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Kansas City District
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STOCKTON LAKE SURVEY AND ASSESSMENT

National Register Assessment of Prehistoric Archeological Sites
23DA407 and 23DA408 and
Historic Properties Survey
in the Stockton Lake Project, Cedar and Dade Counties, Missouri
Contract No. DACW41-92-C-0072

1993

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Intensive survey of 1372 acres at Stockton Lake recorded 90 sites and 24 isolated prehistoric artifacts (64 prehistoric sites, 20 historic sites and 6 sites with both prehistoric and historic components). Of this total, 38 sites have been recommended for Phase II assessments.

Phase II assessments of 23DA407 and 23DA408 found no evidence of significant prehistoric deposits. Neither site is considered eligible for the National Register of Historic Places.

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DISCLAIMER

The study performed herein by the Contractor for the Corps of Engineers is authorized by the National Historic Preservation Act of 1966, as amended. Accomplishment of this work provides documentation evidencing compliance with Executive Order 11593 (Protection and Enhancement of the Cultural Environment, dated 13 May 1971) and Section 110 of the National Historic Preservation Act.

Funds for this investigation and report were provided by the U. S. Army Corps of Engineers. The Corps contracted with Historic Preservation Associates for this Downstream Stockton Study and may not necessarily agree with the contents of this report in its entirety. The report reflects the professional views of the Contractor who is responsible for collection of the data, analysis, conclusions and recommendations.

The Contractor designated a study team to make the investigation and the study team has drawn conclusions regarding the effects of power generation on the Sac River downstream of Stockton Dam. Since the U. S. Army Corps of Engineers does not wish to interfere with the professional independence of the study team, those conclusions remain in the study. However, it should be noted that the U. S. Army Corps of Engineers does not necessarily agree with the conclusions of the study team regarding the effects of power generation.

ABSTRACT

Test excavations were completed at prehistoric archeological sites 23DA407 and 23DA408. Excavations slated for 23DA83 could not be conducted due to high lake levels and will be undertaken at a later date. These sites are being actively excavated by collectors and are in danger of destruction. Hand excavations included 1 m x 1 m test units and shovel tests. Controlled surface collecting or piece plotting was not undertaken as planned because of the obvious evidence of surface disturbance. 23DA407 appears to have functioned as a seasonal habitation and yielded evidence of Early-Middle Archaic, Middle-Late Woodland and Mississippi Period occupations. Evidence of Historic Period trapping activities was also recovered. 23DA408 also appears to have functioned as a seasonal habitation and yielded evidence of Late Archaic, Late Woodland, Mississippi and Late Prehistoric occupations. Neither of these sites was determined to be eligible for inclusion in the National Register of Historic Places. Both have suffered damage from unauthorized digging and neither exhibited visible stratigraphy or positive evidence of in situ cultural deposits.

An intensive survey of 1,372.4 acres on Government lands around Stockton Lake resulted in the investigation of 90 cultural properties and 24 isolated prehistoric artifacts. These include 64 prehistoric, 20 Historic and 6 sites that exhibited both prehistoric and historic occupations. Thirty-eight of these sites yielded evidence that they may be eligible for inclusion in the National Register of Historic Places and Phase II testing and assessment has been recommended for them. Seven additional sites are located outside our designated survey areas. Five of these are prehistoric, one is historic and one is both prehistoric and historic. All but one were previously recorded. Archaeological Survey of Missouri site forms were prepared for these but they are not discussed in detail in this report.

Thirty-one sites and eight isolated artifacts are located in Cedar County. Twenty of the sites are prehistoric (seven previously recorded), nine are historic (four previously recorded) and two are both prehistoric and historic (none previously recorded). Fifty-nine sites and 16 isolated artifacts are located in Dade County. Forty-four are prehistoric (17 previously recorded), 11 are historic (three previously recorded) and four are both prehistoric and historic (two previously recorded).

Finally, artifacts collected at 115 Stockton Lake sites in Cedar, Dade and Polk counties by Mr. Howard R. Wimmer of St. Louis were analyzed for evidence of use-wear and classified according to typologies commonly accepted for the Stockton area. Those artifacts that were classifiable or that exhibited use-wear are described in an addendum to this report. Information gained during their analysis is used, where appropriate, to supplement that gathered during the HPA fieldwork.

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STOCKTON LAKE SURVEY AND ASSESSMENT

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STOCKTON LAKE SURVEY AND ASSESSMENT

National Register Assessment of Prehistoric Archeological Sites
23DA407 and 23DA408 and
Historic Properties Survey in the Stockton Lake Project
Cedar and Dade Counties, Missouri

submitted to the Kansas City District, Corps of Engineers
by Timothy C. Klinger, Steven M. Imhoff and Don R. Dickson
Historic Preservation Associates

INTRODUCTION

To fulfill its obligations under the National Historic Preservation Act of 1966 (PL89-665), the National Environmental Policy Act of 1969 (PL91-190), Executive Order 1159 3, the Archeological and Historic Preservation Act of 1974 (PL93-291), the Archaeological Resources Protection Act of 1979 (PL96-95) and the Procedures for the Protection of Historic and Cultural Properties (36CFR800), the Kansas City District of the U. S. Army Corps of Engineers (COE) requested National Register of Historic Places (NRHP) evaluation of three archeological sites situated within the Maze Creek drainage of Stockton Lake and a pedestrian survey of 1,372.4 acres in various tracts in eight Public Use Areas and the Maze Creek Drainage. Contract DACW41-92-C-0072 was awarded to Historic Preservation Associates (HPA) for this work.

Sites evaluated in this report were previously recorded as were 40 of those visited during the survey. The remaining 57 sites and 24 isolated artifacts were newly recorded. The purpose of this report is to document archeological test excavations that were undertaken to assess the nature, extent and significance of three prehistoric sites relative to National Register of Historic Places criteria (36CFR60.4) and to make recommendations on the disposition of sites visited during the survey. This report follows the guidelines and standards of fieldwork and reports contained in the *Guidelines for Reporting Phase II Testing of Archaeological Site Significance and Evaluation of National Register Eligibility* (Weichman 1987), *Guidelines for Contract Cultural Resource Survey Reports & Professional Qualifications* (Weichman 1987), the *Master Plan for Archaeological Resource Protection in Missouri* (Weston and Weichman 1987), McGimsey and Davis (1977:64-77), Bense et al. (1986:52-62) and the Scope of Work.

The project sponsor was the Kansas City District of the U. S. Army Corps of Engineers. The Project Manager was Ms. Camille Lechliter who was assisted by Mr. Berkely Bailey of the Kansas City office. Mr. Ken Lucius of the Stockton Lake office served as liaison between the field crew and the Kansas City District. Mr. Timothy C. Klinger, Director of HPA, was the Principal Investigator. Mr. Steven M. Imhoff directed the fieldwork. Mr. Don R. Dickson assisted with the excavations at 23DA408 and conducted the analysis of all cultural materials

recovered during the HPA fieldwork and those collected from various sites by Mr. Howard R. Wimmer.

The complete Scope of Work is presented as Appendix F. Provisions dealing specifically with the conduct of the work (including the paragraph cited) are as follows:

- Documentation, analysis and presentation of artifacts collected by Howard Wimmer (4b(1)).
- Extensive archeological survey (4b(2))
- Extensive archeological testing of three (3) rock shelters (4b(3))
- Data collection - literature search, cultural materials soil stratification (4b(4))
- Data analysis/interpretation - identification of cultural materials, interpretation, mapping, analysis of data (4b(5))
- Thoroughly supported and documented recommendations for the NRHP significance of sites (4b(6))
- Use shovel/auger/core testing at 10 m intervals to define site limits (10d(1))
- Excavate in 1 x 1s or 1 x 2s but no more than 16 m^2 (10d(2)) at each site
- Excavate to bedrock or 1 m minimum; draw profiles and collect geomorphic data (10d(3))
- Analyze Wimmer's collections as follows (10d(4))

  <u>Chipped Stone</u>

  a. typology
  b. prehistoric cultural affiliation
  c. material type
  d. presence of heat treatment
  e. presence of cortex and cortex type
  f. presence of use wear
  g. biface stage
  h. site type location (open air; rock shelter; etc.)
  i. complete specimen or fragment (proximal, medial, distal)

  <u>Ground Stone</u>

  a. typology
  b. prehistoric cultural affiliation
  c. presence of use wear
  d. material type
  e. site type location (open air; rock shelter; etc.)
  f. complete specimen or fragment

  <u>Ceramics</u>

  a. typology
  b. prehistoric cultural affiliation
  c. temper agent
  d. decorative pattern
  e. site type location (open air; rock shelter; etc.)
- No deep testing using heavy equipment is necessary (10d(5))
- Before beginning excavation, assess damage using ARPA techniques to prepare a damage assessment report (10d(7))
- Establish a permanent datum with a brass or steel cap set in reinforced concrete with the site number, date placed and an X or + for accurate establishment of a transit station. Subdatums shall consist of a steel pin driven into stone and clearly identified (10d(8))
- Test inside shelters and on talus slopes. Line bottom of test pits and previously disturbed areas with a non-biodegradable material. Rake surface smooth. Document the site in accordance with 36CFR63 (10d(9))
- NAGPRA and Missouri burial laws must be followed (10d(10))

- During surveys, the precise location and thorough documentation of all cultural debris shall be recorded. Note precise location of cultural diagnostics (10d(11))
- Identify each site's temporal placement and type (10d(15))
- Collect all diagnostics and a sample of other materials (10d(16))
- Collect samples for absolute dating, palynology but do not process without prior approval (10d(17))
- Use the metric system (10d(19))
- Photograph all phases of fieldwork using black and white prints and color slides. Illustrate or photograph all features and diagnostic artifacts (10d(20))
- Use flotation and dry screening where feasible (10d(21))
- After investigations are completed, document condition of the sites in accordance with 36CFR63 (10d(23))
- Backfill excavations and return site to its condition prior to beginning work (10d(24))

Three sites situated within the Maze Creek drainage were to be tested. All are being actively looted and are in danger of destruction. All are located in Dade County, Missouri in the Sac Watershed, a division of the Osage Prairie Study Unit (Weston and Weichman 1987:B191 - B1911) (Figure 1). In Cedar County, lands to be surveyed were located in the Stockton (107.7 acres), Crabtree Cove (52.7 acres), Orleans Trail (198.9 acres), Hawker Point (72.0 acres), Masters (74.1) and Cedar Ridge (40.0 acres) Public Use areas. In Dade County, lands to be surveyed were located in the Cedar Ridge (59.0 acres), Mutton Creek (162.5 acres) and Ruark Bluff (129.0 acres) Public Use areas and in the Maze Creek Drainage (476.5 acres) (Figure 2).

The survey took place between 15 September and 4 November 1992. Survey tracts were, for the most part, investigated in the order specified in the Scope of Work (Table 1) but exceptions were made when overall efficiency was enhanced. Test excavations took place at 23DA407 between 18 and 24 January 1993 and at 23DA408 between 4 and 7 January 1993.

Table 1. Dates of investigation for 19 survey tracts in the Stockton Lake Project

Public Use Area	Survey Priority	Acreage	Date Begun	Date Completed
Mutton Creek	1	101.0	09/15/92	09/18/92
Orleans Trail	2	78.1	09/28/92	09/28/92
Ruark Bluff	3	96.7	09/29/92	09/30/92
Ruark Bluff	4	8.4	09/30/92	09/30/92
Ruark Bluff	7	23.9	09/30/92	09/30/92
Orleans Trail	5	37.5	10/01/92	10/01/92
Orleans Trail	6	41.9	10/01/92	10/01/92
Orleans Trail	10	41.4	10/02/91	10/02/92
Crabtree Cove	9	52.7	10/02/92	10/05/92
Masters	8	30.5	10/05/92	10/06/92
Masters	11	43.6	10/06/92	10/06/92
Cedar Ridge	12	40.0	10/09/92	10/09/92
Cedar Ridge	16	59.0	10/09/92	10/09/92
Mutton Creek	14	38.9	10/12/92	10/12/92
Mutton Creek	15	22.6	10/12/92	10/12/92
Hawker Point	13	59.7	10/13/92	10/13/92
Hawker Point	17	12.3	10/13/92	10/13/92
Stockton	18	107.7	10/14/92	10/14/92
Maze Creek	N/A	476.5	10/15/92	11/04/92

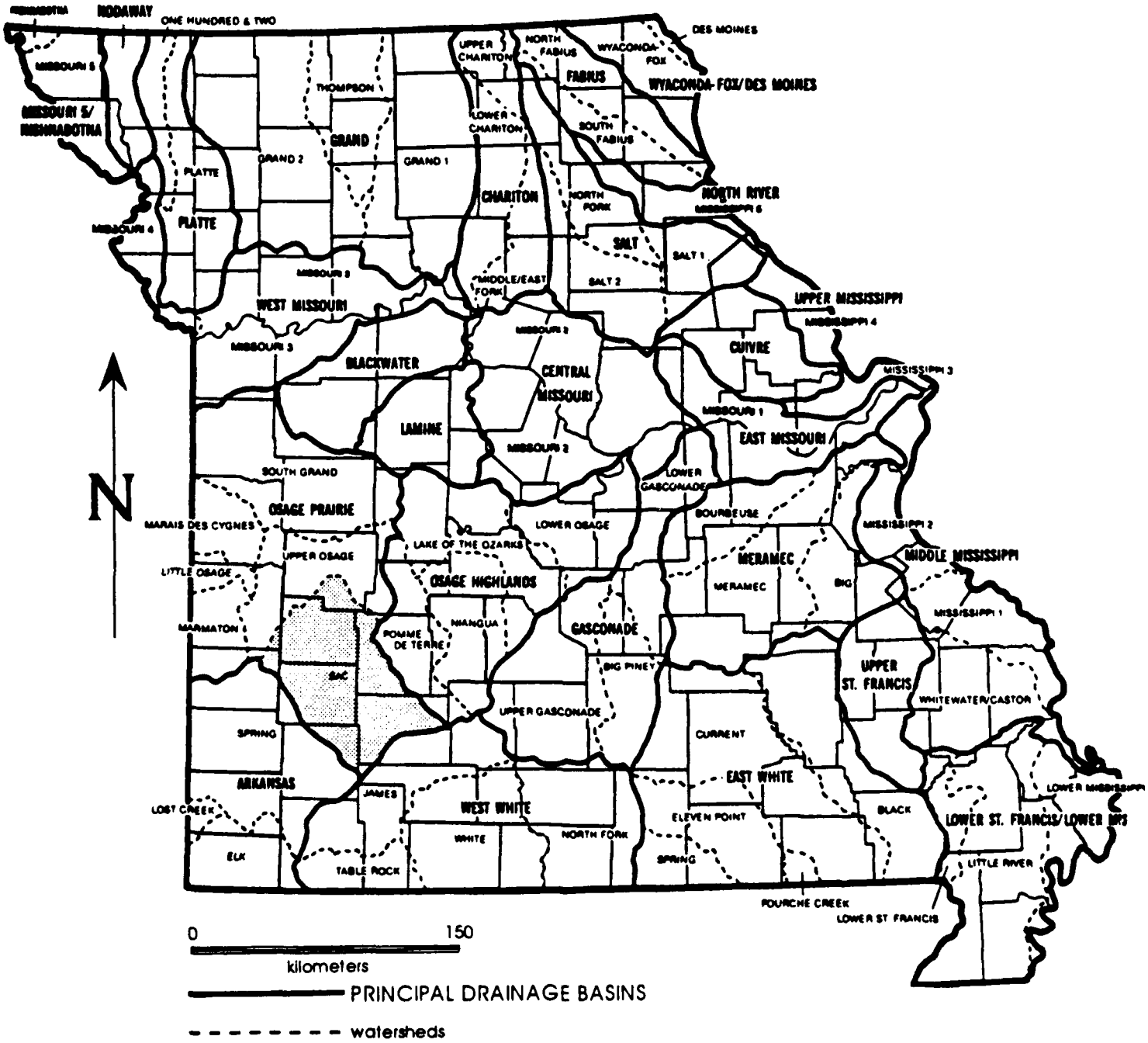


Figure 1. Missouri watersheds and general project location.

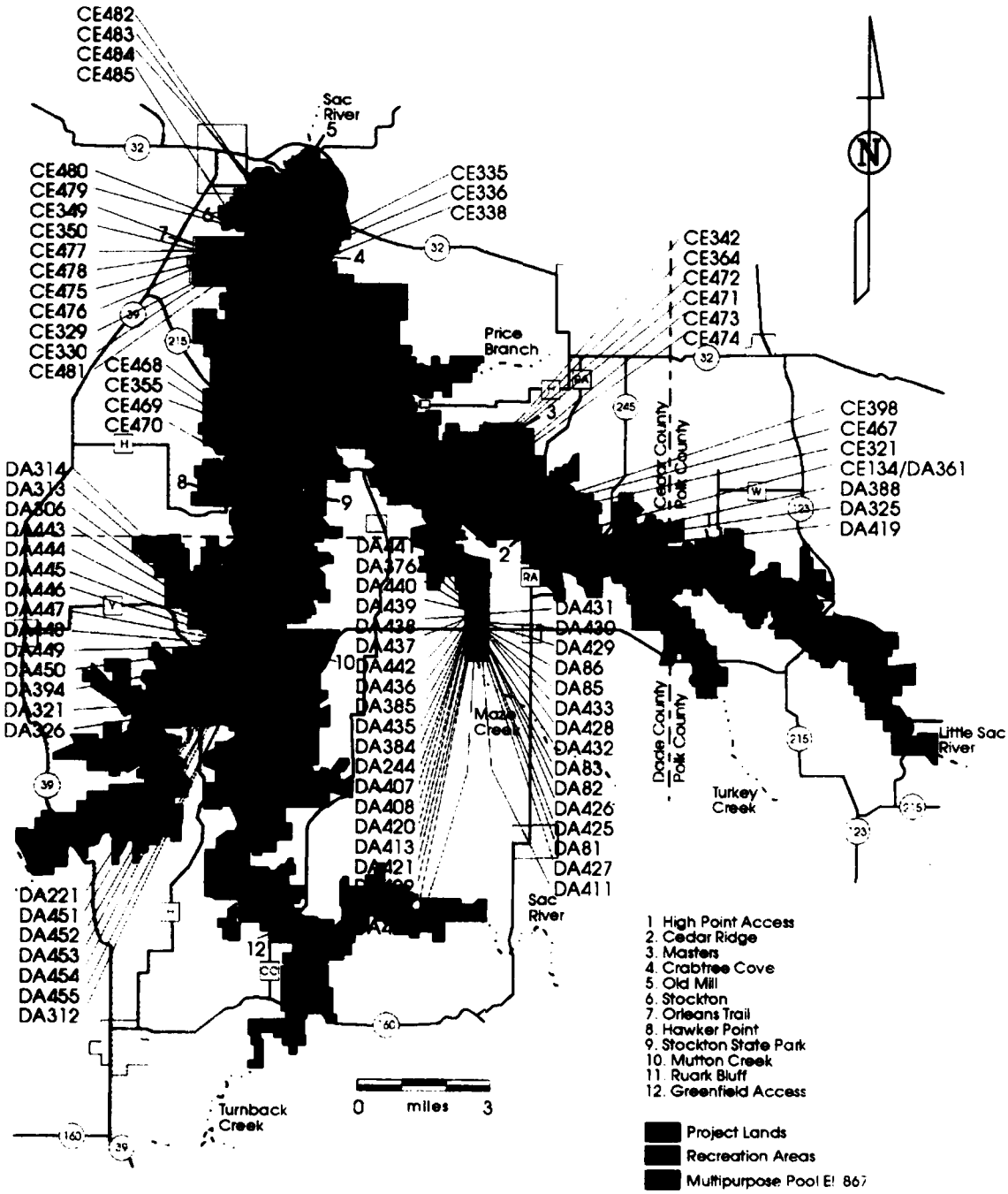


Figure 2 Location of the sites investigated

ENVIRONMENTAL SETTING

Because archeologists study the physical remains of past cultures, it is often easy for us to focus on artifacts as an end in themselves. This is particularly true when they are unusually beautiful or well preserved, and is a natural outgrowth of the fact that artifacts comprise our basic data and must be dealt with before we can proceed with other studies. The real issues before us are not the cultural remains per se but the behaviors that produced them. These behaviors comprise the means by which people adapt to the physical and cultural environments in which they find themselves (Rappaport 1969:185). While other animals adapt to their surrounding environment through genetic mechanisms, people do so through genetic adaptation and by developing technological and behavioral strategies. These strategies and their accompanying technologies are closely related enough that, through the study of the physical remains, we can gain at least a partial understanding of past behavioral systems.

One important key to interpreting the remains of past cultures is an understanding of the physical environment that existed at the time. Basic assumptions underlying this are that technologies are closely related to the environment (Binford 1962:218) and that:

> ...similar technologies applied to similar environments tend to produce similar arrangements of labor in production and distribution, and...these in turn call forth similar kinds of social groupings, which justify and coordinate their activities by means of similar systems of values and beliefs [Harris 1968:4].

The Sac River lies roughly at the boundary between the Ozark Highlands and the Osage Plains (Figure 3). The Ozarks are an elongated dome that encompass most of the southern half of Missouri. Major physiographic regions of the southwestern Ozarks include the Salem Plateau and the Springfield Plateau. The Salem Plateau is a maturely dissected upland surface composed of Cambrian and Ordovician rocks that has been substantially destroyed by streams that have cut valleys hundreds of feet deep (Vineyard 1967:13). The Springfield Plateau is underlain by Mississippian age rocks and rises slightly above the Salem Plateau. It slopes downward to the northwest and is an area of low relief where little of the old surface remains (Vineyard 1967:14). The Osage Plains are underlain by Pennsylvanian age sedimentary rocks and are characterized by low rolling relief (Vineyard 1967:14; Allgood and Persinger 1979; Anderson 1979; Haynes 1976).

Although numerous cultural resource investigations have been conducted at Stockton Lake (Girard and Freeman 1992, Mercado-Allinger and Jackson 1989, Nichols et al. 1980) and along the downstream reaches of the Sac River (Collins, et al. 1983, Moffat and Houston 1986, Perttula and Purrington 1983, Schmits 1988, Wood et al. 1977), none of these efforts have included reviews or analysis of local or regional geomorphology.

Local geology is highly complex. Formations in and around the project area include the Ordovician age, Canadian Series Jefferson City Dolomite, the Mississippian age Osagean, Kinderhookian and Meramecian series and the Pennsylvanian age Atokan series. The OsageanSeries includes the Burlington limestone and the Elsey, Reeds Spring and Pierson formations. The Kinderhookian Series includes the Northview, Compton and Bachelor

System	Series	Formation
Mississippian	Meramecian	Warsaw
		Burlington
	Osagean	Keokuk
		Elsey — (truncated)
		Reeds Spring
	Kinderhookian	Pierson
		Northview
		Compton
Ordovician	Canadian	Cotter
		Jefferson City

/ **These formations are often mapped together.**

Figure 3. Geological column for the Sockton Lake, Missouri area.

formations. The Meramecian Series includes the St. Louis limestone and the Salem and Warsaw formations.

Floodplains in the area are now submerged beneath Stockton Lake but pre-inundation topographic maps show them to be broad, level and well circumscribed by steep walls of dissected uplands that are 15 m to 50 m higher than the floodplain. Although generally level, the valley is characterized by gently rolling floodplain topography.

The Sac River originates in Greene County just west of Springfield, Missouri. It flows generally northward until reaching the Osage River. Named tributaries in the project area include, from south to north, Sons Creek, Mutton Creek, Hawker Branch, the Little Sac River, Cothwell Branch, and Edge Branch. Named tributaries of the Little Sac include Big Branch and Maze Creek.

Both upland and lowland soils are included in the project area. The upland soils are shallow, rapidly drained and usually stony. The lowland soils are less well drained silty and clayey alluvium that contain little stone. Neither Cedar nor Dade counties have been mapped according to current soil classification schemes, although mapping is in progress in Dade County and preliminary mapping was available for a few of the survey areas. The most recent published soil mapping for Cedar County (Watson and Williams 1911) is outdated and not useful for our purposes.

The Sac River lies roughly at the boundary between the Eastern deciduous forest and the western prairie. Shelford (1963:306) notes that:

> In dry regions there is commonly a gradual transition at these contacts, with mixing of grass and woody plants. In moist regions, however, an abrupt change occurs from grassland to forest, and the assemblage of plants and animals is largely different from that of either grassland or forest. These forest-edge communities are in a state of constant fluctuation back and forth with changes in climate.

Topography east of the Sac is more dissected than to the west and the dominant vegetation is Oak-hickory forest. Major plants include white oak (*Quercus alba*), black oak (*Q. velutina*), post oak (*Q. stellata*), black jack oak (*Q. marilandica*), scarlet oak (*Q. coccinea*) and mockernut hickory (*Carya tomentosa*) with a lowbush blueberry (*Vaccinium vacillans*) understory predominating on acid soils and sugar maple (*Acer saccharum*), blue ash (*Fraxinus quadrangulata*), chinquapin oak (*Quercus prinoides* var. *acuminata*), walnut (*Juglans nigra*), papaw (*Asimina triloba*), linden (*Tilia americana*), deciduous holly (*Ilex decidua*), southern buckthorn (*Bumelia lyciodes*) and other species on soils derived from limestone. Pignut (*Carya cordiformis*) and shellbark (*C. laciniosa*) hickories are intermixed with the oaks on deep soils (Sauer 1920:52-60; Shelford 1963:59; Steyermark 1963:xix-xx). Major animal species include turkey (*Meleagris gallopavo*), whitetail deer (*Odocoileus virginianus*), wolf , bobcat (*Lynx rufus*), bear (*Euarctos americanus*?), gray squirrel (*Sciurus carolinensis*), fox squirrel (*S. niger*), raccoon (*Procyon lotor*), opossum (*Didelphis marsupialis*), gray fox (*Urocyon cinereo argenteus*) and ruffed grouse (*Bonasa umbellus*). Snakes include the copperhead (*Agkistrodon contortrix*), the rough green snake (*Opheodrys aestivus*), the rat snake (*Elaphe flavirufa*), the

coachwhip (*Masticophis flagellum*), the speckled kingsnake (*Lampropeltis getulus*), the cottonmouth moccasin (*Agkistrodon piscivorus*), coral snakes (*Micrurus fulvius*) and timber rattlesnakes (*Crotalus horridus*)(Shelford 1963:59-60).

Dominant vegetation west of the Sac is tall grass prairie on the level areas with stream-skirting forest in the drainages (Shelford 1963:330; Steyermark 1963:xviii-xxiv; Watson and Williams 1911:6-7). Dominant species include June grass (*Koeleria cristata*), blue grama (*Bouteloua gracilis*), side-oats grama (*B. curtipendula*), hairy grama (*B. hirsuta*), needle-and-thread (*Stipa comata*), green needlegrass (*S. viridula*), sheep fescue (*Festuca ovina brachyphilla*), little bluestem (*Andropogon scoparius*), buffalo grass (*Buchloe dactyloides*) and the animals bison (*Bison bison*), pronghorn (*Antilocapra americana*), badger (*Taxidea taxus*), jack rabbit (*Lepus* sp.). The cottontail (*Sylvilagus* sp.), wapiti (*Cervus canadensis*) and whitetail deer are secondary influents in areas having substantial stream-skirting forests.

Climate of Cedar and Dade counties is midcontinental with a yearly range in temperature extremes of 100°+ F (37° C) in the summer to -25° F (-4° C) in the winter (Howard 1987:78; Watson and Williams 1911:9). The average annual temperature is about 56° F (13° C) with 38 to 40 inches of precipitation, including 14 to 18 inches of snow. Rainfall is abundant, particularly during the spring and summer months. January is, on average, the coldest and driest month of the year but also receives about one third of the annual snowfall. June is the wettest month with an average of nearly five inches of rain, while July is the hottest month. The last spring frost usually occurs in mid to late April but may occur as late as early May. The first Fall frost normally occurs in mid to late October.

From a practical standpoint, environmental conditions had dramatic effects on our ability to locate and record cultural properties. Ground surface visibility in campgrounds and picnic areas was generally excellent (75% - 100%) but damage to the sites from erosion and surface collecting by lake visitors was often extensive. In wooded areas and fallow fields, surface visibility was normally poor (10% or less) and required extensive shovel testing to locate and define cultural properties. The generally low density of artifacts at sites in these upland environments often made accurate definition of site boundaries difficult since negative shovel tests were the rule rather than the exception. It is possible that some of the large ridgetop sites actually encompass several smaller sites that could not be accurately defined by shovel testing.

CULTURAL ENVIRONMENT

The prehistory of Missouri has been divided into the Early Man, Paleo-Indian, Archaic, Woodland and Mississippi periods (Table 2) (Chapman 1975, 1980; Wright 1987) and generally follows long established cultural divisions for the eastern United States. The Archaic, Woodland and Mississippi periods have been divided into early, middle and late periods as well. This discussion is not intended to be exhaustive but only to provide a framework for the results of this work.

Early Man Period (pre-12,000 BC). Early Man is a speculative period that refers to stone age people having technology similar to Old World Paleolithic cultures. Percussion flaked crude bifaces, cobble tools and slightly modified flake tools were allegedly used by pre-Clovis peoples in the Americas (Chapman 1975:31-59; Wright 1987:C-1-1 - C-1-3). The well-made projectile points associated with Clovis and later cultures supposedly were not made by these peoples. The alleged Lively Complex of Alabama (Josselyn 1965) and Byran's (1965) pre-projectile point periods are examples of Early man manifestations. There is little agreement regarding the age or even existence of Early Man sites in North America (Meltzer 1989: 471:490). Those who accept that people were present in North America have estimated their arrival at anywhere between 100,000 and 12,500 years ago. Most estimates are in the 25,000 to 40,000 year range based on the timing of glaciation episodes and the exposure of a land bridge across the Bering Strait.

Table 2. Prehistoric cultural sequence for the Western Prairie Region of Missouri.
(after Chapman 1975:230, 1980:264)

Cultural Period	Date Range	Comments
Late Mississippi	AD 1450 - AD 1700	Upper Osage
Middle Mississippi	AD 1200 - AD 1450	area used only by intermittent hunting and trading expeditions
Early Mississippi	AD 900 - AD 1200	Stockton complex; Steed-Kisker phase hunting parties (Dryocopus and Flycatcher sites, Forager Tradition?)
Late Woodland	AD 400 - AD 900	Boliver aggregate; Fristoe Burial aggregate; temporary campsites and burial mounds; Pomona Phase? Lindley Phase? Maramec Spring Phase?
Middle Woodland	500 BC - AD 400	temporary campsites of Hopewellian Interaction Sphere; Cooper complex; Forager Tradition may continue
Early Woodland	1000 BC - 500 BC	Forager Tradition continues in Stockton area
Late Archaic	3000 BC - 1000 BC	possible Forager component in Harrison shelter based on Table Rock Stemmed and Afton Corner Notched points and in Cat Hollow shelter based on Smith Basal Notched and Table Rock Stemmed; Munkers Creek phase and John Redmond Reservoir manifestation Kansas
Middle Archaic	5000 BC - 3000 BC	surface collections and tools probably from the Middle Archaic in proper sequence in Brounlee and Woody shelters
Early Archaic	7500 BC - 5000 BC	substantial Early Archaic component found at the Montgomery site (23CE261).
Dalton	8500 BC - 7000 BC	possible use of shelter at 23BE108; deeply buried Dalton component found at Montgomery
Paleo-Indian	12,000 - 8000 BC	only a few Clovis Fluted and Folsom Fluted
Early Man	Pre-12,000 BC	no data

Population densities would have been very low and the archeological record concomitantly scanty. No Early Man sites have been proposed for the Osage Prairie Study Unit.

Paleo-Indian Period (12,000 - 8000 BC). Cultures of this period are generally characterized as nomadic hunting and gathering bands that subsisted primarily by exploiting Late Pleistocene megafauna (Chapman 1975:60-94; Wright 1987:C-2-1 - C-2-3). These Big Game Hunters, as they are known, undoubtedly exploited a wide range of other floral and faunal resources with a broader technology than is commonly preserved at sites of this age. We would expect them to have employed a range of bone and wooden tools along with the stone tools that are normally the only surviving evidence. The hallmark of Paleo-Indian culture is the fluted projectile point, many of which have been recovered but few in good context. Fluted points have been found in the Osage Prairie Study Unit but no Paleo-Indian sites have been recorded. Although the Paleo-Indian Period is the first well-documented human occupation of North America, we know little of these peoples beyond their lithic technology.

Dalton Period (8500 - 7500 BC). The Dalton Period (Chapman 1975: 95-126; Wright 1987:C-3-1 - C-3-4) is the first wide-spread cultural manifestation and sites yielding Dalton Period artifacts are far more common than the preceding Paleo-Indian. It is generally regarded as transitional between the Paleo-Indian and Archaic periods, although some consider it to be terminal Paleo-Indian. Chapman notes that the Dalton Period marks the transition from free-wandering big game hunting to hunting and foraging, probably as a result of changing climatic conditions that brought about the extinction of the Pleistocene megafauna and an end to the lifeway that depended upon them. The hallmark of the Dalton Period is the Dalton projectile point or knife. Other tools appeared along with artifacts useful in hunting. Tools for working wood - adzes, spokeshaves and steep-edged scraping and cutting tools - suggest the manufacture of wooden implements possibly useful in procuring small game or other non-game resources. Faunal remains recovered from the Dalton levels at Graham Cave (23MT2) indicate a dependence on cottontail rabbit, raccoon, squirrel and whitetail deer (Logan 1952:63). The addition of milling and pulverizing tools indicates that vegetal resources such as nuts and seeds were becoming more important. In addition, bone awls and needles have been recovered from dry caves, giving some insight into the non-lithic technology employed by these peoples. Dalton activities at a depth of 3.3 m below surface have been documented at the Montgomery site (23CE261) located on the Sac River a short distance from Stockton Dam. It was recorded by Roper (1977) in 1976, later tested by Collins et al. (1983) and is now listed in the National Register of Historic Places.

Early Archaic Period (7500 - 5000 BC). The Early Archaic Period (Chapman 1975:127-157; Wright 1987:C-4-1 - C-4-5) marked an increased shift toward foraging and the exploitation of aquatic resources with weirs, traps, nets and spears. The chipped stone tool technology no longer included fluting and new forms emerged. These included lanceolate points with concave bases and heavily ground edges (Dalton Serrated and Rice Lobed) and large points with straight or contracting stems (Eden, Scottsbluff, Hidden Valley). Other chipped tools included snubbed-end flake scrapers, round scrapers and scrapers made of broken projectile points. Projectile points were also reworked into drills. Milling and pulverizing tools, useful for processing plant resources continued to be used. Chapman (1975:130) notes that Early Archaic sites are virtually unknown in the area and none are associated with extinct megafauna. The Montgomery site

(23CE261; Collins et al. 1983) yielded numerous Early Archaic point types including Graham Cave, Cache River, Scottsbluff, Holland, Plainview, Agate Basin, Angostura, Hardin, Hardaway Side-Notched, Rice Lobed, Big Sandy, Golondrina, Wheeler, and a variety of other points that exhibited similar forms but could not be classified with confidence. Other materials included flake tools, cores, hammerstones, drilled stones, drills and miscellaneous lithic debris. A radiocarbon date of 7850 BC was obtained from a small tree trunk or branch embedded in the cutbank, but not in direct association with any cultural remains.

Middle Archaic Period (5000 - 3000 BC). During the Middle Archaic Period (Chapman 1975:158-183; Wright 1987:C-5-1 - C-5-4), the climate of North America was markedly drier. Human adaptation to these conditions, which fostered the expansion of prairie environments, included increased reliance on a wide variety of small game animals and collecting vegetal foods but apparently did not result in fundamental shifts in settlement and subsistence activities. Side-notched projectile points (Black Sand, Big Sandy, White River Archaic) became common and new tools were introduced, including the full-grooved ground stone axe, the celt (an ungrooved ground stone axe), a variety of twined fabrics and cordage, bone and shell ornaments and bone and antler tools. Other common artifacts include corner-notched and contracting-stemmed points, scrapers, pitted cobbles and choppers. Chapman characterizes the period as one of diversity rather than specialization.

Late Archaic Period (3000 - 1000 BC). Climate during the Late Archaic Period (Chapman 1975:184-224; Wright 1987:C-6-1 - C-6-6) continued to be dry through about 2000 BC. Primary reliance continued to be placed on plant gathering over hunting. It was also during this time when some of the earliest cultivation of tropical plants occurred at Phillips Spring (Chomko and Crawford 1978; Kay et al. 1980). New tools included the Clear Fork Gouge and the Sedalia Digger. The first may have been used for pulverizing roots or the cambium layers of trees, while the second characteristically exhibits gloss from digging. Grinding and pulverizing implements, such as manos, pestles and hammerstones, were common, as were large flaked knives, such as Etley Stemmed, Sedalia Lanceolate and Stone Square-Stemmed. Typical point types include Nebo Hill, Smith Basal Notched, Table Rock Stemmed, Godar, Afton and contracting-stemmed types. Items associated with hunting such as flake scrapers, flake knives and dart points are less common than in previous periods.

Early Woodland Period (1000 - 500 BC). The appearance of Woodland cultures is usually marked by mound construction and the addition of pottery to the technology, however, that does not seem to have been the case in this part of Missouri (Chapman 1980:9-20; Wright 1987:C-7-1 - C-7-3). Whether this is due to the abandonment of the area during this period, tardiness in the adoption of new lifeways and technologies, or use of the area in ways that did not require pottery (such as at specialized activity sites) is not well understood. The problem that this creates, of course, is that, if defining Early Woodland sites depends on the presence of pottery in a place where the inhabitants did not use pottery, recognizing sites dating to this period becomes extremely difficult. Projectile point types are marginally useful since none are exclusively affiliated with the Early Woodland. The problem can be readily seen in the Schmits (1988:32-36) inventory of Sac River sites and the Nichols (Nichols et al. 1980:3-2 - 3-9, A-2 - A-3) inventory of Stockton Lake sites where 45 Woodland components are listed for Cedar County, none of

which is Early Woodland. The consensus appears to be that peoples living in the area during this period still followed an Archaic lifeway.

Middle Woodland Period (500 BC - AD 400). The Middle Woodland Period (Chapman 1980:21-77; Wright 1987:C-8-1 - C-8-7) has been defined on the basis of traits associated with the Hopewell. These include permanent village settlements, the introduction of pottery, mound construction, the beginning of maize cultivation, trade in exotic items from distant places. Projectile points are ovate corner-notched (Mankers and Snyders) and subtriangular corner-notched (Ansell and Steuben). Ceramics are sand or grit-tempered with decorative techniques that include punch and boss, roulette, dentate stamp and cross-hatching.

Other diagnostic artifacts include clay figurines, stone platform pipes, celts, stone hoes, adzes, oval and circular scrapers and flake blades. Exotic items include copper, silver, obsidian, marine shell, shark's teeth, sheet mica, meteoric iron and bear teeth. In Missouri, there are 3 clusters of Hopewell activity: The Kansas City Center, the Big Bend Center in central Missouri, the Cooper Center in southwest Missouri. Other Middle Woodland phases include the Central Valley and Monroe phases in northeast Missouri, and the Burkett, Barnes Ridge and Ten Mile Pond phases in southeast Missouri. No Middle Woodland phases have been defined for the Sac River Valley. Sites in the project vicinity that have yielded Middle Woodland materials include an unidentified cave in St. Clair County, Rockhouse Cave, Taterhole Cave, Griffin Shelter, 23CE411 and 23CE417.

Late Woodland Period (AD 400 - AD 900). The Late Woodland Period (Chapman 1980:78-137; Wright 1988:C-9-1 - C-9-10) witnessed the decline of Hopewell culture and the provincialization of Woodland society. The far flung trade networks no longer functioned and ceremonialism declined. Settlements were more dispersed and areas not previously inhabited were now occupied on at least a semi-permanent basis. Subsistence systems had less emphasis on gardening and specialized resource procurement in favor of more generalized foraging. The artifact inventory was largely the same as the Middle Woodland except for the inclusion of arrow points and plain and cord marked ceramics with simple decorations such as scalloping, notching, punctating or impressing applied to the lip. Tempering agents included principally clay, grit and limestone. Sites in the project area assigned to the Late Woodland Period include Dryocopus (23CE120), Flycatcher (23CE153), Shady Grove, 23CE123, 23CE241, 23CE406 and 23CE412.

Work conducted in the Stockton Reservoir during the 1960s resulted in the establishment of the Bolivar Burial Complex (Wood and Brock 1984). Excavations were conducted at nine mounds including Umber Point (23CE148), Sorter's Bluff (23CE150), Bowling Stone (23CE152), Sycamore Bridge (23CE154), Tunnel Bluff (23DA222), Bunker Hill (23DA225), Divine (23DA226), Paradise Tree (23DA246) and Slick Rock (23PO306). These mounds ranged in size from 5 m to 7 m in diameter, 15 cm to 91 cm in height and contained the remains of 3 to 18 individuals. Two contained dog burials as well. Artifacts included limestone, grog and shell-tempered ceramics; Scallorn, Young, Fresno, Harrel and Reed arrow points; Rice Side-Notched and Cupp dart points; drills, scrapers, various flake tools, celts, milling implements, bone and antler tools; *Anculosa, Marginella, Oliva* and periwinkle beads; mussel shell disk beads; conch

shell disk beads, pendants, rings and gorgets. Vegetal remains included maize, squash, sunflower, Marshelder, Chenopodium, hickory nuts, hazelnuts, acorns, walnuts, mulberry and dogwood.

Radiocarbon dates were AD 390 ± 140 (Bowling Stone), AD 1000 ±120 (Umber Point), AD 1090 ± 100 (Sorter's Bluff), AD 1110 ± 75 (Divine) and AD 1465 ± 90 (Divine). Thermoluminescence dates were AD 953 ± 49 (Bunker Hill), AD 1085 ± 49 (Bunker Hill), AD 1307 ± 30 (Slick) and AD 1580 ± 30 (Slick).

Wood and Brock (1984) placed the complex in the Late Woodland Period because the majority of the ceramics were limestone tempered. Chapman (1980:150-152) places the complex in the Early Mississippi Period on the basis of the radiocarbon dates. Open campsites dating to the period have been investigated at Dryocopus Village (23CE120), Flycatcher (23CE153) (Calabrese et al. 1968, 1969; Pangborn et al. 1971) and Shady Grove (Ward 1968). These sites contained circular and oval post-in-ground structures and yielded lithic assemblages that Chapman (1980:86) feels place them in the Late Woodland or Early Mississippi periods (ca AD 1000). No ceramics were recovered. Radiocarbon dates of AD 1485 ± 100 at Dryocopus Village and AD 715 ± 95 and AD 1390 ± 100 at Flycatcher, however argue for a Middle Mississippi Period affiliation. It is possible that sites like Flycatcher and Dryocopus, which are roughly contemporaneous with the various burial mounds in the area, may have been occupied by peoples returning to their ancestral homeland to bury the dead.

Early Mississippi Period (AD 900 - AD 1200). The Early Mississippi Period (Chapman 1980:138-227; Wright 1988:C-10-1 - C-10-8) marked the advent of organized village life. Classic Mississippi Period cultures in the major river valleys were characterized by fortified planned civic ceremonial centers having mounds arranged around a plaza. These centers were surrounded by outlying villages, farmsteads and specialized activity loci where specific resources were exploited. Subsistence centered around the cultivation of tropical plants such as corn, beans and squash with organized exploitation of a wide variety of natural resources. Diagnostic artifacts include shell-tempered ceramics and a variety of arrow points, particularly triangular forms. The Early Mississippi Period occupation in the project area does not fit the classic mold, however. The Stockton Burial complex, which is has been identified at a number of sites in the area, including Madrigal Mound, Petit Cote Cairn, King's Curtain Mound, Amity Mound, Albert Mound, Matthews Mound, Cordwood Cairn, Eureka Mound and shelters at 23DA241, 23DA300, 23DA301, 23DA302, 23DA303, the Vance site, Tater Hole Cave, Toler Cave, Buck's Cave, Gray Shelter, Harrison Shelter, Elmer Long Shelter and Gannaway Cave (Wood 1965:130; Chapman 1980:150). The mounds and cairns of the complex are located on hilltops overlooking the major stream valleys. The mounds are 6 m - 8 m in diameter, less than 1 m high and constructed with earth and rock fill. A variety of burial types were present, including cremations, extended, flexed, bundle burials and scattered bones, both burned and unburned. Associated artifacts included plain and cord marked shell-tempered ceramics, Huffaker Notched and Cahokia Notched arrow points, chert knives, conch shell beads, effigy elbow pipes, bone fishhooks, pulley type ear spools, and strip and antler bracelets. Other artifacts, also associated with other complexes, included Mississippi Triangular, Scallorn Corner Notched, Reed Side Notched and Crisp Ovate arrow points; *Anculosa* and *Marginella* shell beads, conch shell disk beads; bone awls; Rice Side Notched; Cupp Corner Notched; and large triangular or oval cutting implements.

Chapman feels that the primary contributors to the complex were peoples of the Gibson Aspect and the Steed-Kisker phase, based on of pottery types found in the caves and shelters.

Middle Mississippi Period (AD 1200 - AD 1450). The Middle Mississippi Period (Chapman 1980:228-261; Wright 1988:C-10-1 - C-10-8) was largely an elaboration of trends begun in the Early Mississippi Period and represents the florescence of Mississippi culture. Population expanded, as did the territory under the control of the various civic-ceremonial centers. In the project vicinity, no sites ascribable to the Middle Mississippi Period are known. This is due to an artifact assemblage that is largely identical the Early Mississippi Period and that the area appears to have been used primarily for hunting forays.

Late Mississippi and Protohistoric Period (AD 1450 - AD 1700). Chapman does not discuss the Late Mississippi Period, noting that it includes protohistoric and historic groups that were to be discussed in a future publication (Chapman 1980:138). We know from the accounts of the De Soto expedition of 1541 that Late Mississippi cultures in the Mississippi Valley were highly organized agrarian-based societies capable of fielding formidable fighting forces. When French explorers arrived, 130 years later, the area had apparently been largely depopulated and the large towns abandoned, possibly the result of introduced epidemic diseases to which the native peoples had no immunity (Morse and Morse 1983:305-315).

Historic Period (AD 1541 - present). Immigrants from Kentucky, Tennessee, Virginia, Illinois, Indiana and Ohio were among the first to settle the Missouri Highlands during the 1820s - 1840s (Goodspeed 1889; Rafferty 1982). By the late 19th century these frontier settlers began a transformation from subsistence farming to more diversified crop and fruit production (Abbott and Hoff 1971). The economy of the area continued to improve from the turn of the century through World War II. Buildings and roads were built throughout the area to support the boom in the farming, mining, oil and tourist industries (Abbott and Hoff 1971:96). Dairy farming was soon transformed to feeder cattle production and forests of the region were cut for timber and cleared for pastures (Girard and Freeman 1984:33).

PREVIOUS INVESTIGATIONS IN THE PROJECT VICINITY

The earliest known professional investigations in the immediate vicinity occurred in the early 1960s before the construction of Stockton Dam. An initial survey was conducted by the University of Missouri (UMAAD) under contract to the National Park Service and resulted in the recording of 40 sites (Chapman et al. 1962, 1963). Excavations were conducted at three mound sites and three shelters. Subsequent excavations continued until 1967 (Calabrese et al. 1969; Wood 1965, 1966) that clarified the local cultural sequence and defined the Bolivar Burial Complex (Wood and Brock 1984). Work at three floodplain sites - Dryocopus Village, Flycatcher (Calabrese et al. 1968, 1969; Pangborn et al. 1971) and Shady Grove (Ward 1968) - in the area produced information on the nature of non-mound sites spanning the transition from Woodland to Mississippian culture.

After a hiatus in archeological work of about ten years, the Kansas City District awarded a contract to the University of Missouri for the survey of COE-controlled lands along the Sac River downstream from the Stockton Dam (Roper 1977). This survey encompassed 9 km^2, equal to about 45% of the Sac River Valley, between the Stockton Dam and Caplinger Mills. Forty of the 44 sites visited were newly recorded. Cultural components identified included Dalton (1), Middle Archaic (6), Late Archaic (8), Early (?) Woodland (7) and Middle/Late Woodland (9). It is worth pointing out that since none of the sites yielded pottery, some of the Woodland sites that yielded arrow points could be either Woodland or Mississippi in affiliation. Roper (1977:97-99) concluded that the Sac River Valley has been more or less continuously occupied since Dalton times but has been used differently by different cultures. Middle Archaic peoples established base settlements on the floodplain with small specialized activity sites located next to the river. Late Archaic peoples established two kinds of limited activity sites including those near the river and those at the base of the valley wall. Woodland peoples early on established both base camps and limited activity sites but later did not establish permanent occupations. Limited test excavations were also conducted at Montgomery (23CE261) which exhibited a deeply buried Dalton occupation.

Test excavations at 23CE235, 23CE252 and 23CE324, located downstream of Stockton Lake, were conducted by the Center for Archaeological Research (CAR), Southwest Missouri State University in 1981 (Perttula and Purrington 1983). CAR had planned to conduct excavations at 23CE240, 23CE241 and 23CE242 as well but landowner permission could not be secured for work at these sites. 23CE252 proved to be a single component Woodland Period site that exhibited good integrity but was limited to the upper 15 cm - 20 cm. 23CE235 was found to be a Woodland Period limited activity site that was restricted to the plowzone and exhibited substantial evidence of damage from erosion. 23CE324 was found to be a probable hunting camp occupied during the Woodland Period that exhibited shallow deposits.

Work at Montgomery (23CE261) was undertaken by the University of Missouri, American Archaeology Division in 1976 (Collins et al. 1983). Previous limited testing had indicated that deeply buried in situ deposits were present at the site but, since no culturally diagnostic artifacts were recovered, possible cultural components present could only be guessed at, based on the site's vertical location. Abundant evidence of Dalton and Early Archaic activities at the site was recovered, as well as a single Middle Archaic Big Sandy point that was recovered from the river but thought to be from the site. The major occupation occurred at a depth of 2.4 m and exhibited discrete horizontal clustering that indicated that activity areas have been preserved at the site.

In late 1984 and early 1985, American Resources Group (ARG) conducted a survey of COE slough easements downstream from the Stockton Dam (Moffat and Houston 1986). Approximately 400 acres were surveyed and 27 sites and 4 isolated artifacts were located. Test excavations were conducted at 12 of these sites as well as 3 previously recorded sites added by the Kansas City District. Sites tested included 23CE14, 23CE255, 23CE256, 23CE401, 23CE403, 23CE405, 23CE406, 23CE408, 23CE410, 23CE412, 23CE417, 23CE418, 23CE419, 23CE420 and 23CE421. Cultural components identified included Early or Middle Archaic (1), Late Archaic (8), Middle Woodland (2), Late Woodland (5), indeterminate Woodland (14),

indeterminate Mississippi (1), indeterminate prehistoric (5) and a historic mill (1). Nine sites were found to be eligible for inclusion in the National Register including 23CE14, 23CE255, 23CE401, 23CE406, 23CE408, 23CE410, 23CE417, 23CE419 and 23CE420.

In 1986 the Kansas City District issued a contract to Environmental Systems Analysis (ESA) for the survey of an additional 148 acres of slough easements and assessment of 18 prehistoric sites, 14 of which were previously recorded (23CE52, 23CE226, 23CE227, 23CE229, 23CE230, 23CE238, 23CE239, 23CE242, 23CE245, 23CE253, 23CE258, 23CE262, 23CE263 and 23CE409) and 4 newly recorded sites (23CE423, 23CE425, 23CE426 and 23CE427). Cultural components identified included Dalton (1), Middle Archaic (6), Late Archaic (9), Late Woodland (11), indeterminate Woodland (2), indeterminate prehistoric (2) and historic (1). A historic bridge (23CE424) was not assessed. Six sites (23CE226, 23CE229, 23CE238, 23CE409, 23CE426 and 23CE427) were determined to be eligible for inclusion in the National Register and an additional 6 (23CE52, 23CE227, 23CE230, 23CE253, 23CE258 and 23CE425) were found to be potentially eligible.

In 1987 the ESA contract was modified to provide for the survey of 22 additional Corps easements beginning at Caplinger Mills and continuing downstream nearly to the confluence of the Sac and Osage rivers. This work was conducted in 1988. Previously recorded sites that were revisited included 23CE46C and 23SR291. Newly recorded sites included 23CE437, 23CE438, 23CE439, 23CE440, 23CE441, 23CE442, 23CE443, 23CE446, 23SR1059, 23SR1060, 23SR1067 and an unidentified newly recorded site found in Tract 2603E. One previously recorded site (23SR1049) was thought to be located in Tract 2604E and could not be relocated. Little is known of these sites since no report was required.

Most recently, in 1990 and 1991 Historic Preservation Associates (Klinger et al. 1992) conducted test excavations at 23CE46C, 23CE439, 23CE440, 23CE444, 23CE446, 23SR291 and 23SR1067 in Cedar and St. Clair counties. These sites were all located along the Sac River downstream from the Stockton Dam and were subject to bank slumping. 23CE46C yielded evidence of Late Archaic, Late Woodland and Early Mississippi occupations focusing on seasonal exploitation of river resources. 23CE439 yielded evidence of Middle and Late Woodland occupations probably as a seasonal hunting and fishing camp. 23CE442 was occupied during the Middle or Late Woodland period and may represent a single component site. It also produced the only ceramics found during the project. 23CE444 yielded evidence of a Late Woodland occupation. A single Dalton point, recovered from the River, suggested an early occupation as well but no evidence of a Dalton component was recovered. 23CE446 yielded scant evidence of an Early Archaic and possibly Dalton occupations in the form of a Dalton Serrated point (again, recovered from the Sac River) and a Beaver Lake-like point but failed to produce sufficient evidence to assign definite cultural affiliations. 23SR291 produced evidence of badly mixed and probably redeposited prehistoric and historic materials possibly associated with Rockhouse Cave (23SR21), which is located immediately to the north. 23SR1067 yielded evidence of Late Archaic and Early Woodland occupations. It also produced evidence of a well-defined buried component. Three of the sites (23CE46C, 23CE442 and 23SR1067) were determined to contain sufficient data potential to make them eligible for inclusion in the National Register of Historic Places.

RESEARCH CONSIDERATIONS

Survey Methods.

- A literature and records review was conducted to determine if known cultural properties existed in any of the areas to be surveyed.
- Areas of less than 10% slope were walked along transect at 10 m - 30 m intervals.
- Shovel tests were excavated at 10 m - 30 m intervals when the slope was less than 10% and ground surface visibility was less than 50%.
- Areas with slopes greater than 10% were walked along transects at 30 m - 50 m intervals.
- Shovel tests were excavated at 30 m - 50 m intervals when the slope was 10% - 30 % and ground surface visibility was less than 50%.
- Shovel tests were not excavated where slopes exceeded 30% or where ground surface visibility was greater than 50%.
- All exposed areas were inspected for the presence of cultural materials.
- The horizontal extent of each cultural property was defined by shovel tests and/or the surface dispersion of artifacts and features. At least one shovel test was excavated deeply enough to determine the presence of sub-plow depth deposits[1].
- Missouri Archaeological Survey site survey forms were completed for each cultural property discovered.
- A field journal was kept by the field supervisor, detailing daily activities.

Testing Methods.

- The investigations were restricted to COE property and were sufficient to document the National Register eligibility of each site as defined in 36 CFR Part 60 and 36 CFR Part 63.
- A Missouri Archaeological Survey site update form was prepared for each site.
- The horizontal limits of each site were defined by the surface dispersion of artifacts and shovel or posthole tests, as necessary.

[1]Exceptions to this general procedure were made for such sites as shelters, where intact deposits could be damaged by shovel testing, or where other means of assessing subsurface deposition existed, such as erosional gullies or stream cut banks.

- A map of each site, showing the locations of the subsurface investigations, was prepared.

- Horizontal and vertical control was maintained with a transit.

- A permanent datum was established at each property and identified on a scaled plan map. Mapping and all measurements were accomplished with metric tapes and transit. Controlled surface collections of prehistoric artifacts were made where possible.

- Test units were excavated to 1 m or culturally sterile soil or rock surfaces and all units were backfilled. Subsurface units were excavated in natural levels or as required in 10 cm levels. Cultural matrix was screened through ¼ inch mesh hardware cloth. At least one fine screen and one soil/pollen sample was collected from every level. Feature fill was bagged and later finescreened. Features were excavated and documented in halves when possible.

- Work was documented with black-and-white photos and (where necessary) color slides. Notes were maintained on each test unit (including shovel, posthole, auger and backhoe tests) and at a minimum documented Munsell color, matrix texture, artifact content, the presence of features or in situ deposits and other relevant information. At least one wall of each test unit was drawn in profile with others documented as needed.

- Isolated human skeletal elements were recovered from existing pothunter backdirt but no burials were encountered. Had testing resulted in the discovery of human burials, these would have been covered and left in situ until an acceptable data recovery program had been developed according to Missouri Public Law 194.400 et. seq.

- Subsurface investigations were terminated once sufficient data for a determination of significance or nonsignificance had been recovered. The impact of our investigations on the properties never exceeded that absolutely necessary to obtain this information.

- Excavation units included 1 m x 1 m test units and 30 cm diameter shovel tests.

- Rodent burrows, cultivated areas, tree tipups and eroded areas were inspected for the presence of artifacts, middens and other evidence of past cultural activities.

All controlled excavation units were excavated to either the underlying bedrock or until rockfall prohibited excavating more deeply.

Laboratory Considerations. As anticipated, most of the prehistoric artifacts were lithic specimens. Bifacial tools and other diagnostic artifacts were individually described and assigned, if possible, to established types depicted by Bell (1958; 1960), Bell and Hall (1953), Dickson (1968), Marshall (1958), Skully (1951), Suhm and Krieger (1954), Wheeler (1954) and Perino (1968; 1971). Probable cultural affiliation was determined by comparing the diagnostic Wimmer

artifacts to specimens recovered from deeply stratified regional sites with clear stratigraphy. All the remaining lithic artifacts were analyzed in light of a lithic reduction sequence including flakes of primary and secondary decortication, retouch and thinning flakes and various waste categories (see Sullivan and Rozen 1985; Amick and Mauldin 1989; Rozen and Sullivan 1989a, 1989b; Ensor and Roemer 1989).

An attempt was made to identify raw material types represented in the collections including possible exotics. Assessments of post-procurement heat treating were also made by comparing the color and texture with experimentally heat treated specimens. Heat treatment made many chert types easier to knap (Gregg and Grybush 1976:189).

Microscopic study was done with an AO stereo microscope with a range of amplification from 7X to 40X. The instrument was on a universal mount with light provided by a Reichert variable microscopic light placed at a 40° angle about 3 in (7.6 cm) from each tool being studied. Freshly made stone tools were used to perform a series of activities such as skinning an animal, cutting flesh (with and without bone contact), scraping both fresh skins and dry hide, and cutting, perforating and graving bone and wood. Other tools were used to cut soft stone, grass, and fired pottery. These experimental tools were labeled and used to compare with the artifacts collected by Wimmer. Experimental studies of Ahler (1971:81-87) and his photomicrographs of tool wear (Ahler 1971:plates 13-20) were considered along with *Experimentation in the Formation of Edge Damage: A New Approach to Lithic Analysis* (Tringham et al. 1974:174-196). The Odell and Odell-Vereedken paper *Verifying the Reliability of Lithic Use Wear Assessments by Blind Tests: The Low Power Approach* (Odell and Odell-Vereedken 1980:87-120) was also consulted.

Activity	Material being worked	
butchering	flesh	animals
cutting	wood	woody plants, grass
scraping	dry hide	pottery
sawing	bone or antler	shell
perforating	dry or fresh skin	
graving	soft stone	bone, wood

To assess the accuracy of this type of analysis, the analyst arranged to take an evaluation in which a series of labeled tools (labels were covered) were given him one at a time and, without using a comparative collection, evaluations were made regarding the hardness of the material that was worked, the type of activity (such as cutting, scraping or sawing), and, if possible, the type of substance that was worked. Over 90% of the evaluations regarding hardness (soft, medium, hard) and type of activity (cutting, scraping, sawing) were correct, while 66% of the evaluations of substance being worked were right. The average accuracy of 83.6% could have been improved by using comparative materials. Based on these experiments and studies, it was possible to assess the tools recovered for indications of the hardness of the materials that were worked, the type of activities (such as cutting, scraping or sawing), and, in many instances, the types of substances on which the tools were used.

Bifacial and unifacial tools were appraised at 20X for evidence of distinctive micro breakage, use rounding or polish. A study by Flenniken (1979:208-213) indicated that trampling often produced edge damage similar to that found on tools used by prehistoric people and that polish was absent on trampled specimens. Another study by Dickson (1991:38) also indicated

that polish is not found on trampled specimens. Therefore the presence of polish was an important criteria in deciding if a flaked tool had been used. Specimens that apparently featured use alteration were then carefully studied at 30X to 40X to evaluate the nature of the micro breakage, use rounding and use polish. Probable function was determined for each specimen based on a comparison with the experimental specimens.

Ceramics were sorted according to their morphological characteristics and identified according to established types for the Western Prairie Region (Chapman 1980). Tempering agents were identified as were surface treatments and other attributes. Lithic artifacts were sorted according to a model of lithic reduction that includes flakes of primary and secondary decortication, retouch and thinning flakes and various categories of waste flakes. Bifacial tools and many flakes were inspected under magnification for the presence of use wear. Identifiable points were classified according to established types. Raw materials were identified for all lithics to assist in the assessment of lithic resource use, site type (e.g., base settlements/specialized activity areas) as well as in the identification of possible activities that may have taken place at each property.

Focus of the Assessment Effort. Even after all the work that has been conducted at the Stockton, Truman and Pomme de Terre reservoirs, principal investigators generally agree that the culture history and chronology of the region remain poorly understood. Western Prairie culture history is not well known although the preceramic Afton Complex and the ceramic period Blackwell Complex, Fristoe Burial Complex, Lindley Focus, Nemo Complex and Vista Focus have been identified in the area.

Roper (Wood et al. 1977) identified Dalton activities at 23CE261 in her Downstream Stockton study. She also found Middle Archaic occupations at 23CE227, 23CE235, 23CE237, 23CE242 and 23CE253; Archaic activities at 23CE227, 23CE234, 23CE242, 23CE243, 23CE248, 23CE250, 23CE253 and 23CE258; and Woodland Period components at 23CE224, 23CE226, 23CE227, 23CE229, 23CE236, 23CE241, 23CE242, 23CE243, 23CE244, 23CE245, 23CE249, 23CE251, 23CE253, 23CE255 and 23CE258.

Perttula and Purrington (1983) also documented Woodland Period activities at 23CE324, 23CE235, 23CE240, 23CE241 and 23CE252 in their Below Stockton Dam study for the District. While evidence of Paleo-Indian activities in the reservoir area has not yet been found it remains possible that truly early artifacts are present in the lowest levels of the 23CE439. Work at Stockton sites has been documented by various investigators including Calabrese et al. (1968 and 1969), Chapman (1965), Chapman et al. (1962 and 1963), Collins et al. (1983), Heldman (1960), Holland (1985), Kaplan et al. (1967), McMillan (1965 and 1968), Moffat and Houston (1986), Nichols et al. (1980), Pangborn (1965, 1966), Pangborn et al. (1971), Schmits (1988), Ward (1968), Wood (1965 and 1966) and Wood and Pangborn (1968a, 1968b and 1968c) (also see Anonymous n.d., 1963; Wood and McMillan 1976; Falk 1969; Lippincott 1972; McMillan 1966).

Assemblages from each of the sites were studied from the perspective of how they can help refine culture history and chronology. Datable contexts were of particular importance in furthering our understanding of the chronology of past use of the area. It should be remembered that much of what we know about chronology in the area comes from Rodgers Shelter to the north. Of

particular interest in this regard was the position of the cultural deposits at many of the properties relative to the current surface. Although past use of the region is well documented we really do not know the particulars of how people exploited and adapted to their natural environment. We generally know where people have used the landscape in the past because this is largely a function of the availability of suitable habitats.

UMAAD and CAR investigators have worked toward developing settlement models that account for past use of the landscape at Stockton. Both Roper (Wood et al. 1977) and Perttula and Purrington (1983) used catchment analysis to help identify factors that may have been important in prehistoric settlement behavior. Catchment size in both studies included the area in a one mile radius of each property. No data were available from the single Dalton component identified by Roper at 23CE261. Roper interpreted Archaic settlements to revolve around at least semi-permanent base camps located in the bottoms with evidence of Late Archaic activities found both along the bluff base as well as on the broad floodplains. Roper's Woodland Period components reflect small hamlets on the lower terraces a relatively short distance from the forested valley walls (Wood et al. 1977:94). At least some of the Downstream Stockton sites appear similar to the Woodland villages at Flycatcher and Dryocopus excavated along the Sac River by Calabrese et al. (1968 and 1969) and Kaplan et al. (1967).

Investigations by Perttula and Purrington (1983:118) focused on Woodland components in the area below the Stockton Dam. CAR followed Roper's lead and used catchment analysis to help interpret characteristics of Woodland settlement behavior. The CAR study identified various elements in the Woodland Period settlement system including permanent settlements like that at Flycatcher (Calabrese et al. 1968; Pangborn et al. 1971) with the possible association of horticulture, temporary camps in rockshelters, Bolivar and Stockton Complex cairns and upland and floodplain hunting and gathering camps or specialized activity sites.

We view site function in terms of how it relates to subsistence. With few exceptions, all activities carried out at either permanent or temporary sites are related to basic subsistence behavior. Site function must therefore first be assessed in connection with subsistence practices. Methods of procuring basic foodstuffs can be understood through a model involving gathering, fishing, hunting and agriculture (cf. Plog 1974).

Gathering-Fishing-Hunting (GFH) -- Although this combination of strategies may be used in any proportion to each other (to the exclusion of agriculture), the basic model assumes that gathering and fishing are more important than hunting in terms of an energy expended/captured ratio (cf. Lee 1966). This is not to say that gathering and fishing are the most efficient at any given time in an annual cycle. The reverse may well be true in some environments but not in others. The point here is that over a period of time, the GFH strategy of capturing energy is dominated by gathering activities that are supplemented by fishing and hunting. This subsistence system has been suggested to be the basic one employed by the inhabitants of the Western Prairie for most of their 10,000 year history.

Agriculture-Gathering-Fishing-Hunting (AGFH) -- A system using mainly agriculture to subsist will also routinely exploit floral, aquatic and faunal resources in varying proportions. In times when crop returns are unexpectedly low, natural foodstuffs can serve as buffer resources.

Site function and settlement patterns are closely related. Our model is founded on the assumption that people carry out particular activity sets at particular locations because it is most efficient to do so. From this, our model calls for 6 site types (read settlement patterns/site functions):

- *GFH* winter-spring base settlements
- *GFH* winter-spring specialized activity sites
- *GFH* summer-fall family base settlements
- *GFH* summer-fall specialized activity sites
- *AGFH* year-round base settlements
- *AGFH* specialized activity sites

While numerous research areas might be addressed during the investigations, we recognized that perhaps the most practical one for providing useful data relates to chert procurement. Our model of lithic procurement (in its simplest form) includes choosing a source of raw material and traveling to it, acquiring the desired material and transporting it to the point of intended use. Analysis of raw material use and availability was important in this regard.

RESULTS OF THE HISTORIC PROPERTIES SURVEY

Sufficient work was accomplished in each survey area to identify potentially significant sites and at each of the sites tested to determine if cultural deposits exist that might make the site eligible for inclusion in the National Register of Historic Places.

To provide a foundation from which to read the following site-specific discussions, we developed a series of tables that form the background and summary data for the survey and assessment efforts. Summary physical characteristics include natural setting, elevation, slope, parent material, vegetation and surface visibility and current land use (Table 3). Background characteristics include COE Real Estate Tract numbers and the dates during which the HPA fieldwork took place (Table 4). Surface material was present at nearly all of the sites visited during the survey and at the three shelters (Table 5). We shovel tested 69 sites with numbers ranging from one (23DA447, 23DA451 and 23DA452) to 300 (23CE469 and 23DA388).

In all, 90 cultural properties and 24 isolated prehistoric artifacts were investigated during the survey. These include 64 prehistoric, 20 Historic and 6 sites that exhibited both prehistoric and historic occupations (Tables 3, 4 and 5). Seven additional sites are located outside our designated survey areas. Five of these are prehistoric (23CE134, 23DA84, 23DA378, 23DA412 and 23DA456), one is historic (23CE316) and one is both prehistoric and historic (23CE315). All but 23DA456 were previously recorded. Archaeological Survey of Missouri site forms were prepared for these but they are not discussed in detail in this report.

Table 3. Physical characteristics of Stockton sites.

Site No.	Component	Function	Elev	Slope	Aspect	Geology	Soil
23CE321	Archaic, Late	Habitation/Prehistoric	890	4	NW	Osagean Series (Mo)	Peridge-Wildemess-Goss-Pembroke Association
23CE329	Prehistoric	Quarry	870	17	NW	Kinderhookian Series (Mk)	Peridge-Wildemess-Goss-Pembroke Association
23CE330	Prehistoric	Upland hunting site	910	3	N	Kinderhookian Series (Mk)	Peridge-Wildemess-Goss-Pembroke Association
23CE335	Prehistoric	Upland hunting site	900	5		Kinderhookian Series (Mk)	Peridge-Wildemess-Goss-Pembroke Association
23CE336	Prehistoric	Habitation/Prehistoric	900	1	W	Kinderhookian Series (Mk)	Peridge-Wildemess-Goss-Pembroke Association
23CE338	Prehistoric	Habitation/Prehistoric	880	4	W	Kinderhookian Series (Mk)	Peridge-Wildemess-Goss-Pembroke Association
23CE342	Prehistoric	Upland hunting site	870	8	S	Kansas City Group (Pck)	Boliver-Hector Association
23CE349	Historic, 20th century?	Residence/Farmstead	910	7	SW	Kinderhookian Series (Mk)	Peridge-Wildemess-Goss-Pembroke Association
23CE350	Historic	Stone wall	900	8	SW	Kinderhookian Series (Mk)	Peridge-Wildemess-Goss-Pembroke Association
23CE355	Historic, 19th-20th cen.	Cemetery	920	1	SE	Kinderhookian Series (Mk)	Peridge-Wildemess-Goss-Pembroke Association
23CE364	Historic	Residence/Farmstead	900	2	SW	Kansas City Group (Pck)	Boliver-Hector Association
23CE398	Archaic, Late	Habitation/Prehistoric	870	1	NE	Osagean Series (Mo)	Peridge-Wildemess-Goss-Pembroke Association
23CE398	Mississippi	Habitation/Prehistoric	870	1	NE	Osagean Series (Mo)	Peridge-Wildemess-Goss-Pembroke Association
23CE398	Woodland	Habitation/Prehistoric	870	1	NE	Osagean Series (Mo)	Peridge-Wildemess-Goss-Pembroke Association
23CE467	Prehistoric	Habitation/Prehistoric	890	6	NW	Osagean Series (Mo)	Peridge-Wildemess-Goss-Pembroke Association
23CE468	Woodland?	Upland hunting site	900	17	NE	Kinderhookian Series (Mk)	Peridge-Wildemess-Goss-Pembroke Association
23CE469	Archaic, Late	Habitation/Prehistoric	900	6	NE	Kinderhookian Series (Mk)	Peridge-Wildemess-Goss-Pembroke Association
23CE469	Historic, 20th century?	Residence/Farmstead	900	6	NE	Kinderhookian Series (Mk)	Peridge-Wildemess-Goss-Pembroke Association
23CE470	Prehistoric	Habitation/Prehistoric	900	6	E	Kinderhookian Series (Mk)	Peridge-Wildemess-Goss-Pembroke Association
23CE471	Historic, 20th century?	Residence/Farmstead	880	3	SW	Kansas City Group (Pck)	Boliver-Hector Association
23CE471	Prehistoric	Habitation/Prehistoric	880	3	SW	Kansas City Group (Pck)	Boliver-Hector Association
23CE472	Historic	Industrial	920	3	SW	Kansas City Group (Pck)	Boliver-Hector Association
23CE473	Prehistoric	Habitation/Prehistoric	960	1	SW	Kansas City Group (Pck)	Boliver-Hector Association
23CE474	Prehistoric	Upland hunting site	920	9	S	Kansas City Group (Pck)	Boliver-Hector Association
23CE475	Prehistoric	Habitation/Prehistoric	930	0		Kinderhookian Series (Mk)	Peridge-Wildemess-Goss-Pembroke Association
23CE476	Historic	Rock wall	890	9	SW	Kinderhookian Series (Mk)	Peridge-Wildemess-Goss-Pembroke Association
23CE477	Prehistoric	Upland hunting site?	920	9	S	Kinderhookian Series (Mk)	Peridge-Wildemess-Goss-Pembroke Association
23CE478	Prehistoric	Upland hunting site?	880	9	S	Kinderhookian Series (Mk)	Peridge-Wildemess-Goss-Pembroke Association
23CE479	Prehistoric	Upland hunting site?	920	7	SE	Kinderhookian Series (Mk)	Peridge-Wildemess-Goss-Pembroke Association
23CE480	Prehistoric	Upland hunting site?	890	11	NW	Kinderhookian Series (Mk)	Peridge-Wildemess-Goss-Pembroke Association
23CE481	Prehistoric	Upland hunting site	880	11	N	Kinderhookian Series (Mk)	Peridge-Wildemess-Goss-Pembroke Association
23CE482	Historic, 20th century	Residence/Farmstead	920	5	SW	Kinderhookian Series (Mk)	Peridge-Wildemess-Goss-Pembroke Association
23CE483	Historic, 20th century	Enclosed spring	900	8	SE	Kinderhookian Series (Mk)	Peridge-Wildemess-Goss-Pembroke Association
23CE484	Historic, 20th century	Residence/Farmstead	890	10	SE	Kinderhookian Series (Mk)	Peridge-Wildemess-Goss-Pembroke Association
23CE485	Prehistoric	Upland hunting site	880	7	E	Kinderhookian Series (Mk)	Peridge-Wildemess-Goss-Pembroke Association
23DA211	Prehistoric	Habitation/Prehistoric	890	1	N	Osagean Series (Mo)	Britwater silt loam, 2% - 5% slopes
23DA244	Prehistoric	Lithic scatter	890	8	E	Osagean Series (Mo)	Peridge-Wildemess-Goss-Pembroke Association

Table 3. Physical characteristics of Stockton sites.

Site No.	Component	Function	Elev	Slope	Aspect	Geology	Soil
23DA306	Prehistoric	Lithic scatter	950	11	E	Kinderhookian Series (Mk)	Alaup silt loam, 5% - 20%, extremely stony
23DA312	Prehistoric	Upland hunting site	880	3	E	Osagean Series (Mo)	Waben gravelly silt loam, 3% - 9% slopes
23DA313	Archaic, Late	Habitation/Prehistoric	920	2		Kinderhookian Series (Mk)	Moko-Blueye-rock outcrop cpx, 5% - 14% slopes
23DA313	Historic, 19th-20th cen.	Residence/Farmstead	920	2		Kinderhookian Series (Mk)	Moko-Blueye-rock outcrop cpx, 5% - 14% slopes
23DA313	Woodland	Habitation/Prehistoric	920	2		Kinderhookian Series (Mk)	Moko-Blueye-rock outcrop cpx, 5% - 14% slopes
23DA314	Historic, 19th-20th cen?	Residence/Farmstead	890	16	NE	Kinderhookian Series (Mk)	Goss gravelly silt loam, 5% - 15% slopes
23DA321	Historic, 20th Century	Residence/Farmstead	925	5	E	Kinderhookian Series (Mk)	Bardley-Moko_Rock Outcrop cpx, 5% - 15% slope
23DA325	Historic, 19th-20th cen?	Residence/Farmstead	930	1	E	Osagean Series (Mo)	Peridge-Wildemess-Goss-Pembroke Association
23DA326	Archaic, Late	Habitation/Prehistoric	910	10	SE	Kinderhookian Series (Mk)	Bardley-Moko-Rock Outcrop cpx, 5% - 15% slope
23DA326	Historic, 20th century	Residence/Farmstead	910	10	SE	Kinderhookian Series (Mk)	Bardley-Moko-Rock Outcrop cpx, 5% - 15% slope
23DA326	Mississippi	Habitation/Prehistoric	910	10	SE	Kinderhookian Series (Mk)	Bardley-Moko-Rock Outcrop cpx, 5% - 15% slope
23DA326	Woodland	Habitation/Prehistoric	910	10	SE	Kinderhookian Series (Mk)	Bardley-Moko-Rock Outcrop cpx, 5% - 15% slope
23DA361	Prehistoric	Quarry, Upland hunting site	900	8	S	Osagean Series (Mo)	Peridge-Wildemess-Goss-Pembroke Association
23DA376	Archaic, Late	Lithic scatter	870	23	E	Osagean Series (Mo)	Peridge-Wildemess-Goss-Pembroke Association
23DA376	Woodland	Lithic scatter	870	23	E	Osagean Series (Mo)	Peridge-Wildemess-Goss-Pembroke Association
23DA384	Prehistoric	Lithic scatter	870	18	E	Osagean Series (Mo)	Peridge-Wildemess-Goss-Pembroke Association
23DA388	Archaic, Late	Habitation/Prehistoric	920	8	E	Osagean Series (Mo)	Peridge-Wildemess-Goss-Pembroke Association
23DA388	Woodland	Habitation/Prehistoric	920	8	E	Osagean Series (Mo)	Peridge-Wildemess-Goss-Pembroke Association
23DA394	Late Prehistoric	Quarry	880	17	N	Kinderhookian Series (Mk)	Bardley-Moko-Rock Outcrop cpx, 5% - 15% slope
23DA407	Archaic, Early-Middle?	Cave/Shelter	920	40	NE	Osagean Series (Mo)	Peridge-Wildemess-Goss-Pembroke Association
23DA407	Historic	Trapping station	920	40	NE	Osagean Series (Mo)	Peridge-Wildemess-Goss-Pembroke Association
23DA407	Mississippi	Cave/Shelter	920	40	NE	Osagean Series (Mo)	Peridge-Wildemess-Goss-Pembroke Association
23DA407	Woodland, Middle - Late	Cave/Shelter	920	40	NE	Osagean Series (Mo)	Peridge-Wildemess-Goss-Pembroke Association
23DA408	Archaic, Late	Cave/Shelter	940	30	S	Osagean Series (Mo)	Peridge-Wildemess-Goss-Pembroke Association
23DA408	Late Prehistoric	Cave/Shelter	940	30	S	Osagean Series (Mo)	Peridge-Wildemess-Goss-Pembroke Association
23DA408	Mississippi	Cave/Shelter	940	30	S	Osagean Series (Mo)	Peridge-Wildemess-Goss-Pembroke Association
23DA408	Woodland, Late	Cave/Shelter	940	30	S	Osagean Series (Mo)	Peridge-Wildemess-Goss-Pembroke Association
23DA411	Mississippi	Cave/Shelter	930	50	W	Osagean Series (Mo)	Peridge-Wildemess-Goss-Pembroke Association
23DA411	Woodland	Cave/Shelter	930	50	W	Osagean Series (Mo)	Peridge-Wildemess-Goss-Pembroke Association
23DA413	Prehistoric	Upland hunting site	880	3	E	Osagean Series (Mo)	Peridge-Wildemess-Goss-Pembroke Association
23DA419	Historic, 19th-20th cen.	Cemetery	910	8	S	Osagean Series (Mo)	Peridge-Wildemess-Goss-Pembroke Association
23DA420	Historic, 20th century	Residence/Farmstead	910	10	E	Channel sands (Pcs)	Peridge-Wildemess-Goss-Pembroke Association
23DA421	Historic, 20th century	Residence/Farmstead Outbuilding	910	3	SE	Channel sands (Pcs)	Peridge-Wildemess-Goss-Pembroke Association
23DA421	Woodland?	Habitation/Prehistoric	910	3	SE	Channel sands (Pcs)	Peridge-Wildemess-Goss-Pembroke Association
23DA422	Historic, 20th century	Residence/Farmstead	920	5	NE	Channel sands (Pcs)	Peridge-Wildemess-Goss-Pembroke Association
23DA422	Prehistoric	Lithic scatter	920	5	NE	Channel sands (Pcs)	Peridge-Wildemess-Goss-Pembroke Association
23DA423	Prehistoric	Habitation/Prehistoric	910	5	E	Channel sands (Pcs)	Peridge-Wildemess-Goss-Pembroke Association

Table 3. Physical characteristics of Stockton sites.

