A PHASE I CULTURAL RESOURCE SURVEY
FOR THE PROPOSED BLACK WARRIOR
MINERALS, INC. SEABOARD MINE/P-3937
REVISION R-5, TUSCALOOSA COUNTY,
ALABAMA

Prepared by
TERRAXPLORATIONS, INC.

Prepared for
PERC ENGINEERING COMPANY, INC.

October 2014
INTRODUCTION

TerraXplorations, Inc. (TerraX) of Tuscaloosa, Alabama was contracted by PERC Engineering Company, Inc. of Jasper, Alabama to conduct a cultural resource survey for the proposed Black Warrior Minerals, Inc. Seaboard Mine/P-3937 Revision R-5 in Tuscaloosa County, Alabama. The Phase I survey was performed on September 30, 2014 by Chris Kerns and Zach Gooch under the supervision of Paul D. Jackson, Principal Investigator. The purpose of this study was to determine if any prehistoric or historic properties exist within the limits of the survey area, and if so, to document and assess each based on the National Register of Historic Places (NRHP) criteria.

The project area, as identified by PERC Engineering Company, is an approximate 29-acre tract located northeast of Peterson and south of State Route 216 in Tuscaloosa County. The Louisville and Nashville Railroad borders a portion of the projects southern boundary. The subject property can be found on the 1974 Lake Nicol, Alabama, USGS 7.5’ series topographic quadrangle in the Southwest 1/4 of Section 33, Township 20 South, Range 8 West (Figure 1). Photographs depicting the present state of the land within the project area are provided (Figures 2-5).

PROJECT AREA ENVIRONMENT

The project area is located in Tuscaloosa County in the Warrior Basin District of the Cumberland Plateau Physiographic Region near its intersection with the Fall Line Hills District of the East Gulf Coastal Plain Physiographic Region. The survey area is characterized by gentle to steeply sloping ridges dissected by intermittent drainages. A few of these drainages feed small ponds located on the property. Elevations range from 420 to 520 feet (ft.) above mean sea level. Much of the property has been heavily impacted from previous strip mining. In addition, areas located outside of the former strip mine have suffered from dirt road construction and erosion as noted by severely deflated ridges. The project area is primarily covered by planted pine forest interspersed with undergrowth and some hardwoods.

A review of the Web Soil Survey (2014) identified three soil types within the project area including Montevallo-Nauvoo complex (15 to 45 percent slopes), Palmerdale very gravelly loam (6 to 45 percent slopes), and Smithdale fine sandy loam (6 to 15 percent slopes). Montevallo soils are created from loamy residuum weathered from shale, while Nauvoo soils are derived from loamy residuum weathered from shale and sandstone. Typical Montevallo soil profiles are comprised of channery loam underlain by very channery sandy loam and weathered bedrock. Generally, Nauvoo soil profiles consist of fine sandy loam followed by clay loam, sandy clay loam, and weathered bedrock.

Palmerdale very gravelly loam (6 to 45 percent slopes) is described as somewhat excessively drained soil occurring on the side slopes of ridges. This soil type is formed from gravelly mine spoil or earthy fill derived from sandstone and shale. A typical Palmerdale profile consists of very channery loam over very channery sandy loam.
Figure 1. Map showing the project area and nearby previously recorded archaeological sites (based on the 1974 Lake Nicol, Alabama; the 1974 (photorevised 1983) Brookwood, Alabama; the 1969 (photorevised 1978) Coaling, Alabama; and the 1969 (photorevised 1983) Cottondale, Alabama USGS 7.5’ series topographic quadrangles).
Figure 2. View of dirt road in northern portion of project area, facing South.

Figure 3. View of pond in eastern portion of project area, facing south.
Figure 4. View of central portion of project area within old strip mine, facing north.

