

A Phase I Archaeological Survey
of the Proposed Training Area 11 Timber Harvest
and Adjacent Areas on the Fort Knox Military Reservation,
Hardin and Meade Counties, Kentucky

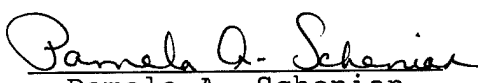
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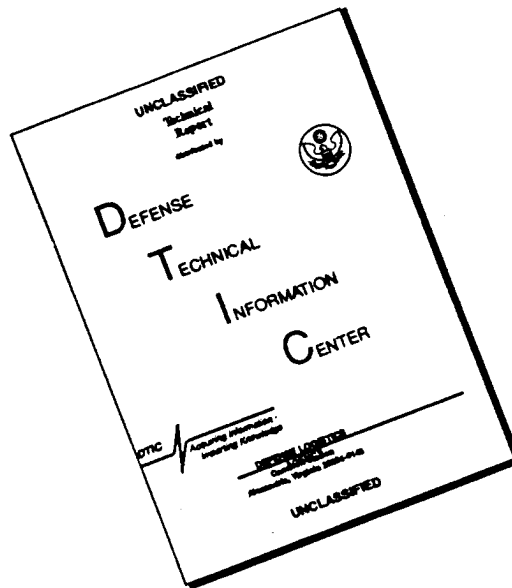
November 1995

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<p>From June-October, 1995, Fort Knox contract archaeologists conducted a Phase I survey of the proposed Training Area 11 timber harvest tract and adjoining areas on the Fort Knox Military Reservation, Hardin and Meade Counties, Kentucky. The timber tract encompasses approximately 15.3 ha (37.8 acres). An additional adjacent 5.9 ha (14.7 acres) also were surveyed. The survey recorded three historic archaeological sites, 15Hd502-15Hd504, and the recovery of a prehistoric isolated find. Isolated finds are not eligible for the National Register. Site 15Hd504, the isolated find, and a portion of 15Hd503 lie outside the proposed timber tract. The historic sites have an end date of 1919 and are considered potentially eligible for the National Register due to the presence of intact cultural deposits. Sites 15Hd502 and 15Hd504 are also potentially eligible because of their association with individuals of local, and possibly state and national, significance. Because the timber harvest is being conducted to improve airfield safety, site avoidance is not feasible. It is recommended that the timber harvest be conducted as proposed except that heavy machinery use on sites be minimized and that archaeologists be present during the logging of site areas to assist in the avoidance of damage.</p>			
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ABSTRACT

Between June and October, 1995, the Fort Knox contract archaeology staff conducted a Phase I archaeological survey of the proposed Training Area 11 timber harvest tract and adjoining areas on the Fort Knox Military Reservation, Hardin and Meade Counties, Kentucky. The timber tract encompasses approximately 15.3 ha (37.8 acres). An additional adjacent 5.9 ha (14.7 acres) also were surveyed. The survey resulted in the recording of three historic archaeological sites, 15Hd502-15Hd504, and the recovery of a prehistoric isolated find. Isolated finds are not eligible for the National Register. Site 15Hd504, the isolated find, and a portion of 15Hd503 lie outside the proposed timber tract. The historic sites have an end date of 1919 and are considered potentially eligible for the National Register due to the presence of intact features and sheet middens. Sites 15Hd502 and 15Hd504 are also potentially eligible because of their association with individuals of local, and possibly state and national, significance. Because the timber harvest is being conducted to improve the safety of the airfield runways, avoidance of the sites is not feasible. It is recommended that the timber harvest be conducted as proposed with the exception that the use of heavy machinery on the sites be minimized and that the archaeologists be present during the logging of the site areas to assist in the avoidance of damage.

MANAGEMENT SUMMARY

In accordance with Executive Order 11593 and other applicable federal laws and regulations, a Phase I archaeological study was conducted of a proposed timber harvest tract and adjoining areas on the Fort Knox Military Reservation, Hardin and Meade Counties, Kentucky. The entire tract was inspected, but only a limited number of trees will be cut within the tract. Three historic archaeological sites and a prehistoric isolated find were recorded. The isolated find is not eligible for the National Register. The three sites are potentially eligible for the National Register. Site 15Hd504, the isolated find, and a portion of 15Hd503 lie outside the timber tract. It is recommended that the timber harvest be conducted as proposed, but that heavy equipment use be minimized on 15Hd502 and 15Hd503 and that the archaeologists monitor the logging on these two sites to assist in the minimization of impact to the sites.

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INTRODUCTION

In June through October, 1995, the Fort Knox contract archaeology staff performed a Phase I archaeological survey of a proposed timber harvest tract in Training Area (TA) 11 and adjacent areas to the east in Hardin and Meade Counties, Kentucky (Figure 1). The area to be harvested is approximately 500 m (1640 feet) long (north-south) and 300 m (984 feet) wide, encompassing approximately 15.3 ha (37.8 acres) (Figure 2). The western edge of the timber tract is bounded by the fence along U.S. 31W, the north border is a dirt road which runs south of Dickerson Lake, the south edge of the timber area is the north fence of Godman Airfield, and the east border is demarcated by the west edge of Tow Dragon range and a flagged line. Only some trees in the proposed timber tract are marketable timber. The primary purpose of the proposed timber harvest is to improve the safety of the flight paths of the airfield runways by removing taller trees.

An additional 5.9 ha (14.7 acres) of adjacent land in and around Tow Dragon range was surveyed (Figure 3) to help with preparations for the National Boy Scout Jamboree, which took place on the Tow Dragon Range on October 13-15, 1995. After discovering intact, open cisterns on two sites within the proposed timber tract, it was felt necessary as a safety precaution, given the imminent arrival of over 3000 children, to inspect all known former building locations near the Tow Dragon Range. Theoretically, the scouts were not supposed to go into the woods except on designated trails and with adult supervision, but nobody involved with the planning of the jamboree believed that those instructions would be followed by all.

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), and these documents are updated regularly. These documents are on file at the Cultural Resource Management Office, Environmental Management Division, Directorate of Public Works (DPW), Fort Knox. 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 portions of the project area had not been previously surveyed, but others had been, as reported in Ruple (1993), Schenian and Mocas (1993), and Mocas (1994a) (Figure 4). During the present project the areas which had not been previously surveyed were inspected by walkover, supplemented by shovel probing. A portion of the area covered by the Mocas (1994a) study was rewalked because the field conditions had improved.