Site No.	Component	Function	Elev	Slope	Aspect	Geology	Soil
23DA424	Prehistoric	Upland hunting site	910	6	E	Channel sands (Pcs)	Peridge-Wildemess-Goss-Pembroke Association
23DA425	Prehistoric	Cave/Shelter	900	60	W	Osagean Series (Mo)	Peridge-Wildemess-Goss-Pembroke Association
23DA426	Prehistoric	Cave/Shelter	900	60	W	Osagean Series (Mo)	Peridge-Wildemess-Goss-Pembroke Association
23DA427	Prehistoric	Habitation/Prehistoric	950	5	W	Osagean Series (Mo)	Peridge-Wildemess-Goss-Pembroke Association
23DA428	Prehistoric	Habitation/Prehistoric	900	2		Osagean Series (Mo)	Peridge-Wildemess-Goss-Pembroke Association
23DA429	Prehistoric	Habitation/Prehistoric	925	8	S	Osagean Series (Mo)	Peridge-Wildemess-Goss-Pembroke Association
23DA430	Prehistoric	Upland hunting site	890	3	W	Osagean Series (Mo)	Peridge-Wildemess-Goss-Pembroke Association
23DA431	Prehistoric	Upland hunting site	900	3		Osagean Series (Mo)	Peridge-Wildemess-Goss-Pembroke Association
23DA432	Prehistoric	Upland hunting site	890	8	W	Osagean Series (Mo)	Peridge-Wildemess-Goss-Pembroke Association
23DA433	Prehistoric	Quarry	880	25	W	Osagean Series (Mo)	Peridge-Wildemess-Goss-Pembroke Association
23DA435	Prehistoric	Upland hunting site	920	2	E	Osagean Series (Mo)	Peridge-Wildemess-Goss-Pembroke Association
23DA436	Archaic, Late-Terminal	Upland hunting site	910	3	E	Osagean Series (Mo)	Peridge-Wildemess-Goss-Pembroke Association
23DA436	Woodland, Late	Upland hunting site	910	3	E	Osagean Series (Mo)	Peridge-Wildemess-Goss-Pembroke Association
23DA437	Prehistoric	Upland hunting site	910	3	E	Osagean Series (Mo)	Peridge-Wildemess-Goss-Pembroke Association
23DA438	Prehistoric	Upland hunting site	910	3	E	Osagean Series (Mo)	Peridge-Wildemess-Goss-Pembroke Association
23DA439	Prehistoric	Upland hunting site	910	3	E	Osagean Series (Mo)	Peridge-Wildemess-Goss-Pembroke Association
23DA440	Prehistoric	Upland hunting site	910	3	E	Osagean Series (Mo)	Peridge-Wildemess-Goss-Pembroke Association
23DA441	Prehistoric	Upland hunting site	930	3	N	Osagean Series (Mo)	Peridge-Wildemess-Goss-Pembroke Association
23DA442	Mississippi	Habitation/Prehistoric	910	6	E	Osagean Series (Mo)	Peridge-Wildemess-Goss-Pembroke Association
23DA442	Woodland, Late	Habitation/Prehistoric	910	6	E	Osagean Series (Mo)	Peridge-Wildemess-Goss-Pembroke Association
23DA443	Prehistoric	Quarry	940	25	E	Kinderhookian Series (Mk)	Alsup silt loam, 5% - 20%, extremely stony
23DA444	Historic	Rock pile	890	20	E	Kinderhookian Series (Mk)	Goss-Moko complex, 10% - 25% slopes
23DA445	Historic	Industrial (mining pits?)	930	12	W	Kinderhookian Series (Mk)	Goss gravelly silt loam, 5% - 15% slopes
23DA446	Historic, 20th century	Residence/Farmstead Outbuilding	885	8	W	Kinderhookian Series (Mk)	Alsup silt loam, 5% - 20%, extremely stony
23DA447	Historic	Rock pile	940	5	N	Kinderhookian Series (Mk)	Goss gravelly silt loam, 5% - 15% slopes
23DA448	Archaic, Late	Habitation/Prehistoric	940	8	N	Kinderhookian Series (Mk)	Goss gravelly silt loam, 5% - 15% slopes
23DA448	Historic	Habitation/Prehistoric	940	8	N	Kinderhookian Series (Mk)	Goss gravelly silt loam, 5% - 15% slopes
23DA448	Woodland, Middle - Late	Habitation/Prehistoric	940	8	N	Kinderhookian Series (Mk)	Goss gravelly silt loam, 5% - 15% slopes
23DA449	Historic	Residence/Farmstead	867	5	NW	Kinderhookian Series (Mk)	Alsup silt loam, 5% - 20%, extremely stony
23DA449	Woodland?	Habitation/Prehistoric	867	5	NW	Kinderhookian Series (Mk)	Alsup silt loam, 5% - 20%, extremely stony
23DA450	Prehistoric	Petroglyph/Pictograph	920	8	N	Kinderhookian Series (Mk)	Goss gravelly silt loam, 5% - 15% slopes
23DA451	Prehistoric	Upland hunting camp?	890	5	E	Osagean Series (Mo)	Goss gravelly silt loam, 5% - 15% slopes
23DA452	Prehistoric	Upland hunting camp?	890	10	SE	Osagean Series (Mo)	Waben gravelly silt loam, 3% - 9% slopes
23DA453	Archaic, Late	Upland hunting camp?	880	10	SE	Osagean Series (Mo)	Waben gravelly silt loam, 3% - 9% slopes
23DA454	Historic	Industrial (mining pits)	940	10	SE	Osagean Series (Mo)	Bardley-Moko-Rock Outcrop cpx, 5% - 15% slope
23DA455	Prehistoric	Upland hunting site	880	20	N	Osagean Series (Mo)	Waben gravelly silt loam, 3% - 9% slopes
23DA81	Prehistoric	Cave/Shelter	920	13	W	Osagean Series (Mo)	Peridge-Wildemess-Goss-Pembroke Association

Table 3. Physical characteristics of Stockton sites.

Site No.	Component	Function	Elev	Slope	Aspect	Geology	Soil
23DA82	Prehistoric	Cave/Shelter	890	99	W	Osagean Series (Mo)	Peridge-Wildemess-Goss-Pembroke Association
23DA83	Archaic, Late	Cave/Shelter	860	10	NE	Osagean Series (Mo)	Peridge-Wildemess-Goss-Pembroke Association
23DA83	Woodland	Cave/Shelter	860	10	NE	Osagean Series (Mo)	Peridge-Wildemess-Goss-Pembroke Association
23DA85	Archaic, Late	Cave/Shelter	860	99	W	Osagean Series (Mo)	Peridge-Wildemess-Goss-Pembroke Association
23DA85	Mississippi	Cave/Shelter	860	99	W	Osagean Series (Mo)	Peridge-Wildemess-Goss-Pembroke Association
23DA85	Woodland, Late	Cave/Shelter	860	99	W	Osagean Series (Mo)	Peridge-Wildemess-Goss-Pembroke Association
23DA86	Prehistoric	Cave/Shelter	870	40	N	Osagean Series (Mo)	Peridge-Wildemess-Goss-Pembroke Association
SLCC-IF1	Prehistoric	Isolated Find	870	16	N	Kinderhookian Series (Mk)	Peridge-Wildemess-Goss-Pembroke Association
SLDA-IF1	Prehistoric	Isolated Find	890	1	E	Osagean Series (Mo)	Peridge-Wildemess-Goss-Pembroke Association
SLDA-IF2	Woodland	Isolated Find	890	1	E	Osagean Series (Mo)	Peridge-Wildemess-Goss-Pembroke Association
SLDA-IF3	Prehistoric	Isolated Find	900	3	E	Osagean Series (Mo)	Peridge-Wildemess-Goss-Pembroke Association
SLDA-IF4	Prehistoric	Isolated Find	910	8	SE	Osagean Series (Mo)	Peridge-Wildemess-Goss-Pembroke Association
SLDA-IF5	Prehistoric	Isolated Find	880	5	W	Osagean Series (Mo)	Peridge-Wildemess-Goss-Pembroke Association
SLM-IF1	Prehistoric	Isolated Find	880	8	SE	Kansas City Group (Pck)	Boliver-Hector Association
SLM-IF2	Prehistoric	Isolated Find	870	3	SW	Kansas City Group (Pck)	Boliver-Hector Association
SLMC-IF1	Prehistoric	Isolated Find	940	12	N	Kinderhookian Series (Mk)	Goss gravelly silt loam, 5% - 15% slopes
SLMC-IF2	Prehistoric	Isolated Find	820	12	N	Kinderhookian Series (Mk)	Goss gravelly silt loam, 5% - 15% slopes
SLMC-IF3	Prehistoric	Isolated Find	885	12	N	Kinderhookian Series (Mk)	Britwater silt loam, 2% - 5% slopes
SLMC-IF4	Prehistoric	Isolated Find	940	12	N	Kinderhookian Series (Mk)	Goss gravelly silt loam, 5% - 15% slopes
SLMC-IF5	Prehistoric	Isolated Find	890	16	S	Kinderhookian Series (Mk)	Alsup silt loam, 5% - 20%, extremely stony
SLMC-IF6	Prehistoric	Isolated Find	900	18	NE	Kinderhookian Series (Mk)	Bardley-Moko-Rock Outcrop cpx, 5% - 15% slope
SLOT-IF2	Prehistoric	Isolated Find	880	12	S	Kinderhookian Series (Mk)	Peridge-Wildemess-Goss-Pembroke Association
SLOT-IF3	Prehistoric	Isolated Find	930	3	SE	Kinderhookian Series (Mk)	Peridge-Wildemess-Goss-Pembroke Association
SLRB-IF1	Prehistoric	Isolated Find	890	6	SE	Osagean Series (Mo)	Britwater silt loam, 2% - 5% slopes
SLRB-IF2	Prehistoric	Isolated Find	910	10	SE	Osagean Series (Mo)	Goss-Moko complex, 10% - 25% slopes
SLRB-IF3	Prehistoric	Isolated Find	870	25	NW	Osagean Series (Mo)	Goss-Moko complex, 10% - 25% slopes
SLRB-IF4	Prehistoric	Isolated Find	880	6	N	Osagean Series (Mo)	Basehor cobbly very-fine sandy loam, 5% - 14%
SLRB-IF5	Prehistoric	Isolated Find	870	6	N	Osagean Series (Mo)	Basehor cobbly very-fine sandy loam, 5% - 14%
SLS-IF1	Prehistoric	Isolated Find	870	11	S	Kinderhookian Series (Mk)	Peridge-Wildemess-Goss-Pembroke Association
SLS-IF2	Prehistoric	Isolated Find	940	3	SE	Kinderhookian Series (Mk)	Peridge-Wildemess-Goss-Pembroke Association
SLS-IF3	Prehistoric	Isolated Find	880	7	S	Kinderhookian Series (Mk)	Peridge-Wildemess-Goss-Pembroke Association

Table 3. Physical characteristics of Stockton sites.

Site No.	Vegetation	Water Source	Type	Dist.	Dir.	Topography
23CE321	Mixed hardwoods and grasses	Little Sac River	River	450	E	Ridgetop and sides
23CE329	Mixed HW, shoreline vegetation	Cothwell Branch	Perennial Stream	10	N	Hillside
23CE330	Mixed hardwoods	Cothwell Branch	Perennial Stream	100	N	Ridgetoe
23CE335	Grasses and mixed hardwoods	Sac River	River	150	W	Ridgetop
23CE336	Grasses and mixed hardwoods	Unnamed	Intermittent Stream	100	S	Ridgetop
23CE338	Grasses and mixed hardwoods	Unnamed	Intermittent Stream	200	S	Ridgetoe
23CE342	Mixed hardwoods	Unnamed	Perennial Stream	300	SE	Hillside
23CE349	Mixed hardwoods	N/A	Well	0		Ridgetop
23CE350	Mixed hardwoods			0		Ridgetop and sides
23CE355	Mixed hardwoods and 2nd growth	Hawker Branch	Perennial Stream	300	W	Ridgetop
23CE364	Unknown	Unnamed	Intermittent Stream	20	W	Ridgetop
23CE398	None	Little Sac	River	40	NE	Ridgetoe
23CE398	None	Little Sac	River	40	NE	Ridgetoe
23CE398	None	Little Sac	River	40	NE	Ridgetoe
23CE467	Mixed hardwoods and grasses	Unnamed	Intermittent Stream	60	W	Ridgetop and sides
23CE468	Mixed hardwoods and 2nd growth	Hawker Branch	Perennial Stream	500	W	Ridgetop
23CE469	Mixed hardwoods and 2nd growth	Hawker Branch	Perennial Stream	150	W	Ridgetop
23CE469	Mixed hardwoods and 2nd growth	Hawker Branch	Perennial Stream	150	W	Ridgetop
23CE470	Mixed hardwoods and grasses	Sac River	River	60	E	Ridgetop and toeslope
23CE471	Mixed HW and secondary growth		Well	0		Ridgetoe
23CE471	Mixed HW and secondary growth		Well	0		Ridgetoe
23CE472	Mature hardwood forest	Unnamed	Intermittent Stream	150	SE	Ridgetop
23CE473	Prairie	Unnamed	Perennial Stream	240	N	Ridgetop
23CE474	Grasses and mixed hardwoods	Unnamed	Perennial Stream	320	NW	Ridgetoe
23CE475	Mixed hardwoods and grasses	Cothwell Branch	Perennial Stream	120	S	Hilltop and sides
23CE476	Mixed hardwoods and grasses	Cothwell Branch	Perennial Stream	250	S	Hillside
23CE477	Mixed hardwoods and grasses	Unnamed	Intermittent Stream	50	E	Hillside
23CE478	Mixed hardwoods and grasses	Unnamed	Intermittent Stream	50	E	Hillside
23CE479	Mixed hardwoods	Unnamed	Intermittent Stream	50	SE	Hillside
23CE480	Mixed hardwoods	Unnamed	Intermittent Stream	40	NW	Hillside
23CE481	Mixed hardwoods	Cothwell Branch	Perennial Stream	180	N	Ridgetoe
23CE482	Mixed HW, grasses, 2nd growth	Edge Branch	Intermittent Stream	220	S	Ridgetop
23CE483	Mixed HW, grasses, 2nd growth	Unnamed	Spring	0		Hillside drainage
23CE484	Mixed HW, grasses, 2nd growth	Edge Branch	Intermittent Stream	500	S	Hillside
23CE485	Mixed hardwoods	Edge Branch	Intermittent Stream	40	N	Ridgetoe
23DA211	Grasses	Sac River	River	40	E	Ridgetop
23DA244	Grasses and weeds	Maze Creek	Perennial Stream	180	E	Hillside

Table 3. Physical characteristics of Stockton sites.

Site No.	Vegetation	Water Source	Type	Dist.	Dir.	Topography
23DA306	Mixed hardwoods and grasses	Mutton Creek	Perennial Stream	150	NE	Hillside
23DA312	Grasses and mixed hardwoods	Sac River	River	40	N	Ridgetoe
23DA313	Mixed hardwoods	N/A	Well	0		Hilltop
23DA313	Mixed hardwoods	N/A	Well	0		Hilltop
23DA313	Mixed hardwoods	N/A	Well	0		Hilltop
23DA314	Mixed hardwoods	Mutton Creek	Perennial Stream	300	NE	Hillside
23DA321	Mixed hardwoods and grasses	Sac River	River	450	SW	Hilltop and sides
23DA325	Prairie	Big Branch	Perennial Stream	600	E	Ridgetop
23DA326	Grasses and mixed hardwoods	Unnamed	Intermittent Stream	60	S	Hilltop
23DA326	Grasses and mixed hardwoods	Unnamed	Intermittent Stream	60	S	Hilltop
23DA326	Grasses and mixed hardwoods	Unnamed	Intermittent Stream	60	S	Hilltop
23DA326	Grasses and mixed hardwoods	Unnamed	Intermittent Stream	60	S	Hilltop
23DA361	Mixed hardwoods	Big Branch	Perennial Stream	50	E	Ridgetop and sides
23DA376	Mixed hardwoods	Unnamed	Intermittent Stream	20	E	Hillside
23DA376	Mixed hardwoods	Unnamed	Intermittent Stream	20	E	Hillside
23DA384	Mixed hardwoods	Maze Creek	Perennial Stream	120	SE	Hillside
23DA388	Mixed HW, prairie, 2nd growth	Big Branch	Perennial Stream	150	E	Ridgetop and sides
23DA388	Mixed HW, prairie, 2nd growth	Big Branch	Perennial Stream	150	E	Ridgetop and sides
23DA394	Mixed hardwoods and 2nd growth	Mutton Creek	Perennial Stream	20	N	Hillside
23DA407	Mixed hardwoods	Unnamed	Perennial Stream	1	N	Bluff
23DA407	Mixed hardwoods	Unnamed	Perennial Stream	1	N	Bluff
23DA407	Mixed hardwoods	Unnamed	Perennial Stream	1	N	Bluff
23DA407	Mixed hardwoods	Unnamed	Perennial Stream	1	N	Bluff
23DA408	Mixed hardwoods and grasses	Unnamed	Spring	0		Hillside drainage
23DA408	Mixed hardwoods and grasses	Unnamed	Spring	0		Hillside drainage
23DA408	Mixed hardwoods and grasses	Unnamed	Spring	0		Hillside drainage
23DA408	Mixed hardwoods and grasses	Unnamed	Spring	0		Hillside drainage
23DA411	Mixed hardwoods	Maze Creek	Perennial Stream	60	W	Bluff
23DA411	Mixed hardwoods	Maze Creek	Perennial Stream	60	W	Bluff
23DA413	Grasses and second growth	Maze Creek	Perennial Stream	200	E	Stream terrace (T-2)
23DA419	Second growth	Big Branch	Perennial Stream	560	E	Hillside
23DA420	Mixed HW, sandstone glade	Unnamed	Intermittent Stream	90	S	Hillside
23DA421	Mixed HW, sandstone glade	Unnamed	Spring	0	SE	Hillside
23DA421	Mixed HW, sandstone glade	Unnamed	Spring	0	SE	Hillside
23DA422	Mixed HW, grasses and cedars	Unnamed	Intermittent Stream	40	N	Hillside
23DA422	Mixed HW, grasses and cedars	Unnamed	Intermittent Stream	40	N	Hillside
23DA423	Prairie and second growth	Unnamed	Spring	0	S	Hillside

Table 3. Physical characteristics of Stockton sites.

Site No.	Vegetation	Water Source	Type	Dist.	Dir.	Topography
23DA424	Mixed hardwoods	Unnamed	Spring	50	N	Hillside
23DA425	Mixed hardwoods	Maze Creek	Perennial Stream	40	W	Bluff
23DA426	Mixed hardwoods	Maze Creek	Perennial Stream	40	W	Bluff
23DA427	Mixed hardwoods	Maze Creek	Perennial Stream	200	W	Ridgetop
23DA428	Mixed hardwoods	Maze Creek	Perennial Stream	200	SW	Ridgetop
23DA429	Mixed hardwoods	Unnamed	Intermittent Stream	50	S	Ridgetop and sides
23DA430	Prairie and mixed hardwoods	Maze Creek	Perennial Stream	250	W	Ridgetoe
23DA431	Prairie and mixed hardwoods	Maze Creek	Perennial Stream	300	SW	Ridgetop
23DA432	Grasses, mixed HW and cedars	Maze Creek	Perennial Stream	200	W	Hillside
23DA433	Mixed hardwoods	Maze Creek	Perennial Stream	200	SW	Bluff
23DA435	Mixed hardwoods	Maze Creek	Perennial Stream	220	E	Hillside bench
23DA436	Mixed hardwoods	Maze Creek	Perennial Stream	100	E	Hillside bench
23DA436	Mixed hardwoods	Maze Creek	Perennial Stream	100	E	Hillside bench
23DA437	Mixed hardwoods	Maze Creek	Perennial Stream	140	SE	Hillside bench
23DA438	Mixed hardwoods	Maze Creek	Perennial Stream	150	E	Hillside bench
23DA439	Mixed hardwoods	Maze Creek	Perennial Stream	100	NE	Hillside bench
23DA440	Mixed hardwoods	Maze Creek	Perennial Stream	60	NE	Hillside bench
23DA441	Mixed hardwoods	Maze Creek	Perennial Stream	60	NE	Ridgetoe
23DA442	Pasture and mixed hardwoods	Unnamed	Intermittent Stream	20	E	Hillside
23DA442	Pasture and mixed hardwoods	Unnamed	Intermittent Stream	20	E	Hillside
23DA443	Mixed hardwoods	Mutton Creek	Perennial Stream	250	NE	Hillside
23DA444	Mixed hardwoods	Mutton Creek	Perennial Stream	180	NE	Hillside
23DA445	Mixed hardwoods	Unnamed	Intermittent Stream	350	W	Hillside
23DA446	Mixed hardwoods and cedars	Unnamed	Intermittent Stream	80	S	Ridgetoe
23DA447	Mixed hardwoods	Mutton Creek	Perennial Stream	300	NE	Ridgetop
23DA448	Mixed hardwoods	Mutton Creek	Perennial Stream	300	NE	Ridgetop
23DA448	Mixed hardwoods	Mutton Creek	Perennial Stream	300	NE	Ridgetop
23DA448	Mixed hardwoods	Mutton Creek	Perennial Stream	300	NE	Ridgetop
23DA449	Mixed hardwoods, weeds, grass	Sac River	Perennial Stream	200	W	Toeslope
23DA449	Mixed hardwoods, weeds, grass	Sac River	Perennial Stream	200	W	Toeslope
23DA450	Mixed hardwoods	Mutton Creek	Perennial Stream	300	NE	Ridgetop
23DA451	Mixed hardwoods	Sac River	River	40	E	Blufftop
23DA452	Mixed hardwoods	Unnamed	Intermittent Stream	60	N	Hillside
23DA453	Mixed hardwoods and grasses	Unnamed	Intermittent Stream	60	S	Hillside
23DA454	Mixed hardwoods	Unnamed	Intermittent Stream	230	S	Hilltop
23DA455	Mixed hardwoods and grasses	Unnamed	Intermittent Stream	50	N	Ridgeslope
23DA81	Mixed hardwoods	Maze Creek	Perennial Stream	60	NW	Hillside

Table 3. Physical characteristics of Stockton sites.

Site No.	Vegetation	Water Source	Type	Dist.	Dir.	Topography
23DA82	Mixed hardwoods	Maze Creek	Perennial Stream	30	SW	Bluff
23DA83	Mixed hardwoods	Unnamed	Spring	10	N	Hillside
23DA83	Mixed hardwoods	Unnamed	Spring	10	N	Hillside
23DA85	Shoreline species	Maze Creek	Perennial Stream	10	W	Bluff
23DA85	Shoreline species	Maze Creek	Perennial Stream	10	W	Bluff
23DA85	Shoreline species	Maze Creek	Perennial Stream	10	W	Bluff
23DA86	Mixed hardwoods	Unnamed	Intermittent Stream	20	N	Hillside
SLCC-IF1	Grasses and mixed hardwoods	Unnamed	Intermittent Stream	60	N	Ridgeslope
SLDA-IF1	Grasses and weeds	Unnamed	Spring	100	SW	Stream terrace (T-2)
SLDA-IF2	Mixed hardwoods and crops	Carmack Branch	Perennial Stream	40	W	Stream terrace (T-1)
SLDA-IF3	Mixed hardwoods	Maze Creek	Perennial Stream	160	E	Hillside bench
SLDA-IF4	Mixed hardwoods and pasture	Maze Creek	Perennial Stream	180	E	Hillside
SLDA-IF5	Mixed hardwoods	Maze Creek	Perennial Stream	5	W	Floodplain (T-0)
SLM-IF1	Mixed hardwoods	Unnamed	Intermittent Stream	100	E	Hillside
SLM-IF2	Grasses and mixed hardwoods	Unnamed	Intermittent Stream	300	W	Toeslope
SLMC-IF1	Grasses and mixed hardwoods	Mutton Creek	Perennial Stream	240	NE	Ridgetop
SLMC-IF2	Grasses and mixed hardwoods	Mutton Creek	Perennial Stream	250	NE	Ridgetop
SLMC-IF3	Grasses and mixed hardwoods	Mutton Creek	Perennial Stream	150	E	Ridgetop
SLMC-IF4	Grasses and mixed hardwoods	Mutton Creek	Perennial Stream	300	NE	Ridgetop
SLMC-IF5	Mixed hardwoods	Unnamed	Intermittent Stream	5	S	Hillside drainage
SLMC-IF6	Mixed hardwoods	Mutton Creek	Perennial Stream	350	NE	Hillside
SLOT-IF2	Mixed hardwoods	Cothwell Branch	Perennial Stream	400	S	Ridgeslope
SLOT-IF3	Mixed hardwoods	Cothwell Branch	Perennial Stream	600	SW	Ridgetop
SLRB-IF1	Mixed hardwoods	Sac River	River	100	E	Hillside
SLRB-IF2	Mixed hardwoods and grasses	Unnamed	Perennial Stream	150	S	Hillside
SLRB-IF3	Grasses and second growth	Sons Branch	Perennial Stream	70	NW	Ridgetoe
SLRB-IF4	Grasses and second growth	Sons Branch	Perennial Stream	100	NW	Ridgetoe
SLRB-IF5	Grasses and second growth	Unnamed	Intermittent Stream	60	E	Ridgetoe
SLS-IF1	Mixed HW, grasses 2nd growth	Edge Branch	Intermittent Stream	380	S	Hillside
SLS-IF2	Grasses and second growth	Edge Branch	Intermittent Stream	340	SE	Hillside
SLS-IF3	Grasses and second growth	Edge Branch	Intermittent Stream	60	S	Ridgetoe

Table 4. Background characteristics of Stockton sites.

Site Number	Real Estate Tract No.	Recording Agency	Recorder/date	HPA Date
SLCC-IF1	146	Historic Preservation Associates	Steven M. Imhoff	October 5 1992
SLM-IF1	1404	Historic Preservation Associates	Steven M. Imhoff	October 6 1992
SLM-IF2	1404	Historic Preservation Associates	Steven M. Imhoff	October 6 1992
SLOT-IF2	161	Historic Preservation Associates	Steven M. Imhoff	October 1 1992
SLOT-IF3	161	Historic Preservation Associates	Steven M. Imhoff	October 1 1992
SLS-IF1	117	Historic Preservation Associates	Steven M. Imhoff	October 14 1992
SLS-IF2	156	Historic Preservation Associates	Steven M. Imhoff	October 14 1992
SLS-IF3	157	Historic Preservation Associates	Steven M. Imhoff	October 14 1992
23CE321	1439, 1440	Espey, Huston & Associates	P.W. Nichols & L.R. Voellinger/Jun 21 1979	October 9 1992
23CE329	171	Prewitt & Associates, Inc.	R. Holan & J.R. Hanson/Apr 26 1982	October 2 1992
23CE330	171	Prewitt & Associates, Inc.	Unknown/Apr 26, 1982	October 2 1992
23CE335	145, 146	Prewitt & Associates, Inc.	L. Day/May 17 1982	October 5 1992
23CE336	145, 146	Prewitt & Associates, Inc.	L. Day/May 17 1982	October 5 1992
23CE338	145	Prewitt & Associates, Inc.	R. Holan/May 18 1982	October 2 1992
23CE349	161	Prewitt & Associates, Inc.	Unknown/Apr 30 1982	October 1 1992
23CE350	161	Prewitt & Associates, Inc.	M. D. Freeman/May 18 1982	October 1 1992
23CE355	403,407	Prewitt & Associates, Inc.	P.W. Nichols/May 3 1982	October 13 1992
23CE364	1407	Prewitt & Associates, Inc.	L. Day/May 22 1982	October 6 1992
23CE398	1422, 1440, 1441	Private individual	D. Thompson/Jun 27 1984	October 9 1992
23CE467	1422	Historic Preservation Associates	Steven M. Imhoff	October 9 1992
23CE468	407	Historic Preservation Associates	Steven M. Imhoff	October 13 1992
23CE469	403, 407	Historic Preservation Associates	Steven M. Imhoff	October 13 1992
23CE470	434	Historic Preservation Associates	Steven M. Imhoff	October 13 1992
23CE471	1422	Historic Preservation Associates	Steven M. Imhoff	October 6 1992
23CE472	1404	Historic Preservation Associates	Steven M. Imhoff	October 6 1992
23CE473	1419	Historic Preservation Associates	Steven M. Imhoff	October 6 1992
23CE474	1420	Historic Preservation Associates	Steven M. Imhoff	October 8 1992
23CE475	164, 165	Historic Preservation Associates	Steven M. Imhoff	September 28 1992
23CE476	164,165	Historic Preservation Associates	Steven M. Imhoff	September 28 1992
23CE477	161, 165	Historic Preservation Associates	Steven M. Imhoff	September 28 1992
23CE478	165	Historic Preservation Associates	Steven M. Imhoff	September 28 1992
23CE479	169	Historic Preservation Associates	Steven M. Imhoff	October 1 1992
23CE480	149, 151	Historic Preservation Associates	Steven M. Imhoff	October 1 1992
23CE481	170	Historic Preservation Associates	Steven M. Imhoff	October 2 1992
23CE482	153	Historic Preservation Associates	Steven M. Imhoff	October 14 1992
23CE483	117	Historic Preservation Associates	Steven M. Imhoff	October 14 1992
23CE484	117	Historic Preservation Associates	Steven M. Imhoff	October 14 1992
23CE485	157	Historic Preservation Associates	Steven M. Imhoff	October 14 1992
SLDA-IF1	1518	Historic Preservation Associates	Steven M. Imhoff	October 15 1992
SLDA-IF2	1522	Historic Preservation Associates	Steven M. Imhoff	October 17 1992
SLDA-IF3	1511	Historic Preservation Associates	Steven M. Imhoff	October 19 1992
SLDA-IF4	1511	Historic Preservation Associates	Steven M. Imhoff	November 4 1992
SLDA-IF5	1511	Historic Preservation Associates	Steven M. Imhoff	November 4 1992
SLMC-IF1	547	Historic Preservation Associates	Steven M. Imhoff	September 15 1992
SLMC-IF2	547	Historic Preservation Associates	Steven M. Imhoff	September 15 1992

Table 4. Background characteristics of Stockton sites (Continued).

Site Number	Real Estate Tract No.	Recording Agency	Recorder/date	HPA Date
SLMC-IF3	539	Historic Preservation Associates	Steven M. Imhoff	September 15 1992
SLMC-IF4	547	Historic Preservation Associates	Steven M. Imhoff	September 16 1992
SLMC-IF5	547	Historic Preservation Associates	Steven M. Imhoff	September 16 1992
SLMC-IF6	547	Historic Preservation Associates	Steven M. Imhoff	September 17 1992
SLRB-IF1	624	Historic Preservation Associates	Steven M. Imhoff	September 29 1992
SLRB-IF2	624	Historic Preservation Associates	Steven M. Imhoff	September 29 1992
SLRB-IF3	709	Historic Preservation Associates	Steven M. Imhoff	September 30 1992
SLRB-IF4	709	Historic Preservation Associates	Steven M. Imhoff	September 30 1992
SLRB-IF5	709	Historic Preservation Associates	Steven M. Imhoff	September 30 1992
23DA81	1518	Private individual	L. Gum/n.d.; H. R. Wimmer/Dec 8 1990	October 17 1992
23DA82	1516	Private individual	L. Gum?/n.d.;H. R. Wimmer/Dec 9 1990	October 17 1992
23DA83		Private individual	L. Gum?/n.d.;H. R. Wimmer/Dec 8 1990	October 17 1992
23DA85	1510	Private individual	L. Gum/Feb 1 1955; H. R. Wimmer/Sep 12 1987	October 18 1992
23DA86	1510	Private individuals; Center for Archaeological Research, Southwest Missouri State Univ.	Leonard Gum?/n.d.; M.J. Fuller/Apr 27 1976/H.R. Wimmer/ Sep 12 1987	October 18 1992
23DA211	739	Univ. of Missouri; Prewitt & Associates, Inc.	R. Pangburn & Graves/Mar 24 1961; L. Day/May 11 1982	September 29 1992
23DA244	1511	University of Missouri	R. Pangborn & Graves/April 11 1961	October 19 1992
23DA306	539	Espey, Huston & Associates	P.W. Nichols & L.R. Voellinger/Jun 21 1979	September 15 1992
23DA312	624	Prewitt & Associates, Inc.	L. Day/May 12 1982	September 30 1992
23DA313	547	Prewitt & Associates, Inc.	P.W. Nichols/May 7 1982	September 18 1992
23DA314	547	Prewitt & Associates, Inc.	P.W. Nichols/May 7 1982	September 17 1992
23DA321	605	Prewitt & Associates, Inc.	J.R. Atkinson/May 10 1982	October 12 1992
23DA325	1617	Prewitt & Associates, Inc.		October 9 1992
23DA326	605	Prewitt & Associates, Inc.		October 12 1992
23DA361	1644	Private individual	D. Thompson/Dec 12 1984	October 9 1992
23DA376	1511, 1512	Private individual	H.R. Wimmer/Jul 25 1987	November 4 1992
23DA384	1511	Private individual	H.R. Wimmer/Nov 14 1987	October 19 1992
23DA388	1617	Private individual	H.R. Wimmer/Apr 10 1987	October 9 1992
23DA394	539, 543	Private individual	H.R. Wimmer/Aug 27 1988	October 12 1992
23DA407	1518	Private individual	H.R. Wimmer/Oct 10 1990	January 19 - 23 1993
23DA408	1518	Private individual	H.R. Wimmer/Oct 10 1990	January 4 - 7 1993
23DA411	1518	Private individual	H.R. Wimmer/Dec 8 1990	October 17 1992

Table 4. Background characteristics of Stockton sites (Concluded).

Site Number	Real Estate Tract No.	Recording Agency	Recorder/date	HPA Date
23DA413	1518	Historic Preservation Associates	Steven M. Imhoff	October 19 1992
23DA419	1617	Historic Preservation Associates	Steven M. Imhoff	October 9 1992
23DA420	1518	Historic Preservation Associates	Steven M. Imhoff	October 15 1992
23DA421	1518	Historic Preservation Associates	Steven M. Imhoff	October 15 1992
23DA422	1518	Historic Preservation Associates	Steven M. Imhoff	October 16 1992
23DA423	1518, 1520	Historic Preservation Associates	Steven M. Imhoff	October 16 1992
23DA424	1520, 1522	Historic Preservation Associates	Steven M. Imhoff	October 16 1992
23DA425	1516	Historic Preservation Associates	Steven M. Imhoff	October 17 1992
23DA426	1516	Historic Preservation Associates	Steven M. Imhoff	October 17 1992
23DA427	1517, 1518	Historic Preservation Associates	Steven M. Imhoff	October 17 1992
23DA428	1510	Historic Preservation Associates	Steven M. Imhoff	October 18 1992
23DA429	1510	Historic Preservation Associates	Steven M. Imhoff	October 18 1992
23DA430	1507, 1510	Historic Preservation Associates	Steven M. Imhoff	October 18 1992
23DA431	1509	Historic Preservation Associates	Steven M. Imhoff	October 18 1992
23DA432	1510	Historic Preservation Associates	Steven M. Imhoff	October 18 1992
23DA433	1510	Historic Preservation Associates	Steven M. Imhoff	October 18 1992
23DA435	1511	Historic Preservation Associates	Steven M. Imhoff	October 19 1992
23DA436	1510	Historic Preservation Associates	Steven M. Imhoff	October 19 1992
23DA437	1509	Historic Preservation Associates	Steven M. Imhoff	October 19 1992
23DA438	1509	Historic Preservation Associates	Steven M. Imhoff	October 19 1992
23DA439	1509	Historic Preservation Associates	Steven M. Imhoff	October 19 1992
23DA440	1509	Historic Preservation Associates	Steven M. Imhoff	November 4 1992
23DA441	1503, 1509	Historic Preservation Associates	Steven M. Imhoff	November 4 1992
23DA442	1511	Historic Preservation Associates	Steven M. Imhoff	November 4 1992
23DA443	539	Historic Preservation Associates	Steven M. Imhoff	September 15 1992
23DA444	539	Historic Preservation Associates	Steven M. Imhoff	September 15 1992
23DA445	539	Historic Preservation Associates	Steven M. Imhoff	September 15 1992
23DA446	547	Historic Preservation Associates	Steven M. Imhoff	September 15 1992
23DA447	539	Historic Preservation Associates	Steven M. Imhoff	September 16 1992
23DA448	539	Historic Preservation Associates	Steven M. Imhoff	September 16 1992
23DA449	547	Historic Preservation Associates	Steven M. Imhoff	September 17 1992
23DA450	539	Historic Preservation Associates	Steven M. Imhoff	September 18 1992
23DA451	739	Historic Preservation Associates	Steven M. Imhoff	September 29 1992
23DA452	624	Historic Preservation Associates	Steven M. Imhoff	September 29 1992
23DA453	624	Historic Preservation Associates	Steven M. Imhoff	September 29 1992
23DA454	624	Historic Preservation Associates	Steven M. Imhoff	September 29 1992
23DA455	624	Historic Preservation Associates	Steven M. Imhoff	September 29 1992

Table 5. HPA investigations at Stockton sites.

Site Number	Surface Material	Shovel Tests	Test Units (No. & m²)	Site Size
23CE321	Yes	216	None	480 m x 180 m
23CE329	No	3	None	15 m x 70 m
23CE330	Yes	196	None	280 m x 280 m
23CE335	Yes	51	None	340 m x 60 m
23CE336	Yes	104	None	160 m x 260 m
23CE338	Yes	50	None	200 m x 100 m
23CE349	Yes	9	None	60 m x 60 m
23CE350	Yes	0	None	5 m x 500 m
23CE355	Yes	0	None	18 m x 10 m
23CE364	No	0	None	75 m x 50 m[1]
23CE398	Yes	0	None	91 m x 46 m
23CE467	Yes	95	None	270 m x 140 m
23CE468	Yes	35	None	320 m x 180 m
23CE469	Yes	300	None	660 m x 200 m
23CE470	Yes	88	None	350 m x 100 m
23CE471	Yes	75	None	300 m x 100 m
23CE472	No	0	None	7 m x 20 m²
23CE473	Yes	22	None	300 m x 120 m
23CE474	Yes	182	None	260 m x 280 m
23CE475	Yes	10	None	500 m x 150 m
23CE476	No	0	None	113 m x 5 m²
23CE477	Yes	23	None	60 m x 150 m
23CE478	Yes	10	None	40 m x 100 m
23CE479	Yes	28	None	140 m x 80 m
23CE480	Yes	8	None	40 m x 80 m
23CE481	Yes	40	None	100 m x 160 m
23CE482	Yes	94	None	250 m x 150 m
23CE483	No	0	None	2 m x 2 m²
23CE484	Yes	20	None	100 m x 80 m
23CE485	Yes	2	None	30 m x 30 m
23DA81	Yes	0	None	10 m x 6 m
23DA82	Yes	0	None	23 m x 3 m
23DA83	Yes	0	None	42 m x 3 m
23DA85	Yes	0	None	30 m x 20 m
23DA86	Yes	0	None	90 m x 6 m
23DA211	Yes	22	None	225 m x 180 m
23DA244	No	5	None	36 m x 14 m
23DA306	No	3	None	32 m x 32 m
23DA312	Yes	8	None	80 m x 150 m
23DA313	Yes	22	None	260 m x 120 m
23DA314	Yes	6	None	50 m x 50 m
23DA321	No	3	None	30 m x 30 m
23DA325	No	2	None	30 m x 30 m
23DA326	Yes	45	None	220 m x 200 m
23DA361	Yes	5	None	300 m x 80 m
23DA376	No	3	None	15 m x 5 m
23DA384	No	0	None	15 m x 15 m[1]
23DA388	Yes	300	None	300 m x 400 m
23DA394	Yes	20	None	40 m x 840 m

Table 5. HPA investigations at Stockton sites (Concluded).

Site Number	Surface Material	Shovel Tests	Test Units (No. & m²)	Site Size
23DA407	Yes	9	4 = 4 m²	45 m x 26 m
23DA408	Yes	12	2 = 2 m²	31 m x 18 m
23DA411	Yes	0	None	20 m x 6 m
23DA413	Yes	3	None	50 m x 80 m
23DA419	No	0	None	30 m x 40 m³
23DA420	Yes	0	None	40 m x 160 m
23DA421	Yes	50	None	180 m x 110 m
23DA422	Yes	2	None	30 m x 30 m
23DA423	No	52	None	260 m x 80 m
23DA424	Yes	20	None	100 m x 80 m
23DA425	Yes	0	None	19 m x 5 m
23DA426	Yes	0	None	13 m x 5 m
23DA427	No	10	None	160 m x 100 m
23DA428	No	8	None	200 m x 200 m
23DA429	Yes	5	None	240 m x 220 m
23DA430	Yes	12	None	100 m x 160 m
23DA431	No	9	None	60 m x 100 m
23DA432	Yes	6	None	40 m x 60 m
23DA433	Yes	3	None	20 m x 5 m
23DA435	No	3	None	110 m x 60 m
23DA436	No	5	None	170 m x 60 m
23DA437	Yes	5	None	80 m x 100 m
23DA438	Yes	5	None	60 m x 100 m
23DA439	No	5	None	60 m x 100 m
23DA440	No	7	None	80 m x 60 m
23DA441	No	5	None	100 m x 80 m
23DA442	Yes	6	None	60 m x 60 m
23DA443	Yes	8	None	40 m x 80 m
23DA444	No	0	None	3 m x 11 m²
23DA445	No	2	None	30 m x 20 m
23DA446	No	2	None	30 m x 30 m
23DA447	No	1	None	15 m x 11 m
23DA448	Yes	2	None	30 m x 30 m
23DA449	Yes	6	None	300 m x 40 m
23DA450	No	0	None	3 m x 5 m²
23DA451	Yes	1	None	10 m x 10 m
23DA452	Yes	1	None	10 m x 10 m
23DA453	Yes	2	None	20 m x 30 m
23DA454	No	0	None	18 m x 12 m²
23DA455	Yes	2	None	40 m x 70 m

[1]Previously recorded site dimensions
[2]Site size determined from distribution of surface features
[3]Site size estimated from COE maps

Thirty-one sites and eight isolated artifacts are located in Cedar County. Twenty of the sites are prehistoric (seven previously recorded), nine are historic (four previously recorded) and two are both prehistoric and historic (none previously recorded). Fifty-nine sites and 16 isolated artifacts are located in Dade County. Forty-four are prehistoric (17 previously recorded), 11 are historic (three previously recorded) and four are both prehistoric and historic (two previously recorded).

The conduct of non-experimental research is fraught with problems that effect the quality of the data recovered and the kinds of conclusions that can be drawn from them. This project is no exception. In working with the data recovered by us and by Mr. Howard R. Wimmer, we were reminded of a number of limitations that basically revolve around considerations of sampling.

First, the places we were asked to survey were selected based on the needs of the Government without consideration of how well the survey areas represent environmental zones, or even how well they represent Government lands. This is, of course, nothing unusual and is not inherently bad but it does affect our ability to translate our findings to a wider area. There is even some doubt as to whether the best sampling scheme devisable would produce quality results at this point since the best environments for prehistoric and historic occupation in the area are now inundated. This does not mean that there is nothing to be said about the cultural resources visited during the survey. It just means that we will be unable to extend what we know about these sites to a wider area.

Second, variability in collecting strategies and collecting conditions makes it difficult to use the artifacts retrieved to characterize the sites from a functional standpoint and to compare the sites visited by us to those visited by Wimmer. All of the collections are grab samples but Wimmer's strategy focused on bifacial tools while ours focused on obtaining a sample of all materials present. We would have preferred probabilistic controlled surface samples but a variety of conditions militated against such a strategy. These included poor surface collecting conditions at many sites and severe post-depositional impacts at others that would probably render controlled collecting ineffectual and misleading. Places where surface visibility was good enough to make surface collecting productive were also the areas most effected by erosion and also thoroughly combed by visitors to the lake. The upshot of this is that our attempt to classify the sites functionally on the basis of the artifacts recovered through a variety of numerical clustering techniques was not successful and our assessment of site function is, of necessity, subjective.

The following discussion will present descriptions of the areas surveyed (and the sites found within them) in alphabetic order to make it easy to find them in the report. We could discuss them in order of survey priority or in the order in which they were actually surveyed but this would make individual discussions more difficult to locate. Most of the sites recorded by Wimmer, for which we have analyzed the artifact collections, are not included in these discussions since we did not visit them.

CEDAR RIDGE PUBLIC USE AREA

Priority area 12 was surveyed on October 9, 1992. It is a 40 acre (16.2 ha) parcel located in Cedar County in the N½ of the SW¼ and the SE¼ of the SW¼ and the W½ of the SW¼ of the SE¼ of section 21, township 33N, range 25W. Elevations range from 867-950 ft NGVD with slopes of 3% - 22%. The local geology consists of the Osagean Series (Mo) on which Peridge-Wilderness-Goss-Pembroke Association soils have developed. These soils support mixed hardwood and grasses. The local drainage is the Little Sac River.

This area has been developed for camping. Existing facilities include an entrance station, paved roads and parking areas, a three lane boat ramp, three double vault toilets, a sanitary dump, a well, 50 camp sites, a shower latrine, two water spigots and underground electrical lines (Figure 4). Areas immediately surrounding camp sites have suffered from erosion due to a lack of good ground cover but the more densely wooded areas appear to be in good condition with little evidence of soil loss. Some recent trenching for electrical and water lines has damaged the wooded area surrounding an existing well. Surface visibility is generally good (50% - 75%) in the camping areas but poor in the more densely wooded areas due to an accumulation of leaf litter.

Our survey began at the northernmost tip at the boat ramp. In areas where surface visibility was good, broad zig-zaging transects were walked without shovel testing. The area east of the road leading to the boat ramp was surveyed along six transects with 80 shovel tests excavated at 20 m - 30 m intervals. As a result of these efforts, we found two prehistoric lithicscatters (23CE321 and 23CE467). A third site (23CE398), known to exist on a narrow point of land at the northeast extent of the area, could not be visited due to the lake level.

23CE321

Table 6. Summary characteristics of 23CE321.

Site Name	Unnamed
Cultural Affiliation	Indeterminate prehistoric
Topographic Setting	Ridgetop and sides
Parent Material	Osagean Series (Mo)
Drainage	Little Sac
Original recording Agency	Espey, Huston and Associates
Size of Site	480 m x 180 m
Surface Visibility	25% - 50%
Slope	16%
Ground Cover Vegetation	Mixed hardwoods and grasses
Month and Year of Field Investigation	October 1992
Land Use	Public camping
Elevation	890

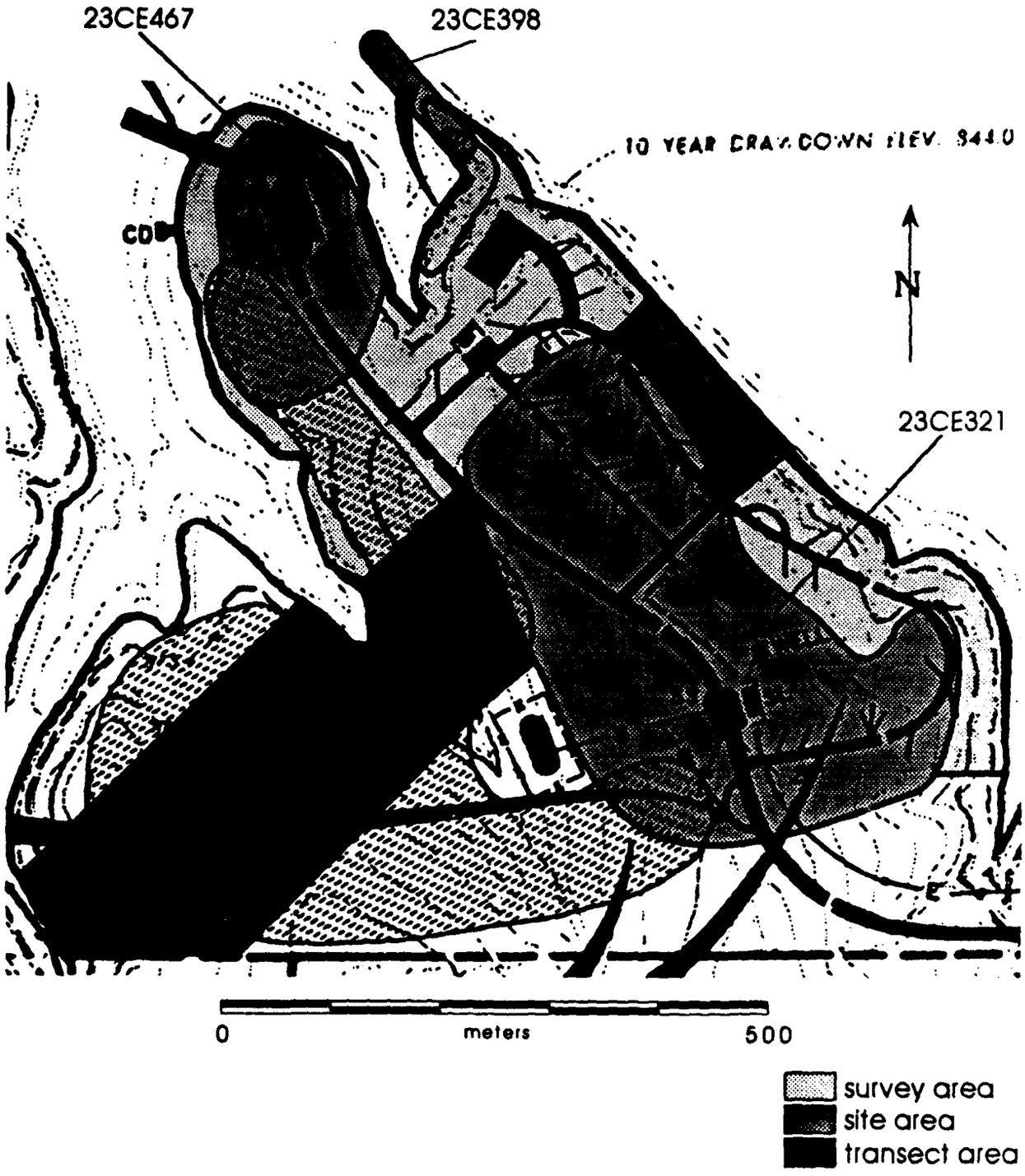


Figure 4. Cedar Ridge Public Use Area showing Survey Area 12.

23CE321 (Photograph 1) is a prehistoric site recorded in June 1979 by Peter W. Nichols and Leonard R. Voellinger. This site is unnamed and is described in Nichols et al. (1980:2-19) as follows:

> **This site is on the east side of the point immediately to the west of Perkins Bluff. It is a prehistoric site of undetermined cultural affiliation. Cultural material evidence was mostly secondary lithic debitage. Two of the chert chips recovered exhibited edge modification. One triangular thick biface was also found. It is of white and grey mottled chert. The site has been severely disturbed by the construction of access roads, a pit toilet, a camp site and a parking loop. The remainder of the site is under a forest canopy with little underbrush. Ground cover is mostly decaying leaves. Soil is shallow, 20 cm or less in depth, over a ferrugineous sandstone base.**

Further work was not recommended (Nichols et al. 1980:2-26) due to the apparent shallow depth of the site.

It was revisited by Steven M. Imhoff of Historic Preservation Associates on October 9, 1992. Our visit revealed that the site is much larger than originally thought (about 480 m northwest-southeast x 180 m northeast-southwest, or 86,400 m^2). It is situated on a ridgetop at elevations of 910 ft - 950 ft. The ridge crest slopes downward to the northwest at a rate of 4%. The local geology consists of the Osagean Series on which Peridge-Wilderness-Goss-Pembroke Association soils have formed. In the vicinity of the site, these soils support mature hardwood forest with little or no ground cover in camping and picnicing areas. The nearest available water is the Sac River, located 450 m northeast of the site.

A select sample of surface materials yielded 1 (5.5 g) biface fragment, 1 (11.3 g) dart point stem/base, 11 (9.2 g) interior flakes, 22 (121.6 g) initial stage interior flakes, and 1 (27.7 g) preform fragment. Artifact 1-1 is a dart point stem. It is an expanding stem specimen with a missing tip, a straight blade, corner notches, square shoulders and a convex base. The cross section is biconvex with no edge abrading, and no beveling. The tip has been carried away by an impact fracture 1.9 cm above the shoulders. Maximum dimensions are 3.3 cm x 3.8 cm x 0.9 cm and it weighs 11.3 g. The raw material is Burlington chert, which is found locally. Microscopic examination revealed no evidence of use-wear. This most closely resembles the Stone Corner Notched type, which is associated with the Late Archaic period.

Stone Corner Notched (1-1)

No organic remains were recovered and no cultural features were observed. The cultural materials at the site suggest that it was occupied during the Late Archaic period and functioned as a habitation.

This site has been affected by construction of roads and camping facilities. A recent (probably within a year) utility trench has been excavated across a portion of the site not previously identified. Impact from public use and erosion is localized but serious in the portion of the site previously recorded. However, much of the site is wooded and not subject to heavy

Photograph 1. View of 23CE321 facing south.

traffic. There, soil development is reasonably good and intact deposits may remain. If so, this site may be eligible for inclusion in the National Register of Historic Places.

23CE398

Table 7. Summary characteristics of 23CE398.

Site Name	The Swimming Beach Site
Cultural Affiliation	Late Archaic, Woodland, Mississippi
Topographic Setting	Ridgetoe
Parent Material	Osagean Series (Mo)
Drainage	Little Sac
Original recording Agency	Prewitt and Associates
Size of Site	91 m x 46 m
Surface Visibility	75% - 100%
Slope	1%
Ground Cover Vegetation	None
Month and Year of Field Investigation	October 1992
Land Use	Public camping
Elevation	870

23CE398 is a prehistoric site previously recorded in August 1984 by Del Thompson, an amateur archeologist who frequents the lake. It is known as The Swimming Beach Site. At the

time of our survey, the site was isolated from the remainder of the survey area by Stockton Lake and was not visited. Mr. Thompson's site form describes it as follows:

> Site located on the Little Sac branch of Stockton Lake, in Cedar County, within the Cedar Ridge public camp area, about 2 2/3 miles n/nw of Bona. Surface evidence in the form of light concentrations or isolated stone artifacts and debris found on and around a small eroded ridge, funning parellel [sic] to a minor tributary channel at the edge of the (former) Little Sac flood plain. The site area had been developed as a swimming beach, which is now closed.
>
> As far as I know, the site is unexcavated, but it appears to be a fairly popular collecting spot, and probably has been since the public camp area was developed.
>
> The site is located upon a small "ridge-like" structure which is bounded to the west by an abrupt drainage feature, and to the east by a minor tributary or drainage channel at the edge of the Little Sac flood plain. The normal lake pool is around 860 ft./MSL and extensive erosion, in the form of wave action and slope wash, etc. has stripped most of the site of all top soil.
>
> The site itself is probably of little significance today, due mostly to the extreme erosion and easy public access.

Mr. Thompson collected 13 bifacial artifacts from the site and noted that other individuals had collected an additional six items. Descriptions of these items were included with the site form submitted to the Archaeological Survey of Missouri and we have paraphrased them below.

> Specimen A is a corner-notched hafted knife manufactured from a dirty white chert with a faint gray undertone (Burlington?). It may have been heat-treated. In cross-section, it is somewhat plano-convex. It exhibits slightly barbed shoulders with an expanding stem and convex base. It measures (32) mm x 44 mm x 7 mm[1].
>
> Specimen B is an ovoid point preform or finished arrow point (Young or Crisp Ovate) manufactured from white chert (Burlington?). It is biconvex in cross section and is unstemmed. It measures (22) mm x 19 mm x 4 mm.
>
> Specimen C is similar in form to specimen B but is slightly smaller. It is also manufactured of white chert (Burlington?). It is plano-convex in cross section and is unstemmed. It measures (27) mm x 15 mm x 3 mm. Mr. Thompson's description suggests that it is made from a flake and is worked primarily on the dorsal surface.
>
> Specimen D is a corner-notched hafted knife manufactured from a tan to gray clouded white chert (Burlington?). In cross-section, it is biconvex with one slightly barbed shoulder, an expanding stem and straight base. It measures (33) mm x (35) mm x 10 mm.
>
> Specimen E is a small corner-notched knife or dart point manufactured from light gray chert (Burlington?). It is biconvex in cross-section with an expanding stem and straight to slightly convex base. The blade margins have been resharpened numerous times. It measures (30) mm x 28 mm x 7 mm.
>
> Specimen F is an ovoid chopper or heavy scraper manufactured of fossiliferous dark to light gray to tan chert (Burlington?). It is biconvex in cross-section and is unstemmed. It measures 96 mm x 73 mm x 20 mm.

[1] Measurements are length, width, thickness. Those enclosed in parentheses indicate an incomplete dimension due to breakage.

Specimen G is an ovoid side scraper, chopper or gouge manufactured from heat treated multi-colored chert. It is plano-convex in cross-section and is unstemmed. There is crude primary flaking on the dorsal face with some heavy bifacial retouch on the ends and marginal nibbling along the lateral edges, which appear unground. Thompson noted the presence of retouch and use wear. It measures 89 mm x 53 mm x 15 mm.

Specimen H is a triangular adze manufactured from a grainy white chert that may have been heat treated (Burlington?). It is plano-convex in cross-section and is unstemmed. Flaking is crude to medium quality and occurs primarily on the dorsal surface. The lateral edges exhibit retouching and moderate to heavy grinding. It measures 95 mm x 50 mm x 18 mm.

Specimen I is a "thick, steeply flaked core tool most [closely resembling] the Clear Fork Gouge, a type of heavy scraper or adze, locally associated with the Sedalia complex of west-central Missouri (MAS site form)." It is roughly triangular, plano-convex in cross-section and is unstemmed. It is crudely flaked from a dirty white chert (Burlington?)with some marginal nibbling on the broad bit section. No use wear or grinding is present. It measures 85 mm x 66 mm x 27 mm.

Specimen J is an ovoid or triangular preform or knife manufactured from a white to light gray chert with darker gray banding (Jefferson City?). It is biconvex in cross-section and is unstemmed. Flaking is medium quality primary with slight roughening that is either the result of platform preparation or from use as a knife. It measures (52) mm x 50 mm x 13 mm.

Specimen K is an ovoid or triangular preform or knife manufactured of heat treated white to light tan to gray clouded chert (Burlington?). It is biconvex in cross-section and is unstemmed. Flaking is medium to good quality primary with some roughening or retouching along the base and blade edges. It measures (37) mm x 49 mm x 7 mm.

Specimen L is an ovoid preform or knife manufactured of heat treated tan to gray banded chert (Jefferson City?). It is biconvex in cross-section. There is medium to good quality primary flaking only with the remaining blade edge slightly roughened. It measures (55) mm x (34) mm x 7 mm.

Specimen M is the tip and part of the blade of a well-made triangular knife manufactured of heat treated white chert having a faint dark undertone (Burlington?). It is somewhat plano-convex in cross-section with medium to good quality primary flaking on the dorsal face only with bifacial retouch along the margins. It measures (55) mm x 38 mm x 10 mm.

Thompson also included descriptions of six specimens collected by others, designating then as specimens 1 - 6. These items were not illustrated, however.

Specimen 1 is the tip of a well-made preform or knife manufactured from a light gray chert with a darker gray undertone (Burlington?). Flaking is medium to good quality primary flaking with some retouch. It is biconvex in cross-section and measures (42) mm x 35 mm x 10 mm.

Specimen 2 is the mid-section of a thin, finely flaked arrow or dart point manufactured from a light pink to gray clouded chert (Burlington?). It is biconvex in cross-section and measures (17) mm x 20 mm x 3 mm.

Specimen 3 is the tip of a knife or projectile point preform roughly flaked from a white to light gray chert (Burlington?). It is biconvex in cross-section and measures (23) mm x 19 mm x 2 mm.

Specimen 4 is the basal portion of an ovoid preform or knife crudely flaked from a heat treated white to light gray chert (Burlington?). It is biconvex in cross-section and measures (30) mm x 33 mm x 12 mm.

Specimen 5 is an ovoid core or core tool preform manufactured from dark gray mottled white or light gray chert (Burlington?). Flaking is crude random primary flaking with no use wear or grinding present along the margins. It is roughly biconvex in cross-section and measures 90 mm x 55 mm x 27 mm.

Specimen 6 is another ovoid core or core tool preform manufactured from slightly fossiliferous off-white chert (Burlington?). Flaking is crude random primary flaking with no use wear or grinding present along the margins. It is roughly biconvex in cross-section and measures 78 mm x 48 mm x 20 mm.

The site is situated on a ridgetop at an elevation of 870 ft. The land surface slopes downward to the northeast at a rate of 1%. The local geology consists of the Osagean Series (Mo) on which Peridge-Wilderness-Goss-Pembroke Association soils have formed. In the vicinity of the site, these soils have been largely eroded away, exposing the underlying bedrock. The nearest available water is the Little Sac River located 40 m northeast of the site.

Artifacts are reportedly distributed over an area measuring 91 m northwest-southeast x 46 m northeast-southwest (4,186 m^2). The cultural materials previously collected were thought to suggest that it was occupied during the Late Archaic, Woodland and Mississippi periods. Our interpretation of Thompson's analysis is that Specimen A is probably a Big Creek point, while Specimens D and E are Stone Corner Notched, the latter having been reworked. These are all Late Archaic types. Specimens B and C appear to be arrow point preforms and probably are Late Woodland in age. Specimens F and G appear to be preforms, while K, L and M could be late stage preforms broken during manufacture or bifacial tools broken during use. Specimens H and J appear to be adzes, while Specimen I could be a single bit axe or a hoe, but an accurate assessment would require use wear analysis.

The site has been severely damaged by fluctuations in the level of Stockton Lake and by shoreline erosion. It is also a popular collecting location. Impacts are so extensive that it is not eligible for inclusion in the National Register of Historic Places.

23CE467

23CE467 is a prehistoric site recorded by Steven M. Imhoff of Historic Preservation Associates on October 9, 1992. This site is unnamed. It measures about 270 m northwest-southeast x 140 m northeast-southwest (37,800 m^2) and is situated on a ridgetop at an elevation of 890 ft. The land surface slopes downward to the northwest at a rate of 6%. The local geology consists of the Osagean Series on which Peridge-Wilderness-Goss-Pembroke Association soils have formed. In the vicinity of the site, these soils support mixed hardwoods and grasses, with

Table 8. Summary characteristics of 23CE467.

Site Name	Unnamed
Cultural Affiliation	Indeterminate prehistoric
Topographic Setting	Ridgetop and sides
Parent Material	Osagean Series (Mo)
Drainage	Unnamed intermittent stream
Original recording Agency	Historic Preservation Associates
Size of Site	270 m x 140 m
Surface Visibility	75% - 100%
Slope	6%
Ground Cover Vegetation	Mixed hardwoods and grasses
Month and Year of Field Investigation	October 1992
Land Use	Recreation
Elevation	890 ft NGVD

the site proper in an area developed for camping and picnicing. The nearest available water is an unnamed intermittent stream located 60 m west of the site.

A select sample of surface materials yielded 3 (23.9 g) biface fragments, 1 (158.2 g) core, 12 (9.7 g) interior flakes, 13 (88.4 g) initial stage interior flakes, 3 (84.8 g) secondary decortication flakes, 2 (7.2 g) flake knifes, 1 (42.6 g) preform fragment, and 4 (128.8 g) aborted preforms.

Artifact 1-4 is a bifacial knife basal fragment. It is an unstemmed (and apparently unhafted) specimen with a missing tip, a missing blade, no notches, no shoulders and a straight base. The cross section is biconvex with no edge abrading, and no beveling. Maximum dimensions are 4.1 cm x 4.0 cm x 0.8 cm and it weighs 12.8 g. The raw material is Burlington chert, which is found locally. Microscopic examination revealed wear resulting from cutting meat without bone contact. This is an unclassified type not associated with a cultural period.

Artifact 1-8 is a bifacial knife edge fragment. It has a damaged blade and a biconvex cross section with no edge abrading, and no beveling. Maximum dimensions are 3.2 cm x 2.2 cm x 0.8 cm and it weighs 5.3 g. The raw material is Burlington chert, which is found locally. Microscopic examination revealed wear resulting from cutting meat without bone contact. This is an unclassified type not associated with a cultural period.

Flake Knife (1-14)

Artifact 1-14 is a blade-like flake knife. Maximum dimensions are 4.0 cm x 1.5 cm x 0.7 cm and it weighs 3.5 g. The raw material is Burlington chert, which is found locally. Microscopic examination revealed wear resulting from cutting wood. This is an unclassified type not associated with a cultural period.

Artifact 1-15 is a flake knife. Maximum dimensions are 3.4 cm x 2.4

Flake Knife (1-15)

cm x 0.5 cm and it weighs 3.7 g. The raw material is Burlington chert, which is found locally. Microscopic examination revealed wear resulting from cutting wood. This is an unclassified type not associated with a cultural period.

No organic remains were recovered. No cultural features were observed. The cultural materials at the site suggest only that it was occupied during the prehistoric period and functioned as a habitation.

This site has been heavily damaged by the construction of roads and camping facilities. The soils are thin and badly deflated by public use and an absence of ground cover. It probably retains little, if any, depositional integrity and appears to be not eligible for inclusion in the National Register of Historic Places.

Priority area 16 was surveyed on October 9, 1992. It is a 59 acre (23.9 ha) parcel located in Dade County in the W½ of the NW¼ and the W½ of the SE¼ of the NW¼ of section 27, township 33N, range 25W (Figure 5). Nearly all of this area has been previously surveyed by Espey Huston and Associates (Nichols, et al. 1980:2-3) and Prewitt and Associates (Girard and Freeman 1992:195). Elevations range from 867 ft -930 ft NGVD with slopes of 1% - 22%. The local geology consists of the Osagean Series (Mo) on which Peridge-Wilderness-Goss-Pembroke Association soils have developed. These soils support mixed hardwoods and grasses. The local drainage is Big Branch, a tributary of the Little Sac River.

Limited development has occurred in the area. Existing facilities include paved roads and parking areas, a boat ramp and two double vault toilets. None of the developments (roads, parking lots, a boat ramp and a latrine) are shown on the photorevised (1981) Bona quadrangle and have presumably been completed since the aerials were flown in 1980. We should point out that the road leading to the boat ramp is not in the location shown in Figure 5, but is at the ridgetop. As a result, there is little loss of ground cover with its attendant erosion and deflation. Surface visibility is generally poor (0% - 25%) with only isolated patches of exposed ground.

Our survey began with the narrow strip of land at the north edge of the area. Here, ground surface visibility was excellent due to heavy use by campers and picnicers. In the remainder of the area was surveyed along 12 roughly east-west transects with approximately 210 shovel tests excavated at 20 m - 30 m intervals. As a result of these efforts, we found two prehistoric and two historic sites.

23DA325

23DA325 is a historic house site previously recorded in May 1982 by investigators from Prewitt and Associates, Inc (Girard and Freeman 1992). It is described as:

> . . . an historic housesite located on a ridge approximately 550 m to the west of the former channel of Big Branch. The site covers an area of about 55 by 55 m which has been partially

Figure 5. Cedar Ridge Public Use Area showing Survey Area 16.

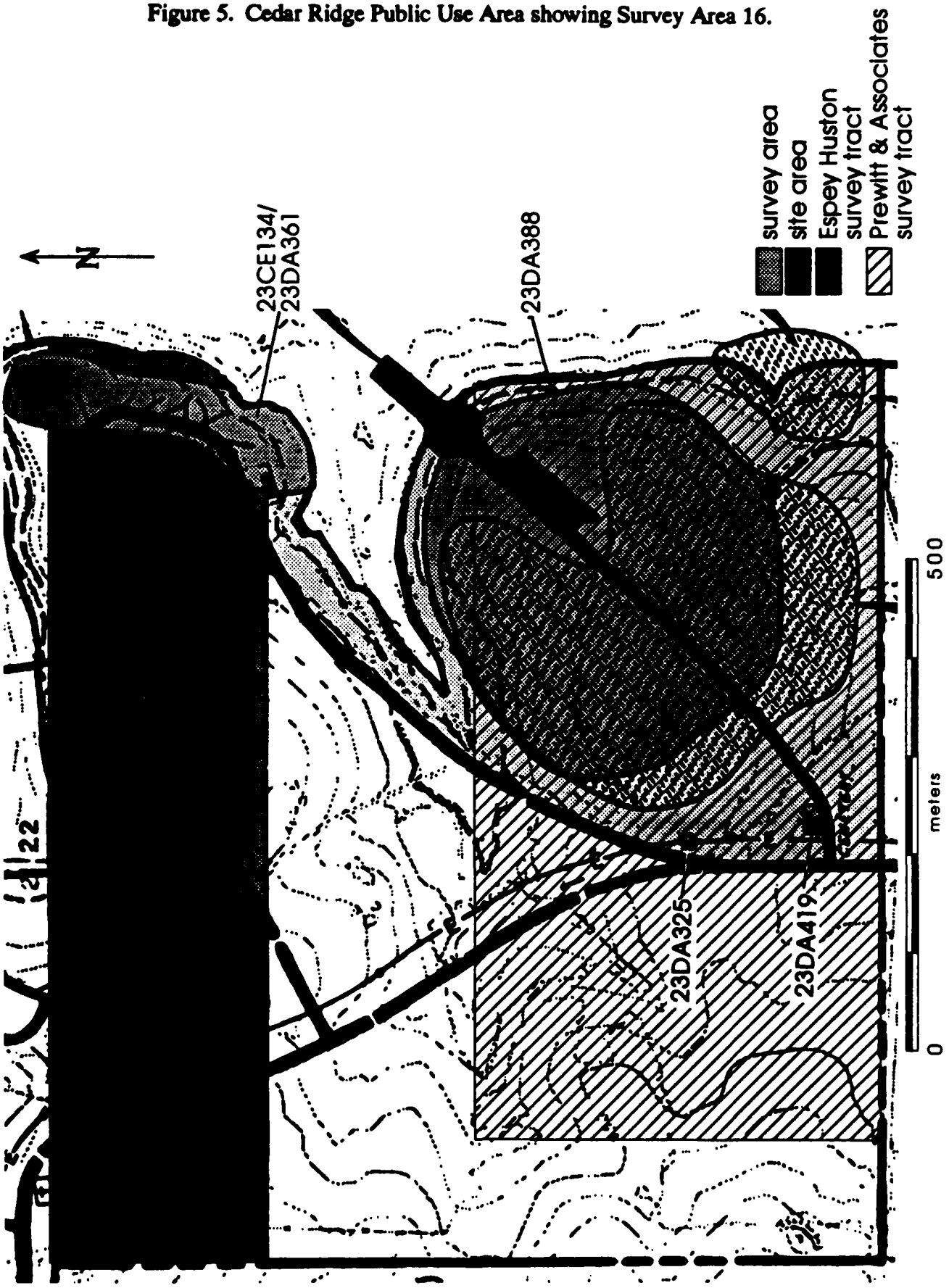


Table 9. Summary characteristics of 23DA325.

Site Name	Unnamed
Cultural Affiliation	19th-20th century Historic?
Topographic Setting	Ridgetop
Parent Material	Osagean Series (Mo)
Drainage	Big Branch
Original Recording Agency	Prewitt and Associates
Size of Site	30 m x 30 m
Surface Visibility	0% - 25%
Slope	1%
Ground Cover Vegetation	Prairie
Month and Year of Field Investigation	October 1992
Land Use	Recreation
Elevation	930 ft NGVD

cleared. Scattered native and domestic trees, shrubs, and grasses cover the area. A park road borders the site on the west.

The site consists of structural remains and abundant domestic vegetation. Structural elements include a concrete slab, which measures approximately 7 by 10 m (23 by 32 ft), and a depressed area in which a shovel test revealed more concrete. A total of four shovel tests were excavated, but, other than the concrete, no cultural materials were recovered.

Documentary and oral history sources indicate that this general area was the location of a series of homes owned by members of the prominent Lindley family. The Goodspeed Publishing Co. notes that John Lindley was, in 1845, one of the first individual to make a land entry in T33N, R25W, an observation confirmed in early Dade County survey maps which show that Lindley had a home and cultivated fields in the vicinity of 23DA325 by 1843-1844. The 1917 *History of Dade County and Her People* notes that Lindley's son, John Cyrus Lindley, was born on the family homestead 2 miles north of Bona on September 11, 1852, and that after his father's death at the hands of bushwackers [sic] on October 7, 1864, John Cyrus and his wife, Florence Hailey, eventually acquired the extensive Lindley family holdings. Before his death John Lindley, Sr. was the largest taxpayer in Dade County.

In 1979 informants stated that they had seen one of the older Lindley homes before it was destroyed, but at the time the property was acquired by the Government, two newer houses were located at 23DA325. One house, built shortly after World War II, was moved about 0.5 miles to the south by R. A. Lindley; the other house, constructed around the time of World War I, was moved about 1 mile to the west of Dadeville by Joe Lindley. Left unmoved by the grandsons of John Lindley were two graves in a field east of Highway RA which Hailey believed were in the vicinity of the Lindley House.

It is recommended that the site be considered eligible for nomination to the National Register under Criteria A and B because of its associations with the prominent Lindley family and because its occupation dates from the period of earliest settlement in Dade County [Girard and Freeman 1992:193-194].

It was revisited by Steven M. Imhoff of Historic Preservation Associates on October 9, 1992. The boundaries are difficult to determine due to dense grasses and brush but appear to be about 30 m north-south x 30 m east-west (900 m^2). The site is situated on a ridgetop at an elevation of 930 ft. The land surface slopes downward to the east at a rate of 1%. The local geology consists of the Osagean Series on which Peridge-Wilderness-Goss-Pembroke Association soils have formed. In the vicinity of the site, these soils support prairie, with the site proper in an area developed for camping and picnicing. The nearest stream is Big Branch, a perennial stream located 600 m east of the site but water was probably supplied by a well, cistern or rural piping system.

No shovel tests other than those excavated along our survey transects were placed on the site, due to its obviously disturbed condition. The only visible feature was a pile of concrete rubble south of the road leading to the boat ramp that appeared to be the remains of a house foundation. This site has been heavily disturbed by the construction, subsequent to Prewitt and Associates' survey, of a road leading to a boat ramp. This road appears to have gone directly through the former house and probably has rendered it not eligible for inclusion in the National Register of Historic Places.

23DA361

Table 10. Summary characteristics of 23DA361.

Site Name	The Pamela Site
Cultural Affiliation	Indeterminate prehistoric
Topographic Setting	Ridgetop and slopes
Parent Material	Osagean Series (Mo)
Drainage	Big Branch
Original Recording Agency	Del Thompson
Size of Site	300 m x 80 m
Surface Visibility	50% - 75%
Slope	8%
Ground Cover Vegetation	Mixed hardwoods
Month and Year of Field Investigation	October 1992
Land Use	Recreation
Elevation	900 ft NGVD

23DA361 is a prehistoric site previously recorded in December 1984 by Del Thompson who named it the Pamela Site. It was revisited by Steven M. Imhoff of Historic Preservation Associates on October 9, 1992. At that time, lithic debris was exposed in a picnic area and extended upslope to 23CE134 (The Jennie Site). Whether these two sites should be considered a single site is debatable. The artifact scatter is continuous over the entire area but that may be due to downslope movement of artifacts caused by erosion.

The site is about 300 m north-south x 80 m east-west (24,000 m^2) and is situated on a slope at an elevation of 900 ft. The land surface slopes downward to the south at a rate of 8%.

The local geology consists of the Osagean Series on which Peridge-Wilderness-Goss-Pembroke Association soils have formed. In the vicinity of the site, these soils support mixed hardwoods, with the site proper in an area developed for camping and picnicing. The nearest available water is Big Branch, a perennial stream located 50 m east of the site.

Thompson collected seven specimens from the site. These include the stem of a Langtry point, the blade of a Scallorn arrow point, an unclassified dart point with an expanding stem and convex base, a Jakie Stemmed variant, two choppers or heavy scrapers and a scraper or adze. His descriptions of the cherts from which these items were manufactured suggest that they are all Burlington.

