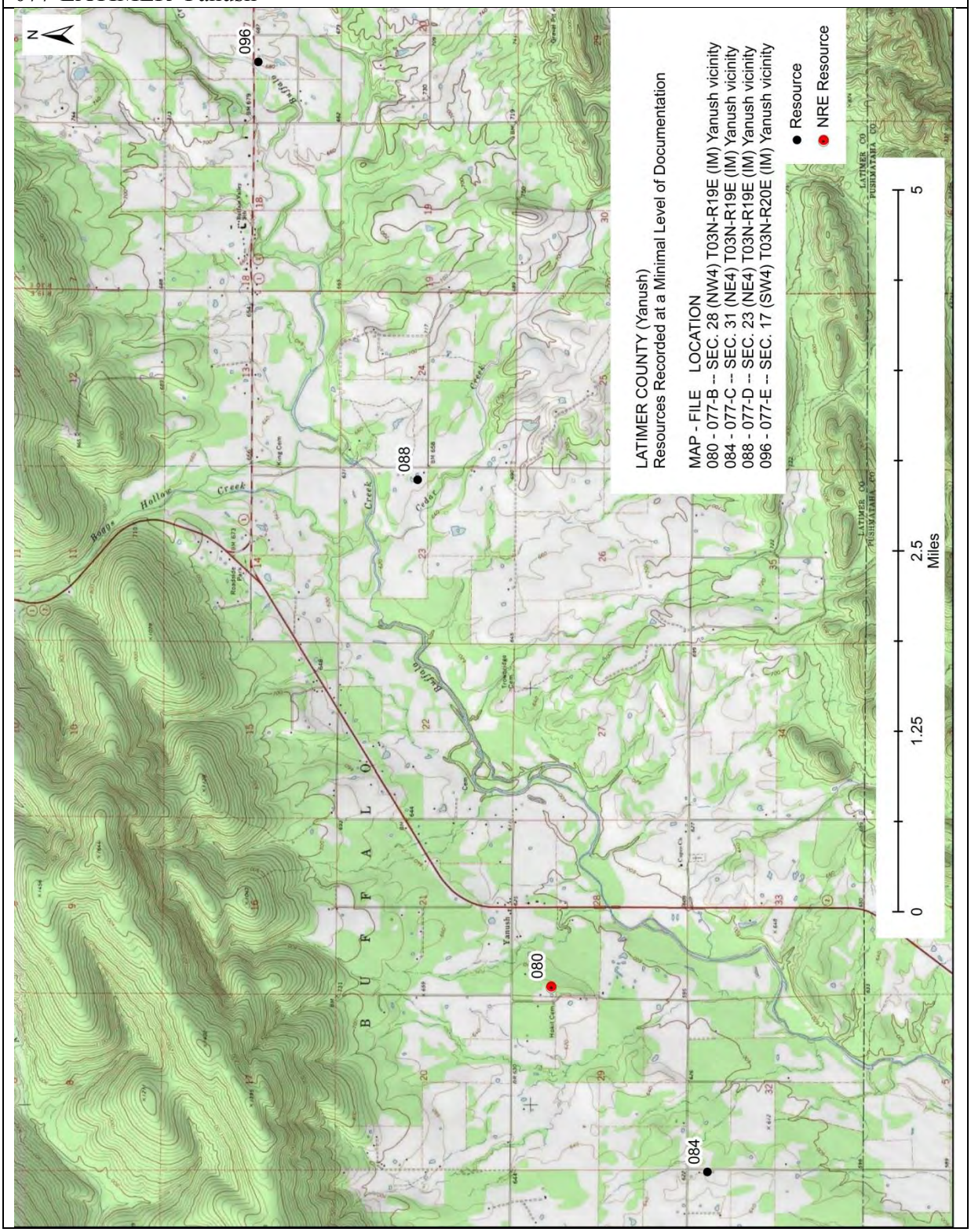

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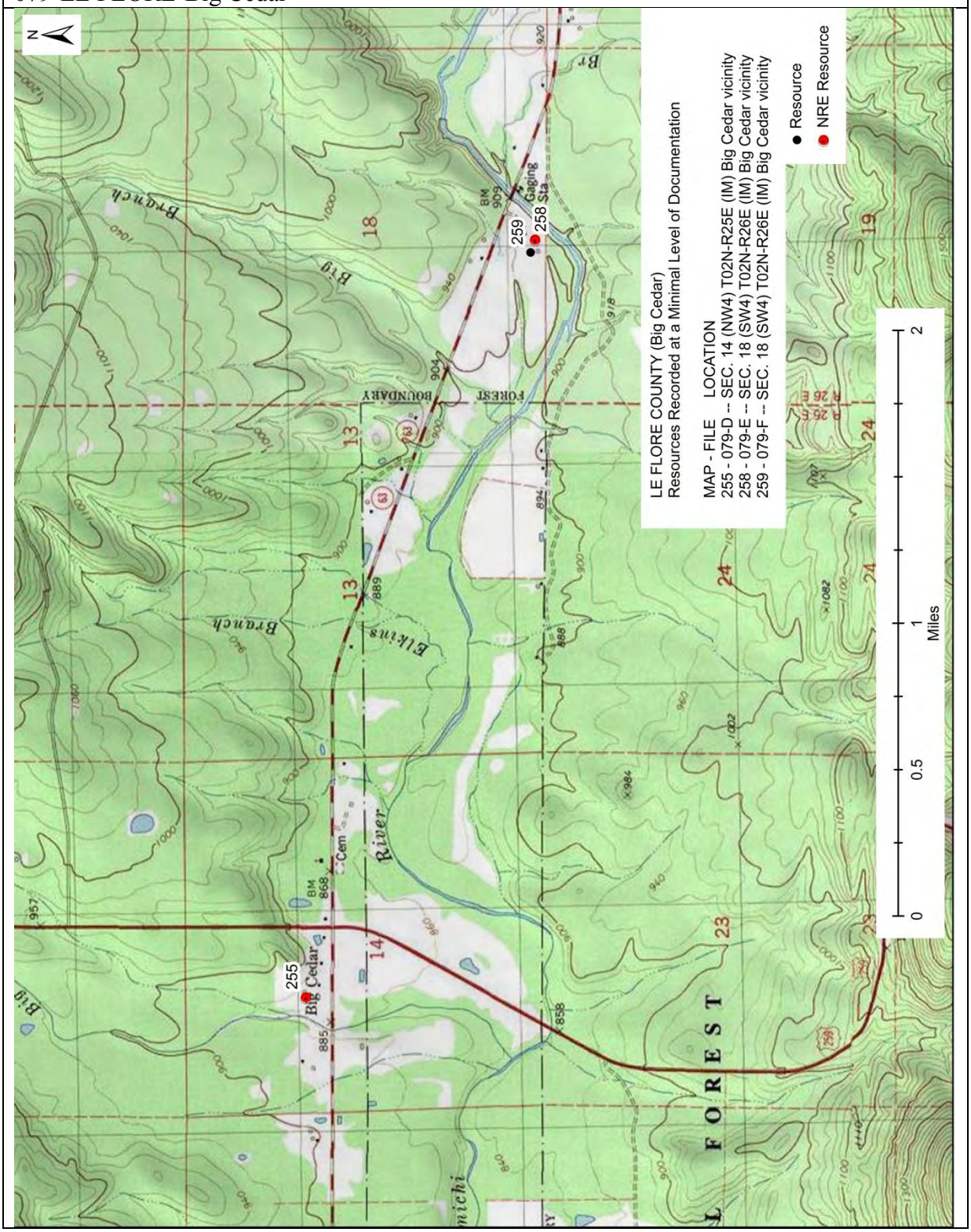

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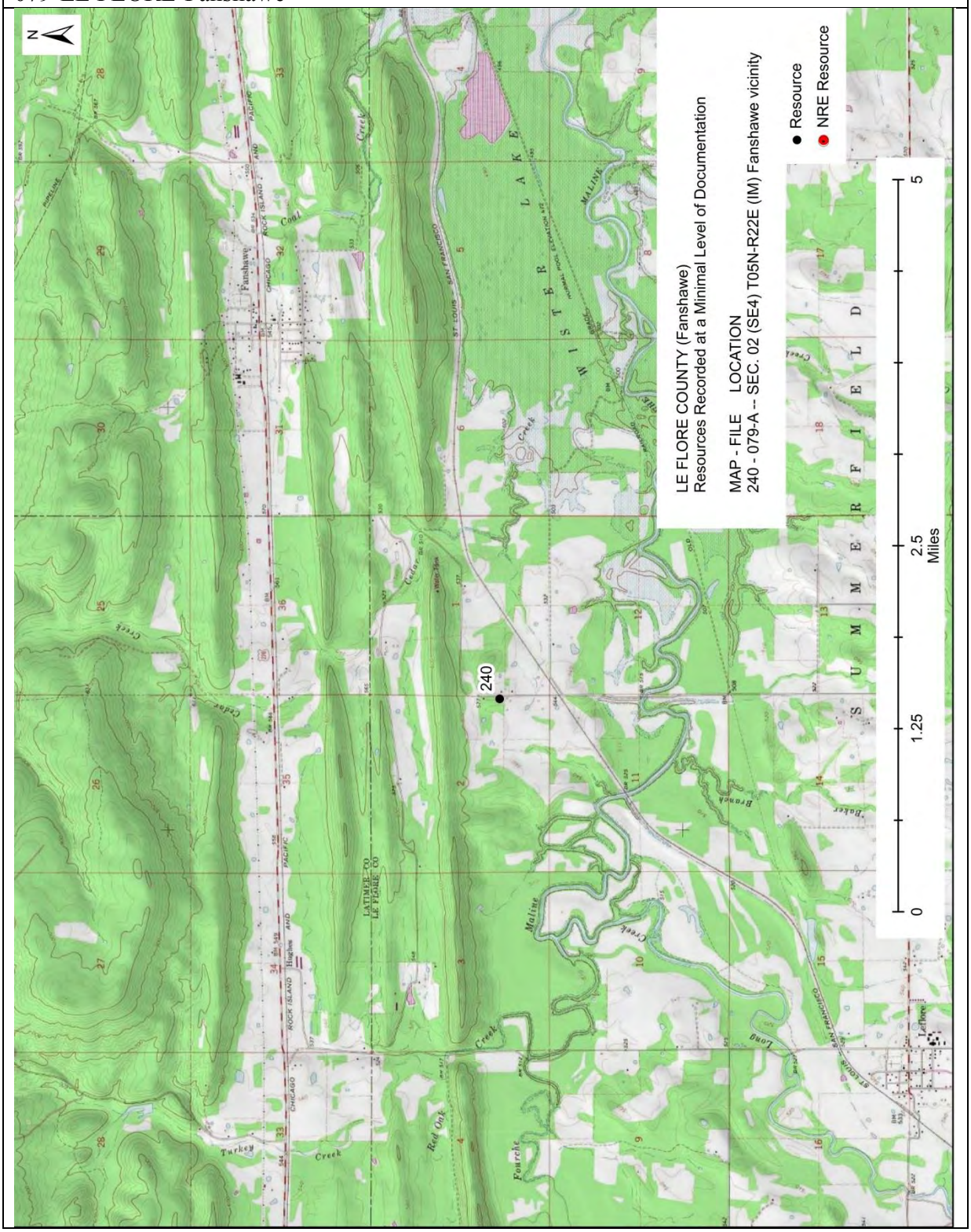

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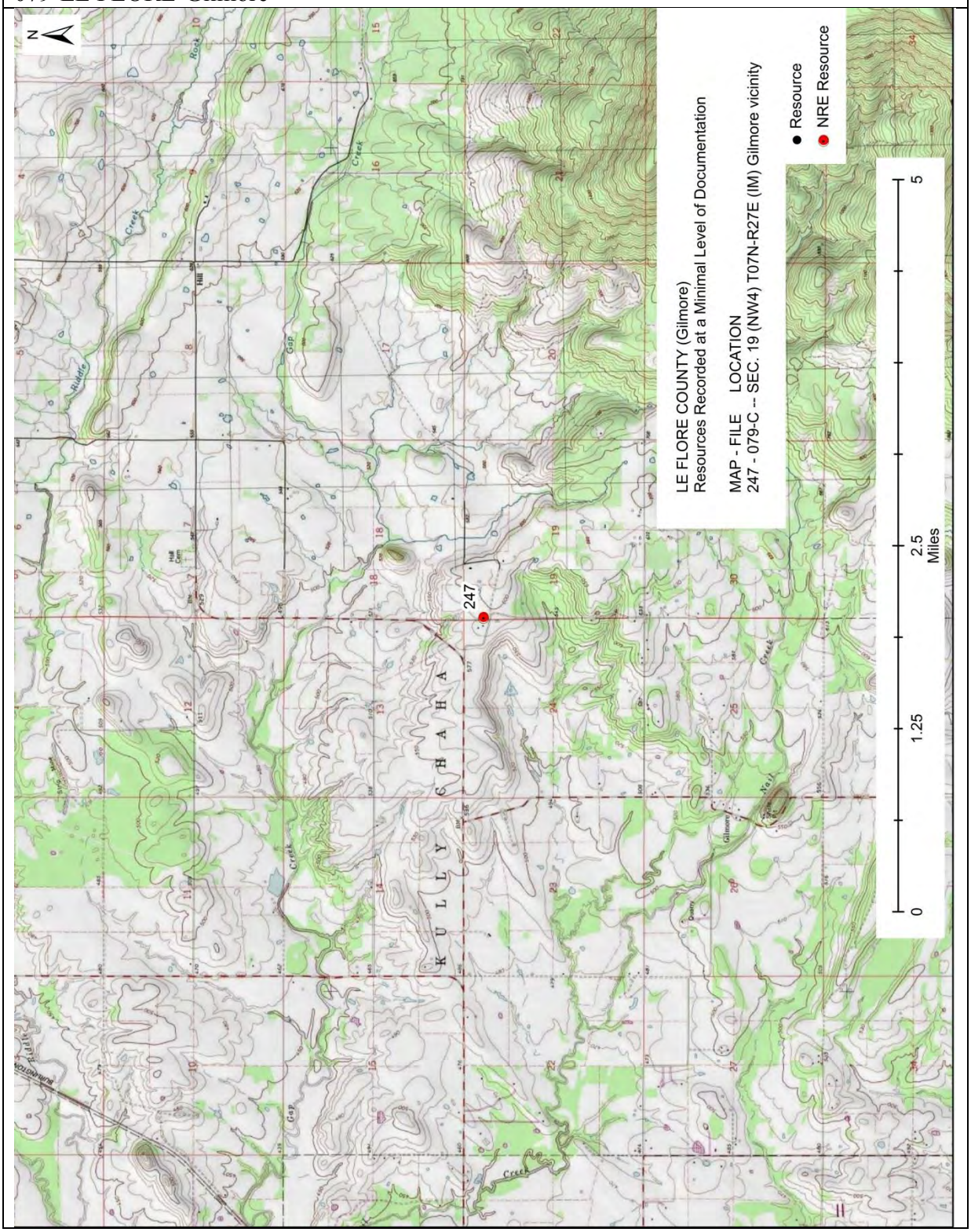

