

July 8, 2015



Ms. Amber Tubbs
McGehee Engineering Corp.
P.O. Box 3431
Jasper, Alabama 35502

OAR PROJECT NUMBER: 15-201
AHC TRACKING NUMBER: None Assigned

Dear Ms. Tubbs:

Please find enclosed two copies of our recent report entitled "A Cultural Resources Reconnaissance Survey for the Proposed Black Warrior Minerals Mine No. 2 in Jefferson County, Alabama", by Lesley S. Mashburn of our staff.

Please forward one copy to the Alabama Historical Commission (AHC) for review and concurrence of this report. The AHC's address is:
468 South Perry Street
Montgomery, Alabama 36104

It has been a pleasure to be of service to McGehee Engineering Corp. Please feel free to call for further information or services.

Sincerely,

A handwritten signature in cursive script that reads "Eugene Futato".

Eugene Futato, Assistant Director
The University of Alabama
Office of Archaeological Research

Enclosures: 2 Survey Reports

**A CULTURAL RESOURCES RECONNAISSANCE SURVEY
FOR THE PROPOSED BLACK WARRIOR MINERALS MINE NO. 2
IN JEFFERSON COUNTY, ALABAMA**

Lesley S. Mashburn

**PERFORMED FOR:
McGehee Engineering Corp.
P.O. Box 3431
Jasper, Alabama 35502**

JULY 2015



**Office of
Archaeological
Research**

THE UNIVERSITY OF ALABAMA



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PROPOSED BLACK WARRIOR MINERALS MINE NO. 2 IN
JEFFERSON COUNTY, ALABAMA**

OAR PROJECT NUMBER: 15-201
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PERFORMED FOR: McGehee Engineering Corp.
P.O. Box 3431
Jasper, Alabama 35502
Attn: Ms. Amber Tubbs

PERFORMED BY: Lesley S. Mashburn, Cultural Resources Assistant
Jeremiah Stager, Cultural Resources Assistant
Donald Brown, Cultural Resources Assistant
V. Caitlin Cowley, Cultural Resources Assistant

The University of Alabama
Office of Archaeological Research
13075 Moundville Archaeological Park
Moundville, Alabama 35474

DATE PERFORMED: June 8-26, 2015


Lesley S. Mashburn
Cultural Resources Assistant
Office of Archaeological Research


Eugene Futato, Assistant Director
Office of Archaeological Research
The University of Alabama

A Cultural Resources Reconnaissance Survey for the Proposed Black Warrior Minerals Mine No. 2 in Jefferson County, Alabama

Lesley S. Mashburn

Management Summary

The University of Alabama, Office of Archaeological Research (OAR) was contracted by McGehee Engineering Corp. to perform a cultural resources reconnaissance survey for the proposed Black Warrior Minerals Mine No. 2, in Jefferson County, Alabama. The proposed project's area of potential effect (APE) is approximately 471 ha (1,164 ac) in size. Field investigations for the project were undertaken between June 8 and 26, 2015. Lesley S. Mashburn, Cultural Resources Assistant, serves as the Project Director. The Principal Investigator for the project is Matthew D. Gage RPA, Director of OAR.

During the cultural resources survey, no new archaeological sites or historic standing structures were identified or documented within the boundaries of the APE. The proposed project area was found to be void of any archaeological resources. Based on these findings, it is the opinion of this office that the proposed Black Warrior Minerals Mine No. 2 will not affect any significant historic properties and a finding of no properties is recommended.

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A Cultural Resources Reconnaissance Survey for the Proposed Black Warrior Minerals Mine No. 2 in Jefferson County, Alabama

Lesley S. Mashburn

Introduction

The University of Alabama, Office of Archaeological Research (OAR) was contracted by McGehee Engineering Corp. to perform a cultural resources survey for the proposed Black Warrior Minerals Mine No. 2, located in Jefferson County, Alabama. The proposed project's area of potential effect (APE) is approximately 471 ha (1,164 ac) in size. Lesley S. Mashburn (Cultural Resources Assistant), assisted by Donald Brown, Jeremiah Stager, and V. Caitlin Cowley (Cultural Resources Assistants), conducted the survey during the period July 8 to July 26, 2015 to locate and identify any archaeological sites or historic standing structures. The Principal Investigator for the project is Matthew D. Gage RPA, Director of OAR.

The lead oversight agency for the proposed project is the Alabama Surface Mining Commission (ASMC). Permitting for the project requires compliance with the National Environmental Policy Act and National Historic Preservation Act (NHPA) of 1966 as amended 2006 (16 USC 470) and its implementing regulations (36 CFR 800). McGehee Engineering Corp., in conjunction with the Alabama Historical Commission (AHC), and other interested parties assists ASMC in meeting its obligations under Section 106 of the NHPA.

The research design of the cultural resources survey is to locate and identify any archaeological sites and historic standing structures within the APE, assess their significance, and provide recommendation with regard to guidelines set forth by the National Park Service (NPS) for National Register of Historic Places (NRHP) eligibility criteria (NPS 1995). Included in this report is a discussion of the environmental setting of the

survey area, a literature search of any previously recorded sites or previously conducted surveys within or near the survey area, a description of field and laboratory methods, the results of the cultural resources survey, and conclusions and recommendations based on the findings of this survey.

Environmental Setting

The APE for the proposed Black Warrior Minerals Mine No. 2 Project can be seen on the 1979, USGS, 7.5', Gardendale, Alabama topographic quadrangle. The survey area consists of two separate areas. Survey Area A (460 ha [1,138 ac]) is centered in Section 10. It extends north into the S $\frac{1}{2}$ of Section 3, northeast into the SW $\frac{1}{4}$ of Section 2, east into the W $\frac{1}{4}$ of Section 11, south into the N $\frac{1}{2}$ of Section 15 with a small portion extending west into the NE $\frac{1}{4}$ of Section 9. Survey Area B (10.3 ha [25.6 ac]) is west of Survey Area A and located in the E $\frac{1}{2}$ of Section 17, with a small portion extending into the SW $\frac{1}{4}$ of Section 16. Both portions of the survey area are located in T15S, R3W (Figure 1).

