

MRS CONSULTANTS, LLC.

Cultural Resource Specialists Archaeologists NHPA Section 106 Consultants

A Phase I Cultural Resources Survey of the Proposed Alden Resources Kimberly Mine Expansion, Jefferson County, Alabama

By

**Beth A. Ryba
Principal Investigator**

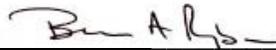


**PERFORMED BY:
MRS Consultants, LLC.
P.O. Box 3146
Tuscaloosa, Alabama 35403**

**PERFORMED FOR:
McGehee Engineering Corporation
P.O. Box 3431
Jasper, AL 35502**

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Project Information:

Project Name: Kimberly Mine Expansion

Project Type: Surface Mine

Survey Area Size: 50 acres

Date of Survey: December 12, 2013

Locational Data:

County/State: Jefferson County, AL

Topographic Map: Warrior, AL

Township: 14S **Range:** 3W **Section:** 3

Township: 15S **Range:** 3W **Section:** 34

INTRODUCTION

MRS Consultants, LLC. was contracted by McGehee Engineering Corporation to perform a Phase I cultural resources assessment for the Alden Resources Kimberly Mine Expansion in Jefferson County, Alabama. A pedestrian reconnaissance survey was conducted at the project area to determine the existence of archaeological sites, cemeteries, and historic structures. Jeffery M. Meyer and Samuel J. Pearson conducted the field survey on December 12, 2013. Beth A. Ryba serves as Principal Investigator for the project

Located in northernmost Jefferson County, approximately two miles to the west of Kimberly, Alabama, the proposed Alden Resources Mine Expansion can be found in Section 34, T14S, R3W and Section 3, T15S, R3W on the USGS 7.5' Warrior, Alabama quadrangle (Figure 1). The survey area is approximately 50 acres in size and the irregularly shaped tract of land is immediately south of the existing Kimberly Mine. The area is characterized as upland terrain consisting of alternating ridges and spurs with steeply sloping sides. Elevations range from 400 ft to 510 ft AMSL. The property has been subject to prior surface mining and logging activities and, as such, the area is severely disturbed and highly eroded. The landscape is dominated by stands of immature and juvenile planted pines, clearcut areas, and secondary growth. Several logging roads provide sufficient access and logging staging areas, clearcut areas, and eroded clearings are found throughout the property.

This report details the cultural resource studies conducted for the proposed mine expansion. Sections of the report relate the background research, field research, laboratory analysis, and data interpretations. Recommendations conclude the report. No archaeological sites were recorded during the survey. No historic structures or cemeteries were identified within or near the area. The following sections detail our research findings.