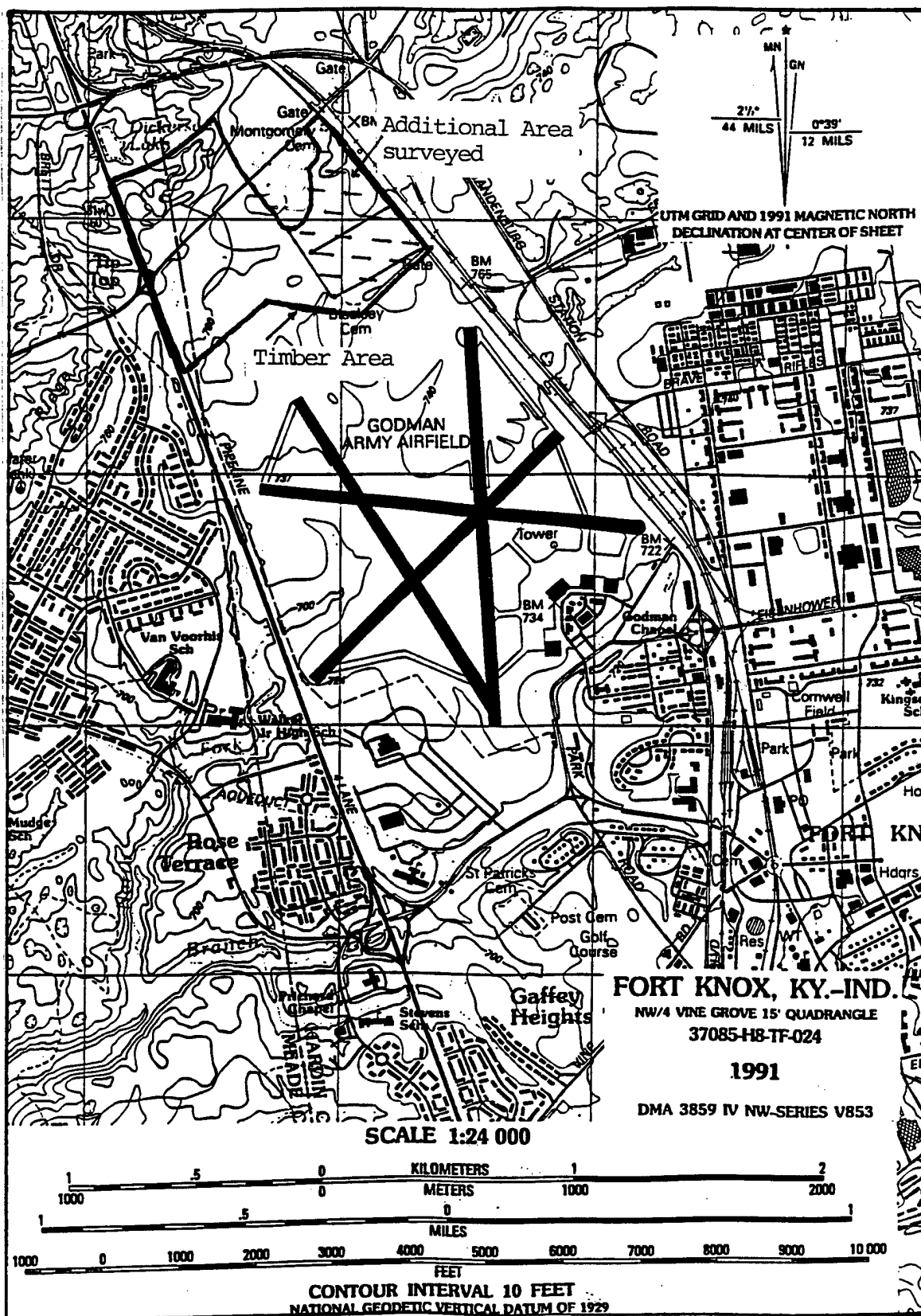


Figure 1. Location of Project Area.

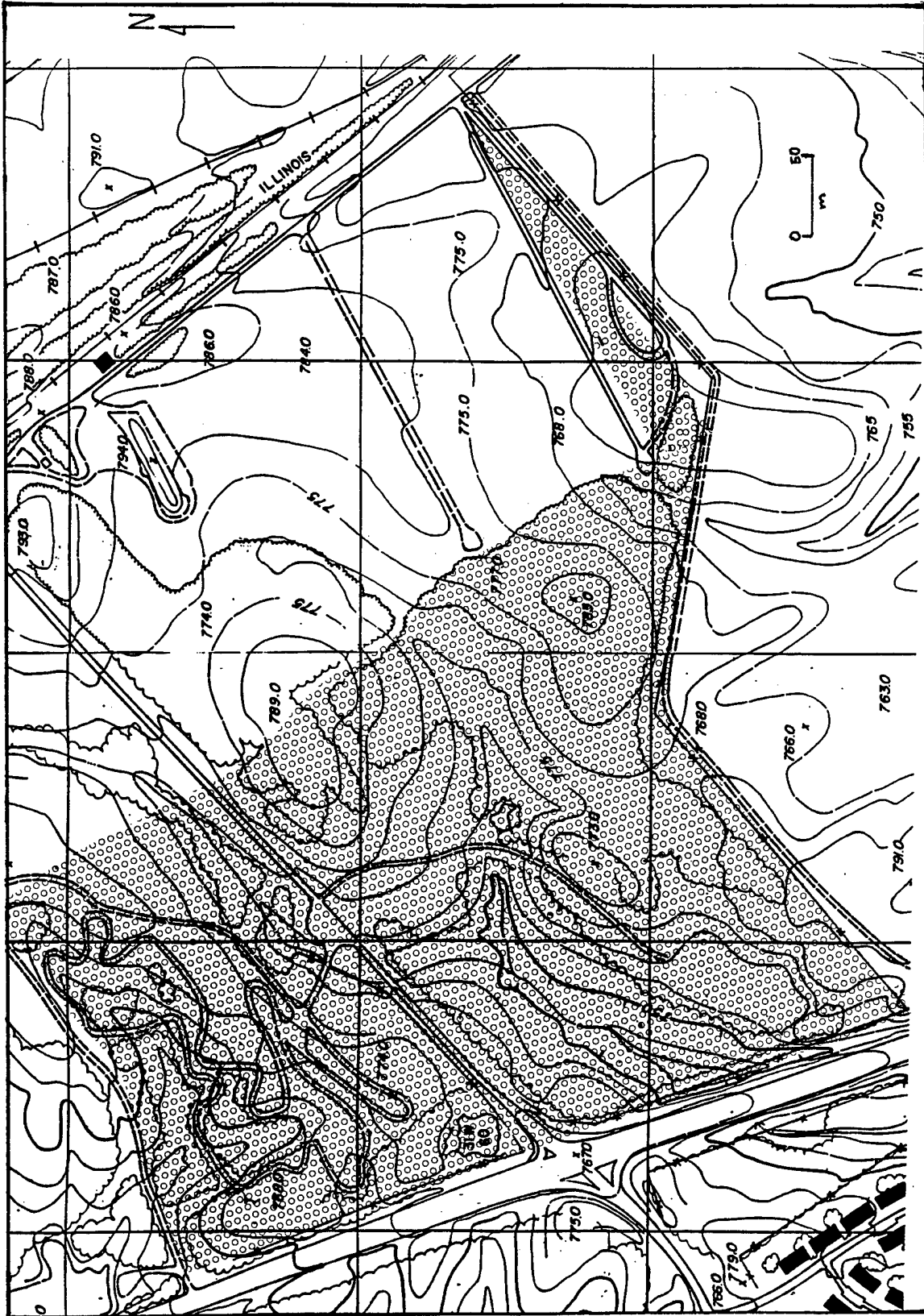


Figure 2. Proposed Timber Harvest Area.

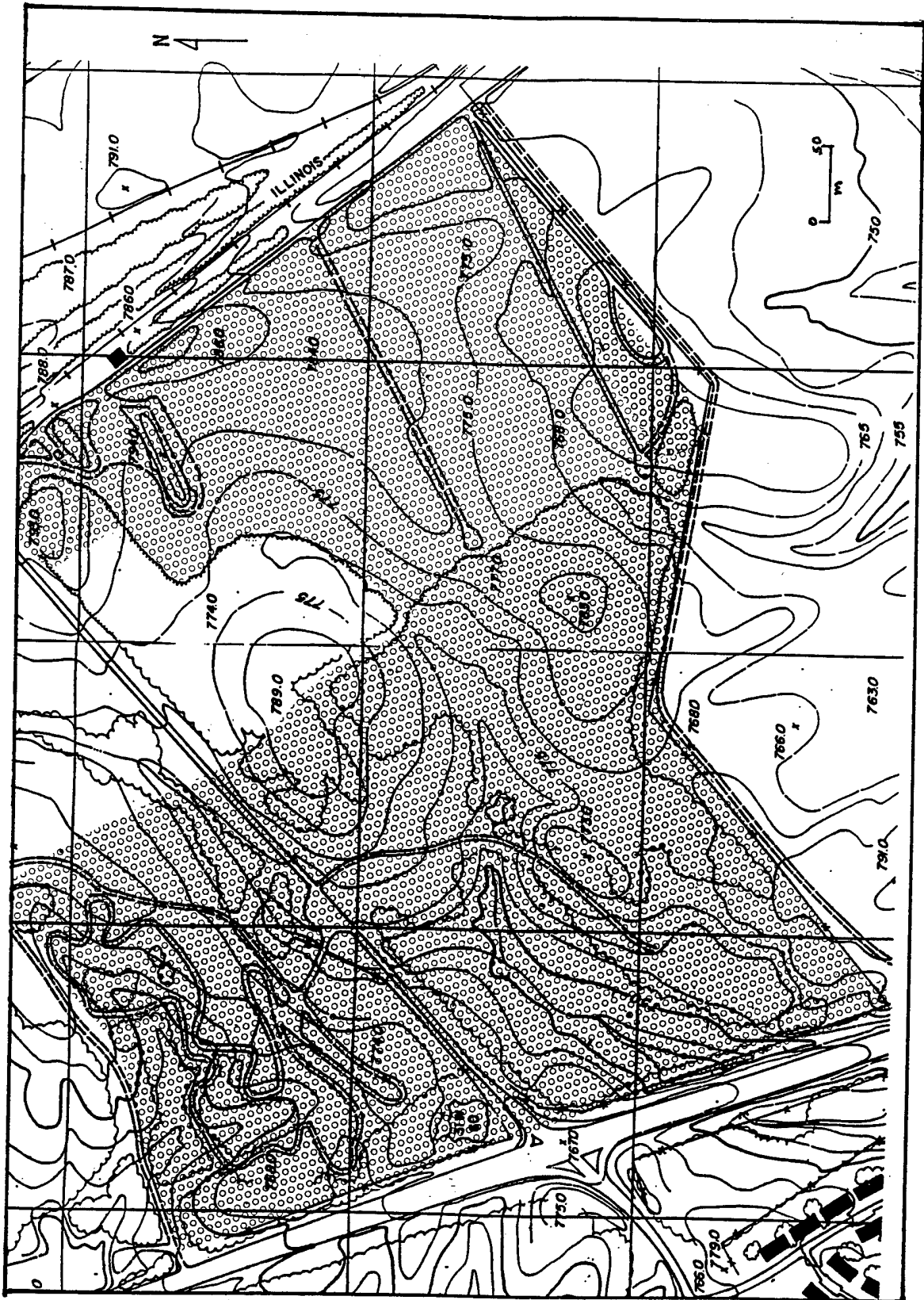


Figure 3. Area Surveyed.