Figure 5. View of southeastern portion project area outside of old strip mine, facing northwest.
Finally, Smithdale fine sandy loam (6 to 15 percent slopes) is a well-drained soil found on sloping ridges and formed from loamy fluviomarine deposits derived from sedimentary rock. A typical Smithdale profile consists of fine sandy loam underlain by sandy clay loam and sandy loam.

**LITERATURE AND DOCUMENT SEARCH**

Before conducting the fieldwork, TerraX performed a literature and document search in order to gather pertinent background information regarding the subject property and its surroundings. This research included inspections of the Alabama State Archaeological Site File (ASASF) (Office of Archaeological Research [OAR] 2014), the National Archaeological Database Bibliography (NADB) (OAR 2014), the Alabama Register of Landmarks and Heritage (ARLH) (Alabama Historical Commission [AHC] 2014), the National Register of Historic Places (NRHP) (National Park Service 2014), the *Directory of Underground Coal Mines in Alabama* (DeJarnette 1986) and the 1911 Tuscaloosa County soil survey map (United States Department of Agriculture 1911).

**Alabama State Archaeological Site File:** Research of the ASASF identified five previously recorded archaeological sites (1TU563, 1TU575, 1TU664, 1TU687, and 1TU689) within a mile of the project area (see Figure 1). All of these sites lie well outside of the survey area and thus will not be impacted by the proposed mining project. For information on these five sites refer to Table 1.

**National Archaeological Database Bibliography:** A search of the NADB identified one previous archaeological survey conducted within the current study area and nine other previous archaeological surveys within a mile of the proposed project area. For information on these previous surveys, refer to Table 2.

**Alabama Register of Landmarks and Heritage:** Examinations of the ARLH showed no listings for any historic properties within or adjacent to the study area.

**National Register of Historic Places:** The NRHP contained no listings for any historic properties within or adjacent to the study area.

**Directory of Underground Coal Mines in Alabama:** The coal mine directory listed no mines in Section 33, Township 20 South, Range 8 West.

**1911 Tuscaloosa County Soil Survey Map:** Inspections of the 1911 soil survey map showed no structures within or adjacent to the project area.
<table>
<thead>
<tr>
<th>Site Component</th>
<th>NRHP Eligibility</th>
<th>NRHP Site Recorder and Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>University of Alabama, 1993</td>
<td>Not Eligible</td>
<td>University of Alabama, 1993</td>
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<tr>
<td>University of Alabama, 1995</td>
<td>Underemined</td>
<td>University of Alabama, 1995</td>
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<td>University of Alabama, 1990</td>
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<td>Site Recorder and Date</td>
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<td>Site Number</td>
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<tr>
<td>University of Alabama, 1993</td>
<td>University of Alabama, 1993</td>
<td>University of Alabama, 1993</td>
</tr>
</tbody>
</table>