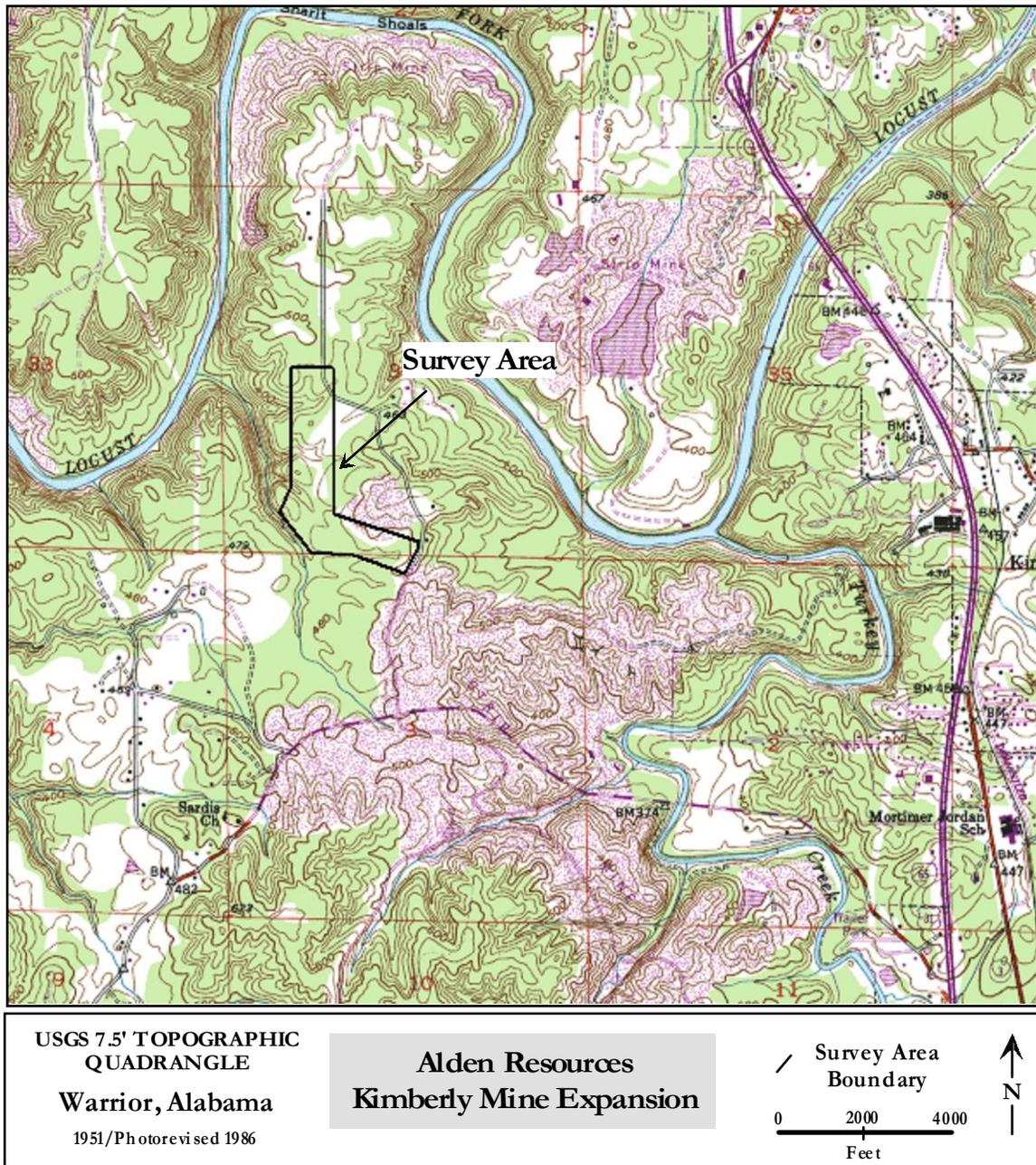


Figure 1. USGS 7.5' Warrior, Alabama Topographic Quadrangle Showing the Location of the Survey Area.

BACKGROUND RESEARCH

Background research was conducted prior to the survey to identify any known cultural resources, especially archaeological sites. This research also served to identify the potential for such resources. Several sources were referenced during the research, including the Alabama Online Cultural Resource Database (AOCR), the Alabama Phase I Surveys, the National Register of Places (NRHP), the National Historic Landmarks (NHL), the Alabama Register of Landmarks and Heritage (ARLH), the Alabama Historic Cemetery Register, historic maps at the University of

Alabama's W.S. Hoole Special Collections Library, and the *Directory of Underground Coal Mines in Alabama*.

Alabama Online Cultural Resource Database: One site, 1Je17, is recorded within a one mile radius of the proposed expansion area but is not located within or near the survey area tract. Site 1Je17 is found approximately three-quarters of a mile to the east of the project area and is situated on a second terrace of Locust Fork. According the limited information provided by the ASSF, the site was recorded in 1978 by MacDonald Brooms and consists of an unknown aboriginal lithic scatter whose NRHP-eligibility is undetermined. The site will not be impacted by the proposed expansion mine.

