

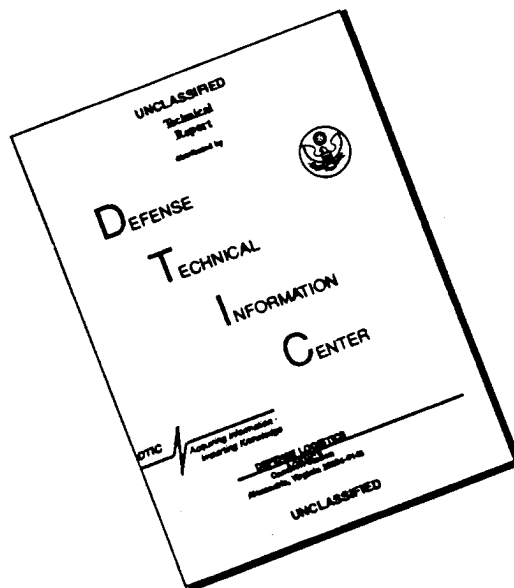
"A Phase I Archaeological Survey of the
Proposed Expansion and Improvement of Mendick
Tollgate Range, Fort Knox Military
Reservation, Hardin County, Kentucky" by
Stephen T. Mocas, Fort Knox. March 1996.

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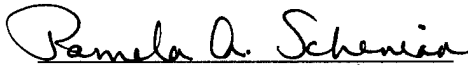
REPORT DOCUMENTATION PAGE	1. REPORT NO. 2.	3. Recipient's Accession No.
4. Title and Subtitle A Phase I Archaeological Survey of the Proposed Expansion and Improvement of Mendick Tollgate Range, Fort Knox Military Reservation, Hardin County, Kentucky		5. Report Date March 1996
7. Author(s) Stephen T. Mocas		6. 8. Performing Organization Rept. No.
9. Performing Organization Name and Address Directorate of Public Works ATTN: ATZK-PWE (Archaeology) U.S. Army Armor Center and Fort Knox Fort Knox, Kentucky 40121-5000		10. Project/Task/Work Unit No.
12. Sponsoring Organization Name and Address Directorate of Public Works ATTN: ATZK-PWE (Archaeology) U.S. Army Armor Center and Fort Knox Fort Knox, Kentucky 40121-5000		11. Contract(C) or Grant(G) No. (C) DACW65-93-D-0039 and (G) DABT23-95-C-0102
13. Type of Report & Period Covered Final, March 1996		14.
15. Supplementary Notes The Cultural Resource Management office of the Directorate of Public Works is staffed by outside contractors employed by J.M. Waller Associates, Inc., 9249 Old Keene Mill Road, Burke, Va 22015-4202 (contract DACW65-93-D-0039) or Program of Archaeology, University of Louisville, Louisville, KY 40292 (contract DABT23-95-C-0102)		
16. Abstract (Limit 200 words) <p style="text-align: center;"> In March 1996, the Fort Knox contract archaeology staff conducted a Phase I archaeological survey of the areas designated for improvement and expansion of the facilities at the Mendick Range on the Fort Knox Military Reservation, Hardin County, Kentucky. The project areas consisted of the Mendick Tollgate range, a cleared area 1600 feet square (58.8 acres/23.8 ha) that had been used as a small arms range, and a wooded area to the north that was 18.3 ha or 45.2 acres in size. Both areas were walked in their entirety and evaluated for potential cultural resources. No archaeological sites were found in this study. It is recommended that the improvement and expansion be conducted as proposed. </p>		
17. Document Analysis <p>a. Descriptors</p> <p>b. Identifiers/Open-Ended Terms</p> <p>c. COSATI Field/Group</p>		
18. Availability Statement Release Unlimited	19. Security Class (This Report) Unclassified	21. No. of Pages iv+12=16
	20. Security Class (This Page) Unclassified	22. Price

A Phase I Archaeological Survey of the Proposed Expansion
and Improvement of Mendick Tollgate Range,
Fort Knox Military Reservation, Hardin County, Kentucky

by
Stephen T. Mocas
Contract Assistant Staff Archaeologist

Directorate of Public Works
U.S. Army Armor Center and Fort Knox
Fort Knox, Kentucky 40121-5000
Phone: 502-624-6581
Fax: 502-624-1868

March 1996


Pamela A. Schenian
Project Principal Investigator

ABSTRACT

In March 1996, the Fort Knox contract archaeology staff conducted a Phase I archaeological survey of the areas designated for improvement and expansion of the facilities at the Mendick Range on the Fort Knox Military Reservation, Hardin County, Kentucky. The project areas consisted of the Mendick Tollgate range, a cleared area 1600 feet square (58.8 acres/23.8 ha) that had been used as a small arms range, and a wooded area to the north that was 18.3 ha or 45.2 acres in size. Both areas were walked in their entirety and evaluated for potential cultural resources. No archaeological sites were found in this study. It is recommended that the improvement and expansion be conducted as proposed.