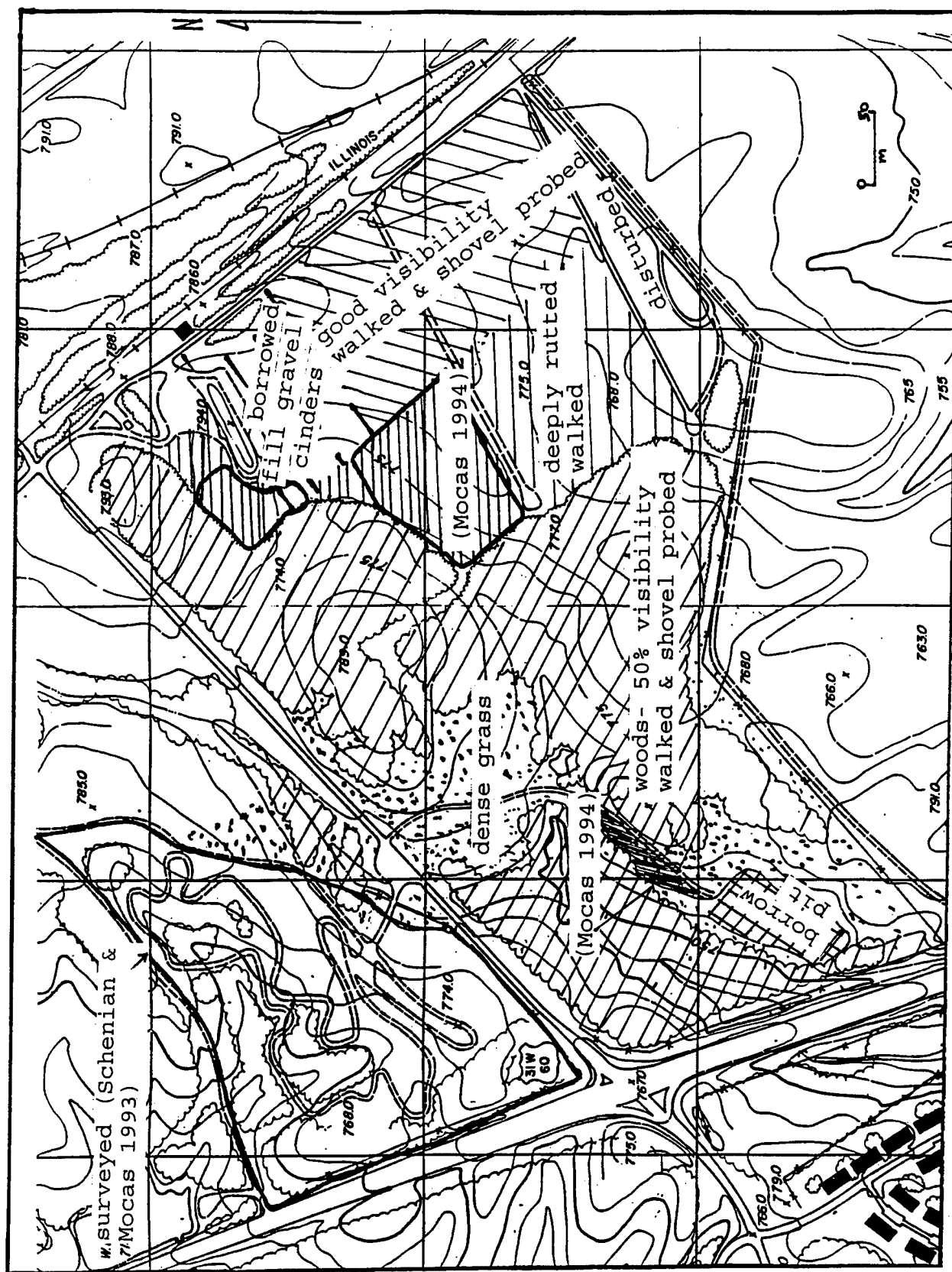


Figure 4. Vegetation and Field Methods in Project Area.

The current project area is in the Plain section of the Pennyryle cultural landscape, in the undulating karst plain. Elevations in the project area range from 745 to 789 feet. Soils are classified as Crider-Vertrees soil association (U.S.D.A. 1975: General Soil Map). Drainage in the project area is into the headwaters of the North Dry Branch of Otter Creek.

The archaeological survey was conducted in preparation for the removal of selected trees from the wooded area north of the Godman Airfield. The archaeological survey and literature review were required to comply with the National Environmental Protection 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), Presidential Executive Order 11593, and Army Regulation 420-40.

The survey of the project area was sporadically conducted on various dates between June and October 1995. A total of 44 person hours were spent in the survey. Schenian worked alone on the dates in June through August, and Schenian and Mocas completed the fieldwork in September and October. Tim Barker, a high school co-op student assisted in the screening of shovel tests on site 15Hd502 and 15Hd504 in September and October. Three historic archaeological sites and one prehistoric isolated find were recorded. The artifacts collected and the related project documentation 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 at DPW). Duplicate copies of the documentation will be stored at DPW.

SETTING AND ENVIRONMENTAL BACKGROUND

O'Malley et al. (1980) prepared a detailed description of the setting and environmental background of the Fort Knox base as a whole. This section will focus on the environmental characteristics of the current survey area.

The project area is located in the Plain section of the Pennyryle cultural landscape. The project area lies in the Mississippian Plateau physiographic region of Kentucky (McGrain and Currens 1978:35) on a relatively level area at the edge of the undulating karstic plain. Elevations in the project area range from 745 to 789 feet. Drainage in the project area is into the headwaters of the North Dry Branch of Otter Creek.

Soils are classified as Crider-Vertrees soil association (U.S.D.A. 1975: General Soil Map), and consist of Melvin silt loam in level poorly drained low areas, Gatton silt

loam and Nicholson silt loam in well drained, gently sloping areas (primarily on ridge tops), and Riney loam in moderately steep, well drained areas (primarily on ridge slopes) (Arms et al. 1979: Map 2).

The portion of the timber area along U.S. 31W had been borrowed for construction fill for that highway. The south-west portion of the timber area, directly north of Godman Field, had been borrowed for military construction activities. Aerial photographs and U.S.G.S. topographic maps from the late 1940's and early 1950's indicate that most of the timber tract had been cleared of trees, except the areas around each of the three historic sites. This may be a factor in the excellent preservation of these sites. After a variety of military activities, limited timbering, and occasional burning, the area was reclaimed by an impenetrable mass of flesh-rending briars that necessitated survey with machetes and weed cutters, which became even more lethal weapons as the crew danced about writhing from the bites of sharp-fanged harvester ants that climbed from below and dropped from above and were remarkably adept at finding all available garment openings. At present, the southern portion of the wooded area has vehicle paths through it, but there is little evidence of extensive tank traffic.

The topsoil in the northwest portion of Tow Dragon range had recently been removed (Mocas 1994a) and visibility was excellent, therefore this area was resurveyed. The southwest portion of the range had been heavily crisscrossed during tank training and the soil deposits were significantly disturbed. Most of the eastern half of the range had been borrowed and altered for construction of the range and the associated berms.

PREVIOUS RESEARCH

Approximately 26,260 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. This section will focus on the previous research conducted within a 2 km radius of the current project area.

Most of the portion of the project area north of Baker Road and south of the moto-cross course had been previously surveyed by Rupple (1993) and Schenian and Mocas (1993) with negative results. The remainder of the project area north or south of Baker Road had not been surveyed, except a small rise north of the archery range service road (Mocas 1994a). This rise contained no sites.

Ruple (1993) surveyed the area around Dickerson Lake, to the north of the project area, but found no sites. O'Malley et al. (1980) surveyed approximately one-quarter each of Hunting Areas (HA) 7, 8, 19, and 20 near the current project area. Three prehistoric sites (15Md166 through 15Md168), a prehistoric isolated find (15Md169), a historic house (15Md170), and a cistern (12Md234) were reported in HA 7 within 2 km of the project area. No sites were found in HAs 8, 19, and 20. None of the sites listed above are eligible for the National Register.

Mocas (1994b) encountered no sites in the survey for a pipeline and water tower on Frazier Road. The survey of proposed topsoil borrow areas on Tow Dragon range, to the east of the project area, yielded two prehistoric isolated finds (Mocas 1994a).