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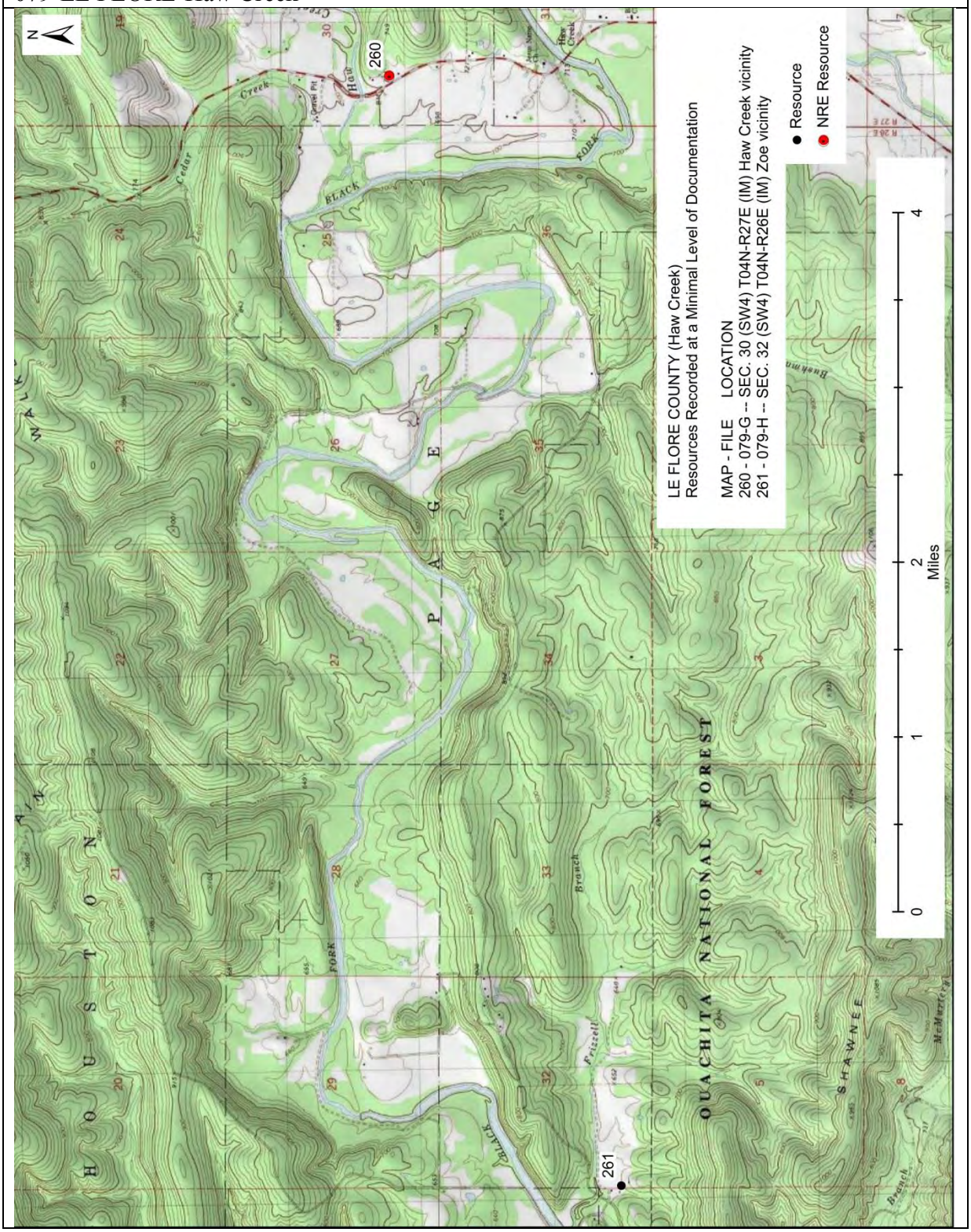

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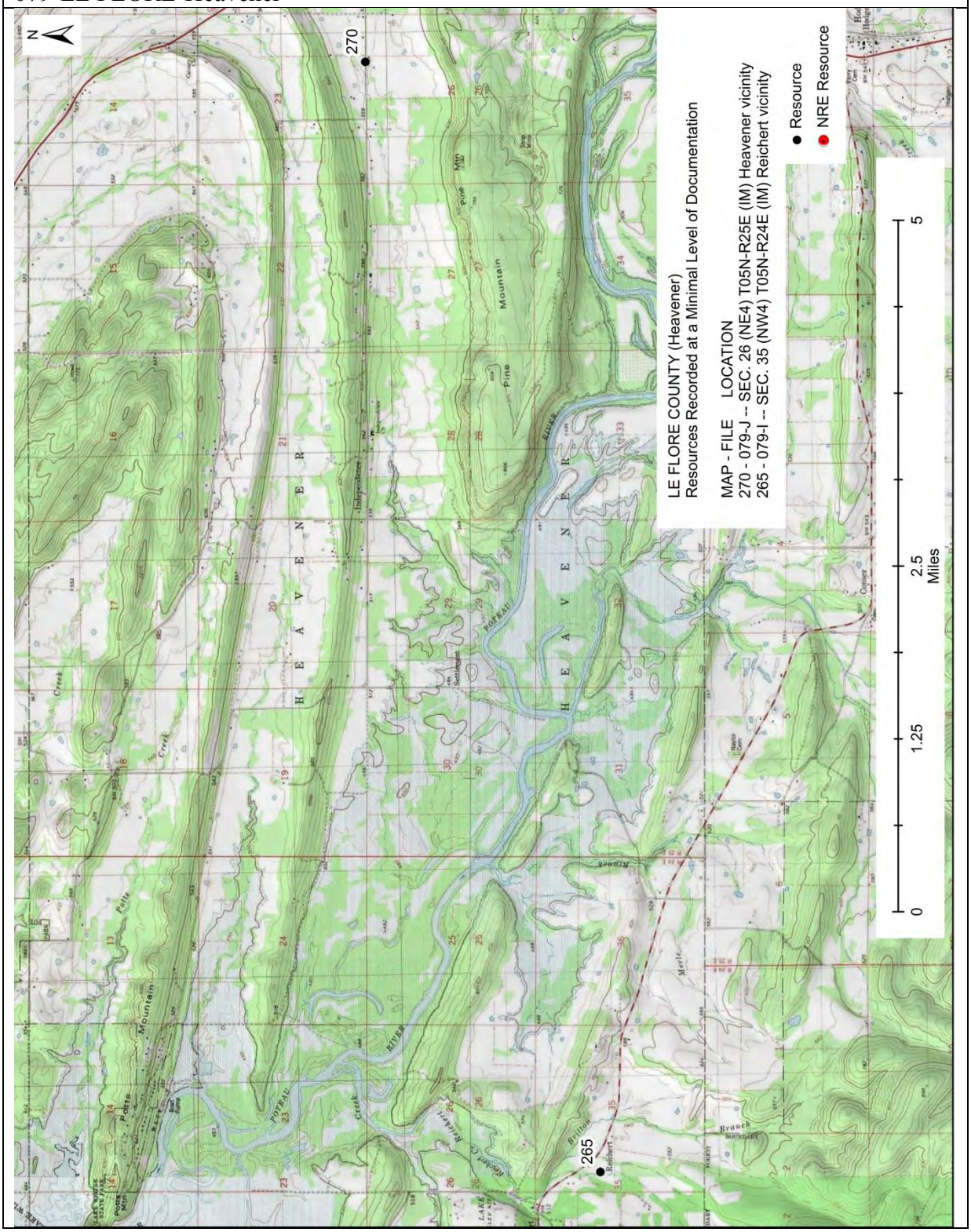

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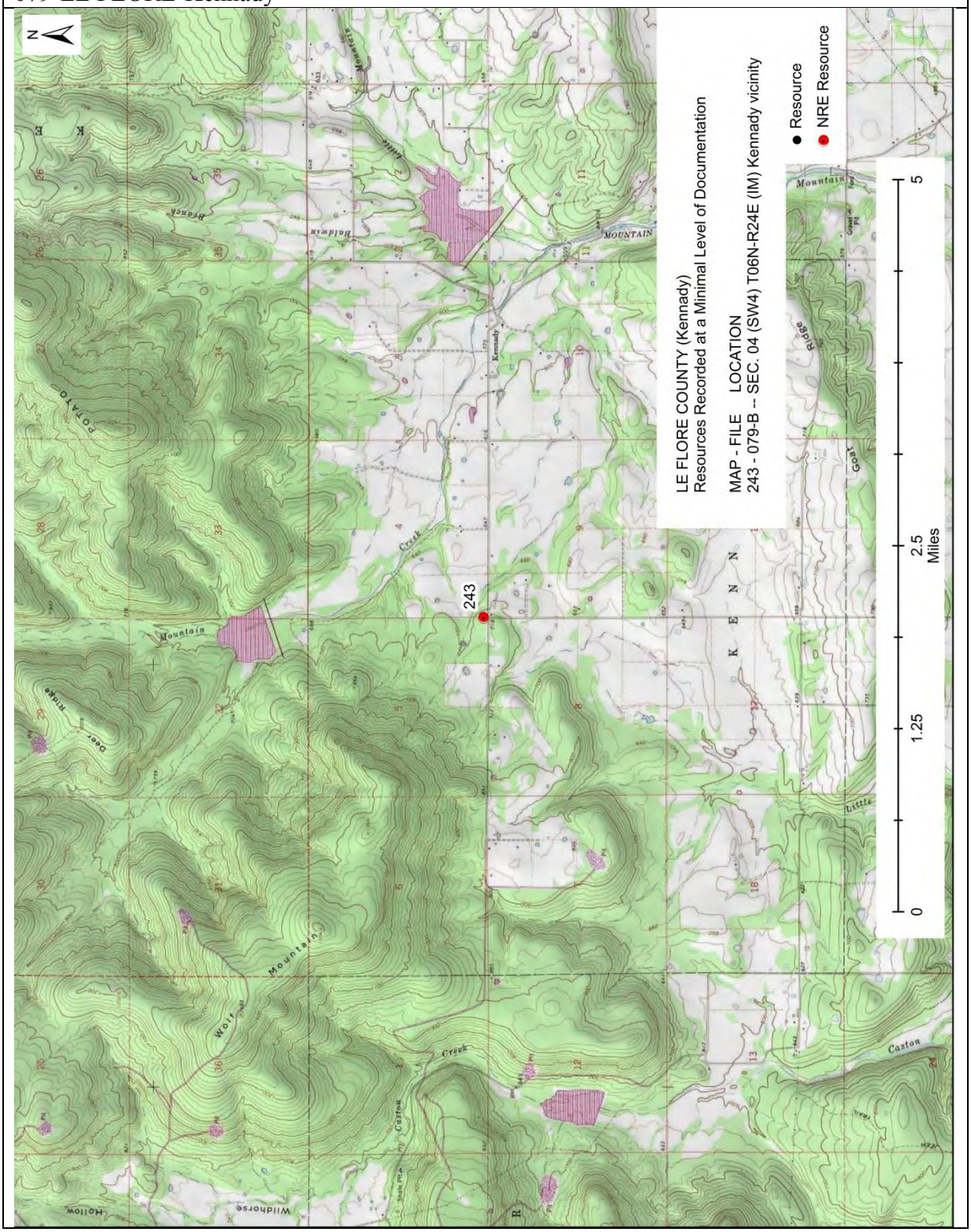

