

**PHASE I ARCHAEOLOGICAL SURVEY FOR THE PROPOSED
LITTLE WHITE OAK SURFACE MINE
LOGAN DISTRICT, LOGAN COUNTY, WEST VIRGINIA**

ADDENDUM REPORT

To

**ABBREVIATED TECHNICAL REPORT FOR PHASE I ARCHAEOLOGICAL SURVEY OF THE
PROPOSED LITTLE WHITE OAK SURFACE MINE, LOGAN DISTRICT, LOGAN COUNTY,
WEST VIRGINIA**



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LITTLE WHITE OAK SURFACE MINE, LOGAN DISTRICT, LOGAN COUNTY, WEST VIRGINIA

LEAD AGENCY: WEST VIRGINIA DIVISION OF ENVIRONMENTAL PROTECTION

FR# 07-768-LG-1

Prepared for

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1.0 INTRODUCTION

Semaphore Hill Associates, LLC (SHA) conducted a Phase I archaeological survey in July 2007 for a previously unsurveyed section of the proposed Little White Oak Surface Mine (FR# 07-768-LG-1). The proposed Little White Oak Surface Mine is located in the Logan District of Logan County, West Virginia (Figure 1). An *Abbreviated Technical Report for Phase I Archaeological Survey of the Proposed Little White Oak Surface Mine, Logan District, Logan County, West Virginia* (Mead 2007) was previously submitted for review to the West Virginia Division of Culture and History (WVDCH). This report serves an addendum to the previously submitted abbreviated technical report, and includes sections of the proposed project area that were not previously surveyed.

This Phase I archaeological survey was conducted for Michael Baker Jr., Inc. to locate, record, and evaluate archaeological resources that may be eligible for inclusion in the National Register of Historic Places (NRHP) pursuant to the criteria set forth in 36 CFR 60.4 (a-d). This investigation was completed as required by the guidelines established by the National Historic Preservation Act, as amended (36 CFR 800), June 17, 1999; Section 1(3) and 2(b) of the Executive Order 11593; and the *Secretary of the Interior's Standards and Guidelines* (Federal Register 48[190] 44716-44742). These investigations also complied with all guidelines set forth in the West Virginia Division of Culture and History's (WVDCH) *Guidelines for Phase I, II, III Investigations and Technical Reports* (Wilson 2001).

The current survey area (referred throughout this report as *project area*) is along the eastern edge of the proposed surface mine, approximately one mile east-northeast of the town of Kelly (Figure 1). SHA conducted a Phase I archaeological survey for this area on July 12, 2007. The current project area is a small ridge, measuring approximately 7.0 acres (2.8 hectares). The project area is of rugged topography, with steep sideslopes and a small descending ridgeline. A pedestrian survey was conducted for the entire project area. Shovel test probes (STPs) were placed along two transects following the descending ridgeline. Placement of STPs along these transects were at 15 meter (49 feet) intervals. A total of eight STPs were excavated. All excavated soil was screened through ¼ hardware mesh to ensure artifact recovery. No cultural resources were identified and further archaeological work is not recommended.

2.0 ENVIRONMENTAL SETTING

The topography of Logan County is characterized by sharp, V-shaped valleys with associated narrow ridgetops and steep sideslopes (WVGES 1914). The project area is located in the unglaciated Appalachian Plateau physiographic province. The general area is underlain by Pennsylvanian age bedrock of the Kanawha and Allegheny formations, characterized by cyclic sequences of sandstone, shale, clay, coal, and limestone (Cardwell et al 1969).

As of August 2007, the USDA Soil Conservation Service did not have a published soil survey for Logan County. Relying on the web soil survey information provided by the Natural Resources Conservation Service (<http://websoilsurvey.nrcs.usda.gov>), the project area is in the Matewan-Pineville-Guyandotte association (MPG), very steep and extremely stony.

Contemporary climate conditions in the project area are summarized from Wolf (1994). Logan County is characterized by a continental, humid climate. Although the trend is toward warm summers and relatively mild winters, there are extremes in high and low temperatures. Annual rainfall averages from 114.3 centimeters (45 in). Annual snowfall averages about 76.2- 101.6 centimeters (30-40 in) across the county with the eastern portion receiving more snowfall than its western half. Temperatures during the summer months are not usually extreme and average 82 degrees during July. Thunderstorms are common, as is flash flooding, especially along the smaller drainages in the county.