No archaeological sites listed on or eligible for listing on the National Register of Historic Places were reported to be in or immediately adjacent to the current project area prior to the survey. No buildings listed on or known to be eligible for the National Register are located in or within the viewshed of the current project area. Two small cemeteries are located just outside the proposed timber area. These are well-marked by sturdy fences and signs.

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 wooded area proposed for timber harvesting is bounded by topsoil and earth borrow areas, an artillery range, and a highway, and is divided by a road; therefore, it is expected that some disturbance has occurred.
- 2) The project area consists of low rises in a relatively level area with small drainages. This environment may have been suitable for specialized prehistoric activities but not habitation.
- 3) The Army land acquisition maps indicate the presence of several historic farmsteads within the project area. Structural remains and refuse are likely to be present from these habitations.

FIELD METHODS

Most of the woods in the project area were systematically walked in transects spaced approximately 10 m apart (Figure 4). Ground surface visibility was variable, but game trails, old vehicle paths, and light understory allowed fair visibility (25 percent or more) at irregular intervals. Many areas could be examined by simply scraping aside the leaves. The understory consisted primarily of scattered spindly weeds and saplings, with some brambles and vines near the edge of the woods.

The small portion of the project area north of Baker Road that had not been inspected in previous surveys was walked. Although wooded, this area had many open patches with 100 percent ground surface visibility and abundant evidence of prior disturbance (e.g., bulldozer piles, small drainage ditches).

The archery range and the adjoining hay field were in grass, which had been bushhogged the week it was surveyed. Ground surface visibility was 50 to 100 percent in these areas, which were walked at 10 m intervals.

Tow Dragon Range was walked at 10 m intervals. Shovel probes were placed in areas of limited visibility, unless the shovel hit the dense layers of rock and cinder fill, which had been used to construct military training features in portions of the range. The area of Tow Dragon range that had been scraped for topsoil offered 100 percent 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 30 cm or until subsoil was encountered. The fill was trowel sorted for cultural materials outside of known site areas, and the probe wall profiles were inspected prior to backfilling of the tests. On archaeological sites, the fill was screened through one-quarter inch hardware cloth to maximize recovery of materials.

When a projectile point was found as an isolate in one of the shallow topsoil borrow areas on Tow Dragon Range, the area around the find spot was walked at 1 to 2 m intervals for a distance of at least 50 m from the find within the borrowed area. North of the borrowed area were woods encompassed a shallow drainage. This wooded area had bulldozer piles and was so disturbed that the investigation of the find spot was discontinued.

The woods around the sites had more densely concentrated trees, briars, weeds, and rye grass than elsewhere in the project area. Visibility was worse (nearly zero percent)

around sites 15Hd503 and 15Hd504, than on 15Hd502. Site 15Hd502 was transected by a dirt truck path (a former logging trail). Ground cover on most of 15Hd502 consisted of fallen leaves and spice bush, but much of the site had approximately 50 percent visibility. Because of the generally poor visibility and difficulty of movement on 15Hd503 and 15Hd504, the approximate locations of the historic structures were calculated in advance and the investigation focused on areas with a high potential for structural ruins, features, and cultural deposits.

According to the 1919 Army acquisition maps, a school and two privies had been located in the general vicinity of a gravel turnaround on the north side of Baker Road directly opposite the entrance to the archery range. Examination of the former location of the school led to the conclusion that the footprint of the building would be under the turnaround and that the former privy locations have been heavily disturbed. No artifacts were observed in this area, although modern refuse was abundant. It appeared that the area had been bulldozed or borrowed during the construction of Highway 31W and maintenance of Baker Road, and it is likely that all evidence of the school complex was destroyed by these activities.

The former Scheible property lies completely outside the proposed timber harvest tract. According to the 1919 Army acquisition maps, this property had two additional clusters of buildings and one isolated building besides the cluster recorded as 15Hd504. The surface of these former locations were inspected for cultural deposits or features that might need to be protected during the Boy Scout Jamboree or that might be safety hazards to the scouts.

The isolated structure had been located next to the northeast corner of the Montgomery cemetery. The dirt road that used to run between this structure and the railroad tracks has been graded, widened, and covered with gravel. This area was in patchy mowed grass, and no evidence was found of archaeological deposits. Since the road is lower than the cemetery, it is assumed that archaeological evidence of the structure has been destroyed by road maintenance and range construction activities.

One structure cluster containing three buildings had been located within 30 m of Baker Road and approximately 60 to 90 m west of 15Hd504. This location had been heavily disturbed by bulldozing for the installation of a powerline and improving drainage along Baker Road. No evidence was found to indicate that the structures and associated activity areas had translated into archaeological features.

Another structure cluster within 80 m of Baker Road and approximately 40 to 60 m east of 15Hd503 had contained two structures. The approximate location of the building nearer

the road had been borrowed. No surface evidence was found of the larger building, which had been located farther from the road, but some very large trees were present in that locale which suggested that the area had not been previously disturbed.

Because the wooded portion of the former Scheible property was inspected only to facilitate arrangements for the Boy Scout Jamboree and because field conditions were poor due to the dense vegetation, the inspection was limited to known former structure locations and only limited shovel testing was conducted. This wooded area will need to be inspected further if a new federal undertaking is proposed for it or if field conditions improve.

In summary, the survey resulted in the recording of three historic archaeological sites, 15Hd502 through 15Hd504, and of one prehistoric isolated find. The following sections describe the artifacts and the cultural resources.

ARTIFACT TYPOLOGY AND MATERIALS RECOVERED

The following paragraphs summarize the artifact typologies used in the sorting and analysis of the artifacts recovered in this project, and describe specific artifacts recovered in greater detail. The distribution of historic artifacts by site is summarized in Table 1. Only one prehistoric artifact was recovered, and this was recovered as an isolate.

Prehistoric Artifact Typology

Projectile Point

A projectile point is a bifacially worked chipped stone tool which is generally assumed to have been hafted for use as a hunting implement, such as a spear head or arrowhead, but may have an alternative or additional use as a cutting implement. One Middle Woodland Snyders projectile point (ca. 200 B.C. to A.D. 200) (Justice 1987:201-204) was recovered during this project (Figure 5).

Historic Artifact Typology

South (1977:95-95) defined a system of artifact classification based on function. Under South's system, for example, ceramics and curved glass are kitchen group artifacts, flat glass less than 10 mm thick and nails are architectural

TABLE 1. Historic Artifacts by Site.

	15Hd502	15Hd503	15Hd504	Total
KITCHEN GROUP				
Ceramics				
stoneware, buff	0	0	3	3
ironstone	11	2	3	16
refined earthenware				
whiteware	10	4	3	17
pearlware	1	0	4	5
porcelain	1	1	1	3
unidentified, burnt	0	92	0	92
Glass				
bottles				
amethyst, solarized	1	6	8	15
aqua	3	4	4	11
clear	1	3	0	4
dark blue green	0	0	1	1
green	0	18	3	21
slate	0	5	0	5
dishware				
amethyst, solarized	0	0	3	3
clear	0	3	1	4
milk glass	0	1	0	1
curved				
amethyst, solarized	1	0	1	2
clear	2	13	0	15
green	0	0	1	1
canning jar lid liners	1	0	0	1
Kitchen Group Total	32	152	36	220
ARCHITECTURAL GROUP				
Brick	52	4	21	77
Ceramic block	0	9	0	9
Mortar	3	30	6	39
Flat (window) glass				
Aqua	0	3	0	3
Clear	2	0	0	2
Green	2	2	2	6
Nail/spike				
Square nails	7	5	0	12
Wire	0	38	4	42
Faucet	0	0	1	1
Slate tile	0	5	0	5
Ceramic insulator	0	1	0	1
Architectural Group Total	66	97	34	197
FURNITURE GROUP				
Kerosene lamp glass				
amethyst, solarized	0	0	18	18
clear	3	0	2	5
Metal stove part	0	0	1	1
Porcelain statue	0	0	1	1
Furniture Group Total	3	0	22	25

TABLE 1. Historic Artifacts by Site (continued).