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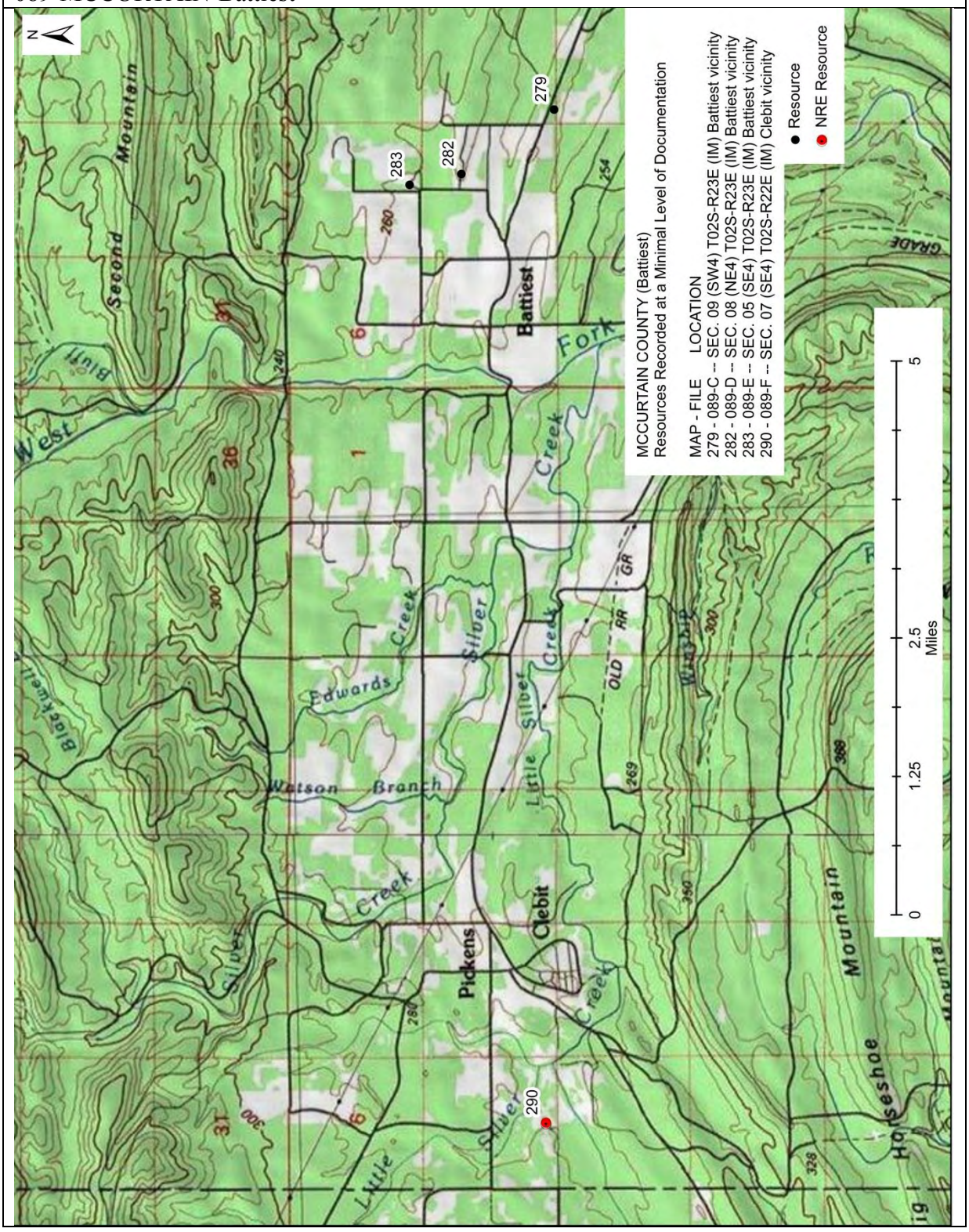

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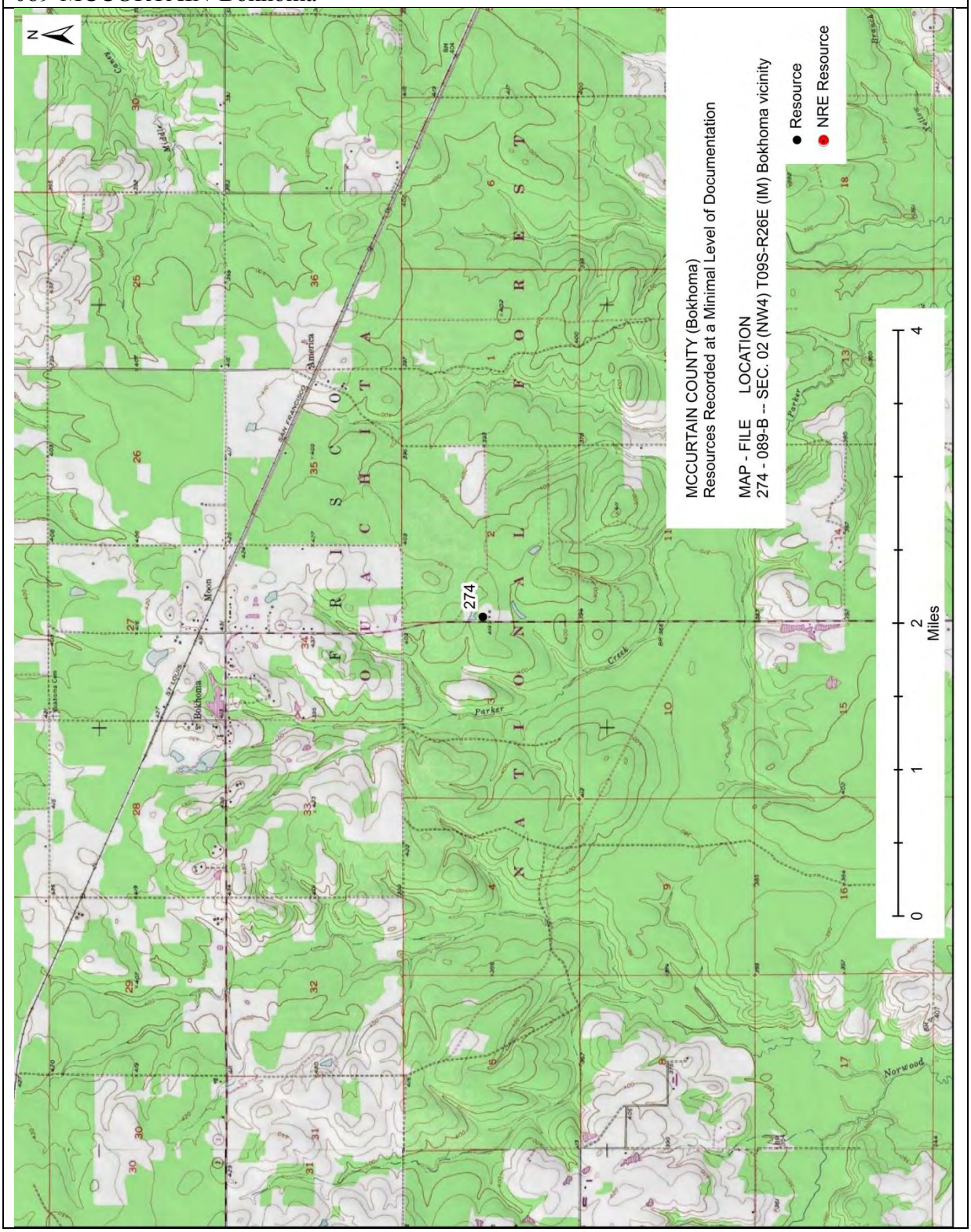

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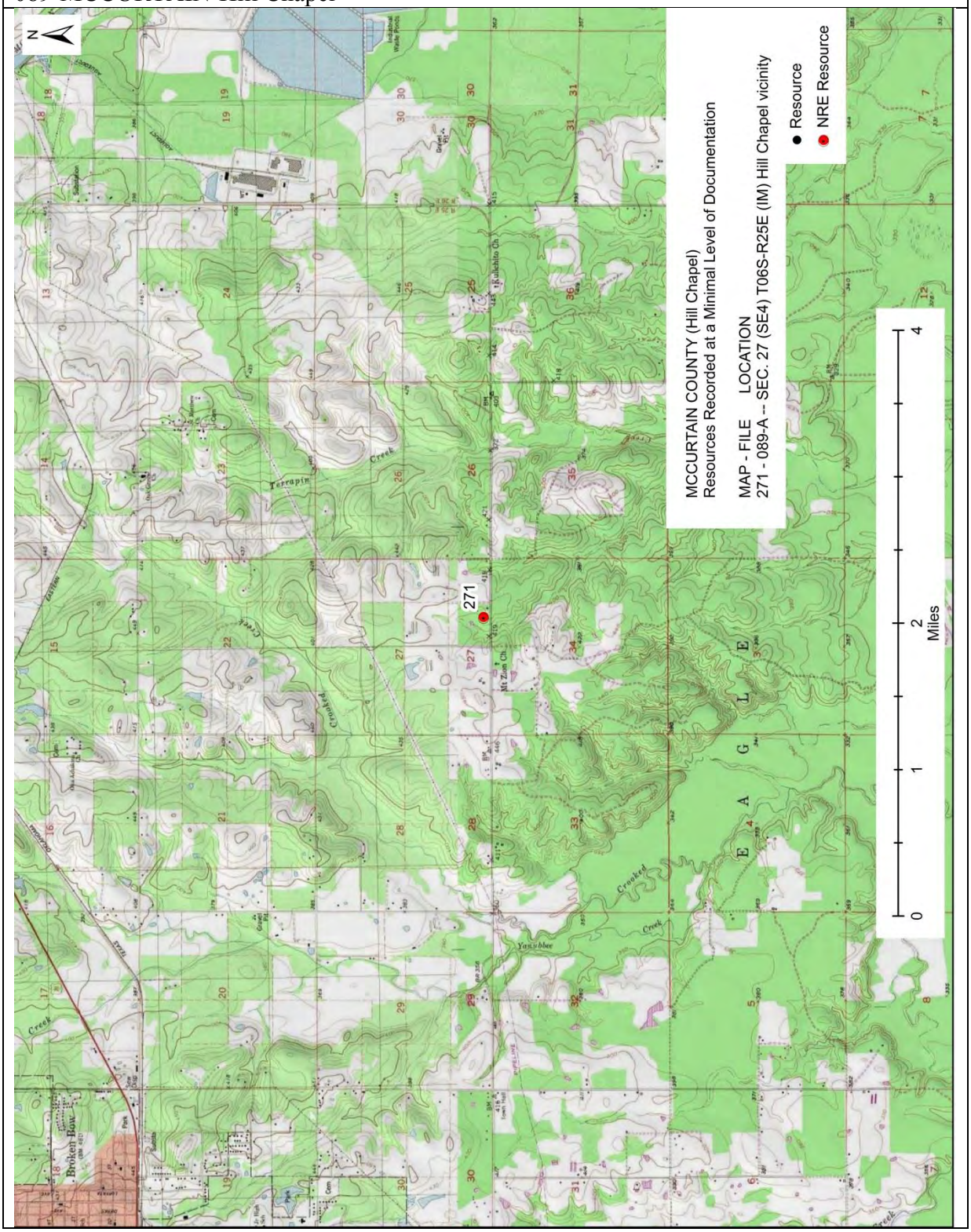

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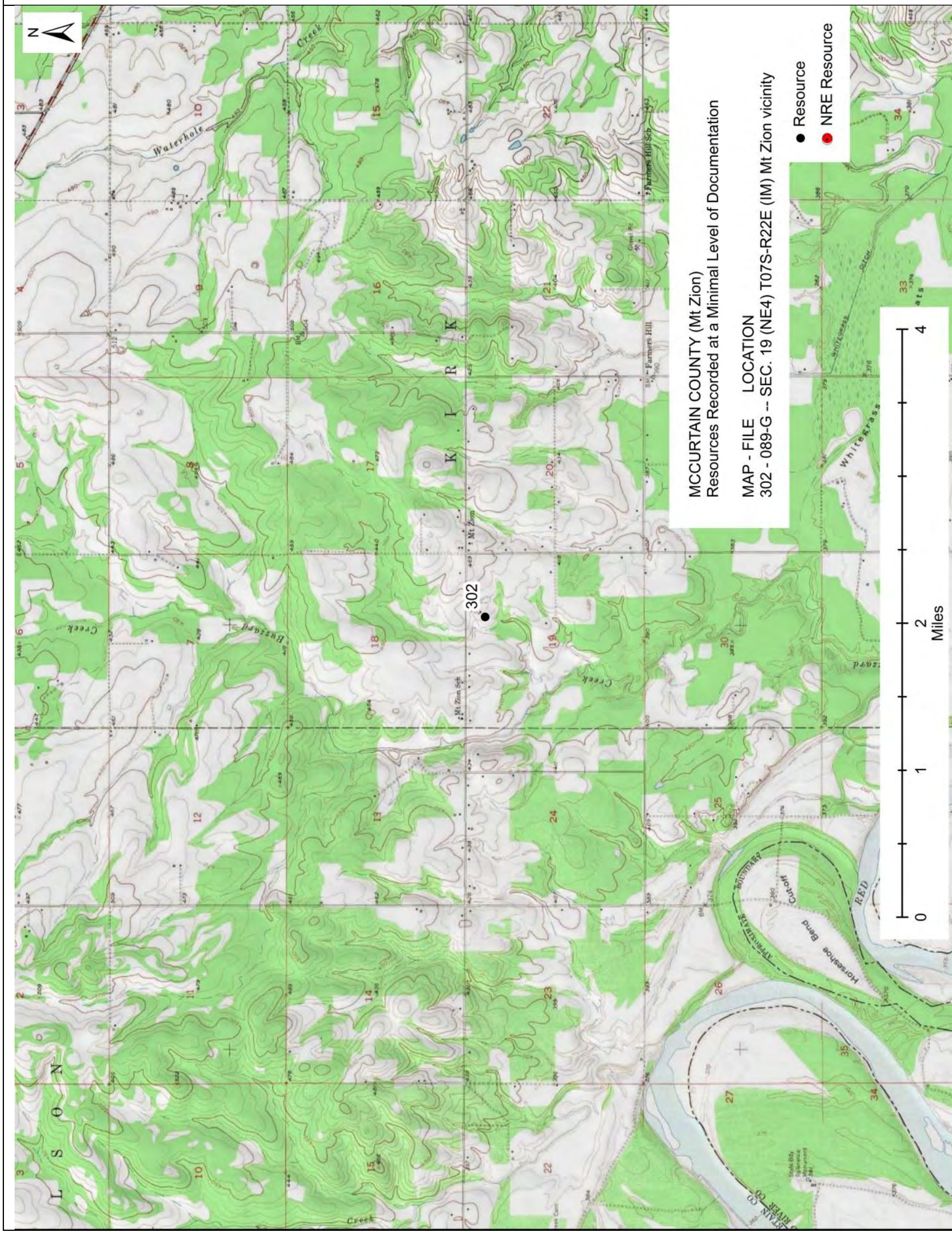