The APE consists of moderate to steeply rolling upland, dominated by a series of north to south trending ridges with elevation ranging from a peak of 182.8 m (628 ft) AMSL along some of the ridge tops, to a low of 122 m (400 ft) AMSL along some of the drainages. A large portion of the survey area has been previously impacted by strip mining as depicted on the topographic map (Figure 1). The narrow ridgelines within the survey area all contain relic and modern logging and access roads, leaving little to no undisturbed landforms. The entirety of the APE has been rotationally logged since at least the mid-twentieth century based on

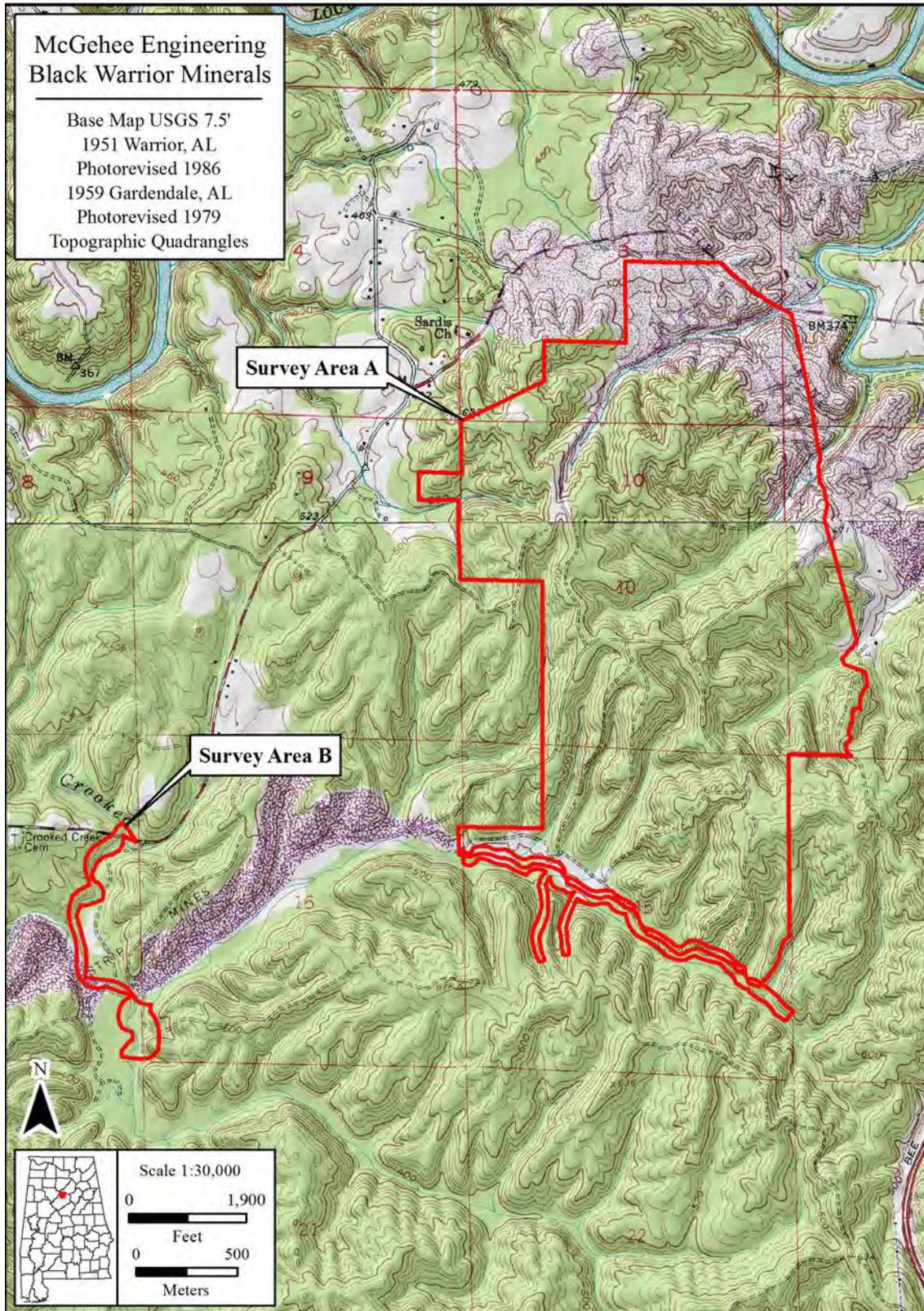


Figure 1. Overview of the APE.

historic aerial photographs, and subsequent erosion has resulted in subsoil or parent bedrock material to be found at the ground surface or at very shallow depths below the surface. Vegetation consists of secondary growth immature pine and hardwood, although large tracts of linear planted pine, particularly in the areas of reclaimed strip mine, are also present.

The APE lies within the Warrior Basin district of the Cumberland Plateau physiographic section of Alabama. The Warrior Basin district is described as a “Synclinal submaturely to maturely dissected sandstone and shale plateau of moderate relief” (Sapp and Emplincourt 1975).

The National Cooperative Soil Survey (Soil Survey Staff 2015) Jefferson County, Alabama shows five soil types/associations present within the survey area (Figures 2-4). A brief description of each soil, along with a representative soil profile follows (Spivey 1982).

29-Montevallo-Nauvoo association, steep.

This map unit consists of soils on strongly dissected areas of sandstone and shale plateaus in the northern and western parts of the county. Extensive surface and deep mining of coal occur in this area. The underlying layers of sandstone, siltstone, shale, and coal are nearly level. The ridges are commonly underlain by sandstone, and the side slopes are generally underlain by shale and siltstone.

30-Nauvoo fine sandy loam, 2 to 8 percent slopes.

This is a gently sloping to sloping, well-drained soil on medium to broad ridgetops and upland plateaus that are underlain by sandstone. Slopes are convex. The landscape also has a few small, upland drainage ways, and some areas have weakly expressed knolls and depressions. Areas are 20 to 200 acres or more and irregular in shape. Typically, the surface layer is dark grayish brown fine sandy loam about 4 inches thick. The subsoil is about 42 inches thick. The upper 5 inches is strong brown loam; the next 18 inches is yellowish red sandy clay loam; and the lower 19 inches is mottled

yellowish red, red, and yellowish brown sandy clay loam.

31-Nauvoo fine sandy loam, 8 to 15 percent slopes.

This is a strongly sloping, well-drained soil on ridges and upland plateaus that are underlain by sandstone. The landscape in some places is small knolls and depressions that have a few, small upland drainage ways. Slopes are convex. Areas are 20 to 100 acres or more and irregular in shape. Typically, the surface layer is very dark grayish brown and dark brown fine sandy loam about 7 inches thick. The subsurface layer is yellowish brown fine sandy loam about 5 inches thick. The subsoil is yellowish red clay loam about 22 inches thick.

35-Palmerdale complex, steep.

This complex consists of steep, somewhat excessively drained Palmerdale soils and other soils on surface mining spoil piles. The sediment-producing slope and highwalls have convex slopes. Palmerdale soils and similar soils make up about 70 percent of the map unit. Typically, Palmerdale soils are more than 60 inches thick. The soil is dark gray very shaly silt loam. In places, soils are similar to Palmerdale soils except that they are medium acid to moderately alkaline, or they have slopes of less than 15 percent.

39-Sullivan-State complex, 0 to 2 percent slopes.

This complex consists of nearly level, well-drained Sullivan soils on flood plains and well-drained State soils on stream terraces. The drainage basins on which these soils are located are dominated by sandstone and shale. Areas are 40 or more acres and long and narrow. The areas of Sullivan and State soils are so intricately mixed, or so small, that mapping them separately was not practical. Sullivan soils and similar soils make up about 50 percent of the map unit. Typically, the surface layer of Sullivan soils is dark brown silt loam about 4 inches thick. The subsoil is about 35 inches thick. The upper 16 inches is dark yellowish brown silt loam, and the lower 19 inches is very dark grayish brown loam.