	15Hd502	15Hd503	15Hd504	Total
ENTERTAINMENT GROUP				
China doll parts	2	0	0	2
China toy teaset	0	0	1	1
Entertainment Group Total	2	0	1	3
FAUNAL GROUP				
Bone	0	0	3	3
Faunal Group Total	0	0	3	3
ARMS GROUP				
Shotgun shell	0	0	1	1
Arms Group Total	0	0	1	1
ACTIVITIES GROUP				
Miscellaneous Hardware	1	37	3	41
Rock	0	0	1	1
Slag				
Mostly metal	0	1	4	5
Mostly glass	0	154	14	168
Mostly zinc	0	13	0	13
Unidentified	0	1	0	1
Activities Group Total	1	206	22	229
TOTAL	104	455	119	678

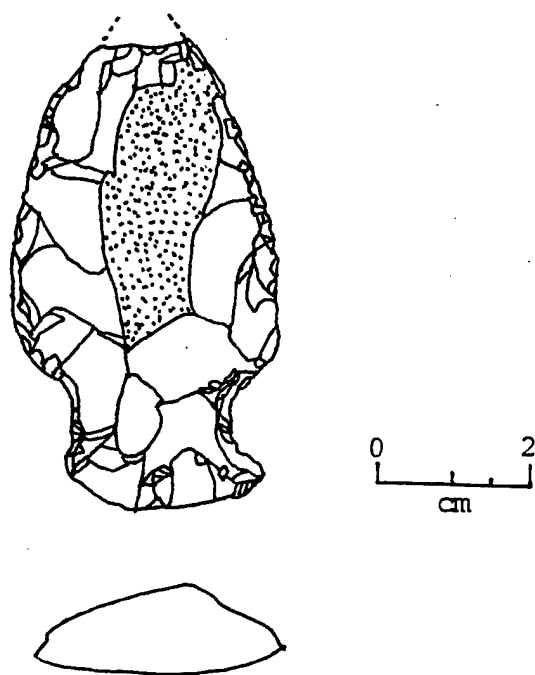


Figure 5. Projectile Point Found as Isolated Find.

group artifacts, and toys are entertainment group artifacts. A complete analysis of many of the artifacts recovered in this project was impossible due to fire damage.

KITCHEN GROUP

Ceramics

Historic ceramics are divided into coarse earthenware, stoneware, ironstone, refined earthenware, semi-porcelain, and porcelain. Coarse and refined earthenware have the most porous paste, stoneware and ironstone have less porous paste, and semi-porcelain and porcelain have the least porous paste. Each of these broad categories is further divided into more specific types based on paste texture and color, glaze characteristics, and decoration (Maples 1991). No coarse earthenware sherds were recovered in this project.

Stoneware. Stoneware cannot be dated to a more accurate range than nineteenth to twentieth century and vessels frequently lack maker's marks. Three buff stoneware sherds were recovered from 15Hd504.

Ironstone. A total of 16 ironstone sherds were collected in this project. All have white paste. Ironstone dates from 1860 to 1920 (Ketchum 1983:201). Ironstone with scalloped rims and/or impressed and/or relief decoration dates from ca. 1895 to 1920 (Montgomery Ward & Co. 1969; Sears, Roebuck & Co. 1920).

Eleven ironstone sherds were recovered from 15Hd502. Five rim sherds were found. One rim sherd is undecorated, one has shallow relief decoration, one has remnants of a gilt floral decoration and a gilt band around the rim, another has a gilt band below the lip, and one is a scalloped rim from a plate has relief decoration and a gilt band. One fragment of a covered dish lid and one sherd from a serving dish also were recovered. One basal sherd from a plate with a transfer print of green leaves and pink roses, one basal sherd of a plate with a floral transfer print, and two undecorated basal sherds were found.

A total of two ironstone sherds were found at 15Hd503. One is an undecorated plate rim sherd and one is a scalloped rim with relief decoration.

One undecorated rim sherd, one undecorated lid fragment, and one reproduction flow blue rim with relief decoration and blue underglaze were found at 15Hd504. Although the reproduction flow blue piece does not have a maker's mark, Schenian recognizes this pattern, through ownership of a piece, as manufactured by the French China Company, Sebring, Ohio, sometime between 1900 and 1932 (Lehner 1988:155-156).

Refined Earthenware. Most of the refined earthenware collected in this project is whiteware, i.e., earthenware with a white paste. Unless decoration is mentioned, the sherd has white glaze on the exterior and interior surface, but no other decoration. Whiteware dates from 1830 to 1890 (Smith 1983:171). Pearlware is a refined earthenware with white paste and a clear lead glaze with a small amount of cobalt that causes a bluish opalescent cast (Price 1979:10). The temporal span of pearlware is approximately 1780-1830 (Smith 1983).

One pearlware sherd and 10 whiteware sherds were found at 15Hd502. The pearlware sherd is a plate rim with scalloped edge and impressed bud blue shell edge. This form of shell edge on pearlware dates from ca. 1800-1830 (Miller 1989). The whiteware sherds consist of two undecorated cup rims, one angular rim of a serving vessel or plate, one additional rim, one undecorated cup body sherd, two body sherds with leaf transfer print, one plate base, one additional base sherd, and one chip.

Four whiteware sherds were found at 15Hd503. One is a base sherd from a bowl or plate. One is a plate rim sherd. One is a body sherd with faded floral decoration. One is a whiteware body sherd with floral relief decoration.

Four pearlware sherds and three whiteware sherds were found at 15Hd504. The pearlware sherds consist of one rim with blue shell edge impressions, one undecorated rim, and two body sherds. The whiteware sherds consist of three body sherds.

Porcelain. A porcelain rim sherd was found at 15Hd502, a body sherd was recovered at 15Hd503, and one rim sherd was found at 15Hd504.

Unidentified, burnt. A total of 92 ceramic sherds from 15Hd503 were too heavily burned to identify the paste. Remnants of decoration could be seen on a few of the pieces but it could not be determined if they were painted or transfer print decoration.

Glass

Glass kitchen artifacts typically are divided into three main categories. These are bottles, dishware, and canning jar lid liners. The term "curved glass" is used in this report to describe glass that could not be identified as bottle glass or dish glass, but which was clearly from a curved vessel.

Bottle glass. A total of 57 bottle glass fragments were recovered in this project. Amethyst bottle glass dates from

ca. 1880 to 1914 (Newman 1970:70-75), green glass from 1865 to present, clear glass from 1875 to present, and cobalt and milk glass from 1890 to present (Fike 1987:13).

Five bottle glass fragments were recovered from 15Hd502. One is a piece of a solarized amethyst medicine bottle, one is an aqua panel bottle shoulder, two are aqua body sherds, and one is a clear fragment.

A total of 36 bottle glass fragments were collected from 15Hd503. These consist of six amethyst, four aqua, three clear, 18 green, and five slate-colored fragments.

A total of 16 bottle glass pieces were found at 15Hd504. These consist of eight solarized amethyst pieces, four aqua, three green, and one dark blue-green glass.

Dish glass. A total of eight fragments of dish glass were recovered in this project, four each from 15Hd503 and 15Hd504. Dish glass colors are dated the same as bottle glass colors, although dish glass often has recognizable pressed or cut patterns which permit more specific identification of manufacturing dates.

A milk glass pitcher or creamer handle and three clear sherds were found on 15Hd503. Three amethyst sherds, including one piece of pressed glass, and one piece of clear glass, were found on 15Hd504.

Curved glass. Eighteen curved glass fragments were recovered in this project which could not be more specifically identified as deriving from bottles or dishes. One piece of solarized amethyst curved glass and two clear curved glass pieces were found at 15Hd502, thirteen clear sherds of curved glass were recovered from 15Hd503, and one amethyst and one green sherd were recovered from 15Hd504.

Lid liner. Milk glass lid liners date from 1869 to 1915 (Toulouse 1969:499). One fragment of a liner was found at 15Hd502.

ARCHITECTURAL GROUP

Brick

A total of 77 brick fragments were collected in this project. Additional pieces were observed in the field but not collected. The brick fragments consist of 52 handmade brick fragments from 15Hd502, four fragments from 15Hd503, and 21 fragments from 15Hd504.

Ceramic Block

Ceramic block is the precursor to concrete blocks, and dates from ca. 1880 to present. Nine ceramic block fragments were found on 15Hd503.

Mortar

A total of 39 pieces of mortar were recovered in this project. Three pieces of mortar were found on 15Hd502, 30 pieces were recovered from 15Hd503, and six pieces were found on 15Hd504.

Flat (window) glass

Eleven pieces of flat glass, presumed to derive from windows, was recovered in this project. Two pieces of clear and two pieces of green glass were found at 15Hd502, three pieces of aqua and two pieces of green glass were found at 15Hd503, and two pieces of green glass were found at 15Hd504.

Nail/spike

Machine cut square nails were produced from 1790-1880 (Smith 1975:5-7) and the temporal span of wire nails is 1890-present (Nelson 1968). Seven square nails were recovered from 15Hd502, five square nails and 38 wire nails were recovered from 15Hd503, and four wire nails were collected from 15Hd504.

Faucet

A metal faucet was found at 15Hd504. It was found in a shovel probe in the location of a building believed to be a residence.

Slate tile

Five pieces of slate tile were found at 15Hd503. These are probably roof tile fragments.