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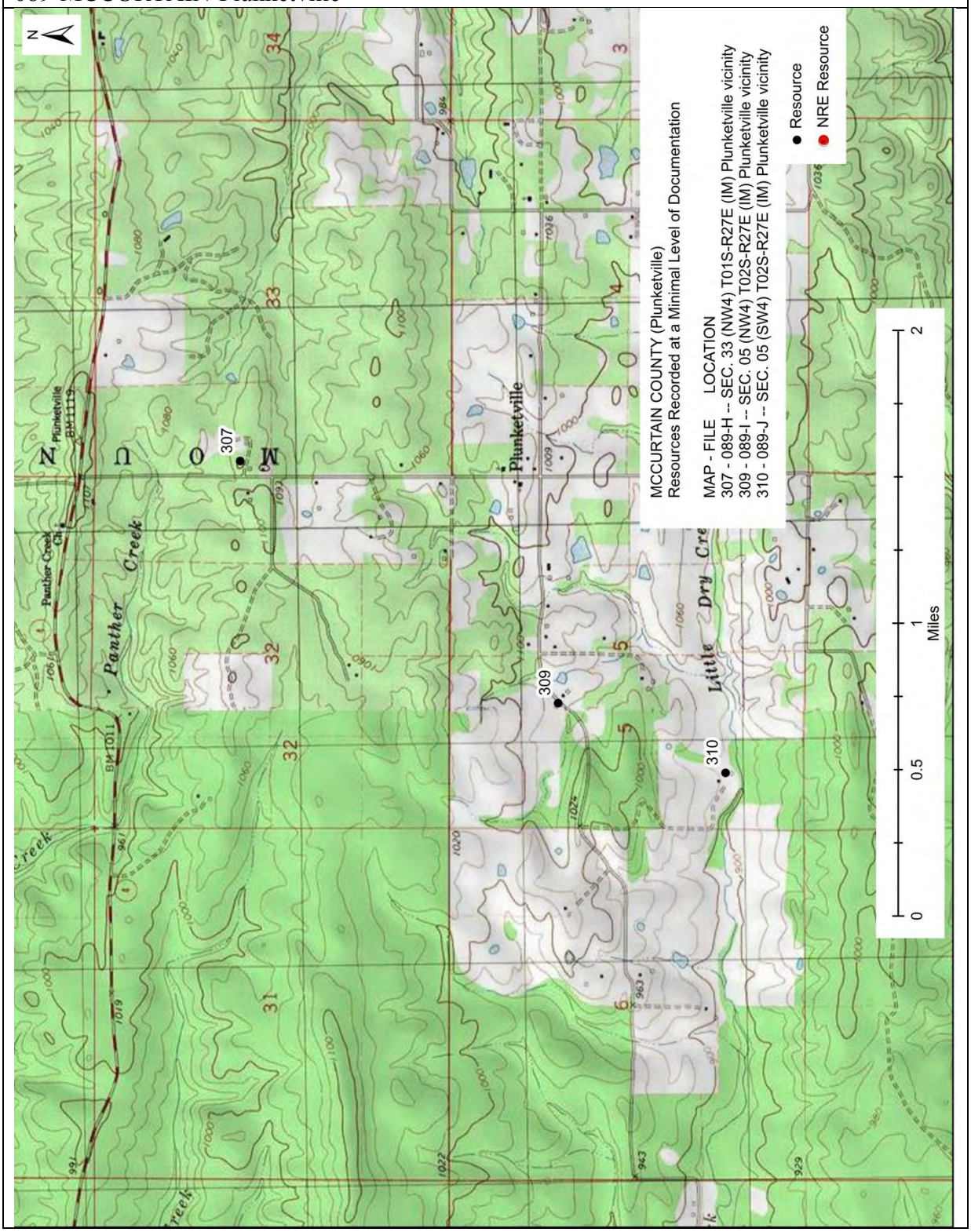
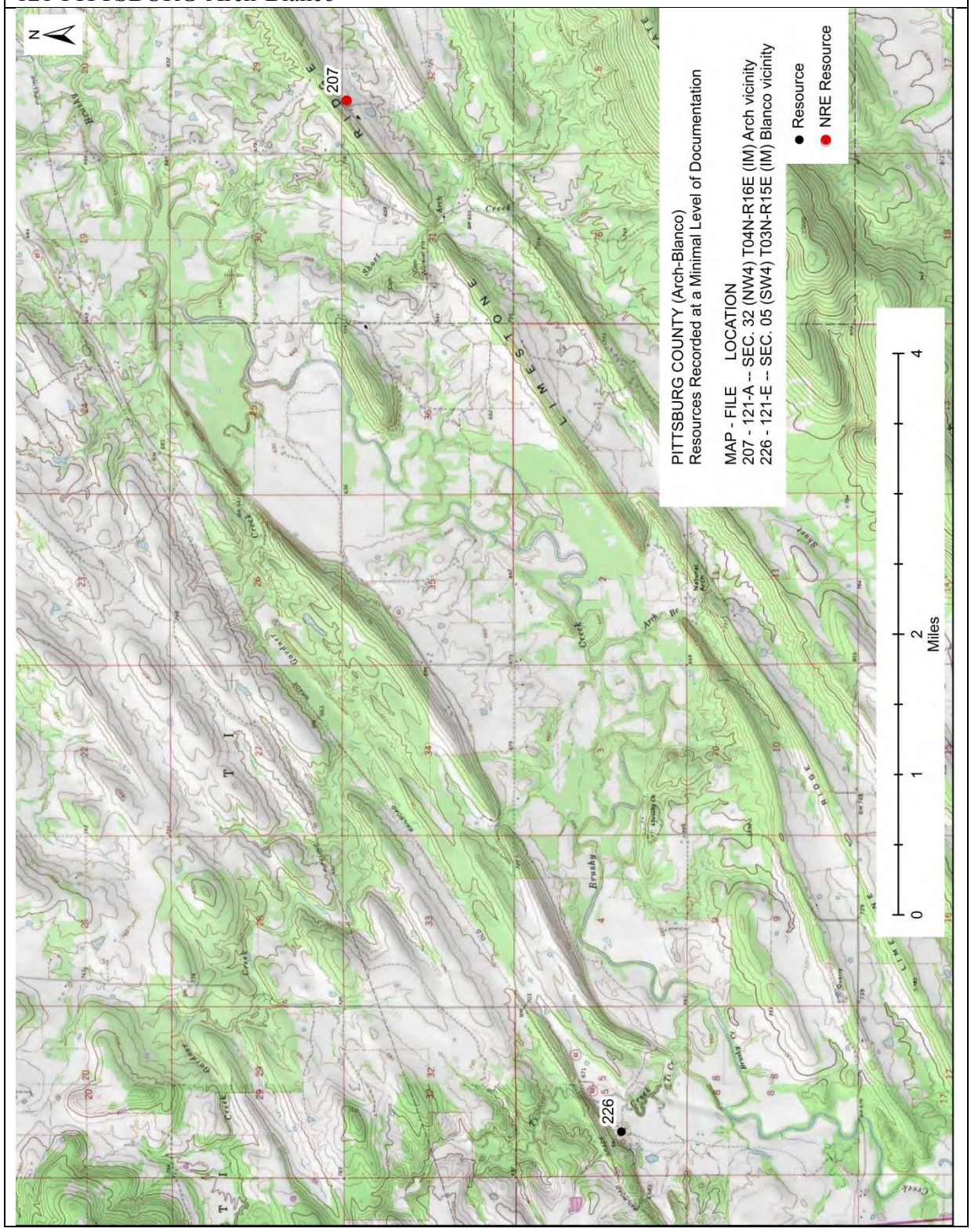


121-PITTSBURG-Arch-Blanco



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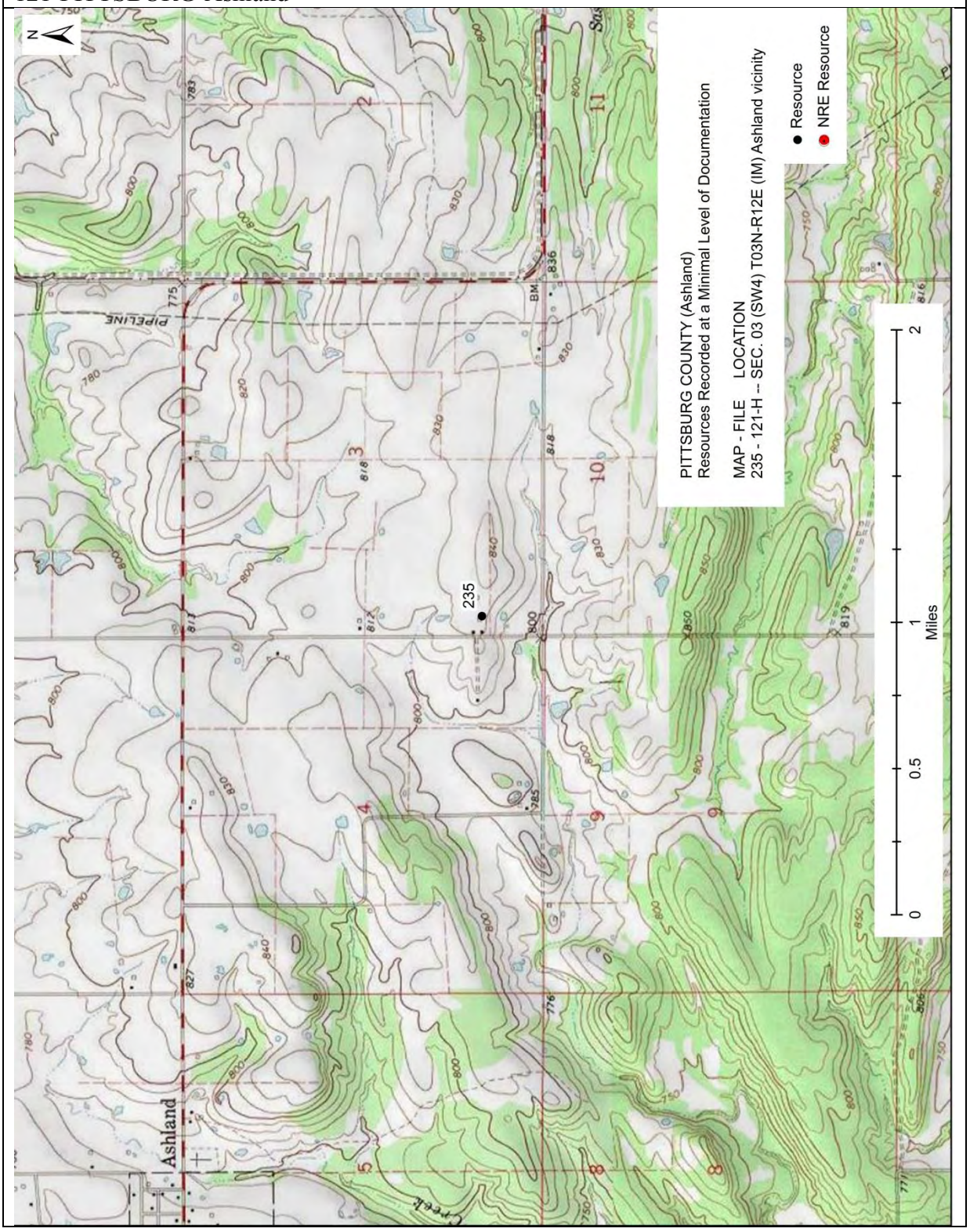

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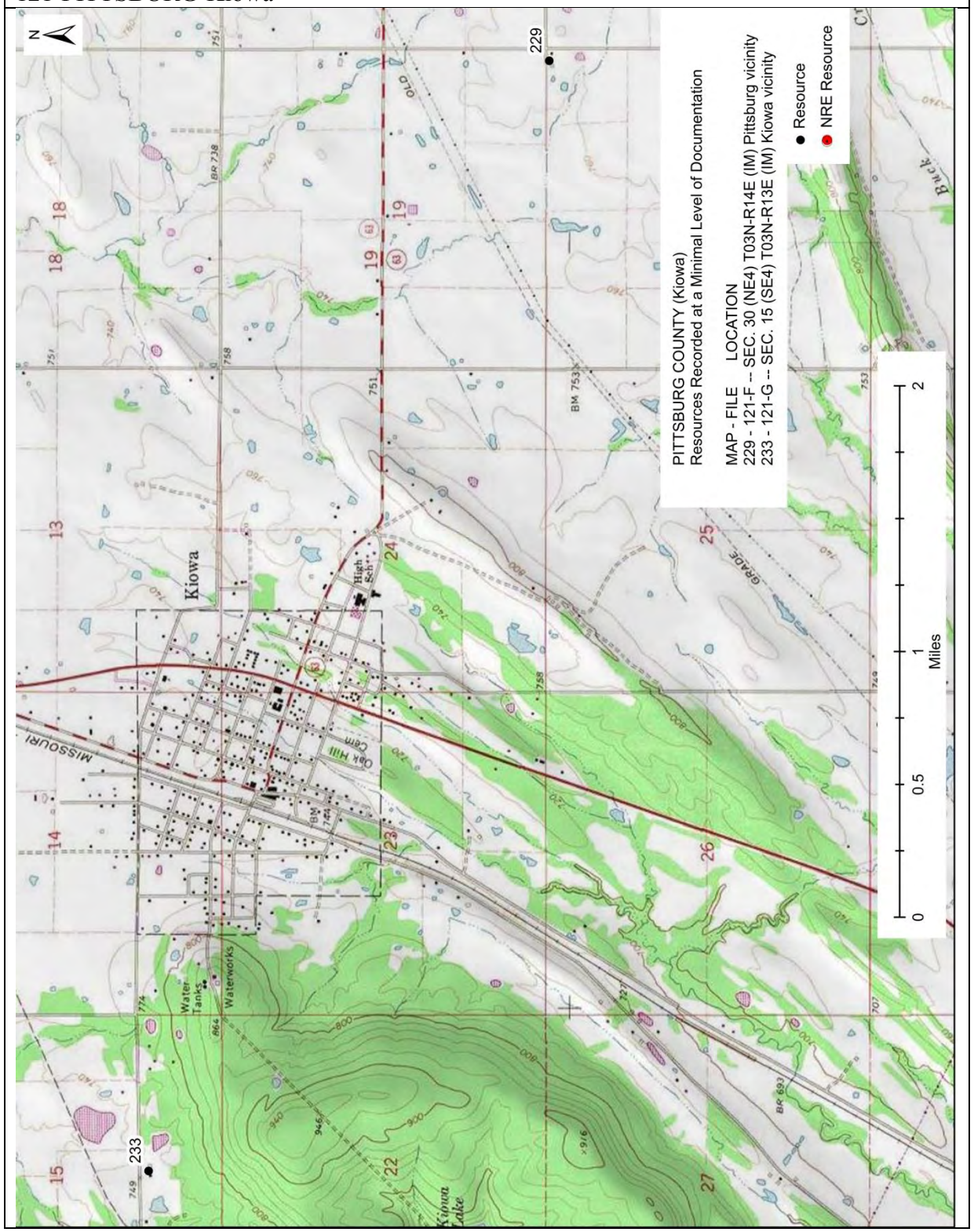