Elevations within the project area range from 1780 feet AMSL to 1940 feet AMSL. Vegetation is dominated by mixed second or third growth hardwoods, with moderate undergrowth. Areas with recent disturbances contained small saplings or sparse weeds.

The project area is accessed from a gated mine road off of CR 15, and is approximately 7.0 acres (2.8 hectares). Topography includes a descending ridgeline, with a small ridge spur. The majority of the project area has been disturbed due to historical mine/logging activities and recent timbering and associated road building (Photos 1 and 2). Disturbance from mechanical plowing and grading is observable, and the ridge spur has been slashed and burned within the last year (Photo 3). Access roads dissect the project area. The project area has steep sideslopes (sloping southwest and

northeast) surrounding a moderate-grade ridgetop. Prior to fieldwork, there were believed to be areas of archaeological potential along the ridgeline. However, due to recent severe disturbance in the area, the potential for recovering any undisturbed deposits was very low.

3.0 FIELD TECHNIQUES

Prior to initiating fieldwork, background research was conducted at the WVDCH by SHA personnel (Figure 2). Previous research done in the vicinity of the project area was reviewed, along with statewide survey information and National Register listings for Logan County. One previously recorded archaeological site (46LG122) is located within the proposed Little White Oak Surface Mine, as reported by Scuoteguazza and Anslinger (1996). This site is described as an isolated find in a disturbed context. No previously recorded archaeological sites or historic structures were found within the current Phase I project area.

An intensive pedestrian survey was performed for the entire project area. All exposed soils were inspected visually, including areas that have recently been clear-cut and areas where access roads have been plowed. Shovel testing was performed in areas with less than 20 percent slope and areas with surface visibility less than 75 percent (Photo 4). Approximately 75 to 80 percent of the project area has a slope gradient that exceeds 20 percent and did not warrant subsurface testing.

Archaeological fieldwork consisted of the placement of two transects within the project area, with STPs excavated at 15 meter (49.2 ft) intervals. A total of eight STPs were excavated. Each STP was approximately 50 centimeters (19.6 in) in diameter, and excavated at least 10 centimeters (3.93 in) into culturally sterile subsoil or until inclusions prevented further excavation. All excavated soil was screened through ¼ in hardware mesh to ensure artifact recovery and were backfilled upon completion. Soils were assigned color and texture based on designations provided by the Munsell soil book. STPs were excavated according to the natural soil strata with each stratum screened separately. Soil profiles were recorded and each stratum measured in sequence from below ground surface (bgs). No artifacts were recovered or cultural features identified.

4.0 RESULTS OF ARCHAEOLOGICAL FIELDWORK

Given the rugged topography and steep sideslopes of the project area, the primary mode of investigation was pedestrian survey. Shovel testing also occurred on level areas with a slope gradient of less than 20 percent. Recent logging and associated activities have impacted these level areas, and caused ground disturbance throughout the project area.

A total of eight STPs were excavated in the project area. A typical soil profile consisted of a 0-15 centimeter (5.90 in) thick 10 YR 4/2 Dark Grayish Brown Sandy Loam above a 10 YR 6/6 Brownish Yellow Clay Loam (Figure 3). From the excavation of STPs, examination of exposed soils, and evidence of spoil piles and artificial contour breaks, it is indicated that previous earthmoving activities have occurred along this ridge. No artifacts were recovered during this survey.

5.0 RECOMMENDATIONS AND CONCLUSIONS

The archaeological survey consisted of a pedestrian survey of the project area and a total of eight STPs excavated at 15 meter (49.2) intervals. A typical soil profile consisted of a 0-15 centimeter (5.90 in) thick 10 YR 4/2 Dark Grayish Brown Sandy Loam above a 10 YR 6/6 Brownish Yellow Clay Loam (Figure 3). No cultural resources were identified during a record search at the WVDCH or during field survey. It is recommended that no further archaeological work is required. The requirements have been satisfied as outlined in the National Historic Preservation Act, as amended (36 CFR 800), June 17, 1999; Section 1(3) and 2(b) of the Executive Order 11593; and the *Secretary of the Interior's Standards and Guidelines* (Federal Register 48[190] 44716-44742). These investigations also complied with all guidelines set forth in the West Virginia Division of Culture and History's (WVDCH) *Guidelines for Phase I, II, III Investigations and Technical Reports* (Wilson 2001).

6.0 REFERENCES CITED

Cardwell, Dudley H., Robert B. Erwin, and Herbert P. Woodward

1968 *Geologic Map of West Virginia*, West Sheet (slightly revised 1986). West Virginia Geological and Economic Survey, Charleston.