A select sample of surface materials collected by us included 1 (96.7 g) core, 3 (1.5 g) interior flakes, 10 (32.6 g) initial stage interior flakes, 3 (143.2 g) primary decortication flakes, 5 (239.3 g) secondary decortication flakes, 1 (126.2 g) preform fragment, and 1 (55.1 g) aborted preform. No organic remains were recovered. No cultural features were observed, other than the low rock and earth mound previously noted at 23CE134. The cultural materials recovered by Thompson suggest that it was occupied during the Middle Archaic; almost certainly during the Late Archaic and either the Late Woodland or Early Mississippi periods. The site functioned as a source of chert for the manufacture of stone tools and possibly as an upland hunting site.

This site is exposed in a camping area and has suffered impact from the construction of roads and camping facilities. The soils are thin and ground cover is sparse. The deposits have been affected by erosion and traffic by public use of the area. It is unlikely that intact deposits remain and the site appears to be ... eligible for inclusion in the National Register of Historic Places.

23DA388

Table 11. Summary characteristics of 23DA388.

Site Name	Unnamed
Cultural Affiliation	Late Archaic, Woodland
Topographic Setting	Ridgetop and slopes
Parent Material	Osagean Series (Mo)
Drainage	Big Branch
Original Recording Agency	Howard R. Wimmer
Size of Site	300 m x 400 m
Surface Visibility	0% - 25%
Slope	8%
Ground Cover Vegetation	Mixed hardwoods, prairie, secondary growth
Month and Year of Field Investigation	October 1992
Land Use	Recreation
Elevation	920 ft NGVD

Photograph 2. View of 23DA388 facing east.

23DA388 (Photograph 2) is a prehistoric site previously recorded in May 1988 by Howard Wimmer who named it Big Branch #9. At that time, Wimmer found lithics exposed in areas surrounding the boat ramp. Materials noted included mostly flaking debris but one Langtry point was also recovered.

The site was revisited by Steven M. Imhoff of Historic Preservation Associates on October 9, 1992. Extensive shovel testing in the vicinity revealed a much larger artifact scatter extending upslope and covering most of the hilltop. The site is about 300 m north-south x 400 m east-west (120,000 m^2) and is situated at an elevation of 920 ft. The land surface slopes downward to the east at a rate of 8%. The local geology consists of the Osagean Series on which Peridge-Wilderness-Goss-Pembroke Association soils have formed. In the vicinity of the site, these soils support mixed hardwoods, prairie and secondary growth species. The nearest available water is Big Branch, a perennial stream located 150 m east of the site.

A select sample of surface materials yielded 3 (2.7 g) interior flakes, 7 (24.0 g) initial stage interior flakes, 2 (0.2 g) retouch flakes, 1 (102.7 g) secondary decortication flake, and 2 (227.5 g) preforms. No organic remains were recovered and no cultural features were observed. The cultural materials at the site suggest that it was occupied during Late Archaic or Woodland times and functioned as a habitation.

This site has been damaged by the construction of roads and parking lots. This impact appears localized but most of the site is in a former agricultural field or pasture and has been affected by land clearing. However, much of it is covered in mixed hardwoods and prairie with

good soil development on the ridgetop. Intact deposits may remain and the site may merit inclusion in the National Register of Historic Places.

23DA419

Table 12. Summary characteristics of 23DA419.

Site Name	Unnamed
Cultural Affiliation	19th-20th century Historic?
Topographic Setting	Hillside
Parent Material	Osagean Series (Mo)
Drainage	Big Branch
Original Recording Agency	Historic Preservation Associates
Size of Site	30 m x 40 m
Surface Visibility	0% - 25%
Slope	8%
Ground Cover Vegetation	Second growth
Month and Year of Field Investigation	October 1992
Land Use	Recreation
Elevation	910 ft NGVD

23DA419 is the Lindley Cemetery noted by Girard and Freeman (1992:194) but not listed in the Missouri Archaeological Survey site files until recorded by Steven M. Imhoff of Historic Preservation Associates following a review of the Stockton Lake Master plan map of the Cedar Ridge area.

As shown in Figure 5, the site is about 30 m north-south x 40 m east-west (1,200 m^2) and is situated on a slope at an elevation of 910 ft. The land surface slopes downward to the south at a rate of 8%. The local geology consists of the Osagean Series (Mo) on which Peridge-Wilderness-Goss-Pembroke Association soils have formed. In the vicinity of the site, these soils support second growth vegetation in a former field.

This site is located in a heavily overgrown area and is difficult to locate. While it is reported to be the Burial of John Lindley, an early settler, cemeteries are generally not eligible for inclusion in the National Register (National Park Service 1982:34-36). This one does not contain famous individuals or architecturally significant grave markers.

CRABTREE COVE PUBLIC USE AREA

Priority area 9 was surveyed on October 2, 1992 and October 5, 1992. It is a 52.7 acre (21.3 ha) parcel located in Cedar County in the E½ of the E½ of the SE¼ of section 22 and the E½ of the SW¼ of section 23 and the NW¼ of the NW¼ of the NW¼ of section 26, township 34N, range 26W (Figure 6). Virtually all of this area had been surveyed previously by Prewitt and Associates (Girard and Freeman 1992:183). Elevations range from 867 ft - 920 ft NGVD with slopes of 1% - 30%. The local geology consists of the Kinderhookian Series (Mk) on which

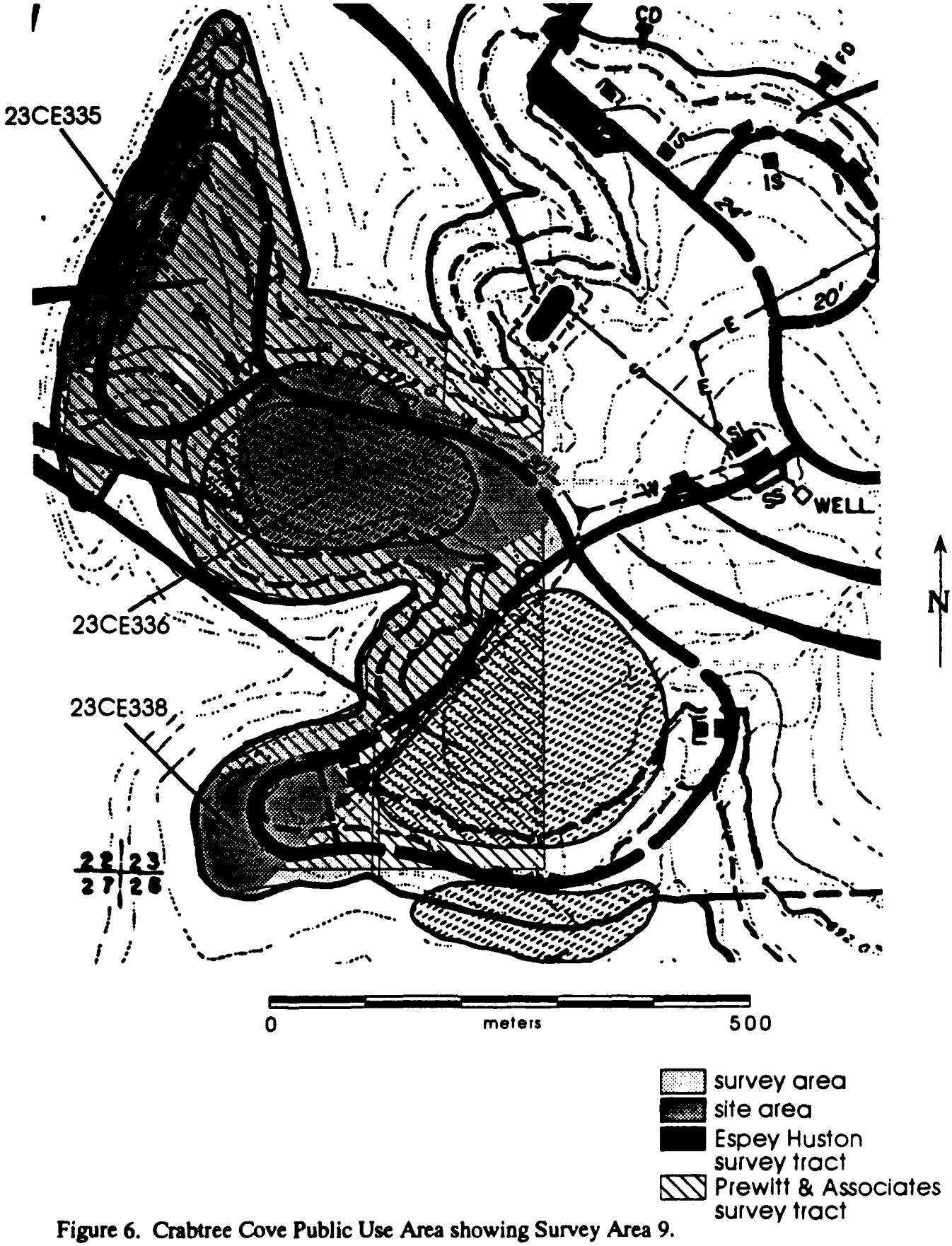


Figure 6. Crabtree Cove Public Use Area showing Survey Area 9.

Peridge-Wilderness-Goss-Pembroke Association soils have developed. These soils support mixed hardwoods. The local drainage is the Sac River. Surface visibility is highly variable but, is generally fair (25% - 50%). Survey transects were generally walked parallel to the major topographic features or the shoreline.

Developments in the area include both paved and unpaved roads, three double vault toilets, buried water and electrical service, approximately 40 campsites and picnicing areas. The ground surface over most of the camping area has been denuded of grass, resulting in substantial erosion and deflation.

Approximately 15 transects were walked with 170 shovel tests excavated at 20 m - 30 m intervals. In areas with good surface visibility, wide zig-zag transects were walked without shovel testing. Three previously recorded prehistoric sites (23CE335, 23CE336 and 23CE338) were revisited during our survey.

Our survey area is distributed over two ridges and we began with the smaller southern one. Three transects were walked parallel to the shoreline, making a loop around the picnic area. Surface visibility along the shoreline was 100% while in most other areas it was poor due to a good covering of grass but with isolated exposures in heavy traffic areas. Few shovel tests were necessary since virtually the entire area exhibited cultural materials where the ground was visible.

We began work on the north ridge, starting at the east end on the north side of the road, surveying between the road and north shoreline in wide zigzag transects and working west and north until reaching the northernmost point of the area. We then began surveying transects parallel to the west edge of the area.

We surveyed as far east as 23CE336 and then began shovel testing the field south of the road to determine the extent of that site. We walked three more-or-less east-west transects spaced 20 m apart with shovel tests at 20 m intervals. After three transects and 45 shovel tests, we decided to extend a north-south line off of the third transect. In all 50 tests were excavated but only 5 yielded artifacts. Most of these were near the south edge of the hilltop.

23CE335

23CE335 is an unnamed prehistoric site previously recorded in May 1982 by Liz Day of Prewitt and Associates, Inc. It is described as:

> . . . a scatter of chipped stone tools and debitage, covers an area of about 200 by 50 m on a ridgetop adjacent to a steep bluff approximately 150 m east of the former channel of the Sac River. The surrounding area is in oak-hickory forest, but a park road and campground are present on the site.
>
> Three 2-m-diameter surface collection units were employed, and all recognizable tools were plotted and collected. Recovered from the surface were 96 flakes and angular fragments (1 with edge modification), 1 biface fragment, and 2 projectile points. Two shovel tests indicated that soils consist of about 25 cm of clay loam overlying clay. The upper horizon contained 94

Table 13. Summary characteristics of 23CE335.

Site Name	Unnamed
Cultural Affiliation	Indeterminate prehistoric
Topographic Setting	Ridgetop
Parent Material	Kinderhookian Series (Mk)
Drainage	Sac River
Original Recording Agency	Prewitt and Associates
Size of Site	340 m x 60 m
Surface Visibility	50% - 75%
Slope	5%
Ground Cover Vegetation	Grasses and mixed hardwoods
Month and year of Field Investigation	October 1992
Land Use	Recreation
Elevation	900 ft NGVD

flakes and angular fragments (3 with edge modification) and 4 cores. The form of the single complete projectile point suggests that the site was occupied during the Early/Middle Archaic.

Despite the dense and extensive nature of the site deposits, most of the cultural materials are exposed on the surface and have been disturbed by park development. Similar, more-intact sites are present in the Crabtree Cove area. It is recommended that 23CE335 be considered not eligible for nomination to the National Register of Historic Places [Girard and Freeman 1992:182-184].

It was revisited by Steven M. Imhoff of Historic Preservation Associates on October 5, 1992. The site is about 340 m northeast-southwest x 60 m northwest-southeast (20,400 m^2) and is situated on a ridgetop at an elevation of 900 ft. The land surface slopes at a rate of 5%. The local geology consists of the Kinderhookian Series (Mk) on which Peridge-Wilderness-Goss-Pembroke Association soils have formed. In the vicinity of the site, these soils support grasses and mixed hardwoods, with the site proper in an area developed for camping and picnicing. The nearest available water is the Sac River, located 150 m west of the site.

A select surface collection yielded 2 (3.2 g) interior flakes, 7 (58.0 g) initial stage interior flakes, 1 (40.0 g) primary decortication flake, and 1 (0.6 g) secondary decortication flake. No organic remains were recovered and no cultural features were observed. The cultural materials recovered by us suggest only that it was occupied during prehistoric times. A Wells-like point recovered by Prewitt and Associates investigators suggests a Late Archaic time frame (Newell and Krieger 1949:167; Perino 1985:394) but Wells points were recovered in good Late Woodland context at the Albertson site (3BE174; Dickson 1991:122-123). The site probably functioned as an upland hunting camp.

This site has been affected by the construction of roads and camping facilities. It exhibits a light density of lithics but has yielded few cultural diagnostics. Soil development is not good and intact deposits probably do not remain. This site is not eligible for inclusion in the National Register of Historic Places.

23CE336

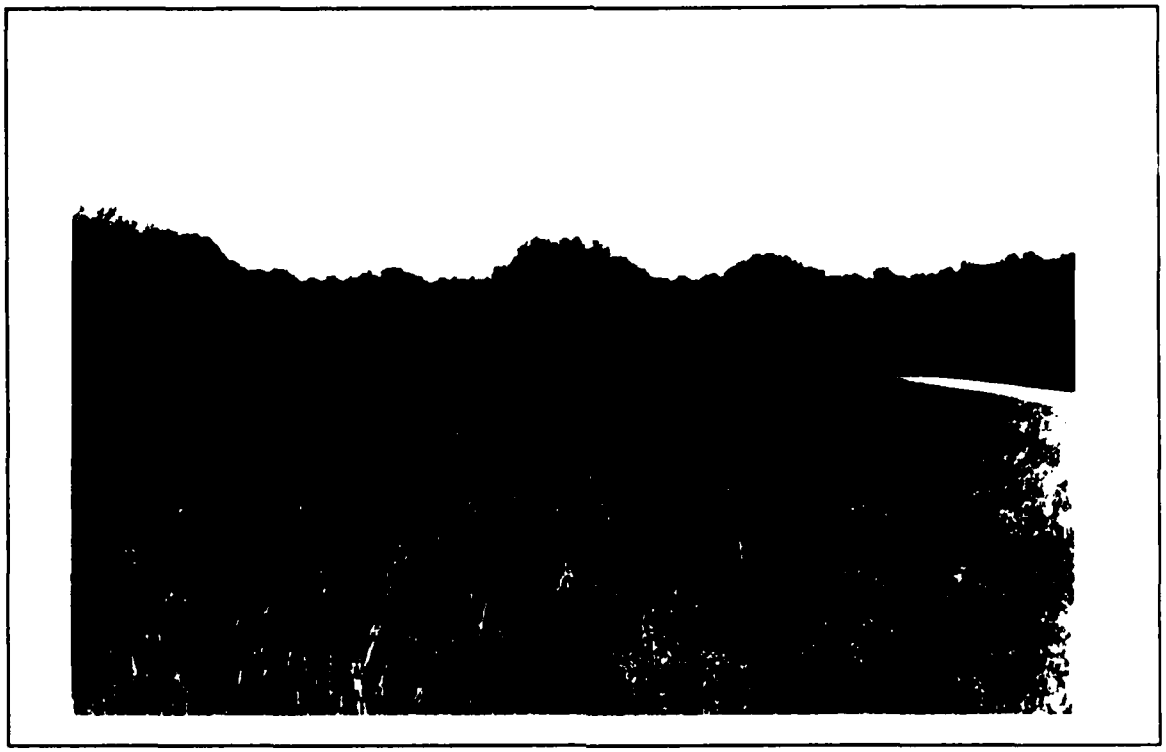
Table 14. Summary characteristics of 23CE336.

Site Name	Unnamed
Cultural Affiliation	Indeterminate prehistoric
Topographic Setting	Ridgetop
Parent Material	Kinderhookian Series (Mk)
Drainage	Unnamed intermittent stream
Original Recording Agency	Prewitt and Associates
Size of Site	160 m x 260 m
Surface Visibility	0% - 25%
Slope	1%
Ground Cover Vegetation	Grasses and mixed hardwoods
Month and Year of Field Investigation	October 1992
Land Use	Recreation
Elevation	900 ft NGVD

23CE336 (Photograph 3)is an unnamed prehistoric site previously recorded in May 1982 by Liz Day of Prewitt and Associates, Inc.

> This site consists of lithic tools and debitage scattered across an area of approximately 220 by 100 m on a narrow ridge located approximtely [sic] 400 m southeast of the former channel of the Sac River. The site lies adjacent to a park road just south of a picnic area. The surface has been cleared and was in pasture at the time of investigation. Oak-hickory forest surrounds the site.
>
> In 1982 five shovel tests were excavated, four of which contained cultural materials. Dense grasses obscured the surface and the site boundaries were not well defined, so five additional shovel tests and one 1-by-1-m test pit were excavated in 1983. Recovered from the shovel tests were 62 flakes and angular fragments (2 with edge modification), 1 core, and 1 projectile point fragment. The test pit was excavated in four 10-cm levels, all of which yielded lithic debitage although a zone of clay and large gravels was encountered in the deepest level. Recovered were 277 flakes and angular fragments (3 with edge modification), 2 biface fragments, 1 uniface fragment, and 2 projectile point fragments.
>
> The projectile point fragments are very small and although they cannot be identified confidently as to type, they appear to represent large barbs often present on a Late Archaic period form. In any event, this site contains extensive, relatively undisturbed deposits. The possibility for isolating and dating components appears to be good. The site has the potential for yielding significant information concerning prehistoric activities in an upland setting. It is recommended that 23CE336 be considered eligible for nomination to the National Register of Historic Places [Girard and Freeman 1992:184].

It was revisited by Steven M. Imhoff of Historic Preservation Associates on October 5, 1992. The site is about 160 m north-south x 260 m east-west (41,600 m^2) and is situated on a ridgetop at an elevation of 900 ft. The land surface slopes downward to the west at a rate of 1%. The local geology consists of the Kinderhookian Series (Mk) on which Peridge-Wilderness-Goss-



Photograph 3. View of 23CE336 facing west.

Pembroke Association soils have formed. In the vicinity of the site, these soils support grasses and mixed hardwoods, with the site proper in an area developed for camping and picnicing. The nearest available water is an unnamed intermittent stream located 100 m south of the site.

A select surface collection and five shovel tests yielded 10 (11.0 g) interior flakes, 5 (11.0 g) initial stage interior flakes, 1 (0.1 g) retouch flake, and 1 (1.7 g) secondary decortication flake. No organic remains were recovered and no cultural features were observed. The cultural materials recovered by us suggest only that it was occupied during prehistoric times and functioned as a habitation. Prewitt and Associates investigators assigned a tentative Late Archaic period affiliation.

This site has been damaged by the construction of roads and park facilities as well as land clearing. It exhibits a light density of lithics and yielded no cultural diagnostics. However, our shovel testing and a 1 m x 1 m test excavation by Prewitt and Associates (Girard and Freeman 1992:184) show that there is good soil development over most of the site and intact deposits may remain. This site may be eligible for inclusion in the National Register of Historic Places and further assessment is required.

23CE338

23CE338 (Photograph 4) is a unnamed prehistoric site previously recorded in May 1982 by Ron Holan of Prewitt and Associates, Inc.

Photograph 4. View of 23CE338 facing southwest.

Table 15. Summary characteristics of 23CE338.

Site Name	Unnamed
Cultural Affiliation	Indeterminate prehistoric
Topographic Setting	Ridgetoe
Parent Material	Kinderhookian Series (Mk)
Drainage	Unnamed intermittent stream
Original Recording Agency	Prewitt and Associates
Size of Site	200 m x 100 m
Surface Visibility	25% - 50%
Slope	4%
Ground Cover Vegetation	Grasses and mixed hardwoods
Month and Year of Field Investigation	October 1992
Land Use	Recreation
Elevation	880 ft NGVD

Site 23CE338, a scatter of lithic tools and debitage, covers an area of about 95 by 85 m on a low ridge along the present lake shoreline approximately 550 m southeast of the former channel of the Sac River. The area has been partially cleared for construction of a park road and picnic area, but scattered oak, hickory, walnut, and juniper trees remain. The understory has been cleared and much of the surface is exposed. Soils are shallow, and bedrock and gravels outcrop in several areas.

Three 2-m-diameter surface collection units were employed, and all recognizable tools were plotted and collected. Recovered were 69 flakes and angular fragments (5 with edge

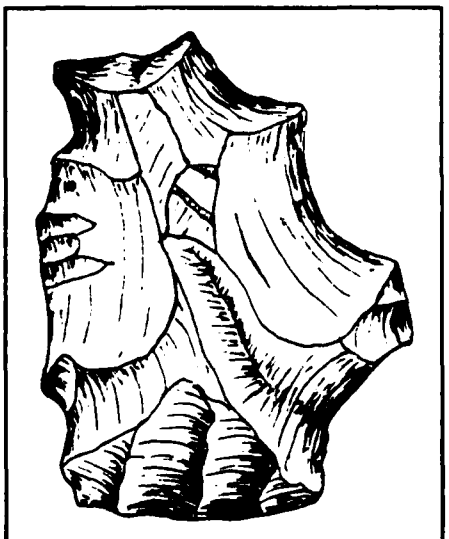
modification) and 3 bifaces. One shovel test was excavated; 24 flakes and angular fragments were recovered in the upper 10 cm of soil.

The shallow and disturbed nature of the deposits indicate that the potential of this site for yielding significant research information is low. It is recommended that 23CE338 be considered not eligible for nomination to the National Register of Historic Places [Girard and Freeman 1992:185].

It was revisited by Steven M. Imhoff of Historic Preservation Associates on October 2, 1992. The site is about 200 m northwest-southeast x 100 m northeast-southwest (20,000 m^2) and is situated on a ridgetop at an elevation of 880 ft. The land surface slopes downward to the west at a rate of 4%. The local geology consists of the Kinderhookian Series (Mk) on which Peridge-Wilderness-Goss-Pembroke Association soils have formed. In the vicinity of the site, these soils support grasses and mixed hardwoods, with the site proper in an area developed for camping and picnicing. The nearest available water is an unnamed intermittent stream located 200 m south of the site.

A select surface collection yielded 4 (27.3 g) biface fragments, 1 (121.9 g) core, 1 (8.4 g) dart point, 5 (4.1 g) interior flakes, 21 (183.9 g) initial stage interior flakes, 2 (13.8 g) secondary decortication flakes, 1 (6.4 g) flake knife, 1 (9.2 g) bifacial scraper fragment, 1 (49.1 g) flake scraper, and 1 (289.3 g) denticulate shredder.

Artifact 1-2 is a bifacial knife midsection fragment. It has an excurvate blade and a biconvex cross section with no edge abrading and no beveling. Maximum dimensions are 1.9 cm x 1.8 cm x 0.7 cm and it weighs 3.4 g. The raw material is Burlington chert, which is found locally. Microscopic examination revealed wear resulting from cutting meat without bone contact. This is an unclassified type not associated with a cultural period.



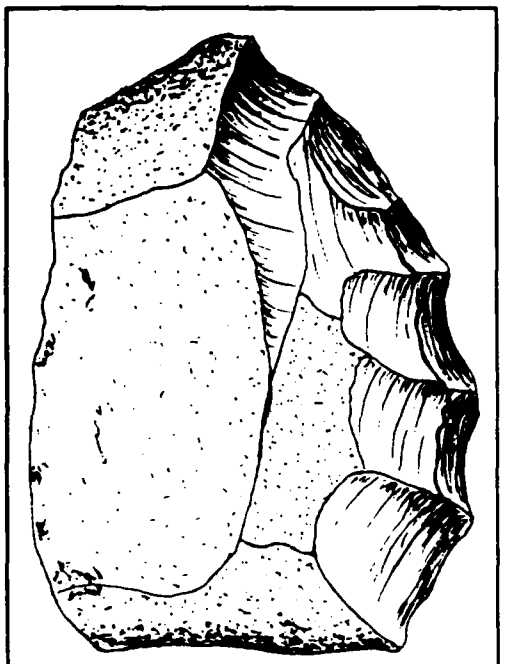
Flake Scraper (1-3)

Artifact 1-3 is a flake scraper. Maximum dimensions are 6.2 cm x 4.9 cm x 1.9 cm and it weighs 49.1 g. The raw material is Burlington chert, which is found locally. Microscopic examination revealed wear resulting from scraping wood. This is an unclassified type not associated with a cultural period.

Artifact 1-4 is an elongated blade-like flake knife. Maximum dimensions are 4.9 cm x 2.0 cm x 0.6 cm and it weighs 6.4 g. The raw material is Burlington chert, which is found locally. Microscopic examination revealed wear resulting from cutting wood. This is an unclassified type not associated with a cultural period.

Artifact 1-7 is a bifacial side scraper distal. The cross section is plano-convex with no edge abrading but bifacial beveling. Maximum dimensions are 4.3 cm x 2.7 cm x 0.8 cm and it weighs 9.2 g. The raw material is Burlington chert, which is found locally. Microscopic examination revealed wear resulting from scraping wet hide. This is an unclassified type not associated with a cultural period.

Artifact 1-9 is a denticulate shredder. The cross section is Irregular with no edge abrading, but unifacial beveling. Maximum dimensions are 8.1 cm x 5.5 cm x 4.9 cm and it weighs 289.3 g. The raw material is an unidentified chert. Microscopic examination revealed wear resulting from shredding. This is an unclassified type not associated with a cultural period. It is made from a blocky tabular stream cobble with flakes unifacially removed from one edge to produce several short denticulate projections. These projections and the edge in general feature much use rounding and soft polish. Traditionally, these kinds of artifacts have been called cores.



Denticulate Shredder (1-9)

No organic remains were recovered and no cultural features were observed. The cultural materials recovered at the site to date suggest only that it was occupied during prehistoric times and functioned as a habitation.

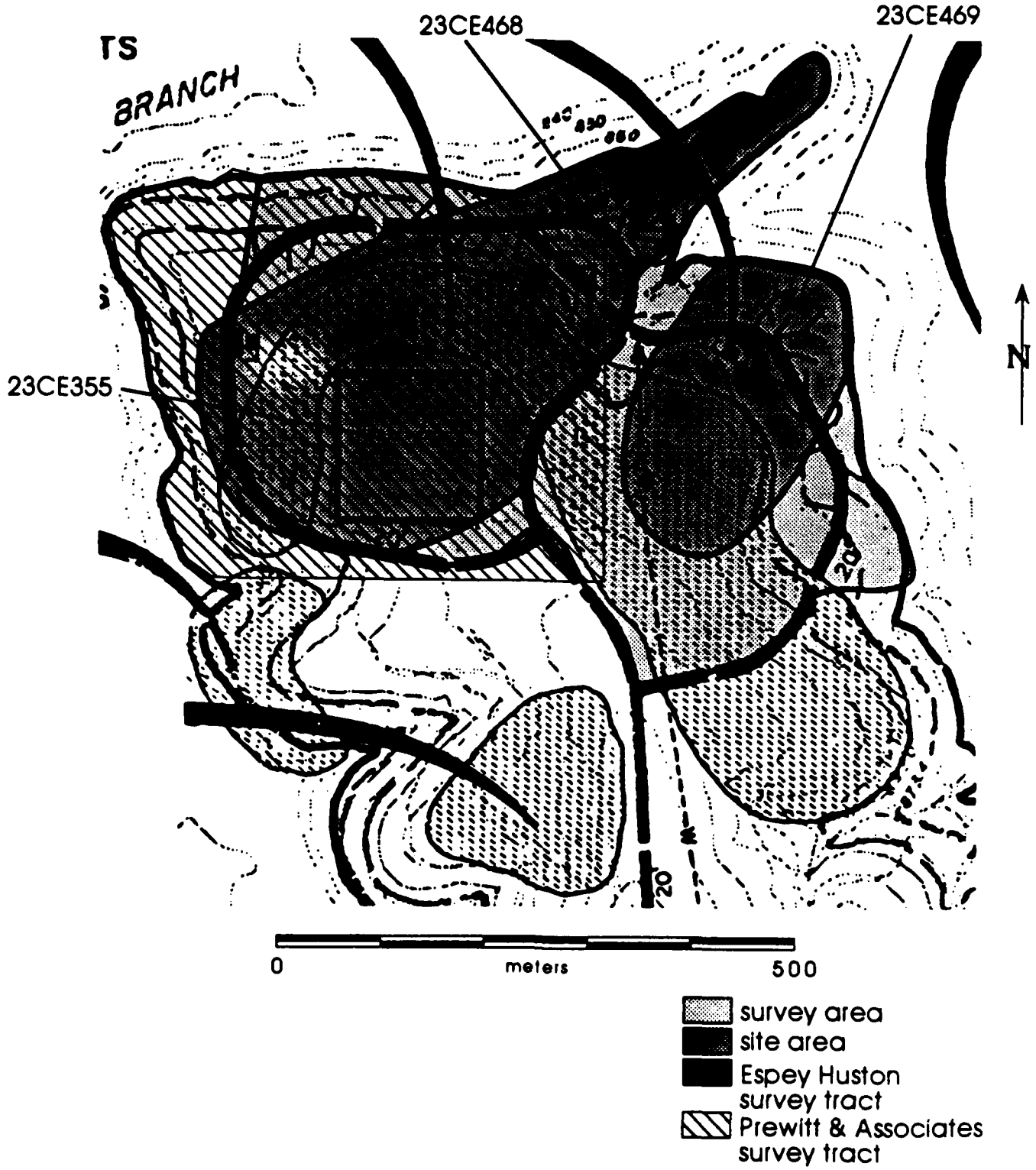
This site is in a camping area of the Crabtree Cove Public Use Area and has been damaged by the construction of roads and park facilities. It is also subject to extensive shoreline erosion. It exhibits a moderate density of lithics and yielded a number of tools, some of which would be culturally diagnostic if they were less damaged. There is reasonably good soil development in some isolated areas and intact deposits may remain. This site should be assessed to determine its eligibility for inclusion in the National Register of Historic Places.

HAWKER POINT PUBLIC USE AREA

Priority area 13 was surveyed on October 13, 1992. It is a 59.7 acre (24.2 ha) parcel located in Cedar County in the SE¼ and the E½ of the NE¼ of the SW¼ and the SW¼ of the SE¼ of the NE¼ of section 9, township 33N, range 26W (Figure 7). Elevations range from 876 ft - 920 ft NGVD with slopes of 1% - 6%. The local geology consists of the Kinderhookian Series (Mk) on which Peridge-Wilderness-Goss-Pembroke Association soils have formed. These soils support mixed hardwoods and second growth. The local drainage is Hawker Branch, a tributary of the Sac River.

Most of the area is undeveloped and covered in either mature hardwood forest or dense second growth in places that were formerly cleared for agricultural fields or pastures. Developments, which are concentrated near the shoreline, include paved and unpaved roads, two double vault toilets, picnic tables and 35 to 40 campsites. Surface visibility was generally fair (25% - 50%) but ranged from 0% to 100%. Eighteen transects were walked with approximately 250 shovel tests excavated at 20 m intervals.

Figure 7. Hawker Point Public Use Area showing Survey Area 13.



The survey area is largely defined by two road loops, east and west. We surveyed the eastern loop by walking three transects within the circle with shovel tests/scrapes at 20 m intervals. After that, we inspected the shoreline. We surveyed the west loop, which had been surveyed previously by Prewitt and Associates, by walking 12 east-west transects with shovel tests excavated at 20 m intervals. Occasional shovel tests produced artifacts but areas exposed along roads and around campsites produced additional evidence of cultural materials. As a result of our efforts, one previously recorded historic cemetery (23CE355), one newly recorded prehistoric site (23CE468) and one newly recorded prehistoric/historic site (23CE469) were recorded.

23CE355

Table 16. Summary characteristics of 23CE355.

Site Name	Ross Cemetery
Cultural Affiliation	19th-20th century Historic
Topographic Setting	Ridgetop
Parent Material	Kinderhookian Series (Mk)
Drainage	Hawker Branch
Original Recording Agency	Prewitt and Associates
Size of Site	18 m x 10 m
Surface Visibility	0% - 25%
Slope	1%
Ground Cover Vegetation	Mixed hardwoods and second growth
Month and Year of Field Investigation	October 1992
Land Use	Cemetery, recreation
Elevation	920 ft NGVD

23CE355 is Ross Cemetery recorded in May 1982 by Peter W. Nichols of Prewitt and Associates, Inc.

This site, an historic cemetery, is located within the boundaries of the Hawker Point Public Use Area, but on a tract of land (ca. 150 by 125 m) not owned by the Government. The site is on a ridgetop approximately 200 m east of the former channel of Hawker Branch.

A portion of the cemetery lies inside a metal fence and measures 18 m north-south by 10 m east-west (60 by 32 ft). A slave section is though to lie outside the fenced area , but it is unlikely that it is located on Government lands. Graves inside the enclosure number in excess of 13, and several of those marked are indicated by stones or monuments which are either uninscribed or so weathered that the inscriptions are unreadable.

Individuals interred include members of the Hill, Rutledge, Ross, and Pollard families, all names which represent early settlement in Cedar County. The earliest marked burial is that of George Ross (September 11, 1841), and the most recent is that of Eliza Pollard (December 14, 1905). Graves are undecorated, but most early limestone markers demonstrate sophistication in both lettering and design.

Cemeteries normally do not qualify for nomination to the National Register of Historic Places. However, the Ross Cemetery may be eligible for nomination due to its intact condition, its unusual (for Cedar County) slave burials, the presence of a number of significant Cedar County figures, and its potential for providing information on demography and mortuary practices for a specific segment of the population which has not been documented elsewhere. Thomas Ross, who filed on land in Section 9, T33N, R26W, was one of the County's earliest residents; his son, Hugh F. Ross was a prominent planter, the proceeds of whose estate were used to construct the Presbyterian Church in Stockton. Since the site is not on land owned by the Corps of Engineers, however, the Corps has no obligation to consider the potential eligibility of this site for the National Register. Should the site become endangered by Corps-sponsored earth-moving activities or should the cemetery be acquired by the Corps, an effort should be made to locate the slave burials and to further assess the significance of the site [Girard and Freemen 1992:154].

It was revisited by Steven M. Imhoff of Historic Preservation Associates on October 13, 1992. The cemetery proper is enclosed by an iron fence measuring 18.3 m (60 ft) north-south x 10.1 m (33 ft) east-west (184.8 m²) and is situated on a ridgetop at an elevation of 920 ft. The land surface slopes downward to the southeast at a rate of 1%. The local geology consists of the Kinderhookian Series on which Peridge-Wilderness-Goss-Pembroke Association soils have formed. In the vicinity of the site, these soils support mixed hardwoods and second growth.

About twenty graves are present. A number of low piles of rocks 50 m west of the cemetery may represent a disposal area for rocks removed when graves were excavated. The graves of slaves are reported to exist outside the identifiable cemetery. The grave markers show that the cemetery was most actively used during the mid to late nineteenth century.

This site is reasonably well preserved. The cemetery is surrounded by an iron fence that is in excellent condition. Many of the headstones have fallen but none appear to be grossly out of place. It is overgrown with secondary growth. Cemeteries are generally not eligible for inclusion in the National Register of Historic Places (National Park Service 1982:34-36). None of the graves are architecturally noteworthy and none of the individuals are of national importance. This site is surrounded by, but not situated on, Government land and is not eligible for inclusion in the National Register of Historic Places.

23CE468

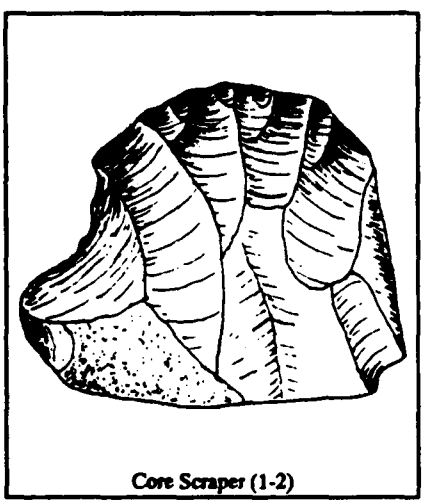
23CE468 is an unnamed prehistoric site recorded by Steven M. Imhoff of Historic Preservation Associates on October 13, 1992. The site is about 320 m northeast-southwest x 180 m northwest-southeast (57,600 m²) and is situated on a ridgetop at an elevation of 900 ft. The land surface slopes downward to the northeast at a rate of 17%. The local geology consists of the Kinderhookian Series on which Peridge-Wilderness-Goss-Pembroke Association soils have formed. In the vicinity of the site, these soils support mixed hardwoods and second growth, with the site proper wooded. The nearest available water is Hawker Branch, a perennial stream located 500 m west of the site.

A select surface collection and 35 shovel tests yielded 1 (1.7 g) biface fragment, 1 (2.6 g) transfer print china sherd, 2 (10.0 g) whiteware china sherds, 2 (351.3 g) cores, 26 (10.3 g) interior flakes, 20 (161.5 g) initial stage interior flakes, 2 (195.5 g) primary decortication flakes, 2

Table 17. Summary characteristics of 23CE468.

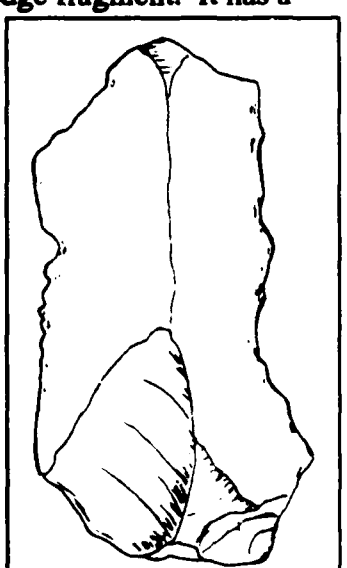
Site Name	Unnamed
Cultural Affiliation	Woodland?
Topographic Setting	Ridgetop
Parent Material	Kinderhookian Series (Mk)
Drainage	Hawker Branch
Original Recording Agency	Historic Preservation Associates
Size of Site	320 m x 180 m
Surface Visibility	0% - 25%
Slope	17%
Ground Cover Vegetation	Mixed hardwoods and second growth
Month and Year of Field Investigation	October 1992
Land Use	Recreation
Elevation	900 ft NGVD

(33.6 g) secondary decortication flakes, 2 (59.9 g) flake knife, 1 (10.8 g) preform fragment, 2 (105.2 g) aborted preforms, and 1 (51.8 g) core scraper.


Core Scraper (1-2)

Artifact 1-2 is a core scraper. Maximum dimensions are 5.0 cm x 4.5 cm x 2.3 cm and it weighs 51.8 g. The raw material is Burlington chert, which is found locally. Microscopic examination revealed wear resulting from scraping wet hide. This is an unclassified type common in Woodland sites.

Artifact 1-7 is a bifacial knife edge fragment. It has a damaged blade and a biconvex cross section with no edge abrading, and no beveling. Maximum dimensions are 2.2 cm x 1.6 cm x 0.8 cm and it weighs 1.7 g. The raw material is Jefferson City chert, which is found locally in the deeper valleys. Microscopic examination revealed wear resulting from cutting meat without bone contact. This is an unclassified type not associated with a cultural period.


Flake Knife (1-11)

Artifact 1-11 is a large blade-like flake knife. Maximum dimensions are 6.7 cm x 3.5 cm x 0.8 cm and it weighs 19.6 g. The raw material is Burlington chert, which is found locally. Microscopic examination revealed wear resulting from cutting bone or antler. This is an unclassified type not associated with a cultural period.

Artifact 1-12 is a flake knife. Maximum dimensions are 6.6 cm x 4.3 cm x 1.4 cm and it weighs 40.3 g. The raw material is Burlington chert, which is found

locally. Microscopic examination revealed wear resulting from cutting wood. This is an unclassified type not associated with a cultural period.

No organic remains were recovered and no cultural features were observed. The cultural materials at the site suggest only that it was occupied during the prehistoric (perhaps Woodland) period and functioned as an upland hunting camp. The historic materials were recovered near a picnic table and probably are of recent origin.

This site has been affected by the construction of park roads and camping facilities and shoreline erosion. Moreover, it is shallow and contains few artifacts which are sparsely distributed over a large area. Its research potential is minimal and it is not eligible for inclusion in the National Register of Historic Places.

23CE469

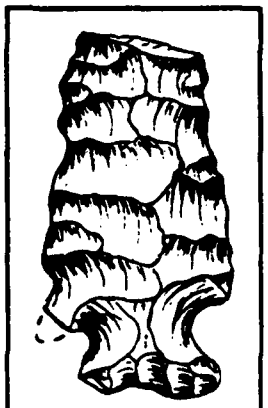
Table 18. Summary characteristics of 23CE469.

Site Name	Unnamed
Cultural Affiliation	Late Archaic, 20th century historic?
Topographic Setting	Ridgetop
Parent Material	Kinderhookian Series (Mk)
Drainage	Hawker Branch
Original Recording Agency	Historic Preservation Associates
Size of Site	660 m x 200 m
Surface Visibility	0% - 25%
Slope	6%
Ground Cover Vegetation	Mixed hardwoods and second growth
Month and Year of Field Investigation	October 1992
Land Use	Recreation
Elevation	900 ft NGVD

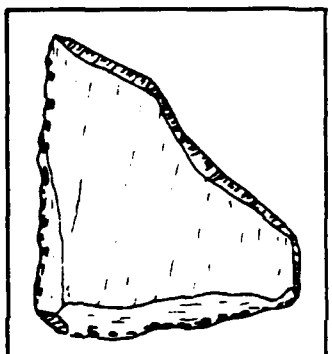
23CE469 is an unnamed prehistoric and historic site recorded by Steven M. Imhoff of Historic Preservation Associates on October 13, 1992. The site is about 660 m northeast-southwest x 200 m northwest-southeast (132,000 m^2) and is situated on a ridgetop at an elevation of 900 ft. The land surface slopes downward to the northeast at a rate of 6%. The local geology consists of the Kinderhookian Series on which Peridge-Wilderness-Goss-Pembroke Association soils have formed. In the vicinity of the site, these soils support mixed hardwoods, second growth, with the site proper wooded. The nearest available water is Hawker Branch, a perennial stream located 150 m west of the site.

In general, lithics are thinly distributed over the entire ridgetop, extending to the northeast through a camping area and onto the narrow point of land at the northeast extent of the survey area. At the northeast tip of this point, there is an historic site (shown at that location on the Crisp, 1956 USGS quadrangle) with numerous artifacts and fragments of poured concrete foundation. A select surface collection and numerous shovel tests yielded 1 (8.6 g) biface

fragment, 1 (156.1 g) aborted blank, 4 (20.9 g) whiteware china sherds, 1 (239.8 g) core, 13 (8.3 g) interior flakes, 30 (385.7 g) initial stage interior flakes, 1 (39.6 g) secondary decortication flake, 1 (2.4 g) glass canning jar lid sherd, 2 (14.6 g) clear glass sherds, 1 (5.0 g) sherd or green glass bottle, 3 (24.5 g) ironstone sherds, 1 (44.6 g) preform fragment, 1 (14.8 g) aborted preform, and 1 (11.2 g) bifacial scraper fragment.


Bifacial Knife (1-1)

Artifact 1-1 is a bifacial knife proximal. It is an expanding stem specimen with a missing tip, a straight blade, corner notches, barbed shoulders and a concave base. The cross section is biconvex with no edge abrading and no beveling. Maximum dimensions are 4.5 cm x 2.5 cm x 0.6 cm and it weighs 8.6 g. The raw material is oolitic Jefferson City chert, which is found locally in the deeper valleys. Microscopic examination revealed wear resulting from cutting meat without bone contact. This is an unclassified type, which may be associated with the Late Archaic period.


Bifacial Side Scraper (1-2)

Artifact 1-2 is a bifacial side scraper edge fragment. The cross section is plano-convex with no edge abrading, and unifacial beveling. Maximum dimensions are 3.9 cm x 3.4 cm x 0.7 cm and it weighs 11.2 g. The raw material is Burlington chert, which is found locally. Microscopic examination revealed wear resulting from scraping wet hide. This is an unclassified type not associated with a cultural period.

Artifact 1-6 is an aborted preform edge fragment. It has a missing tip, an excurvate blade, no notches, no shoulders and a missing base. The cross section is biconvex with no edge abrading, and no beveling. Maximum dimensions are 4.2 cm x 2.8 cm x 1.2 cm and it weighs 14.8 g. The raw material is heat-treated Burlington chert, which is found locally. Microscopic examination revealed wear resulting from cutting meat without bone contact. This is an unclassified type not associated with a cultural period.

No organic remains were recovered and no prehistoric cultural features were observed. The cultural materials suggest only that the site was occupied during the prehistoric (possibly Late Archaic) and historic times and functioned as a habitation and a residence/farmstead.

This site has been affected by the construction of park roads and camping facilities and by shoreline erosion. The historic component has been completely destroyed by shoreline erosion and fluctuations in the level of Stockton Lake. The prehistoric component is largely undamaged by park construction and exhibits good soil development in many places on the ridgetop. It has been affected to a limited extent by activities at the Ross Cemetery. It is possible that intact deposits remain and that the site may be eligible for inclusion in the National Register of Historic Places.

Priority area 17 was surveyed on October 13, 1992. It is a 12.3 acre (5.0 ha) parcel located in Cedar County in the SW¼ of the SW¼ of the SW¼ of section 15 and the SE¼ of the

SE¼ of the SE¼ of section 16, township 33N, range 26W (Figure 8). Elevations range from 867 ft - 930 ft NGVD with slopes of 6% - 11%. The local geology consists of the Kinderhookian Series (Mk) on which Peridge-Wilderness-Goss-Pembroke soils have developed. These soils support mixed hardwoods and second growth. The local drainage is the Sac River.

Developments in the area include paved roads, a double vault toilet and approximately 20 campsites. Surface visibility is generally fair (25% - 50%), ranging from 0% in an overgrown part of the area enclosed by the road loop to 100% in many areas surrounding campsites and picnic tables. We surveyed three transects parallel to the crest of the ridge beginning at the west end and working toward the tip of the ridge. Surface visibility was good and shovel testing was employed only infrequently. One new prehistoric site (23CE470) was recorded.

23CE470

Table 19. Summary characteristics of 23CE470.

Site Name	Unnamed
Cultural Affiliation	Indeterminate prehistoric
Topographic Setting	Ridgetop and toeslope
Parent Material	Kinderhookian Series (Mk)
Drainage	Sac River
Original Recording Agency	Historic Preservation Associates
Size of Site	350 m x 100 m
Surface Visibility	50% - 75%
Slope	6%
Ground Cover Vegetation	Mixed hardwoods and grasses
Month and Year of Field Investigation	October 1992
Land Use	Recreation
Elevation	900 ft NGVD

23CE470 is an unnamed prehistoric site recorded by Steven M. Imhoff of Historic Preservation Associates on October 13, 1992. It is about 350 m northwest-southeast x 100 m northeast-southwest (35,000 m^2) and is situated on a ridgetop at an elevation of 900 ft. The land surface slopes downward to the east at a rate of 6%. The local geology consists of the Kinderhookian Series on which Peridge-Wilderness-Goss-Pembroke Association soils have formed. In the vicinity of the site, these soils support mixed hardwoods and grasses, with the site proper in an area developed for camping and picnicing. The nearest available water is the Sac River, located 60 m east of the site.

Cultural materials are scattered over most of the survey area but concentrate toward the ridgetoe. A select surface collection yielded 6 (26.2 g) initial stage interior flakes. No organic remains were recovered and no cultural features were observed. The cultural materials at the site suggest only that it was occupied during the prehistoric period and functioned as a habitation.

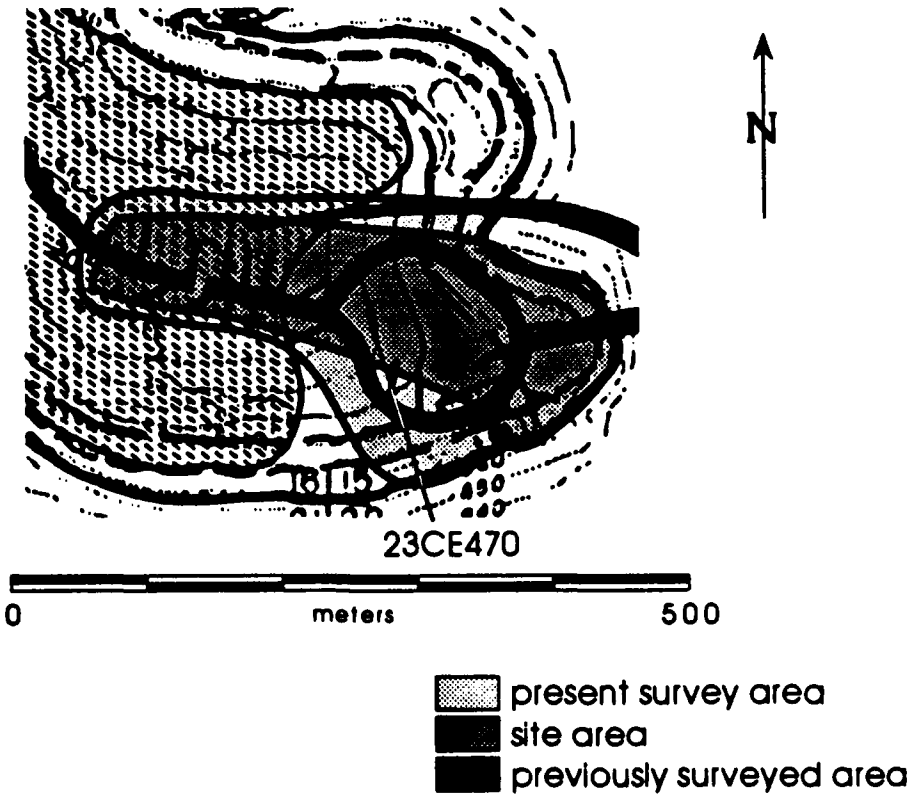


Figure 8. Hawker Point Public Use Area showing Survey Area 17.

This site is not eligible for inclusion in the National Register. Soils are generally thin and erosion has been enhanced by an absence of ground cover in many areas. The area also has been extensively disturbed by the construction of roads and park facilities as well as public use.

MASTERS PUBLIC USE AREA

Priority area 8 was surveyed on October 5 and 6, 1992. It is a 30.5 acre (12.3 ha) parcel located in Cedar County in the center of the NE¼ of section 17, township 33N, range 25W (Figure 9). Elevations range from 867 ft - 930 ft with slopes of 2% - 20%. The local geology consists of the Kansas City Group (Pck) on which Boliver-Hector Association soils have developed. These soils support mixed hardwoods and second growth. The local drainage is an unnamed creek that drains into the Little Sac River.

Developments include both paved and unpaved roads, two double vault toilets, buried water lines and approximately 10 camp sites. Surface visibility is generally poor (0% - 25%), with the exception of highly isolated exposures around camping and picnicing sites.

Our survey began at the easternmost edge of the area, following the shoreline around the perimeter and then traversing the crest of the low ridge at the east end of the survey area. It is covered in dense secondary growth and proved to be impenetrable, although we did manage to find a pipe well northeast of the public toilet. We then went to the western ridge and walked four transects parallel to and east of Espey Houston's previous survey transect excavating shovel tests at 20 m intervals. This area is covered in mature hardwood forest and was easy to traverse.

As a result of these efforts, one prehistoric/historic site (23CE471), one historic site (23CE472) and two isolated prehistoric artifacts (SLM-IF1 and SLM-IF2) were recorded. In addition to these, four previously recorded sites (23CE315, 23CE316, 23CE342 and 23CE364) exist near the survey area.

23CE471

23CE471 (Photograph 5) is an unnamed prehistoric and historic site recorded by Steven M. Imhoff of Historic Preservation Associates on October 6, 1992. It is about 300 m northeast-southwest x 100 m northwest-southeast (30,000 m^2) and is situated on a ridgetop at an elevation of 880 ft. The land surface slopes downward to the southwest at a rate of 3%. The local geology consists of the Kansas City Group (Pck) on which Boliver-Hector Association soils have formed. In the vicinity of the site, these soils support mixed hardwoods and secondary growth, with the site proper in an area developed for camping and picnicing. The nearest available water is a pipe well located on the site. In addition an unnamed creek and the Little Sac River are located nearby.

A select surface collection yielded 2 (11.6 g) biface fragments, 1 (2.6 g) sherd of transfer print china, 1 (3.6 g) plain whiteware china sherd, 8 (9.5 g) interior flakes, 4 (24.4 g) initial stage interior flakes, 1 (2.5 g) glass canning jar lid sherd, 1 (155.5 g) glass jug fragment, 1 (22.0 g)

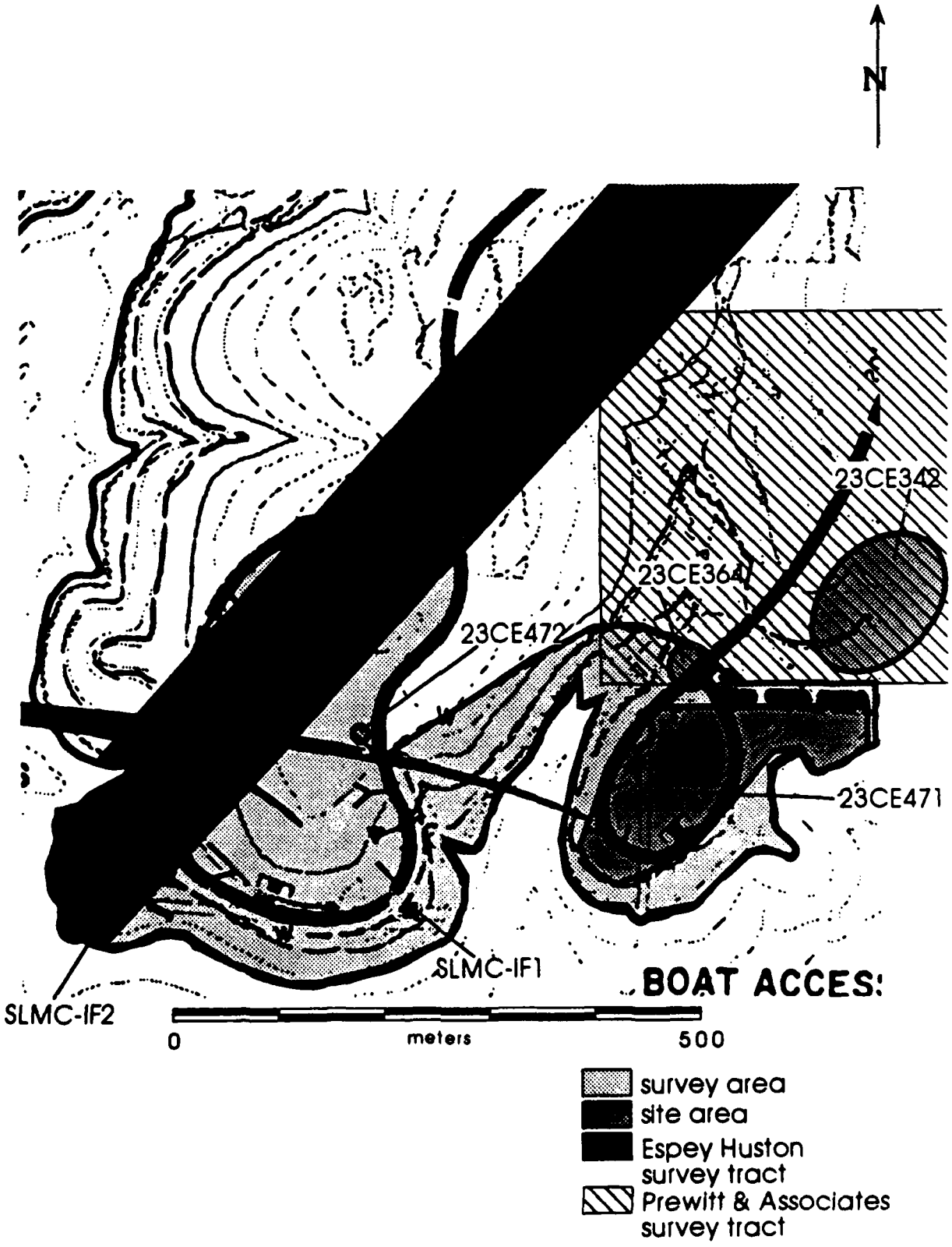
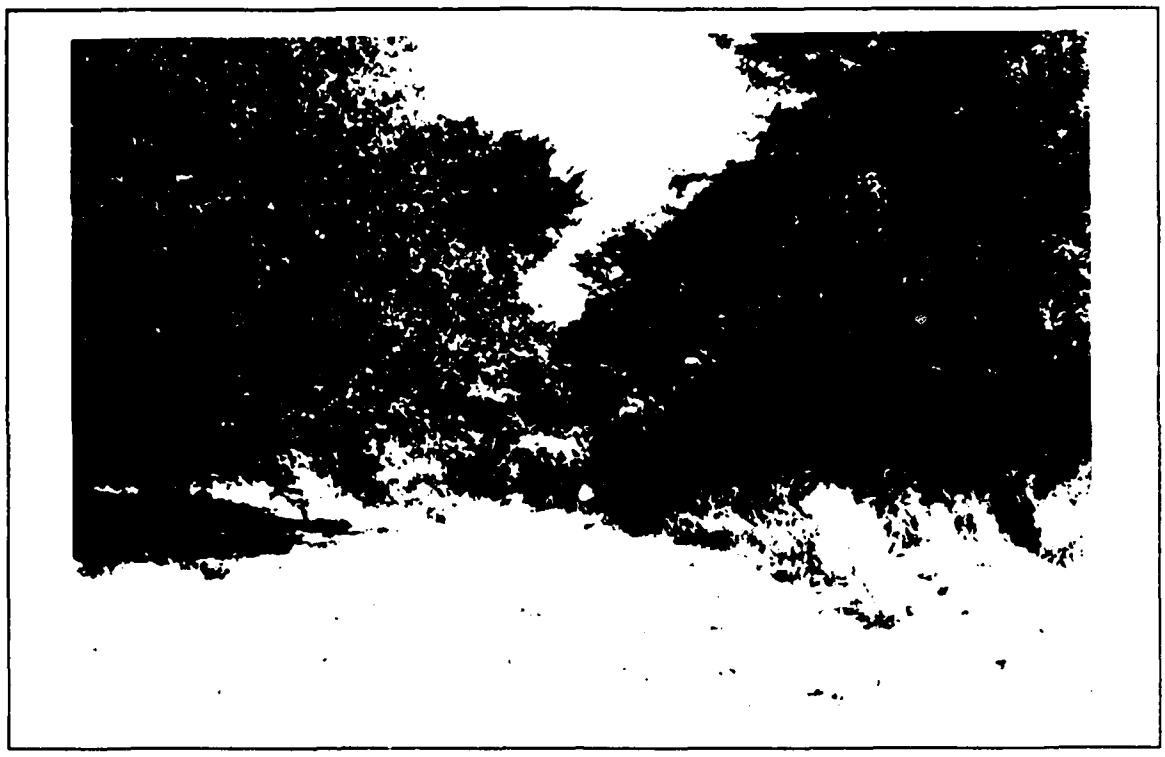


Figure 9. Masters Public Use Area showing Survey Area 8.



Photograph 5. View of 23CE471 facing northwest.

Table 20. Summary characteristics of 23CE471.

Site Name	Unnamed
Cultural Affiliation	Indeterminate prehistoric, 20th cen. historic?
Topographic Setting	Ridgetoe
Parent Material	Kansas City Group (Pck)
Drainage	Unnamed intermittent stream, pipe well
Original Recording Agency	Historic Preservation Associates
Size of Site	300 m x 100 m
Surface Visibility	25% - 50%
Slope	3%
Ground Cover Vegetation	Mixed hardwoods and secondary growth
Month and Year of Field Investigation	October 1992
Land Use	Recreation
Elevation	880 ft NGVD

aborted preform, 1 (35.0 g) stoneware crock fragment, 2 (122.4 g) stoneware sherds, 11 (114.1 g) sherds of white stoneware and 1 (135.8 g) drain tile fragment.

Artifact 1-9 is a bifacial knife edge fragment. It has an excurvate blade with no edge abrading, and no beveling. Maximum dimensions are 4.1 cm x 2.1 cm x 1.0 cm and it weighs 6.1 g. The raw material is Burlington chert, which is found locally. Microscopic examination

revealed wear resulting from cutting meat without bone contact. This is an unclassified type not associated with a cultural period.

No organic remains were recovered and no prehistoric cultural features were observed. Historic features include the pipe well and part of a concrete foundation at the far northeast edge of the site. Other features may exist in the vicinity of the well, but the vegetation is so dense that identifying them is virtually impossible. It is also likely that 23CE364, which is located a short distance to the north, is associated with the site. The cultural materials at the site suggest only that it was occupied during prehistoric and historic (probably 20th century) times. The site functioned as a prehistoric habitation and a residence/farmstead

Subsurface deposits have been affected by the construction of roads and camping facilities as well as public use of the area. This site yielded abundant cultural materials and some historic features remain, although all standing structures have been des[illegible]ed. This site may be eligible for inclusion in the National Register of Historic Places and should be assessed.

23CE472

Table 21. Summary characteristics of 23CE472.

Site Name	Unnamed
Cultural Affiliation	Historic
Topographic Setting	Ridgetop
Parent Material	Kansas City Group (Pck)
Drainage	Unnamed intermittent stream
Original Recording Agency	Historic Preservation Associates
Size of Site	7 m x 20 m
Surface Visibility	0% - 25%
Slope	3%
Ground Cover Vegetation	Mature hardwood forest
Month and Year of Field Investigation	October 1992
Land Use	Recreation
Elevation	920 ft NGVD

23CE472 is an historic mining site recorded by Steven M. Imhoff of Historic Preservation Associates on October 6, 1992. The site includes two mining pits and associated tailings that occupy an area about 7 m north-south x 20 m east-west (140 m^2) and is situated on a ridgetop at an elevation of 920 ft. The land surface slopes downward to the southwest at a rate of 3%. The local geology consists of the Kansas C[illegible] Group (Pck) on which Boliver-Hector Association soils have formed. In the vicinity of the site, these soils support mature hardwood forest. The nearest available water is an unnamed intermittent stream located 150 m southeast of the site.

No remote sensing/sampling techniques were employed. No organic remains were recovered and no associated structural features were observed. Although there are no obvious

disturbances, this is an isolated historic feature without associated structures or artifacts and is not eligible for inclusion in the National Register of Historic Places.

Survey area 11 was investigated on October 6 and 8, 1992. It is a 43.6 acre (17.6 ha) parcel located in Cedar County in the S½ of the NW¼ and the NW¼ of the SW¼ of section 16, township 33N, range 25W (Figure 10). Elevations range from 867 ft - 960 ft with slopes of 2% - 18 %. The local geology consists of the Kansas City Group (Pck) on which Boliver-Hector Association soils have formed. These soils support mixed hardwoods and prairie. The local drainage is an unnamed creek that flows into the Little Sac River.

Developments in the area include paved and unpaved roads, two double vault toilets, buried waterlines and about 20 camp sites. Surface visibility is generally poor (0% - 25%) except in areas surrounding camp sites and picnic tables. As a result, approximately 15 transects were walked with 205 shovel tests excavated at 20-30 m intervals.

Our survey began at the far northeast edge of the area and immediately found a moderate density lithic scatter located in a small prairie. Shovel tests were excavated along north-south and east-west transects as well as purposive ones to fill in the gaps. The east-west transect began at the road intersection and proceeded along the southern edge of Espey Houston's previous transect. The soil is sandy and deep and most shovel tests were positive. The remainder of the area was surveyed in east-west transects with shovel tests at 20 m intervals except in the southernmost portion of the area where surface visibility was good and soil development was minimal. Our efforts resulted in the discovery of two prehistoric sites (23CE473 and 23CE474).

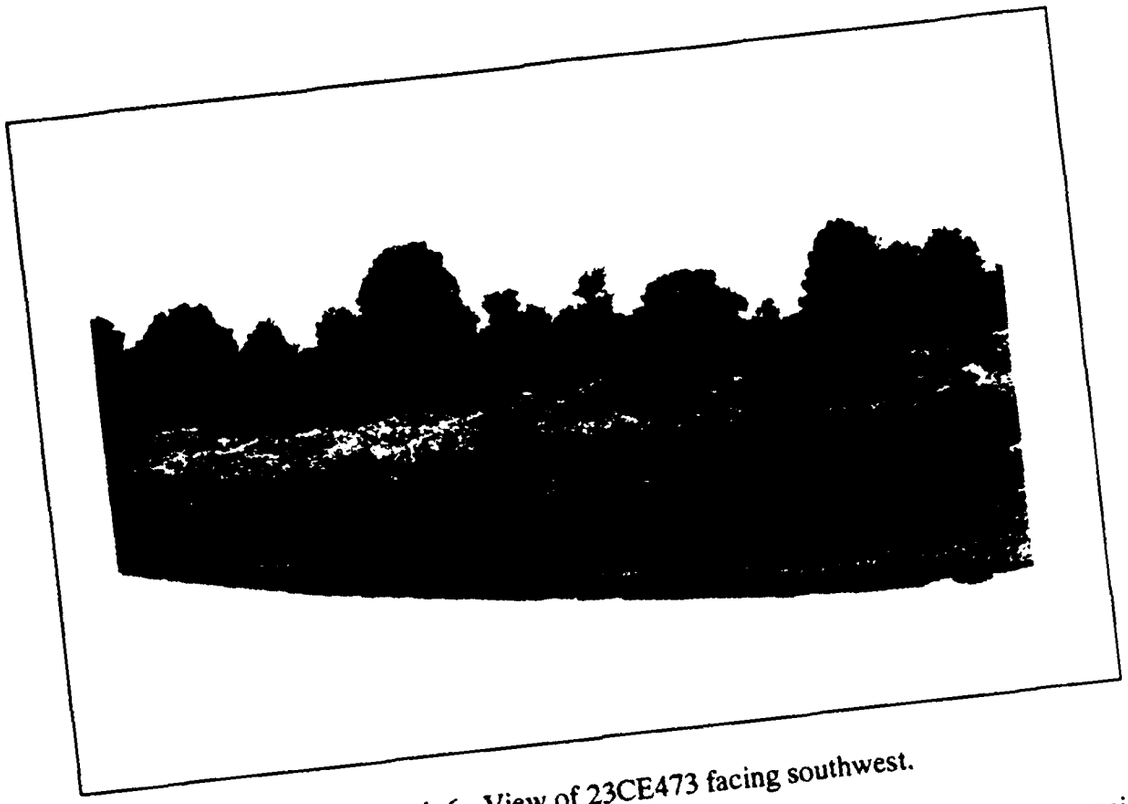
23CE473

Table 22. Summary characteristics of 23CE473.

Site Name	Unnamed
Cultural Affiliation	Indeterminate prehistoric
Topographic Setting	Ridgetop
Parent Material	Kansas City Group (Pck)
Drainage	Unnamed perennial stream
Original Recording Agency	Historic Preservation Associates
Size of Site	300 m x 120 m
Surface Visibility	0% - 25%
Slope	1%
Ground Cover Vegetation	Prairie
Month and Year of Field Investigation	October 1992
Land Use	Recreation
Elevation	960 ft NGVD

23CE473 (Photograph 6) is an unnamed prehistoric site recorded by Steven M. Imhoff of Historic Preservation Associates on October 6, 1992. It is about 300 m northeast-southwest x 120 m northwest-southeast (36,000 m^2) and is situated on a ridgetop at an elevation of 960 ft.

Figure 10. Masters Public Use Area showing Survey Area 11.



Photograph 6. View of 23CE473 facing southwest.

The land surface slopes downward to the southwest at a rate of 1%. The local geology consists of the Kansas City Group (Pck) on which Boliver-Hector Association soils have formed. In the vicinity of the site, these soils support mixed hardwoods and grasses with the site proper covered predominantly in prairie. The nearest available water is an unnamed perennial stream located 240 m north of the site.

A select surface collection and 11 shovel tests yielded 12 (4.6 g) interior flakes, 17 (87.8 g) initial stage interior flakes, 1 (0.5 g) retouch flake, 1 (33.4 g) secondary decortication flake, and 1 (19.7 g) preform fragment. No organic remains were recovered and no cultural features were observed. The cultural materials at the site suggest only that it was occupied during prehistoric times and functioned as a habitation.

The site has been affected by the construction of roads but appears to be largely undamaged and yielded abundant cultural materials. Soil development is very good and intact cultural deposits may exist. This site may be eligible for inclusion in the National Register of Historic Places.

23CE474

23CE474 is an unnamed prehistoric site recorded by Steven M. Imhoff of Historic Preservation Associates on October 8, 1992. It is about 260 m north-south x 280 m east-west (72,800 m^2) and is situated on a ridgetop at an elevation of 920 ft. The land surface slopes downward to the south at a rate of 9%. The local geology consists of the Kansas City Group

Table 23. Summary characteristics of 23CE474.

Site Name	Unnamed
Cultural Affiliation	Indeterminate prehistoric
Topographic Setting	Ridgetoe
Parent Material	Kansas City Group (Pck)
Drainage	Unnamed perennial stream
Original Recording Agency	Historic Preservation Associates
Size of Site	260 m x 280 m
Surface Visibility	25% - 50%
Slope	9%
Ground Cover Vegetation	Grasses and mixed hardwoods
Month and Year of Field Investigation	October 1992
Land Use	Recreation
Elevation	920 ft NGVD

(Pck) on which Boliver-Hector Association soils have formed. In the vicinity of the site, these soils support grasses and mixed hardwoods, with the site proper in an area developed for camping and picnicing. The nearest available water is an unnamed perennial stream located 320 m northwest of the site.

A select surface collection yielded 1 (18.1 g) biface fragment, 9 (9.5 g) interior flakes, and 11 (42.7 g) initial stage interior flakes. Artifact 1-1 is a bifacial knife midsection. It has an excurvate blade and a biconvex cross section with no edge abrading, and no beveling. Maximum dimensions are 2.9 cm x 4.5 cm x 1.1 cm and it weighs 18.1 g. The raw material is a fossiliferous Burlington chert, which is found locally. Microscopic examination revealed wear resulting from cutting meat without bone contact. This is an unclassified type not associated with a cultural period. It was produced by reverse hinging while trying to thin a biface tip.

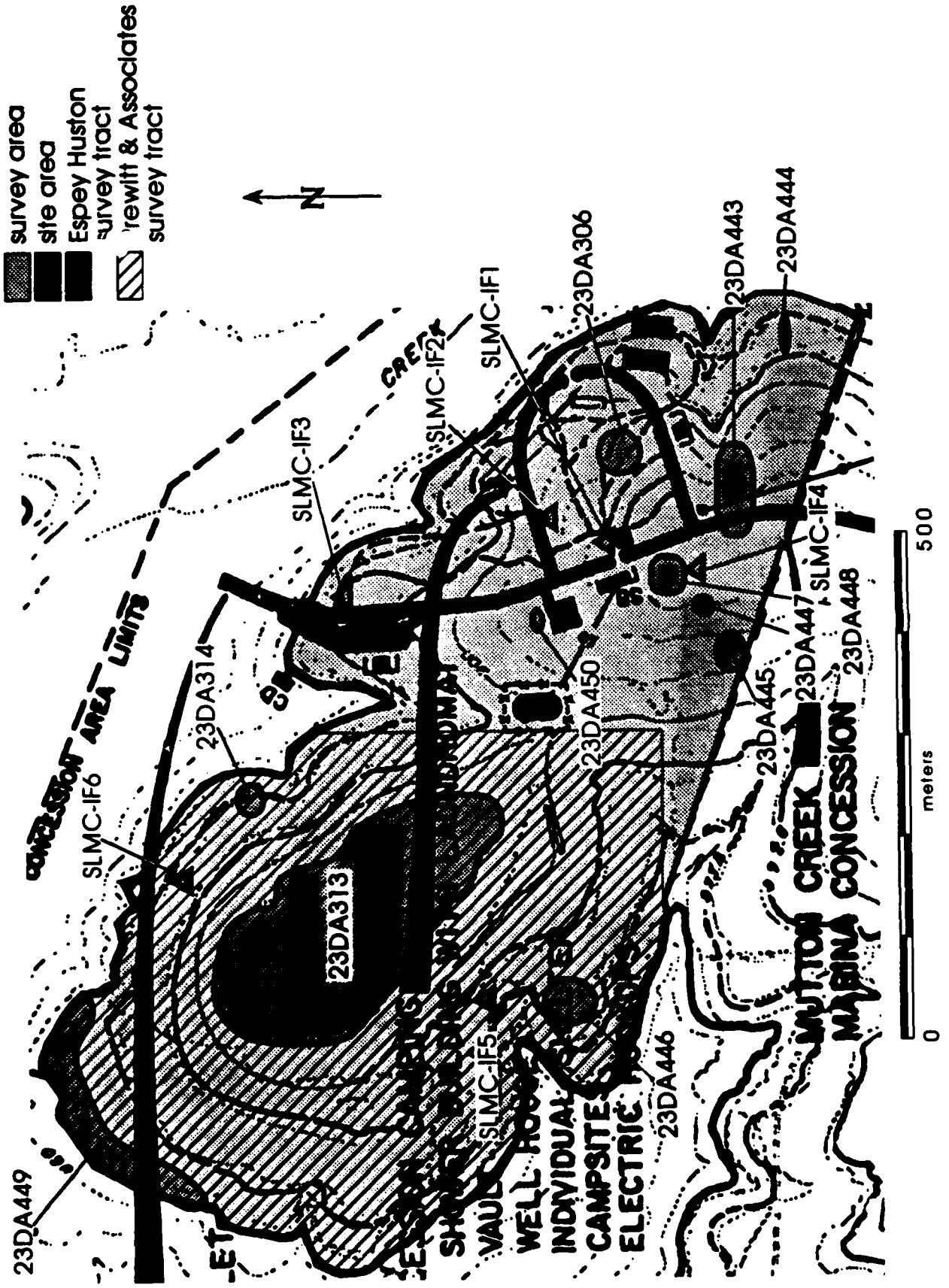
No organic remains were recovered and no cultural features were observed. The cultural materials at the site suggest only that it was occupied during prehistoric times. The site may have functioned as an upland hunting camp.

This site has been damaged by the construction of roads and camping facilities. The soils have little depth and the site has probably been largely destroyed. This site probably has been heavily damaged by construction activities and is not eligible for inclusion in the National Register of Historic Places.

MUTTON CREEK PUBLIC USE AREA

Survey area 1 was investigated between September 15 and 18, 1992. It is a 101 acre (40.9 ha) parcel located in Dade County in the SW¼ of the NW¼ and the NW¼ of the NW¼ of the SW¼ of section 3 and the E½ of the NE¼ of section 4, township 32N, range 26W (Figure 11). The western half of this area has been surveyed previously by Prewitt and Associates (Girard

Figure 11. Mutton Creek Public Use Area showing Survey Area 1.



and Freeman 1992:163). Elevations range from 867 ft - 940 ft with slopes of 2% - 10%. The local geology consists of the Kinderhookian Series (Mk) on which various soils have developed. Preliminary soil mapping provided by the USDA Soil Conservation Service and the Missouri Department of Natural Resources (Harwood 1992) shows areas of Alsup silt loam, 5% - 20%, extremely stone; Goss gravely silt loam, 5% - 15% slopes; Goss-Moko complex, 10% - 25% slopes; Bardley-Moko-rock outcrop complex, 5% - 15% and Moko-Blueye-rock outcrop complex, 5% - 14%. These soils support mixed hardwoods and second growth in old fields. The local drainage is Mutton Creek and the Sac River. Surface visibility was generally fair (25% - 50%) but ranged from 50% or better in camping areas to 0% in wooded areas. We walked 22 with approximately 280 shovel tests excavated at 20 m -30 m intervals.

Seven transects were walked east of, and parallel to, the road leading to the boat ramp. Most of the area has been severely affected by the construction of campground facilities. This area is covered with grasses and scattered hardwoods with 50% - 75% ground surface visibility. A small area east of the road and south of the campground is covered in mixed hardwoods with 0% surface visibility. The campground area was not shovel tested due to relatively good surface visibility but 10 shovel tests were excavated in the wooded area to the south.

After completing the area east of the road, we began surveying east-west transects west of it. Shovel tests were excavated at 20 m intervals. About 35.2 of the 76.5 acres west of the road were formerly a terraced pasture that has grown up in black locusts, bois d'arcs, green briar, roses, blackberries and various weeds and grasses. Surface visibility is 0% and the area can only be traversed with difficulty. The remaining 41.3 acres is covered in mixed hardwoods with less understory vegetation but significant stands of cedars that make walking transects difficult. Surface visibility in the mixed hardwoods is somewhat better but still negligible. We finished up by walking the shoreline west of the boat ramp to see if any sites are exposed by erosion. We then walked three transects with shovel tests at 20 m intervals going east back to the road.

As a result of our efforts, three previously recorded sites (23DA306, 23DA313 and 23DA314) were revisited, eight new sites (23DA443, 23DA444, 23DA445, 23DA446, 23DA447, 23DA448, 23DA449 and 23DA450) were recorded and six isolated prehistoric artifacts (SLMC-IF1, SLMC-IF2, SLMC-IF3, SLMC-IF4, SLMC-IF5 AND SLMC-IF6) were located.

23DA306

23DA306 is an unnamed prehistoric site recorded in June 1979 by Peter W. Nichols and Leonard R. Voellinger of Espey Huston and Associates.

