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Office of Archaeological Research

March 25, 2010

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Mr. Jerry W. Williams
Task Engineering Management, Inc.
2832 Monte Deste Drive
Birmingham, Alabama 35216

OAR PROJECT NUMBER: 10-137

Dear Mr. Williams:

Please find enclosed for your company a copy of our recent report entitled "A Phase I Archaeological Survey of 885 Acres for the Proposed Bull Gap Mine in Blount County, Alabama", by Samuel D. Mizelle, II of our staff. Please note that SHPO has 30 days to comment on our findings.

It has been a pleasure to be of service to Task Engineering Management, Inc. Please feel free to call for further information or services.

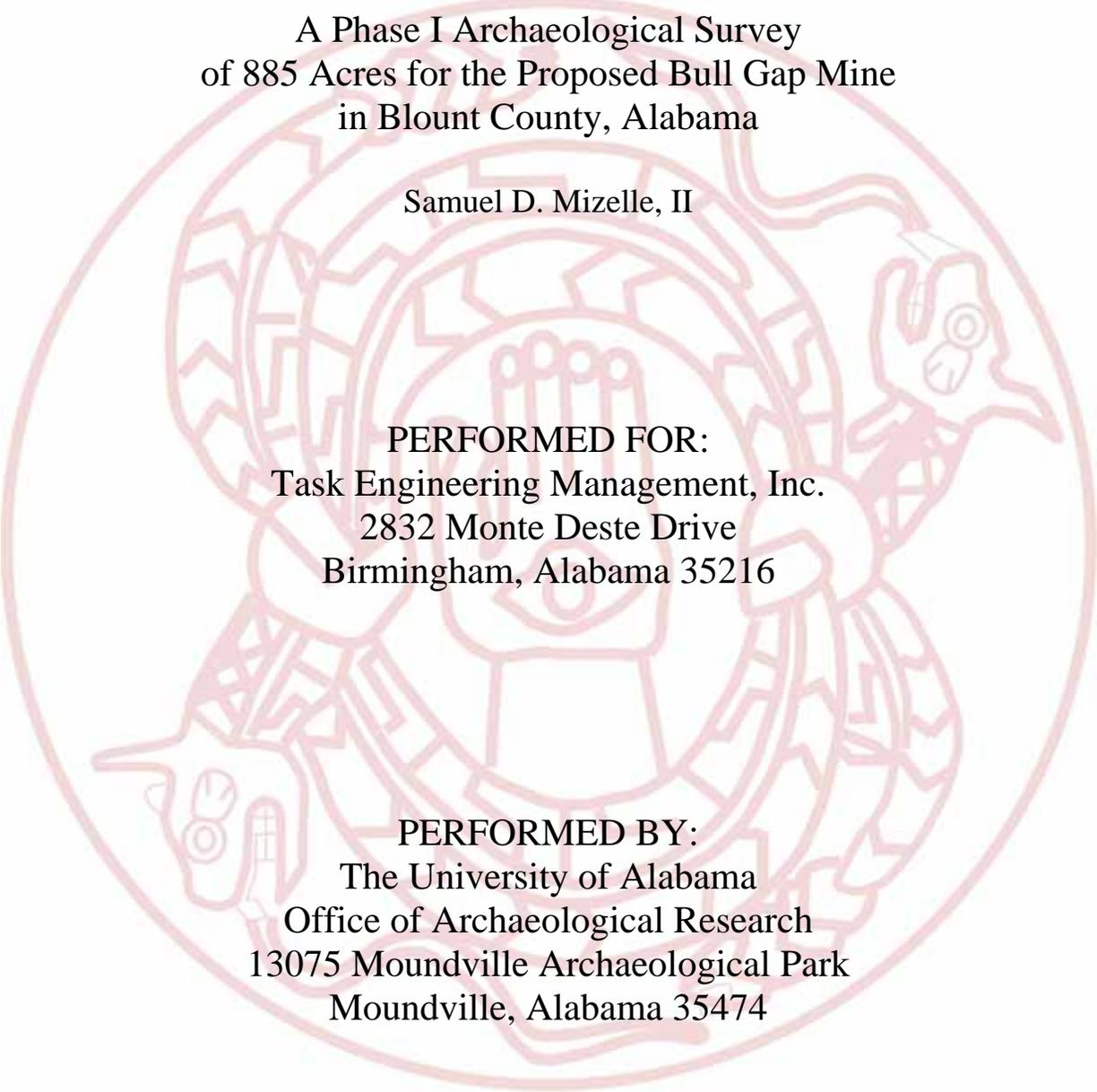
Sincerely,



Eugene M. Futato/Deputy Director
The University of Alabama
Office of Archaeological Research

EMF:tkw
FILE:2009-10SURVEY.FCL/1

Enclosures: Survey Report
Invoice for Professional Services



A Phase I Archaeological Survey
of 885 Acres for the Proposed Bull Gap Mine
in Blount County, Alabama