MANAGEMENT SUMMARY

In accordance with Executive Order 11593 and other applicable federal laws and regulations, a Phase I archaeological survey was conducted of two areas of proposed improvement and expansion of the Mendick Range on the Fort Knox Military Reservation, Hardin County, Kentucky. The entirety of the proposed project areas were surveyed. No evidence was found of archaeological sites. It is recommended that the construction be conducted as proposed.

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INTRODUCTION

In March 1996, the Fort Knox contract archaeology staff performed a Phase I archaeological survey of two areas at the Mendick Tollgate Range on the Fort Knox Military Reservation. The present Mendick Range and the additional wooded area to the north, both of which were surveyed, are in Hardin County (Figures 1 and 2).

The proposed project areas consist of the present Mendick Range, which is scheduled for improvements, and a wooded area to the north, into which the range is to be expanded. Mendick Range is an area 1600 feet (488 m) square that has been landscaped at least twice for primary use as a small arms range. It is bordered by gravel roads on all sides and has five gravel roads exist within it (Figures 1 and 2). The other project area begins directly to the north of the range. The west and east edges of this area are aligned with the west and east edges of the range and bordered by the bluffline above tributaries of Tollgate Creek. The north side ends at the bluffline above Tollgate Creek. The total area surveyed was 104 acres or 42.1 ha.

In 1993, the Fort Knox Contract Staff Archaeologist obtained all the documents necessary to perform Phase I literature searches for the installation (e.g., site forms, reports of previous investigations, historic maps). These documents are on file at the Environmental Management Division of the Directorate of Public Works (DPW), Fort Knox, and are updated regularly. No file check, therefore, was made with the Office of State Archaeology and the Kentucky Heritage Council specifically for this project.

A literature search revealed that the project area had not been previously surveyed. Consultation with range personnel revealed that the range had been renovated approximately 10 years ago. All portions of both proposed project areas were inspected by walkover, supplemented by shovel probing.

The proposed project areas lie in the karst uplands of the Plain section of the Pennyrile cultural landscape and in the Mississippian Plateau physiographic region of Kentucky (McGrain and Currens 1978:35). Elevations in the project area range from 680 to 750 feet. Soils are classified as Crider-Vertrees soil association (U.S.D.A. 1975: General Soil Map). Drainage within the project area is into sinkholes and into Tollgate Creek.

The archaeological survey and literature review were required to comply with the National Environmental Policy Act, or NEPA, (Public Law 91-190), the Historic Preservation Act of 1966, as amended (Public Law 89-665), the Archaeological Resources Protection Act of 1979 (Public Law 96-95),