Mead, Kent

2007 *Abbreviated Technical Report for Phase I Archaeological Survey of the Proposed Little White Oak Surface Mine, Logan District, Logan County, West Virginia*. Prepared by Cultural Resource Analysts, Inc., Hurricane, West Virginia.

Scuoteguazza, Eric, and C. Michael Anslinger

1996 Phase I Archaeological Survey for the Proposed Pigeonroost Surface Mine near Blair, Logan County, West Virginia. Prepared by Cultural Resource Analysts, Inc., Hurricane, West Virginia.

West Virginia Geological and Economic Survey (WVGES)

1914 *Logan and Mingo Counties County Soil Reports, 1914*. Prepared by the West Virginia Geological and Economic Survey, Wheeling, West Virginia.

Wolf, Barrie L.

1994 *Soil Survey of Boone County, West Virginia*. United States Department of Agriculture, Soil Conservation Service, in cooperation with the West Virginia University Agricultural and Forestry Experiment Station

Wilson, Joanna (editor)

2001 *Guidelines for Phase I, II, and III Archaeological Investigations and Technical Reports*. Prepared by the West Virginia State Historic Preservation Office, Charleston, West Virginia.

FIGURES

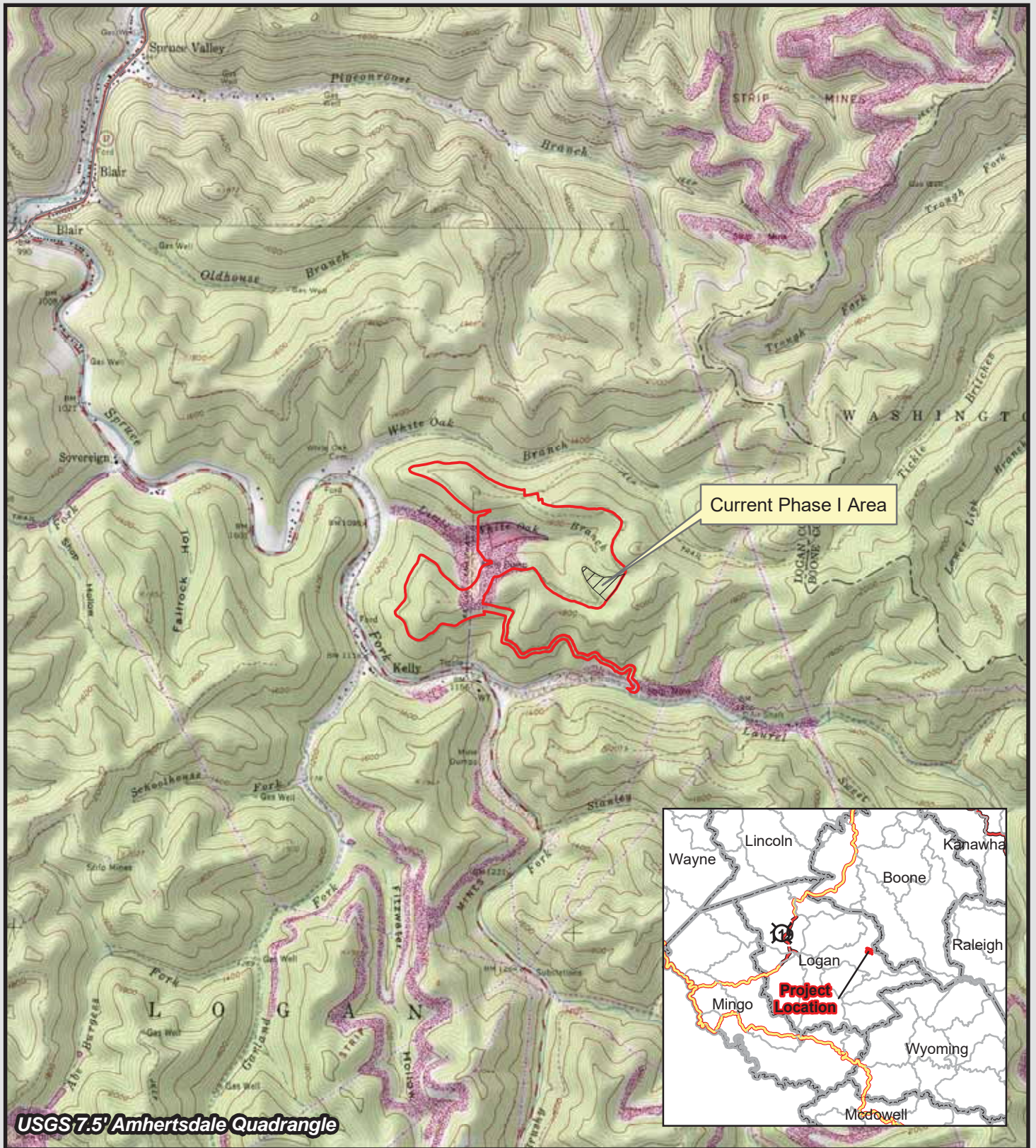
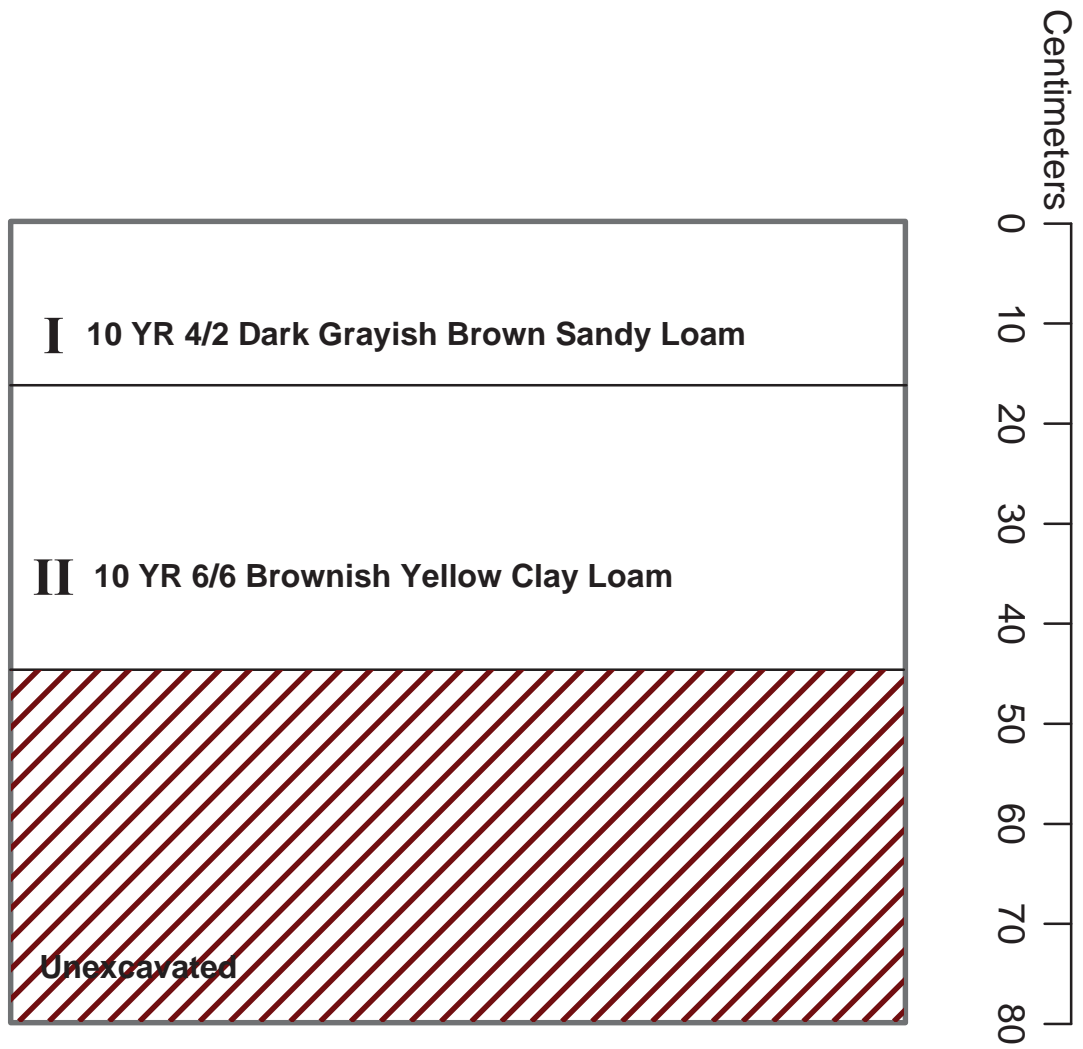


Figure 1 - Location of Current Phase I Archaeological Survey



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Figure 3 - Typical Shovel Test Probe Soil Profile

Legend

 Unexcavated

PHOTOS



Photo 1 Typical logging disturbance within project area.



