Appendix E

Phase I Archaeological Report and Technical Memorandum

PN 1595.002 September 2005

PHASE I ARCHAEOLOGICAL SURVEY OF CA. 73 ACRES FOR KENNECOTT MINERALS COMPANY, EAGLE PROJECT, MARQUETTE COUNTY, MICHIGAN

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ABSTRACT

In the early summer of 2004, archaeologists from BHE Environmental, Inc. of Cincinnati, Ohio, conducted a Phase I archaeological survey of approximately 33 acres for the development of the proposed Kennecott Minerals Company Eagle Project, located in Marquette County, Michigan. In July of 2005, further Phase I survey addressed a new configuration of the proposed mine facilities, largely confined to the area surrounding Bedrock outcrop (as was the case in 2004). A total of roughly 40 acres were investigated during the 2005 field season.

The ca. 33 acre and ca. 40 acre study areas occur within a larger 199 acre parcel, portions of which were subjected to a casual inspection for cultural resources in 2004. In both 2004 and 2005, BHE employed a variety of methods in an effort to answer the primary question posed by the Research Design developed for the project: are there any cultural properties eligible to the NRHP within the project Area of Potential Effect that could be impacted by the proposed action?

BHE's Phase I archaeological survey of the combined 73 acres yielded no evidence of prehistoric or historic occupation, with the exception of a scant amount of modern refuse (oil cans, plastics), most likely the result of modern recreational activity. The excavation of 809 negative shovel tests (78 percent of 1037 total sample loci), mostly at 15 m intervals, provides evidence for the complete lack of prehistoric and historic activity (aside from logging) within the areas of proposed ground disturbance.

While the Phase I survey of the 73 acres did not yield cultural materials, the cursory inspection of the entire 199 acre parcel did identify three cultural resources: a small prehistoric lithic scatter (20Mq228) of three flakes recovered from the surface of a utilized access road and a pair of historic-era logging sites (20Mq229 and 20Mq230). The two historic sites contained evidence of several structures, most likely wooden cabins and other buildings, associated with the logging industry (which was the primary commercial activity in this portion of Marquette County since the mid-19th century). As these sites were identified outside of the area to be disturbed by the proposed construction footprint, additional testing of any of these three localities is obviated at this time. Kennecott Minerals Company has opted to avoid all impacts to the three cultural resources identified by BHE.

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1.0 INTRODUCTION

The following report details the various methods employed during a Phase I archaeological survey for the proposed Kennecott Minerals Company (KMC) Eagle Project in Marquette County, Michigan. This work was performed by archaeologists in the employ of BHE Environmental, Inc. (BHE) of Cincinnati, Ohio, under contract to Golder Associates, Inc. (Golder) of Lakewood, Colorado. The Phase I survey involved examination of approximately 73 acres of land in rural Marquette County, in a forested and clear-cut portion of the Yellow Dog River Watershed. The 73 acres, encompassing a greater area than the primary Area of Potential Effect (APE) where the mine facilities will be built, was divided into 12 survey blocks. In addition to the formal, set-interval Phase I survey conducted by BHE on the 73 acres, easily accessible portions of the 199 acre parcel were subjected to a cursory visual inspection (mostly roads and recreational trails) for surficial evidence of cultural properties.

BHE's Phase I survey involved the implementation of a variety of archaeological and archival methods, including: a literature review pertaining to the region, an inventory of all previously identified cultural resources within one-mile of the project area, and a field reconnaissance of the property as defined by the project area boundaries. The methods employed by BHE during this project were designed to comply with thirty-plus years of Federal regulation governing cultural resources surveys. Specifically, these regulations include: the National Historic Preservation Act (Public Law 89-665, as amended by Public Law 96-515) and the guidelines set forth by the Michigan Historic Preservation Office (MHPO).

The goal of the Phase I survey was the identification and delineation of any cultural resources that could potentially be impacted during construction activities within the project APE. Further, all cultural resources identified were analyzed and assessed to determine their eligibility for listing in the National Register of Historic Places (NRHP). Recommendations could then be made for avoidance or mitigation of any culturally-significant sites as stipulated within the National Historic Preservation Act of 1966 (as amended 2000). To accomplish this, several research strategies were employed:

- Development of a Research Design (see Appendix A), incorporating the results of the archival research to provide a better understanding of the local and regional characteristics that influence site location and distribution.

- Background research, specifically a literature and physiographic review, at local libraries and historic research institutions (such as Northern Michigan University) in the City of Marquette and Marquette County, and the archives maintained by the MHPO at the State Library in Lansing;

- Consultation with local residents, historians, archaeologists, and personnel of the MHPO; and

- Field reconnaissance of the project area, which was conducted by using a set-interval testing grid superimposed over the entire parcel, with each 15 meter (m) Sample Loci (SL) surveyed through either shovel test probes or pedestrian inspection (primarily in areas of disturbance or exposed soils).

The fieldwork and report preparation were the responsibility of Christopher A. Bergman, Ph.D., RPA, and Christopher G. Leary.

1.1 REPORT ORGANIZATION

The following report is organized according to the outline suggested by the MHPO. As such, the report begins with an examination of the various research questions that the Phase I survey attempts to address (Chapter 2). This is followed by a discussion of the environmental and historical factors present within Marquette County, including an overview of the known archaeological record for this region (Chapter 3 and Appendix B). Chapter 4 describes the various field methods utilized during the survey of the project area. The results of the fieldwork are discussed in Chapters 5 and 6 and a description of the cultural resources identified is included in Chapter 7. The final chapter (8) summarizes the results of the report and provides suggestions for the research potential of the project area. Figures, such as historic mapping of the project area and a graphical representation of the survey coverage, are interspersed throughout the document where appropriate. A detailed cultural overview appears as Appendix B, while a large fold out map depicting the results of the 2004 and 2005 investigations is attached to the back cover of the report.

1.2 PROJECT LOCATION

The project is located within the Upper Peninsula of Michigan, in Sections 11 and 12, T50N-R29W of Michigamme Township, Marquette County (Figures 1-1 and 1-2). The project area occupies landforms within a pair of watersheds: the Yellow Dog River watershed and the Salmon Trout River watershed. The Yellow Dog and Salmon Trout rivers discharge into Lake Superior within six miles of the project area, and are not at their maximum width and depth in the vicinity of the project area. The closest modern population center to the project area is Marquette.

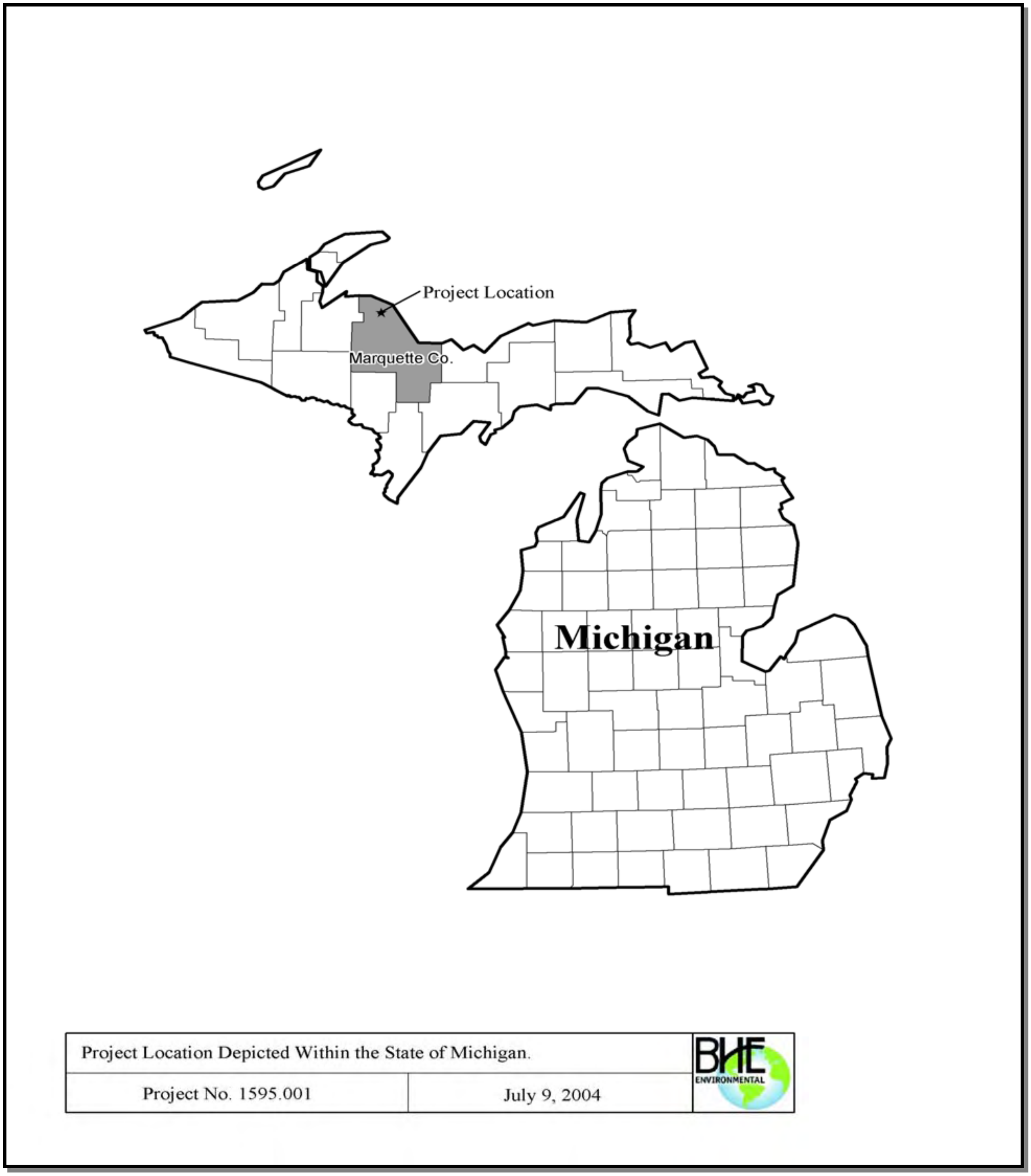


Figure 1-1. Project Area Depicted Within the State of Michigan.

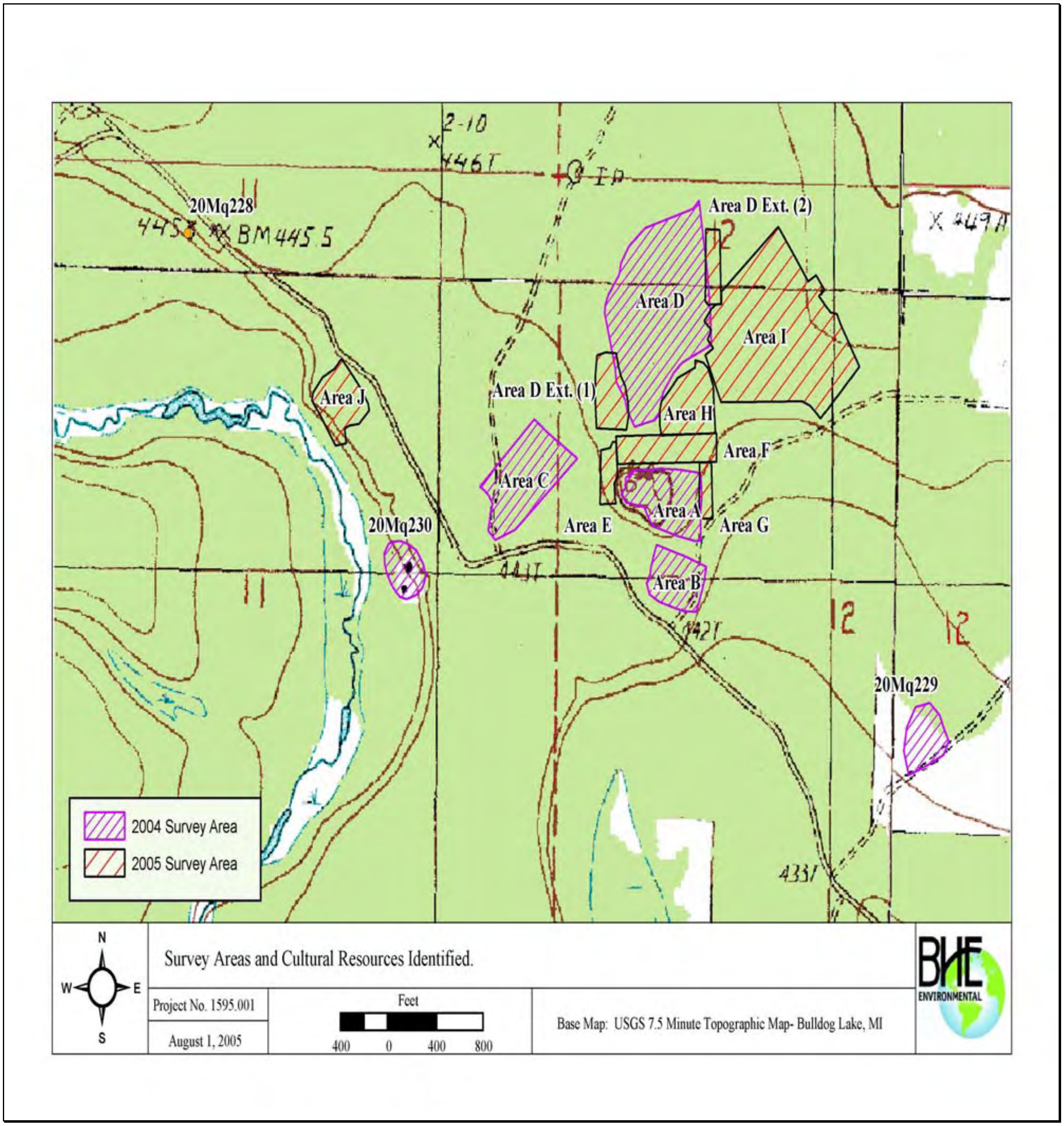


Figure 1-2. Survey Areas and Cultural Resources Identified Depicted on the 7.5-minute Bulldog Lake, MI USGS Topographic Map.

1.3 PROJECT DESIGN

The Eagle mineral deposit is contained in a body of rock that has a surface area of about 12 acres. The surface expression of the actual deposit is less than half this size (approximately six acres) and the ore body is located between 300 and 1,200 feet below the surface. The deposit occurs in an upper and lower zone, both of which are wedge-shaped and taper with depth.

These geological conditions make Eagle a small, but valuable, deposit containing approximately 184,000 tons (405 million pounds) of nickel and 153,000 tons (335 million pounds) of copper. Smaller amounts of cobalt, gold, platinum and palladium also exist. During the next few years, KMC will be working to determine the feasibility of mining this deposit as it has done at other metal mines in North America.

KMC is carefully studying the ways in which the Eagle deposit could be safely mined and processed. It has considered a range of mining options. A small underground mine, with all waste rock being used to refill the mine opening after the ore is extracted, is emerging as the best option. This would mean no large open pit and no large waste dumps.

KMC is still studying the area to determine the best approach to develop minimal surface disturbances at this site, if the project proves to be feasible. During the next few years, KMC will be actively engaged in scientific analysis, economic review, environmental studies, and dialogue with community residents as the Eagle Project moves forward.

KMC has developed conceptual layouts for key project facilities including:

- Mine portal
- Ore crushing and handling facilities
- Ore development rock stockpile
- Water treatment and water storage ponds
- Office and maintenance buildings
- Access roads
- Utilities

The primary project APE is defined as the areas of ground disturbance that will result from the construction of the facilities described above. This report identifies a number of potential locations that have been subjected to survey and may be used for these facilities (see large foldout map attached to back cover).

2.0 RESEARCH DESIGN

In an attempt to efficiently and effectively complete a Phase I archaeological survey at the project area, a Research Design was developed to guide the field reconnaissance. This Research Design was assembled by examining a variety of factors relevant to the project; in this case, a densely-wooded upland plateau in an extremely remote portion of Marquette County, Michigan. The factors involved in this analysis include: existing and prehistoric environmental conditions and vegetation patterns; the known archaeological record of the region, both prehistoric and historic; previous archaeological and Cultural Resource Management (CRM)-related experience of the staff of BHE; and the modern land use and development of the area immediate to the project. These various factors are discussed in greater detail in subsequent chapters; this chapter will summarize those factors and analyze their impact on the Research Design. Through the development of the Research Design, several questions can be posed, relevant to the survey, which can then be answered by the actual field reconnaissance of the project area.

The project area is located in an extremely rural section of Michigamme Township, which occupies the northwestern corner of Marquette County. Situated within a pair of watersheds, the project area occupies landforms on the terraces above the headwaters of the Salmon Trout River, which discharges out into Lake Superior. As such, the project area occurs within the Lake Superior drainage basin. This portion of Marquette County has been witness to a concerted logging industry since the nineteenth century, and the evidence of these commercial concerns can still be seen across the current landscape (typically in the form of clear-cut field and, occasionally, logging camps). The topography of Marquette County has been heavily influenced by several glacial episodes during the Late Pleistocene and into the Early Holocene, and the project occurs on sandy soils (resultant from the grinding ice sheets, which eroded the underlying bedrock). These soils are not typically conducive to historic-era occupation, and have largely been left forested. Current land use patterns (logging and recreational use) in the area are reflective of the poor quality of the soils for agricultural pursuits.

The prehistoric landscapes of Marquette County are broadly similar to those elsewhere on the Upper Peninsula. The retreating ice sheets of the Early Holocene exposed different portions of the area for human occupation, and early Paleo-Indian hunters began to exploit the tundra-like margins of the glaciers around 10,000 before present (B.P.). Palynological data obtained from several locations in Marquette County hint at the severe climatic conditions present across the Upper Peninsula during this epoch, as the shifting glaciers either buried the region under several hundred feet of ice or lingered close enough to foster a harsh, tundra-like environment along the southern margin of the ice sheet. In spite of these forces, several archaeological deposits that contained Paleo-Indian artifacts have been identified in the general project region, including the Silver Lake and Gorto sites. (It should be noted for the purposes of this report, the term “project region” refers to greater Marquette County and adjacent counties, while “project area” refers to the environs of the primary APE). Interestingly, the artifact assemblage recovered from the Gorto site contained both Late Paleo-Indian fluted points and Early Archaic points that display a shift in lithic technology (Hi-Lo and Kirk complex points), which is suggestive of the attractiveness of that environment to prehistoric cultures during the Early Holocene.

The shifting climatic and environmental factors at work in the Upper Peninsula during the Early Holocene have worked to obscure the boundary between the Paleo-Indian period and the Early Archaic. Few sites have been definitively identified as containing an Early Archaic component on the Upper Peninsula, and it has been postulated that low water levels in the post-glacial Great Lakes opened up different shorelines than those of the modern era. As a result, these highly-attractive biomes along the shores of the expansive lakes currently reside below Lake Superior and Lake Michigan. Therefore, it has been theorized that the absence of an extensive Early and Middle Archaic culture in the Upper Peninsula is the direct result of the inaccessibility of the landforms that would have the best potential for containing the archaeological footprint from these temporal periods.

While the increased centralization of sites in the Late Archaic period across the lower Great Lakes has been viewed as a harbinger of the rapid growth of the Woodland period (especially in the case of the Hopewell Complex of Ohio), Late Archaic sites in the Upper Peninsula bear strong similarities to sites identified across the region during the previous 4000 years of human occupation. What had changed by the advent of the Late Archaic was the number of sites, which may be the result of an increase in population size on the periphery of the burgeoning moieties of neighboring regions (especially the Saginaw River valley of southern Michigan). The utilization of naturally-occurring copper, especially on Isle Royale in Lake Superior, gave rise to a cultural efflorescence known as the Old Copper Culture.

The introduction of a prehistoric ceramic technology into the upper Great Lakes occurred much later than in the south, and as such, the Early Woodland temporal period on the Upper Peninsula has been suggested to be a continuation of the cultural trends of the Late Archaic. Sites of the Middle Woodland period contain ceramics with strong ties to neighboring cultural motifs, especially those to the south, within the Hopewellian sphere of influence. In spite of this, Middle Woodland sites across the Upper Peninsula are distinctively different from those on the Lower Peninsula. The presence of Lake Superior copper in artifact assemblages across the eastern portion of North America does provide an indication of the increased interaction of Upper Peninsula societies with neighboring groups.

The Late Woodland cultures of the Upper Peninsula have appeared to possess a material culture strikingly similar to that first documented by European visitors to the area. The incorporation of wild rice into the diet during this period meant that sites displayed a tendency to occur on landforms near habitats conducive to the growth of this naturally-occurring grain. Late Woodland assemblages contained not only the predominant Lake Superior ceramic type, known as Juntunen, but a variety of different ceramics from surrounding regions, including types representative of a northern variant of the Upper Mississippian complexes of the Ohio and Mississippi watersheds.

The predictive model detailed below, and included in the Scope-of-Work (SOW) developed by BHE for this project (see Appendix A), illustrates the necessity of analyzing as much of the known archaeological and historical record of an area as possible before engaging in a field reconnaissance. In the case of the current project area, the paucity of previously identified archaeological resources in the vicinity may lead to the conclusion that the potential for encountering cultural materials is relatively minor. This belief was supported during a 2004 interview with John Anderton, Ph.D., of Northern Michigan University. Earlier in the project, Dr. Anderton reviewed the SOW and suggested that the APE did not coincide with landforms considered to contain a high potential for locating cultural resources. Dr. Anderton showed BHE an unpublished map of the region that depicted areas of high probability for site location, and the current APE was situated outside these boundaries.

In the absence of further data, the most effective method for testing the project area could be a low probability method, or a 30 meter (m) test interval supplemented by visual inspection. However, since the lack of archaeological information in this region is most likely the result of an associated dearth of systematic archaeological research (see Chapter 4, below), the project area for the purposes of this study should not be regarded as containing a low potential for cultural materials. Therefore, conservatively for this study, the absence of archaeological data resulted in our consideration of the project area as possessing at least a moderate probability for containing cultural resources. Thus, the most effective method for conducting a systematic archaeological survey would include a 15 m test interval, supplemented by visual inspection of areas on steep slope (greater than 13 percent grade), high surface visibility of exposed soils (above 75 percent visibility), standing water, and heavy modern disturbance.

The above factors, when analyzed in conjunction with the scope of the field reconnaissance, assist in generating specific research questions to guide the survey of the project area and maximize the research potential of the study. These questions include:

- What types of prehistoric sites can be expected to be found within the APE, and, if identified, how do the prehistoric resources fit into the archaeological record of the region?

- The presence of several Paleo-Indian sites in the project region is suggestive of a focus for activity in the area during the early settlement of the Upper Great Lakes. Are there additional Paleo-Indian sites in the project APE?

- Historic-era mapping of the area reveals that a small number of logging camps were located across the township, several of which may have been situated within or near the project APE. Is there any archaeological footprint of these occupations, and was there any additional historic activity in the remainder of the area?

- Are there any cultural resources within the project APE that are potentially eligible for inclusion on the National Register of Historic Places?

3.0 ENVIRONMENTAL AND CULTURAL OVERVIEW

3.1 GEOLOGY AND PHYSIOGRAPHY

The project area lies within the Marquette Highland of the North-Central Swamp-Moraine Plains Province of the Interior Plains physiographic division (Sommers 1977). This region is characterized by severe local relief, with elevations varying widely between the deeply-cut river valleys and the vast tracts of uplands.

Although the study area was thoroughly scoured by glaciers during the Late Pleistocene (up to approximately 10,000 years B.P.), the basal materials that underlie Marquette County are much older. Bedrock exposures in the vicinity of the project area date to the Late Huronian of the Proterozoic era of the Middle Pre-Cambrian, and are from the Lower Slates of the Michigamme Formation of the Barga Group (Boyum 1991a). The Late Huronian, which occurred approximately two billion years ago, was characterized by periods of sediment accumulation, with minor episodes of volcanic activity. Rocks from this period include slate, quartzite and argillite (all of which have been identified across the region in the form of prehistoric tools and debitage).

3.2 HYDROLOGY

The project area is located within two distinct watersheds: the Yellow Dog River and the Salmon Trout River. The proximal waterway, Salmon Trout River, is located less than 100 m from the western extremity of the project area. The project area occupies the terraces above and to the east of the headwaters of the Salmon Trout River which, in this area, is only 5 ft in width. The Salmon Trout River descends from the glacial outwash plain that contains the project area, trending north and widening out into a much larger river before discharging into Lake Superior. Interestingly, the project area occupies a portion of a northwest-southeast aligned glacial outwash bench that is predominantly within the broad plains of the Yellow Dog River watershed. This watershed trends eastward from the project area, descending from a bedrock highland, across a series of glacial outwash deposits and a series of glacial moraines to the north, to discharge into Lake Superior approximately six miles away (Golder 2005).

3.3 SOILS

“Soil type appears to have controlled- either directly, or indirectly through its influence on vegetation-the distribution of various cultures and human groups on both a large and small scale” (Evans 1978:6-7). The settlement patterns of both American Indian groups and early colonial settlers were influenced by individual and group soil preferences. Quite often, vegetational indicators were surveyed to determine soil fertility and moisture prior to migration and frontier settlement. To illustrate one example from the colonial period of American history, Palatinate Germans in Pennsylvania were drawn to areas that resembled the Rhineland limestone soils in their European place of origin. Their successes with this fertile soil is particularly ironic, since the Scotch-Irish avoided limestone soils, associating them with the “dry lands” of Scotland (Hulbert 1930:77).

Nowhere in eastern North America is the effect of soil stratigraphy on historic settlement patterns more pronounced than in the Upper Peninsula of Michigan. Heavily influenced by the glacial forces of the Late Pleistocene and Early Holocene, the soils of the region were not conducive to intensive agricultural utility. In fact, the underlying soils of the Upper Peninsula were at the extreme opposite end of the arability spectrum from that seen in the Lower Great Lakes, where Euroamerican settlement focused intently on exploiting the fertile farmlands above the Lakes. The massive grinding and terra-forming power of the various glaciers resulted in predominantly sandy soils, a vestige of the exposed bedrock ground beneath the ice sheets.

The four work areas surveyed in 2004 and the eight work areas surveyed in 2005 coincide with five distinct soil types. While an official United States Department of Agriculture – Soil Conservation Service Soil Survey was not available for Marquette County, the soils of the county have been mapped and analyzed, and are available electronically on the National Soil Conservation Service website. Golder Associates, in a surficial geology survey of the site, has identified the primary APE as underlain by glacial outwash comprised of silty sand with gravels (Golder 2005). The following graphic (Figure 3-1) and soil descriptions detail the predominant soil types present within the project areas, where specific soil information was available.

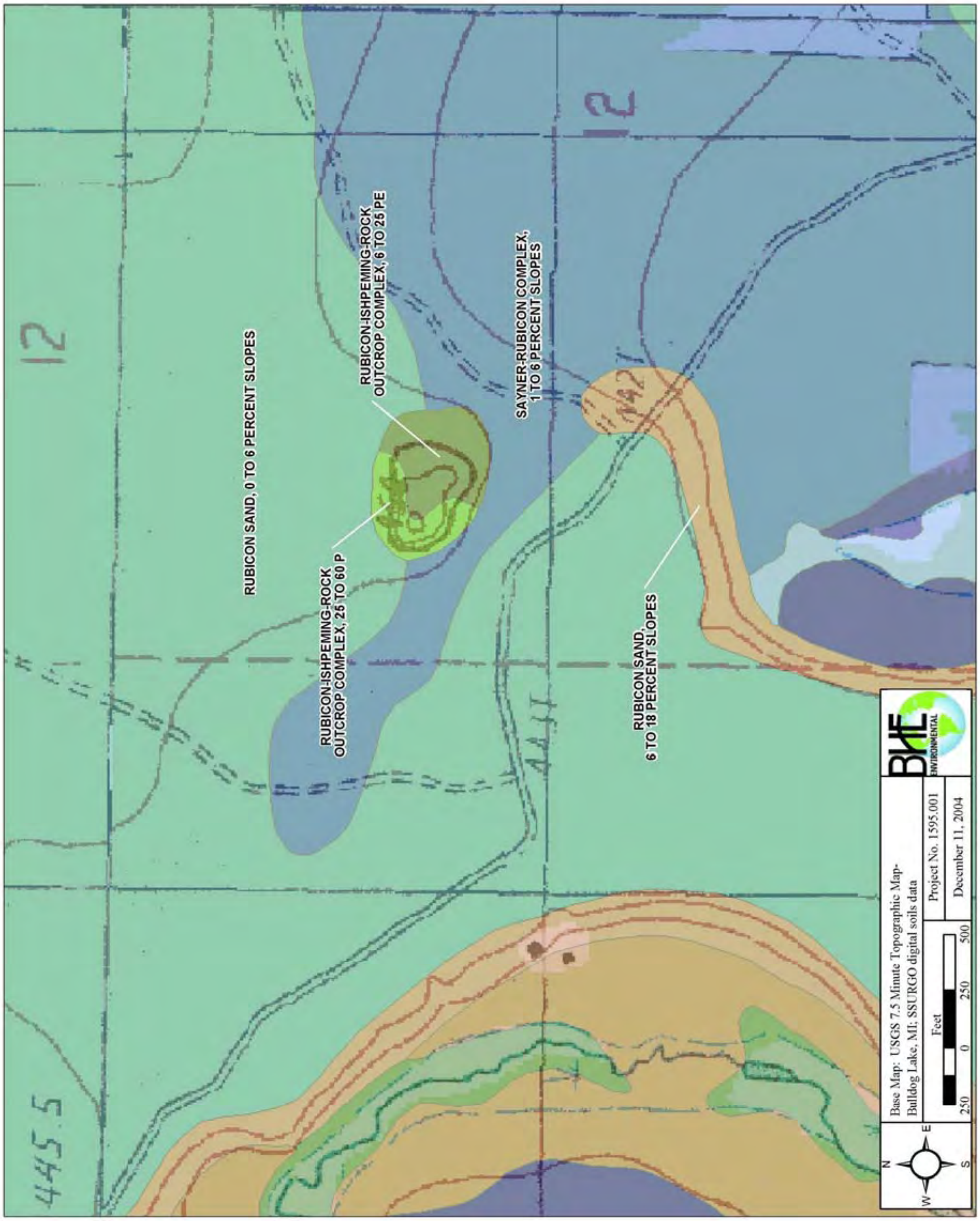


Figure 3-1. Soil Map Depicting Area of Project.

2004 Survey Locations

Work Area A (the bedrock outcrop): Situated atop a natural rise, an outcrop of peridotite, this work area rests on Rubicon-Ishpeming-Rock Outcrop Complex, partially sloping to extremely steep. This soil complex is found throughout the county on outcrops of exposed bedrock, and exhibits an extremely shallow soil profile. The poor quality of this soil complex does not support any agricultural land-use patterns except for woodlands.

The typical soil profile for Rubicon Sand soils is strikingly similar to other sandy soil series in the region formed in sandy glacial drift material, mostly the result of eroded silt and sandstone. A typical soil profile for Rubicon Sand consists of a 2-inch thick O horizon, typically ranging in color from a Munsell Color Chart 10YR3/1 very dark gray to a 10YR4/1 dark gray, extremely friable sand, with decaying organic material. This horizon is underlain by an E horizon composed of a 10YR5/2 grayish brown sand that is typically 3 inches thick. Below this layer are two distinct B horizons, extending to an average depth of 24 inches below ground surface. The upper B horizon, classified as a Bs, is composed of a 5YR4/4 reddish brown friable sand, while the lower, the BC, is a 10YR5/6 yellowish brown sand. Below 24 inches below ground surface, the C horizon is typically a 10YR6/4 light yellowish brown coarse sand.

Work Area B: This work area occurs on three different soil types: Rubicon Sand, 0 to 6 percent slope; Rubicon Sand, 6 to 18 percent slope; and the Sayner-Rubicon Complex. All three of these soil types are strikingly similar, being composed of a sandy soil profile that was formed through glacial outwash activity. These soils are uniformly poor for any agricultural activities.

Work Area C: This work area occupies a portion of the APE that is composed of Rubicon Sand, 0 to 6 percent slope, and the Sayner-Rubicon Complex. Both of these soil types are composed predominantly of sand, and are ill-suited to agricultural activities.

Work Area D: The entirety of this portion of the project APE rests atop Rubicon Sand, 0 to 6 percent slope. This soil type is typically found in nearly level to flat upland environments on both the upper and lower peninsulas of Michigan, predominantly on plateaus and flat ridgetops. The sandy character of the soil profile makes Rubicon Sands particularly ill suited to agricultural and animal husbandry pursuits, due primarily to instability and droughtiness. However, the nature of Rubicon Sand makes it ideal for use as a base of modern construction.

2005 Survey Locations

Work Area D Extension (1): The soil of this small survey block, Rubicon Sand, 0 to 6 percent slope, is the same as Work Area D above. The extension is immediately adjacent to the west of the clear-cut field forming Area D and is currently pine forest.

Work Area E: Although the soil map (Figure 3-1) would appear to indicate that Area E falls within the Rubicon-Ishpeming-Rock Outcrop Complex, it is more likely associated with the adjacent Rubicon Sand, 0 to 6 percent slope, or the Sayner-Rubicon Complex.

Work Area F: This work area lies adjacent to the northern side of the bedrock outcrop and is associated with soils classified as Rubicon Sand, 0 to 6 percent slope. This soil type is typically found in nearly level to flat upland environments on both the upper and lower peninsulas of Michigan, predominantly on plateaus and flat ridgetops.

Work Area G: Located to the east of the bedrock outcrop, Area G is a small strip of land that occurs within an area of the Sayner-Rubicon Complex. Work Area G primarily coincides with a dirt two track situated to the east of the outcrop.

Work Area H: Area H is located within a pine forest north of the bedrock outcrop that contains Rubicon Sand, 0 to 6 percent slope.

Work Area I: This survey block coincides with a large clear-cut area that has both Rubicon Sand, 0 to 6 percent slope, and soils of the Sayner-Rubicon Complex.

Work Area J: Work Area J is located due west of the bedrock outcrop along the Triple A Highway and is situated on an elevated terrace overlooking the Salmon Trout River. The soil in this clear-cut area is Rubicon Sand, 0 to 6 percent slope. It should also be noted that some of the survey coverage of Area J coincided with steep slope and may fall within an area of Rubicon Sand, 6 to 18 percent slope.

3.4 PALEOENVIRONMENT, FLORA AND FAUNA

The following floral and faunal reconstructions are based on palynological assessments and archaeological data. Palynological data indicate types and frequencies of floral species present in an assemblage, including archaeological samples, while the early historic records provide evidence of distribution of natural forest types at the time of initial European settlement. For example, the earliest vegetational patterns of the post-glacial succession, as well as shifts in climax forest constituents, are derived primarily from palynological evidence. On the other hand, the forest types present during the Woodland cultural periods (especially those directly preceding European contact) are assumed to be similar to those present during the advent of the historic period, as evidenced in the vast compendium of ethnohistoric data recorded for the region in the 17th and 18th centuries.

Three paleoecological sites have been analyzed in the region, all within the northwestern corner of Marquette County. The Camp 11 Lake, Lost Lake, and Yellow Dog Pond sites (Brubaker 1975) have all been instrumental in assessing the Late Pleistocene and Early to Mid-Holocene environment of the Upper Peninsula in general, and Marquette County in particular.

The area that would eventually become Marquette County was covered by glacial ice during the last peak of glacial advance (21,000 to 14,000 B.P.), when the vast Laurentide ice sheets extended south of present-day Michigan to the Ohio River (Dorr and Eschman 1970:161). During this glacial advance (known as the Late Wisconsinan), the ice sheet was several thousands of feet thick. Marquette County was first deglaciated during the Carey-Port Huron interval (13,300 to 13,000 B.P.), when a rise in worldwide temperature caused the ice sheet to retreat to the north of the Keweenaw Peninsula (Hansel et al. 1985:45). During this relatively short period, the leading edge of the ice sheet extended to within 75 miles north of the project area. This brief period ended quickly, as the ice advanced across the northern portion of the state, leaving Marquette County effectively covered by ice through to the end of the glacial era in Michigan, around 11,000 B.P.

According to Mason (1981:68), geologists and palynologists estimate a 160 to 320 km wide zone of park tundra-like ground extending south from the leading edge of the glacier, which would gradually shift north during the Holocene as the glacial ice retreated. The boundary of this zone was most likely sinuous, and was interlaced with the advancing coniferous forest that dominated the environments immediately to the south. Studies in Michigan and the surrounding areas indicate that this tundra-like vegetation became established in the Upper Peninsula with the retreat of the ice shield to the north of Sault Ste. Marie (Holloway and Bryant 1985).

At some point near 9900 B.P., the ice shield again descended across glacial Lake Michigan (which encompassed Lake Superior and the upper reaches of Lake Huron), partially covering the northern extent of Marquette County (Kapp 1999:50-51). Known as the Marquette Advance, this event meant that a tundra-like setting most likely dominated the region of the project area until approximately 8500 B.P. (Holloway and Bryant 1985). At that time, a mixed pine and deciduous forest became established in Marquette County, a biome that, in a limited way, is still extant in the remote portions of Marquette County.

The project area is currently situated within the Canadian Biotic Province (Mason 1981:58-60). The forest type is referred to as Lake Forest, which is typified by a wide variety of coniferous and deciduous trees. Among the species present in this environment are black spruce, white spruce, balsam fir, jack pine, tamarack, red pine, white aspen, basswood, willow, and sugar maple. This variety of vegetation, in addition to shrubs and other plants, provided a broad range of natural resources that would have been readily available for exploitation by both prehistoric and historic peoples. Mason (1981:59) notes that at least 373 native plant species are known to have been utilized by native societies of the Upper Great Lakes region at the time of contact. He believes there probably were as many as 500 species that may actually have been exploited by these cultures.

3.5 MODERN CLIMATE AND HISTORIC/CURRENT LAND USE

The modern climate of Marquette County is heavily influenced by the proximity of Lake Superior to the north and, to a lesser degree, Lake Michigan to the south. The Great Lakes produce a moderating effect, resulting in a cooler summer and warmer winter than a land mass at the same latitude with no major body of water nearby. The length of the growing season varies from year to year, typically averaging 80 to 100 days annually (Sommers 1977). The average high temperature during the summer months is an extremely mild 75 degrees Fahrenheit, while the winter months are into the low teens.

Precipitation occurs sporadically throughout the year, with a slight increase in annual rainfall in early summer and autumn (Sommers 1977). During the long winter months, the region averages between 140 to 160 inches of snow, with at least 120 days of minimally one inch of snow cover. Like most of the Upper Great Lakes, the first snows of the winter typically set in during the two weeks around the end of the October.

The relatively poor soils and severe climate have severely restricted agricultural activity in this region. Historically, mining and forestry have been the main industrial pursuits in rural Marquette County (including the area of the project). The modern era has seen a significant rise in the exploitation of the land for recreational purposes, as evidenced by the increasing number of vehicle trails, parks, and campgrounds.

3.6 POTENTIAL PREHISTORIC AND HISTORIC NATURAL RESOURCES

As stated previously (in Section 3.1), the underlying bedrock in this portion of Marquette County is Pre-Cambrian in age with bedrock exposures related to the Michigamme Formation. This contains a variety of available rock for tool manufacture such as slate, quartzite, and argillite. While all three have been recovered in the form of prehistoric artifacts throughout the region, the most utilitarian to prehistoric cultures was quartzite (based on the predominance of tools recovered from the region). Other Pre-Cambrian rocks that are seen to occur in the Upper Peninsula include basalt and greywacke, both of which have also been recovered in prehistoric assemblages.

Of particular utility prehistorically and during the historic era was the abundant copper deposits of the Upper Peninsula. These deposits do not occur in the project area, but do in Keweenan Series outcrops, which appear along a 100-mile long belt extending from the top of the Keweenaw Peninsula, through the Porcupine Mountains and west into the upper reaches of Wisconsin (Dorr and Eschman 1970:70-80). “Float” copper, which was the most easily accessible version of copper prehistorically, consists of copper deposits that have been torn from the original bedrock by glacial activity and redeposited in till and along stream beds. Prehistoric people also mined for copper directly into the bedrock. At such sites, prehistoric artifacts related to the removal of copper such as rock hammers, chisels, and wedges have been recovered. Chert artifacts are relatively rare across the region, which is indicative of the paucity of chert outcrops in the Upper Peninsula. Although there are no known local chert outcrops, chert cobbles can be found in till deposits.

3.7 ABBREVIATED CULTURAL OVERVIEW

The following section presents are an abbreviated overview of cultural development in the project region. A more detailed version of this section may be found in Appendix B.

The Upper Peninsula of Michigan has a long history of occupation. As climatic conditions began to improve at the end of the last Ice Age, prehistoric Paleoindian groups visited localities south of the project area at Silver Lake and Negaunee. Later, during the Archaic Period, perhaps as early as 6000 years ago, the importance of the region’s mineral resources was first recognized as evidenced by the extensive exploitation of native copper. Native Americans participating in what became known as the Old Copper Complex used copper for the manufacture of awls, axe blades, socketed spear points, fish hooks, as well as ornaments. As the prehistoric period drew to a close, new natural resource procurement strategies developed to include harvesting wild rice and, along the southern portion of the peninsula, use of deep water fisheries in the Mackinac straits. Interest in the natural resources and scenic beauty of the region continued into historic times with the burgeoning logging industry and establishment of recreational camps.

4.0 METHODOLOGY

4.1 ARCHIVAL RESEARCH METHODS

During June 2004, archaeologists from BHE conducted background research, in an effort to better understand the known prehistoric and historic record of the region in general and the survey areas in particular. This work focused on a review of the published and inventoried archaeological data collected at the MHPO in East Lansing, Michigan, supplemented by visits to archives local to the project area, especially the library at Northern Michigan University, in Marquette. In addition, Dr. John Anderton of Northern Michigan University was interviewed in 2004 regarding the cultural resources of the region.

The direct result of the archival research was the realization that no previously recorded cultural resources were known to occur within the 12 survey areas associated with the current project. In fact, the review of the MHPO records revealed that no known cultural resource sites have been recorded within a one-mile radius of the survey areas. As a result, BHE expanded the research "window" to encompass all previously recorded sites within five-miles of the project APE. This led to the identification of 14 documented sites within the MHPO State Archaeological Site File, as listed in the table below.

Table 4-1. Previously recorded sites within five-miles of the project APE.

Site ID	Type	Description	NRHP Status
20Mq35	Early Archaic Prehistoric	Agate Basin Point	Not Assessed
20Mq37	Non-diagnostic Prehistoric, 1930s Era Historic	Surficial Lithic Scatter, WPA-related highway construction	Not Assessed
20Mq40	Early Archaic Prehistoric	Subsurface Assemblage of Lithics, Scottsbluff and Cody Tradition	Not Assessed
20Mq41	Late Archaic Prehistoric	Shoreline Lithic Scatter with Hearth Feature	Not Assessed
20Mq69	Paleo-Indian, Early Archaic, and Late Archaic Prehistoric	Eroded Beach Lithic Scatter	Not Assessed
20Mq74	Non-diagnostic Prehistoric	Possible Hearth Feature	Not Eligible
20Mq76	Non-diagnostic Historic	Cemetery	Not Assessed

Site ID	Type	Description	NRHP Status
20Mq87	Non-diagnostic Prehistoric	Surficial Lithic Scatter	Not Assessed
20Mq127	Late 19th/ Early 20th Century Historic	Mining Pit	Not Assessed
20Mq131	Non-diagnostic Prehistoric	Shoreline Lithic Scatter with Copper Awl and Hearth Feature	Not Assessed
20Mq154	Ca. 1920-1940 A.D. Historic	Historic Refuse Dump	Not Assessed
20Mq160	Ca. 1916-1964 A.D. Historic	Hunting Camp/Cabin	Not Assessed
20Mq161	20th Century Historic	Swedish-American Hunting Camp	Not Assessed
20Mq162	Ca. 1910-1950 A.D. Historic	Logging/Hunting Camp	Not Assessed

The table above illustrates the diversity of archaeological sites that can be encountered in Marquette County. Known sites across the region have contained cultural components that are diagnostic to almost all of the prehistoric and historic temporal periods, as currently defined by the archaeological community. While specific distance-to-water and elevation data are not currently recorded within the Michigan State Archaeological Site File form for individual sites, the location of the sites was identified on the appropriate USGS topographic map by BHE archaeologists. This recordation revealed that the majority of these sites occur in close proximity to a permanent water source. As the current project APE is located near several permanent streams, as discussed in the Research Design section, the likelihood of encountering unidentified cultural resources was considered at least moderate.

A possible qualifier to a straightforward application of these data to the current project APE is the location of most of these resources within the Silver Lake valley. In fact, most of the prehistoric resources described in the table (and all of the sites that contained prehistoric diagnostic material) were identified adjacent to, or within, the lake basin. Interestingly, prehistoric deposits were delineated by previous work on landforms that lie below the modern water level of Silver Lake, and were only identified during a “drawdown” of the lake. These shoreline sites (particularly 20Mq40 and 20Mq41) hint at the Paleo-Indian and Early Archaic spatial site distribution theories described in Appendix B, which suggest that occupations from those epochs are most likely to occur on Early Holocene shorelines that have since been inundated under the modern lakes.

In addition to an examination of the MHPO State Archaeological Site Files, BHE reviewed all previous CRM-related and archaeological reports conducted across the region and filed with the MHPO. A total of nine volumes have been published concerning CRM or archaeological issues in this portion of Marquette County. This total includes: five reports on Phase I or Phase II activities (Buckmaster and Paquette 1996; Dobbs and Breakey 1993; Haywood 1993; Institute for Minnesota Archaeology 1993; Ottawa National Forest 1998), a history of historic hunting camps in Marquette County (Bjork 1997), an inventory of sites contained within Michigan State Parks (Jackson et al 1996), a predictive model for cultural resources in the Dead River drainage (Dobbs 1993), and a synthesis of the archaeological potential within the Silver Lake drainage basin (Mooers 1993). While some of these volumes are not particularly applicable to the current project (such as the reports detailing the archaeological record of the Silver Lake drainage basin), an examination of these materials does provide some insight into the archaeological record of the region, as well as the potential for identifying cultural resources within the project APE. The Phase I surveys conducted by Dobbs and Clark (1993) and Haywood (1993) surveyed over 100 acres of Marquette County woodlands combined, and did not identify any cultural resources that were considered eligible for the NRHP. As these surveys were conducted on landforms adjacent to permanent waterways within five-miles of the project area, the negative results of these surveys are suggestive of the lack of potentially eligible cultural materials in this part of Marquette County. This is, however, tempered by the presence of Paleo-Indian and Early Archaic sites on the southern fringe of the Silver Lake basin.

4.2 FIELD METHODS

The field survey of the proposed project area was conducted using standard archaeological reconnaissance methods, as outlined by the MHPO. The methods were developed through the formulation of a Research Design (see Chapter 2 and Appendix A), in consultation with Dr. John Anderton of Northern Michigan University. These methods included visual surface inspection, and shallow subsurface shovel testing. The project area was subdivided into fields and each field was further subdivided into linear transects and given alphabetical designations. Across each transect, the area was surveyed at 15 m increments, each representing a single sample loci (SL). Within each SL, notation is made regarding topography, condition, type of survey method implemented, and the presence or absence of cultural materials.

In two instances (on Work Area D and Transect YY of Work Area I), the testing interval between (**not within**) transects was expanded to 30 m, due to the paucity of cultural material identified across the other adjacent survey areas. In addition, the 30 m interval used between transects YY and A, in Area I, was used to locate the northwestern boundary of that survey area. Since shovel testing was entirely negative at both transects YY and A, it was decided that an additional 15 m interval transect at “Z” would not be necessary.

4.2.1 Shovel Testing

Shovel testing was used in areas in which the ground surface visibility was less than 75 percent, or where the depth of soil deposits may preclude an adequate sample having been exposed by plowing. Shovel tests were arranged at intervals of 15 m, dependent upon local topography, level of modern deflation of soils, and potential for cultural resources. Individual shovel tests were a minimum of 50 centimeters (cm) in diameter, or 50 cm by 50 cm square, and extended to a depth of 10 cm into sterile deposits, where such could be identified. All soil removed from each test was screened through six millimeter mesh hardware cloth and any artifacts recovered were placed in plastic sample bags marked with the appropriate segment, shovel test, and depth designations.

4.2.2 Pedestrian Inspection

A systematic pedestrian inspection was performed across portions of the four survey areas where surface visibility was 75 percent or better. In addition, the larger project area (199 acres) was subjected to a casual windshield and pedestrian inspection. Specifically, visual survey was conducted along heavily utilized recreational trails, where modern construction activities were readily discernable, or where standing water was present.

4.2.3 Global Positioning Satellite Data Recording

The use of a GPS unit proved invaluable in recording data, as well as accurately checking the location of the various survey blocks while conducting the fieldwork. For the purposes of the fieldwork, beginning and ending survey transects, permanent features of the landscape, both man-made and natural, and cultural resources were mapped using a Trimble TDS1 Global Positioning Satellite (GPS) with a Pro XRS receiver that is capable of sub-meter accuracy. GPS mapping employed by BHE was divided into three stages: Data Collection, Data Correction, and Data Analysis.

4.2.3.1 Data Collection

Data Collection deals with the logging of the site features and testing methods used to detect sites. The GPS unit used to complete this task was set for logging intervals of 5 seconds, and “Auto 2D/3D” rover option for collecting the locations of features. For each point taken, there were a minimum of five readings taken to increase accuracy. The GPS unit was placed within a backpack and carried by the GPS technician. The Pro XRS receivers were usually hand held so that they could be pointed in the direction with the most satellite reception.

4.2.3.2 Data Correction

The Data Correction involved the correction of the raw data and this occurred in one of two ways:

- When possible, during Data Collection the locations had real-time differential correction applied while the data were being logged; and

- Regardless of whether real-time differential corrections were acquired in the field or not, the RAW GPS data was post processed with base station files that were logged at the same time interval of 5 seconds. The Trimble Pathfinder Office software only applies differential correction to those points that had not been real-time differentially corrected.

All corrected GPS data were then exported into the Latitude/Longitude, WGS 84, feet for projection and datum before being manipulated within Environmental Services Research Institute’s (ESRI) ArcView 3.3 or 9.0 software.

4.2.3.3 Data Manipulation

Data Manipulation occurred within ESRI's ArcView 3.3 software and maps were created within ESRI's 9.0 software. Simply put, the data were tabulated, manipulated if necessary for consistency and completion, and checked for potential errors. Finally, they were incorporated into ESRI's ArcMap-ArcView 9.0 program to display the data information upon existing topographic and or aerial base maps and shape files, for final insertion into the technical report.

It should be noted that the survey coverage maps presented in this technical report accurately depict the alignment of transects due to the use of GPS technology. In many of the following figures, it can be seen that the maps display slightly skewed transect lines; this is because of the nature of Phase I survey methodology that relies on pacing at 15 m intervals using a compass for orienteering. In many studies of this type, using similar methods, project mapping often displays survey coverage in evenly spaced intervals. As can be seen below, it is highly unlikely that any survey using a compass and pacing would result in coverage that is evenly spaced at 15 m intervals along a straight line following a cardinal direction. The fact that the current Phase I transects do not overlap or cross one another clearly indicates that the extent and placement of survey coverage was effective in assessing the presence of cultural resources.

5.0 PHASE I FIELD RECONNAISSANCE OF JUNE 2004

Archaeologists from BHE, under the direction of Dr. Christopher A. Bergman, conducted the field reconnaissance of the APE in June of 2004. In an effort to facilitate the field investigations of the large, non-contiguous APE, the four work areas were surveyed separately and assigned different alphabetical designations (Figure 5-1). Called out as "Areas" and differentiated by proposed impacts, these study locations are described below.

5.1 WORK AREA A (THE BEDROCK OUTCROP)

- Planned Development: None
- Dimensions: 5.46 acres (2.20 ha)
- Number of Lateral Transects Surveyed: Nine (A through I)
- Number of Sample Loci Surveyed: 88
- Topography: Rock Outcrop on Upland Plain
- Current Land Use: Woods
- Vegetation: Deciduous and coniferous trees, ferns
- Disturbance: Logging

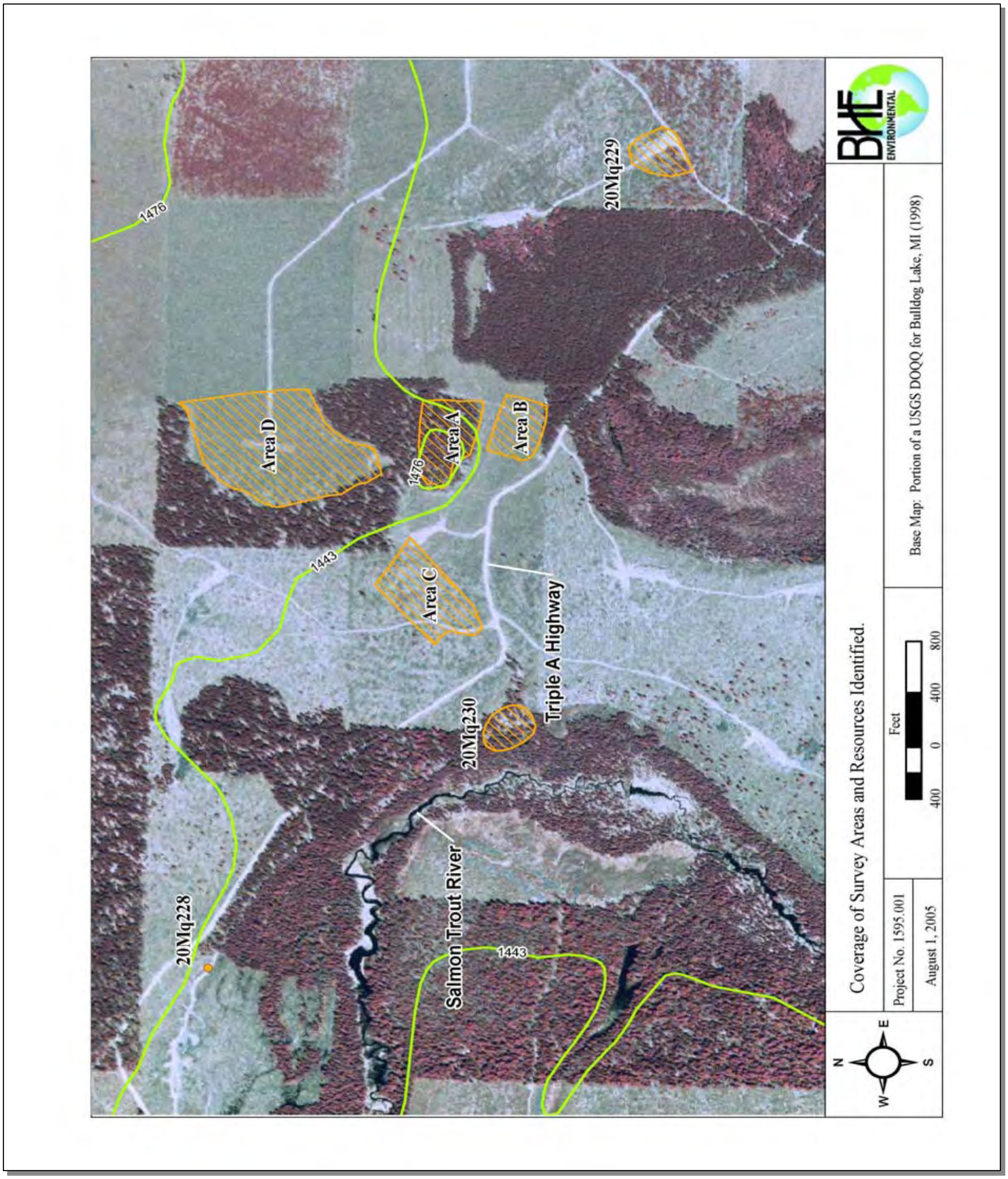


Figure 5-1. Coverage of Survey Areas in 2004 and Resources Identified.

Work Area A is a 5.4 acre work area situated atop an elevated knob overlooking the Salmon Trout River terraces and floodplain. This landform, which rises off of the surrounding terrace approximately 20 ft, contains an area of exposed bedrock along the southern and western fringe

Plate 1. Work Area A, showing exposed bedrock on top of rise, looking west from SL G13.

of the small plateau. Vegetation patterns across the rise consisted of a mixed hardwood forest, composed of large pines, maple, and birch interspersed with small shrubs and ferns. A total of nine survey transects, labeled A through I and running from south to north at a 15 m interval, were delineated across this landform. Each transect was surveyed from the eastern edge of the landform across to the western edge, and each 15 m SL was numbered sequentially. The number of SL within each individual transect varied, due primarily to the exposed rock and irregular shape of the landform.

In all, a total of 88 SL were surveyed by BHE within Work Area A. Of these, 57 SL were shovel tested. The remaining 31 were either visibly disturbed or surveyed by pedestrian inspection due to exposed bedrock or incidence of slope. The 57 shovel tests revealed a relatively standard soil profile consisting of a 2.5YR3/1 dark reddish gray sandy humic layer, which extended to an average depth of 20 cm below ground surface. This extremely sandy soil horizon contained leaf litter, pine needles, and numerous roots, with a small amount of gravel. This soil horizon interfaced with a leached 10YR5/3 brown sand. Another interface was encountered at an average depth of 26 cm below ground surface with a 7.5YR4/4 brown sand. This soil horizon extended to an average depth of 47 cm, at which point the excavation of the shovel tests was abandoned at a compact, hard pan composed of iron oxide, silica, calcium carbonates, and other substances.

A second, distinct, soil profile was encountered in a small number of shovel tests, especially at SL H7. This profile contained no leached soil horizon, and consisted of a 2.5YR3/1 dark reddish gray sand, which extended to a depth of 18 cm below ground surface. At that point, an interface with a 7.5YR3/2 dark brown sand was encountered, which extended down to the hard pan. It is unclear why the leached layer is eroded at these locations.

The systematic Phase I survey conducted by BHE on this work area did not yield any evidence of prehistoric or historic occupation of the landform. Further, disturbance from logging activities and erosion have affected the integrity of the soil profiles atop the landform.

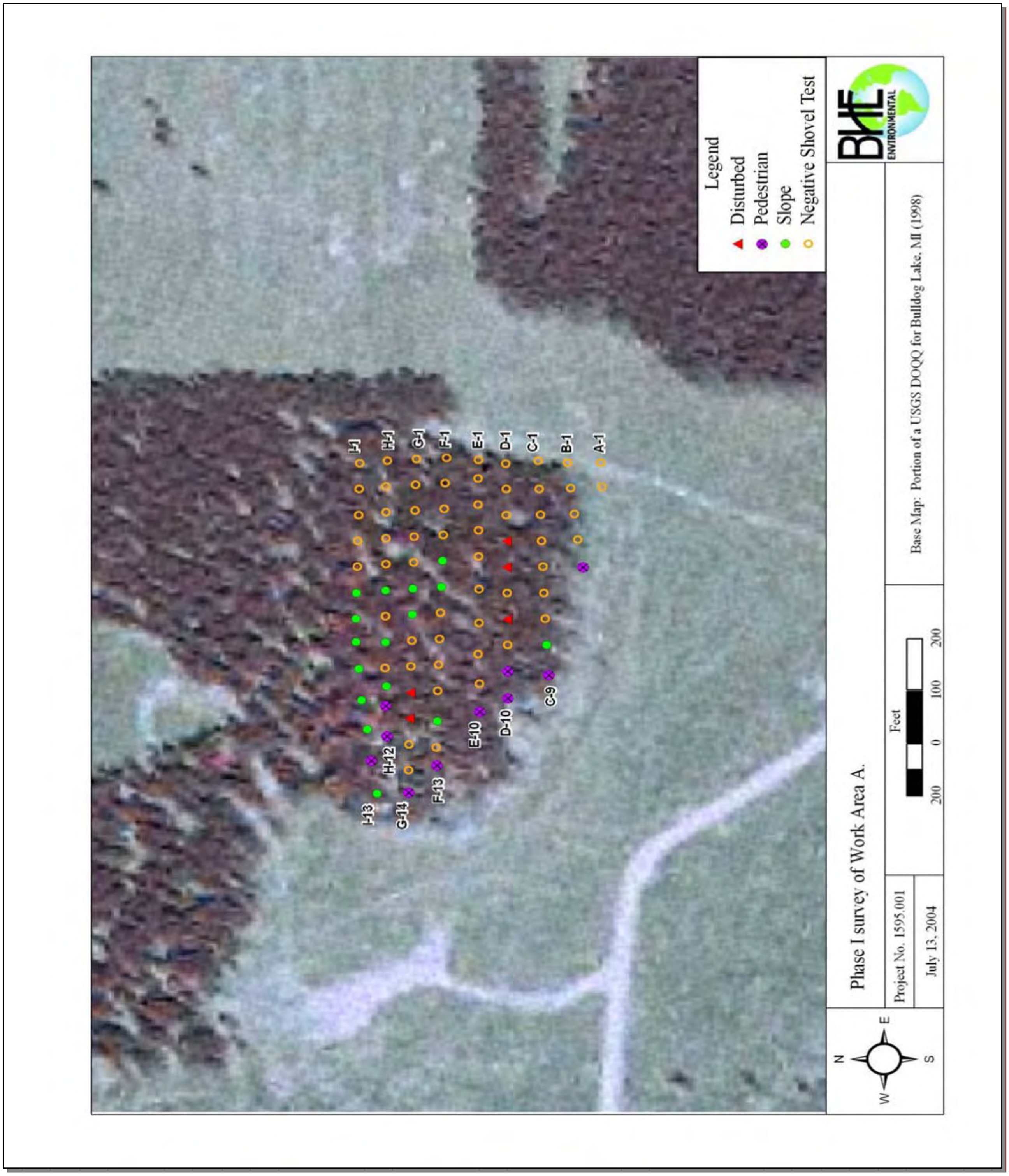


Figure 5-2. Phase I Survey Coverage of Work Area A.

5.2 WORK AREA B

- Planned Development: None
- Dimensions: 3.5 acres (1.41 ha)
- Number of Transects Surveyed: Seven (A through G)
- Number of Sample Loci Surveyed: 63
- Topography: Upland Plain
- Past Land Use: Logging
- Current Land Use: Clear-cut field with small trees
- Vegetation: Scrub, ferns
- Disturbance: Logging, ruts

Work Area B is located directly south of Work Area A, on a secondary terrace of the Salmon Trout River. This portion of the terrace has been deforested, leaving the ground surface covered by low grasses, weeds, and the remnants of trees. The land surface across the work area was extremely rutted, and contained copious amounts of tree branches and fragments, indicative of modern logging activities in the recent past. In addition, an existing dirt road is located within the work area, trending from south to north between SL 3 and 4.

Plate 2. Excavation of shovel test at SL G1, Work Area B, looking southeast.

In all, a total of seven transects (labeled A through G and running from south to north at a 15 m interval) were delineated for survey across this work area. The number of SL surveyed by BHE within the individual transects were uniform in number. This resulted in the survey of 63 total SL, 58 of which were shovel tested. The remaining five SL were generally surveyed by pedestrian means due to visible modern disturbance. The majority of the soil profiles encountered within the 58 shovel tests consisted of a 10YR3/2 very dark grayish brown sandy O horizon which contained decaying organic material and gravel. An interface with the E horizon was identified at an average depth of 10 cm below ground surface. The E horizon was composed of a 10YR5/2 grayish brown sand that contained some small gravels to an average depth of 26 cm, before terminating in a 7.5YR4/6 strong brown sand B horizon. The third layer was often compacted. The hardpan compaction is the result of cementation by iron oxide, silica, calcium carbonates, or other substances.

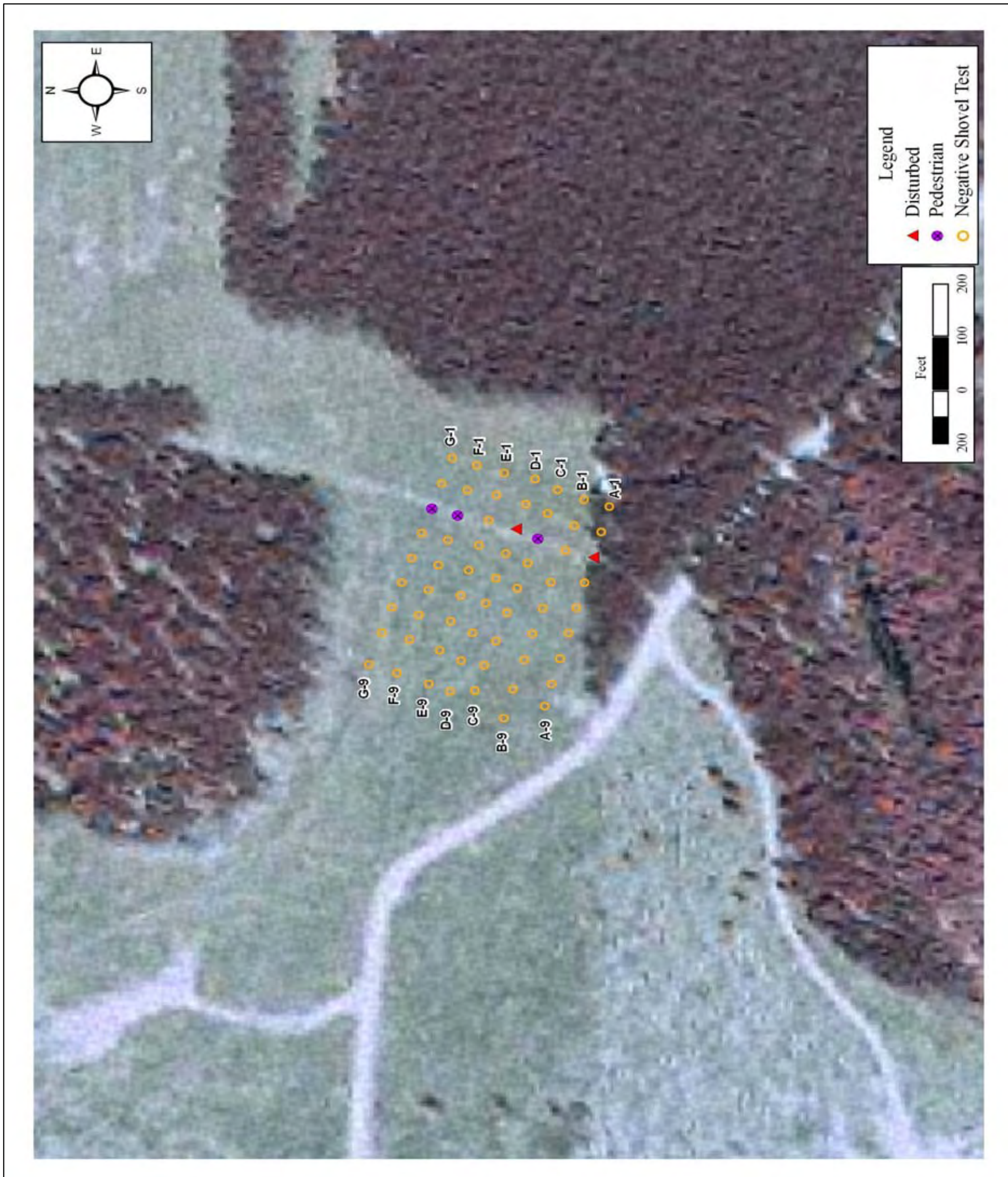


Figure 5-3. Phase I Survey of Work Area B.