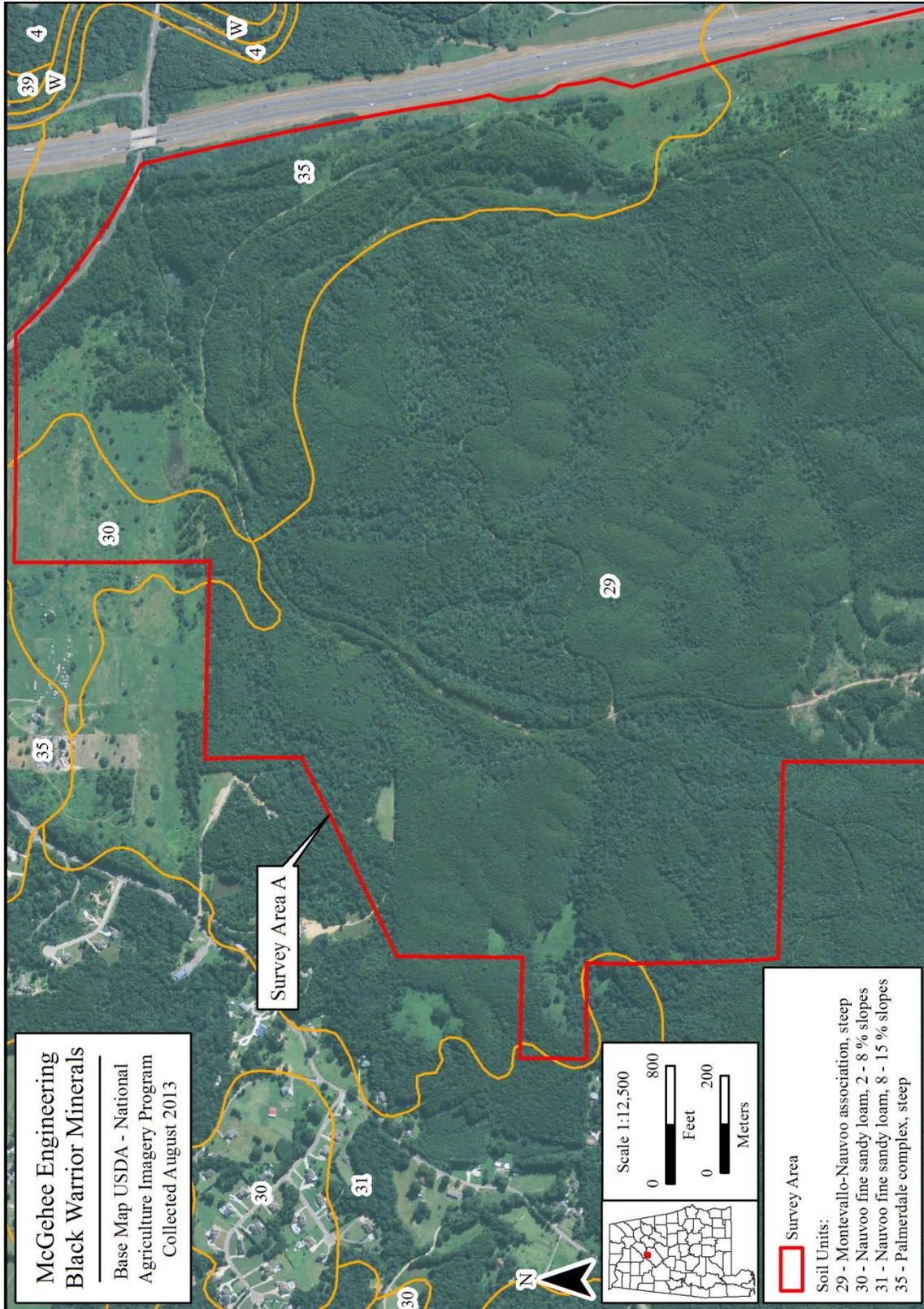


Figure 2. Soil Map of northern portion of Survey Area A.

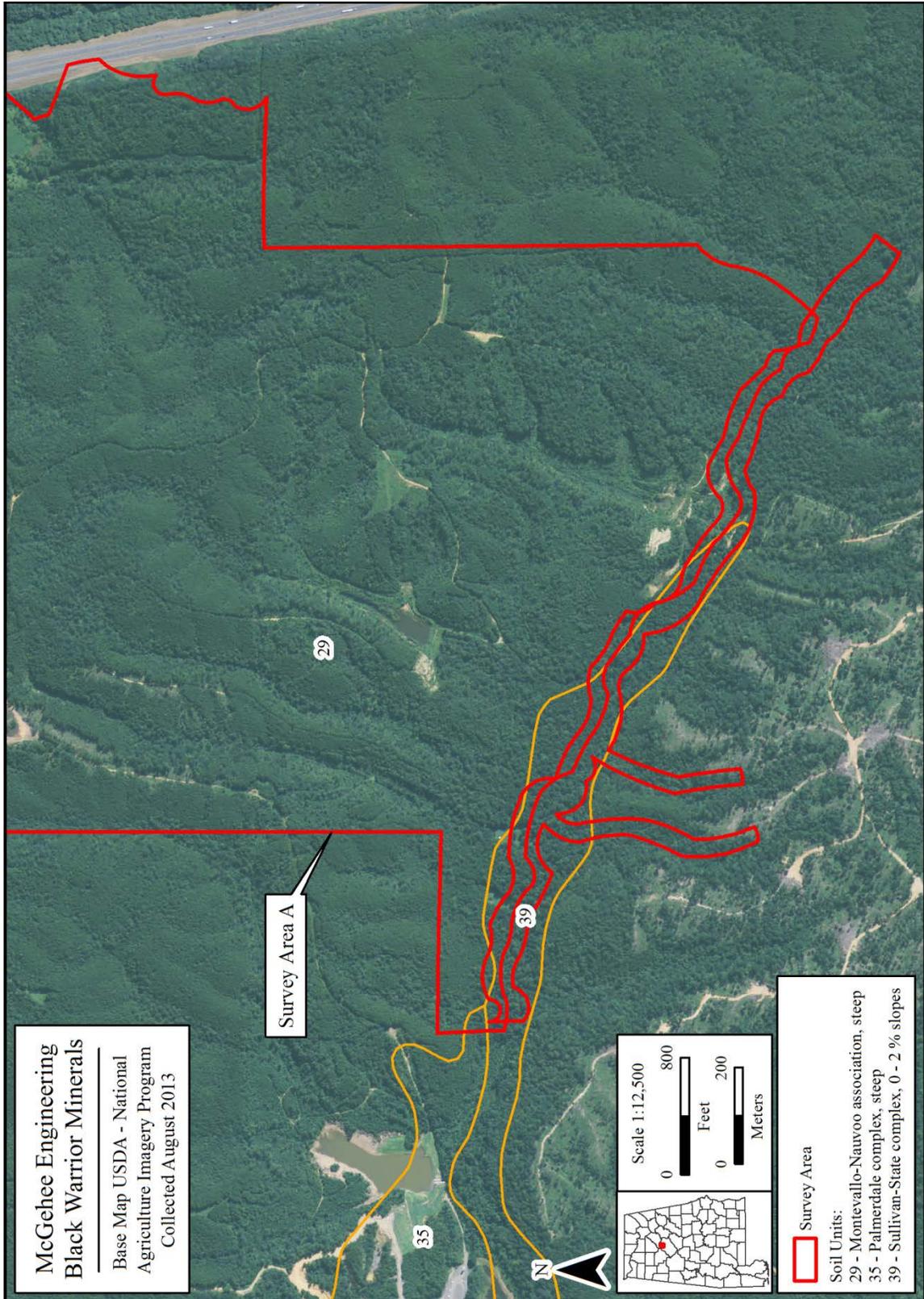


Figure 3. Soil Map of southern portion of Survey Area A.