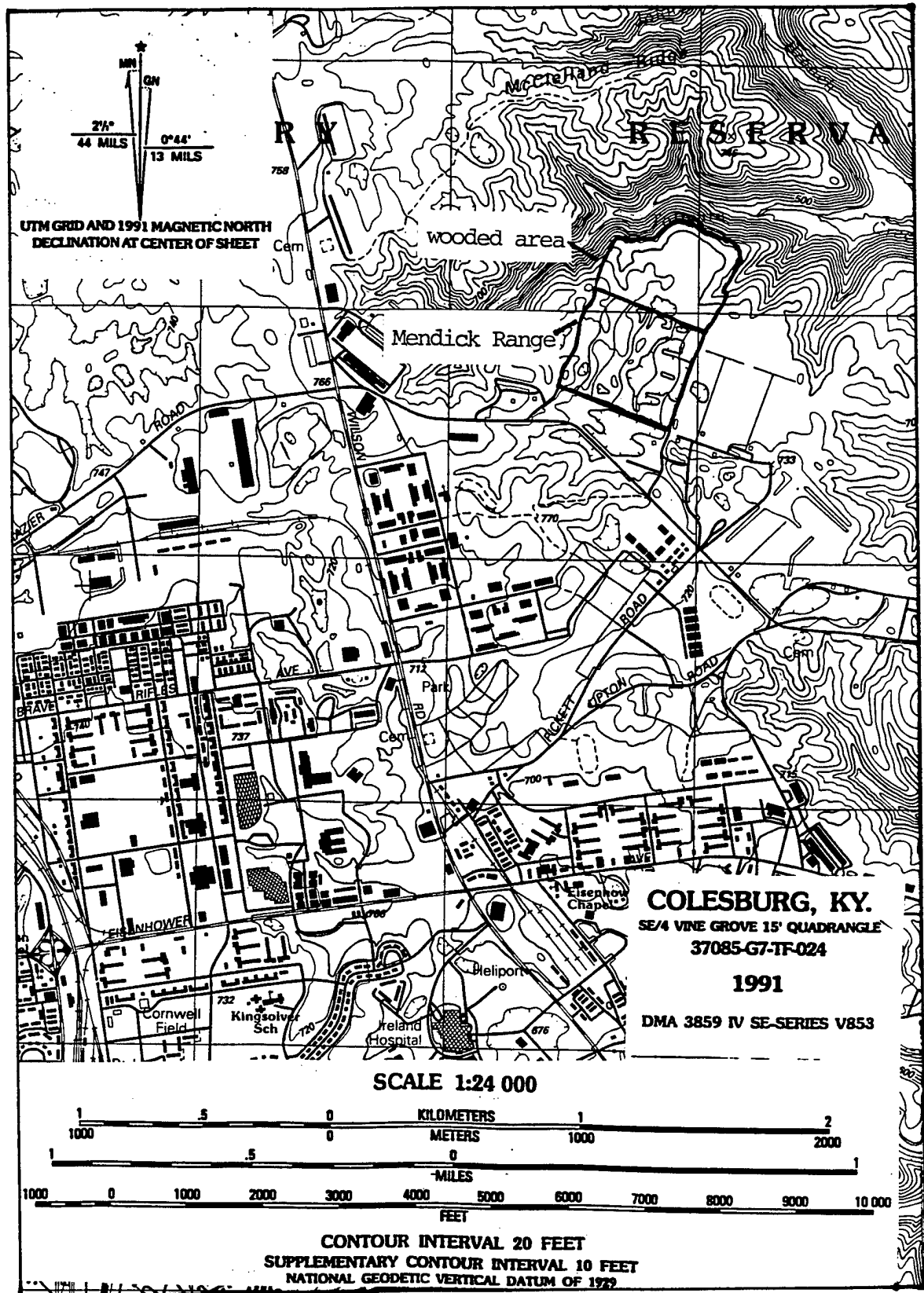


Figure 1. Location of the Proposed Project Areas and Areas Surveyed.