Samuel D. Mizelle, II

PERFORMED FOR:
Task Engineering Management, Inc.
2832 Monte Deste Drive
Birmingham, Alabama 35216

PERFORMED BY:
The University of Alabama
Office of Archaeological Research
13075 Moundville Archaeological Park
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MARCH 2010

OFFICE OF ARCHAEOLOGICAL RESEARCH

The University of Alabama

*University of Alabama Museums
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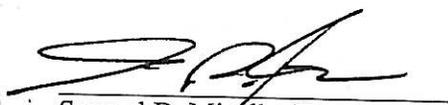
A Phase I Archaeological Survey of 885 Acres for the Proposed Bull
Gap Mine in Blount County, Alabama

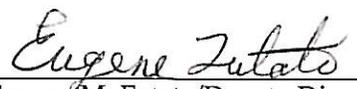
OAR PROJECT NUMBER: 10-137

PERFORMED FOR: Task Engineering Management, Inc.
2832 Monte Deste Drive
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Attn: Mr. Jerry W. Williams

PERFORMED BY: Samuel D. Mizelle, II, Cultural Resources Investigator
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DATE PERFORMED: March 1-5, 2010


Samuel D. Mizelle, II
Cultural Resources Investigator
Office of Archaeological Research


Eugene M. Futato/Deputy Director
The University of Alabama
Office of Archaeological Research

*A Phase I Archaeological Survey of 885 Acres
for the Proposed Bull Gap Mine in Blount County, Alabama*

Samuel D. Mizelle, II

Introduction

The University of Alabama, Office of Archaeological Research (OAR) was contracted by Task Engineering, LLC to perform a cultural resources reconnaissance survey of approximately 885 acres for the proposed Bull Gap Mine project in Blount County, Alabama. Samuel D. Mizelle, II (Cultural Resources Investigator) and John F. Lieb (Cultural Resources Assistant) conducted the survey, and Mr. Mizelle and Eugene M. Futato served as Co-Principal Investigators for the project. The pedestrian survey was conducted during the period of March 1–5, 2010 to locate and identify any archaeological sites or historic standing structures within the survey boundaries, assess their archeological significance, and provide eligibility recommendations based on the guidelines set forth by the National Historic Preservation Act and the Alabama Historical Commission.

Literature and Document Search

The Alabama State Site File (ASSF), housed at OAR, contains no previously recorded sites within the project area. There are four previously recorded sites within a one mile vicinity of the project area (1Bt87, 1Bt106, 1Bt107, and 1Bt108), located on the west side on Straight Mountain (Figure 1) (OAR 2002). Only 1Bt106 has been investigated beyond a reconnaissance level, but was determined not to be eligible for inclusion in the National Register of Historic Places (NRHP). None of the remaining three sites were recommended for additional testing. The National Archaeological Database Bibliography (NADB) lists no previous surveys conducted within the project area. Neither the NRHP nor the Alabama Register of Landmarks and Heritage list any properties within the immediate vicinity of the project area.

Environmental Setting

As seen on the Altoona and Hyatt Gap, Alabama USGS 7.5 minute topographic maps, the study areas are located in Sections 8, 9, 16, 17, 18, and 19 of T12S, R3E (Figure 1). The project area lies within the Blount Mountain district of the Cumberland Plateau physiographic section. This district is a “submaturely dissected synclinal sandstone and shale plateau of moderate relief” (Sapp and Emplaincourt 1975). Topographically, the project has elevations ranging from approximately 1000 to 1240 feet AMSL.