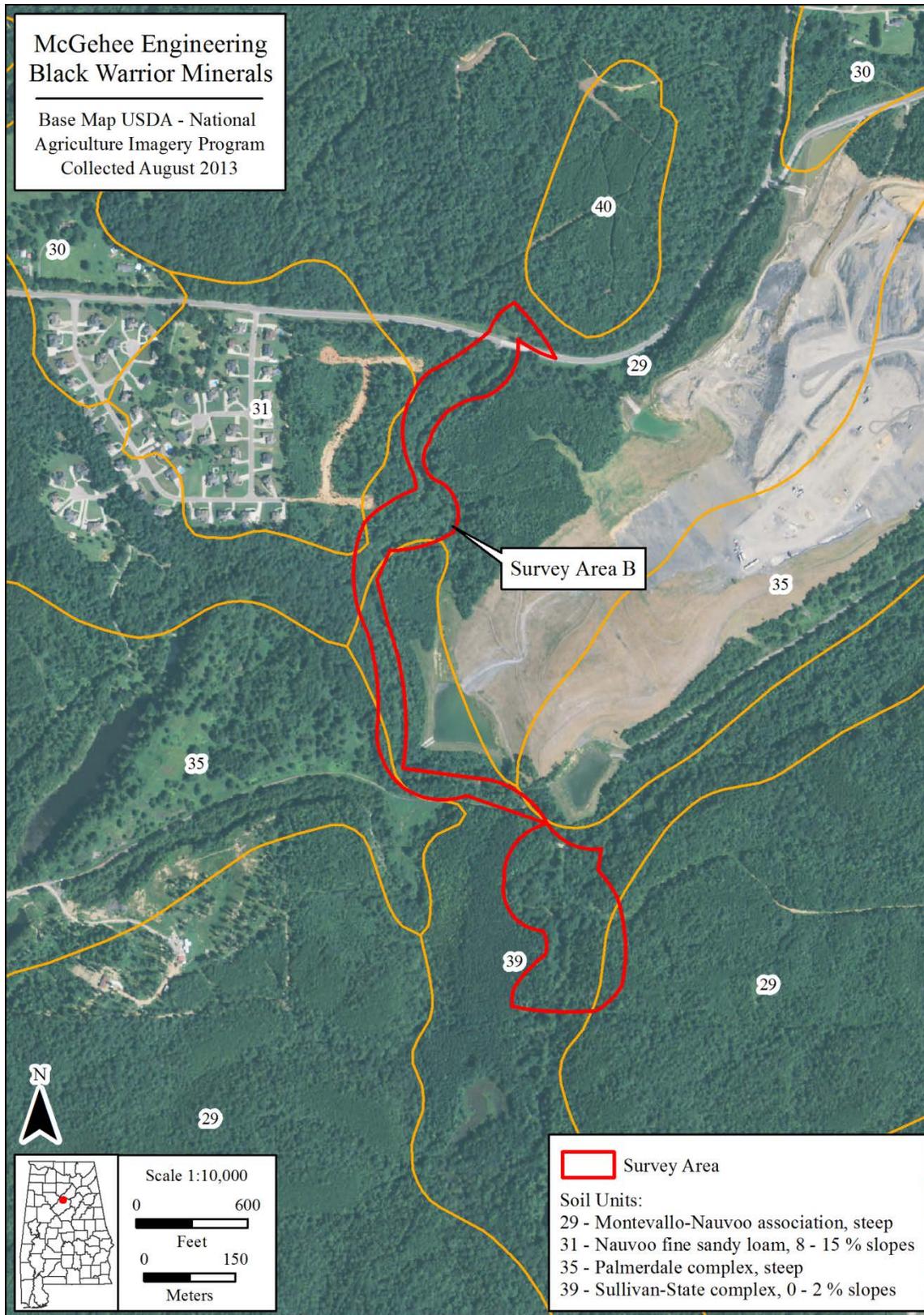


Figure 4. Soil Map of Survey Area B.

Literature and Document Search

For prior archaeological surveys conducted in the general area, the Alabama Cultural Resources Online Database, housed at OAR and consisting of the National Archaeological Database Bibliography, the Alabama State Site File (ASSF) (OAR 2015), and the Alabama Phase I Surveys Website (OAR 2014) were reviewed. The ASSF (OAR 2015) showed no previously recorded sites within the APE, but five sites, all NRHP ineligible, were previously recorded within a one mile radius of the APE (1Je17, 1Je178, 1Je179, 1Je554, and 1Je936). Site 1Je17 is an unknown aboriginal site recorded by Mack Brooms with the AHC in Montgomery, Alabama. The site is located on the second terrace above the Locust Fork River with a gentle slope down to river. A small tributary lies to the west of the site. Site 1Je178 was recorded by Charles Willingham of Mt. Olive. The site sits on a 3-5 acre pasture along the side of Crooked Creek. Site 1Je179, an unknown aboriginal site, was recorded by Charles Willingham of Mt. Olive and is located just north of 1Je178. Site 1Je554 is a 19th century nonaboriginal site with a small unknown aboriginal component recorded by John Hollis of OAR in Moundville, Alabama. The site consists of a light scatter of 19th century whiteware and stoneware ceramics and a very light scatter of chert lithic debris. This highly eroded site with no topsoil and has been impacted by an access road through the site. Situated on a saddle of a ridgespur, the site slopes to the northwest and southeast leading downward to Turkey Creek. Lastly, Site 1Je936 was recorded at the request of a local resident of Gardendale. It is said to be an earthen mound of possible Native American origin. None of these sites will be affected by the proposed project.

According to the Alabama Phase I Surveys Website (OAR 2014), 13 Phase I surveys have been conducted within a one mile radius of the present survey area (Figure 5). These surveys are discussed below in order by date. Brooms (1978) conducted an intensive archaeological and historical survey of the Alabama Highway Department Project I-65-3(52)(53) in Jefferson County, Alabama.