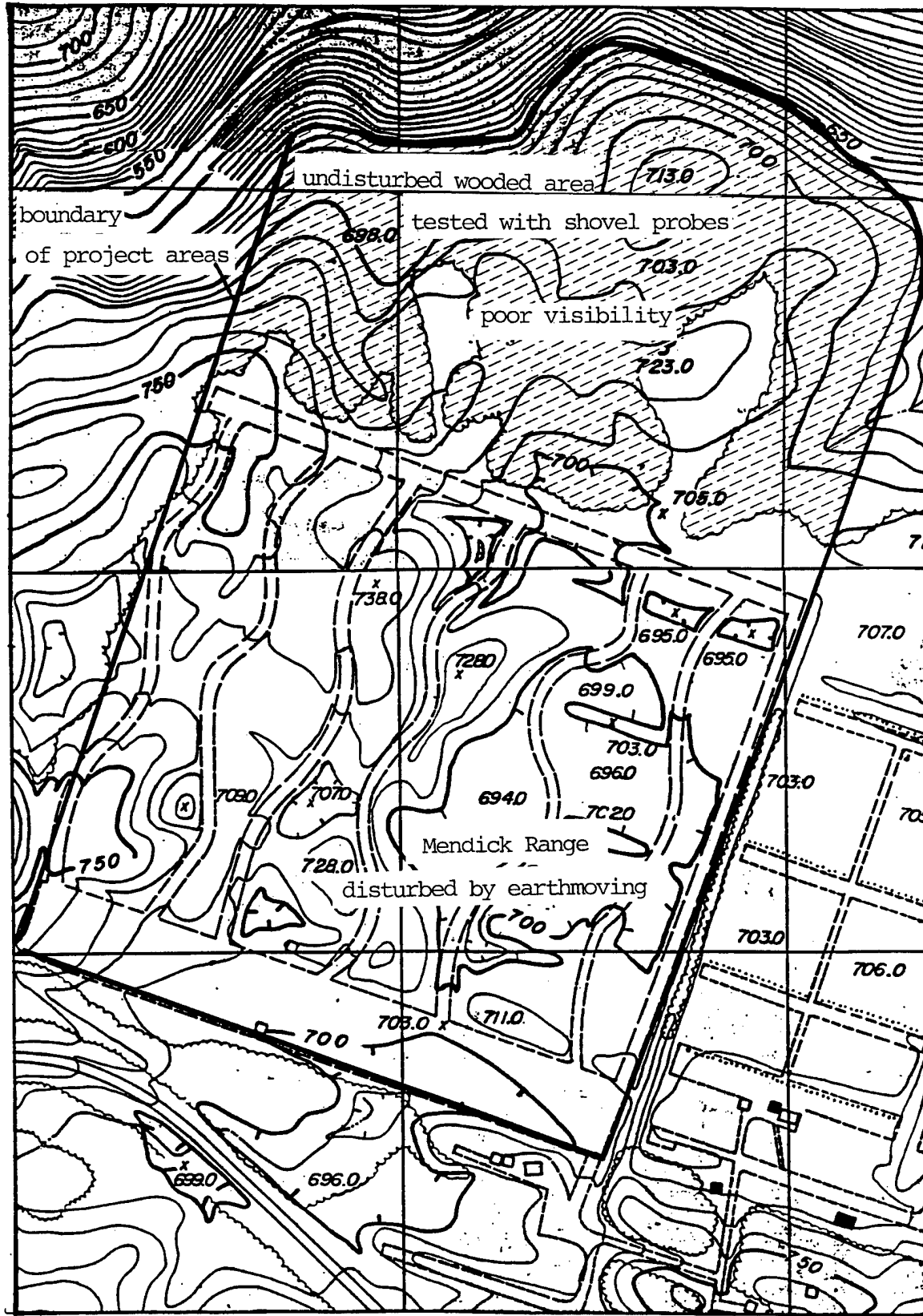


Figure 2. Vegetation and Field Methods.

Presidential Executive Order 11593, and Army Regulation 420-40.

The project areas were surveyed on March 12, 1996. Schenian and Mocas surveyed a portion of the existing range together, but it became clear that Schenian was too sick with the flu to continue, and Mocas completed the remainder of the survey himself. A total of 6.5 person hours were spent in the survey of the project area. No artifacts were observed or collected in this survey. Documentation of this project will be curated at the University of Louisville Program of Archaeology, on a "permanent loan" basis, under contract number DABT 23-95-C-0102, for curatorial and technical support (copy of contract on file, DPW, Fort Knox, Kentucky). Duplicate copies of the documentation will be stored at DPW, U.S. Army Armor Center and Fort Knox, Fort Knox, Kentucky.

PREVIOUS RESEARCH

Approximately 26,534 acres of the Fort Knox installation have been surveyed for archaeological sites at some level, primarily in cultural resource management (CRM) studies. Schenian and Mocas (1994) summarize the archaeological studies conducted on or near the installation through August 1994. No portion of the project areas had been previously surveyed. This section will focus on the previous research conducted within a 2 km radius of the current project area.

Within 2 km of the project area, O'Malley et al. (1980) surveyed approximately one-quarter of Hunting Area (HA) 56 and recorded 15Hd294, a historic root cellar. Mocas (1993) reported no sites in a survey of a landfill and borrow pit along Baker Road. Mocas (1994a) surveyed a proposed sports complex along Pickett Road and a water tower and pipeline along Frazier Road (Mocas 1994b), but found no sites. Schenian (1995a) surveyed along Wilson Road for a MATES Facility and reported 15Hd496, a historic site slightly more than 2 km from the project area. Schenian (1995b) surveyed a small area at the corner of Wilson and Frazier Roads during the survey of timber harvest tracts within Training Areas 8, 13, and 14, in which no archaeological sites were encountered.

No archaeological sites listed on or known to be eligible for listing on the National Register of Historic Places are located in or near the current project area. No buildings listed on or known to be eligible for the National Register are located in or within the viewshed of the project area. The only building within view of the project is a metal range building of modern construction. No cemeteries are located in or near the project area.