> This site, on the northeast side of a point of land which overlooks the Mutton Creek Branch of Stockton Lake, was found by chance while taking environmental photographs around the lake.... The site is a dense scatter of primary lithic debitage: cores, flakes and crude bifaces. It may have been a quarrying and primary manufacturing station. The site has been severely altered by the construction of an RV campground. The hillside on which the site is located has been terraced to provide recreational vehicle pads and access drives. Soil is shallow humus over bedrock. No collection was made at this site [Nichols et al. 1980:2-19--2-21].

Table 24. Summary characteristics of 23DA306.

Site Name	Unnamed
Cultural Affiliation	Indeterminate prehistoric
Topographic Setting	Hillside
Parent Material	Kinderhookian Series (Mk)
Drainage	Mutton Creek
Original Recording Agency	Espey Huston and Associates
Size of Site	32 m x 32 m
Surface Visibility	50% - 75%
Slope	11%
Ground Cover Vegetation	Mixed hardwoods and grasses
Month and Year of Field Investigation	September 1992
Land Use	Recreation
Elevation	950 ft NGVD

It was revisited by Steven M. Imhoff of Historic Preservation Associates on September 15, 1992. The site is situated on a slope at an elevation of 950 ft. The land surface slopes downward to the east at a rate of 11%. The local geology consists of the Kinderhookian Series (Mk) on which Alsup Silt Loam, 5% - 20% slopes, extremely stony soils have formed. In the vicinity of the site, these soils support mixed hardwoods, grasses, with the site proper in an area developed for camping and picnicing. The nearest available water is Mutton Creek, a perennial stream located 150 m northeast of the site.

Seven roughly north-south transects were walked in the area occupied by 23DA306 but no evidence of the site was observed. Isolated artifacts SLMC-IF1 and SLMC-IF2 may be associated with the site but were found up slope from the previously recorded site area. Artifacts were previously reported over an area measuring 32 m north-south x 32 m east-west (1,024 m^2). No cultural materials were observed or collected. No organic remains were recovered and no cultural features were observed. The cultural materials previously noted suggest only that it was occupied during prehistoric times and may have functioned as a source of raw material for the manufacture of stone tools.

No evidence of this site was discovered during our visit. Although the ground surface is obscured by imported gravel and grasses in areas not subject to traffic, there are sufficient exposures to detect cultural materials. The area has been severely disturbed by park developments and public use of the area. The soils are shallow and stony and the site has probably been severely damaged, if not destroyed. This site does not appear to merit inclusion in the National Register of Historic Places.

SLMC-IF1 is an adze. It is an unstemmed specimen with a rounded tip, an excurvate blade, no notches, no shoulders and a convex base. The cross section is irregular with no edge abrading, and no beveling. Maximum dimensions are 8.4 cm x 7.1 cm x 1.9 cm and it weighs 113.7 g. The raw material is Burlington chert, which is found locally. Microscopic examination revealed edge battering. This is an unclassified type not associated with a cultural period.

23DA313

Table 25. Summary characteristics of 23DA313.

Site Name	Unnamed
Cultural Affiliation	Late Archaic, Woodland, 19th-20th cen. Historic
Topographic Setting	Hilltop
Parent Material	Kinderhookian Series (Mk)
Drainage	Mutton Creek, pipe well
Original Recording Agency	Prewitt and Associates
Size of Site	260 m x 120 m
Surface Visibility	0% - 25%
Slope	2%
Ground Cover Vegetation	Mixed hardwoods
Month and Year of Field Investigation	September 1992
Land Use	Recreation
Elevation	920 ft NGVD

23DA313 is an unnamed prehistoric and historic site recorded in May of 1982 by Peter W. Nichols of Prewitt and Associates, Inc.

> This site, which contains both prehistoric and historic components, covers an area of about 80 by 45 m on a ridgeslope approximately 350 m east of the former channel of the Sac River. The area is in oak-hickory forest with numerous small clearings and bedrock out-crops. Mounded and scoured areas indicate that bulldozer activity has taken place at the site.
>
> The prehistoric component consists of a dense scatter of lithic debitage and tools. The historic component is marked by limestone footings which apparently represent at least two structures. The footings are spatially intact in one portion of the site and are arranged in a rectangular pattern measuring approximately 4 by 8 m (13 by 26 ft). Surface depressions, scattered footing stones, and mounded earth to the east of this structure all probably relate to a second structure. A concrete slab to the north of the first structure probably represents the footing for a windmill.
>
> In 1982 nine shovel tests were excavated, and it was discovered that a dense scatter of historic and prehistoric cultural materials was present. However, the relationship of the historic and prehistoric artifacts to one another was not clear and the site limits were not well defined. Test excavations were carried out in 1983 in order to address these problems. Eight additional shovel tests were excavated in addition to two 1-by-1-m test pits. A general collection of artifacts exposed on the surface also was made. . . .
>
> One of the projectile point fragments appears to relate to the Early/Middle Archaic period whereas another relates to the Late Woodland/Mississippian period. The third is too fragmented for identification. Although there is no evidence of vertical separation of the prehistoric occupations, the two classified projectile points were recovered from widely separated portions of the site, and it may be possible to isolate components horizontally. The test pits revealed that although prehistoric and historic artifacts are mixed in the upper 10 to 15 cm, undisturbed prehistoric deposits underlie the historic materials to about 30 cm below the surface.

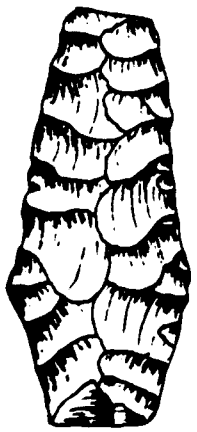
No informants were able to associate a specific family with site 23DA313. However, published sources indicate that the first land entries in T32N, R26W were made in 1840 by James Hobbs, L. T. Dunnaway, Eber E. White, William M. Roark, S. E. Seybert, John F. Son, Thomas Fleming, and William Johnson. Additionally, a nineteenth-century survey map indicates that a cabin existed by 1837 in the immediate vicinity of either this site or 23DA314.

Corps of Engineers photographs taken of the house standing at 23DA313 revealed a typical and-and-one-half-story, Cumberland-plan, wood-frame residence which dated from the late nineteenth to early twentieth century. Artifacts collected from this site in 1983 not only are contemporaneous with this structure by may date from a considerably earlier period as well.

This site has the potential to yield significant information concerning both prehistoric and nineteenth-century settlements in the project area. Reconstruction of prehistoric activities, site spatial structure, and methods of lithic tool manufacture all appear to be possible as well as isolating and dating of occupations. The identified structures might date to the turn of the century, but historic records and some artifacts suggest that an earlier nineteenth-century occupation is represented which includes significant material remains. It is recommended that 23DA313 be considered eligible for nomination to the National Register of Historic Places [Girard and Freeman 1992:165-166].

It was revisited by Steven M. Imhoff of Historic Preservation Associates on September 18, 1992. Shovel testing and inspection of isolated surface exposures revealed that the site is about 260 m northwest-southeast x 120 m northeast-southwest (31,200 m^2) and encompasses virtually all of the ridgetop. The land surface slopes at a rate of 2%. The local geology consists of the Kinderhookian Series (Mk) on which Moko-Blueye-rock outcrop complex, 5% - 14% slope soils have formed. In the vicinity of the site, these soils support mixed hardwoods, with the site proper wooded. The nearest available water is from a pipe well located on the site. The nearest water source for the prehistoric occupants is Mutton Creek located 300 m northeast.

A select surface collection and 15 shovel tests yielded 1 (7.6g) biface, 1 (8.9g) Langtry-like biface, 2 (16.7g) biface fragments, 1 (6.3g) Langtry-like biface fragment, 2 (4.4g) whiteware china sherds, 6 (2.0g) interior flakes, 16 (27.3g) initial stage interior flakes, 27 (4.9g) retouch flakes, 1 (1.2g) secondary decortication flake, 1 (9.4g) blue-green glass, 1 (5.3g) glass canning jar lid sherd, 2 (2.5g) clear bottle glass sherds, 3 (27.1g) window glass, 1 (116.0g) iron harness hardware, 1 (13.6g) ironstone sherd, 1 (426.3g) stoneware sherd, and 1 (44.2g) zinc canning jar ring.



Langtry (1-1)

Artifact 1-1 is a bifacial knife. It is a contracting stem corner removed specimen with a damaged tip, a straight blade, sloping shoulders and a straight base. The cross section is biconvex with no edge abrading, and no beveling. Maximum dimensions are 5.3 cm x 2.4 cm x 0.5 cm and it weighs 8.9 g. The raw material is Burlington chert, which is found locally. Microscopic examination revealed wear resulting from cutting meat without bone contact. This specimen is resharpened and most closely resembles the Langtry type, which is associated with the Late Archaic through Woodland periods.

Langtry (1-2)

Artifact 1-2 is a bifacial knife proximal. It is a contracting stem corner removed specimen with a missing tip, an asymmetrical blade, sloping shoulders and a base. The cross section is with no edge abrading, and no beveling. Maximum dimensions are 3.4 cm x 2.8 cm x 0.5 cm and it weighs 6.3 g. The raw material is Burlington chert, which is found locally. Microscopic examination revealed wear resulting from cutting meat without bone contact. This most closely resembles the Langtry type, which is associated with the Late Archaic through Woodland periods.

Artifact 1-3 is a bifacial knife. It is a basally notched specimen with a missing stem, a rounded tip with a spur protruding from its apex, a straight blade, no shoulders and a missing base. The cross section is biconvex with no edge abrading, and no beveling. Maximum dimensions are 4.7 cm x 2.7 cm x 0.5 cm and it weighs 7.6 g. The raw material is Burlington chert, which is found locally. Microscopic examination revealed wear resulting from cutting meat without bone contact. This is an unclassified type not associated with a cultural period.

Artifact 1-4 is a bifacial knife midsection. It has an excurvate blade, missing shoulders and a missing base. The cross section is biconvex with no edge abrading, and no beveling. Maximum dimensions are 2.7 cm x 2.6 cm x 0.6 cm and it weighs 4.9 g. The raw material is heat-treated Burlington chert, which is found locally. Microscopic examination revealed wear resulting from cutting meat without bone contact. This is an unclassified type not associated with a cultural period.

No organic remains were recovered and no prehistoric features were detected. Historic features include a pipe well and a native stone house foundation (Figure 12). The well pipe is set into a concrete slab 4' 3" square and located 6.1 m north of the house. The house is an L-shaped structure oriented with magnetic north. The north-south length is 33' 6" and the east-west length is 26' 10". The width of the east-west leg of the "L" is 13' 6". That of the north-south leg is 15' 6". The cultural materials and features at the site suggest that it was occupied during the Historic (probably turn of the century) and Archaic-Woodland periods and functioned as a prehistoric habitation and, later, as a residence/farmstead.

No standing structures remain but foundation stones for the house appear to be in situ. Otherwise, the site appears to be in good condition. The extent of damage inflicted on the prehistoric component by the historic occupants is unknown but no obvious gross disturbances were observed and the prehistoric component may also be in good condition. Twenty-two shovel were tests excavated along the cardinal directions and revealed the presence of sub-plowzone deposits. It is also possible that this is the 1835 structure shown on an historic map of the Stockton Lake area (Nichols et al. 1980:1-9). This site may be eligible for inclusion in the National Register of Historic Places and an assessment is required.

23DA314

23DA314 is an unnamed historic site recorded in May of 1982 by Peter W. Nichols of Prewitt and Associates, Inc.

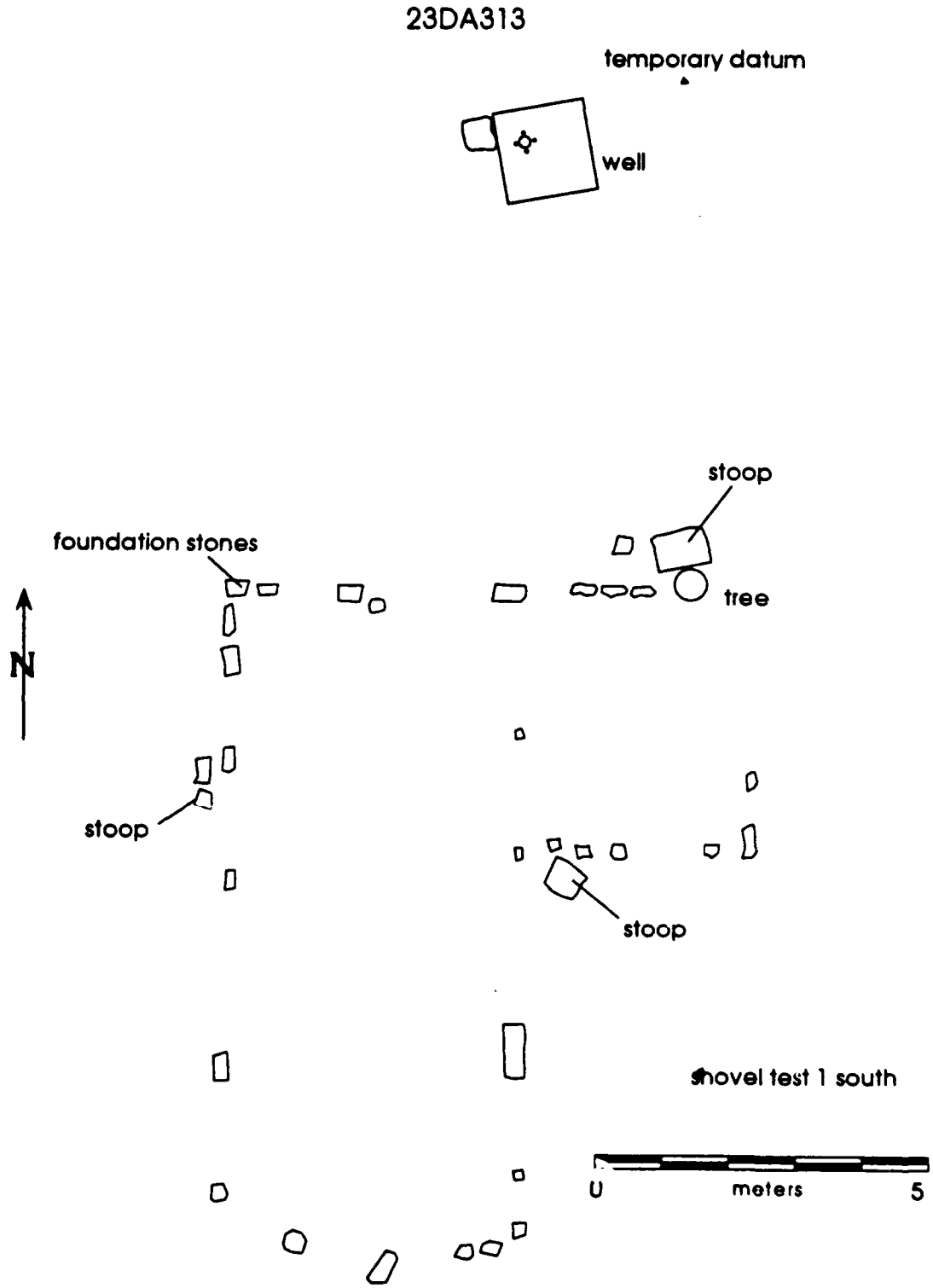


Figure 12. Historic features at 23DA313.

Table 26. Summary characteristics of 23DA314.

Site Name	Unnamed
Cultural Affiliation	19th-20th century Historic?
Topographic Setting	Hillside
Parent Material	Kinderhookian Series (Mk)
Drainage	Mutton Creek
Original Recording Agency	Prewitt and Associates
Size of Site	50 m x 50 m
Surface Visibility	0 5 - 25%
Slope	16%
Ground Cover Vegetation	Mixed hardwoods
Month and Year of Field Investigation	September 1992
Land Use	Recreation
Elevation	890 ft NGVD

This site contains the remains of an historic structure located on a ridgeslope along the present lake shoreline. The site covers an area of approximately 15 by 9 m and lies 200 m south of the former channel of Mutton Creek. The area is wooded with a moderate to dense understory. The site is periodically inundated and may be slightly disturbed as a result of shoreline erosion.

The site consists of a series of limestone or dolomite footing stones arranged in a rectangular pattern. The southern portion lies in a large shallow depression. Remnants of dry-laid walls remain standing at the site.

This site lies approximately 60 m northeast of 23DA313 on the same historical property. As noted, there is evidence that a cabin existed at 23DA314 of 23DA313 by 1837, and the artifacts recovered from 23DA313 clearly suggest that the complex of sites was occupied during the mid nineteenth century. No shovel tests or surface collections were carried out at 23DA314 in 1982, and attempts to relocate the site in 1983 were unsuccessful because of the high lake level. Investigations of this site in conjunction with those at 23DA313 would have a high potential to yield information significant to understanding mid nineteenth-century settlements in the project area. It is recommended that 23DA314 be considered eligible for nomination to the National Register of Historic Places [Girard and Freeman 1992:166].

It was revisited by Steven M. Imhoff of Historic Preservation Associates on September 17, 1992. It is situated on a hillside at an elevation of 890 ft. The local geology consists of the Kinderhookian Series (Mk), on which Goss Gravely Silt Loam, 5% - 15% slope soils have formed. These soils presently support mixed hardwoods. In the vicinity of the site, the land slopes northeast at a rate of 16%. The nearest available water is from Mutton Creek, a perennial stream located approximately 300 m northeast of the site.

Artifacts and surface features are distributed over an area measuring 50 m north-south x 50 m east-west (2500 m^2). Cultural materials collected include 8 (47.9 g) whiteware china sherds, 2 (11.0 g) glass canning jar sherds, 1 (7.7 g) automotive light bulb, 1 (18.4 g) bottle glass sherd, 1 (1.4 g) clear bottle glass sherd, 1 (10.7 g) green glass bottle sherd, 1 (6.4 g) lavender bottle glass sherd, 1 (7.8 g) pressed glass sherd, 1 (2.1 g) window glass sherd, 1 (478.1 g) horseshoe, 1

(144.3 g) unidentified iron object, 1 (256.5 g) iron stove part, and 7 (338.9 g) ironstone sherds. No organic remains were recovered. The lone remaining feature is the native stone foundation of a house. It is roughly L-shaped. The north half has been excavated into the hillside and is 16' 3" north-south by 15' east-west. The south half is 16' north-south by 9' east-west. These materials and features at the site suggest that it was occupied during historic times and functioned as a residence/farmstead.

No standing structures remain. The site is subject to inundation when the lake is at flood stage. The National Register eligibility of this site is undetermined. It appears to be one of many Depression Era farmsteads but an historic map of the Stockton Lake area compiled by Nichols et al. (1980:1-9) shows an 1835 structure in the vicinity that may correspond to 23DA314. If so, this site may be eligible for inclusion in the National Register. Further assessment is required.

23DA443

Table 27. Summary characteristics of 23DA443.

Site Name	Unnamed
Cultural Affiliation	Indeterminate prehistoric
Topographic Setting	Hillside
Parent Material	Kinderhookian Series (Mk)
Drainage	Mutton Creek
Original Recording Agency	Historic Preservation Associates
Size of Site	40 m x 80 m
Surface Visibility	50% - 75%
Slope	25%
Ground Cover Vegetation	Mixed hardwoods
Month and Year of Field Investigation	September 1992
Land Use	Recreation
Elevation	940 ft NGVD

23DA443 is an unnamed prehistoric site recorded by Steven M. Imhoff of Historic Preservation Associates on September 15, 1992. It is situated on a hillside at an elevation of 940 ft. The local geology consists of the Kinderhookian Series (Mk), on which Alsup silt loam, 5% - 20%, extremely stony soils have formed. These soils presently support mixed hardwoods with the site proper covered in various weeds that have sprouted subsequent to bulldozing activities. In the vicinity of the site, the land slopes east at a rate of 25%. The nearest available water is from Mutton Creek a perennial stream located approximately 250 m northeast of the site.

Artifacts are distributed over an area measuring 40 m north-south x 80m east-west (3200 m^2). Cultural materials collected include 8 (235.4 g) initial stage interior flakes, and 6 (38.0 g) primary decortication flakes. No organic remains were recovered and no features were observed. The materials at the site suggest only that it was occupied during prehistoric times and may have functioned as a source of chert for the manufacture of stone tools.

This site has been heavily damaged by bulldozing. The deposits are thinly scattered and shallow and have probably been destroyed. This site does not merit inclusion in the National Register of Historic Places.

23DA444

Table 28. Summary characteristics of 23DA444.

Site Name	Unnamed
Cultural Affiliation	Historic
Topographic Setting	Hillside
Parent Material	Kinderhookian Series (Mk)
Drainage	Mutton Creek
Original Recording Agency	Historic Preservation Associates
Size of Site	3 m x 11 m
Surface Visibility	0% - 25%
Slope	20%
Ground Cover Vegetation	Mixed hardwoods
Month and Year of Field Investigation	September 1992
Land Use	Recreation
Elevation	890 ft NGVD

23DA444 is an unnamed historic site recorded by Steven M. Imhoff of Historic Preservation Associates on September 15, 1992. It is situated on a hillside at an elevation of 890 ft. The local geology consists of the Kinderhookian Series (Mk), on which Goss-Moko complex, 10% - 25% slope soils have formed. These soils presently support mixed hardwoods. In the vicinity of the site, the land slopes east at a rate of 20%. The nearest available water is from Mutton Creek a perennial stream located approximately 180 m northeast of the site.

The site consists of a linear pile of rock distributed over an area measuring 3 m north-south x 11 m east-west (33 m^2). No cultural materials were collected. It probably is the result of historic field clearing activities. Given the absence of artifacts, we know only that it dates to historic times. There are no obvious gross disturbances but the wall has fallen down. This is an isolated historic feature and is not eligible for inclusion in the National Register of Historic Places.

23DA445

23DA445 is an unnamed historic site recorded by Steven M. Imhoff of Historic Preservation Associates on September 15, 1992. It is situated on a hillside at an elevation of 930 ft. The local geology consists of the Kinderhookian Series (Mk), on which Goss Gravely silt loam, 5% - 15% slope soils have formed. These soils presently support mixed hardwoods. In the vicinity of the site, the land slopes west at a rate of 12%. The nearest available water is from an unnamed intermittent stream located approximately 350 m west of the site.

Table 29. Summary characteristics of 23DA445.

Site Name	Unnamed
Cultural Affiliation	Historic
Topographic Setting	Hillside
Parent Material	Kinderhookian Series (Mk)
Drainage	Unnamed intermittent stream
Original Recording Agency	Historic Preservation Associates
Size of Site	30 m x 20 m
Surface Visibility	0% - 25%
Slope	12 %
Ground Cover Vegetation	Mixed hardwoods
Month and Year of Field Investigation	September 1992
Land Use	Recreation
Elevation	930 ft NGVD

Surface features are distributed over an area measuring 30 m north-south x 20 m east-west (600 m^2). No cultural materials were collected and no organic remains were recovered. Features include a roughly circular 5 m diameter pit, a 3 m x 15 m trench and a linear pile of stones. The pits are 1 m - 1.5 m deep. The rock pile is oriented north-south and is about 3 m x 15 m and 30 cm - 40 cm high. The features at the site suggest only that it was created during historic times and may be the result of mining activities. There are no obvious gross disturbances. This site consists of a number of features without associated artifacts and is not eligible for inclusion in the National Register of Historic Places.

23DA446

Table 30. Summary characteristics of 23DA446.

23DA446 Site Name	Unnamed
Cultural Affiliation	20th century historic
Topographic Setting	Ridgetoe
Parent Material	Kinderhookian Series (Mk)
Drainage	Unnamed intermittent stream
Original Recording Agency	Historic Preservation Associates
Size of Site	30 m x 30 m
Surface Visibility	0% - 25%
Slope	8%
Ground Cover Vegetation	Mixed hardwoods and cedars
Month and Year of Field Investigation	September 1992
Land Use	Recreation
Elevation	885 ft NGVD

23DA446 is an unnamed historic site recorded by Steven M. Imhoff of Historic Preservation Associates on September 15, 1992. It is situated on a ridgetoe at an elevation of 885 ft. The local geology consists of the Kinderhookian Series (Mk), on which Alsup silt loam, 5% - 20%, extremely stony soils have formed. These soils presently support mixed hardwoods and cedars. In the vicinity of the site, the land slopes west at a rate of 8%. The nearest available water is from an unnamed intermittent stream located approximately 80 m south of the site.

Artifacts and surface features are distributed over an area estimated at 30 m north-south x 30 m east-west (900 m^2). Cultural materials observed include a stoppered blown glass half gallon bottle, a tin can, a 3 gallon bucket and a section of concrete foundation. No cultural materials were collected and no organic remains were recovered. All cultural features have been destroyed. The lone remaining "feature" is a large mound of earth. The materials and features at the site suggest only that it was occupied during historic times and probably functioned as a farmstead outbuilding. All that remains is some scattered building materials, foundation stones and a large mound of earth. This site apparently has been effectively destroyed and is not eligible for inclusion in the National Register of Historic Places.

23DA447

Table 31. Summary characteristics of 23DA447.

Site Name	Unnamed
Cultural Affiliation	Historic
Topographic Setting	Ridgetop
Parent Material	Kinderhookian Series (Mk)
Drainage	Mutton Creek
Original Recording Agency	Historic Preservation Associates
Size of Site	15 m x 11 m
Surface Visibility	0% - 25%
Slope	5%
Ground Cover Vegetation	Mixed hardwoods
Month and Year of Field Investigation	September 1992
Land Use	Recreation
Elevation	940 ft NGVD

23DA447 is an unnamed historic site recorded by Steven M. Imhoff of Historic Preservation Associates on September 16, 1992. It is situated on a ridgetop at an elevation of 940 ft. The local geology consists of the Kinderhookian Series (Mk), on which Goss gravely silt loam, 5% - 15% slope soils have formed. These soils presently support mixed hardwoods. In the vicinity of the site, the land slopes north at a rate of 5%. The nearest available water is from Mutton Creek, a perennial stream located approximately 300 m northeast of the site.

Surface features are distributed over an area measuring 15 m northeast-southwest x 11 m northwest-southeast (165 m^2). No cultural materials were collected and no organic remains were recovered. This site includes five circular rock piles that range from 1 m - 3 m in diameter and

about 30 cm high. The features at the site suggest only that it dates to historic times and functioned in an unknown way.

This site is largely undisturbed with the exception of two rock piles, one of which appears to have been dug into and another that must have surrounded a tree that fell. This site is an isolated historic feature and is not eligible for inclusion in the National Register of Historic Places.

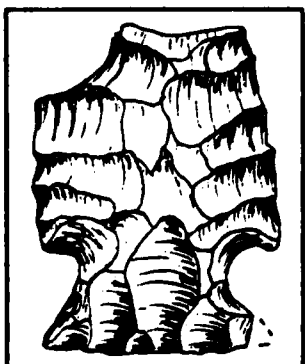
23DA448

Table 32. Summary characteristics of 23DA448.

Site Name	Unnamed
Cultural Affiliation	Late Archaic, Middle - Late Woodland, Historic
Topographic Setting	Ridgetop
Parent Material	Kinderhookian Series (Mk)
Drainage	Mutton Creek
Original Recording Agency	Historic Preservation Associates
Size of Site	30 m x 30 m
Surface Visibility	50% - 75%
Slope	8%
Ground Cover Vegetation	Mixed hardwoods
Month and Year of Field Investigation	September 1992
Land Use	Recreation
Elevation	940 ft NGVD

23DA448 is a prehistoric site recorded by Steven M. Imhoff of Historic Preservation Associates on September 16, 1992. It is situated on a ridgetop at an elevation of 940 ft. The local geology consists of the Kinderhookian Series (Mk), on which Goss gravely silt loam, 5% - 15% slope soils have formed. These soils presently support mixed hardwoods. In the vicinity of the site, the land slopes north at a rate of 8%. The nearest available water is from Mutton Creek, a perennial stream located approximately 300 m northeast of the site.

Artifacts are distributed over an area measuring 30 m north-south x 30 m east-west (900 m^2). Cultural materials collected include 1 (10.1g) Langtry biface fragment, 1 (10.4g) Steuben biface fragment, 1 (115.7g) core, 1 (4.2g) initial stage interior flake, 3 (6.3g) secondary decortication flakes, and 1 (12.0g) ironstone sherd.


Steuben (1-1)

Artifact 1-1 is a bifacial knife proximal. It is an expanding stem specimen with a missing tip, an excurvate blade, side notches, square shoulders and a straight base. The cross section is biconvex with no edge abrading, and no beveling. Maximum dimensions are 4.1 cm x 3.1 cm x 0.7 cm and it weighs 10.4 g. The raw material is Burlington chert, which is found locally. Microscopic examination revealed wear resulting from cutting meat without bone contact. This most closely resembles the

Steuben type, which is associated with the Woodland period.

Langtry (1-2)

Artifact 1-2 is a bifacial knife proximal. It is a contracting stem corner removed specimen with a missing tip, a straight blade, sloping shoulders and a straight base. Breakage probably was due to a large crystal filled vug. The cross section is biconvex with edge abrading on the stem, and no beveling. Maximum dimensions are 4.2 cm x 3.8 cm x 0.6 cm and it weighs 10.1 g. The stem measures 1.7 cm x 2.0 cm and comprises about 40 % of the total length of the specimen. The raw material is Burlington chert, which is found locally. Microscopic examination revealed wear resulting from cutting meat without bone contact. This most closely resembles the Langtry type, which is associated with the Late Archaic through Woodland periods.

No organic remains were recovered. No features were observed. The materials at the site suggest that it was occupied during the Archaic and/or Woodland period and probably functioned as a seasonal habitation. A new gravel parking area may also conceal part of the site. This site appears to have been destroyed by bulldozing and is not eligible for inclusion in the National Register of Historic Places.

23DA449

Table 33. Summary characteristics of 23DA449.

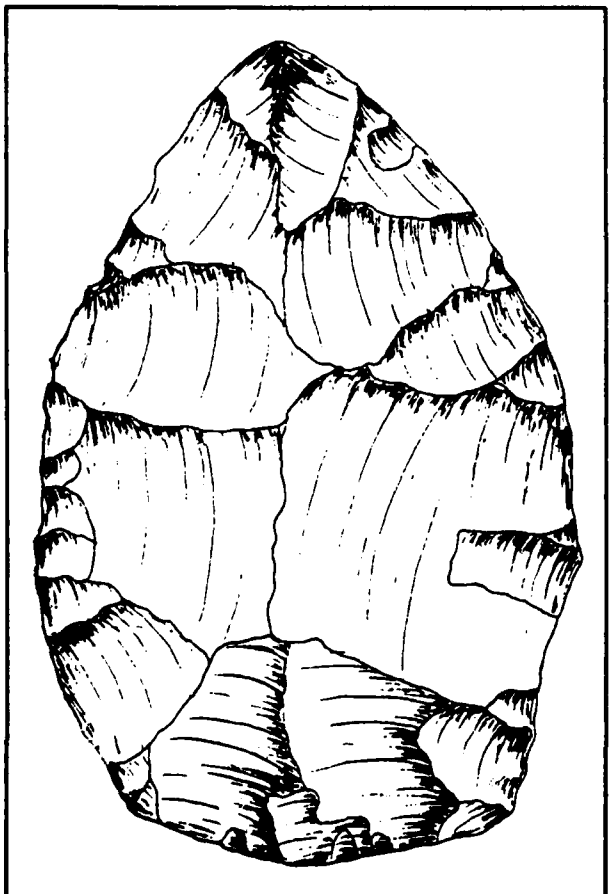
Site Name	Unnamed
Cultural Affiliation	Woodland?, Historic
Topographic Setting	Toeslope
Parent Material	Kinderhookian Series (Mk)
Drainage	Sac River
Original Recording Agency	Historic Preservation Associates
Size of Site	300 m x 40 m
Surface Visibility	50% - 75%
Slope	5%
Ground Cover Vegetation	Mixed hardwoods weeds and grass
Month and Year of Field Investigation	September 1992
Land Use	Recreation
Elevation	867 ft NGVD

23DA449 is an unnamed prehistoric and historic site recorded by Steven M. Imhoff of Historic Preservation Associates on September 17, 1992. It is situated on a toeslope at an elevation of 867 ft. The local geology consists of the Kinderhookian Series (Mk), on which Alsup silt loam, 5% - 20%, extremely stony soils have formed. These soils presently support mixed hardwoods, weeds and grasses. In the vicinity of the site, the land slopes northwest at a rate of

5%. The nearest available water is from the Sac River located approximately 200 m west of the site.

Artifacts are distributed over an area measuring 300 m northeast-southwest x 40 m northwest-southeast (12,000 m^2). Cultural materials collected include 1 (48.4 g) adze, 1 (146.4 g) biface, 1 (198.7 g) core, 1 (4.5 g) dart point stem/base, 1 (2.8 g) dart point tip, 21 (29.3 g) interior flakes, 21 (219.1 g) initial stage interior flakes, 4 (55.0 g) primary decortication flakes, 1 (78.9 g) secondary decortication flake, 1 (27.4 g) ironstone sherd, and 3 (152.6 g) aborted preforms.

Artifact 1-1 is a dart point proximal. It is an expanding stem specimen with a missing tip, a missing blade, corner notches, damaged shoulders and a straight base. The tip has been carried away by an impact fracture. The cross section is biconvex with no edge abrading and no beveling, although the specimen is sufficiently damaged to have obliterated evidence of edge abrading. Maximum dimensions are 2.8 cm x 2.3 cm x 0.5 cm and it weighs 4.5 g. The raw material is Burlington chert, which is found locally. Microscopic examination revealed no evidence of use-wear. This is an unclassified type that may be associated with the Woodland period.



Bifacial Knife (1-2)

Artifact 1-2 is a broad lanceolate bifacial knife. It is an unnotched and unstemmed specimen with a rounded tip, an excurvate blade, no shoulders and a convex base. The cross section is plano-convex with no edge abrading and no beveling. Maximum dimensions are 10.8 cm x 7.0 cm x 1.8 cm and it weighs 146.4 g. The raw material is Burlington chert, which is found locally. This is a large biface, possibly a preform, that was hand-held and used as a cutting tool. Microscopic examination revealed wear resulting from cutting meat with bone contact. This is an unclassified type not associated with a cultural period.

Adze (1-3)

Artifact 1-3 is a small pear-shaped adze. It is a contracting stem specimen with a rounded tip, an excurvate blade, no notches, no shoulders and a convex base. Hafting constrictions

exist on the poll end, but one may be accidental. The cross section is biconvex with no edge abrading, but beveling of the bit. Maximum dimensions are 6.9 cm x 4.7 cm x 1.7 cm and it weighs 48.4 g. The raw material is Burlington chert, which is found locally. Microscopic examination revealed wear resulting from Battering. This is an unclassified type not associated with a cultural period.

No organic remains were recovered and no features were observed. The materials at the site suggest that it was occupied during the Archaic and historic periods and functioned as a prehistoric habitation and a residence/farmstead.

This site has been damaged by field clearing and is now subject to shoreline erosion. Much of it is permanently inundated. It is also subject to unauthorized collecting. This site yielded abundant cultural remains and five shovel tests excavated away from the lake shore revealed sub-plowzone deposits. This site may be eligible for inclusion in the National Register of Historic Places.

23DA450

Table 34. Summary characteristics of 23DA450.

Site Name	Unnamed
Cultural Affiliation	Indeterminate prehistoric
Topographic Setting	Ridgetop
Parent Material	Kinderhookian Series (Mk)
Drainage	Mutton Creek
Original Recording Agency	Historic Preservation Associates
Size of Site	3 m x 5 m
Surface Visibility	25% - 50%
Slope	8%
Ground Cover Vegetation	Mixed hardwoods
Month and Year of Field Investigation	September 1992
Land Use	Recreation
Elevation	920 ft NGVD

23DA450 is a prehistoric petroglyph recorded by Steven M. Imhoff of Historic Preservation Associates on September 18, 1992. It is situated on a ridgetop at an elevation of 920 ft. The local geology consists of the Kinderhookian Series (Mk), on which Goss gravely silt loam, 5% - 15% slope soils have formed. These soils presently support mixed hardwoods. In the vicinity of the site, the land slopes north at a rate of 8%. The nearest available water is from Mutton Creek, a perennial stream located approximately 300 m northeast of the site.

Bedrock is exposed over an area measuring 3 m north-south x 5 m east-west (15 m^2). Geometric designs are carved into the west half of the rock. No associated cultural materials were observed. These carvings are most likely prehistoric in origin but not definitely so (Figure 13).

23DA450

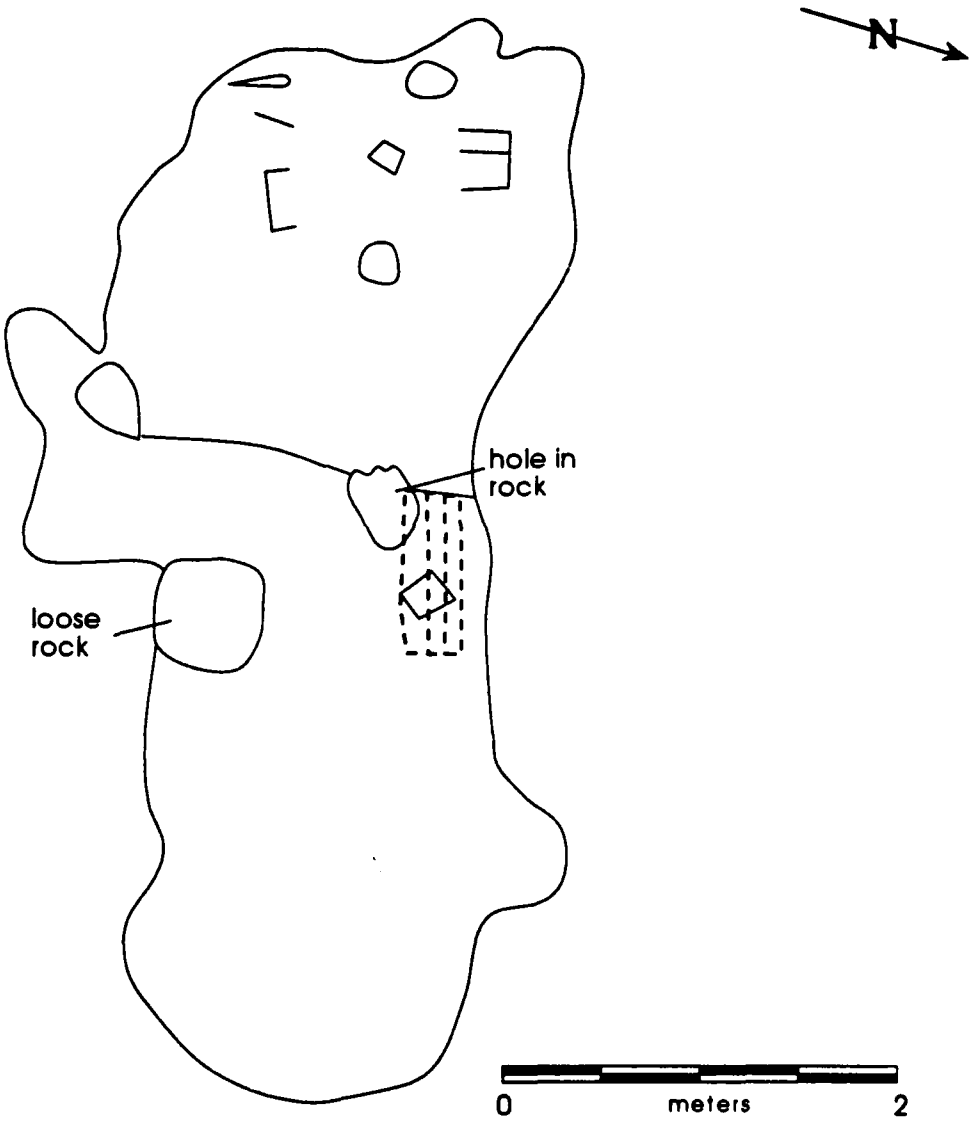


Figure 13. 23DA450 showing carvings in the exposed bedrock.

This site appears to be in excellent condition. More petroglyphs may be found if the soil is removed from the bedrock further west. This site may be eligible for inclusion in the National Register of Historic Places. Additional work will be required to assess the site's exact nature.

Survey area 14 was investigated on October 12, 1992. It is a 38.9 acre (15.7 ha) parcel located in Dade County in the E½ of the NE¼ of the SW¼ and the N½ of the N½ of the SE¼ of section 3 and the NW¼ of the NW¼ of the SW¼ of section 2, T32N, R26W (Figure 14). Elevations range from 867 ft - 930 ft NGVD with slopes of 3% - 17%. The local geology consists of the Kinderhookian Series (Mk) on which Bardley-Moko-rock outcrop complex, 5% - 15% slopes. These soils support mixed hardwoods and second growth. The area is drained by Mutton Creek, a tributary of the Sac River located immediately to the north. Surface visibility is generally poor (0% - 25%) but visibility along the shoreline is excellent and there are also isolated exposures around camping and picnic areas.

The area was surveyed in three transects, one wide zig-zag transect between the park road and the lake and two shovel testing transects on the land side of the road where the surface visibility is poor. Flakes were found in exposed areas between the road and the lake almost throughout the entire length of the area (23DA398). Only one preform and a flake were found on the side of the road opposite the lake. Here, surface visibility is generally poor (0% - 10%) but little chert is present also. The majority of stone exposed is sandstone, so the site may be more than a figment of surface visibility.

23DA394

Table 35. Summary characteristics of 23DA394.

Site Name	Unnamed
Cultural Affiliation	Late Indeterminate prehistoric
Topographic Setting	Hillside
Parent Material	Kinderhookian Series (Mk)
Drainage	Mutton Creek
Original Recording Agency	Howard R. Wimmer
Size of Site	40 m x 840 m
Surface Visibility	50% - 75%
Slope	17%
Ground Cover Vegetation	Mixed hardwoods and second growth
Month and Year of Field Investigation	October 1992
Land Use	Recreation
Elevation	880 ft NGVD

23DA394 is a unnamed prehistoric site previously recorded in August 1988 by Howard R. Wimmer. He described it in the MAS site form as:

> . . . a low density cultural material scatter on the left bank of and overlooking Mutton Creek, Stockton Lake. The site is in an area of mixed softwood (willow and sycamore) approx. 408 m².

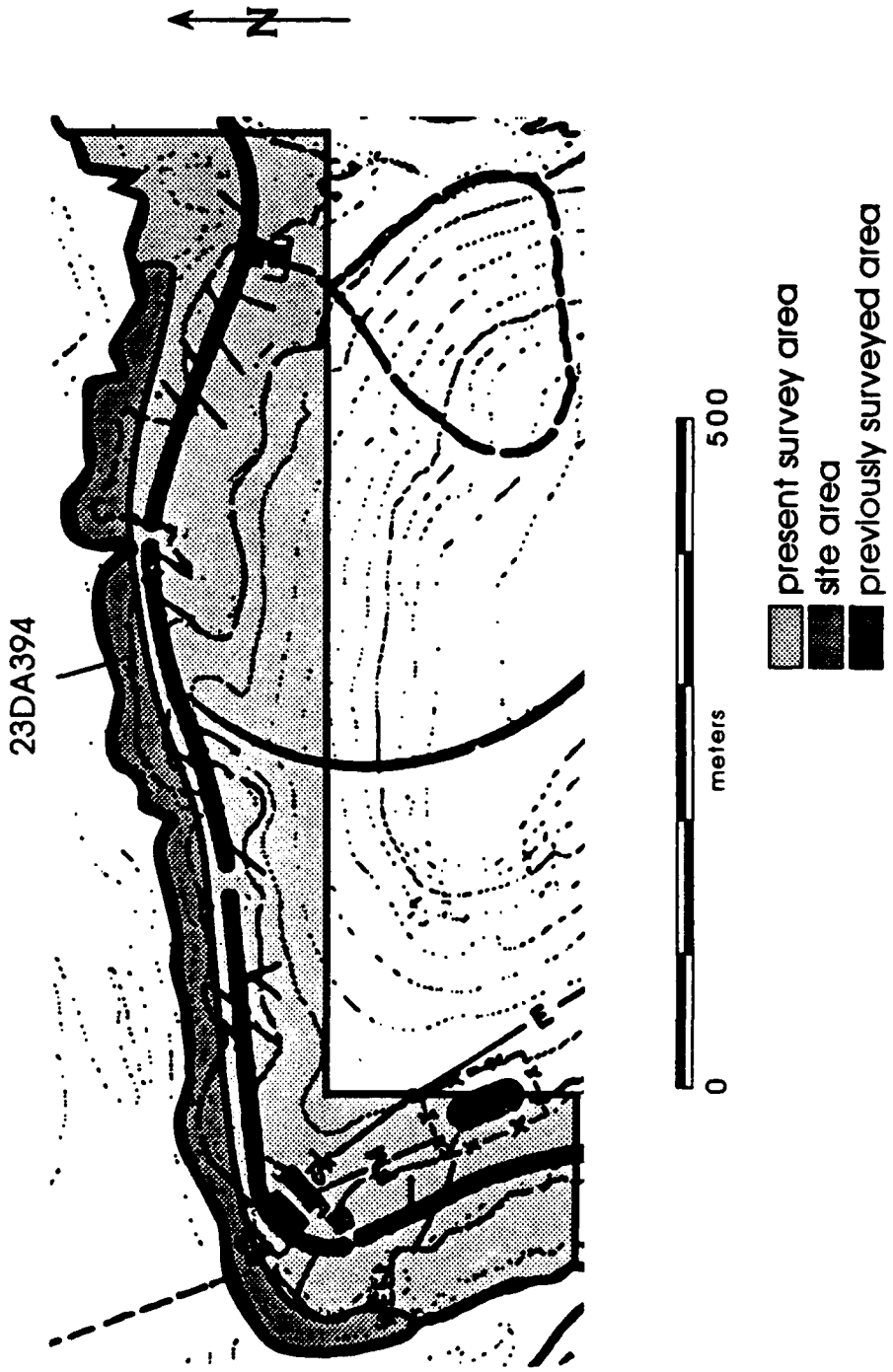


Figure 14. Mutton Creek Public Use Area showing Survey Area 14.

A selective grab surface collection was made that consisted of one (1) diagnostic projectile point and two (2) biface fragments. Pressure flakes were present in considerable number, but were neither counted nor collected. It should be noted that this is a large public access area, and the actual artifact density may be greater than indicated. Soil depth was not measured, but is probably not more than 10-15 cm deep.

[The condition of the site is] uncertain. The southern boundary of the site was not determined so the percentage of disturbance is unknown.

Wimmer collected 3 artifacts weighing 14.8 g. These included 1 arrow point (1.1 g) and 2 preform fragments (13.7 g). Artifact 1-1 is an arrow point. It is an unstemmed specimen with a pointed tip, an excurvate blade, no notches, no shoulders and a concave base. The cross section is biconvex with no edge abrading and no beveling. Maximum dimensions are 2.5 cm x 1.5 cm x 0.3 cm and it weighs 1.1 g. The raw material is Keokuk chert, which is abundant further south but may be available locally in highly restricted areas. Microscopic examination revealed no evidence of use-wear. This specimen most closely resembles the Fresno type, which is associated with the Late Prehistoric period.

It was revisited by Steven M. Imhoff of Historic Preservation Associates on October 12, 1992. The site is about 40 m north-south x 840 m east-west (33,600 m^2) and is situated on a slope at an elevation of 880 ft. The land surface slopes downward to the north at a rate of 17%. The local geology consists of the Kinderhookian Series (Mk), on which Bardley-Moko-rock outcrop complex, 5% - 15% slope soils have formed. In the vicinity of the site, these soils support mixed hardwoods and secondary growth species, with the site proper in an area developed for camping and picnicing. The nearest available water is Mutton Creek, a perennial stream located 20 m north of the site.

A select sample of surface materials yielded 1 (292.3 g) core, 4 (6.4 g) interior flakes, 7 (137.3 g) initial stage interior flakes, 1 (18.2 g) primary decortication flake, 7 (169.2 g) secondary decortication flakes, and 1 (106.5 g) aborted preform. No organic remains were recovered and no cultural features were observed. The cultural materials at the site suggest that it was occupied during the prehistoric period and functioned as an source of chert for the manufacture of stone tools.

This site appears to have been an important source of chert for the manufacture of stone tools but has been severely damaged by shoreline erosion and fluctuations in the level of Stockton Lake. It is not eligible for inclusion in the National Register of Historic Places.

Survey area 15 was investigated on October 12, 1992. It is a 22.6 acre (9.1 ha) parcel located in Dade County in the NW¼ of the SE¼ and the E½ of the NE¼ of the SE¼ of section 10, township 32N, range 26W. This area had been surveyed previously by Prewitt and Associates (Girard and Freeman 1992:163). Elevations range from 867 ft - 930 ft with slopes of 10% - 16%. The local geology consists of the Kinderhookian Series (Mk) on which Bardley-Moko-rock outcrop complex, 5% - 15% slope and Goss gravely silt loam, 5% - 15% soils have formed. These sites support grasses and mixed hardwoods. The area is drained by the Sac River. Surface

visibility was generally poor (0% - 25%) but with isolated exposures in trails and around camping and picnic areas.

We began our survey of area 15 at its east end (Figure 15). Immediately upon stepping out of the truck, we began finding flakes. We inspected exposed areas and excavated select shovel tests to fill in the gaps. We then walked three transects around the perimeter of the area, excavating shovel tests at 20 m intervals. In all, about 45 shovel tests were excavated. Artifacts are distributed over the top and south and east sides of the ridge. There are also some indications that the historic site at 23DA321 extends into the area, such as rock piles, a possible root cellar depression and a couple of artifacts. If structures existed in the area, they have been thoroughly destroyed. No new sites were discovered but two previously recorded ones (23DA321 and 23DA326) were examined.

23DA321

Table 36. Summary characteristics of 23DA321.

Site Name	William Henry & Frances Toler housesite
Cultural Affiliation	20th century historic
Topographic Setting	Hillside and top
Parent Material	Kinderhookian Series (Mk)
Drainage	Sac River
Original Recording Agency	Prewitt and Associates
Size of Site	30 m x 30 m
Surface Visibility	0% - 25%
Slope	5%
Ground Cover Vegetation	Mixed hardwoods and grasses
Month and Year of Field Investigation	October 1992
Land Use	Recreation
Elevation	925 ft NGVD

23DA321 is a historic site previously recorded in May 1982 by J. R. Atkinson of Prewitt and Associates, Inc. It is known as the William Henry and Frances Toler house site.

> Site 23DA321, an historic housesite, covers an area of about 60 by 10 m on a gentle ridgeslope approximately 450 m north of the former channel of the Sac River. Recently constructed park roads extend across the site which is marked only by irises and a 60-cm-square piece of concrete. Two structures are plotted in the area on the 1956 USGS Crisp 7.5' quadrangle.
>
> No shovel tests were excavated at the site but 40 fragments of a molded earthenware vessel (vase?) with a brown painted exterior and glazed white interior were collected.
>
> A local informant identified the site as the former location of the home of William Henry and Frances Toler who had come to the area from New Amsterdam, Indiana in the 1893.

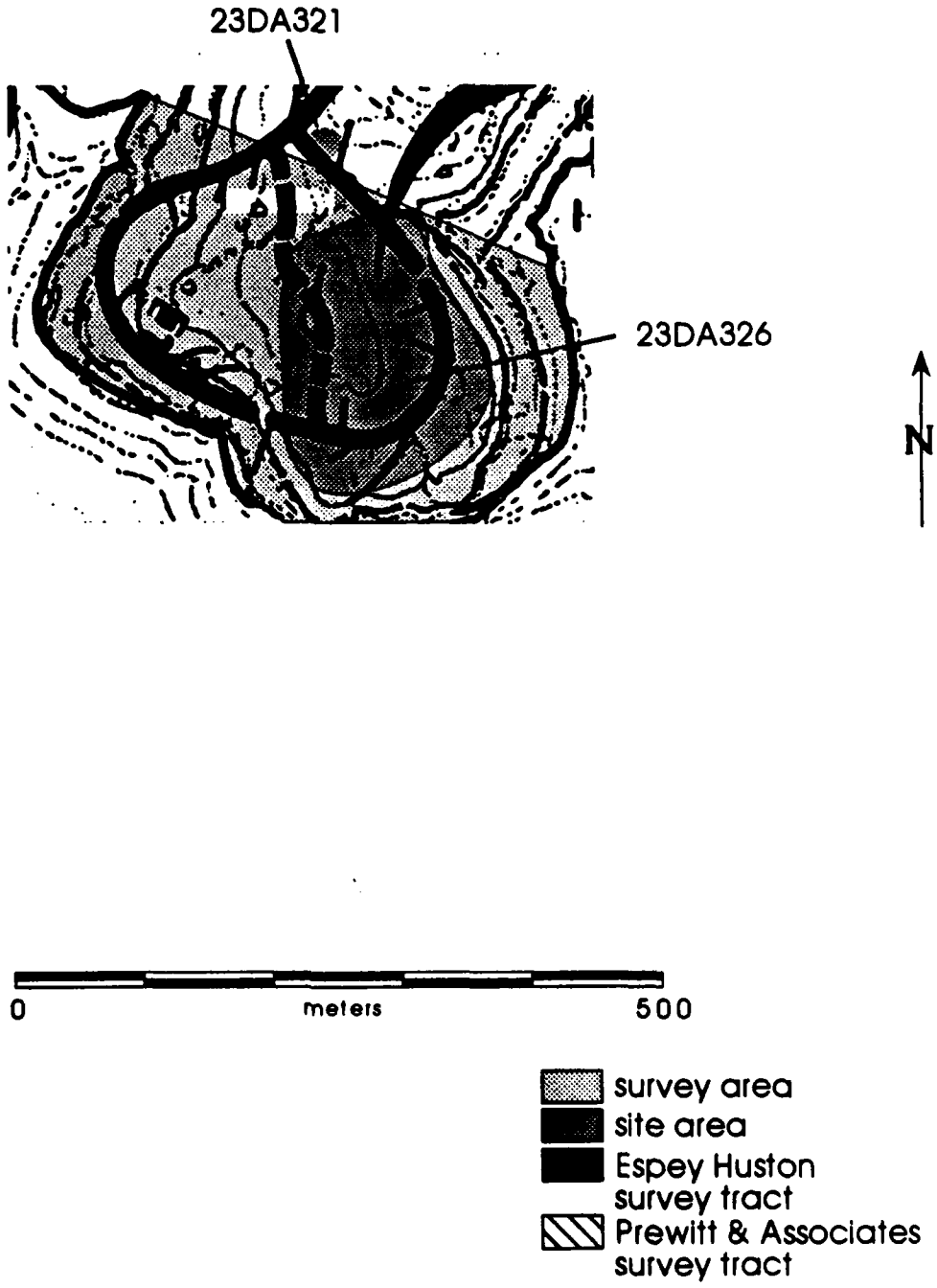


Figure 15. Mutton Creek Public Use Area showing Survey Area 15.

Little information is potentially available from this site because of its very disturbed condition. It is recommended that 23DA221 [sic] be considered not eligible for nomination to the National Register of Historic Places [Girard and Freeman 1992:169].

It was revisited by Steven M. Imhoff of Historic Preservation Associates on October 12, 1992. The site is situated on a ridgetop at an elevation of 925 ft. The land surface slopes downward to the east at a rate of 5%. The local geology consists of the Kinderhookian Series (Mk) on which Bardley-Moko-Rock Outcrop complex, 5% - 15% slope soils have formed. In the vicinity of the site, these soils support mixed hardwoods and grasses, with the site proper in an area developed for camping and picnicing. The nearest available water is the Sac River located 450 m southwest of the site.

Three shovel tests were excavated in the site vicinity with negative results. The known horizontal extent is 60 m north-south x 10 m east-west (600 m^2) but the site was probably much larger when it was occupied, extending onto 23DA326 where an outbuilding is shown on the 1959 Crisp quadrangle. No cultural materials were collected or observed and no organic remains were recovered. No cultural features were noted, including the domestic plants noted by Prewitt and Associates investigators. The cultural materials and features suggest that it was occupied during the 20th Century and functioned as a residence/farmstead. This site has been largely destroyed by park development and it does not appear to be eligible for inclusion in the National Register of Historic Places.

23DA326

Table 37. Summary characteristics of 23DA326.

Site Name	Unnamed
Cultural Affiliation	Late Archaic, Woodland, Mississippi, 20th century historic
Topographic Setting	Hilltop
Parent Material	Kinderhookian Series (Mk)
Drainage	Unnamed intermittent stream
Original Recording Agency	Prewitt and Associates
Size of Site	220 m x 200 m
Surface Visibility	25% - 50%
Slope	10%
Ground Cover Vegetation	Grasses and mixed hardwoods
Month and Year of Field Investigation	October 1992
Land Use	Recreation
Elevation	910 ft NGVD

23DA326 is an unnamed prehistoric site recorded in May 1982 by investigators from Prewitt and Associates.

Site 23DA326 consists of a small (ca. 30 by 30 m) dispersed scatter of chipped stone tools and debitage located on a ridgeslope approximately 250 m north of the former channel of

the Sac River. The surrounding area is in upland oak-hickory forest, but the site has been cleared and is in a campground.

All cultural materials exposed on the surface were collected, but no shovel tests were excavated because most artifacts were exposed among outcrops of gravels. Recovered artifacts consist of 13 flakes and angular fragments (3 with edge modification) and 5 biface fragments.

Construction and use of campground facilities have severely disturbed this site. Most cultural materials are exposed on the surface. The potential of 23DA326 for yielding significant research information is low, and it is recommended that this site be considered not eligible for nomination to the National Register of Historic Places [Girard and Freeman 1992:171].

It was revisited by Steven M. Imhoff of Historic Preservation Associates on October 12, 1992. An intensive surface inspection and systematic shovel testing revealed that the site is about 220 m north-south x 200 m east-west (44,000 m^2) and occupies most of the ridgetop. The land surface slopes downward to the southeast at a rate of 10%. The local geology consists of the Kinderhookian Series (Mk), on which Bardley-Moko-rock outcrop complex, 5% - 15% slope soils have formed. In the vicinity of the site, these soils support grasses and mixed hardwoods, with the site proper in an area developed for camping and picnicing. The nearest available water is an unnamed intermittent stream located 60 m south of the site.

A select sample of surface materials yielded 1 (0.2 g) arrow point stem/base, 1 (0.8 g) arrow point tip, 4 (42.3 g) biface fragments, 1 (3.5 g) dart point, 23 (18.4 g) interior flakes, 14 (94.9 g) initial stage interior flakes, 1 (11.5 g) secondary decortication flake, 1 (9.7 g) flake scraper, and 10 (8.9 g) stoneware sherds.

Unclassified Dart Point (1-1)

Artifact 1-1 is a dart point. It is an expanding stem specimen with a pointed tip, a straight blade, corner notches, barbed shoulders and a straight base. The cross section is biconvex with no edge abrading, and no beveling. The tip has been carried away by an impact fracture. Maximum dimensions are 3.4 cm x 2.3 cm x 0.6 cm and it weighs 3.5 g. The raw material is Burlington chert, which is found locally. Microscopic examination revealed wear resulting from cutting meat with bone contact. This specimen is and is an unclassified type, which is associated with the Late Archaic period.

Artifact 1-2 is a small, crudely made, arrow point stem. It has a damaged tip, an asymmetrical blade, unifacially produced side notches, no shoulders and a convex base. The cross section is irregular with no edge abrading, and no beveling. Maximum dimensions are 1.2 cm x 1.0 cm x 0.3 cm and it weighs 0.2 g. The raw material is Burlington chert, which is found locally. Microscopic examination revealed no evidence of use-wear. This is an unclassified type that may be associated with the Woodland or Mississippi period. This is the work of a beginner or a child and probably was never used.

Flake Scraper (1-3)

Artifact 1-3 is a flake scraper. This is a 1 cm thick flake with an excurvate edge fragment that is beveled unifacially partly by pressure and partly by use. A 1.2 cm wide concave area is found in the center. Maximum

dimensions are 4.2 cm x 2.5 cm x 1.0 cm and it weighs 9.7 g. The raw material is an unidentified chert. Microscopic examination revealed wear resulting from scraping wood. This specimen is not associated with a cultural period.

Artifact 1-5 is a biface distal fragment. It has a damaged tip, a straight blade, missing shoulders and a missing stem and base. The cross section is biconvex with no edge abrading and beveling of the left blade edge. Maximum dimensions are 3.7 cm x 1.9 cm x 0.8 cm and it weighs 6.3 g. The raw material is Burlington chert, which is found locally. Microscopic examination revealed no evidence of use-wear. This is an exhausted unclassified type not associated with a cultural period.

Artifact 1-6 is a biface distal fragment. It has a rounded tip, an excurvate blade, missing shoulders and a missing base. The cross section is biconvex with no edge abrading, and no beveling. Maximum dimensions are 2.5 cm x 2.5 cm x 0.7 cm and it weighs 4.2 g. The raw material is Burlington chert, which is found locally. Microscopic examination revealed wear resulting from cutting meat with bone contact. This is an unclassified type not associated with a cultural period.

Artifact 1-7 is a biface midsection fragment. The cross section is biconvex with no edge abrading, and no beveling. Maximum dimensions are 1.5 cm x 4.0 cm x 1.1 cm and it weighs 8.6 g. The raw material is Burlington chert, which is found locally. Microscopic examination revealed wear resulting from cutting meat without bone contact and scraping bone or antler. A concave area has been unifacially worked into what is probably the distal part of the fragment. This is an unclassified type not associated with a cultural period.

Artifact 1-8 is an arrow point tip. The cross section is biconvex with no edge abrading, and no beveling. Maximum dimensions are 1.6 cm x 1.3 cm x 0.4 cm and it weighs 0.8 g. The raw material is Jefferson City chert, which is found locally in the deeper valleys. Microscopic examination revealed no evidence of use-wear. This is an unclassified type that may be associated with the Woodland or Mississippi period.

No organic remains were recovered and no cultural features were observed. No evidence of the structure shown on the 1959 Crisp quadrangle was observed. The cultural materials at the site suggest that it was occupied during the Woodland, Mississippi and probably historic periods and functioned as a habitation and, later, as a residence/farmstead.

This site has been damaged by the construction of roads and camping facilities. If there is an historic component, it has been almost completely destroyed. However, there is fairly good soil development on the higher elevations at the site and intact deposits may have survived. This site may be eligible for inclusion in the National Register of Historic Places and requires further assessment.

ORLEANS TRAIL PUBLIC USE AREA

Survey area 2 was investigated on September 28, 1992. It is a 78.1 acre (31.6 ha) parcel located in Cedar County in the E½ of the E½ of the SE¼ of section 20 and the N½ of the SW¼ and the SW¼ of the SW¼ of section 21, township 34N, range 26W (Figure 16). A small portion of the area has been surveyed previously by Prewitt and Associates (Girard and Freeman 1992:145). Elevations range from 867 ft - 940 ft with slopes of 2% - 10%. The local geology consists of the Kinderhookian Series (Mk) on which Peridge-Wilderness-Goss-Pembroke Association soils have formed. These soils support mixed hardwoods and grasses. The area is drained by Cothwell Branch, a tributary of the Sac River. Surface visibility was generally good (50% - 75%).

Developments include paved and unpaved roads, a boat ramp, sailboat moorings, a marina, motel facilities (13 cabins), a restaurant, a boat and motor repair facility, two double vault toilets, and a number of RV campsites.

We started our survey in the lawn on the left side of the road as one enters the Orleans Trail camp ground. Surface visibility in this area is poor (0% - 10%) and shovel tests were excavated at 20 m intervals until we began finding flakes at the edge of the treeline downslope from the road. Once we entered the camp ground, no shovel testing was necessary due to the good (50% - 75%) surface visibility. The camp ground north of the marina also presented excellent surface visibility and only selective shovel testing was conducted. Most of Survey Area 2 has been heavily disturbed by development.

As a result of our efforts three prehistoric sites (23CE475, 23CE477 and 23CE478) and one historic site (23CE476) were recorded.

23CE475

Table 38. Summary characteristics of 23CE475.

Site Name	Unnamed
Cultural Affiliation	Indeterminate prehistoric
Topographic Setting	Hilltop and sides
Parent Material	Kinderhookian Series (Mk)
Drainage	Cothwell Branch
Original Recording Agency	Historic Preservation Associates
Size of Site	500 m x 150 m
Surface Visibility	50% - 75%
Slope	0%
Ground Cover Vegetation	Mixed hardwoods and grasses
Month and Year of Field Investigation	September 1992
Land Use	Recreation
Elevation	930 ft NGVD

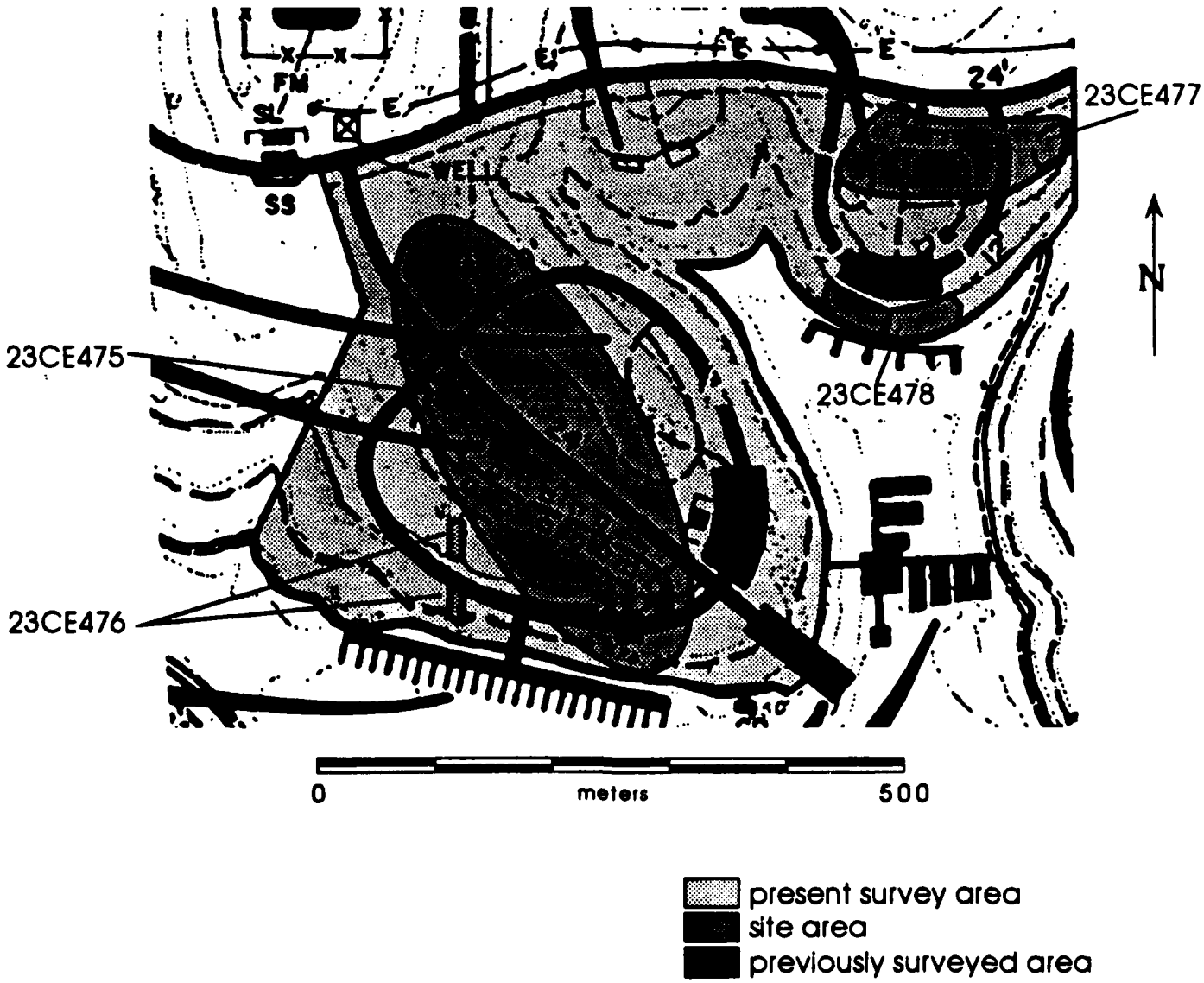


Figure 16. Orleans Trail Public Use Area showing Survey Area 2.

23CE475 is an unnamed prehistoric site recorded by Steven M. Imhoff of Historic Preservation Associates on September 28, 1992. The site is about 500 m northwest-southeast x 150 m northeast-southwest (75,000 m²) and is situated on a ridgetop at an elevation of 930 ft. The land surface slopes at a rate of 10%. The local geology consists of the Kinderhookian Series (Mk) on which Peridge-Wilderness-Goss-Pembroke Association soils have formed. In the vicinity of the site, these soils support mixed hardwoods and grasses, with the site proper in an area developed for camping and picnicing. The nearest available water is Cothwell Branch, a perennial stream located 120 m south of the site.

A select surface collection yielded 1 (4.9 g) biface fragment, 1 (150.3 g) blank, 3 (14.6 g) calcite fragments, 2 (376.8 g) cores, 6 (2.0 g) interior flakes, 14 (274.9 g) initial stage interior flakes, 1 (171.5 g) primary decortication flake, 2 (11.5 g) flake knife, 1 (67.0 g) aborted preform, and 1 (55.8 g) flake scraper.

Artifact 1-3 is a flake knife. Maximum dimensions are 2.9 cm x 2.2 cm x 0.4 cm and it weighs 2.2 g. The raw material is Burlington chert, which is found locally. Microscopic examination revealed wear resulting from cutting meat with bone contact. This is an unclassified type not associated with a cultural period.

Artifact 1-4 is a blade-like flake knife. Maximum dimensions are 3.9 cm x 2.6 cm x 0.7 cm and it weighs 9.3 g. The raw material is Burlington chert, which is found locally. Microscopic examination revealed wear resulting from cutting bone or antler. This is an unclassified type not associated with a cultural period.

Flake Scraper (1-6)

Artifact 1-6 is a thick roughly D-shaped flake scraper. Maximum dimensions are 6.8 cm x 4.5 cm x 2.0 cm and it weighs 55.8 g. The raw material is Burlington chert, which is found locally. Microscopic examination revealed wear resulting from scraping wet hide. This is an unclassified type not associated with a cultural period.

No organic remains were recovered and no cultural features were observed. The cultural materials at the site suggest only that it was occupied during prehistoric times and functioned as a prehistoric habitation.

This site has been virtually destroyed by development activities associated with the Orleans Trail campground and resort. The soils are shallow, the deposits extremely scattered and probably retain none of their original integrity. It is not eligible for inclusion in the National Register of Historic Places.

23CE476

Table 39. Summary characteristics of 23CE476.

Site Name	Unnamed
Cultural Affiliation	Historic
Topographic Setting	Hillside
Parent Material	Kinderhookian Series (Mk)
Drainage	Cothwell Branch
Original Recording Agency	Historic Preservation Associates
Size of Site	113 m x 5 m
Surface Visibility	25% - 50%
Slope	9%
Ground Cover Vegetation	Mixed hardwoods and grasses
Month and Year of Field Investigation	September 1992
Land Use	Recreation
Elevation	890 ft NGVD

23CE476 is an historic stone wall recorded by Steven M. Imhoff of Historic Preservation Associates on September 28, 1992. The site is about 113 m north-south x 5 m east-west (565 m^2) and is situated on a slope at an elevation of 890 ft. The land surface slopes downward to the southwest at a rate of 9%. The local geology consists of the Kinderhookian Series (Mk) on which Peridge-Wilderness-Goss-Pembroke Association soils have formed. In the vicinity of the site, these soils support mixed hardwoods and grasses, with the site proper in an area developed for camping and picnicing. The nearest available water is Cothwell Branch, a perennial stream located 250 m south of the site.

No remote sensing/sampling techniques were employed. There are a few bricks next to the north half of the wall but if other materials are present, their association is uncertain. No cultural materials were collected and no organic remains were recovered. The wall is 113 m long and about 60 cm high and is made of stacked flat limestone rocks without binding material.

This site has been damaged to an unknown extent by development activities in the Orleans Trail camp ground and resort. A road cut through it has destroyed 23 m in the site's center and an unknown amount at each end has been lost to construction of the Orleans Trail Resort and to inundation. No associated structural features remain. This site is an isolated historic feature and is not eligible for inclusion in the National Register of Historic Places.

23CE477

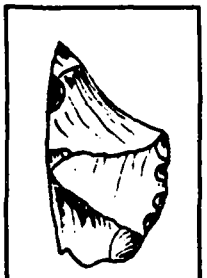
23CE477 is an unnamed prehistoric site recorded by Steven M. Imhoff of Historic Preservation Associates on September 28, 1992. The site is about 60 m north-south x 150 m east-west (9,000 m^2) and is situated on a slope at an elevation of 920 ft. The land surface slopes downward to the south at a rate of 9%. The local geology consists of the Kinderhookian Series (Mk) on which Peridge-Wilderness-Goss-Pembroke Association soils have formed. In the vicinity

Table 40. Summary characteristics of 23CE477.

Site Name	Unnamed
Cultural Affiliation	Indeterminate prehistoric
Topographic Setting	Hillside
Parent Material	Kinderhookian Series (Mk)
Drainage	Unnamed intermittent stream
Original Recording Agency	Historic Preservation Associates
Size of Site	60 m x 150 m
Surface Visibility	50% - 75%
Slope	9%
Ground Cover Vegetation	Mixed hardwoods and grasses
Month and Year of Field Investigation	September 1992
Land Use	Recreation
Elevation	920 ft NGVD

of the site, these soils support mixed hardwoods and grasses, with the site proper in an area developed for camping and picnicing. The nearest available water is an unnamed intermittent stream located 50 m east of the site.

All observed artifacts were collected. These included 1 (1.0 g) disc-shaped biface, 1 (1.9 g) initial stage interior flake, 1 (10.0 g) primary decortication flake, 1 (49.4 g) secondary decortication flake, and 1 (1.7 g) unifacial scraper.


Flake Scraper (1-1)

Artifact 1-1 is a flake scraper. There is no edge abrading but it is unifacially beveled. Maximum dimensions are 2.9 cm x 1.6 cm x 0.4 cm and it weighs 1.7 g. The raw material is Burlington chert, which is found locally. Microscopic examination revealed wear resulting from scraping wood. This is an unclassified type not associated with a cultural period.

Artifact 1-6 is a flake knife. Maximum dimensions are 3.6 cm x 2.4 cm x 0.7 cm and it weighs 1.9 g. The raw material is heat-treated Jefferson City chert, which is found locally in the deeper valleys. Microscopic examination revealed wear resulting from cutting meat without bone contact. This is an unclassified type not associated with a cultural period.

No organic remains were recovered and no cultural features were observed. The cultural materials at the site suggest only that it was occupied during prehistoric times and functioned as an upland hunting camp.

This site has been destroyed by development activities in the Orleans Trail camp ground. The soils are shallow and the artifacts thinly scattered. This site stretches to the limit the minimal definition of a site and is not eligible for inclusion in the National Register of Historic Places.

23CE478

Table 41. Summary characteristics of 23CE478.

Site Name	Unnamed
Cultural Affiliation	Indeterminate prehistoric
Topographic Setting	Hillside
Parent Material	Kinderhookian Series (Mk)
Drainage	Unnamed intermittent stream
Original Recording Agency	Historic Preservation Associates
Size of Site	40 m x 100 m
Surface Visibility	75% - 100%
Slope	9%
Ground Cover Vegetation	Mixed hardwoods and grasses
Month and Year of Field Investigation	September 1992
Land Use	Recreation
Elevation	880 ft NGVD

23CE478 is a prehistoric site recorded by Steven M. Imhoff of Historic Preservation Associates on September 28, 1992. The site is about 40 m north-south x 100 m east-west (4,000 m^2) and is situated on a slope at an elevation of 880 ft. The land surface slopes downward to the south at a rate of 9%. The local geology consists of the Kinderhookian Series (Mk) on which Peridge-Wilderness-Goss-Pembroke Association soils have formed. In the vicinity of the site, these soils support mixed hardwoods and grasses, with the site proper in an area developed for camping and picnicing. The nearest available water is an unnamed intermittent stream located 50 m east of the site.

All observed artifacts were collected. These included 1 (102.4 g) core, and 5 (20.8 g) initial stage interior flakes. No organic remains were recovered and no cultural features were observed. The cultural materials at the site suggest only that it was occupied during prehistoric times and functioned as an upland hunting camp.

This site has been destroyed by development activities in the Orleans Trail camp ground and by inundation. The soils are shallow and the artifacts thinly scattered. This site stretches to the limit the minimal definition of a site and is not eligible for inclusion in the National Register of Historic Places.

Survey area 5 was investigated on October 1, 1992. It is a 37.5 acre (15.2 ha) parcel located in Cedar County in the E½ of the E½ of the SW¼ and the W½ of the SE¼ of section 21, township 34N, range 26W (Figure 17). Roughly one third of the area had been surveyed previously by Prewitt and Associates (Girard and Freeman 1992:145). Elevations range from 867 ft - 940 ft with slopes of 3% - 10%. The local geology consists of the Kinderhookian Series (Mk) on which Peridge-Wilderness-Goss-Pembroke Association soils have developed. These soils support mixed hardwoods. The area is drained by Cothwell Branch, a tributary of the Sac River.