Two archaeological sites were recorded during the field investigations, 1Je17 and 1Je18. Only one of these, 1Je17, falls within a one mile radius of the current survey area, but will not be affected by the proposed project as it lies well north of the survey area. The survey by Jordan (1986) was a cultural resource survey of the proposed Morris Manor Apartments in Jefferson County, Alabama with no resources recorded. Patterson (1989) conducted a cultural resource survey for a proposed apartment complex in Morris, Jefferson County, Alabama with no resources recorded. The Oakley (1990) cultural resources survey was for a proposed landfill in north Jefferson County, Alabama and had no resources recorded. Shaw (1993) surveyed the Mt. Olive landfill expansion in Jefferson County, Alabama. Two archaeological sites were recorded during the course of the survey. They are 1Je440 and 1Je441; neither of which lie within a one mile radius of the current survey area. Hollis (1998) surveyed a proposed wastewater treatment plant along Turkey Creek near Kimberly in Jefferson County, Alabama. One historic/prehistoric archaeological site (1Je554) was recorded as a result of the survey. Site 1Je554 is located well north of the current survey area and will not be affected by the proposed project. Crowell (1999) conducted a Phase I cultural resources assessment of the proposed bridge over Turkey Creek in Jefferson County, Alabama and recorded no resources. Chirel and Keith (2001) surveyed a proposed Morris cell phone tower site in Jefferson County, Alabama and recorded no resources. Watley (2002) surveyed a proposed borrow pit near Gardendale in Jefferson County, Alabama. This survey also recorded no resources. Watkins (2010a, 2010b) conducted two Phase I cultural resources surveys of the proposed Black Warrior Minerals Mine No. 1 (Areas 1 and 2) near Sardis in Jefferson County, Alabama. No resources were recorded by this survey. Mizelle (2012) did a Phase I cultural resources survey for the proposed Black Creek Mine, located in Jefferson County, Alabama. Mizelle (2014) also surveyed the proposed Black Warrior Minerals Mine No. 1 in Jefferson County, Alabama. Neither of these surveys recorded any cultural resources.

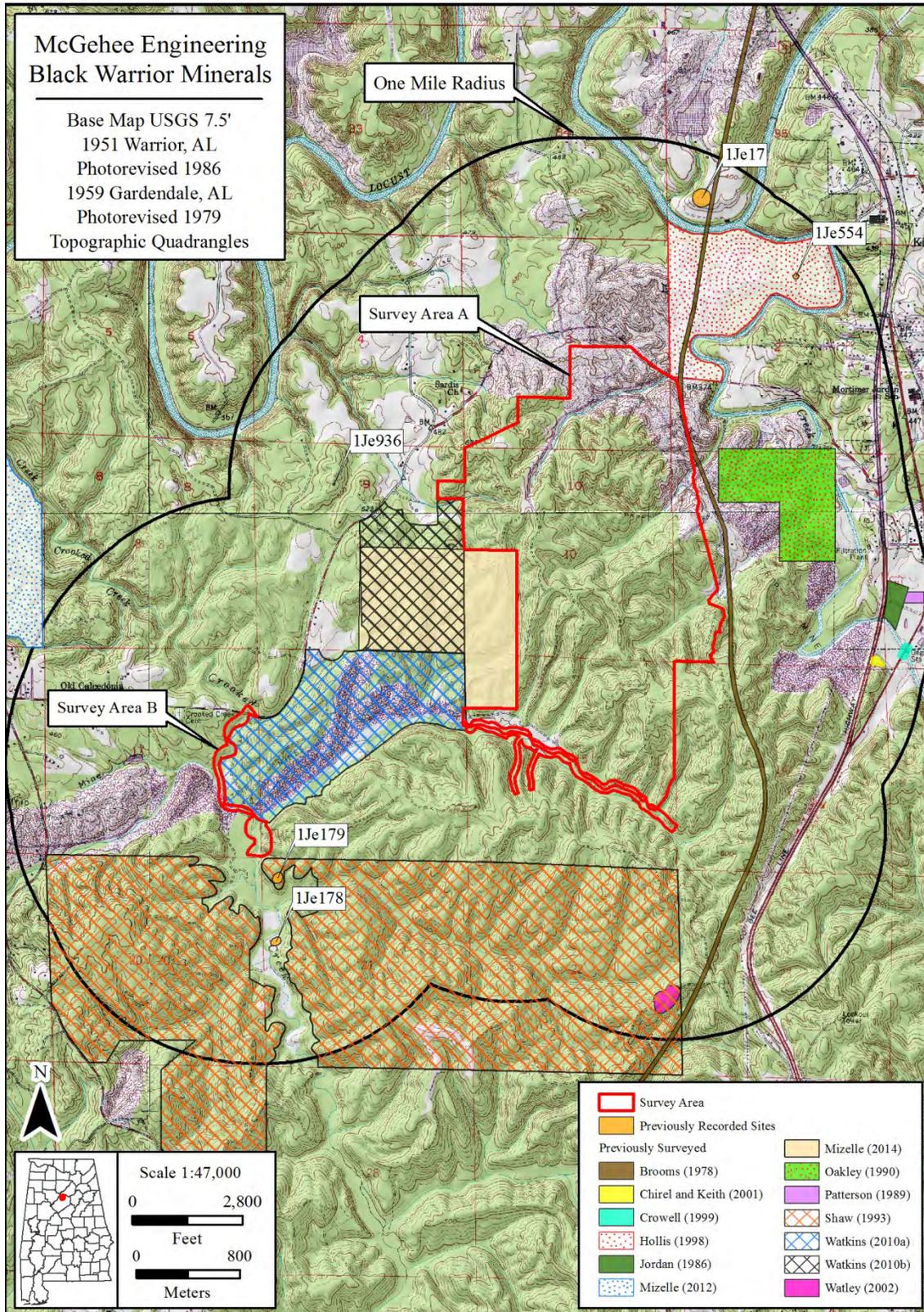


Figure 5. Previous Phase I surveys and previously recorded sites within a one-mile radius of the APE.

The NRHP (NPS 2015) and the *Alabama Register of Landmarks and Heritage* and related supplements (AHC 1978, 2015) list no eligible properties located within a one mile radius of the APE. A review of the 1908, Jefferson County, Alabama Soil Map show no properties within the survey area. Also, the 1937 and 1953 editions of the Jefferson County, Alabama Highway Map revealed no standing structures located within a one mile radius of the APE. Finally, *Cemetery Locations by County* lists no historic cemeteries located within the survey tract (Remington 2008).

Field Methods

Field investigations consisted of a pedestrian walkover of the proposed project area employing visual inspection of exposed ground surface and subsurface testing. Per AHC guidelines, all shovel tests had a minimum diameter of 30 cm and were excavated to recognizable, culturally sterile subsoil. All excavated soil was screened through 6.35 mm (0.25 in) hardware cloth in an effort to recover cultural materials. Soil profiles were recorded for each shovel test noting soil colors, textures, and depths of soil texture/color changes and horizon boundaries. All shovel test locations were documented using global positioning systems units rated for submeter accuracy. A total of 307 shovel tests were excavated in the course of this survey. The amount of heavily eroded, sloping terrain, coupled with the extensive impact from prior strip mining and silviculture, has greatly reduced or even negated the potential for many areas of the APE to contain intact subsurface or even surficial evidence of prior aboriginal or historic occupation. Photographic documentation was undertaken to provide evidence of the varying environments and disposition of the proposed project area. These photographs (Figures 6-19) are keyed to the topographic maps (Figures 20-23) showing their location and direction of capture.