Ceramic Insulator

A fragment of a ceramic insulator was found at 15Hd503. Ceramic insulators post-date 1835, when the telegraph was invented (Cleland 1983:22). The proximity of 15Hd503, and the other sites in this project, to the railroad depot at

Tip Top makes it possible that these households had electricity earlier than most of residents of Hardin and Meade County where electricity was not common in rural areas until well into the twentieth century.

FURNITURE/FURNISHINGS GROUP

Kerosene Lamp Glass

A total of 23 pieces of kerosene lamp glass were recovered in this project. Eighteen pieces of amethyst kerosene lamp glass were found at 15Hd504. Three pieces of clear kerosene lamp glass were found at 15Hd502 and two pieces at 15Hd504.

Stove

One metal component of a wood or coal stove was recovered from 15Hd504. It is one of the hinged plates which served to extend the length of the stove and keep pots warm without being over direct heat.

Porcelain Statue

One porcelain fragment with gilt from 15Hd504 may be part of a statue, or possibly a small vase. The piece has a complex molded shape, and painted gilt decoration in a floral garland motifs.

ENTERTAINMENT GROUP

Toy fragments were recovered from 15Hd502 and 15Hd504. Two china doll appendages were collected from 15Hd502. One basal sherd from a toy tea set was collected from 15Hd504.

FAUNAL GROUP

Three pieces of bone were found on 15Hd504. One is a ham bone and two are unidentified burnt bone fragments.

ARMS GROUP

Shotgun Shell

A shotgun shell was found on 15Hd504. It is a 12 gauge shell.

ACTIVITIES GROUP

Miscellaneous Hardware

A total of 41 miscellaneous hardware pieces were recovered in this project. One metal band was found at 15Hd502, 33 unidentified pieces of metal and four pieces of wire were found on 15Hd503, and three unidentified pieces of metal were found on 15Hd504. One of the wire pieces from 15Hd503 may be a handle of a whisk, bottle brush, or similar object with a twisted wire handle.

Rock

One piece of worked limestone was found on 15Hd504. Its function is unknown, but it appears to be too small to have an architectural function. A large quantity of limestone foundation and chimney stones, which are architectural group artifacts, were observed at each of the sites, but not collected.

Slag

A total of 186 pieces of slag were collected in this project. Most of these are lumps of burned materials composed of several artifact types which could not be positively identified due to the degree of melting. If they could be identified, most would fall under the kitchen or architectural artifact groups. Site 15Hd503 contained 168 pieces of slag consisting primarily of glass, zinc, or metal, and 15Hd504 had 18 pieces of slag. The "mostly zinc" slag is believed to derive predominantly from melted zinc canning jar lids. Almost all of the pieces of zinc slag also contain glass. Many of the "mostly glass" slag pieces probably derive from bottles or glass dishware, but several slag pieces included small-mesh metal screen, suggesting they derive from window glass which melded with the adjacent window screen. A few pieces of the glass slag could be identified to color, but most were composites of so many materials that this was not possible. The "mostly metal" category refers to slag which is of metals other than zinc. These are conglomerates in which iron predominates. The number of pieces which could be identified only as slag and the appearance of these items suggests an extremely hot fire.

Unidentified

One unidentified item, possibly a burnt bottle brush, was found on 15Hd503. It may be a part of the same item from this site which had the twisted wire handle included in the miscellaneous hardware category.

CULTURAL RESOURCES

This Phase I archaeological survey resulted in the recording of three historic archaeological sites and one prehistoric isolated find. Two cemeteries are also located in the area surveyed, but outside the proposed timber harvest tract. Preliminary archival research was conducted to develop an outline of land ownership of the three historic sites. Archival research for these sites is complicated by the fact that they lie near the indefinite boundary of Hardin and Meade Counties, and this boundary has shifted through time. Records related to these properties therefore are found in both counties, and it sometimes appears that the decision to use a particular court house as the place of record was based on convenience rather than law. In the following paragraphs, Hardin County deed books are referenced as "HCDB" and Meade County deed books are referenced as "MCDB". The UTM coordinates of the cultural resources are listed in Table B-1 in Appendix B. Appendix B also includes a topographic quadrangle section showing the locations of the cultural resources, plan views, and soil profiles.

15Hd502

Site 15Hd502, the Kendall-Blakely Site, is located on a knoll in an upland karstic plain, at an elevation of 780 feet (Figures B-1, B-2, and B-6). Acquisition maps were used to relocate the former structure locations and select shovel probe loci. At the time of Army acquisition in 1919, eight buildings were located over a 70 m (north-south) by 40 m, or 2800 m², area. The structure layout was used to estimate the site size, since ground surface visibility was generally poor.

The buildings are not labeled as to function on the acquisition maps, but appear to represent one house, one barn, and six outbuildings. Cultural features, including an open cistern, a chimney fall, and several foundation stone piles, were observed on the site. Shovel probes yielded evidence that a sheet midden of variable thickness exists on the site. Materials recovered include a variety of residential refuse, dating from ca. 1800 to 1919.

A total of 104 artifacts were collected from 15Hd502. Of these, 58 were recovered from shovel test pit (STP) 2, five from STP 3, five from STP 4, three from STP 5, and 33 from the site surface. The items from STP 2, placed near what is believed to be the chimney fall within the house, consist of 49 brick fragments, one chunk of mortar, one pieces of clear window glass, five complete square nails, and two pieces of clear kerosene lamp glass. The items from STP 3 consist of one milk glass lid liner, one whiteware sherd, one square

nail, one piece of clear flat glass, and one piece of an amethyst medicine bottle. Three brick fragments and two chunks of mortar were recovered from STP 4, excavated near the northeast corner of the residence. One piece of solarized amethyst curved glass, one square nail, and one metal band were recovered from STP 5, located near a stone pile believed to be the foundation of an outbuilding. Large quantities of architectural limestone and brick were observed on the site surface, but not collected.

The Army acquired 116.25 acres from T.E. and Bessie Kendall on January 15, 1919 (HCDB 71:229). T.E. Kendall purchased the property from L.L. and G.E. Daugherty on January 26, 1918 (HCDB 68:564), who had purchased from William R. and C.M. Hart on December 2, 1907 (HCDB 54:505). William R. Hart purchased the property from Samuel Blakely (or Bleakley) on July 15, 1905 (HCDB 51:282-283). Samuel Blakely had acquired the property through a series of transactions and court decisions beginning on March 1866 and ending in August 1884 (MCDB: N:179; HCDB 10:446, 11:537). The 1905 deed states that Blakely acquired the property from Elizabeth J. Hinton and R.R. Jones, although it is not clear which transaction occurred in 1866 and which in 1884. The August 1884 transaction is referred to in the 1905 deed as being recorded in HCDB 29:525, but this reference is incorrect and the authors did not have the opportunity to do deed research at the Meade County courthouse, so the deed trail was lost at this point, but the earlier ownership can be hypothesized based on other clues.

Samuel Blakely was the son of Robert and Dorcas Withers Bleakley. Robert Bleakley (November 9, 1767-April 13, 1851) and William Montgomery, the earliest known owner of 15Hd504, immigrated together from Aughnacly, County Tyrone, Ireland, in the late 1700's. They operated a merchantile business, Bleakley & Montgomery in Elizabethtown, Hardin County, Kentucky (Briggs 1988:19-21). Robert Bleakley was also appointed the first deputy sheriff of Hardin County when the county was created (Miller 1991:54). Bleakley and Montgomery operated the business until the time of their marriages in the first decade of the 1800's, when they bought adjoining farms near what later became Tip Top (Briggs 1988:19-21). William Montgomery's wife, Elizabeth, and Robert Bleakley's wife, Dorcas, were sisters, the daughters of William and Hannah Rosser (or Rooser, but probably Reesor) Withers (Briggs 1988:10, 17, 19). The Withers extended family owned large tracts of land in northeastern Meade County and northern Hardin County from the late 1700's until Army acquisition, and Bleakley and Montgomery probably acquired their farms from their father-in-law as dowry lands when they married. Robert Bleakley's farm is certainly 15Hd502, and was probably established around May 17, 1809, when he married Dorcas Withers (Jones 1980:3). Robert and Dorcas Bleakley (June 10, 1785-August 14, 1868) had the following children: Robert W. (March 25, 1810-August 7,

1883), William (1812-1868), David (1815-1868), Samuel (1824-1910), and Sarah Ann (1818-1912) (Briggs 1955:149, 1988:20).