No cultural materials, or evidence of prehistoric or historic occupation, were identified on Work Area B by BHE's Phase I survey. This paucity of material may be the direct result of the intensive commercial logging activity across this area, both historically and up to the current day (as evidenced by the tree littoral present across the ground surface).

5.3 WORK AREA C

- Planned Development: None
- Dimensions: 6.76 Acres (2.73 ha)
- Number of Transects Surveyed: Eight (A through H)
- Number of Sample Loci Surveyed: 114
- Topography: Upland Plain
- Past Land Use: Logging
- Current Land Use: Clear-cut field with small trees
- Vegetation: Deciduous and Coniferous trees, shrubs
- Disturbance: Logging, furrows, divots, ruts

Plate 3. Overview of Work Area C, looking southwest.

Work Area C is located on the deforested uplands west of and topographically below Work Area A. Much like other portions of the uplands east of and topographically above the headwaters of the Salmon Trout River, the ground surface has been heavily-disturbed by logging activities, leaving the ground covered by low grasses and weeds.

A total of eight southwest-trending survey transects, labeled A through H, were laid across the work area for ease of testing. In all, a total of 114 SL were surveyed by BHE within this work area, 89 of which were shovel tested. The remaining 25 were pedestrian inspected, due primarily to areas of impenetrable tree piles. The majority of the soil profiles encountered in the 89 shovel tests contained four distinct soil horizons. Directly below the ground surface, a 7 cm deep 7.5YR3/1 very dark gray sandy, humic O horizon was encountered. This soil horizon was composed of decaying organic material, and terminated at a natural interface with the E horizon, which was consisted of a leached 7.5YR6/2 pinkish gray sand. The E horizon extended to an average depth of 15 cm below ground surface, at which point a 5YR5/8 yellowish red sand was encountered. Another interface was identified at an average depth of 33 cm below ground surface, and the remainder of each of the SL was composed of a 2.5YR3/4 dark reddish brown sand. No cultural materials were identified within any of the shovel tests.

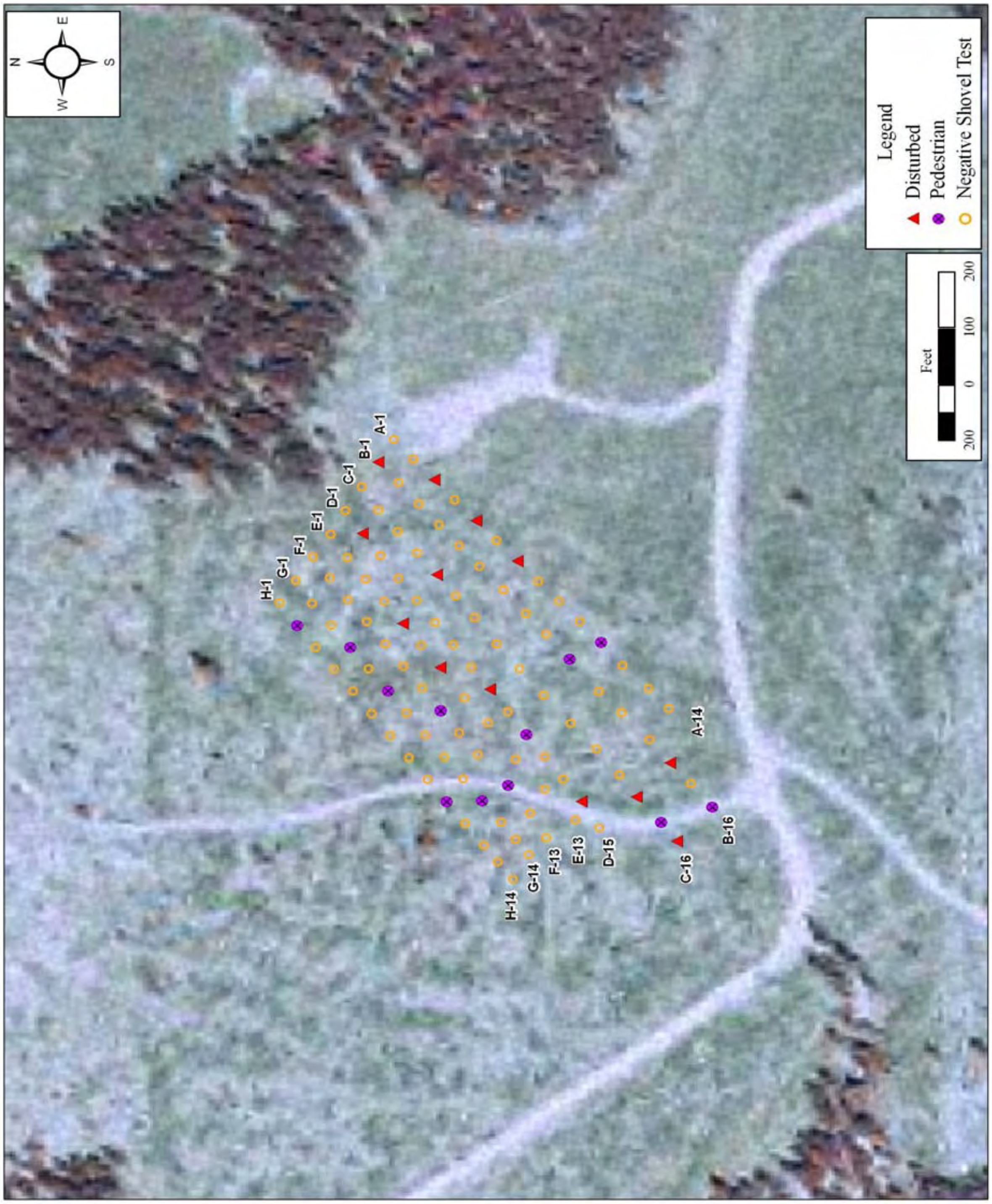


Figure 5-4. Phase I Survey of Work Area C.

Two modern artifacts were identified on the ground surface of the work area, a metal oil can and a large, double-handled saw blade. While the oil can has the appearance of modernity, the saw blade may be related to early 20th century logging activities in the immediate vicinity (see below). No other cultural materials were identified on Work Area C by the BHE Phase I survey. As a result of design changes in 2005, Work Area C now lies outside the boundaries of the primary APE.

5.4 WORK AREA D

- Planned Development: Coarse Ore Storage, Emulsion Tank, Rock Storage Area, Fuel Storage, Contact Water Storage Basin, Construction Staging Area
- Dimensions: 17.5 (7.08 ha)
- Number of Transects Surveyed: 15 (A through BB)
- Number of Sample Loci Surveyed: 204
- Topography: Upland Plain
- Past Land Use: Logging
- Current Land Use: Clear-cut field with small trees
- Vegetation: Small trees , shrubs
- Disturbance: Logging, furrows, divots

Work Area D is located north of Work Area A, in a fallow field carved out of the surrounding woodlot on a tertiary terrace of the Salmon Trout River. While the work area is currently covered by low grasses, the remains of a variety of mixed hardwood trees are evident across the land surface, indicative of modern logging activities.

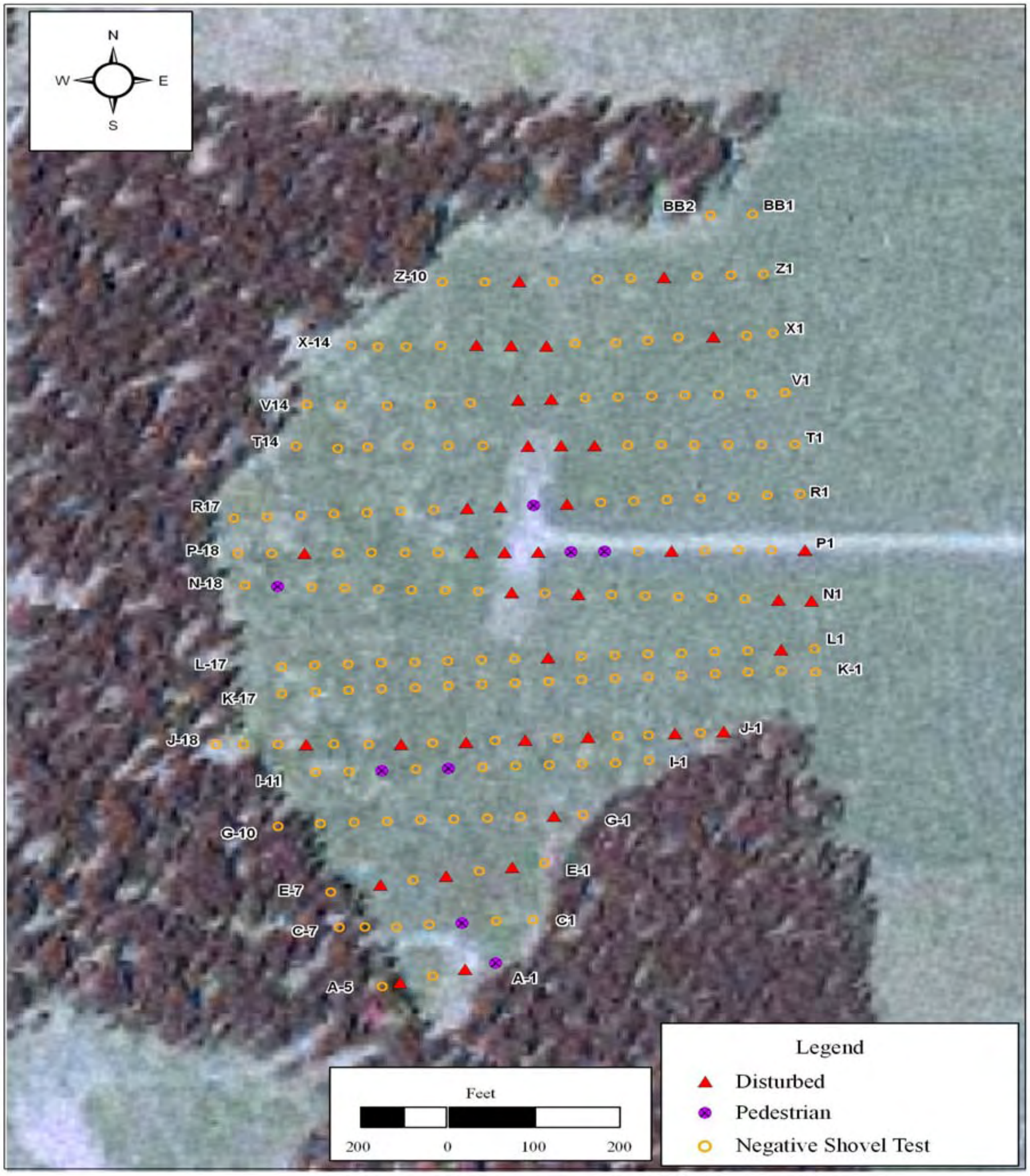


Figure 5-5. Phase I Survey of Work Area D.

As the survey of this portion of the project area was undertaken after the survey of the other three parcels, the negative findings reached on those work areas altered the testing strategy employed for the survey of Work Area D. In lieu of the 15 m spacing between lateral survey transects, this interval was expanded to 30 m, for a total of 15 lateral, west-trending survey transects across this work area. Transects I and J were however, placed 15 m apart due to an error in placement in the field.

In all, a total of 204 SL were surveyed on Work Area D by BHE. Of this total, 157 SL were shovel tested, while the remaining 47 were pedestrian inspected due to impassable piles of cut trees or access roads. The typical soil profile identified in the 157 shovel tests was composed of four distinct soil horizons. The top layer consisted of a 7.5YR3/1 very dark gray sandy, humic O horizon, which contained a variety decaying organic material. At an average depth of 17 cm below ground surface lay the interface between the O and the top layer of the E horizon. The E horizon was composed of a leached 7.5YR6/2 pinkish gray sand. This portion of the A horizon was extremely thin and ill defined, typically terminating in 3-4 cm into a 7.5YR4/4 brown sand, which was most likely the second layer of the E horizon. This layer extended to an average depth of 43 cm below ground surface, at which point an interface with a compact 10YR4/4 dark yellowish brown coarse sand which was encountered. The hardpan compaction is caused by a cement of iron oxide, silica, calcium carbonates, or other substances.

Plate 4. Overview of Work Area D surveyed in 2004, looking southeast from SL P14 and into Area I (left in photograph) surveyed in 2005.

No cultural materials or evidence of prehistoric or historic occupation, aside from the obvious logging activity, was identified by BHE on Work Area D.

5.5 TESTING RESULTS FOR PHASE I SURVEY IN 2004

The following table summarizes the results of the field survey in 2004. It should be noted that all sample loci tested negative for cultural resources.

Table 5-1. Sample Loci Type, Number and Percentage for 2004.

Sample Loci Type	N	Percentage
Disturbed	59	**12.6**
Negative Shovel Test	361	**77.0**
Pedestrian Survey	33	**7.0**
Slope (>13 percent grade)	16	**3.4**
Total	**469**	**100.0**

The vast majority of the sample loci investigated were negative shovel tests (77.0 percent), while disturbed areas identified by pedestrian survey accounted for 12.6 percent of the field coverage. Disturbed areas were most often associated with previous logging and consisted of timber piles, deflated ruts, and piles of earth. Pedestrian survey comprised 7.0 percent of the sample loci, while steep slopes (3.4 percent) were mostly confined to the northern side of the bedrock outcrop.

5.6 CASUAL LANDSCAPE INSPECTION

In addition to the formal Phase I field reconnaissance conducted in 2004 on the above-mentioned work area, the entire 199 acre parcel was subjected to a casual visual reconnaissance by BHE archaeologists. This survey focused on an inspection of easily accessible portions of the parcel (primarily existing roads and game trails), referenced with historic atlases, topographic maps, and aerial photographs. These efforts resulted in the identification of three previously unrecorded archaeological sites including two sets of historic structure foundations and a prehistoric archaeological site. These resources are discussed in detail in Chapter 7.0 and are the only cultural properties identified during the 2004 and 2005 field seasons.

6.0 PHASE I FIELD RECONNAISSANCE OF JULY 2005

Field reconnaissance of the APE continued in July 2005 under the direction of Dr. Christopher A. Bergman. In an effort to facilitate the 2005 field survey, the results of the original 2004 survey were plotted on a large-scale map to identify areas that had not been previously examined (see map attached to back cover). Within the larger project area, locations that were not surveyed in 2004, as well as newly proposed land requirements, were assigned different alphabetical designations (Figure 6-1). A total of eight work areas of varying size (ca. 3.3 [Area J] acres to 22.9 acres [Area D extension and adjacent Area I combined]) were subjected to Phase I survey in 2005, as described below. In all instances, except for transect YY in Work Area I, a 15 m interval sampling distance was used between individual sample loci. In the case of transect YY, this was widened to a 30 m interval to find the boundary of the area of the survey block.

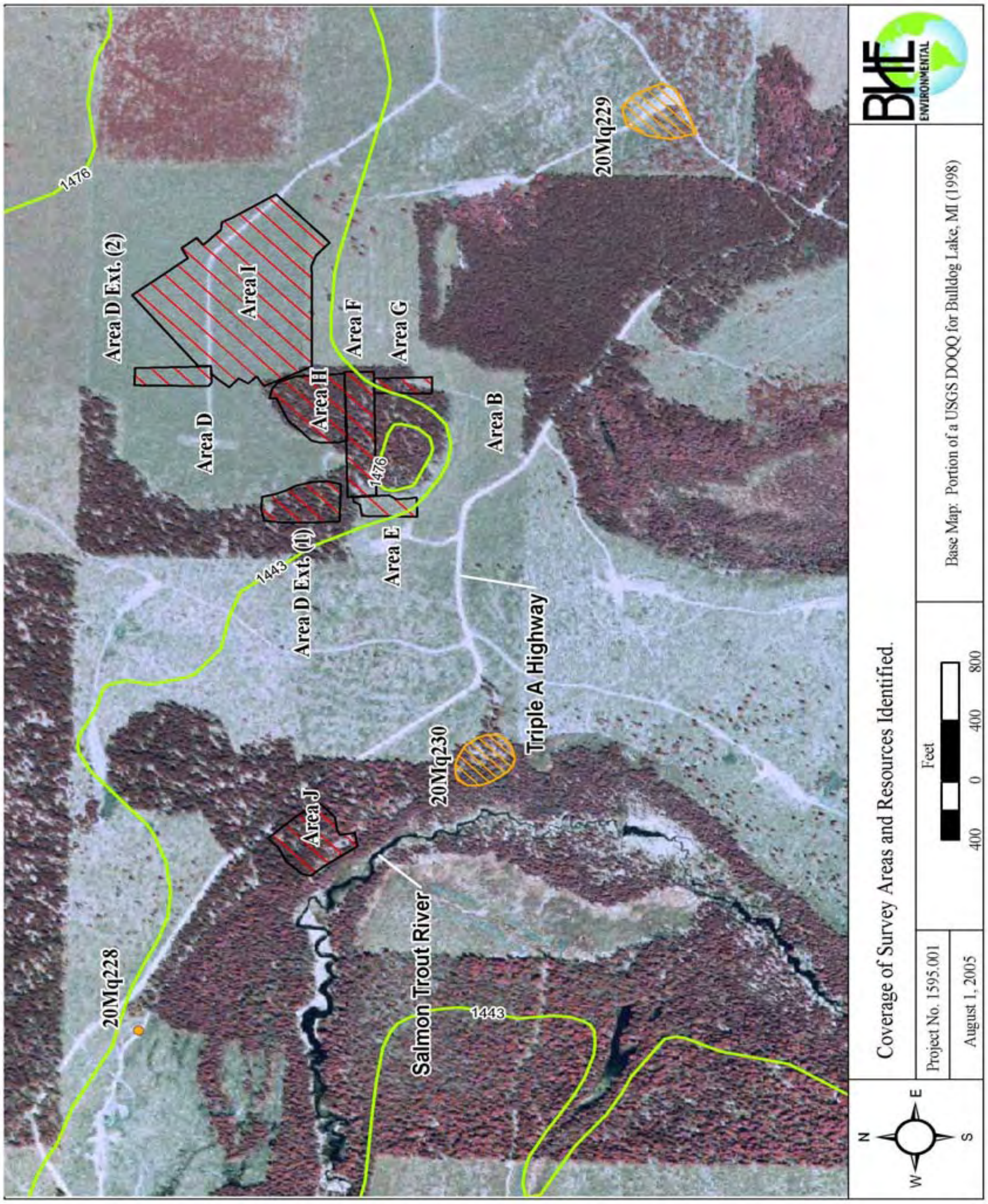


Figure 6-1. Coverage of Survey Areas in 2005 and Resources Identified.

6.1 WORK AREA D EXTENSION (1)

- Planned Development: Water Storage and Treatment Facilities
- Dimensions: 3.51 acres (1.42 hectares)
- Number of Lateral Transects Surveyed: Four, 8 through 11
- Number of Sample Loci Surveyed: 24
- Topography: Upland Plain
- Current Land Use: Woods
- Vegetation: Deciduous and coniferous trees, ferns
- Disturbance: Logging

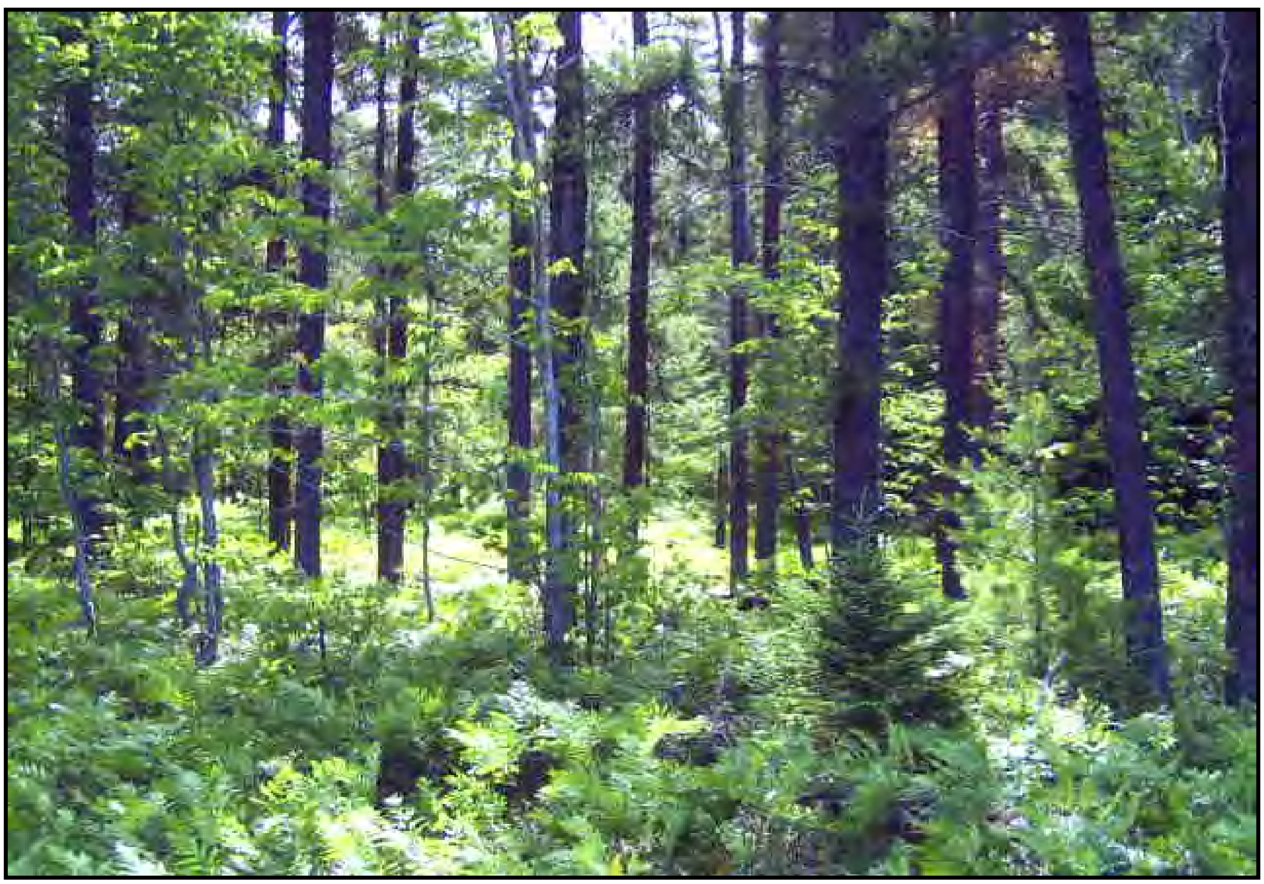


Plate 5. Work Area D Extension (1) looking north.

This small, 3.5 acre, area is currently a forest adjacent to the western side of Area D surveyed in 2004 (see above). Surface visibility was poor and all 24 sample loci were shovel tests excavated at 15 m intervals. The soil horizons consisted of a 10YR2/2 (very dark brown) humic sand, less than 10 cm in depth, above a 7.5YR5/4 brown sand that ranged in depth from about 9 cm to 25 cm. The base of the profile was composed of a 2.5YR3/4 dark reddish brown sand that sometimes displayed fragmented hard pan or 5 to 10 percent gravels. All shovel tests excavated in the Area D Extension were negative and no cultural resources were identified.

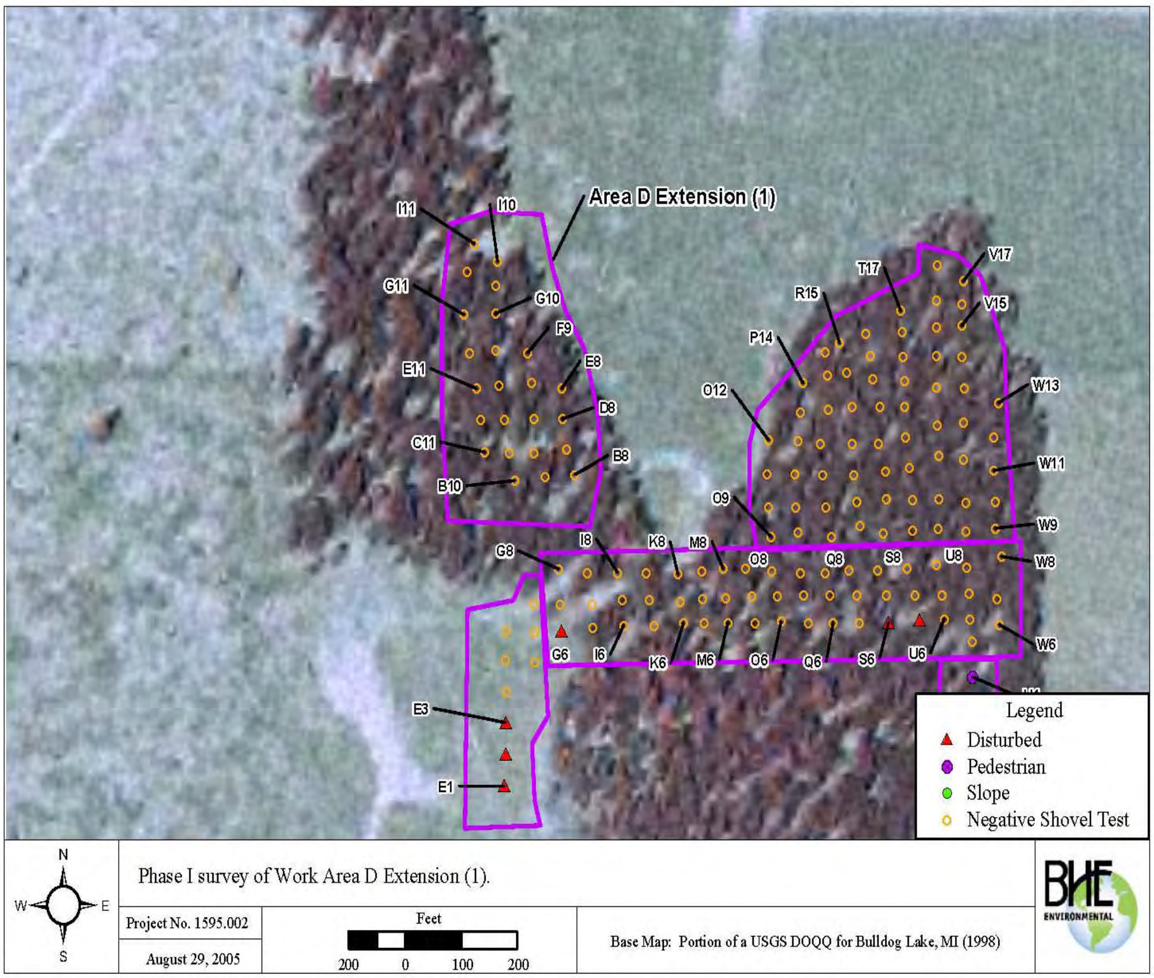


Figure 6-2. Survey Coverage in Work Area D Extension (1).

6.2 WORK AREA E

- Planned Development: Portal
- Dimensions: 0.5 acres (0.2 hectares)
- Number of Lateral Transects Surveyed: Two, E and F
- Number of Sample Loci Surveyed: 8
- Topography: Upland Plain
- Current Land Use: Clear-cut field
- Vegetation: Deciduous and coniferous trees, ferns
- Disturbance: Logging

Plate 6. Work Area E with slopes of the bedrock outcrop to left, looking southwest.

Area E is a small strip of land in a clear-cut field adjacent to the western side of the bedrock outcrop. The field investigations consisted of two transects, E and F, and a total of eight 15 m interval sample loci were investigated. Five of these were shovel tests and SL E5 displayed a typical soil profile for the area as follows: 10YR2/2 very dark brown humic sand, 0-15 cm, above a 7.5YR5/4 brown sand from 15-45 cm. A 2.5YR3/4 very dark reddish brown sand was recorded until reaching a depth of 63 cm. No cultural resources were identified in Area E.

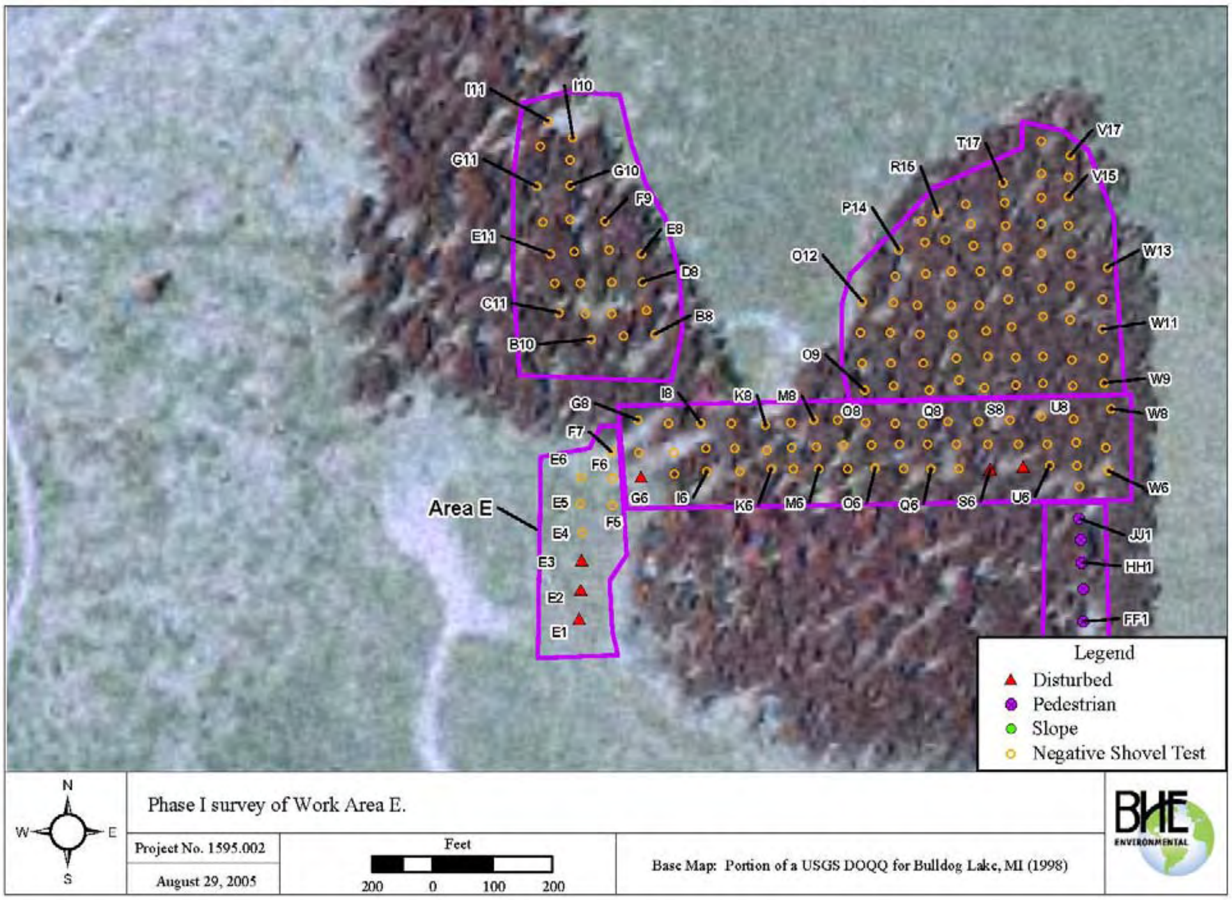


Figure 6-3. Survey Coverage in Work Area E.

6.3 WORK AREAS F, G, AND H

- Planned Development: Laydown Area, Propane Storage and Mine Air Heater, Generator Plant, Maintenance Shop and Compressor Plant, Assay Lab, Crusher Facilities, and Fine Ore Bin
- Dimensions: 9.0 acres (3.64 hectares)
- Number of Lateral Transects Surveyed: F (three, 6 through 8), G (one), H(nine, O through W)
- Number of Sample Loci Surveyed: F (50), G (8), H (64) for a total of 122
- Topography: Upland Plain
- Current Land Use: Woods
- Vegetation: Deciduous and coniferous trees, ferns
- Disturbance: Logging

These three survey blocks are grouped together because they are contiguous and located on the northern and eastern sides of the bedrock outcrop. This portion of the project APE is characterized by level ground and a mixed deciduous and coniferous forest with a dirt two track running along its eastern portion. Despite the fact that 113 (ca. 93 percent of 122 sample loci) shovel tests were excavated, no cultural resources were identified by BHE on these blocks.

Plate 7. Work Area F, looking west.

Area F was surveyed with three 15 m interval transects that involved a total of 50 sample loci. There were a total of 47 shovel tests and three sample loci that were disturbed. A typical soil profile in Area F consisted of a 10YR2/2 very dark brown sand, a 7.5YR4/4 brown sand, and a 2.5YR3/4 dark reddish brown sand. The humic horizon was generally less than 10 cm deep, while the brown sand generally reached no more than 30 cm in depth. The strong brown or yellowish red sand was noted to depths of over 50 cm. The final horizon sometimes contained fragmented hard pan (e.g., SL J6, O6, J8) and a 5 to 10 percent gravel content was frequently noted. No cultural materials were recorded in Area F.

Area G was surveyed using a single transect of eight sample loci. These generally were in alignment with a dirt two track that borders the eastern edge of the bedrock outcrop. Six of the sample loci were subjected to a pedestrian survey, while two were negative shovel tests. Due to the disturbed nature of the soils in Area G, no cultural resources were identified.

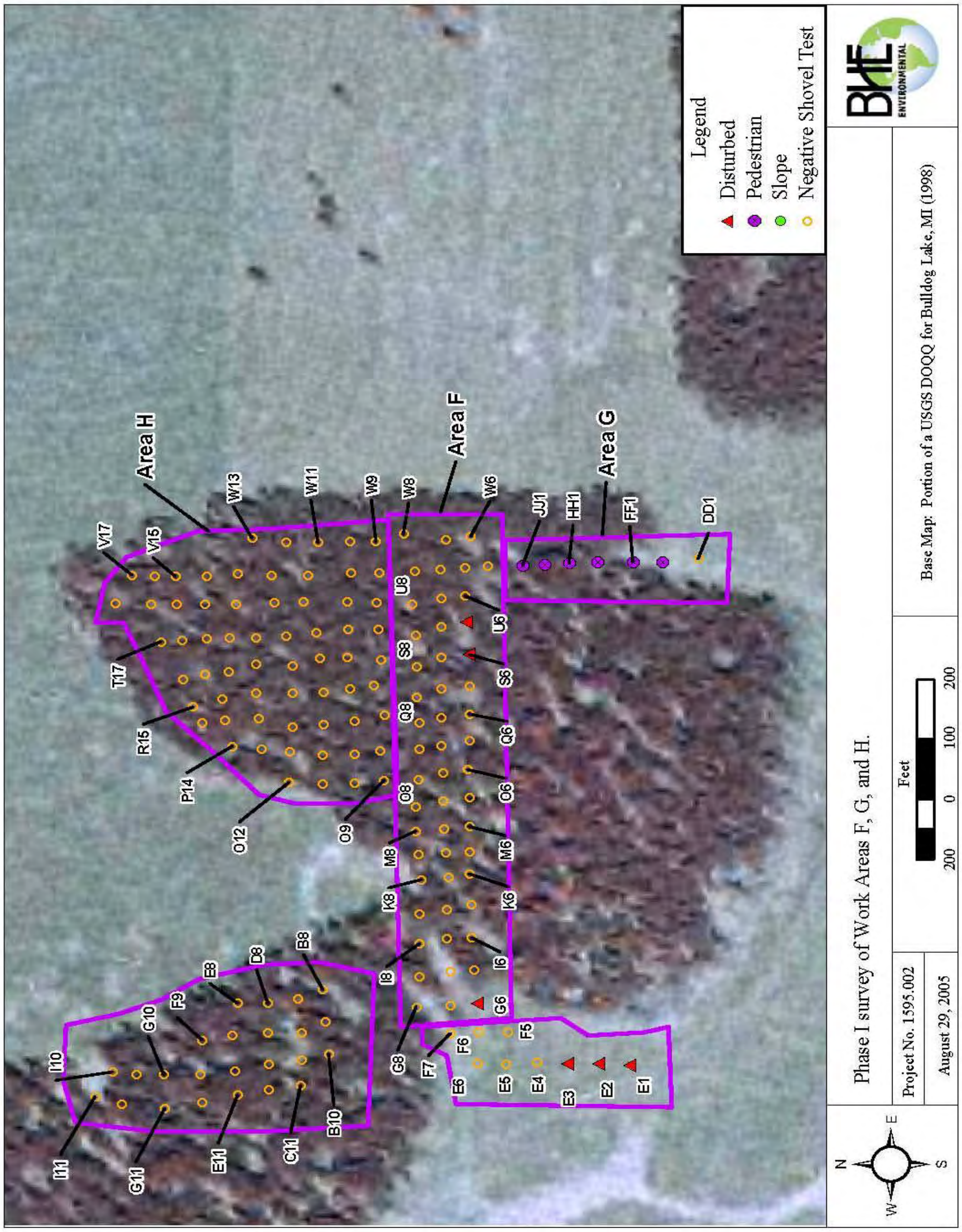


Figure 6-4. Survey Coverage in Work Areas F, G and H

Plate 8. Work Area H facing toward clear-cut field and Work Area I (right side), looking northeast.

The survey of Work Area H consisted of nine 15 m interval transects which resulted in the excavation of a total of 64 shovel tests. A typical soil profile in Area H consisted of a 10YR2/2 very dark brown sand, a 7.5YR4/4 brown sand, and a 7.5YR4/6 strong brown or 5YR4/6 yellowish red sand. The humic horizon was generally less than 10 cm deep, while the brown sand often reached no more than 25 cm in depth. The strong brown or yellowish red sand was noted to depths of over 50 cm. Gravels, comprising some 5 to 10 percent of the soil content, were noted in the third stratum as was fragmented hard pan. No cultural materials were identified or collected in Area H and all 64 shovel tests were negative.

6.4 WORK AREAS D EXTENSION (2) AND I

- Planned Development: Ground Water Discharge System, Emergency Response Facility, Mine Offices, Parking, Non-contact Water Basin, Construction Staging Area, Truck Scales and Wash
- Dimensions: 22.9 acres (9.27 hectares)
- Number of Lateral Transects Surveyed: D Extension (two, A and B), I (20, YY through S)
- Number of Sample Loci Surveyed: D Extension 2 (18), I (332) for a total of 350
- Topography: Upland Plain
- Current Land Use: Clear-cut field with small trees
- Vegetation: Deciduous and coniferous trees, ferns
- Disturbance: Logging

Work Area D Extension (2) and Work Area I lie within the same clear-cut field to the north and northeast of the bedrock outcrop. Area D Extension (2) was surveyed with two 15 m interval south-north transects to fill in a portion of the original Area D that did not completely cover the newly proposed project design. At the time of BHE's survey, both blocks were clear-cut fields and as such, disturbance was noted in the form of timber piles, deflated ruts, divots, and earth mounds at a number of sample loci.

Work Area D Extension (2) was surveyed using two transects (A and B) and 16 negative shovel tests were excavated. The soil profiles encountered comprised a 10YR2/2 very dark brown humic sand, no deeper than 15 cm below the surface, above a 7.5YR4/2 brown sand that typically was less than 25 cm deep. A 5YR4/4 reddish brown sand underlay these two horizons. No cultural resources were located in this portion of the project APE.

Since Work Area I is a relatively large land tract, the survey results are summarized in the following table for convenience (numbers are color keyed to survey coverage maps). The transects proceeded across the level field in a northeasterly to southwesterly direction.

Table 6-1. Survey Coverage Transect and Results for Work Area I.

Transect	Disturbed	Negative Shovel Test	Pedestrian	Slope	Total
YY	6	8	3		17
A	1	15	1		17
B	4	14	1		19
C	4	13	3		20
D	1	18	2		21
E	2	18	1		21
F	6	16	1		23
G	2	21	1		24
H	1	20	1		22
I	6	14	1		21
J	2	17	1		20
K		16			16
L	6	10			16
M	2	11	1		
N	2	10			12
O	2	6	1		9
P	1	8	1		10

Transect	Disturbed	Negative Shovel Test	Pedestrian	Slope	Total
Q		8	2		**10**
R		8	2		**10**
S	3	6	1		**10**
Total	**51 (15.4 percent)**	**257 (77.4 percent)**	**24 (7.2 percent)**	**0**	**332 (100.0)**

Out of a total of 332 sample loci investigated in Work Area I, 257 or 77.4 percent were negative shovel tests. This portion of the APE displayed a relatively high incidence of disturbance (15.4 percent) due to logging when compared with Work Areas F and H, for example. Timber piles, ruts, earthen mounds, divots, and deflated areas were observed during the survey.

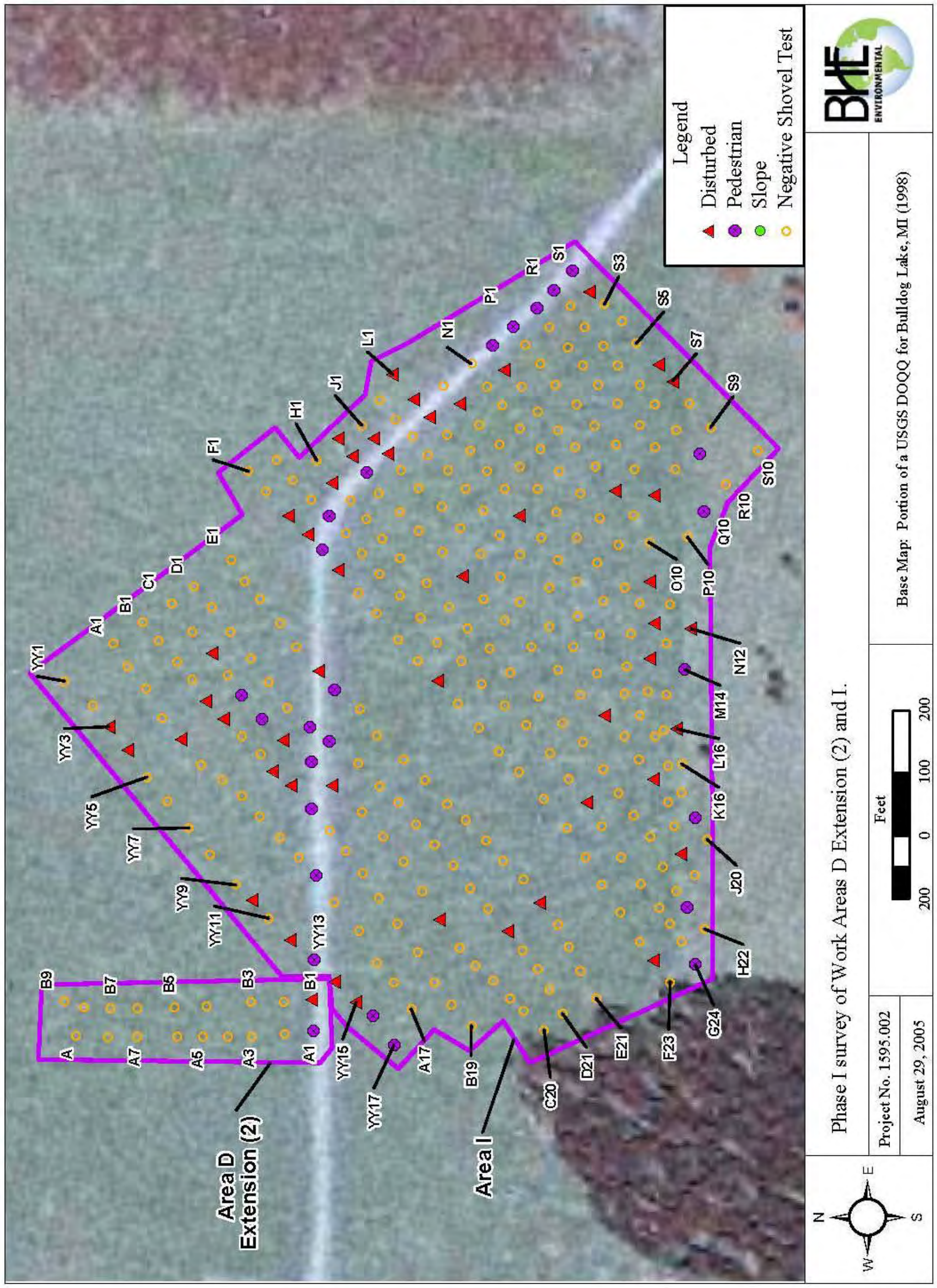


Figure 6-5. Survey Coverage in Work Areas D Extension (2) and I

Plate 9. General view of Work Area I with cut timber pile in foreground.

In general, the soil horizons displayed a 10YR2/2 very dark brown humic sand above a 7.5YR 4/3 or 4/4 brown sand. Beneath these two horizons was a 5YR3/4 dark reddish brown, 4/4 reddish brown or 4/6 yellowish red sand that frequently had a 5 percent gravel content. The depth of the humic horizon was generally no more than 10 cm, while the brown sand could be as deep as 45 cm, but was most often less than 25 cm as noted in other work areas. No cultural resources were recorded during the Phase I survey of Area I.

6.5 WORK AREA J

- Planned Development: Aggregate Storage Pad, Exhaust Fan Housing
- Dimensions: 3.34 acres (1.35 hectares)
- Number of Lateral Transects Surveyed: Eight, A through H
- Number of Sample Loci Surveyed: 64
- Topography: Upland Plain, terrace edge
- Current Land Use: Clear-cut field, fallow
- Vegetation: Scrub, ferns
- Disturbance: Logging

The investigation of Work Area J involved eight linear transects, trending northwest to southeast, that each had eight sample loci. Thus, a total of 64 sample loci were recorded and 33 of these were shovel tests. Disturbance was noted throughout Area J in the form of deflated and turbated soils, cut timber, and ruts. In addition, 12 sample loci coincided with slopes that lead down to the Salmon Trout River. Area J was located adjacent to the Triple A Highway as seen in the photograph below.

Plate 10. View of Work Area J with Triple A Highway in foreground.

The soil profiles identified in the shovel tests included a 10YR2/2 very dark brown humic sand, a 7.5YR 4/4 or 5/2 brown sand, and a 5YR3/4 dark reddish brown or 4/6 yellowish red sand. In general, the uppermost horizon was less than 10 cm in depth. Stratum II, the brown sand, was typically less than 25 cm deep, while the reddish brown or yellowish red sand was recorded to depths in excess of 50 cm. No cultural resources were recovered from Area J.

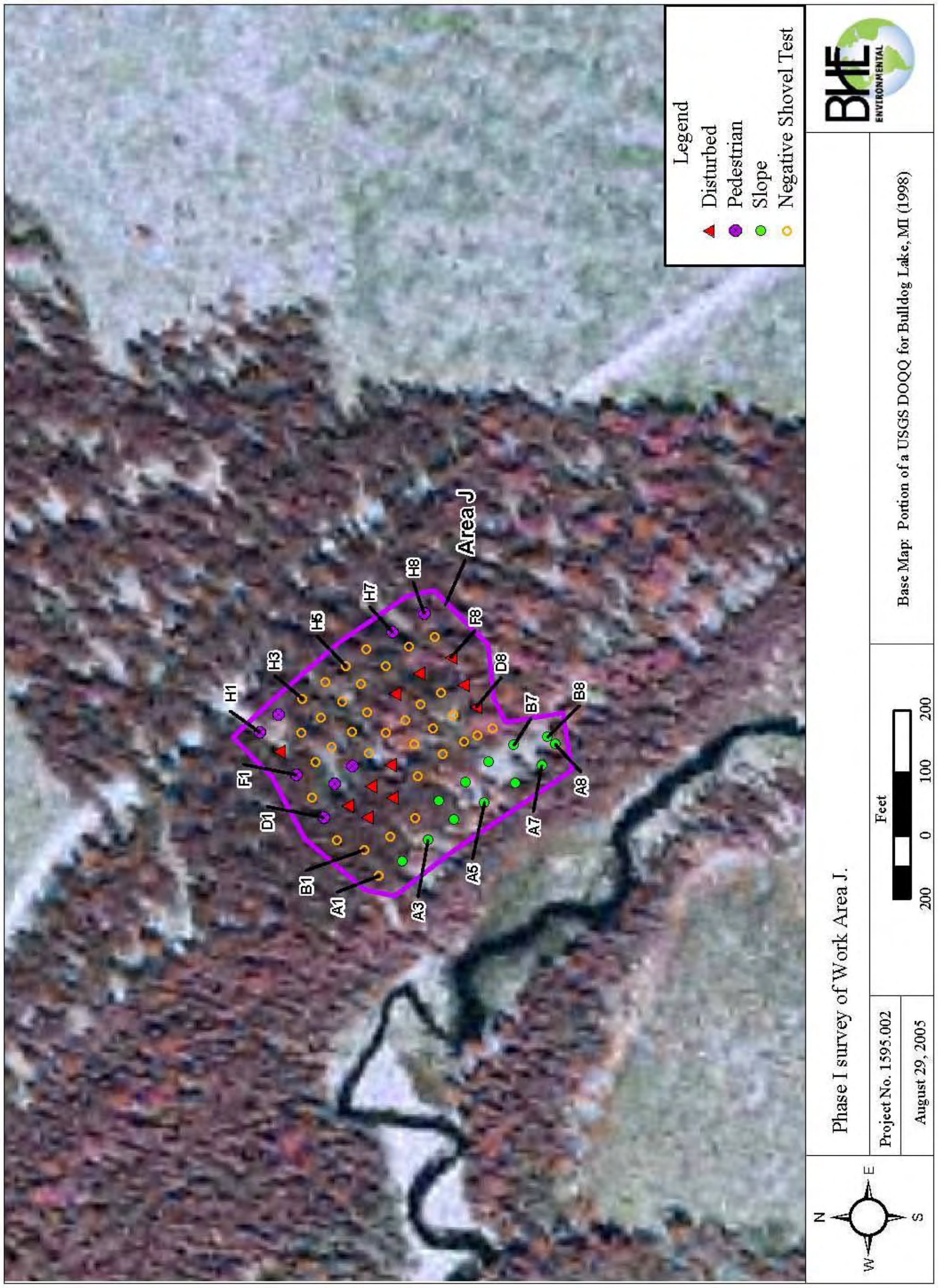


Figure 6-6. Survey Coverage in Area J.

6.6 TESTING RESULTS FOR PHASE I SURVEY IN 2005

The following table summarizes the results of the field survey in 2005. It should be noted that all sample loci investigated were negative in terms of locating cultural resources.

Table 6-2. Sample Loci Type, Number and Percentage for 2005.

Sample Loci Type	Number	Percentage
Disturbed	68	**12.0**
Negative Shovel Test	448	**78.9**
Pedestrian Survey	40	**7.0**
Slope (>13 percent grade)	12	**2.1**
Total	**568**	**100.0**

The vast majority of the sample loci investigated were negative shovel tests (78.9 percent), while disturbed areas identified by pedestrian survey accounted for 12.0 percent of the field coverage. Disturbed areas were most often associated with previous logging and consisted of timber piles, deflated ruts, and piles of earth. Pedestrian survey of areas with exposed soils comprised 7.0 percent of the sample loci, while steep slopes (2.1 percent) were wholly confined to the southwest edge of Area J.

7.0 INVENTORY OF CULTURAL RESOURCES IDENTIFIED

This chapter discusses the cultural resources identified within the project area as a result of BHE's Phase I survey. All three of the sites documented below were discovered by BHE within the 199 acre parcel, outside of the twelve work areas subjected to the intensive Phase I field reconnaissance in 2004 and 2005. As a result, a thorough archaeological investigation of these sites was not conducted as part of the current project. Instead, these sites were visually inspected, mapped with GPS, photographed, and inventoried with the MHPO.

7.1 SITE 20MQ228

- Site Type: Prehistoric
- UTM Coordinates: N5177833.99315, E431344.59765
- Site Dimensions: 20 ft x 5 ft or 6 m x 1.5 m
- Elevation: 445 ft (135.6 m)
- Distance to Water: 920 ft (280.4 m) north of Salmon Trout River
- Temporal Component(s) and Function: Unknown Prehistoric/Lithic Reduction area
- Topography: Terrace
- Past Land Use: Logging
- Current Land Use: Roadway
- Vegetation: Small trees, shrubs
- Disturbances: Logging, road construction

Located within a dirt roadway, site 20Mq228 was identified by BHE during a casual visual inspection of the 199 acre parcel. A total of three pieces of prehistoric debitage, all of which are made of brown quartzite, were recovered from the surface of this location. Two of the debitage are classified as broken flake fragments, while the final specimen is a biface thinning flake. Although these light brown flakes have a sugary texture, the material is quite vitreous. Further scrutiny of the surface of the road intersection failed to produce more cultural materials, despite the ground visibility being near 100 percent. Given the context of recovery in a road cut, the flakes are in a disturbed context.

7.2 SITE 20MQ229

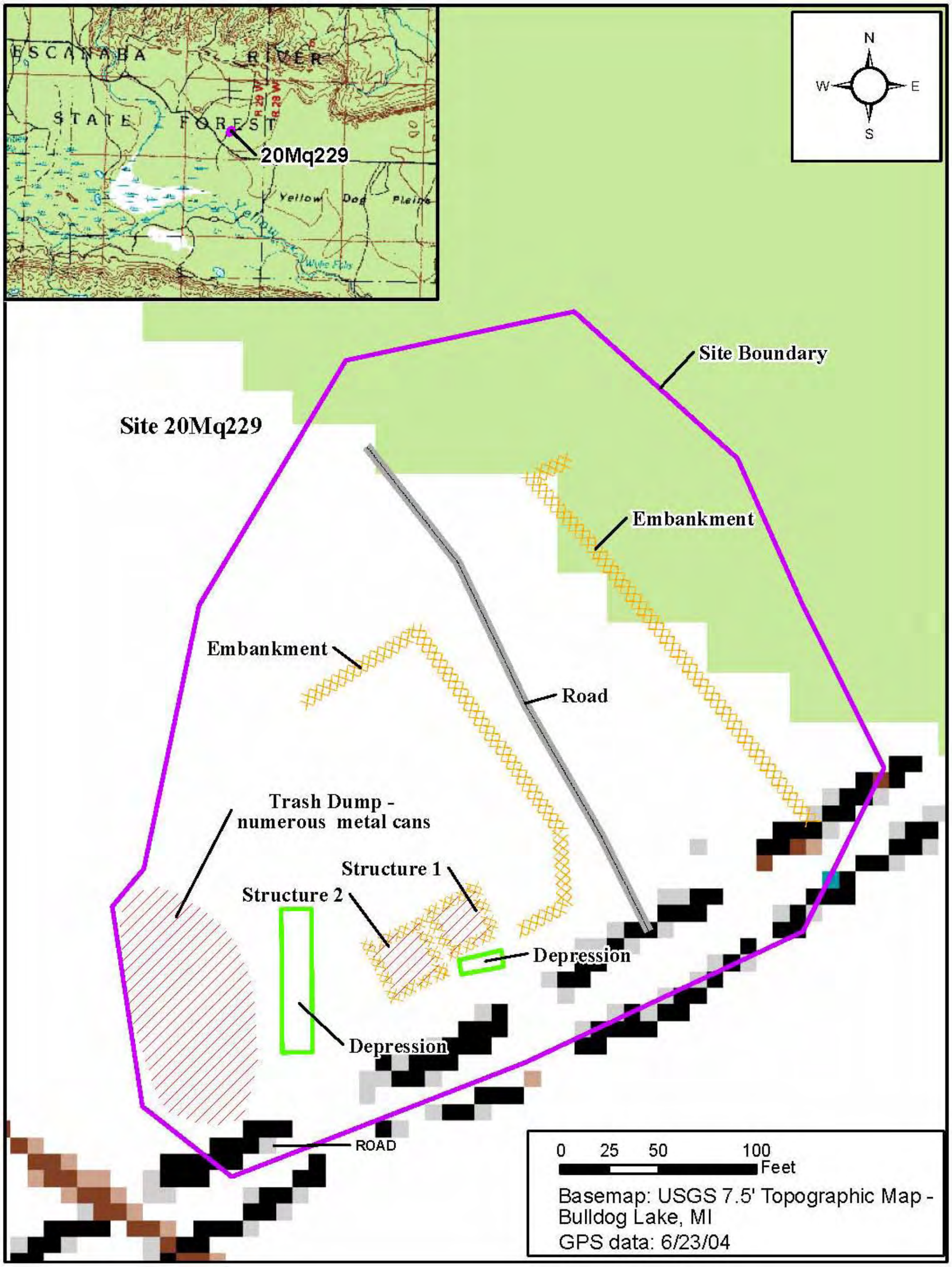
- Site Type: Historic camp
- UTM Coordinates: N5176916.67066, E433234.20966
- Site Dimensions: 200 ft x 200 ft or 61 m x 61 m
- Elevation: 442 ft (134.7 m)
- Distance to Water: 2020 ft (615.6 m) northeast of a low-lying marsh which discharges into Yellow Dog River and Salmon Trout River
- Temporal Component(s) and Function: 20th Century Logging Camp
- Topography: Upland Plain
- Past Land Use: Logging
- Current Land Use: Fallow
- Vegetation: Small trees, shrubs
- Disturbances: Man-made embankments

Description: Site 20Mq229 was identified initially by review of a 1939 aerial photograph (Appendix B); this was later confirmed by BHE during casual visual inspection of the 199 acre parcel. This site consists of a pair of log cabins and an associated surface scatter of artifacts located along the western edge of an existing dirt road. The site is situated in a grassy clearing cut into the surrounding forest, on the gentle slopes above the Salmon Trout River to the west and Yellow Dog River to the south. BHE delineated and mapped the pair of extant structures and performed a cursory pedestrian inspection, in an effort to identify any material related to the cabins that could be diagnostic of a particular historic period.

Structure 1 measures 26 ft by 22 ft and Structure 2 measures 24 ft by 22 ft. Both structures contain earthen berms with logs placed on them, which likely served as insulating buffers. A six foot diameter depression was noted within the southwest corner of the Structure 1. The exact function or nature of this depression is not known.

A surface scatter of artifacts consisting of cans, a motor oil can with the name “KOOE MOTOR,” a bed spring, aluminum pans, and a bottle was recorded between Structure 1 and to the west and southwest of Structure 2 (Figure 7-1). The metal cans consist of both pull tops and punctured tops with both can openers and make shift openers (e.g., screw drivers) utilized. Specific brands of beer cans include Pabst, Old Milwaukee, and Buckhorn. Based on the material culture remains, as well as the historic documentation, it is suggested that Camp 1 represents a logging camp; the camp is depicted on the 1939 aerial photograph of the region (Appendix B).

Figure 7-1. Planview of Site 20Mq229.



View of earthen embankment at 20Mq229.

Close-up view of construction of Structure #1 at 20Mq229.

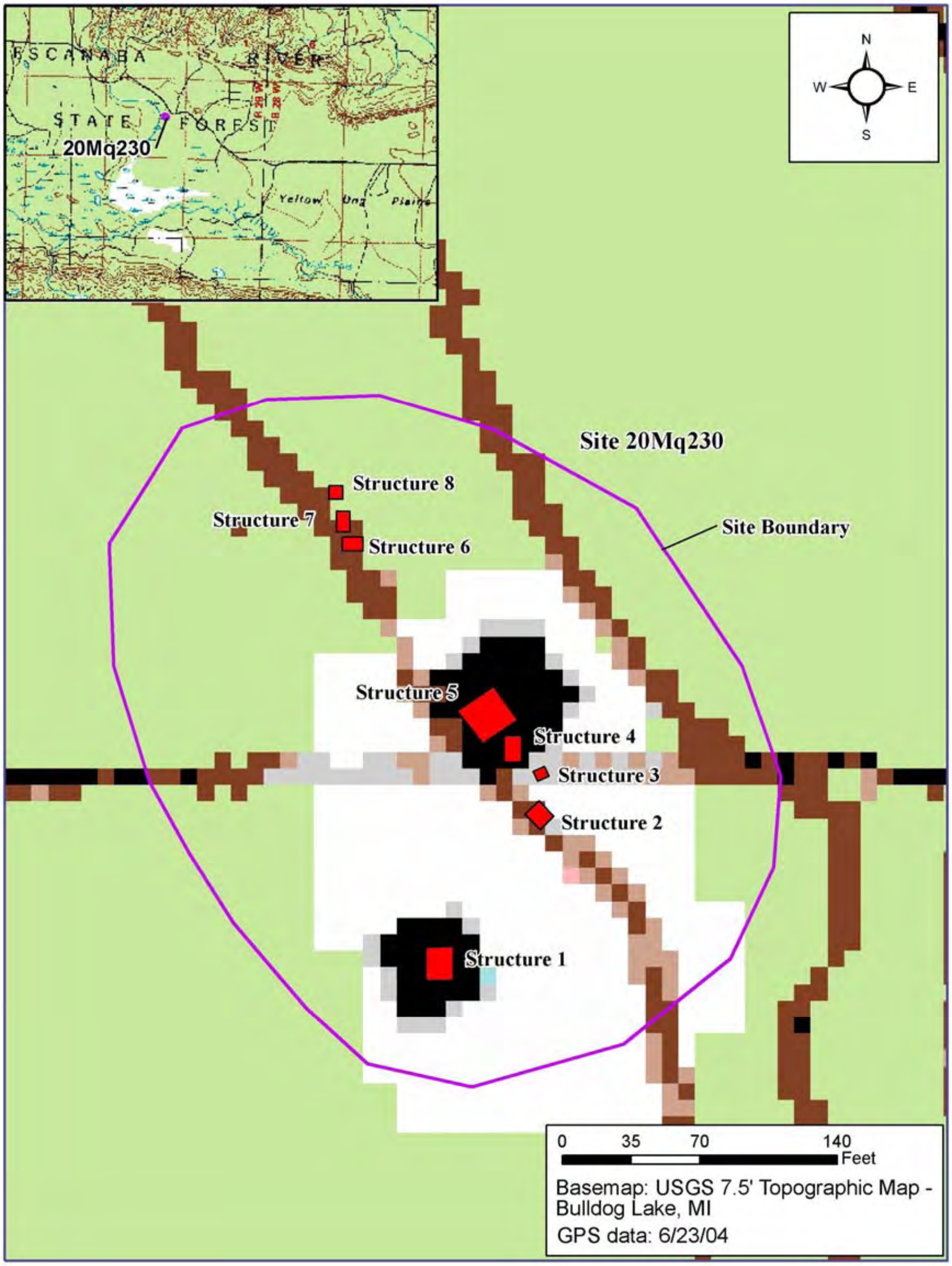
7.3 SITE 20MQ230

- Site Type: Historic camp
- UTM Coordinates: N5177213.46116, E431902.66800
- Site Dimensions: 200 ft x 75 ft or 61 m x 23 m
- Elevation: 435 ft (132.5 m)
- Distance to Water: 370 ft (112.7 m) east of Salmon Trout River
- Temporal Component(s) and Function: 20th Century Logging Camp
- Topography: Terrace
- Past Land Use: Logging
- Current Land Use: Fallow
- Vegetation: Small trees, shrubs
- Disturbances: Logging, furrows

Description: Site 20Mq230 was identified by archaeologists from BHE on landforms directly above, and adjacent to, the Yellow Dog River. Known locally as the "Pigeons Nest," this site consists of eight structural remnants of various sizes, arrayed along the crest of a western-facing bluff bench. These structural remnants consisted of hewn logs, arranged in a rectangular pattern and cut into the bench.

Archival research concerning this historic-era occupation provided additional information as to the nature of the utility of the site. On a 1939 aerial photograph of the area (Appendix B), a cluster of cabins is clearly visible in the vicinity of 20Mq230, and most likely represents a period of occupation of the site area.

Figure 7-2. Planview of Site 20Mq230.



General View of Structure #2 (bounded by trees), 20Mq230.

View of Structure #2 (20Mq230) with cut timber on left of photograph; the tree root (at top) follows an adjoining edge of the structure.

8.0 CONCLUSIONS AND RECOMMENDATIONS

The preceding narrative has detailed the Phase I archaeological survey, conducted by BHE, for the KMC Eagle Project in Michigamme Township, Marquette County, Michigan. The KMC Eagle Project involves the utilization of a heavily-forested portion of the Yellow Dog River watershed. In addition to the formal, set-interval Phase I survey conducted by BHE on the 73 acre primary APE, easily accessible portions of the 199 acre parcel were subjected to a cursory windshield and visual inspection (mostly roads and recreational trails) for surficial evidence of cultural resources.

BHE's Phase I survey failed to identify any cultural resources potentially eligible or eligible to the NRHP within the 73 acre survey area. A total of 1037 sample loci were investigated and 809 of these (78 percent) were negative shovel tests as indicated in Table 8.1 , below.

Table 8-1. Sample Loci Type, Number and Percentage for 2004 and 2005.

Sample Loci Type	2004 Number	2004 Percentage	2005 Number	2005 Percentage	2004/2005 Number	2004/2005 Percentage
Disturbed	59	**12.6**	68	**12.0**	127	**12.3**
Negative Shovel Test	361	**77.0**	448	**78.9**	809	**78.0**
Pedestrian Survey	33	**7.0**	40	**7.0**	73	**7.1**
Slope (>13 percent grade)	16	**3.4**	12	**2.1**	28	**2.7**
Total	**469**	**100.0**	**568**	**100.0**	**1037**	**100.1**

The lack of cultural material within the primary APE may be the result of at least a century of intensive logging and subsequent disturbance to the soils. The cursory visual inspection of the larger 199 acre area did, however, delineate three previously unrecorded areas of cultural activity: one prehistoric site (20Mq228) and a pair of logging camps (20Mq229 and 20Mq230) of indeterminate age and association. Site 20Mq228 is a small scatter of prehistoric lithic debris identified from the surface of a graded recreational trail. The historic-era logging camps each contained extant structural remnants and artifacts like metal cans, but these were not collected from the site area. As BHE's visual identification of these sites did not include any intensive level of survey (such as shovel testing or pedestrian artifact collection) and the current scope of the project does not involve any ground disturbance within (or adjacent to) any of the site areas, an assessment of eligibility for the NRHP has not been provided.

During the course of the 2004 fieldwork, Dr. John Anderton of Northern Michigan University provided BHE with an unpublished map depicting zones of probability for the discovery of cultural resources in the project area. According to his data, the area surrounding the bedrock outcrop has a low probability for site location, while the floodplain and terrace margins of the Salmon Trout River display a high probability for site location. Significantly, the only prehistoric materials recovered during the survey (20Mq228) were located by casual surface inspection of a terrace sloping down to the floodplain of the Salmon Trout. To a certain extent, Work Area J of 2005 also coincides with this area, but no cultural resources were identified. This is probably due to the highly disturbed soils resulting from logging within this portion of the APE.