Where exposed ground surface was present, initial investigations consisted of ground surface inspection. The locations included bare soil exposures along natural slopes, drainages, road cutbanks, road surfaces, and erosional surfaces. Where visibility was limited, shovel tests were excavated at 30 m intervals. Such areas were very limited in extent and consisted of landforms with relatively level settings (areas of less than 15 percent slope) and terraces adjacent to intermittent and permanent water courses. The 30 m interval subsurface testing method was also limited to those settings exhibiting an absence of disturbance from prior silviculture activities where subsequent erosion has removed near surface soil horizons. Lower probability areas were sampled at greater intervals of 60 m and included gently sloped and disturbed settings. Slopes greater than 15 percent were visually inspected. In some cases shovel testing was curtailed altogether due to the lack of intact near surface soil horizons.

Laboratory Methods and Collection Curation

All photographs, field notes, maps, and documentation pertinent to the survey will be curated at the Erskine Ramsay Archaeological Repository located at Moundville Archaeological Park. This repository meets Department of the Interior curation standards as defined under 36 CFR Part 79. A letter of agreement for curation, as required by Alabama Code 460-X-9, has been included as Appendix A.

Results

As a result of the field investigations no cultural materials were recovered, no archaeological sites were recorded, and no historic standing structures were identified. The majority of terrain with the APE is moderate to steep rolling uplands and would



Figure 6. Shovel Test 1 profile showing one of the deeper tests excavated in the southwestern portion of Survey Area A.



Figure 7. Shovel Test 15 profile showing shallow topsoil over subsoil in the southwestern portion of Survey Area A beside a drainage.



Figure 8. Shovel Test 58 profile along southern boundary of Survey Area A beside a drainage.



Figure 9. Shovel Test 164 profile showing sandy subsoil over very shallow topsoil in the north-central portion of Survey Area A.



Figure 10. Shovel Test 108 profile showing subsoil at the ground surface in the west-central portion of Survey Area A.



Figure 11. Small pines and push piles, view northeast.



Figure 12. Clearcut hillside with subsoil at surface, view northeast.



Figure 13. Clearcut area with subsoil at surface, view east.



Figure 14. Clearcut hillside, view southeast.



Figure 15. Clearcut and road with subsoil at surface, view southeast.



Figure 16. Eroded drainage ditch, view northeast.



Figure 17. Eroded drainage ditch, view west.



Figure 18. Eastern boundary of APE, I-65, view south.



Figure 19. Crooked Creek, view north.

not have provided landforms conducive for historic or prehistoric habitation. Furthermore, with the degree of ground disturbance and erosion resulting from mining, timber harvesting/silviculture and access road construction, the lack of cultural resource identification is not unexpected. Additionally, all of the 307 shovel tests revealed an extremely disturbed and/or eroded subsurface environment and all were negative for cultural material recovery.

Summary and Evaluation

During the course of the cultural resources survey, the area for the proposed

Black Warrior Minerals Mine No. 2 was found to consist of moderate to steeply sloped uplands with deeply eroded drainages. No new archaeological sites or historic standing structures were identified. The entirety of the APE has been heavily impacted by previous mining, logging, and subsequent erosion. No cultural materials were recovered from visual inspection of the ground surface or from subsurface shovel testing. The previous alterations to the landscape resulted in these areas as not being conducive to cultural material preservation.

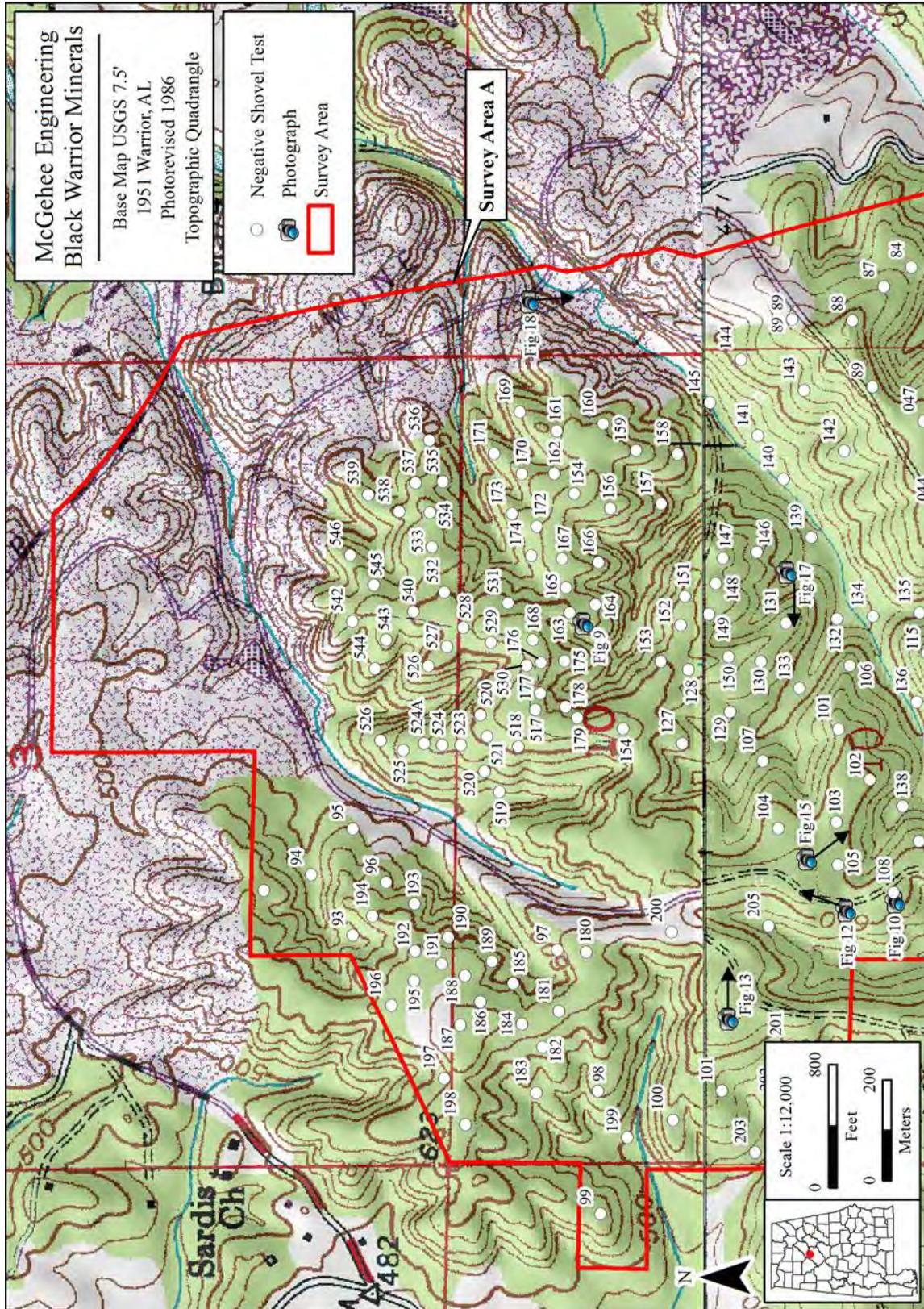


Figure 20. Shovel test map of the northern portion of Survey Area A.