The transition of the property from Robert Bleakley to his son Samuel is fuzzy. The third marriage of Robert W. Blakely, Samuel's brother, was to Frances Elizabeth Garnett on March 4, 1863 (Miller 1988: 109). Reuben R. Jones married Mrs. Cora L. Garnett (née Cora L. Coombs, widow of William Garnett) on July 21 1836 (Miller 1988:23). Samuel Blakely married Ann Elizabeth Hinton on December 15, 1853 (Miller 1988:72), so the Elizabeth J. Hinton from whom he acquired property may have been his mother-in-law, and the R.R. Jones may have been Robert W.'s father-in-law. It is undetermined how Hinton and Jones came to acquire the property between Robert Bleakley and Samuel Blakely at this time, but it is suspected that it is through a complex series of intermarriages and related dowry and inheritance transactions.

Robert Bleakley therefore established the farmstead at 15Hd502 ca. 1809. In 1850, Robert, Dorcas, David and Samuel were residing on the site (Crabb 1979:118). Robert died on April 13, 1851 (McDowell 1983:73). As mentioned above, Samuel and Ann Elizabeth Hinton married in 1853. Ann died September 3, 1854, at the age of 18. In 1870, Samuel Blakely's household consisted of himself, a black woman named Sarah Buckler (1840-?), her children Lloyd (1858-?), Ben (1862-?), and William (1866-?), and a white farm laborer, Thomas Chamberlain (1851-?) (Deardorff 1983:231). Soon thereafter Samuel must have married Kate H. (September 14, 1833-July 8, 1886) (McDowell 1983:72). Kate and Samuel had one daughter, Mary V. "Birdie" (1874-?). In 1900, Samuel Blakely, his daughter Birdie Blakely Kinnison, her husband Henry A. Kinnison (or Kennison), and boarders George W. and Lillie Johnson (Briggs 1988:166) were living at 15Hd502. Birdie and Henry A. Kinnison had a child in 1899 who was either stillborn or died shortly after birth and is buried in the Bleakley cemetery (McDowell 1983:72).

William R. and C.M. Hart are unlikely to have lived at the site during their brief ownership from 1905 to 1907, since they already had an established farmstead on what is now Godman Airfield. No information could be found about the Daughertys. The Kendalls owned several properties in this vicinity, and may not have lived at the site during their brief ownership.

Logging had been conducted on and near 15Hd502 area in 1979. A logging trail passes through the house foundations. The site as a whole does not appear to be heavily disturbed, however, as evidenced by the intact features.

Site 15Hd502 is considered potentially eligible for the National Register because there are intact cultural features, artifact concentrations, and a sheet midden. The site

also has a historic association with the Bleakley/Blakely family who were considered locally prominent in the nineteenth century (Briggs 1955:149). Monitoring of the timber harvest activities on and near 15Hd502 is recommended.

15Hd503

Site 15Hd503, the Villier/Anthill Acres Site, is located on a knoll in an upland karstic plain, at an elevation of 785 feet (Figures B-1, B-3, and B-6). Based on the known layout of structures when the property was acquired by the Army in 1919, the site covers a 70 m by 70 m, or 4900², area. Most of the site was in very dense vegetation, with nearly zero percent ground surface visibility. The investigators examined the site by hacking a path with weed cutters and machetes and then examined the surface of the cleared path. Large harvester ant hills were abundant on the site. Although there were some denuded patches around the anthills, the ants were so aggressive that it was not possible to examine these areas closely. By taping and pacing off distances from Baker Road the locations of several former structures were confirmed as archaeological features and other cultural features were discovered. These include depressions, foundation stones, one filled-in brick cistern, and one concrete subterranean feature with ceramic pipes extending from it, which was tentatively identified as a cistern or dry well. Sections of a dirt and gravel driveway were observed leading from Baker Road to the house location. Non-native plantings were observed on the site, including a row of irises along the east side of the driveway near Baker Road.

A total of 455 items were recovered from 15Hd503 and include ceramics, bricks, coal, slate tile, mortar, wire and square nails, miscellaneous metal hardware, and bottle, dish and flat glass, and a ceramic insulator. Of these 356 came from STP 1, excavated within a dense sheet midden which was at least 2 m square, but probably much larger, and in some places over 30 cm thick. Most of the materials from STP 1 were charred. The materials from STP 1 represent a wide range of artifacts from the kitchen, architectural, entertainment, and activities artifact groups. STP 2, excavated approximately 5 m north of STP 1, yielded 68 artifacts, again representing a wide range of materials. STP 3, excavated near a filled in brick cistern, yielded three pieces of flat glass, two brick fragments, one piece of glass slag, and one ceramic insulator. STP 4, excavated over a probable outbuilding location, yielded one piece of iron slag, two whiteware sherds, four wire nails, and four pieces of aqua bottle glass. Only 19 artifacts were collected from the ground surface, with 16 of these coming from the surface of the sheet midden near STP 1, but ground surface visibility was extremely poor over most of the site.

The Army acquired the property on which site 15Hd503 lies from Delvina Agnes and Charles A. Villier on April 17, 1919 (HCDB 72:262). Charles A. Villier, then of Jefferson County, had purchased the property from George W. and Elizabeth Johnson on August 19, 1902, "with all appurtenances thereon" (HCDB 48:342). It is uncertain if the Villiers actually lived on the property, because on September 26, 1914, Charles A. and Delvina Agnes Villier sold the property to L. Frank (or Frank L.) Withers (HCDB 63:394) who sold it back to Delvina Agnes Villier the same day (HCDB 63:395). The August 19, 1902, deed does not reference the deed, or other instrument, through which the property was first acquired by the Johnsons, so the deed trail was lost at this point. Since the Johnsons were boarding with Samuel Blakely in 1900, it is likely that they purchased this tract from or were given this tract by Samuel Blakely between 1900 and 1902. It is possible, however, that the buildings at 15Hd503 were constructed during Blakely's ownership, with the residences used to house servants, tenants, laborers, or boarders.

Although there has been some disturbance to the site, the disturbance appears to be limited to the powerline easement and small trails. The site is potentially eligible for the National Register due to the presence of intact features and an extensive sheet midden. The site layout does not appear to be purely residential or farmstead -- there are too many buildings in too small an area, and they are arranged in a U-shaped layout. The site may represent a cottage industry, motel complex, or other specialized site type. Only a portion of 15Hd503 is located within the proposed timber harvest tract. It is recommended that the timbering on the site be monitored.

15Hd504

Site 15Hd504, the Scheible-Montgomery Site, is located on a knoll on an upland karst plain, at an elevation of 793 feet (Figures B-1, B-4, and B-6). At the time of Army acquisition, the Scheible property contained three building clusters plus an isolated building next to the cemetery. Site 15Hd504 represents the building cluster containing the residence. The other clusters apparently did not translate into archaeological entities.

Site 15Hd504 covers a 40 m (east-west) by 60 m, or 2400 m², area. Shovel probes and surface walkover yielded evidence of a sheet midden, a cistern with collapsing fill, and piles and scatters of foundation stones and brick. Artifacts recovered represent typical residential or farmstead debris. A total of 119 artifacts were collected from 15Hd504, with 89 of these deriving from STP 1, excavated near the east end of the foundations of a house. STP 2, excavated near a brick and stone scatter believed to represent a second house or a

large outbuilding, yielded 11 artifacts. STP 3, excavated near the west end of the first house, yielded eight artifacts. STP 4, excavated in the location of a T-shaped outbuilding, yielded one piece of green curved glass and one stove part. The low surface artifact count is believed to be due to the dense vegetation on the site, which resulted in poor ground surface visibility.

The Army acquired the tract on which 15Hd504 lies from Mary E. Scheible, widow of George C. Scheible, on January 14, 1919 (HCDB 71:235-236). George C. Scheible purchased the property from Kittie A. Montgomery on April 7, 1876 (HCDB 18:138). As discussed in the 15Hd502 section, this tract was probably once a part of military land grants of the Withers family and given to William Montgomery by William and Dorcas Withers as dowry land when he married their daughter, Elizabeth, on July 18, 1807 (Jones 1980:18). Site 15Hd504 was probably established at that time. William and Elizabeth Withers Montgomery had only one child, William Withers Montgomery (November 9, 1810-January 30, 1868), who married Catherine "Kittie" A. Brooks (May 30, 1811-August 10, 1880) (Briggs 1988:21). The elder William Montgomery died on March 4, 1831. Elizabeth married Denton Geoghegan sometime between 1831 and 1850, by which time she was a widow again (Crabb 1979:118), and married a man named Lampton (possibly Edmond H.S. Lampton?) sometime between 1850 and October 12, 1854, when she died at the age of 63. (McDowell 1983:71; Briggs 1988:22).