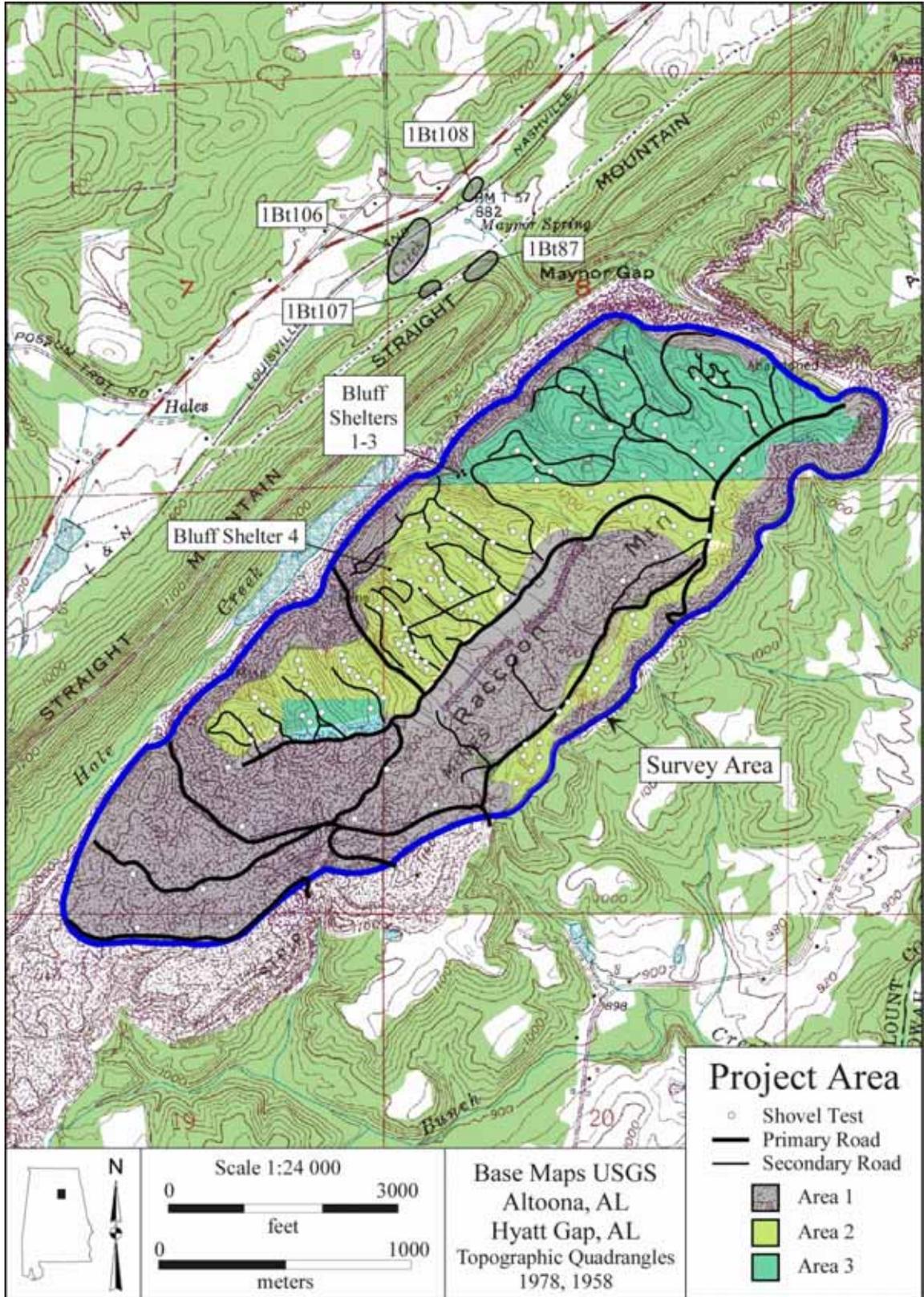


Figure 1. View of project area, shovel tests and roads as seen on Altoona and Hyatt Gap USGS topographic maps.

The National Cooperative Soil Survey for Blount County (NCSS 2007) classifies two soil types within the survey area: Montevallo-Townley complex, 15-45 percent slopes (54.5% of survey area) and Palmerdale very channery silt loam, 2-60 percent slopes (45.5% of survey area) (Figure 2). The Soil Survey of Blount County, Alabama (Bowen et al. 1979) describes the two soil types as follows below:

Montevallo-Townley complex: The soils in this complex are on rough hilly uplands that have narrow winding ridgetops and steep side slopes that are dissected by drainageways and intermittent streams. Because of steep slopes and a very high hazard of erosion, this complex is not suited to cultivated crops; it is better suited to woodland. Most of the acreage is second-growth pine and mixed hardwoods.

Palmerdale Series: The Palmerdale series consists of deep, somewhat excessively drained, very shaly soils. These soils formed in spoil material derived from strip mining of coal. They are gently rolling to very steep. Most of the acreage is idle, but a few areas have been planted to pine, and a few small areas have been smoothed and are in pasture. This soil is suited to pine trees.

As evident from the soil associations and map symbology on the USGS topographic map, approximately 485 acres of the project area have been previously mined. The impact of previous mining activities is documented in the field methods portion of this report. This portion of the project lands is referred to as Area 1, and offered virtually no potential for intact cultural deposits. The vegetation in Area 1 consists of approximately 20-30 year old planted pines mixed with some hardwoods and assorted scrub vegetation.

Area 2 is approximately 240 acres, and primarily contains mixed hardwoods (90%) and a few pine trees. While this area presented the best potential for undisturbed archaeological sites, site probability was low to moderate at best. Most of the rather narrow ridges have deeply cut logging and/or mine access roads extending along their spines, and several roads that drop down into the drainages as well. Consistent with the Montevallo-Townley complex soils, the drainages were steeply incised, with slopes ranging from 15-45 percent.