Alabama Phase I Surveys: The on-line GIS module was referenced for previously performed cultural resource surveys. Four surveys were identified within a one mile radius of the project area, none of which included the current survey area. Three archaeological sites were recorded during the course of surveys conducted by MacDonald Brooms and John Hollis, only one of which, 1Je17, is in the general vicinity of the study area and is briefly described above. A fifth survey, not shown on the Phase I website, but most relevant to the current project was conducted for a proposed surface mine immediately north, and adjacent to, the study area. The 2010 investigation by University of Alabama archaeologists failed to locate any significant cultural resources. The following tabulation lists the four surveys and general information pertinent to each project.

<u>Year</u>	<u>Report Author</u>	<u>Project Type/Parameters</u>
1978	MacDonald Brooms	Highway corridor/ \pm 13 miles
1982	James W. Parker	Borrow pits/ \pm 4 acres
1984	Eddie M. Hatcher	Borrow pits/1 acre
1998	John M. Hollis	Wastewater treatment plant/180 acres
2010	Lance Richardson	Surface mine/408 acres

National Register of Historic Places: No NRHP properties are listed for the nearby town of Kimberly or in the vicinity of the project area.

National Historic Landmarks: No landmarks are listed in or near the survey area.

Alabama Register of Landmarks and Heritage: No properties are listed within in or near the survey area.

Alabama Historic Cemetery Register: No historic cemeteries are listed in or near the survey area.

Historical Map Archive: Several maps were referenced at the on-line web site; including the 1908 Jefferson County soil map and the 1951a, 1970, and 1978 USGS 7.5' Warrior topographic quadrangles. No structures are depicted in, or near, the project area.

Directory of Underground Coal Mines in Alabama: Seven mines, Prichett #s 1 through 7, are listed for T14S, R3W (DeJarnette 1986). No evidence of the mines was encountered during the

investigation and it is likely that the identified mines are located in a section or sections other than Section 3.

ENVIRONMENTAL SETTING

The survey area lies within the Warrior Basin district of the Cumberland Plateau physiographic section of Alabama (Sapp and Emplaincourt 1975). The upland terrain consists of alternating ridgespurs and draws with moderately steep to steeply sloping sides. Elevations range from 400 ft to 510 ft AMSL. Locust Fork, a major tributary, lies to the east and west of the survey area and an unnamed first order stream lies just outside the southwestern boundary. Several intermittent drainages are found within the study area and a manmade sediment pond is present within the northwestern portion of the property. Within the survey area, immature and juvenile planted pines dominate the landscape while areas that have been cleared in the past are either open and eroded or covered with tall grasses and weeds (Figure 2). The property has been subject to mechanical disturbances associated with past timbering activities and, as a result, is highly eroded and little to no topsoil remains.

Four soil types are present within the project area (NRCS 2013). These include: Nauvoo fine sandy loam, 8 to 15 percent slopes; Nauvoo fine sandy loam, 2 to 8 percent slopes; Montevallo-Nauvoo association, steep; and Palmerdale complex, steep. The most frequently occurring soil type, Nauvoo fine sandy loam, 8 to 15 percent slopes, occupies approximately 60 % of the survey area. The well drained, fine sandy loam is found on strongly sloping upland ridges and erosion is a severe hazard (Spivey 1982). Nauvoo fine sandy loam, 2 to 8 percent slopes, is found on gently sloping to sloping ridgetops, plateaus, and drainages and is a well drained soil that is prone to erosion (Spivey 1982). Soils classified as Montevallo-Nauvoo association, steep, and Palmerdale complex, steep, are both found on dissected upland terrain and are excessively drained and erosion is a severe hazard (Spivey 1982). Spivey (1992) notes that, due to the slopes and the potential for erosion, each of the above mentioned soil types is best suited for woodland, grasses, and wildlife management.