SURVEY PREDICTIONS

Based on previous archaeological research in the area, the history of settlement, and the environmental setting of the project area, the following results were expected:

- 1) The existing Mendick Tollgate Range has been thoroughly disturbed by earthmoving at least twice, thus few if any intact cultural deposits are expected within this area.
- 2) Most of the wooded project area consists of sinkholes that are too steep to support habitation or agriculture. The karstic plain typically has had a low prehistoric site density on Fort Knox.
- 3) No known historic structures are indicated within the project area on the Army acquisition maps, therefore there is a low potential for historic archaeological sites.
- 4) One knoll among the sinkholes has a moderate to high potential to be the location of prehistoric or historic activity.
- 5) The southern end of the wooded project area has been subjected to earthmoving and is unlikely to have intact cultural deposits.

SETTING AND FIELD METHODS

The proposed project areas are located in the Plain section of the Pennyryle cultural landscape and the Salt River Section of the Salt River archaeological management area. The project areas are in the Mississippian Plateau physiographic region of Kentucky (McGrain and Currens 1978:35) in the upland karst plain. Elevations in the project area range from 680 to 750 feet.

Drainage in the project area is into sinkholes and into Tollgate Creek. Soils in the project area are classified as Crider-Vertrees soil association (U.S.D.A. 1975: General Soil Map). Soil on the small level upland area at the northeast corner of the wooded area is Nicholson silt loam, two to six percent. Most of the surface undulates and the soils are Crider silt loam and Vertrees silt loam, six to 12 percent, and on the upper slopes and the sides of the ravines the soil is Vertrees silt loam, 12 to 20 percent (Arms et al. 1979). There are no sources of chert evident within the project area, although residual chert is present on the steep slope above Tollgate Creek and in the streambed of Tollgate Creek and its tributaries. The bedrock underlying

the soils in the project area is St. Louis and Salem Limestone, and Harrodsburg and Muldraugh limestones are dissected in the lower slopes above Tollgate Creek (Kepferle and Sable 1977).

Each proposed project area was walked in its entirety in transects spaced 10 m apart and shovel probes were placed in areas of limited visibility. If the ground surface was obscured by vegetation for greater than 10 m within a transect, then a shovel probe was excavated. Each shovel probe was approximately 30 cm square at ground surface and excavated to a depth of at least 25 cm or until subsoil was encountered. The fill was trowel sorted for possible cultural materials. Ground surface visibility was relatively good within the range, but in the wooded area it was extremely poor because of the heavy leaf cover that obscured the surface.

The ground surface of the entire range had been scraped to subsoil by construction activity, with the exception of small areas of intact topsoil in the southwest corner of the south half and at the crest of a rise between the fourth and fifth roads from the east side of the project area. The southern end of the wooded area had also been scraped with earthmoving equipment to provide for borrow fill and earth for target berms. A road, of probable military origin, began north of the cleared portion at the southeast corner of the wooded area and connected with the cleared areas. An old road was barely evident at the north end of the wooded area, and it descended from the ridgetop toward Tollgate Creek. The ground surface in the wooded area undulated and was pitted by sinkholes, leaving little habitable or arable land. No evidence of any archaeological material was observed in either project area.

CONCLUSIONS AND RECOMMENDATIONS

The Phase I literature search of the proposed project areas determined that neither area had been previously inspected. It also determined that the northern project area had not been the site of previous military construction or demolition. Both project areas were field inspected by walkover and shovel probing in the current study. The field inspection resulted in the discovery of no archaeological sites. It is recommended that the installation be permitted to construct the trail as proposed.

No impact to any significant cultural resource is expected as a result of the proposed improvement and expansion of the range. In the remote possibility that archaeological materials are discovered during the trail construction, all work in the vicinity of the finds must cease and the State Historic Preservation Officer (502-564-7005) and

the DPW Staff Archaeologist (502-624-6581 or 502-624-3629) should be contacted, so a representative of those agencies may evaluate the materials. Also, if human remains, regardless of age or cultural affiliation, are discovered, all activity in the vicinity of the remains must cease immediately, and the state medical examiner (502-564-4545) and the appropriate local law enforcement agency (Fort Knox Law Enforcement Command, 502-624-6852) must be contacted, as stipulated in KRS 72.020.