Area 3, though not previously mined, offered little potential for intact cultural deposits. Classified in this report by the vegetative cover, Area 3 is primarily in Section 8 (145 acres), and a small portion of Section 18 (15 acres). These areas are densely populated with small diameter pine trees that are probably less than 10 years old. In addition to recent timbering activities, the area is riddled with old logging roads and access roads to the surrounding mining areas. There is an abundance of pushpiles located in Area 3, further diminishing the probability of undisturbed archaeological sites.

The three areas classified are color coded on Figure 1, but are equally as apparent on the aerial photograph (Figure 3). The pine trees are considerably taller in the previously mined Area 1, and the high wall features from mining can be seen around the entire perimeter of the project area. Also visible are the more barren areas, covered primarily by dense scrub vegetation.

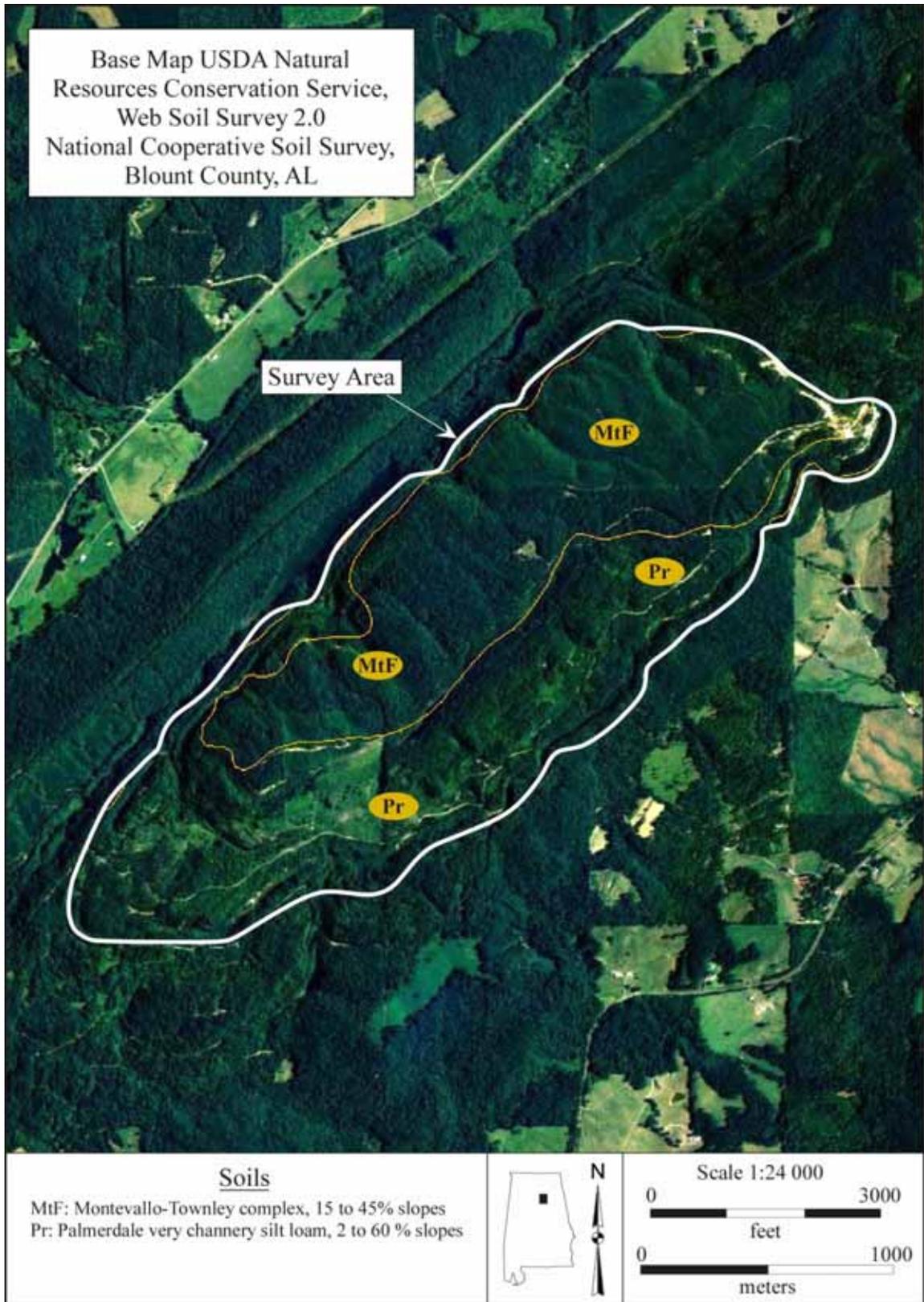


Figure 2. Soil associations within project area.