Photo 2 Recently clear-cut ridge spur in project area.



Photo 3 Recent timbering and burning activity in project area.



Photo 4 Shovel testing in project area.

APPENDIX A



Semaphore Hill
Associates

Andrea D. Griffith, President

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Education:

George Washington University
M.A., Anthropology
January 2002

University of Charleston
B.A., History
August 1995

University of Charleston
A.S., Business Administration
August 1995

Marshall University
Anthropology, June – December
1996

Certifications:

- Applied Fluvial Geomorphology (Rosgen Level I), August 2002
- River Morphology & Applications (Rosgen Level II), August 2002
- River Assessment & Monitoring (Rosgen Level III), September 2002
- River Restoration (Rosgen Level IV), October 2002

General Qualifications

Semaphore Hill Associates, LLC, is a women-owned, small business providing a variety of environmental and consulting services. Semaphore Hill offers a range of environmental and consulting services—including geographic information system (GIS), cultural, and natural resource management—that generates value for clients through the application of knowledge, innovation, and technology. Our program development responds to client requirements for timely delivery of cost-effective, accurate and precise information. Semaphore Hill provides expertise for a full range of services, including the following:

- Aerial Photography Analysis and Remote Sensing Interpretation
- Cumulative Impacts Analyses
- Data Creation and Conversion
- Predictive and Location Modeling
- GIS Implementation
- Quality Assessment and Control for GIS/Mapping Data
- Graphic Design, Exhibits, and Public Meeting Materials
- Project Oversight and Management

In addition, Semaphore Hill has experience in jurisdictional wetland delineations, stream assessments/delineations, and cultural resource management. Semaphore Hill has also provided technical support in the preparation of NEPA documents (i.e., Environmental Impact Statements, Environmental Assessments, Categorical Exclusions). Semaphore Hill has practical experience in the following cultural and natural resources:

- Wetland Delineations
- Stream Delineations and Assessments
- Archeological Surveys and Site Evaluations
- Architectural Inventories
- HABS/HAER Documentation
- National Register of Historic Places (NRHP) Nominations
- National Environmental Policy Act (NEPA) Documentation and Compliance Consulting

PROJECT EXPERIENCE

Cultural Resource Management

- **Southeast Arkansas Interstate 69 Connector**

Arkansas Highway and Transportation Department. Served as crew chief for 37-mile Phase I survey, located between Pine Bluff and Monticello, Arkansas. Duties included overseeing a crew of field technicians; conducting pedestrian survey and shovel testing; recording, mapping, and photographing sites; completing field data forms and paperwork; interpreting aerial photos and topographic maps of the project area.

- **Appalachian Corridor D**

West Virginia Department of Transportation, Division of Highways. Directed Phase I level investigations of the Belleville Slough Wetland Mitigation site, in Wood County, West Virginia. Responsibilities included managing a field crew, communicating with landowners, and collecting field data with total station and data collector. Ms. Griffith also provided assistance with the archaeological analysis and preparation of the Phase I report.

- **James Rumsey Bridge Replacement**

West Virginia Department of Transportation, Division of Highways. Served as crew chief for portions of the Phase I survey for the project, which is located along the Potomac River in Jefferson County, West Virginia and Washington County, Maryland. Other responsibilities include writing and preparing the technical reports for these projects. Ms. Griffith also provided additional assistance in the Phase II testing at the Lock 38 site (18WA486), including surveying and data collection, as well as field excavation.

- **Appalachian Corridor H**

West Virginia Department of Transportation, Division of Highways. Performed as crew chief on Phase I projects for Battlefield Avoidance, Moorefield Bypass, and Wardensville Bypass sections of Corridor H, in Randolph, Hardy, and Tucker Counties, West Virginia. Responsibilities for these projects included managing field crew, conducting pedestrian survey and shovel testing, communicating with landowners; completing applicable site forms, and preparing Phase I reports.

- **Coalfields Expressway**

West Virginia Department of Transportation, Division of Highways. Tasked as field director/crew chief for Slab Fork Section of the Coalfields Expressway, in Raleigh County, West Virginia. Duties for this project included managing a crew of field technicians, conducting pedestrian survey and shovel testing, and preparing the technical report. Ms. Griffith was also involved in the Phase I testing of the Stafford Section, in McDowell County, West Virginia, as well as supporting in the Phase I report preparation.