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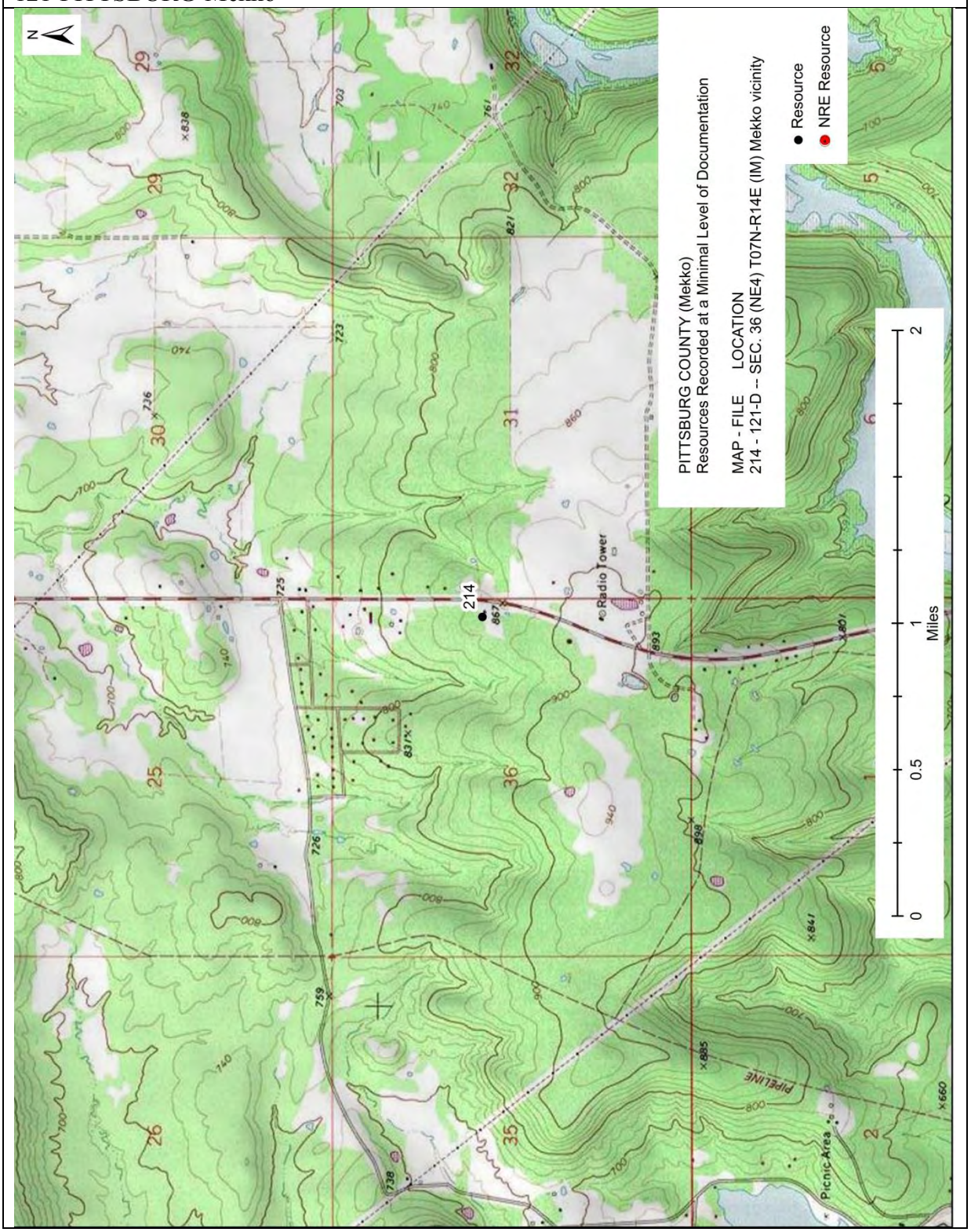

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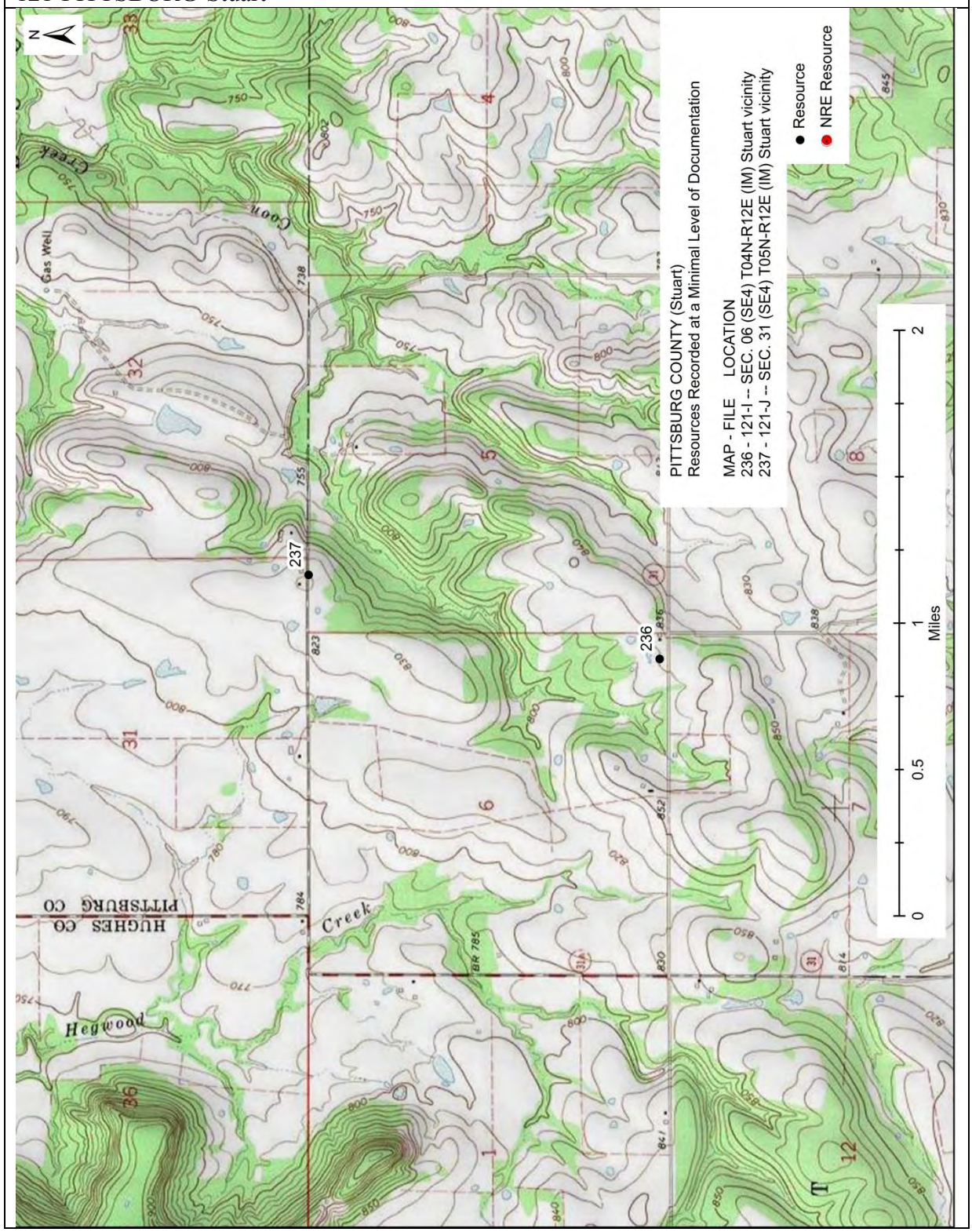

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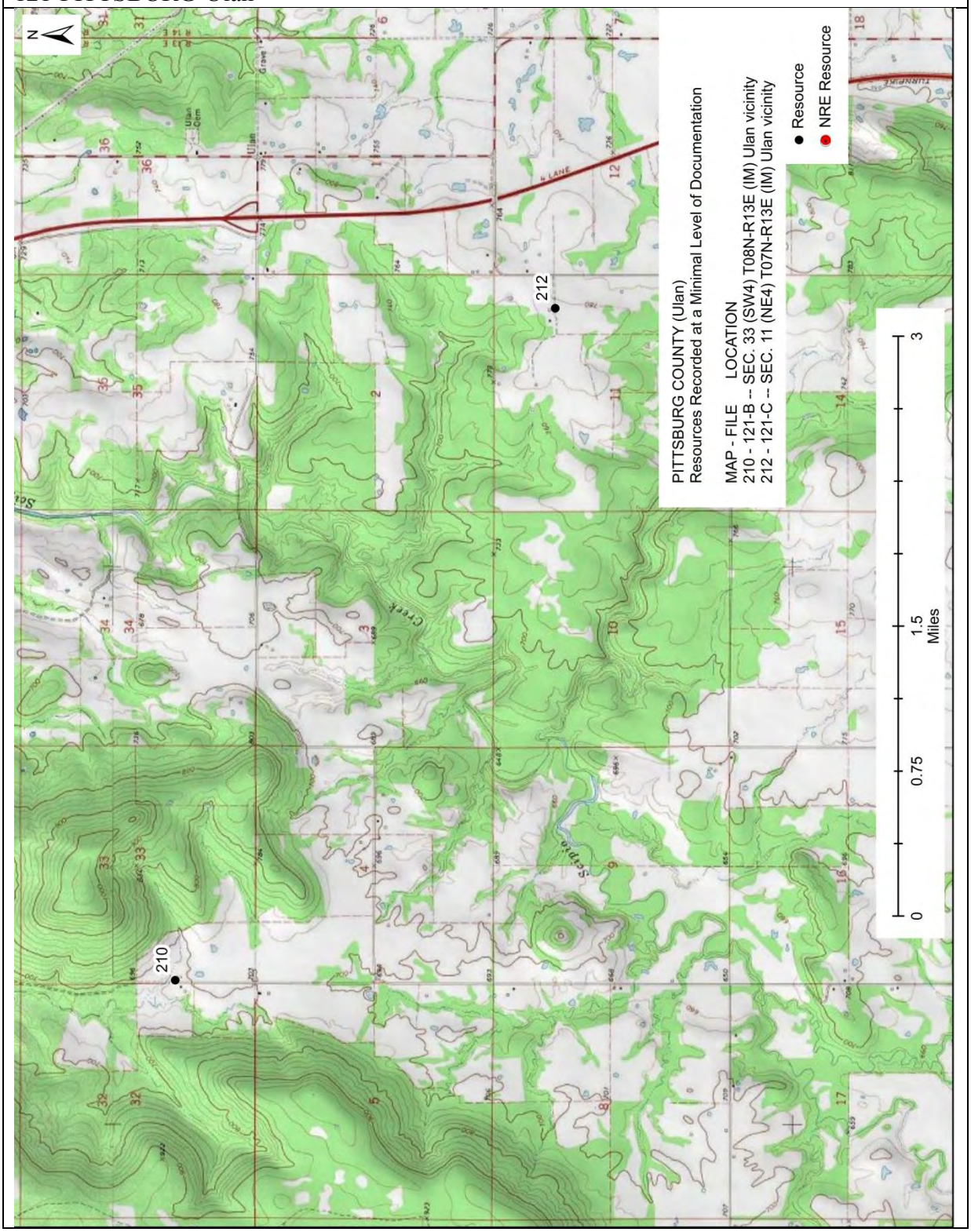
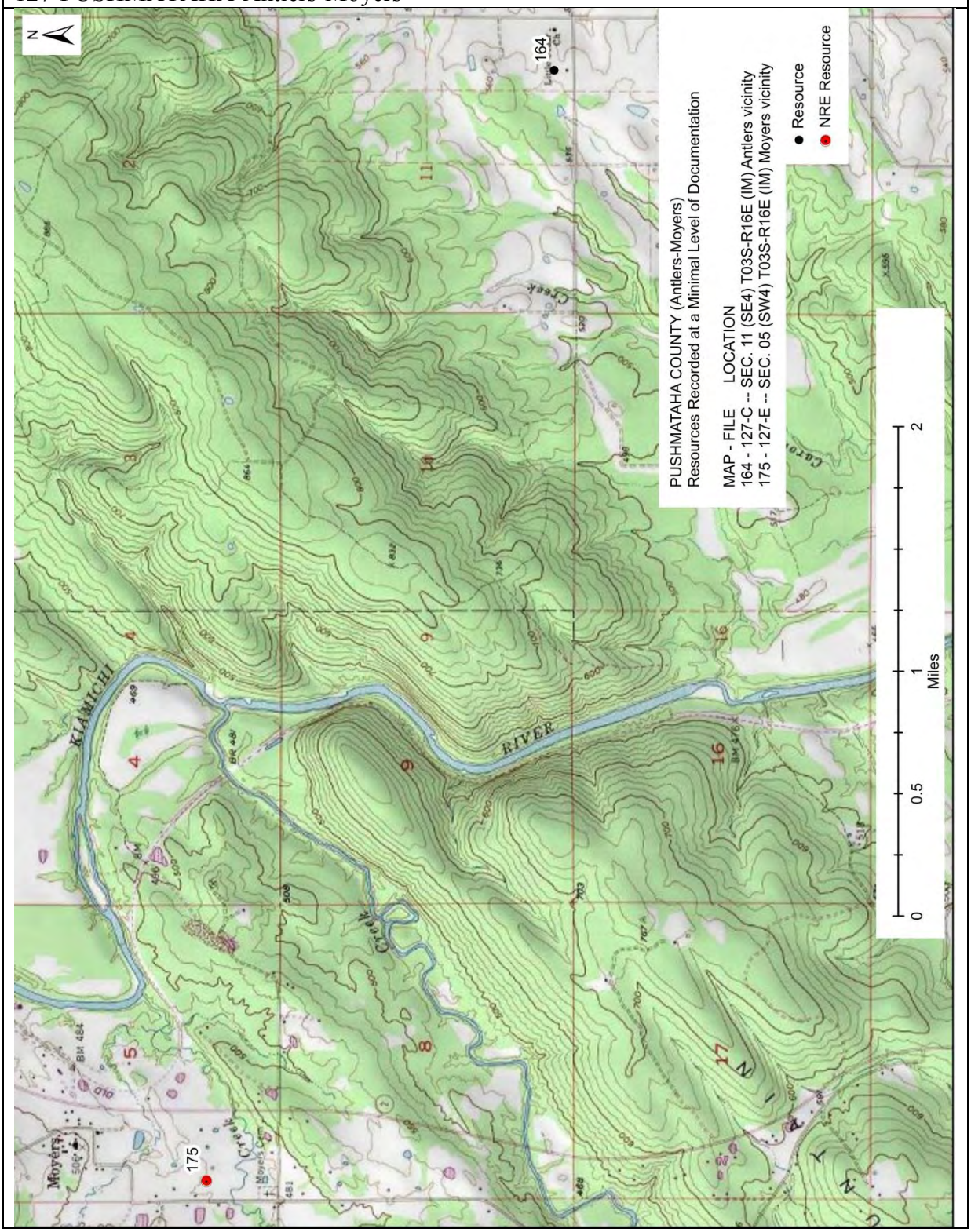