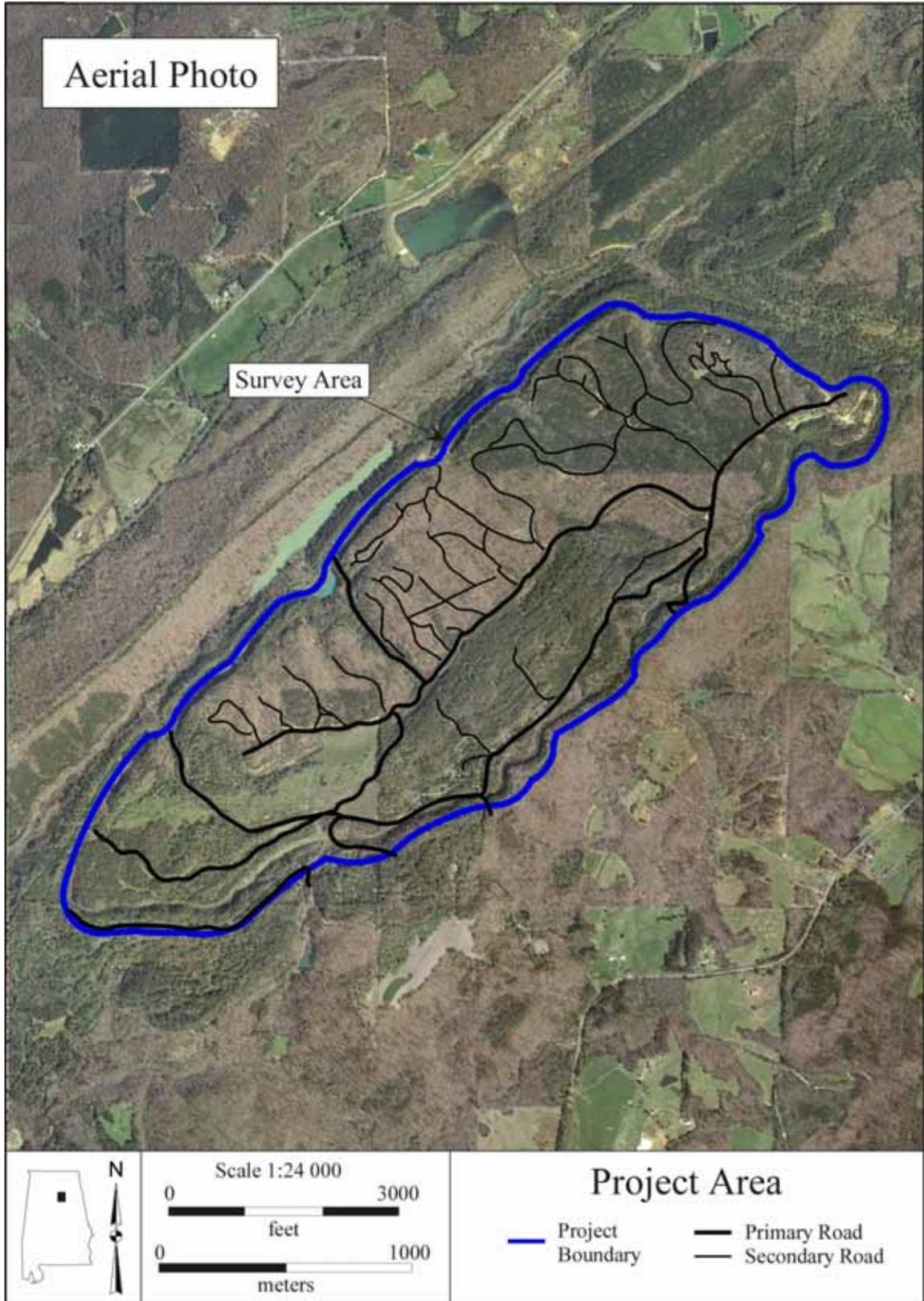


Figure 3. Project area as seen on aerial photograph.

Taken during the winter months, the hardwoods in Area 2 appear as a brownish color on the aerial photograph. Finally, the dense small diameter pine trees of Area 3 are a distinct contrast along the southern boundary of Section 8 and the northeast $\frac{1}{4}$ of the southeastern $\frac{1}{4}$ of Section 18.

Field Methods

The field survey implemented standard survey techniques, and followed the guidelines set forth by the Alabama Historical Commission. Field investigations were conducted by a pedestrian reconnaissance using visual inspection of exposed ground surfaces, as well as subsurface testing. All shovel tests measured 30 cm in diameter and were excavated to a depth of at least 30 cm or until sterile subsoil or bedrock was encountered. All excavated soils were screened through 6 mm wire mesh to recover cultural materials. The extensive road networks throughout the project area had moderate to good surface visibility, as did many areas where exposed subsoil was found at the ground surface. The project area was walked over in its entirety, including the steep slopes and drainages to ensure no bluff shelters or historic features were missed. Numerous photographs were taken throughout the project area to document the degree of disturbance, soil profiles, vegetation and topography. The location and direction of the photographs are plotted on Figure 37. A total of 130 shovel tests was excavated, the locations of which can be found on Figure 1. Shovel testing was not conducted on slopes in excess of 15%. The shovel testing intervals were increased in areas that were obviously disturbed by mining and timbering activities.