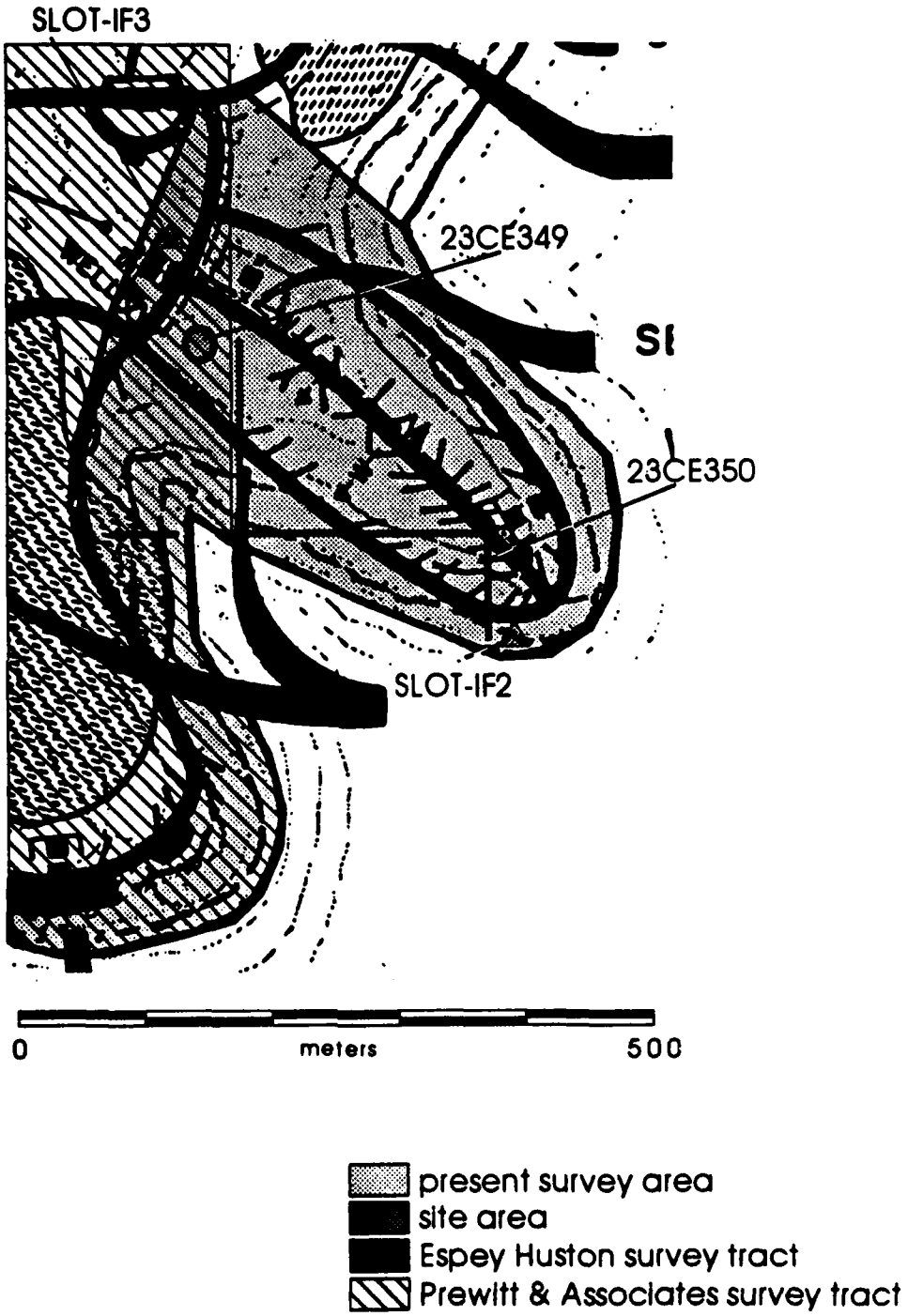


Figure 17. Orleans Trail Public Use Area showing Survey Area 5.

Surface visibility was generally fair (25% - 50%). Developments include paved roads, a shower latrine, a double vault toilet, a sewage disposal plant, two water spigots and about 50 campsites.

We began surveying priority area 5 at the end of the ridge and surveying three transects in a northwest direction parallel to the park roads. Vegetation consists of mature hardwoods with various grasses. Ground surface visibility is generally fair, although gravel spread in the area is a problem. We then surveyed a narrow strip of land located at the west end of the area between a park road and the shoreline. The area is covered in mixed hardwoods with fair ground surface visibility. Shovel scrapes were placed at 30 m intervals along three transects oriented parallel to the shoreline. Two previously recorded sites (23CE349 and 23CE350) were revisited and two isolated artifacts (SLOT-2 and SLOT-3) were found.

23CE349

Table 42. Summary characteristics of 23CE349.

Site Name	Unnamed
Cultural Affiliation	20th century historic?
Topographic Setting	Ridgetop
Parent Material	Kinderhookian Series (Mk)
Drainage	Well
Original Recording Agency	Prewitt and Associates
Size of Site	60 m x 60 m
Surface Visibility	0% - 25%
Slope	7%
Ground Cover Vegetation	Mixed hardwoods
Month and Year of Field Investigation	October 1992
Land Use	Recreation
Elevation	910 ft NGVD

23CE349 is an historic site recorded in May 1982 by investigators from Prewitt and Associates.

> This site, covering an area of about 15 by 15 m, represents the remains of an historic structure and is on a ridgeslope approximately 650 m north of the former channel of Cothwell Branch. In the area are scattered deciduous trees, native grasses, and domestic vegetation. The structure has been removed by the area is not extensively disturbed.
>
> The site, located in dense underbrush, is marked by irises, lilies, scattered glass, bricks, and metal, and a rock foundation. The foundation, which is continuous on three sides, is oriented north-south and measures 6.3 m (20.5 ft) north-south by 5 m (16.5 ft) east-west. A second stone wall, possibly a retaining wall, lies some 6.1 m south of the southernmost wall of the foundation and is about 7.6 m (25 ft) long. No surface collection or shovel tests were carried out at the site.

A structure at 23CE349 is shown on maps dating from 1908 and 1909, and an informant noted that this structure was located on land owned by Solomon Hartley whose residence lay some 762 m to the west in an area now covered by Stockton Lake.

Although the site possibly is associated with a member of a prominent Cedar County family, the nature of the association is not clear. The site postdates the Hartley Housesite located to the east. Significant information relating to the research problems presented in Chapter 2 is lacking. It is recommended that 23CE349 be considered not eligible for nomination to the National Register of Historic Places [Girard and Freeman 1992:149-150; citations omitted].

It was revisited by Steven M. Imhoff of Historic Preservation Associates on October 1, 1992. The site is about 60 m north-south x 60 m east-west (3,600 m²) and is situated on a ridgetop at an elevation of 910 ft. The land surface slopes downward to the southwest at a rate of 7%. The local geology consists of the Kinderhookian Series (Mk) on which Peridge-Wilderness-Goss-Pembroke Association soils have formed. In the vicinity of the site, these soils support mixed hardwoods, with the site proper wooded. The nearest available water is a well located on the site. 23CE350 is located about 24 m east of the house foundation. Whether the two sites are associated is not known.

A select surface collection yielded 1 (4.5 g) glass bowl sherd, 1 (193.3 g) No. 5 glass canning jar basal sherd, 1 (6.1 g) glass canning jar lid sherd, 5 (39.2 g) glass lamp globe sherds, 1 (18.0 g) milk glass sherd, 4 (18.5 g) sherds of window glass, and 3 (29.1 g) white stoneware sherds. Other artifacts noted were a number of machine-made bricks and large pieces of sheet metal. There is also a trash dump in the drainage gully across the road and south of the house. No organic remains were recovered. Features include a house foundation, stone walkway, possible outbuilding, flowerbed and possible privy depression (Figure 18). The cultural materials and features at the site suggest that it was occupied during historic times and functioned as a residence/farmstead.

No standing structures remain and the locations of former structures are difficult to locate because of thick vegetation. At least a portion of this site remains intact but the extent of impact from development activity is unknown. Additional assessment will be required to assess the significance of this site.

23CE350

23CE350 is an historic stone wall recorded in May 1982 by Martha D. Freeman of Prewitt and Associates.

This is a small site (ca. 6 by 6 m) which apparently represents the location of a former historic structure. The site is located approximately 50 m north of 23CE349 and 700 m north of the former channel of Cothwell Branch. The site area is partially cleared but contains scattered oak trees and irises.

Site 23CE350 appears to have been the location of an historic outbuilding or habitation which is marked only by irises and rock rubble. Oak trees grow within the rock piles. No artifacts are visible on the surface, and no shovel tests were excavated. The proximity of the site

23CE349

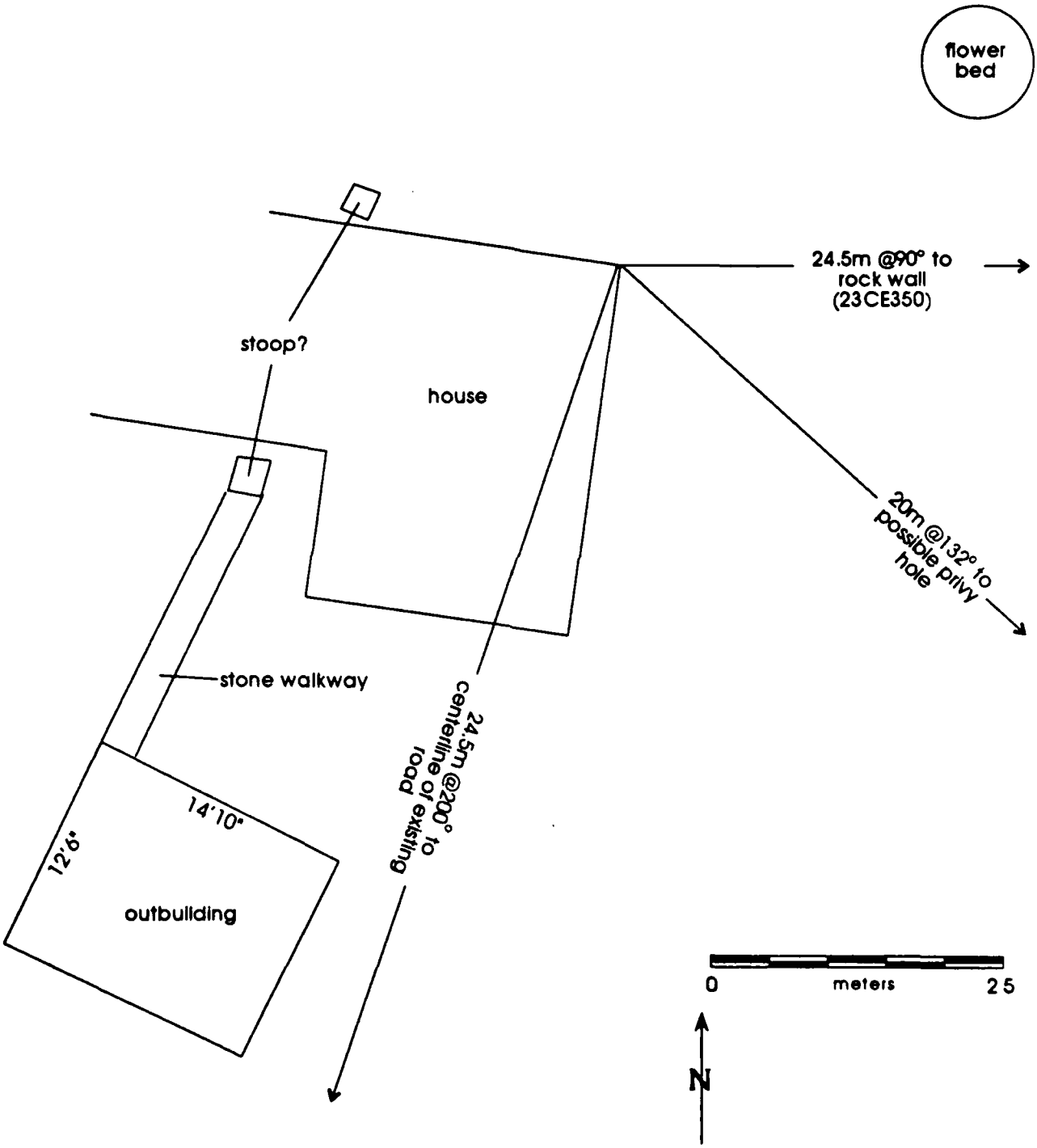


Figure 18. Historic structural features at 23CE349.

Table 43. Summary characteristics of 23CE350.

Site Name	Unnamed
Cultural Affiliation	Historic
Topographic Setting	Ridgetop and sides
Parent Material	Kinderhookian Series (Mk)
Drainage	Cothwell Branch
Original Recording Agency	Prewitt and Associates
Size of Site	5 m x 500 m
Surface Visibility	0% - 25%
Slope	8%
Ground Cover Vegetation	Mixed hardwoods
Month and Year of Field Investigation	October 1992
Land Use	Recreation
Elevation	900 ft NGVD

> to 23CE349 and to the Solomon Hartley Housesite suggests that the former structure may have been associated with them in some way.
>
> Because very little evidence of the structure remains and artifacts appear to be absent, the research potential of this site is low. it is recommended that 23CE350 be considered not eligible for nomination to the National Register of Historic Places [Girard and Freeman *1992:150*].

It was revisited by Steven M. Imhoff of Historic Preservation Associates on October 1, 1992. The stone rubble found by Freeman is actually a part of a stone wall isolated by construction of the sewage disposal plant. The site is actually about 5 m x 500 m (2,500 m^2) and is situated on a slope at an elevation of 900 ft. The land surface slopes downward to the southwest at a rate of 8%. The local geology consists of the Kinderhookian Series (Mk) on which Peridge-Wilderness-Goss-Pembroke Association soils have formed. In the vicinity of the site, these soils support mixed hardwoods, with the site proper in an area developed for camping and picnicing.

No remote sensing/sampling techniques were employed. No cultural materials were collected and no organic remains were recovered. The wall begins south of the sewage treatment plant and runs south almost to the lake shore where it turns east and runs upslope to the top of the ridge (about 55 m south of the intersection at the tip of the ridge). At that point it, again, turns south and disappears into Stockton Lake. A small isolated and disturbed east-west section of the wall also exists on an east-facing slope west of the gully dump.

Very little of the wall remains standing and portions of it have been scavenged for campfire rings. This site is an isolated historic feature and is not eligible for inclusion in the National Register of Historic Places.

Survey area 6 was surveyed on October 1, 1992. It is a 41.9 acre (17 ha) parcel located in Cedar County in the center of the NE¼ of section 21, township 34N, range 26W (Figure 19). Roughly 75% of the area has been surveyed previously by Prewitt and Associates (Girard and Freeman 1992:145). Elevations range from 867 ft - 930 ft with slopes of 1% - 10%. The local geology is the Kinderhookian Series (Mk) on which Peridge-Wilderness-Goss-Pembroke Association soils have developed. These soils support mixed hardwoods. The area is drained by Cothwell Branch, a tributary of the Sac River. Surface visibility was generally fair (25% - 50%). Developments include paved roads and parking areas, a swimming beach with two change houses, four double vault toilets, two water spigots and 31 camping spots.

We began at the northeast corner of the area, near the swimming beach, and surveyed three zig-zag transects parallel to the road that loops through the area west toward the main road and then back to our starting point. As a result, two prehistoric lithic scatters (23CE479 and 23CE480) were found.

23CE479

Table 44. Summary characteristics of 23CE479.

Site Name	Unnamed
Cultural Affiliation	Indeterminate prehistoric
Topographic Setting	Hillside
Parent Material	Kinderhookian Series (Mk)
Drainage	Unnamed intermittent stream
Original Recording Agency	Historic Preservation Associates
Size of Site	140 m x 80 m
Surface Visibility	25% - 50%
Slope	7%
Ground Cover Vegetation	Mixed hardwoods
Month and Year of Field Investigation	October 1992
Land Use	Recreation
Elevation	920 ft NGVD

23CE479 is an unnamed prehistoric site recorded by Steven M. Imhoff of Historic Preservation Associates on October 1, 1992. The site is about 140 m northwest-southeast x 80 m northeast-southwest (11,200 m^2) and is situated on a slope at an elevation of 920 ft. The land surface slopes downward to the southeast at a rate of 7%. The local geology consists of the Kinderhookian Series (Mk) on which Peridge-Wilderness-Goss-Pembroke Association soils have formed. In the vicinity of the site, these soils support mixed hardwoods, with the site proper in an area developed for camping and picnicing. The nearest available water is an unnamed intermittent stream located 50 m southeast of the site.

All observed artifacts were collected. These included 4 (6.9 g) interior flakes, 7 (39.4 g) initial stage interior flakes, and 1 (14.0 g) flake knife. Artifact 1-1 is a blade-like flake knife. Maximum dimensions are 5.3 cm x 2.9 cm x 0.8 cm and it weighs 14.0 g. The raw material is

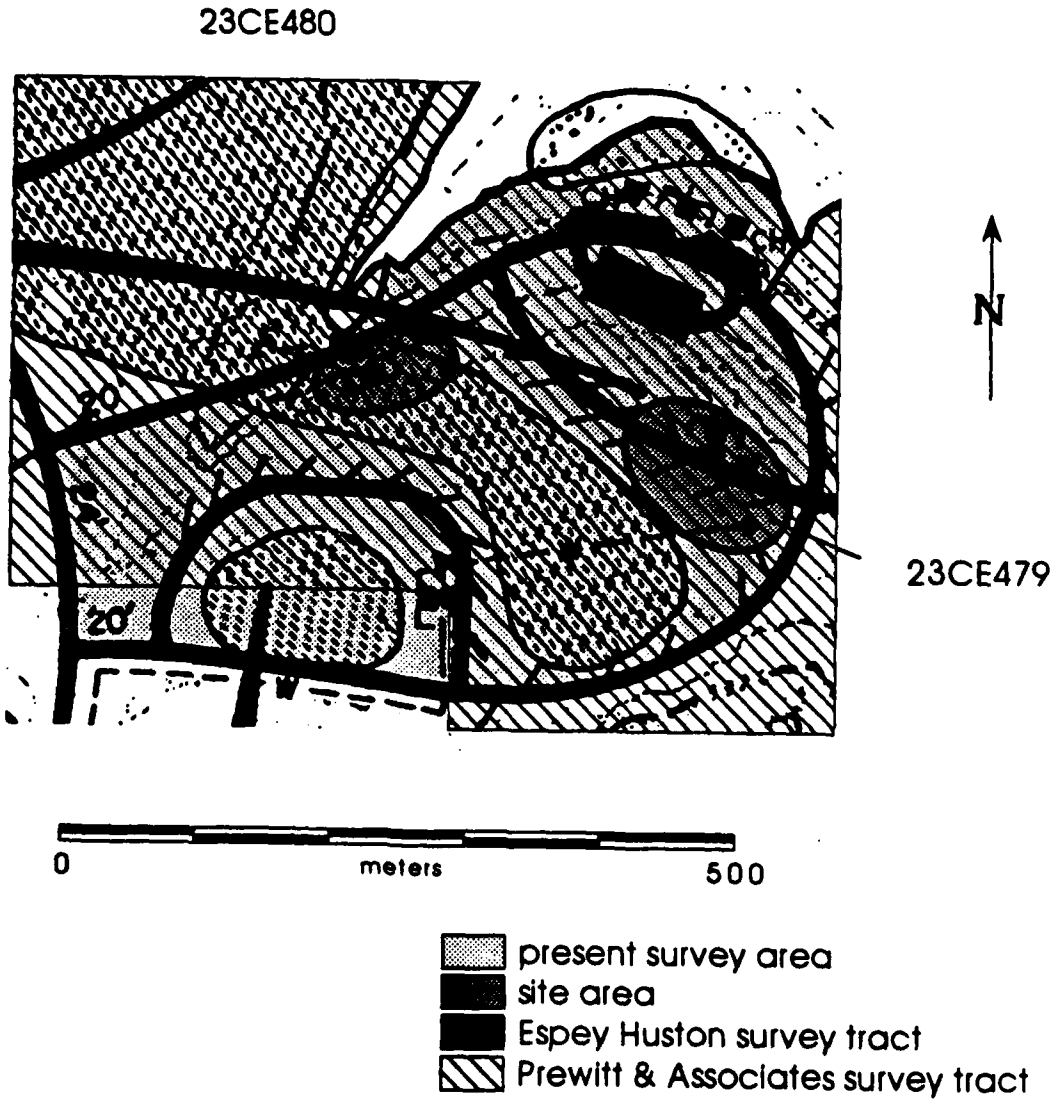


Figure 19. Orleans Trail Public Use Area showing Survey Area 6.

Burlington chert, which is found locally. Microscopic examination revealed wear resulting from cutting bone or antler. This specimen is not associated with a cultural period.

No organic remains were recovered and no cultural features were observed. The cultural materials at the site suggest only that it was occupied during prehistoric times and functioned as an upland hunting camp.

This site has been destroyed by development activities in the Orleans Trail camp ground. The soils are shallow and the artifacts thinly scattered. This site stretches to the limit the minimal definition of a site and is not eligible for inclusion in the National Register of Historic Places.

23CE480

Table 45. Summary characteristics of 23CE480.

Site Name	Unnamed
Cultural Affiliation	Indeterminate prehistoric
Topographic Setting	Hillside
Parent Material	Kinderhookian Series (Mk)
Drainage	Unnamed intermittent stream
Original Recording Agency	Historic Preservation Associates
Size of Site	40 m x 80 m
Surface Visibility	0% - 25%
Slope	11%
Ground Cover Vegetation	Mixed hardwoods
Month and Year of Field Investigation	October 1992
Land Use	Recreation
Elevation	890 ft NGVD

23CE480 is an unnamed prehistoric site recorded by Steven M. Imhoff of Historic Preservation Associates on October 1, 1992. The site is about 40 m northwest-southeast x 80 m northeast-southwest (3,200 m^2) and is situated on a slope at an elevation of 890 ft. The land surface slopes downward to the northwest at a rate of 11%. The local geology consists of the Kinderhookian Series (Mk) on which Peridge-Wilderness-Goss-Pembroke Association soils have formed. In the vicinity of the site, these soils support mixed hardwoods, with the site proper in an area developed for camping and picnicing. The nearest available water is an unnamed intermittent stream located 40 m northwest of the site.

All observed artifacts were collected. These included 4 (9.9 g) initial stage interior flakes, and 1 (82.0 g) secondary decortication flake. One is a large initial stage interior flake that has been unifacially worked. No organic remains were recovered and no cultural features were observed. The cultural materials and features at the site suggest only that it was occupied during prehistoric times and functioned as an upland hunting camp.

This site has been destroyed by development activities in the Orleans Trail camp ground. The soils are shallow and the artifacts thinly scattered. This site stretches to the limit the minimal definition of a site and is not eligible for inclusion in the National Register of Historic Places.

Survey area 10 was surveyed on October 2, 1992. It is a 41.4 acre (16.8 ha) parcel located in Cedar County in the W½ of the NW¼ and the E½ of the NW¼ of section 28, township 34N, range 26W (Figure 20). Elevations range from 867 ft - 960 ft NGVD with slopes of 3% - 13 %. The local geology consists of the Kinderhookian Series (Mk) on which :Peridge-Wilderness-Goss-Pembroke Association soils have formed. These soils support mixed hardwoods. The area is drained by Cothwell Branch, a tributary of the Sac River. Surface visibility was generally poor (0% - 25%). Developments include paved roads, 2 double vault toilets, one water spigot and about 37 campsites.

Priority area 10 is divided into east and west portions. The larger west portion has been surveyed previously by Prewitt and Associates (Girard and Freeman 1992:145). Both are covered in mixed hardwoods with generally poor surface visibility. We began with the larger west portion by surveying three parallel transects around the perimeter of the area, starting at its southeast edge. We then surveyed nine north-south transects within the loop formed by the park road, finishing at our starting point. The smaller east portion was surveyed in the same manner as the west. As a result, two previously recorded sites (23CE329 and 23CE330) were recorded and one new one (23CE481) recorded.

23CE329

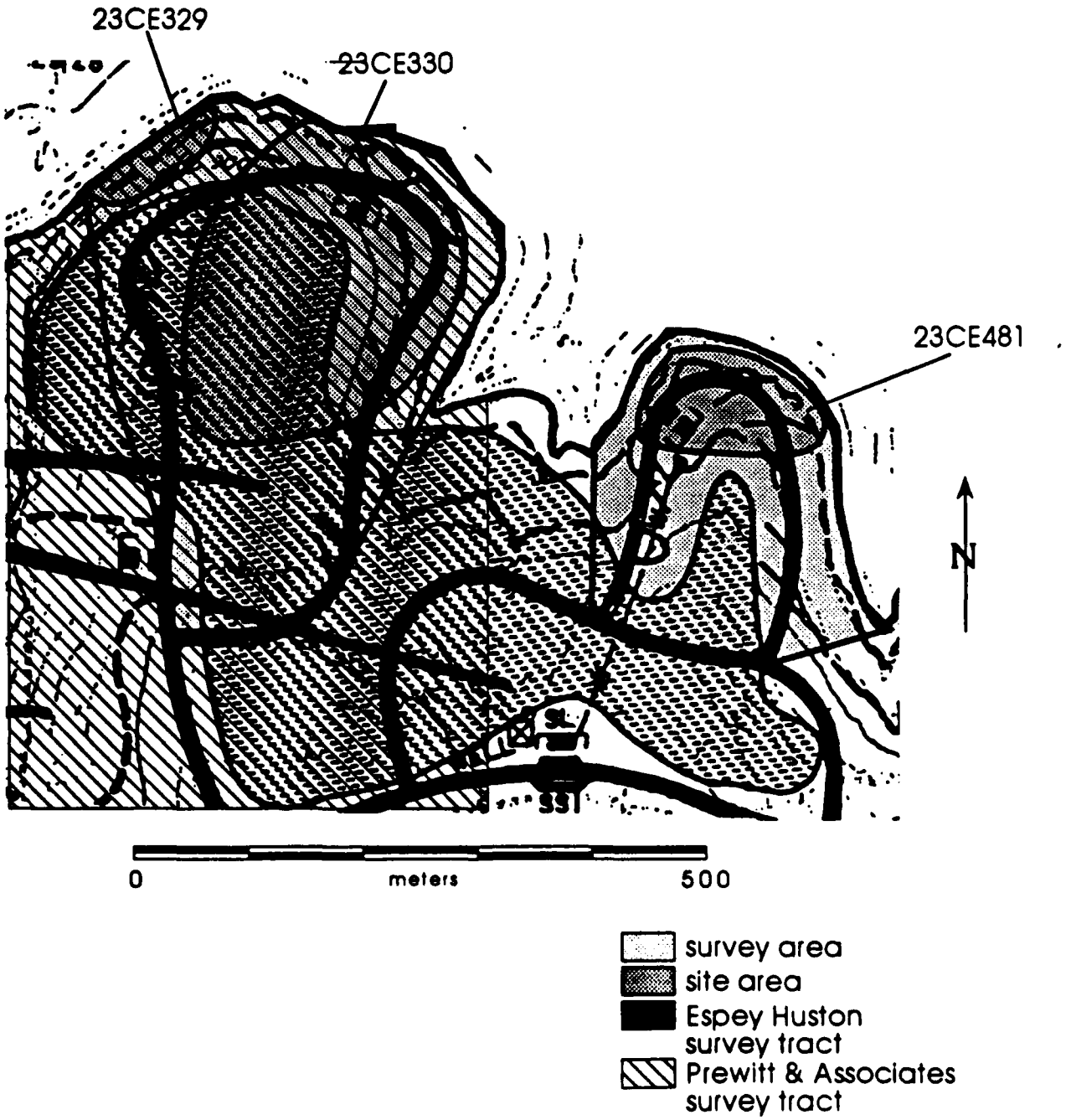
Table 46. Summary characteristics of 23CE329.

Site Name	Unnamed
Cultural Affiliation	Indeterminate prehistoric
Topographic Setting	Hillside
Parent Material	Kinderhookian Series (Mk)
Drainage	Cothwell Branch
Original Recording Agency	Prewitt and Associates
Size of Site	15 m x 70 m
Surface Visibility	75% - 100%
Slope	17%
Ground Cover Vegetation	Mixed hardwoods and shoreline vegetation
Month and Year of Field Investigation	October 1992
Land Use	Recreation
Elevation	870 ft NGVD

23CE329 is an unnamed prehistoric site recorded in April 1982 by investigators from Prewitt and Associates.

Site 23CE329, a dense scatter of lithic tools and debitage, covers an area of about 70 by 15 m on a steep northwest-facing slope along the present lake shoreline, directly overlooking the

Figure 20. Orleans Trail Public Use Area showing Survey Area 10.



former channel of Cothwell Branch. The site has been scoured by shoreline erosion, and portions are inundated continuously. The slope is in upland forest.

Because the artifacts were exposed along with dense natural chert gravels, no shovel tests were excavated. Three 2-m-diameter surface collection units were employed, and all recognized tools were plotted and collected. Recovered specimens consist of 283 flakes (40 with edge modification), 2 cores, 3 bifaces, and 1 uniface.

Cultural materials are confined to the surface and probably have been displaced by erosion from lake level fluctuations. Potential information from this site appears to be limited to a partial artifact inventory. It is recommended the 23CE329 be considered not eligible for nomination to the National Register of Historic Places [Girard and Freeman 1992:146].

It was revisited by Steven M. Imhoff of Historic Preservation Associates on October 2, 1992. The site is situated on a slope at an elevation of 870 ft. The land surface slopes downward to the northwest at a rate of 17%. The local geology consists of the Kinderhookian Series (Mk) on which Peridge-Wilderness-Goss-Pembroke Association soils have formed. In the vicinity of the site, these soils support mixed hardwoods and shoreline vegetation, with the site proper wooded. The nearest available water is Cothwell Branch, a perennial stream located 10 m north of the site.

No evidence of this site was observed during our survey, suggesting that it has been eroded away completely or was submerged during our visit. It is subject to shoreline erosion and has probably been severely damaged. It is also possible that the materials observed by the previous investigators were eroded downslope from 23CE330. This site does not appear to be eligible for inclusion in the National Register of Historic Places.

23CE330

Table 47. Summary characteristics of 23CE330.

Site Name	Unnamed
Cultural Affiliation	Indeterminate prehistoric
Topographic Setting	Ridgetoe
Parent Material	Kinderhookian Series (Mk)
Drainage	Cothwell Branch
Original Recording Agency	Prewitt and Associates
Size of Site	280 m x 280 m
Surface Visibility	0% - 25%
Slope	3%
Ground Cover Vegetation	Mixed hardwoods
Month and Year of Field Investigation	October 1992
Land Use	Recreation
Elevation	910 ft NGVD

23CE330 is a prehistoric site recorded in April 1982 by investigators from Prewitt and Associates.

This site consists of a scatter of lithic tools and debitage over an area of about 400 by 15 m along the present lake shoreline approximately 100 m south of the former channel of Cothwell Branch. The artifacts are exposed on a slope among natural gravels in a shallow cherty soil. Vegetation consists of hardwood trees with little understory. The site has been extensively disturbed from wave action and is periodically inundated.

Three 2-m-diameter collection units were employed to sample surface artifacts, and all recognizable tools were plotted and collected. Because of the dense gravels, no shovel tests were excavated. Recovered cultural materials consist of 214 flakes and angular fragments (35 with edge modification), 1 biface, 1 projectile point, and 1 perforator/graver.

The projectile point appears to relate to the Early/Middle Archaic period, but it is likely that occupations which relate to other time periods also are represented. The deposits have been severely disturbed by shoreline erosion, and cultural materials probably have been displaced. The potential of this site to yield significant information relating to the research problems presented in Chapter 2 is low. It is recommended that 23CE330 be considered not eligible for nomination to the National Register of Historic Places [Girard and Freeman 1992:146-147].

It was revisited by Steven M. Imhoff of Historic Preservation Associates on October 2, 1992. Intensive inspection of exposures around campsite and extensive shovel testing revealed that the site is about 280 m north-south x 280 m east-west (78,400 m^2) and occupies most of the ridgetop overlooking the original location. The land surface slopes downward to the north at a rate of 3%. The local geology consists of the Kinderhookian Series (Mk) on which Peridge-Wilderness-Goss-Pembroke Association soils have formed. In the vicinity of the site, these soils support mixed hardwoods, with the site proper in an area developed for camping and picnicing but largely covered in mature hardwood forest. The nearest available water is Cothwell Branch, a perennial stream located 100 m north of the site.

A select surface collection yielded 2 (18.1 g) biface fragments, 2 (0.8 g) interior flakes, 12 (126.1 g) initial stage interior flakes, 3 (67.5 g) primary decortication flakes, 4 (135.6 g) secondary decortication flakes, and 3 (147.7 g) flake knife.

Artifact 1-1 is a biface midsection fragment. It has an excurvate blade and a biconvex cross section with no edge abrading and no beveling. Maximum dimensions are 2.4 cm x 2.2 cm x 0.6 cm and it weighs 4.1 g. The raw material is Burlington chert, which is found locally. Microscopic examination revealed wear resulting from cutting meat without bone contact. This specimen is an unclassified type not associated with a cultural period.

Artifact 1-2 is a flake knife fragment. It has an excurvate blade and a biconvex cross section with no edge abrading and unifacial beveling along one 2.5 cm-long margin. Maximum dimensions are 4.1 cm x 4.3 cm x 0.8 cm and it weighs 14.0 g. The raw material is Burlington chert, which is found locally. Microscopic examination revealed wear resulting from cutting meat with bone and from scraping wet hide. This is an unclassified type not associated with a cultural period.

Artifact 1-5 is a flake knife. Maximum dimensions are 7.4 cm x 5.6 cm x 2.0 cm and it weighs 75.2 g. The raw material is Burlington chert, which is found locally. Microscopic

examination revealed wear resulting from cutting bone or antler. This is an unclassified type not associated with a cultural period.

Artifact 1-6 is a flake knife. Maximum dimensions are 8.0 cm x 5.5 cm x 1.5 cm and it weighs 51.4 g. The raw material is Burlington chert, which is found locally. Microscopic examination revealed wear resulting from cutting wood. This is an unclassified type not associated with a cultural period.

Artifact 1-7 is a flake knife. Maximum dimensions are 5.4 cm x 3.5 cm x 1.4 cm and it weighs 21.1 g. The raw material is Burlington chert, which is found locally. Microscopic examination revealed wear resulting from cutting Wood. This is an unclassified type not associated with a cultural period.

No organic remains were recovered and no cultural features were observed. The cultural materials recovered from the site to date suggest an Early to Middle Archaic occupation and functioned as an upland hunting camp. However, we concur with Girard and Freeman's assumption that later occupations are present as well.

This site is exposed in a public camping area and has been damaged by construction of the campground and road building. Most of the site is somewhat protected by moderately dense vegetation and soil development on the ridgetop is reasonably good. In addition, definite concentrations of artifacts occur, suggesting that a measure of site integrity exists. This site may merit inclusion in the National Register of Historic Places and requires further assessment.

23CE481

Table 48. Summary characteristics of 23CE481.

Site Name	Unnamed
Cultural Affiliation	Indeterminate prehistoric
Topographic Setting	Ridgetoe
Parent Material	Kinderhookian Series (Mk)
Drainage	Cothwell Branch
Original Recording Agency	Historic Preservation Associates
Size of Site	100 m x 160 m
Surface Visibility	0% - 25%
Slope	11%
Ground Cover Vegetation	Mixed hardwoods
Month and Year of Field Investigation	October 1992
Land Use	Recreation
Elevation	880 ft NGVD

23CE481 is a prehistoric site recorded by Steven M. Imhoff of Historic Preservation Associates on October 2, 1992. The site is about 100 m north-south x 160 m east-west (16,000 m^2) and is situated on a ridgetop at an elevation of 880 ft. The land surface slopes downward to

the north at a rate of 11%. The local geology consists of the Kinderhookian Series (Mk) on which Peridge-Wilderness-Goss-Pembroke Association soils have formed. In the vicinity of the site, these soils support mixed hardwoods, with the site proper in an area developed for camping and picnicing. The nearest available water is Cothwell Branch, a perennial stream located 180 m north of the site.

A select surface collection yielded 11 (15.6 g) interior flakes, 10 (62.2 g) initial stage interior flakes, 2 (127.5 g) primary decortication flakes, 1 (0.1 g) retouch flake and 1 (6.8 g) secondary decortication flake. No organic remains were recovered and no cultural features were observed. The cultural materials at the site suggest only that it was occupied during prehistoric times and functioned as an upland hunting camp.

This site is exposed in a public camping area and has been damaged by construction of the campground and road building. The soils are shallow and additional damage has resulted from foot traffic and erosion. This site consists of thinly scattered shallow deposits that have been damaged by campground construction and use and probably does not merit inclusion in the National Register of Historic Places.

RUARK BLUFF PUBLIC USE AREA

Survey area 3 was investigated on September 29 and 30, 1992. It is a 96.7 acre (39.1 ha) parcel located in Dade County in the SW¼ and the E½ of the NW¼ of section 9, township 32N, range 26W (Figure 21). It is divided into north and south sections separated by an inlet. About half of the north portion and all of the southern one have been surveyed previously by Prewitt and Associates (Girard and Freeman 1992:159). Elevations range from 867 ft - 960 ft with slopes of 2% - 15%. The local geology consists of the Osagean Series (Mo) on which Bardley-Moko-rock outcrop complex, 5% - 15% slopes; Britwater silt loam 2% - 5% slopes; Goss gravely silt loam, 5% - 15% slopes, Goss-Moko complex, 10% - 25% slopes and Waben gravely silt loam, 3% - 9% have developed. These soils support mixed hardwoods and grasses. The area is drained by the Sac River. Surface visibility was generally poor (0% - 25%) because substantial areas were wooded, but areas exposed along the shoreline and around campsites presented excellent visibility.

We began at the north end of the north part of the area. It is a lightly developed camp ground that is mostly covered in thick grass with poor (0% - 10%) surface visibility. We began surveying this area with shovel tests at 20 m intervals along three transects and found a large lithic scatter (23DA211) almost immediately. We then continued surveying south and found 23DA451 on the first knoll south of 23DA211. A rock pile was noted behind a public toilet near the end of our transect and an isolated flake was found on the north edge of a camp ground near the end of the transect. We then surveyed back to the north end of the area without finding any more sites. Three more trips of three transects at the west end of the area produced two small lithic scatters (23DA452 and 23DA453) and what appear to be historic mining pits (23DA454).

We then surveyed the south area, beginning at the far west end and walking east. The western part of the area is an old field that has been allowed to return to forest. It is difficult to

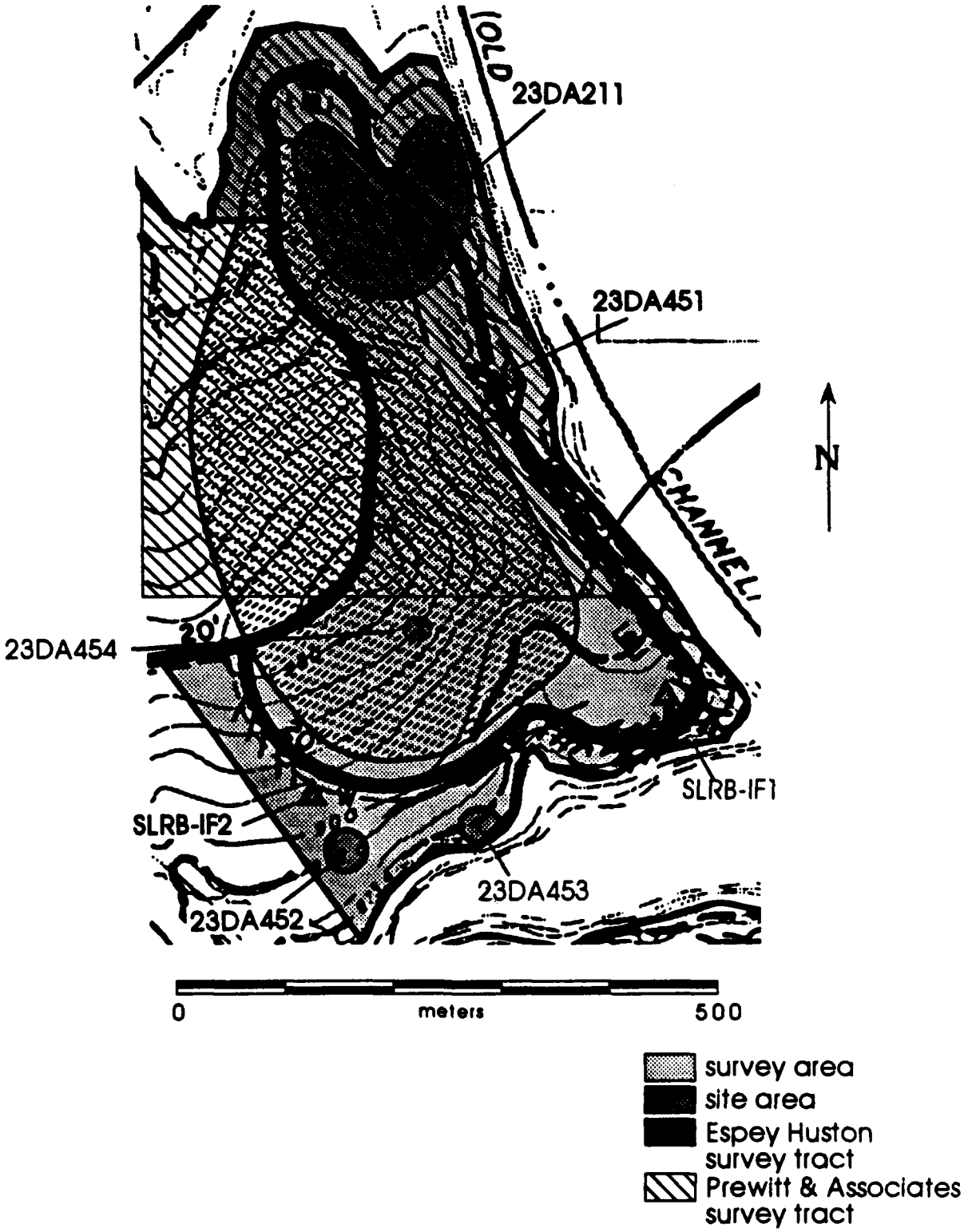


Figure 21. Ruark Bluff Public Use Area showing Survey Area 3.

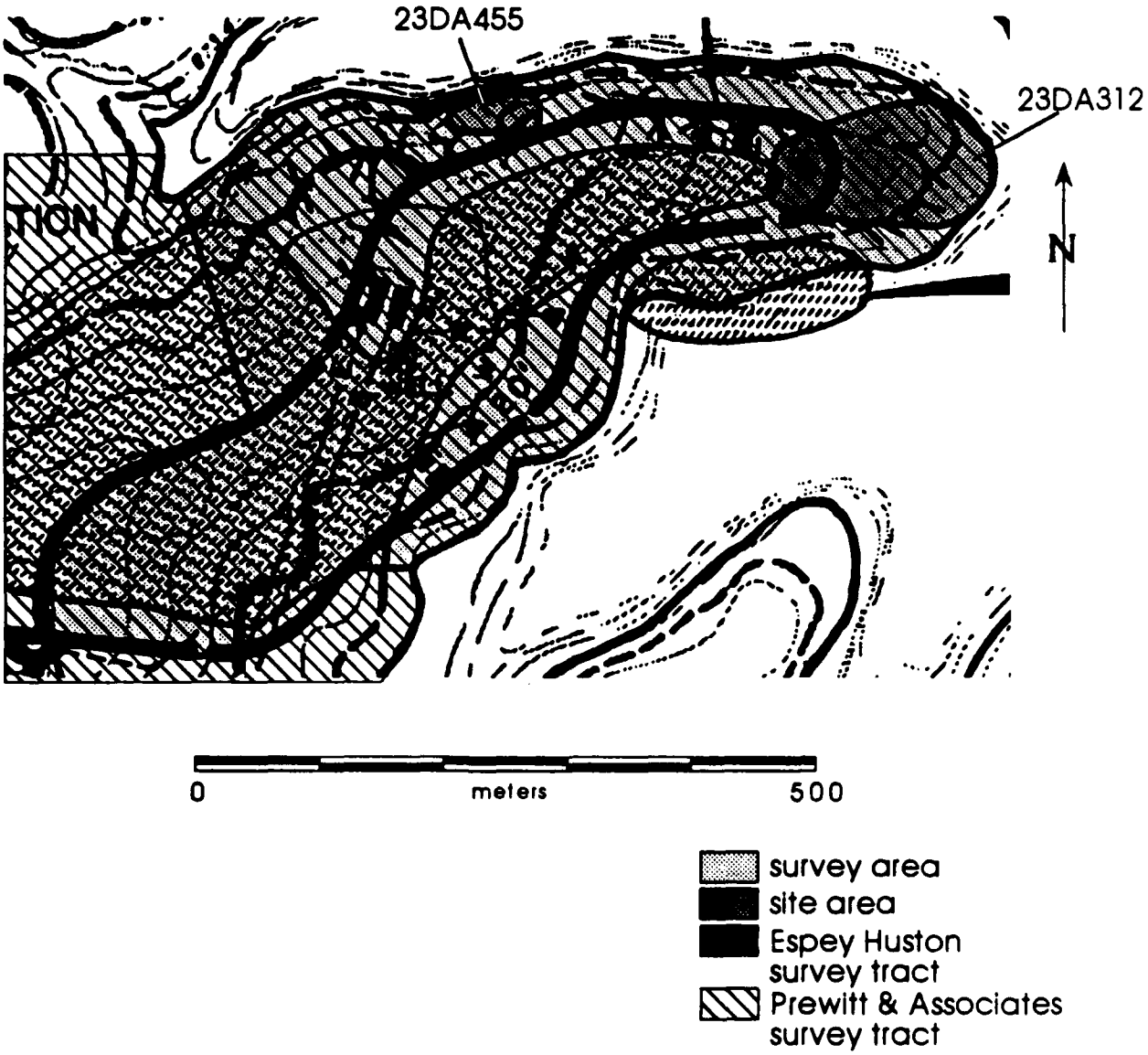


Figure 21. Ruark Bluff Public Use Area showing Survey Area 3.

traverse and surface visibility is poor (0% - 10%). The eastern part of the area has been developed for camping and is covered with grasses. Surface visibility is poor here too except around campsites and along the shoreline where it is excellent. A light lithic scatter (23DA312) was found exposed at the water line at the east end of the area. We surveyed back to the west end of the area, finding a second light lithic scatter (23DA455) on the north edge of the area, almost directly across from SLRB-4.

23DA211

Table 49. Summary characteristics of 23DA211.

Site Name	Unnamed
Cultural Affiliation	Indeterminate prehistoric
Topographic Setting	Ridgetop
Parent Material	Osagean Series (Mo)
Drainage	Sac River
Original Recording Agency	University of Missouri
Size of Site	225 m x 180 m
Surface Visibility	0% - 25%
Slope	1%
Ground Cover Vegetation	Grasses
Month and Year of Field Investigation	September 1992
Land Use	Recreation
Elevation	890 ft NGVD

23DA211 is a prehistoric site recorded in March 1961 by Pangborn and Graves of the University of Missouri. The Pangborn and Graves site form describes 23DA211 as a:

> Campsite located on a 2 acre plateau, extending out on the northwest point of Ruark Bluff. Artifacts recovered; 3 medium size corner notched proj. points, 2 medium size contracting stemmed proj., 2 medium size base notched proj., choppers and scrapers, 1 medium size shallow side notched concave base proj. point, numerous chips and spalls, and broken stone tools.
>
> Site had been cleared of timber and brush by a bull dozer. Site extends down the bluff to app. 75 yds long and 30 yds wide, from the bluff edge to the southwest, on to a plateau.

It was revisited in May 1982 by Liz Day of Prewitt and Associates. The Prewitt and Associates report describes it as follows:

> This site consists of a scatter of lithic tools and debitage covering an area of about 60 by 20 m located on the edge of a ridge adjacent to Ruark Bluff. The site is approximately 50 m west of the former channel of the Sac River. The area has been cleared and planted with domestic grass. Park roads pass through the site, and a picnic area is present.
>
> Because of the grass cover no surface collection units were employed, but a general collection was made of specimens exposed in the roadcuts. Collected were one projectile point fragment, two biface fragments, and one drill fragment. Two shovel tests were excavated and debitage was recovered from the upper 20 cm of both. A total of 64 flakes and angular fragments

(1 with edge modification) were recovered. Chapman et al. 1962 reported seven projectile points, four scrapers, one chert adze, eight blade (biface?) fragments, and one flake blade from earlier collections at the site. Most of the Projectile points appear to relate to the Late Woodland period although two of those described by Chapman et al. may be Early/Middle Archaic period forms.

Disturbances from road construction and picnic area use are severe, and deposits are relatively shallow and may be mixed. The potential for addressing research problems presented in Chapter 2 is low. It is recommended that 23DA211 be considered not eligible for nomination to the National Register of Historic Places [Girard and Freeman 1992:157].

It was revisited for a third time by Steven M. Imhoff of Historic Preservation Associates on September 29, 1992. The site is about 225 m northwest-southeast x 180 m northeast-southwest (40,500 m^2) and is situated on a ridgetop at an elevation of 890 ft. The land surface slopes downward to the north at a rate of 1%. The local geology consists of the Osagean Series (Mo) on which Britwater silt loam soils have formed. In the vicinity of the site, these soils support grasses, with the site proper in an area developed for camping and picnicing. The nearest available water is the Sac River, located 40 m east of the site.

Nineteen shovel tests and a select surface collection yielded 2 (0.2 g) biface fragments (incl. 1 barb tip), 39 (15.4 g) interior flakes, 11 (16.2 g) initial stage interior flakes, 2 (80.4 g) primary decortication flakes, 22 (0.9 g) retouch flakes, 2 (30.8 g) secondary decortication flakes, 1 (38.1 g) aborted preform and 2 (0.2 g) pieces of chert shatter. No organic remains were recovered and no cultural features were observed. The cultural materials at the site suggest only that it was occupied during prehistoric times and functioned as a prehistoric habitation.

This site may retain some of its original integrity, although Pangborn and Graves noted bulldozing activity. There is good soil development relative to other sites in the area and construction has been less intense. If this site contains undisturbed deposits, it may be eligible for inclusion in the National Register of Historic Places and requires further assessment.

23DA312

23DA312 is a prehistoric site recorded in May 1982 by Liz Day of Prewitt and Associates.

This site consists of a scatter of lithic tools and debitage on a ridgepoint adjacent to a bluff which drops to the former channel of the Sac River. Ephemeral tributary drainages border the ridge on the north and south. The area (ca. 100 by 100 m) is planted in domestic grass and contains several scattered sycamore trees. A camping area extends across the site which has been disturbed by a dirt road and possibly by shoreline erosion.

No surface collection units were employed but two bifaces were plotted and collected. Three shovel tests were excavated, all of which contained cultural materials. Recovered were 12 flakes and angular fragments (1 with edge modification) from the upper few centimeters of clay loam.

Construction and public use impacts have severely disturbed the shallow site deposits, and the potential of this site for yielding significant information is low. It is recommended that

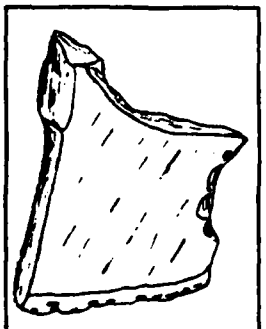
Table 50. Summary characteristics of 23DA312.

Site Name	Unnamed
Cultural Affiliation	Indeterminate prehistoric
Topographic Setting	Ridgetoe
Parent Material	Osagean Series (Mo)
Drainage	Sac River
Original Recording Agency	Prewitt and Associates
Size of Site	80 m x 150 m
Surface Visibility	50% - 75%
Slope	3%
Ground Cover Vegetation	Grasses and mixed hardwoods
Month and Year of Field Investigation	September 1992
Land Use	Recreation
Elevation	880 ft NGVD

23DA312 be considered not eligible for nomination to the National Register of Historic Places [Girard and Freeman 1992:158].

It was revisited by Steven M. Imhoff of Historic Preservation Associates on September 30, 1992. The site is about 80 m north-south x 150 m east-west (12,000 m^2) and is situated on a ridgetop at an elevation of 880 ft. The land surface slopes downward to the east at a rate of 3%. The local geology consists of the Osagean Series (Mo) on which Waben gravely silt loam, 3% - 9% slope soils have formed. In the vicinity of the site, these soils support grasses and mixed hardwoods, with the site proper in an area developed for camping and picnicing. The nearest available water is the Sac River, located 40 m north of the site.

A select surface sample and eight shovel tests yielded 16 (12.5 g) interior flakes, 10 (37.9 g) initial stage interior flakes, 1 (0.1 g) retouch flake, 2 (38.1 g) secondary decortication flakes, and 1 (7.1 g) graver-scraper flake tool.


Graver-scraper (1-1)

Artifact 1-1 is a graver-scraper. Maximum dimensions are 3.6 cm x 2.5 cm x 0.6 cm and it weighs 7.1 g. The raw material is Burlington chert, which is found locally. Microscopic examination revealed wear resulting from scraping wood. This most closely resembles the type, which is not associated with a cultural period. This item is a small tabular piece of chert with a graver spur produced by unifacial flaking and one edge that has been used as a scraper without modification.

No organic remains were recovered and no cultural features were observed. The cultural materials at the site suggest only that it was occupied during prehistoric times and functioned as an upland hunting camp.

There is damage from construction of park roads and camping facilities. The site is also suffering from shoreline erosion and casual collecting by park visitors. This site is a low density

lithic scatter with few cultural diagnostics but soil development is reasonably good in places and intact deposits may remain. This site may be eligible for inclusion in the National Register of Historic Places and requires further assessment.

23DA451

Table 51. Summary characteristics of 23DA451.

Site Name	Unnamed
Cultural Affiliation	Indeterminate prehistoric
Topographic Setting	Blufftop
Parent Material	Osagean Series (Mo)
Drainage	Sac River
Original Recording Agency	Historic Preservation Associates
Size of Site	10 m x 10 m
Surface Visibility	0% - 25%
Slope	5%
Ground Cover Vegetation	Mixed hardwoods
Month and Year of Field Investigation	September 1992
Land Use	Recreation
Elevation	890 ft NGVD

Unifacial Side Scraper (1-1)

23DA451 is a prehistoric site recorded by Steven M. Imhoff of Historic Preservation Associates on September 29, 1992. The site is about 10 m north-south x 10 m east-west (100 m^2) and is situated on a bluff at an elevation of 890 ft. The land surface slopes downward to the east at a rate of 5%. The local geology consists of the Osagean Series (Mo) on which Goss gravely silt loam, 5% - 15% soils have formed. In the vicinity of the site, these soils support mixed hardwoods, with the site proper in an area developed for camping and picnicing. The nearest available water is the Sac River, located 40 m east of the site.

All observed artifacts were collected. These included 3 (0.6 g) interior flakes, 2 (6.4 g) initial stage interior flakes, and 1 (8.2 g) unifacial side scraper. Artifact 1-1 is a D-shaped unifacial side scraper. Maximum dimensions are 4.8 cm x 2.2 cm x 0.6 cm and it weighs 8.2 g. The raw material is Jefferson City chert, which is found locally in the deeper valleys. Microscopic examination revealed wear resulting from scraping wet hide. This is an unclassified type not associated with a cultural period.

No organic remains were recovered and no cultural features were observed. The cultural materials at the site suggest only that it was occupied during prehistoric times and functioned as an upland hunting camp. This site is shallow with sparse artifacts and probably retains little, if any, of its original integrity. It is not eligible for inclusion in the National Register of Historic Places.

23DA452

Table 52. Summary characteristics of 23DA452.

Site Name	Unnamed
Cultural Affiliation	Indeterminate prehistoric
Topographic Setting	Hillside
Parent Material	Osagean Series (Mo)
Drainage	Unnamed intermittent stream
Original Recording Agency	Historic Preservation Associates
Size of Site	10 m x 10 m
Surface Visibility	0% - 25%
Slope	10%
Ground Cover Vegetation	Mixed hardwoods
Month and Year of Field Investigation	September 1992
Land Use	Recreation
Elevation	890 ft NGVD

23DA452 is a prehistoric site recorded by Steven M. Imhoff of Historic Preservation Associates on September 29, 1992. The site is about 10 m north-south x 10 m east-west (100 m^2) and is situated on a slope at an elevation of 890 ft. The land surface slopes downward to the southeast at a rate of 10%. The local geology consists of the Osagean Series (Mo) on which Waben gravely silt loam, 3% - 9% slope soils have formed. In the vicinity of the site, these soils support mixed hardwoods, with the site proper wooded. The nearest available water is an unnamed intermittent stream located 60 m north of the site.

All observed artifacts were collected. These included 1 (6.2 g) biface, and 5 (23.6 g) initial stage interior flakes. Artifact 1-1 is a biface. It is an expanding stem specimen with a rounded tip, an asymmetrical blade, corner notches, damaged shoulders and a convex base. One shoulder has been eliminated by resharpening, one by breakage, and one tang is missing. One blade edge is convex and one is concave. The cross section is biconvex with no edge abrading, and no beveling. Maximum dimensions are 3.3 cm x 2.4 cm x 0.8 cm and it weighs 6.2 g. The raw material is heat-treated Burlington chert, which is found locally. Microscopic examination revealed wear resulting from cutting meat without bone contact. This specimen is exhausted and is an unclassified type not associated with a cultural period.

Bifacial Knife (1-1)

No organic remains were recovered and no cultural features were observed. The cultural materials at the site suggest only that it was occupied during prehistoric times and functioned as an upland hunting camp. This site is shallow with sparse artifacts and probably retains little, if any, of its original integrity. It is not eligible for inclusion in the National Register of Historic Places.

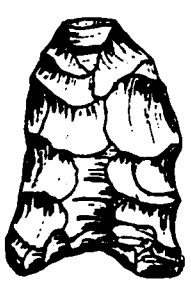
23DA453

Table 53. Summary characteristics of 23DA453.

Site Name	Unnamed
Cultural Affiliation	Late Archaic
Topographic Setting	Hillside
Parent Material	Osagean Series (Mo)
Drainage	Unnamed intermittent stream
Original Recording Agency	Historic Preservation Associates
Size of Site	20 m x 30 m
Surface Visibility	50% - 75%
Slope	10%
Ground Cover Vegetation	Mixed hardwoods and grasses
Month and Year of Field Investigation	September 1992
Land Use	Recreation
Elevation	880 ft NGVD

23DA453 is a prehistoric site recorded by Steven M. Imhoff of Historic Preservation Associates on September 29, 1992. The site is about 20 m north-south x 30 m east-west (600 m^2) and is situated on a slope at an elevation of 880 ft. The land surface slopes downward to the southeast at a rate of 10%. The local geology consists of the Osagean Series (Mo) on which Waben gravely silt loam, 3% - 9% slope soils have formed. In the vicinity of the site, these soils support mixed hardwoods and grasses, with the site proper in an area developed for camping and picnicing. The nearest available water is an unnamed intermittent stream located 60 m south of the site.

All observed artifacts were collected. These included 1 (5.3 g) dart point, 9 (14.7 g) interior flakes, and 1 (32.8 g) flake knife.



Hannah (1-1)

Artifact 1-1 is a dart point. It is a bifurcated stem specimen with a rounded tip, an asymmetrical blade, side notches, missing shoulders and a concave base. The cross section is biconvex with edge abrading on the Light, and no beveling. Maximum dimensions are 3.3 cm x 1.9 cm x 0.7 cm and it weighs 5.3 g. The raw material is Burlington chert, which is found locally. Microscopic examination revealed wear resulting from Impact fracture. This specimen has been resharpened to exhaustion and most closely resembles the Hannah type, which is associated with the Late Archaic period.

Artifact 1-2 is a flake knife. Maximum dimensions are 6.2 cm x 4.4 cm x 1.3 cm and it weighs 32.8 g. The raw material is Burlington chert, which is found locally. Microscopic examination revealed wear resulting from cutting meat with bone contact. This specimen is not associated with a specific cultural period.

No organic remains were recovered and no cultural features were observed. The cultural materials at the site suggest only that it was occupied during prehistoric times and functioned as an upland hunting camp.

This site is shallow with sparse artifacts and probably retains little, if any, of its original integrity. It has been heavily damaged by development activity and inundation. It is not eligible for inclusion in the National Register of Historic Places.

23DA454

Table 54. Summary characteristics of 23DA454.

Site Name	Unnamed
Cultural Affiliation	Historic
Topographic Setting	Hilltop
Parent Material	Osagean Series (Mo)
Drainage	Unnamed intermittent stream
Original Recording Agency	Historic Preservation Associates
Size of Site	18 m x 12 m
Surface Visibility	0% - 25%
Slope	10%
Ground Cover Vegetation	Mixed hardwoods
Month and Year of Field Investigation	September 1992
Land Use	Recreation
Elevation	940 ft NGVD

23DA454 is an historic site recorded by Steven M. Imhoff of Historic Preservation Associates on September 29, 1992. The site is about 18 m north-south x 12 m east-west (216 m^2) and is situated on a ridgetop at an elevation of 940 ft. The land surface slopes downward to the southeast at a rate of 10%. The local geology consists of the Osagean Series (Mo) on which Bardley-Moko-rock outcrop complex, 5% - 15% slope soils have formed. In the vicinity of the site, these soils support mixed hardwoods, with the site proper wooded. The nearest available water is an unnamed intermittent stream located 230 m south of the site.

No remote sensing/sampling techniques were employed. No cultural materials were observed or collected. No organic remains were recovered. There are two pits about 5 m in diameter and 1 m - 1.5 m deep with associated tailing piles. The features at the site suggest that it consists of mining pits created during historic times. There are no indications of gross disturbances but this site exhibits no associated structural features or artifacts and is not eligible for inclusion in the National Register of Historic Places.

23DA455

23DA455 is a prehistoric site recorded by Steven M. Imhoff of Historic Preservation Associates on September 30, 1992. The site is about 40 m north-south x 70 m east-west (2,800

Table 55. Summary characteristics of 23DA455.

Site Name	Unnamed
Cultural Affiliation	Indeterminate prehistoric
Topographic Setting	Ridge slope
Parent Material	Osagean Series (Mo)
Drainage	Unnamed intermittent stream
Original Recording Agency	Historic Preservation Associates
Size of Site	40 m x 70 m
Surface Visibility	50% - 75%
Slope	20%
Ground Cover Vegetation	Mixed hardwoods and grasses
Month and Year of Field Investigation	September 1992
Land Use	Recreation
Elevation	880 ft NGVD

m^2) and is situated on a slope at an elevation of 880 ft. The land surface slopes downward to the north at a rate of 20%. The local geology consists of the Osagean Series (Mo) on which Waben gravely silt loam, 3% - 9% slope soils have formed. In the vicinity of the site, these soils support mixed hardwoods, grasses, with the site proper in an area developed for camping and picnicing. The nearest available water is an unnamed intermittent stream located 50 m north of the site.

A select surface collection yielded 11 (6.0 g) interior flakes, 8 (10.9 g) initial stage interior flakes, 3 (9.8 g) secondary decortication flakes, and 1 (4.1 g) flake scraper. Artifact 1-1 is a flake spokeshave. Maximum dimensions are 2.8 cm x 2.3 cm x 0.5 cm and it weighs 4.1 g. The raw material is Burlington chert, which is found locally. Microscopic examination revealed wear resulting from scraping wood. This specimen is not associated with a specific cultural period.

No organic remains were recovered and no cultural features were observed. The cultural materials suggest only that it was occupied during the prehistoric past and functioned as an upland hunting camp.

This site has been severely damaged by construction of roads and camping facilities, shoreline erosion, fluctuations in the level of Stockton Lake and erosion caused by a lack of ground cover. It is also subject to casual collecting by lake visitors. This site has been largely destroyed and is not eligible for inclusion in the National Register of Historic Places.

Survey area 4 was investigated on September 30, 1992. It is an 8.4 acre (3.4 ha) parcel located in Dade County in the center of the W½ of the NE¼ of section 8, township 32N, range 26W (Figure 22). It was surveyed previously by investigators from Prewitt and Associates (Girard and Freeman 1992:159). Elevations range from 867 ft - 900 ft NGVD with slopes of 3% - 16%. The local geology consists of the Osagean Series (Mo) on which Basehor cobbly very file sandy loam, 5% - 20% slopes; Goss gravely silt loam, 5% - 15% slopes and Goss-Moko complex, 10% - 25% slopes have formed. These soils support mixed hardwoods and grasses. The area is

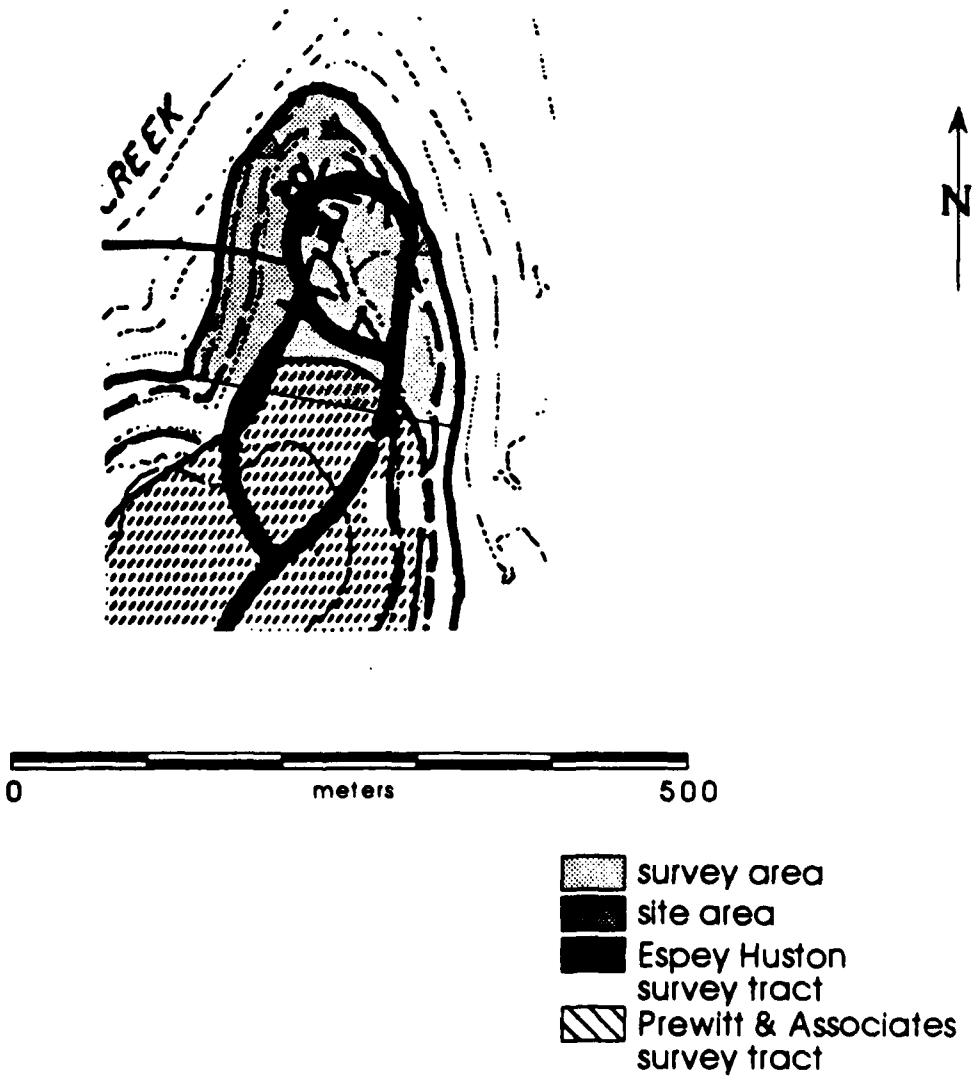


Figure 22. Ruark Bluff Public Use Area showing Survey Area 4.

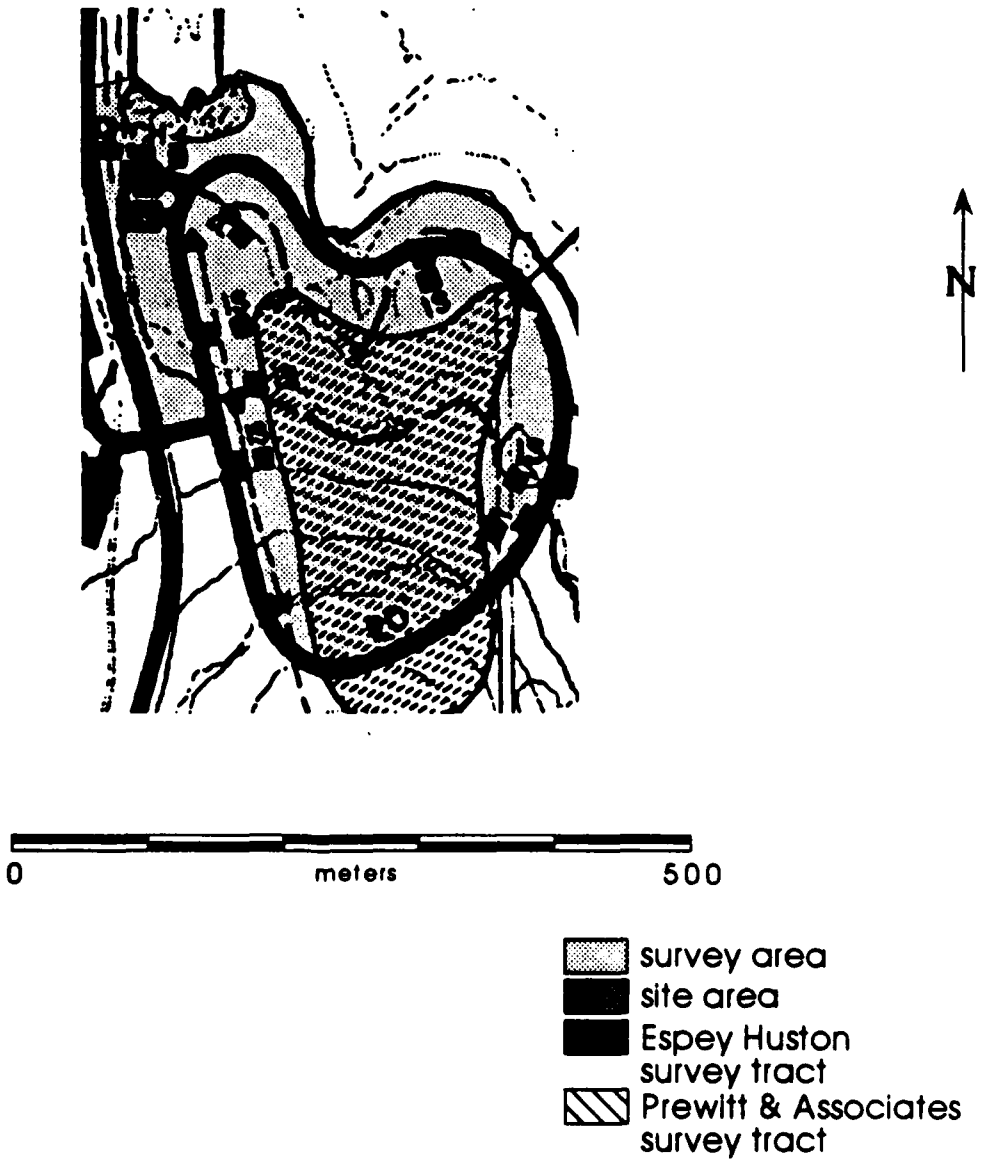


Figure 23. Ruark Bluff Public Use Area showing Survey Area 7.

drained by Sons Creek, a tributary of the Sac River. Surface visibility was generally fair (25% - 50%). Developments include paved roads, a double vault toilet, underground utilities and 9 campsites.

the area was surveyed by walking three transects parallel to the shoreline. Very little shovel testing was conducted because of 100% surface visibility along the shoreline and relatively good (25% - 50%) visibility in the campground caused by recent development activity. Three isolated artifacts (SLRB-3, SLRB-4 and SLRB-5) were found.

Survey area 7 was investigated on September 30, 1992. It is a 23.9 acre (9.7 ha) parcel located in the E½ of the NE¼ of section 8 and the NW¼ of the SW¼ of the NW¼ of section 9, township 32N, range 26W (Figure 23). Elevations range from 867 ft - 930 ft with slopes of 5%. The local geology consists of the Osagean Series (Mo) on which Britwater silt loam, 2% - 5% and Goss gravely silt loam, 5% - 20% soils have developed. These soils support mixed hardwoods and grasses. The area is drained by Sons Creek, a tributary of the Sac River. Surface visibility was generally poor (0% - 25%). Developments include paved roads and parking areas, a swimming beach with two change houses, two double vault toilets, a sand volleyball court, playground equipment, five individual shelters and one water spigot.

This area is predominantly covered in grasses with isolated areas of hardwoods or cedars. It has the appearance of a city park. We surveyed nine roughly north-south transects with shovel tests at 20 m - 30 m intervals. Ground surface visibility was uniformly poor and our shovel tests produced no cultural materials.

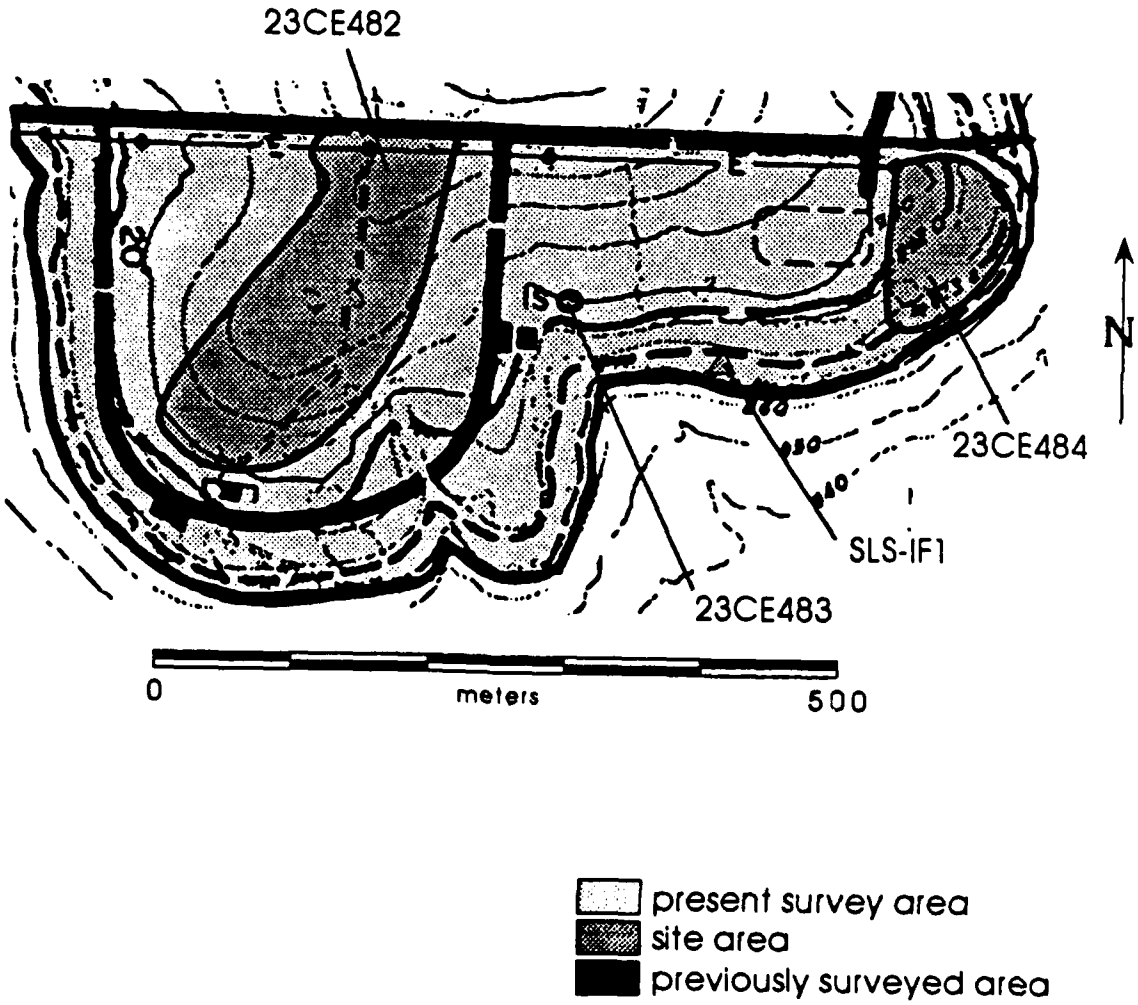
STOCKTON PUBLIC USE AREA

Survey area 18 was investigated on October 14, 1992. It is a 107.7 acre (43.6 ha) parcel located in Cedar County in the SW¼ and the N½ of the SE¼ of section 16, township 34N, range 26W (Figure 24). Elevations range from 867 ft - 930 ft with slopes of 4% - 16%. The local geology consists of the Kinderhookian Series (Mk) on which Peridge-Wilderness-Goss-Pembroke Association soils have developed. These soils support mixed hardwoods, grass and second growth. The area is drained by Edge Branch a tributary of the Sac River. Surface visibility was generally poor (0% - 25%)

It is divided into east and west portions of roughly equal size. We began with the east part, walking east-west transects with shovel tests at 20 m intervals. The area has been closed for some time, judging by the secondary growth covering most of it. We found three historic sites (23CE482, 23CE483 and 23CE484) and one isolated flake (SLS-IF1).

We then began surveying the west area, surveying northwest-southeast transects with shovel tests at 20 m intervals. Roughly 75% of this area has been surveyed previously by investigators from Prewitt and Associates (Girard and Freeman 1992:145). We walked 12 such transects, covering about the northern 2/3 of the area finding two isolated artifacts (SLS-IF2 and SLS-IF3). We then surveyed north-south transects between the large road loop at the center of the area and the group use area at the south end. We found one small prehistoric site (23CE485)

Figure 24. Stockton Public Use Area showing Survey Area 18.