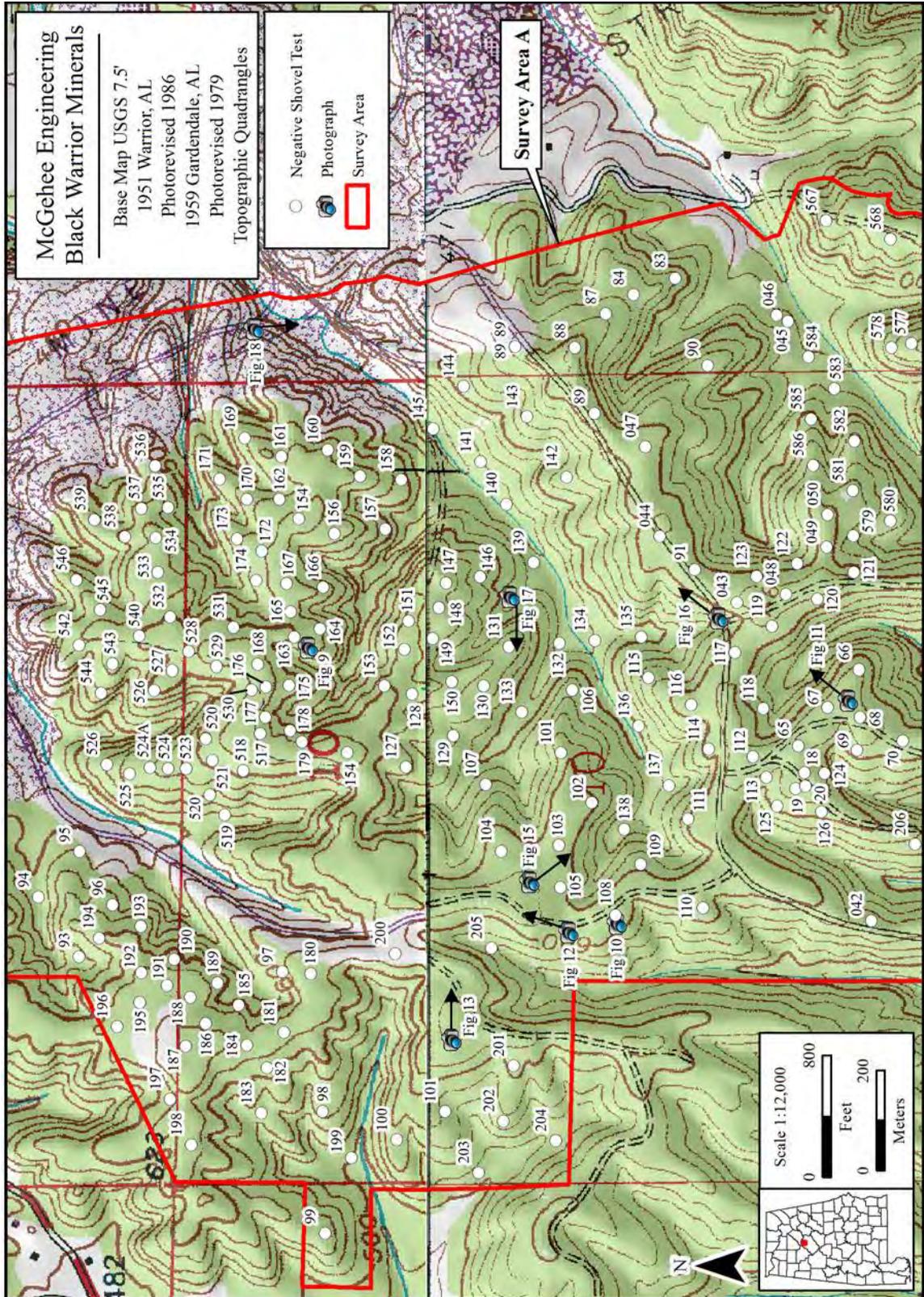


Figure 21. Shovel test map of the central portion of Survey Area A.