Table 1. Previously Recorded Archaeological Sites Within a One-Mile Radius of the Project Area.
<table>
<thead>
<tr>
<th>NADB Number</th>
<th>WITHIN PROPOSED PROJECT AREA</th>
<th>LOCATION (SECTION, TOWNSHIP, AND RANGE)</th>
<th>REPORT TITLE/RESULTS</th>
<th>REFERENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>4050347</td>
<td>Yes (a portion of the survey falls within the current project area)</td>
<td>Sections 29, 32, and 33, T20S, R8W; Sections 4, 5, 8, 17, and 20, T21S, R8W</td>
<td>An Archaeological Survey of Sixteen Proposed Exploratory Methane Gas Wells and Access Road Transects Northwest of Coal, Tuscaloosa County, Alabama. The Phase I survey identified two archaeological sites (1TU563 and 1TU564). Site 1TU563 lies within a mile of the project area.</td>
<td>University of Alabama (Oliphant 1990b)</td>
</tr>
<tr>
<td>4050349</td>
<td>No</td>
<td>Sections 28 and 33, T20S, R8W; Sections 3, 15, 16, and 29, T21S, R7W; and Sections 4, 8, and 15, T21S, R8W</td>
<td>An Archaeological and Historical Survey of Sixteen Exploratory Methane Gas Wells and Proposed Access Roads near Brookwood, Tuscaloosa County, Alabama. The survey led to the discovery of a single unknown aboriginal isolated find.</td>
<td>University of Alabama (Patterson 1990)</td>
</tr>
<tr>
<td>4050391</td>
<td>No</td>
<td>Sections 28, 29, 31, 32, and 33, T20S, R8W; Sections 2 and 16, T21S, R8W</td>
<td>An Archaeological Survey of Nineteen Proposed Exploratory Methane Gas Wells and Access Road Transects East of Peterson, Tuscaloosa County, Alabama. The investigation resulted in the identification of two prehistoric sites (1TU573 and 1TU574), both of which lie more than a mile from the current study area.</td>
<td>University of Alabama (Oliphant 1990a)</td>
</tr>
<tr>
<td>4050399</td>
<td>No</td>
<td>Survey area begins in Section 15, T21S, R8W, and ends in Section 20, T20S, R8W</td>
<td>A Reconnaissance Level Archaeological Survey for the Proposed Taurus Exploration Water Discharge Line in Eastern Tuscaloosa County, Alabama. The Phase I study discovered a single archaeological site, 1TU575. This site lies within a mile of the current study area and consists of an unknown aboriginal lithic scatter.</td>
<td>University of Alabama (Hollis 1990)</td>
</tr>
<tr>
<td>4050530</td>
<td>No</td>
<td>Section 32, T20S, R8W; Sections 4, 5, 9, 10, 16, and 17, T21S, R8W</td>
<td>A Cultural Resources Survey of the Proposed Cedar Cove No. 5 and Cedar Cove No. 6 Pipeline in Tuscaloosa County, Alabama. No cultural resources were found.</td>
<td>University of Alabama (Shaw 1991)</td>
</tr>
<tr>
<td>NADB Number</td>
<td>Report Title/Results Reference</td>
<td>Proposed Project Area</td>
<td>Location (Section, Township, and Range)</td>
<td>Findings</td>
</tr>
<tr>
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<tr>
<td>403048</td>
<td>Phase I Cultural Resource Survey of the Proposed Project Area. No cultural resources were found. Survey Area: Sections 32 and 33, T20S, R8W.</td>
<td>No</td>
<td>Sections 32 and 33, T20S, R8W</td>
<td></td>
</tr>
<tr>
<td>406572</td>
<td>A Cultural Resource Survey of the Proposed Project Area. No cultural resources were found. Survey Area: Sections 33, T120S, R8W.</td>
<td>No</td>
<td>Section 33, T120S, R8W</td>
<td></td>
</tr>
<tr>
<td>4062160</td>
<td>A Phase I Cultural Resource Survey of the Proposed Project Area. No cultural resources were found. Survey Area: Section 33, T20S, R8W.</td>
<td>No</td>
<td>Section 33, T20S</td>
<td></td>
</tr>
<tr>
<td>4057379</td>
<td>A Cultural Resource Survey of the Proposed Project Area. No cultural resources were found. Survey Area: Sections 1TU564. Site 1TU564 lies within a mile of the current project. Site 1TU564 represents an unknown aboriginal and 20th century nonaboriginal component. The Phase I study revisited Site 1TU564 and discovered four new archaeological sites (1TU686 - 1TU689). Sites 1TU687 and 1TU689 lie within a mile of the current project. Site 1TU687 represents a Woodland occupation and Site 1TU689 contains unknown aboriginal and 20th century nonaboriginal components. Survey Area: Sections 4, 5, 8, and 9, T20S, R8W.</td>
<td>No</td>
<td>Sections 4, 5, 8, and 9, T20S, R8W</td>
<td></td>
</tr>
<tr>
<td>4063572</td>
<td>A Phase I Cultural Resource Assessment of the Proposed Project Area. No archaeological sites were discovered; however, two historic structures were documented. Site 1TU664, the site of the former Taurus North Hurricane Creek Project, lies within a mile of the current project. Site 1TU664 represents an unknown aboriginal and 20th century nonaboriginal component. Survey Area: Sections 32 and 33, T20S, R8W.</td>
<td>No</td>
<td>Sections 32 and 33, T20S, R8W</td>
<td></td>
</tr>
<tr>
<td>4073048</td>
<td>A Phase I Cultural Resource Assessment for the Proposed Project Area. No cultural resources were found. Survey Area: Section 32, T20S, R8W.</td>
<td>No</td>
<td>Section 32, T20S</td>
<td></td>
</tr>
</tbody>
</table>