The two logging camps were initially identified using archival materials, specifically a 1939 aerial photograph provided by the Michigan Department of Natural Resources in Ishpeming (see Appendix B). The use of historic maps and photographs guided the assessment of the wider 199 acre parcel, especially in the search for 19th and 20th century structures and other facilities, but aside from the logging camps no other cultural properties were located.

As for the Research Design developed as guide for this project, the paucity of cultural material does not permit an extensive analysis of the prehistoric or historic record of the region. The three sites identified by BHE as a result of the cursory visual inspection of the 199 acre parcel can, however, be applied to the questions posed by the Research Design, which may shed a modicum of light on the cultural history of this portion of Michigamme Township.

- What types of prehistoric sites can be expected to be found within the project area, and, if identified, how does the prehistoric resource(s) fit into the archaeological record of the region? *While the Phase I archaeological survey of the 73 acre APE failed to produce any evidence of prehistoric occupation on these landforms, the cursory visual inspection of the larger, 199 acre parcel did delineate a small scatter of prehistoric debris. This site, subsequently inventoried with the MHPO as 20Mq228, was identified on a sloping terrace above the Yellow Dog River. The absence of any diagnostics, coupled with the location of this material within a utilized roadway, obviates the ability to effectively assess this site within the larger prehistoric context of the region.*

- The presence of several Paleo-Indian sites proximal to the project area is suggestive of a focus for activity on this region during the early settlement of the Upper Great Lakes. Are there additional Paleo-Indian sites in the region? *The results of the current survey are inconclusive regarding the Paleo-Indian period in the region, as no artifacts diagnostic to any prehistoric temporal period were recovered by BHE. The lack of recovery of prehistoric materials suggests limited use of the uplands in the project environs, or at least activity that is "low contrast" in terms of artifact deposition.*

- Historic-era mapping of the area reveals that a small number of logging camps were located across the township, several of which may have been situated within or near the project area. Is there any archaeological footprint of these occupations, and was there any additional historic activity on the remainder of the area? *BHE's cursory visual inspection identified a pair of historic-era occupations, both of which most likely constitute the archaeological footprint of early to mid-20th century logging camps. Both of these camps are situated adjacent to extant roads, and both contain evidence of structural foundations. Although not adjacent to a water source, 20Mq229 did have a pit that may have been used to access groundwater (John Anderton, personal communication, 2004). Of particular interest is site 20Mq230, known locally as the Pigeon's Nest. This site consists of at least eight structural remnants, suggestive of a relatively large-scale level of historic activity. Given the known history and utility of this part of Marquette County, the theory that both sites represent logging camps is more valid than an assessment of these loci as representing a residential or agrarian utility.*

- Are there any cultural resources within the project area that could be potentially eligible for inclusion on the NRHP? *BHE's Phase I survey did not identify any cultural resources within the current project area that could be potentially eligible for the NRHP. The additional cursory visual inspection of the larger 199 acre parcel did delineate three archaeological sites (one prehistoric and two historic occupations). As the scope of the current project does not include any ground disturbance within, or adjacent to, these three sites, BHE's survey did not assess their NRHP status.*

It is the conclusion of this report, based upon intensive 15 m interval Phase I survey of 73 acres, that no cultural properties potentially eligible or eligible to the NRHP exist within the proposed construction footprint of the primary APE.

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APPENDIX A

RESEARCH DESIGN

SCOPE OF WORK FOR PHASE I SITE DETECTION SURVEY ON 195 ACRES FOR THE KENNECOTT EAGLE PROJECT, MARQUETTE COUNTY, MICHIGAN

INTRODUCTION

Phase I Site Detection survey documents the prehistoric and historic archaeological and architectural sites of a particular area. BHE Environmental, Inc. (BHE) will conduct archival research, followed by field research in order to collect data regarding the cultural properties in the APE. Once data collection is complete, a draft report that documents all findings and provides recommendations for site significance and protection will be written.

Site significance will be considered through application of the four criteria (A-D) for National Register of Historic Places (NRHP) eligibility. Since the proposed project is a Phase I Site Detection survey, involving only inventory and preliminary documentation, no full-scale testing aimed at a NRHP Eligibility Evaluation (e.g., Phase II testing) is envisaged at this time. Thus, any sites encountered will only be assessed as not eligible or potentially eligible for the NRHP. Those sites that are determined to be potentially eligible to the NRHP may require additional testing (and later perhaps mitigation) or avoidance measures prior to project clearance.

Based on available information, the general locality is understood to consist of about 1280 acres located near the headwaters of the Salmon Trout and Yellow Dog River on the Yellow Dog Plains in northern Marquette County, Michigan. The APE is confined to roughly 195 acres that includes ca. 29 acres of land disturbing activity as indicated in the following table.

FEATURE TYPE	ACREAGE
Conveyor	0.266177
Access Road	11.072661
Road Gate to Parking	1.649827
Power	0.252490
Pond	2.369963
Pad	3.668824
Explosives storage	0.691453
Alt. surface crusher	0.212893
Ore loadout, truck wash, scale	0.140849
Conveyor raise from crusher	0.084269

Backfill truck dump	0.084135
Water treatment plant	0.051102
Water treatment plant	0.089012
Unknown facility	0.115431
Security gate, scale	0.110221
Offices	2.721075
Mine	5.419388
Total	**28.999770**

The Phase I Site Detection survey will be composed of three major efforts as follows. First, a detailed land use history, geological overview, and site location model will be developed for the study area, the results of which will be used to guide field efforts. Second, a survey of the APE will be conducted using regionally-accepted field techniques. Third, the results of the field survey, along with descriptions of the sites encountered and their potential NRHP eligibility, will be discussed in a report.

SCOPE OF WORK DEVELOPMENT AND PEER-REVIEW

This scope of work (SOW) was developed in conjunction with Dr. John Anderton of Northern Michigan University and offers an overview of the methods and procedures to be utilized during the Phase I Site Detection survey. During the project, Dr. Anderton will offer his expertise in a peer-review capacity as follows:

1. Assistance in preparation and review of the present SOW to ensure that the procedures and methods meet applicable Federal and Michigan state guidelines for conducting cultural resource investigations.

2. Review with the BHE field team, prior to beginning the field effort, information about regional and local culture history, as well as prehistoric and historic site location parameters.

3. Conduct a debriefing session after BHE has completed the field work to assess results and ensure successful completion of the field portion of the investigation.

4. Comment upon the draft and final reports for accuracy and completeness.

PRE-FIELD RESEARCH

Pre-field research efforts will consist of an extensive review of all available documents and maps pertaining to study area, as well as the state archaeological, historical, and NRHP listings at the Michigan State Historic Preservation Office. Under the guidance of Dr. Anderton, the Longyear Archives, Peter White Historical Collections, and the Central Upper Peninsula and Northern Michigan University Archives will be consulted.

Potential historic site locations will be determined through careful examination of archival documents including primary journals, maps, and other related sources pertaining to the study area's history. This information will then be synthesized into a land-use history that will be used to guide field efforts directed at historic site location.

In addition, with Dr. Anderton's assistance, BHE will develop a geological overview for the study area, based on existing studies. The overview will include interpretations of landform development and geomorphology, which will be taken from topographic maps and aerial photographs. Knowledge of regional geological structure and local geomorphic conditions will help in the location of prehistoric archaeological sites.

FIELD RESEARCH

Field efforts will consist of site inventory, which entails locating and mapping all cultural resources identified as a result of the sampling methodology outlined below. Federal standards for field survey in heavily wooded regions, which have been followed for years in the National Forests of the Upper Peninsula, will be closely adhered to. In concert with the pre-field geological and geomorphic information, aerial photographs and topographic maps will be evaluated to identify areas of high prehistoric site potential. All major bodies of water, including the Salmon Trout and Yellow Dog rivers, and their tributaries, as well as major wetland edges, lakes, and ponds, will be given particular attention.

In order to address the goals of the Site Detection survey, the project is divided into two major components. The fieldwork component aims at collecting the raw data, locating sites, identifying site deficient areas, and characterizing these locations. The analytical component aims at assemblage and site characterization, site location modeling, and synthesizing the results into a coherent statement of the potential eligibility of properties identified. The following section provides an overview of the field methodology to be applied during the Site Detection survey.

Field Methods

The Site Detection survey will utilize a sampling procedure of shovel tests for the 29 acre area(s) of ground disturbance and casual surface inspection for the remaining 166 acres of the 195 acre parcel. In both instances, the survey will build upon the pre-field research described above that identifies target locations where prehistoric and/or historic sites may be encountered.

The standard maximum spacing interval for shovel testing will be 15 meters. For the purposes of the fieldwork, a shovel test will be a 40 by 40 centimeter square test or an equivalent area in a circular test. The depth of each shovel test will be around 50 centimeters below surface, based on information supplied by Dr. Anderton, unless the test reveals bedrock, disturbance into culturally sterile subsoil, or deposits at shallower depths that preclude the possibility of more deeply buried human cultural deposits. Soils excavated at each shovel test will screened through a mesh no larger that ¼ inch; all shovel test holes will be backfilled after completion of the screening.

During the shovel testing, the beginning and ending sample loci of each transect will be mapped using a sub-meter accurate Trimble XR-Pro Global Positioning System (GPS). In addition, field forms will be completed that describe the setting, soil type and depth, and artifacts identified at each shovel test. These data will be supplemented by field notebooks providing the Principal Investigator's impressions, as well as forms specifically tailored to describe sites encountered.

Sample loci at certain shovel test locations will be recorded as "not dug" if the test location in question is such that a shovel test is impossible to dig or cannot provide useful information regarding the potential presence or absence of archaeological resources. In the case of a positive shovel test, additional radial shovel tests will be excavated at 7.5 meter intervals in the surrounding four cardinal directions to identify whether the find is isolated or not. (Note: for the purposes of this investigation, isolated finds will generally consist of the recovery of a single artifact.) If additional positive shovel tests are identified as a result of the intrasite units, then further radial shovel tests will continue to be excavated until the site boundaries are defined.

Photographs, both 35 mm and digital, will be taken to document the general setting of each site, along with visible cultural and natural features. Every photograph will be recorded in a sequential log with the name of the photographer, date, subject, camera orientation, and photographic details. All located prehistoric and historic sites will be mapped using a sub-meter accurate Trimble XR-Pro GPS unit; shape files delimiting the site boundaries will be created for incorporation into BHE's Global Information System (GIS). Cultural features, such as walls, earthen embankments, pits, and artifact concentrations, will be included on site maps and in electronic GIS files, as well as any relevant topographic and ecological information.

POST-FIELD ARTIFACT ANALYSIS AND FINAL REPORT

Prehistoric Artifacts

In order to analyze any prehistoric assemblages that are encountered, the artifacts will first be classified according to type: lithic, ceramic, fire-cracked rock (FCR), or other.

Prehistoric ceramics collected during Site Detection, if encountered, will first be separated into various intuitive "lots" based upon temper types and exterior treatment. A set of nominal attributes based upon a series of key attributes will be used to study the ceramics. These attributes minimally include temper type, temper particle size, exterior treatment, paste, sherd type, and cordage twist, when appropriate.

BHE's procedures for analyzing prehistoric lithic artifacts are as follows: prehistoric artifacts are sorted by artifact type (e.g., projectile point) based on standard references such as Noel Justice's

1987 Stone Age Spear and Arrow Points of the Midcontinental and Eastern United States. Quantitative and qualitative metric attributes are recorded and compared to existing references. Whenever possible, raw material type is also recorded.

Debitage categories are based on classification schemes currently used by both Old and New World prehistorians. The first level of analyses involves separating the debitage sample into categories of flakes, cores, and fragments (shatter and chunks of raw material), and listing the presence or absence of specific features, such as cortex. The debitage is then subdivided, in as much as possible, into groups that best identify the manufacturing trajectories that produced it. Consequently, each type of debitage is assigned a class number based on the reduction sequence (or in equivocal cases, the lack thereof) to which it is assigned:

Class 1- Initial reduction flake

Class 2 - Flake (unspecified reduction sequence)

Class 3 -Biface initial reduction flake

Class 4 - Biface thinning flake

Class 5 - Biface finishing flake

Class 6 - Chip

Class 7 – Shatter (7a, flake shatter; 7b angular shatter)

Class 8 - Microdebitage

Class 9 - Janus flake

Historic Artifacts

Stanley South pioneered methods of analysis in which historical artifact assemblages are ranked within functional classes, such as architectural debris, kitchen refuse, pharmaceutical glass, etc. The functional categories so generated are then ranked by their percentage within a total site assemblage. South contended that comparing the frequency of particular functional classes and their percentages over a wide variety of sites displays consistent patterns that are diagnostic of settlement types (e.g., frontier sites). Settlement types reflected in a given assemblage are seen as region specific.

The historic artifact classification methodology employed by BHE regards the form or material of an object to be of minor importance when compared to its cultural function. The classification is similar to that defined by South in 1977 with artifacts assigned to one of a number of groups, such as Personal Items, Domestic Items, Architecture, Commerce and Industry, or Unknown Objects classified by material. Each group is subdivided into classes based on function. For example, Domestic Items may be broken down into furnishings, house wares and appliances, and cleaning and maintenance. Architectural Items fall into classes such as construction, plumbing, fixed illumination and power, fixed heating, cooling and atmospheric conditioning, and architectural safety.

Classes are further subdivided into types that are based on one or more key attributes. For example, in the case of a ceramic sherd, observable technological or stylistic criteria by which a ceramic type is defined include shape, part, paste, hardness, decoration, color, and glaze.

Establishing date ranges for historic artifacts is an integral part of the cataloging process. Socio-economic ranking is possible with large assemblages of ceramics, if data are available on relative prices, popularity, and function. The frequency of occurrence of particular ceramic types within an assemblage is used to create an economic profile. Socio-economic scaling by artifact analysis is supplemented, where possible, by reference to tax records for the site. Ethnicity may be ascertained by reference to vernacular architecture, archival reference, or folk material culture in the archaeological record.

REPORTING

The Phase I Site Detection report will include the following sections: an introduction describing the project and defining the APE; a discussion of the development of the regional and local ecological setting; an overview of regional and local cultural development; a site location model based on archival data and materials provided by Dr. Anderton; the plan for investigations based on the cultural background and site location model data; an explanation of the field investigation and artifact analysis methods; a summary of the field investigation results and site descriptions, if warranted; a synthesis of the Site Detection survey results; a closing statement summarizing BHE's recommendations; and, finally, the report references.

APPENDIX B

CULTURAL OVERVIEW

CULTURAL OVERVIEW

The following chapter attempts to frame a discussion of the currently-accepted prehistoric and historic landscape of the upper Great Lakes region in general, and the Upper Peninsula of Michigan in particular. Due primarily to a lack of synthesis regarding the archaeological record for the immediate project area, the following discussion is as revealing of the current state of archaeological research, as it is informative of extinct cultural and societal lifeways.

PREHISTORIC MICHIGAN

Paleo-Indian Period (10,500 B.P. – 9000 B.P.)

The Paleo-Indian cultural tradition in the eastern United States has been recognized as part of a widespread, homogeneous New World culture, typified by a distinctive lithic assemblage. The most distinctive members of this assemblage are lanceolate-shaped, typically fluted, projectile points fashioned from a wide range of material. Artifact types, which remain fairly consistent across a wide range, geographically, of sites, represent tools utilized in the processes of hunting, butchering, and hideworking activities.

Most of what is currently known about this earliest of cultural developments in the New World is, by nature, inferred from the sporadic and opportunistic recovery of artifacts, typically from a surficial context and manifest as the ubiquitous diagnostic, fluted projectile point (Dorwin 1966; Prufer and Baby 1963). These data have been analyzed in conjunction with geochronological and paleoecological data to make generalized assumptions about the earliest Early Holocene inhabitants. Adaptive strategies employed during this epoch were focused on surviving with a predominantly harsh, unstable environment. Paleo-Indian sites generally reflect areas where small bands of people gathered to perform specific, short-duration tasks, often geared towards resource procurement. By nature, this type of site becomes manifest archaeologically within an extremely narrow footprint that can be problematic to effectively identify and analyze. It has been argued that the earliest subsistence strategies in North America were not typified by a hunting bias towards megafauna (such as mastodon), but were instead characterized by a balanced hunting economy based on the exploitation of migratory game (especially caribou) and supplemented by extensive gathering (Fitting 1965; Ritchie and Funk 1973).

Any informed discussion of the prehistoric landscape of eastern North America before 10,000 B.P. begins, of necessity, with an examination of the known environmental and climatic factors present across the continent at that time. The Upper Peninsula is no exception; in fact, the climatic conditions present across this region can be said to have been in a near-constant state of flux during the Late Pleistocene and Early Holocene (see Section 3.4 for a detailed discussion of the environmental forces at work during these epochs). The advance and retreat of the various glacial ice sheets between 13,000 and 9000 B.P. alternately covered the region under hundreds (and, often, thousands) of feet of ice and exposed a harsh, tundra-like landscape that extended south from the leading edge of the ice sheets. As such, the identification of Paleo-Indian sites in the Upper Peninsula is a problematic exercise at best, since the region was, at various times, either inhospitable or unattainable for human habitation.

In spite of the mitigating environmental factors at play in the region, the past three decades of archaeological research have produced a better understanding of the Paleo-Indian landscape of the region in general and Marquette County in particular. Unlike the situation in the Lower Peninsula of Michigan, which has a documented Paleo-Indian cultural efflorescence beginning as early as 12,000 B.P., and represented by several large occupations, the Upper Peninsula has produced a handful of Paleo-Indian sites scattered across the region. For the Upper Peninsula, Buckmaster and Paquette (1996) suggest a possible Paleo-Indian chronology (based entirely on projectile point typologies) divided into three distinct temporal periods: Agate Basin (10,500 to 10,000 B.P.), Hell Gap (10,000 to 9500 B.P.) and Great Lakes Cody Complex (9400 to 9000 B.P.).

Buckmaster and Paquette (1996) suggested that with the appearance of the Agate Basin tradition, the first groups of people arriving in the region. This corresponds with the recession of the Greatlakean ice sheet north past the current southern shoreline of Lake Superior, an event which opens a large area to exploitation by Paleo-Indian peoples from the south. Sites such as Silver Lake (located approximately 4 miles from the project area), Negaunee, Deer Lake and Lost Lake were all found to contain material that may be related to this time period. The ubiquitous fluted bifaces seen throughout eastern North America on Paleo-Indian sites are present as well in the Upper Peninsula, typically fashioned from quartzite, a material which occurs in great abundance across the region.

Important Paleo-Indian Sites in the State of Michigan.

The subsequent traditions identified by Buckmaster and Paquette, the Hell Gap and Cody traditions, are viewed by many as completely disparate occupations of the region during major environmental epochs, and distinct from the cultural lifeway represented in the Upper Peninsula by the Agate Basin tradition. Between 10,000 and 9,500 B.P., the Marquette Advance ice sheet covered much of the northern Upper Peninsula in several hundred feet of ice, pushing southwards the tundra-like environment seen in the region over the preceding 500 years. The retreat of this ice sheet after 9,500 B.P. opened the region again for prehistoric occupation, and a variety of sites began to appear across the landscape. Of particular interest is the Gorto site (20Mq39), an extensive Plano Horizon occupation which contained both Late Paleo-Indian material and Early

Archaic artifacts (the main period of the Plano Horizon). Both the Hell Gap and Cody traditions fall within the broader Plano Horizon, which have been identified across the Great Lakes.

Contemporaneous sites from southern Ontario, located to the southeast of the project area, are generally small-sized occupations of relatively short duration. A handful of sites, however, may possibly represent localities that were repeatedly visited by hunting or resource procurement expeditions. The Fisher site, by way of example, is situated atop a knoll overlooking an abandoned shoreline of the glacial lake predecessor of Lake Algonquin, in Simcoe County. The lithic assemblage identified on this site consisted of fluted points, end-scrapers, gravers, and debitage (including numerous channel flakes). A second example of a Paleo-Indian site on the shore of Lake Algonquin occurs near the town of Parkhill, in Middlesex County. The Parkhill site, which yielded some 80 fluted points, probably was occupied by 45 to 75 individuals (Mason 1981).

The Late Paleo-Indian period in the Great Lakes region is perhaps best represented at the Holcombe site (20Mb30), located in southeastern Michigan. This site, apparently occupied by 20 to 50 people, consisted of five to eight discrete areas of cultural debris, surrounded by an open, central area. Faunal remains were recovered at Holcombe, including bone fragments of barren ground caribou. The lithic assemblage recovered at Holcombe consisted of projectile points which have been clearly fluted, as well as examples which are basally thinned lanceolates. This latter group of artifacts displays links with types which, in western North America, are referred to as Plano points (Ellis and Ferris 1990; Fitting et al 1966).

Archaic Period (9500 B.P. – 3000 B.P.)

Early Archaic Period (9500 B.P. – 8000 B.P.)

Delineating the boundary between the Paleo-Indian and Early Archaic periods is a problematic exercise. At some ill-defined point between 10,000 and 8,000 B.P., a transition was made across eastern North America between the Paleo-Indian cultures which had dominated the landscape for the better part of 3000 years (an abbreviated 1500 in the Upper Peninsula) and a new, displacing tradition. The difficulty in effectively differentiating Early Archaic sites from Late Paleo-Indian sites is exacerbated in the broader context, as the Late Paleo-Indian era in the Great Lakes is contemporaneous with the early stages of the Early Archaic in other portions of eastern North America. In addition, the shorelines of the Early Holocene Great Lakes, especially Lake Superior and Lake Huron, were strikingly different during the Early Archaic from their current configuration. The recession of the last ice sheets left behind a relatively low water level, opening up landforms for occupation that would eventually reside at the bottom of the current Great Lakes. As a result, it can be conjectured that a significant number of sites from the period have been rendered inaccessible for systematic archaeological investigations, if they have even been preserved at all.

Identifying the advent of the Early Archaic in the upper Great Lakes is based primarily on the sudden absence of fluted bifaces from lithic assemblages of the period, which has been referred to as the Plano Horizon. The toolkits recovered from Plano Horizon sites transcend the arbitrary boundary between the Late Paleo and Early Archaic periods, having been identified from both contexts at sites across Michigan, including the aforementioned Holcombe and Gorto sites. The Early Archaic Plano Horizon in Michigan encompassed a variety of different projectile point types, all of which have been theorized to fall within two major lithic tool traditions: the Agate Basin and Eden-Scottsbluff. Both traditions extend across the division between Late Paleo-Indian and Early Archaic, and points related to both have been recovered from sites in the Upper Peninsula.

The projectile point that is most indicative of a Plano Horizon occupation is the Hi-Lo biface, a lanceolate point that has been identified in archaeological deposits from the western Great Lakes east to the upper Atlantic Coast (Justice 1987:46). It has been conjectured that these points are representative of a hunting focus, centered on exploitation of the Early Holocene caribou population that would have thrived along the tundra-like environments recently exposed by the retreating glaciers. The Hi-Lo type has also been viewed as a distinctive upper Great Lakes manifestation of a much larger shift in tool manufacture across eastern North America (Shott 1999:75). In fact, current archaeological thinking places the Hi-Lo within a broad tradition that is contemporaneous with the widely-recognized Early Archaic Dalton Horizon, which predominates on Early Archaic sites across southeastern North America from 10,000 to 9,000 B.P. (Ellis and Deller 1982).

Around 9500 B.P., a new Early Archaic typology begins to appear in archaeological deposits across North America east of the Mississippi River. Represented by the presence of a new form of tool, the stemmed and/or notched biface, the Kirk Horizon defines the end of the morpohological traditions dating back to the Paleo-Indian period. Gone are the lanceolate forms that dominate the prehistoric toolkits from the advent of human occupation of North America, replaced by a completely different style of lithic manufacture.

The Kirk Horizon in Michigan is represented by a variety of distinct tool types and forms, all of which have been identified from sites as far away as the southeastern Atlantic Coast. These include the Kirk Stemmed, Kirk Corner-Notched, Thebes, and Decatur. Early specimens of these point types were typically worked from exotic chert sources, especially those found in the Allegheny Plateau region of eastern Ohio. Over time, the utilization of non-local materials diminished, which some archaeologists view as suggestive of a reduction in group territorial range (Shott 1999: 78).

While a thorough analysis of the settlement patterns across the state represented by the known Early Archaic sites has not yet been fully undertaken (perhaps due, in part, to the absence of any systematic archaeological investigations on a Kirk horizon site, in spite of their abundance within the state), recent research has begun to shed light on the character of the Early Archaic landscape. The early stages of archaeological research in Michigan formulated a distinct view of the Early Archaic landscape as one of small, dispersed bands of hunters scattered across the terrain, utilizing and re-utilizing areas maximal to resource procurement locations. In this hypothesis, the population densities were seen as extremely low, with only a handful of groups occupying the frozen tundra left behind by the retreat of the glaciers. Recent research controverts these theories, as new hypotheses have been developed, based primarily upon a better understanding of the regional geological forces at work during the era. The paucity of sites inferred in early research could not take into account the fluctuating water levels of the surrounding lakes; as the glacial ice sheets receded to the north, the lake basins slowly began to fill, a process which exposed a fluctuating shoreline and, by logical extension, prehistorically-attractive adjacent landforms. As the current levels of Lake Superior and Huron have effectively eradicated the Early Archaic shorelines, the sites that would most likely have been located in close proximity have, likewise, been inundated.

The unfortunate truth, however, is that the current dearth of knowledge about the era precludes a more informed evaluation of the cultural landscape of the Early Archaic. There is simply no way of accurately assessing such basic cultural data as population size, density, and economy, due to the paucity of material recovered and the lack of a systematic program of excavation of Early Archaic sites.

The Gorto site, located approximately 10 miles south of the project area, is indicative of the type of Early Archaic site that may be found in the Upper Peninsula (Buckmaster and Paquette 1988). Strikingly similar to a contemporaneous site on Lake Michigan in northern Wisconsin (the Renier site), the Gorto site contains material from the Agate Basin and Eden-Scottsbluff traditions, as well as notched bifaces possibly representative of the later Early Archaic Kirk Horizon. The Eden-Scottsbluff bifaces recovered from Gorto were fashioned from heat-treated material found in northern Wisconsin (Hixton silicified sandstone), highly suggestive of a relationship between the Gorto and Renier sites. Shott (1999:75) conjectures that these pair of sites have strong ties to other Plano Horizon sites in the western Great Lakes and Great Plains.

Middle Archaic Period

If the current state of archaeological research and, by extension, knowledge of the Early Archaic in Michigan suffers from a lack of systematic testing of the known sites, the situation in the Middle Archaic stands at the opposite end of the spectrum. In Michigan, as in most of eastern North America, the interval between the heavily Paleo-influenced Early Archaic cultures and the first vestige of settled, agrarian communities in the Late Archaic is poorly represented, and poorly understood, within the archaeological record. While the dearth of archaeological data for the Middle Archaic in certain parts of Michigan (the Upper Peninsula, in particular) has prevented a detailed picture of the prehistoric landscape from being developed, what can be said with some degree of certainty is that the period was witness to a dramatic change in climatic and environmental conditions, so much so that the paucity of sites from the Middle Archaic has been conjectured to be resultant from the fluctuating environment.

Between 8500 and 5100 B.P., a wide-ranging climatic shift began to take hold in the Great Lakes region. Known as the Hypsithermal Interval, this change would inaugurate a new epoch in human habitation of the Great Lakes. Following the retreat of the glacial ice sheets to the north of present-day Lake Superior, the climate and vegetation patterns of the Upper and Lower Peninsulas were strongly influenced by the still-active glacial mass. Prevailing winds out of the north during the Paleo-Indian and Early Archaic eras maintained the spruce-pine forests that trailed along the southern edge of the glacier, retarding the ability of prehistoric cultures to effectively exploit the native vegetation. This established boreal forest environment was not conducive to either floral or faunal development, and the stagnation of the environment may have been a mitigating factor behind the decline of site frequency, size, and density during the early stages of the Middle Archaic.

The Hypsithermal Interval radically changed the prevailing ecological conditions of the previous 4000 years since the introduction of human populations into the region. The warming trend experienced across eastern North America profoundly affected the Great Lakes region. The circulation shift off of the glacial north fostered the development of broadleaf forest communities, a habitat much more conducive to human habitation and utility. Aquatic resources began to flourish as the water levels rose, both in the Great Lakes and the ancillary rivers. These factors may have been enough to trigger a rise in human occupation of the region, but the trend from south to north meant that the Upper Peninsula experienced these forces well after the Lower Peninsula.

Unfortunately, the archaeological record from the Middle Archaic in the Upper Peninsula is sparse at best, with an extremely limited sample of sites that may date to the era. The rapid climatic changes in southern Michigan, which brought on a distinct Middle Archaic cultural efflorescence (especially in the Saginaw River watershed) were not experienced in the Upper Peninsula until relatively late; evidence of boreal forests have been identified in northern parts of the Upper Peninsula as late as 5000 B.P. Given these conditions, it is likely that either the majority of the Middle Archaic sites in the Upper Peninsula either rest at the bottom of Lake Superior (as the shorelines were much further north than their present configuration), or are actually represented within Kirk Horizon assemblages (most of which have never been systematically analyzed and georeferenced), or are simply not present in any quantity in the Upper Peninsula. Whatever the case may be, it is enough to know that, for the moment, the Middle Archaic era in the Upper Peninsula is under-represented in the archaeological record.

Late Archaic (4500 B.P. – 2000 B.P.)

The Late Archaic period in Michigan, much like other portions of the Great Lakes, has been viewed as an antecedent to the vast cultural changes experienced by native societies during the Early Woodland. By 4500 B.P., the majority of the landforms in the state were covered by the vegetational patterns documented by early European visitors to the area, over 5000 years into the future. The severe weather patterns of the previous 6000 years across the region gave way to a moderate, stable climactic environment that was ideally suited to prehistoric occupation and utility.

Arbitrarily dated in the state between 5000 and 2000 B.P., Late Archaic sites tend to be larger and more complex occupations, focused more on exploiting the natural resources in a specific area over a longer period of time than sporadically across a large prehistoric landscape. The recognized cultural differentiation of the Late Archaic was based primarily on the development of stabilized regional and local environments that made “the maximum use of all resources within restricted areas” (Dragoo 1976:11). This trend towards a greater exploitational economy, begun towards the end of the Middle Archaic in the Lower Peninsula, culminated in the Late Archaic with what Caldwell (1959) defines as “primary forest efficiency”: a complete and effective adaptation to and utilization of a forest-edge environment.

Late Archaic sites, in stark contrast to earlier occupations, are often of relatively large size and represent a longer-duration settlement. These settlement systems reflect the necessity for altering resource procurement strategies as a response to shifting seasonal availability of different resources. During the spring and early summer, for instance, the exploitation of lacustrine resources (such as shellfish, fish, turtles, and migratory birds) produced sites above and adjacent to water courses. The autumn harvest of nuts and vegetables took place at sites that can be characterized as small camps on slight knolls and terraces. Winter camp sites were situated above stream valleys for the exploitation of upland mammalian resources, such as deer and, in the Upper Peninsula, caribou.

Important Late Archaic sites in the Upper Peninsula region.

While the Late Archaic trends seen on the Lower Peninsula represented a relatively swift march towards the cultural dynamism of the Early Woodland, the distinct biomes of the Upper Peninsula fostered a different, and less obsequious, cultural efflorescence. The abundance of Late Archaic sites in the Lower Peninsula, especially those that contain sealed archaeological deposits which have produced diagnostic tools in context with radiocarbon dates (such as the Brandt site on Lake Huron in Iosco County), is not mirrored in the Upper Peninsula. Only a handful of the already scant Late Archaic sites in the Upper Peninsula region have produced radiocarbon dates in association with diagnostic artifacts. The North Manitou 3 site (20Lu38) and Screaming Loon site (20Em23), both located at the upper extent of the Lower Peninsula (and distinctly separate from the extensive Late Archaic populations of the southern Lower Peninsula), contained lithic material not seen in the southern Lower Peninsula and associated with radiocarbon dates between 3630 and 2830 B.P. The square-based, small side-notched points recovered from these sites have strong morpohological correlates with points identified from Late Archaic sites within the northern Lake Huron basin (Robertson et al. 1999: 104).

In the Lake Superior basin, one of the local expressions of the Late Archaic was termed the Old Copper Complex. Focused in Wisconsin and on Isle Royale (located approximately 45 miles north of the Upper Peninsula shoreline in northern Lake Superior), the Old Copper Complex includes a variety of distinct cultural features, most significantly the exploitation of natural copper resources at these locations. While the native copper had been a known quantity at least as far back as the Early Archaic in the western Lake Superior basin (Martin 1999:153), the Late Archaic period was witness to a sharp upswing in the mining and utility of copper. Data from mining pits on Isle Royale indicate that the procurement of copper at that location dates to at least the Middle Archaic, and sites on the island during that time period include a small amount of copper artifacts within the assemblage (Martin 1999:155).

Late Archaic artifacts related to the Old Copper Complex include awls, tanged knives, axe/hatchet blades, gouges, socketed spear points, tanged points, fish hooks, and gorgets. Some of these artifacts bear striking resemblance to material recovered from the Maritime and Laurentian Archaic traditions, located in the eastern Great Lakes region. The material culture of the Laurentian Brewerton phase included copper tools and ornaments, which suggests that a native trade economy in the Great Lakes may have been expanding during the Late Archaic. In addition, typical Laurentian side-notched projectile points have been recovered in direct association with copper artifacts excavated from burials of the Old Copper Complex (Mason 1981:166). The presence of such imported raw materials as copper in Brewerton assemblages, as well as the appearance of similar lithic artifact types, hints at an incipient, yet wide-ranging, exchange network of a scale not seen in the Great Lakes region prior to this era, and on par with that of the later Middle Woodland (Ritchie 1980:101).

The only well-documented Old Copper Complex site excavated in the Upper Peninsula is the Riverside Cemetery site, situated atop a sand dune overlooking the Menominee River near the Lake Michigan shoreline. Excavation of this site over the past thirty years has identified at least fifty-four distinct, Late Archaic internments. These burials included not only a variety of copper artifacts, but other items fashioned from locally-unavailable materials. The estimated date for these features has been affixed to a 600-year span at the terminal end of the Late Archaic, between 3000 and 2400 B.P. (Martin 1999:162-163).

In spite of the extensive utilization of copper documented across the upper Great Lakes during the Late Archaic, recent research may suggest that there is no direct correlation between sites in upper Lake Superior (on Isle Royale) and sites on the Upper Peninsula (Clark 1996:130). The Shield Archaic appears to have developed in the upper Great Lakes, which is more of a blanket term for Late Archaic-era sites of the region that have not displayed diagnostic evidence of one of the more robust traditions of the Lower Peninsula and the western Great Lakes. These sites preserve features which resemble an earlier Archaic tradition, including lithic material similar to the lanceolate types of the much earlier Plano horizon.

On the Upper Peninsula itself, there are relatively few Late Archaic sites currently recognized as distinguishable to the Late Archaic. The paucity of the available data for the Late Archaic in the region (a situation mirrored in every temporal period on the Upper Peninsula up to the well-documented Contact Period) is exacerbated by the lack of sealed archaeological deposits which contain datable material in context with an extensive assemblage of diagnostic artifacts. This situation prevents a detailed analysis of Late Archaic lifeways, such as the large volume of work published on Late Archaic cultures of southern Michigan. What we can infer from the data available, however, is that Late Archaic settlement patterns in the Upper Peninsula exploited both coastal areas and inland landforms. The majority of the Late Archaic sites in the region (such as the Riverside Cemetery site, Miner's Beach site, and the cluster of sites on Isle Royale) are situated on landforms above and adjacent to a lacustrine environment, and as such can be conjectured to represent a spring/summer/autumn occupation (Robertson et al. 1999). These sites have been identified both on the Lake Superior and Lake Michigan shorelines of the Upper Peninsula land mass, as well as on the various small islands within both lakes. Some of the better examples of these site types in the region are the Popper and Trout Run sites on Grand Island (situated in Lake Superior, approximately 3 miles off of the Upper Peninsula shore), and the cluster of sites on Isle Royale.

Incidental to the project area, sites 20Mq90 and 20Mq91 are Late Archaic sites representative of a winter (and, according to the data, possibly mid-summer) inland occupation focused away from exploiting lacustrine resources. This pair of sites (dated to between 3710 and 2890 B.P.) contain relatively small artifact assemblages composed of quartz, quartzite, and chert tool manufacture debris, as well as non-diagnostic tools (predominantly bifaces and biface fragments). The function of each site has been conjectured to be markedly different, however. The archaeological deposit at 20Mq90 is suggestive of a small camp, utilized sporadically over a number of years and serving a variety of different resource procurement functions. Site 20Mq91, however, is situated to exploit an adjacent swamp conifer habitat, and the character of the archaeological deposit is suggestive of a small group hunting camp (Robertson et al. 1995).

The terminal end of the Archaic tradition in the Great Lakes is represented by the introduction of ceramic technology, manifest in artifact assemblages as early as 4000 B.P. in the southern Great Lakes. On the Upper Peninsula, however, the utilization of ceramics (and the complementary increase in community organization most often implied by that utility) does not appear until well after the onset of the Early Woodland on the southern Lower Peninsula. The current archaeological record of the region suggests that, while societies of the Lower Peninsula began to develop into the larger-scale societies seen elsewhere in eastern North America, the traditional Late Archaic lifeway remained the prevailing characteristic of the peoples on the Upper Peninsula.

Woodland Period

Early Woodland

Typically defined by the widespread introduction of a new native technology, ceramics, the Early Woodland period across the lower Great Lakes and eastern seaboard of North America is a well-defined stage in what has been seen as an inexorable march of indigenous populations from the semi-nomadic Archaic lifeways to the large-scale settlements of the Mississippian and Late Woodland periods. For the Upper Peninsula of Michigan, however, this easily-discerned epoch is not so well-defined, as the appearance of a local ceramic technology is contemporaneous with Middle Woodland-era sites on the Lower Peninsula and elsewhere. Therefore, it has come into vogue for prehistorians to condense the archaeological record for the Upper Peninsula between 2500 and 1400 B.P. into one, initial, Woodland era. For the purposes of this study, the Early Woodland in the Upper Peninsula is considered to be an extension of the Late Archaic, and the next major shift in cultural dynamics (manifest in archaeological deposits) is the Middle Woodland.

Middle Woodland (2000 B.P. – 1400 B.P.)

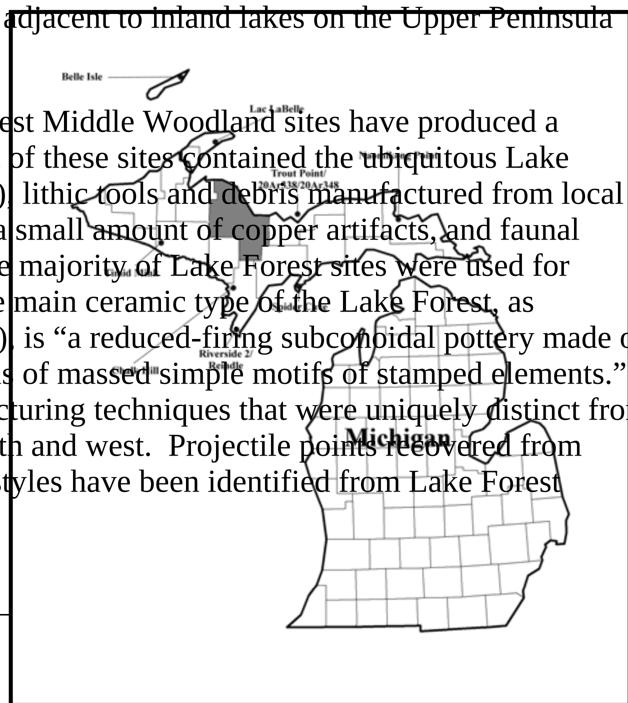
The introduction of a local ceramic industry in the upper Great Lakes ushered in a new era, one which mirrored the developments seen in the lower Great Lakes during the Early Woodland, but temporally contemporaneous with the Middle Woodland. As Brose and Hambacher aptly summarized (1999:173), the Middle Woodland culture on the "Upper Peninsula… is a ceramic assemblage." While it may be an oversimplification to append an entire societal shift to a single technological advance, the appearance of ceramics in the archaeological assemblages after 2000 B.P. are a strong indicator of a different lifeway, distinctly separate from that seen in the Upper Peninsula over the previous 5000 years. Termed by Fitting (1975:98-99) as the Lake Forest Middle Woodland, this lifeway (subdivided into several regional variants) profoundly altered the cultural landscape of the upper Great Lakes.

The Middle Woodland period in eastern North America was witness to a wide variety of different societal groups, developing complementary technologies while interacting in a large economic sphere that indirectly linked the Atlantic seaboard with the major watershed of the continental interior, the Mississippi River. The presence of exotic materials in Middle Woodland assemblages (including the native copper of upstate Michigan, which has been recovered in archaeological deposits across the east coast) is a leading indicator of the active interaction between different cultural groups. Almost all Middle Woodland sites east of the Mississippi contain evidence of a local ceramic industry, relatively stable settlement patterns, and an elaboration of burial practices. The most widely-recognized, and, perhaps, influential Middle Woodland culture is the Hopewell, centered in modern-day Ohio and extending out into the surrounding regions, including southern Michigan. The overtly elaborate mounds and earthworks are emblematic of the era, and represent one of the most distinctive cultural efflorescences of North American prehistory.

It was, therefore, on the periphery of this dynamic cultural environment that the Lake Forest Middle Woodland developed across the upper Great Lakes. Situated at the northern fringe of the Hopewellian sphere of influence (which extended north into the central Lower Peninsula) and to the east of several similar prehistoric cultures, the Lake Forest maintained an autonomy during a period of high cultural interactivity. While there are several regionalized complexes within the Lake Forest, the expansive mortuary practices and distinct ceramic and lithic technologies of the neighboring societies failed to make a profound impact on Lake Forest society. Regional complexes within the overarching Lake Forest tradition include the Green Bay/Bay du Noc, Menominee River, Copper Country, Southeast Lake Superior Shore/Naomikong Point, St. Mary’s River, Traverse Corridor, Straits of Mackinac, and Goodwinian (Brose and Hambacher 1999:178-189). While all of these complexes display a certain degree of local variation, there are commonalities in artifact type, settlement/subsistence patterns, and mortuary practices.

It has been postulated that Lake Forest Middle Woodland cultures focused on exploiting riverine resources, including, for what may have been the first time, seasonally-spawning fish populations (Brose and Hambacher 1999:177). Cleland (1974), among others, viewed Middle Woodland settlement patterns as slightly-modified variants of Late Archaic lifeways, with the emphasis on large inland camps and a near-abandonment of the lake shorelines. This view has been contested by data from large, coastal sites, like the Summer Island site on the northern Lake Michigan coast, which Brose (1970) has suggested is representative of a sustained occupation designed to exploit coastal resources. What cannot be disputed through an examination of the archaeological record is the dependence of Lake Forest peoples on fishing, whether on the coastal shorelines, above the various rivers, or adjacent to inland lakes on the Upper Peninsula (Brose and Hambacher 1999:178).

Artifact assemblages recovered from Lake Forest Middle Woodland sites have produced a variety of materials. Primarily, however, most of these sites contained the ubiquitous Lake Forest ceramics (or regional variations thereof), lithic tools and debris manufactured from local sources (predominantly quartz and quartzite), a small amount of copper artifacts, and faunal remains consistent with the supposition that the majority of Lake Forest sites were used for lacustrine resource procurement (fishing). The main ceramic type of the Lake Forest, as described by Brose and Hambacher (1999:173), is “a reduced-firing subconoidal pottery made of tenoned coils (and) oblique or horizontal panels of massed simple motifs of stamped elements.” These ceramics contained designs and manufacturing techniques that were uniquely distinct from the motifs seen in Hopewellian sites to the south and west. Projectile points recovered from these sites are also unique, although southern styles have been identified from Lake Forest



contexts (such as Cleland's identification of Snyders Cluster points from the Spider Cave site in Delta County, on the northern shoreline of Lake Michigan [Cleland and Peske 1968]).

The prehistoric utilization of copper, which had been a component of archaeological deposits in the Upper Peninsula for over 6000 years, was manifest on sites not only across the Upper Peninsula during the Middle Woodland, but was also disseminated across eastern North America during the era. While it is unclear exactly what role copper played in the Lake Forest cultures, the copper mined in the Lake Superior basin eventually found it's way into Hopewellian burial

Selected Middle Woodland sites in the Upper Peninsula.

mounds across Ohio, fashioned into iconic works of native art. The copper that has been found in Middle Woodland contexts on the Upper Peninsula has typically been in the form of tools, either supplanting or accompanying the lithic tool kit. While many of these copper implements have been sourced back to the Lake Superior basin, as of yet there has not been a Middle Woodland-era mining site identified on the major copper source, Isle Royale. This may suggest that the mining of copper was conducted by small groups of people at sporadic intervals, rather than a concerted effort at an economic system dependant upon the trade and utility of copper (Martin 1999).

While no extensive Middle Woodland-era sites have been identified in proximity to the project area, several Lake Forest occupations have been excavated over the past twenty years on the southern shores of Lake Superior in the region. Sites 20Ar348, 20Ar338, Lac LaBelle, and Trout Point 1 are all Middle Woodland sites situated on, or adjacent to, the coastal shore of Lake Superior within 40 miles of modern-day Marquette County. These sites all produced Laurel-tradition ceramics (a western variant of Lake Forest), quartz and/or quartzite tools, and evidence of fishing activities (Brose and Hambacher 1999:183-184). In addition, the Lac LaBelle site (20Ke20) contained a plethora of copper artifacts, suggestive of the utility of copper in close proximity to the source mines, most likely on Isle Royale (Martin 1999:173).

Late Woodland (1400 B.P. – 1492 A.D.)

By the mid-point of the first millennium of the modern era, the cultures of the Upper Peninsula had adapted to a changing climate, both in terms of ambient weather patterns and neighboring cultures. Six hundred years of what can be called a "Woodland" lifeway (ill-defined as a seasonally-shifting settlement pattern designed to exploit natural resources, primarily fish, while developing a ceramic technology) had produced cultures that were as similar as they were at variance. Unlike the sweeping changes brought on by the rise of the Hopewell societies to the south, the peoples of the Upper Peninsula appear to have incorporated native technologies into an existing, Late Archaic lifeway. The Late Woodland period, however, would bring about a shift towards the cultures that would occupy the region when European contact ended the prehistoric era of the upper Great Lakes in the 17th century.

Elsewhere in eastern North America, the Late Woodland was witness to a denouement of the elaborate social organization that was the Hopewellian sphere of influence. All but gone are the elaborate mortuary practices of the Hopewell world, which had reached an apex with the construction of the anthropomorphic and geometric mound complexes of the lower Great Lakes. The large villages of the Middle Woodland were dramatically reduced in size and distribution, and the social stratification represented by distribution of wealth (manifest primarily in burial goods) becomes less distinct.

For the cultures of the Upper Peninsula, living on the periphery of this Hopewellian world, the Late Woodland can be viewed as a relatively stable era with a trend towards incorporating new natural resource procurement strategies, perhaps to replace the copper trade economy that may have flourished during the Middle Woodland. Across the Upper Peninsula, known Late Woodland sites exhibit a set of shared, distinctive characteristics that were representative of a cultural dynamic which focused on exploiting both faunal resources as well as wild rice habitats. This incorporation of wild rice into the native diet, seen most clearly on sites at the western end of the peninsula (and mirroring neighboring sites in upper Wisconsin), marks a profound shift in native lifeways that will alter the settlement and subsistence patterns for people of the Upper Peninsula through to the Historic Period. Site distribution will now focus on exploiting not just profitable riverine resource locales (such as the seasonally-spawning fish sites of the Middle Woodland), but wild rice habitats as well (Brashler et al. 1997:565; Martin 1999:221-222).

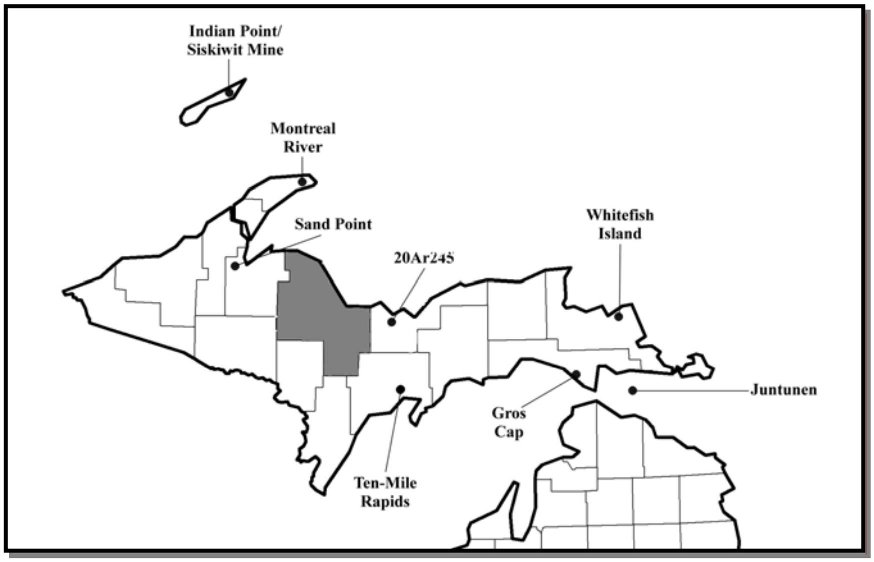
The introduction of wild rice was slow to take hold in the eastern portion of the Upper Peninsula during the Late Woodland. Instead, sites during the period exhibit a tendency towards heavy reuse, as the cultures intently focused on particular fish species. Late Woodland archaeological deposits on the eastern end of the peninsula become larger, more intensively utilized, and appear to have begun to shift off of the Lake Superior shoreline south towards the Mackinac Straits. It has been postulated (Brashler et al. 2000:565) that this movement was an attempt to exploit deep water fisheries of the Straits, as a possible climatic warming trend during the period may have impacted the effectiveness of exploiting the shallow, cold water environments of the north.

The known archaeological record for the Upper Peninsula during the Late Woodland relies heavily on data from sites at the periphery: at the eastern end, a cluster of occupations on the northern shores of Lake Michigan towards the Mackinac Straits; and at the western end, excavations of sites on Isle Royale and the Door Peninsula of Wisconsin. Sites within each of these regions display locally-distinctive artifact assemblages in context with material closely related to artifacts recovered from sites across the entirety of the Upper Peninsula. A good example of this heterogeneity of material across the region is the presence of ceramics from neighboring cultures (especially those of upper Wisconsin) at sites within both the Lake Superior and Lake Michigan basins (Martin 1999:222).

The classic Late Woodland ceramic style that developed across the entirety of the Upper Peninsula has come to be known as the Juntunen ceramic complex. Known for it's homogeneity (McPherron 1967), these ceramics have been found in archaeological deposits from as early as 800 B.P., and Juntunen ceramics have been recovered on Native American sites in association with European trade goods (for instance, at the Gros Cap site, which dates roughly to the mid- to late seventeenth century [Martin 1979]). McHale Milner (1991, 1994) has defined two distinct sub phases to the Juntunen complex, the early phase (extending from the introduction of the style up to approximately the mid-fifteenth century) and the late phase (from the mid-fifteenth through to the development of historic native American culture following European contact). Localized stylistic variations to the Juntunen ceramic template are seen to mimic styles of neighboring cultures, which has been postulated to represent strong regional interaction with neighboring groups (Brashler et al. 2000:566).

Selected Late Woodland occupations on the Upper Peninsula.

There are a variety of known Late Woodland occupations across the Upper Peninsula, focused primarily at the eastern and western extremity of the region. Known colloquially as the Lakes Phase, sites across the region exhibit many shared characteristics, both in terms of artifact assemblages and site distribution and density. A plethora of sites have been systematically excavated along the northern shoreline of Lake Michigan and the Straits of Mackinac, including Juntunen (the site type for the eponymous ceramics of the Late Woodland), Gros Cap (a seventeenth century occupation) and Scott Point. Of particular interest to the current project is the Sand Point site, located within 10 miles of the project area. This site, which was occupied between 900 and 600 B.P., contains a diverse assemblage of artifacts, which mirrors that seen across the region during the period. The diversity of ceramics recovered from the site, which includes not only the ubiquitous Juntunen style but styles from outlying regions, including Ramsey incised (an Upper Mississippian style), is highly suggestive of an active trade network with neighboring cultures across the upper Great Lakes during the Late Woodland. Faunal and floral remains recovered from the site suggests a diverse subsistence pattern which included the exploitation of small mammals, fish, and a variety of berries and acorns.



The Late Woodland period across the upper Great Lakes effectively marks the end of the prehistoric era for the region. While the outward push of the Mississippian cultures from the southeastern portion of North America can be seen by the increased presence of these types of ceramics in archaeological deposits on the Upper Peninsula, the settlement and subsistence patterns demonstrated by early Late Woodland sites are conjectured to be markedly similar to those documented by European visitors towards the end of the seventeenth century. As a result, it is tempting to utilize contact-era ethnohistoric sources to describe the cultural and societal patterns of the Upper Peninsula that become manifest as archaeological deposits. As problematic as this exercise inherently is, it may be likely that the tribal moieties documented by early European chroniclers were mirrored during the long intervening years of the Late Woodland.

HISTORIC MICHIGAN

The nebulous, and often speculative, boundaries between prehistoric temporal periods in eastern North America stand in sharp contrast to the division between the prehistoric and historic eras for the upper Great Lakes. While there is a somewhat hazy interregnum between the two blocks of time (often referred to as the Protohistoric Period), the arrival of Europeans into the region was a clear harbinger of the profound changes that would, over the relatively short course of two hundred years, transform the Lake Superior and Michigan watersheds into an industrial and commercial center for the American empire. The discussion below attempts to provide a framework for this tumultuous era, during which the indigenous societies of the region would be replaced by the modern villages, towns and cities of the industrialized West.

Protohistoric (1492 A.D. – 1670 A.D.)

Similar to most of eastern North America, there is apocryphal evidence for European interaction with native North American societies that predates the advent of what has become known as the era of European Exploration. From Nordic adventurers in the northeast to Chinese treasure fleets off the Atlantic Coast, these various accounts have yet to be proven within the archaeological record. What can be ascertained, with some degree of certainty is that, as early as the mid-fifteenth century, Europeans began to appear off the Atlantic Coast of the North American landmass. Over the course of the next two hundred years, different groups of European peoples exploited the advantageous position provided by a disparity in technology and, even more importantly, immunity to airborne pathogens, to encroach into the margins of the North American mainland.

It is extremely difficult to affix a date to the first encounter between a European and the people of the Upper Peninsula, and even more problematic to attempt to estimate when items of European manufacture reached the upper Great Lakes. It seems likely that the encroachment of French-speaking peoples into the watershed of the St. Lawrence River, which began as early as Cartier's expedition of 1535, would have introduced a variety of material into the exchange economy of the upper Great Lakes that may have reached people on the Upper Peninsula. There are currently no sites, however, which date to the sixteenth century on the Upper Peninsula that have produced non-native material from a sealed archaeological deposit. Cleland (1999:280) posits that the first historic-period site in Michigan is the Cloudman site, located on Drummond Island at the extreme eastern end of the Upper Peninsula near the northern entrance to the Mackinac Straits. This site produced a variety of Late Woodland artifacts in context with European material (a handful of iron scraps, glass beads, and a copper knife fashioned into a French form). It has been hypothesized that the historic component on this site, which most likely dates to between 1615 and 1630, represents an Ottawa settlement, and the European artifacts were obtained from trade with more eastern moieties, such as the Huron (Branstner 1991).

As the small French settlements in the St. Lawrence watershed constituted the most proximal group of Europeans to the upper Great Lakes, it should come as no shock that the cultural groups across the region would come to be known through a Gallic filter. While only "official" (government-sanctioned) expeditions into the upper Great Lakes were recorded, it seems likely that individuals or small groups of French would have ventured out into the lakes. Certainly, the missionary work of French Jesuits to the Huron of the eponymous lake and Georgian Bay brought Europeans into close proximity to the Upper Peninsula between 1630 and 1650.

It was during this period that the names assigned to the peoples of the upper Great Lakes would become affixed for posterity. Most of the early ethnohistoric information recorded for the peoples of the upper Great Lakes was collected by Jean Nicolet, a Frenchman who lived with a variety of groups of the region as early as 1618. The French identified two distinct linguistic groups across the region, which they referred to as the Iroquoian and Algonquian. The groups within the Algonquian sphere included the various peoples of the western Great Lakes, including those described by Nicolet in the Lake Superior basin. Nicolet lists three groups as occupying the Lake Superior basin of the Upper Peninsula prior to 1650: the Saulteaur (also known as the

Pahouitingwach Irini, or people of the falls), the Mikinac (turtle people), and the Nouquet (bear people). These three groups are all ascribed to different portions of the Upper Peninsula. The Saulteaur occupied the eastern portion of the peninsula, centered above the falls on the St. Mary's River. To the south, Mikinac lands encompassed what would become known as the Mackinac Straits. The lesser known Nouquet were described as occupying the central portion of the Upper Peninsula (and would therefore be the closest group to the project area). Little else besides place-names were provided by Nicolet for these groups, but they have been accepted as the forerunners of the Ojibwa, or Chippewa, peoples of the historic period (Cleland 1992:86).

In addition to the native moieties discussed above, the Menominee occupied the northern coastline of Lake Michigan on the Upper Peninsula. The Menominee, whose name derived from the native word for "wild rice" (*Oumalouminek,* or *manomin*) in the Algonquian tongue, occupied the area around the watershed that would become known by the same name at the time of Nicolet's journeys across Lake Michigan (in 1634-35 A.D.). During the seventeenth century, the Menominee occupied villages stretching across the entirety of the northern shoreline of Lake Michigan, from the Mackinac Straits in the east around to the entrance to Green Bay in the west (an area that roughly corresponds to modern-era Menominee settlements in northeastern Wisconsin).

At some point between 1640 and 1650, bands of Iroquois-speaking peoples from modern-day New York State conducted a devastating series of raids into the country of the Huron, perhaps in an effort to replenish a population devastated by the introduction of European pathogens, carried into the center of Iroquois communities by French missionaries and entrepreneurs. Armed with modern guns supplied by (or taken from) the French of Quebec and the Dutch of the New Netherlands, Iroquois warriors invaded the heartland of the Huron country in search of captives, and most likely not the monopoly of the fur trade that was once conjectured to be at the heart of the conflict. These "mourning-wars" would almost certainly have disrupted native trade networks of the upper Great Lakes, as the Huron moved west to escape the depredations of the Iroquois. The longer-reaching impact of the conflict on the peoples of the upper Great Lakes was the rapid displacement of Huron and Ottawa from their traditional lands around Lake Huron and the Georgian Bay (present-day southern Ontario) westward into portions of the Upper and Lower Peninsulas, and eventually as far west as Green Bay. This movement led the Iroquois to venture further out in search of captives, which effectively depopulated the Lower Peninsula for the next fifty years. French accounts of an Iroquoian war band raiding into the Saulteaur country on the eastern end of the Upper Peninsula intimate that the Saulteaur decimated their attackers to such an extent that Iroquois attention was turned southwards during the remainder of the period (Cleland 1992:87-90). Incidental to the project area, groups of displaced Huron (known in the accounts as Ottawa and Petun) had settled as far west as Chequamegon Bay, on the southern Lake Superior shoreline in modern-day Wisconsin.

There is an extremely small number of protohistoric sites known in Michigan, and an even smaller sample from the Upper Peninsula. The vast majority have been identified within, or directly adjacent to, the Mackinac Straits, a location that would become a focal point for both European and indigenous activity during the next century. Incidental to the project area, there are no known contact sites in Marquette and adjoining counties.

Historic Indian/European Imperial Period (1670 A.D. – 1815 A.D.)

In 1671, an entrepreneur (and sometime diplomat) in the employ of Quebec visited the mission at St. Mary's, located adjacent to the village of the Saulteaur. Known as Saint Lusson, he attended, in the name of the King of France, a large gathering of different native groups and laid official claim to the Lake Superior basin for the French. And so, unlike traditional European acquisition of land that required a war of conquest to secure the desired territory, the upper Great Lakes were brought within the imperial arms of the French monarchy by the pronouncement of a minor colonial functionary to an assembly of native warriors who did not even speak the language.

The vast depredations of the Iroquois during the 1650's and 1660's profoundly altered the cultural dynamic of the upper Great Lakes. Over the course of the next fifty years, the lands once occupied by the Huron Confederacy (a loose conglomeration of peoples in the Iroquoian language group) and the lands of the Lower Peninsula of Michigan were left predominantly vacant, apart from small bands of hunters who exploited game across the region. The Huron had been scattered across eastern North America, either incorporated into the Iroquois world of the southern Great Lakes or splintered into smaller groups on the shores of the western upper Great Lakes. It was into this environment that the Fleur-de-Lis of imperial France was planted, ushering in the advent of the historic era to the Lake Superior and Lake Michigan basin.

The near-total eradication of the Huron meant that the French Jesuit missions had to move deeper into the upper Great Lakes in search of converts to the cross. As a result, new missions were founded in close proximity to villages of the western Great Lakes, including several on the Upper Peninsula. Proselytizing efforts were directed at the Saulteaur near the falls of St. Mary's (Raymbault, the site of the first Jesuit mission in the Lake Superior basin, founded in 1641), at the conglomerate settlements around the Mackinac Straits, and along the southern shoreline of Lake Superior at the mixed Huron refugee community of Chequamagon Bay. In addition, a short-lived mission to the Nouquet was established at St. Michel in 1659. The attempt to incorporate European belief systems into the native cultural mores did not always take, and the majority of the upper Great Lakes Jesuit missions were quickly abandoned. The mission located at the Mackinac Straits, known as St. Ignace by the French, did, however, gain a foothold into the interior of the Great Lakes that would soon be exploited by the government of New France.

Over the next fifty years, the small native settlement at the straits grew in size, bolstered by the migration of displaced Hurons from the east, seasonal hunting bands looking to turn a profit, and an influx of French traders, officials and soldiers to the newly-founded Fort du Baud. The burgeoning fur trade, which reached it's apex around 1685, provided a serious economic motivation for native societies to interact with the French. The settlement became a focal point for French activity in the upper Great Lakes, as missionaries and traders stopped en route to the distant reaches of Lake Superior. This included several persons of particular significance to the region, including the Jesuit missionary Marquette (who founded the mission site at the straits), and Antoine de la Mothe de Cadillac, who was commandant of Fort du Baud for a time.

By the turn of the eighteenth century, the French influence in the Lake Superior basin was felt profoundly by native groups. Gone were the former individual group names for the people of the region; the French now rechristened the former Nouquets, Saulteurs, and various other peoples of the upper Great Lakes as Ojibwa, an appellation that would remain through to the modern era for the native culture of the region. Also known as the Chippewa, these peoples were the descendants of the groups first documented by Nicolet on the southern shores of Lake Superior, and the volume of ethnohistoric information concerning the lifeways, mores, and cultural mores of these peoples grew tremendously over the next two hundred years. Perhaps because of the lack of arable lands on the Upper Peninsula, coupled with the harsh climate, the Ojibwa were not pushed west by European expansion, as happened directly to the south in the Midwest.

The eighteenth century was a time of climactic change for the denizens of the upper Great Lakes, as the various societies were drawn inexorably into the armed conflict between the competing imperial aspirations of France, England, and, eventually, the United States. This association, which grew out of a shared symbiotic economy that developed as a result of the fur trade, would prove exceedingly difficult for the native peoples to engage in, and would eventually lead to catastrophe.

As France viewed the upper Great Lakes as their colonial dominion, the government of New France, centered in Quebec, considered the Ojibwa, Ottawa, and Menominee (to name but a few) of the region subject to the crown's authority. Hundreds of miles from formal civil authority, however, the edicts of the French were viewed entirely differently. White (1991) includes the region as part of the *Pays d'en Haut*, or middle ground, where native societies and European citizens (primarily missionaries and traders) developed a distinctly different culture than that east of the Appalachians. By his account, the perceived dominance of European culture, both spiritually and temporally (and materially), was not a substantive part of the eighteenth century landscape of the upper Great Lakes. Instead, the native cultures adopted the French into a worldview that integrated with pre-existing social mores, and in turn the French of the frontier accepted this situation, to the extent that traditional native belief systems were honored. Over the course of the first fifty years of the eighteenth century, a unique environment was fostered across the region, where French presence did not necessitate European exploitation, and the vast colonization practices seen on the Atlantic seaboard were replaced by a shared community (White 1991).

When the end came for the indigenous era in Michigan, however, it proceeded quickly. European imperial designs on the North American continent touched off a series of wars which culminated in the worldwide conflagration known alternately as the French and Indian War and the Seven Year's War. One of the main cockpits for the conflict was the lower Great Lakes and Ohio River valley, a region contested by both the French and English crowns (and, to some extent, the colonial governments subservient to each). While the theater of war did not extend into the Upper Peninsula, the native populations were pulled into the conflict by their ties to New France.

During the previous fifty years, New France had begun a process of fortifying strategic points in the Great Lakes, with an eye towards protecting what they considered their domain. The encroachment of other European interests into the region, including the Hudson Bay Company to the north and the active English-speaking influx of traders to the south, necessitated a much stronger presence in the Lakes for policy-makers in the corridors of Versailles. A chain of frontier forts was constructed, linking the St. Lawrence River with the Mississippi. Old Fort du Baud was abandoned, replaced by a much sturdier military post known as Fort Michilimackinac in 1715. Fort Ponchartrain was erected at the entrance to the straits between Lake Erie and Lake St. Clair (the eventual site of the modern city of Detroit). These highly obtrusive manifestations of imperial hegemony into the region became focal points for native activity and trade, and solidified the relationship between the Quebec government and the conglomerate villages of the Upper Peninsula region.

Fort Michilimackinac (known at its construction as Fort DeLignery) is the primary archaeological site of the period in the region. Located on the southern, Lower Peninsula side of the Mackinac Straits, the fort was constructed in 1715, within view of the abandoned settlement of St. Ignace (which was vacated at the turn of the eighteenth century). The small wooden outpost of 1715 was soon restructured, as both French and indigenous peoples congregated near the source of material goods and information. The Fort would grow in size over the next thirty years, as the French government attempted to secure a stronger foothold in the northern lakes. As the year 1744 began, however, imperial conflicts between France and England ignited into open war, a situation that would last through to 1763 with the capitulation of New France and the abandonment of French dominion over the Great Lakes.

The Development of Modern Michigan (1815 A.D. – Present Day)

Originally annexed as part of the Northwest Territory in the late eighteenth century, Michigan was christened as a full State of the Union on January 26, 1837. The exploitation of the resources of the Upper Peninsula lagged far behind the situation on the Lower Peninsula, which left the majority of the Lake Superior basin vacant of any extensive American settlement until the second half of the century. In 1843, the Michigan legislature commissioned a formal survey of the entirety of the Upper Peninsula, in an effort to divide the landform into manageable counties. This survey work resulted in the formation of six counties, including Marquette. On April 4, 1848, the county of Marquette was formally organized into a separate legal entity, adopting the name of the 17th century Jesuit priest who established a mission at the Mackinac Straits. Encompassing a total of 1,821 square miles, Marquette County would become the largest county in the entire state.