Limited shovel testing was conducting in the previously mined Area 1, primarily to verify the degree of disturbance. This area was easily identifiable based upon the vegetation (or lack thereof), mining spoil piles and highwalls (Figures 4-13). Visual inspection of the barren ground surface precluded the need for testing in many areas (Figure 14) and a quick flip of the thin ground cover revealed the degree of disturbance across the acreage contained in Area 1 (Figure 15).

Areas 2 and 3 were more thoroughly tested, though the degree of disturbance in Area 3 did not warrant systematic shovel testing at 30 meter intervals. Both of these areas contained road networks that extended down virtually every ridgeline, and Area 3 contained hundreds of pushpiles, most likely attributable to road building, timber clearing and stump removal (Figures 16-18). Portions of Area 3 were void of almost any topsoil, and pine tree growth was stunted from lack of nutrients (Figure 19).

While Area 2 offered the best potential for intact cultural deposits, site probability was still relatively low due to the topography and the lack of a substantial water source nearby. Site probability was further diminished by the deeply cut roads along the ridgelines and even a few on the side slopes leading into the steeply incised drainages (Figures 20-22).



Figure 4. View of previous mining area and reclamation pine trees.



Figure 5. View of previously mined area and scrub vegetation.



Figure 6. View of staging area leading to highwall along northern side of project area.



Figure 7. View of previously mined area.



Figure 8. View of spoil piles in previously mined area.



Figure 9. Spoil pile within Area 1.



Figure 10. Highwall along western perimeter of project area.



Figure 11. Highwall on southwestern perimeter of project area.



Figure 12. View of young pine trees in previously mined area.



Figure 13. View of secondary growth, slope, and rock outcrops in previously mined area.



Figure 14. View of barren ground surface in Area 1.



Figure 15. View of shovel test in Area 1.



Figure 16. Small diameter pine trees in Area 3.



Figure 17. General view of vegetation and pushpiles in Area 3.



Figure 18. View of pushpiles, relic logging road and vegetation in Area 3.



Figure 19. View of planted pines in Area 3.



Figure 20. View of road cut extending west along ridgeline in Area 2.



Figure 21. View of deep road cut and slope in south end of Area 2.



Figure 22. View of ridgeline road and cutback leading into drainage.

Soil profiles even in relatively undisturbed areas were generally lacking a well developed A Horizon (Figures 23 and 24). A typical profile consisted of 2-5 centimeters (cm) of a humic layer, underlain by 20-30 cm of 10YR 7/4 (very pale brown) sandy loam, followed by a 10YR 7/8 (yellow) sandy clay. Percentages of sandstone and shale gravels increased with depth.

Due to the narrow widths of the landforms and the road disturbances, only a few of the ridges required more than one transect to adequately cover testing requirements. A considerable amount of ground disturbance has occurred along the primary road that winds through Area 2 (Figure 25). In addition, several of the broader landforms that appear more promising on the topographic map are occupied by game plots (Figures 3 and 26). Game plots were examined for cultural materials using a combination of surface inspection and shovel testing.

As viewed on the topographic map and as described in the Montevallo-Townley complex soil association, Areas 2 and 3 are characterized by steep drainages (15-45% slopes) between the ridgelines (Figures 27 and 28). All drainages were inspected via pedestrian walkover for bluff shelters and historic features. Four bluff shelters were identified by walking the steep side slopes. Three of these were too small (less than one meter tall or deep) to have had much utility, and had no accumulation of topsoil atop the parent rock material (Figures 29-31). All three of these are in close proximity to one another on a south facing slope, overlooking a very steep drainage. They are located near the western boundary of the project area along the southern line of Section 8.



Figure 23. View of shovel test.



Figure 24. View of shovel test.



Figure 25. View of ground disturbance in Area 2.



Figure 26. View of game plot in Area 2.



Figure 27. View of steep side slope in Area 2.



Figure 28. View of steeply incised drainage in Area 2.



Figure 29. View of Bluff Shelter 1.



Figure 30. View of Bluff Shelter 2.



Figure 31. View of Bluff Shelter 3.