Table 2. Previous Archaeological Surveys Conducted Within a One-Mile Radius of the Proposed Project Area (Cont.).
FIELD METHODS

The Phase I survey was guided by procedural standards created by the Alabama Council of Professional Archaeologists in concurrence with the Alabama Historical Commission’s (2002) specifications as outlined in the Policy for Archaeological Surveying and Testing in Alabama. Land coverage requirements were achieved by walking and visually inspecting the entire survey area. Any exposed surfaces were carefully examined for cultural material. For areas determined to have a low probability of containing archaeological deposits, such as areas disturbed from previous strip mining and areas with steep slopes, pedestrian walkover was the primary method of survey. For medium to high probability areas, systematic subsurface testing was employed. Typically, subsurface testing is performed judgmentally or along 30-m interval transects comprised of shovel tests spaced 30 m apart. Standard shovel tests consist of 30 centimeter (cm) diameter cylindrical holes excavated to the top of the sterile subsoil layer. Soils from each test are screened through 1/4-inch (0.64 cm) hardware cloth for the purpose of recovering any cultural material that may exist at that location. When cultural material is encountered, the material is sorted by provenience and placed into bags labeled with the pertinent excavation information before being transported to TerraX’s laboratory.

The field investigation included the placement of 13 shovel test transects within the project area outside of the previously disturbed strip mine areas, which were visually inspected (Figure 6). A total of 80 shovel tests were attempted along these 13 transects during this project. Of these tests, 78 were culturally sterile and two were not excavated due to previous mining disturbance.

LABORATORY METHODS AND COLLECTION CURATION

All cultural materials recovered during field projects are delivered to TerraX’s laboratory in Tuscaloosa, Alabama for processing. Here, materials are sorted by provenience, cleaned, and analyzed. Along with the cultural material, all project records, photographs, and maps produced while conducting the investigation are transported for curation at the Office of Archaeological Research, Erskine Ramsay Curation Facility, University of Alabama Museums, Moundville, Alabama. A copy of the curation agreement can be found in Appendix A. No cultural material was recovered during this project.

ARCHAEOLOGICAL SURVEY RESULTS

Both subsurface and surface examinations were conducted within the project area. A total of 80 shovel tests were attempted along 13 transects placed outside of the previously disturbed strip mine area. Of these tests, 78 produced negative results and two were not excavated due to previous mining disturbance. All of the excavated tests exposed deflated soils with many of these tests encountering clay subsoil at the surface. In areas where topsoil did occur, typical soil profiles consisted of 3 to 20 cm of grayish brown to yellowish brown sandy loam underlain by strong brown to yellowish brown sandy clay to clay subsoil containing heavy gravel. Visual examinations were conducted of the entire survey area paying close attention to areas of exposed surfaces; however, other than some modern trash, no cultural material was observed.
Figure 6. Map showing the project area boundary, shovel test transects, and previously disturbed strip mining area (based on the 1974 Lake Nicol, Alabama, USGS 7.5’ series topographic quadrangle).
CONCLUSIONS AND RECOMMENDATIONS