127-PUSHMATAHA-Antlers-Moyers



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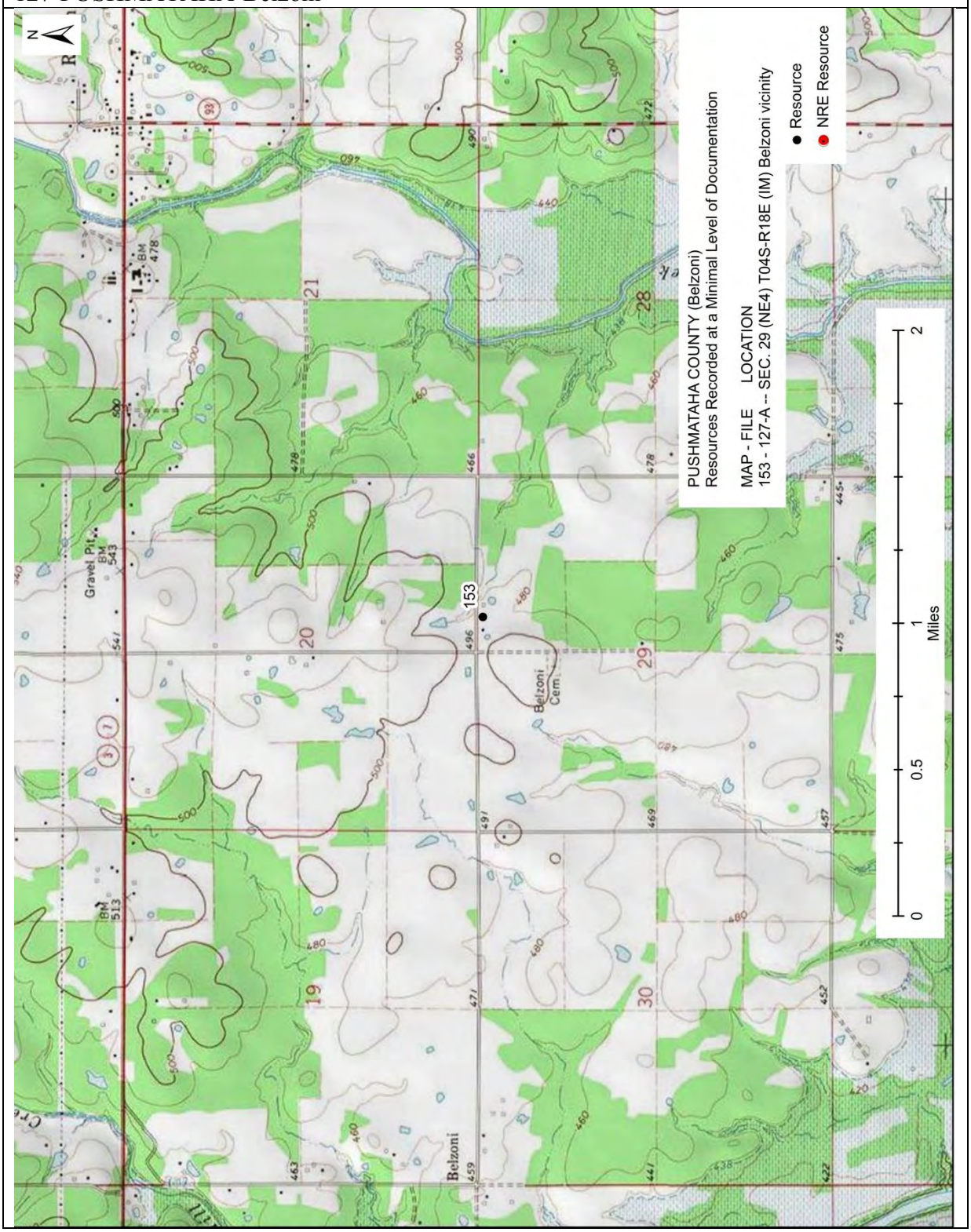

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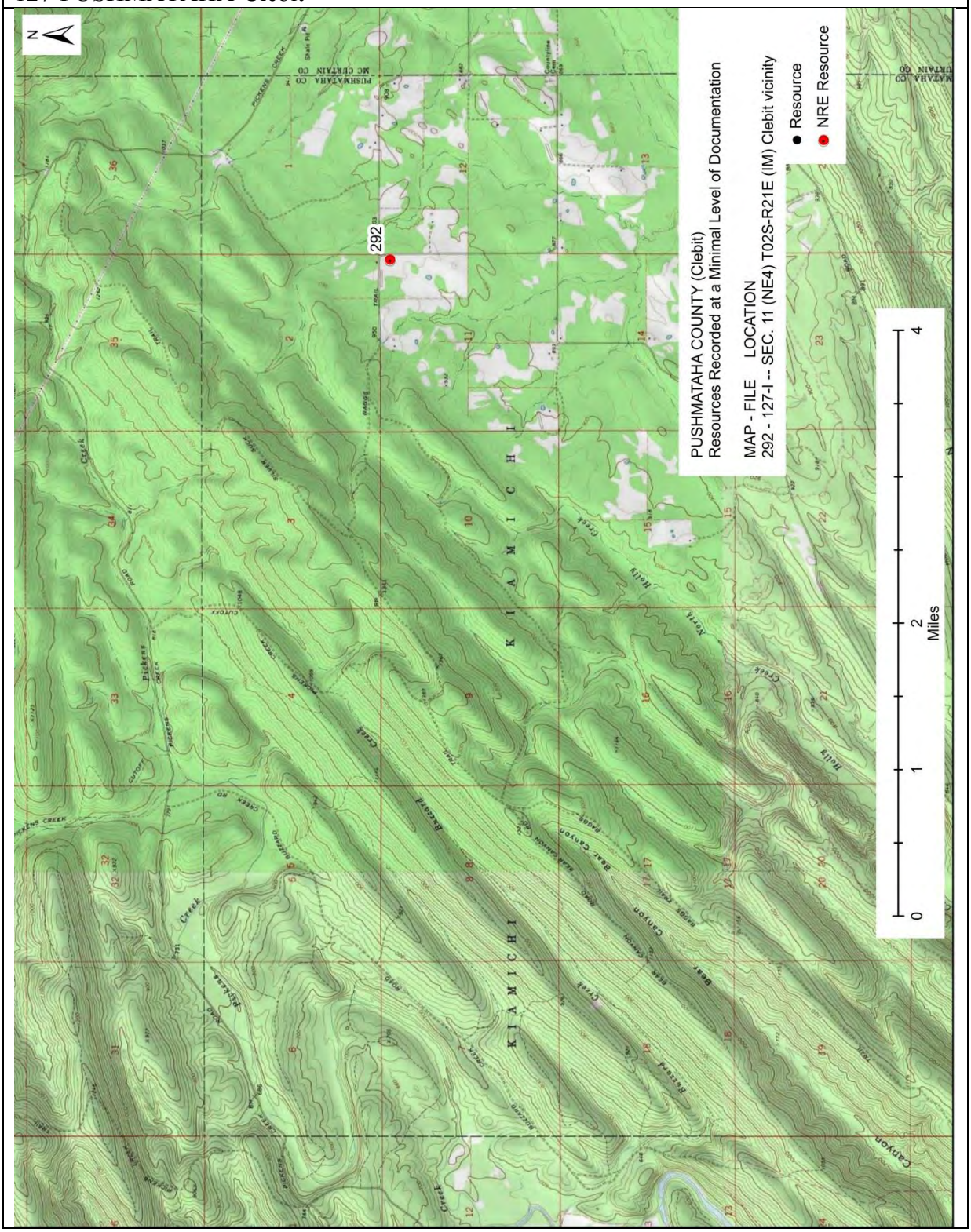

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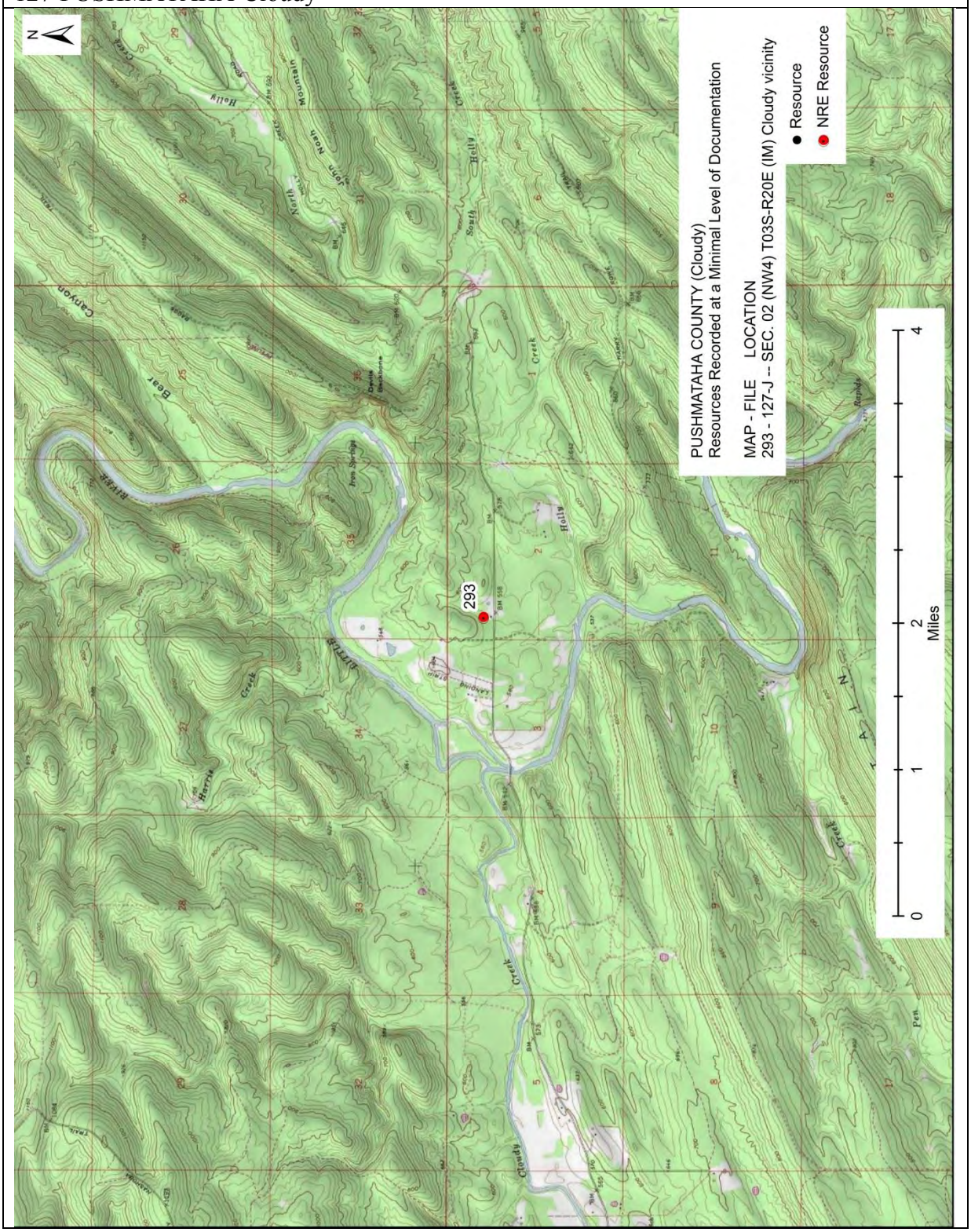