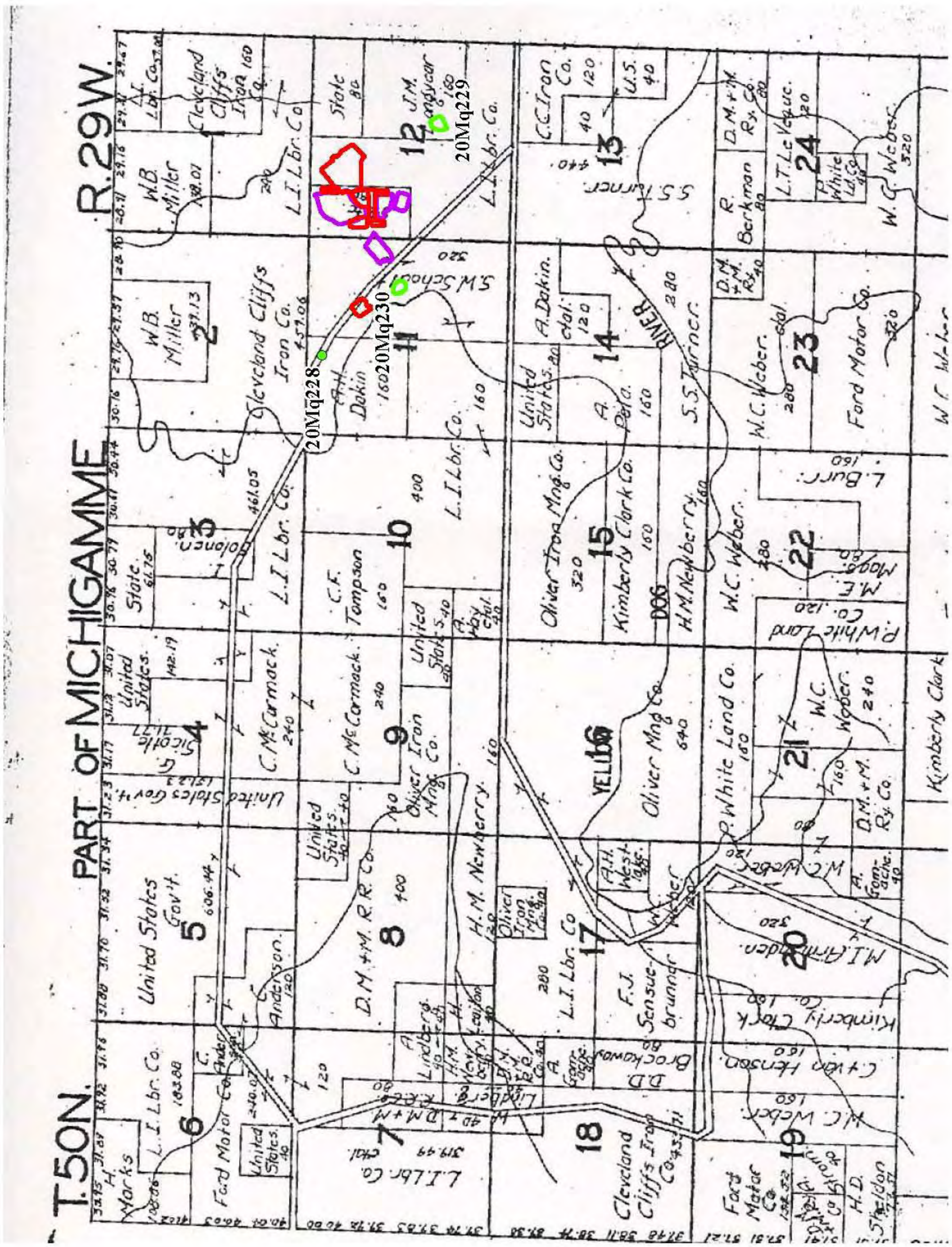
Within a decade of the establishment of Marquette County, the industrial exploitation of the natural resources began in earnest. The vast tracts of timber, coupled with the presence of iron ore in the Marquette Range (the uplands south of the project area), attracted settlers and business interests into the region by way of the town of Marquette. Logging camps began to appear across the wilderness of the county, carving space out of the forests and making Michigan, over the last forty years of the 19th century, the nation's leading lumber-producing state (Whitney 1994). Relying largely on riverine environments (for ease of transport of the timber), the smaller-scale logging camps begat towns, including Ishpeming (located approximately five miles east of the project area). The archaeological footprint of these logging camps can be seen across the entirety of the Upper Peninsula, and were typically composed of temporary wooden cabins around either a road, railroad grade, or river. The construction of the railroad network within the county led to an increase in the size and utility of the logging camps, as the ease of transport provided by the railroad had a similar affect on the necessity for additional woodsmen. The depletion of a timber source (which occurred often during the period) led to the abandonment of a camp in favor of a more profitable portion of the county. Conlin (1979) suggests that, apart from the structural remnants of these logging camps, the most abundant artifact type that could be expected to be encountered from these sites relate to food, due primarily to the transient nature of a given logging camp coupled with the prodigious amounts of energy necessary to process timber.

Around the turn of the 20th century, the modern character of the Upper Peninsula became largely defined. Davis (1999) posits that the peak initial population across the Upper Peninsula occurred between 1890 and 1920, well after the intensive settlement of the rest of Michigan, with relatively little activity across the region prior to the American Civil War. He further suggests that historic land-use patterns in the Upper Peninsula can be divided into three stages of development: initial acquisition of large land-tracts by commercial logging and mining interests, followed by an influx of homesteaders into biomes suitable for agrarian pursuits, which eventually gave way to a mixture of commercial, agricultural and recreational utility (Davis 1999:347). While the utilization of the land for agrarian interests was nowhere near as prevalent as that seen across lower Michigan, Davis has generalized that there were thousands of farmsteads across the Upper Peninsula by the turn of the 20th century.

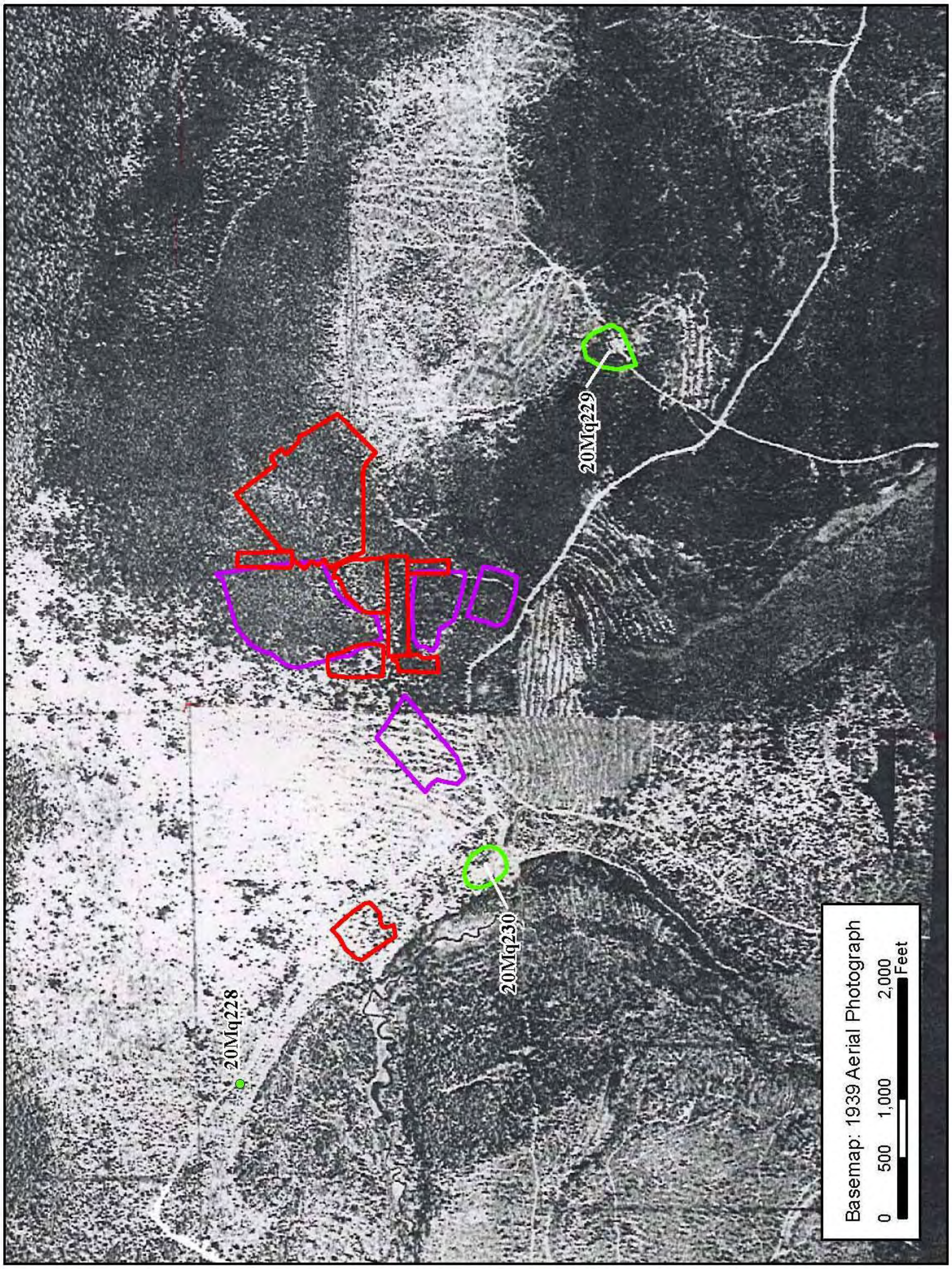
The historic-era character of this portion of Marquette County is still predominantly evident across the modern landscape. The intensive exploitation of the natural resources during the waning years of the 19th century was, while not entirely abandoned, somewhat diminished by the middle decades of 20th century. The mechanization of the American society led to a decrease in the demand for lumber just as the demand for pristine habitats began to enter the vernacular. The establishment of several national forests across the Upper Peninsula ensured that portions of these forests would retain at least a hint of their former grandeur, before the deflation of the primeval woodlands under the heel of industrialization.

An examination of several historic-era documents depicting the area of the current survey is illustrative as to land-use patterns across these landforms during the 20th century. The first of these resources, a plat map developed in 1910, shows that the area of the project (Section 12 of Michigamme Township) was divided between several landowners, including a corporation that was most likely involved in the timber industry.

Survey Areas Depicted on a 1910 Plat Map of Michigamme Township.



Survey Areas Depicted on a 1939 Aerial Photograph of the Area.



APPENDIX C

LABORATORY METHODS

LABORATORY METHODS

All recovered artifacts were returned to the BHE laboratory in Cincinnati to be washed, sorted, analyzed, and packaged for curation or return to the landowner as appropriate. The laboratory methods described below apply to the analysis of materials conducted at the BHE laboratory in Cincinnati.

Prehistoric Lithics

Terminology related to Debitage

- Blank: When a flake is detached from a block of raw material it may be regarded as waste, utilized without modification, or used as a 'blank' to be retouched into a tool (e.g. a scraper or denticulate).

- Chip: This term, introduced by Newcomer and Karlin (1987), describes tiny flakes (<1 cm in length) which are detached during several different types of manufacturing trajectories. First, they can result from the preparation of a core or biface edge by abrasion, a procedure that strengthens the platform prior to the blow of the hammer. During biface manufacture, chips are detached when the edge is 'turned' and a platform is created in order to remove longer, more invasive flakes. Tiny flakes of this type are also removed during the manufacture of tools like end-scrapers.

- Core: A core is a block of raw material, other than a biface preform, from which flakes have been detached. Cores may be produced by careful preparation or consist of a block of material from which only a few flakes have been detached.

- Debitage: The French term debitage has two related meanings: 1) it refers to the act of intentionally flaking a block of raw material to obtain its products, and 2) it refers to those products themselves. Commonly, the term debitage is used by prehistorians to describe flakes that have not been modified by secondary retouch and made into tools.

- Flake: A flake is a product of debitage that has a length/width ratio of 1:1. In this report, there are two separate categories of flakes and the first is for those pieces to which a specific reduction sequence cannot be assigned. With these pieces, it is impossible to tell whether they have been detached during simple core reduction or biface manufacture. For example, cortical flakes initially removed from a block of raw material can appear similar in both core and biface reduction.

The second group of flakes result from biface reduction and are described as follows:

A) Biface initial reduction flakes are typically thick, have cortex on part of their dorsal surfaces, and have large plain or simply faceted butts. There are relatively few dorsal scars, but these may show removals from the opposite edge of the biface.

B) The thinning flakes result from shaping the biface, while its thickness is reduced. These flakes generally lack cortex, are relatively thin, and have narrow, faceted butts, multidirectional dorsal scars, and curved profiles. Thinning flakes are typically produced by percussion flaking.

C) The finishing flakes are produced during the preparation of the edge of the tool. These flakes are similar in some respects to thinning flakes, but are generally smaller and thinner and can be indistinguishable from tiny flakes resulting from other processes such as platform preparation. Biface finishing flakes may be detached by either percussion or pressure flaking.

The categories used to describe biface reduction follow in a broad sense those proposed by Newcomer (1971), Callahan (1979), and Bradley and Sampson (1986). It should be noted, however, that rigid schemes of reduction such as those cited, which break up into stages a process that is in fact an unbroken continuum from raw material selection to the final abandonment of the tool, can only approximate the course of a manufacturing trajectory used by prehistoric knappers.

- Janus flake: These are a debitage type produced during the initial reduction of a flake blank (Tixier et al. 1980). The removal of a flake from the ventral surface of a larger flake results in a flake the dorsal surface of which is completely or partially composed of the ventral surface of the larger flake blank.

- Percussion and pressure flaking: In the case of flintknapping, percussion flaking involves the use of a hammer or percussor to strike a piece of chert in order to detach a flake. This hammer can be of a relatively hard material, such as a quartzite hammerstone, or a softer organic material such as a deer antler. Direct percussion is a flaking technique that involves the delivery of the blow directly on to the striking platform, while indirect percussion utilizes an intermediary or “punch”. Pressure flaking, as suggested by the name, involves the chipping of stone by pressure. Flakes are ‘pressed off' with the use of a pointed tool such as a deer or elk antler tine.

- Platform abrasion: When the blow of the percussor is aimed close to the edge of the piece being flaked (marginal flaking), it is necessary to prepare and strengthen that edge. The edge is usually prepared by abrasion, which entails rubbing the striking platform area with a hammerstone and detaching a series of tiny flakes (chips) from the surface where the flake will be removed. Evidence of platform abrasion is usually clearly visible on biface thinning flakes at the intersection between the butt and dorsal surface.

- Shatter: Shatter can either be produced during the knapping process or through natural agents. For the purposes of this volume, shatter is defined as a piece of raw material that shows no evidence of being humanly struck, but may nonetheless be a waste product from a knapping episode. The reporting of shatter is, therefore, somewhat equivocal and relies on context. If shatter is identified among a collection of “good” flakes, it is likely to be an artifact; if it occurs in isolation, it is likely to be natural.

Terminology related to retouched tools

- Biface: A biface is any retouched tool, partially completed or finished, which has been flaked by percussion or pressure flaking over both of its surfaces (see bifacial retouch).

- Retouch: This term is taken from the French retouchee and refers to the modification of a block of raw material (biface manufacture) or flake by a single removal or series of removals, thus transforming the piece into a ‘tool'. Retouch shapes the original blank and its edges and can take the form of invasive bifacially detached flakes on a projectile point or small, tiny flakes on the edge of an end-scraper. Retouch may also be caused unintentionally due to utilization; in this case, retouch forms as a result of an activity and not by a process of intentional modification before use. Utilization retouch is typically discontinuous along an edge.

- Retouched flake or piece: This category of retouched tool is represented by flakes, or badly broken artifacts, which have limited amounts of retouch and are not standardized tool forms. The retouch on these artifacts is highly varied in type, inclination, and position.

- Tool: For the purposes of typological description only, a tool is any flake that has been shaped and modified by secondary retouch. In the case of biface manufacture, a block of raw material may be transformed directly by retouch into a tool such as a knife or projectile point. The term tool, therefore, is used only for descriptive purposes to separate those artifacts which have been retouched from the debitage or unretouched pieces. Finally, it should be recognized that the latter group of objects may well have functioned as tools, for example unretouched flakes with good cutting edges are effective from skinning and butchery, but this is difficult to determine without a microwear analysis.

Method of Lithic Analysis

For the purposes of analysis and to facilitate sorting and the display of information in tables, each type of debitage is assigned a class number. These classes are as follows:

- Class 1 - Initial reduction flake
- Class 2 - Flake (unspecified reduction sequence)
- Class 3 - Biface initial reduction flake
- Class 4 - Biface thinning flake
- Class 5 - Biface finishing flake
- Class 6 - Chip
- Class 7 - Shatter
- Class 8 - Microdebitage
- Class 9 - Janus flake

Current approaches to the analysis of lithic artifacts include a study of the step-by-step procedures utilized by prehistoric knappers to make tools. The term used to describe this process is referred to as chaine operatoire or reduction strategy. The production of any class of stone tools involves a process that must begin with the selection of suitable raw materials. The basic requirements of any raw material to be used to make flaked stone artifacts include the following: 1) that it can be easily worked into a desirable shape; and 2) that sharp, durable edges can be produced as a result of flaking. Raw material selection involves a careful process of decision-making and includes consideration of the properties of specific materials, especially their ability to be easily flaked and hold an edge. For example, obsidian is ideal for producing cutting implements such as projectile points, but it is not as suitable for tasks involving heavy chopping.

Once a raw material is selected and an adequate source is located, the process of tool manufacture begins. Two different strategies can be utilized and these involve the reduction of a material block directly into a tool form, like a biface, or the production of a core. The second reduction process involves the preparation of a block of raw material so that flakes of a suitable shape and size can be detached. These blanks are then flaked by percussion or pressure flaking into a variety of tool types including scrapers, bifacial knives, or projectile points.

In general, biface reduction can proceed along two different manufacturing trajectories, one of which involves the reduction of blocks of raw material, while the other involves the reduction of a flake blank. Experimental work has shown that the former manufacturing strategy, involving a block of raw material, begins with the detachment of flakes with cortical or natural surfaces. This stage is accomplished by direct percussion, usually involving a hard hammer that more effectively transmits the force of the blow through the outer surface. Having removed a series of flakes and thus created suitable striking platforms, the knapper begins the thinning and shaping stage. The majority of the knapping is done with a soft hammer using marginal flaking. The pieces detached tend to be invasive, extending into the midsection of the biface. A later stage of thinning may follow, which consists of further platform preparation and the detachment of invasive flakes with progressively straighter profiles in order to obtain a flattened cross-section. By the end of this stage, the biface has achieved a lenticular or bi-convex cross-section. Finally, the tool's edge is prepared by a combination of fine percussion work and pressure flaking if desired. It should be noted that flakes deriving from biface reduction are sometimes selected for tool manufacture as discussed above. Thus, the biface can, in some instances during the reduction cycle, be treated as a core.

The second manufacturing trajectory, utilizing a flake, begins with core reduction and the manufacture of a suitable flake blank. The advantages of utilizing a flake blank for biface reduction include the following: 1) flakes are generally lightweight and can be more easily transported in large numbers than blocks of material; and 2) producing flakes to be used for later biface reduction allows the knapper to assess the quality of the material, avoiding transport of poorer-grade cherts.

The initial series of flakes detached from a flake blank may or may not bear cortex. However, they will display portions of the original dorsal or ventral surfaces of the flake from which they were struck. It should be noted that primary reduction flakes from this manufacturing sequence can be wholly non-cortical. Thus, the use of the presence of cortex alone to define initial reduction is of limited value. Biface reduction on a flake involves the preparation of the edges of the piece in order to create platforms for the thinning and shaping stages that follow. In most other respects, the reduction stages are similar to those described above, except that a flake blank often needs additional thinning at the proximal or bulbar end of the piece to reduce the pronounced swelling.

Historic Artifact Classification

Phase I investigations typically do not include data from intact subsurface features, however the data collected can provide information on site chronology, function, and spatial distribution of artifacts and features across a site. These interpretations are used in determining potential National Register eligibility and recommending future research. In categorizing the historical period artifacts, a basic functional analysis is used. The classification system is derived from South's (1977) analysis of artifact patterning based on functional analysis.

- Kitchen artifacts are items related to food preparation, presentation, and storage, such as cooking pans, dishes, tableware, canning jars, utensils, and faunal and plant remains associated with food consumption.

- Architectural artifacts include items related to building, construction, architectural, and structural elements, shingles, roofing slate, window glass, nails, etc.

- Agricultural artifacts include items related to farming, animal husbandry, and farm maintenance and may include drainage tile, barbed wire, horseshoes, plow, and machinery parts.

- Household/maintenance is a combined category that includes subgroups such as lighting, furniture, decorative household elements and household maintenance items.

- The Personal category includes those items related to personal use, hygiene, activities associated with drinking, smoking, pharmaceutical bottles/jars, clothing, coins, toys, etc.

- Munitions includes bullets and fired cartridges.

- Miscellaneous artifacts are items that are unidentified as to function, sometimes because the item is too small or corroded, such as glass sherds and bits of metal.

Artifact classifications established in the report were based on the type and class designations established by Sprague (1980). This is a functional classification in which the form or material of an object is of minor importance when compared to the object's function in a culture. The classification is similar to that defined by South (1977), but the categories in Sprague's classificatory system are mutually exclusive, and the system is designed specifically for 19th and 20th century sites. Artifacts are assigned to one of a number of groups, such as Personal Items, Domestic Items, Architecture, Commerce and Industry, or Unknown objects classified by material.

Each group is subdivided into classes based on function. For example, Domestic Items may be broken down into furnishings, housewares and appliances, and cleaning and maintenance. Architectural Items fall into classes such as construction, plumbing, fixed illumination and power, fixed heating, cooling, and atmospheric conditioning, and architectural safety.

Classes are further subdivided into types that are based on one or more key attributes. For example, in the case of a ceramic sherd, observable criterion, primarily technological or stylistic, by which a ceramic type is defined include shape, paste, hardness, part, decoration, color, and glaze. The following sections provide definitions of the more common ceramic, glassware, and nail types, as well as their decorations, recovered in seventeenth through early twentieth century contexts. These are the classes of artifacts most relevant to the current project.

Ceramics

The earthenwares are a broad category of ceramics fired at temperatures too low to vitrify the paste, but high enough to vitrify the glaze. Earthenware pastes are porous, absorbent and relatively coarsely-grained. Often various materials added to the paste as tempering agents are clearly visible in the paste. Earthenware-quality clays are readily available, relatively easy to work and inexpensive to fire. Earthenwares were generally utilitarian, although various decorative traditions were prized tablewares. Earthenware decorative types include, but are not limited to, tin glazed, iron glazed, mottled manganese, lead glazed, slipped, slip-trailed, combed slip, and sgrafitto. Earthenwares are nearly ubiquitous on historic period sites; details of vessel form, manufacturing, and decorative technique are often diagnostic for specific ethnicities or periods. The so-called refined earthenwares of the late eighteenth through early nineteenth centuries reflect the popular demand for inexpensive imitations of porcelain. The following sub-categories of refined earthenwares are usually treated as distinct types with discrete production histories, but often prove nearly indistinguishable in the laboratory.

- Creamware is an early refined earthenware, dating from around 1760 to 1820. Creamwares are generally thinly potted using mold-patterns. Creamware and the other "refined" earthenwares were mass-produced for an international market.

- Pearlware is a refined earthenware with a white paste, introduced after 1779 by Josiah Wedgwood. Pearlware has several improvements over creamware, including an increased flint content; cobalt was added to the glaze to mask the natural yellowish tint of the glaze. The addition of cobalt gives pearlware a bluish-green cast, particularly in areas where the glaze has 'puddled.' Pearlware reached a peak in popularity around 1810, but was largely superseded by whiteware by 1825.

- Whiteware is a refined earthenware with a white paste, clear glaze and no tinting. Whiteware was developed as a direct successor to pearlware and became popular after ca. 1820-1830. The paste is generally more porous than that of ironstone (see below) which generally possesses a harder, more compact paste.

- Ironstone is a highly refined opaque earthenware with a clear glaze. It is typically dense, non-porous, and may be indistinguishable from whiteware. The peak of production for 'heavy bodied,' dense ironstone wares was between 1840 and 1885, although variations on ironstone continue in production today.

- Stonewares are characterized by a compact, fine- grained and non-porous, opaque body fired to higher temperatures (1300^{o} F) than the earthenwares. Stonewares are manufactured from naturally vitrifying, dense clays that produce a fine-grained, homogenous texture with a hard body. Stonewares may be decorated with cobalt and manganese, "Albany" or "Bristol" slips, or salt glazing, with a variety of incised or applied surface decorations. Stonewares have a long history of use in utilitarian and tableware forms, although by the nineteenth century, stoneware was used almost exclusively for storage vessels.

- The term “Yellowware” applies to a ceramic type constructed of a clay which fires to a yellowish hue. Less dense than stoneware, yellowware is fired at 2200^{o} F) to a very durable body suitable for use in baking. Yellowwares were intended to be low cost, mass-produced utilitarian ceramics. They generally date from 1850-1930.

- Porcelain is a highly vitrified ceramic with a white, translucent, almost glassy body. Porcelain contains a meticulously purified kaolin white china clay and feldspar paste that has been fired at extremely high temperatures.

Ceramic decorations

Most ceramics are decorated by glazing, whereby an applied solution which vitrifies at high temperature seals the porous paste of the vessel, while imparting a distinctive color according to the trace elements present in the glaze solution. Most historic glazes were based on lead flux until the 1820s when alkaline glazes were introduced in refined earthenware manufacturing. Hydrofluoride acid and ammonium sulfide solutions may be used to test the presence of lead in historic ceramic sherds (Deiss 1985).

The following are some of the most common decorative types in historic ceramics:

1) Underglaze transfer print: The use of an underglaze transfer print to decorate ceramics was developed in the early part of the nineteenth century. The designs are typically quite intricate and include floral motifs, as well as exotic oriental scenes. The earliest transfer prints were blue, but a variety of colors were introduced after ca. 1825.

2) Flow blue: Flow blue decoration was a variant of transfer printing where the design flows or blends with the glaze. The result of this effect is a fuzzy or blurred decoration that is caused by the introduction of a volatile liquid, such as lime or ammonia chloride, during the final firing of the vessel. Flow blue decorated wares date from 1830-1860, with a peak of production between 1850-1860.

3) Spongeware/Spatterware: The production of spongeware involved the application of a coloring agent with a modified sponge. The sponge was dipped in a color or variety of colors and used to produce blotches, whirls, or bands. Varying date ranges have been applied to this form of decoration, but 1840-1860 is the most commonly accepted. Spatterware is a variant of spongeware in which the color is ‘spattered’ over the surface of the vessel. It has a slightly longer date range than spongeware, extending between 1840-1880. Both decorative techniques remain in production to the present day.

4) Handpainted underglaze: Handpainted decorations, usually floral motifs, were utilized on refined earthenwares including pearlware, whiteware, and ironstone. On the earlier ceramic vessels the colors included blue, ochre, and green. Later vessels, dating between 1840-1860 were more often polychrome with a wider variety of colors such as green, brown, yellow, black, red, blue, and pink.

5) Annular: Banded decorations were commonly applied to whitewares and ironstone with the use of a quill. This type of decoration, referred to as “annular,” consists of horizontal or concentric bands of color applied to the slip. Annular whiteware has a median date of production of 1845 (Price 1982).

6) Molded or embossed wares: Included in this group are the edge decorated pearlwares and whitewares such as the “shell-edge” or “feather edge” types. These ceramic wares have a pattern molded to the edge that was then covered with a cobalt blue or forest green color. Blue and green shell edge wares have a date range of 1810-1860, with a median date of production of 1835 (Lofstrum et al. 1982). Plain molded or embossed designs were utilized on whiteware and ironstone, especially in the middle part of the nineteenth century. Large embossed ironstone vessels, with floral or naturalist designs such as sheaves of wheat, have a median date of production around 1873 (Gates and Ormerod 1984).

Glassware

Glassware can be as valuable as ceramic technology and decoration for providing chronological information on historic period sites. Vessel form, closure type, metal (chemical composition) and manufacturing technique are often diagnostic attributes. Window glass thickness, taken as an average over large cohesive assemblages, may be used as a rough dating tool for the nineteenth century.

Optimal cataloguing procedure for glass requires sorting specimens by glass-making materials - the actual compounds which compose the “metal,” or body of the glass: “Soda-lime,” “Potash-Lime,” “Potash-Lead,” and “Lime.” Determining these fluxes and stabilizing agents can be approached two ways: by chemical analysis, or ultra-violet light testing (Jones and Sullivan 1985:10, 12). The ultra-violet test is the less reliable; lead glass will fluoresce blue, while soda glass will appear yellow at the rim. Chemical analysis requires cleaning an unobtrusive (read "expendable") portion of the glass fragment, then dropping a minute amount of hydrofluoric acid onto its surface. A second drop of sulphide of ammonia is then applied directly over the first. The reaction will show a white spot for the presence of soda and a black spot for lead.

The traditional method of cataloguing by color is notoriously unreliable, but more practical for nineteenth and twentieth century collections where the glass-making compounds have become standardized for the industry. All glass is cataloged by color, supplemented by manufacturing technique, vessel form and rim/base finish where such evidence is available in the collection. Where there is evidence for pre-nineteenth century cultural resources, tests to determine glass metal compounds can be performed.

Nails

The period from 1790 to 1830 is considered a transitional period from wrought to cut nails (Nelson 1963:4). After the American Revolution, many cut nail manufactories were established in the northeast. These were first operated by hand power and later by water or steam power. Initial inventions and specific improvements of cut nails are largely unknown. The most important contributions seem to have made by Jacob Perkins, J. G. Pierson, Jesse Reed, and Mark and Richard Reeve between 1791 and 1815 when more than 88 patents were issued for improvements on nail machines. The rapid development and sale of these machines made it possible to manufacture nails on a wide scale in the early nineteenth century (Nelson 1963:6).

The development of cut nail manufacturing is marked by at least five distinct phases (Nelson 1963:8): cut from common sides with hammered heads (1790s-1820s); cut from opposite sides with hammered heads (1810-1820s); cut from common sides with crude machine-made heads (1815-1830s); cut from opposite sides with crude machine-made heads (1820s-1830s); and modern machine headed nails.

The first factories set up for the production of wire nails were apparently established in New York in the 1850s. The earliest wire nails were not made for building construction, but rather in smaller sizes for pocket-book frames and objects like cigar boxes (Nelson 1963:9). American wire nail machinery was not really perfected until the 1860s and 1870s. Wire nails did not supplant cut nails with the rapidity that wrought nails were replaced. The transition was more gradual. Wire nails did not really become the dominant type until the 1890s, and many builders preferred using cut nails well into the twentieth century. The greater holding power of cut nails was certainly a factor that delayed the quick acceptance of wire nails. The earliest wire nails can be distinguished from their modern counterparts by their head, as they are bulbous and generally eccentric with respect to the shank. Generally, the presence of wire nails in older sites indicates late nineteenth or twentieth century repairs, alterations, or maintenance.

Curation

All artifacts collected in the field are returned to BHE's Cincinnati, Ohio laboratory for cleaning, analysis, and stabilization. The recovered artifacts will be curated at a facility within Michigan upon landowner waiver and acceptance by a curation facility.

APPENDIX D

SAMPLE LOCUS FORMS

2004 FIELDWORK

N ▲ TRANSECT:
THE RISE 06/15

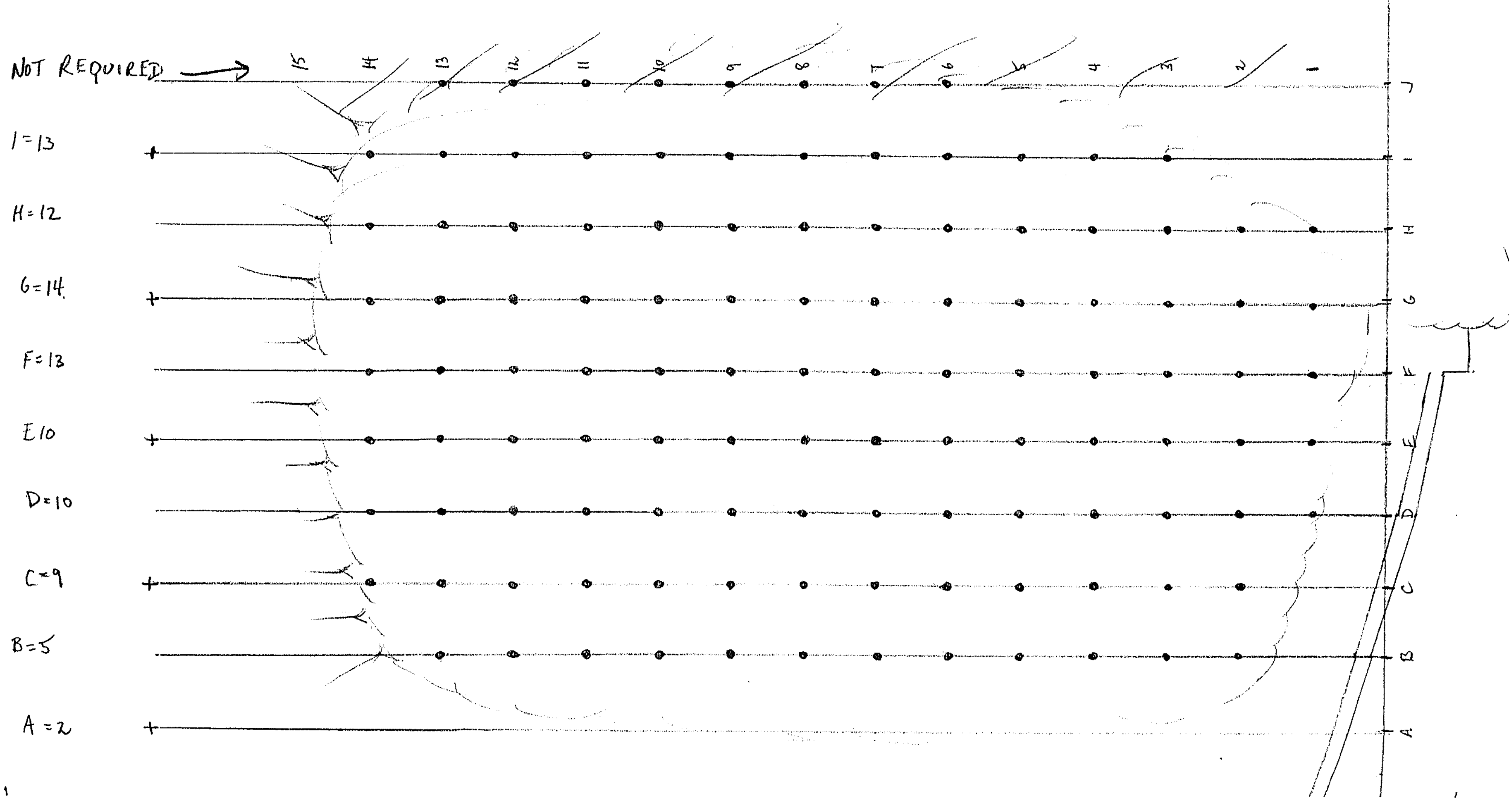
	S	P	S	S	S	S	S	S	E	E	E	E	E• I 1
		P	P	S	E	S	E	S	E	E	E	E	E• H
P	E	E	D	D	E	E	S	S	E	E	E	E	E• G
	P	E	S	E	E	E	E	S	S	E	E	E	E• F
				P	P	E	E	E	E	E	E	E	E• E
				P	P	E	D	E	P	D	E	E	E• D
					P	E	E	E	E	E	E	E	E• C
									E	E	E	E	E• B
												E	E• A 1
14	13	12	11	10	9	8	7	6	5	4	3	2	

N Δ

BACKFILL TRUCK DUMP
CONVEYER AREAS

114 SL @ 17/acre = 6.7 acre

SCALED @ 198 m x 112 m =
649 ft x 367 ft =
238,183 sq. ft ÷ 43,560 = 5.46 ac



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ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number 1595 001

Map or Quad

Segment # RISE
Transect #

Date 6/15/04
Recorder(s) DLB

Page 1 of

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet (use one code only - explain extra data in soil profile description and comments section)								
Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
A-1	E	1 m E of access Rd	open	humic	0-5	2.5 Y 3/1 very dark gray sand	—	
"				1	5-20	10 YR 5/3 brown sand	—	
"				2	20-35	7.5 YR 4/4 brown sand	—	becoming compact w some gravel
A-2	E	15 m W of A-1	open	humic	0-5	2.5 Y 3/1 sand	—	
				2	5-25	7.5 YR 4/4 sand	—	becoming compact w some gravel
End of transect A: It runs off of the southern edge of								
rise - along rocky outcrops								

TRANSECT: Beginning UTM: N ____ E ____
TRANSECT: Ending UTM: N ____ E ____

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number: Golder 1595001 | Map or Quad: ______ | Segment #: The Rise | Transect #: B | Date: 6-15-04 | Recorder(s): SKY | Page 1 of 1

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet (use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
B1	E	1m West of Rd	open	Organic humic	0-4	2.5Y 3/1 very dark gray sand	ø	dark organic supports vegetation.
"	"	"	"	Horizon 1	4-20	10YR 5/3 brown sand	ø	leached soil
"	"	"	"	Horizon 2	20-47	7.5YR 4/4 brown sand	ø	becomes compact w. ~~some gravels~~
B2	E	16m W of Rd.	edge of Pine Forest	Organic humic	0-8	2.5Y 3/1 sand	ø	dark organic supports vegitatio
"	"	"	"	1	8-28	10YR 5/3 sand	ø	leached soil
"	"	"	"	2	28-51	7.5YR 4/4 sand	ø	compact with gravel
B3	E	31m W of Rd	Pine Forest	Organic humic	0-5	2.5Y 3/1 sand	ø	dark organic supports vegetation
"	"	"	"	1	5-22	10YR 5/3 brown sand	ø	leached soil
"	"	"	"	2	22-39	7.5YR 4/4 brown sand	ø	compact w/ gravell
B4	E	46m W. of Rd	Pine Forest	Organic humic	0-6	2.5Y 3/1 sand.	ø	dark organic supports vegetation
"	"	"	"	1	6-12	10YR 5/3 sand	ø	leached soil
"	"	"	"	2	12-29	7.5YR 4/4.	ø	compact w/ gravel ending on rock
B5	UE	61m W of Rd	Pine Forest	unexcavated on top of ROCK				

TRANSECT: BEGINNING UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

Note - Horizon 1 trends toward a 10YR 6/2 light brownish gray

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

****Fill Out Form Completely!****

Project Name/Number 1595.001 Map or Quad ______ Segment # Rise Transect # C Date 06/15 Recorder(s) CB Page 1 of 2

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet (use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
C1	E	15 N of B1	Forest edge	Humic, organic	0-8	2.5YR 3/1 sand, humus	∅	
				Horizon 1	8-29	10YR 5/3 sand	∅	Leached horizon below organic; some small gravels
				Horizon 2	29-46	7.5YR 4/4 sand	∅	
C2	E	15m W of C1	Forest edge	Humic, organic	0-8	2.5YR 3/1 sand, humus	∅	
				Horizon 1	8-20	10YR 5/3 sand	∅	Leached horizon below organic; some small gravels
				Horizon 2	20-46	7.5YR 4/4 sand	∅	
C3	E	15m W of C2	Forest, slope	Humic, organic	0-9	2.5YR 3/1 sand, humus	∅	
				Horizon 1	9-22	10YR 5/3 sand	∅	Leached horizon below organic
				Horizon 2	22-43	7.5YR 4/4 sand	∅	
C4	E	15m W of C3	Forest, slope	Humic, organic	0-8	2.5YR 3/1 sand	∅	
				Horizon 1	8-26	10YR 5/3 sand	∅	Leached horizon below organic
				Horizon 2	26-40	7.5YR 4/4 sand	∅	

TRANSECT: Beginning UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number 1595.001 Map or Quad ______ Segment # C Transect # ______ Date 06/15 Recorder(s) CB Page 2 of 2

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet (use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
C5	E	15m W of C4	Forest, slope close to outcrop edge	Humic, organic	0-5	2.5YR 3/1 sand, humus	Ø	in small depression, disturbed Horizon 1 entirely missing; rock at base
				Horizon 2	5-40	7.5 YR 4/4 sand	Ø	
C6	E	15m W of C5	Forest, Sedge	Humic, organic	0-7	2.5 YR 3/1 sand, humus	Ø	
			of rise level	Horizon 1	7-16	10 YR 5/3 sand	Ø	
				Horizon 2	16-40	7.5 YR 4/4 sand	Ø	
C7	E	15m W of C6	Forest, Sedge of rise level	Humic, organic	0-7	5YR 3/3 humus	Ø	hit top of rock outcrop at 7cm
C8	S	15m W of C7	Forest, Sedge of rise	—	—	—	Ø	in small erosional gully draining top of rise bedrock exposed, overlook to Salmon Trout river
C9	P	15m W of C8	Forest, Sedge of rise, bluff	—	—	—	Ø	

TRANSECT: BEGINNING UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number 1595.001 Map or Quad ______ Segment # RISE Transect # D Date 6/15/04 Recorder(s) DLB Page 2 of ____

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
D1	E	2 m W fenceless 00	open	H	0-5	2.5Y 3/1 (sand)	—	area has been
"				1	5-15	sand	—	dozed
"				2	15-40	7.5YR 4/4 sand	—	strat. 2, becoming sandy w/ some gravel
D2	E	15 m W of D1	pine forest	H	0-10	same	—	roots
"				1	10-20	"	—	roots
"				2	20-40	brown	—	becoming compact w/ some gravel
D-3	E	" D2	"	H	0-10	same as	—	roots
"				1	10-20	brown	—	—
"				2	20-30	"	—	—
D-4	D	" D-3	pine forest,	—	—	did not	ex	cavate - area
"			(on slight slope)	of	rocky	outcrops		and push
"				piles	of	earth		
D-5	D	" D-4	same		as	above		

TRANSECT: BEGINNING UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number: Golden | Map or Quad: ______ | Segment #: rise | Transect #: ______ | Date: 6/15/04 | Page 3 of ___ | Recorder(s): DLB

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
D-6	E	15 m W of D-5	pine forest	H	0-8	2.5Y 3/1 organic humic (sand)	—	—
"	"	-	-	1	8-30	10YR 5/3 sand	—	leached soil
"	"	-	-	2	30-45	7.5YR sand	—	compact towards base
D-6		towards	road	end	rise			
D-7	D.	15 m W of D-6	area in rutted ...					
D-8	E	15 m W of D-7	"	H	0-8	same	—	lots of
"				1	8-12	"	—	roots
"				2	12-20	above	—	
D-9	P	on	rock	outcrop			—	E-O T
D-10	P	W of D-9	on	rock	and crop		—	flagged

TRANSECT: BEGINNING UTM: N __________ E __________
TRANSECT: Ending UTM: N __________ E __________

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

****Fill Out Form Completely!****

Project Name/Number: Golder 1595001 | Map or Quad: ____ | Segment #: The Rise | Transect #: E | Date: 6-15-04 | Recorder(s): SK4 | Page 1 of 2

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
E1	E	7m W of Rd	Edge of Pine Forest	organic humic	0-6	2.5Y 3/1 sand very dark gray	∅	dark organic supports vegetation
"	"	"	"	Horizon 1	6-19	10YR 5/3 brown sand	∅	leached soil
"	"	"	"	Horizon 2	14-47	7.5YR 4/4 brown sand	∅	not compressed possibly previously disturbed by foresting
E2	E	22m W. of Rd	Pine forest	organic humic	0-7	2.5Y 3/1 sand	∅	dark organic supports vegetation
"	"	"	"	1	7-19	10YR 5/3 sand	∅	leached soil
"	"	"	"	2	19-35	7.5YR 4/4 sand	∅	compressed sand light gravel mix
E3	E	37m W. of Rd	Pine forest	organic humic	0-8	2.5Y 3/1 sand very dark gray	∅	dark organic
"	"	"	"	1	8-24	10YR 5/3 brown sand	∅	leached soil
"	"	"	"	2	24-38	7.5YR 4/4 brown sand	∅	compressed soil mixed gravel
E4	E	52m W of Rd	Pine Forest	organic humic	0-9	2.5Y 3/1 sand mixed organic waste	∅	organic soil mixed decaying vegetation
"	"	"	"	1	9-27	10YR 5/3 sand	∅	leached soil
"	"	"	"	2	27-43	7.5YR 4/4 sand	∅	compressed sand light gravel mix
E5	E	67m W of Rd	Pine Forest	Organic humic	0-8	2.5Y 3/1 sand very dark gray	∅	dark organic Fades into next Horizon (1)
"	"	"	"	1	8-17	10YR 5/3 brown sand	∅	leached soil

TRANSECT: Beginning UTM: N ____ E ____
TRANSECT: Ending UTM: N ____ E ____

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number: Golder 159500l
Map or Quad:
Segment #: The Rise
Transect #: E
Date: 6-15-04
Recorder(s): SKY
Page 2 of 2

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
E5	E	67m W of Rd	Pine Forest	Horizon 2	17-36	7.5 YR 4/4 brown sand	∅	compressed sand light gravel mix
E6	E	82m W. of Rd	Pine Forest	Organic Humic	0-6	2.5 Y 3/1 sand very dark gray	∅	Organic soil supports vegetation
"	"	"	"	1	6-45	10YR 5/3 Brown sand	∅	leached soil, large amounts of carbon (burnt wood) 3 cm pieces
"	"	"	"	2	45-52	7.5 YR 4/4 brown sand	∅	compressed sand. angular gravel - decaying rock
E7	E	97m W. of Rd	Pine forest	Organic Humic	0-8	2.5 Y 2/1 sand	∅	organic soil
"	E	"	"	1	8-14	10YR 5/3 sand	∅	Very thin leached soil layer
"	E	"	"	2	14-38	7.5 YR 4/4 sand	∅	compressed sand. heavy gravel deposit
E8	E	112m W of Rd	Pine forest	Organic Humic	0-5	2.5 Y 3/1 sand	∅	Organic soil supports vegetation.
"	"	"	"	1	5-13	10 YR 5/3 sand	∅	leached soil
"	"	"	"	2	13-20	7.5YR 4/4 sand	∅	Rocks and compressed sand ended early due to rock
E9	Unexcavated	rock after				10 cm of organic humic soil		
E10	Unexcavated	End of			transect - cliff			

TRANSECT: Beginning UTM: N ____ E ____
TRANSECT: Ending UTM: N ____ E ____

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number: 1595 001
Map or Quad:
Segment #: F
Transect #:
Date: 06/15
Recorder(s):
Page 1 of 3

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet (use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
F1	E	15 m N of E1	Forest, level	Humic, organic	0-6	2.5 YR 3/1 sand, humus	Ø	
				Horizon 1	6-16	10YR 5/3 sand	Ø	Leached horizon below organic some small gravels
				Horizon	16-38	7.5 YR 4/4 sand	Ø	
F2	E	15 m N of F1	Forest, level	Humic, organic	0-13	2.5 YR 3/1 sand, humus	Ø	
				Horizon 1	13-29	10 YR 5/3 sand	Ø	Leached horizon below organic some small gravels
				Horizon 2	29-46	7.5 YR 4/4 sand	Ø	
F3	E	15 m N of F2	Forest, beg. of rise	Humic, organic	0-6	2.5 YR 3/1 sand, humus	Ø	
				Horizon 1	6-20	10 YR 5/3 sand	Ø	Leached horizon below organic
				Horizon 2	20-42	7.5 YR 4/4 sand	Ø	
F4	E	15 m N of F3	Forest, beg. of rise in erosional depression/gully ~~trending~~ w/ upslope	Humic, organic	0-8	2.5 YR 3/1 sand, humus	Ø	
				Horizon 1	8-26	10 YR 5/3 sand	Ø	Leached horizon below organic
				Horizon 2	26-46	7.5 YR 4/4 sand	Ø	
F5	S	15 m N of F4	Forest slope in erosional gully	—	—	—	Ø	declination @ 16% grade
F6	S	15 m N of F5	Forest, slope top of gully	—	—	—	Ø	declination @ 16% grade

TRANSECT: BEGINNING UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number 1595 001
Map or Quad
Segment # F
Transect #
Date 06/15
Recorder(s) CB

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet (use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
F7	E	15m W of F6	Forest, level top of gully	Humic, organic	0-8	2.5 YR 3/1 sand, humus	Ø	
				Horizon1	8-24	10YR 5/3 sand	Ø	Leached horizon below organic
				Horizon2	24-48	7.5YR 4/4 sand	Ø	Abundant rock: flat slabs, decaying sandstone, small pebbles
F8	E	15m W of F7	Forest, slight slope top of rise	Humic, organic	0-6	2.5 YR 3/1 sand, humus	Ø	
				Horizon1	6-19	10 YR 5/3 sand	Ø	Leached horizon below organic
				Horizon2	19-42	7.5 YR 4/4 sand	Ø	
F9	E	15m W of F8	Forest, level top of rise	Humic, organic	0-7	2.5 YR 3/1 sand, humus	Ø	large cobble on surface, near small outcrop
				Horizon1	7-23	10 YR 5/3 sand	Ø	leached horizon below organic
				Horizon2	23-38	7.5YR 4/4 sand	Ø	
F10	E	15m W of F9	Forested, level top of rise	Humic, organic	0-5	2.5 YR 3/1 sand, humus	Ø	
				Horizon1	5-16	10 YR 5/3 sand	Ø	Leached horizon below organic
				Horizon2	16-28	7.5YR 4/4 sand	Ø	rock at base of unit, 28cm
F11	S	15m W of F10	Forested, steep slope with gully S of highest point	—	—	—	Ø	

TRANSECT: Beginning UTM: N E
TRANSECT: Ending UTM: N E

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number: 1595 001
Map or Quad:
Segment #: F
Transect #:
Date: 06/15
Recorder(s): CB
Page 3 of 3

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
F12	E	15m W of F11	Forest, in gully (5m wide) between outcrops	A	0-20	2.5YR 3/4 silty clay	Ø	F12 has a soil profile entirely
				B	20-28	2.5YR 4/6 silty clay	Ø	different from other SLs on transect-
				C	28-43	7.5YR 4/4 sandy silt	Ø	positioned in a pronounced gully
F13	P	15m W of F12	Bluff N. edge outcrop	—	—	—	Ø	SL on rock outcrop

TRANSECT: Beginning UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number: Golder
Map or Quad:
Segment #: 11 [illegible]
Transect #: G
Date: 6/15/04
Page 4 of
Recorder(s): D L B

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet (use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
G-1	E	15 m W of access [illegible]	pine forest	H	0-7	2.5 y [illegible] organic humus layer	—	
"				1	7-25	10 yr [illegible] [illegible]	—	
"				2	25-35	7.5 yr 4/4 sand	—	[illegible] towards [illegible]
G-2	E	15 m W of G-1	"	H	0-3	[illegible]	—	
"				1	3-10		—	
"				2	10-35	above	—	"
G-3	E	15 m W of G-2	"	H	0-5	same	—	—
"				1	5-15	"	—	—
"				2	15-35	above	—	"
G-4	E	15 m W of G-3	"	H	0-7	same	—	—
"				1	7-20	"	—	—
"				2	20-40	above	—	"
G-5	E	15 m W of G-4 base of slope		H	0-5	same	—	—
				1	5-15	"		
				2	15-30	above	—	"

TRANSECT: Beginning UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

BHE Environmental
11733 Chesterdale Road
Cincinnati, Ohio 45246

ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number: Golden
Map or Quad:
Segment #: RISE
Transect #: 6
Date: 6/15/04
Recorder(s): DLB
Page 5 of

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
G-6	S	15 m W of G-5	pine forest	–	–	–	–	> 20% slope
G-7	S	" G-6	"	–	–	–	–	"
G-8	E	15 m W of G-7	"	H	0-5	7.5 YR 3/1 organic humic w. sand	—	Eastern most
"		towards west of		1	[illegible]	10 YR 4/3 sand	—	of rise
"		rise		2	[illegible]	7.5 YR 4/4 sand	—	—
G-9	E	"	"	H	0-7	same	—	digital photo
"				1	7-20	"	—	of soil
"		"	"	2	20-40	above	—	profile
G-10	D	"	"	–		push piles /	disturbed	area
G-11	D	"	"	–		"		"
G-12	E	15 m W of G-11	"	H	0-5	root disturb.		towards top of rise
"	"	–		1	5-15	root disturb		terminated SL because of root disturb.
G-13	E	" G-12	"	2	0-15	7.5 YR 4/4 sandy loam	no top soil / area disturbed	from logging
G-14	P	" G-13	"	–	–	rocky w/ crop		E of T

TRANSECT: BEGINNING UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

11733 Chesterdale Road
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ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number: Golder 1595001
Map or Quad:
Segment #: The Ri[illegible]
Transect #: 4
Date: 6-15-04
Recorder(s): SKY
Page 1 of 2

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
H1	E	7m W. from Rd	Pine forest	Organic humic Horizon	0-7	2.5Y 3/1 sand very dark gray	Ø	dark organic supports vegetation
"	"	"	"	1	7-16	10YR 5/3 brown sand	Ø	leached soil - carbon scattered 0.5-1cm pieces
"	"	"	"	2	16-39	7.5YR 4/4 brown sand	Ø	non-compacted sand - many decaying roots - possibly disturbed by up[illegible]
H2	E	12m W. from Rd	Pine forest	Organic humic	0-5	2.5Y 3/1 sand	Ø	dark organic
"	"	"	"	1	5-18	10YR 5/3 sand	Ø	leached soil
"	"	"	"	2	18-51	7.5YR 4/4	Ø	compact sand - terminated on hard pan
H3	E	27m W. from Rd	Pine forest	Organic humic	0-7	2.5Y 3/1 sand	Ø	dark organic supports vegetation
"	"	"	"	1	7-22	10YR 5/3 brown sand	Ø	leached soil - carbon scattered 0.5-1cm pieces
"	"	"	"	2	22-48	7.5YR 4/4 sand	Ø	compact sand
H4	E	42m W. from Road	Pine Forest	organic humic	0-6	2.5Y 3/1 sand very dark gray	Ø	dark organic
"	"	"	"	1	6-40	10YR 5/3 brown sand	Ø	leached soil unusually large
"	"	"	"	2	40-49	7.5YR 4/6 strong brown sand	Ø	compact sand - terminated on hard pan - MORE RED
H5	"	57m W from Road	Pine forest	organic humic	0-6	7.5Y 3/1 sand	Ø	dark organic so[illegible]
"	"	"	"	1	6-30	10YR 5/3 brown sand	Ø	leached soil

TRANSECT: Beginning UTM: N ________ E ________
TRANSECT: Ending UTM: N ________ E ________

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number: Golder 159J001 | Map or Quad: ____ | Segment #: The Rise | Transect #: H | Date: 6-15-04 | Recorder(s): SKY | Page 2 of 2

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
H5	E	57m W from Rd.	Pine forest	Horizon 2	30-47	7.5YR 4/4 brown sand	Ø	compact soil - terminated on hard pan.
H6	S	Steep	unexcavated					
H7	E	87m W. from Road	Pine forest	Organic humic	0-6	2.5Y 3/1 sand very dark gray	Ø	organic soil supports vegetation
"	"	"	"	1	6-32	10YR 5/3 brown sand	Ø	leached soil terminated on rock.
H8	S	steep	unexcavated					
H9.	E	117m W. from Rd	Pine forest	Organic humic*	0-8	2.5Y 3/1 sand very dark	Ø	organic soil supports vegetation
"	"	"	"	Horizon 1	8-48	5YR 3/2 sand/clay dark redish brown	Ø	sand and clay mixture deep red - no leached layer.
H10	S	Steep	unexcavated					
H11	unexcavated	on	rock.					
H12	unexcavated	on	rock		on	edge of	cliff.	

TRANSECT: BEGINNING UTM: N ____ E ____
TRANSECT: Ending UTM: N ____ E ____

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number 1595.001
Map or Quad
Segment # I
Transect #
Date 06/15
Recorder(s) CB
Page 1 of

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet (use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
I1	E	15m N of H1	Forest, level	Humic, organic	0-7	2.5YR 3/1 sand, humus	Ø	
				Horizon 1	7-23	10YR 5/3 sand	Ø	
				Horizon 2	23-47	7.5YR 4/4 sand	Ø	
I2	E	15m W of I1	Forested, level	Humic, organic	0-6	2.5YR 3/1 sand, humus	Ø	
				Horizon 1	6-20	10YR 5/3 sand	Ø	
				Horizon 2	20-42	7.5YR 4/4 sand	Ø	hard pan encountered at base
I3	E	15m W of I2	Forested, level	Humic, organic	0-3	2.5YR 3/1 sand, humus	Ø	
				Horizon 1	3-16	10YR 5/3 sand	Ø	
				Horizon 2	16-33	7.5YR 4/4 sand	Ø	small gravels ↓
				Sand	33-49	7.5YR 5/6 sand	Ø	sand was not encountered in SLs I1 & I2
I4	E	15m W of I3	Forested, beg. of rise	Humic, organic	0-8	2.5YR 3/1 sand, humus	Ø	
				Horizon 1	8-15	10YR 5/3 sand	Ø	
				Horizon 2	15-40	7.5YR 4/4 sand	Ø	
				Sand	40-50	7.5YR 5/6 sand	Ø	

TRANSECT: Beginning UTM: N E
TRANSECT: Ending UTM: N E

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Cincinnati, Ohio 45246

ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number 1595.001 Map or Quad ______ Segment # I Transect # ______ Date 06/15 Recorder(s) CB Page 2 of ______

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

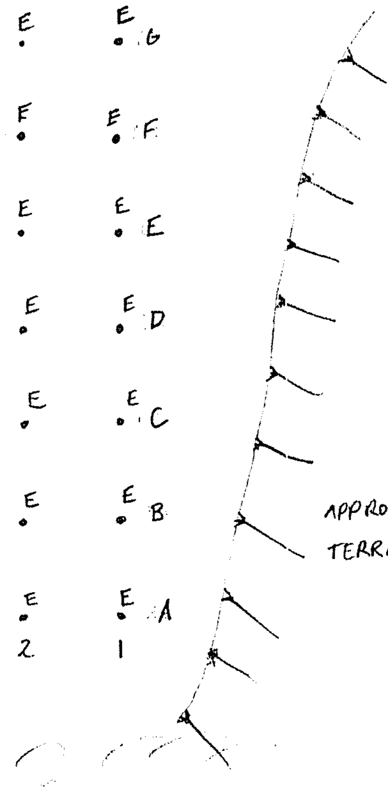
Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
I5	E	15m W of I4	Forested	Humic, organic	0-10	2.5YR 3/1 sand, humus	Ø	Slope ca. 10% grade
			slope	Horizon 1	10-31	10YR 5/3 sand	Ø	
				Horizon 2	31-48	7.5YR 4/4 sand	Ø	
I6	P, S	15m W of I5	Forested, slope N side of rise	—	—	—	Ø	steep slope, rock outcrop at SL
I7	E	15m W of I6	Forested, slope N side	Humic, organic	0-5	2.5YR 3/1 sand, humus	Ø	
			of rise	Horizon 2	5-38	7.5YR 4/4 sand	Ø	large cobble in Horizon 2, rock at 38 cm
I8	P, S	15m W of I7	Forested, slope N side of rise	—	—	—	Ø	N facing slope ca. 18% grade
I9	P, S	15m W of I8	Forested, slope N side of rise	—	—	—	Ø	N facing slope ca. 18% grade
I10	P, S	15m W of I9	Forested, slope N side of rise	—	—	—	Ø	N facing slope ca. 18% grade
I11	P, S	15m W of I10	Forested slope N side of rise	—	—	—	Ø	N facing slope ca. 18% grade
I12	P	15m W of I11	Forested, level on outcrop	—	—	—	Ø	outcrop positioned adjacent to gully as in F12
I13	P, S	15m W of I12	Forested steep on outcrop	—	—	—	Ø	

TRANSECT: Beginning UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

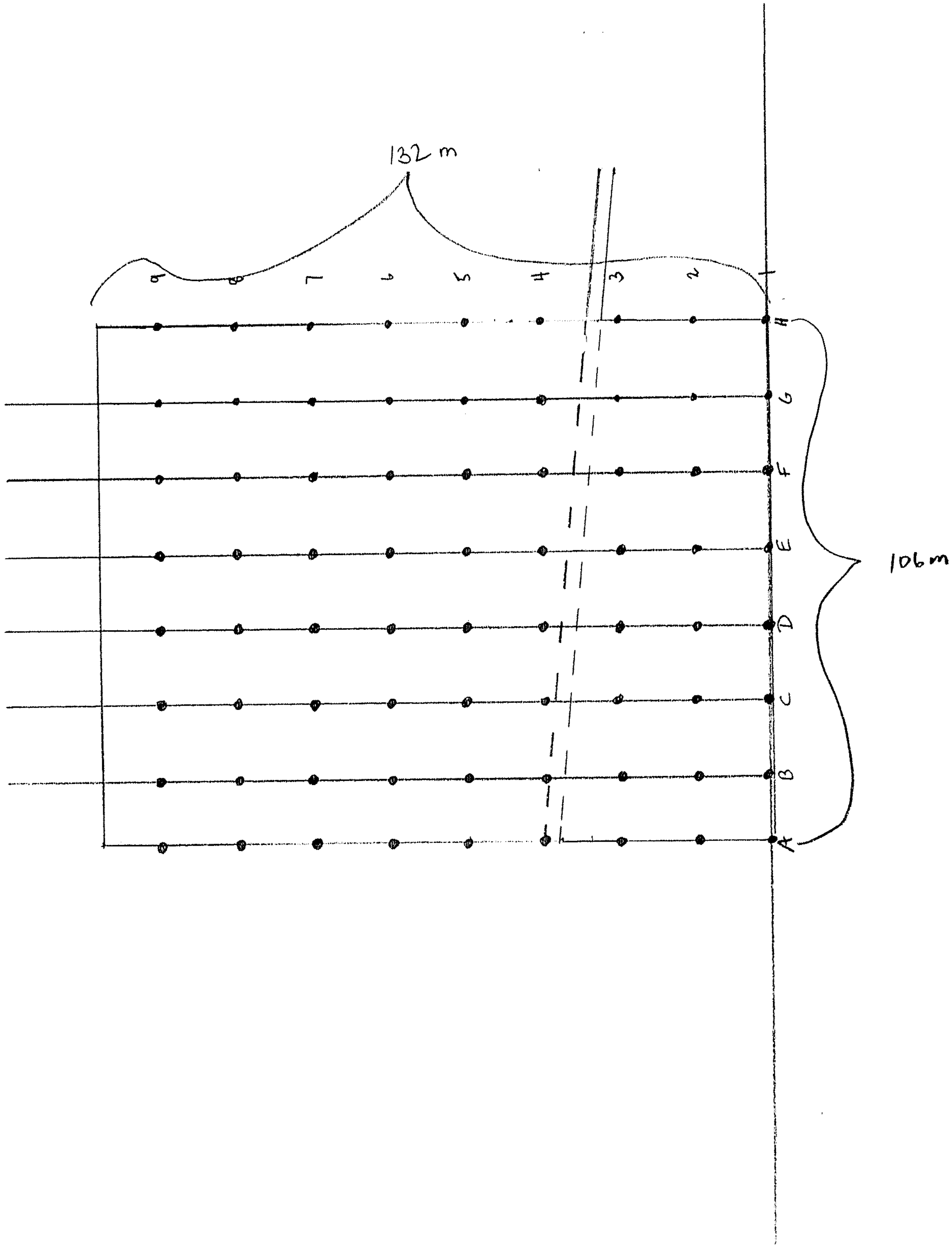
TRANSECT : OFFICES
06/16
N ▲

RISE

	9	8	7	6	5	4	3	2	1
G	E	E	E	E	E	E	P	E	E
F	E	E	E	E	E	E	P	F	E
E	E	E	E	E	E	E	E	E	E
D	E	E	E	E	E	E	P	E	E
C	E	E	E	E	E	E	P	E	E
B	E	E	E	E	E	E	E	E	E
A	E	E	E	E	E	E	P	E	E



63 SL = 105 m N-S   344' x 443' = 3.5 acres
135 m E-W



N Δ
OFFICES, PARKING

OFFICES = 350 ft × 350 ft
122,500 sq ft ÷ 43,560 =
2.8 acres

350 ft = 106 m

72 SL @ 17/acre = 4.2 acres
432 ft × 350 = 3.4 acres

BHE

11733 Chesterdale Road
Cincinnati, Ohio 45246

ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number Golden

Map or Quad

Segment # office
Transect # A

Date 6/16/04
Recorder(s) DLB

Page 1 of 2

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet (use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
A-1	E	see GPS	[illegible] cut	humic	0-5	10YR 3/2 very dk grayish brn humic	—	
"				1	5-15	10YR 5/2 grayish brn sand	—	
"				2	15-50	10YR 4/6 strong brn sand	—	some gravel
"					50-65	7.5YR 5/4 yell brn mixed sand	—	"
A-2	E	15 m 290° from A1	"	"	0-5	same	—	
"				"	5-15	"	—	
"				"	15-45	above	—	"
"				"	45-50		—	"
A3	D	15 m 290° A2	"	dist and	lost cut	of access road berm (did	in not excavate)	push piles
A4	E	" A3	"	humic	0-5	same as	—	
"				1	5-7	A-2	—	
"				2	7-40	"	—	"
"				—	40-50	"	—	"
A5	E	" A4	"	humic	0-7			

TRANSECT: Beginning UTM: N E

TRANSECT: Ending UTM: N E

BHE

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Cincinnati, Ohio 45246

ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Page 2 of 2

Project Name/Number: Golder
Map or Quad:
Segment #: office
Transect #: A
Date: 6/16/04
Recorder(s): DLB

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
A-5	E	15 m 290° of A-4	clear cut	1	7-15	10YR 5/2 gray brn sand	—	
"				2	15-37	10YR 4/6 silty brn sand	—	w. some gravel
A-6	E	" of A-5	"	humic	0-2	10YR 3/1 very dk grayish brn sand	—	
"	"	"	"	1	2-5	"	—	very thin top soil
"		"	"	2	5-25	"	—	" "
A-7	E	" of A-6	"	humic	0-5	"	—	
"				1	5-20	"	—	
"				2	20-35	"	—	some gravels
A-8	E	" of A-7	"	humic	0-5	"	—	—
"				1	5-20	"	—	—
"				2	20-55	"	—	"
A-9	E	" of A-8	"	"	"	"	—	
"			"	"	"	"	—	
"			"	"	"	"	—	"