FIELD METHODS

The field survey conducted for the proposed Alden Resources Kimberly Mine Expansion implemented standard archaeological survey techniques. The survey area has been subject to prior surface mining and logging activities, as evidenced by exposed subsoil, clear-cut areas, logging roads, logging staging areas, and spoil piles. A pedestrian reconnaissance using visual inspection of exposed ground surfaces, i.e. road cuts, clearings, erosional gullies, and push-piles was conducted. Surface visibility ranged from poor to excellent, with the most surface exposure occurring primarily along the ridgetops while the sideslopes and base of the ridges were generally covered with planted pines and secondary vegetation. Surface investigations were supplemented by shovel tests measuring 30 cm in diameter that were excavated to subsoil. Soils were then sifted through a 6 mm wire mesh screen in order to check for cultural materials. For each shovel test, the soil types and stratigraphic profile were recorded. Because of the extensive impacts within the survey corridor (i.e. surface



Figure 2. Aerial Photograph of the Survey Area.

mining, logging, and erosion), and considering the upland topography, interval shovel testing was not practical. Shovel tests were concentrated on the level ridgetop and ridgespurs where the potential for intact cultural deposits was highest. A total of 32 shovel tests were excavated during the survey, none of which were positive for cultural materials.

In regard to prehistoric occupation, the survey area is considered to have a low to moderate probability for the occurrence of archaeological sites. The property is characterized as an upland ridge with several level ridgespurs and moderately steep to very steep slopes. Due to the steepness of the terrain, the majority of the area is considered poorly suited for prior occupation. Those areas that were considered to be most likely to have been occupied in the past include the level ridgetops, ridgespurs that are in close proximity to a permanent water source.

In addition to the archaeological survey, the survey area and adjacent property was inspected for historic structures and cemeteries. The topographic quadrangle was reviewed and no cemeteries are shown in or in close proximity to the survey area. During the course of the survey, no historic structures were located within or adjacent to the proposed surface mine.

RESEARCH FINDINGS

No archaeological sites were discovered during the investigation of the proposed Alden Resources Kimberly Mine Expansion. Little remaining topsoil was noted during the subsurface testing and surface investigations. In general, the highly disturbed nature of the property, combined

with the moderately steep to steep dissected topography provides little potential for intact cultural deposits to exist.

The following section summarizes the environmental conditions observed and recorded during the archaeological survey. A following section details the architectural landscape. Maps of the survey area are provided throughout the report (Figures 1-3) and photographs of the survey area are located at the end of the report (Figures 4-15).

Archaeological Data:

Setting/Ground Cover: 45% gently sloping ridgetops and ridgespurs/45% steep to moderately steep slopes/10% level ridgetops and ridgespurs/50% immature and juvenile planted pines/25% previously cleared areas with tall grasses and weeds/25% open and eroded areas

Previous Impacts: Land clearing/clear cutting/surface mining/logging/severe erosion

Degree of Surface Visibility: 80-100 % along logging roads and clearings/10-35% within planted pines and grassy fields

Nearest Water Sources: First order stream

Distance to Water: 30 m to 400 m

Probability of Archaeological Sites: Low to moderate

Soil Types: Nauvoo fine sandy loam, 8 to 15 percent slopes/Nauvoo fine sandy loam, 2 to 8 percent slopes/Montevallo-Nauvoo association, steep/Palmerdale complex, steep

Number of Shovel Tests: 32

Depth of Topsoil: 0 cm to 6 cm

Number of Archaeological Sites: None

Findings: Located in north Jefferson County, the proposed surface mine expansion is found in fairly close proximity to Locust Fork and is characterized by dissected upland terrain that ranges from fairly level ridgetops to the moderately steep to steep side slopes and drainages. Several logging roads that cut into the subsoil exist within the survey area boundaries, including one that begins at Crane Road and continues in a southwesterly direction through the property. Approximately 50% of the area is in planted pines and the remaining 50% of the property is either overgrown with tall grasses/secondary growth or is open and eroded. The survey area has been subject to land clearing, clear-cutting and other logging activities, surface mining, and severe erosion. Based on visual observation, it is estimated that the most recent of timbering activities took place anywhere from 5 to 10 years ago and subsequent severe erosion is evidenced by deep erosional gullies throughout the property. The property is considered to be severely eroded and