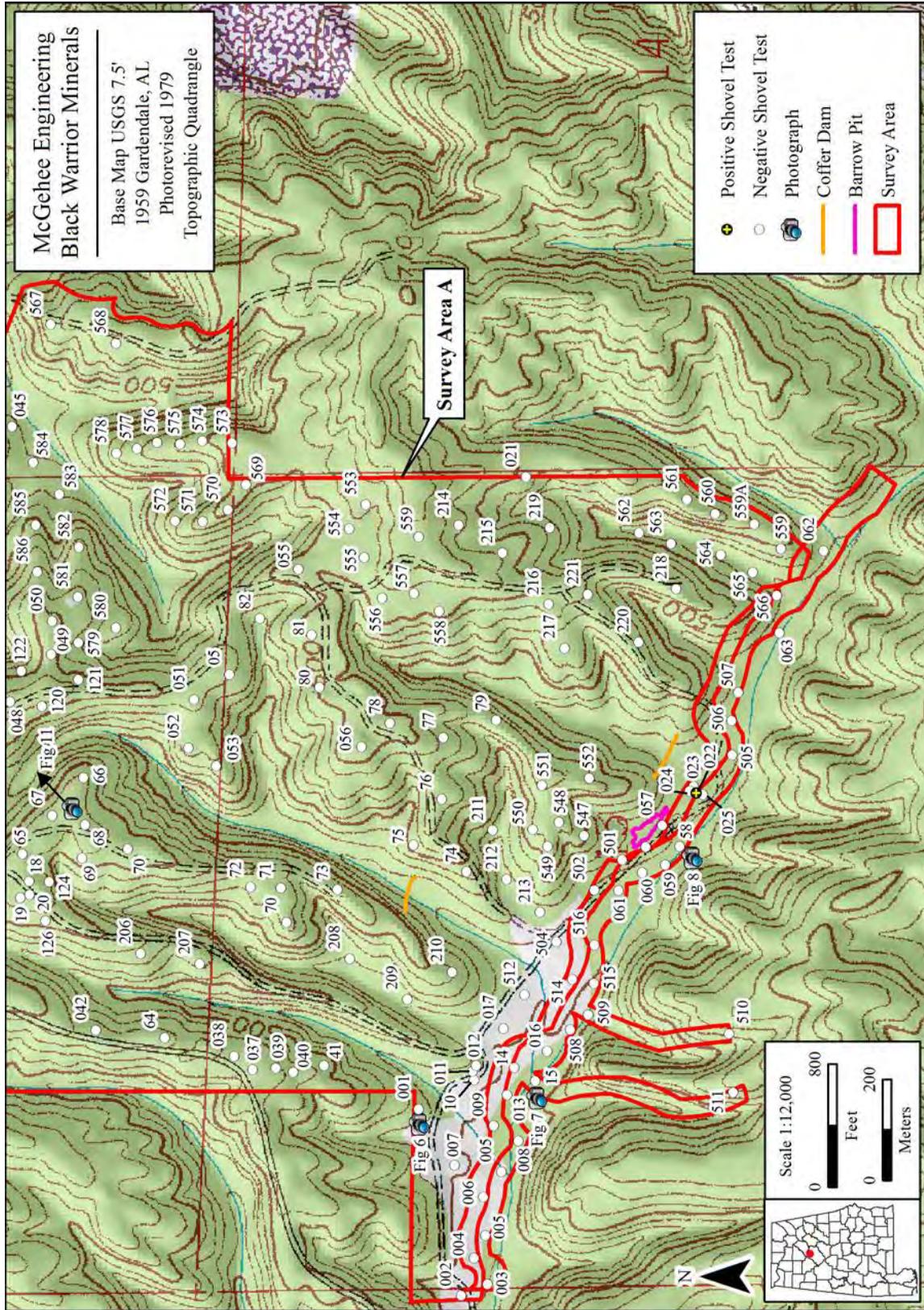


Figure 22. Shovel test map of the southern portion of Survey Area A.

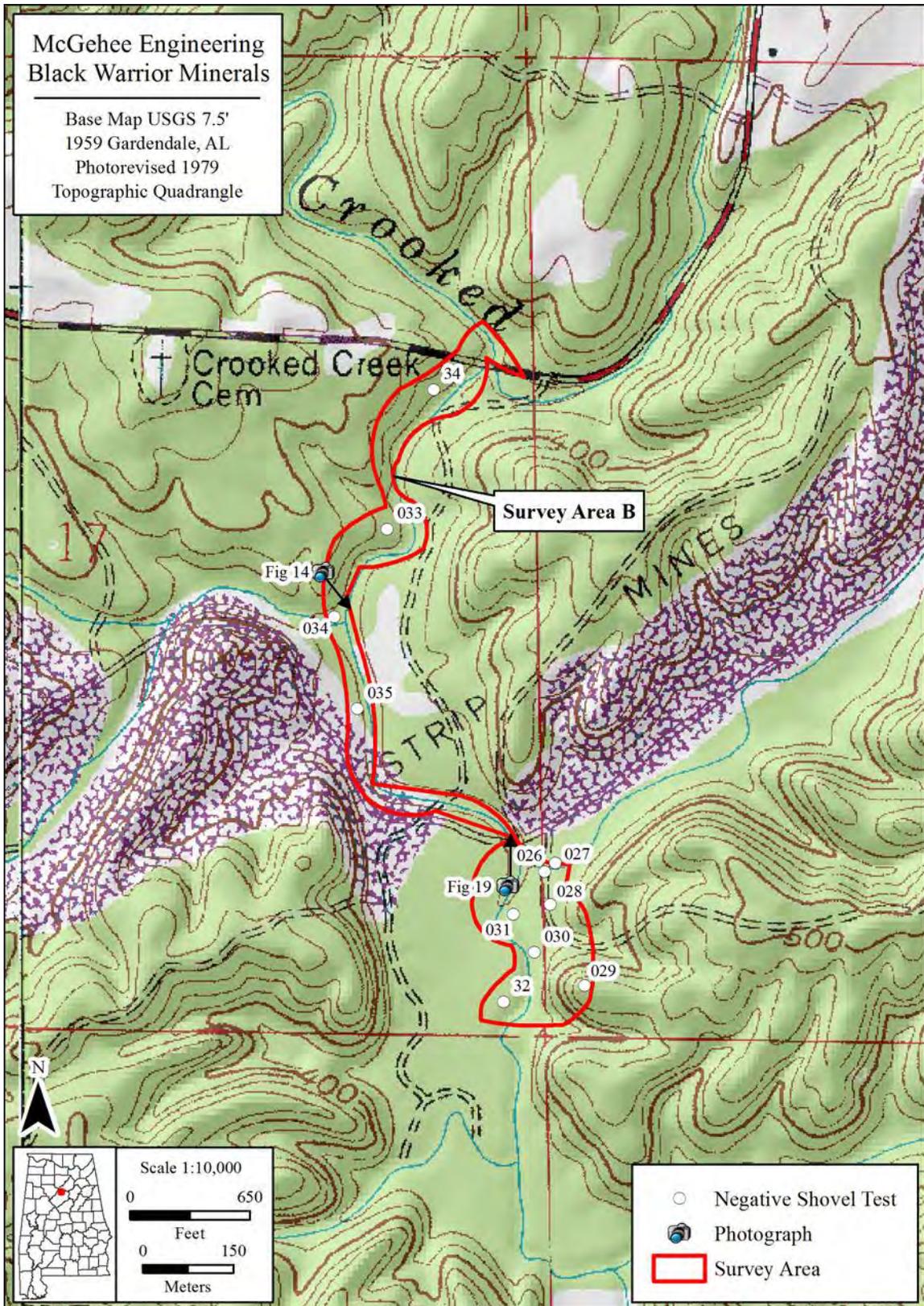


Figure 23. Shovel test map of Survey Area B.

Recommendations

During the course of this survey, no new archaeological sites were discovered within the boundaries of the proposed project area. Based on these findings, it is the opinion of this office that the proposed Black Warrior

Minerals Mine No. 2 will not have an adverse effect on any significant historic properties within the APE and a finding of no properties is recommended.

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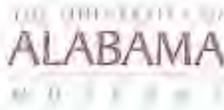
2010a *A Phase I Cultural Resources Survey of the Proposed Black Warrior Minerals, Inc., Mine No. 1 (Area 1) near Sardis, Jefferson County, Alabama.* Report submitted to Black Warrior Minerals, Jasper, Alabama by the Office of Archaeological Research, University of Alabama Museums, Tuscaloosa.

2010b *A Phase I Cultural Resources Survey of the Proposed Black Warrior Minerals, Inc., Mine No. 1 (Area 2) near Sardis, Jefferson County, Alabama.* Report submitted to Black Warrior Minerals, Jasper, Alabama by the Office of Archaeological Research, University of Alabama Museums, Tuscaloosa.

Watley, Eric S.

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APPENDIX A



October 25, 2013

Matthew D. Gage, Director
Office of Archaeological Research
University of Alabama Museums
13075 Mound State Parkway
Moundville, AL 35474

Dear Matt:

This letter is to confirm our agreement to provide curation services for all the materials generated by this project. As you know, we are recognized by a variety of Federal agencies as a repository meeting the standards in 36 CFR Part 79 and have formal agreements to provide curation under these guidelines to agencies such as the National Park Service, U.S. Fish and Wildlife Service, U.S. Soil Conservation Service, U.S. Army Corps of Engineers, Tennessee Valley Authority, National Forest Service, etc.

We appreciate having the opportunity to assist you with curation services in the past and look forward to working with you in the future.

Sincerely,

A handwritten signature in cursive script that reads "Eugene M. Futato".

Eugene M. Futato RPA
Deputy Director