- **I-70 Fort Henry Industrial Exchange**

West Virginia Department of Transportation, Division of Highways. Directed Phase I level investigations of the Fort Henry Industrial Exchange in Ohio County, West Virginia. Responsibilities as crew chief included overseeing

PROJECT EXPERIENCE (cont.)

a crew of field technicians; conducting pedestrian survey and shovel testing; recording, mapping, and photographing sites; and completing field data forms and paperwork.

- **I-64 Widening**

West Virginia Department of Transportation, Division of Highways. Ms. Griffith assisted in the Phase II level excavations at site, located in Kanawha County, West Virginia. Duties included fieldwork, as well as completing field data forms and paperwork.

- **Shawnee Highway**

West Virginia Department of Transportation, Division of Highways. Ms. Griffith assisted in the Phase I survey and Architectural field survey of area, located near Ghent, West Virginia. Phase I include shovel probes and the recordation of historic properties.

Geospatial Services

- **Implementation of Statewide Addressing and Mapping System**

West Virginia Statewide Addressing and Mapping Board (WVSAMB). Provides support for the WVSAMB Project Management Team. Ms. Griffith currently serves as one of several Addressing Liaisons for the project. Duties include working directly with assigned counties to complete the addressing portion of the project. Previous duties included conversion and control for mapping and addressing data, photogrammetric images, and aerial photos; Project management support, including logistical and administrative. The West Virginia Statewide Addressing and Mapping Project is a one-of-a-kind project to provide uniform city-type addresses for every area of the state, employing the latest technology such as digital mapping, global positioning, wireless telecommunications, and geographic information systems.

- **U.S. Customs and Border Protection Computer-Based Environmental System**

USCBP/Michael Baker Jr., Inc. Michael Baker Jr. Inc. (Baker) is developing a computer-based system that will assist the U.S. Customs and Border Protection (CBP) in the identification of: environmental compliance requirements; opportunities to develop processes to expedite environmental approvals; gaps in its current database; and environmental compliance constraints to facilities development and operations within three ecosystems within a 25-mile wide area along the border of the U.S. and Mexico. This system includes development of a document data entry system and a web-accessible database for environmental compliance reporting requirements. Ms. Griffith was tasked with compiling GIS mapping/data, and other applicable resource data within the project areas. Semaphore Hill also provided quality assurance and assistance with the development of a project metadata registry and data warehouse.

- **Spruce Mine No. 1 Mountaintop Mining Environmental Impact Statement**

USACE/Arch Coal Company. Spruce Mine No. 1 is the first mountaintop



PROJECT EXPERIENCE (cont.)

mining (MTM) project (+3,200 acres) requiring an EIS by the U.S. Army Corps of Engineers. Ms. Griffith's responsibilities included data manipulation and analysis, DEIS and FEIS figure and graphics preparation. The project employed extensive use of GIS, including a comprehensive forest patch and cumulative impact analysis that assessed the project at the sub-watershed/watershed/regional watershed/Mountaintop Mining Region/state of West Virginia scales of analysis.

- **County Road Map Vectorization Project**

West Virginia Department of Transportation, Division of Highways. The County Road Map (CRM) Vectorization Project provided the WVDOH Cartography Department with a seamless digital County Road Map Series system. Ms. Griffith was responsible for manual conversion (vectorization), quality assurance of data, delivery, post-processing, and maintenance. Ms. Griffith provided on-site assistance to the WVDOH in the implementation of the system.

- **Constitution MTR Surface Mine Environmental Information Document**

Michael Baker Jr., Inc./Independence Coal Company. Duties included cumulative impacts and forest fragmentation analyses and exhibits preparation for mountaintop mining project located along the border of Raleigh and Boone Counties, West Virginia.

- **Daniel Hollow Coarse Refuse Facility Environmental Information Document**

Michael Baker Jr., Inc./Mingo Logan Coal Company. Mountaintop mining project that is located along the border of Boone and Logan Counties, West Virginia. Duties included cumulative impacts and forest fragmentation analyses and exhibits preparation.

- **Twilight MTR Surface Mine Environmental Information Document**

Michael Baker Jr., Inc./Independence Coal Company. Duties included cumulative impacts and forest fragmentation analyses and exhibits preparation for mountaintop mining project located along the border of Raleigh and Boone Counties, West Virginia.