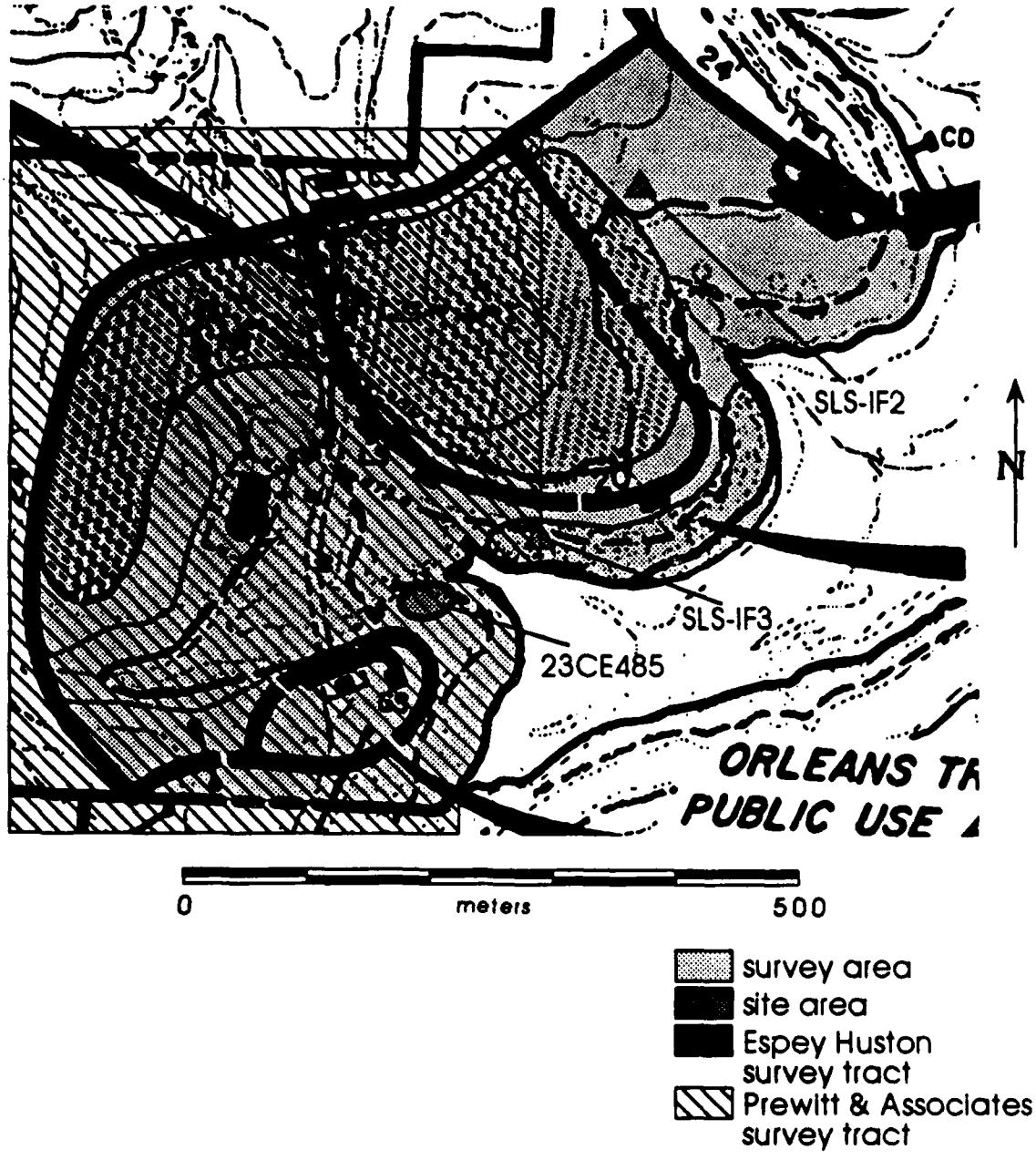


Figure 24. Stockton Public Use Area showing Survey Area 18.

in the northeast corner of the group use area. We inspected all of the exposed ground in the public use area with negative results.

SLS-IF1 is a large U-shaped flake knife. The cross section is plano-convex with no edge abrading, and no beveling. Maximum dimensions are 7.2 cm x 4.7 cm x 1.1 cm and it weighs 37.8 g. The raw material is Burlington chert, which is found locally. Microscopic examination revealed wear resulting from cutting meat without bone contact. This specimen is not associated with a cultural period.

23CE482

Table 56. Summary characteristics of 23CE482.

Site Name	Unnamed
Cultural Affiliation	20th century historic
Topographic Setting	Ridgetop
Parent Material	Kinderhookian Series (Mk)
Drainage	Edge Branch
Original Recording Agency	Historic Preservation Associates
Size of Site	250 m x 150 m
Surface Visibility	0% - 25%
Slope	5%
Ground Cover Vegetation	Mixed hardwoods, grasses and second growth
Month and Year of Field Investigation	October 1992
Land Use	Recreation
Elevation	920 ft NGVD

23CE482 is an historic site recorded by Steven M. Imhoff of Historic Preservation Associates on October 14, 1992. The site is about 250 m northeast-southwest x 150 m northwest-southeast (37,500 m^2) and is situated on a ridgetop at an elevation of 920 ft. The land surface slopes downward to the southwest at a rate of 5%. The local geology consists of the Kinderhookian Series (Mo) on which Peridge-Wilderness-Goss-Pembroke Association soils have formed. In the vicinity of the site, these soils support mixed hardwoods, grass and secondary growth species, with the site proper wooded. The nearest available water is Edge Branch, an intermittent stream located 220 m south of the site.

A select surface collection yielded 1 (31.6 g) Bayer Aspirin bottle, 2 (172.7 g) whiteware china sherds, 1 (147.3 g) glass canning jar and lid, 1 (87.8 g) bottle glass sherd, 1 (8.8 g) canning jar glass sherd, 2 (474.3 g) clear bottle glass sherds, 1 (20.3 g) milk glass sherd, 1 (42.8 g) Prince Albert tobacco tin and 1 (70.0 g) zinc canning jar ring. No organic remains were recovered. A livestock pen - probably a hog house - still exists on the lower part of the site north of a public toilet. In addition, some fence lines can still be traced. A flower bed exists on the higher elevation of the site and is probably near the former location of the house. The cultural materials and features at the site suggest that it was occupied during historic times and functioned as a residence/farmstead.

All structures but one - probably a hog house - have been dismantled and removed from the site. Depending on the amount of bulldozing done at the site, patterning in artifact distributions may or may not be present. This site has been damaged by the destruction of buildings and construction activities. It probably retains little of its original integrity and is not eligible for inclusion in the National Register of Historic Places.

23CE483

Table 57. Summary characteristics of 23CE483.

Site Name	Unnamed
Cultural Affiliation	20th century historic
Topographic Setting	Hillside drainage
Parent Material	Kinderhookian Series (Mk)
Drainage	Unnamed spring
Original Recording Agency	Historic Preservation Associates
Size of Site	2 m x 2 m
Surface Visibility	0% - 25%
Slope	8%
Ground Cover Vegetation	Mixed hardwoods, grasses and second growth
Month and Year of Field Investigation	October 1992
Land Use	Recreation
Elevation	900 ft NGVD

23CE483 is an historic site recorded by Steven M. Imhoff of Historic Preservation Associates on October 14, 1992. The site is about 2 m north-south x 2 m east-west (4 m^2) and is situated on a slope at an elevation of 900 ft. The land surface slopes downward to the southeast at a rate of 8%. The local geology consists of the Kinderhookian Series (Mo) on which Peridge-Wilderness-Goss-Pembroke Association soils have formed. In the vicinity of the site, these soils support mixed hardwoods, grass and secondary growth species, with the site proper wooded.

No remote sensing/sampling techniques were employed. No organic remains were recovered. The site consists of a poured concrete wall enclosing a spring, which was not flowing at the time of our visit. It is 5.5 ft square about 4 ft deep and was formerly rocked with sandstone on the outside. A pipe was once located near the top of the south wall which has been breached at the southwest corner. A large sandstone slab located a few feet south of the spring may have served as a cap. There is no evidence of a structure having been erected over it.

The concrete structure is in good condition but a hole has been knocked into the southwest corner. This site is an isolated historic feature and is not eligible for inclusion in the National Register of Historic Places.

23CE484

Table 58. Summary characteristics of 23DA484.

Site Name	Unnamed
Cultural Affiliation	20th century historic
Topographic Setting	Hillside
Parent Material	Kinderhookian Series (Mk)
Drainage	Edge Branch intermittent stream
Original Recording Agency	Historic Preservation Associates
Size of Site	100 m x 80 m
Surface Visibility	0% - 25%
Slope	10%
Ground Cover Vegetation	Mixed hardwoods, grasses and second growth
Month and Year of Field Investigation	October 1992
Land Use	Recreation
Elevation	890 ft NGVD

23CE484 is an historic site recorded by Steven M. Imhoff of Historic Preservation Associates on October 14, 1992. The site is about 100 m north-south x 80 m east-west (8,000 m^2) and is situated on a ridgetop at an elevation of 890 ft. The land surface slopes downward to the southeast at a rate of 10%. The local geology consists of the Kinderhookian Series (Mo) on which Peridge-Wilderness-Goss-Pembroke Association soils have formed. In the vicinity of the site, these soils support mixed hardwoods, grasses and secondary growth species, with the site proper wooded. The nearest available water is Edge Branch, an intermittent stream located 500 m south of the site.

A select surface collection yielded 1 (683.0 g) glass chicken waterer, and 1 (759.0 g) stoneware jug. No organic remains were recovered. The sole remaining feature is a concrete slab 26 ft north-south and 14.5 ft east-west. The cultural materials and features at the site suggest that it was occupied during historic times and functioned as a residence/farmstead.

All structures have been dismantled and removed from the site. Depending on the amount of bulldozing done at the site, patterning in artifact distributions may or may not be present. The former location of the house cannot be accurately determined. This site is not eligible for inclusion in the National Register of Historic Places.

23CE485

23CE485 is a prehistoric site recorded by Steven M. Imhoff of Historic Preservation Associates on October 14, 1992. The site is about 30 m north-south x 30 m east-west (900 m^2) and is situated on a ridgetop at an elevation of 880 ft. The land surface slopes downward to the east at a rate of 7%. The local geology consists of the Kinderhookian Series (Mo) on which Peridge-Wilderness-Goss-Pembroke Association soils have formed. In the vicinity of the site,

Table 59. Summary characteristics of 23DA485.

Site Name	Unnamed
Cultural Affiliation	Indeterminate prehistoric
Topographic Setting	Ridgetoe
Parent Material	Kinderhookian Series (Mk)
Drainage	Edge Branch
Original Recording Agency	Historic Preservation Associates
Size of Site	30 m x 30 m
Surface Visibility	25% - 50%
Slope	7%
Ground Cover Vegetation	Mixed hardwoods
Month and Year of Field Investigation	October 1992
Land Use	Recreation
Elevation	880 ft NGVD

these soils support mixed hardwoods, with the site proper wooded. The nearest available water is Edge Branch, an intermittent stream located 40 m north of the site.

A select surface collection yielded 2 (304.3 g) cores, 2 (2.1 g) interior flakes, 4 (18.5 g) initial stage interior flakes, 1 (25.4 g) primary decortication flake, 1 (6.1 g) prismatic flake blade, and 1 (47.3 g) secondary decortication flake. Artifact 1-3 is a flake knife. Maximum dimensions are 3.8 cm x 2.4 cm x 0.6 cm and it weighs 6.1 g. The raw material is Burlington chert, which is found locally. Microscopic examination revealed wear resulting from cutting meat without bone contact. This most closely resembles the type, which is not associated with a cultural period.

No organic remains were recovered and no cultural features were observed. The cultural materials at the site suggest that it was occupied during the prehistoric period and functioned as an upland hunting site. This site may be eligible for inclusion in the National Register and requires additional assessment. It has been disturbed by the construction of park roads and camping facilities but much of it lies outside the area affected.

THE MAZE CREEK DRAINAGE

The work along Maze Creek took place between October 15 - 19 and on November 4, 1992. The survey encompasses 476.5 acres(192.8 ha) in section 5, township 32N, range 25W and section 32, township 33N, range 25W (Figure 25). Elevations range from 867 ft - 950 ft NGVD with slopes of 1% to vertical bluffs. The local geology includes the Osagean Series and channel sands on which Peridge-Wilderness-Goss-Pembroke Association soils have developed. These soils support mixed hardwoods, grasses, and second growth species in old fields. The area is drained by Maze Creek, a tributary of the Little Sac River. Surface visibility is generally poor (0% - 25%) but with isolated exposures along roads, in eroded or otherwise disturbed areas and the cutbank of Maze Creek.

Figure 25. Maze Creek drainage showing the areas surveyed.

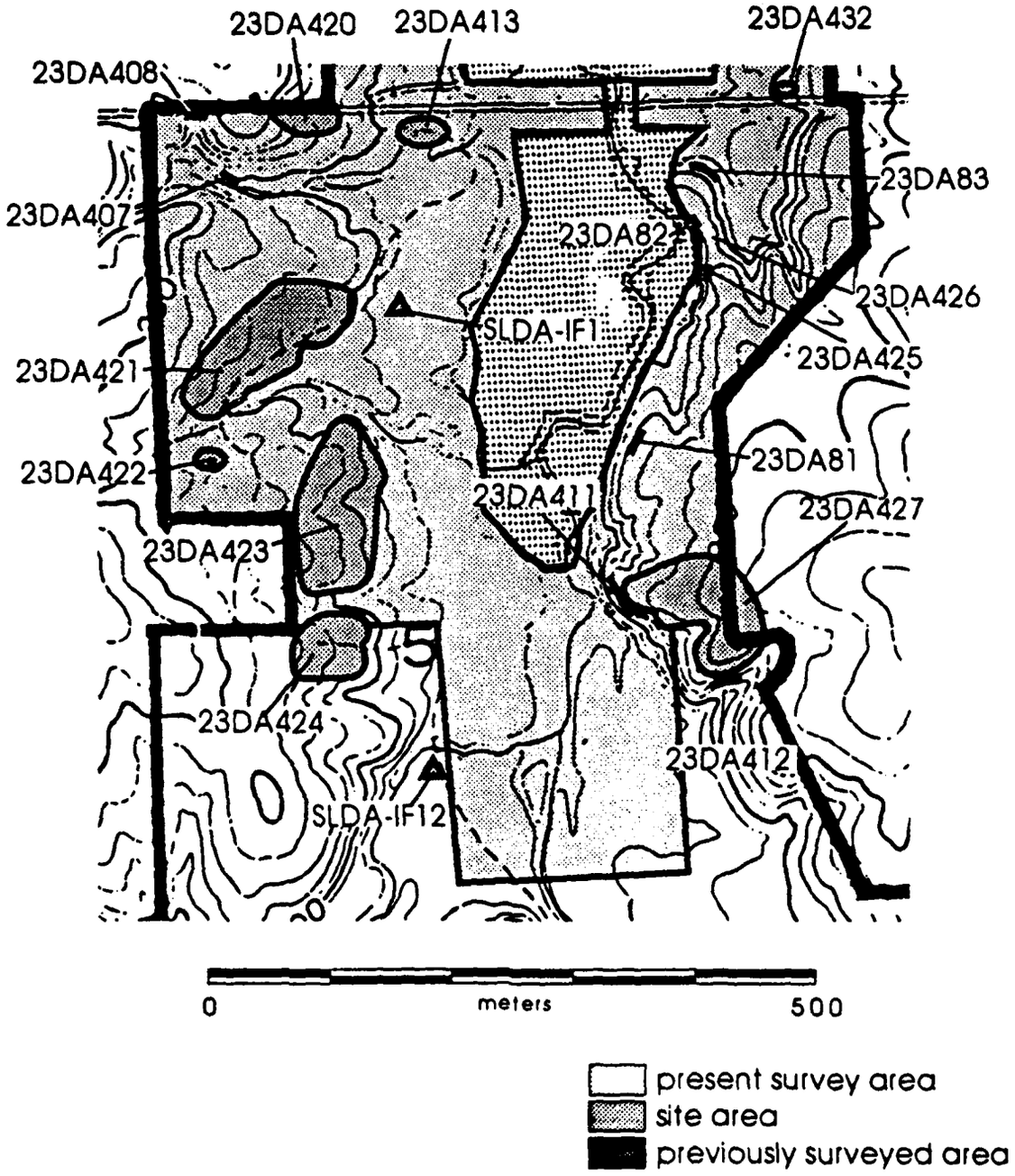
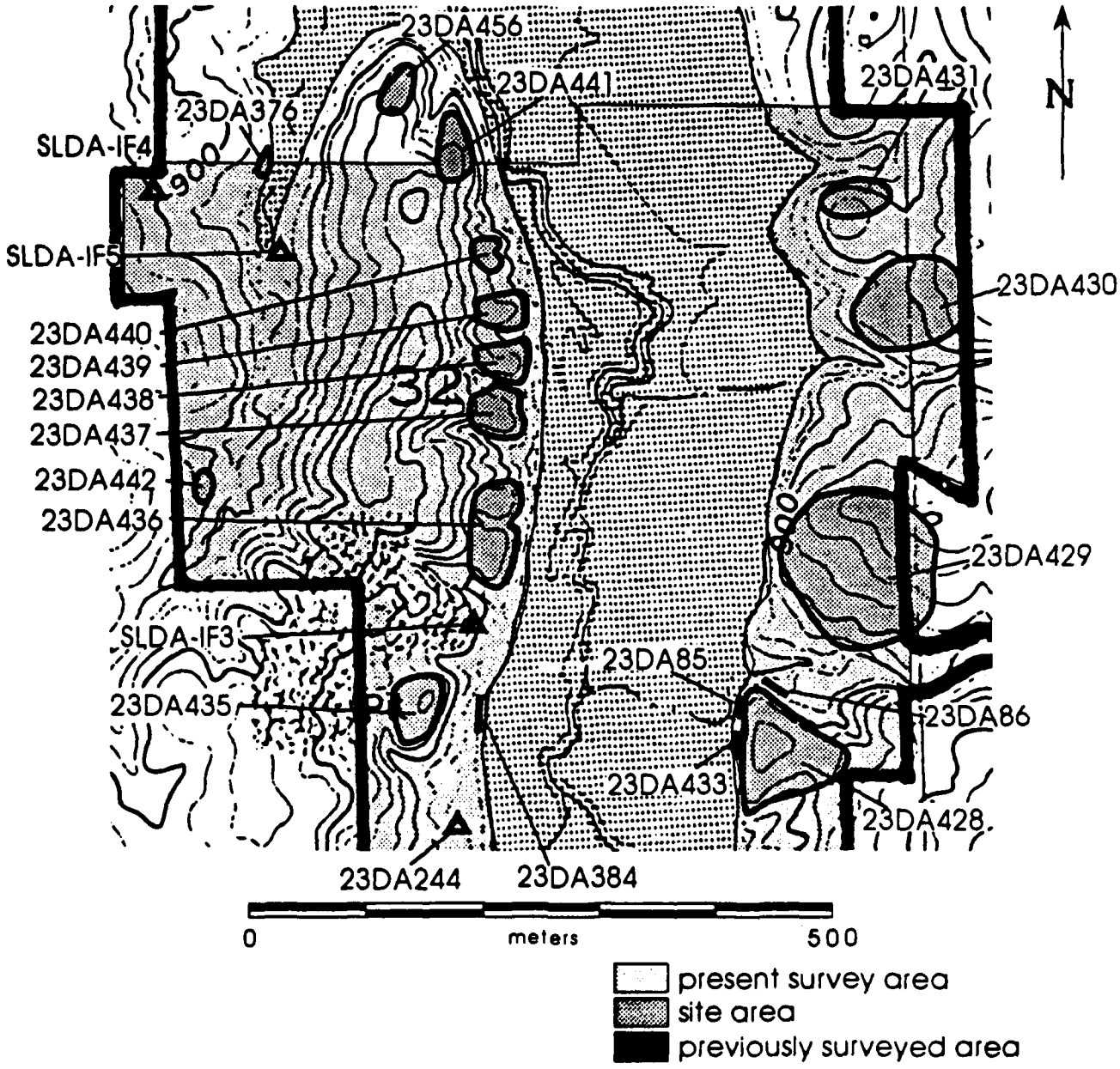


Figure 25. Maze Creek drainage showing the areas surveyed.



On October 15, the NE¼ of the NW¼ and the NW¼ of the NE¼ of section 5 was surveyed, which encompasses roughly 70.0 acres (28.3 ha) south of highway 215 and west of Maze Creek. Elevations range from 867 ft - 950 ft with slopes of 1% - 20%. Vegetation in the area includes mixed hardwoods, grass, and limited areas of second growth. Surface visibility was generally poor (0% - 25%). Twelve east-west transects were walked with approximately 350 shovel tests excavated at 20 m - 30 m intervals. Beginning at the north edge of section 5 south of State Highway 215, east-west transects were surveyed with shovel tests at 20 m intervals. Immediately the remains of an historic site (23DA420) were found on a hillside sandstone glade. No collections were taken but items observed included the remains of a brick chimney, asphalt roofing shingles, metal chicken waterers and wood framing lumber. The apparent footing for the chimney was found about 75 m up the hill. The east-west drainage near the highway was also intensively shovel tested and exposed cutbanks were inspected. These efforts produced no evidence of any sites in the drainage bottom. A prehistoric and historic site was also found at the southwest edge of the area. Prehistoric and historic materials are exposed in open areas. A few flakes can also be found on the floodplain immediately below the ridgetoe upon which the site is situated. These have probably been redeposited and the site boundaries have not been extended to include them. The part of the Maze Creek floodplain most recently submerged was mucky and made it impossible to walk all the way to the creek. There is at least 15 cm - 20 cm of recent silt deposited there, so shovel tests were excavated as deeply as possible.

On October 16, the NW¼ of the SW¼ of the NW¼ and the E½ of the SE¼ NW¼ and the W½ of the SW¼ of the NE¼ of section 5 was surveyed, encompassing roughly 60.0 acres (24.3 ha) south of highway 215 and west of Maze Creek. Elevations range from 867 ft - 930 ft with slopes of 1% - 10%. Vegetation is composed of mixed hardwoods, grasses and second growth. Surface visibility was generally poor (0% - 25%). Eighteen east-west transects were walked with about 350 shovel tests excavated at 20 m - 30 m intervals. It was possible to walk all the way to Maze Creek where a cutbank is exposed and is as much as two meters high. No cultural materials were exposed in the cut bank and shovel tests excavated on the natural levee deposits along the creek failed to produce evidence of human occupation.

On October 17, the SW¼ of the NW¼ of the SE¼ and the W½ of the SW¼ of the NE¼ and the W½ of the NE¼ of the NE¼ and the W½ of the W½ of the SE¼ of the NE¼ and the E½ of the NE¼ of the NE¼ of the NE¼ of section 5 was surveyed, encompassing roughly 65.0 acres (26.3 ha) south of highway 215 and east of Maze Creek. Elevations range from 867 ft - 950 ft with slopes ranging from 1% to vertical bluffs. Vegetation consists of bottomland & upland hardwoods. Surface visibility was generally fair (25% - 50%). Eighteen north-south transects were walked with about 300 shovel tests excavated at 20 m - 30 m intervals. Much of this area was not surveyable due to the steep slopes overlooking Maze Creek. The area was surveyed in roughly north-south transects with shovel tests at 20 m intervals with the exception of about 30 acres in the NW¼ of the SE¼, which were surveyed in east-west transects. Again, it was possible to reach Maze Creek and inspect the bank profile for cultural materials. No evidence of human occupation was detected either in the cut bank or in shovel tests. After finishing the remaining bottomland, we began surveying the uplands east of Maze Creek, beginning at highway 215 and working south. This area is primarily covered in mature oak-hickory forest that was easy to traverse but with generally poor surface visibility.

On October 18, the E½ of the NE¼ of the NE¼ and the E½ of the SE¼ of section 32 and the E½ of the E½ of the SW¼ of the NW¼ of section 33 was surveyed, encompassing about 108.0 acres (43.7 ha) north of highway 215 and east of Maze Creek. Elevations range from 867 ft - 940 ft with slopes ranging from 6% to nearly vertical bluffs. Vegetation consists of mature upland hardwoods. Surface visibility is generally poor (0% - 25%). Six north-south transects were walked with about 250 shovel tests excavated at 20 m - 30 m intervals. Much of the area is mature oak-hickory forest but there is a large sandstone glade at the south end. At the north end, an area of prairie appears to have been planted in a former agricultural field or pasture. Here, there was evidence of bulldozing in the form of two large mounds of earth (both overgrown in fescue). The east edge of the prairie is defined by a fence that marks the line between sections 32 and 33. Grasses and weeds were head high with zero surface visibility and were nearly impenetrable. Shovel testing was also difficult due to a thick root zone. The bluff at the south end of the area was also surveyed, beginning at 23DA86 and working south. Cultural materials are continuously distributed between 23DA86 and a possible quarry site (23DA433) at the south end of the bluff. There is a small overhang at the south end of the exposed bluff that contained flakes in the backdirt of a large pothole. We believe that the materials found there have been washed in from 23DA428 which is located immediately above.

On October 19, the E½ of the E½ of the SE¼ of the SW¼ and the W½ of the W½ of the SW¼ of the SE¼ and the E½ of the NW¼ and the SE¼ and the SW¼ of the SW¼ of the NE¼ of section 32, township 33N, range 25W was surveyed, encompassing about 60.0 acres (24.3 ha) north of highway 215 and west of Maze creek. Elevations range from 867 ft - 930 ft with slopes of 10% - 33 %. Vegetation consists of mature upland hardwoods. Surface visibility was generally poor (0% - 25%). Three north-south transects were walked with about 145 shovel tests excavated at 20-30 m intervals. Most of this area is covered in mature oak-hickory forest but an open area at the south end is overgrown in grasses, weeds and various second growth species. Surface visibility is generally poor and nearly all of the artifacts found were recovered from shovel tests. The area is occupied by a long, roughly north-south, ridge that has a wide bench on its east slope that has been divided into a series of smaller benches by erosional gullies. All but one of these, which has been severely damaged by gravel quarrying, exhibited a lithic scatter. The series of benches was surveyed by walking three transects along them parallel to the east slope of the ridge.

On November 4, the SE¼ of the NW¼ and the NW¼ of the SW¼ of the NE¼ and the N½ of the NE¼ of the SW¼ of section 32, township 33N, range 25W was surveyed, encompassing roughly 90.0 acres (36.4 ha) north of highway 215 and west of Maze Creek. Elevations range from 867 ft - 960 ft with slopes of 3% - 20%. Vegetation is mature hardwoods. Surface visibility was generally poor (0% - 25%). Seven transects were walked with 130 shovel tests excavated at 20 m - 30 m intervals. We began where we left off on October 19 by working along the eroded bench on the east slope of the large ridge west of Maze Creek. A wide zig-zaging transect was then walked down the crest of the ridge as far as the gravel pit, excavating shovel tests where there was sufficient soil depth and shovel scrapes where there was not. The bulk of the ridgetop is rocky with almost no soil development and all shovel tests/scrapes produced negative results. We then walked around the north side of the gravel quarry to an east-west fence line marking the limit of Government property. A transect was walked along the fence

line, first north, then west, then north again and finally east to an intermittent stream. The east side of the intermittent stream was surveyed and exposed cutbanks inspected. Most of this area is encompassed by a large borrow pit that may have been the source of fill for the abandoned gravel pit on the ridgetop. Open areas were inspected for materials eroding down the west slope of the ridge but shovel tests were not excavated. a second north-south transect was then surveyed on the west side of the creek the cutbank inspected.

As a result of these efforts 11 previously recorded sites (23DA81, 23DA82, 23DA83, 23DA86, 23DA244, 23DA376, 23DA384, 23DA407, 23DA408, 23DA411 and 23DA413) were revisited and 22 new ones (23DA420 - 23DA433 and 23DA435 - 23DA442) recorded. We also recorded the locations of five isolated prehistoric artifacts (SLDA-IF1 - SLDA-IF5). Two of these sites (23DA407 and 23DA408) were the subject of testing and will be discussed elsewhere.

Rice Side Notched variant (SLDA-IF2)

SLDA-IF2 is a dart point stem. It is an expanding stem specimen with a missing tip, a damaged blade, side notches, sloping shoulders and a straight base. The cross section is biconvex with no edge abrading, and no beveling. The tip has been carried away by an impact fracture. Maximum dimensions are 2.9 cm x 2.6 cm x 0.6 cm and it weighs 4.9 g. The raw material is Burlington chert, which is found locally. Microscopic examination revealed no evidence of use-wear. This is a variant of the Rice Side Notched type, which is associated with the Late Woodland period.

SLDA-IF5 is a bifacial side scraper. The cross section is irregular with no edge abrading and steep beveling on the distal end. Maximum dimensions are 3.7 cm x 4.6 cm x 1.3 cm and it weighs 27.2 g. The raw material is oolitic Jefferson City chert, which is found locally in the deeper valleys. Microscopic examination revealed wear resulting from scraping dry hide. This may be a reworked preform and is not associated with a cultural period.

23DA81

Table 60. Summary characteristics of 23DA81.

Site Name	Maze Creek Shelter #8
Cultural Affiliation	Indeterminate prehistoric
Topographic Setting	Hillside
Parent Material	Osagean Series (Mo)
Drainage	Maze Creek
Original Recording Agency	Leonard Gum
Size of Site	10 m x 6 m
Surface Visibility	75% - 100%
Slope	13 %
Ground Cover Vegetation	Mixed hardwoods
Month and Year of Field Investigation	October 1992
Land Use	Recreation
Elevation	920 ft NGVD

23DA81 is a prehistoric bluff shelter previously recorded in the mid-1950s by Leonard Gum. The site information was updated in December 1990 by Howard R. Wimmer who named the site Maze Creek Shelter # 8 and described it in the site form as:

> . . . a cultural material scatter of undetermined density located on in and immediately in front of a rock overhang/cave on the east bank of and overlooking Maze Creek, Stockton Lake. The site is in an area of predominantly mixed softwoods typical of a river bottom environment. The total area of the scatter was estimated to be at least 95m² (1024 sq.ft.) with the exact depth of the narrow cave into the bluff not being established. The remains of a small campfire of recent origin was noted at the mouth of the shelter. No bifacial fragments or diagnostic pieces were found, but at least forty-six (46) pressure and thinning flakes were noted on the surface. Soil depth was not measured.
>
> NOTE: A second opening approx. 1.2m (4 ft.) high and approx. 3m (10 ft.) long was noted directly above the south end of this shelter. due to the deteriorated condition of the sandstone bluff, this opening was not accessable [sic] in the absence of climing [sic] equipment. It is estimated to be 3m (10 ft.) to 4.6m (15 ft.) above the floor of thi [sic] shelter.
>
> [The condition of the site is] uncertain. While there was evidence of recent use by campers or firshermen [sic], there was no evidence of potting or other digging. However, it is not known if the original reporter - who was noted for digging on sites - engaged in any ecavation [sic] activity.

The site is situated on a bluff at an elevation of 920 ft. The land surface slopes downward to the west at a rate of 13%. The local geology consists of the Osagean Series (Mo) on which Peridge-Wilderness-Gos- Pembroke Association soils have formed. In the vicinity of the site, these soils support mixed hardwoods, with the site proper wooded. The nearest available water is Maze Creek, a perennial stream located 60 m northwest of the site.

This site was not visited during our survey. Artifacts and surface features are reportedly distributed over an area measuring 10 m north-south x 6 m east-west (60 m²). No cultural features have been previously observed. The cultural materials previously collected suggest only that it was occupied during prehistoric times and functioned as a shelter. The shelter is reportedly used by campers but there is no evidence of digging. If the deposits are undisturbed, this site may be eligible for inclusion in the National Register. Additional assessment is required.

23DA82

23DA82 is a prehistoric shelter probably recorded by Leonard Gum in the mid-1950s. The site was revisited in December 1990 by Howard R. Wimmer who called it Maze Creek Rock Shelter #7 and described it in the site form as follows:

> This is a cultural material scatter of undetermined density located in and in front of a narrow rock overhang and cave at the base of a sandstone bluff on the east bank of and overlooking Maze Creek, Stockton Lake. The site is in an area of mixed river bottom softwoods and eroded lake shore. This site is thought to be the area reported as a collapsed overhang and assigned site number 23DA82. At this time the involved area was measures at 27 m (88 ft).) in length with a maximum width of 9 m (29 ft.). The total area of the scatter and the collapsed overhang is estimated to be 147 m² (1584 sq. ft.). No bifacial tool fragments or diagnostic pieces were found.

Table 61. Summary characteristics of 23DA82.

Site Name	Maze Creek Rock Shelter #7
Cultural Affiliation	Indeterminate prehistoric
Topographic Setting	Bluff
Parent Material	Osagean Series (Mo)
Drainage	Maze Creek
Original Recording Agency	Leonard Gum
Size of Site	23 m x 3 m
Surface Visibility	75% - 100%
Slope	Nearly vertical
Ground Cover Vegetation	Mixed hardwoods
Month and Year of Field Investigation	October 1992
Land Use	Recreation
Elevation	890 ft NGVD

Pressure flakes were present inconsiderable [sic] number and were used to define the limits of this site, but were neither counted nor collected. Soil depth was not measured.

NOTE; If the original site report was correct, and the original collapsed rock shelter was 300 ft. long, then the southern 200 ft of this site would have been erroded [sic] away by a shift in the position of the Maze Creek channel. Geologically, however, this does not seem likely as the area to the south of this site consists of a short, steep bank of loose stones and sheer bluff.

[The condition of the site is] unknown. There is no evidence of potting or other soil disturbance at this time. The rockfall/collapsed roof may have protected any cultural deposits present.

The site is situated on a bluff at an elevation of 890 ft. The land surface slopes downward to the west at a nearly vertical rate. The local geology consists of the Osagean Series (Mo) on which Peridge-Wilderness-Goss-Pembroke Association soils have formed. In the vicinity of the site, these soils support mixed hardwoods, with the site proper wooded. The nearest available water is Maze Creek, a perennial stream located 30 m southwest of the site.

This site was briefly visited during our survey. Artifacts are distributed over an area measuring 23 m north-south x 9 m east-west (207 m^2). These included only flaking debris and none were collected. No organic remains or cultural features were observed or previously reported. The cultural materials previously recovered suggest only that it was occupied during prehistoric times and functioned as a shelter. No gross disturbances have been reported and National Register assessment is recommended.

23DA83

23DA83 is a prehistoric site recorded in the 1950s by Leonard Gum and visited by Howard R. Wimmer in December 1990. He called it Maze Creek Rock Shelter #5 and described it in the MAS site form as:

Table 62. Summary characteristics of 23DA83.

Site Name	Maze Creek Rock Shelter #5
Cultural Affiliation	Late Archaic Woodland
Topographic Setting	Bottomland at base of low bluff
Parent Material	Osagean Series (Mo)
Drainage	Unnamed spring
Original Recording Agency	Leonard Gum
Size of Site	42 m x 3 m
Surface Visibility	0% - 25%
Slope	10%
Ground Cover Vegetation	Mixed hardwoods
Month and Year of Field Investigation	Fall and Winter 1992-1993
Land Use	Recreation
Elevation	860 ft NGVD

> . . . a north facing rock shelter overlooking an unnamed spring branch in a valley due east of and emptying into Maze Creek, Stockton Lake, approx. .1 km (250 ft) due south of the HWY 215 bridge. The site was measured at 53 m (175 ft.) along the drip line with a maximum width of 15.4 m (50½ ft.) from the spring branch to the deepest part of the rock overhang. The total area of the site is estimated at 2053 m² (2200 sq.ft)[sic]. Ground visability [sic] was extremely poor on the north side of the branch, but there was no physical evidence that the site extended to thi [sic] area. Two holes measuring approx. 17.9 m² (192 sq. ft.) and 13.4 m² (144 sq. ft.) had been excavated to a depth of 30.5cm to 76.2 cm immediately in front of the overhang on the eastern side of this site. At least fourty [sic] (40) pressure flakes were counted on the surface in association with four (4) bifacial tool fragments and a nutting stone. A collection was not made. Soil depth was not measured.

On a subsequent visit in April 1991, Wimmer collected a grit-tempered cord marked body sherd weighing 11.3 g. The site was named Maze Creek Rock Shelter #5 by Wimmer.

It was visited by Historic Preservation Associates personnel on several occasions during the Fall and Winter of 1992-1993. The site is situated at the base of a low bluff at an elevation of 860 to 870 ft. The land surface slopes downward to the northeast at a rate of 10%. The local geology consists of the Osagean Series (Mo) on which Peridge-Wilderness-Goss-Pembroke Association soils have formed. In the vicinity of the site, these soils support mixed hardwoods. The nearest available water is an unnamed spring located 10 m north of the site.

A surface inspection was conducted and one artifact collected. The shelter proper extends over an area measuring 42 m northwest-southeast x 3 m northeast-southwest (126 m²) but the overall dispersion of cultural deposits is undoubtedly much larger. A Stone Corner Notched variant bifacial knife (7.0 g) was collected at the time of our visit. Wimmer collected a grit-tempered cord marked body sherd (11.3 g). No organic remains were recovered and no cultural features were observed. The cultural materials and features suggest that it was occupied during Late Archaic and/or Woodland times and functioned as a shelter.

There is evidence of substantial unauthorized digging but the extent of the damage is unknown at this time. The National Register eligibility of this site is undetermined and scheduled test excavations had to be postponed due to high lake levels.

Artifact 1-1 is a bifacial knife proximal. It is an expanding stem specimen with a missing tip, a damaged blade, corner notches, barbed shoulders and a damaged base. The cross section is biconvex with no edge abrading, and no beveling. Maximum dimensions are 4.4 cm x 2.3 cm x 0.8 cm and it weighs 7.0 g. The raw material is Jefferson City chert, which is found locally in the deeper valleys. Microscopic examination revealed wear resulting from cutting meat with bone contact. This is a variant of the Stone Corner Notched type, which is associated with the Late Archaic period.

23DA85

Table 63. Summary characteristics of 23DA85.

Site Name	Maze Creek Rock Shelter #1
Cultural Affiliation	Late Archaic, Late Woodland, Mississippi
Topographic Setting	Bluff
Parent Material	Osagean Series (Mo)
Drainage	Maze Creek
Original Recording Agency	Leonard Gum
Size of Site	100 m x 5 m
Surface Visibility	75% - 100%
Slope	Vertical bluff face
Ground Cover Vegetation	Shoreline species
Month and Year of Field Investigation	October 1992
Land Use	Recreation
Elevation	860 ft NGVD

23DA85 is a prehistoric shelter recorded in February 1955 by Leonard Gum. He described it as a large overhang (10 ft x 400 ft) situated at ground level with a west exposure. He also noted that two individuals were, at that time, excavating at the site and recovering polished deer antler, pottery sherds and arrow points. He also knew of several other excavations at the site.

The site was revisited in December 1987 by Howard Wimmer who called it Maze Creek Rock Shelter #1. He noted that the site was located along the "flooded/eroded lake shore at [the] base of [a] sandstone bluff [on the] east side of the Maze Creek arm of Stockton Lake approx. 800 ft due north of the hwy 215 bridge." Artifacts collected by Wimmer in the possession of the Kansas City District include 1 dart point fragment (4.7 g),1 arrow point (1.0 g), 1 bifacial scraper fragment (5.4 g) and 1 biface fragment (2.5 g) and 3 preform fragments (40.0 g).

Artifact 1-1 is a dart point stem. It is an expanding stem specimen with a missing tip, a straight blade, corner notches, barbed shoulders and a straight base. The cross section is biconvex

Kings Corner Notched
(1-1)

with edge abrading on the base and stem and no beveling. Maximum dimensions are 2.9 cm x 2.5 cm x 0.6 cm and it weighs 4.7 g. The stem measures 0.9 cm x 2.0 cm and comprises about 31 % of the total length of the specimen. The raw material is heat-treated Burlington chert, which is found locally. The tip has been carried away by an impact fracture. This specimen most closely resembles the Kings Corner Notched type, which is associated with the Woodland period.

Arrow Point
(1-2)

Artifact 1-2 is an arrow point. It is an expanding stem specimen with a straight blade, side notches, square shoulders and a missing base. The cross section is biconvex with no edge abrading and no beveling. The side notches have been executed low on the sides, producing a short expanding stem. The base was probably straight or slightly concave. Maximum dimensions are 2.2 cm x 1.2 cm x 0.4 cm and it weighs 1.0 g. The stem measures 0.5 cm x 1.0 cm and comprises about 23 % of the total length of the specimen. The raw material is heat- treated Burlington chert, which is found locally. Microscopic examination revealed no evidence of use-wear. This specimen is an unclassified type, which is often associated with the Late Woodland and Mississippi periods.

Artifact 1-3 is the distal portion of a bifacial scraper. It is an unstemmed specimen with an excurvate blade and a missing base. The cross section is rhomboidal with no edge abrading and beveling on the left edge of the blade. Maximum dimensions are 4.0 cm x 2.5 cm x 0.6 cm and it weighs 5.4 g. The raw material is heat-treated Burlington chert, which is found locally. Microscopic examination revealed wear resulting from scraping wet hide. Distinct polish over the entire surface is due to handling during use. This specimen is an unclassified type not associated with a specific cultural period.

Artifact 1-4 is a bifacial knife tip. It has a pointed tip, an excurvate blade and a biconvex cross section with no edge abrading and no beveling. Maximum dimensions are 2.7 cm x 2.4 cm x 0.4 cm and it weighs 2.5 g. The raw material is heat-treated Burlington chert, which is found locally. Microscopic examination revealed wear resulting from cutting meat without bone contact. This specimen is an unclassified type not associated with a specific cultural period.

The site was revisited by Steven M. Imhoff of Historic Preservation Associates on October 18, 1992. The site is situated at the base of a bluff at an elevation of 860 ft. The land surface slopes downward to the west at a nearly vertical rate. The local geology consists of the Osagean Series (Mo) on which Peridge-Wilderness-Goss-Pembroke Association soils have formed. In the vicinity of the site, these soils support shoreline species, with the site proper largely unvegetated. The nearest available water is Maze Creek, a perennial stream located 10 m west of the site.

No remote sensing/sampling techniques were employed. Artifacts are distributed over an area measuring roughly 30 m north-south x 10 m east-west (300 m^2). No cultural materials were collected since only non-diagnostic flaking debris was visible on the surface. No cultural features were observed. The cultural materials previously recovered (1 (4.7g) dart point stem/base, 1

(1.0g) arrow point, 1 (5.4g) bifacial scraper fragment, 1 (2.5g) biface fragment, 3 (40.0g) preform fragment) suggest that it was occupied during Middle to Late Woodland times and functioned as a shelter.

This site is subject to inundation by Stockton Lake. A large recent pot hole was noted at the time of our visit. Otherwise, the site appears undisturbed, although this could be misleading since the lake subjects the site to shoreline erosion which would mask evidence of digging in the sandy soil. The National Register eligibility of this site is undetermined but i is subject to fluctuations in the level of Stockton Lake, shoreline erosion and unauthorized digging. In combination, these impacts appear severe and the site probably does not retain any integrity.

23DA86

Table 64. Summary characteristics of 23DA86.

Site Name	Arbell Cr. Shelter, Maze Cr. Rock Shelter #2
Cultural Affiliation	Indeterminate prehistoric
Topographic Setting	Hillside
Parent Material	Osagean Series (Mo)
Drainage	Unnamed intermittent stream
Original Recording Agency	Leonard Gum
Size of Site	90 m x 5 m
Surface Visibility	75% - 100%
Slope	40 %
Ground Cover Vegetation	Mixed hardwoods
Month and Year of Field Investigation	October 1992
Land Use	Recreation
Elevation	870 ft NGVD

23DA86 (Arbell Creek Shelter) is a prehistoric site probably recorded in the mid-1950s by Leonard Gum. Since that time, supplementary site information has been submitted to the Archaeological Survey of Missouri on two occasions. In April 1975 Michael J. Fuller of the Center for Archaeological Research at SMSU submitted an updated site form in which he stated:

> This site was reported to Michael Fuller by Mr. John Wagemann; the site has not been visited by Fuller, but its location is also confirmed by Charles Collins (Dept. of Geography-Geology at SMSU). This site has yielded a considerable quantity of material to various uncontrolled excavators. Material donated to SMSU includes projectiles indicative of occupation ranging from the Late Archaic through the Mississippi Period. A considerable quantity of bone and pottery sherds has also been recovered. Pottery includes both shell tempered and grit and limestone tempered sherds. Both cord marked and plain sherds are present. An interesting find from this site consists of seven pottery sherds with a distinctive incised pattern; the sherds are shell tempered and very similar to Steed-Kisker sherds in the Shippee collection from Kansas City. Several pieces of the Woodland Period pottery show evidence of innovation in coarse designs; one sherd has nodes manufactured by pinching off pieces of clay and pressing them onto the body of the vessel. Several small Mississippi Period projectiles were recovered from the upper levels,

including some classic Cahokia three and five notched points. Only about 2 to 3% of the pottery sherds at SMSU are suggestive of Steed-Kisker contact. No metal points were found.

The site has been badly damaged by looting; a sizable test trench was excavated into shelter in February of 1969 and July through November of 1969. Much of the digging was by individuals attempting to salvage material from the shelter before it was inundated by Stockton Lake. The shelter is within the emergency floodpool of the lake. Some deposits north of the back wall approximately 5 to 6 feet may still be intact. It is doubtful that most of the testing reached the actual bottom of the deposits. The site has been badly damaged, but can still yield some information if carefully studied.

Howard Wimmer visited the site in September of 1987. At that time, he noted the presence of excavations but also stated that portions of the overhang have collapsed and may have preserved portions of the site. He called it Maze Creek Rock Shelter #2.

The site was visited by Steven M. Imhoff of Historic Preservation Associates on October 18, 1992 during a pedestrian survey of lands owned by the U. S. Army Corps of Engineers within the Maze Creek arm of Stockton Lake.

The site is situated at the base of a bluff at an elevation of 870 ft. The land surface slopes downward to the north at a rate of 40%. The local geology consists of the Osagean Series (Mo) on which Peridge-Wilderness-Goss-Pembroke Association soils have formed. In the vicinity of the site, these soils support mixed hardwoods, with the site proper wooded. The nearest available water is an unnamed intermittent stream located 20 m north of the site.

No remote sensing/sampling techniques were employed. Artifacts are distributed over an area measuring 6 m north-south x 90 m east-west (540 m^2). No cultural materials were collected since only flaking debris was visible on the surface. No organic remains were recovered and no cultural features were observed. The cultural materials suggest only that it was occupied during prehistoric times and functioned as a shelter.

There is evidence of digging and the Lake occasionally floods the site, depositing large amounts of flotsam. The National Register eligibility of this site is undetermined and requires further assessment. It is subject to periodic flooding and unauthorized digging but intact deposits may still remain. Further assessment is required.

23DA244

23DA244 is a unnamed prehistoric site recorded in April 1961 by Pangborn and Graves of the University of Missouri. They describe it in the site form as follows:

Artifacts recovered include: 1 pitted mano, 8 medium size cor notched proj. points, 1 med. size shallow side notched concave base proj. point, 2 med. size ntracting stemmed proj. points, 1 scraper, 5 broken blades, and fragments of broken projectile points.

[The] site is located at the base of the hillside, running north and south. App. 40 yds long and 15 yds wide.

Table 65. Summary characteristics of 23DA244.

Site Name	Unnamed
Cultural Affiliation	Indeterminate prehistoric
Topographic Setting	Hillside
Parent Material	Osagean Series (Mo)
Drainage	Maze Creek
Original Recording Agency	University of Missouri
Size of Site	36 m x 14 m
Surface Visibility	0% - 25%
Slope	8%
Ground Cover Vegetation	Grasses and weeds
Month and Year of Field Investigation	October 1992
Land Use	Recreation
Elevation	890 ft NGVD

The site was revisited by Steven M. Imhoff of Historic Preservation Associates on October 19, 1992 during a pedestrian survey of lands owned by the U. S. Army Corps of Engineers within the Maze Creek arm of Stockton Lake.

The site is situated on a slope at an elevation of 890 ft. The land surface slopes downward to the east at a rate of 8%. The local geology consists of the Osagean Series (Mo) on which Peridge-Wilderness-Goss-Pembroke Association soils have formed. In the vicinity of the site, these soils support mixed hardwoods grasses and weeds, with the site proper covered with grasses and weeds. The nearest available water is Maze Creek, a perennial stream located 180 m east of the site.

Shovel tests were excavated at 20 m intervals along three north-south transects in the site vicinity with negative results. Artifacts are previously reported over an area measuring 36 m north-south x 14 m east-west (504 m^2). No cultural materials were recovered. No organic remains were recovered and no cultural features were observed. The cultural materials previously reported suggest that it was occupied during Archaic and Woodland times and functioned in an unknown way.

This site is not eligible for inclusion in the National Register. It is subject to fluctuations in the level of Stockton Lake and may have been damaged during construction of the Highway 215 bridge. It is so heavily vegetated that casual collecting and digging is probably not a problem, however, shovel tests excavated on roughly a 20 m grid in the area failed to produce cultural materials.

23DA376

23DA376 is a prehistoric site recorded in July 1987 by Howard Wimmer, who called it Maze Creek #1. He noted the presence of cultural materials along the eroded lake shore that

Table 66. Summary characteristics of 23DA376.

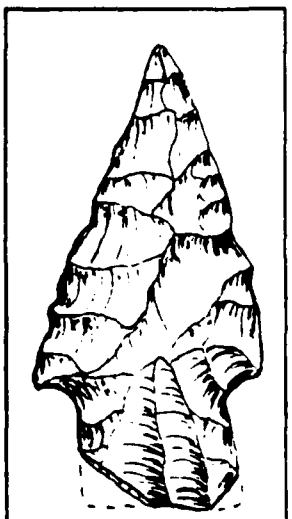
Site Name	Maze Creek #1
Cultural Affiliation	Late Archaic, Woodland
Topographic Setting	Hillside
Parent Material	Osagean Series (Mo)
Drainage	Unnamed intermittent stream
Original Recording Agency	Howard R. Wimmer
Size of Site	15 m x 5 m
Surface Visibility	0% - 25%
Slope	23 %
Ground Cover Vegetation	Mixed hardwoods
Month and Year of Field Investigation	November 1992
Land Use	Recreation
Elevation	870 ft NGVD

might date to the Early to Middle Archaic period. Materials collected by Wimmer now in the possession of the Kansas City District include 1 dart point fragment (3.0 g), 2 bifacial knives (15.0 g) and 8 preform fragments (130.7 g).

Bifacial Knife (1-1)

Artifact 1-1 is a bifacial knife. It is an expanding stem specimen with a broad tip, an excurvate blade, basal notches, barbed shoulders and a concave base. The cross section is biconvex with edge abrading on the base and no beveling. Maximum dimensions are 3.4 cm x 2.7 cm x 0.6 cm and it weighs 4.7 g. The stem measures 0.5 cm x 1.4 cm and comprises about 15% of the total length of the specimen. The raw material is Jefferson City chert, which is found locally in the deeper valleys. Microscopic examination revealed wear resulting from cutting meat with bone contact. This specimen is an unclassified type, which may be associated with the Late Archaic period.

Artifact 1-2 is a bifacial knife. It is a parallel stem specimen with a pointed tip, a straight blade, sloping shoulders and a straight base. The cross section is rhomboidal with edge abrading on the stem and beveling on the left edge of the blade. Maximum dimensions are 6.0 cm x 2.9 cm x 0.7 cm and it weighs 10.3 g. The stem measures 1.6 cm x 2.1 cm and comprises about 27 % of the total length of the specimen. The raw material is Burlington chert, which is found locally. Microscopic examination revealed wear resulting from cutting meat with bone contact. This specimen is a variant of the Stone Square Stemmed type, which is associated with the Late Archaic period.


Stone Square Stemmed (1-2)

Artifact 1-3 is a dart point midsection. It has a missing tip, a damaged blade, corner notches, barbed shoulders and a missing stem and

base. The tip has been carried away by an impact fracture. The cross section is biconvex with no edge abrading and no beveling. Maximum dimensions are 2.2 cm x 2.5 cm x 0.5 cm and it weighs 3.0 g. The raw material is heat-treated Burlington chert, which is found locally. Microscopic examination revealed no evidence of use-wear. This specimen most closely resembles the Kings Corner Notched type, which is associated with the Late Archaic period.

The site is situated on a slope at an elevation of 870 ft. The land surface slopes downward to the east at a rate of 23%. The local geology consists of the Osagean Series (Mo) on which Peridge-Wilderness-Goss-Pembroke Association soils have formed. In the vicinity of the site, these soils support mixed hardwoods, with the site proper exposed by shoreline erosion. The nearest available water is an unnamed intermittent stream located 20 m east of the site.

This site was not visited during our survey. Its plotted location places it partially within our survey area but an error of only a few meters either in the plot or in the placement of our survey transect could mean that it is actually outside our survey area or was not actually crossed by a survey transect. Artifacts are reported over an area measuring 15 m north-south x 5 m east-west (75 m^2). Based upon the cultural materials he recovered, Wimmer suggested that it was occupied during Early to Middle Archaic times. Our analysis of those artifacts indicates that a Late Archaic affiliation is more likely.

The site was discovered along the eroded lake shore but the limits are, as yet, not well defined. Although its condition is undocumented, damage from shoreline erosion is certain. The National Register eligibility of this site is undetermined and requires further assessment.

23DA384

Table 67. Summary characteristics of 23DA384.

Site Name	Maze Creek #14
Cultural Affiliation	Indeterminate prehistoric
Topographic Setting	Hillside
Parent Material	Osagean Series (Mo)
Drainage	Maze Creek
Original Recording Agency	Howard R. Wimmer
Size of Site	Unknown but apparently small
Surface Visibility	0% - 25%
Slope	18 %
Ground Cover Vegetation	Mixed hardwoods
Month and Year of Field Investigation	October 1992
Land Use	Recreation
Elevation	870 ft NGVD

23DA384 is a prehistoric site previously recorded in November 1987 by Howard Wimmer who called it Maze Creek #14. He found cultural materials eroding from the lake shore north of an abandoned road bed and about 500 ft (ca. 150 m) north of the Highway 215 bridge over

Stockton Lake. However, his plot on the Bona quadrangle shows the site to be about 800 ft (ca. 245 m) north of the highway. If his stated location and the sketch map submitted with the site form are more correct than his topo plot. this and 23DA244 may be the same site. One biface collected by Wimmer is in the possession of the Kansas City District. It is a biface midsection with a missing tip, a damaged blade, sloping shoulders and a missing stem and base. The cross section is biconvex with no edge abrading and no beveling. Maximum dimensions are 4.5 cm x 2.7 cm x 1.0 cm and it weighs 14.3 g. The raw material is heat-treated Burlington chert, which is found locally. Microscopic examination revealed wear resulting from cutting meat with bone contact. This specimen is an unclassified type not associated with a specific cultural period.

The site is situated on a slope at an elevation of 870 ft. The land surface slopes downward to the east at a rate of 18%. The local geology consists of the Osagean Series (Mo) on which Peridge-Wilderness-Goss-Pembroke Association soils have formed. In the vicinity of the site, these soils support mixed hardwoods, with the site proper largely unvegetated. The nearest available water is Maze Creek, a perennial stream located 120 m southeast of the site.

This site was not visited during our survey. Artifacts are reportedly distributed over a small area and no organic remains or cultural features have been reported. Sparse cultural materials suggest only that it was occupied during prehistoric times and functioned in an unknown capacity. The National Register eligibility of this site is undetermined and assessment is recommended.

23DA411

Table 68. Summary characteristics of 23DA411.

Site Name	Maze Creek Rock Shelter #6
Cultural Affiliation	Woodland, Mississippi
Topographic Setting	Bluff
Parent Material	Osagean Series (Mo)
Drainage	Maze Creek
Original Recording Agency	Howard R. Wimmer
Size of Site	20 m x 6 m
Surface Visibility	75% - 100%
Slope	50%
Ground Cover Vegetation	Mixed hardwoods
Month and Year of Field Investigation	October 1992
Land Use	Recreation, Powerline corridor
Elevation	930 ft NGVD

23DA411 is a prehistoric site previously recorded in December 1990 by Howard Wimmer who called it Maze Creek Rock Shelter #6. He described it in his site form as follows:

> This is a cultural material scatter of undetermined density located in and immediately in front of a rock overhang on the east side of and overlooking Maze Creek, Stockton Lake. The site is in an area of mixed hardwoods and cedar glades and overlooks a valley of open fields and mixed

river bottom softwoods. This shelter was measured at 20 m (66 ft)in length with a maximum depth of 6 m (20 ft). The total area of the shelter is estimated at approx. 81 m² (872 sq. ft.). Three (3) large sections of the ceiling have fallen onto the floor of the south section of the cave covering approx. 75% of this area. A single blade fragment was found on top of one of these rocks, and appears to have been brought up from beneath it by animal burrowing. At least fifteen (15) pressure flakes were counted. A collection was not made. Soil depth was not measured.

[The condition of the site is] uncertain. There is no evidence of potting in or around this shelter. As noted in the site description rockfall from the ceiling of the cave may have covered and protected deposits inside the shelter. Other than damage caused by animal activity, the site appears to be intact.

The site was visited by Steven M. Imhoff of Historic Preservation Associates on October 17, 1992 during a pedestrian survey of lands owned by the U. S. Army Corps of Engineers within the Maze Creek arm of Stockton Lake. The site is situated near the top of a bluff at an elevation of 930 ft. The land surface slopes downward to the west at a rate of 50%. The local geology consists of the Osagean Series (Mo) on which Peridge-Wilderness-Goss-Pembroke Association soils have formed. In the vicinity of the site, these soils support mixed hardwoods, with the site proper wooded. The nearest available water is Maze Creek, a perennial stream located 60 m west of the site.

A select surface collection was taken and included 1 core scraper (84.7 g), 1 aborted preform (161.9 g), 1 preform fragment (38.2 g), 1 flake knife (3.7 g), 1 flake scraper (22.0 g), 1 arrow point stem (0.2 g), 1 secondary decortication flake (17.7 g) and 1 initial stage interior flake (9.7 g). Artifacts are distributed over an area measuring 20 m north-south x 6 m east-west (120 m²).

Artifact 1-1 is a core scraper. Maximum dimensions are 5.4 cm x 5.2 cm x 2.5 cm and it weighs 84.7 g. The raw material is Burlington chert, which is found locally. Microscopic examination revealed battering and wear resulting from scraping wet hide. This specimen is not associated with a specific cultural period. This is a small ovate core. One excurvate margin has been used slightly as a scraper and the opposite edge is somewhat battered suggesting light use as hammerstone.

Artifact 1-4 is a flake knife. Maximum dimensions are 6.9 cm x 5.8 cm x 1.0 cm and it weighs 3.7 g. The raw material is Burlington chert, which is found locally. Microscopic examination revealed wear resulting from cutting meat without bone contact. This specimen is not associated with a specific cultural period.

Artifact 1-5 is a flake scraper. Maximum dimensions are 3.8 cm x 3.0 cm x 1.7 cm and it weighs 22.0 g. The raw material is heat-treated Burlington chert, which is found locally. Microscopic examination revealed wear resulting from scraping dry hide. This specimen is not associated with a cultural period.

Artifact 1-6 is an arrow point stem. It is an expanding stem specimen with a missing tip, a missing blade, corner notches, barbed shoulders and a convex base. The cross section is irregular with no edge abrading, and no beveling. Maximum dimensions are 1.3 cm x 1.2 cm x 0.2 cm and

it weighs 0.2 g. The raw material is Burlington chert, which is found locally. It probably was broken in manufacture while removing the second notch. Microscopic examination revealed no evidence of use-wear. This specimen is an unclassified type that may be associated with the Woodland or Mississippi period.

No organic remains were recovered. No cultural features were observed. The cultural materials suggest only that it was occupied during prehistoric times and functioned as a shelter. The cave is used by campers and some digging is evident but appears to be shallow and limited in extent. The National Register eligibility of this site is undetermined, however, it appears to be in good condition and may contain intact deposits requiring further assessment.

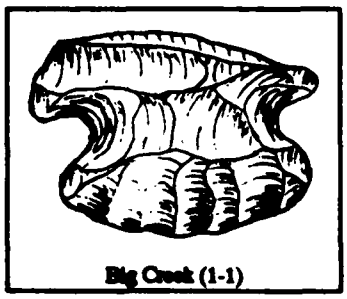
23DA413

Table 69. Summary characteristics of 23DA413.

Site Name	Maze Creek #17
Cultural Affiliation	Late Archaic
Topographic Setting	Second terrace
Parent Material	Osagean Series (Mo)
Drainage	Maze Creek
Original Recording Agency	Howard R. Wimmer
Size of Site	50 m x 80 m
Surface Visibility	25% - 50%
Slope	3%
Ground Cover Vegetation	Grasses and secondary growth
Month and Year of Field Investigation	October 1992
Land Use	Recreation
Elevation	880 ft NGVD

23DA413 is a prehistoric site previously recorded in January 1992 by Howard Wimmer who called it Maze Creek #17. He described it in the MAS site form as:

> . . . an unknown prehistoric cultural material scatter of undetermined density approx. 300 m West of Maze Creek and 611 [sic] m (200 ft.) South of HWY 215. It overlooks and appears to be adjacent to an unnamed spring branch to the immediate south of the identified scatter. The exact size of the site could not be determined due to extensive vegetation cover, but is thought to be approx. 61 m. (200 ft.) X 29 m. (94 ft.) or 1748 m/sq.(18,800 sq ft.). The scatter does not appear to extend further south from the spring branch. The site is in an area of open fields and oak/hickory forest, with identification made by lithic material and debris found in the dirt roads created by vehicular traffic across the field seeking access to Maze Creek and the surrounding valley. Thirtyfour [sic] (34) pressure flakes and One [sic] (1) stemmed bifacial fragment were counted on the surface. Soil depth was not measured, and the depth of cultural deposits is not known.
>
> [The condition of the site is] uncertain due to lack of information on past land usage, depth of deposits and limited amount of site exposure. It is felt that relatively little of the site has been disturbed and that [it] is, therefore, in relatively good condition.


Big Creek (1-1)

Wimmer recovered a biface fragment (artifact 1-1). It is an expanding stem specimen with a missing tip and blade, corner notches, barbed shoulders and a convex base. The cross section is biconvex with no edge abrading and no beveling. Maximum dimensions are 2.6 cm x 3.5 cm x 0.7 cm and it weighs 8.7 g. The stem measures 1.5 cm x 3.2 cm and comprises about 58 % of the total length of the specimen. Tne raw material is heat- treated Burlington chert, which is found locally. Microscopic examination revealed no evidence of use-wear. This specimen most closely resembles the Big Creek type, which is associated with the Late Archaic period.

The site was revisited by Steven M. Imhoff of Historic Preservation Associates on October 19, 1992 during a pedestrian survey of lands owned by the U. S. Army Corps of Engineers within the Maze Creek arm of Stockton Lake. The site is about 50 m north-south x 80 m east-west (4,000 m^2) and is situated on a second terrace (T-2) of Maze Creek at an elevation of 880 ft. The land surface slopes downward to the east at a rate of 3%. The local geology consists of channel sands on which Peridge-Wilderness-Goss-Pembroke Association soils have formed. In the vicinity of the site, these soils support grasses and secondary growth, with the site proper in an area developed for camping and picnicing. The nearest available water is a spring-fed tributary of Maze Creek located at the south edge of the site. Maze Creek is approximately 200 m to the east.

A select surface collection and three shovel tests yielded 2 (16.2 g) biface fragments, 6 (6.4 g) interior flakes, 12 (46.2 g) initial stage interior flakes, 1 (30.5 g) primary decortication flake, and 2 (15.7 g) secondary decortication flakes. Artifact 1-3 is a biface edge fragment. The cross section is unknown with no edge abrading, and no beveling. Maximum dimensions are 3.6 cm x 2.8 cm x 1.0 cm and it weighs 10.0 g. The raw material is heat-treated Burlington chert, which is found locally. Microscopic examination revealed wear resulting from scraping wood. This is an unclassified type not associated with a cultural period.

No organic remains were recovered and no prehistoric cultural features were observed. The cultural materials at the site suggest that it was occupied during the Late Archaic period and may have functioned as an upland hunting camp.

This site yielded sparse materials and has been damaged by construction of the highway 215 bridge across Maze Creek as well as "Jeep" trails that cross it. Soils are shallow and rocky and exhibit little potential to contain intact deposits. This site is not eligible for inclusion in the National Register of Historic Places.

23DA420

Table 70. Summary characteristics of 23DA420.

Site Name	Unnamed
Cultural Affiliation	20th century historic
Topographic Setting	Hillside
Parent Material	Channel sands (Pcs)
Drainage	Unnamed intermittent stream
Original Recording Agency	Historic Preservation Associates
Size of Site	40 m x 160 m
Surface Visibility	25% - 50%
Slope	10%
Ground Cover Vegetation	Mixed hardwoods sandstone glade
Month and Year of Field Investigation	October 1992
Land Use	Recreation
Elevation	910 ft NGVD

23DA420 is an unnamed historic site recorded by Steven M. Imhoff of Historic Preservation Associates on October 15, 1992 during a pedestrian survey of lands owned by the U. S. Army Corps of Engineers within the Maze Creek arm of Stockton Lake. The site is about 40 m north-south x 160 m east-west (6,400 m^2) and is situated on a slope at an elevation of 910 ft. The land surface slopes downward to the east at a rate of 10%. The local geology consists of channel sands (Pcs) on which Peridge-Wilderness-Goss-Pembroke Association soils have formed. In the vicinity of the site, these soils support mixed hardwoods and sandstone glade species. The nearest available water is an unnamed intermittent stream located 90 m south of the site.

No remote sensing/sampling techniques were employed. Cultural materials observed included machine-made bricks (the remains of a chimney), asphalt shingles, galvanized steel chicken waterers, decayed dimension lumber, wire nails and the apparent footing for a chimney. No organic remains were observed and no cultural features were observed. The cultural materials at the site suggest that it was occupied during historic times and functioned as a residence/farmstead.

This site has been heavily damaged, probably when the structures were dismantled after the land was purchased by the Government and is not eligible for inclusion in the National Register of Historic Places.

23DA421

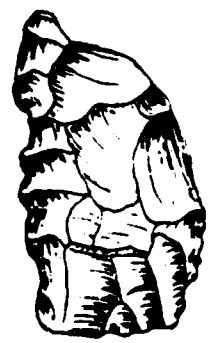
23DA421 is an unnamed prehistoric and historic site recorded by Steven M. Imhoff of Historic Preservation Associates on October 15, 1992 during a pedestrian survey of lands owned by the U. S. Army Corps of Engineers within the Maze Creek arm of Stockton Lake. The site is about 180 m northeast-southwest x 110 m northwest-southeast (19,800 m^2) and is situated on a slope at an elevation of 910 ft. The land surface slopes downward to the southeast at a rate of

Table 71. Summary characteristics of 23DA421.

Site Name	Unnamed
Cultural Affiliation	Woodland?, 20th century historic
Topographic Setting	Hillside
Parent Material	Channel sands (Pcs)
Drainage	Unnamed spring
Original Recording Agency	Historic Preservation Associates
Size of Site	180 m x 110 m
Surface Visibility	0% - 25%
Slope	3%
Ground Cover Vegetation	Mixed hardwoods, sandstone glade
Month and Year of Field Investigation	October 1992
Land Use	Recreation
Elevation	910 ft NGVD

3%. The local geology consists of channel sands on which Peridge-Wilderness-Goss-Pembroke Association soils have formed. In the vicinity of the site, these soils support mixed hardwoods and sandstone glade species. The nearest available water is an unnamed spring located at the southeast edge of the site.

A select surface collection yielded 1 (9.8 g) biface, 1 (5.1 g) biface fragment, 1 (1.0 g) button, 3 (12.4 g) whiteware china sherds, 2 (1.0 g) interior flakes, 13 (76.4 g) initial stage interior flakes, 1 (10.0 g) bottle glass sherd, 1 (2.3 g) canning jar glass sherd, 4 (20.2 g) canning jar glass lid sherds, 1 (33.2 g) green glass, melted, 1 (0.8 g) milk glass sherd, 1 (68.3 g) preform fragment, and 1 (26.4 g) stoneware sherd.



Unclassified Bifacial Knife (1-1)

Artifact 1-1 is a biface. It is an unstemmed specimen with a damaged tip, an asymmetrical blade, no notches, no shoulders and a straight base. The cross section is irregular with no edge abrading, and unifacial beveling. Maximum dimensions are 4.1 cm x 2.3 cm x 1.2 cm and it weighs 9.8 g. The raw material is Burlington chert, which is found locally. Microscopic examination revealed wear resulting from cutting meat without bone contact. This specimen is exhausted and is an unclassified type that may be associated with the Woodland period.

No organic remains were recovered. No cultural features were observed. The cultural materials at the site suggest that it was occupied during the prehistoric and historic periods and functioned as a habitation and, later, as a farm outbuilding probably associated with the farmstead at 23DA423.

The historic component has been heavily damaged, probably when the structures were dismantled after the land was purchased by the Government. The prehistoric component has been damaged by historic activities at the site and by the improvement of a trail that crosses it.

However, an area of the site located southeast of the trail exhibits good soil development and may retain intact deposits. If so, the prehistoric component may be eligible for inclusion in the National Register of Historic Places and requires further assessment.

23DA422

Table 72. Summary characteristics of 23DA422.

Site Name	Unnamed
Cultural Affiliation	Indeterminate prehistoric, 20th century historic
Topographic Setting	Hillside
Parent Material	Channel sands (Pcs)
Drainage	Unnamed intermittent stream
Original Recording Agency	Historic Preservation Associates
Size of Site	30 m x 30 m
Surface Visibility	0% - 25%
Slope	5%
Ground Cover Vegetation	Mixed hardwoods, grasses and cedars
Month and Year of Field Investigation	October 1992
Land Use	Recreation
Elevation	920 ft NGVD

23DA422 is an unnamed prehistoric and historic site recorded by Steven M. Imhoff of Historic Preservation Associates on October 16, 1992 during a pedestrian survey of lands owned by the U. S. Army Corps of Engineers within the Maze Creek arm of Stockton Lake. The site is about 30 m north-south x 30 m east-west (900 m^2) and is situated on a slope at an elevation of 920 ft. The land surface slopes downward to the northeast at a rate of 5%. The local geology consists of channel sands on which Peridge-Wilderness-Goss-Pembroke Association soils have formed. In the vicinity of the site, these soils support mixed hardwoods, grasses and cedars, with the site proper wooded. The nearest available water is an unnamed intermittent stream located 40 m north of the site.

A select sample of surface materials yielded 2 (999.0 g) brick fragments, 1 (1.1 g) primary decortication flake, 1 (17.9 g) glass canning jar lid sherd, 1 (24.4 g) bottle glass sherd, 5 (355.4 g) canning jar glass sherds, 1 (4.0 g) clear bottle glass sherd, 1 (11.8 g) milk glass sherd, 1 (26.6 g) aborted preform, 1 (80.4 g) stoneware jar fragment, 1 (66.5 g) plain whiteware, and 1 (20.7 g) zinc canning jar ring.

Artifact 1-8 is an aborted preform fragment. It is an unstemmed and unnotched specimen with an excurvate blade and no shoulders. The cross section is biconvex with edge abrading on the Edge, and no beveling. Maximum dimensions are 3.5 cm x 5.3 cm x 1.1 cm and it weighs 26.6 g. The raw material is heat-treated Burlington chert, which is found locally. Microscopic examination revealed wear resulting from cutting meat without bone contact. This is one end of a preform with a flat area of cortex present. It is impossible to tell whether it is a distal or proximal

fragment. It apparently was broken during reduction due to a fossil in the chert. This is an unclassified type not associated with a specific cultural period.

No organic remains were recovered and no cultural features were observed. The cultural materials at the site suggest that it was occupied during historic times and functioned as a residence/farmstead. It may be related to the historic component at 23DA422.

All structures have been dismantled and surface features thoroughly disturbed in the process of bulldozing the site. It is unlikely that subsurface deposits have survived intact and the site is not eligible for inclusion in the National Register of Historic Places.

23DA423

Table 73. Summary characteristics of 23DA423.

Site Name	Unnamed
Cultural Affiliation	Indeterminate prehistoric
Topographic Setting	Hillside
Parent Material	Channel sands (Pcs)
Drainage	Unnamed spring
Original Recording Agency	Historic Preservation Associates
Size of Site	260 m x 80 m
Surface Visibility	0% - 25%
Slope	5%
Ground Cover Vegetation	Prairie and second growth
Month and Year of Field Investigation	October 1992
Land Use	Recreation
Elevation	910 ft NGVD

23DA423 (Photograph 7) is an unnamed prehistoric site recorded by Steven M. Imhoff of Historic Preservation Associates on October 16, 1992 during a pedestrian survey of lands owned by the U. S. Army Corps of Engineers within the Maze Creek arm of Stockton Lake. The site is about 260 m north-south x 80 m east-west (20,800 m^2) and is situated on a ridgetop at an elevation of 910 ft. The land surface slopes downward to the east at a rate of 5%. The local geology consists of channel sands on which Peridge-Wilderness-Goss-Pembroke Association soils have formed. In the vicinity of the site, these soils support prairie and second growth species. The nearest available water is an unnamed spring located at the south edge of the site.

Ten shovel tests yielded 66 (9.2 g) initial stage interior flakes, 4 (207.3 g) primary decortication flakes, and 3 (4.4 g) pieces of chert shatter. No organic remains were recovered. No cultural features were observed. The cultural materials at the site suggest that it was occupied during the prehistoric period and functioned as a habitation.

Photograph 7. View of 23DA423 facing east.

The condition of this site is unknown but soil development is good and shovel testing revealed sub plow depth deposits. If these deposits are intact, the site may be eligible for inclusion in the National Register of Historic Places and requires further assessment.

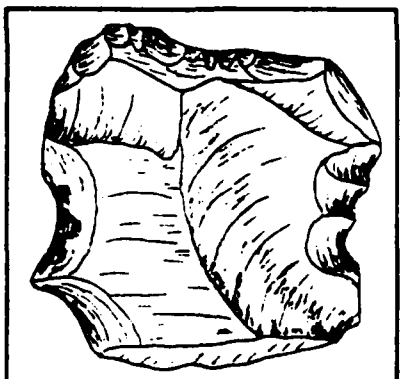
23DA424

Table 74. Summary characteristics of 23DA424.

Site Name	Unnamed
Cultural Affiliation	Indeterminate prehistoric
Topographic Setting	Hillside
Parent Material	Channel sands (Pcs)
Drainage	Unnamed spring
Original Recording Agency	Historic Preservation Associates
Size of Site	100 m x 80 m
Surface Visibility	0% - 25%
Slope	6%
Ground Cover Vegetation	Mixed hardwoods
Month and Year of Field Investigation	October 1992
Land Use	Recreation
Elevation	910 ft NGVD

23DA424 is a prehistoric site recorded by Steven M. Imhoff of Historic Preservation Associates on October 16, 1992 during a pedestrian survey of lands owned by the U. S. Army Corps of Engineers within the Maze Creek arm of Stockton Lake. The site is about 100 m north-south x 80 m east-west (8,000 m²) and is situated on a slope at an elevation of 910 ft. The land surface slopes downward to the east at a rate of 6%. The local geology consists of channel sands on which Peridge-Wilderness-Goss-Pembroke Association soils have formed. In the vicinity of the site, these soils support mixed hardwoods, with the site proper wooded. The nearest available water is an unnamed spring located 50 m north of the site.

A select surface collection yielded 1 (0.2 g) interior flake, 12 (65.1 g) initial stage interior flakes, and 2 (39.0 g) flake scrapers.


Flake Scraper (1-1)

Artifact 1-1 is a flake scraper. Maximum dimensions are 4.3 cm x 4.3 cm x 1.2 cm and it weighs 27.9 g. The raw material is Burlington chert, which is found locally. Microscopic examination revealed wear resulting from scraping wood. This specimen is not associated with a cultural period.

Artifact 1-2 is a flake scraper. Maximum dimensions are 3.5 cm x 2.5 cm x 1.0 cm and it weighs 11.1 g. The raw material is Jefferson City chert, which is found locally in the deeper valleys. This is a secondary decortication flake with a steeply beveled distal end that has been lightly retouched and exhibits a soft polish, comparable to that produced on experimental skin scrapers. This speciman is of a type which is not associated with a cultural period.

No organic remains were recovered. No cultural features were observed. The cultural materials at the site suggest that it was occupied during the prehistoric period and functioned as an upland hunting camp.

This site has been damaged by powerline construction and a forest trail. The soils are shallow and stony and intact deposits may no longer be present. The site is not eligible for inclusion in the National Register of Historic Places

23DA425

23DA425 is an unnamed prehistoric bluff shelter recorded by Steven M. Imhoff of Historic Preservation Associates on October 17, 1992 during a pedestrian survey of lands owned by the U. S. Army Corps of Engineers within the Maze Creek arm of Stockton Lake. The site is about 19 m north-south x 5 m east-west (95 m²) and is situated on a sandstone bluff at an elevation of 900 ft. The land surface slopes downward to the west at a rate of 60%. The local geology consists of the Osagean Series on which Peridge-Wilderness-Goss-Pembroke Association soils have formed. In the vicinity of the site, these soils support mixed hardwoods, with the site proper wooded. The nearest available water is Maze Creek, a perennial stream located 40 m west of the site.

Table 75. Summary characteristics of 23DA425.

Site Name	Unnamed
Cultural Affiliation	Indeterminate prehistoric
Topographic Setting	Bluff
Parent Material	Osagean Series (Mo)
Drainage	Maze Creek
Original Recording Agency	Historic Preservation Associates
Size of Site	19 m x 5 m
Surface Visibility	75% - 100%
Slope	60 %
Ground Cover Vegetation	Mixed hardwoods
Month and Year of Field Investigation	October 1992
Land Use	Recreation
Elevation	900 ft NGVD

Flake Knife (1-1)

A select surface collection yielded 1 (4.7 g) biface fragment, 3 (2.5 g) interior flakes, 2 (7.1 g) initial stage interior flakes, 1 (7.9 g) secondary decortication flake, 1 (10.0 g) flake knife, and 1 (20.5 g) preform fragment. Artifact 1-1 is a blade-like flake knife. Maximum dimensions are 5.0 cm x 2.7 cm x 0.7 cm and it weighs 10.0 g. The raw material is Burlington chert, which is found locally. Microscopic examination revealed wear resulting from cutting meat without bone contact. This specimen is not associated with a specific cultural period.

No organic remains were recovered. No cultural features were observed. The cultural materials at the site suggest that it was occupied during the prehistoric period and functioned as a shelter.

Although some disturbance from recreational digging is evident, it is not widespread. In addition the shelter is dry so that the preservation of organic remains is likely. This site may be eligible for inclusion in the National Register of Historic Places.

23DA426

23DA426 is an unnamed prehistoric bluff shelter recorded by Steven M. Imhoff of Historic Preservation Associates on October 17, 1992 during a pedestrian survey of lands owned by the U. S. Army Corps of Engineers within the Maze Creek arm of Stockton Lake. The site is about 13 m north-south x 5 m east-west (65 m^2) and is situated on a sandstone bluff at an elevation of 900 ft. The land surface slopes downward to the west at a rate of 60%. The local geology consists of the Osagean Series on which Peridge-Wilderness-Goss-Pembroke Association soils have formed. In the vicinity of the site, these soils support mixed hardwoods, with the site proper wooded. The nearest available water is Maze Creek, a perennial stream located 40 m west of the site.