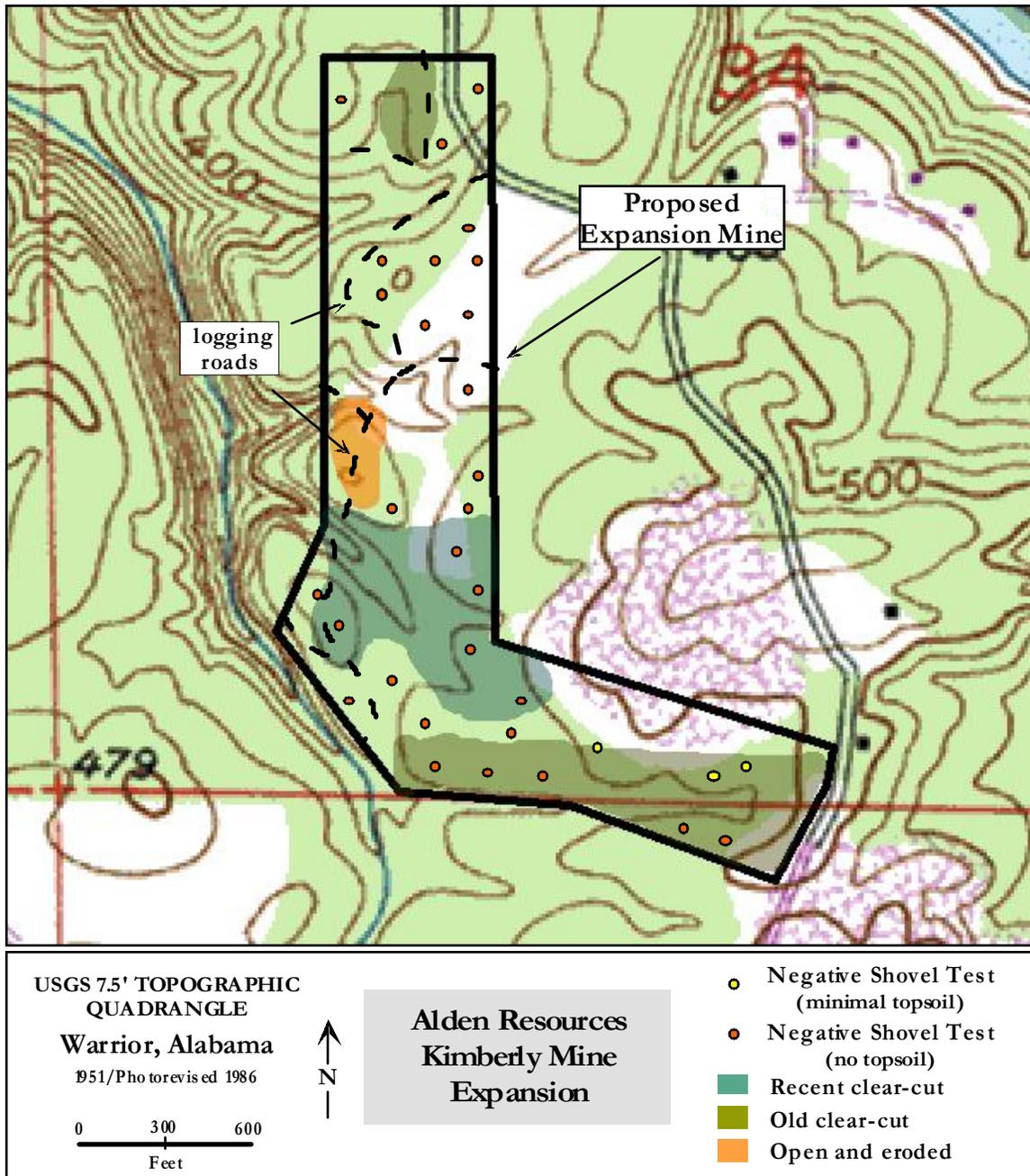


Figure 3. Survey Area Map Showing the Locations of Shovel Tests, Logging Roads, and the General Condition of the Property.

the potential for intact cultural deposits to exist is low. The survey area is characterized as consisting of approximately 45 % gentle slope/45% moderately steep to steep slope, and 10% level ridgetop and ridgespurs.