TRANSECT: Beginning UTM: N ____ E ____
TRANSECT: Ending UTM: N ____ E ____

11733 Chesterdale Road
Cincinnati, Ohio 45246

ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Page 1 of 5

Project Name/Number: Golder 1595
Map or Quad:
Segment #: Office Area
Transect #: B
Date: 6-16-04
Recorder(s): SKY

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
B1	E	15m 200° from C1	Open	Organic humic	0 – 5	10YR 3/2 sand very dark grayish brown	Ø	organic soil supports vegetation
"	"	"	"	Horizon 1	5 – 15	10YR 5/2 sand grayish brown	Ø	leached soil gravel
"	"	"	"	Horizon 2	15 – 55	7.5YR 4/6 Strong brown	Ø	compact sand heavy gravel and cobble
"	"	"	"	Sand	55-57	10YR 5/4 yellowish brown	Ø	corse sand
B2	E	15m 290° from B1	Open	Organic humic	0 – 8	10YR 3/2 sand	Ø	organic soil.
"	"	"	"	1	8 – 22	10YR 5/2 sand	Ø	leached soil.
"	"	"	"	2	22 – 57	7.5YR 4/6 sand	Ø	terminated on hard pan 10R 3/2 dusky red.
B3	E	15m 290° from B2	Open	Organic humic	0 – 8	10YR 3/2 sand	Ø	organic soil
"	"	"	"	1	8 – 27	10YR 5/2 sand	Ø	leached soil light gravel
"	"	"	"	2	27 – 47	7.5YR 4/6 sand	Ø	compact sand light gravel
B4	E	15m 290° from B3	Open	Organic humic	0 – 7	10YR 3/2 sand	Ø	organic soil
"	"	"	"	1	7 – 18	10YR 5/2 sand	Ø	leached soil light gravel
"	"	"	"	2	18 – 49	7.5YR 4/6 sand	Ø	loose sand light gravel
B5	E	15m 290° from B4	Open	organic humic	0 – 8	10YR 3/2 sand	Ø	organic soil

TRANSECT: Beginning UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

11733 Chesterdale Road
Cincinnati, Ohio 45246

ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number: Golder 1595
Map or Quad:
Segment #: Office Area
Transect #: B
Date: 6-16-04
Recorder(s): SY
Page 2 of 3

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet (use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
B5	E	15m 290° from B4	Open	Horizon 1	8-17	10YR 5/2 sand grayish brown	Ø	leached soil
"	"	"	"	Horizon 2	17-43	7.5YR 4/6 strong brown	Ø	uncompact - possible disturbance from foresting
B6	E	15m 290° from B5	Open	Organic humic	0-8	10YR 3/2 sand very dark grayish brown	Ø	organic soil supports vegetation
"	"	"	"	1	8-44	10YR 5/2 sand	Ø	leached soil looks disturbed
"	"	"	"	2	44-52	7.5YR 4/6 strong brown	Ø	uncompact mixed w/ leached soil looks disturbed
B7	E	15m 290° from B6	Open	organic humic	0-6	10YR 3/2 sand	Ø	organic soil
"	"	"	"	1	6-20	10YR 5/2 sand	Ø	leached soil
"	"	"	"	2	20-44	7.5YR 4/6	Ø	uncompact, sand light gravel
"	"	"	"	Sand	44-50	10YR 5/4 corse sand yellowish brown	Ø	corse sand
B8	E	15m 290° from B7	Open	organic humic	0-7	10YR 3/2 sand	Ø	organic soil
"	"	"	"	1	7-15	10YR 5/2 sand	Ø	leached soil possible disturbance foresting
"	"	"	"	2	15-51	7.5YR 4/6 sand	Ø	uncompact soil - light gravel possible foresting disturbance
B9	E	15m 290° from B8	Open	organic humic	0-5	10YR 3/2 sand	Ø	organic soil - moved forward slightly due to fallen trees
"	"	"	"	1	5-20	10YR 5/2 sand	Ø	leached soil

TRANSECT: Beginning UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number Golden 1595 Map or Quad ____ Segment # Office Area Transect # B Date 6-16-04 Recorder(s) SKY + DLB Page 2 of 3

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
B.9	E	15m 210° from B8	Open	Horizon 1	20-40	7.5 YR 4/6 strong brown	Ø	compact sand - STP moved forward due to fallen trees

TRANSECT: BEGINNING UTM: N ____ E ____
TRANSECT: Ending UTM: N ____ E ____

11733 Chesterdale Road
Cincinnati, Ohio 45246

ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Page 1 of ____

Project Name/Number 1595.001   Map or Quad ____   Segment # Office Area   Transect # ____   Date 06/16/04   Recorder(s) CB

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
C1	E	15 m N of B1	Clear cut field, level	Organic, humic	0-7	10YR 3/2 sand, humus	Ø	
				Horizon 1	7-25	10YR 5/2 sand	Ø	Leached horizon some small gravels ↓
				Horizon 2	25-48	7.5YR 4/6 sand	Ø	
C2	E	290° 15m W of C1	Clear cut field, level	Organic, humic	0-6	10YR 3/2 sand, humus	Ø	
				Horizon 1	6-19	10YR 5/2 sand	Ø	Leached horizon some small gravels ↓
				Horizon 2	19-46	7.5YR 4/6 sand	Ø	
C3	P	290° 15m W of C2	Dirt road leading to vise @ N	—	—	—	Ø	
C4	E	290° 15m W of C3	Clear cut field, level	Organic, humic	0-6	10YR 3/2 sand, humus	Ø	
				Horizon 1	6-22	10YR 5/2 Sand	Ø	Leached horizon some small gravels ↓
				Horizon 2	22-49	7.5YR 4/6 sand	Ø	
				Sand	49-51	10YR 5/4 coarse sand	Ø	
C5	E	290° 15m W of C4	Clear cut field, level	Organic, humic	0-7	10YR 3/2 sand, humus	Ø	
				Horizon 1	7-18	10YR 5/2 sand	Ø	Leached horizon
				Horizon 2	18-34	7.5YR 4/6 sand	Ø	
				Hard pan	34+	10R 3/2		at base of unit

TRANSECT: Beginning UTM: N ____ E ____
TRANSECT: Ending UTM: N ____ E ____

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Cincinnati, Ohio 45246

ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number 1595 001 Map or Quad ______ Segment # Office Area Transect # ______ Date 06/16/2004 Recorder(s) ______ Page 2 of ______

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
C6	E	290° 15m W of C5	Clear cut field, level	Organic, humic	0-11	10YR 3/2 sand, humus	Ø	
				Horizon1	11-22	10YR 5/2 sand	Ø	Leached horizon some small gravels
				Horizon2	22-50	7.5YR 4/6 sand	Ø	
C7	E	290° 15m W of C6	Clear cut field, level	Organic, humic	0-9	10YR 3/2 sand, humus	Ø	
				Horizon1	9-27	10YR 5/2 sand	Ø	Leached horizon
				Horizon2	27-39	7.5YR 4/6 sand	Ø	
				Sand	39-47	10YR 5/4 coarse sand	Ø	
C8	E	15m 290° W of C7	Clear cut field, level	Organic, humic	0-6	10YR 3/2 sand, humus	Ø	
				Horizon1	6-12	10YR 5/2 sand	Ø	Leached horizon
				Horizon2	12-49	7.5YR 4/6 sand	Ø	10YR 5/4 Coarse sand @ base
C9	E	15m 290° W of C8	Clear cut field, level	Organic humic	0-9	10YR 3/2 sand, humus	Ø	
				Horizon1	9-17	10YR 5/2 sand	Ø	Leached horizon
				Horizon2	17-51	7.5YR 4/6 sand	Ø	
				Sand	51 +	10YR 5/4 coarse sand	Ø	

TRANSECT: BEGINNING UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

BHE

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number: Golden
Map or Quad:
Segment #: Africa (?) apex
Transect #: D
Date: 6/16/04
Recorder(s): DLB
Page 1 of 2

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
D-1	E		clear cut	H	0-5	10YR 3/2 very dk. greyish brn	—	—
"				1	5-25	10YR 5/2 gry. brn. sand	—	—
"				2	25-35	10YR 4/4 silty brn. sand	—	w. some gravels
D-2	E	15 m 290° of D-1	"	H	0-7	"	—	—
"				1	7-13	"	—	
"				2	13-25	"	—	hit hard layer
D-3	D	" of D-2	"	—	—	not excavated	—	on eastern edge of access road
D-4	E	" of D-3	"	H	0-7	"	—	
"	—	—	—	1	7-15	"	—	
"	—	—	—	2	15-35	"	—	some gravels
D-5	E	" of D-4	"	H	0-5	10YR 3/2 humus		
"		—		1	5-12	10YR 5/2 sand		
"	—	—		2	12-37	10YR 4/6 sand dense w. cobbles	(poss. the	meeting hard layer)
D-6	E	" of D-5	"	H	0-10	"		

TRANSECT: BEGINNING UTM: N ____ E ____
TRANSECT: Ending UTM: N ____ E ____

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Cincinnati, Ohio 45246

ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number Volder

Map or Quad

Segment # 0 three spoil
Transect # D

Date 6/16/04
Recorder(s) DLB

Page 2 of 2

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet (use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
D-6	E	15 m 290° of D-5	Clear cut	1	10-20	10YR 5/2 gray brn s. ld	—	
"	—	—	—	2	20-35	10YR 4/4 strong brn s. ld	—	becomes compact / some gravels
D-7	E	" of D-6	"	H	0-10	"	—	"
"		"	"	1	10-20	"	—	"
"		"		2	20-37	"	—	"
D-8	E	" of D7	"	H	"	"	—	
"				1	"	"	—	
"				2	"	"	—	"
D-9	E	" of D-8	"	H	"	"	—	
"				1	"	"	—	
"				2	"	"	—	"

TRANSECT: BEGINNING UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

11733 Chesterdale Road
Cincinnati, Ohio 45246

ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number: Golder 1595
Map or Quad:
Segment #: The Office Area
Transect #:
Date: 6-16-04
Recorder(s): SKY
Page 1 of 2

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
E1	E	15m 20° from D1	Open	organic humic	0-5	10 YR 3/2 sand very dark grayish brown	Ø	organic soil
"	"			Horizon 1	5-18	10 YR 5/2 sand grayish brown	Ø	leached soil
"	"	"	"	Horizon 2	18-47	7.5 YR 4/6 sand strong brown	Ø	compact sand
E2	E	15m 290° from E1	Open	organic humic	0-5	10 YR 3/2 sand	Ø	organic soil supports vegetation
"	"	"	"	1	5-20	10 YR 5/2 sand	Ø	leached soil sparse gravel
"	"	"	"	2	20-44	7.5 YR 4/6 sand	Ø	compact sand terminated on hard pan
E3	E	15m 290° from E2	Open	organic humic	0-5	10YR 3/2 sand	Ø	organic soil
"	"	"	"	1	5-21	10YR 5/2 sand	Ø	leached soil
"	"	"	"	2	21-46	7.5 YR 4/6 sand	Ø	compact sand
E4	E	15m 290° from E3	Open	organic humic	0-6	10YR 3/2 sand	Ø	organic soil
"	"	"	"	1	6-22	10YR 5/2 sand	Ø	leached soil sparse gravel
"	"	"	"	2	22-44	7.5 YR 4/6	Ø	compact soil sparse gravel
E5	E	15m 290° from E4	Open	organic humic	0-4	10YR 3/2 sand	Ø	organic soil
"	"	"	"	1	4-12	10YR 5/2	Ø	leached soil light gravel

TRANSECT: BEGINNING UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

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Cincinnati, Ohio 45246

ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number: Golder 1595
Map or Quad:
Segment #: The Office Area
Transect #:
Date: 6-16-04
Recorder(s): SKT

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet (use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
E5	E	15 – 210° from E4	Open	Horizon 2	12 – 49	7.5 YR 4/6 sand strong brown	Ø	compact sand light gravel
E6	E	15m 290° from E5	Open	Organic humic	0 – 7	10 YR 3/2 sand	Ø	organic soil supports vegetation
"	"	"	"	Horizon 1	7 – 24	10 YR 5/2 sand	Ø	leached soil light gravel
"	"	"	"	2	24 – 37	7.5 YR 4/6 sand	Ø	compact soil - terminate on hard pan - 5YR 3/2 dark reddish brown
					–			
E7	E	15m 290° from E6	Open	Organic humic	0 – 9	10 YR 3/2 sand	Ø	organic soil
"	"	"	"	1	9 – 27	10 YR 5/2 sand	Ø	leached soil light gravel
"	"	"	"	2	27 – 48	7.5 YR 4/6 sand	Ø	compact sand SL located west due to Timber
E8	E	15m 290° from E7	Open	Organic humic	0 – 6	10 YR 3/2 sand	Ø	organic soil
"	"	"	"	1	6 – 29	10 YR 5/2 sand	Ø	leached soil light gravel
"	"	"	"	2	29 – 46	7.5 YR 4/6 sand	Ø	compact sand no gravel
E9	E	15m 290° from E8	Open	Organic humic	0 – 5	10 YR 3/2 sand	Ø	organic soil
"	"	"	"	1	5 – 19	10 YR 5/2 sand	Ø	leached soil no gravel
"	"	"	"	2	19 – 53	7.5 YR 4/6 sand	Ø	compact sand no gravel

TRANSECT: Beginning UTM: N ____ E ____
TRANSECT: Ending UTM: N ____ E ____

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Cincinnati, Ohio 45246

ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number 1595.001 | Map or Quad ______ | Segment # Office Area | Transect # F | Date 06/15/2004 | Recorder(s) CR | Page 1 of 2

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
F1	E	20° 15m N of E1	Clear cut, level	Organic, humic	0-10	10YR 3/2 sand, humus	Ø	
				Horizon 1	10-30	10YR 5/2 sand	Ø	Leached horizon with some small gravels
				Horizon 2	30-48	7.5YR 4/6 sand	Ø	
F2	E	290° 15m W of F1	Clear cut, field	Organic, humic	0-8	10YR 3/2 sand, humus	Ø	
				Horizon 1	8-23	10YR 5/2 sand	Ø	Leached horizon with some small gravels
				Horizon 2	23-43	7.5YR 4/6 sand	Ø	
F3	P	290° 15m W of F2	Dirt road leading N to rise	—	—	—	Ø	
F4	E	290 15m W of F3	Clear cut, field	Organic, humic	0-11	10YR 3/2 sand, humus	Ø	
				Horizon 1	11-25	10YR 5/2 sand	Ø	Leached horizon
				Horizon 2	25-44	7.5YR 4/6 sand	Ø	
				Sand	44-49	7.5YR 5/4 coarse sand	Ø	
F5	E	290° 15m W of F4	Clear cut, field	Organic, humic	0-3	10YR 3/2 sand, humus	Ø	
				Horizon 1	3-7	10YR 5/2 sand	Ø	Leached horizon with some small gravels
				Horizon 2	7-28	7.5YR 4/6 sand	Ø	
				Sand	28-35	7.5YR 5/4 coarse sand	Ø	

TRANSECT: BEGINNING UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

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Cincinnati, Ohio 45246

ARCHAEOLOGICAL SAMPLE LOCUS FORM

****Fill Out Form Completely!****

Page 2 of 2

Project Name/Number 1595.001 | Map or Quad ______ | Segment # Office Area | Transect # F | Date 06/16/2004 | Recorder(s) QB

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet (use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
F6	E	290° 15m W of F5	Clear cut, level	Organic, humic	0-8	10YR 3/2 sand, humus	Ø	
				Horizon 1	8-23	10YR 5/2 sand	Ø	Leached horizon some small gravels ↓
				Horizon 2	23-47	7.5YR 4/6 sand	Ø	
F7	E	290° 15m W of F6	Clear cut, level	Organic, humic	0-7	10YR 3/2 sand, humus	Ø	
				Horizon 1	7-20	10YR 5/2 sand	Ø	Leached horizon some small gravels ↓
				Horizon 2	20-50	7.5YR 4/6 sand	Ø	
F8	E	290° 15m W of F7	Clear cut, level	Organic, humic	0-10	10YR 3/2 sand, humus	Ø	
				Horizon 1	10-20	10YR 5/2 sand	Ø	Leached horizon some small gravels ↓
				Horizon 2	20-42	7.5YR 4/6 sand	Ø	hard pan @ base, 42 cm
F9	E	290° 15m W of F8	Clear cut, level	Organic, humic	0-8	10YR 3/2 sand, humus	Ø	
				Horizon 1	8-29	10YR 5/2 sand	Ø	Leached horizon some small gravels ↓
				Horizon 2	29-34	7.5YR 4/6	Ø	hard pan @ base, 34 cm

TRANSECT: Beginning UTM: N______ E______
TRANSECT: Ending UTM: N______ E______

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number: Golden
Map or Quad:
Segment #: Office space
Transect #: 6
Date: 6/16/04
Page 2 of 2
Recorder(s): DLB

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
"				2	22-32	"	—	hit hard pan, 32 cm
6-4	E	W of 15 m 290° 6-3	Clear cut, level	H	0-7	10YR 3/2 humic	—	
"				1	7-30	10YR 5/2 sand	—	
"				2	30-49	10YR 4/4 sand	—	some small gravels
6-3	P	15 m 290° W of 6-2	Dirt road leading N to rise			in access	road	
6-2	E	15 m 290° W of 61	Clear cut, level	H	0-8	10YR 3/2 sand, humus	Ø	
				1	8-23	10YR 5/2 sand	Ø	Leached horizon some small gravels
				2	23-43	7.5YR 5/4 sand	Ø	
6-1	E	15 m N 20° of F1	Clearcut, level	H	0-6	10YR 3/2 sand, humus	Ø	
				1	6-19	10YR 5/2 sand	Ø	Leached horizon some small gravels
				2	19-50	7.5YR 5/4 sand	Ø	

TRANSECT: BEGINNING UTM: N ________ E ________
TRANSECT: Ending UTM: N ________ E ________

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Cincinnati, Ohio 45246

ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number: Golden
Map or Quad:
Segment #: office space
Transect #: G
Date: 6/16/04
Recorder(s): DLB
Page 1 of 2

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
G-9	E	see	clear cut	H	0-9	10YR 3/2 humic	—	
"		G10 15m W 290° of		1	9-22	10YR 5/3 [illegible] loam sand	—	
"		G8		2	22-45	10YR 4/6 strong brown sand	—	becoming compact w/ some gravel
G-8	E	15 m W 290° of G-9		H	0-9	"	—	
"				1	9-23	"	—	
"				2	23-48	"	—	"
G-7	E	" of G-6	"	H	0-11	"	—	
"				1	11-34	"	—	
"				2	34-54	"	—	"
G-6	E	" of G-5	"	H	0-8	"	—	
"				1	8-23	"	—	
"				2	23-34	"	—	hard pan at base, 34 cm
G-5	E	" of G-4	"	H	0-5	"	—	
"				1	5-22	"	—	

TRANSECT: Beginning UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

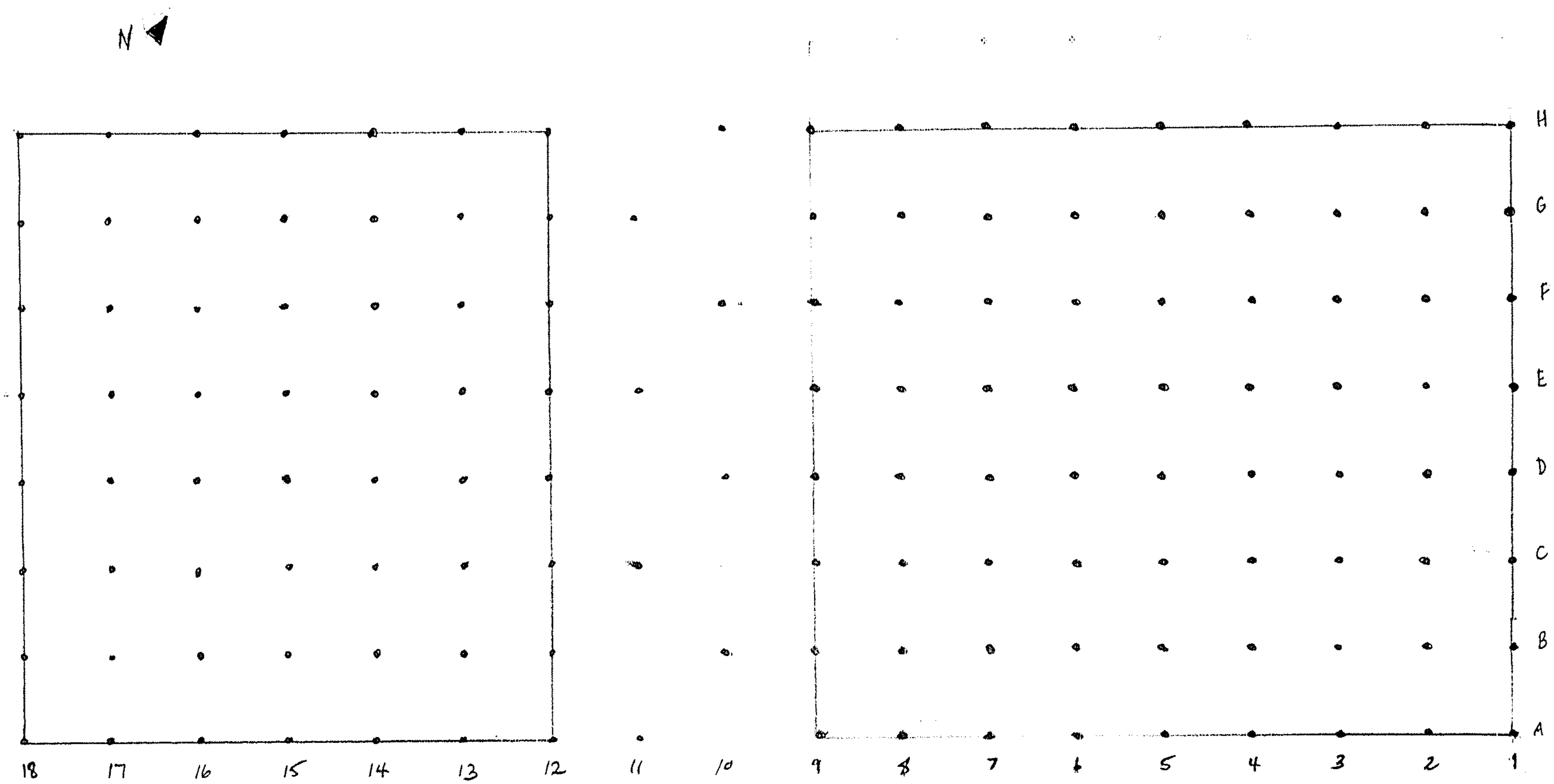
TRANSECT ; POND / PAD
06/17 - 06/18

	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
H					E	E	E	E	P	E	E	E	E	E	E	E	P	E
G					E	E	E	P	E	E	E	E	P	E	P	E	E	E
F						E	E	P	E	E	P,D	E	E	E	E	E	E	E
E						E	E	E	E	E	E	D	E	D	E	E	E	E
D				E	D	E	E	P	E	P	E	E	E	E	E	E	D	E
C			D	P	D	E	E	P	E	E	E	E	E	P,D	E	E	E	E
B			P	E	D	E	E	E	P	E	E	E	E	E	E	E	E	D
A					E	E	E	P	E	E	E	D	E	D	E	D	E	E

120 SL ÷ 17 acre 7.1 acre

TRANSECT: ROCK LINED STORAGE PAD

LINED HOLDING PAD



56 SL

8 SL

72 SL

PROJECTED @ 136 SL ÷ 17 = 8 ACRES

BHE

11733 Chesterdale Road
Cincinnati, Ohio 45246

ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

50°

Project Name/Number: Golden

Map or Quad:

Segment #: road / pond

Transect #: A

Date: 6/17/04

Page 1 of

Recorder(s): DLB

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
A 1	E	see GPS	clear cut	H	0-5	7.5 yr 3/1 very dk gray	—	
"				1	5-15	7.5 yr 6/2 pinkish gray sand	—	
"				2	15-32	5 yr 5/8 yellowish red sand	—	gravels throughout becoming compact
"		"	"	hard pan	32-35	2.5 yr 3/4 dk red brn compact sand	—	
A 2	E	15 m 230° of A 1	clear cut	2	0-25	5 yr 5/8 yellowish red sand	—	no top soil
A 3	D	" of A 2	"	—		push pile area	—	not excavated
A 4	E	" of A 3		H	0-2	same	—	
"				1	2-5	"	—	
"				2	5-35	above	—	gravels becoming compact
A 5	D	15 m 230° of A 4	"	—		disturbed / tree stump area	NA	excavated
A6	E	" of A 5	"	H	0-5	same	—	
"				1	5-10	"	—	
"				2	10-30	above	—	
A 7	D	" of A6	tree roots	stump	nd	not excavated	—	—

TRANSECT: Beginning UTM: N E

TRANSECT: Ending UTM: N E

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Cincinnati, Ohio 45246

ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number: golden | Map or Quad: | Segment #: pond / pond | Transect #: A | Date: 6/17/04 | Recorder(s): DLB | Page 2 of

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
A 8	E	15 m @ 230° of A7	clear cut	H	0-5	same	—	
"				1	5-15	as	—	
"				2	15-40	above	—	becoming compact w/ gravel
A 9	E	" of A 8	"	H	0-5	"	—	
"				1	5-10		—	
"				2	10-35	"	—	hit hard pan @ 35
A 10	E	" of A 9	"	H	"	"	—	
"				1	"	"	—	
"				2	"	"	—	
A 11	Did	not	excavate		(area	not	being	built)
A 12	E	15 m 230° of A 11	"	H	0-6	"	—	
"				1	6-17	"	—	
"				2	17-35	"	—	"
A 13	E	" of A 12	"	H	0-7			

TRANSECT: Beginning UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

BHE

11733 Chesterdale Road
Cincinnati, Ohio 45246

ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number: bolduy

Map or Quad:

Segment #: pond/pad
Transect #: A

Page 3 of
Date 6/17/04
Recorder(s) DLB

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
A 13	E	15 m 230° ↑ A 12	clean cut	1	7-15	"	—	
"				2	15-35	"	—	
A 14	E	" ↑ A 13	"	H	0-2	"	—	
"				2	2-30	"	—	gravels / EOT
		/						

TRANSECT: Beginning UTM: N ________ E ________
TRANSECT: Ending UTM: N ________ E ________

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Cincinnati, Ohio 45246

ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number: Golder 1595
Map or Quad:
Segment #: Pad + Pond
Transect #: B
Date: 6-17-04
Recorder(s): SKY
Page 1 of 3

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
B1	D	15m 120° N from A1	Open	Disturbed	0 – 48	10YR 4/2 dark grayish brown	Ø	Disturbed soil – Burn Pile to Foresting
"	"	"	"	Horizon 2	48 – 55	7.5 YR 4/6 strong brown	Ø	Terminated on hard pan 2.5 YR 3/4 dark reddish brown
B2	E	15m 230° N from B1	Open	Organic humic	0 – 8	7.5 YR 3/1 very dark gray	Ø	organic soil supports vegetation
"	"	"	"	Horizon 1	8 – 13	7.5 YR 6/2 pinkish gray	Ø	leached soil
"	"	"	"	2	13 – 50	5 YR 5/8 yellowish red	Ø	compact sand terminating on hard pan
B3	E	15m 230° N from B2	Open	organic humic	0 – 5	7.5 YR 3/1 sand	Ø	Organic soil supports vegetation
"	"	"	"	1	5 – 21	7.5 YR 6/2 sand	Ø	leached soil light gravel
"	"	"	"	2	21 – 48	5 YR 5/4 sand	Ø	compact sand light gravel
B4	E	15m 230° N from B3	Open	organic humic	0 – 6	7.5 YR 3/1 sand	Ø	organic soil
"	"	"	"	1	6 – 19	7.5 YR 6/2 sand	Ø	leached soil light gravel
"	"	"	"	2	19 – 35	5 YR 5/8 Sand	Ø	compact sand, terminated on hard pan.
B5	E	15m 230° N from B4	open	organic humic	0 – 7	7.5 YR 3/1 sand	Ø	organic sand
"	"	"	"	1	7 – 21	7.5 YR 6/2 sand	Ø	leached horizon little gravel
"	"	"	"	2	21 – 49	5 YR 5/8 sand	Ø	compact sand, sparse gravel

TRANSECT: Beginning UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

11733 Chesterdale Road
Cincinnati, Ohio 45246

ARCHAEOLOGICAL SAMPLE LOCUS FORM

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Page 2 of 3

Project Name/Number: Golder 1595
Map or Quad:
Segment #: Pad + Pond
Transect #: B
Date: 6-17-04
Recorder(s): SKY

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
B6	E	15m 230° N from B5	Open	Organic humic	0-7	7.5 YR 3/1 sand very dark gray	ø	organic soil supports vegetation
"	"	"	"	Horizon 1	7-23	7.5 YR 6/2 pinkish gray	ø	leached soil light gravel
"	"	"	"	Horizon 2	23-52	5 YR 5/8 yellowish red	ø	compact sand.
B7	E	15m 230° N from B6	Open	Organic humic	0-7	7.5 YR 3/1 sand	ø	Organic soil
"	"	"	"	1	7-26	7.5 YR 6/2 sand	ø	leached soil
"	"	"	"	2	26-49	5 YR 5/8 sand	ø	compact soil
"	"	"	"	sand	49-53	10 YR 5/6 strong brown	ø	corse sand.
B8	E	15m 230° N from B7	Open	Organic humic	0-7	7.5 YR 3/1 sand	ø	organic sand
"	"	"	"	1	7-19	7.5 YR 6/2 sand	ø	leached soil light gravel
"	"	"	"	2	19-30	5 YR 5/8 sand	ø	compact sand terminated on hard pan 2.5 YR 3/4 dark reddish brown
B9	E	15m 230 N from B8	Open	Organic humic	0-8	7.5 YR 3/1 sand	ø	organic soil supports vegetation
"	"	"	"	*Horizon 1	8-45	7.5 YR 4/3 brown sand	ø	brownish sand - compact sand mixed throughout
"	"	"	"	*Horizon 2	45-54	5 YR 5/8 sand	ø	compact sand. sparse pebbles
B10	skipped due to grid							

TRANSECT: Beginning UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

BHE

11733 Chesterdale Road
Cincinnati, Ohio 45246

ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number: Golder 1595 | Map or Quad: ____ | Segment #: Pad & Pond | Transect #: B | Date: 6-17-04 | Recorder(s): SKY | Page 3 of 3

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
B11	E	30m 230°N from B9	Open	organic humic	0-5	7.5YR 3/1 sand very dark gray	Ø	organic soil supports vegetation
"	"	"	"	Horizon 1	5-23	7.5YR 6/2 sand pinkish gray	Ø	leached soil
"	"	"	"	Horizon 2	23-46	5YR 5/8 yellowish red sand	Ø	compact sand
B12	E	15m 230°N from B11	Open	organic humic	0-7	7.5YR 3/1 sand	Ø	organic soil
"	"	"	"	1	7-29	7.5YR 6/2 sand	Ø	leached soil light gravel
"	"	"	"	2	21-51	5YR 5/8	Ø	compact sand light gravel
B13	E	15m 230°N from B12	Open	organic humic	0-8	7.5YR 3/1 sand	Ø	organic soil
"	"	"	"	1	8-32	7.5YR 6/2 sand	Ø	leached soil light gravel
"	"	"	"	2	32-44	5YR 5/8 sand	Ø	compact sand light gravel
B14	D	Disturbance due to forestry - Buried, decaying wood. ≈ 15cm						
B15	E	15m 230°N from B13	Open	organic humic	0-	7.5YR 3/1 sand	Ø	organic soil
"	"	"	"	1	-	7.5YR 6/2 sand	Ø	leached soil light gravel
"	"	"	"	2	-	5YR 5/8 sand	Ø	compact soil no gravel
B16	P	Road to solar powered station.						

TRANSECT: Beginning UTM: N ____ E ____
TRANSECT: Ending UTM: N ____ E ____

BHE

11733 Chesterdale Road
Cincinnati, Ohio 45246

ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number 1595 001 Map or Quad ______ Segment # Pond, Pad Transect # C Date 06/17 Recorder(s) QB Page 1 of 3

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet (use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
C1	E	15m 120° N of B1	Clear cut, level	Humic, organic	0-7	7.5YR 3/1 sand, root	Ø	
				Horizon1	7-15	7.5YR 6/2 sand	Ø	Leached horizon some small gravels ↓
				Horizon2	15-33	5YR 5/8 sand	Ø	
				Hard Pan	33+	2.5YR 3/4 compact sand	Ø	@ base of unit
C2	E	15m 230° W of C1	Clear cut, level	Humic, organic	0-8	7.5YR 3/1 sand, root	Ø	
				Horizon1	8-20	7.5YR 6/2 sand	Ø	Leached horizon some small gravels ↓
				Horizon2	20-34	5YR 5/8 sand	Ø	
				Hard Pan	34+	2.5YR 3/4 compact sand	Ø	@ base of unit
C3	E	15m 230° W of C2	Clear cut, level	Humic, organic	0-8	7.5YR 3/1 sand, root	Ø	
				Horizon1	8-22	7.5YR 6/2 sand	Ø	Leached horizon some small gravels ↓
				Horizon2	22-49	5YR 5/8 sand	Ø	on top of course sand
C4	E	15m 230° W of C3	Clear cut, level	Humic, organic	0-8	7.5YR 3/1 sand, root	Ø	
				Horizon1	8-20	7.5YR 6/2 sand	Ø	leached horizon some small gravels ↓
				Horizon2	20-47	5YR 5/8 sand	Ø	on top of course sand

TRANSECT: BEGINNING UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number 1595 001

Map or Quad

Segment # Pond/Pad
Transect # C

Date 06/17/04
Recorder(s) CB

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
C5	P, D	15m 230° W of C4	Clear cut, level	—	—	—	Ø	at push with tree stump and tree limbs
C6	E	15m 230° W of C5	Clear cut, level	Humic, organic	0-8	7.5YR 3/1 sand, root	Ø	
				Horizon1	8-12	7.5YR 6/2 sand	Ø	Leached horizon some small gravels ↓
				Horizon2	12-43	5YR 5/8 sand	Ø	
C7	E	15 m 230° W of C6	Clear cut, level	Humic, organic	0-6	7.5 YR 3/1 sand, root	Ø	
				Horizon1	6-16	7.5 YR 6/2 sand	Ø	Leached horizon some small gravels ↓
				Horizon2	16-43	5YR 5/8 sand	Ø	
C8	E	15 m 230° W of C7	Clear cut, level	Humic, organic	0-8	7.5YR 3/1 sand, root	Ø	
				Horizon1	8-15	7.5 YR 6/2 sand	Ø	Leached horizon some small gravels ↓
				Horizon2	15-37	5YR 5/8 sand	Ø	
C9	E	15m 230° W of C8	Clear cut, level	Humic, organic	0-7	7.5 YR 3/1 sand, root	Ø	
					7-21	7.5YR 6/2 sand	Ø	Leached horizon some small gravels ↓
					21-46	5 YR 5/8 sand	Ø	

TRANSECT: Beginning UTM: N ________ E ________
TRANSECT: Ending UTM: N ________ E ________

11733 Chesterdale Road
Cincinnati, Ohio 45246

ARCHAEOLOGICAL SAMPLE LOCUS FORM

****Fill Out Form Completely!****

Project Name/Number 1595.001
Map or Quad ______
Segment # Pad/Pond
Transect # C
Date CB
Recorder(s) 6/17/04
Page 3 of 3

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
C10	E	15m 230° W of C9	Clear cut, field	Humic, organic	0-8	7.5YR 3/1 sand, root	Ø	
				Horizon 1	8-23	7.5 YR 6/2 sand	Ø	Leached horizon, some small gravels ↓
				Horizon 2	23-45	5YR 5/8 sand	Ø	
C11	E	15m 230° W of C10	Clear cut, field	Humic, organic	0-8	7.5 YR 3/1 sand, root	Ø	
				Horizon 1	8-24	7.5 YR 6/2 sand	Ø	Leached horizon, some small gravels ↓
				Horizon 2	24-40	5YR 5/8 sand	Ø	
C12	E	15m 230° W of C11	Clear cut, field	Humic, organic	0-10	7.5 YR 3/1 sand, root	Ø	lots of charcoal
				Horizon 1	10-21	7.5 YR 6/2 sand	Ø	Leached horizon some small gravels ↓
				Horizon 2	21-52	5 YR 5/8 sand	Ø	
C13	E	15m 230° W of C12	Clear cut, field	Humic, organic	0-8	7.5YR 3/1 sand, root	Ø	
				Horizon 1	8-21	7.5 YR 6/2 sand	Ø	leached horizon some small gravels ↓
				Horizon 2	21-49	5YR 5/8 sand	Ø	Hard Pan @ 49cm
C14	D	15m 230° W of C13	Pushpile	—	—	—	Ø	large pushpile by N-S trending dirt road
C15	P	15m 230° W of C14	Dirt road	—	—	—	Ø	large pushpile W of N-S trending dirt road
C16	D	15m 230° W of C15	Pushpiles	—	—	—	Ø	

TRANSECT: BEGINNING UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

BHE Environmental

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Cincinnati, Ohio 45246

ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number: Golden
Map or Quad:
Segment #: pond / pad
Transect #: D
Date: 6/17/04
Recorder(s): DLB

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet (use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
D-1	E	15 m 320° of C1	clear cut	H	0-5	7.5 yr 3/1 very dk gray humus	—	
"				1	5-12	7.5 yr 6/2 pinkish gray sand	—	
"				2	12-42	5 yr 5/8 yel red sand	—	w. some gravels; hit hard pan @ 42 cm
D-2	D	15 m 230° of D1	"	not excavated	in tree filled cut area			
D-3	E	" of D2	"	H	0-7	same	—	
"				1	7-17	"	—	
"				2	17-40	above	—	some gravels
D4	E	" of D3	"	H	0-6	"	—	
"				1	6-17	"	—	
"				2	17-35	"	—	some gravel; hit hard pan @ 35 cm
D5	E	" of D4	"	H	0-5	"	—	
				1	5-10	"	—	
				2	10-35	"	—	
D6	E	" of D5	"	H	0-10	"	—	

TRANSECT: BEGINNING UTM: N ____ E ____
TRANSECT: Ending UTM: N ____ E ____

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Cincinnati, Ohio 45246

ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number: Golden

Map or Quad: ______

Segment #: pond / pond
Transect #: D

Date: 6/17/04
Recorder(s): DLB

Page 2 of 3

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
D6	E	15 m 230° from D5	clear cut	1	10-15	"	—	
"				2	15-30	"	—	some gravels
D7	E	" from D6	"	H	0-7	7.5yr 3/1 very dk gray humus	—	
"				1	7-17	7.5yr 6/2 pinkish gray sand	—	
"				2	17-35	5yr 5/8 yellow red sand	—	"
D8	E	" from D7	"	H	"	"	—	
"				1	"	"	—	
"				2	"	"	—	"
D9	D	" from D8	"	did not excavate — rutted pond area w. fallen trees & stumps				
D10	E	" from D9	"	H	0-5	"		
"				1	5-20	"		
"				2	20-32	"		
D11	did not excavate - no buildings garage here							

TRANSECT: Beginning UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

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Cincinnati, Ohio 45246

ARCHAEOLOGICAL SAMPLE LOCUS FORM

****Fill Out Form Completely!****

Project Name/Number: Golder
Map or Quad:
Segment #: pond / road
Transect #: D
Date: 6/18/04
Recorder(s): DLB
Page 3 of 3

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet (use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
D12	E	15 m 230° of D10	clean cut	H	0-10	7.5yr 3/1 very dk gray humus		
"				1	10-20	7.5 yr 6/2 pinkish gray sand		
"				2	20-32	5yr 5/8 yell. red sand		w. gravels
D13	E	" of D12	"	H	0-5	s.a.		-
"				1	5-22	s.a.		
"	—	—		2	22-34	above		"
D14	D	in wood pile		E	of dirt road			
D15	E	3m 230° of dirt rd.	clean cut	2	0-25	5yr 5/8 yell red sand w. some gravels / becoming compact		

TRANSECT: BEGINNING UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

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Cincinnati, Ohio 45246

ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number: Golden 1595
Map or Quad:
Segment #: Pad + Pond
Transect #: E
Date: 6-17-04
Recorder(s): SKY
Page 1 of 3

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
E1	E	15M 300°N from D1	Open	organic humic	0-5	7.5YR 3/1 sand very dark gray	Ø	organic soil supports vegetation
"	"	"	"	Horizon 1	5-17	7.5YR 6/2 pinkish gray sand	Ø	leached soil
"	"	"	"	Horizon 2	17-42	5YR 5/8 sand yellowish red	Ø	compact sand
E2	E	15M 230°N from E1	Open	Organic humic	0-7	7.5YR 2/1 sand	Ø	organic soil
"	"	"	"	1	7-24	7.5YR 6/2 sand	Ø	leached soil sparse gravel
"	"	"	"	2	24-53	5YR 5/4 sand	Ø	compact sand sparse gravel
E3	E	15M 230°N from E2	open	organic humic	0-9	7.5YR 3/1 sand	Ø	organic soil
"	"	"	"	1	9-21	7.5YR 6/2 sand	Ø	leached soil light gravel
"	"	"	"	2	21-36	5YR 5/8 sand	Ø	compact sand terminated on hard pan - 7.5YR 3/4
E4	E	15m 230°N from E3	Open	Organic humic	0-7	7.5YR 3/1 sand	Ø	Organic soil
"	"	"	"	1	7-22	7.5YR 6/2 sand	Ø	leached soil light gravel
"	"	"	"	2	22-56	5YR 5/8 sand	Ø	compact sand heavy gravel
E5	D	Disturbed -	Pile of	fallen timbers	and	stump - soil	also	disturbed

TRANSECT: BEGINNING UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

****Fill Out Form Completely!****

Project Name/Number: Golder 1545
Map or Quad:
Segment #: Pad - Pond
Transect #: E
Date: 6-17-04 6-18-04
Recorder(s): SKW
Page 2 of 3

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet (use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
E6	E	15m 230° N from E5	Open	Organic humic	0-7	7.5YR 3/1 sand very dark gray	Ø	organic soil supports vegetation
"	"	"	"	Horizon	7-26	7.5YR 6/2 sand pinkish gray sand	Ø	leached soil sparse gravel
"	"	"	"	Horizon 2	26-48	5YR 5/6 sand yellowish red sand	Ø	compact sand
E7	D - Disturbed - stumps and fallen timbers							
E8	E	30m 230° N from E6	Open	Organic humic	0-5	7.5YR 3/1 sand	Ø	organic soil
"	"	"	"	1	5-15	7.5YR 6/2 sand	Ø	leached soil
"	"	"	"	2	15-37	5YR 5/8 sand	Ø	compact sand
E9	E	15m 230° N from E8	Open	organic humic	0-6	7.5YR 3/1 sand	Ø	organic soil
"	"	"	"	1	6-20	7.5YR 6/2 sand	Ø	leached sand sparse gravel
"	"	"	"	2	20-55	5YR 5/8 sand	Ø	compact sand sparse gravel
E10	E	15m 230° N from E9	Open	Organic humic	0-8	7.5YR 3/1 sand	Ø	organic soil
"	"	"	"	1	8-19	7.5YR 6/2 sand	Ø	leached soil
"	"	"	"	2	19-49	5YR 5/8 sand	Ø	compact sand.

TRANSECT: Beginning UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

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Cincinnati, Ohio 45246

ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number: Golder 1595
Map or Quad:
Segment #: Pad + Pond
Transect #: E
Date: 6-18-04
Recorder(s): SKY
Page 3 of 3

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
E11	E	15M 230° N from E10	Open	Organic humic	0-5	7.5YR 3/1 sand very dark gray	Ø	organic soil supports vegetation
"	"	"	"	Horizon 1	5-26	7.5YR 6/2 sand pinkish gray sand	Ø	leached soil light gravel
"	"	"	"	Horizon 2	26-48	5YR 5/8 sand yellowish red	Ø	compact soil sparse gravel
E12	E	15m 230° N from E11	Open	Organic humic	0-7	7.5YR 3/1 sand	Ø	Organic soil
	"	"	"	1	7-13	7.5YR 6/2 sand	Ø	leached soil light gravel
	"	"	"	2	13-44	5YR 5/8 sand	Ø	compact sand - terminated on hard pan - 2.5YR 3/4
E13	"	15m 230° N from E11	Open	Organic humic	0-11	7.5YR 3/1 sand	Ø	Organic soil
"	"	"	"	1	11-27	7.5YR 6/2 sand	Ø	leached soil sparse gravel
"	"	"	"	2	27-53	5YR 5/8 sand	Ø	compact sand. Sparse gravel

TRANSECT: BEGINNING UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

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Cincinnati, Ohio 45246

ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number 1595.001 | Map or Quad ______ | Segment # Pond/Pad | Transect # F | Date 06/17 | Recorder(s) CB | Page 1 of 3

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
F1	E	15m 20° N of E1	Clear cut, level	Organic, humic	0-8	7.5YR 3/1 sand, root	Ø	
				Horizon 1	8-23	7.5YR 6/2 sand	Ø	Leached horizon some small gravels ↓
				Horizon 2	23-39	5YR 5/8 sand	Ø	
F2	E	15m 230° W of F2	Clear cut, level	Organic, humic	0-6	7.5YR 3/1 sand, root	Ø	
				Horizon 1	6-15	7.5 YR 6/2 sand	Ø	Leached horizon some small gravels ↓
				Horizon 2	15-47	5 YR 5/8 sand	Ø	
F3	E	15m 230° W of F2	Clear cut, level	Organic, humic	0-7	7.5 YR 3/1 sand, root	Ø	
				Horizon 1	7-19	7.5 YR 6/2 sand	Ø	Leached horizon some small gravels ↓
				Horizon 2	19-33	7.5 YR 3/1 sand	Ø	
				Hard Pan	33+	2.5 YR 3/4 compact sand	Ø	
F4	E	15m 230° W of F3	Clear cut, level	Organic, humic	0-9	7.5YR 3/1 sand, root	Ø	
				Horizon 1	9-18	7.5 YR 6/2 sand	Ø	Leached horizon some small gravels ↓
				Horizon 2	18-43	7.5 YR 3/1 sand	Ø	
				Hard Pan	43+	2.5 YR 3/4 compact sand	Ø	

TRANSECT: Beginning UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

11733 Chesterdale Road
Cincinnati, Ohio 45246

ARCHAEOLOGICAL SAMPLE LOCUS FORM

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Page 2 of 3

Project Name/Number 1595 001 | Map or Quad ____ | Segment # Pad / Pond | Transect # F | Date 06/17 | Recorder(s) CB

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
F5	E	15m 230° W of F4	Clear cut, level	Humic, organic	0-8	7.5YR 7/1 sand, root	Ø	
				Horizon 1	8-19	7.5YR 6/2 sand	Ø	Leached horizon some small gravels ↓
				Horizon 2	19-38	5YR 5/8 sand	Ø	Hard Pan @ 38cm
F6	E	15m 230° W of F5	Clear cut, level	Humic, organic	0-10	7.5 YR 3/1 sand, root	Ø	
				Horizon 1	10-19	7.5YR 6/2 sand	Ø	Leached horizon some small gravels ↓
				Horizon 2	19-49	5YR 5/8 sand	Ø	
F7	E	15 m 230° W of F6	Clear cut, level	Humic, organic	0-7	7.5 YR 3/1 sand, root	Ø	
				Horizon 1	7-25	7.5 YR 6/2 sand	Ø	Leached horizon
				Horizon 2	25-40	5YR 5/8 sand	Ø	
F8	P, D	15m 230° W of F7	Push pile, brush	—	—	—	Ø	Push pile around tree
F9	E	15m 230° W of F8	Clear cut, level	Humic, organic	0-6	7.5 YR 3/1 sand, root	Ø	
				Horizon 1	6-23	7.5 YR 6/2 sand	Ø	Leached horizon some small gravel ↓
				Horizon 2	23-47	5YR 5/8 sand	Ø	Hard Pan @ 47cm

TRANSECT: Beginning UTM: N ____ E ____
TRANSECT: Ending UTM: N ____ E ____

11733 Chesterdale Road
Cincinnati, Ohio 45246

ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number 1595.001
Map or Quad
Segment # Pad / Pond
Transect # F
Date
Recorder(s)

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
F10	E	15m 230° W of F9	Clear cut, level	Humic, organic	0-8	7.5YR 3/1 sand, root	Ø	
				Horizon 1	8-17	7.5YR 6/2 sand	Ø	Leached horizon some small gravel
				Horizon 2	17-50	5YR 5/8 sand	Ø	
F11	P	15m 230° W of F10	Dirt road	—	—	—	Ø	Dirt road trending N-S to solar panel
F12	E	15m 230° W of F11	Clear cut, level	Humic, organic	0-7	7.5YR 3/1 sand, root	Ø	
				Horizon 1	7-12	7.5YR 6/2 sand	Ø	Leached horizon some small gravel
				Horizon 2	12-24	5YR 5/8 sand	Ø	
				Hard Pan	34+	5YR 3/2 compact sand	Ø	
F13	E	15m 230° W of F12	Clear cut, field	Humic, organic	0-10	7.5YR 3/1 sand root	Ø	
				Horizon 1	10-29	7.5YR 6/2 sand	Ø	Leached horizon some small gravel
				Horizon 2	29-49	5YR 5/8 sand	Ø	

TRANSECT: BEGINNING UTM: N E
TRANSECT: Ending UTM: N E

BHE

11733 Chesterdale Road
Cincinnati, Ohio 45246

ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number 1595.00 Map or Quad ________ Segment # Pad/Pond Transect # 6 Date 06/18/2004 Recorder(s) CB Page 1 of 3

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet (use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
G1	E	15m 20° W of 61	Clearcut, level	Humic, organic	0-8	7.5YR 3/1 sand, root	Ø	
				Horizon1	8-24	7.5YR 6/2 sand	Ø	Leached horizon some small gravels
				Horizon2	24-42	5YR 5/8 sand	Ø	
G2	E	15m 230° W of 62	Clearcut, level	Humic, organic	0-8	7.5YR 3/1 sand, root	Ø	-
				Horizon1	8-25	7.5YR 6/2 sand	Ø	Leached horizon some small gravels
				Horizon2	25-37	5YR 5/8 sand	Ø	
				Hard Pan	37+	2.5YR 3/4 compact sand	Ø	
G3	E	15m 230° W of 62	Clearcut, level	Humic, organic	0-7	7.5YR 3/1 sand, root	Ø	
				Horizon1	7-24	7.5YR 6/2 sand	Ø	Leached horizon some small gravels
				Horizon2	24-48	5YR 5/8 sand	Ø	
G4	P	15m 230° W of 63	Clearcut, level	—	—	—	Ø	Push pile with small/medium timber
G5	E	15m 230° W of 64	Clearcut, level	Humic, organic	0-12	7.5YR 3/1 sand, root	Ø	
				Horizon1	12-25	7.5YR 6/2 sand	Ø	Leached horizon some small gravel
				Horizon2	25-48	5YR 5/8 sand	Ø	

TRANSECT: BEGINNING UTM: N ________ E ________
TRANSECT: Ending UTM: N ________ E ________

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number: 1595.001
Map or Quad:
Segment #: Pond / Pand
Transect #: 6
Date: 06/18/2004
Recorder(s):
Page 2 of 3

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
G6	P	15m 230° W of G5	Clear cut, level	—	—	—	Ø	Push pile with small/medium timber
G7	E	15m 230° W of G6	Clear cut, level	Humic, organic	0-8	7.5 YR 3/1 sand, root	Ø	
				Horizon 1	8-14	7.5 YR 6/2 sand	Ø	Leached horizon some small gravels ↓
				Horizon 2	14-30	5YR 5/8 sand	Ø	
				Hard Pan	30+	2.5 YR 3/1 compact sand	Ø	
G8	E	15m 230° W of G7	Clear cut, level	Humic, organic	0-8	7.5 YR 3/1 sand, root	Ø	
				Horizon 1	8-14	7.5 YR 6/2 sand	Ø	Leached horizon some small gravels ↓
				Horizon 2	14-34	5 YR 5/8 sand	Ø	
G9	E	15m 230° W of G8		Humic, organic	0-5	7.5 YR 3/1 sand, root	Ø	
				Horizon 1	5-28	7.5 YR 6/2 sand	Ø	
				Horizon 2	28-48	5 YR 5/8 sand	Ø	
G10	E	15m 230° W of G9		Humic, organic	0-9	7.5 YR 3/1 sand, root	Ø	
				Horizon 1	9-20	7.5 YR 6/2 sand	Ø	Leached horizon some small gravels ↓
				Horizon 2	20-39	5YR 5/8 sand	Ø	
				Hard Pan	39+	2.5 YR 3/1 compact sand	Ø	

TRANSECT: BEGINNING UTM: N ________ E ________
TRANSECT: Ending UTM: N ________ E ________

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number 1595.001   Map or Quad ______   Segment # Pad/Pond   Transect # 6   Date 06/18/2004   Recorder(s) CB   Page 3 of 3

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet (use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
G11	P	15m 230° W of 610	Clear cut, level	—	—	—	Ø	
G12	E	15m 230° W of 611	Clearcut, level	Humic, Organic	0-8	7.5 YR 3/1 sandy root	Ø	
				Horizon 1	8-24	7.5YR 6/8 sand	Ø	leached horizon some small gravels ↓
				Horizon 2	24-53	5 YR 5/8 sand	Ø	
G13	E	15m 230° W of 612	Clear cut, level	Humic, organic	0-8	7.5YR 3/1 sand, root	Ø	
				Horizon 1	8-23	7.5YR 6/8 sand	Ø	leached horizon some small gravel ↓
				Horizon 2	23-43	5YR 5/8 sand	Ø	
				Hard Pan	43+	2.5 YR 3/1 compact sand	Ø	
G14	E	15m 230° W of 613	Clear cut, level	Humic, organic	0-7	7.5YR 3/1 sand, root	Ø	
				Horizon 1	7-20	7.5YR 6/8 sand	Ø	leached horizon some small gravel ↓
				Horizon 2	20-32	5YR 5/8 sand	Ø	
				Hard Pan	32+	2.5 YR 3/1 compact sand	Ø	

TRANSECT: BEGINNING UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number: Golder 1595 | Map or Quad: ________ | Segment #: Pad + Pond | Transect #: 1d | Date: 6-18-01 | Recorder(s): SKK + DLB | Page 1 of 3

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
H1	E	15m 300°N from G1	Open	organic humic	0-10	7.5YR 3/1 sand very dark gray	ø	organic soil supports vegetation
"	"	"	"	horizon 1	10-17	7.5YR 6/2 sand pinkish gray sand	ø	leached soil
"	"	"	"	horizon 2	17-34	5YR 5/8 sand yellowish red	ø	compact soil - terminated on hard pan - 2.5YR 3/4
H2	P - Stump - disturbance by foresting							
H3	E	30m 230°N from H1	Open	organic humic	0-8	7.5YR 3/1 sand	ø	organic soil
"	"	"	"	1	8-20	7.5YR 6/2 sand	ø	leached soil
"	"	"	"	2	20-35	5YR 5/8 sand	ø	compact sand
H4	E	15m 230°N from H3	open	organic humic	0-7	7.5YR 3/1 sand	ø	organic soil
"	"	"	"	1	7-18	7.5YR 6/2 sand	ø	leached soil
"	"	"	"	2	18-46	5YR 5/8	ø	compact sand
H5	E	15m 230°N from H4	Open	organic humic	0-8	7.5YR 3/1 sand	ø	organic soil
"	"	"	"	1	8-20	7.5YR 6/2 sand	ø	leached soil
"	"	"	"	2	20-42	5YR 5/8 sand	ø	compact soil

TRANSECT: BEGINNING UTM: N ________ E ________
TRANSECT: Ending UTM: N ________ E ________

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

****Fill Out Form Completely!****

Project Name/Number: Golder 1595   Map or Quad: ____   Segment #: Pad + Pond   Transect #: H   Date: 6-18-04   Recorder(s): SKY + DLB   Page 2 of 3

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
H6	E	15m 230° N from H5	Open	organic humic	0 – 8	7.5YR 3/1 sand very dark gray	∅	organic soil supports vegetation
"	"	"	"	1	8 – 21	7.5YR 6/2 sand pinkish gray	∅	leached soil sparse vegetation
"	"	"	"	2	21 – 48	5YR 5/8 yellowish red	∅	compact sand - terminated on hard pan 2.5YR 3/4
H7	E	15m 230° N from H6	Open	organic humic	0 – 7	7.5YR 3/1 sand	∅	organic soil
"	"	"	"	1	7 – 20	7.5YR 6/2 sand	∅	leached soil
"	"	"	"	2	20 – 32	5YR 5/8 sand	∅	compact sand
H8	E	15m 230° N from H7	Open	organic humic	0 – 8	7.5YR 3/1 sand	∅	organic soil
"	"	"	"	1	8 – 29	7.5YR 6/2 sand	∅	leached soil
"	"	"	"	2	29 – 46	5YR 5/8 sand	∅	compact soil - terminated on hard pan 2.5YR 3/4
H9	E	15m 230° N from H8	Open	organic humic	0 –	7.5YR 3/1 sand	∅	organic soil
"	"	"	"	1	–	7.5YR 6/2 sand	∅	leached soil
"	"	"	"	2	–	5YR 5/8 sand	∅	compact soil
H10	P	Road	to	solar	Powered	Station.		

TRANSECT: Beginning UTM: N ____ E ____
TRANSECT: Ending UTM: N ____ E ____

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Cincinnati, Ohio 45246

ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number: Golder 1595
Map or Quad:
Segment #: Pad + Pond
Transect #: 1st
Date: 6-18-04
Page 3 of 3
Recorder(s): SKK + DLB

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
H11	E	30m 230° N from H9	Open	Organic humic Horizon	0-7	7.5YR 3/1 sand very dark gray	Ø	organic soil supports vegetation
"	"	"	"	1	7-25	7.5YR 6/2 sand pinkish gray	Ø	leached soil
"	"	"	"	Horizon 2	25-43	5YR 5/8 sand yellowish red	Ø	compact sand
H12	E	15m 230° N from H11	Open	Organic humic	0-8	7.5YR 3/1 sand	Ø	organic soil
"	"	"	"	Horizon 1	8-23	7.5YR 6/2 sand	Ø	leach soil
"	"	"	"	Horizon 2	23-43	5YR 5/8 sand	Ø	compact soil - terminated on hard pan 2.5YR 3/4
H13	E	15m 230° N from H12	Open	Organic humic	0-6	7.5YR 3/1 sand	Ø	organic soil
"	"	"	"	1	6-18	7.5YR 6/2 sand	Ø	leached soil light gravel
"	"	"	"	2	18-44	5YR 5/8 sand	Ø	compact sand light gravel
H14	E	15m 230° N from H13	Open	Organic humic	0-8	7.5YR 3/1 sand	Ø	organic soil
"	"	"	"	1	6-23	7.5YR 6/2 sand	Ø	leached soil light gravel
"	"	"	"	2	23-47	5YR 5/8 sand	Ø	compact sand light gravel

TRANSECT: Beginning UTM: N ____ E ____
TRANSECT: Ending UTM: N ____ E ____

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number: Golder
Map or Quad:
Segment #: alternate
Transect #: A
Date: 6/19/04
Recorder(s): DLB
Page 1 of 1

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet (use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
A 1	P	see GPS	clear cut	—			—	
A 2	D	15 m W of A 1	"	—	—	—	—	area rutted out, tree trunks
A 3	E	" A 2		H	0-5	7.5 yr 3/1 v dk gray	—	
"				1	5-15	7.5 yr 6/2 pinkish gray sand	—	
"	—		—	2	15-40	7.5 yr 4/4 brown sand	—	
A 4	D	" A 3	"	—	—	rutted out area not excavated		
A 5	E	" A 4	"	H		same as above	—	
"				1		"	—	
"		—		2			—	some gravels (EOT)

TRANSECT: Beginning UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

BHE

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number: Golder 1515
Map or Quad:
Segment #: Alternate
Transect #: C
Date: 6-19-04
Recorder(s): SKY
Page 1 of 2

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet (use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
C1	E	30m 25° N from A1	Open	organic humic	0-4	7.5YR 3/1 sand very dark gray	∅	Organic soil supports vegetation
"	"	"	"	Horizon 1	4-8	7.5YR 6/2 sand pinkish gray	∅	leached soil
"	"	"	"	Horizon 2	8-53	7.5YR 4/4 sand brown	∅	compact soil light gravel
C2	E	15m 270° N from C1	Open	organic humic	0-7	7.5YR 3/1 sand	∅	organic sand
"	"	"	"	1	7-22	7.5 6/2 sand	∅	leached soil
"	"	"	"	2	22-39	7.5 4/4 sand	∅	compact sand - terminated on hard pan - 7.5YR 3/4
C3	P	Pedestrian	- open	area	at end	of road.		
C4	E	30m 270° N from C2	Open	organic humic	0-7	7.5YR 3/1 sand	∅	organic soil
"	"	"	"	1	7-19	7.5YR 6/2 sand	∅	leached soil sparse gravel
"	"	"	"	2	19-44	7.5YR 4/4 sand	∅	compact sand
C5	E	15m 270° N from C4	Open	organic humic	0-	7.5YR 3/1 sand	∅	organic soil
"	"	"	"	2	-	7.5YR 4/4 sand	∅	compact soil - gravel possibly disturbed by forestry
"	"	"	"	sand	-	10YR 4/4 corse sand dark yellowish brown		corse sand

TRANSECT: Beginning UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

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Cincinnati, Ohio 45246

ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number: Golder 1595
Map or Quad:
Segment #: Alternate
Transect #: C
Date: 6-19-04
Recorder(s): SKY

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
C6	E	15m 270° N from C5	Open	organic humic	0 – 8	7.5YR 3/1 sand very dark gray	∅	organic soil supports vegetation
"	"	"	"	Horizon 1	8–22	7.5YR 6/2 sand pinkish gray	∅	leached soil light gravel
"	"	"	"	Horizon 2	22–52	7.5YR 4/4 sand brown	∅	compact sand light gravel
C7	E	15m 270° N from C6	Open	Organic humic	0 – 7	7.5YR 3/1 sand	∅	organic soil
"	"	"	"	Horizon 1	7 – 24	7.5YR 6/2 sand	∅	leached soil light gravel
"	"	"	"	Horizon 2	24 – 47	7.5YR 4/4 sand	∅	compact sand light gravel

TRANSECT: Beginning UTM: N ____________ E ____________
TRANSECT: Ending UTM: N ____________ E ____________

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

****Fill Out Form Completely!****

Project Name/Number: Golden
Map or Quad:
Segment #: alternate
Transect #: E
Date: 6/19/04
Recorder(s): DLB
Page 1 of 1

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet (use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
E 1	E	15 m N of D1	clear cut	H	0-8	7.5YR 3/1 very dk gray hum.	—	
"				1	8-15	7.5YR 6/2 pinkish gray sand	—	
"	-	-	-	2	15-30	7.5YR 4/4 brn. sand	—	some gravels / browning compacted at base
E 2	D	15 m W of E1	"	—	-	not excavated	—	- in rut
E 3	E	" of E2	"	H	0-5	same		
"				1	5-15	as		
"	-	-	-	2	15-32	above		some gravels
E 4	D	—	—	—		not excavated		in rut
E 5	E	" of E4	"	H	0-5	same		
"	"			1	5-15	as		
"				2	15-35	above		some gravels
E 6	D	" of E5	"	—		not excavated		in rut
E 7	E	" of E6	"	H 1	0-5 5-15	same as		—
"	-	-		2	15-32	above		some gravels

E 7 = EOT

TRANSECT: Beginning UTM: N________ E________
TRANSECT: Ending UTM: N________ E________

BHE

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number: Gadder 1595 Map or Quad: ______ Segment #: Alternate Transect #: G Date: 6-19-04 Recorder(s): SKY Page 1 of 3

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet (use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
G1	E	30m 215° N from E1	Open	organic humic	0-7	7.5YR 3/1 sand very dark gray	Ø	organic soil supports vegetation
"	"	"	"	Horizon 2	7-24	7.5YR 6/2 sand pinkish gray	Ø	leached soil
"	"	"	"	Horizon 2	24-47	7.5YR 4/4 sand brown	Ø	compact sand
G2	D	- Disturbed by Forestry - large piles of soil and wood.						
G3	E	30m 270° N from G1	Open	organic humic	0-7	7.5YR 3/1 sand	Ø	organic soil light gravel
"	"	"	"	1	7-22	7.5YR 6/2 sand	Ø	leached soil
"	"	"	"	2	22-48	7.5YR 4/4	Ø	compact sand light gravel
G4	E	15m 270° N from G3	Open	organic humic	0-7	7.5YR 3/1 sand	Ø	organic sand
"	"	"	"	1	7-22	7.5YR 6/2 sand	Ø	leached sand
"	"	"	"	2	22-39	7.5YR 4/4 sand	Ø	compact sand - terminated on hard pan 2.5YR 3/4
G5	E	15m 270° N from G4	Open	organic humic	0-6	7.5YR 3/1 sand	Ø	organic soil
"	"	"	"	1	6-24	7.5YR 6/2 sand	Ø	leached soil sparse gravel
"	"	"	"	2	24-50	7.5YR 4/4 sand	Ø	compact soil

TRANSECT: Beginning UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

****Fill Out Form Completely!****

Project Name/Number: Golder 1595
Map or Quad:
Segment #: Alternate
Transect #: G
Date: 6-19-01
Recorder(s): DKY
Page 2 of 3

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
G6	E	15m 270° N from G5	Open	Organic humic	0-6	7.5YR 3/1 sand very dark gray	Ø	organic soil
"	"	"	"	Horizon 1	6-19	7.5YR 6/2 sand pinkish gray	Ø	leached soil sparse gravel
"	"	"	"	Horizon 2	19-47	7.5YR 4/4 sand Brown	Ø	compact soil
"	"	"	"	Sand	47-52	10YR 4/4 coarse sand dark yellowish brown	Ø	corse sand
G7	E	15m 270° N from G6	Open	organic humic	0-6	7.5YR 3/1 sand	Ø	Organic soil
"	"	"	"	1	6-21	7.5YR 6/2 sand	Ø	leached soil light gravel
"	"	"	"	2	21-39	7.5YR 4/4 sand	Ø	compact sand terminating on hard pan 2.5YR 3/4.
G8	E	15m 270° N from G7	Open	organic humic	0-6	7.5YR 3/1 sand	Ø	organic soil
"	"	"	"	1	6-16	7.5YR 6/2 sand	Ø	leached soil sparse gravel
"	"	"	"	2	16-45	7.5YR 4/4 sand	Ø	compact sand sparse gravel
"	"	"	"	Sand	45-52	10YR 4/4 coarse sand	Ø	corse sand
G9	E	15m 270° N from G8	Open	organic humic	0-8	7.5YR 3/1 sand	Ø	organic soil
"	"	"	"	1	8-22	7.5YR 6/2 sand	Ø	leached soil
"	"	"	"	2	22-49	7.5YR 4/4 sand	Ø	compact sand

TRANSECT: BEGINNING UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

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Page 3 of 3

Project Name/Number Golder 1595 | Map or Quad ______ | Segment # Alternate | Transect # G | Date 6-19-04 | Recorder(s) SKY

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
410	"	15m 270° N from G9	Open	organic humic	7	7.5YR 3/1 sand very dark gray	Ø	organic soil - supports vegetation
"	"	"	"	Horizon 1	19	7.5YR 6/2 sand pinkish gray	Ø	leached soil - light gravel
"	"	"	"	Horizon 2	35	7.5YR 4/4 sand brown	Ø	compact soil - terminated on hard pan 2.5YR 3/4. End of transect.