- **Westridge No. 3 Surface Mine Sugartree Surface Mine Amendment No. 2 Environmental Information Document**

Michael Baker Jr., Inc./Hobet Mining Inc. Mountaintop mining project that is located along the border of Boone and Lincoln Counties, West Virginia. Duties included cumulative impacts and forest fragmentation analyses and exhibits preparation.

- **Loggy Branch Mountaintop Mining Environmental Information Document**

Michael Baker Jr., Inc./Catenary Coal Company. Duties included cumulative impacts and forest fragmentation analyses and exhibits preparation for mountaintop mining project located along the Mingo/Logan County, West Virginia border.

- **Phoenix No. 5 Mountaintop Mining Environmental Information Document**



PROJECT EXPERIENCE (cont.)

Coal-Mac Inc/Arch Coal Company. Responsibilities included data manipulation and data analysis, as well as EID report preparation and production. The Phoenix No. 5 is a proposed mountaintop mine located along the border of Logan and Mingo Counties, West Virginia.

- **Hernshaw No. 1 Deep Mine Environmental Information Document**

Michael Baker Jr., Inc./Catenary Coal Company. Duties included cumulative impacts and forest fragmentation analyses and exhibits preparation for deep mine located at border of Kanawha and Boone Counties, West Virginia.

- **Camp Creek South Deep Mine Environmental Information Document**

Michael Baker Jr., Inc./Hobet Mining Inc. Duties included cumulative impacts and forest fragmentation analyses and exhibits preparation. Camp Creek South Deep Mine is located in Boone County, West Virginia.

- **Campbells Creek No. 7 Winifrede Deep Mine Environmental Information Document**

Michael Baker Jr., Inc./Catenary Coal Company. Project is a proposed deep mine, located in Kanawha County, West Virginia. Duties included cumulative impacts and forest fragmentation analyses and exhibits preparation.

- **Phoenix No. 4 Mountaintop Mining Environmental Assessment**

Michael Baker Jr., Inc./Arch Coal Company. Mountaintop mining project is located on the border of Logan and Mingo Counties, West Virginia. Responsibilities included data manipulation and data analysis, as well as EA report preparation and production.

- **Strategic Environmental Appraisals (SEAs) and Ecosystem Environmental Baseline Studies (States of TX, AZ, CA, WA, ID, MT, ND, MN, MI, NY, VT, NH, ME, AK)**

U.S. Department of Homeland Security, Directorate of Security and Transportation. Assisted in the GIS integration, impacts analyses, data assessment, mapping, and report production for these studies. The Visitor and Immigrant Status Indicator Technology Program (VISIT) is an automated entry-exit system initiated by the Department of Homeland Security to control arrivals and departures to the US. As part of this effort, environmental baseline studies were prepared for 165 land ports of entry (LPOE) situated along the southern and northern borders (including Alaska).

- **Land Port of Entries - Preliminary Environmental Review**

U.S. Department of Justice, Immigration and Naturalization Service. Provided GIS mapping capabilities in assessment of environmental variables for each Land Point-of-Entry (LPOE). This project was a rapid inventory of red-flag issues that may require a greater level of agency coordination, public involvement, and/or analysis. In addition, produced archaeological probability model for all points of interest. As part of this effort, information and data was collected on a broad scale, utilizing large-scale data sets and a methodology to quickly identify potential red-flag issues



PROJECT EXPERIENCE (cont.)

for 168 Land Point-of-Entries (LPOE). The 19 environmental variables were then ranked into three general “Degree of Concern” categories, depending on the potential involvement of the resource and its proximity to the LPOE site within the Study Area.

- **Environmental Baseline Studies (MT, ND, MN, VT)**
U.S. Department of Justice, Immigration and Naturalization Service. Ms. Griffith assisted in the GIS integration, impacts analysis, data assessment, mapping, and report production for these studies. The analyses were conducted to determine the affected environment and the environmental consequences to the proposed action area as a result of proposed border enhancements.
- **GIS Assistance for Appalachian Corridor H, King Coal Highway, Coalfields Expressway, and Appalachian Highway Corridor D**
West Virginia Department of Transportation, Division of Highways. Ms. Griffith has provided GIS support for both environmental and cultural resource projects, including producing field maps, archaeological analysis, delineating drainages and watersheds, environmental coordination, and viewshed analyses.