The fourth bluff shelter is also located on a south facing slope. It is slightly larger than the other three, though not big enough for anything more than a very temporary shelter (Figure 32). Unfortunately, this bluff shelter has been looted. It has relatively good access from a road that extends along the ridgeline above, and is only 15-20 meters down the hillside. The looter hole is an irregular shape, as it has been excavated down to the underlying rock materials, with virtually all soils removed (Figure 33). A profile and plan view sketch can be seen in Figure 34. The shelter was full of leaves, but careful probing with a shovel and trowel confirmed that the entire interior had been picked over. Due to the steep drop off below the shelter, only one shovel test was possible at this location, placed along the drip line just east of the looter's hole. One piece of Bangor chert debitage (0.25 inch with a small amount of cortex) was found at approximately 10 cm below surface (cmbs). The shovel test was terminated at 27 cmbs, where solid rock was encountered. Attempts were made to expand the perimeter of the shovel test outward, but rock impediments prevented expansion of the test much beyond its original size. The limited testing potential (due to the slope and protruding rock outcrops along the hillside) is visible in the figures associated with this bluff shelter.

A makeshift screen was found a few meters down the steep hillside (Figure 35). It had been propped up against a tree to provide a surface to screen the excavated soils through. The screened dirt pile was examined for any debitage or other small artifacts that might have been missed or discarded, but yielded no cultural materials (Figure 36). The back dirt pile was rather small and had relatively high gravel content. This, combined with several surrounding loose stones between the shelter and the back dirt pile, suggests only a moderate amount of soil was



Figure 32. View of Bluff Shelter 4.



Figure 33. View of interior of Bluff Shelter 4 with shovel in looter's hole.

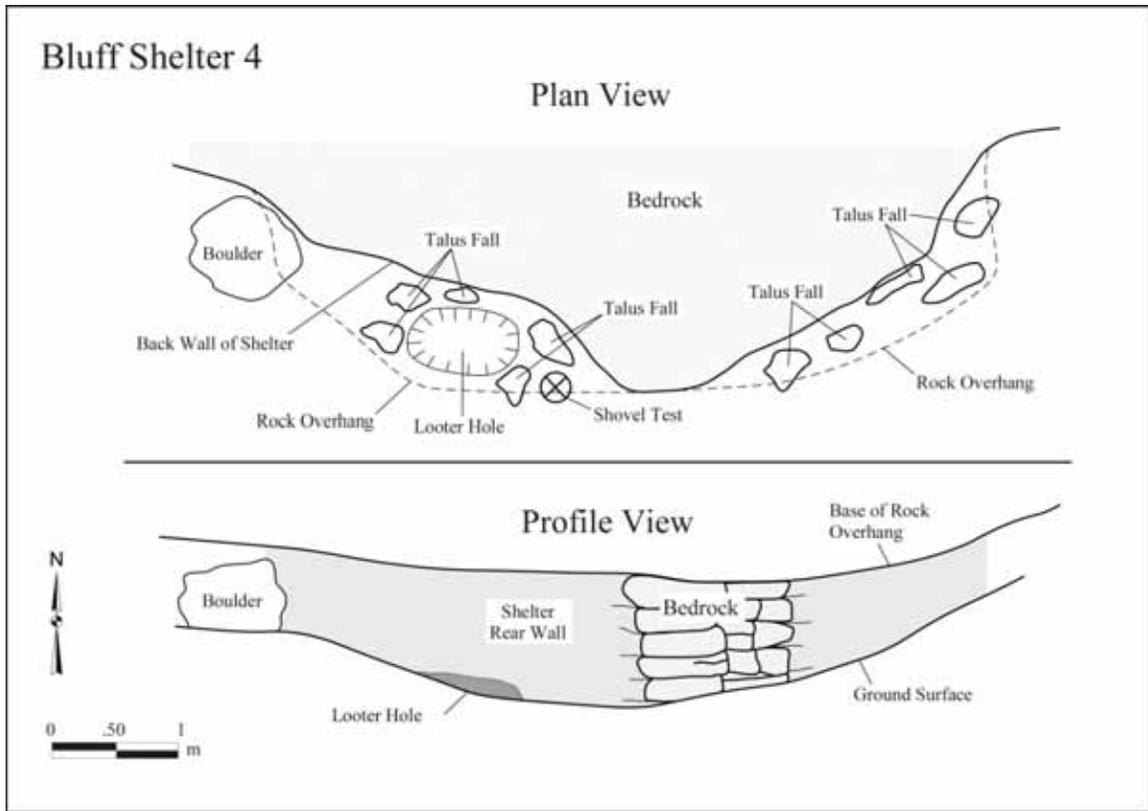


Figure 34. Profile and plan view of Bluff Shelter 4.



Figure 35. View of looter's screen, slope and rock outcrops below Bluff Shelter 4.



Figure 36. View of inspection of looter's spoil pile for artifacts.