William and Kittie Montgomery had the following children: Ann E. "Nannie" (August 29, 1834-July 22, 1876), William Alexander (March 3, 1835-September 19, 1836), Alexander Brooks (December 11, 1837-1910), Minerva Ellen (1840-August 22, 1854), James (October 7, 1840-February 3, 1920), Laura Ann (May 14, 1842-August 14, 1854), William (May 19, 1845-August 1, 1854), and Edwin Roughwin (May 29, 1847-November 28, 1916) (Briggs 1955:126). Alexander Brooks Montgomery served as the Hardin County Deputy Sheriff from 1868-1870, Hardin County Judge from 1870-1878, a Kentucky Senator from 1878-1882, a U.S. Congressman from Kentucky's Fourth District from 1886-1893, and then served on the Dawes Indian Commission (Briggs 1988:21). James Montgomery was a member of General John Hunt Morgan's Confederate Army unit and participated in all of Morgan's raids (Briggs 1988:21-22). It is possible that James Montgomery's familiarity with the region was instrumental in Morgan's successful use of the nearby L and N Turnpike in his raids. He also served under General Nathan Bedford Forrest at Chickamauga (Briggs 1955:126). After the Civil War, James Montgomery ran a large law practice and served as a Hardin County county attorney (Briggs 1988:22).

Alexander Brooks Montgomery was the head of the household at 15Hd504 in 1870, while still a Deputy Sheriff (Deardorff 1983:241). He had married Mildred F. Coons on February

13, 1866 (Briggs 1988:21), and by 1870 they had the following children: William (1867-?), James (1868-?), and a two-month old son who was not yet named (1870-?). His mother, Kittie, his brother, Edwin (then a physician), and Catherine (1850-?), who was either the wife of Edwin or a younger sister of Alexander and Edwin, also lived with them (Deardorff 1983:241). In 1876, the property was sold to George Scheible. George C. Scheible (1844-1917) (Hardin County Will Book 1T:67) had married Mary Ellen "Nellie" Aylesworth (1854-?) on January 3, 1871 (Miller 1988:141). In 1900, the Scheible household consisted of George, Mary E., and their children: Ethel (1877-?), Bessie (1878-?), Sterling G. (1882-?), Walter (1883-?), Lucy (1884-?), Philip (1886-?), Verna (1888-?), Mary (1890-?), and Eliza (1891-?). The Scheible's had at least two other children, Anna Cohen Scheible (October 9, 1873-April 5, 1875) and Courtney Hill Scheible (September 20, 1875-August 25, 1876) who are buried in the Old Grahamton Cemetery (McDowell 1983:253) in the Meade County section of Fort Knox. Mary Aylesworth Scheible was the daughter of Philip Z. Aylesworth (Miller and Newton 1991:126; Boucher 1978:67), who was one of the owners of the Grahamton Mill at the time of Mary's marriage (Holmberg 1991:72-73).

Some bulldozer disturbance was present along the tree line adjoining Baker Road, but the rest of the 15Hd504 did not have any obvious evidence of disturbance. Site 15Hd504 is considered potentially eligible for the National Register due to the presence of a sheet midden, the potential for intact features, and a historic association with the Montgomery family who were of local significance (Briggs 1955:126) and potentially state and national significance as well. Site 15Hd504 lies completely outside the proposed timber harvest tract, so no further archaeological investigation is recommended for the site in conjunction with the current timber harvest. If an undertaking is proposed for the site area in the future, however, additional archaeological research, including extensive archival research, should be conducted.

Isolated Find

A projectile point was found as an isolate in the current survey in the same locality as a biface found in the Tow Dragon borrow area survey (Mocas 1994) (Figures B-1 and B-5). Ground surface visibility was excellent in this area, which had been machine stripped of vegetation and most topsoil. The cleared area was walked at 1 to 2 m intervals for a distance of at least 50 m around the find within the shallowly borrowed area. No shovel testing was conducted, because most of the area around the find had been machine stripped to the very top of the subsoil zone. No additional cultural materials were found and no evidence was found of potential subsurface features. No site number was obtained

for this location, and the locale will remain an isolated find spot unless additional materials are recovered in the future. Isolated finds are not eligible for the National Register. This isolated find spot lies outside the proposed timber harvest area.

Bleakley Cemetery

The Bleakley Cemetery, or Cemetery #6, lies just north of the Godman Airfield fence, at the south end of Tow Dragon Range. It contains 26 marked graves (McDowell 1983:72-73), at least 18 of whom are members of the Bleakley/Blakely extended family who lived at 15Hd502. McDowell (1982:72) states that the cemetery is located on land acquired by the Army from W.R. Hart, and the cemetery some maps and other documents refer to this as the Hart Cemetery. This is incorrect, however, since T.E. Kendall was the owner at the time of Army acquisition and no Harts are interred in this cemetery. The cemetery is fenced and marked with signs. The cemetery is close to the proposed timber harvest area, so it is recommended that the contractors be made aware of its exact location so they can avoid felling trees in the direction of the cemetery.

Montgomery Cemetery

The Montgomery Cemetery, or Cemetery #5, lies near Baker Road at the north end of Tow Dragon Range, on the property acquired from Mary Scheible. It contains 12 marked headstones (McDowell 1983:71-72), although it is very possible that additional graves exist. At least nine of the graves are of members of the Montgomery family who resided at 15Hd504. The cemetery is fenced and posted with identifying signs. The cemetery lies outside the proposed timber harvest tract.

CONCLUSIONS AND RECOMMENDATIONS

The Phase I literature search of the proposed timber harvest area in Training Area 11 determined that most of the project area south of Baker Road had not been previously inspected and that most of the project area north of Baker Road had been previously surveyed. All previously unsurveyed areas of the proposed timber harvest area, plus the field to be used for the Boy Scout Jamboree, and the adjoining wooded areas which had a high potential for containing archaeological sites were field inspected in the current study. The inspection of this area resulted in the discovery of three archaeological sites and one isolated find. Two cemeteries are also located in the area surveyed.

The isolated find is a projectile point, which was discovered outside the proposed timber harvest area. It was found in the same locale as a biface, discovered in 1994 during a borrow pit survey. Because no additional cultural materials were found after an extensive search of the ground surface, which had 100 percent visibility, this locale was kept as an isolated find spot rather than as an archaeological site. Isolated finds are not eligible for the National Register, and no additional archaeological work is recommended for the isolated find spot.

The three archaeological sites, 15Hd502 through 15Hd504, are all historic sites. Sites 15Hd502 and 15Hd504 date from the first decade of the 1800's to 1919. Site 15Hd503 dates from the late nineteenth century or early twentieth century to 1919. All three are considered potentially eligible for the National Register due to the presence of intact cultural features and sheet middens. Two of the sites, 15Hd502 and 15Hd504, are additionally associated with families of local significance. Two of the individuals associated with 15Hd504, James Montgomery and Alexander Brooks Montgomery, may be of state and national significance as well.

Both the Montgomery and the Bleakley cemeteries are fenced. The Montgomery Cemetery, associated with 15Hd504, is located several hundred meters outside the proposed timber area and there is no potential for adverse impact to this cemetery as a result of the proposed timber harvest.

Partially open cisterns were present on 15Hd502 and 15Hd503 when they were first discovered. Because these were safety hazards, the archaeologists coordinated with other individuals involved with the planning of the Boy Scout Jamboree to have the open features filled with culturally sterile fill brought in from off-site prior to the Jamboree. The features were photographed and measured before they were filled, so that there would be a record of the depth at which the deposits associated with site occupation should begin. As an additional safety and site protection method, the site boundaries were flagged with blue and white flagging tape prior to the Jamboree, and the Scout leaders were instructed to keep their troops out of the flagged areas. The flagging tape also serves to mark the areas where the timber harvest contractors need to coordinate with the archaeological staff.

Site 15Hd504 is completely outside the proposed timber harvest area. No impact is expected to this site as a result of the proposed timber harvest activities. No additional work is recommended for 15Hd504 in conjunction with the timber harvest, although additional archaeological research, including an extensive archival search is recommended if an undertaking is proposed for the site area in the future.

The east margin of site 15Hd503 is outside the proposed timber harvest area, but the remainder of that site and all of 15Hd502 lie inside the proposed timber harvest area. It is not possible to avoid logging in the site areas, because the trees need to be topped or removed as a safety measure for the airfield. Some of the trees are sufficiently tall that there is a risk of planes clipping the trees upon take-off or landing. It is recommended that the installation be permitted to harvest timber as proposed, with the caveat that the skidders and other heavy equipment be kept out of the archaeological sites and that the cultural resource management staff be present when the logging is taking place on the sites to prevent trees from being dragged over the stone piles and other vulnerable cultural features.

If archaeological materials are discovered during the timber harvesting, 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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APPENDIX A.
RESUMES OF KEY PERSONNEL

Pamela A. Schenian
Staff Archeologist 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 archeological projects in the states of 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".

Manuscript 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 Archaeologist

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:

- 4 Non-contract site reports on projects
- 26 CRM contract reports on projects
- 5 Chapters in additional site reports.
- 5 Publications

APPENDIX B.
LOCATIONS OF CULTURAL RESOURCES