TRANSECT: Beginning UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

11733 Chesterdale Road
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ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number 1595.001 Map or Quad ____ Segment # Alternate Transect # I Date 06/19/2004 Page 1 of 3 Recorder(s) CB

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet (use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
I1	E	15m 220° NE of H1 15m N of treeline	Clear cut, level	Organic, humic	0-8	7.5YR 3/1 sand, root	Ø	
				Horizon 1	8-20	7.5YR 6/2 sand	Ø	Leached horizon some small/medium gravels ↓
				Horizon 2	20-43	7.5YR 4/4 sand	Ø	
				Sand	43+	10YR 4/4 coarse sand	Ø	
I2	E	15m 270° W of I1	Cut cut, level	Organic, humic	0-10	7.5YR 3/1 sand, root	Ø	
				Horizon 1	10-18	7.5YR 6/2 sand	Ø	Leached horizon some small gravels ↓
				Horizon 2	18-48	7.5YR 4/4 sand	Ø	
				Sand	48+	10YR 4/4 coarse sand	Ø	
I3	E	15m 270° W of I2	Clear cut, level	Organic, humic	0-10	7.5YR 3/1 sand, root	Ø	
				Horizon 1	10-22	7.5YR 6/2 sand	Ø	Leached horizon some small/medium gravels ↓
				Horizon 2	22-43	7.5YR 4/4 sand	Ø	
				Sand	43+	10YR 4/4 coarse sand	Ø	

TRANSECT: Beginning UTM: N ____ E ____
TRANSECT: Ending UTM: N ____ E ____

BHE

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number 1595.001 Map or Quad ______ Segment # Alternate Transect # I Date 06/19/04 Recorder(s) CB Page 2 of 3

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet (use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
I4	E	15m 270° W of I3	Clear cut, level	Organic, humic	0-10	7.5YR 3/1 sand, root	Ø	
				Horizon 1	10-21	7.5YR 6/2 sand	Ø	Leached horizon some small/medium gravels ↓
				Horizon 2	21-40	7.5YR 4/4 sand	Ø	
				Sand	40+	10YR 4/4 coarse sand	Ø	-
I5	E	15m 270° W of I4	Clear cut, level	Organic, humic	0-11	7.5YR 3/1 sand, root	Ø	
				Horizon 1	11-21	7.5YR 6/2 sand	Ø	Leached horizon some small/medium gravels ↓
				Horizon 2	21-41	7.5YR 4/4 sand	Ø	
				Hard Pan	41+	2.5YR 3/2 compact sand	Ø	
I6	E	15m 270° W of I5	Clear cut, level	Organic, humic	0-10	7.5YR 3/1 sand, root	Ø	
				Horizon 1	10-~~18~~ 28	7.5YR 6/2 sand	Ø	Leached horizon some small gravels ↓
				Horizon 2	28-50	7.5YR 4/4 sand	Ø	
I7	P	15m 270° W of I6	Push pile, cleared area	—	—	—	Ø	inspected open Medium-sized timber, ground adjacent
I8	E	15m 270° W of I7	Clear cut, level	Organic, humic	0-8	7.5YR 3/1 sand, root	Ø	
				Horizon 1	8-19	7.5YR 6/2 sand	Ø	Leached horizon some small gravels ↓
				Horizon 2	19-38	7.5YR 4/4 sand	Ø	

TRANSECT: BEGINNING UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number 1595.001 Map or Quad ______ Segment # Alternate Transect # I Date 06/19/04 Recorder(s) CB Page 3 of 3

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
I9	P	15m 270° W of I8	Push pile, level	—	—	—	Ø	Small, medium timber
I10	E	15m 270° W of I9	Clear cut, level	Organic, humic	0-10	7.5YR 3/1 sand, root	Ø	
				Horizon 1	10-20	7.5YR 6/2 sand	Ø	Leached horizon some small / medium gravels
				Horizon 2	20-47	7.5YR 4/4 sand	Ø	
I11	E	15m 270° W of I10	Clear cut level	Organic, humic	0-10	7.5YR 3/1 sand, root	Ø	
				Horizon 1	11-18	7.5YR 6/2 sand	Ø	Leached horizon some small gravels
				Horizon 2	18-48	7.5YR 4/4 sand	Ø	
				Sand	48-52	10YR 4/4 course sand	Ø	

TRANSECT: Beginning UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number: golden
Map or Quad:
Segment #: [illegible]
Transect #: J
Date: 11/19/04
Recorder(s): DLB
Page 1 of 3

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
J1	D	15 m N of K1	dense wd	–	–	–	–	in rut
J2	E	15 m W of J1		H	0-5	7.5 yr 3/1 very dk gray humic	–	
"				1	5-15	7.5 yr 6/2 pinkish gray sand	–	
"	–	–	"	2	15-37	7.5 yr 4/4 brn. sand	–	some gravels
J3	D	" J2	"	–	–	not excavated		in logging rut
J4	E	" J3	"	H	0-5	same	–	
"				1	5-15	"	–	
"				2	15-35	above	–	some gravels
J5	E	" J4	"	H	0-7	"	–	–
"				1	7-15	"	–	–
"				2	15-35	"	–	"
J6	D	" J5	"	–	not excavated		in	logging rut
J7	E	" J4	"	H	0-5	same as	–	
				1	5-15			
"				2	15-35	above	–	some gravels

TRANSECT: Beginning UTM: N ____ E ____
TRANSECT: Ending UTM: N ____ E ____

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number: Golden

Map or Quad: ______

Segment #: Identity

Transect #: J

Date: 6/19/04

Recorder(s): DLB

Page 2 of 3

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
J8	D	15 m W of J7	clear cut	–	-	not excavated	–	in logging rut
J9	E	" of J8	"	H		same	–	
"	–			1		as	–	
"	-			2		J7	–	some gravels
J10	D	" of J9	"	–	–	not excavated	–	in logging rut
J11	E	" of J10	"	H		same	–	
"				1		as	–	
"	-	-		2		J9	–	some gravels/ compact at base
J12	D	" of J11	"	–	-	not excavated		in logging rut
J13	E	" of J12	"	H	0-4	same	–	
"	–			1	4-15	as	–	
"	–			2	15-35	about	–	some gravels/ compact nodules
J14	E	" of J13	"	H 1	0-4 4-15	same	–	
"				2	15-35	as above	–	"

TRANSECT: Beginning UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number: Golder   Map or Quad: ______   Segment #: alternate   Transect #: J   Date: 6/19/09   Recorder(s): DLB   Page 3 of 3

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet (use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
J15	D	15 m W of J14	clear cut	—	—	not excavated	—	in logging rut
J16	E	" of J15	"	H	0-3	7.5 yr 3/1 very dk gray humic	—	—
"				1	3-12	7.5 yr 6/2 pinkish gray sand	—	—
"	—	—		2	12-30	7.5 yr 4/4 brn. sand	—	some gravels and compact sand nodules
J17	E	" of J16	"	"	0-3	same		
"				1	3-10	as		
"				2	10-30	above		"
J18	E	" of J17	"	H	0-3	same		
"				1	3-10	as		
"		—		2	10-30	above		"

TRANSECT: Beginning UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number Golder 1595　Map or Quad ______　Segment # Alternate　Transect # L　Date 6-19-04　Recorder(s) SKY　Page 1 of 4

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet (use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
L1	E	30m 180° N from J1	Open	organic humic	0-7	7.5YR 3/1 very dark gray	Ø	organic soil supports vegetation
"	"	"	"	Horizon 1	7-21	7.5YR 6/2 pinkish gray	Ø	leached soil sparse gravel
"	"	"	"	Horizon 2	21-48	7.5YR 4/4 Brown	Ø	compact soil sparse gravel
L2	D	- Disturbed	due to forestry	- Pile of logs	and stumps			-
L3	E	30m 270° N from L1	Open	organic humic	0-6	7.5YR 3/1 sand	Ø	organic soil
"	"			1	6-18	7.5YR 6/2 sand	Ø	leached soil light gravel
"	"			2	18-45	7.5YR 4/4 sand	Ø	compact sand terminated on hard pan 7.5YR 3/4
L4	E	15m 270° N from L3	Open	organic humic	0-8	7.5YR 3/1 sand	Ø	organic soil
"	"	"	"	1	8-22	7.5YR 6/2 sand	Ø	leached soil
"	"	"	"	2	22-42	7.5YR 4/4 sand	Ø	compact sand
L5	E	15m 270° N from L4	Open	organic humic	0-7	7.5YR 3/1 sand	Ø	organic soil
"	"	"	"	1	0-25	7.5YR 6/2 sand	Ø	leached soil
"	"	"	"	2	0-46	7.5YR 4/4 sand	Ø	compact soil

TRANSECT: Beginning UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number: Golder 1595 | Map or Quad: | Segment #: Alternate | Transect #: L | Date: 6-19-04 | Recorder(s): SKY | Page 2 of 4

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
L6	E	15m 270°N from L5	Open	Organic humic	0 - 8	7.5 YR 3/1 sand very dark gray	Ø	Organic soil Supports vegetation
"	"	"	"	Horizon 1	8 - 18	7.5 YR 6/2 Sand pinkish gray	Ø	leached soil heavy gravel
"	"	"	"	Horizon 2	18 - 43	7.5 YR 4/4 sand Brown	Ø	compact sand
L7	E	15m 270°N from L6	Open	Organic humic	0 - 6	7.5 YR 3/1 sand	Ø	organic soil
"	"	"	"	1	6 - 19	7.5 YR 6/2 sand	Ø	leached soil
"	"	"	"	2	19 - 37	7.5 YR 4/4 sand	Ø	compact soil - terminated on hard pan 2.5 YR 3/4
L8	E	15m 270°N from L7	Open	Organic humic	0 - 6	7.5 YR 3/1 sand	Ø	organic soil
"	"	"	"	1	6 - 19	7.5 YR 6/2 sand	Ø	Leached soil sparse gravel
"	"	"	"	2	19 - 44	7.5 YR 4/4 sand	Ø	compact soil
L9	D	- Disturbed	by	Forestry	-	Piles of logs	and	stumps.
L10	E	30m 270°N from L8	Open	Organic humic	0 - 6	7.5 YR 3/1 sand	Ø	organic soil
"	"	"	"	1	6 - 19	7.5 YR 6/2 sand	Ø	leached soil
"	"	"	"	2	19 - 58	7.5 YR 4/4 sand	Ø	compact sand. terminated on hard pan

TRANSECT: Beginning UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

****Fill Out Form Completely!****

Project Name/Number: Golder 1595
Map or Quad:
Segment #: Alternate
Transect #: L
Date: 6-19-04
Recorder(s): SKY
Page 3 of 4

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet (use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
L11	E	15m 270° N from L10	Open	Organic humic	0-5	7.5 YR 3/1 sand very dark gray	Ø	Organic soil supports vegetation
"	"	"	"	1	5-18	7.5 YR 6/2 sand pinkish gray	Ø	leached soil heavy gravel
"	"	"	"	2	18-48	7.5 YR 4/4 sand Brown	Ø	compact soil light gravel
L12	E	15m 270° N from L11	Open	organic humic	0-7	7.5 YR 3/1 sand	Ø	organic soil
"	"	"	"	1	7-18	7.5 YR 6/2 sand	Ø	leached soil light gravel } Decaying wood possible disturbance by something
"	"	"	"	2	18-49	7.5 YR 4/4 sand	Ø	compact soil light gravel }
L13	E	15m 270° N from L12	Open	Organic humic	0-8	7.5 YR 3/1 sand	Ø	organic soil
"	"	"	"	1	8-22	7.5 YR 6/2 sand	Ø	leached soil
"	"	"	"	2	22-47	7.5 YR 4/4 sand	Ø	compact soil
L14	E	15m 270° N from L13	Open	organic humic	0-6	7.5 YR 3/1 sand	Ø	organic soil
"	"	"	"	1	6-24	7.5 YR 6/2 sand	Ø	leached soil
"	"	"	"	2	24-44	7.5 YR 4/4 sand	Ø	compact soil - terminated on hard pan 2.5 YR 3/4

TRANSECT: Beginning UTM: N ____ E ____
TRANSECT: Ending UTM: N ____ E ____

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

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Page 4 of 4

Project Name/Number: Golder 1595
Map or Quad:
Segment #: Alternate
Transect #: L
Date: 6-19-04
Recorder(s): SKK

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
L15	E	15m 270° N from L14	Open	Organic humic	0-5	7.5YR 3/1 Sand very dark gray	ø	organic soil supports vegetation
"	"	"	"	Horizon 1	5-19	7.5 YR 6/2 Sand pinkish gray	ø	leached soil
"	"	"	"	Horizon 2	19-55	7.5YR 4/4 sand Brown	ø	compact soil
L16	E	15m 270° N from L15	Open	Organic humic	0-7	7.5YR 3/1 sand	ø	organic soil
"	"	"	"	1	7-21	7.5YR 6/2 sand	ø	leached soil
"	"	"	"	2	21-43	7.5YR 4/4 sand	ø	compact soil
L17	E	15m 270° N from L16	Open	Organic humic	0-6	7.5YR 3/1 sand	ø	Organic soil
"	"	"	"	1	6-19	7.5YR 6/2 sand	ø	leached soil
"	"	"	"	2	19-52	7.5YR 4/4 sand	ø	compact soil End of transect

TRANSECT: BEGINNING UTM: N ________ E ________
TRANSECT: Ending UTM: N ________ E ________

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11733 Chesterdale Road
Cincinnati, Ohio 45246

ARCHAEOLOGICAL SAMPLE LOCUS FORM

****Fill Out Form Completely!****

Project Name/Number 1595 001 Map or Quad ______ Segment # Alternate Transect # N Date 06/19/04 Recorder(s) CB Page 1 of 4

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet (use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
N1	P,D	15m 350° N of M1	In drill area YD 02-10	–	–	–	Ø	disturbed by drilling activity
N2	P,D	15m 270° W of N1	Edge of drill area YD 02-10	–	–	–	Ø	edge of disturbed area
N3	E	15m 270° W of N2	Clear cut, level	Organic, humic	0-10	7.5YR 3/1 sand, root	Ø	
				Horizon 1	10-16	7.5YR 6/2 sand	Ø	Leached horizon some small gravels
				Horizon 2	16-42	7.5YR 4/4 sand	Ø	Coarse sand @ base
N4	E	15m 270° W of N3	Clear cut field	Horizon 2	0-20	7.5YR 4/4 sand	Ø	lots of medium/small gravels; entire top of profile truncated by furrow
				Sand	20-30	10YR 4/4 coarse sand	Ø	
N5	E	15m 270° W of N5	Clear cut, field	Organic, humic	0-6	7.5YR 3/1 sand, root	Ø	
				Horizon 1	6-12	7.5YR 6/2 sand	Ø	Leached horizon some small gravels
				Horizon 2	12-38	7.5YR 4/4 sand	Ø	
				Sand	38-50	10YR 4/4 coarse sand	Ø	
N6	E	15m 270° W of N6	Clear cut, field	Organic, humic	0-8	7.5YR 3/1 sand, root	Ø	
				Horizon 1	8-17	7.5YR 6/2 sand	Ø	Leached horizon some small/medium gravels
				Horizon 2	17-44	7.5YR 4/4 sand	Ø	
				Sand	44-46	10YR 4/4 coarse sand		

TRANSECT: BEGINNING UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

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Cincinnati, Ohio 45246

ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number 1595 001

Map or Quad

Segment # Alternate
Transect # N

Date 06/19
Recorder(s) CB

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet (use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
N7	E	15m 270° W of N6	Clearcut, level	Organic, humic	0-8	7.5YR 3/1 sand, root	Ø	
				Horizon 1	8-17	7.5YR 6/2 sand.	Ø	Leached horizon some small/medium gravels ↓
				Horizon 2	17-46	7.5YR 4/4 sand	Ø	
				Sand	46-51	10YR 4/4 coarse sand	Ø	
N8	P, D	15m 270° W of N7	Pushpile	—	—	—	Ø	medium / large timber aligned N-S
N9	E	15m 270° W of N8	Clearcut, level	Organic, humic	0-3	7.5YR 3/1 sand, root	Ø	
				Horizon 1	3-18	7.5YR 6/2 sand	Ø	Leached horizon some small/medium gravels ↓
				Horizon 2	18-50	7.5YR 4/4 sand	Ø	Coarse sand @ base
N10	P, D	15m 270° W of N9	Pushpile	—	—	—	Ø	medium/large timber aligned N-S
N11	E	15m 270° W of N10	Clear cut, level	Organic, humic	0-8	7.5YR 3/1 sand, root	Ø	
				Horizon 1	8-16	7.5YR 6/2 sand	Ø	Leached horizon some small gravels ↓
				Horizon 2	16-50	7.5YR 4/4 sand	Ø	
N12	E	15m 270° W of N12	Clear cut, level	Organic, humic	0-3	7.5YR 3/1 sand, root	Ø	In a furrow
				Horizon 1	3-8	7.5YR 6/2 sand	Ø	Leached horizon
				Horizon 2	8-12	7.5YR 4/4 sand	Ø	
				Hard Pan	12+	10YR 4/4 coarse sand	Ø	

TRANSECT: BEGINNING UTM: N E
TRANSECT: Ending UTM: N E

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number 1595.001 Map or Quad ______ Segment # Alternate Transect # N Date 06/19/04 Recorder(s) CB Page 3 of 4

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet (use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
N13	E	15m 270° W of N12	Clear cut, level	Organic, humic	0-8	7.5YR 3/1 sand, root	Ø	
				Horizon1	8-17	7.5YR 6/2 sand	Ø	Leached horizon some small/medium gravels
				Horizon2	17-30	7.5YR 4/4 sand	Ø	
				Sand	30-48	10YR 4/4 coarse sand	Ø	
N14	E	15m 270° W of N13	Clear cut, level	Organic, humic	0-10	7.5YR 3/1 sand, root	Ø	
				Horizon1	10-18	7.5YR 6/2 sand	Ø	Leached horizon some small/medium gravels
				Horizon2	18-46	7.5YR 4/4 sand	Ø	
				Sand	46-52	10YR 4/4 coarse sand	Ø	
N15	E	15m 270° W of N14	Clear cut, level	Organic, humic	0-8	7.5YR 3/1 sand, root	Ø	
				Horizon1	8-17	7.5YR 6/2 sand	Ø	Leached horizon some small gravels
				Horizon2	17-50	7.5YR 4/4 sand	Ø	
N16	E	15m 270° W of N15	Clear cut, level	Organic, humic	0-8	7.5YR 3/1 sand, root	Ø	
				Horizon1	8-17	7.5YR 6/2 sand	Ø	Leached horizon some small gravels
				Horizon2	17-47	7.5YR 4/4 sand	Ø	

TRANSECT: Beginning UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number 1595.001
Map or Quad
Segment # Alternate
Transect # N
Date 06/19
Recorder(s) CB
Page 4 of 4

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
N17	P	15m 270° W of N16	Pushpile, large tree stump	—	—	—	Ø	N-S trending pushpile with large stump
N18	E	15m 270° W of N17	Edge of pines	Organic, humic	0-10	7.5YR 3/1 sand, root	Ø	
				Horizon 1	10-14	7.5YR 6/2 sand	Ø	Leached horizon some small gravels ↓
				Horizon 2	14-34	7.5YR 4/4 sand	Ø	-
				HardPan	34+	2.5YR 3/3 compact sand	Ø	

TRANSECT: BEGINNING UTM: N E
TRANSECT: Ending UTM: N E

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number: Golden   Map or Quad: ______   Segment #: Alternate   Transect #: 7   Date: 6/19/04   Recorder(s): DLB   Page 1 of 3

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
P1	D	15 m N of M1	clear cut	–	–	not excavated	–	logging disturb.
P2	E	15 m W of P1	"	H	0-6	7.5YR 3/1 very dk gray humic		
"				1	6-19	7.5YR 6/2 pinkish gray sand		
"				2	19-52	7.5YR 4/4 brn sand		- some gravels
P3	E	" of P2	"	H	0-5	"	–	
"				1	5-12	"	–	
"				2	12-36	"	–	gravels hit hard pan @ 36 cm
P-4	E	" of P3	"	H	0-5	"	–	
"				1	5-19	"	–	
"	–	–		2	19-36	"	–	gravels / hit hard pan @ 36 cm
P-5	D	" of P-4	"	–	–	not excavated		logging berm
P-6	E	" of P-5	"	H	0-6		–	
"				1	6-18		–	
"				2	18-34		–	gravel / hard pan @ 36

TRANSECT: Beginning UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

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Project Name/Number: golder
Map or Quad:
Segment #: alternate
Transect #: P
Date: 6/19/04
Recorder(s): DLB
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*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
P7	P	15 m W of P6	clear land	—	—	surface	—	in road
P8	P	" of P7	"	—	—	surface	—	in road
P9	D						—	push pile
P10	D	" of P9	"	—	—	—	—	fallen trees
P11	D	" of P10	"				—	push pile
P12	E	" of P11	"	H	0-7	same	—	—
"				1	7-21	"	—	gravel
"	—	—		2	21-43	P2	—	increase in gravels
P13	E	" of P12	"	H	0-8	"	—	—
"				1	8-21	"	—	gravel
"	—	—		2	21-53	.	—	increase in gravels
P14	W			H	0-8	same	—	—
"				1	8-18	"	—	gravel
"				2	18-45	about	—	increase in gravel!
"				3	45-52	course sand	—	gravel / coarse sand

TRANSECT: Beginning UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

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Project Name/Number: Golden   Map or Quad: ______   Segment #: alternate   Transect #: P   Date: 4/19/04   Recorder(s): DLB   Page 3 of 3

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet (use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
P15	E	15m W of P14	clear cut	H	0-2	7.5yr 3/1 very dk gray humic	—	—
				1	2-4	7.5yr 6/2 pinkish gray	—	—
				2	4-35	7.5yr 4/4 brown sand	—	gravels
P16	D	" of P15	"	—	—	not excavated	—	logging disturb.
P17	E	" of P16		H	0-5	same	—	—
"				1	5-21	as	—	
"				2	21-52	P15	—	gravel
P18	E	" of P17	"	H	0-8	"	—	—
"				1	8-19	"	—	
"				2	19-32	"	—	gravel
"				hard pan	32+	hard	P—	
P18 = EOT								

TRANSECT: Beginning UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

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Project Name/Number 1595.001 Map or Quad ______ Segment # Alternate Transect # R Date 06/22 Recorder(s) CB

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet (use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
R1	E	180°N 15m of Q1	Clear cut, level	Organic, humic	0-6	7.5YR 3/1 sand, root	Ø	
				Horizon 1	6-13	7.5YR 6/2 sand	Ø	Leached horizon
				Horizon 2	13-42	10YR 4/6 sand	Ø	Medium gravels
				Sand	42-52	10YR 5/6 coarse sand	Ø	
R2	E	15m 90° W of R1	Clear cut, level	Organic, humic	0-5	7.5YR 3/1 sand, roots	Ø	Leached horizon
				Horizon 1	5-17	7.5YR 6/2 sand	Ø	
				Horizon 2	17-43	10YR 4/6 sand	Ø	
R3	E	15m 90° W of R2	Clear cut, level	Organic, humic	0-6	10YR 3/1 sand, roots	Ø	
				Horizon 1	6-19	7.5YR 6/2 sand	Ø	Leached horizon
				Horizon 2	19-49	10YR 4/6 sand	Ø	
R4	E	15m 90° W of R3	Clear cut, level	Organic, humic	0-6	7.5YR 3/1 sand, roots	Ø	Charcoal
					6-19	7.5YR 6/2 sand	Ø	Leached horizon
					19-46	10YR 4/6 sand	Ø	Small/medium gravels
					46-54	10YR 5/6 coarse sand	Ø	

TRANSECT: BEGINNING UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

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Project Name/Number 1595.001
Map or Quad
Segment # Alternate
Transect # R
Date 06/22/04
Recorder(s) CB

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
R5	E	15m 90° W of R4	Clear cut, level	Organic, humic	0-7	7.5YR 3/1 sand, roots	Ø	Sparse gravel
				Horizon 1	7-17	7.5YR 6/2 sand	Ø	Leached horizon
				Horizon 2	17-44	10YR 4/6 sand	Ø	Small/medium gravels
				Sand	44-49	10YR 5/6 coarse sand	Ø	
R6	E	15m 90° W of R5	Clear cut, level	Organic, humic	0-5	7.5YR 3/1 sand, roots	Ø	Sparse gravel
				Horizon 1	5-17	7.5YR 6/2 sand	Ø	Leached horizon
				Horizon 2	17-50	10YR 4/6 sand	Ø	Small/medium gravel
				Sand	50+	10YR 5/6 coarse sand	Ø	
R7	E	15m 90° W of R6	Clear cut, level	Organic, humic	0-6	7.5YR 3/1 sand, roots	Ø	Sparse gravel
				Horizon 1	6-12	7.5YR 6/2 sand	Ø	Leached horizon
				Horizon 2	12-41	10YR 4/6 sand	Ø	
				Sand	41-49	10YR 5/6 coarse sand	Ø	

TRANSECT: Beginning UTM: N E
TRANSECT: Ending UTM: N E

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

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Project Name/Number: 1595.001
Map or Quad:
Segment #: Alternate
Transect #: R
Date: 06/22
Recorder(s): CB
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*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
R8	P, D	15m 90° W of R7	Pushpile, level	—	—	—	Ø	N-S trending push pile
R9	P	15m 90° W of R8	Clear cut, level	—	—	—	Ø	in access road
R10	P, D	15m 90° W of R9	Pushpile, level	—	—	—	Ø	N-S trending push pile
R11	D	15m 90° W of R10	Clearcut, level	0-59	Sand	10YR 5/6 Coarse sand	Ø	in heavily furrowed area
R12	E	15m 90° W of R11	Clear cut, level	Organic, humic	0-6	7.5YR 3/1 sand, roots	Ø	Sparse gravel
				Horizon 1	6-18	7.5YR 6/2 sand	Ø	leached horizon
				Horizon 2	18-43	10YR 4/6 sand	Ø	Small gravels
				Sand	43-51	10YR 5/6 coarse sand	Ø	
R13	E	15m 90° W of R12	Clear cut, level	Organic, humic	0-6	7.5YR 3/1 sand, roots	Ø	
				Horizon 1	6-23	7.5YR 6/2 sand	Ø	leached horizon
				Horizon 2	23-39	10YR 4/6 sand	Ø	Coarse sand @ base
R14	P	15m 90° W of R13	Pushpile	—	—	—	Ø	small/medium timbers

TRANSECT: Beginning UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

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Project Name/Number 1595.001 | Map or Quad ____ | Segment # Alternate | Transect # R | Date 06/22/04 | Recorder(s) CB | Page 4 of 4

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet (use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
R15	E	15m 90° W of R14	Clearcut, level	Organic, humic	0-5	7.5YR 3/1 sand, roots	Ø	
				Horizon1	5-13	7.5YR 6/2 sand	Ø	Leached horizon
				Horizon2	13-52	10YR 4/6 sand	Ø	Small gravels
R16	E	15m 90° W of R15	Clearcut, level	Organic, humic	0-4	7.5YR 3/1 sand, roots	Ø	-
				Horizon1	4-12	7.5YR 6/2 sand	Ø	Leached horizon
				Horizon2	12-48	10YR 4/6 sand	Ø	Small gravels
				Sand	48+	10YR 5/6 coarse sand	Ø	
R17	E	15m 90° W of R16	Clearcut, level	organic, humic	0-6	7.5YR 3/1 sand, roots	Ø	
				Horizon2	6-32	10YR 4/6 sand	Ø	Small/medium gravels
				Sand	32-40	10YR 5/6 coarse sand	Ø	

TRANSECT: Beginning UTM: N ____ E ____
TRANSECT: Ending UTM: N ____ E ____

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

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Project Name/Number: 1595.001
Map or Quad:
Segment #: Alternate
Transect #: T
Date: 06/22/04
Recorder(s): CB
Page 1 of 3

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
T1	E	15m 180° N of S1	Clear cut, level	Organic, humic	0-4	7.5YR 3/1 sand, root	Ø	Sparse gravel
				Horizon 1	4-13	7.5YR 6/2 sand	Ø	Leached horizon
				Horizon 2	13-50	10YR 4/6 sand	Ø	Medium/small gravels
T2	E	15m 90° W of T1	Clear cut, level	Organic, humic	0-4	7.5YR 3/1 sand, root	Ø	Sparse gravels
				Horizon 1	4-16	7.5YR 6/2 sand	Ø	Leached horizon
				Horizon 2	16-39	10YR 4/6 sand	Ø	
				Hard	39+	5YR 3/4 compact sand	Ø	
T3	E	15m 90° W of T2	Clear cut, level	Organic, humic	0-4	7.5YR 3/1 sand, root	Ø	
				Horizon 1	4-13	7.5YR 6/2 sand	Ø	Leached horizon
				Horizon 2	13-30	10YR 4/6 sand	Ø	Small gravels
				Hard Pan	30+	5YR 3/4 compact sand	Ø	
T4	E	15m 90° W of T3	Clear cut, level	Organic, humic	0-5	7.5YR 3/1 sand, root	Ø	Leached horizon, medium/small gravels
				Horizon 1	5-19	7.5YR 6/2 sand	Ø	Small/medium gravels
				Horizon 2	19-44	10YR 4/6 sand	Ø	

TRANSECT: Beginning UTM: N ________ E ________
TRANSECT: Ending UTM: N ________ E ________

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

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Project Name/Number 1595.001　Map or Quad ______　Segment # Alternate　Transect # T　Date 06/22　Recorder(s) CB　Page 2 of 3

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
T5	E	15m 90° W of T4	Clear cut, level	Humic, organic	0-6	7.5YR 3/1 sand, root	Ø	
				Horizon1	6-12	7.5YR 6/2 sand	Ø	
				Horizon2	12-38	10YR 4/6 sand	Ø	
T6	E	15m 90° W of T5	Clear cut, level	Humic, organic	0-5	7.5YR 3/1 sand, root	Ø	
				Horizon1	5-26	7.5YR 6/2 sand	Ø	Leached horizon Small/medium gravels ↓
				Horizon2	26-50	10YR 4/6 sand	Ø	
T7	P, D	15m 90° W of T6	Pushpile, level	—	—	—	Ø	N-S trending pushpile
T8	P, D	15m 90° W of T7	Clear cut, level	—	—	—	Ø	N-S in access road 100% visibility
T9	P, D	15m 90° W of T8	Pushpile, level	—	—	—	Ø	N-S trending pushpile
T10	E	15m 90° W of T9	Clear cut, level	Humic, Organic	0-5	7.5YR 3/1 sand, root	Ø	
				Horizon1	5-21	7.5YR 6/2 sand	Ø	Leached horizon
				Horizon2	21-45	10YR 4/6 sand	Ø	fragmented hardpan

TRANSECT: BEGINNING UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

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Project Name/Number 1595.001 Map or Quad ______ Segment # Alternate Transect # T Date 06/22/04 Recorder(s) CB

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet (use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
T11	E	15m 90° W of T10	Clear cut, level	Humic, organic	0-5	7.5YR 3/1 sand, root	Ø	
				Horizon 1	5-13	7.5YR 6/2 sand	Ø	Leached horizon
				Horizon 2	13-43	10YR 4/6 sand	Ø	small gravels
				Sand	43-51	10YR 5/6 coarse sand	Ø	-
T12	E	15m 90° W of T11	Clear cut, level	Humic, organic	0-9	7.5YR 3/1 sand, root	Ø	
				Horizon 1	9-16	7.5YR 6/2 sand	Ø	Leached horizon
				Horizon	16-53	10YR 4/6 sand	Ø	Small gravels
T13	E	15m 90° W of T12	Clear cut, level	Humic, organic	0-5	7.5YR 3/1 sand, root	Ø	Sparse gravel
				Horizon 1	5-20	7.5YR 6/2 sand	Ø	Leached horizon
				Horizon 2	20-47	10YR 4/6 sand	Ø	Small gravels
T14	E, D	15m 90° W of T13	Clear cut, level	Humic, organic	0-12	5YR 2.5/1 sand, root	Ø	dark black horizon
				Horizon 1	12-42	7.5YR 6/2 sand	Ø	leached horizon
				Horizon 2	42-55	10YR 4/6 sand	Ø	cut wood @ base small gravels

TRANSECT: Beginning UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

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Project Name/Number: Golder 1595
Map or Quad:
Segment #: Alternate
Transect #: V
Date: 6-23-04
Recorder(s): SKP
Page 1 of 3

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet (use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
V1	E	30m 180° N from T1	Open	organic humic	0-6	7.5YR 3/1 sand very dark gray	Ø	organic soil supports vegetation
"	"	"	"	Horizon 1	6-19	7.5YR 6/2 sand pinkish gray	Ø	leached soil sparse gravel
"	"	"	"	Horizon 2	19-47	5YR 4/4 sand reddish brown	Ø	compact sand sparse gravel
V2	E	15m 270° N from V1	Open	organic humic	0-6	7.5YR 3/1 sand	Ø	organic soil
"	"	"	"	1	6-22	7.5YR 6/8 sand	Ø	leached soil
"	"	"	"	2	22-49	5YR 4/4 sand	Ø	compact sand
V3	E	15m 270° N from V2	Open	organic humic	0-4	7.5YR 3/1 sand	Ø	organic soil
"	"	"	"	1	4-18	7.5YR 6/2 sand	Ø	leached soil
"	"	"	"	2	18-53	5YR 4/4 sand	Ø	compact sand sparse gravel
V4	E	15m 270° N from V3	Open	organic humic	0-6	7.5YR 3/1 sand	Ø	organic soil
"	"	"	"	1	6-21	7.5YR 6/2 sand	Ø	leached soil sparse gravel
"	"	"	"	2	21-51	5YR 4/4 sand	Ø	compact sand light gravel
V5	E	15m 270° N from V4	Open	Organic humic	0-5	7.5YR 3/1 sand	Ø	organic soil no leached horizon
"	"	"	"	2	5-34	7.5YR 6/2 sand	Ø	Compact sand terminating on coarse sand

TRANSECT: Beginning UTM: N______ E______
TRANSECT: Ending UTM: N______ E______

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

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Project Name/Number: Golder 1596
Map or Quad:
Segment #: Alternate
Transect #: ✓
Date: 6-23-04
Recorder(s): SKY
Page 2 of 3

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
V6	E	15m 270°N from V5	Open	organic humic	0-3	7.5YR 3/1 sand very dark gray	Ø	organic soil
"	"	"	"	Horizon 1	3-7	7.5YR 6/2 sand pinkish gray	Ø	leached soil
"	"	"	"	Horizon 2	7-52	5YR 4/4 sand reddish brown	Ø	compact soil light gravel
V7	E	15m 270°N from V6	Open	organic humic	0-6	7.5YR 3/1 sand	Ø	organic soil
"	"	"	"	1	6-20	7.5YR 6/2 sand	Ø	leached soil
"	"	"	"	2	20-50	5YR 4/4 sand	Ø	compact sand - sparse gravel w/ cobbles mixed in,
V8	D	Disturbance due to forestry						
V9	E, D	30m 270°N from V7	Open	organic humic	0-8	7.5YR 3/1 sand	Ø	organic soil
"	"	"	"	1	8-123	7.5YR 6/2 sand	Ø	large burried timber prevented excavation
V10	E	15m 270°N from V9	Open	organic humic	0-16	7.5YR 3/1 sand	Ø	organic soil - decaying wood intermitent
"	"	"	"	1	16-32	7.5YR 6/2 sand	Ø	leached horizon sparse gravel
"	"	"	"	2	32-58	5YR 4/4 sand	Ø	compact sand
V11	E	15m 270°N from V10	Open	organic humic	0-5	7.5YR 3/1 sand	Ø	organic soil
"	"	"	"	1	5-18	7.5YR 6/2 sand	Ø	leached horizon

TRANSECT: BEGINNING UTM: N ________ E ________
TRANSECT: Ending UTM: N ________ E ________

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

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Project Name/Number: Golder 1595
Map or Quad:
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Transect #: ✓
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Recorder(s): SK4
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*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet (use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
V11	E	15m 270° N from V10	Open	Horizon 3	18 – 42	5YR 4/4 sand reddish brown	Ø	compact sand – terminated on hard pan 2.5YR 3/4
V12	E	15m 270° N from V11	Open	organic humic	0 – 6	7.5YR 3/1 sand very dark gray	Ø	organic soil supports vegetation
"	"	"	"	1	6 – 32	7.5YR 6/2 sand pinkish gray	Ø	leached soil sparse gravel
"	"	"		2	32 – 47	5YR 4/4 sand	Ø	compact sand sparse gravel
V13	E	15m 270° N from V12	Open	organic humic	0 – 6	7.5YR 3/1 sand	Ø	organic soil
"	"	"	"	1	6 – 14	7.5YR 6/2 sand	Ø	leached soil sparse gravel
"	"	"		2	14 – 39	5YR 4/4 sand	Ø	compact sand – terminated on hard pan 2.5YR 3/4
V14	E	15m 270° N from V13	Open	organic humic	0 – 5	7.5YR 3/1 sand	Ø	organic soil
"	"	"	"	1	5 – 18	7.5YR 6/2 sand	Ø	leached soil sparse gravel
"	"	"	"	2	18 – 47	5YR 4/4 sand	Ø	compact sand end of transect

TRANSECT: Beginning UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

11733 Chesterdale Road
Cincinnati, Ohio 45246

ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number: [illegible]   Map or Quad: ______   Segment #: [illegible]   Transect #: X   Date: 6/23/04   Recorder(s): DL3   Page 1 of ___

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
X1	E	15 m N of W 1	[illegible]	H 1 2	0-5 5-18 18-36	7.5YR 3/1 humus 7.5YR 6/2 [illegible] 5YR 4/4 sand	ø	gravels at base
X2	E	15 m W of X 1	"	"	"	"	ø	"
X3	D	" X 2	"	—	—	—	ø	logging disturb.
X4	E	" X 3	"	H 1 2	0-3 3-10 10-35	"	ø	gravels at base
X5	E	" X 4	"	" 1 2	0-3 3-10 10-35	"	ø	gravels at base, compact sand,
X6	E	" X 5	"	"	0-3 3-15 15-38	"	ø	gravels, [illegible] @ 38 cmbs
X7	E	" X 6	"	"	"	"	ø	gravels at base
X8	D	" X 7	"	—	—	—	ø	logging disturb.
X9	"	" X 8	"	H 1 2	0-2 2-10 10-30	"	ø	gravels at base
X10	D	" X 9	"	—		—	ø	logging disturb.
X11	E	" X 10	"	H 1 2	0-5 5-15 15-36	"	ø	gravels, hard pan @ 38 cmbs
X12	E	" X 11	"	"	0-5 5-18 18-36	"	ø	gravels, compact sand! @ 36 cmbs
X13	D	" X 12	—	—	—	—	ø	logging disturb.
X14	E	" X 13	"	H 1 2	0-5 5-15 15-37	"	ø	gravels, some compact sand @ 37 cmbs

EOT

TRANSECT: Beginning UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

BHE

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

****Fill Out Form Completely!****

Project Name/Number: Golden 1595 | Map or Quad: ______ | Segment #: alternate | Transect #: 2 | Date: 6/23/04 | Recorder(s): DLB + SKY | Page 1 of 2

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet (use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
Z1	E	15 m N of Y1	clear cut	Organic humic	0-5	7.5YR 3/1 very dark gray sand	Ø	organic soil supports vegetation
"	"	"	"	Horizon 1	5-13	7.5YR 6/2 pinkish gray sand	Ø	leached soil
"	"	"	"	Horizon 2	13-48	5YR 4/4 reddish brown sand	Ø	compact sand sparse gravel
Z2	E	15 m 270° N of Z1	Open	Organic humic	0-6	7.5YR 3/1 sand	Ø	organic soil
"	"	"	"	1	6-13	7.5YR 6/2 sand	Ø	leached soil
"	"	"	"	2	13-48	5YR 4/4 sand	Ø	compact soil
Z3	E	15 m 270° N of Z2	Open	organic humic	0-7	7.5YR 3/1 sand	Ø	organic soil sparse gravel
"	"	"	"	1	7-22	7.5YR 6/2 sand	Ø	leached soil
"	"	"	"	2	22-53	5YR 4/4 sand	Ø	compact sand light gravel
Z4	D	Disturbance due to foresting - large piles - Fallen branches + stumps						
Z5	E	30 m 270° N of Z3	Open	Organic humic	0-7	7.5YR 3/1 sand	Ø	organic soil
"	"	"	"	1	7-20	7.5YR 6/2 sand	Ø	leached soil sparse gravel
"	"	"	"	2	20-47	5YR 4/4 sand	Ø	compact soil sparse gravel

TRANSECT: Beginning UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

****Fill Out Form Completely!****

Project Name/Number: Golder 1595
Map or Quad:
Segment #: Alternate
Transect #: 2
Date: 6-23-04
Recorder(s): SKY.
Page 2 of 2

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
Z6	E	15m 270°N from Z5	Open	Organic humic horizon	0-6	7.5YR 3/1 sand very dark gray	Ø	organic soil supports vegetation
"	"	"	"	1	6-27	7.5YR 6/2 sand pinkish gray	Ø	leached soil sparse gravel
"	"	"	"	Horizon 2	27-51	5YR 4/4 sand reddish brown	Ø	compact sand sparse gravel
Z7	E	15m 270°N from Z6	Open	organic humic	0-7	7.5YR 3/1 sand	Ø	organic soil
"	"	"	"	1	7-22	7.5YR 6/2 sand	Ø	leached soil
"	"	"	"	2	22-50	5YR 4/4 sand	Ø	compact sand sparse gravel
Z8	D	Disturbed due to trees and mounds of soil						
Z9	E	30m 270°N from Z7	Open	organic humic	0-7	7.5YR 3/1 sand	Ø	organic soil
"	"	"	"	1	7-24	7.5YR 6/2 sand	Ø	leached soil sparse gravel
"	"	"	"	2	24-46	5YR 4/4 sand	Ø	compact soil
Z10	E	15m 270°N from Z9	Open	organic humic	0-7	7.5YR 3/1 sand	Ø	organic soil
"	"	"	"	1	7-15	7.5YR 6/2 sand	Ø	leached soil
"	"	"	"	2	15-46	5YR 4/4 sand	Ø	compact sand sparse gravel
	.							End of transect

TRANSECT: BEGINNING UTM: N ____ E ____
TRANSECT: Ending UTM: N ____ E ____

BHE

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number: Golder 1595 | Map or Quad: ______ | Segment #: Alternate | Transect #: BB | Date: 6-23-04 | Recorder(s): SKY | Page 1 of ____

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
BB1	E	15m 180° N from AA1	Open	organic humic	0-6	7.5YR 3/1 sand very dark gray	Ø	organic soil supports vegetation
"	"	"	"	Horizon 1	6-9	7.5YR 6/2 sand pinkish gray	Ø	leached soil
"	"	"	"	Horizon 2	9-45	5YR 4/4 sand reddish brown	Ø	compact sand sparse gravel
BB2	E	15m 270° N from BB1	Open	organic humic	0-6	7.5YR 3/1 sand	Ø	organic soil
"	"	"	"	1	6-21	7.5YR 6/2 sand	Ø	leached soil sparse gravel
"	"	"	"	2	21-38	5YR 4/4 sand	Ø	compact sand - terminated on hardpan - 2.5YR 3/6
								end of transect

TRANSECT: Beginning UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

2005 FIELDWORK

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number 1595.002   Map or Quad ____   Segment # B8, B9, B10   Transect # Sg. D extension (1)   Date 06/28/2005   Recorder(s) CB   Page 1 of 1

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet (use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
B8	E	15m S of C9	Pine forest	I	0-8	10YR 2/2 humic sand	Ø	
				II	8-23	7.5YR 5/4 sand	Ø	
				III	23-36	2.5YR 3/4 sand	Ø	10% gravel content
B9	E	15m W of C8		I	0-8	10YR 2/2 humic sand	Ø	
				II	8-22	7.5YR 5/4 sand	Ø	
				III	22-43	2.5YR 2/2 sand	Ø	
B10	E	15m W of D8		I	0-7	10YR 2/2 humic sand	Ø	
				II	7-20	7.5YR 5/4 sand	Ø	
				III	20-40	2.5YR 3/4 sand	Ø	ca. 5% gravel content

TRANSECT: Beginning UTM: N ____ E ____
TRANSECT: Ending UTM: N ____ E ____

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Cincinnati, Ohio 45246

ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number Golder KMC

Map or Quad

Segment # D Extension (1)
Transect # 8

Date 6-28-05
Recorder(s) SKY

Page 1 of 1

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet (use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
C8	E	15m W of C7 EOT	Pine Forest	I II III	0-6 6-16 16-29	10YR 2/2 Black humic sand 7.5YR 8/4 Pinkish Gray leached 7.5YR 3/4 Sand	Ø	Strat I Organic humic sandy loam Strat II Leached horizon pinkish Strat III sand
D8	E	15m N of C8	"	"	0-7 7-14 14-26	"	Ø	" gravel mix in strats I & II
E8	E	15m N of D8	"	"	0-6 6-17 17-30	"	Ø	"

TRANSECT: Beginning UTM: N E
TRANSECT: Ending UTM: N E

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number 1595.002 / Golder/KMC
Map or Quad
Segment # D extension (1) Date 6/23 Page 1
Transect # 9 Recorder(s) ALS of

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
C-9	E	15m → N@0°	flat, wooded w/ ferny undergrowth (pines)	I II III	0-9 9-23 23-35	10YR 2/2 Humic SAND 7.5YR 5/4 SAND 2.5YR 3/4 SAND	– – –	
D-9	E			I II III	0-9 9-19 19-31		– – –	
E-9	E			I II III	0-7 7-20 20-30		– – –	
F-9	E			I II III	0-9 9-17 17-32		– – –	

TRANSECT: Beginning UTM: N E
TRANSECT: Ending UTM: N E

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number: 1595.002 Golder KMC
Map or Quad:
Segment #: D Extension (1)
Transect #: 10
Date: 06/28/2005
Recorder(s): CB
Page 1 of

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet (use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
C10	E	15m W of C9	Pine forest	I	0-3	10YR 2/2 humic sand	Ø	
				II	3-20	7.5YR 5/4 sand	Ø	
				III	20-40	2.5YR 3/4 sand	Ø	
D10	E	15m N of C10	Pine forest	I	0-10	10YR 2/2 humic sand	Ø	
				II	10-20	7.5YR 5/4 sand	Ø	
				III	20-46	2.5YR 3/4 sand	Ø	10% gravel content
E10	E	15m N of D10	Pine forest	I	0-5	10YR 2/2 humic sand	Ø	
				II	5-20	7.5YR 5/4 sand	Ø	
				III	20-43	2.5YR 3/4 sand	Ø	
F10	E	15m N of E10	Pine forest	I	0-5	10YR 2/2 humic sand	Ø	
				II	5-24	7.5YR 5/4 sand	Ø	
				III	24-56	2.5YR 3/4 sand	Ø	

TRANSECT: BEGINNING UTM: N E
TRANSECT: Ending UTM: N E

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

****Fill Out Form Completely!****

Project Name/Number: 1595.002 Golden KMC   Map or Quad: ______   Segment #: D Extension (1)   Transect #: 10   Date: 06/28/2005   Recorder(s): CB   Page 2 of ____

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
G10	E	15m from F10	Pine forest	I	0-3	10YR 2/2 humic sand	Ø	
				II	3-18	7.5YR 5/4 sand	Ø	
				III	18-30	2.5YR 3/4 sand	Ø	5-10% gravel content
H10	E	15m from G10	Pine forest	I	0-8	10YR 3/2 humic sand	Ø	
				II	8-23	7.5YR 5/4 sand	Ø	
				III	23-46	2.5YR 3/4 sand	Ø	5-10% gravel content
I10	E	15m from H10	Pine forest	I	0-3	10YR 3/2 humic sand	Ø	
					3-19	7.5YR 5/4 sand	Ø	
					19-47	2.5 3/4 sand	Ø	broken fragments of hard pan

TRANSECT: Beginning UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Page 1 of 1

Project Name/Number: Golder KMC
Map or Quad:
Segment #: D Extension (1)
Transect #: 11
Date: 6-28-05
Recorder(s): SKY

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet (use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
C11	E	15m W of C10	Pine Forest	I II III	0-8 8-22 22-35	10YR 2/2 Black humic; 7.5YR 8/4 Pinkish gray; 2.5YR 3/4 Sand	Ø	Strat I Organic humic sandy loam; Strat II Leached horizon Pinkish sand; Strat III reddish sand
D11	E	15m N of C11	"	"	0-7 7-17 17-29	"	"	"
E11	E	15m N of D11	"	"	0-11 11-22 22-35	"	"	"
F11	E	15m N of E11	"	I II	0-10 10-37	10YR 2/2 Black humic; 7.5YR 4/6 Strong Brown Sand	Ø	Strat I Organic humic Sandy loam; Strat II Brown Sand.
G11	E	15m N of F11	"	Same as E11	0-7 7-22 22-30	Same as E11	Ø	Same as E11
H11	E	15m N of G11	"	"	0-7 7-28	"	Ø	"
I11	E	15m N of H11	"	"	0-8 8-23 23-32	"	Ø	"

TRANSECT: Beginning UTM: N ________ E ________
TRANSECT: Ending UTM: N ________ E ________

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

****Fill Out Form Completely!****

Project Name/Number: Golder KML
Map or Quad: Area E
Segment #: Area E
Transect #: E
Date: 6-28-05
Recorder(s): SKY
Page 1 of ____

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
E1	D	Disturbed area W of Eagle Rock	Open Small Pines	—	—	—	Ø	—
E2	D	"	"	—	—	—	Ø	—
E3	P	"	"	—	—	—	Ø	—
E4	E	15m N of E3	"	I II III	0 - 6 6 - 18 18 - 31	10YR 2/2 Black Humic 7.5YR 5/4 Pinkish Gray Sand 2.5YR 3/4 Red Sand	Ø	10YR 2/2 Black humic sandy loam 7.5YR 5/4 Pinkish gray sand leached 2.5YR 3/4 Red Sand
E5	E	15m N of E4	"	"	0 - 15 15 - 45 45 - 63	"	Ø	Strata are deeper at this location. Same color + texture as other ST
E6	E	15m N of E5	"	"	0 - 7 7 - 20 20 - 33	"	Ø	Same as E4 Terminated on hard pan

TRANSECT: Beginning UTM: N ____________ E ____________
TRANSECT: Ending UTM: N ____________ E ____________

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number / GOLDER
Map or Quad

Segment # Area E
Transect # F

Date 6/28/05
Page 1 of 1
Recorder(s) ALS

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
F-6	E	15m @ 180° S	flat farm field	I	0-8	10 YR 2/2 HUMIC SANDY lo	–	
				II	8-19	7.5 YR 5/4 Sand	–	
				III	19-32	2.5 YR 3/4 Sand	–	
F-5	E			I	0-8		–	
				II	8-20		–	
				III	20-32		–	

TRANSECT: BEGINNING UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

ARCHAEOLOGICAL SAMPLE LOCUS FORM

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****Fill Out Form Completely!****

Project Name/Number 1595.002
Map or Quad
Segment # Area F
Transect # 6
Date 06/28/2005
Recorder(s) CB

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet (use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
BOT G6	D	15m S of G7	Mixed forest, level	—	—	—	Ø	disturbed by logging, ruts and timber in area of shovel test
H6	E	15m E of G6	Mixed forest, level	I	0-5	10YR 2/2 humic sand	Ø	
				II	5-18	7.5YR 5/4 sand	Ø	
				III	18-51	2.5YR 3/4 sand	Ø	
I6	E	15m E of H6	Mixed forest, level	I	0-8	10YR 2/2 humic sand	Ø	
				II	8-26	7.5YR 5/4 sand	Ø	
				III	26-41	2.5YR 3/4 sand	Ø	hardpan
J6	E	15m E of I6	Mixed forest, level	I	0-3	10YR 2/2 humic sand	Ø	
				II	3-18	7.5YR 5/4 sand	Ø	
				III	18-45	7.5YR 4/6 sand	Ø	fragmented hardpan
K6	E, D	15m E of J6	Mixed forest, level	I	0-3	2.5YR 2/2 humic sand	Ø	
				II	3-12	7.5YR 5/4 sand	Ø	
				III	12-29	7.5YR 4/6 sand	Ø	fallen timber at base of test

TRANSECT: Beginning UTM: N ____ E ____
TRANSECT: Ending UTM: N ____ E ____

ARCHAEOLOGICAL SAMPLE LOCUS FORM

11733 Chesterdale Road
Cincinnati, Ohio 45246

Fill Out Form Completely!

Project Name/Number 1595.002 | Map or Quad ____ | Segment # Area F | Transect # 6 | Date 06/28/2005 | Recorder(s) CB | Page 2 of 3

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
L6	E	15m E of K6	Mixed forest, level	I	0-6	10YR 2/2 humic sand	Ø	
				II	6-17	7.5YR 5/4 sand	Ø	
				III	17-47	7.5YR 4/6 sand	Ø	
M6	E	15m E of L6	Mixed forest, level	I	0-3	10YR 2/2 humic sand	Ø	
				II	3-8	7.5YR 5/4 sand	Ø	
				III	8-41	7.5YR 4/6 sand	Ø	
N6	E	15m E of M6	Mixed forest, level	I	0-6	10YR 2/2 humic sand	Ø	
				II	6-10	7.5YR 5/4 sand	Ø	
				III	10-40	7.5YR 4/6 sand	Ø	
O6	E	15m E of N6	Mixed forest, level	I	0-3	10YR 2/2 humic sand	Ø	
				II	3-14	7.5YR 5/4 sand	Ø	
				III	14-45	7.5 4/6 sand	Ø	fragmented hardpan
P6	E	15m E of O6	Mixed forest, level	I	0-6	10YR 2/2 humic sand	Ø	
				II	6-18	7.5YR 5/4 sand	Ø	
				III	18-46	7.5YR 4/6 sand	Ø	

TRANSECT: Beginning UTM: N ____ E ____
TRANSECT: Ending UTM: N ____ E ____

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

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Page 3 of 3

Project Name/Number 1595.002 | Map or Quad | Segment # Area F | Transect # 6 | Date 06/29/2005 | Recorder(s) CB

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet (use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
Q6	E	15m E of P6	Mixed forest, level	I	0-3	10YR 2/2 humic sand	Ø	
				II	3-20	7.5YR 5/4 sand	Ø	
				III	20-48	2.5YR 3/4 sand	Ø	10% gravel content
R6	E	15m E of Q6	Mixed forest, level	I	0-5	10YR 2/2 humic sand	Ø	
				II	5-20	7.5YR 5/4 sand	Ø	
				III	20-43	7.5YR 4/6 sand	Ø	
S6	D	15m E of R6	in dirt two track	—	—	—	Ø	sunken two track with deflated soils
T6	D	15m E of S6	in dirt two track	—	—	—	Ø	sunken two track with deflated soils
U6	E	15m E of T6	Pine forest, level	I	0-5	10YR 2/2 humic sand	Ø	
				II	5-20	7.5YR 5/4 sand	Ø	
				III	20-40	7.5YR 4/6 sand	Ø	
V6	E	15m E of U6	Pine forest, level	I	0-5	10YR 2/2 humic sand	Ø	
				II	5-23	7.5YR 5/4 sand	Ø	
				III	23-47	7.5YR 4/6 sand	Ø	

TRANSECT: BEGINNING UTM: N ____ E ____

TRANSECT: Ending UTM: N ____ E ____

PTO

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number: Golder KMC
Map or Quad: Area F
Segment #:
Transect #: ?7
Date: 6-28-05
Page 1 of 2
Recorder(s):

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
G7	E	15m N of G6	Pine Forest	I II III	0-6 6-18 18-28	10YR 2/2 humic 7.5YR 5/4 sand 2.5YR 3/4 sand	Ø	10YR 2/2 Black humic loam 7.5YR 5/4 Pinkish leached sand 2.5YR 3/4 sand red
H7	E	15m E of G7	"	"	0-8 8-21 21-40	"	Ø	" Terminated on Hard Pan 2.5YR 2.5/2 Dark Reddish Brown
I7	E	15m E of H7	"	"	0-8 8-22 22-37	"	Ø	" No Hard Pan.
J7	E	15m E of I7	"	"	0-5 5-22 22-38	"	Ø	"
K7	E	15m E of J7	"	"	0-8 8-17 17-25	10YR 2/2 humic 7.5YR 5/4 sand 7.5YR 4/6 sand	Ø	10YR 2/2 Black humic loam 7.5YR 5/4 sand Pinkish 7.5YR 4/6 Strong brown sand
L7	E	15m E of K7	"	"	0-9 9-22 22-35	Same as J7	Ø	Same as J7
M7	E	15m E of L7	"	"	0-7 7-14 14-27	Same as K7	Ø	gravel in " Strats II + III
N7	E	15m E of M7	"	"	0-5 5-18 18-27	"	Ø	Same as M7
O7	E	15m E of N7	"	"	0-8 8-20 20-38	"	Ø	"
P7	E	15m E of O7	"	"	0-7 7-28 28-50	Same as J7	Ø	Same as J7.
Q7	E	15m E of P7	"	"	0-7 7-22 22-36	Same as K7	Ø	Same as K7
R7	E	15m E of Q7	"	"	0-8 8-13 13-37	"	Ø	"
S7	E	15m E of R7	"	"	0-6 6-12 12-42	10YR 2/2 Black humic 7.5YR 5/4 sand Pinkish Gray 10YR 4/6 sand	Ø	Strat I Black humic loam Strat II leached horizon Strat III sandy horizon
T7	E	15m E of S7	"	"	0-8 8-16 16-40	Same as K7	Ø	Same as K7

TRANSECT: Beginning UTM: N ____ E ____
TRANSECT: Ending UTM: N ____ E ____

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number: Golder KML
Map or Quad: Area F
Segment #:
Transect #: T7
Date: 6-28-05
Page 2 of 2
Recorder(s): SKW

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet (use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
U7	E	15m E of T7	Pine	I II III	0 - 6 6 - 18 18 - 39	10YR 2/2 Black humid 7.5YR 5/4 Sand 7.5YR 4/6 Sand	Ø	Strat I Black humic loam Strat II Pinkish Sand Strat III Strong Brown Sand
V7	E	15m E of U7	//	//	0 - 8 8 - 14 14 - 30	//	Ø	//
W7	E	15m E of V7	//	//	0 - 7 7 - 17 17 - 37	//	Ø	// End of Transect

EOT

TRANSECT: BEGINNING UTM: N _______ E _______
TRANSECT: Ending UTM: N _______ E _______

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number: GOLDER / KMC
Map or Quad:
Segment #: F
Transect #: 8
Date: 6/28/05
Recorder(s): ALS
Page 1 of

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

SOT

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
G-8	E	15 m @ 90° E	Flat fern field	I II	0-9 9-70	10YR 2/2 Humic Sand Lo 7.5 YR 4/6 Sandy	– –	Some gravels <5%
H-8	E			I II III	0-8 8-23 23-33	10YR 2/2 Humic SAND Lo 7.5 YR 5/4 Sand 7.5 YR 4/6 Sand	– – –	
I-8	E			I II III	0-11 11-28 28-40		– – –	
J-8	E			I II III	0-10 10-21 21-34		– – –	Hardpan @ 34 cm
K-8	E			I II III	0-7 7-24 24-37		– – –	
L-8	E			I II III	0-7 7-16 16-30		– – –	
M-8	E			I II III	0-11 11-19 19-32		– – –	

TRANSECT: BEGINNING UTM: N ________ E ________
TRANSECT: Ending UTM: N ________ E ________

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number: GOLDER/ KMC
Map or Quad:
Segment #: F
Transect #: 8
Date: 6/28/05
Recorder(s): ALS
Page 2 of

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet (use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
N-8	E	15 m @ 90° E	pines w/ fern undergrowth	I	0-12	10YR 2/2 HUMIC SANDY LO	–	some gravels (<5%)
				II	12-25	7.5 YR 5/4 SAND	–	
				III	25-36	7.5 YR 4/6 SAND	–	
O-8	E			I	0-6		–	
				II	6-18		–	
				III	18-29		–	
P-8	E			I	0-11		–	
				II	11-26		–	
				III	26-35		–	
Q-8	E			I	0-7		–	
				II	7-25		–	
				III	25-35		–	
R-8	E			I	0-6		–	
				II	6-23		–	
				III	23-36		–	
S-8	E			I	0-16		–	
				II	16-24		–	
				III	24-40		–	
T-8	E			I	0-8		–	
				II	8-19		–	
				III	19-31		–	

TRANSECT: BEGINNING UTM: N E
TRANSECT: Ending UTM: N E

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number: COLDER
Map or Quad:
Segment #: F
Transect #: 8
Date: 6/28/05
Recorder(s): ACR
Page 3 of

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
U-8	E	15m @ 90° E	Flat wooded (pine)	I	0-9	10YR 2/2 Humic SA LO	-	(Few gravels <5%)
				II	9-23	4.5 YR 5/4 Sand	-	
	|	|	w/ ferns	III	23-36	7.5 YR 4/6 Sand	-	
V-8	E	|	|	I	0-8	|	-	
				II	8-22		-	
				III	22-34		-	
W-8	E	|	|	I	0-8	|	-	edge of woods/clearing
				II	8-18		-	
				III	18-29		-	

TRANSECT: Beginning UTM: N ____ E ____
TRANSECT: Ending UTM: N ____ E ____

ST

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

****Fill Out Form Completely!****

Project Name/Number: Golder KMC
Map or Quad: Area G
Segment #: Area G
Transect #: DD1 - KK1
Date: 6-28-05
Recorder(s): SKY
Page 1 of 1

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
GG1	P	North of Eagle Rock	Pine	—	—	—	Ø	Pedestrian - Road
FF1	P	15m S of GG1	Pine	—	—	—	Ø	Pedestrian — Road
EE1	P	15m S of FF1	Pine	—	—	—	Ø	Pedestrian - Road.
DD1	E	15m S of EE1	Pine	I II III	0-8 8-21 21-36	10YR 2/2 Black Humic 7.5YR 5/4 Sand 7.5YR 6/4 Sand	Ø	10YR 2/2 Black Humic loam 7.5YR 5/4 Pinkish leached sand 7.5YR 6/4 Strong Brown Sand. BOT
HH1	P	15m N of GG1	Pine	—	—	—	Ø	Pedestrian - Road
II1	P	15m N of HH1	Pine	—	—	—	Ø	Dished-out deflated basin Pedestrian Road
JJ1	P	15m N of II1	"	—	—	—	Ø	"
KK1.	E	15m N of JJ1	"	I II III	0-7 7-20 20-38	10YR 2/2 Black humic 7.5YR 5/4 Pinkish Sand 2.5YR 3/4 Red sand	Ø	Strat I Black humic loam strat II Pinkish leached sand strat III Red sand. EOT

TRANSECT: BEGINNING UTM: N ________ E ________
TRANSECT: Ending UTM: N ________ E ________

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

****Fill Out Form Completely!****

Project Name/Number 1595.002 Golder/KMC Map or Quad ______ Segment # Area H Transect # 0 Date 06/29/2005 Page 1 of ___ Recorder(s) OB

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet (use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
09	E	15m N of 08	Pine forest, level	I	0-3	10YR 2/2 humic sand	Ø	
				II	3-24	7.5YR 4/4 sand	Ø	
				III	24-49	7.5YR 4/6 sand	Ø	
010	E, D	15m N of 09	Pine forest, level	I	0-3	10YR 2/2 humic sand	Ø	deflated @ I + II
				II	3-7	7.5YR 4/4 sand	Ø	
				III	7-47	7.5YR 4/6 sand	Ø	
011	E	15m N of 010	Pine forest, level	I	0-5	10YR 2/2 humic sand	Ø	
				II	5-15	7.5YR 4/4 sand	Ø	
				III	15-50	7.5YR 4/6 sand	Ø	
012	E	15m N of 011	Pine forest, level	I	0-3	10YR 2/2 humic sand		deflated @ I + II
				II	3-7	7.5YR 4/4 sand		
				III	7-43	7.5YR 4/6 sand		

TRANSECT: Beginning UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number: Golder KMC   Map or Quad: ______   Segment #: Area H   Transect #: P9   Date: 6-29-05   Recorder(s): SK4   Page 1 of 1

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
P9	E	15m N of P8	Pine	I II III	0 - 5 5 - 15 15 - 34	10YR 2/2 black humic 7.5YR 4/4 dark brown 5YR 4/6 yellowish brown	Ø	Strat I Organic humic Strat II Leached horizon Strat III Sand.
P10	E	15m N of P9	"	"	0 - 10 10 - 17 17 - 32	"	Ø	Strat II + Strat III consisted of a fine sand
P11	E	15m N of P10	"	"	0 - 8 8 - 17 17 - 43	"	Ø	gravel in strats II + III
P12	E	15m N of P11	"	"	0 - 7 7.5 - 15 15 - 36	"	Ø	"
P13	E	15m N of P12.	"	"	0 - 6 6 - 16 16 - 40	"	Ø	"
P14	E	15m N of P13	"	"	0 - 10 10 - 23 23 - 41	"	Ø	EOT "

TRANSECT: Beginning UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number GOLDER/KMC | Map or Quad ____ | Segment # H | Transect # Q | Date 6/29/05 | Recorder(s) ALS | Page 1 of 1

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet (use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
Q-9	E	15m @ 0° N	pines w/ ferny undergrowth	I II III	0-10 10-24 24-34	10YR 2/2 HUMIC SAND LO 7.5 YR 4/4 SAND 5 YR 4/6 SAND	– – –	very few gravels (<5%)
Q-10	E			I II III	0-10 10-20 20-34		– – –	
Q-11	E			I II III	0-8 8-19 19-30		– – –	
Q-12	E			I II III	0-8 8-16 16-29		– – –	
Q-13	E			I II III	0-8 8-16 16-37		– – –	
Q-14	E			I II III	0-5 5-18 18-57		– – –	
Q-16	E			I II III	0-7 7-18 18-38		– – –	

TRANSECT: BEGINNING UTM: N ____ E ____
TRANSECT: Ending UTM: N ____ E ____

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

****Fill Out Form Completely!****

Project Name/Number GOLDER/KMC
Map or Quad
Segment # H
Transect # R
Date 6/29/05
Recorder(s) ALS
Page 1 of

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
R-9	E	15 m @ 0° N	pines w/ ferny undergrowth	I II III	0-9 9-23 23-32	10YR 2/2 Humic SA Lo 7.5 YR 4/4 SAND 5YR 4/6 SAND	– – –	very few gravels <5%
R-10	E			I II III	0-11 11-23 23-33		– – –	
R-11	E			I II III	0-10 10-20 20-30		– –	
R-12	E			I II III	0-9 9-23 23-33		– – –	
R-13	E			I II III	0-10 10-25 25-34		– – –	
R-14	E			I II III	0-12 12-29 29-38		– – –	
R-15	E			I II III	0-9 9-20 20-32		– –	

TRANSECT: Beginning UTM: N E
TRANSECT: Ending UTM: N E

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Cincinnati, Ohio 45246

ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number 1595.002 Golder KMC   Map or Quad ______   Segment # Area H   Transect # S   Date 06/26/2005   Recorder(s) CB   Page 1 of ____

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet (use one code only - explain extra data in soil profile description and comments section)

30T

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
S9	E	15m N of S8	Pine forest, level	I	0-5	10YR 2/2 humic sand	Ø	
				II	5-17	7.5YR 4/4 sand	Ø	
				III	17-49	7.5YR 4/6 sand	Ø	
S10	E	15m N of S9	Pine forest, level	I	0-7	10YR 2/2 humic sand	Ø	
				II	7-20	7.5YR 4/4 sand	Ø	
				III	20-45	7.5 YR 4/6 sand	Ø	fragmented hardpan
S11	E	15m N of S10	Pine forest, level	I	0-5	10YR 2/2 humic sand	Ø	
				II	5-21	7.5YR 4/4 sand	Ø	
				III	21-54	7.5YR 4/6 sand	Ø	
S12	E	15m N of S11	Pine forest, level	I	0-5	10YR 2/2 humic sand	Ø	
				II	5-14	7.5YR 4/4 sand	Ø	
				III	14-45	7.5 YR 4/6 sand	Ø	
S13	E	15m N of S12	Pine forest, level	I	0-2	10YR 2/2 humic sand	Ø	
				II	2-4	7.5YR 4/4 sand	Ø	
				III	4-37	7.5 YR 4/6 sand	Ø	fragmented hard pan

TRANSECT: BEGINNING UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number: 1595.002 Golder KMC
Map or Quad:
Segment #: Area H
Transect #: S
Date: 06/29/2005
Recorder(s): CB
Page 1 of 2

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
S14	E	15m N of S13	Pine forest, level	I	0-5	10YR 2/2 humic sand	Ø	
				II	5-15	7.5YR 4/4 sand	Ø	
				III	15-36	5YR 4/6 sand	Ø	5% gravel content
S15	E	15m N of S14	Pine forest, level	I	0-5	10YR 2/2 humic sand	Ø	
				II	5-16	7.5YR 4/4 sand	Ø	
				III	16-40	5YR 4/6 sand	Ø	
S16	E	15m N of S15	Pine forest, level	I	0-5	10YR 2/2 humic sand	Ø	
				II	5-12	7.5YR 4/4 sand	Ø	
				III	12-46	5YR 4/6 sand	Ø	5% gravel content

TRANSECT: Beginning UTM: N ____ E ____
TRANSECT: Ending UTM: N ____ E ____

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number: Golder KMC
Map or Quad:
Segment #: Area H
Transect #: T9 - T17
Date: 6-29-05
Recorder(s): SKY
Page 1 of 1

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet (use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
T9	E	15m N of T8	Pine.	I II III	0 - 9 9 - 20 20 - 25	10 YR 2/2 Black humic 7.5YR 4/4 brown 5YR 4/6 yellowish red	Ø	BOT Strat I Organic humic horizon Strat II Leached Strat III Sand
T10	E	15m N of T9	"	"	0 - 5 5 - 18 18 - 34	"	Ø	"
T11	E	15m N of T10	"	"	0 - 6 6 - 13 13 - 34	"	Ø	"
T12	E	15m N of T11	"	"	0 - 6 6 - 22 22 - 40	"	Ø	"
T13	E	15m N of T12	"	"	0 - 7 7 - 17 17 - 29	"	Ø	"
T14	E	15m N of T13	"	"	0 - 10 10 - 22 22 - 32	"	Ø	"
T15	E	15m N of T14	"	"	0 - 6 6 - 12 12 - 40	"	Ø	"
T16	E	15m N of T15	"	"	0 - 9 9 - 14 14 - 29	"	Ø	"
T17	E	15m N of T16	"	"	0 - 8 8 - 18 18 - 34	"	Ø	" Strat II + strat III had gravel.