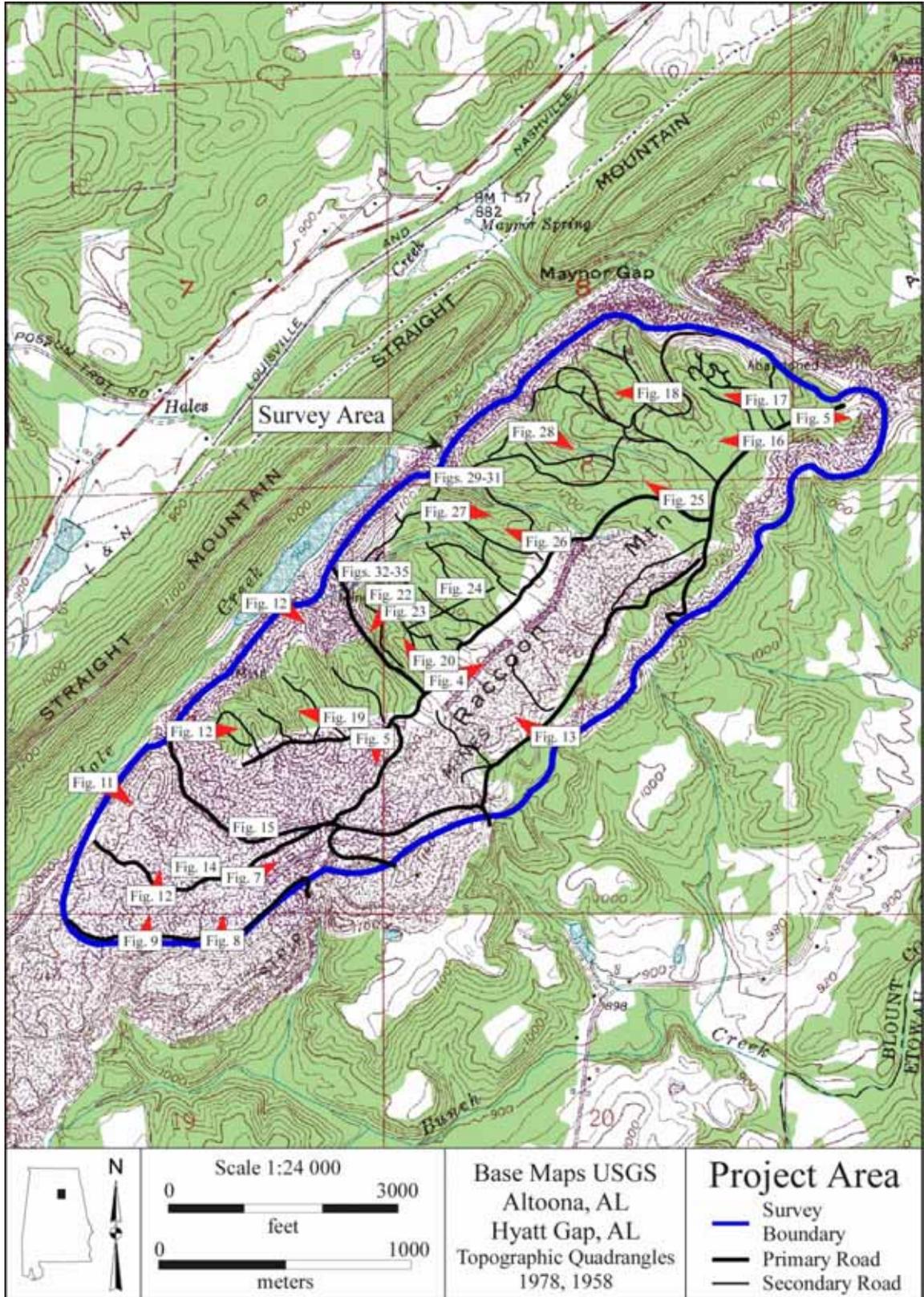


Figure 37. Map of photograph locations and direction included in report.

within the bluff shelter to before it was looted. Since only one piece of debitage was found at this location, it was recorded as an isolated find. Due to the lack of intact deposits within the shelter, combined with the steep slope and minimal topsoil on the hillside, no additional testing appears warranted or feasible.

Laboratory Methods and Collection Curation

All artifacts, 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.

Results and Recommendations

During the course of the survey, no prehistoric or historic archaeological sites were identified. Previous mining, clearcutting, and other timbering activities have heavily disturbed a large portion of the project area. The rugged terrain of even the less disturbed areas and the lack of a perennial water source offered limited potential for significant resources to be located within the project lands. Essentially, no A horizon was present in any of the 130 shovel tests performed. One piece of chert debitage was the sole artifact recovered from the project lands, found in Area 2 in the vicinity of a small bluff shelter. This shelter had been previously looted, and likely would not have yielded a significant amount of cultural materials due to its size and lack of deeply deposited soils. Therefore, based on the absence of any significant cultural materials or historic standing structures within the vicinity, this office recommends a finding of no properties.

References Cited

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1979 *Soil Survey of Blount County, Alabama*. United States Department of Agriculture, Washington.
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1975 *Physiographic Regions of Alabama*. Map 168. Geological Survey of Alabama, University.

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