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Schenian, Pamela A., and Stephen T. Mocas

1994 A Phase I Archaeological Survey of the Fall 1994
Rehab Areas in Training Areas 9 and 10 on the Fort
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Directorate of Public Works, Fort Knox.

United States Department of Agriculture

1975 General Soil Map of Kentucky. Soil Conservation Ser-
vice, Washington, D.C..

United States Geological Survey

1991 Fort Knox, Kentucky-Indiana, 7.5 Minute Topographic
Quadrangle.

APPENDIX A.
RESUMES OF KEY PERSONNEL

Pamela A. Schenian
Staff Archaeologist and Project Principal Investigator

Office Address: Directorate of Public Works
ATTN: ATZK-DPW (Schenian)
U.S. Army Armor Center and Fort Knox
Fort Knox, Kentucky 40121-5000
Phone: (502) 624-6581

Date and Place of Birth: January 1, 1959; Waukesha, WI.

Present Position: J.M. Waller & Associates/Fort Knox Contract Staff Archaeologist

Education:

A.B.D. in Anthropology, Northwestern University, 1984.
M.A. in Anthropology, Northwestern University, 1982.
A.B. in Anthropology, Bryn Mawr College, 1980.

Previous Employment:

Senior Staff Archeologist, Archeology Service Center,
Department of Sociology, Anthropology, and Social Work, Murray State University, Murray, KY, November 1991-June 1993;
Staff Archeologist, November 1983-November 1991.

Southern Illinois University, Carbondale, IL: Field Technician, November-December 1985, September-October 1984.

Illinois State Museum Society, Springfield, IL: Field Assistant II (Supervisor), summer 1983; Field Technician, summer 1981.

Center for American Archeology, Kampsville, IL: Field Technician, summer 1982.

Department of Anthropology, Northwestern University, Evanston, IL: Teaching Assistant, 1981-82 academic year.

Great Lakes Archeological Research Center, Milwaukee, WI: Field Technician, summer 1979.

Field Research Experience:

Field experience on prehistoric and historic archaeological projects in Illinois, Indiana, Kentucky, New Jersey, South Dakota, Tennessee, and Wisconsin, 1979-present.

Professional Publications, Reports, Papers and Manuscripts:
107 CRM contract reports on projects in Indiana, Kentucky, and Tennessee.

1 Homicide site excavation contract report prepared in lieu of court testimony in Illinois.

7 Papers presented at professional conferences.

5 Publications, 1 in press.

Doctoral candidacy qualifying paper: "A Theory of Individual Style Variation for Archeological Studies".

Ms. submitted in partial fulfillment of the M.A. requirements: "Models of Environmental-Cultural Relationships: Testing with Archeological Evidence".

Stephen T. Mocas
Contract Assistant Staff Archaeologist

Office Address: Directorate of Public Works
ATTN: ATZK-DPW (Mocas)
U.S. Army Armor Center and Fort Knox
Fort Knox, Kentucky 40121-5000
Phone: (502) 624-6581

Present Position: University of Louisville Program of
Archaeology/Fort Knox Contract Assistant Staff Archeologist

Education:

Completed one year of doctoral program, Southern Illinois University, Carbondale, Illinois, 1972.

B.A. in Anthropology, University of Louisville, 1971.

Previous Employment:

Indiana University, Bloomington, Indiana: Staff Archaeologist, Part-time September 1991-Present.

Fort Knox/University of Louisville: Contract Assistant Staff Archaeologist, November 1993-December 1994.

Murray State University, Murray Kentucky: Staff Archaeologist, November 1991-November 1993.

Jefferson Community College, Louisville, Kentucky. Anthropology Instructor, August 1981-December 1982.

Louisville School of Art, Louisville, Kentucky: Anthropology Instructor, January-May 1976.

University of Louisville Archaeological Survey, Louisville, Kentucky. Project Director, Field Supervisor, or Research Assistant on various projects, July 1969-January 1977.

State University of New York of Buffalo, Buffalo, New York. Senior Field Worker, June-August 1970.

Field Research Experience:

Field experience, Phase I-III, prehistoric and historic archaeological projects in the states of Illinois, Indiana, Kentucky, New York, and Tennessee, 1969-present.

Research Grants:

Six grants for fieldwork and research.

Professional Publications, Reports, Papers and Manuscripts:

2 Non-contract site reports on projects.

31 CRM contract reports on projects.

6 Chapters in additional site reports.

5 Publications.