TRANSECT: Beginning UTM: N ________ E ________
TRANSECT: Ending UTM: N ________ E ________

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number: GOLDER/ KMC
Map or Quad:
Segment #: H
Transect #: U
Date: 6/29/05
Page 1 of 2
Recorder(s): ALS

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
U-9	E	15m @ 0° N	flat pine woods w/ ferny undergrowth	I II III	0-11 11-21 21-33	10YR 2/2 Humic SA-LO 7.5YR 4/4 SAND 5YR 4/6 SAND	- - -	few gravels < 5%
U-10	E			I II III	0-12 12-24 24-36		- - -	
U-11	E			I II III	0-11 11-22 22-32		- - -	
U-12	E			I II III	0-8 8-23 23-35		- - -	
U-13	E			I II III	0-7 7-16 16-30		- - -	
U-14	E			I II III	0-8 8-21 21-30		- - -	
U-15	E			I II III	0-7 7-21 21-31		- - -	

TRANSECT: BEGINNING UTM: N ____ E ____
TRANSECT: Ending UTM: N ____ E ____

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number: GOLDEN
Map or Quad:
Segment #: H
Transect #: U
Date: 6/29/05
Recorder(s): AW
Page 2 of 2

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
U-16	E	15m @ 0° N	wooded forest/under (pine)	I II III	0-11 11-22 22-33	10YR 2/2 HUMIC SA LO 7.5YR 4/4 SAND 5YR 4/6 SAND	- - -	(little gravels <5%)
U-17	E			I II III	0-9 8-21 24-36		- - -	edge of woods/field

TRANSECT: Beginning UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

7.5YR 4/4
5YR 4/6

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

****Fill Out Form Completely!****

Project Name/Number: Golder KMC
Map or Quad: /
Segment #: Area H
Transect #: ~~V9~~ V9 - V17
Date: 6-29-05
Recorder(s): SKY
Page 1 of 1

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet (use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
V9	E	15m N of V8	Pine	I II III	0 - 10 16 - 24 24 - 38	10YR 2/2 Black humic 7.5YR 3/4 dark brown 7.5YR 4/6 strong brown	Ø	BOT Strat I Organic humic Strat II Leached horizon Strat III Sand
V10	E	15m N of V9	"	"	0 - 8 8 - 18 18 - 29	10YR 2/2 Black humic 7.5YR 4/4 brown 5YR 4/6 yellowish red	Ø	"
V11	E	15m N of V10	"	"	0 - 9 9 - 23 23 - 37	"	Ø	"
V12	E	15m N of V11	"	"	0 - 9 9 - 27 27 - 42	"	Ø	"
V13	E	15m N of V12	"	"	0 - 6 6 - 19 19 - 31	"	Ø	"
V14	E	15m N of V13	"	"	0 - 8 8 - 23 23 - 31	"	Ø	"
V15	E	15m N of V14	"	"	0 - 7 7 - 21 21 - 37	"	Ø	"
V16	E	15m N of V15	"	"	0 - 7 7 - 11 11 - 25	Same as V9	Ø	Same as V9.
V17	E	15m N of V16	"	"	0 - 10 10 - 24 24 - 36	Same as V15	Ø	EOT Same as V15

TRANSECT: BEGINNING UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number: 1595.002 Golden KMC
Map or Quad:
Segment #: Area H
Transect #: W
Date: 06/29/2005
Recorder(s): CB
Page 1 of 1

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet (use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
W9	E	15m N of W8	Pine forest, level	I	0-7	10YR 2/2 humic sand	Ø	
				II	7-22	7.5YR 4/4 sand	Ø	
				III	22-40	5YR 4/6 sand	Ø	
W10	E	15m N of W9	Pine forest, level	I	0-5	10YR 3/2 humic sand	Ø	
				II	5-19	7.5YR 4/4 sand	Ø	
				III	19-45	7.5YR 4/6 sand	Ø	
W11	E	15m N of W10	Pine forest, level	I	0-5	10YR 2/2 humic sand	Ø	
				II	5-19	7.5YR 4/4 sand	Ø	
				III	19-47	7.5YR 4/6 sand	Ø	10% gravel content
W12	E	15m N of W11	Pine forest, level	I	0-6	10YR 2/2 humic sand	Ø	
				II	6-23	7.5YR 4/4 sand	Ø	
				III	23-39	7.5YR 4/6 sand	Ø	10% gravel content
W13	E	15m N of W12	Pine forest, level	I	0-5	10YR 2/2 humic sand	Ø	
				II	5-19	7.5YR 4/4 sand	Ø	
				III	19-51	7.5YR 4/6 sand	Ø	10% gravel content

TRANSECT: BEGINNING UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

ARCHAEOLOGICAL SAMPLE LOCUS FORM

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Fill Out Form Completely!

Project Name/Number: Golder KMC
Map or Quad:
Segment #: Area D Ext
Transect #: A1 - A8
Date: 6-29-05
Recorder(s): SKY
Page 1 of 1

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
A1	P	—	Open	—	—	—	Ø	Pedestrian Road
A2	E	15m N of A1	"	I II III	0 - 9 9 - 25 25 - 37	10YR 2/2 Black humic 7.5YR 4/2 brown 5YR 4/4 reddish brown	Ø	Strat I organic humic loam Strat II leached horizon Strat III sand
A3	E	15m N of A2	"	I	0 - 27	5YR 4/4 reddish brown	Ø	Disturbed by logging, first two strats stripped
A4	E	15m N of A3	"	I II III	0 - 9 9 - 29 29 - 40	Same as A2	Ø	Same as A2
A5	E	15m N of A4	"	"	0 - 7 7 - 15 15 - 39	"	Ø	"
A6	E	15m N of A5	"	"	0 - 7 7 - 17 17 - 30	"	Ø	"
A7	E	15m N of A6	"	"	0 - 9 9 - 22 22 - 43	"	Ø	"
A8	E	15m N of A7	"	"	0 - 7 7 - 22 22 - 30	"	Ø	"
A9	E	15m N of A8	"	"	0 - 7 7 - 20 20 - 40	"	Ø	"

TRANSECT: Beginning UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number: GOLDER / KMC
Map or Quad:
Segment #: D EXTENTION
Transect #: B
Date: 6/29/05
Recorder(s): ALS
Page 1 of 2

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
30T B-1	D	15m @ 0° N.	Farm field					edge of Road / disturbed
B-2	E			I II III	0-10 10-26 16-38	10YR 2/2 HUMIC SA LO 7.5 YR 4/4 SAND 5 YR 4/6 SAND	– – –	field a little chewed up
B-3	E			I II III	0-9 9-18 18-32		– – –	
B-4	E			I II III	0-15 15-22 22-34		– – –	
B-5	E			I II III	0-11 11-24 24-37		– – –	
B-6	E			I II III	0-6 6-15 15-32		– – –	
B-7	E			I II III	0-8 8-21 21-34		– – –	

TRANSECT: Beginning UTM: N E
TRANSECT: Ending UTM: N E

BHE Environmental, Inc.
11733 Chesterdale Road
Cincinnati, Ohio 45246
513-326-1500

BHE ENVIRONMENTAL, INC.

ARCHAEOLOGICAL SAMPLE LOCUS FORM
Fill out form completely!

Project Number: [redacted] Golder/KMC

Project Name: [redacted]

[redacted]g Area: Dextension

Date: 6/29/05

Transect ID: B

Quad Map:

Recorder: ALS

Sample Locus	Code*	Interval (m) & direction	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts (P or H)	Comments
B-8	E	15 m. @ 0° N	fern field	I	0-9	10YR 2/2 Humic SA. LO	—	• field chewed up
				II	9-17	7.5 YR 4/4 SAND	—	
				III	17-30	5 YR 4/6 SAND		
B-9	E			I	0-9		—	
				II	9-18		—	
				III	18-30		—	

*Codes: E=Excavated, P=Pedestrian, S=Slope, D=Disturbed, W=Wet

Transect Beginning Feature: ______ Transect Ending Feature: ______

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

****Fill Out Form Completely!****

Project Name/Number 1595.002 | Map or Quad ______ | Segment # Area I | Transect # YY | Date 07/03/2005 | Recorder(s) B | Page 1 of ___

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
YY1	E	30m 150° NW of A1	level, clear cut field	I	0-5	10 YR 2/2 humic sand	Ø	30 m interval employed to find survey boundary edge and as a result of negative findings
				II	5-13	7.5YR 4/4 sand	Ø	
				III	13-40	5YR 4/4 sand	Ø	5% gravel content
YY2	E	15m 233° SW of YY1	level, clear cut field	I	0-3	10 YR 2/2 humic sand	Ø	
				II	3-10	7.5YR 4/4 sand	Ø	
				III	10-40	5YR 4/4 sand	Ø	5% gravel content
YY3	P, D	15m 233° SW of YY2	on road berm	—	—	—	Ø	
YY4	D	15m 233° SW of YY3	level, clear cut field	—	—	—	Ø	in timber pile
YY5	E	15m 233° SW of YY4	level, clear cut field	I	0-5	10 YR 2/2 humic sand	Ø	
				II	5-16	7.5 YR 4/4 sand	Ø	
				III	16-42	5 YR 4/4 sand	Ø	5% gravel content
YY6	E	15m 233° SW of YY5	level, clear cut field	I	0-1	10 YR 2/2 humic sand	Ø	
				II	1-4	7.5 YR 4/4 sand	Ø	
				III	4-38	5 YR 4/4 sand	Ø	

TRANSECT: Beginning UTM: N______ E______
TRANSECT: Ending UTM: N______ E______

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number 1595.002 | Map or Quad ______ | Segment # Area I | Transect # YY | Date 07/03/05 | Recorder(s) CB | Page 2 of ____

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
YY7	E	15m SW 233° of YY6	level, clear cut field	I	0-6	10YR 2/2 humic sand	Ø	
				II	6-17	7.5YR 4/4 sand	Ø	
				III	17-49	5YR 4/4 sand	Ø	5% gravel content
YY8	E	15m 233° SW of YY7	level, clear cut field	I	0-5	10YR 2/2 humic sand	Ø	
				II	5-15	7.5YR 4/4 sand	Ø	
				III	15-44	5YR 4/4 sand	Ø	<5% gravel content
YY9	E	15m 233° SW of YY8	level, clear cut field	I	0-5	10YR 2/2 humic sand	Ø	
				II	5-18	7.5YR 4/4 sand	Ø	
				III	18-51	5YR 4/4 sand	Ø	
YY10	D	15m 233° SW of YY9	level, clear cut field	—	—	—	Ø	in timber pile
YY11	E	15m 233° SW of YY10	level, clear cut field	I	0-3	10YR 2/2 humic sand	Ø	
				II	3-17	7.5YR 4/4 sand	Ø	
				III	17-47	5YR 4/4 sand	Ø	

TRANSECT: BEGINNING UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number 1595.002
Map or Quad
Segment # Area I
Transect # YY
Date 07/03/05
Recorder(s) CB
Page 3 of

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
YY12	D	15m 233° SW of YY11	level, clear cut field	—	—	—	∅	in timber pile
YY13	P	15m 233° SW of YY12	in road	—	—	—	∅	main access road
YY14	D	15m 233° SW of YY13	level, clear cut field	—	—	—	∅	in timber pile, south side road
YY15	D	15m 233° SW of YY14	level, clear cut field	—	—	—	∅	in timber pile
YY16	P	15m 233° SW of YY15	level, cleared with no cover	—	—	—	∅	clear area, deflated 100% vis.
YY17	P	15m 233° SW of YY16	level, cleared with no cover	—	—	—	∅	clear area, deflated 100% vis

TRANSECT: BEGINNING UTM: N ____ E ____
TRANSECT: Ending UTM: N ____ E ____

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number: 1595.002 GALDER/KMC
Map or Quad:
Segment #: I
Transect #: A
Date: 7/03/05
Page 1 of
Recorder(s): ACS

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
A-1	E	15m @ 230W	choppy, ferny field w/ fallen timbers	I II III	0-7 7-19 19-32	10YR 2/2 HUMIC SA. LO 7.5 YR 4/3 SAND 5 YR 3/4 SAND	– – –	
A-2	E			I II III	0-8 8-19 19-33		– – –	
A-3	E			I II III	0-8 8-20 20-31		– – –	
A-4	E			I II III	0-9 9-22 22-38		– – –	
A-5	D		Road edge/ pushpile					Road Edge/Pushpile – NO DIG
A-6	E		choppy, ferny field w/ downed timber	I II III	0-7 7-17 17-35	See A-1		
A-7	E			I II III	0-5 5-17 17-34			

TRANSECT: Beginning UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number: 1595.002 GOLDER/KMC
Map or Quad:
Segment #: I
Transect #: A
Date: 4/1/05
Recorder(s): AZS
Page 2 of

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
A-8	E	15 m @ 233°W	choppy, ferny field w/ downed timbers	I II III	0-7 7-18 18-34	10YR 2/2 HUMIC SA. LO 7.5 YR 4/3 SAND 5 YR 3/4 SAND	— — —	
A-9	E			I II III	0-8 8-18 18-38		— — —	
A-10	E			I II III	0-5 5-21 21-39		— — —	
A-11	E			I II III	0-5 5-16 16-30		— — —	
A-12	P		in Road cut				—	
A-13	E		choppy, ferny field with downed trees	I II III	0-6 6-17 17-29	see A-8	— — —	
A-14	E			I II III	0-7 7-17 17-34		— — —	(near badly rutted area)

TRANSECT: Beginning UTM: N E
TRANSECT: Ending UTM: N E

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number: 1595.002 GOLDER/KMC
Map or Quad:
Segment #: I
Transect #: A
Date: 7/03/05
Recorder(s): ACS
Page 3 of 3

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet (use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
A-15	E	15m @ 233° W	Choppy, ferny field w/ downed timbers	I II III	0-6 6-15 15-32	10YR 2/2 HUMIC SA Lo 7.5 YR 4/3 SAND 5 YR 3/4 SAND	– – –	
A-16	E	↓	↓	I II III	0-5 5-20 20-51	↓	– – –	
ST A-17	E	↓	↓	I II III	0-8 8-19 19-43	↓		

TRANSECT: Beginning UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

ARCHAEOLOGICAL SAMPLE LOCUS FORM

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Page 1 of 2

Name/Number Golder KML Map or Quad ______ Segment # Area I Transect # B1-B19 Date 7-3-05 Recorder(s) SUY

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
B1	E	15m 143° N of A1	Open	I II III	0-8 8-23 23-43	10YR 2/2 Black 7.5YR 4/3 Pinkish Gray 5YR 4/6 Red	Ø	Strat I Limited Loam Strat II Leached horizon Strat III Sand
B2	E	15m 233°N of B1	"	"	0-6 6-18 18-36	"	Ø	"
B3	E	15m 233°N of B2	"	"	0-6 6-17 17-40	"	Ø	"
B4	E	15m 233°N of B3	"	"	0-6 6-12 12-27	"	Ø	"
B5	D	15m 233°N of B4	"	—	—	—	Ø	Disturbed - Road.
B6	D	15m 233°N of B5	"	—	—	—	Ø	Disturbed - Road
B7	E	15m 233°N of B6	"	I II III	0-7 7-19 19-37	Same as B4	Ø	Same as B4
B8	E	15m 233°N of B7	"	"	0-6 6-30 30-41	"	Ø	"
B9	D	15m 233°N of B8	"	—	—	—	Ø	Disturbed logging Push Pile
B10	D	15m 233°N of B9	"	—	—	—	Ø	Disturbed logging Push Pile
B11	P	15m 233°N of B10	"	—	—	—	Ø	Pedestrian Road
B12	E	15m 233°N of B11	"	I II III	0-6 6-15 15-32	Same as B8	Ø	Same as B8
B13	E	15m 233°N of B12	"	I II III	0-10 10-28 28-39	"	Ø	"
B14	E	15m 233°N of B13	"	"	0-7 7-15 15-32	"	Ø	"

TRANSECT: Beginning UTM: N __________ E __________
TRANSECT: Ending UTM: N __________ E __________

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

****Fill Out Form Completely!****

Project Name/Number: Golder KMC
Map or Quad:
Segment #: Area I
Transect #: B1 - B19
Date: 7-3-04
Recorder(s): SKY
Page 2 of 2

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
B15	E	15m 233°N of B14	Open	I II III	0 - 6 6 - 17 17 - 36	10YR 2/2 Black humic 7.5YR 4/3 Pinkish gray sand 5YR 4/6 Sand	Ø	Strat I humic loam Strat II leached horizon Strat III Sand
B16	E	15m 233°N of B15	"	"	0 - 9 9 - 22 22 - 30	"	Ø	"
B17	E	15m 233°N of B16	"	"	0 - 7 7 - 16 16 - 45	"	Ø	"
B18	E	15m 233°N of B17	"	"	0 - 5 5 - 19 19 - 37	"	Ø	"
B19	E	15m 233°N of B18	"	"	0 - 7 7 - 24 24 - 39	"	Ø	"

TRANSECT: Beginning UTM: N ____ E ____
TRANSECT: Ending UTM: N ____ E ____

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number 1595.002 Map or Quad ______ Segment # Area I Transect # C Date 07/03/2005 Recorder(s) JCB Page 1 of 4

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet (use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
C1	E	15m @ 150° NW of D.1	level, clear cut field	I	0-8	10YR 2/2 humic sand	Ø	
				II	8-17	7.5YR 4/4 sand	Ø	
				III	17-40	5YR 4/4 sand	Ø	5% gravel content
C2	E	15m @ 233° SW of C1	level, clear cut field	I	0-2	10YR 2/2 humic sand	Ø	deflated, in rut
				II	2-4	7.5YR 4/4 sand	Ø	
				III	4-35	5YR 4/4 sand	Ø	
C3	D	15m @ 233° SW of C2	level, clear cut field	—	—	—	Ø	in timber pile
C4	E	15m @ 233° SW of C3	level, clear cut field	I	0-5	10YR 2/2 humic sand	Ø	
				II	5-17	7.5YR 4/4 sand	Ø	
				III	17-43	5YR 4/4 sand	Ø	
C5	P	15m @ 233° SW of C4	level, clear cut field	—	—	—	Ø	deflated, exposed Stratum III
C6	P	15m @ 233° SW of C5	road	—	—	—	Ø	
C7	D	15m @ 233° SW of C6	level, clear cut field	—	—	—	Ø	in timber pile

TRANSECT: BEGINNING UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

11733 Chesterdale Road
Cincinnati, Ohio 45246

ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number: 1595 002
Map or Quad:
Segment #: Area I
Transect #: C
Date: 07/03/2005
Recorder(s): CB
Page 2 of 4

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
C8	P	15 m @ 233° SW of C7	road	—	—	—	Ø	main access road
C9	D	15 m @ 233° SW of C8	level, clear cut field	—	—	—	Ø	in timber pile
C10	E	15 m @ 233° SW of C9	level, clear cut field	I	0-3	10YR 2/2 humic sand	Ø	
				II	3-16	7.5 YR 4/4 sand	Ø	
				III	16-41	5YR 4/4 sand	Ø	5% gravel content
C11	E	15 m @ 233° SW of C10	level, clear cut field	I	0-5	10YR 2/2 humic sand	Ø	
				II	5-15	7.5 YR 4/4 sand	Ø	
				III	15-42	5YR 4/4 sand	Ø	5% gravel content
C12	E	15 m @ 233° SW of C11	level, clear cut field	I	0-5	10YR 2/2 humic sand	Ø	
				II	5-15	7.5 YR 4/4 sand	Ø	
				III	15-52	5YR 4/4 sand	Ø	
C13	E	15 m @ 233° SW of C12	level, clear cut field	I	0-3	10YR 2/2 sand	Ø	
				II	3-17	7.5 YR 4/4 sand	Ø	
				III	17-47	5YR 4/4 sand	Ø	5% gravel content

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

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Project Name/Number 1595.002

Map or Quad ______

Segment # Area I
Transect # C

Date 07/03/2005
Recorder(s) CB

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet (use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
C14	D	15m @ 233° SW of C13	level, clear cut field	—	—	—	Ø	
C15	E	15m @ 233° SW of C14	level, clear cut field	I	0-2	10YR 2/2 humic sand	Ø	deflated, in rut
				II	2-5	7.5YR 4/4 sand	Ø	
				III	5-50	5YR 4/4 sand	Ø	5% gravel content
C16	E	15m @ 233° SW of C15	level, clear cut field	I	0-4	10YR 2/2 humic sand	Ø	—
				II	4-12	7.5YR 4/4 sand	Ø	
				III	12-45	5YR 4/4 sand	Ø	5% gravel content
C17	E	15m @ 233° SW of C16		I	0-5	10YR 2/2 humic sand	Ø	
				II	5-45	7.5YR 4/4 sand	Ø	
				III	45-65	5YR 4/4 sand	Ø	
C18	E	15m @ 233° SW of C17		I	0-3	10YR 2/2 humic sand	Ø	
				II	3-17	7.5YR 4/4 sand	Ø	
				III	17-31	5YR 4/4 sand	Ø	

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

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Project Name/Number 1595.002　Map or Quad ______　Segment # Area I　Transect # C　Date 07/03/2005　Recorder(s) CB

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
C19	E	15 m @ 233° SW of C18	level, clear cut field	I	0-3	10YR 3/2 humic sand	Ø	
				II	3-19	7.5YR 4/4 sand	Ø	
				III	19-40	5YR 4/4 sand	Ø	5% gravel content
C20	E	15m @ 233° SW of C19	level, clear cut field	I	0-2	10YR 3/2 humic sand	Ø	
				II	2-4	7.5YR 4/4 sand	Ø	
				III	4-40	5YR 4/4 sand	Ø	5% gravel content

TRANSECT: Beginning UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number: 1595.002 GOLDER/KMC
Map or Quad:
Segment #: A
Transect #: D
Date: 7/3/05
Recorder(s): ALS
Page 1 of

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet (use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
D-1	E	15 m @ 233° W	choppy field ferny w/ many downed timbers	I II III	0-6 6-17 17-33	10YR 2/2 HUMIC SA LO 7.5YR 4/3 SAND 5YR 3/4 SAND	– – –	
D-2	E	|	|	I II III	0-6 6-22 22-38	|	– –	
D-3	E	|	|	I II III	0-6 6-20 20-33	|	– – –	
D-4	E	|	|	I II III	0-7 7-24 24-40	|	– – –	
D-5	E	|	|	I II III	0-6 6-21 21-36	|	– – –	
D-6	E	|		I II III	0-7 7-22 22-34	|	– – –	
D-7 and D-8	P	|	in Road Cut	/	/	/	– – –	

TRANSECT: BEGINNING UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

****Fill Out Form Completely!****

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Project Name/Number 1595.002 GOLDER/KMC

Map or Quad ___

Segment # I
Transect # D

Date 7/3/05
Recorder(s) ALS

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
D-9	E	15m @ 233°W	choppy, ferny field w/ downed timbers	I	0-20	extremely mottled sands - Disturbed	–	push pile ?
D-10	E			I II III	0-5 6-16 16-32	10YR 2/2 HUMIC SA lo 7.5 YR 4/3 SAND 5YR 3/4 SAND	– – –	
D-11	E			I II III	0-7 7-21 21-35		– – –	
D-12	E			I II III	0-6 6-19 19-39			
D-13	E			I II III	0-8 8-16 16-40			
D-14	E			I II III	0-6 6-15 15-25			
D-15	E			I II III	0-8 8-17 17-29			

TRANSECT: Beginning UTM: N ___ E ___
TRANSECT: Ending UTM: N ___ E ___

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Cincinnati, Ohio 45246

ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number 1595.002 GOLDER/KMC
Map or Quad
Segment # I
Transect # D
Date 7/03/05
Recorder(s) ALS
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*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet (use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
D-16	E	15 m @ 233° W	choppy ferny field w/ downed timbers	I II III	0-4 4-19 19-36	10 YR 2/2 HUMIC SA.LO 7.5 YR 4/3 SAND 5 YR 3/4 SAND	- - -	
D-17	D	|	|	/	/	/	/	Large Pile of Timbers / No Dig
D-18	E	|	|	I II III	0-9 9-17 17-39	See D-16		
D-19	E	|	|	I II III	0-8 8-22 22-37	|		
D-20	E	|	|	I II III	0-9 9-22 22-44	|		
D-21	E	|	|	I II III	0-6 6-21 21-44	|		

TRANSECT: BEGINNING UTM: N ________ E ________
TRANSECT: Ending UTM: N ________ E ________

ARCHAEOLOGICAL SAMPLE LOCUS FORM

11733 Chesterdale Road
Cincinnati, Ohio 45246

Fill Out Form Completely!

Project Name/Number: Golther VMC
Map or Quad:
Segment #: Area I
Transect #: E1 - E21
Date: 2-3-05
Recorder(s): JKY

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
E1	E	15m 143° N of D1	Open	I II III	0-9 9-18 18-36	10YR 2/2 Black 7.5YR 6/3 Pinkish Gray 5YR 4/6 Reddish	Ø	Strat I humic loam Strat II Leached horizon Strat III sand BOT
E2	E	15m 233° N of E1	"	"	0-9 9-23 23-36	"	Ø	"
E3	E	15m 233° N of E2	"	"	0-6 6-14 14-33	"	Ø	"
E4	E	15m 233° N of E3	"	"	0-8 8-19 19-39	"	Ø	"
E5	E	15m 233° N of E4	"	I II	0-4 4-36	10YR 2/2 Black humic 5YR 4/6 Reddish Sand	Ø	deflated soil due to logging
E6	D	15m 233° N of E5		—	—	—	Ø	Disturbed due to logging
E7	P	15m 233° N of E6	"	—	—	—	Ø	Pedestrian Road
E8	E	15m 233° N of E7	"	I II III	0-9 9-21 21-39	Same as E4	Ø	Same as E4
E9	E	15m 233° N of E8	"	"	0-10 10-20 20-36	"	Ø	"
E10	E	15m 233° N of E9	"	"	0-4 4-12 12-34	"	Ø	"
E11	E	15m 233° N of E10	"	"	0-9 9-18 18-36	"	Ø	"
E12	E	15m 233° N of E11	"	"	0-6 6-17 17-36	"	Ø	"
E13	E	15m 233° N of E12	"	"	0-8 8-22 22-38	"	Ø	"
E14	E	15m 233° N of E13	"	"	0-7 7-34 34-51	"	Ø	"

TRANSECT: Beginning UTM: N ____ E ____
TRANSECT: Ending UTM: N ____ E ____

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

****Fill Out Form Completely!****

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Project Name/Number: Golder KMG
Map or Quad:
Segment #: Area I
Transect #: E1 - E21
Date: 7-3-05
Recorder(s): SKY

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet (use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
E15	E	15 m 233°N of E14	Open	I II III	0 - 6 6 - 15 15 - 43	10YR 2/2 Black 7.5YR 4/3 Pinkish Gray 5YR 4/6 Red	Ø	Strat I Humic Loam Strat II Leached horizon Strat III Sand
E16	E	15m 233°N of E15	"	"	0 - 10 10 - 32 32 - 46	"	Ø	"
E17	D	15 m 233°N of E16	"	—	—	—	Ø	Disturbed due to logging
E18	E	15m 233°N of E17	"	I II III	7 26 45	same as E16	Ø	same as E16
E19	E	15m 233°N of E18	"	I II III	0 - 7 7 - 22 22 - 46	"	Ø	"
E20	E	15m 233°N of E19	"	"	0 - 8 8 - 18 18 - 38	"	Ø	"
E21	E	15m 233°N of E20	"	"	0 - 9 9 - 17 17 - 34	"	Ø	" EOT

TRANSECT: BEGINNING UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

****Fill Out Form Completely!****

Project Name/Number: 1595.002
Map or Quad:
Segment #: Area I
Transect #: F
Date: 07/02/05
Recorder(s): CB

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
F8	E	15 m SW 233° from F7	level, clear cut field	I	0-3	10YR 2/2 humic sand	Ø	
				II	3-20	7.5YR 4/4 sand	Ø	
				III	20-47	5YR 4/4 sand	Ø	
F9	D	15m SW 233° from F8	level, clear cut field	—	—	—	Ø	in timber pile
F10	E	15m SW 233° from F9	level, clear cut field	I	0-2	10 YR 2/2 humic sand	Ø	
				II	2-4	7.5YR 4/4 sand	Ø	
				III	4-40	5YR 4/4 sand	Ø	
F11	D	15m SW 233° from F10	level, clear cut field	—	—	—	Ø	in timber pile
F12	E	15m SW 233° from F11	level, clear cut field	I	0-5	10YR 2/2 humic sand	Ø	
				II	5-20	7.5 YR 4/4 sand	Ø	
				III	20-40	5YR 4/4 sand	Ø	5% gravel content
F13	E	15m SW 233° from F12	level, clear cut field	I	0-8	10YR 2/2 humic sand	Ø	
				II	8-22	7.5YR 4/4 sand	Ø	
				III	22-37	5YR 4/4 sand	Ø	

TRANSECT: Beginning UTM: N ____ E ____
TRANSECT: Ending UTM: N ____ E ____

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number 1595.002

Map or Quad

Segment # Area I
Transect # F

Date 07/02/05
Recorder(s) CB

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet (use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
F14	E	15m 233° SW from F13	level, clear cut field	I	0-2	10YR 2/2 humic sand	Ø	deflated in rt
				II	2-4	7.5YR 4/4 sand	Ø	
				III	4-37	5YR 4/4 sand	Ø	
F15	E	15m 233° SW from F14	level, clear cut field	I	0-15	5YR 4/4 sand	Ø	deflated
F16	E	15m 233° SW from F15	level, clear cut field	I	0-8	10YR 2/2 humic sand	Ø	
				II	8-18	7.5YR 4/4 sand	Ø	
				III	18-38	5YR 4/4 sand	Ø	
F17	E	15m 233° SW from F16	level, clear cut field	I	0-5	10YR 2/2 humic sand	Ø	
				II	5-10	7.5YR 4/4 sand	Ø	
				III	10-51	5YR 4/4 sand	Ø	
F18	E	15m 233° SW from F17	level, clear cut field	I	0-6	10YR 2/2 humic sand	Ø	
				II	6-17	7.5YR 4/4 sand	Ø	
				III	17-32	5YR 4/4 sand	Ø	

TRANSECT: BEGINNING UTM: N ____ E ____
TRANSECT: Ending UTM: N ____ E ____

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number 1595.002 Golder/KMG   Map or Quad ______   Segment # Area I   Transect # F   Date ______   Recorder(s) ______   Page 4 of 4

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
F19	E	15 m SW 233° from F18	level, clear cut field	I	0-4	10 YR 2/2 humic sand	Ø	
				II	4-22	7.5YR 4/4 sand	Ø	
				III	22-52	5YR 4/4 sand	Ø	
F20	E	15 m SW 233° from F19	level, clear cut field	I	0-6	10 YR 2/2 humic sand	Ø	
				II	6-16	7.5 YR 4/4 sand	Ø	
				III	16-39	5YR 4/4 sand	Ø	
F21	E	15m SW 233° from F20	level, clear cut field	I	0-6	10 YR 2/2 humic sand	Ø	
				II	6-19	7.5 YR 4/4 sand	Ø	
				III	19-37	5YR 4/4 sand	Ø	
F22	D	15m SW 233° from F21	level, clear cut field	—	—	—	Ø	
F23	E	15 m SW 233° from F22	level, clear cut field	I	0-5	10YR 2/2 humic sand	Ø	
				II	5-13	7.5YR 4/4 sand	Ø	
				III	13-50	5YR 4/4 sand	Ø	

TRANSECT: BEGINNING UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

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Cincinnati, Ohio 45246

ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number Golder KMC

Map or Quad

Segment # Area I
Transect # G1 - G24

Date 7-7-05
Recorder(s) SKY

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*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet (use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
G1	E	30m 53° N of G3	Open	I II III	0 - 13 13 - 19 19 - 34	10YR 2/2 Black 7.5YR 4/3 Pinkish Gray 5YR 4/6 Reddish Sand	Ø	Strat I humic loam Strat II Leached horizon Strat III Sand
G2	E	15m 53° N of G3	"	"	0 - 9 9 - 26 26 - 44	"	Ø	"
G3	E	15m 143° N of F3	"	"	0 - 8 8 - 17 17 - 43	"	Ø	"
G4	P	15m 233° N of G7	"	—	—	—	Ø	Pedestrian - Road
G5	E	15m 233° N of G4	"	I II III	0 - 8 8 - 21 21 - 34	Same as G3	Ø	Same as G3
G6	E	15m 233° N of G5	"	"	0 - 5 5 - 15 15 - 36	"	Ø	"
G7	E	15m 233° N of G6	"	"	0 - 4 4 - 18 18 - 34	"	Ø	"
G8	E	15m 233° N of G7	"	"	0 - 7 7 - 16 16 - 24	"	Ø	"
G9	E	15m 233° N of G8	"	"	0 - 7 7 - 17 17 - 33	"	Ø	"
G10	E	15m 233° N of G9	"	"	0 - 8 8 - 22 22 - 35	"	Ø	"
G11	E	15m 233° N of G10	"	"	0 - 9 9 - 24 24 - 42	"	Ø	"
G12	E	15m 233° N of G11	"	"	0 - 8 8 - 13 13 - 30	"	Ø	"
G13	E	15m 233° N of G12	"	"	0 - 8 8 - 19 19 - 33	"	Ø	"
G14	E	15m 233° N of G13	"	"	0 - 6 6 - 13 13 - 33	"	Ø	"

TRANSECT: BEGINNING UTM: N ____ E ____
TRANSECT: Ending UTM: N ____ E ____

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Cincinnati, Ohio 45246

ARCHAEOLOGICAL SAMPLE LOCUS FORM

****Fill Out Form Completely!****

Project Name/Number: Golder KMC
Map or Quad:
Segment #: Area I
Transect #: G1- G24
Date: 7-7-05
Recorder(s): SKY

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet (use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
G15	E	15m 233° N of G14	Open	I II III	0 – 7 7 – 14 14 – 43	10YR 2/2 humic 7.5YR 3/4 Pinkish sand 5YR 4/6 Reddish sand	Ø	Strat I humic loam Strat II Leached horizon Strat III sand
G16	E	15m 233° N of G15	"	"	0– 10 10– 21 21– 40	"	Ø	"
G17	D	15m 233° N of G16	"	—	—	—	Ø	Disturbed due to logging
G18	E	15m 233° N of G17	"	I II III	0 – 11 11 – 19 19 – 32	Same as G16	Ø	same as G16
G19	E	15m 233° N of G18	"	"	0 – 8 8 – 25 25 – 40	"	Ø	"
G20	E	15m 233° N of G19	"	"	0 – 7 7 – 13 13 – 35	"	Ø	"
G21	E	15m 233° N of G20	"	"	0 – 8 8 – 21 21 – 34	"	Ø	"
G22	E	15m 233° N of G21	"	"	0 – 8 8 – 14 14 – 43	"	Ø	"
G23	E	15m 233° N of G22	"	"	0 – 4 4 – 14 14 – 27	"	Ø	"
G24	P	15m 233° N of G23	"	—	—	—	Ø	Pedestrian – old road

TRANSECT: BEGINNING UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

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Cincinnati, Ohio 45246

ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number: 1595.002 Golder/KMC
Map or Quad:
Segment #: I
Transect #: H
Date: 7-2
Recorder(s): ALS
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*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
5F H-1	E	15m @ 233° W	choppy, farm field by road, downed timbers	I II III	0-8 8-22 22-33	10YR 2/2 Hv. SA. L 7.5YR 4/3 SAND 5YR 3/4 SAND	– – –	
H-2	D							NO DIG - SL FALLS IN LARGE PILE OF TIMBERS, JUST EAST OF ROAD
H-3	E			I	0-30	mottled/disturbed sands	–	SOILS DISTURBED/MOTTLED. 2M W. of Road
H-4	E			I II III	0-9 9-23 23-36	See H-1	– – –	offset slightly to N. for timbers
H-5	E			I	0-40	mottled/disturbed sands		SOILS DISTURBED/MOTTLED
H-6	E			I II III	0-7 7-21 21-32	See H-1	– – –	
H-7	E			I II III	0-5 5-17 17-34		– – –	

TRANSECT: Beginning UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

ARCHAEOLOGICAL SAMPLE LOCUS FORM

11733 Chesterdale Road
Cincinnati, Ohio 45246

Fill Out Form Completely!

Project Name/Number: 1595.002 GOLDER/KMC
Map or Quad:
Segment #: I
Transect #: H
Date: 7/2/05
Recorder(s): ACS
Page 2 of 3

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet (use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
H-8	E	15 m @ 233° W	choppy, ferny field with many downed timbers	I II III	0-7 7-23 23-38	10YR 2/2 HUMIC SA LO 7.5 YR 4/3 SAND 5 YR 3/4 SAND	- -	
H-9	E			I II III	0-5 5-22 22-38		-	
H-10	E			I II III	0-9 9-13 13-36		-	
H-11	E			I II III	0-6 6-20 20-35		-	
H-12	E			I II III	0-7 7-16 16-32		-	
H-13	E			II II III	0-9 9-25 25-40		-	
H-14	E			I II III	0-8 8-18 18-30		-	

TRANSECT: BEGINNING UTM: N ________ E ________
TRANSECT: Ending UTM: N ________ E ________

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Cincinnati, Ohio 45246

ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number: 1595.002 GOLDER/KIMC
Map or Quad:
Segment #: I
Transect #: H
Date: 7/2/05
Recorder(s): ACS
Page 3 of 3

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet (use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
H-15	E	15m @ 233° W	choppy, ferny field with downed timber	I II III	0-5 5-12 12-28	10YR 2/2 Humic SA LO 7.5YR 4/3 Sand 5YR 3/4 Sand	– – –	
H-16	E			I II III	0-6 6-23 23-33		– – –	
H-17	E			I II III	0-5 5-19 19-35		– – –	
H-18	E			I II III	0-7 7-16 16-31		– – –	
H-19	E			I II III	0-9 9-20 20-44		– – –	
H-20	E			I II III	0-5 5-16 16-33		– – –	
H-21	P						– – –	Ground chewed up- pedestrian survey

TRANSECT: Beginning UTM: N ____ E ____
TRANSECT: Ending UTM: N ____ E ____

H-22	E			I II III		See H-15 for profile	– – –	

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Cincinnati, Ohio 45246

ARCHAEOLOGICAL SAMPLE LOCUS FORM

****Fill Out Form Completely!****

Project Name/Number 1595.002   Map or Quad ______   Segment # Area I   Transect # I   Date CB   Recorder(s) 07/02/2005   Page 1 of 4

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
I1	D	ca. 15 m NE 53° from road	level, clear cut field	—	—	—	Ø	in timber pile
I2	D	15m SW 233° of I1	level, clear cut field	—	—	—	Ø	in timber pile
I3	P	15m SW 233° of I2	level, clear cut field	—	—	—	Ø	
I4	E	15m SW 233° of I3	level, clear cut field	I	0-3	10YR 2/2 humic sand	Ø	
				II	3-16	7.5YR 4/4 sand	Ø	
				III	16-45	5YR 4/4 sand	Ø	fragmented hard pan; 5% gravel
I5	E	15m SW 233° of I4	level, clear cut field	I	0-5	10YR 2/2 humic sand	Ø	
				II	5-19	7.5YR 4/4 sand	Ø	
				III	19-49	5YR 4/4 sand	Ø	5% gravel content
I6	E	15m SW 233° of I5	level, clear cut field	I	0-3	10YR 2/2 humic sand	Ø	
				II	3-19	7.5YR 4/4 sand	Ø	
				III	19-51	5YR 4/4 sand	Ø	
I7	E	15m SW 233° of I6	level, clear cut field	I	0-3	10YR 2/2 humic sand	Ø	
				II	3-15	7.5YR 4/4 sand	Ø	
				III	15-47	5YR 4/4 sand	Ø	

TRANSECT: Beginning UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

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Cincinnati, Ohio 45246

ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number 1595.002　　Map or Quad ______　　Segment # Area I　　Transect # I　　Date 07/02/05　　Recorder(s) CB　　Page 2 of 4

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet (use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
I8	D	15 m SW 233° from I7	level, clear cut field	—	—	—	Ø	on timber pile
I9	E	15m SW 233° from I8	level, clear cut field	I	0-5	10YR 2/2 humic sand	Ø	
				II	5-18	7.5YR 4/4 sand	Ø	
				III	18-50	5YR 4/4 sand	Ø	
I10	E	15m SW 233° from I10	level, clear cut field	I	0-2	10YR 2/2 humic sand	Ø	deflated, in cut
				II	2-4	7.5YR 4/4 sand	Ø	
				III	4-43	5YR 4/4 sand	Ø	
I11	E	15m SW 233° from I 10	level, clear cut field	I	0-1	10YR 2/2 humic sand	Ø	
				II	1-3	7.5YR 4/4 sand	Ø	
				III	3-39	5YR 4/4 sand	Ø	
I12	E	15m SW 233° from I11	level, clear cut field	I	0-3	10YR 2/2 humic sand	Ø	
				II	3-15	7.5YR 4/4 sand	Ø	
				III	15-49	5YR 4/4 sand	Ø	

TRANSECT: BEGINNING UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

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Cincinnati, Ohio 45246

ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number 1595.002 Map or Quad ______ Segment # Area I Transect # I Date 07/02/2005 Recorder(s) CB Page 3 of 4

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet (use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
I13	E	15m SW 233° of I12	level, clear cut field	I	0-5	10YR 2/2 humic sand	Ø	
				II	5-16	7.5YR 4/4 sand	Ø	
				III	16-43	5YR 4/4 sand	Ø	
I14	D	15m SW 233° of I13	level, clear cut field	—	—	—	Ø	in timber pile
I15	E	15m SW 233° of I14	level, clear cut field	I	0-3	10YR 2/2 humic sand	Ø	
				II	3-12	7.5YR 4/4 sand	Ø	
				III	12-46	5YR 4/4 sand	Ø	
I16	E	15m SW 233° of I15	level, clear cut field	I	0-30	5YR 4/4 sand	Ø	deflation exposed Stratum III
I17	D	15m SW 233° of I16	level, clear cut field	—	—	—	Ø	in timber pile
I18	E	15m SW 233° of I17	level, clear cut field	I	0-3	10YR 2/2 humic sand	Ø	
				II	3-5	7.5YR 4/4 sand	Ø	
				III	5-47	5YR 4/4 sand	Ø	
I19	E	15m SW 233° of I18	level, clear cut field	I	0-3	10YR 2/2 humic sand	Ø	
				II	3-5	7.5YR 4/4 sand	Ø	
				III	5-32	5YR 4/4 sand	Ø	

TRANSECT: BEGINNING UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

11733 Chesterdale Road
Cincinnati, Ohio 45246

ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number 1595.002

Map or Quad

Segment # Area I
Transect # I

Date 07/12/05
Recorder(s) CB

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet (use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
I20	D	15m SW 233° of I19	level, clear cut field	—	—	—	Ø	in timber pile
I21	E	15 m SW 233° of I20	level, clear cut field	I	0-5	10YR 2/2 humic sand	Ø	
				II	5-14	7.5YR 4/4 sand	Ø	
				III	14-51	5YR 4/4 sand	Ø	

TRANSECT: BEGINNING UTM: N E
TRANSECT: Ending UTM: N E

ARCHAEOLOGICAL SAMPLE LOCUS FORM

11733 Chesterdale Road
Cincinnati, Ohio 45246

Fill Out Form Completely!

Page 1 of 2

Project Name/Number: Golder KMC
Map or Quad:
Segment #: Area I
Transect #: J1 – J20
Date: 7-7-05
Recorder(s): SKY

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
J1	E	15m 143° N of I1	Open	I II III	0 - 6 6 - 18 18 - 29	10YR 2/2 Black humic 7.5YR 4/3 Pinkish Sand 5YR 4/6 Reddish Sand	Ø	Strat I humic loam Strat II leached horizon Strat III Sand
J2	D	15m 233° N of J1	"	—	—	—	Ø	Disturbed due to logging
J3	D	15m 233° N of J2	"	—	—	—	Ø	"
J4	E	15m 233° N of J3	"	I II III	0 - 8 8 - 22 22 - 42	Same as J1	Ø	Same as J1
J5	E	15m 233° N of J4	"	"	0 - 7 7 - 21 21 - 39	"	Ø	"
J6	E	15m 233° N of J5	"	"	0 - 6 6 - 15 15 - 35	"	Ø	"
J7	E	15m 233° N of J6	"	"	0 - 7 7 - 20 20 - 40	"	Ø	"
J8	E	15m 233° N of J7	"	"	0 - 7 7 - 18 18 - 39	"	Ø	"
J9	E	15m 233° N of J8	"	"	0 - 10 10 - 24 24 - 38	"	Ø	"
J10	E	15m 233° N of J9	"	"	0 - 9 9 - 18 18 - 42	"	Ø	"
J11	E	15m 233° N of J10	"	"	0 - 7 7 - 16 16 - 35	"	Ø	"
J12	E	15m 233° N of J11	"	"	0 - 8 8 - 19 19 - 42	"	Ø	"
J13	E	15m 233° N of J12	"	"	0 - 7 7 - 20 20 - 47	"	Ø	"
J14	E	15m 233° N of J12	"	"	0 - 7 7 - 22 22 - 40	"	Ø	"

TRANSECT: Beginning UTM: N ____ E ____
TRANSECT: Ending UTM: N ____ E ____

11733 Chesterdale Road
Cincinnati, Ohio 45246

ARCHAEOLOGICAL SAMPLE LOCUS FORM

****Fill Out Form Completely!****

Project Name/Number: Golder KML
Map or Quad:
Segment #: Area I
Transect #: J1 - J20
Date: 7-02-05
Recorder(s): SKY

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
J15	E	15m 233°N of J14	Open	I II III	0-9 9-26 26-39	10YR 2/2 Black humic 7.5YR 4/3 Pinkish sand 5YR 4/6 reddish sand	Ø	Strat I Organic humic Strat II leached horizon Strat III sand
J16	E	15m 233°N of J15	〃	〃	0-8 8-21 21-33	〃	Ø	〃
J17	E	15m 233°N of J16	〃	〃	0-5 5-18 18-35	〃	Ø	〃
J18	E	15m 233°N of J17	〃	〃	0-8 8-23 23-34	〃	Ø	〃
J19	P	15m 233°N of J18	〃	—	—	—	Ø	Pedestrian – old Road
J20	E	15m 233°N of J19	〃	I II III	0-9 9-24 24-36	Same as J18	Ø	Same as J18 EOT

TRANSECT: Beginning UTM: N ____ E ____
TRANSECT: Ending UTM: N ____ E ____

11733 Chesterdale Road
Cincinnati, Ohio 45246

ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number: Golder / KML
Map or Quad:
Segment #: Area I
Transect #: K
Date: 6/31/05
Page 1 of 3
Recorder(s): ALS

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
K1	E	10 m @ 233°W	ferny: chopped field	I II III	0-9 9-22 22-37	10YR 2/2 Humic SA Lo 7.5YR 4/3 Sand 5YR 3/4 Sand	- - -	ground chewed @ surface, but soil seen OK
K-2	E			I II III	0-8 8-26 26-38		- - -	2-3 m E. of Road
K-3	E			I II III	0-6 6-17 17-31		- - -	Just West of Road
K-4	E			I II III	0-10 10-23 23-33		- - -	
K-5	E			I II III	0-9 9-24 24-38		- - -	
K-6	E			I II III	0-9 9-23 23-33		- - -	
K-7	E			I II III	0-8 8-25 25-40		- - -	

TRANSECT: Beginning UTM: N ____ E ____
TRANSECT: Ending UTM: N ____ E ____

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number: GOLDER / EMC
Map or Quad:
Segment #: AREA I
Transect #: K
Date: 6/31/05
Recorder(s): AKS
Page 2 of 3

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
K-8	E	15 m @ 233° W	ferny choppy field	I II III	0-9 9-19 19-39	10YR 2/2 HUMIC SA LO 7.5YR 4/3 SAND 5YR 3/4 SAND	– – –	choppy ground surface
K-9	E			I II III	0-6 6-19 19-31		– – –	
K-10	E			I II III	0-8 8-22 22-42		– – –	
K-11	E			I II III	0-10 10-19 19-32		– – –	
K-12	E			I II III	0-8 8-22 22-36		– – –	
K-13	E			I II III	0-9 9-20 20-42		– – –	
K-14	E			I II III	0-8 8-23 23-36		– – –	

TRANSECT: BEGINNING UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

BHE
11733 Chesterdale Road
Cincinnati, Ohio 45246

ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number: GOLDER / KMC
Map or Quad:
Segment #: AREA I
Transect #: K
Date: 6/31/05
Recorder(s): ALS

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet (use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
K-15	E	15 m @ 233°W	ferny, choppy field	I	0-8	10YR 2/2 Humic SA. Lo	–	choppy ground surface
				II	8-20	7.5 YR 4/3 Sand	–	
				III	20-35	5 YR 3/4 Sand	–	
K-16	E			I	0-5			(next SL would have fill in middle of old road - obviously disturbed)
				II	5-14		–	
				III	14-38		–	

TRANSECT: Beginning UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

11733 Chesterdale Road
Cincinnati, Ohio 45246

ARCHAEOLOGICAL SAMPLE LOCUS FORM

****Fill Out Form Completely!****

Project Name/Number: 1595.002 Golder KMC
Map or Quad:
Segment #: Area I
Transect #: L
Date: 07/01/2005
Recorder(s): CB
Page 1 of 3

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
L1	D	15m NE 233° of road	level, clear cut field	—	—	—	Ø	in timber pile
L2	D	at road	level, clear cut field	—	—	—	Ø	in timber pile adjacent to stake QAL 042
L3	D	15m 233° from L2 SW side of road	level, clear cut field	—	—	—	Ø	in timber pile
L4	E	15m 233° SW of L3	level, clear cut field	I	0-6	10YR 2/2 humic sand	Ø	
				II	6-17	7.5YR 4/3 sand	Ø	
				III	17-50	5YR 4/6 sand	Ø	5% gravel content
L5	E	15m 233° SW of L4	level, clear cut field	I	0-5	10YR 2/2 humic sand	Ø	
				II	5-18	7.5YR 4/3 sand	Ø	
				III	18-44	5YR 4/6 sand	Ø	5% gravel content
L6	E	15m 233° SW of L5	level, clear cut field	I	0-3	10YR 2/2 humic sand	Ø	near stake QAL 041
				II	3-15	10YR 4/3 sand	Ø	
				III	15-33	5YR 3/4 sand hardpan	Ø	hardpan @ base
L7	E	15m 233° SW of L7	level, clear cut field	I	0-3	10YR 2/2 humic sand	Ø	
				II	3-23	10YR 4/3 sand	Ø	
				III	23-42	5YR 4/6 sand	Ø	10% gravel content

TRANSECT: BEGINNING UTM: N ________ E ________
TRANSECT: Ending UTM: N ________ E ________

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number: 1595 002 Golden KMC
Map or Quad:
Segment #: Area I
Transect #: L
Date: 07/01/2005
Recorder(s): CB
Page 2 of 3

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
L8	D	15m SW 233° of L7	level, clear cut field	—	—	—	Ø	in timber pile
L9	E	15m SW 233° of L8	level, clear cut field	I	0-8	10YR 2/2 humic sand	Ø	
				II	8-16	7.5YR 4/3 sand	Ø	
				III	16-52	5YR 4/6 sand	Ø	
L10	E	15m SW 233° of L9	level, clear cut field	I	0-3	10YR 2/2 humic sand	Ø	
				II	3-10	7.5YR 4/3 sand	Ø	
				III	10-47	5YR 4/6 sand	Ø	deflated in rut
L11	E	15m SW 233° of L10	level, clear cut field	I	0-3	10YR 2/2 humic sand	Ø	
				II	3-10	7.5YR 4/3 sand	Ø	
				III	10-40	5YR 4/6 sand	Ø	5% gravel content
L12	E	15m SW 233° of L12	level, clear cut field	I	0-2	10YR 2/2 humic sand	Ø	deflated in rut
				II	2-4	7.5YR 4/3 sand	Ø	
				III	4-30	5YR 4/6 sand	Ø	5% gravel content

TRANSECT: Beginning UTM: N ________ E ________
TRANSECT: Ending UTM: N ________ E ________

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Cincinnati, Ohio 45246

ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number 1595002 | Map or Quad ______ | Segment # Area I | Transect # L | Date 07/61/2005 | Recorder(s) CB | Page 3 of 3

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
L13	E	15m SW 233° of L12	level, clear cut field	I	0-6	10YR 3/2 humic sand	Ø	
				II	6-16	7.5YR 4/3 sand	Ø	
				III	16-40	5YR 4/6 sand	Ø	fragmented hard pan
L14	D	15m SW 233° of L13	level, clear cut field	—	—	—	Ø	in timber pile
L15	E	15m SW 233° of L14	level, clear cut field	I	0-2	10YR 3/2 humic sand	Ø	deflated in rut
				II	2-4	7.5YR 4/3 sand	Ø	
				III	4-40	5YR 4/6 sand	Ø	5% gravel content; fragmented hardpan
L16	D	15m SW 233° of L15	level, clear cut field	—	—	—	Ø	in timber pile

TRANSECT: BEGINNING UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

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Cincinnati, Ohio 45246

ARCHAEOLOGICAL SAMPLE LOCUS FORM

****Fill Out Form Completely!****

Project Name/Number: Golder KML
Map or Quad:
Segment #: Area I
Transect #: M1 - M11
Date: 7-1-05
Recorder(s): SKY
Page 1 of 1

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet (use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
M1	E	15m @ 143°N of L1	Open	I II III	0 - 6 6 - 19 19 - 38	10YR 2/2 Black 7.5YR 4/3 Pinkish gray 5YR 4/6 Reddish	Ø	Strat I humic loam Strat II Leached horizon Strat III Sand BOT
M2	D	15m @ 233°N of M1	"	—	—	—	Ø	Disturbed due to logging
M3	E	15m @ 233°N of M2	"	I II III	0 - 7 7 - 18 18 - 36	Same as M1	Ø	Same as M1
M4	E	15m @ 233°N of M3	"	"	0 - 9 9 - 18 18 - 43	"	Ø	"
M5	E	15m @ 233°N of M4	"	"	0 - 4 4 - 18 18 - 36	"	Ø	"
M6	E	15m @ 233°N of M5	"	"	0 - 7 7 - 19 19 - 38	"	Ø	"
M7	E	15m @ 233°N of M6	"	"	0 - 10 10 - 21 21 - 38	"	Ø	"
M8	E	15m @ 233°N of M7	"	"	0 - 9 9 - 18 18 - 34	"	Ø	"
M9	E	15m @ 233°N of M8	"	"	0 - 7 7 - 18 18 - 35	"	Ø	"
M10	E	15m @ 233°N of M9	"	"	0 - 8 8 - 16 16 - 28	"	Ø	"
M11	E	15m @ 233°N of M10	"	"	0 - 10 10 - 27 27 - 40	"	Ø	"
M12	D	15m @ 233°N of M11	"	—	—	—	Ø	Disturbed by logging
M13	E	15m @ 233°N of M12	"	I II III	0 - 7 7 - 13 13 - 23	Same as M11	Ø	Same as M11
M14	P	15m @ 233°N of M13	"	—	—	—	Ø	Pedestrian - Road / Excavation Pad EOT

TRANSECT: Beginning UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

11733 Chesterdale Road
Cincinnati, Ohio 45246

ARCHAEOLOGICAL SAMPLE LOCUS FORM

****Fill Out Form Completely!****

Project Name/Number: Golder
Map or Quad:
Segment #: Area I
Transect #: N
Date: 6/31/05
Recorder(s): ALS
Page 1 of

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
N-1	E	15 m @ 233°W	chopped! farm field	I II III	0-5 5-18 18-33	10YR 2/2 SANDY HUMIC LO 7.5YR 4/3 SAND 5YR 3/4 SAND		3 m. from Road. Area surface looks a little disturbed, but soils appear OK below surface.
N-2	E			I II III	0-7 7-24 24-35			
N-3	E			I II III	0-6 6-20 20-32			
N-4	E			I II III	0-6 6-23 23-36			
N-5	E			I II III	0-6 6-23 23-33			
N-6	E			I II III	0-7 7-23 23-35			
N-7	E			I II III	0-8 8-23 23-38			

TRANSECT: BEGINNING UTM: N ____ E ____
TRANSECT: Ending UTM: N ____ E ____

11733 Chesterdale Road
Cincinnati, Ohio 45246

ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number: Golder
Map or Quad:
Segment #: Area I
Transect #: N
Date: 6/31/05
Recorder(s): ALS
Page 2 of 2

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
N-8	E	15m @ 233° W	Sorry: chopped field	I II III	0-7 7-23 23-37	10YR 2/2 Humic SA lo 7.5YR 4/3 SAND 5YR 3/4 SAND	- - -	Area surface looks a little disturbed, but soils appear OK beneath surface
N-9	E			I II III	0-6 6-22 22-32		- - -	
N-10	D No D_{10}							yellow/orange flagged stake to Norm - will fall on M-Line, most likely (QAL 030) (disturbed log pile)
N-11	E			I II III	0-10 10-20 20-40	See N-9	- -	
N-12	D No D_{10}							ground extremely visibly chewed up @ surface. No top soil & many fallen logs

TRANSECT: Beginning UTM: N ________ E ________
TRANSECT: Ending UTM: N ________ E ________

11733 Chesterdale Road
Cincinnati, Ohio 45246

ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number 1595.002

Map or Quad

Segment # Area I
Transect # 0

Date 07/01/2005
Recorder(s) OB

Page 1 of 2

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
01	P	15 m NW of P1 at road	level, clear cut field	—	—	—	Ø	at road edge exposed soils 100% vis.
02	D	15 m SW 233° of 01	level, clear cut field	—	—	—	Ø	earth pile and cut timber
03	E	15 m SW 233° of 02	level, clear cut field	I	0-5	10YR 2/2 humic sand	Ø	
				II	5-16	7.5YR 4/3 sand	Ø	
				III	16-42	5YR 4/6 sand	Ø	
04	E	15m SW 233° of 03	level, clear cut field	I	0-3	10YR 2/2 humic sand	Ø	
				II	3-20	7.5YR 4/3 sand	Ø	
				III	20-48	5YR 4/6 sand	Ø	10% gravel content
05	E	15m SW 233° of 04	level, clear cut field	I	0-5	10YR 2/2 humic sand	Ø	
				II	5-19	7.5YR 4/3 sand	Ø	
				III	19-51	5YR 4/6 sand	Ø	10% gravel content
06	E	15m SW 233° of 05	level, clear cut field	I	0-5	10YR 2/2 humic sand	Ø	
				II	5-18	7.5YR 4/3 sand	Ø	
				III	18-44	5YR 4/6 sand	Ø	10% gravel content

TRANSECT: BEGINNING UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

11733 Chesterdale Road
Cincinnati, Ohio 45246

ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number 1595.062 | Map or Quad ______ | Segment # Area I | Transect # 0 | Date 07/01/2005 | Recorder(s) CB | Page 2 of 2

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
07	E	15m SW 233° of 06	level, clear cut field	I	0-5	10YR 3/2 humic sand	Ø	
				II	5-17	7.5YR 4/3 sand	Ø	
				III	17-40	5YR 4/6 sand	Ø	5% gravel content
06	D	15m SW 233° of 07	level, clear cut field	—	—	—	Ø	at earthen pile with cut timber
09	E	15m SW 233° of 08	level, clear cut field	I	0-5	10YR 3/2 humic sand	Ø	
				II	5-23	7.5YR 4/3 sand	Ø	
				III	23-51	5YR 4/6 sand	Ø	5% gravel content

TRANSECT: BEGINNING UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

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Cincinnati, Ohio 45246

ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number: Galder KML   Map or Quad: ______   Segment #: Area I   Transect #: P1 - P8   Date: 7-1-05   Recorder(s): SKY   Page 1 of 1

*Codes: E=Excavated (Shovel/Auger); P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
P1	P	15m @ 143° N	Open	—	—	—	Ø	Pedestrian Road BOT
P2	E	15m @ 233° N P1	"	I II III	0-7 7-19 19-40	10YR 2/2 Black 7.5YR 4/3 Pinkish Gray 5YR 4/6 reddish	Ø	Strat I 10YR 2/2 Black humic loam Strat II 7.5YR 4/3 Pinkish sand leached Strat III 5YR 4/6 Reddish sand
P3	E	15m @ 233° N P2	"	"	0-7 7-17 17-35	"	Ø	"
P4	E	15m @ 233° N P3	"	"	0-9 9-18 18-32	"	Ø	"
P5	E	15m @ 233° N P4	"	"	0-6 6-16 16-21	"	Ø	"
P6	E	15m @ 230° N P5	"	"	0-6 6-17 17-33	"	Ø	"
P7	E	15m @ 233° N P6	"	"	0-10 10-23 23-43	"	Ø	"
P8	E	15m @ 233° N P7	"	"	0-12 12-21 21-37	"	Ø	" T
P9	D	15m @ 233° N P8	"	—	—	—	Ø	Disturbed due to logging
P10	E	15m @ 233° N P9	"	I III	0-10 10-24 24-38	Same as P8	Ø	Same as P8

TRANSECT: BEGINNING UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

11733 Chesterdale Road
Cincinnati, Ohio 45246

ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number 1595.002 GOLDER/BMC
Map or Quad
Segment # I
Transect # Q
Date 7/4/05
Recorder(s) ALS
Page 1 of 2

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
Q-1	P	15m @ 233° W	In Roadcut				—	
Q-2	E		Choppy, Fomy field w/ downed timber	I II III	0-14 14-28 28-37	10YR 2/2 Humic SA LO 7.5YR 4/3 SAND 5YR 3/4 SAND	— — —	
Q-3	E			I II III	0-8 8-17 17-33			
Q-4	E			I II III	0-6 6-21 21-32			lumber pile area
Q-5	E			I II III	0-6 6-19 19-28			
Q-6	E			I II III	0-9 9-24 24-35			
Q-7	E			I II III	0-6 6-17 17-31			

TRANSECT: BEGINNING UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

11733 Chesterdale Road
Cincinnati, Ohio 45246

ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number 1595.002 Golder/KMC
Map or Quad
Segment # I
Transect # Q
Date 7-4-05
Recorder(s) ALS
Page 2 of 2

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
Q-8	E	15 m 235° W	choppy berry field w/	I II	0-7 7-21	10YR 2/2 Humic Sand 7.5YR 4/3 sand,	\	
			downed timber	III	21-37	5YR 3/4 sand	\	
Q 9	E			I II	0 - 7 7 - 23		\	
				III	25 - 45		\	
Q10	P			—	—	—	\	Pedestrian - Road

TRANSECT: Beginning UTM: N E
TRANSECT: Ending UTM: N E

ARCHAEOLOGICAL SAMPLE LOCUS FORM

11733 Chesterdale Road
Cincinnati, Ohio 45246

Fill Out Form Completely!