NEPA And Environmental Experience

- **Hinton City Island Park Project**
E.L. Robinson. Duties for this project included wetland identification and delineation on two islands in the New River. Additional responsibilities included report writing and permitting consultation.
- **Spruce Mine No. 1 Mountaintop Mining Environmental Impact Statement**
USACE/Arch Coal Company. Spruce Mine No. 1 is the first Mountaintop mining (MTM) project (+3,200 acres) requiring an EIS by the U.S. Army Corps of Engineers. Responsibilities included wetland identification and delineation. Additional duties included technical writing and graphics support for preparation of DEIS.
- **White Oak Extension Mountaintop Mining Environmental Assessment**
USACE/Catenary Coal Company. Duties included wetland and stream delineations. Wetland surveys were conducted for over 795 acres. The White Oak Extension project was the first mountaintop mining project to be successfully permitted under an Individual 404 CWA permit.
- **Ballard Fork Mountaintop Mining Environmental Assessment**
USACE/Catenary Coal Company. Duties included wetland and stream delineations, impacts analysis and report preparation for this mountaintop mining project.
- **Appalachian Corridor H**
West Virginia Department of Transportation, Division of Highways. Responsibilities included mitigation coordination, upland habitat analysis, and stream assessments for this 120-mile project located in the eastern



PROJECT EXPERIENCE (cont.)

panhandle of West Virginia.

- **I-70 Fort Henry Industrial Exchange**

West Virginia Department of Transportation, Division of Highways. Duties for project included stream assessments and wetland delineation for construction of new interchange along interstate highway between Wheeling, WV and Pittsburgh, PA.

- **Melissa Huntington, West Virginia Route 10 Widening**

West Virginia Department of Transportation, Division of Highways.

Responsibilities included benthic sampling and a comprehensive stream assessment, along with mitigation tactics for stream improvement. The project, a 2.25-mile rural collector, was developed to improve safety and to serve the expected population growth in the Huntington metropolitan area. Principal issues included hazardous materials and stream relocations.

- **I-64 Widening**

West Virginia Department of Transportation, Division of Highways. Duties included Section 106 compliance and NEPA document preparation required for the selection of a preferred alternative along I-64 in South Charleston, West Virginia.

- **Phoenix No. 4 Mountaintop Mining Environmental Assessment**

Coal-Mac Inc/Arch Coal Company. Mountaintop mining project is located on the border of Logan and Mingo Counties, West Virginia. Responsibilities included EA report preparation and production.

- **Brooke County Hazard Mitigation Plan**

West Virginia Office of Emergency Services/Brooke County, West Virginia.

Responsible for hazard research and final document preparation of hazard mitigation plan for Brooke County, West Virginia. The document was accepted and approved by the Federal Emergency Management Agency (FEMA).

TECHNICAL PUBLICATIONS

- 2001 Griffith, Andrea D. *Phase I Archaeological Survey of the Coalfields Expressway/King Coal Highway Interchange Extensions, McDowell and Wyoming Counties, West Virginia, Management Summary.* Prepared for the WVDOT, DOH.
- 2001 Kender, Carolyn M., Andrea Griffith and Jonathan Danz., *Phase I Archaeological Survey of the Coalfields Expressway, Stafford Section McDowell County, West Virginia, Management Summary.* Prepared for the WVDOT, DOH.
- 2002 Danz, Jonathan J., Andrea Griffith, Kathryn Lombardi, and Raymond Ezell. *Identification of Historic Properties: Phase I Archaeological Investigations for the New Visitor Parking Lot, Bridge Canal Access Trail, and Core Boring Areas, Conducted as a Part of the James Rumsey Bridge Replacement Project, Washington County, Maryland.* Prepared for the WVDOT, DOH.
- 2002 Griffith, Andrea D. *Phase I Archaeological Survey of the Coalfields Expressway, Slab Fork Section, Raleigh County, West Virginia, Management Summary.* Prepared for the WVDOT, DOH.



**TECHNICAL
PUBLICATIONS**
(cont.)

- 2002 Griffith, Andrea D., Stephen J. Hinks, William C. Johnson, and Deborah E. Casselberry. *Phase I Archaeological Investigations In The Appalachian Corridor H Kerens-to-Parsons Project Area, Randolph and Tucker Counties, West Virginia, Management Summary*. Prepared for the WVDOT, DOH.
- 2002 Griffith, Andrea D., and Carolyn Kender. *Phase I Archaeological Survey for the Bridge Canal Access Trail and Proposed Parking Facility for the James Rumsey Bridge Replacement Project, Washington County, Maryland*. Prepared for the WVDOT, DOH.