TerraX, under contract with PERC Engineering Company, performed the Phase I cultural resource survey for the proposed Black Warrior Minerals, Inc. Seaboard Mine/P-3937 Revision R-5 in Tuscaloosa County, Alabama, in compliance with federal and state regulations. The Phase I survey was performed on September 30, 2014 by Chris Kerns and Zach Gooch under the supervision of Paul D. Jackson, Principal Investigator. The archaeological investigation of the subject property failed to locate any prehistoric or historic resources and found the land to be significantly disturbed from previous strip mining and erosion. Based on the findings of this investigation, TerraX recommends the subject property be cleared in regards to cultural resource concerns and that the proposed mining project be allowed to proceed.

Kenny Pearce
Staff Archaeologist

Paul D. Jackson
Principal Investigator
REFERENCES

Alabama Historical Commission


DeJarnette, Donald W.

Gilliland, Eric J.
1992 An Archaeological Reconnaissance Survey of Fifteen Proposed Methane Gas Wells and Associated Road Transects for the Taurus North Hurricane Creek Project, AFE #TC0192. Prepared for Dames and Moore, Northport, Alabama. Prepared by the University of Alabama, Division of Archaeology, Moundville, Alabama.

Hartzell, Matthew D.

Hollis, John M.
1990 A Reconnaissance Level Archaeological Survey for the Proposed Taurus Exploration Water Discharge Line in Eastern Tuscaloosa County, Alabama. Prepared for Dames and Moore, Atlanta, Georgia. Prepared by the University of Alabama, Division of Archaeology, Moundville, Alabama.

Lolley, Terry L.

National Park Service

Office of Archaeological Research

Oliphant, Todd A.
1990a *An Archaeological Survey of Nineteen Proposed Exploratory Methane Gas Wells and Access Road Transects East of Peterson, Tuscaloosa County, Alabama.* Prepared for Dames and Moore, Atlanta, Georgia. Prepared by the University of Alabama, Division of Archaeology, Moundville, Alabama.

1990b *An Archaeological Survey of Sixteen Proposed Exploratory Methane Gas Wells and Access Road Transects Northwest of Coaling, Tuscaloosa County, Alabama.* Prepared for Dames and Moore, Atlanta, Georgia. Prepared by the University of Alabama, Division of Archaeology, Moundville, Alabama.

Patterson, Paul
1990 *An Archaeological and Historical Survey of Sixteen Exploratory Methane Gas Wells and Proposed Access Roads near Brookwood, Tuscaloosa County, Alabama.* Prepared for Dames and Moore, Atlanta, Georgia. Prepared by the University of Alabama, Division of Archaeology, Moundville, Alabama.

Ryba, Beth A.

Shaw, Scott

Smith, Patrick

United States Department of Agriculture (USDA)
1911 Tuscaloosa County Soil Survey Map. USDA, Washington, D.C. Available online at [http://alabamamaps.ua.edu/historicalmaps/counties/tuscaloosa/tuscaloosa.html](http://alabamamaps.ua.edu/historicalmaps/counties/tuscaloosa/tuscaloosa.html).

Web Soil Survey
APPENDIX A
CURATION LETTER
June 5, 2013

Paul Jackson
TerraXplorations
3523 18th Avenue NE
Tuscaloosa AL 35406

Dear Paul:

As per your request, this letter is to confirm our standing agreement with you to provide curation services to TerraXplorations on an as-needed basis. 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.

Please be advised that once a year we must be notified of all reports in which we were named as the repository. Project collections must be submitted within one calendar year of completion. Small projects may be compiled for periodic submission. The AHC survey policy specifies which materials must be curated (Administrative Code of Alabama, Chapter 460-X-9). Renewal of this agreement is contingent upon compliance.

We appreciate this opportunity to be of assistance and look forward to working with you in the future.

Sincerely,

Eugene M. Futato RPA
Deputy Director

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Fax: (205) 371-2494