Table 76. Summary characteristics of 23DA426.

Site Name	Unnamed
Cultural Affiliation	Indeterminate prehistoric
Topographic Setting	Bluff
Parent Material	Osagean Series (Mo)
Drainage	Maze Creek
Original Recording Agency	Historic Preservation Associates
Size of Site	13 m x 5 m
Surface Visibility	75% - 100%
Slope	60 %
Ground Cover Vegetation	Mixed hardwoods
Month and Year of Field Investigation	October 1992
Land Use	Recreation
Elevation	900 ft NGVD

A select surface collection yielded 1 (38.4 g) core, 2 (1.9 g) interior flakes, 13 (157.8 g) initial stage interior flakes, and 3 (47.2 g) primary decortication flakes. No organic remains were recovered. No cultural features were observed. The cultural materials at the site suggest that it was occupied during the prehistoric period and functioned as a shelter.

Although some disturbance from recreational digging is evident, it is not widespread. In addition, the shelter is dry so that the preservation of organic remains is likely. This site may be eligible for inclusion in the National Register of Historic Places.

23DA427

Table 77. Summary characteristics of 23DA427.

Site Name	Unnamed
Cultural Affiliation	Indeterminate prehistoric
Topographic Setting	Ridgetop
Parent Material	Osagean Series (Mo)
Drainage	Maze Creek
Original Recording Agency	Historic Preservation Associates
Size of Site	160 m x 100 m
Surface Visibility	0% - 25%
Slope	5%
Ground Cover Vegetation	Mixed hardwoods
Month and Year of Field Investigation	October 1992
Land Use	Recreation
Elevation	950 ft NGVD

23DA427 is an unnamed prehistoric site recorded by Steven M. Imhoff of Historic Preservation Associates on October 17, 1992 during a pedestrian survey of lands owned by the U.

S. Army Corps of Engineers within the Maze Creek arm of Stockton Lake. The site is about 160 m north-south x 100 m east-west (16,000 m²) and is situated on a ridgetop at an elevation of 950 ft. The land surface slopes downward to the west at a rate of 5%. The local geology consists of the Osagean Series on which Peridge-Wilderness-Goss-Pembroke Association soils have formed. In the vicinity of the site, these soils support mixed hardwoods, with the site proper wooded. The nearest available water is Maze Creek, a perennial stream located 200 m west of the site.

A select surface collection and 10 shovel tests yielded 2 (8.2 g) biface fragments, 1 (103.2 g) large blank, 8 (6.9 g) interior flakes, 10 (13.2 g) initial stage interior flakes, and 3 (3.0 g) pieces of chert shatter. No organic remains were recovered and no cultural features were observed. The cultural materials at the site suggest that it was occupied during the prehistoric period and functioned as a habitation.

This site has been damaged by powerline construction but soil development in isolated parts of the site is fairly good and may contain intact deposits. The National Register eligibility of this site is undetermined and further assessment is required.

23DA428

Table 78. Summary characteristics of 23DA428.

Site Name	Unnamed
Cultural Affiliation	*Indeterminate prehistoric*
Topographic Setting	Ridgetop
Parent Material	Osagean Series (Mo)
Drainage	Maze Creek
Original Recording Agency	Historic Preservation Associates
Size of Site	200 m x 200 m
Surface Visibility	0% - 25%
Slope	2%
Ground Cover Vegetation	Mixed hardwoods
Month and Year of Field Investigation	October 1992
Land Use	Recreation
Elevation	900 ft NGVD

23DA428 is an unnamed prehistoric site recorded by Steven M. Imhoff of Historic Preservation Associates on October 18, 1992 during a pedestrian survey of lands owned by the U. S. Army Corps of Engineers within the Maze Creek arm of Stockton Lake. The site is about 200 m north-south x 200 m east-w[illegible] (40,000 m²) and is situated on a ridgetop at an elevation of 900 ft. The land surface slopes at a rate of 2%. The local geology consists of the Osagean Series on which Peridge-Wilderness-Goss-Pembroke Association soils have formed. In the vicinity of the site, these soils support mixed hardwoods, with the site proper wooded. The nearest available water is Maze Creek, a perennial stream located 200 m southwest of the site.

A select surface collection and 8 shovel tests yielded 5 (1.7 g) interior flakes, and 9 (14.2 g) initial stage interior flakes. No organic remains were recovered. No cultural features were observed. The cultural materials at the site suggest that it was occupied during the prehistoric period and functioned as a habitation.

Much of the site is exposed in a sandstone glade with no possibility of intact deposits, but the highest portion near Maze Creek exhibits good soil development. Shovel testing revealed that subsurface deposits are present below 20 cm. If these deposits remain intact, the site may be eligible for inclusion in the National Register of Historic Places and further assessment is required.

23DA429

Table 79. Summary characteristics of 23DA429.

Site Name	Unnamed
Cultural Affiliation	Indeterminate prehistoric
Topographic Setting	Ridgetop and sides
Parent Material	Osagean Series (Mo)
Drainage	Unnamed intermittent stream
Original Recording Agency	Historic Preservation Associates
Size of Site	240 m x 220 m
Surface Visibility	0% - 25%
Slope	8%
Ground Cover Vegetation	Mixed hardwoods
Month and Year of Field Investigation	October 1992
Land Use	Recreation
Elevation	925 ft NGVD

23DA429 is an unnamed prehistoric site recorded by Steven M. Imhoff of Historic Preservation Associates on October 18, 1992 during a pedestrian survey of lands owned by the U. S. Army Corps of Engineers within the Maze Creek arm of Stockton Lake. The site is about 240 m north-south x 220 m east-west (52,800 m^2) and is situated on a slope at an elevation of 925 ft. The land surface slopes downward to the south at a rate of 8%. The local geology consists of the Osagean Series on which Peridge-Wilderness-Goss-Pembroke Association soils have formed. In the vicinity of the site, these soils support mixed hardwoods, with the site proper wooded. The nearest available water is an unnamed intermittent stream located 50 m south of the site.

A select surface collection and 5 shovel tests yielded 4 (5.1 g) interior flakes, 1 (2.2 g) initial stage interior flake, 1 (33.1 g) primary decortication flake, 2 (146.8 g) secondary decortication flakes, 1 (4.7 g) flake knife, and 1 (36.7 g) flake scraper.

Artifact 1-1 is a D-shaped flake scraper. Maximum dimensions are 5.4 cm x 3.9 cm x 1.5 cm and it weighs 36.7 g. The raw material is Burlington chert, which is found locally. Microscopic examination revealed wear resulting from scraping wet hide. This specimen is not associated with a cultural period.

Artifact 1-2 is a blade-like flake knife. Maximum dimensions are 4.4 cm x 2.0 cm x 0.7 cm and it weighs 4.7 g. The raw material is Burlington chert, which is found locally. Microscopic examination revealed wear resulting from cutting meat without bone contact. This specimen is not associated with a specific cultural period.

No organic remains were recovered. No cultural features were observed. The cultural materials at the site suggest that it was occupied during the prehistoric period and functioned as a habitation.

Soils at the site are shallow and stony and shovel testing failed to detect subsurface deposits below 10 cm. These deposits probably are not intact and the site is not eligible for inclusion in the National Register of Historic Places.

23DA430

Table 80. Summary characteristics of 23DA430.

Site Name	Unnamed
Cultural Affiliation	Indeterminate prehistoric
Topographic Setting	Ridgetoe
Parent Material	Osagean Series (Mo)
Drainage	Maze Creek
Original Recording Agency	Historic Preservation Associates
Size of Site	100 m x 160 m
Surface Visibility	0% - 25%
Slope	3%
Ground Cover Vegetation	Prairie and mixed hardwoods
Month and Year of Field Investigation	October 1992
Land Use	Recreation
Elevation	890 ft NGVD

23DA430 is an unnamed prehistoric site recorded by Steven M. Imhoff of Historic Preservation Associates on October 18, 1992 during a pedestrian survey of lands owned by the U. S. Army Corps of Engineers within the Maze Creek arm of Stockton Lake. The site is about 100 m north-south x 160 m east-west (16,000 m^2) and is situated on a slope at an elevation of 890 ft. The land surface slopes downward to the west at a rate of 3%. The local geology consists of the Osagean Series on which Peridge-Wilderness-Goss-Pembroke Association soils have formed. In the vicinity of the site, these soils support prairie and mixed hardwoods, with the site proper in pasture. The nearest available water is Maze Creek, a perennial stream located 250 m west of the site.

Approximately 12 shovel tests yielded 5 (5.8 g) interior flakes, and 9 (24.6 g) initial stage interior flakes. No organic remains were recovered. No cultural features were observed. The cultural materials at the site suggest that it was occupied during the prehistoric period and functioned as an upland hunting site.

The site has been damaged by agriculture and two large mounds of soil overgrown with fescue appear to be the result of bulldozing. However, soil development is good over most of the site and materials were recovered below plow depth in one shovel test. Soils at the site are fairly deep and shovel testing revealed the presence of sub plow depth deposits. If these deposits are intact, this site may be eligible for inclusion in the National Register of Historic Places.

23DA431

Table 81. Summary characteristics of 23DA431.

Site Name	Unnamed
Cultural Affiliation	Indeterminate prehistoric
Topographic Setting	Ridgetop
Parent Material	Osagean Series (Mo)
Drainage	Maze Creek
Original Recording Agency	Historic Preservation Associates
Size of Site	60 m x 100 m
Surface Visibility	0% - 25%
Slope	3%
Ground Cover Vegetation	Prairie and mixed hardwoods
Month and Year of Field Investigation	October 1992
Land Use	Recreation
Elevation	900 ft NGVD

23DA431 is an unnamed prehistoric site recorded by Steven M. Imhoff of Historic Preservation Associates on October 18, 1992 during a pedestrian survey of lands owned by the U. S. Army Corps of Engineers within the Maze Creek arm of Stockton Lake. The site is about 60 m north-south x 100 m east-west (6,000 m^2) and is situated on a ridgetop at an elevation of 900 ft. The land surface slopes at a rate of 3%. The local geology consists of the Osagean Series on which Peridge-Wilderness-Goss-Pembroke Association soils have formed. In the vicinity of the site, these soils support prairie and mixed hardwoods, with the site proper in pasture. The nearest available water is Maze Creek, a perennial stream located 300 m southwest of the site.

Approximately nine shovel tests yielded 2 (0.2 g) retouch flakes, and 2 (67.4 g) secondary decortication flakes. No organic remains were recovered. No cultural features were observed. The cultural materials at the site suggest that it was occupied during the prehistoric period and functioned as an upland hunting site.

There is much evidence of erosion. Soils on the south slope of the ridge are deep but subsoil is exposed on the crest. Shovel testing produced substantial evidence of erosion of soil from crest of the ridge onto the slopes. It is unlikely that intact deposits remain and the site is not eligible for inclusion in the National Register of Historic Places.

23DA432

Table 82. Summary characteristics of 23DA432.

Site Name	Unnamed
Cultural Affiliation	Indeterminate prehistoric
Topographic Setting	Hillside
Parent Material	Osagean Series (Mo)
Drainage	Maze Creek
Original Recording Agency	Historic Preservation Associates
Size of Site	40 m x 60 m
Surface Visibility	0% - 25%
Slope	8%
Ground Cover Vegetation	Grasses mixed hardwoods and cedars
Month and Year of Field Investigation	October 1992
Land Use	Recreation
Elevation	890 ft NGVD

23DA432 is an unnamed prehistoric site recorded by Steven M. Imhoff of Historic Preservation Associates on October 18, 1992 during a pedestrian survey of lands owned by the U. S. Army Corps of Engineers within the Maze Creek arm of Stockton Lake. The site is about 40 m north-south x 60 m east-west (2,400 m^2) and is situated on a slope at an elevation of 890 ft. The land surface slopes downward to the west at a rate of 8%. The local geology consists of the Osagean Series on which Peridge-Wilderness-Goss-Pembroke Association soils have formed. In the vicinity of the site, these soils support grasses, mixed hardwoods and cedars, with the site proper in a cedar thicket at the edge of the highway 215 right-of-way. The nearest available water is Maze Creek, a perennial stream located 200 m west of the site.

A select surface collection yielded 2 (2.7 g) interior flakes, 7 (22.3 g) initial stage interior flakes, and 1 (1.4 g) primary decortication flake. No organic remains were recovered. No cultural features were observed. The cultural materials at the site suggest that it was occupied during the prehistoric period and functioned as an upland hunting site. This site has been substantially destroyed by construction of the Highway 215 bridge over Maze Creek and is not eligible for inclusion in the National Register of Historic Places.

23DA433

23DA433 is an unnamed prehistoric site recorded by Steven M. Imhoff of Historic Preservation Associates on October 18, 1992 during a pedestrian survey of lands owned by the U. S. Army Corps of Engineers within the Maze Creek arm of Stockton Lake. The site is about 20 m north-south x 5 m east-west (100 m^2) and is situated on a sandstone bluff at an elevation of 880 ft. The land surface slopes downward to the west at a rate of 25%. The local geology consists of the Osagean Series on which Peridge-Wilderness-Goss-Pembroke Association soils have formed. In the vicinity of the site, these soils support mixed hardwoods, with the site proper wooded. The nearest available water is Maze Creek, a perennial stream located 200 m southwest of the site.

Table 83. Summary characteristics of 23DA433.

Site Name	Unnamed
Cultural Affiliation	Indeterminate prehistoric
Topographic Setting	Bluff
Parent Material	Osagean Series (Mo)
Drainage	Maze Creek
Original Recording Agency	Historic Preservation Associates
Size of Site	20 m x 5 m
Surf[illegible] Visibility	50% - 75%
Slope	25%
Ground Cover Vegetation	Mixed hardwoods
Month and Year of Field Investigation	October 1992
Land Use	Recreation
Elevation	880 ft NGVD

Three shovel tests yielded 1 (0.9 g) interior flake, and 4 (25.7 g) initial stage interior flakes. No organic remains were recovered. No cultural features were observed. The cultural materials at the site suggest that it was occupied during the prehistoric period and functioned as an source of chert for the manufacture of stone tools.

There is little evidence of disturbance, although Stockton Lake occasionally subjects the site to shoreline erosion. Cultural materials are sparse and of questionable research potential. This site is not eligible for inclusion in the National Register.

23DA435

Table 84. Summary characteristics of 23DA435.

Site Name	Unnamed
Cultural Affiliation	Indeterminate prehistoric
Topographic Setting	Hillside bench
Parent Material	Osagean Series (Mo)
Drainage	Maze Creek
Original Recording Agency	Historic Preservation Associates
Size of Site	110 m x 60 m
Surface Visibility	0% - 25%
Slope	2%
Ground Cover Vegetation	Mixed hardwoods
Month and Year of Field Investigation	October 1992
Land Use	Recreation
Elevation	920 ft NGVD

23DA435 is an unnamed prehistoric site recorded by Steven M. Imhoff of Historic Preservation Associates on October 19, 1992 during a pedestrian survey of lands owned by the U.

S. Army Corps of Engineers within the Maze Creek arm of Stockton Lake. The site is about 110 m northeast-southwest x 60 m northwest-southeast (6,600 m²) and is situated on a hillside bench at an elevation of 920 ft. The land surface slopes downward to the east at a rate of 2%. The local geology consists of the Osagean Series on which Peridge-Wilderness-Goss-Pembroke Association soils have formed. In the vicinity of the site, these soils support mixed hardwoods, with the site proper wooded. The nearest available water is Maze Creek, a perennial stream located 220 m east of the site.

A select surface collection and 3 shovel tests yielded 4 (6.7 g) interior flakes, 1 (18.6 g) primary decortication flake, 1 (0.1 g) retouch flake, and 2 (11.4 g) pieces of chert shatter. No organic remains were recovered. No cultural features were observed. The cultural materials at the site suggest only that it was occupied during the prehistoric period and functioned as an upland hunting camp.

There is no evidence of gross disturbances. Soil development is reasonably good but cultural materials are so thinly scattered that shovel testing was ineffective in detecting subsurface deposits. This site in not eligible for inclusion in the National Register. Although the location appears undisturbed, cultural materials are sparse and the soils are 15 cm or less in depth. This does not preclude the presence of intact deposits, however.

23DA436

Table 85. Summary characteristics of 23DA436.

Site Name	Unnamed
Cultural Affiliation	Late-Terminal Archaic Late Woodland
Topographic Setting	Hillside bench
Parent Material	Osagean Series (Mo)
Drainage	Maze Creek
Original Recording Agency	Historic Preservation Associates
Size of Site	170 m x 60 m
Surface Visibility	0% - 25%
Slope	3%
Ground Cover Vegetation	Mixed hardwoods
Month and Year of Field Investigation	October 1992
Land Use	Recreation
Elevation	910 ft NGVD

23DA436 is an unnamed prehistoric site recorded by Steven M. Imhoff of Historic Preservation Associates on October 19, 1992 during a pedestrian survey of lands owned by the U. S. Army Corps of Engineers within the Maze Creek arm of Stockton Lake. The site is about 170 m north-south x 60 m east-west (10,200 m²) and is situated on a hillside bench at an elevation of 910 ft. The land surface slopes downward to the east at a rate of 3%. The local geology consists of the Osagean Series on which Peridge-Wilderness-Goss-Pembroke Association soils have formed. In the vicinity of the site, these soils support mixed hardwoods, with the site proper

wooded. The nearest available water is Maze Creek, a perennial stream located 100 m east of the site.

A select surface collection and five shovel tests yielded 1 (2.9 g) arrow point stem/base, 3 (0.5 g) interior flakes, 6 (56.8 g) initial stage interior flakes, and 1 (0.1 g) retouch flake. Artifact 1-1 is an arrow point stem. It is an expanding stem corner removed specimen with a missing tip, a straight blade, sloping shoulders and a convex base. The cross section is biconvex with no edge abrading, and no beveling. Maximum dimensions are 2.1 cm x 1.7 cm x 0.6 cm and it weighs 2.9 g. The raw material is coarse textured Burlington chert, which is found locally. Microscopic examination revealed no evidence of use-wear. This is an unclassified type that may be associated with the Late Woodland period.

No organic remains were recovered. No cultural features were observed. The cultural materials at the site suggest only that it was occupied during the prehistoric period and functioned as an upland hunting camp.

There is no evidence of gross disturbances. Soils are shallow and rocky but cultural materials are sufficiently plentiful that shovel testing was effective in delineating the extent of the site. The National Register eligibility of this site is undetermined and further assessment is required.

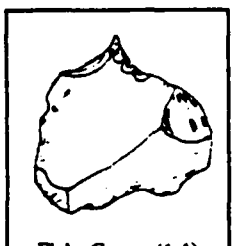
23DA437

Table 86. Summary characteristics of 23DA437.

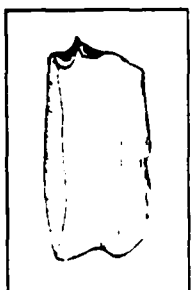
Site Name	Unnamed
Cultural Affiliation	Indeterminate prehistoric
Topographic Setting	Hillside bench
Parent Material	Osagean Series (Mo)
Drainage	Maze Creek
Original Recording Agency	Historic Preservation Associates
Size of Site	80 m x 100 m
Surface Visibility	0% - 25%
Slope	3%
Ground Cover Vegetation	Mixed hardwoods
Month and Year of Field Investigation	October 1992
Land Use	Recreation
Elevation	910 ft NGVD

23DA437 is an unnamed prehistoric site recorded by Steven M. Imhoff of Historic Preservation Associates on October 19, 1992 during a pedestrian survey of lands owned by the U. S. Army Corps of Engineers within the Maze Creek arm of Stockton Lake. The site is about 80 m northeast-southwest x 100 m northwest-southeast (8,000 m^2) and is situated on a hillside bench at an elevation of 910 ft. The land surface slopes downward to the east at a rate of 3%. The local geology consists of the Osagean Series on which Peridge-Wilderness-Goss-Pembroke Association

soils have formed. In the vicinity of the site, these soils support mixed hardwoods, with the site proper wooded. The nearest available water is Maze Creek, a perennial stream located 140 m southeast of the site.


Flake Graver (1-1)

A select surface collection and 5 shovel tests yielded 9 (5.6 g) interior flakes, 5 (19.2 g) initial stage interior flakes, 3 (0.1 g) retouch flakes, and 2 (3.5 g) flake graver. Artifact 1-1 is a flake graver. Maximum dimensions are 2.2 cm x 2.1 cm x 0.5 cm and it weighs 1.8 g. The raw material is Burlington chert, which is found locally. Microscopic examination revealed use-wear from engraving a soft substance, probably soft wood. This specimen is not associated with a specific cultural period.


Flake Graver (1-2)

Artifact 1-2 is a flake graver. Maximum dimensions are 2.8 cm x 1.3 cm x 0.4 cm and it weighs 1.7 g. The raw material is Burlington chert, which is found locally. Microscopic examination revealed use-wear from engraving a soft substance, probably soft wood. This specimen is not associated with a specific cultural period.

No organic remains were recovered. No cultural features were observed. The cultural materials at the site suggest that it was occupied during the prehistoric period and functioned as an upland hunting camp.

There is no evidence of gross disturbances. Soils are shallow and rocky but cultural materials are sufficiently plentiful that shovel testing was effective in delineating the extent of the site. The National Register eligibility of this site is undetermined and further assessment is required.

23DA438

Table 87. Summary characteristics of 23DA438.

Site Name	Unnamed
Cultural Affiliation	Indeterminate prehistoric
Topographic Setting	Hillside bench
Parent Material	Osagean Series (Mo)
Drainage	Maze Creek
Original Recording Agency	Historic Preservation Associates
Size of Site	60 m x 100 m
Surface Visibility	0% - 25%
Slope	3%
Ground Cover Vegetation	Mixed hardwoods
Month and Year of Field Investigation	October 1992
Land Use	Recreation
Elevation	910 ft NGVD

23DA438 is an unnamed prehistoric site recorded by Steven M. Imhoff of Historic Preservation Associates on October 19, 1992 during a pedestrian survey of lands owned by the U. S. Army Corps of Engineers within the Maze Creek arm of Stockton Lake. The site is about 60 m north-south x 100 m east-west (6,000 m^2) and is situated on a hillside bench at an elevation of 910 ft. The land surface slopes downward to the east at a rate of 3%. The local geology consists of the Osagean Series on which Peridge-Wilderness-Goss-Pembroke Association soils have formed. In the vicinity of the site, these soils support mixed hardwoods, with the site proper wooded. The nearest available water is Maze Creek, a perennial stream located 150 m east of the site.

A select surface collection and 5 shovel tests yielded 9 (3.4 g) interior flakes, 1 (21.5 g) initial stage interior flake, 3 (0.1 g) retouch flakes, and 3 (0.6 g) pieces of chert shatter. No organic remains were recovered. No cultural features were observed. The cultural materials at the site suggest that it was occupied during the prehistoric period and functioned as an upland hunting camp.

There is no evidence of gross disturbances. Soils are shallow and rocky but cultural materials are sufficiently plentiful that shovel testing was effective in delineating the extent of the site. The location appears undisturbed and cultural materials are plentiful, relative to neighboring sites in similar locations. The soils are 15 cm - 20 cm in depth and may contain intact deposits. If so, the site may be eligible for inclusion in the National Register of Historic Places and further assessment is required.

23DA439

Table 88. Summary characteristics of 23DA439.

Site Name	Unnamed
Cultural Affiliation	Indeterminate prehistoric
Topographic Setting	Hillside bench
Parent Material	Osagean Series (Mo)
Drainage	Maze Creek
Original Recording Agency	Historic Preservation Associates
Size of Site	60 m x 100 m
Surface Visibility	0% - 25%
Slope	3%
Ground Cover Vegetation	Mixed hardwoods
Month and Year of Field Investigation	October 1992
Land Use	Recreation
Elevation	910 ft NGVD

23DA439 is an unnamed prehistoric site recorded by Steven M. Imhoff of Historic Preservation Associates on October 19, 1992 during a pedestrian survey of lands owned by the U. S. Army Corps of Engineers within the Maze Creek arm of Stockton Lake. The site is about 60 m north-south x 100 m east-west (6,000 m^2) and is situated on a hillside bench at an elevation of 910 ft. The land surface slopes downward to the east at a rate of 3%. The local geology consists

of the Osagean Series on which Peridge-Wilderness-Goss-Pembroke Association soils have formed. In the vicinity of the site, these soils support mixed hardwoods, with the site proper wooded. The nearest available water is Maze Creek, a perennial stream located 100 m northeast of the site.

A select surface collection and 5 shovel tests yielded 1 (34.8 g) core, 14 (5.5 g) interior flakes, 21 (76.1 g) initial stage interior flakes, and 1 (0.1 g) retouch flake. No organic remains were recovered. No cultural features were observed. The cultural materials at the site suggest that it was occupied during the prehistoric period and functioned as an upland hunting camp.

There is no evidence of gross disturbances. Soils are shallow and rocky but cultural materials are sufficiently plentiful that shovel testing was effective in delineating the extent of the site. The location appears undisturbed and cultural materials are plentiful, relative to neighboring sites in similar locations. The soils are 15 cm - 20 cm in depth and may contain intact deposits. If so, the site may be eligible for inclusion in the National Register of Historic Places and further assessment is required.

23DA440

Table 89. Summary characteristics of 23DA440.

Site Name	Unnamed
Cultural Affiliation	Indeterminate prehistoric
Topographic Setting	Hillside bench
Parent Material	Osagean Series (Mo)
Drainage	Maze Creek
Original Recording Agency	Historic Preservation Associates
Size of Site	80 m x 60 m
Surface Visibility	0% - 25%
Slope	3%
Ground Cover Vegetation	Mixed hardwoods
Month and Year of Field Investigation	November 1992
Land Use	Recreation
Elevation	910 ft NGVD

23DA440 is an unnamed prehistoric site recorded by Steven M. Imhoff of Historic Preservation Associates on November 4, 1992 during a pedestrian survey of lands owned by the U. S. Army Corps of Engineers within the Maze Creek arm of Stockton Lake. The site is about 80 m north-south x 60 m east-west (4,800 m^2) and is situated on a hillside bench at an elevation of 910 ft. The land surface slopes downward to the east at a rate of 3%. The local geology consists of the Osagean Series (Mo) on which Peridge-Wilderness-Goss-Pembroke Association soils have formed. In the vicinity of the site, these soils support mixed hardwoods. The nearest available water is Maze Creek, a perennial stream located 60 m northeast of the site.

Seven shovel tests were excavated, four of which yielded 1 (0.3 g) interior flake, and 3 (19.3 g) initial stage interior flakes. No organic remains were recovered. No cultural features were observed. The cultural materials at the site suggest only that it was occupied during the prehistoric past and functioned as an upland hunting camp.

There is no evidence of gross disturbances. Soils are shallow and rocky but cultural materials are sufficiently plentiful that shovel testing was effective in delineating the extent of the site. The location appears undisturbed and cultural materials are plentiful, relative to neighboring sites in similar locations. The soils are 15 cm - 20 cm in depth and may contain intact deposits. If so, the site may be eligible for inclusion in the National Register of Historic Places and further assessment is required.

23DA441

Table 90. Summary characteristics of 23DA441.

Site Name	Unnamed
Cultural Affiliation	Indeterminate prehistoric
Topographic Setting	Ridgetoe
Parent Material	Osagean Series (Mo)
Drainage	Maze Creek
Original Recording Agency	Historic Preservation Associates
Size of Site	100 m x 80 m
Surface Visibility	0% - 25%
Slope	3%
Ground Cover Vegetation	Mixed hardwoods
Month and Year of Field Investigation	November 1992
Land Use	Recreation
Elevation	930 ft NGVD

23DA441 is an unnamed prehistoric site recorded by Steven M. Imhoff of Historic Preservation Associates on November 4, 1992 during a pedestrian survey of lands owned by the U. S. Army Corps of Engineers within the Maze Creek arm of Stockton Lake. The site is about 100 m north-south x 80 m east-west (8,000 m^2) and is situated on a ridgetop at an elevation of 930 ft. The land surface slopes downward to the north at a rate of 3%. The local geology consists of the Osagean Series (Mo) on which Peridge-Wilderness-Goss-Pembroke Association soils have formed. In the vicinity of the site, these soils support mixed hardwoods. The nearest available water is Maze Creek, a perennial stream located 60 m northeast of the site.

Five shovel tests were excavated, three of which yielded 4 (2.7 g) interior flakes. No organic remains were recovered. No cultural features were observed. The cultural materials at the site suggest only that it was occupied during the prehistoric past and functioned as an upland hunting camp.

There is no evidence of gross disturbances. Soils are shallow and rocky and cultural materials are not plentiful enough that shovel testing was effective in delineating the extent of the site. The location appears undisturbed but cultural materials are relatively scarce. The soils are 15 cm - 20 cm in depth and may contain intact deposits. If so, the site may be eligible for inclusion in the National Register of Historic Places and further assessment is required.

23DA442

Table 91. Summary characteristics of 23DA442.

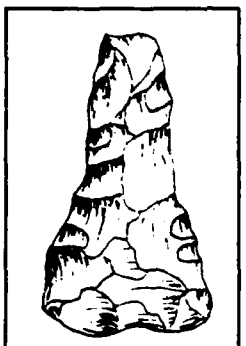
Site Name	Unnamed
Cultural Affiliation	Late Woodland, Mississippi
Topographic Setting	Hillside
Parent Material	Osagean Series (Mo)
Drainage	Unnamed intermittent stream
Original Recording Agency	Historic Preservation Associates
Size of Site	60 m x 60 m
Surface Visibility	0% - 25%
Slope	6%
Ground Cover Vegetation	Pasture and mixed hardwoods
Month and Year of Field Investigation	November 1992
Land Use	Recreation, Pasture
Elevation	910 ft NGVD

23DA442 is an unnamed prehistoric site recorded by Steven M. Imhoff of Historic Preservation Associates on November 4, 1992 during a pedestrian survey of lands owned by the U. S. Army Corps of Engineers within the Maze Creek arm of Stockton Lake. The site is about 60 m north-south x 60 m east-west (3,600 m^2) and is situated on a slope at an elevation of 910 ft. The land surface slopes downward to the east at a rate of 6%. The local geology consists of the Osagean Series (Mo) on which Peridge-Wilderness-Goss-Pembroke Association soils have formed. In the vicinity of the site, these soils support pasture and mixed hardwoods. The nearest available water is an unnamed intermittent stream located 20 m east of the site.

A select surface collection and six shovel tests yielded 1 (0.4 g) arrow point (Scallorn), 1 (5.6 g) Bifacial drill fragment, 9 (15.8 g) interior flakes, 3 (20.7 g) initial stage interior flakes, 2 (51.6 g) secondary decortication flakes, and 3 (7.6 g) pieces of chert shatter.

Scallorn (1-1)

Artifact 1-1 is an arrow point. It is an expanding stem specimen with a pointed tip, a straight slightly serrated blade, corner notches, square shoulders and a straight base. The cross section is biconvex with no edge abrading, and no beveling. Maximum dimensions are 2.2 cm x 1.1 cm x 0.4 cm and it weighs 0.4 g. The raw material is Burlington chert, which is found locally. Microscopic examination revealed no evidence of use-wear. This most closely resembles the Scallorn type, which is associated with the Late Woodland and Mississippi periods.



Bifacial Knife (1-2)

Artifact 1-2 is a biface proximal fragment. It is a parallel stem specimen with a missing tip, an incurved blade, no notches, no shoulders and a convex base. The cross section is diamond-shaped with edge abrading on the stem, and beveling on the left side of the blade. Maximum dimensions are 3.8 cm x 2.2 cm x 0.8 cm and it weighs 5.6 g. The raw material is Burlington chert, which is found locally. This is the basal part of a drill-like form with distinct beveling on left side of each face. Heavy use fracturing, edge rounding and polish, plus the missing tip, suggest arduous use in cutting bone or antler. This specimen is exhausted and is an unclassified type not associated with a cultural period.

No organic remains were recovered. No cultural features were observed. The cultural materials at the site suggest that it was occupied during the Woodland period and functioned as a prehistoric habitation.

This site has been subject to clearing and probable erosion. Cultural materials were found only on the surface of a field road that crosses Government land. Six shovel tests excavated in areas around the road produced no artifacts and it is possible that the materials found in the road were washed down from a ridgetoe west of the survey area. Cultural materials were relatively abundant in the field road but the absence of materials in the shovel tests leaves open the possibility that the materials present have been redeposited from a ridgetoe west of our survey area and on private property. No further work is required.

SUMMARY OF THE INTENSIVE SURVEY

The distribution of sites outside the areas surveyed by us is difficult to assess due to the lack of environmental variability. With the exception of the Maze Creek area, all of the places surveyed were situated in upland environments (Table 3). This and the problems revolving around sampling reduce our ability to assess site distributions to basic descriptions. We also found much of the available environmental data not very useful in studying site distribution. For example, the geological and soils data are too general and the existing vegetation has been significantly altered from its original character. In addition, the restriction of our work to uplands limited the use of topographic data. For purposes of this discussion, we have restricted our analysis to the distribution of sites in relation to elevation (although this too is of questionable value), slope, distance to water and topography. Sites have been grouped into those reflecting Archaic, Woodland, Mississippi/Late Prehistoric, indeterminate prehistoric and historic activities and isolated finds.

SITE DISTRIBUTION RELATIVE TO ELEVATION

Table 92 shows the distribution of sites in relation to elevation. Each cell presents, in clockwise fashion, the observed frequency of sites, the expected frequency, the relative contribution of the cell to the overall Chi Square statistic (computed by dividing the χ^2 value by the expected frequency) and the individual Chi Square value. Chi Square observed (30.81) is not

Table 92. Distribution of sites relative to elevation.

	860-880 ft		881-900 ft		901-920 ft		921-940 ft		> 940 ft		
	Obs	*Exp*	*Obs*	*Exp*	*Obs*	*Exp*	*Obs*	*Exp*	*Obs*	*Exp*	Total
Archaic	5	3.85	2	3.55	5	4.14	2	2.17	0	0.30	14
	0.35	0.09	0.68	0.19	0.18	0.04	0.01	0.01	0.30	1.00	
Woodland	5	4.39	1	4.06	7	4.73	3	2.48	0	0.34	16
	0.08	5	3.85	0.57	1.09	0.23	0.11	0.04	0.34	1.00	
Mississippi &	3	2.47	0.09	2.28	3	2.66	3	1.39	0	0.19	9
Late Prehistoric	0.11	0.05	2.28	1.00	0.04	0.02	1.85	1.33	0.19	1.00	
Indeterminate	13	14.01	17	12.93	14	15.08	4	7.90	3	1.08	51
Prehistoric	0.07	0.01	1.28	0.10	0.08	0.01	1.93	0.24	3.43	3.18	
Isolated finds	11	6.59	7	6.08	2	7.10	4	3.72	0	0.51	24
	2.95	0.45	0.14	0.02	3.66	0.52	0.02	0.01	0.51	1.00	
Historic	2	7.69	9	7.10	11	8.28	6	4.34	0	0.59	28
	4.21	0.55	0.51	0.07	0.89	0.11	0.64	0.15	0.59	1.00	
Total	39	39	36	36	42	42	22	22	3	3	142

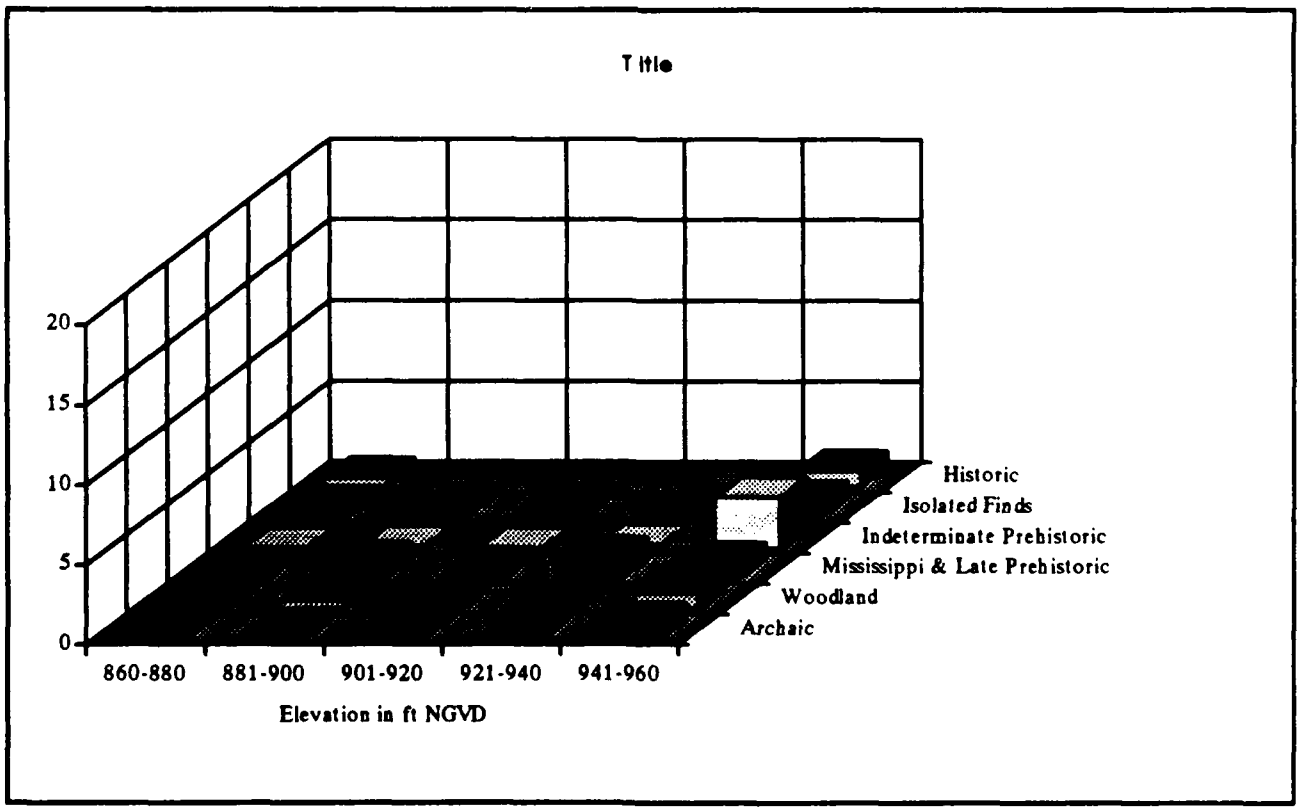


Figure 26. Contribution of elevation categories to the Chi Square.

significant at the .05 level where the critical value of χ^2 is 31.41 with 20 degrees of freedom. Thus, the overall distribution is about as expected with sites evenly distributed over the range of elevations (Figure 26). Although there are noticeably fewer sites situated above 920 ft, lands above this elevation also comprise relatively less of the area surveyed.

The apparent uniformity is probably due to several factors. First, nearly all of the areas surveyed are in upland environments. Were bottomland environments adequately represented, it is likely that elevation would be a more important factor in site location. It could also be that elevation is simply not all that important. Surveys in the Mississippi Valley have repeatedly shown that seemingly minor differences in elevation make major differences in flood hazard, vegetation communities and the habitability of a given location. Surveys in more rugged environments demonstrate the importance of elevation in these locations as well. It may be that, in the Stockton area, elevation is not a critical factor in site location because there is neither too much nor too little relief so that access to critical resources is not greatly enhanced or inhibited by the elevation of a site relative to the surrounding area. For example, our work in the Maze Creek area, where we were able to gain access to a reasonably large expanse of floodplain, revealed that most of the sites (both open and in bluff shelters) are situated in upland areas overlooking the Maze Creek Valley. Placement of sites in such locations would not have hampered access to bottomland resources and may have reduced the risks associated with flooding. Such mundane factors as escape from large populations of mosquitoes also may have been important.

SITE DISTRIBUTION RELATIVE TO WATER

Table 93 shows the distribution of sites in relation to water. Again, the observed χ^2 statistic (29.13) is not significant at the .05 level where χ^2 critical is 31.41 with 20 degrees of freedom (Figure 27). We believe this to be due largely to sampling issues and several factors that inhibited our ability to collect accurate data. First, sites of a variety of functions are included. Thus, while the ready availability of water may be important to a prehistoric habitation, it is less so for chert extraction sites and of no consequence at all for historic cemeteries and rock piles. Second, sites along the lake shore are partially submerged which makes an accurate assessment of their relationship to the original stream channel impossible.

In many cases, the occupants of sites may have depended on springs that were not evident at the time of our survey or that no longer flow. At many of the historic farmsteads, no on-site water source such as a well or cistern was preserved although they were almost certainly present. Abandoned wells are routinely filled in by the Government because they are a safety hazard and a source of ground water contamination and may become invisible to a surface inspection. For example, we have 7 farmsteads where the nearest known source of water is 150 m - 600 m away. None-the-less, there is some suggestion that proximity to water was a consideration. Thirty-seven percent of the sites are within 50 m of water, 57% are within 100 m and all of the site categories except the isolated finds decline in frequency with increasing distance from water.

Table 93. Distribution of sites relative to water.

	0 m - 50 m		50 m - 100 m		101 m - 200 m		201 m - 300 m		>300 m		
	Obs	*Exp*	*Obs*	*Exp*	*Obs*	*Exp*	*Obs*	*Exp*	*Obs*	*Exp*	Total
Archaic	6	5.13	3	2.86	2	2.66	1	1.77	2	1.58	14
	0.15	0.03	0.01	0.00	0.16	0.06	0.34	0.19	0.11	0.07	
Woodland	8	5.86	3	3.27	2	3.04	1	2.03	2	1.80	16
	0.78	0.13	0.02	0.01	0.36	0.12	0.52	0.26	0.02	0.01	
Mississippi &	7	3.30	2	1.84	0	1.71	0	1.14	0	1.01	9
Late Prehistoric	4.16	1.26	0.01	0.01	1.71	1.00	1.14	1.00	1.01	1.00	
Indeterminate	19	18.68	10	10.42	14	9.70	7	6.46	1	5.75	51
Prehistoric	0.01	0.00	0.02	0.00	1.91	0.20	0.04	0.01	3.92	0.68	
Isolated finds	3	8.79	8	4.90	4	4.56	4	3.04	5	2.70	24
	3.81	0.43	1.96	0.40	0.07	0.02	0.30	0.10	1.95	0.72	
Historic	9	10.25	3	5.72	5	5.32	5	3.55	6	3.15	28
	0.15	0.01	1.29	0.23	0.02	0.00	0.59	0.17	2.57	0.81	
Total	52	52	29	29	27	27	18	18	16	16	142

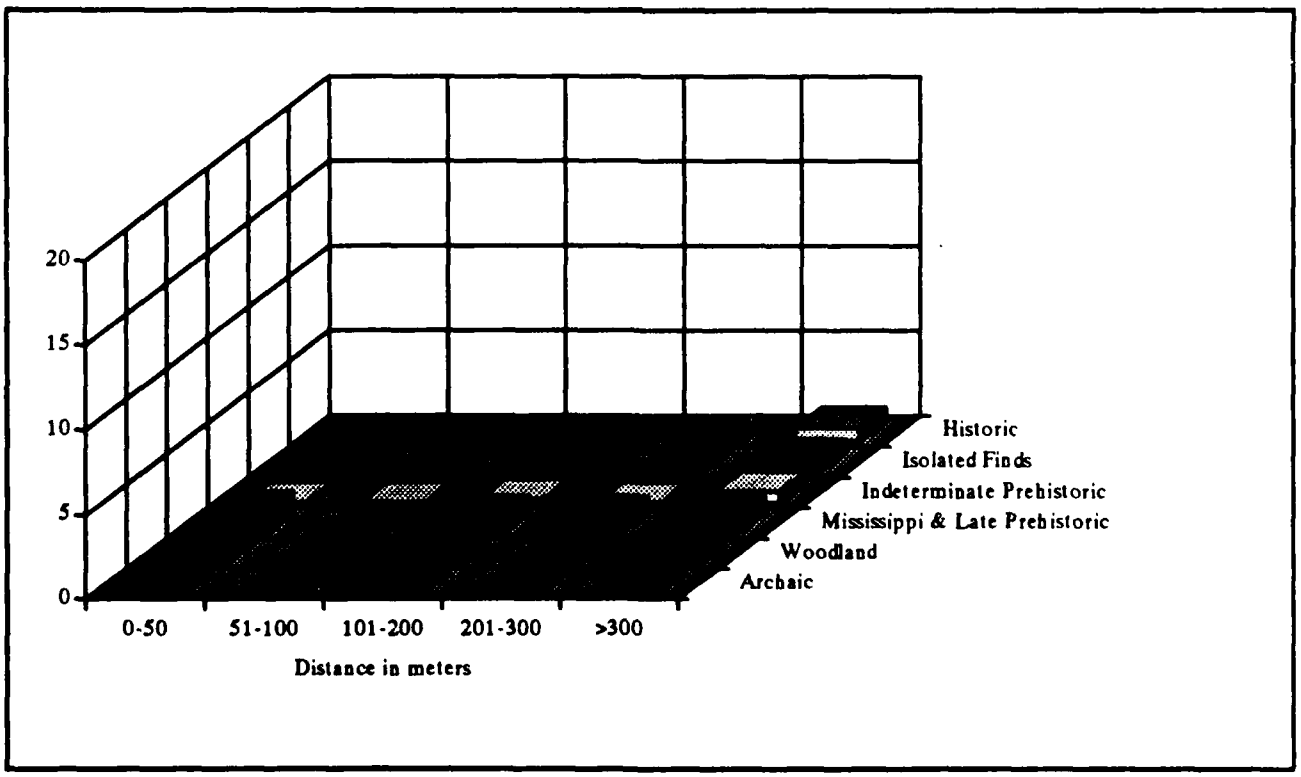


Figure 27. Contribution of distance to water categories to the Chi Square.

SITE DISTRIBUTION RELATIVE TO SLOPE

Table 94 shows the distribution of sites relative to slope. The χ^2 statistic (36.53) is significant at the .02 level where χ^2 critical is 35.02 with 20 degrees of freedom. Interestingly though, the primary contributor to the χ^2 statistic is a higher than expected frequency of Mississippi/Late Prehistoric sites in locations with slope gradients greater than 30%, followed closely by these same sites in locations with slope gradients of 21% - 30% (Figure 28). These are, of course, bluff shelters where some of the slopes are nearly vertical and is in marked contrast to the distribution of the other sites which are overwhelmingly (70%) situated in places having a slope gradient of 10% or less. The only exception, other than the Mississippi and Late Prehistoric sites, is the isolated finds, which are evenly distributed over a somewhat broader range of slope gradients (i.e., 0% - 20%).

SITE DISTRIBUTION RELATIVE TO TOPOGRAPHY

Table 95 shows the distribution of the Stockton sites relative to topographic setting. The χ^2 statistic (38.03) is significant at the .05 level where χ^2 critical is 37.65 with 25 degrees of freedom. The chief factors contributing to the statistic are greater than expected numbers of Mississippi and Late Prehistoric sites in bluffs and upland drainages. All of these sites are actually located in shelters. A third contributor is a greater than expected number of isolated artifacts located in bottomland environments. Although the χ^2 statistic argues otherwise, we believe this to be an example of the effect a bad sample can have on statistical procedures. Remember, that the process of selecting survey areas was not probabilistic in nature. Therefore, while the χ^2 statistic may be internally consistent, it is cast within a sample that does not represent the overall environment. One only has to look at the observed frequencies of sites to see that the important locations for sites are on the tops (44%) and slopes (34%) of hills and ridges.

USE OF THE WIMMER AND HPA COLLECTIONS IN AREA RESEARCH

In an effort to assess research needs in the Stockton area, we consulted the *Master Plan for Archaeological Resource Protection in Missouri* (Weston and Weichman 1987) and previous survey reports of work conducted around the lake (Girard and Freeman 1992; Mercado-Allinger and Jackson 1989 and Nichols et al. 1980). Not all of the research topics posed by these investigators have been incorporated into this study. Some require excavated data or probabilistic sampling strategies that render the information gathered by us less than adequate. Still, other topics were not addressable because our work did not produce the appropriate data. None-the-less, we did find a number of research topics for which we generated sufficient information to address.

INDIGENOUS GROUPS OR CADDOAN GROUPS?

One of the regional research issues focuses on the relationship (if any) of indigenous groups to Caddoan groups to the south. We reviewed the combined HPA and Wimmer

Table 94. Distribution of sites relative to slope.

	0% - 5%		6% - 10%		11% - 20%		21 % - 30%		>30%		
	Obs	*Exp*	*Obs*	*Exp*	*Obs*	*Exp*	*Obs*	*Exp*	*Obs*	*Exp*	Total
Archaic	4	5.13	6	4.63	0	2.07	2	0.79	2	1.38	14
	0.25	0.05	0.40	0.09	2.07	1.00	1.86	2.36	0.28	0.20	
Woodland	5	5.86	5	5.30	1	2.37	2	0.90	3	1.58	16
	0.13	0.02	0.02	0.00	0.79	0.33	1.34	1.49	1.28	0.81	
Mississippi &	1	3.30	2	2.98	1	1.33	2	0.57	3	0.82	9
Late Prehistoric	1.60	0.49	0.32	0.11	0.08	0.06	3.58	6.28	5.75	6.98	
Indeterminate	23	18.68	15	16.88	7	7.54	2	2.87	4	5.03	51
Prehistoric	1.00	0.05	0.21	0.01	0.04	0.01	0.27	0.09	0.21	0.04	
Isolated finds	7	8.79	7	7.94	9	3.55	1	1.35	0	2.37	24
	0.36	0.04	0.11	0.01	8.37	2.36	0.09	0.07	2.37	1.00	
Historic	12	10.25	12	9.27	3	4.14	0	1.58	1	2.76	28
	0.30	0.03	0.81	0.09	0.31	0.08	1.58	1.00	1.12	0.41	
Total	52	52	47	47	21	21	8	8	14	14	142

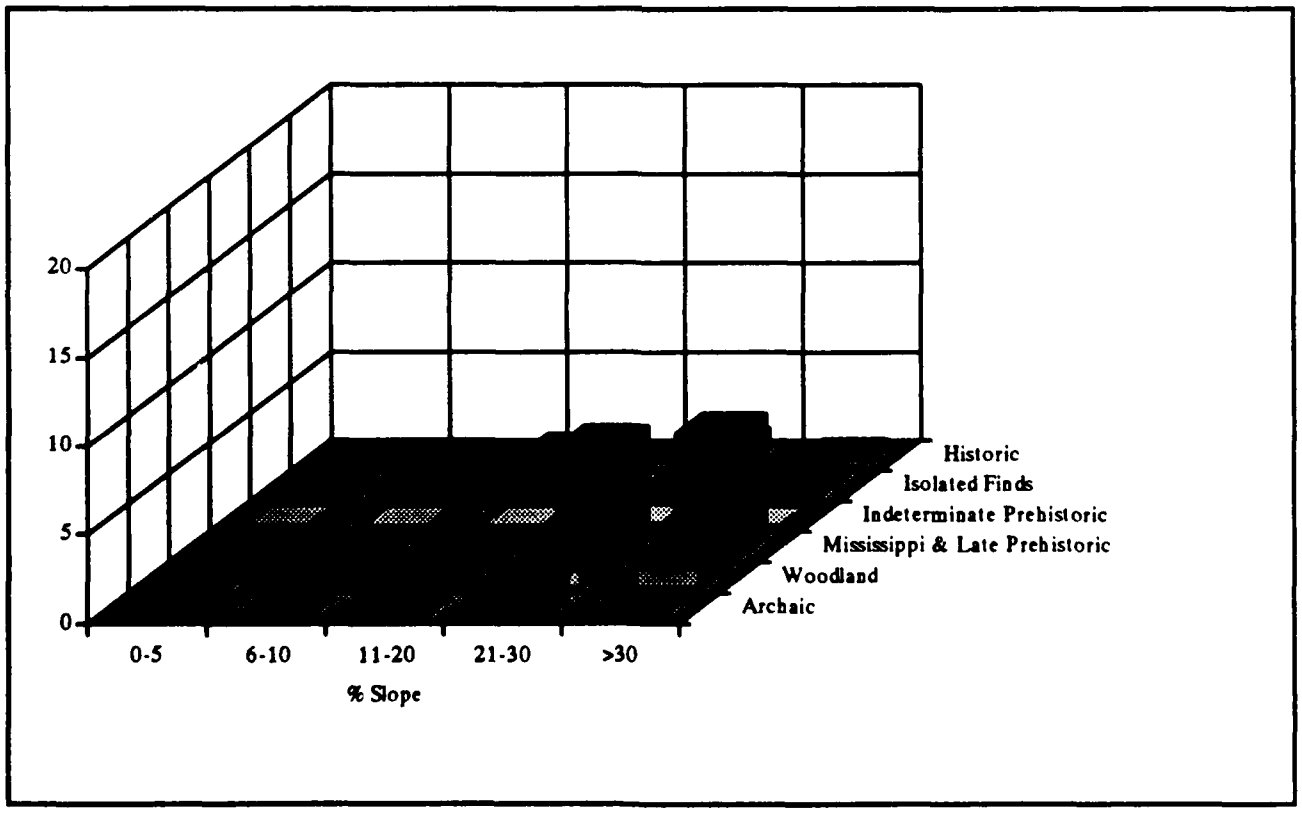


Figure 28. Contribution of slope categories to the Chi Square.

Table 95. Distribution of sites relative to topography.

	Bottomland		Upland Drainage		Upland Slope		Bench		Hilltop		Bluff		
	Obs	*Exp*	*Obs*	*Exp*	*Obs*	*Exp*	*Obs*	*Exp*	*Obs*	*Exp*	*Obs*	*Exp*	Total
Archaic	0	0.39	1	0.59	3	4.73	1	0.79	7	6.21	2	1.28	14
	0.39	1.00	0.28	0.48	0.63	0.13	0.06	0.07	0.10	0.02	0.40	0.31	
Woodland	0	0.45	1	0.68	5	5.41	1	0.90	6	7.10	3	1.46	16
	0.45	1.00	0.16	0.23	0.03	0.01	0.01	0.01	0.17	0.02	1.61	1.10	
Mississippi &	0	0.25	2	0.38	2	3.04	0	0.51	2	3.99	3	0.82	9
Late Prehistoric	0.25	1.00	6.90	18.14	0.36	0.12	0.51	1.00	0.99	0.25	5.75	6.98	
Indeterminate	1	1.44	0	2.15	19	17.24	5	2.87	22	22.63	4	4.67	51
Prehistoric	0.13	0.09	2.15	1.00	0.18	0.01	1.57	0.55	0.02	0.00	0.10	0.02	
Isolated finds	3	0.68	1	1.01	9	8.11	1	1.35	10	10.65	0	2.20	24
	7.99	11.82	0.00	0.00	0.10	0.01	0.09	0.07	0.04	0.00	2.20	1.00	
Historic	0	0.79	1	1.18	10	9.46	0	1.58	16	12.42	1	2.56	28
	0.79	1.00	0.03	0.02	0.03	0.00	1.58	1.00	1.03	0.08	0.95	0.37	
Total	4	4	6	6	48	48	8	8	63	63	13	13	142

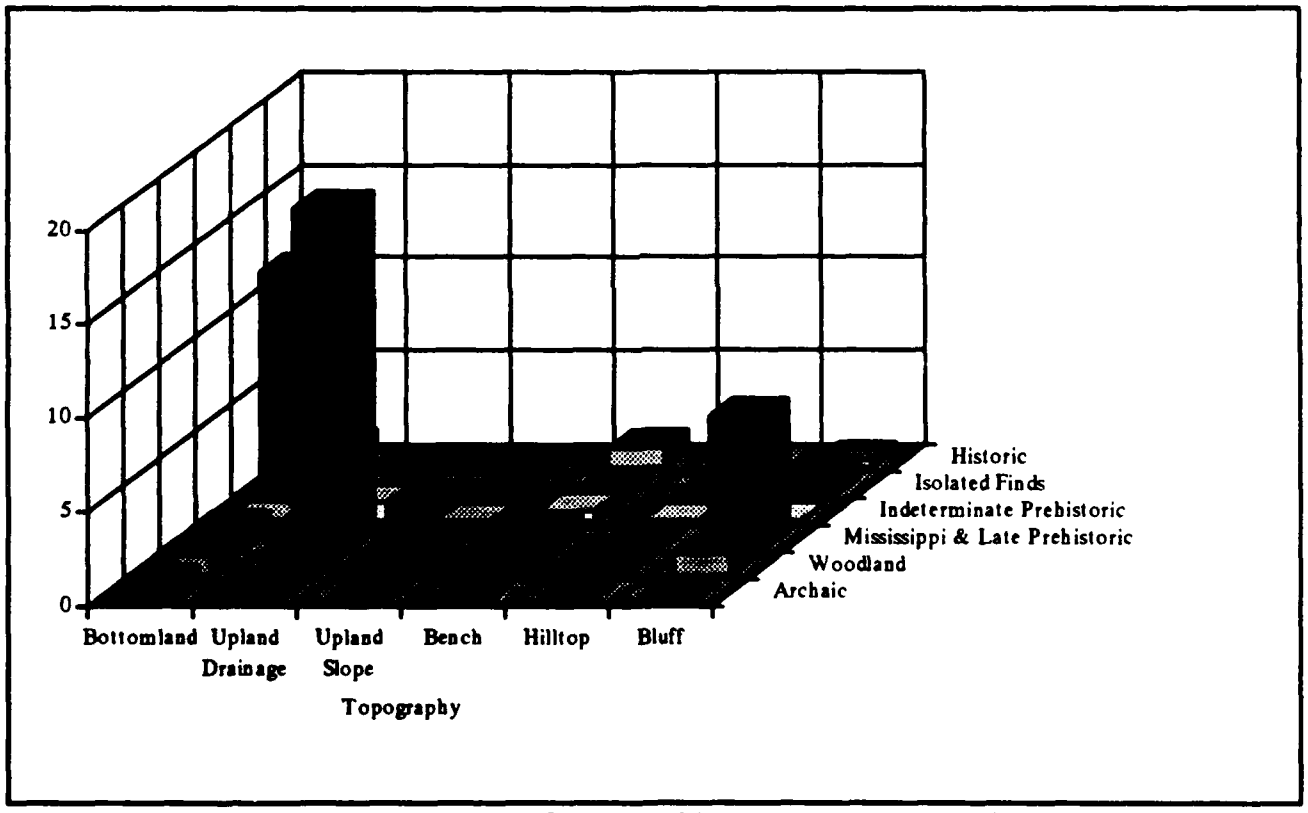


Figure 29. Contribution of topographic categories to the Chi Square.

collections in an effort to assess whether such a relationship existed. Many arrow point types in the Wimmer collection (Agee A, Alba-like, Scallorn, Sequoyah, Haskell, Keota, Sallisaw, Morris, Reed and Huffaker) are commonly associated with the Loftin, Huntsville, War Eagle, Harlan and Spiro phases in southwest Missouri, northwest Arkansas and northeast Oklahoma. 23DA412, 23PO366, 23PO370, 23PO373, 23PO381, 23PO394, 23PO416 and 23PO422 produced 2 or more of these arrow point types, most of which were made from local cherts (Table 96). Three

specimens from 23PO366, 1 from 23PO370 and 1 from 23PO373 were made from Keokuk chert and 2 from 23PO394 were made from Reeds Spring chert found south of the Stockton area. Of the 90 Caddoan-like arrow points recovered, only 7 (12.8%) were made of materials probably obtained in extreme southwest Missouri (i.e., Keokuk and Reeds Spring cherts).

One of the enigmas relating to the substantial quantity of arrow point types normally associated with the southern Caddoan groups is the fact that no sherds commonly associated with Caddoan components to the south (i.e., Woodward Plain, Williams Plain, Le Flore Plain, Paris Plain, Poteau Plain, or any of the undesignated polished plain, engraved or incised types) were recognized in the Wimmer collections, although several grit-tempered cord-marked and plain Late Woodland sherds were present.[1] It is recognized that the Dade and Polk County sites are mostly upland sites, possibly hunting camps, and that sites containing ceramics might have been located adjacent to the river and thus covered by Stockton Lake. To assess this possibility, the literature relating to sites studied in the areas now covered by Stockton Lake and in the Downstream Stockton area was reviewed. In Plate 2 of the Downstream Stockton Study (Roper 1977) specimen (h) seems to be a Haskell point and specimens (e), (f) and (g) are Scallorn or Sequoyah-like arrow points. Scallorn varieties are extremely widespread through Missouri, Arkansas, Oklahoma, Louisiana and Texas in Late Woodland and Mississippi Period sites. The Roper (1977) Plate 2 artifacts are not labeled as to site of origin and are only listed as "Late Woodland."

Although the remains of 3 houses were excavated at Flycatcher (23CE153), an open village location (Calabrese et al. 1969:38), no ceramics were recovered. At least 1 house and several activity areas were excavated at Dryocopus (23CE120), also in Cedar County, Missouri. Again, no ceramics were recovered. The illustrated bifaces including Afton-like, Smith, Table Rock Stemmed and Big Creek-like specimens are probably Late Archaic, and the several contracting stemmed forms could represent either Late Archaic or Woodland activities. Five of the 6 probable arrow points illustrated in Plate 3 are certainly Woodland, while specimen (m) could be either a Woodland or Mississippi Period artifact (Calabrese et al. 1969:1, 38-50).

Considering the fact that most of the Caddoan-like arrow points were made from local Ordovician and Burlington cherts, trade does not seem to represent a probable explanation for their presence in substantial numbers at several sites. One possible explanation is that Caddoan hunting groups from extreme southwest Missouri and the Table Rock area repeatedly visited these sites on hunting-foraging trips, losing only arrow points and other bifaces related to faunal procurement and processing. The use of mostly local cherts suggests that such stays would have been lengthy. However it seems probable that more points, especially broken ones, made from Reeds Spring and other extreme southern Missouri cherts should be present if Caddoan groups from further south came into the area repeatedly. Also, if family groups visited these sites, it seems probable that pottery would be present. To the argument that shell-tempered pottery may have disintegrated in the acidic soils, it should be stressed that some of the Caddoan pottery including Williams Plain and Le Flore Plain were grog or grog and grit-tempered and would have survived.

[1]See Dickson (1991:155-159, 180-188) for descriptions of the Caddoan sherd varieties found at Albertson (3BE174), located in Benton County, Arkansas not far from the Missouri line.

Table 96. Chert types by biface type and cultural period.

Biface Type	Jefferson City		Pierson		Reeds Spring		Elsey		Keokuk		Burlington		Unknown		Total
	Pln	HT	Pln	HT	Pln	HT	Pln	HT	Pln	HT	Pln	HT	Pln	HT	
Early Archaic															
Dalton	1	1			1					1	2	1			7
Hardin	1														1
Middle Archaic															
Calf Creek		1									3				4
Hardin variant											1				1
Jakie	2										2	3			7
Nolan												1			1
Rice Lobed									1			1			2
Rice variant												1			1
White River	3		2	1							4	8			18
Late Archaic															
Afton	1										1	2			4
Big Creek	3			1	1					1	16	55	1		77
Castroville	1											2			3
Duncan											1	2			3
Edgewood		1											1		2
Ellis-like											1	1			2
Ensor					1						1	4			6
Etley											1				1
Fairland	2		1								1	2			6
Godar	2														2
Hanna									1		4	21		1	27
Kings Corner Notched	12				2						11	31			56
Marcos											1	2			3
Marshall-like											1				1
Martindale												1			1
Palmillas-like									1						1
Red Ochre							1				1	1			3
Sedalia digger											1				1
Sedalia-like adze	1														1
Smith	7				1				1	1	9	9	1		29
Stone Corner Notched	6		1	1	1				2		13	41	1		66
Stone Square Stemmed	3						1		1		4	11	2		22
Table Rock Stemmed	1	2	1	1		1			1		1	31	2		41
Undifferentiated Woodland															
Copena											2	2			4
Gary												1			1
Lander Corner Notched					1						4	7			12
Langtry	2	2	1						1		6	19	2		33
Standlee	2	1										9	1		13
Waubesa	2										2	6			10
Middle Woodland															
Dickson	3	1		1					1		5	13			24
Gibson	1							1			2	2			6
Grand												5			5
Snyders	1				1						1	9	1	1	14
Steuben	2		1							1	4	15			23
Late Woodland															
Klunk Side Notched	1														1
Koster-like												1			1

Table 96. Chert types by biface type and cultural period, concluded.

Biface Type	Jefferson City		Pierson		Reeds Spring		Elsey		Keokuk		Burlington		Unknown		Total
	Pln	HT	Pln	HT	Pln	HT	Pln	HT	Pln	HT	Pln	HT	Pln	HT	
Rice Side Notched	3	2	1	1							11	20			38
Schild											1	1			2
Mississippi & Late Prehistoric															
Alba												1	1		2
Cahokia Multiple Notched												1			1
Cahokia Side Notched												1			1
Crisp Ovate	1														1
Fresno	2	1							1		1	5	2	1	13
Harahey Knife											1				1
Haskell											1	2			3
Huffaker	1				1										2
Keota	3														3
Morris												1			1
Reed	1				1							2			4
Sallisaw	2									1	1	4	1		9
Scallorn	12	2							2		8	38			62
Sequoyah	5				1					1	2	5			14
Table Rock Pointed Stem	2				1				1		5				9
Washita												2			2
Total	92	14	8	6	13	1	2	1	14	6	137	403	16	3	716

One explanation for these arrow points could be the possibility that in Late Mississippi or Late Prehistoric times idea diffusion may have promoted the acceptance of biface forms from other areas. In other words, concepts regarding the acceptable shapes of arrow points may have crossed ethnic and cultural barriers. Support for this concept can be found in the fact that the stemmed Scallorn varieties are distributed over such a large area. And, of course, the triangular arrow point, variously labeled as Madison, Mississippi Triangular and Fresno in the Mississippi Valley, western Arkansas, Oklahoma and Texas, is extremely widespread in Late Prehistoric times as are snub-nosed end scrapers, beveled knives, grooved sandstone abraders and bone shaft wrenches.

SHIFT FROM LARGE DARTS TO SMALL ARROWS?

Another regional question asked whether there was a shift from the production of large dat points to small arrow point during the Early/Middle Woodland Period. Perhaps a better question might be: "To what degree did arrow points replace dart points throughout the Woodland and Mississippi Periods?"

Data from such stratified sites as Rice (23SN200; Bray 1956:46-134), Bontke (23MD43; Cobb 1975) and Albertson (3BE174; Dickson 1991:94-213) suggest that the bow and arrow was *gradually* accepted. At Albertson, where 2 m of ceramic deposits were present and components could be separated fairly well, a few late Middle Woodland points (category MW-6) with unusual fractured bases may have functioned as arrow points, however most bifaces were larger and apparently were used as dart points or cutting implements. Late Woodland levels produced many

corner and side notched arrow points as well as several types of larger bifaces. The arrow points seemed to be diminutive copies of the larger specimens and were very common at this time.

During the succeeding Caddoan and Neosho phase occupations arrow points outnumbered the larger dart points and cutting tools, but they did not entirely replace them. In other words, these data suggest a gradual acceptance of the bow and arrow throughout the Woodland. While it is recognized that selective collecting by some individuals in the Stockton area may have distorted the picture at sites visited by Wimmer, he apparently picked up all artifacts other than debitage, and substantial collections exist for several sites. Considering that these are select surface collections, we cannot quantify the ratios of arrow points to dart points by component, although a few data are relevant. For example, 24 diagnostic Woodland and Mississippian arrow points were collected from the multi-component site 23PO370. Ten of these were Scallorn, 2 Sequoyah, 2 Haskell, 2 Sallisaw, 1 Schild and 7 were unclassified fragments. Only the Schild point is not a Caddoan type. Several Stone Corner Notched, White River Archaic, Smith, Table Rock, and Kings Corner Notched bifaces from the site are probably the result of Archaic activities. Six Woodland (3 Dickson bifaces, 1 Steuben biface, 1 Waubesa, and 1 Copena) bifaces were recovered. While the Steuben type apparently survived into the Late Woodland, most of them and the Dickson, Waubesa and Copena bifaces probably relate to the Middle Woodland. Therefore, few if any Late Woodland or Mississippi Period large bifaces were present, while 24 arrow points were recovered. This suggests that the bow and arrow had become quite popular in the Stockton area by Late Woodland times.

Eighteen arrow points were found at 23PO381 including 7 Scallorn, 4 Sequoyah, 2 Reed, 1 Washita, 1 Fresno and 3 undiagnostic fragments. While most of the large bifaces were Late Archaic, 2 Rice Side Notched specimens (usually Late Woodland) and 1 Steuben (Middle Woodland into Late Woodland) were recovered. Again, the scarcity of Late Woodland and Mississippian larger bifaces compared to 18 arrow points suggests that the bow and arrow became the dominant hunting tool during the Late Woodland.

DID TRIANGULAR ARROW POINTS PREVAIL?

The basic question here is whether triangular arrow points eventually replaced all other point forms. In an absence of stratified and datable sites, this is a difficult question to answer. Certainly in extreme southwest Missouri and northwest Arkansas, the Fresno type arrow point seems to replace notched types during the Neosho phase (Dickson 1991:282). Whether this happened in the Stockton Reservoir area is uncertain.

Thirteen Fresno or Mississippi Triangular points were recovered from several sites including 23PO381 and 23PO377 but they are a minor type at the few sites where they were found. Unless population densities dropped tremendously during Late Prehistoric times, notched arrow point forms do not appear to have been replaced by triangular forms. The HPA and Wimmer collections include specimens from a large number of sites in the Stockton area and thus would appear to be more definitive than small assemblages from a few local sites.

LATE ARCHAIC SPECIALIZATION?

Another area of regional interest is whether there was an increase in specialization and/or diversification of tool forms during the late archaic? Since many ancillary tools (i.e., gravers, unhafted bifaces used for cutting, scraper forms and choppers) are not diagnostic of the Late Archaic, one must have a stratified site with sound contextual data to address this question properly. Only the 3 Red Ochre bifaces, the Sedalia adze from 23PO377 and the Sedalia Digger from 23PO395 are characteristic Late Archaic tools (Chapman 1975:200, 251). Because the large numbers of Late Archaic biface styles (i.e., Smith, Table Rock Stemmed, Afton, Big Creek, Stone Corner Notched, Fairland and Kings Corner Notched; Table 96) indicate a larger local population than resided in the area during the Middle and Early Archaic periods, many of the other tools found on these sites probably are Late Archaic as well.

Notice in Table 97 that of 710 bifaces, 358 are Late Archaic. This is in strong contrast to the 9 Early Archaic bifaces and 32 Middle Archaic specimens. An important question here is whether the 21 different Late Archaic biface types found at Stockton sites indicate a large number of Late Archaic groups or whether a few groups made many biface styles. This question can be addressed only if single component or clearly stratified multiple component sites can be found.

CHANGES IN LITHIC RESOURCE SELECTION?

A very interesting regional question is whether lithic resource selection changes over time. Several questions regarding chert selection can also be addressed. First, can any pattern be recognized from the data indicating that a major cultural division, such as Early Archaic or Late Woodland, selected one chert type over another? Also, can it be determined that any group from these more general periods was selective in choice of chert? Table 95 depicts the chert types used during the various periods to produce the diagnostic bifaces recovered from the Stockton area.

One question that cannot be adequately addressed with the data at hand is "to what degree was convenience a factor in chert choice at each site?" At this time the closest lithic sources, either stream cobbles or bedrock outcrops, have not been determined for the Stockton sites. A general observation, based on collections of raw materials gathered adjacent to or near several sites, suggests that mostly local resources were exploited at these locations. One cannot speak with assurance regarding the dozens of other sites. Either detailed geological maps for the entire area would be needed or a field reconnaissance of the areas adjacent to each site would have to be made. One problem with most geological maps is that small outliers and thin lenses of some formations are not always shown, and stream cobble sources are never depicted. A surface survey of the area is the only way to thoroughly consider all possible chert sources.

In the Stockton area the most abundant chert is the Mississippian Burlington (MB) and the next most common is the Ordovician Jefferson City (OJC). Small lenses or outliers of Mississippian Pierson (MP) are locally available, and it is possible that some very thin beds of Sedalia carbonates (MS) may exist in the Stockton area. In Cooper County and adjacent areas of central Missouri, the Sedalia contains a dark gray to black chert (Thompson 1986:39), but

Table 97. Cultural assignment of bifaces at the Stockton sites.

Biface Type	Archaic Early	Archaic Middle	Archaic Late	Woodland	Mississippi
Afton			4		
Alba					2
Big Creek			78		
Cahokia					1
Cahokia Side Notched					1
Calf Creek variant		3			
Calf Creek		1			
Castroville			3		
Copena				4	
Crisp Ovate					1
Dalton	7				
Dickson				24	
Duncan			3		
Edgewood			2		
Ellis-like			2		
Ensor			6		
Etley			1		
Fairland			8		
Fresno					13
Gary				1	
Gibson				6	
Godar			2		
Grand				5	
Hanna			27		
Harahey Knife					1
Hardin	2				
Haskell					3
Huffaker					2
Jakie		7			
Keota					3
Kings Corner Notched			56		
Klunk Side Notched				1	
Koster-like				1	
Lander Corner Notched				12	
Langtry				33	
Marcos			3		
Marshall-like			1		
Martindale			1		
Morris				1	
Nolan		1			
Palmillas-like			1		
Red Ochre			3		
Reed					4
Rice Lobed variant		2			
Rice Side Notched				38	
Sallisaw					9
Scallorn				*	62
Schild				2	
Sedalia digger				1	
Sedalia-like adze				1	
Sequoyah					14
Smith			29		
Snyders				14	
Standlee				13	
Steuben				23	
Stone Corner Notched			66		
Stone Square Stemmed			22		
Table Rock Pointed Stem					10
Table Rock Stemmed			41		
Washita					2
Waubesa				10	
White River		18			
Total	9	32	359	190	128

whether the feather edge of Sedalia possibly existing in the Stockton area contains chert is not known at this time. The Reeds Spring (MRS) and Keokuk (MK) cherts recovered at Stockton area sites probably come from areas in extreme southern Missouri where they are abundant.

The Early Archaic makers of Dalton and Hardin bifaces fashioned 3 specimens from Jefferson City and 3 from Burlington chert. No trend seems apparent here. The single biface made from Reeds Spring chert and 1 from Keokuk probably were brought into the area from the south.

During the Middle Archaic period, residents of the sites being studied made 6 bifaces from Jefferson City chert (17.7%), 3 from Pierson (8.8%), 1 from Keokuk (2.9%) and 24 from Burlington (70.6%). Here we see a definite trend toward the use of Burlington cherts, although the use of Jefferson City may approximate its local availability. There also seems to be a trend toward heat-treating of cherts as 16 of the 34 (47.1%) Middle Archaic bifaces were made from heat-treated cherts. Fourteen of the 24 (58.3%) Burlington chert bifaces had been heat-treated.

At this time we cannot say how many groups were involved in the production of the 21 Late Archaic dart point/knife types, the Sedalia digger and Sedalia adze. However, 42 bifaces (11.7%) were made from Jefferson City chert while 6 (1.7%) were made from Pierson, 6 (1.7%) from Reeds Spring, 2 (0.6%) from Elsey, 9 (2.5%) from Keokuk, 283 (79.3%) from Burlington, and 9 (2.5%) from unknown cherts. It is apparent that Burlington chert was a dominant choice by Late Archaic groups in general. It should be pointed out that 51% of the sites being considered produced Late Archaic bifaces, so such sites are widely represented in the reservoir area. It seems apparent that the Late Archaic peoples were choosing Burlington chert more for cultural reasons than for availability. The geological literature does not document the areal percentages of local outcrops of Jefferson City and Burlington formations but the State Geological Map shows about 25% of Cedar County, possibly 10% of Dade County and almost 50% of adjacent areas in Polk County mapped as Ordovician Jefferson City. It is also interesting to note that 216 (76%) Late Archaic bifaces made from Burlington chert had been heat-treated prior to manufacture. On the other hand only 3 (7%) Jefferson City bifaces had been heat-treated. In all, 226 (63%) of the Late Archaic bifaces were produced from heat-treated chert.

Several biface types (Lander Corner Notched, Langtry and Waubesa) were made in both Middle and Late Woodland times (Woodland undifferentiated). Nine specimens (12.3%) were made from Jefferson City chert, 1 (1.4%) each from of Pierson, Reeds Spring and Keokuk cherts, 58 (79.4%) from Burlington chert and 3 (4.1%) from unknown types. Here again, Burlington cherts are dominant and seem to have been chosen in preference to Ordovician sources. Of bifaces made from Burlington chert, 75.9% had been thermally pre-treated.

Seventy-two bifaces relate to the Middle Woodland activities. Eight (11.1%) were made from Jefferson City chert, 2 (2.8%) from Pierson, 1 (1.4%) each from Reeds Spring and Elsey, 2 (2.8%) from Keokuk, 56 (77.7%) from Burlington and 2 (2.8%) from an unknown chert. As one can see, the percentage of Burlington used by Middle Woodland peoples is very close to that used by the undifferentiated Woodland. Forty-four (78.6%) of the 56 Middle Woodland bifaces made from Burlington cherts were thermally pre-treated.

Forty-two bifaces reflect a Late Woodland activities. Of these 6 (14.3%) are made from Jefferson City chert, 2 (4.8%) from Pierson and 34 (80.9%) from Burlington chert. We found that 64.7% of the Late Woodland Burlington chert bifaces had been heat-treated before manufacture. Chert data from the Late Woodland compares favorably with the other Woodland categories.

One hundred twenty-eight bifaces, mostly arrow points, were characteristic of Mississippian activities. Of these, 32 (25%) were made from Jefferson City chert, 4 (3.1%) were from Reeds Spring chert, 6 (4.7%) were from Keokuk chert, 81 (63.3%) were flaked from Burlington chert, and 5 (3.9%) were from unknown cherts. With the exceptions of the 4 Reeds Spring examples and the 6 Keokuk specimens, which probably are from further south, the percentages of cherts used by Mississippian peoples probably closely approximate local availability. We should note that 12.4% of Late Archaic and Woodland bifaces were made from Jefferson City chert, while 25% of the Mississippian arrow points were produced from Jefferson City. In part this may represent the fact that unfractured high quality Jefferson City chert is usually found in smaller pieces than is usual for Burlington. However, if this were a factor, one wonders why the Late Woodland groups, who also made many arrow points, did not use more than 14.29% of Jefferson City chert. Regarding heat pre-treatment, only 3 (9.4%) Jefferson City chert points had been thermally pre-treated while 67.1% of the Burlington chert had been heat-treated before being made into finished tools.