Despite the fact that much of survey area is either in planted pines or overgrown with tall grasses and secondary growth, surface visibility throughout the property was generally good to excellent. During the pedestrian reconnaissance of the area, unimproved roads, open and eroded ground surfaces, erosional gullies, cutbanks, and spoil piles were visually inspected. No cultural materials were found during the visual inspection of the property. The majority of the survey area consists

of sloping terrain that is not conducive to prior occupation and, as such, systematic shovel testing was not practical. Subsurface testing was instead focused on level to fairly level ridgetops and ridgetops that were most likely to have relatively intact soils and to have been occupied in the past. A total of 32 shovel tests were excavated within the project area boundaries. Only three shovel tests revealed that topsoil still exists and these were located in the southeastern portion of the survey area. The profiles showed 5 cm to 6 cm of yellowish brown silty loam that is underlain by yellowish red silty clay subsoil. All other shovel tests revealed an absence of topsoil, only a yellowish red silty clay subsoil was encountered. Each of the shovel tests was excavated to at least 30 cmbs and no cultural materials were recovered.

Architectural Landscape:

Estimated Area of Potential Effect (APE): Adjacent areas (300 ft)

General Characterization of the APE: The proposed surface mine expansion is found in an unpopulated region of north Jefferson County that is dominated by forested uplands. The architectural landscape is virtually nonexistent and is limited to a single modern residence located near the southeastern corner of the survey area. No historic structures or cemeteries are located within the APE.

SUMMARY AND RECOMMENDATIONS

A cultural resources survey of the proposed surface mine expansion in Jefferson County was conducted in order to identify any archaeological sites or historic resources that may be affected by the proposed mining activities. As a result of the archaeological survey, no cultural materials were found within the survey area boundaries. The majority of the survey area consists of sloping upland terrain that has been subject to significant disturbances in the form of prior surface mining, logging activities, and severe erosion. As a result, it is highly unlikely that intact cultural deposits exist within the survey area. Finally, no cemeteries or historic structures were found at, or in close proximity to, the survey area. Based on these findings, MRS Consultants, LLC. recommends that the proposed Alden Resources Kimberly Mine Expansion be cleared in regards to cultural resources. No significant cultural resources will be affected.

All materials and documentation related to projects conducted by MRS Consultants will be periodically curated at a curatorial facility that meets Department of Interior 36 CFR Part 79 standards. A curation statement is attached to this report.

REFERENCES CITED

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Figure 4. From the Northern Portion of the Survey Area, View to the North of Open Field with Grasses and Weeds.



Figure 5. View to the West of Manmade Sediment Pond near the Northwest Survey Area Boundary.



Figure 6. View to the West of Open and Eroded Ground Surfaces in the Southeast Portion of the Survey Area.



Figure 7. Representative View of Clear cut Area within the Proposed Expansion Mine.



Figure 8. Representative View of Logging Road within the Survey Area, View to the South.



Figure 9. View to the West of Previously Cleared Land within the Southern Portion of the Survey Area.



Figure 10. View to the West of Old Firebreak within the Survey Area.



Figure 11. View to the West of Eroded Grassy Field, Drainage, and Planted Pines in the Northern Portion of the Survey Area.



Figure 12. Representative View of Spoil Piles within the Survey Area.



Figure 13. Representative View of Juvenile Planted Pines and Push-piles within the Survey Area.



Figure 14. Representative View of Immature Planted Pines within the Survey Area.



Figure 15. View to the East of Sloping Terrain in the Southern Portion of the Survey Area.



April 2, 2013

Cathy Myer
MRS Consultants
PO Box 3146
Tuscaloosa AL 35403

Dear Cathy:

As per your request, this letter is to renew our agreement with you to provide curation services to MRS Consultants on an as-needed basis. 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 having the opportunity to assist you with curation services and look forward to working with you in the future.

Sincerely,

A handwritten signature in black ink that reads "Eugene Futato". The signature is written in a cursive style.

Eugene M. Futato RPA
Deputy Director