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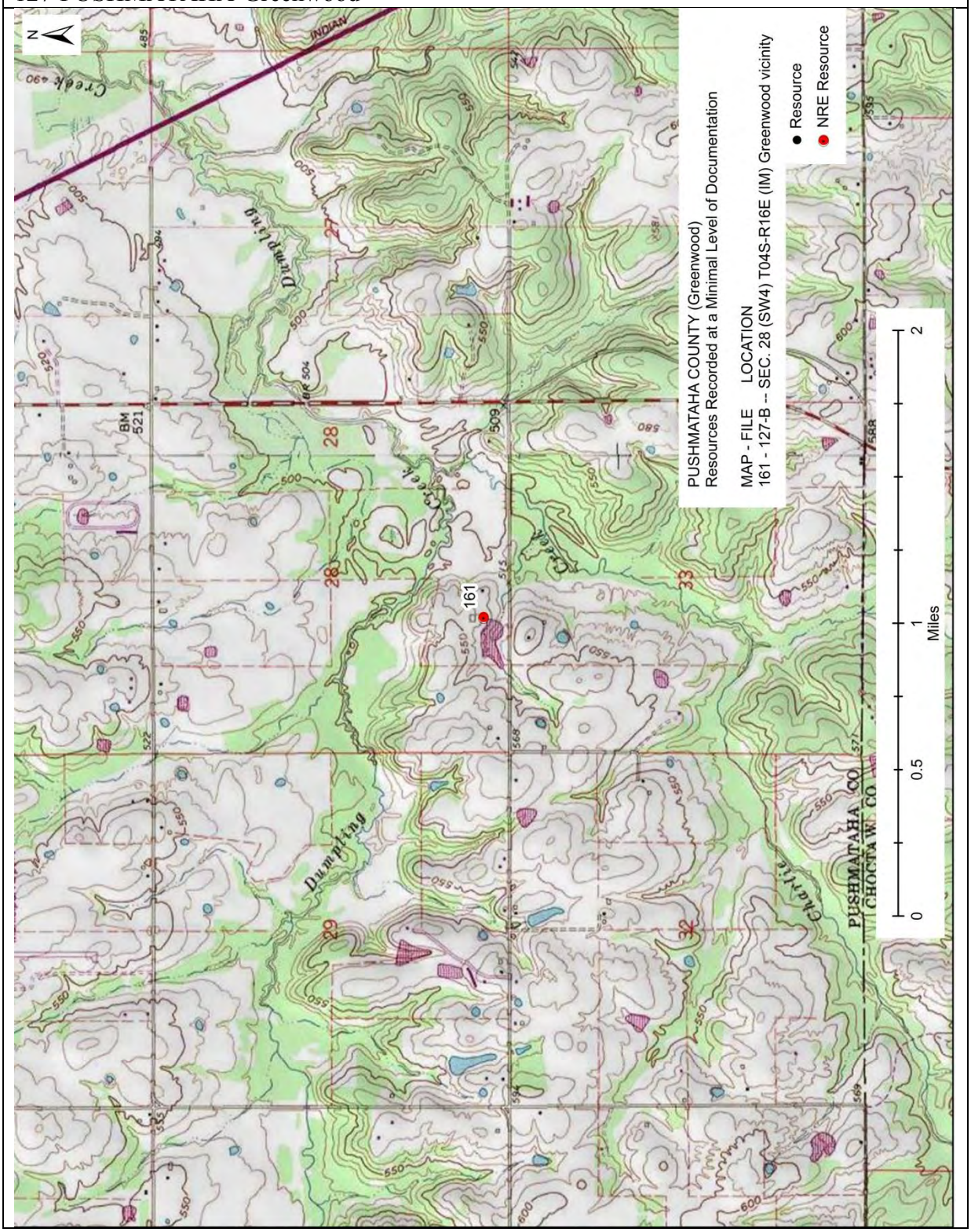

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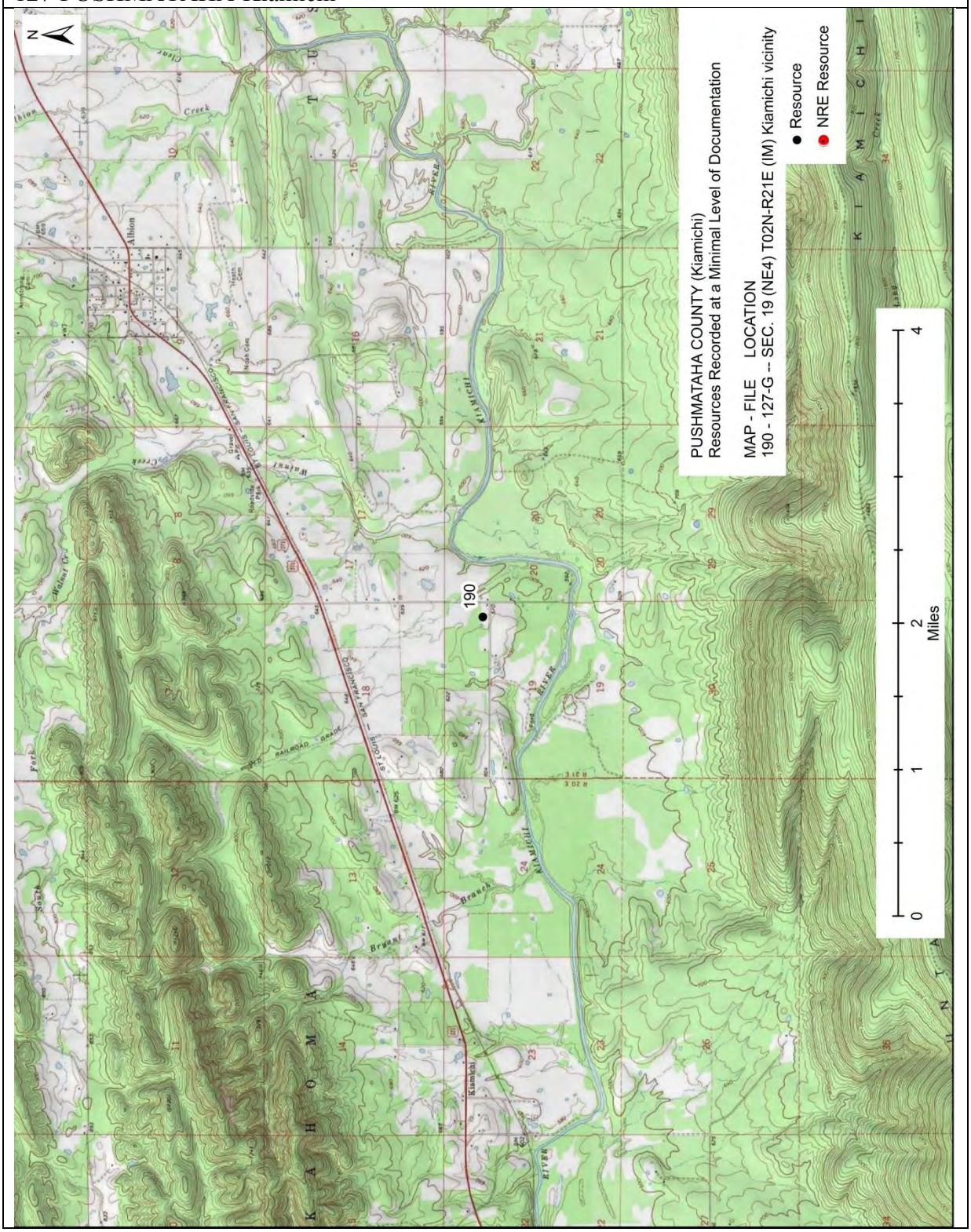

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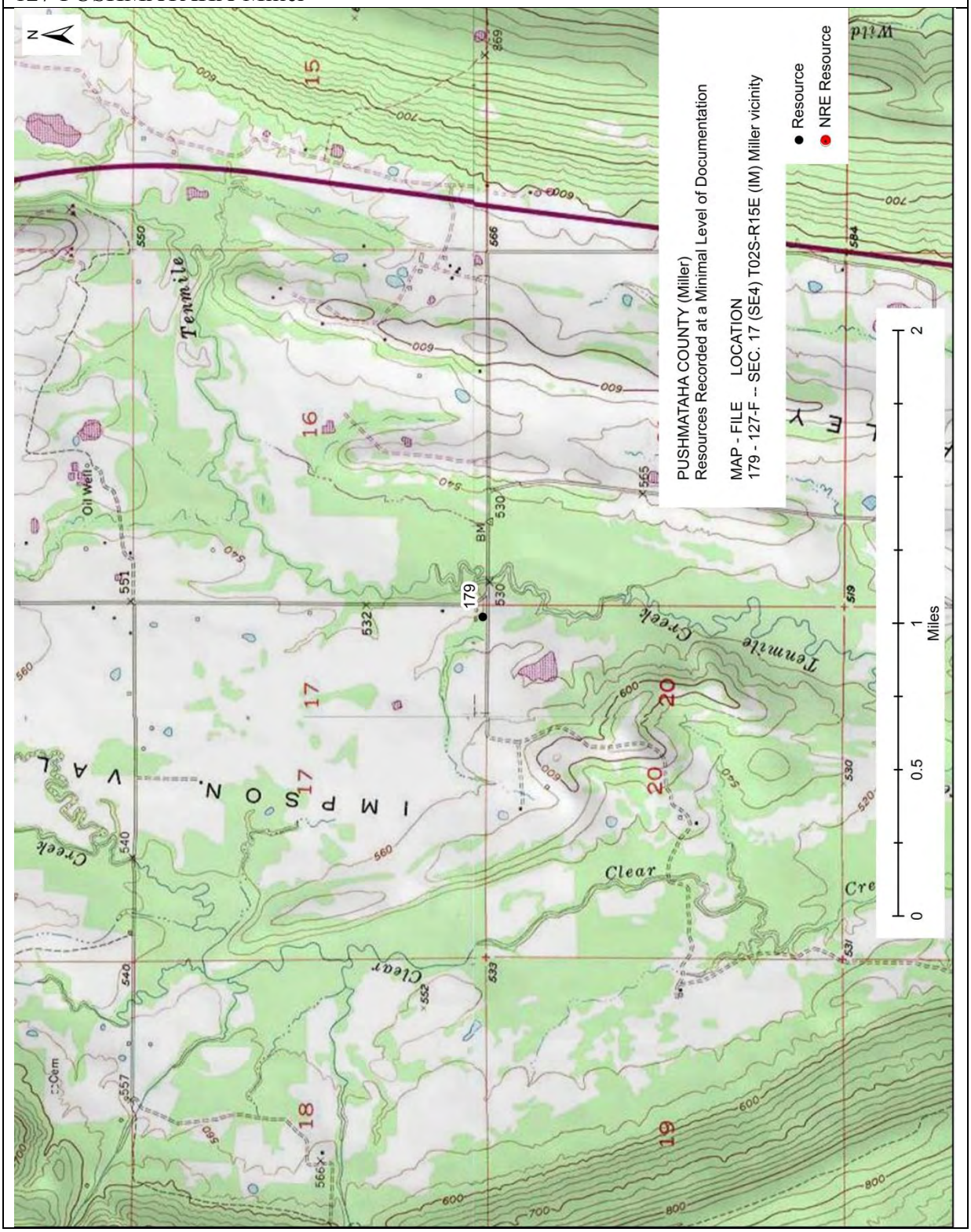

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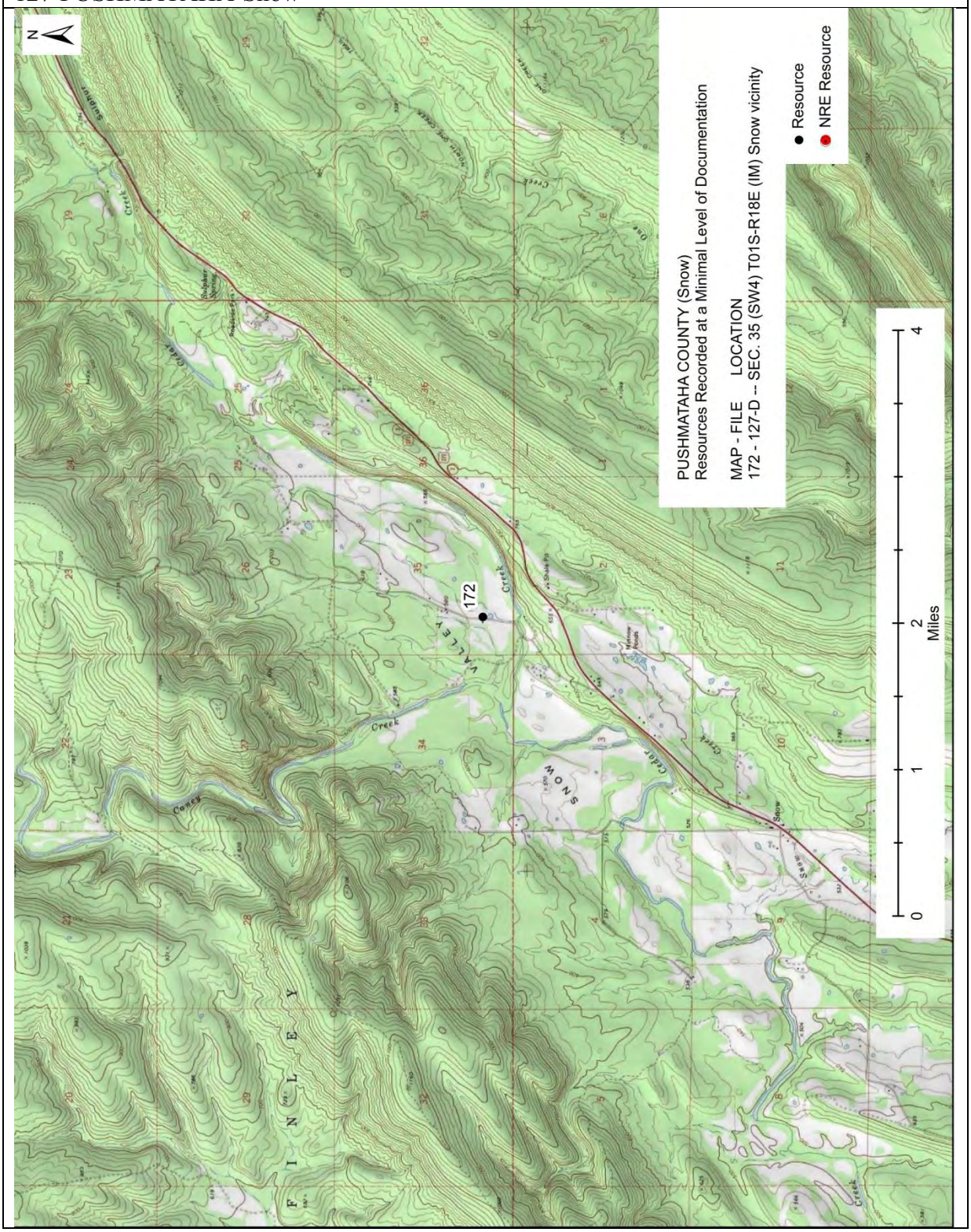