Project Name/Number: Goldor KMC
Map or Quad:
Segment #: Area I
Transect #: R1-R10
Date: 7-4-05
Recorder(s): SKY
Page 1 of 1

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
R1	P	15m 143° N of R1	Open	—	—	—	Ø	Pedestrian Road
R2	E	15m 233° N of R1	"	I II III	0-8 8-19 19-32	10YR 2/2 Black humic 7.5YR 4/3 Pinkish Gray 5YR 4/6 Red	Ø	Strat I humic loam Strat II Leached horizon Strat III Sand
R3	E	15m 233° N of R2	"	I II	0-10 10-45	10YR 2/2 Black humic 5YR 4/6 Red Sand	Ø	deflated soil
R4	E	15m 233° N of R3	"	I II III	0-6 6-15 15-40	Same as R2	Ø	Same as R2
R5	E	15m 233° N of R4	"	"	0-7 7-22 22-35	"	Ø	"
R6	E	15m 233° N of R5	"	"	0-8 8-17 17-26	"	Ø	"
R7	E	15m 233° N of R6	"	"	0-9 9-23 23-42	"	Ø	"
R8	E	15m 233° N of R7	"	"	0-9 9-21 21-34	"	Ø	"
R9	P	15m 233° N of R8	"	"	—	—	Ø	Pedestrian — Road
R10	E	15m 233° N of R9	"	"	0-7 7-17 17-39	Same as R8	Ø	Same as R8 EOT

TRANSECT: BEGINNING UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

11733 Chesterdale Road
Cincinnati, Ohio 45246

ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number 1595.002

Map or Quad

Segment # Area I
Transect # 5

Date 07/04/2005
Recorder(s) CB

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet (use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
S1	P	15m @ 323° SE, FR1	road	—	—	—	Ø	
S2	D	15m @ 233° SW of S1	level, clear cut field	—	—	—	Ø	in timber pile
S3	E	15m @ 233° SW of S2	level, clear cut field	I	0-3	10YR 2/2 humic sand	Ø	
				II	3-22	7.5YR 4/4 sand	Ø	
				III	22-44	5YR 4/4 sand	Ø	
S4	E	15m @ 233° SW of S3	level, clear cut field	I	0-3	10YR 2/2 humic sand	Ø	deflated, in rut
				II	3-7	7.5YR 4/4 sand	Ø	
				III	7-41	5YR 4/4 sand	Ø	10% gravel content
S5	E	15m @ 233° SW of S4	level, clear cut field	I	0-3	10YR 2/2 humic sand	Ø	in rut
				II	3-16	7.5YR 4/4 sand	Ø	
				III	16-40	5YR 4/4 sand	Ø	fragmented hard pan
S6	D	15m @ 233° SW of S5	level, clear cut field	—	—	—	Ø	in timber pile adjacent to access road
S7	D, P	15m @ 233° SW of S6	level, clear cut field	—	—	—	Ø	on earth bank, next to access road

TRANSECT: Beginning UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

11733 Chesterdale Road
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ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number: 1595.002
Map or Quad:
Segment #: Area I
Transect #: 5
Date: 07/04/2005
Recorder(s): CB
Page 2 of 2

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
S8	E	15m @ 233° SW of C7	level, clear cut field	I	0-3	10YR 2/2 humic sand	Ø	
				II	3-19	7.5YR 4/4 sand	Ø	
				III	19-44	5YR 4/4 sand	Ø	
S9	E	15m @ 233° SW of C8		I	0-3	10YR 2/2 humic sand	Ø	
				II	3-17	7.5YR 4/4 sand	Ø	
				III	17-51	5YR 4/4 sand	Ø	10% gravel content
S10	E	15m @ 233° SW of C9		I	0-3	10YR 2/2 humic sand	Ø	
				II	3-24	7.5YR 4/4 sand	Ø	
				III	24-47	5YR 4/4 sand	Ø	

TRANSECT: Beginning UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

11733 Chesterdale Road
Cincinnati, Ohio 45246

ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number: Golder KMC
Map or Quad:
Segment #: Area J
Transect #: A1-A8
Date: 7-5-05
Recorder(s): SKY
Page 1 of 1

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
A1	E	15m 240° N of B1	Edge of Pine.	I II	0-16 16-36	7.5YR 6/2 7.5YR 4/6	Ø	Leached Sand Reddish Sand
A2	S	15m 150° N of A1	Pines	—	—	—	Ø	Steep
A3	S	15m 150° N of A2	"	—	—	—	Ø	"
A4	S	15m 150° N of A3	"	—	—	—	Ø	"
A5	S	15m 150° N of A4	"	—	—	—	Ø	"
A6	S	15m 150° N of A5	"	—	—	—	Ø	"
A7	S	15m 150° N of A6	"	—	—	—	Ø	"
A8	S	15m 150° N of A7	"	—	—	—	Ø	"

TRANSECT: Beginning UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

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ARCHAEOLOGICAL SAMPLE LOCUS FORM

****Fill Out Form Completely!****

Page 1 of ____

Project Name/Number: 1595.002 GOLDER / KMC

Map or Quad: ____

Segment #: J
Transect #: B

Date: 7/5/05
Recorder(s): ALS

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet (use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
B-1	E	15m @ 150° S	choppy, farm field w/ downed timbers overlooking creek	I II III	0-5 5-17 17-27	10YR 2/2 HUMIC SA lo 7.5 YR 4/3 SAND 5YR 3/4 SAND	– – –	choppy, disturbed area
B-2	E	|	|	I II III	0-13 13-27 27-39	|	–	|
B-3	E	|	|	I II III	0-4 4-15 15-31	|	–	edge of slope
B-4 thru B-7	S	↓	woods/slope	/	/	/	/	slope - No DIG
B-8	S	↓	↓	/	/	/	/	|

TRANSECT: BEGINNING UTM: N ____ E ____
TRANSECT: Ending UTM: N ____ E ____

11733 Chesterdale Road
Cincinnati, Ohio 45246

ARCHAEOLOGICAL SAMPLE LOCUS FORM

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Project Name/Number 1595.002 Golder KMC
Map or Quad
Segment # Area J
Transect # C
Date 07/05/2005
Recorder(s) CB
Page 1 of 2

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
C1	E	15m @ 240° N of B1	open field, level	I	0-3	10YR 2/2 humic sand	Ø	
				II	3-17	7.5 YR 4/3 sand	Ø	
				III	17-45	5YR 4/6 sand	Ø	10% gravel content
C2	P, D	15m @ 150° E of C1	open field, level	—	—	—	Ø	subsoil exposed, cobbles, timber on surface
C3	P, D	15m @ 150° E of C2	open field, level	—	—	—	Ø	subsoil exposed, cobbles on surface
C4	E, D	15m @ 150° E of C3	open field, level	I	0-39	5YR 3/4 sand	Ø	deflated, no Strata I and II
C5	E	15m @ 150° E of C4	open field, level	I	0-3	10YR 2/2 humic sand	Ø	
				II	3-15	7.5 YR 4/3 sand	Ø	
				III	15-51	5YR 4/6 sand	Ø	5% gravel content
C6	E	15m @ 150° E of C5	open field, level	I	0-1	10YR 2/2 humic sand	Ø	
				II	1-10	7.5 YR 4/3 sand	Ø	large cobble
				III	10-52	5YR 4/6 sand	Ø	
C7	E	15m @ 150° E of C6		I	0-3	10YR 2/2 humic sand	Ø	
				II	3-21	7.5YR sand	Ø	
				III	21-59	5YR 4/6 sand		

TRANSECT: Beginning UTM: N E
TRANSECT: Ending UTM: N E

11733 Chesterdale Road
Cincinnati, Ohio 45246

ARCHAEOLOGICAL SAMPLE LOCUS FORM

****Fill Out Form Completely!****

Project Name/Number 1595.002
Map or Quad

Segment # Area J
Transect # C

Date 07/05/2005
Recorder(s) CB

Page 2 of 2

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
EOT C8	E	15m @ 150 E of C7	open field, level	I	0-10	10YR 2/2 humic sand	Ø	
				II	10-19	7.5YR 4/3 sand	Ø	
				III	19-57	5YR 4/6 sand	Ø	10% gravel content

TRANSECT: BEGINNING UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

ARCHAEOLOGICAL SAMPLE LOCUS FORM

Chesterdale Road
cinnati, Ohio 45246

****Fill Out Form Completely!****

F.
Name/Number Golder KML   Map or Quad ______   Segment # Area J   Transect # D1 - D8   Date 7-5-05   Recorder(s) SKY   Page 1 of 1

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
D1	P	15m 240° N of E1	Open	—	—	—	Ø	Pedestrian - Disturbed by exploration
D2	D	15m 240°N of D1	Open	—	—	—	Ø	Disturbed by mining exploration
D3	D	15m 240°N of D2	Open	—	—	—	Ø	"
D4	D	15m 240°N of D3	Open	—	—	—	Ø	"
D5	E	15m 240°N of D4	Open	I II III	0 - 8 8 - 27 27 - 37	10YR 2/2 Black humic 7.5YR 5/2 Brown 5YR 4/6 Yellowish Red	Ø	Black humic Loam Leached sand Sand
D6	E	15m 240°N of D5	"	"	0 - 14 14 - 36 36 - 46	"	Ø	"
D7	E	15m 240°N of D6	"	"	0 - 16 16 - 21 21 - 33	"	Ø	"
D8	D	15m 240°N of D7	"	—	—	—	Ø	Disturbed due to logging

TRANSECT: Beginning UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

11733 Chesterdale Road
Cincinnati, Ohio 45246

ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number: 1595.002 Golder/King
Map or Quad:
Segment #: J
Transect #: E
Date: 7/5/05
Recorder(s): ALS
Page 1 of 1

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet
(use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
E-1	E	15m @ 150° S	chopped ferny field w/ downed Timber overlooking stream valley	I	0-25	(deflated soils, 7.5YR 4/3 w/ 5YR 3/4 mottling (SAND)) – No Horizon – 15% gravel content	—	soils heavily disturbed – some gravel @ surface – mild slope
E-2 or E-3	P		disturbed area – no vegetation @ surface gravel @ surface	/	/	/	—	heavily disturbed area – no vegetation (ped survey)
E-4	E		chopped ferny field w/ downed timber [illegible] (hill [illegible] stream valley)	I II III	0-8 8-21 21-32	10YR 2/3 [illegible] 7.5YR 4/3 [illegible] [illegible] 3/4 SAND	– – –	< 1% gravel
E-5	E			I II III	0-6 6-23 23-34		–	
E-6	E			I II III	0-6 5-19 19-33		–	
E-7	E			I II III	0-8 8-23 23-36		–	
E-8	NO DIG			/	/	/	/	< 5m from silt fence – ~~avoided~~ disturbing area

TRANSECT: BEGINNING UTM: N ____ E ____
TRANSECT: Ending UTM: N ____ E ____

11733 Chesterdale Road
Cincinnati, Ohio 45246

ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Page 1 of 1

Project Name/Number: Golder KMC
Map or Quad:
Segment #: Area J
Transect #: F1 - F8
Date: 7-5-05
Recorder(s): SKY

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet (use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
F1	P	15 m 240° N of G1	Open	—	—	—	Ø	Pedestrian - Road to exploration Pad BOT
F2	E	15 m 150° N of F1	Open	I II III	0 - 9 9 - 20 20 - 33	10YR 2/2 Black 7.5YR 5/2 Brown 5YR 4/6 Yellowish Red	Ø	Strat I humic loam Strat II Leached Sand Strat III Sand
F3	E	15 m 150° N of F2	Open	I II III	0 - 11 11 - 24 24 - 36	"	Ø	"
F4	E	15 m 150° N of F3	"	"	0 - 7 7 - 30 30 - 47	"	Ø	"
F5	E	15 m 150° N of F4	"	"	0 - 12 12 - 36 36 - 47	"	Ø	"
F6	D	15 m 150° N of F5	"	—	—	—	Ø	Disturbed Timber Pile
F7	D	15 m 150° N of F6	"	—	—	—	Ø	Disturbed due to exploration
F8	D	15 m 150° N of F7	"	—	—	—	Ø	" EOT

TRANSECT: Beginning UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

11733 Chesterdale Road
Cincinnati, Ohio 45246

ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number 1595 002 Map or Quad ______ Segment # Area J Transect # 6 Date 07/05/2005 Page 1 of ___ Recorder(s) CB

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet (use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
61	P, D	15m @ 240° N of F1	access road	—	—	—	Ø	
62	E	15m @ 150° E of 61	open field, level	I	0-40	5YR 3/4 sand	Ø	deflated
63	E, D	15m @ 150° E of 62	open field, level	I	0-10	10YR 2/2 humic sand	Ø	
					10-20	7.5YR 4/3 sand	Ø	buried timber pile
64	E, D	15m @ 150° E of 63	open field, level	I	0-20	5YR 3/4 sand	Ø	deflated, cobbles on sufface
65	E	15m @ 150° E of 64	open field, level	I	0-3	10YR 2/2 humic sand	Ø	badly rutted and deflated
				II	3-15	7.5YR 4/3 sand	Ø	
				III	15-50	5YR 3/4 sand	Ø	
66	E	15m @ 150° E of 65	open field, level	I	0-10	7.5YR 4/3 sand	Ø	deflated Stratum I, humic missing
				II	10-43	5YR 4/6 sand	Ø	10% gravel content
67	E	15m @ 150° E of 66	open field, level	I		10YR 2/2 humic sand	Ø	
				II		7.5YR 4/3 sand	Ø	
				III		5YR 3/4 sand	Ø	
68	E	15m @ 150 E of 67	open field, level	—	—	—	Ø	

TRANSECT: Beginning UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

11733 Chesterdale Road
Cincinnati, Ohio 45246

ARCHAEOLOGICAL SAMPLE LOCUS FORM

Fill Out Form Completely!

Project Name/Number: 1595.002 Golden/KMC
Map or Quad: ______
Segment #: J
Transect #: H
Date: 7/5/05
Recorder(s): ALS
Page 1 of ___

*Codes: E=Excavated (Shovel/Auger), P=Pedestrian (Surface) survey, S=Steep (>20% slope), D=Disturbed, W=Wet (use one code only - explain extra data in soil profile description and comments section)

Sample Locus	*Code	Distance From Start/Last X	Topography Vegetation	Stratum	Depths (cm)	Soil Profile Description (munsell, texture, etc.)	Artifacts Hist/Prehist	Comments
H-1	P	15 m @ 150° S	farm, chopped field					
H-2	P					extremely deflated/disturbed no humic. 5YR 3/4 SAND and gravel @ surface		extremely disturbed/rutted/bermed. See soil profile
H-3	E			I II III	0-7 7-24 24-33	10YR 2/2 HUMIC SA LO 7.5 YR 4/3 SAND 5 YR 3/4 SAND	- - -	approx 10% gravel content w/ some large cobbles
H-4	E			I II III	0-4 4-16 ?-37		- - -	
H-5	E			I II III	0-9 9-18 18-41		- - -	
H-6	E			I	0-38	Same as H2		
H-7	P							Pedestrian - Road to mining exploration pad
H-8	P							Pedestrian - mining exploration pad

TRANSECT: BEGINNING UTM: N ______ E ______
TRANSECT: Ending UTM: N ______ E ______

APPENDIX E

SITE FORMS

STATE SITE NO. 20 Mq 228

MICHIGAN ARCHAEOLOGICAL SITE FORM

SITE NAME: 40 Mq 228

OTHER NAMES OR NUMBERS: None

SITE DESCRIPTION: A prehistoric lithic reduction area of an unknown temporal affiliation.

COUNTY: Marquette

TOWNSHIP NAME: Michigamme

TWP/RANGE/SECTION: T50N / R29W / 11

QTR-SECTION: NE

UTM COORDINATES WITH DATUM YEAR: N431344.59765, E5177833.99315 NAD 83

DIRECTIONS FROM CLOSEST STATE OR COUNTY ROAD INTERSECTION:

CLOSEST BODY OF WATER: Salmon Trout River

SITE SIZE (length x width or diameter with unit of measurement): 20feet by 5feet or 6 m x 1.5m

FIELD EVIDENCE (surface scatter, stratification, features, exposed by construction, etc : surface scatter consisting of 3 pieces of debitage

FIELDWORK (institution, principal investigator, year, site visit/survey type/excavation): BHE, Environmental Inc., Christopher Bergman, 2004, Phase I surface collection

SITE INTEGRITY OR CONDITION: The site is situated w/in a dirt roadway and material was recovered from the surface. Disturbances include logging and road construction.

COLLECTIONS (private or institutional): NA

DIAGNOSTIC ARTIFACTS: No diagnostic material

COMPONENTS (list period and site function for each): Unassigned Prehistoric

DATES (list radiocarbon dates with lab numbers and associations): NA

HUMAN REMAINS PRESENT? NO X YES ____

IF YES, DETAILS: ——

OWNERSHIP (LIST NAME OF PERSON OR AGENCY):

X PRIVATE OWNER:

___ LOCAL GOVT AGENCY:

___ STATE GOVT AGENCY:

___ FEDERAL GOVT AGENCY:

NATIONAL REGISTER SIGNIFICANCE:

X More information needed for evaluation

___ Ineligible for the National Register of Historic Places

___ Eligible for the National Register of Historic Places

Person making this evaluation/date: CHRISTOPHER BERGMAN / JULY 20, 2004

WHAT MORE INFORMATION IS NEEDED, OR WHY IS SITE ELIGIBLE OR INELIGIBLE?

SITE NOT ASSESSED IN THE FIELD ASIDE FROM CASUAL INSPECTION

COMMENTS:

THIS RECORD BY:

NAME: CHRISTOPHER BERGMAN

INSTITUTION/COMPANY: BHE ENVIRONMENTAL, INC.

DATE: JULY 20, 2004

- APPEND A LIST OF REPORTS AND OTHER DOCUMENTATION ABOUT THE SITE., BOTH PUBLISHED AND UNPUBLISHED, INCLUDING PHOTOS, CORRESPONDENCE, NEWSPAPER ARTICLES, CRM REPORTS, JOURNAL ARTICLES, ETC.

- APPEND A MAP SHOWING THE SITE LOCATION AS PRECISELY AS POSSIBLE. (suggestion: at TopoZone.com you can find the USGS map for the vicinity, mark the site location, and save the results to a file that you can send along with this form.)

TO SUBMIT THIS FORM:

e-mail to barbaram@michigan.gov, fax it to 517/241-4738, or mail it to Office of the State Archaeologist, Michigan Historical Center, 702 W. Kalamazoo St., Lansing, MI 48909-8240

PN 1595.001 December 2004

PHASE I ARCHAEOLOGICAL SURVEY OF CA. 33 ACRES FOR KENNECOTT MINERALS COMPANY, EAGLE PROJECT, MARQUETTE COUNTY, MICHIGAN

Prepared For:
Golder Associates, Inc.
44 Union Boulevard, Suite 300
Lakewood, Colorado 80228

Submitted By:
BHE Environmental, Inc.
11733 Chesterdale Road
Cincinnati, Ohio 45246
513-326-1500
www.bheenv.com

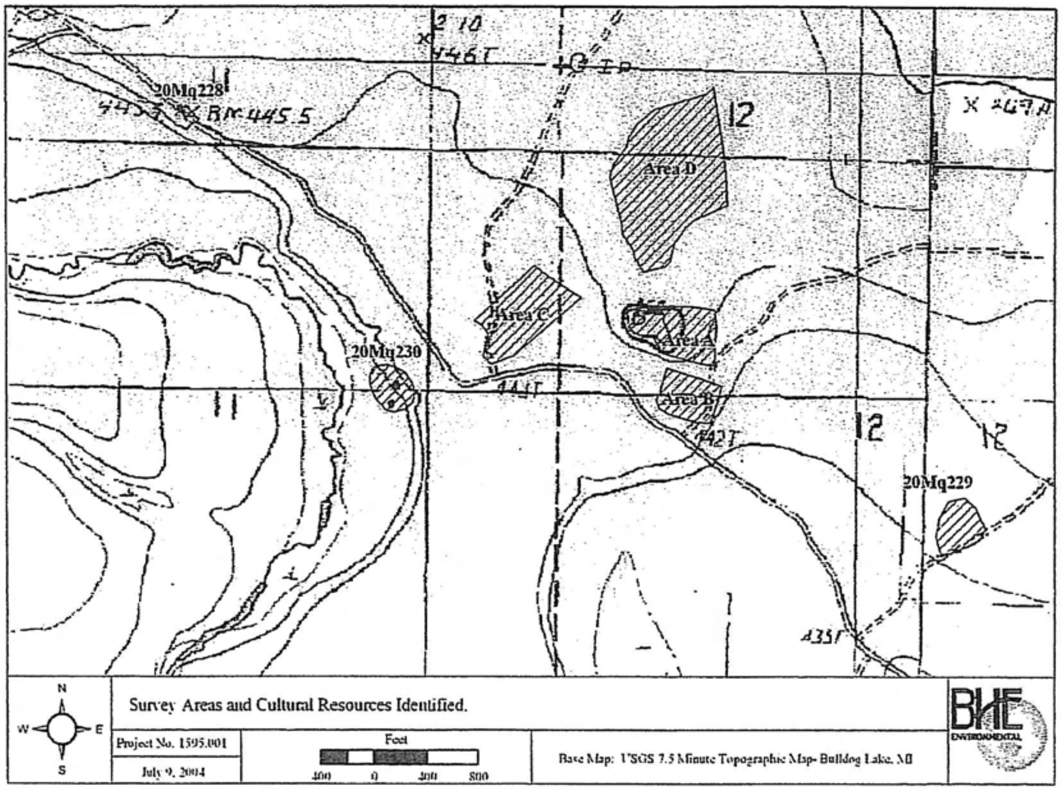

Figure 1-2. Survey Areas and Cultural Resources Identified Depicted on the 7.5-minute Bulldog Lake, MI USGS Topographic Map.

1.3 PROJECT DESIGN

The Eagle mineral deposit is contained in a body of rock that has a surface area of about 12 acres. The surface expression of the actual deposit is less than half this size (approximately six acres) and the ore body is located between 300 and 1,200 feet below the surface. Nickel and copper occur in an upper and lower zone, both of which are wedge-shaped and taper with depth.

This makes Eagle a small, but valuable, deposit containing approximately 184,000 tons (405 million pounds) of nickel and 153,000 tons (335 million pounds) of copper. Smaller amounts of cobalt, gold, platinum and palladium also exist. During the next few years, KMC will be working to determine the feasibility of mining this deposit as they has done at other metal mines in North American.

KMC is carefully studying the ways in which the Eagle deposit could be safely mined and processed. It has considered a range of mining options. A small underground mine with all waste rock being used to refill the mine opening after the ore is extracted has emerged as the best option. This would mean no large open pit and no large waste dumps.

STATE SITE NO. 20Mq229

MICHIGAN ARCHAEOLOGICAL SITE FORM

SITE NAME: 40Mq 229

OTHER NAMES OR NUMBERS: None

SITE DESCRIPTION: Historic Camp

COUNTY: Marquette

TOWNSHIP NAME: Michigamme

TWP/RANGE/SECTION: T50N/ R29W/12

QTR-SECTION: SE

NAD 83

UTM COORDINATES WITH DATUM YEAR: N433234.20966, E5176916.67066

DIRECTIONS FROM CLOSEST STATE OR COUNTY ROAD INTERSECTION:

CLOSEST BODY OF WATER: low lying marsh which discharges into Yellow Dog River and Salmon Trout River

SITE SIZE (length x width or diameter with unit of measurement): 200feet by 200ft or 61 m x 61 m

FIELD EVIDENCE (surface scatter, stratification, features, exposed by construction, etc : Site consists of a pair of log cabins (depicted on 1939 aerial map) and a surface scatter of artifacts.

FIELDWORK (institution, principal investigator, year, site visit/survey type/excavation): BHE Environmental, Inc, Christopher Bergman, 2004, Pedestrian Survey and Surface Collection

SITE INTEGRITY OR CONDITION: some man made embankments, in the past the area was used for logging, there are also two depressions near the two structures.

COLLECTIONS (private or institutional):

DIAGNOSTIC ARTIFACTS:

COMPONENTS (list period and site function for each): 20th century logging camp

DATES (list radiocarbon dates with lab numbers and associations): NA

HUMAN REMAINS PRESENT? NO X YES ____

IF YES, DETAILS:

OWNERSHIP (LIST NAME OF PERSON OR AGENCY):

X PRIVATE OWNER:

__ LOCAL GOVT AGENCY:

__ STATE GOVT AGENCY:

__ FEDERAL GOVT AGENCY:

NATIONAL REGISTER SIGNIFICANCE:

X More information needed for evaluation
___ Ineligible for the National Register of Historic Places
___ Eligible for the National Register of Historic Places

Person making this evaluation/date: CHRISTOPHER BERGMAN / JULY 20, 2004

WHAT MORE INFORMATION IS NEEDED, OR WHY IS SITE ELIGIBLE OR INELIGIBLE?
SITE NOT ASSESSED IN THE FIELD ASIDE FROM CASUAL INSPECTION

COMMENTS:

THIS RECORD BY:

NAME: CHRISTOPHER BERGMAN

INSTITUTION/COMPANY: BHE ENVIRONMENTAL, INC.

DATE: JULY 20, 2004

- APPEND A LIST OF REPORTS AND OTHER DOCUMENTATION ABOUT THE SITE., BOTH PUBLISHED AND UNPUBLISHED, INCLUDING PHOTOS, CORRESPONDENCE, NEWSPAPER ARTICLES, CRM REPORTS, JOURNAL ARTICLES, ETC.

- APPEND A MAP SHOWING THE SITE LOCATION AS PRECISELY AS POSSIBLE. (suggestion: at TopoZone.com you can find the USGS map for the vicinity, mark the site location, and save the results to a file that you can send along with this form.)

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PN 1595.001 December 2004

PHASE I ARCHAEOLOGICAL SURVEY OF CA. 33 ACRES FOR KENNECOTT MINERALS COMPANY, EAGLE PROJECT, MARQUETTE COUNTY, MICHIGAN

Prepared For:
Golder Associates, Inc.
44 Union Boulevard, Suite 300
Lakewood, Colorado 80228

Submitted By:
BHE Environmental, Inc.
11733 Chesterdale Road
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513-326-1500
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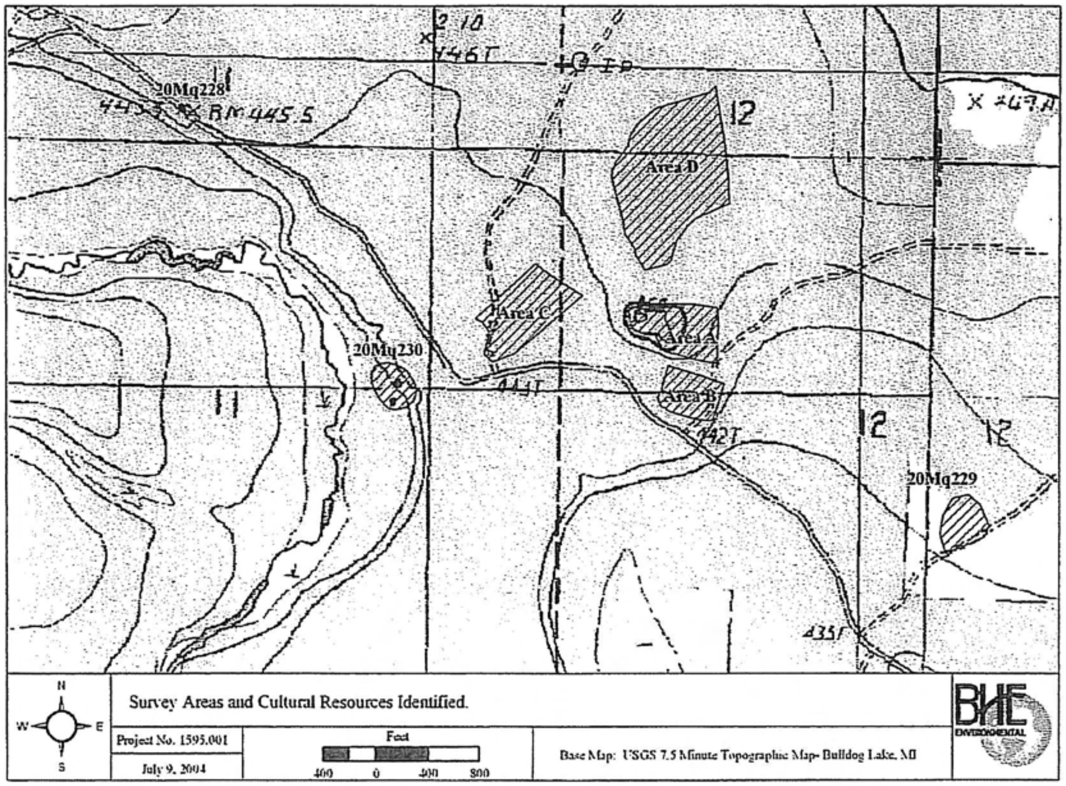


Figure 1-2. Survey Areas and Cultural Resources Identified Depicted on the 7.5-minute Bulldog Lake, MI USGS Topographic Map.

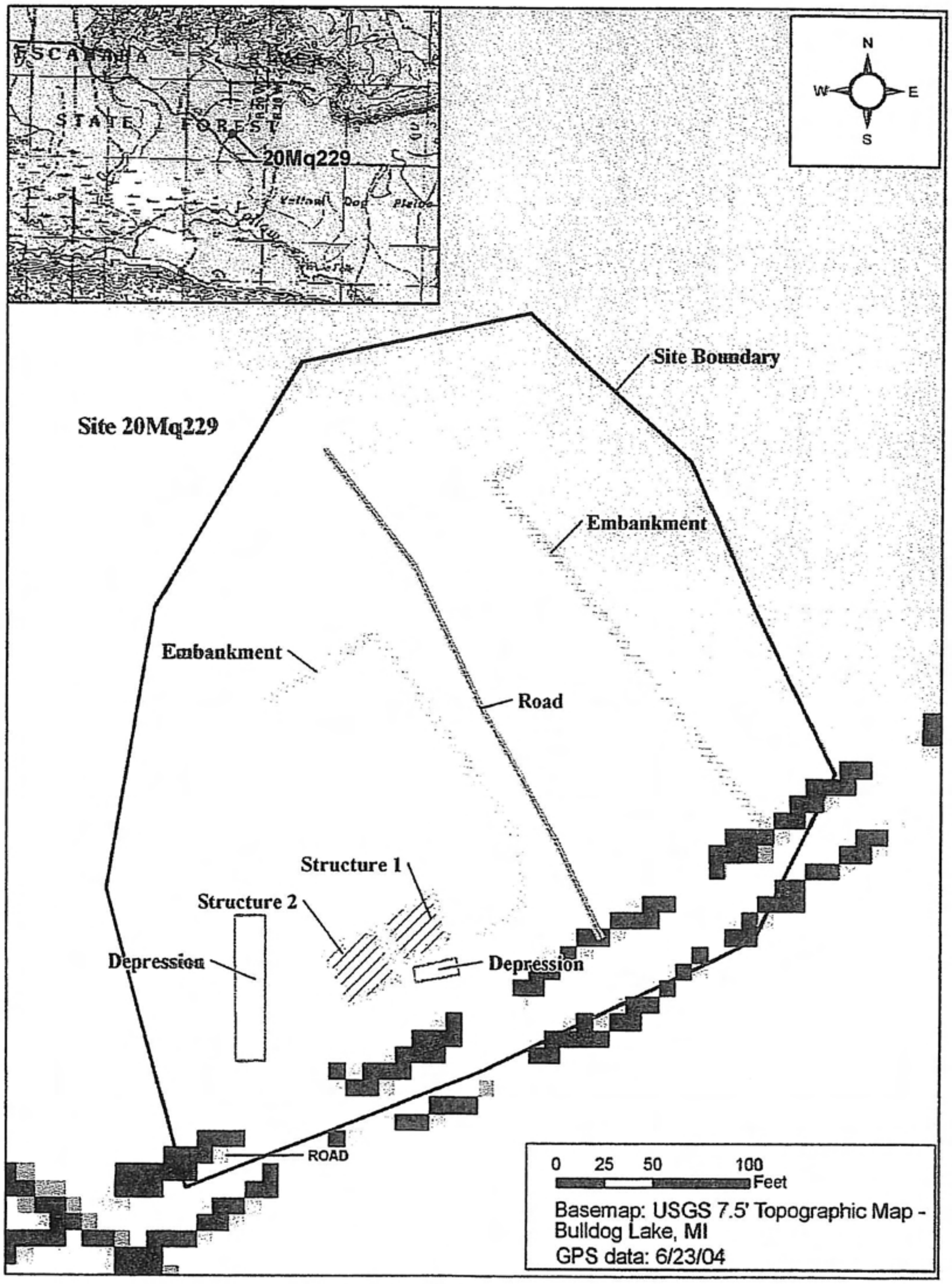
1.3 PROJECT DESIGN

The Eagle mineral deposit is contained in a body of rock that has a surface area of about 12 acres. The surface expression of the actual deposit is less than half this size (approximately six acres) and the ore body is located between 300 and 1,200 feet below the surface. Nickel and copper occur in an upper and lower zone, both of which are wedge-shaped and taper with depth.

This makes Eagle a small, but valuable, deposit containing approximately 184,000 tons (405 million pounds) of nickel and 153,000 tons (335 million pounds) of copper. Smaller amounts of cobalt, gold, platinum and palladium also exist. During the next few years, KMC will be working to determine the feasibility of mining this deposit as they has done at other metal mines in North American.

KMC is carefully studying the ways in which the Eagle deposit could be safely mined and processed. It has considered a range of mining options. A small underground mine with all waste rock being used to refill the mine opening after the ore is extracted has emerged as the best option. This would mean no large open pit and no large waste dumps.

Figure 6-1. Planview of Site 20Mq229.



STATE SITE NO. 20 Mq 230

MICHIGAN ARCHAEOLOGICAL SITE FORM

SITE NAME: 40 Mq 230

OTHER NAMES OR NUMBERS: None

SITE DESCRIPTION: Historic Camp

COUNTY: Marquette

TOWNSHIP NAME: Michigamme

TWP/RANGE/SECTION: T50N/R29W/11

QTR-SECTION: NE/SE

UTM COORDINATES WITH DATUM YEAR: N431902.66800, E5177213.46116 NAD 83

DIRECTIONS FROM CLOSEST STATE OR COUNTY ROAD INTERSECTION:

CLOSEST BODY OF WATER: Salmon trout River

SITE SIZE (length x width or diameter with unit of measurement): 200 feet by 75 feet or 61 m x 23 m

FIELD EVIDENCE (surface scatter, stratification, features, exposed by construction, etc : Eight structural remnants of various sizes arrayed along a bluff bench. Structural Remnants consist of hewn logs arranged in a rectangular pattern.

FIELDWORK (institution, principal investigator, year, site visit/survey type/excavation): BHE Environmental, Inc., Christopher Bergman, 2004, Archival Research and Pedestrian Survey

SITE INTEGRITY OR CONDITION: Not assessed, although logging and furrows have caused disturbances.

COLLECTIONS (private or institutional):

DIAGNOSTIC ARTIFACTS: NA

COMPONENTS (list period and site function for each): 20th century logging camp

DATES (list radiocarbon dates with lab numbers and associations): NA

HUMAN REMAINS PRESENT? NO X YES ____

IF YES, DETAILS:

OWNERSHIP (LIST NAME OF PERSON OR AGENCY):

X PRIVATE OWNER:

__ LOCAL GOVT AGENCY:

__ STATE GOVT AGENCY:

__ FEDERAL GOVT AGENCY:

NATIONAL REGISTER SIGNIFICANCE:

X More information needed for evaluation
___ Ineligible for the National Register of Historic Places
___ Eligible for the National Register of Historic Places

Person making this evaluation/date: CHRISTOPHER BERGMAN / JULY 20, 2004

WHAT MORE INFORMATION IS NEEDED, OR WHY IS SITE ELIGIBLE OR INELIGIBLE?
SITE NOT ASSESSED IN THE FIELD ASIDE FROM CASUAL INSPECTION

COMMENTS:

THIS RECORD BY:

NAME: CHRISTOPHER BERGMAN

INSTITUTION/COMPANY: BHE ENVIRONMENTAL, INC.

DATE: JULY 20, 2004

- APPEND A LIST OF REPORTS AND OTHER DOCUMENTATION ABOUT THE SITE., BOTH PUBLISHED AND UNPUBLISHED, INCLUDING PHOTOS, CORRESPONDENCE, NEWSPAPER ARTICLES, CRM REPORTS, JOURNAL ARTICLES, ETC.

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PN 1595.001 December 2004

PHASE I ARCHAEOLOGICAL SURVEY OF CA. 33 ACRES FOR KENNECOTT MINERALS COMPANY, EAGLE PROJECT, MARQUETTE COUNTY, MICHIGAN

Prepared For:
Golder Associates, Inc.
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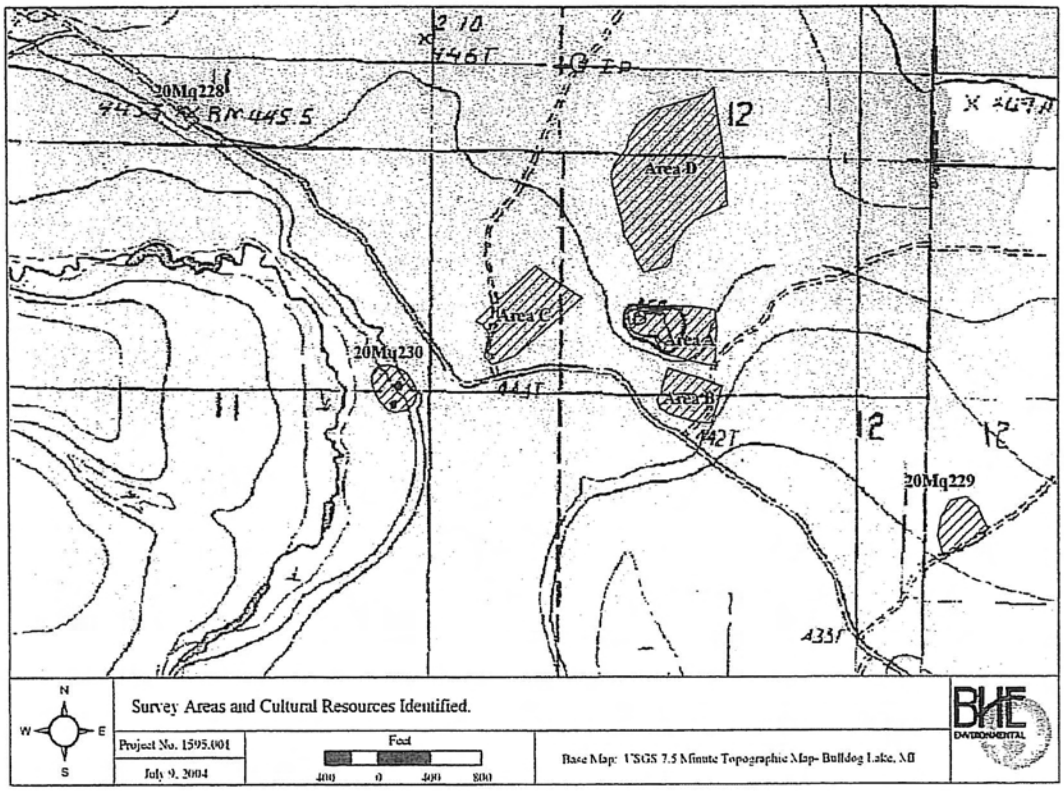

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The Eagle mineral deposit is contained in a body of rock that has a surface area of about 12 acres. The surface expression of the actual deposit is less than half this size (approximately six acres) and the ore body is located between 300 and 1,200 feet below the surface. Nickel and copper occur in an upper and lower zone, both of which are wedge-shaped and taper with depth.

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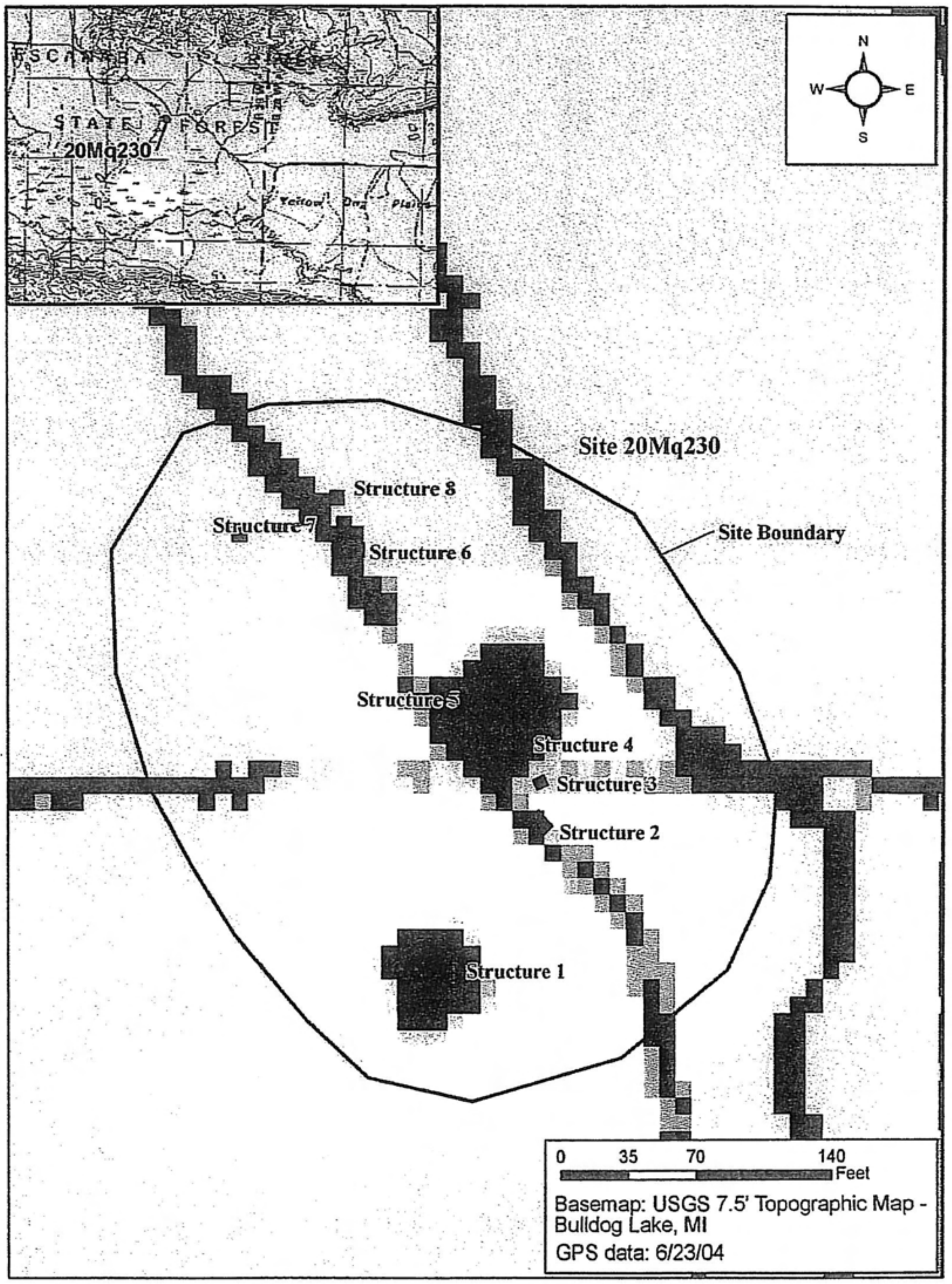
Figure 6-2. Planview of Site 20Mq230.



APPENDIX F

RESUMES OF KEY PERSONNEL

CHRISTOPHER BERGMAN, Ph.D., RPA
Director, Cultural Resource Group

EDUCATION

Ph.D., Archaeology, Institute of Archaeology, University of London, 1985
B.A., Archaeology and Geology, American University of Beirut, 1979

REGISTRATIONS

Register of Professional Archaeologists

QUALIFICATIONS AND RELEVANT EXPERIENCE

Dr. Bergman serves as Principal Investigator on archaeological projects, and is BHE's leading specialist in lithic analysis. His duties include designing and implementing field surveys, coordinating with state and federal agencies, preparing reports, and overseeing laboratory analysis. He is responsible for assessing the significance of cultural resources found during BHE studies and for making recommendations on National Register eligibility status. In addition to the many cultural resource projects he has completed, he has directed Data Recovery excavations at major prehistoric sites in the both the Midwest and Northeast.

Along with his experience in the midwestern and eastern United States, Dr. Bergman has also completed many archaeological projects in the Old World. His doctoral dissertation was on lithic technologies at Ksar Akil, a rockshelter near Beirut, Lebanon with over 23 meters of cultural deposits spanning 40,000 years. He participated in excavations at sites across the Near East and Europe and his work has led to over 50 professional publications, including several books and edited volumes.

In 1995, he was the recipient of the 1st Annual Historic Preservation Archaeological Award for Outstanding Achievement upon completion of Transcontinental Gas Pipe Line Corporation's Sandts Eddy Archaeological Project. The award was presented by the Pennsylvania Historical and Museum Commission in Wilkes Barre, Pennsylvania. In 1997, the Sandts Eddy project was one of four projects nationwide selected for inclusion in the Secretary of Interior's Annual Report to the U.S. Congress as an outstanding contribution to research in the Federal Archaeology Program. In 1999, Dr. Bergman received a second citation in the Secretary of the Interior's Annual Report to U.S. Congress for his work on the 18th century Susan Furnace site in Cherokee County, South Carolina.

Selected Project Experience

Principal Investigator/Lithic Analyst – Refitting Analysis of Lithic Materials from the Phase III investigation of 36SO106 for PennDOT's Meyersdale U.S. 219 Project in Somerset County, Pennsylvania.

Principal Investigator - Preparation of the Historic Preservation Plan for Tyndall Air Force Base, Bay County, Florida for the National Park Service.

Principal Investigator - Preparation of the Historic Preservation Plan for the Atchison Defense Facility for the Kansas City Corps of Engineers.

Director and Principal Investigator - Phase III Mitigation Excavations at two prehistoric sites, , Sandts Eddy (36Nm12) and Padula (36Nm15), in Northampton County, Pennsylvania for Transcontinental Gas Pipe Line Corporation.

Principal Investigator - Phase III Mitigation Excavations at Site 15Be391 for the Cincinnati-Northern Kentucky Airport, Boone County, Kentucky for Landrum and Brown.

Principal Investigator - Phase III Mitigation Report Preparation and Lithic Analysis for the Atterbury Site (12B815), Bartholomew County, Indiana. Data Recovery of Late Archaic/Early Woodland artifacts for Texas Gas Transmission Corporation.

Principal Investigator - Phase III Mitigation Excavations at Sites 40Ln163 and 40Ln167, Lincoln County, Tennessee on behalf of the Tennessee Department of Transportation.

Prinicpal Investigator – Phase II testing of the Susan Furnace site (38Ck67) in Cherokee County, South Carolina.

Project Manager and Principal Investigator - Phase II Testing of a 19th century historic homestead site in Christian County, Kentucky for US Soil Conservation Service.

Principal Investigator - Phase I, II, III Cultural Resource Investigations of a 45-mile AT&T fiber optic cable corridor in Warren, Greene, Clinton and Butler counties, Ohio for Bucher, Willis & Ratliff.

Project Manager and Principal Investigator - Phase II Testing of Prehistoric Site and Native American Concern Coordination in Clark County, Indiana for Indiana SHPO and Indiana State Parks.

Principal Investigator - Phase II Testing of four sites on an 18-mile AT&T fiber optic cable corridor in Madison and St. Clair counties, Illinois for Bucher, Willis & Ratliff.

Principal Investigator - Phase I Survey of Transcontinental Gas Pipeline Corporation's SunBelt Expansion Project and Phase II Testing of the Susan Furnace Site (38Ck1), Cherokee County, South Carolina for Transcontinental Gas Pipeline Corporation.

Principal Investigator - Phase I Cultural Resource Survey of 147 miles of proposed natural gas pipeline and related facilities in West Virginia and Ohio, including deep testing at numerous stream crossings, for Ohio River Pipe Line.

Principal Investigator - Phase I Cultural Resource Survey of 70 miles of proposed gas pipeline in Arkansas and Mississippi for Texas Gas Transmission Corporation.

Principal Investigator – Public hearing testimony Silver Creek Sand & Gravel Clarksville, Indiana for the Indiana Department of Natural Resources.

Principal Investigator – Public hearing testimony Cyrus Charles Indian Cemetery Site, Montauk Long Island, New York.

Selected Research Excavation Experience

Orontes River, Syria: Lower and Middle Paleolithic surface survey and field mapping of sites.

Beirut, Lebanon, Middle Paleolithic preliminary archaeological investigation of a newly discovered rockshelter Field Assistant.

Le Flageolet, France: Upper Paleolithic.

Pont d'Ambon, France: Upper Paleolithic.

Hengistbury Head, England: Mesolithic.

Stoke Newington, England: Lower Paleolithic Field Assistant.

Hengistbury Head, England: Upper Paleolithic-Mesolithic Site Supervisor.

Pincevent, France: Upper Paleolithic.

Pont d'Ambon, France: Upper Paleolithic.

Hengistbury Head, England: Mesolithic Site Supervisor.

Pont d'Ambon, France: Upper Paleolithic.

Hengistbury Head, England: Upper Paleolithic Site Supervisor.

Hengistbury Head, England: Upper Paleolithic Co-Director.

Boxgrove, England: Lower Paleolithic Specialist Site Consultant.

Boxgrove, England: Lower Paleolithic Specialist Site Consultant.

Boxgrove, England: Lower Paleolithic Specialist Site Consultant.

Rio Major, Portugal Upper Paleolithic Field Assistant.

Big Bone Lick State Park, Kentucky, Director

Professional Publications

Books

Bergman, C.A. and L. Copeland (eds.) 1986. I. Azoury Ksar Akil, Lebanon: A Technological and Typological Analysis of the Transitional and Early Upper Palaeolithic Levels of Ksar Akil and Abu Halka. Volume I. BAR International Series 289 (i and ii).

Bergman, C.A. 1987. Ksar Akil, Lebanon: A Technological and Typological Analysis of the Later Palaeolithic Levels. Volume II. BAR International Series 329.

Bergman, C.A. and J.F. Doershuk (eds.) 1994. Recent Research into the Prehistory of the Delaware Valley. Journal of Middle Atlantic Archaeology 10.

Monographs

J.F. Doershuk, C.A. Bergman and D. Pollack (eds.) 1995. Current Archaeological Research in Kentucky: Volume 3. Kentucky Heritage Council, Frankfort.

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Wall, S., K. Russell, G. Perkins, D. Miller, L.R. Kimball, M. Jacobs, K. Duerksen, J.F. Doershuk, R. Adams and C.A. Bergman 1995. Kramer Projectile Points and Early Woodland Activity at the West Runway Site (15Be391), Boone County, Kentucky. in J.F. Doershuk, C.A. Bergman, and D. Pollack (eds.) Current Archaeological Research in Kentucky: Volume 3. Kentucky Heritage Council: 89-112.

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Kooi, B.W. and C.A. Bergman 1997. Mathematical Approaches to the Study of Ancient Bows. Antiquity 71: 124-134.

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Barton, R.N.E. and C.A. Bergman 1983. The Hunters of Hengistbury. The Illustrated London News. February 1983: 42.

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Bergman, C.A. and P. Gibbs 1984. American composites in Britain. Journal of the Society of Archer-Antiquaries 28: 35-36.

Bergman, C. A. 1987. Death on the Plains. Journal of the Society of Archer-Antiquaries 30: 12-14.

Professional Memberships

American Archaeological Society
Register of Professional Archaeologists (RPA)
Member of the Florida Archaeological Council
Member of the New York Archaeological Council
Member of the Ohio Archaeological Council
Member of the Pennsylvania Archaeological Council

Miscellaneous

1999-2000 President of the Middle Atlantic Archaeological Conference.

1999 Cited for Outstanding Achievement in the conduct of the Susan Furnace Project, Secretary of Interior's Annual Report to the United States Congress.

1997-1998: President-elect of the Middle Atlantic Archaeological Conference.

1997: Designed and participated in segments of the National Geographic Explorer special entitled "Mystery of the Neanderthals."

1997: Cited for Outstanding Achievement in the conduct of the Sandts Eddy Project, Secretary of Interior's Annual Report to the United States Congress.

1995: Recipient of the 1st Annual Historic Preservation Archaeological Award for Outstanding Achievement upon completion of the Sandts Eddy Archaeological Project. Award presented by the Pennsylvania Historical and Museum Commission.

1994: Collaborated on a children's book entitled Frozen Man (published by Henry Holt) about the "Iceman" discovery.

1994 to present: Reviewer for the Journal of Middle Atlantic Archaeology.

1994 to present: Midwestern Regional Advisory Editor for North American Archaeologist.

1994: Developed and presented a segment on the history and technology of bows and arrows for Newton's Apple, PBS Television, Minneapolis.

DONNA L. BRYANT, M.A.
Historic Archaeologist

EDUCATION

M.A., Anthropology, University of Denver, 2001, Archaeology emphasis
9

QUALIFICATIONS AND RELEVANT EXPERIENCE

Ms. Bryant serves as a Principal Investigator specializing in Historic Archaeology. She has an M.A. in Anthropology with an emphasis in archaeology from the University of Denver. During graduate school, she participated in the Colorado Coal Field War Archaeological Project, which focuses on labor conflicts and the lives of the working class at the turn of the twentieth century. Her areas of experience include Historical Archaeology, Social Archaeology, the Archaeology of the Midwestern and Western United States, and Cultural Resource Management. Ms. Bryant has several years experience working on Cultural Resource Management projects including background research, survey, testing, excavation, analysis, and report preparation.

2001 Project Supervisor. Center for Archaeological Research, Southwest Missouri State University. Supervised archeological surveys and participated in archaeological excavations in Missouri and Arkansas, background research for both prehistoric and historic archaeological projects and sites, artifact analysis and processing, and prepared reports (writing/map making/formatting)

2001 US/ICOMOS Summer Intern. Coa Valley Archaeological Park, Foz Coa, Portugal. Participated in international exchange in the area of heritage preservation recording rock art and participating in ongoing archaeological excavations in the park (Paleolithic and Iron Age Sites).

1999-2000 Archaeologist/Field Supervisor/Research Assistant. Colorado Coal Field War Project. Served as a supervisor on a project focusing on coal mining communities and labor disputes in the southern Colorado coal fields. Led archaeological excavations, taught archaeological field techniques, maintained daily field notes, organized and led weekly discussions on archaeological topics relevant to the project during the summers of 1999-2000. Processed artifacts, catalogued artifacts recovered from excavations, organized and wrote summaries of excavations during the 1999-2000 school year.

1998-1999 Archaeologist/ Archaeological Laboratory Assistant. SWCA, Inc., Environmental Consultants, Denver, Colorado. Conducted cultural resource investigations, including field investigations, historic research, technical writing, and archaeological laboratory work. Projects included archaeological testing and excavation of late 19th/early 20th century domestic sites associated with African American families in downtown Denver for Broadway Viaduct Replacement Project. Processed, catalogued, and prepared historic artifacts for curation.

1998 Research Assistant. University of Denver, Denver, Colorado. Researched and collected historic photographs of Denver and the surrounding environment for the Archaeology of Greater Denver authored by Sarah M. Nelson, Ph.D.

1998 Teaching Assistant. University of Denver, Denver, Colorado. Field Methods in Archaeology. Assisted in teaching students archaeological field techniques, mapping, and surveying.

1997-1998 Archaeologist. Alpine Archaeological Consultants, Inc. Montrose, Colorado. Conducted cultural resource investigations including archaeological survey and excavations. Projects included archaeological survey and site recording of historic and prehistoric sites for San Juan Mine in northern New Mexico. Archaeological excavations of prehistoric sites including Archaic and ancestral Pueblo sites for Trans-Colorado pipeline in northern New Mexico, western Colorado, and southwestern Colorado.

1997 Archaeologist/Field Supervisor. The University of Denver Archaeological Field School in west-central New Mexico. Served as a supervisor on the archaeological survey of the Merrill Ranch. Led archaeological survey, taught students archaeological field techniques, identified and recorded prehistoric and historic sites, taught and performed archaeological laboratory techniques.

1990-1996 Archaeologist/Field Supervisor. Gray and Pape, Inc. Cincinnati, Ohio. Conducted cultural resource investigations including archaeological survey and testing of prehistoric and historic sites in Ohio, Kentucky, West Virginia, Virginia. Led archaeological testing, maintained daily field notes, conducted archaeological laboratory analysis and artifact processing.

1992 Archaeologist. U.S. National Park Service. Yosemite National Park, Yosemite, California. Archaeological testing of 14 prehistoric and historic sites and laboratory artifact processing.

1991-1992 Archaeologist/ Field Director/ Assistant Crew Chief. U.S. Forest Service. Groveland Ranger District, Groveland, California. Conducted archaeological reconnaissance surface survey, recorded and mapped sites, delineated archaeological sites, technical writing, artifact identification, illustration, and data entry.

Archaeological Field Training

1987 University of Colorado, Boulder Archaeological Field School in association with the University of Colorado Museum. Learned archaeological field techniques including excavation of prehistoric ancestral Pueblo site (Yellow Jacket Complex) in southwestern Colorado. Excavation, note keeping, artifact identification and processing, course work on Southwestern Archaeology and Physical Anthropology.

Reports and Manuscripts

2003 Archaeological Survey of 10 Acres Along Pearson Creek, Greene County, Missouri. Center for Archaeological Research, Southwest Missouri State University, Springfield. Prepared by Donna L. Bryant

2002 Test Excavations at Two Sites (23JE787 and 23JE788) in the Proposed Highway 21 Corridor, Jefferson County, Missouri. Center for Archaeological Research, Southwest Missouri State University, Springfield. Prepared by Gina S. Powell and Donna L. Bryant.

2001 Archaeology of the Colorado Coal Field War 1913-1914. In Archaeologies of the Contemporary Past. Victor Buchli and Gavin Lucas, eds. Routledge: New York. (as the Ludlow Collective with Donna Bryant, Phil Duke, Jason Lapham, Randall McGuire, Paul Reckner, Dean Saitta, Mark Walker and Margaret Wood.)

2000 Towards an Archaeology of Labor History. Prepared for the University of Denver, Department of Anthropology in completion of a M.A. Prepared by Donna Bryant.

2000 Preliminary Report on the Archaeological Survey and Testing of the Merrill Ranch. Prepared for the University of Denver, Department of Anthropology. Prepared by Donna Bryant.

1998 Historical Archaeological Testing and Data Recovery for the Broadway Viaduct Replacement Project, Downtown Denver, Colorado: Mitigation of Site 5DV5997. Prepared for Colorado Department of Transportation. Prepared by Margaret C Wood, Richard F. Carrillo, Terri McBride, and Donna Bryant.

1998 Historical Assessment of the KMM Parking Garage Property, Black Hawk, Gilpin County, Colorado. Prepared for KMM Parking L.L.C. Prepared by Terri McBride, Eric Carlson, Donna Bryant, and Mark Chenault.

Professional Organizations

Archaeological Institute of America
US/International Council on Monuments and Sites

Awards and Scholarships

Alice Hamilton Scholarship for Archaeology Students

Technical Memorandum

January 30, 2006

To: Scott Miller, Golder Associates Inc.
From: Christopher Bergman, BHE Environmental

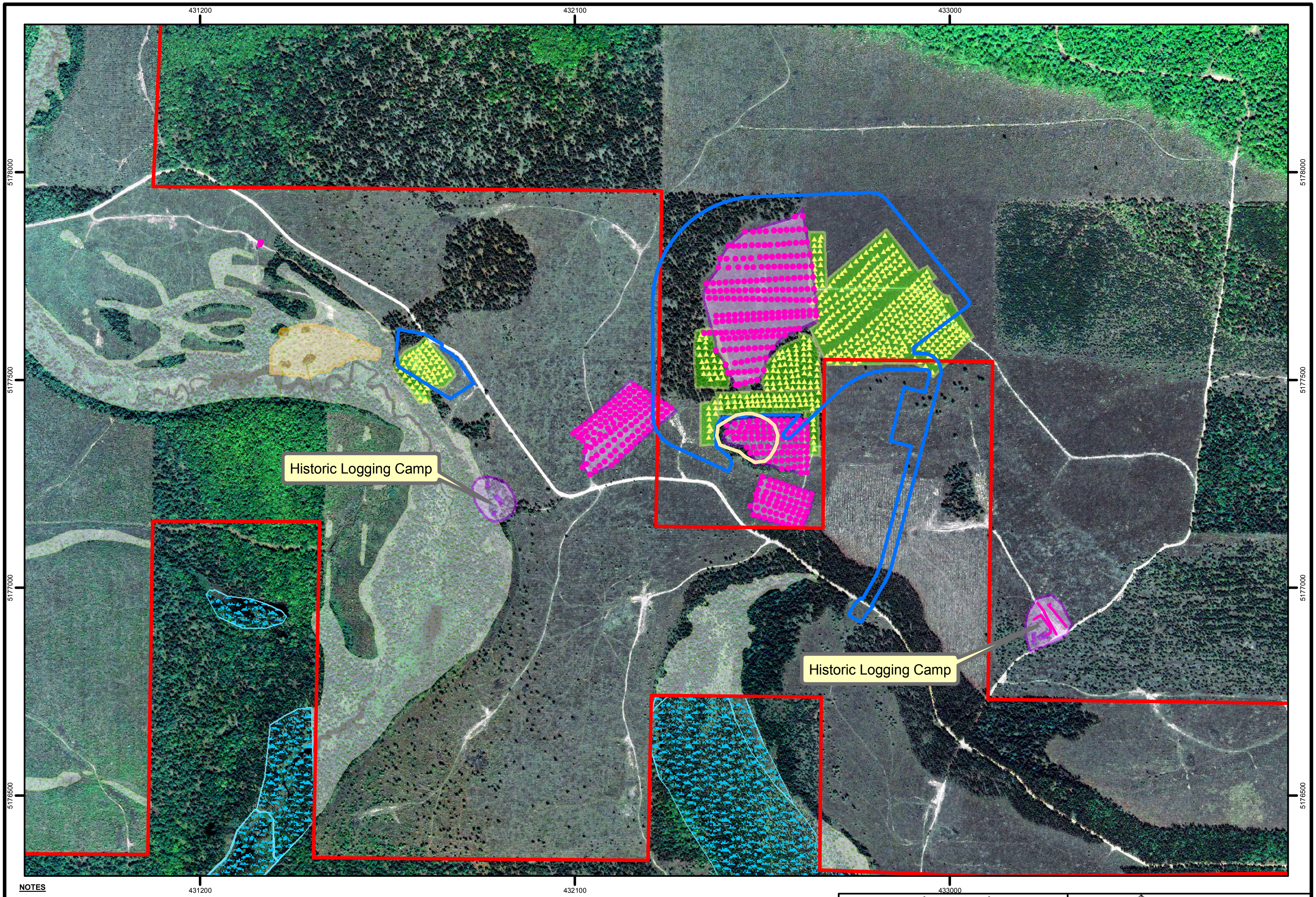
RE: Comparison of Expanded Mine Footprint with Archaeological Surveys

This memo represents further consultation related to Section 106 of the National Historic Preservation Act as a result of additional land requirements for the proposed Kennecott Minerals Company Eagle Project in Marquette County, Michigan. The attached map, Figure 3-13, shows a slightly expanded area of proposed ground disturbance (Area of Potential Effect or APE) when compared to the contiguous areas previously investigated during two separate Phase I surveys conducted in 2004 and 2005. The results of those surveys are summarized in the following table (Table 1), taken from the document entitled, "*Phase I Archaeological Survey of ca. 73 acres for Kennecott Minerals Company, Eagle Project, Marquette County, Michigan*."

Table 1. Sample Loci Type, Number and Percentage for the 2004 and 2005 Phase I Site Detection Surveys.

Sample Loci Type	2004 Number	2004 Percentage	2005 Number	2005 Percentage	2004/2005 Number	2004/2005 Percentage
Disturbed	59	**12.6**	68	**12.0**	127	**12.3**
Negative Shovel Test	361	**77.0**	448	**78.9**	809	**78.0**
Negative Pedestrian Survey	33	**7.0**	40	**7.0**	73	**7.1**
Negative Slope (>13 percent grade)	16	**3.4**	12	**2.1**	28	**2.7**
Total	**469**	**100.0**	**568**	**100.0**	**1037**	**100.1**

As can be seen from the above table, investigations across the originally proposed ca. 73 acre APE resulted in 1037 negative sampling locations of which 809 were shovel tests. The shovel tests were hand excavated with all soils screened through a ¼-inch mesh hardware cloth. It is suggested that similar negative results are likely to be recorded within the immediately adjacent, expanded APE indicated on the attached map. Based on our analysis and understanding of the area, additional Phase I survey work is expected to yield redundant negative results in the expanded area. Therefore, we believe the proposed expanded APE has been adequately characterized, but formal approval prior to land disturbance will be required by the Michigan Historic Preservation Office.



NOTES

1. Surface Property Boundary, Ore Body, Wetland boundary (Wetland and Coastal Resources), 2004 Archeological Survey and Orthophotography supplied by Kennecott via Golder Associates Inc., August, 2005.
2. 2005 Archeological Survey supplied by Kennecott via Golder Associates Inc., October, 2005.
3. Horizontal datum based on NAD 83/94. Horizontal coordinates based on UTM Zone 16.
4. US Fish and Wildlife Service Wetlands downloaded from USFWS website.
5. Site Location - Project Site within Sections 11 &12, T50N, R29W, Town of Michigamme, Marquette County, Michigan.

LEGEND

- Eagle Ore Body
- Location of Surface Facilities
- Kennecott Surface Ownership
- WCR Wetland Boundary
- Wetlands adapted from US Fish and Wildlife Service Wedtlands Inventory Map
- Outcrop
- 2004 Archeological Survey and Test Sites
- 2005 Archeological Survey and Test Sites

N

Foth & Van Dyke

Foth & Van Dyke			
REVISED	DATE	BY	DESCRIPTION

CHECKED BY:	JOS1	DATE: FEB. '06
APPROVED BY:	SVD1	DATE: FEB. '06
APPROVED BY:		DATE:

Kennecott Eagle Minerals

FIGURE 3-13

ARCHEOLOGICAL SURVEY AREAS

Scale: 0 75 150 Meters | Date: FEBRUARY, 2006

Prepared by: Foth & Van Dyke | By: DAT | 04W018

M:\kmceagle\mxd\eia\archeological_3-12_11x17.mxd February 14, 2006