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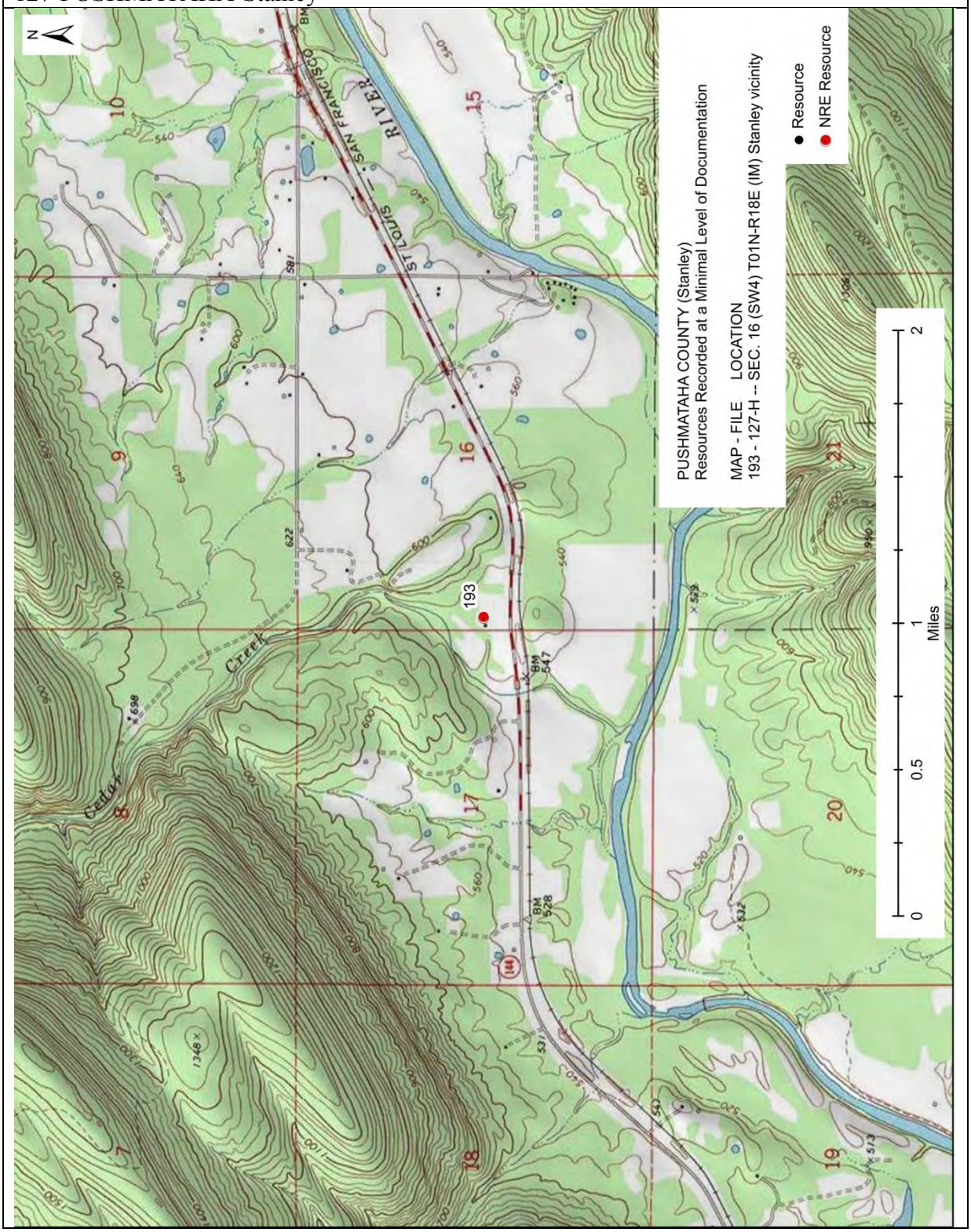

XV. NOTES TO HISTORIC CONTEXT

1. Michael D. Green, "Removal of the Choctaws." In Historical Atlas of Oklahoma, Fourth Edition, edited by Charles Robert Goins and Danney Goble. Norman: University of Oklahoma Press, 2006, 62-63. Hereafter cited as *Historical Atlas*.

2. Johnson, Kenneth S., "Geomorphic Provinces," *Historical Atlas*, 4-5.

3. Ibid.

4. Ibid; Jamie J. Patton and Richard A. Marston, "Shawnee Hills." In *Encyclopedia of Oklahoma History and Culture*, edited by Diana Everett. Oklahoma City: Oklahoma Historical Society, 2009, 1371. Hereafter cited as *Encyclopedia*.

5. James C. Milligan, "Hughes County," *Encyclopedia*, 716-17

6. Dan Boyd, "Oil and Gas Production," *Historical Atlas*, 28-29.

7. James C. Milligan, Coal County," *Encyclopedia*, 306-07.

8. Shayne R. Cole and Richard A. Marston, "Ouachita Mountains," *Encyclopedia*, 1139.

9. Howard L. Johnson, "Precipitation," *Historical Atlas*, 19.

10. Robert L. Brooks, "Beginning Agriculturalists/Village Farmers, Circa 1500-500 B.P.," *Historical Atlas*, 37.

11. Carl N. Tyson, "Shawnee Trail," *Encyclopedia*, 1371-72.

12. Bruce W. Hoagland, "Cross Timbers," *Encyclopedia*, 368-69.

13. Idem, "Soils," *Historical Atlas*, 16-17.

14. Ibid.

15. Danney Goble, "Euro-American Land Claims in North America, 1763-1787," *Historical Atlas*, 40-41; Bruce W. Hoagland, "The Louisiana Purchase," *Historical Atlas*, 42-43; Michael D. Green, "Formation of Indian Territory, 1804-1855," *Historical Atlas*, 54-55; Idem, "Removal of the Choctaws," *Historical Atlas*, 62-63; Marlynn Fleck O'Keefe, "Fort Towson," *Encyclopedia*, 537; Jon D. May, "Fort Washita," *Encyclopedia*, 538.

16. Green, "Formation of Indian Territory, 1804-1855," 54-55; Idem, "Removal of the Choctaws," 62-63; Idem, "Indian Territory, 1855-1866," *Historical Atlas*, 74-75.

17. Green, "Removal of the Choctaws," 62-63; Jon D. May, "Skullyville," *Encyclopedia*, 1386; Idem, "Boggy Depot," *Encyclopedia*, 149-150; Idem, "Doaksville," *Encyclopedia*, 408-409; Louis Coleman, "Eagletown," *Encyclopedia*, 429; John R. Lovett, "Important Early Routes and Trails," *Historical Atlas*, 78-79; Idem, "Forts, Camps, and Military Roads, 1816-1865," *Historical Atlas*, 80-81; Michael D. Green, "Choctaw Nation to Statehood," *Historical Atlas*, 102-03.

18. May, "Skullyville," 1386; Idem, "Boggy Depot," *Encyclopedia*, 149-150; Lovett, "Important Early Routes and Trails," 78-79.

19. Ibid; Dianna Everett, "Butterfield Overland Mail," *Encyclopedia*, 191; Bobby D. Weaver, "Texas Road," *Encyclopedia*, 1476; Augustus J. Veenendaal, Jr., "Missouri, Kansas and Texas Railway," *Encyclopedia*, 968; Green, "Indian Territory, 1855-1866," *Historical Atlas*, 74-75; Idem, "Choctaw Nation to Statehood," *Historical Atlas*, 102-03; John R. Lovett, "Major Cattle Trails, 1866-1889," *Historical Atlas*, 116-17; Bruce W. Hoagland and Danney Goble, "Railroads, 1870-1907," *Historical Atlas*, 118-19.

20. May, "Doaksville," *Encyclopedia*, 408-409; Lovett, "Important Early Routes and Trails," *Historical Atlas*, 78-79; O'Keefe, "Fort Towson," *Encyclopedia*, 537; Garry L. Nall, "Cotton," *Encyclopedia*, 346-48; James C. Milligan, "Choctaw County," *Encyclopedia*, 272-73; Louis Coleman, "McCurtain County," *Encyclopedia*, 917-18; Idem, Bryan County," *Encyclopedia*, 181-82.

21. Michael L. Bruce, "Robert M. Jones," *Encyclopedia*, 774-75; Barbara Krauthamer, "Slavery," *Encyclopedia*, 1387-88.

22. Ibid; John R. Lovett, Civil War Battle Sites, 1861-1865," *Historical Atlas*, 86-87; James L. Huston, "Civil War Era," *Encyclopedia*, 290-93; Mary Jane Warde, "Civil War Refugees," *Encyclopedia*, 293-94.

23. Green, "Indian Territory, 1866-1889," *Historical Atlas*, 98-99; Richard Mize, "Intruder," *Encyclopedia*, 743.

24. Clara Sue Kidwell, "Allotment," *Encyclopedia*, 27-29; Michael D. Green and Danney Goble, "Indian Territory and Allotment, 1890-1907," *Historical Atlas*, 142-43; Danney Goble, "The Great Depression," *Historical Atlas*, 178-81.

25. Gilbert C. Fite, "Farming, *Encyclopedia*, 474-77; Nall, "Cotton," *Encyclopedia*, 346-48; Guy Logsdon, "Moonshine," *Encyclopedia*, 978.

26. Terry G. Jordan-Bychkov, *The Upland South: The Making of An American Folk Region and Landscape*. Santa Fe: Center for American Places, 2003, passim.

27. Fite, "Farming, *Encyclopedia*, 474-77; Nall, "Cotton," *Encyclopedia*, 346-48.

28. Lovett, "Important Early Routes and Trails," *Historical Atlas*, 78-79; Idem, "Forts, Camps, and Military Roads, 1816-1865," *Historical Atlas*, 80-81; Green, "Choctaw Nation to Statehood," *Historical Atlas*, 102-03; Diana Everett, "Highways," *Encyclopedia*, 681-83; Idem, "Turnpikes and Toll Bridges," *Encyclopedia*, 1522-23; Danney Goble, "Interstate, Turnpike, and Major Highway Systems," *Historical Atlas*, 192-93.

29. Green, "Choctaw Nation to Statehood," *Historical Atlas*, 102-03; Idem, "Chickasaw Nation to Statehood," *Historical Atlas*, 104-05.

30. Everett, "Highways," *Encyclopedia*, 681-83; Idem, "Turnpikes and Toll Bridges," *Encyclopedia*, 1522-23; Goble, "Interstate, Turnpike, and Major Highway Systems," *Historical Atlas*, 192-93.

31. Lovett, "Important Early Routes and Trails," *Historical Atlas*, 78-79; Idem, "Forts, Camps, and Military Roads, 1816-1865," *Historical Atlas*, 80-81; Green, "Choctaw Nation to Statehood," *Historical Atlas*, 102-03.

32. Ibid.

33. Ibid.

34. Steven L. Sewell, "Coal," *Encyclopedia*, 304-06; Danney Goble, "Ethnic Settlements," *Historical Atlas*, 140-41; Kenneth S. Johnson, "Nonfuel Mineral Resources," *Historical Atlas*, 30-31; LaRadius Allen, "James Jackson McAlester, *Encyclopedia*, 906-07.

35. Ibid.

36. *2010 Census of the United States*.

37. Alvin O. Turner, "Religious Traditions and Influences," *Historical Atlas*, 224-25; Marvin E. Kroeker, "Amish," *Encyclopedia*, 44-45.

38. Bruce W. Hoagland and Danney Goble, "Railroads, 1907-2000," *Historical Atlas*, 190-91; Augustus J. Veenendall, Jr., "Texas, Oklahoma and Eastern Railroad," *Encyclopedia*, 1474-75; Larry O'Dell, "Mill Towns (Lumber)," *Encyclopedia*, 963-64; William G. Ross, "Choctaw Lumber Company," *Encyclopedia*, 273-74.

39. Milligan, "Choctaw County," *Encyclopedia*, 272-73.

40. O'Dell, "Mill Towns (Lumber)," *Encyclopedia*, 963-64.

41. Matthew Rex Cox, "U.S. Naval Ammunition Depot," *Encyclopedia*, 1545-46.

42. John R. Lovett, "World War II Installations," *Historical Atlas*, 186-87; Bill Corbett, "Prisoner of War Camps," *Encyclopedia*, 1231-32.