There seems to be little doubt that lithic resource selection changes over time. Early Archaic data are too limited to suggest a trend. Middle Archaic occupants of the area seemed to slightly favor Burlington cherts which are greatly improved by heat-treatment. And about 47% of the Burlington examples were heat-treated. Late Archaic peoples definitely selected Burlington cherts since almost 80% of the bifaces were of this product and about 76% of these were heat-treated before being reduced to a finished tool. This is a definite trend. Only about 12% of the specimens were made from Jefferson City chert. This trend continues throughout Woodland times with very similar percentages in the use of Burlington cherts and of thermal pre-treatment. However, during Mississippian times we see a sudden shift back to a greater use of Jefferson City cherts, although the incidence of heat-treatment of Burlington still stays high at 67%. While it is possible that climatic factors promoting deposition or removal of alluvial or colluvial deposits may have reduced or augmented the availability of certain cherts at different times, we have no data available to address this possibility. It seems most likely that cultural factors involving personal preference played a greater role than availability, but we do not have either ethnographic or archeological data from the immediate area that give clear examples of this.

CHANGES IN UPLAND ACTIVITIES?

The central question here is what do the upland sites tell us about the activities that took place there, and do these activities change through time? First, one must consider that the survey areas are biased environmentally because areas now inundated by Stockton Lake are no longer available for comparison with upland sites and the areas surveyed do not reflect the total upland variability present in the area. The fact that this was a surface survey means that some components may exist in a subsurface context at certain sites. This is particularly true of caves

and shelters. In all probability the components recognized in surface collections from these shelters are not the only ones present, but without excavated data the buried components cannot be recognized.

Several types of sites were recognized in upland contexts. The most common seems to be hunting-foraging camps and judging from biface types recovered from these locations these relate to Archaic, Woodland and Mississippian activities. Both Middle and Late Archaic and Woodland hunting-foraging camps seem to be abundant, while Mississippian camps seem to be fewer in number. The fact that more Mississippian components were recognized in shelters and caves than in open settings may simply reflect the fact that they were the last occupants of these sites. A few locations (23DA313, 23DA449, 23CE336 and 23CE473) featured abundant debitage over large areas and 23DA313 yielded several probable Woodland bifaces. These sites probably were at least seasonal base camps and may have been used the year-around for short periods of time.

Other types of sites recorded in the uplands include lithic procurement areas. Five of these were recorded during the survey. Generally these sites are found on hilltops or hillsides and exhibit many decortication flakes and occasionally rough blanks or preforms. Since debitage and preforms are not diagnostic of cultural affiliation, we do not know which groups were active in the lithic extraction. There is no evidence that prehistoric peoples were digging pits or quarrying into bedrock, rather the data obtained suggest that exposed lithic materials were being gathered from talus slopes or broken from exposed ledges. Mention might be made of a petroglyph (23DA450) which features several linear design elements and small pitted areas. The antiquity of this site remains unknown.

We simply do not have enough data to determine whether changes in the occupation or use of these upland sites took place through time. Our data do not suggest changes, however a positive evaluation cannot be made until more data are available.

SAME AS DOWNSTREAM SITES?

A final question has to do with comparing the HPA/Wimmer sites with the Downstream Stockton resources. Assessments conducted by us during 1990 and 1991 at 7 sites (23CE46C, 23CE439, 23CE442, 23CE444, 23CE446, 23SR291 and 23SR1067) downstream from the Stockton dam revealed that 3 of them merit inclusion in the National Register of Historic Places. These sites are being eroded away by the Sac River, but are problematic to mitigate for a variety of reasons. One goal of this study was to "identify similar cultural manifestations on Government-owned land to determine if it may be possible to exchange these sites for downstream sites that continue to be eroded (Scope of Work C-2)." Direct comparisons between the sites investigated during this study and the 7 downstream sites present a number of difficulties.

First, the sites studied here are situated in environmental surroundings that are fundamentally different from the Sac River floodplain. That is not to say that the cultural components identified at the downstream sites are not also represented at sites in the current study because all of them are, but sites located in upland environments will not reflect the same activities as bottomland sites because the people who occupied them were there for different

reasons. We cannot expect the data categories at upland sites to be the same as those found at bottomland sites, even though they may have been created by culturally similar peoples.

Our knowledge of the sites in this study (with the exception of the tested shelters at 23DA407 and 23DA408) is based almost entirely on surface collections that, for a variety of reasons, cannot be considered representative of the assemblages originally present. Conversely, our knowledge of the downstream sites is based on sometimes extensive test excavations so that we know much more about the latter than we do the former. This makes direct comparison difficult. To complicate matters, the sites assessed during this project (23DA407 and 23DA408) do not appear to be eligible for inclusion in the National Register and are not good substitutions for significant downstream resources. They also reflect much more recent cultural occupations which makes them less comparable.

It is likely that finding upland sites that could stand in for the significant downstream resources would not be cost effective or an efficient use of time. It would be necessary to conduct assessments, possibly at a number of sites, since upland sites tend to be shallow and far more easily damaged than the bottomland sites and are less likely to prove significant. In addition, the upland sites are subject to a series of different, but no less devastating, impacts that require that they be studied in their own right. Even if it were possible to find upland sites suitable for substitution it would be difficult to understand how the information gained relates to the bottomland sites. Remember that the goal is not simply to recover similar artifact assemblages but to gain a greater understanding of past human use of the environment. If we continue to allow the downstream sites to go downstream, literally speaking, our knowledge of how and why that part of the environment was occupied will be lost forever and no amount of work at upland sites will replace it.

NATIONAL REGISTER ASSESSMENTS

INVESTIGATIONS AT 23DA407

23DA407 (Photographs 8 and 9) is a rock shelter previously recorded by Howard R. Wimmer in October 1990. The site is situated on a bluff at an elevation of 920 ft. The land surface slopes downward to the northeast at a rate of 40%. Local geology consists of the Osagean Series (Mo) on which Peridge-Wilderness-Goss-Pembroke Association soils have formed supporting mixed hardwoods. The nearest available water is an unnamed perennial stream that forms the north boundary of the site. Wimmer called the site Maze Creek Rock Shelter #3 and described it as follows:

> This is a cultural material scatter of undetermined density located in and immediately in front of a rock overhang/cave overlooking a spring branch (unnamed) approx. .6 kilometers west of Maze Creek, Stockton Lake. The site is located in an area of cedar glades (above the shelter) and overlooks a valley of mixed soft and hardwoods. The involved area was measured at 29 m x 10 m (approx.). This includes the area inside or under the overhand (approx. 5 m). At least thirty (30) pressure flakes were counted on the surface. A single blade fragment was noted, as well as bone remains of indeterminate origin. A collection was not made. Rock carvings were also noted on a rock shelf near the north end of the shelter. Soil depth was not measured. The

Photograph 8. View of 23DA407 facing west.

Photograph 9. View of 23DA407 facing southeast.

area above the cave was checked with no evidence of any cultural deposits in the limited area exposed.

[The condition of the site is] uncertain. This site was reported to have been subject to "potting" in the spring of 1990, but this was not evident at the time of this survey. Rock fall from the ceiling of the cave may have covered and protected any deposits inside the shelter.

Wimmer had collected 9 (91.9 g) were found including 1 (4.2 g) bifacial knife, 1 (13.3 g) and-tempered cord-marked body sherd, 1 (15.8 g) flake knife and 6 (58.6 g) pieces of unidentified bone.

Artifact 1-1 is a bifacial knife proximal. It is an unstemmed specimen with a missing tip, a straight blade, no notches, no shoulders and a straight base. The cross section is biconvex with no edge abrading and no beveling. Maximum dimensions are 2.3 cm x 2.6 cm x 0.5 cm and it weighs 4.2 g. The raw material is heat-treated Burlington chert, which is found locally. Microscopic examination revealed wear resulting from cutting meat without bone contact. This specimen is an unclassified type not associated with a specific cultural period.

Artifact 1-2 is a flake knife. Maximum dimensions are 5.0 cm x 4.5 cm x 0.5 cm and it weighs 15.8 g. The raw material is heat-treated Burlington chert, which is found locally. Microscopic examination revealed wear resulting from cutting meat without bone contact. This specimen is not associated with a specific cultural period.

Test excavations were conducted by Historic Preservation Associates between January 18 and 24, 1993. Four 1 m x 1 m test units and 9 shovel tests were excavated (Figure 30).

Test Unit 1 (0N/11E)

Test Unit 1 was a 1 m x 1 m excavation located in front of the shelter about 5 m from the drip line and on the edge of the slope down to the stream. The northeast corner was used as the horizontal designation. The highest corner was on the southeast and it was used as the vertical datum. The southwest corner was 7 cmbd, the northwest 17 cmbd and the northeast 24 cmbd.

Level 1 (0 cm - 10 cm) was one meter square and was excavated by troweling and shovel skimming. The primary soil matrix was very dark grayish brown (10YR3/2) loamy sand containing many roots and some friable, yellowish brown chunks of sandstone. Only the approximate south 1/3 of the unit was taken out in this level. The level probably was composed of backdirt from previous episodes of pothunting. Features were not present. Special samples included a 10 cm x 10 cm x 10 cm finescreen sample and a soil sample were collected from the southwest corner. Cultural materials included 1 (2.0 g) initial stage interior flake and 1 (1.1 g) box turtle bone. The finescreen sample yielded 41 (0.8 g) items including 34 (0.3 g) poke seeds, 2 (0.1 g) grape seeds, 4 (0.2 g) unidentified small bones and 1 (0.2 g) piece of shatter.

Level 2 (10 cm - 20 cm) was one meter square and was excavated by troweling and shovel skimming. The primary soil matrix was very dark grayish brown (10YR3/2) loamy sand containing many roots and more friable, yellowish brown chunks of sandstone (some reddened)

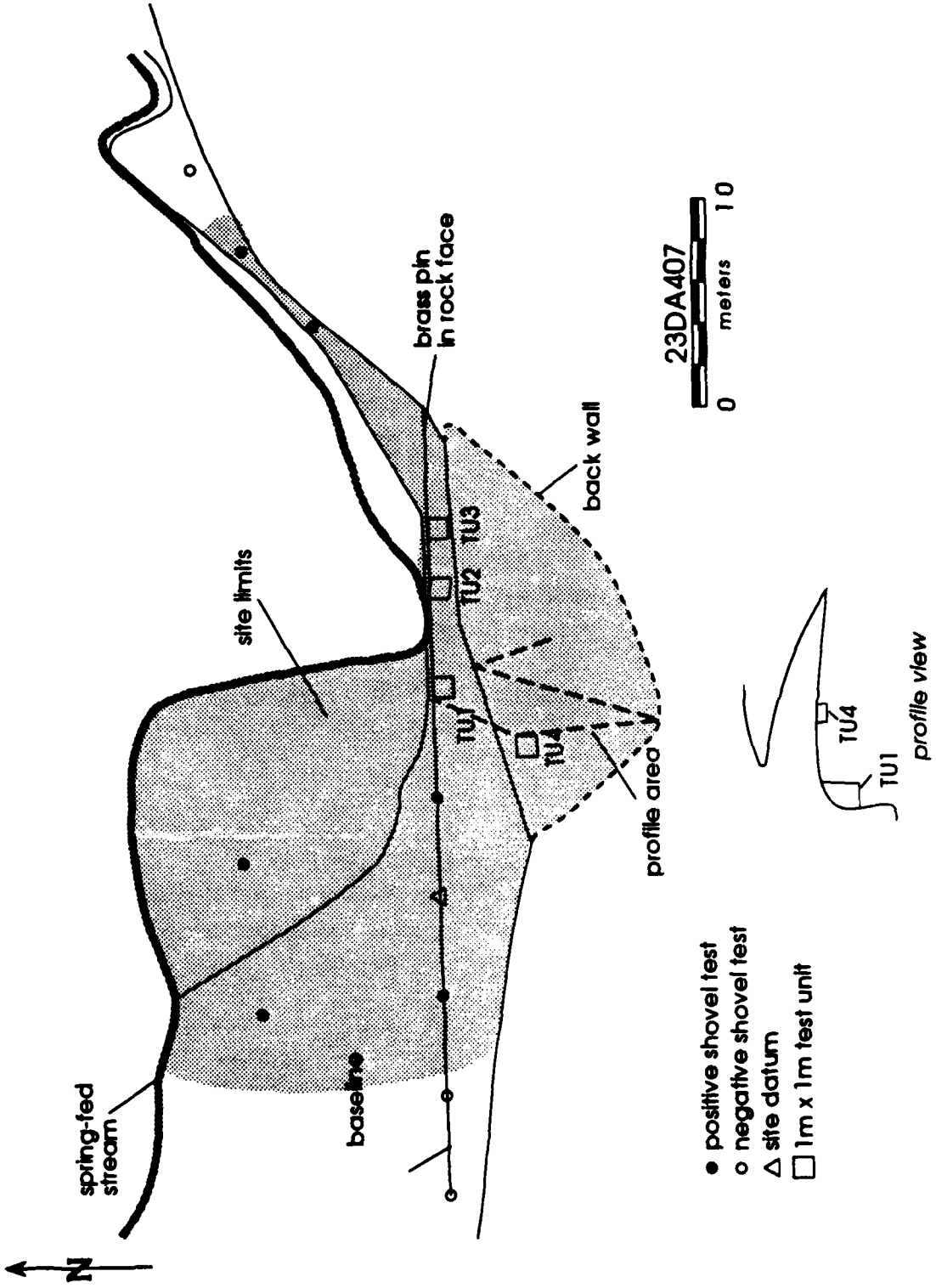


Figure 30. 23DA407 showing the location of the HPA work.

than in Level 1. This level was probably also composed of backdirt from previous episodes of pothunting. All but the northeast corner of the unit was excavated in this level. Toward the bottom of the level, the soil changed to yellowish brown (10YR5/4) when the humus was removed. There was a sharp line of demarcation. Features were not present. Special samples collected included a 10 cm x 10 cm x 10 cm finescreen sample and a soil sample taken from the southwest corner. Thirty-five items (102.9 g) were found including 9 (71.8 g) pieces of shatter, 13 (26.5 g) initial stage interior flakes, 3 (1.2 g) interior flakes, 6 (0.7 g) retouch flakes, 1 (0.9 g) mink scapula, 1 (0.4 g) box turtle bone and 2 (1.4 g) unidentified mammal bones. The finescreen sample yielded an additional 39 (1.8 g) items including 6 (0.1 g) poke seeds, 1 (0.1 g) grape seed, 17 (0.4 g) pieces of unidentified charcoal, 10 (0.4 g) unidentified small bones, 1 (0.1 g) piece of mussel shell, 1 (0.1 g) piece of shatter, 1 (0.3 g) initial stage interior flake and 2 (0.1 g) retouch flakes.

Level 3 (20 cm - 30 cm) was one meter square and was excavated by troweling and shovel skimming. The upper part of the level was very dark grayish brown (10YR3/2) loamy sand containing organic matter. The lower part was yellowish brown (10YR5/4) loamy sand without organic matter. The level was disturbed, as evidenced by mottling with the two colors of fill. This may have been the result of bioturbation or human activity. Features were not present. Special samples included a 10 cm x 10 cm x 10 cm finescreen sample and a soil sample taken from the southwest corner. A carbon sample was collected from throughout the level. One hundred eighteen (173.5 g) items including 1 (8.8 g) biface, 21 (93.6 g) pieces of shatter, 33 (54.3 g) initial stage interior flakes, 36 (12.4 g) interior flakes, 16 (1.3 g) retouch flakes, 3 (0.3 g) pieces of unidentified charcoal, 7 (2.5 g) unidentified mammal bones and 1 (0.3 g) unidentified fish bone. The finescreen sample yielded 16 items weighing 0.5 g. These included 8 (0.1 g) poke seeds, 3 (0.1 g) pieces of unidentified charcoal, 1 (0.1 g) unidentified bone and 4 (0.2 g) retouch flakes.

This level contained several medium sized sandstones near a large surface boulder located on the north edge of the unit. There was some light, amorphous oxidation in the southeast corner and bits of charcoal throughout the darker fill. At the bottom of the level, the staining and charcoal seemed to be concentrated along an east-west line in the center of the unit (Krotovina?). Some of the mottling in the west wall appeared to be the result of water-deposition, possibly from water running over the top of the overhang and down the talus slope.

Level 4 (30 cm - 40 cm) was one meter square and was excavated by troweling and shovel skimming. The northern 2/3s was very dark grayish brown (10YR3/2) loamy sand with organic matter. The southern 1/3 was yellowish brown (10YR5/4) loamy sand without organic matter. Some small sandstone fragments were present and one was reddened. The fill may have been thrown here as backdirt. There was much mixing and mottling. Some of the darker deposit appears to be water deposited as evidenced by inclined layering in the west wall. Features were not present. A finescreen and soil sample were taken from the southwest corner. One hundred six (264.2 g) items were found including 1 (7.1 g) flake scraper, 2 (4.3 g) biface fragments, 14 (168.6 g) pieces of shatter, 36 (47.8 g) initial stage interior flakes, 21 (6.4 g) interior flakes, 6 (24.4 g) primary decortication flakes, 15 (1.3 g) retouch flakes, 1 (0.3 g) gray squirrel bone, 3 (1.6 g) unidentified mammal bones and 7 (2.4 g) pieces of unidentified charcoal. The finescreen

sample yielded 12 (1.6 g) items including 6 (0.1 g) pieces of charcoal, 1 (1.4 g) initial stage interior flake and 5 (0.1 g) retouch flakes.

Flake Scraper (4-1)

Artifact 4-1 is a flake scraper. Maximum dimensions are 2.6 cm x 3.2 cm x 0.7 cm and it weighs 7.1 g. The raw material is Jefferson City chert, which is found locally in the deeper valleys. Microscopic examination revealed wear resulting from scraping wet hide. This specimen is not associated with a specific cultural period.

Artifacts cataloged as 4-2 include two bifacial knife edge fragments. Both have damaged blades, no notches, no shoulders and a missing base. Their combined weight is 4.3 g. Raw materials include heat-treated Burlington chert and an unidentified chert. Microscopic examination revealed wear resulting from cutting meat with bone contact. Neither specimen is associated with a specific cultural period.

This level contained several friable yellowish sandstone fragments in the northern 1/3. Since the unit was being excavated on the level, the band of yellowish brown fill on the south and the grayish brown fill on the north may reflect the slightly sloping surface around the unit. The lighter colored fill had a "crisp" feel under the trowel and contained few artifacts compared to the darker fill, which also contained bits of charcoal.

Level 5 (40 cm - 50 cm) was one meter square and was excavated by troweling and shovel skimming. The primary soil matrix was very dark grayish brown (10YR3/2) loamy sand with organic matter and yellowish brown (10YR5/4) loamy sand without organic matter. There were some sandstone fragments (1 reddened), a few chert gravels and fewer roots in this level. A piece of probable baling wire was discovered near the bottom of the level in the dark fill and suggests post-depositional disturbance. Features were not present. A finescreen and soil sample were collected from the southwest corner. Eighty-three (201.7 g) items were found including 19 (69.9 g) pieces of shatter, 1 (34.6 g) secondary decortication flake, 1 (16.0 g) preform fragment, 3 (1.3 g) pieces of unidentified bone, 29 (69.0 g) initial stage interior flakes, 29 (10.1 g) interior flakes and 1 (0.8 g) strand of baling wire. The finescreen sample yielded 13 items (0.2 g) including 10 (0.1 g) pieces of unidentified charcoal and 3 (0.1 g) retouch flakes. By the base of the level, the dark fill mostly disappeared to the north. It seemed to parallel the sloping surface throughout this unit. One sandstone boulder in the south half extended into the next level.

Level 6 (50 cm - 60 cm) was one meter square and was excavated by troweling and shovel skimming. The primary soil matrix was yellowish brown (10YR5/4) loamy sand with inclusions of rocks. The level was probably disturbed but no direct evidence either way was observed. Features were not present. Soil and finescreen samples were taken from the southwest corner. Eighty-seven (315.1 g) items were found including 31 (235.7 g) pieces of shatter, 23 (68.7 g) initial stage interior flakes, 25 (10.0 g) interior flakes and 8 (0.7 g) retouch flakes. The finescreen sample yielded 11 (0.5 g) items including 8 (0.1 g) pieces of unidentified charcoal, 1 (0.3 g) interior flake and 2 (0.1 g) retouch flakes. This level exhausted the dark fill. The large sandstone in the middle of the unit showed some reddening on its upper edge. A large piece of chert was encountered just to the south of the rock. The unmodified chert was 22 cm x 13 cm x 11 cm and

was found 82 cm south of the north wall and 60 cm east of the west wall. There was another large irregular piece of chert in the wall of the southwest corner. It was 19 cm x 10 cm x ? cm but much of it was hidden in the wall. It may have been a core.

Level 7 (60 cm - 70 cm) was one meter square and was excavated by troweling and shovel skimming. The primary soil matrix was yellowish brown (10YR5/4) loamy sand with fragments of sandstone, some of which were reddened. No evidence of disturbance was noted but neither was there evidence that the deposit was intact, such as features. Soil and finescreen samples were taken from the southwest corner. Forty (246.6 g) items were found including 7 (218.4 g) pieces of shatter, 2 (11.8 g) primary decortication flakes, 11 (4.9 g) initial stage interior flakes, 10 (2.6 g) interior flakes, 2 (8.3 g) secondary decortication flakes and 8 (0.6 g) pieces of unidentified charcoal. The finescreen sample yielded 13 items weighing 0.3 g. These included 11 (0.1 g) pieces of unidentified charcoal and 2 (0.1 g) retouch flakes. The large sandstone boulder was removed with this level but both south corners had rocks that could not be removed. The fill was a uniform yellowish brown with some very subtle reddish mottling along the south edge.

Level 8 (70 cm - 80 cm) was one meter square and was excavated by troweling and shovel skimming. The primary soil matrix was yellowish brown (10YR5/4) loamy sand with some small to medium sized sandstone fragments (2-3 reddened) and some rotten tree roots. No evidence of disturbance was observed but neither was there direct evidence, such as features, that the deposits were intact. Soil and finescreen samples were collected from the southwest corner. Forty-three (641.2 g) items were found including 10 (145.5 g) pieces of shatter, 4 (36.3 g) secondary decortication flakes, 21 (9.1 g) initial stage interior flakes, 7 (0.6 g) retouch flakes and 1 (449.7 g) core. The finescreen sample yielded 9 (0.1 g) pieces of unidentified charcoal.

Level 9 (80 cm - 90 cm) was one meter square and was excavated by troweling and shovel skimming. The primary soil matrix was yellowish brown (10YR5/4) loamy sand with some small to medium sized sandstones and a small amount of chert gravel. The integrity of the deposits in the level is uncertain with no direct evidence of disturbances. Features were not present. Soil and finescreen samples were collected from the southwest corner. Twenty-nine (2,808.3 g) items were found including 1 (1,317.2 g) chunk of unmodified chippable stone, 7 (154.4 g) pieces of shatter, 13 (4.6 g) initial stage interior flakes, 6 (0.5 g) retouch flakes and 2 (1,331.6 g) chunks of tripolized unmodified chert. The finescreen sample yielded 6 (0.1 g) pieces of unidentified charcoal. This level had several large sandstone fragments in the south ½ of the unit that threatened to halt excavation. Several pieces of unmodified chert were collected from the center of the west edge of the unit. There were four or five tabular reddened sandstone fragments in the middle of the unit (10 cm x 12 cm x 2 cm; 5 cm x 12 cm x 2 cm). There was still subtle red mottling in the fill.

Level 10 (90 cm - 100 cm) was one meter square and was excavated by troweling. The primary soil matrix was yellowish brown (10YR5/4) loamy sand with several small and large sandstone fragments, chert gravel and 1 chert cobble (14 cm x 5 cm). The integrity of the level was undetermined with no direct evidence of disturbances. Features were not present. Soil and finescreen samples were collected from the northwest corner. The southwest corner is now completely filled with sandstone boulders. Eleven (64.4 g) items were found including 2 (0.7 g)

pieces of shatter, 2 (13.6 g) secondary decortication flakes, 4 (49.8 g) initial stage interior flakes and 3 (0.3 g) retouch flakes. The finescreen sample yielded 12 (0.1 g) pieces of charcoal. There were many fragments of sandstone in this level and there was very little dirt left in the south ½ of the unit. Fill continued to be yellowish brown loamy sand with subtle reddish mottling. There was a small linear area of coarser, lighter yellow sand in the northeast quadrant that may have been a rodent burrow.

Level 11 (100 cm - 110 cm) was one meter square and was excavated by troweling. The primary soil matrix was yellowish brown (10YR5/4) loamy sand with inclusions of sandstone fragments. No direct evidence of disturbances was observed. Features were not present. Soil and finescreen samples were collected from the northwest corner. Five (110.1 g) items were found including 1 (4.3 g) biface fragment, 1 (1.0 g) piece of shatter, 1 (104.5 g) core and 2 (0.3 g) retouch flakes. The finescreen sample yielded 11 (0.1 g) pieces of unidentified charcoal. Artifact 11-1 is a bifacial knife midsection. It has a straight serrated blade, no notches, no shoulders and a missing base. The cross section is rhomboidal with no edge abrading, and beveling on the right side of the blade. Maximum dimensions are 2.5 cm x 1.8 cm x 0.6 cm and it weighs 4.3 g. The raw material is heat-treated Burlington chert, which is found locally. Microscopic examination revealed wear resulting from cutting meat with bone contact. This specimen is resharpened and is an unclassified type that may be associated with the Early to Middle Archaic Period. The absence of a diagnostic hafting area is problematical, however.

Level 12 (110 cm - 120 cm) was one meter square and was excavated by troweling. The primary soil matrix was yellowish brown (10YR5/4) loamy sand with inclusions of medium sized sandstone fragments and chert gravel. No direct evidence of disturbances was observed. Features were not present. Soil and finescreen samples were collected from the northwest corner. Four (263.5 g) items were found including 1 (176.6 g) chopper, 1 (86.6 g) preform fragment and 2 (0.3 g) retouch flakes. The finescreen sample yielded 16 (0.3 g) items including 15 (0.1 g) pieces of unidentified charcoal and 1 (0.2 g) interior flake. Artifact 12-1 is a chopper. It is an unstemmed specimen with a rounded tip, an asymmetrical blade, no notches, no shoulders and a convex base. Maximum dimensions are 7.4 cm x 6.0 cm x 3.3 cm and it weighs 176.6 g. The raw material is Jefferson City chert, which is found locally in the deeper valleys. Microscopic examination revealed wear resulting from chopping. This is an unclassified type not associated with a cultural period. This specimen is manufactured from a rounded tripolized creek pebble that was been broken in half, exposing a fair quality Ordovician chert. Bifacial knapping produced an edge on this better quality chert. This level was much the same as the previous one except for a thin (ca 1 cm) layer of reddish sand over most of the excavated portion of the level. It varied in elevation but was all contained within this level. There was no noticeable difference in the fill above and below the layer.

Level 13 (120 cm - 130 cm) was one meter square and was excavated by troweling. The primary soil matrix was yellowish brown (10YR5/4) loamy sand with inclusions of sandstone and chert stream gravel. No direct evidence of disturbances was observed. Features were not present. Soil and finescreen samples were collected from the northwest corner. Five (25.5 g) pieces of shatter were found. The finescreen sample yielded 12 (0.1 g) pieces of unidentified charcoal. There were more sandstone fragments in the northwest quadrant than above. Subtle

layers of reddish, slightly more consolidated sand were present in all of the excavated portion. There were only about 2½ five gallon buckets of dirt in this level.

Level 14 (130 cm - 140 cm) was one meter square and was excavated by troweling. The primary soil matrix was yellowish brown (10YR5/4) loamy sand mottled with reddish brown (5YR4/4) sandy loam. Some stream gravels and sandstone fragments were present. The integrity of the deposits in the level was unclear but no direct evidence that they were intact, such as features, was observed. Soil and finescreen samples were collected from the northwest corner. Cultural materials were absent and the finescreen sample yielded 10 (0.1 g) pieces of unidentified charcoal.

Level 15 (140 cm - 150 cm) was one meter square and was excavated by troweling. The primary soil matrix was yellowish brown (10YR5/4) loamy sand mottled with reddish brown (5YR4/4) sandy loam. Sandstone fragments and stream gravels continued to be present. No direct evidence of disturbances was observed. Features were not present. Soil and finescreen samples were collected from the northwest corner. Cultural materials were absent. Because almost no room to work between the sandstone boulders remained, a posthole test was excavated to 170 cm in two 10 cm levels and all fill bagged for finescreening. The posthole test yielded 12 (0.1 g) pieces of unidentified charcoal in Level 16 and 1 (0.3 g) initial stage interior flake in Level 17. Probing indicated that the fill extended in cracks beyond 170 cmbd but many rocks were present.

Two strata were encountered during the excavation of Test Unit 1 (Figure 31). Stratum 1 was composed of a roughly 35 cm thick layer of very dark grayish brown (10YR3/2) loamy sand, containing many artifacts with evidence that it was at least partially composed of backdirt from previous episode of pothunting activity. Below this was a yellowish brown (10YR5/4) loamy sand that extended to the base of the excavation and yielded progressively less cultural material with increasing depth. This stratum appeared to be largely undisturbed but no clear evidence that the materials recovered were in situ was observed. The lower levels were increasingly taken up with sandstone boulders (Figures 31 and 32).

Test Unit 2 (0N/16E)

This unit was located in front of the shelter 5 m east of Test Unit 1. The unit designation was the northeast corner but vertical control was maintained from the northwest corner since it was the highest corner and the only one where the stake was in place solid enough to attach a line level. Level 1 (0 cm - 10 cm) was not 10 cm thick across the entire unit and covered all but the extreme northeast corner. Excavation was by troweling and shovel skimming. The primary soil matrix was very dark grayish brown (10YR3/2) loamy sand with lots of roots and rocks. The deposits in this level appeared to be pothunter backdirt. Features were not present. A 10 cm x 10 cm x 10 cm finescreen sample and a soil sample were taken from the northwest corner of the unit. One hundred thirty-four (87.6 g) items were found including 1 (3.5 g) shell-tempered plain body sherd, 31 (49.6 g) pieces of shatter, 51 (20.9 g) initial stage interior flakes, 22 (7.9 g) interior flakes, 3 (1.0 g) primary decortication flakes, 13 (g) retouch flakes, 1 (0.8 g) cottontail rabbit mandible, 6 (3.7 g) deer bones (5 longbone fragments and 1 tooth), 1 (0.2 g) unidentified bone, 5

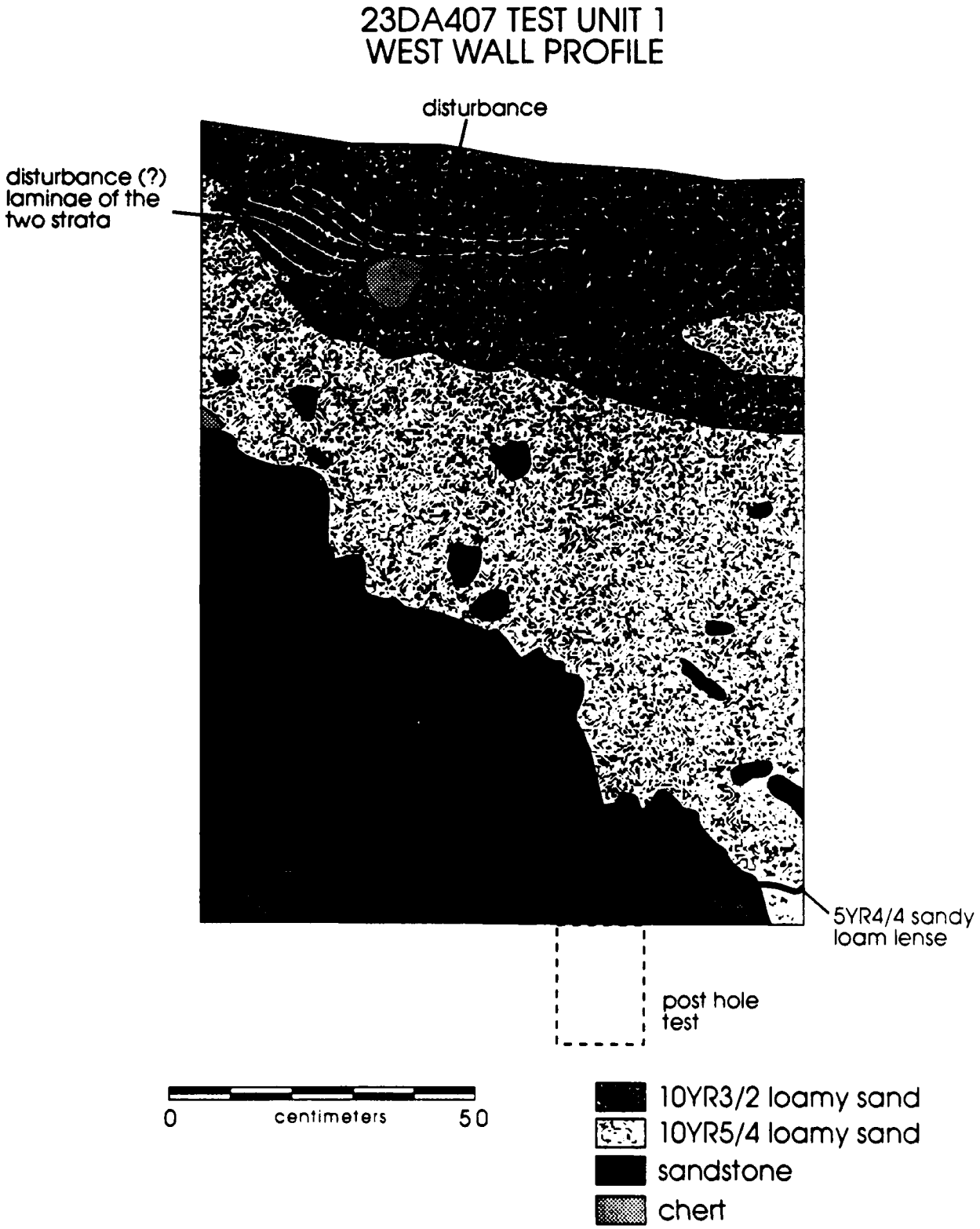


Figure 31. Profile of Test Unit 1 at 23DA407.

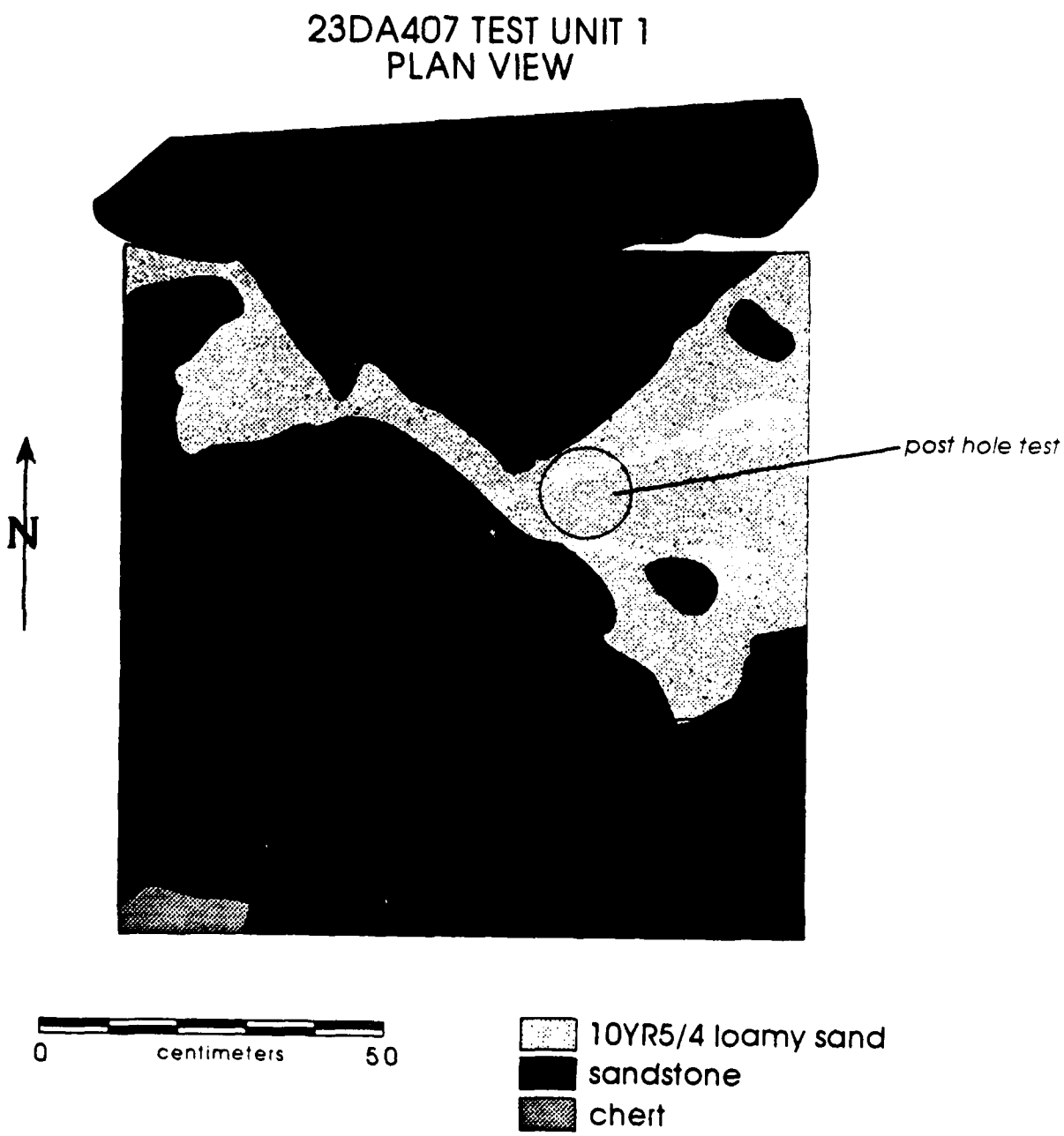


Figure 32. Plan view of Test Unit 1 at 23DA407.

(0.1 g) pieces of mussel shell and 1 (0.1 g) piece of unidentified charcoal. The finescreen sample yielded 7 (0.5 g) items including 3 (0.2 g) dogwood seeds, 1 (0.1 g) grape seed, 2 (0.1 g) poke seeds and 1 (0.1 g) retouch flake.

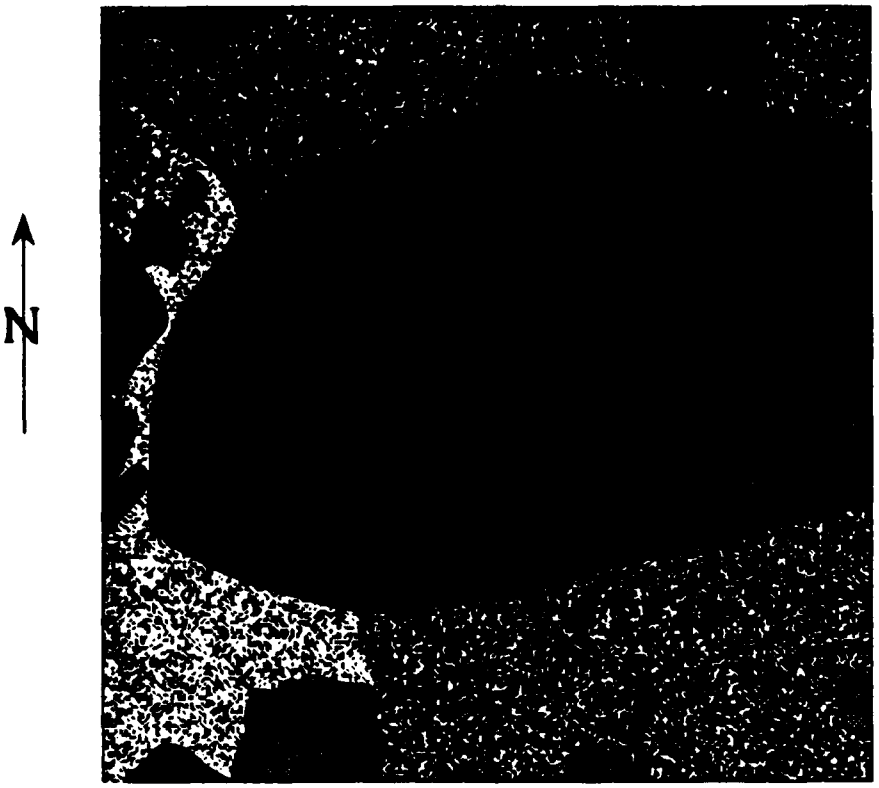
Level 2 (10 cm - 20 cm) was one meter square and was excavated by troweling and shovel skimming. The primary soil matrix was very dark grayish brown (10YR3/2) loamy sand with abundant roots and sandstone fragments. The deposits appeared to be disturbed as evidenced by mottling with a variety of colors and textures. Features were not present. A 10 cm x 10 cm x 10 cm finescreen sample and a soil sample were taken from the northwest corner. One hundred seventy-four (342.0 g) items were found including 1 (12.2 g) sand-tempered cord marked body sherd, 2 (7.3 g) grog-tempered plain body sherds, 2 (1.5 g) clay, grit and bone-tempered plain body sherds, 46 (107.0 g) pieces of shatter, 2 (113.4 g) cores, 49 (37.2 g) initial stage interior flakes, 3 (48.4 g) primary decortication flakes, 20 (3.8 g) interior flakes, 1 (0.7 g) biface fragment, 17 (1.4 g) retouch flakes, 1 (0.8 g) human incisor, 14 (5.1 g) unidentified mammal bones, 1 (0.1 g) pine vole mandible, 2 (0.3 g) unidentified small mammal bones, 1 (0.5 g) box turtle bone, 5 (1.8 g) pieces of mussel shell, 3 (0.2 g) hickory nut hulls and 4 (0.3 g) pieces of unidentified charcoal. The finescreen sample yielded 10 (0.6. g) items including 2 (0.2 g) dogwood seeds, 1 (0.1 g) grape seed, 2 (0.1 g) poke seeds, 1 (0.1 g) unidentified seed and 4 (0.1 g) pieces of unidentified charcoal. A large rock, located in the center of the unit, threatened to halt excavation since it appeared too large to be moved. Much of the sandstone in the fill was decomposed and may account for some of the mottling.

Level 3 (20 cm - 30 cm) was one meter square and was excavated by troweling and shovel skimming. The primary soil matrix was very dark grayish brown (10YR3/2) loamy sand with yellowish brown (10YR5/4) mottling and brownish yellow (10YR6/8) decomposed sandstone. The deposits appeared disturbed as suggested by the mottling. Features were not present. A 10 cm x 10 cm x 10 cm finescreen sample and a soil sample were taken from the northwest corner. Eighty-six (1,479.7 g) items were found including 1 (1,333.1 g) chunk of unmodified chippable stone, 17 (107.9 g) pieces of shatter, 35 (31.0 g) initial stage interior flakes, 17 (3.8 g) interior flakes, 4 (0.3 g) retouch flakes, 2 (0.5 g) box turtle bone, 5 (1.5 g) unidentified mammal bones, 3 (0.2 g) pieces of mussel shell, 1 (0.8 g) plain body sherd (temper unidentified and 1 (0.6 g) iron tack. The finescreen sample yielded 48 (2.0 g) items including 26 (0.1 g) poke seeds, 5 (0.2 g) pieces of unidentified charcoal, 11 (0.4 g) unidentified small bones, 3 (1.1 g) initial stage interior flakes and 3 (0.2 g) retouch flakes. Excavation was halted with Level 3, since the sandstone boulder located in the center of the unit was much too large to be moved. Only one stratum was revealed in Test Unit 2 and was composed of pothunter backdirt. It corresponds to Stratum 1 in Test Unit 1 (Figure 33).

Test Unit 3 (0N/19E)

This unit was located in front of the shelter and 3 m east of Test Unit 2. The unit designation was at the northeast corner but the northwest corner was used for vertical control because the other corner pins were not stable enough to attach a line level. Level 1 (0 cm - 10 cm) included only the northeast 1/3 of the unit. The northeast corner is 17 cmbd, the southeast 10 cmbd and the southwest 12 cmbd. Excavation of Level 1 was by troweling and shovel

23DA407 TEST UNIT 2
PLAN VIEW



NORTH WALL PROFILE

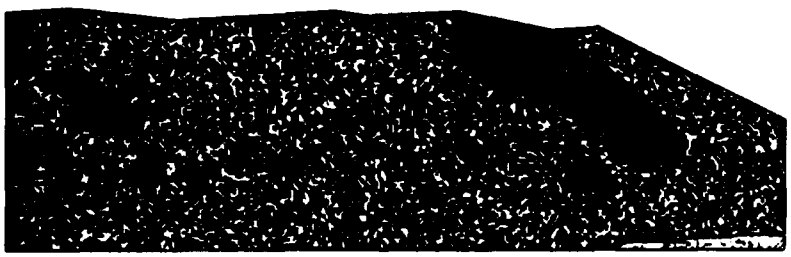


Figure 33. Plan view and profile of Test Unit 2 at 23DA407.

skimming. The primary soil matrix was very dark grayish brown (10YR3/2) loamy sand with yellowish brown (10YR5/4) mottling. Roots and sandstone rocks were abundant. The matrix appeared to be pothunter backdirt as evidenced by the mottling. Features were not present. Soil and finescreen samples were collected from the northwest corner of the unit. Forty-four (248.5 g) items were found including 12 (215.0 g) pieces of shatter, 20 (30.3 g) initial stage interior flakes, 2 (0.6 g) interior flakes, 8 (0.7 g) retouch flakes, 1 (0.1 g) mussel shell and 1 (1.8 g) black walnut hull. The finescreen sample yielded 4 (0.3 g) items including 1 (0.1 g) dogwood seed, 2 (0.1 g) poke seeds and 1 (0.1 g) retouch flake.

Level 2 (10 cm - 20 cm) was one meter square and was excavated by troweling and shovel skimming. The primary soil matrix was yellowish brown (10YR5/4) loamy sand with inclusions of rocks, roots and patches of very dark grayish brown (10YR3/2) loamy sand. The deposits in this level appeared to be disturbed. Features were not present. Soil and finescreen samples were collected from the northwest corner of the unit. One hundred twelve (270.2 g) items were found including 27 (214.8 g) pieces of shatter, 50 (41.8 g) initial stage interior flakes, 4 (1.0 g) interior flakes, 21 (1.5 g) retouch flakes, 4 (3.0 g) primary decortication flakes, 1 (0.4 g) modern snail shell, 1 (5.9 g) black walnut hull, 1 (1.0 g) acorn and 3 (0.8 g) unidentified bones. The finescreen sample yielded 3 (1.2 g) items including 2 (1.1 g) pieces of shatter and 1 (0.1 g) retouch flake. As in Test Unit 2, a large rock was encountered in the center of the unit and threatened to halt excavation.

Level 3 (20 cm - 30 cm) was one meter square and was excavated by troweling and shovel skimming. The primary soil matrix was yellowish brown (10YR5/4) loamy sand with inclusions of rocks and roots. The deposits in the level were disturbed and features were not present. Soil and finescreen samples were collected from the northwest corner of the unit. The unit was abandoned at this level due to the presence of a sandstone boulder that could not be removed. Ninety-five (2,240.7 g) items were found including 2 (1,325.7 g) tested cobbles, 21 (638.8 g) pieces of shatter, 40 (32.8 g) initial stage interior flakes, 20 (33.3 g) interior flakes, 11 (0.8 g) retouch flakes and 1 (209.3 g) flat abrader. The finescreen sample yielded 10 (1.3 g) items including 2 (0.4 g) pieces of shatter, 3 (0.8 g) interior flakes and 5 (0.1 g) retouch flakes. Only one stratum was revealed in Test Unit 3 and, as with Test Unit 2, was composed of pothunter backdirt. It also corresponds to Stratum 1 in Test Unit 1 (Figure 34).

Test Unit 4 (3.95S/8.05E)

This unit was placed beneath the overhang south and west of Test Unit 1. The surrounding ground surface was undulating and appeared to be composed of piles of pothunter backdirt. The unit datum and vertical control was at the northeast corner. Level 1 (0 cm - 10 cm) was one meter square and was excavated by troweling and shovel skimming. The primary soil matrix was very dark grayish brown (10YR3/2) loamy sand with inclusions of rocks and roots. The level was obviously composed of pothunter backdirt. Features were not present. Soil and finescreen samples were collected from the northeast corner. Two hundred sixty-three (499.0 g) items were found including 1 (1.2 g) beaver tooth, 2 (0.5 g) fox squirrel incisors, 3 (3.3 g) skunk bones, 1 (1.8 g) woodchuck bone, 2 (5.3 g) opossum bones, 1 (8.6 g) bison tooth, 34 (47.6 g) deer bones, 48 (20.7 g) unidentified small mammal bones, 8 (18.0 g) unidentified large mammal

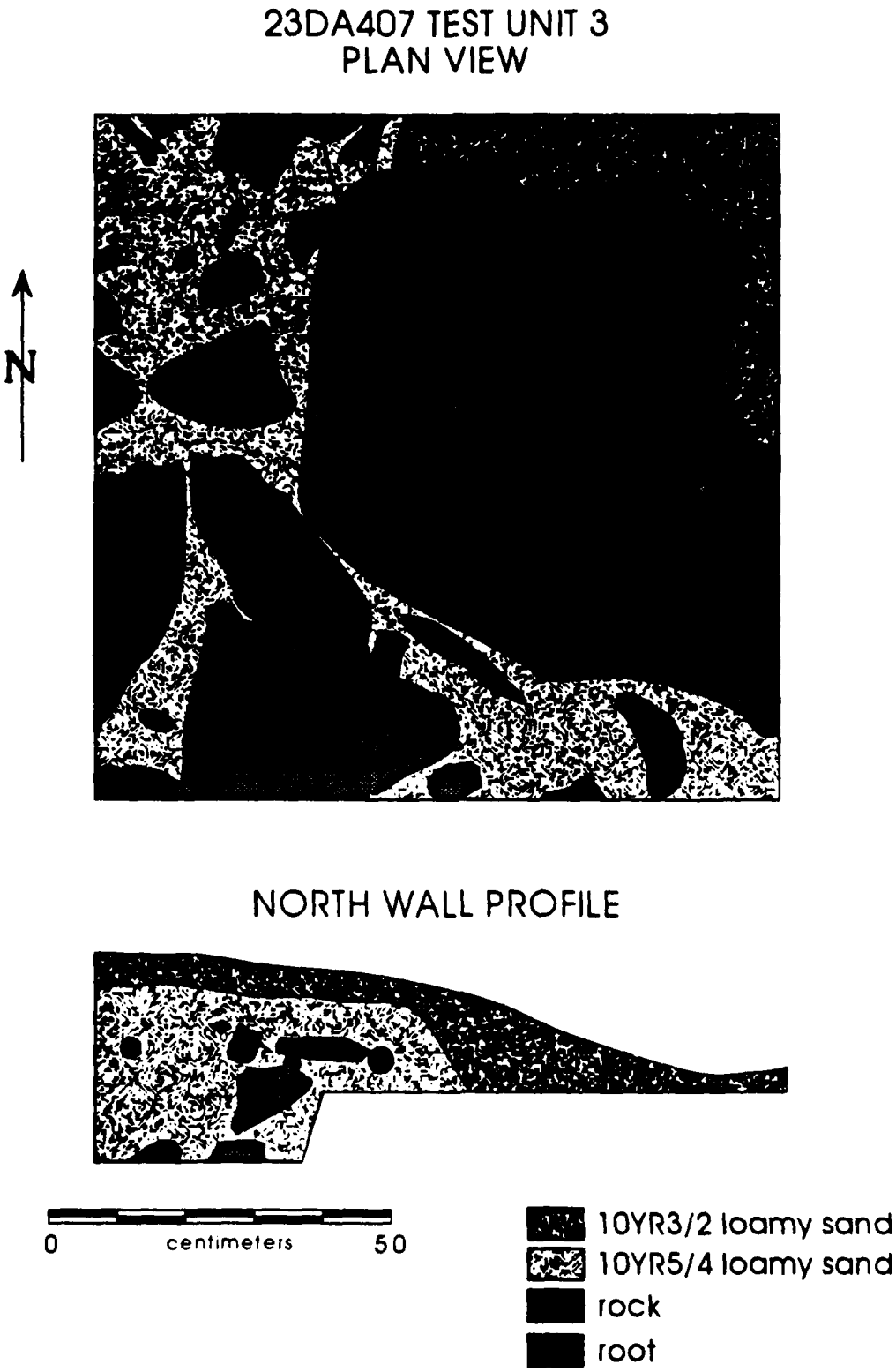


Figure 34. Plan view and profile of Test Unit 3 at 23DA407.

bones, 3 (1.5 g) box turtle bones, 39 (16.7 g) unidentified bones, 8 (4.4 g) pieces of mussel shell, 1 (0.2 g) snail shell, 1 (4.6 g) lump of desiccated small mammal feces, 21 (2.0 g) pieces of unidentified charcoal, 1 (0.6 g) arrow point, 1 (13.6 g) shell-tempered plain body sherd, 33 (171.7 g) pieces of shatter, 26 (145.2 g) initial stage interior flakes, 3 (22.4 g) primary decortication flakes and 26 (9.1 g) interior flakes. The finescreen sample yielded 38 (5.1 g) items including 16 (2.3 g) unidentified bones, 1 (0.1 g) gray squirrel bone, 1 (1.4 g) box turtle bone, 2 (0.3 g) pieces of mussel shell, 10 (0.4 g) pieces of unidentified charcoal, 1 (0.1 g) grape seed, 3 (0.1 g) poke seeds and 1 (0.1 g) unidentified seed.

Washita (20-16)

Artifact 20-16 is a triangular arrow point. It is an unstemmed specimen with a pointed tip, a straight blade, side notches, no shoulders and a concave base. The cross section is biconvex with no edge abrading and no beveling. Maximum dimensions are 1.6 cm x 1.2 cm x 0.2 cm and it weighs 0.6 g. The raw material is heat-treated Burlington chert, which is found locally. Microscopic examination revealed no evidence of use-wear. This specimen is resharpened and most closely resembles the Washita type, associated with Mississippi Period activities.

Level 2 (10 cm - 20 cm) was one meter square and was excavated by troweling and shovel skimming. The primary soil matrix was very dark grayish brown (10YR3/2) loamy sand with inclusions of rocks and roots. This level was also composed of pothunter backdirt. Features were not present. Soil and finescreen samples were collected from the northeast corner. A carbon sample was also collected but the level is obviously pothunter backdirt. Five hundred forty-eight (1,007.8 g) items were found including 2 (8.9 g) woodchuck bones (mandible, tooth), 5 (10.9 g) opossum bones, 1 (1.3 g) skunk ulna, 1 (0.3 g) weasel bone, 8 (1.7 g) squirrel bones, 4 (3.7 g) cottontail rabbit bones, 1 (0.2 g) house mouse(?) bone, 1 (1.2 g) beaver incisor, 105 (37.2 g) unidentified small mammal bones, 13 (33.0 g) unidentified large mammal bones, 5 (15.0 g) elk teeth, 29 (51.4 g) deer bones, 18 (8.7 g) box turtle bones, 115 (41.2 g) unidentified bones, 46 (61.3 g) pieces of mussel shell, 28 (5.6 g) pieces of unidentified charcoal, 3 (0.5 g) snail shells, 59 (467.8 g) pieces of shatter, 1 (8.2 g) shell-tempered plain body sherd, 1 (14.6 g) preform fragment, 11 (113.3 g) primary decortication flakes, 72 (116.7 g) initial stage interior flakes and 19 (5.1 g) interior flakes. The finescreen sample yielded 66 (7.9 g) items including 29 (2.4 g) unidentified bones, 2 (1.1 g) box turtle bones, 29 (0.7 g) pieces of unidentified charcoal, 3 (2.9 g) pieces of shatter and 3 (0.8 g) interior flakes. The fill was loosely compacted and so full of sandstone rubble that it was much like digging in a builder's trench.

Level 3 (20 cm - 30 cm) was one meter square and was excavated by troweling and shovel skimming. The primary soil matrix was very dark grayish brown (10YR3/2) loamy sand with inclusions of rocks and roots. The upper portion of the level (designated 3A) is probably pothunter backdirt, but the lower portion (designated 3B) appeared undisturbed. One anomaly (labeled in the field as Feature 1) was present but was obviously an animal burrow (Figure 35). Soil and finescreen samples were collected from the northeast corner and all ot the fill from the anomaly was bagged for finescreening. One hundred ninety-one (276.5 g) items were found. One hundred twenty-three (194.1 g) of these are from Level 3A and include 1 (2.1 g) red fox bone, 21 (5.4 g) unidentified small mammal bones, 1 (0.3 g) box turtle bone, 9 (12.3 g) deer bones, 35 (20.3 g) unidentified bones, 3 (1.6 g) pieces of mussel shell, 10 (57.0 g) pieces of shatter, 6 (1.6

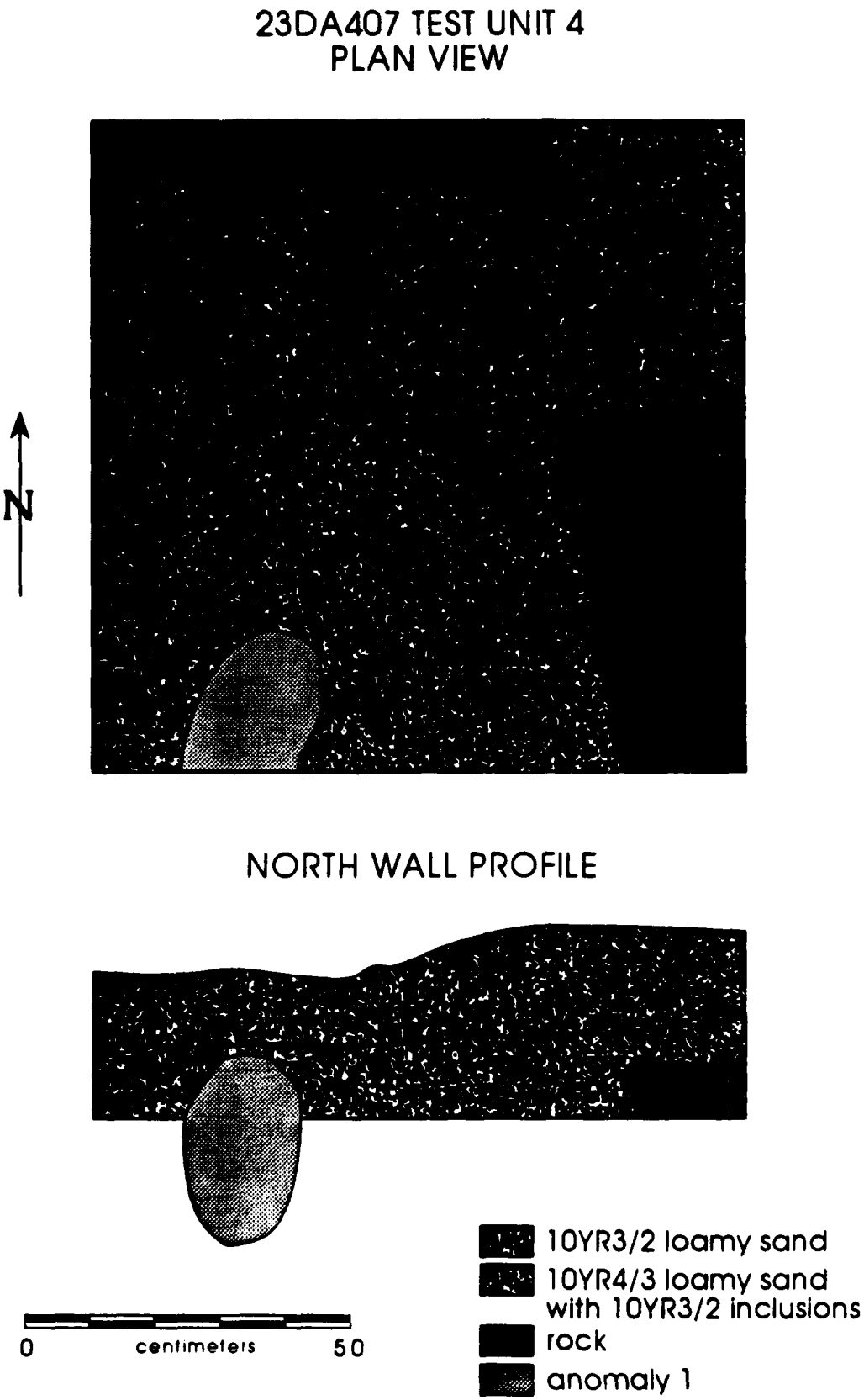


Figure 35. Test Unit 4 at 30 cm at 23DA407.

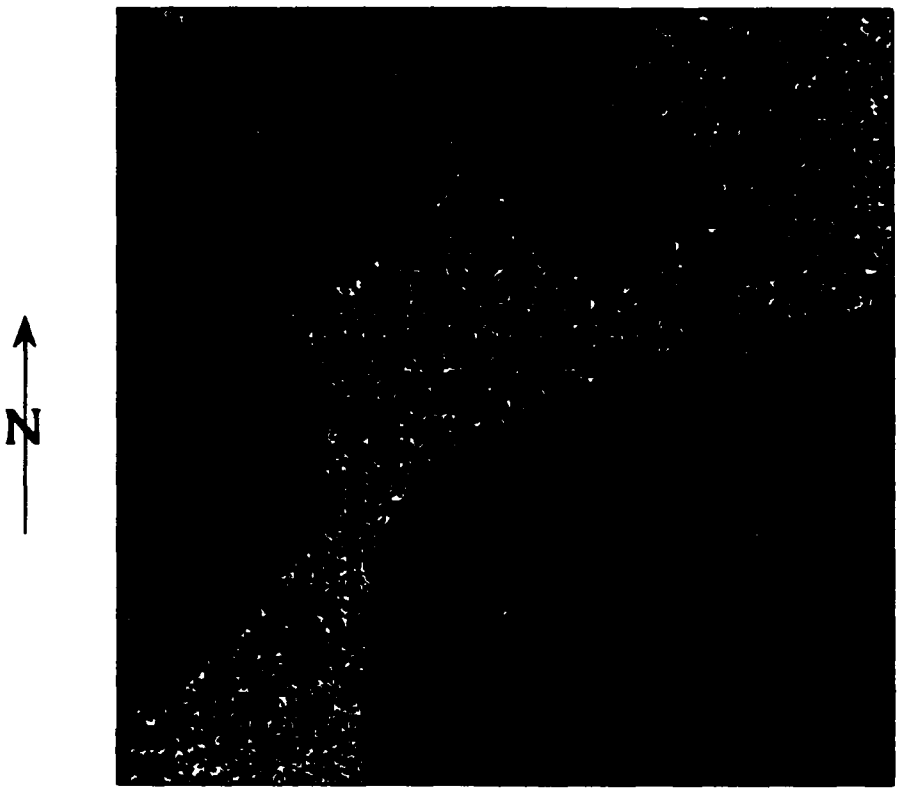
g) pieces of unidentified charcoal, 19 (56.7 g) initial stage interior flakes, 3 (21.9 g) primary decortication flakes, 2 (1 g) secondary decortication flakes, 12 (3.8 g) interior flakes and 1 (1.1 g) baling wire strand. Sixty-seven (60.7 g) of them are from Level 3B and include 1 (0.1 g) cottontail rabbit tooth, 10 (2.6 g) unidentified small mammal bones, 2 (3.9 g) deer bones, 11 (3.7 g) unidentified bones, 6 (0.9 g) pieces of unidentified charcoal, 1 (21.7 g) primary decortication flake, 13 (29.1 g) pieces of shatter, 14 (17.7 g) initial stage interior flakes and 10 (2.7 g) interior flakes. The anomaly matrix yielded 30 items weighing 20.7 g. These included 1 (0.1 g) wood rat bone, 12 (18.7 g) unidentified bones, 1 (0.3 g) unidentified bird talon, 14 (1.3 g) pieces of unidentified charcoal, 1 (0.2 g) grape seed and 1 (0.1 g) retouch flake. The finescreen sample yielded 89 (10.4 g) items including 1 (0.5 g) box turtle bone, 28 (5.8 g) unidentified bones, 1 (0.2 g) piece of mussel shell, 56 (3.2 g) pieces of unidentified charcoal, 2 (0.6 g) initial stage interior flakes and 1 (0.1 g) cottontail rabbit bone. The boundary between levels 3A and 3B is abrupt and 3A could be easily skimmed off. The matrix of 3B was firm and appeared to be undisturbed, with the exception of the anomaly which was determined to be an animal burrow, as evidenced by its size and angle. It begins as a circular stain but quickly strikes southward into the south wall of the unit.

Level 4 (30 cm - 40 cm) was one meter square and was excavated by troweling. The primary soil matrix was brown (10YR4/3) loamy sand with inclusions of rocks and roots and mottled with slightly lighter soil. The mottling appeared to be the result of insect burrowing but the deposits appeared to be otherwise undisturbed. The Feature 1 anomaly was still present, although all of the fill had been previously removed. Soil and finescreen samples were collected from the northeast corner. Forty-eight (100.2 g) items were found including 1 (0.8 g) box turtle bone, 12 (82.8 g) pieces of shatter, 22 (14.6 g) initial stage interior flakes, 11 (1.9 g) interior flakes and 2 (0.1 g) retouch flakes. The finescreen sample yielded 7 items weighing 0.5 g. These included 2 (0.1 g) pieces of unidentified charcoal and 5 (0.4 g) retouch flakes.

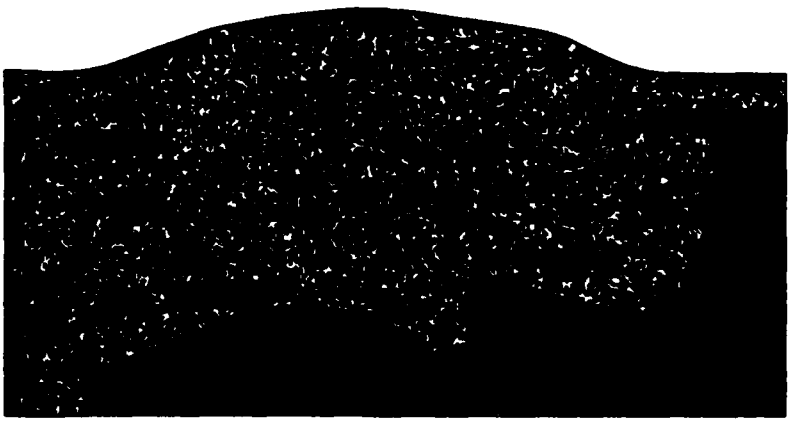
Level 5 (40 cm - 50 cm) was one meter square and was excavated by troweling and shovel skimming. The primary soil matrix was yellowish brown (10YR5/4) loamy sand with inclusions of rocks and roots. The bottom of the anomaly intruded the southeast quadrant. Soil and finescreen samples were collected from the northeast corner. Fifteen (15.6 g) items were found including 4 (8.8 g) pieces of shatter, 6 (6.2 g) initial stage interior flakes and 5 (0.6 g) retouch flakes. The finescreen sample yielded 12 (2.4 g) items including 9 (0.3 g) pieces of unidentified charcoal, 2 (2.0 g) initial stage interior flakes and 1 (0.1 g) retouch flake. Excavation was halted at the bottom of Level 5 due to the presence of numerous large sandstone boulders that could not be removed. Two strata were revealed in Test Unit 4. Stratum 1 was a roughly 25 cm thick layer of pothunter backdirt probably composed of material excavated from the back of the shelter. Stratum 2 was a not-so-disturbed brown (10YR4/3) loamy sand that graded into a yellowish brown (10YR5/4) loamy sand at the base of Level 5 (Figure 36). Cultural materials were common in Stratum 1 but less so in Stratum 2.

Horizontal and Vertical Extent. The shovel testing revealed that artifacts are distributed over an area measuring 27 m north-south x 44 m east-west (1,188 m^2). The east-west dimensions of the site do not extend much beyond the shelter opening. The stream flowing in front of the shelter forms the northern boundary. Two shovel tests excavated on the floodplain both yielded

23DA407 TEST UNIT 4
PLAN VIEW



WEST WALL PROFILE



- 10YR3/2 loamy sand
- 10YR4/3 loamy sand with 10YR3/2 inclusions
- rock
- root

Figure 36. Plan view and profile of Test Unit 4 at 23DA407.

cultural materials but shovel testing and careful inspection of cutbanks during the survey phase of our work failed to detect cultural material north of the creek. The maximum depth of the deposits appears to be 120 cm but the recovery of a flake from the 160 cm - 170 cm level of Test Unit 1 suggests the possibility that artifacts are present in cracks below that depth.

Cultural Affiliation. 23DA407 yielded 2,856 (12,322.7 g) items including 1 (209.3 g) flat abrader, 1 (1.0 g) acorn (*Quercus marilandica*), 1 (0.6 g) arrow point (Washita), 1 (8.8 g) stemmed biface, 1 (0.7 g) biface fragment, 2 (2.4 g) beaver (*Castor canadensis*) bones, 1 (8.6 g) bison (*Bison bison*) bone, 32 (16.8 g) box turtle (*Terrapene carolina*) bones, 7 (4.7 g) cottontail rabbit (*Sylvilagus floridanus*) bones, 80 (118.9 g) deer (*Odocoileus virginianus*) bones, 5 (15.0 g) elk (*Cervus canadensis*) bones, 2 (0.5 g) fox squirrel (*Sciurus niger*) bones, 2 (0.4 g) gray squirrel (*Sciurus carolinensis*) bones, 8 (1.7 g) unidentified squirrel (*Sciurus* sp.) bones, 1 (0.2 g) house mouse(?) (*Mus musculus*) bone, 1 (0.9 g) mink scapula (*Mustela vison*), 7 (16.2 g) opossum (*Didelphis marsupialis*) bones, 1 (0.1 g) pine vole mandible (*Pitymys pinetorum*), 1 (2.1 g) red fox (*Vulpes fulva*) bone, 4 (4.6 g) skunk (*Mephitis* sp.) bones, 318 (114.5 g) unidentified bones, 1 (0.3 g) unidentified bird talon, 1 (0.3 g) unidentified fish bone, 31 (12.1 g) unidentified mammal bones, 21 (51.0 g) unidentified large mammal bones, 186 (66.2 g) unidentified small mammal bones, 1 (0.3 g) weasel (*Mustela frenata*) bone, 1 (0.1 g) wood rat (*Neotoma floridana*) bone, 3 (10.7 g) woodchuck (*Marmota monax*) bones, 355 (21.9 g) pieces of unidentified charcoal, 2 (1,331.6 g) pieces of unmodified tripolized chert, 2 (2,650.3 g) chunks of unmodified chippable stone, 1 (176.6 g) chopper, 2 (1,325.7 g) tested cobbles, 4 (552.4 g) cores, 1 (1.9 g) dart point stem (Dickson?), 1 (4.6 g) lump of desiccated small mammal feces, 298 (118.1 g) interior flakes, 608 (946.2 g) initial stage interior flakes, 36 (267.9 g) primary decortication flakes, 184 (14.6 g) retouch flakes, 14 (163.3 g) secondary decortication flakes, 1 (0.8 g) human incisor, 3(8.6 g) bifacial knife fragments, 75 (70.1 g) pieces of mussel shell, 3 (0.2 g) hickory (*Carya* sp.) nut hulls, 2 (7.7 g) black walnut (*Juglans nigra*) hulls, 3 (117.2 g) preform fragments, 1 (12.2 g) sand-tempered cord marked body sherd, 1 (7.1 g) flake scraper, 1 (449.7 g) core scraper, 6 (0.5 g) dogwood (*Cornus* sp.) seeds, 7 (0.7 g) grape (*Vitis* sp.) seeds, 83 (1.0 g) poke (*Phytolacca americana*) seeds, 2 (0.2 g) unidentified seeds, 422 (3,364.1 g) pieces of shatter, 2 (1.5 g) clay, grit and bone-tempered plain body sherds, 2 (7.3 g) grog-tempered plain body sherds, 3 (25.3 g) shell-tempered plain body sherds, 1 (0.8 g) plain body sherd (unidentified temper), 5 (1.1 g) snail shells, 1 (0.6 g) iron tack and 2 (1.9 g) strands of baling wire. Diagnostic cultural materials are sparse but suggest that the site was occupied during the Early to Middle Archaic, Late Woodland and Middle(?) Mississippi times.

Function. Activities suggested by the artifacts recovered include refuse disposal, food preparation and storage, hunting and butchering (including cutting meat with and without bone contact and scraping wet hide), manufacture and maintenance of stone tools, and chopping and pulverizing plant materials. The more recent prehistoric occupations appear to entail at least seasonal habitation, but the upper levels are so badly disturbed that it is difficult make an accurate assessment. The volume of material is suggestive of reasonably long-term occupation. Archaic Period use appears to have been both infrequent and of short duration, given the paucity of cultural materials and an absence of midden deposition. Historic use appears related to trapping activities.

Integrity. This site has been damaged by unauthorized digging at least since 1990 and evidence of this is present in the form of many obvious backdirt piles. Test Unit 4 was placed on a low ridge that roughly parallels the shelter overhang and showed that it is composed of backdirt that was apparently unscreened, given the recovery of a complete arrow point. Test Units 1 - 3 revealed that much of the ground surface in front of the shelter opening appears to be covered with a thin veneer of backdirt. The upper deposits have been seriously damaged particularly in the back portion of the shelter, where they have been completely destroyed. The deeper deposits have not been damaged because abundant roof fall discourages casual digging below a depth of about 30 cm (1 ft). Deeper artifacts are present but we were able to excavate below 50 cm only in Test Unit 1 (170 cm), finding cultural materials to a depth of 120 cm with 1 flake recovered from 160 cm - 170 cm. Data potential of the deeper deposits is very limited given the absence of features, dateable contexts and detectable stratification.

Damage Assessment. Damage to the deposits at 23DA407 is shallow but complete where it occurs. A low ridge that parallels the shelter opening is composed of unscreened backdirt and contains abundant cultural materials that are similar in composition to those found in the back of the shelter where the soil has been removed to a depth permitted by slabs of roof fall. Little impact to the front part of the shelter or the talus slope is evident. One small (ca. 30 cm x 30 cm x 20 cm deep) recent pothole was observed at the very edge of the talus slope near Test Unit 2. There may also be an older large (ca. 1.5 m dia.) one immediately south of Test Unit 3 but it could also be a natural undulation in the ground surface. Otherwise, no other recent human impacts are evident.

Impact from unauthorized digging has not affected the deeper deposits at the site. Abundant boulder-sized slabs of roof fall prohibit excavation below a depth of about 30 cm by all but the most determined.

Unfortunately, no prior work has taken place at the site that would provide a baseline from which the true extent of the damage can be assessed. We cannot be certain, for example, that the dirt piled at the shelter opening came from the back part of the shelter. We believe this to be the case but cannot account for it from the paultry evidence of pothunting elsewhere on the site, unless other potholes are located beneath the backdirt.

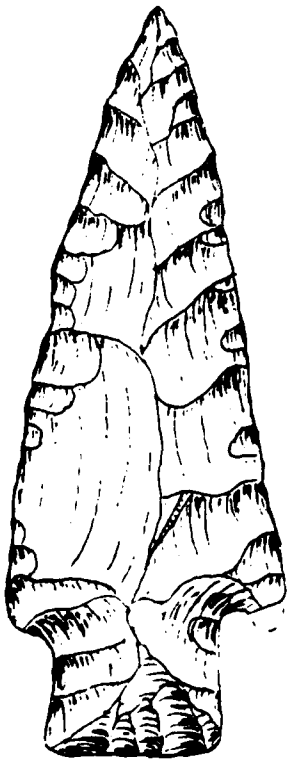
Significance. Although we had high expectations for this site, given the obvious potential for deeply stratified deposits, the upper deposits at 23DA407 have been seriously damaged by unauthorized digging and the deeper deposits do not appear to contain substantial data potential. 23DA407 does not possess characteristics that when viewed in their most favorable light would result in it being considered eligible for the National Register of Historic Places. The site does not allow for the testing of a hypothesis or hypotheses about events, groups or processes in the past that bear on important research questions, does not corroborate or amplify currently available information suggesting that an important research question or hypothesis is either true or false and does not allow reconstruction of the sequence or archeological culture for the purpose of identifying and explaining continuities and discontinuities in the archeological record (*National Register Bulletin* 15:21). Because shelters are numerous in the area and this one is of

questionable research potential, we have concluded that it does not merit inclusion in the National Register of Historic Places. No further work is required and none is recommended.

INVESTIGATIONS AT 23DA408

23DA408 (Photographs 10 and 11) is a rock shelter previously recorded by Howard R. Wimmer in October 1990. The site is situated partially within the Highway 215 right-of-way at the head of a spring-fed drainage at an elevation of 940 ft. The land surface slopes downward to the south at a rate of 30%. Local geology consists of the Osagean Series (Mo) on which Peridge-Wilderness-Goss-Pembroke Association soils have formed. In the vicinity of the site, these soils support grasses within the Highway 215 right-of-way and mixed hardwoods elsewhere. The nearest available water is an unnamed spring located on the site. Wimmer called the site Maze Creek Rock Shelter #4 and described it as follows:

> This is a cultural material scatter of undetermined density located in and immediately in front of a rock cave located immediately adjacent to hwy 215 and .65 kilometers due west of the Maze Creek bridge, Stockton Lake. The cave is surrounded by an area of hardwoods (oaks) with the area immediately in front of the cave covered with thick soft wood brush. The involved area was difficult to measure and survey because of this, but is estimated to be 405 m². (This includes the area inside the overhand, approx 225 m².) Approx. 20 pressure flakes were counted in the limited exposed area. No diagnostic [sic] or other fragments were found and no collection was made. A single tooth - thought to be from a white tail deer - was noted in the bank cut. Soil depth was measured at 0.6 m (2 ft) at the bank cut. Depth of the cultural deposit was indeterminate.
>
> [The condition of the site is] uncertain, however, there was no evidence of potting. Area is densely overgrown, but other than natural erosion, this site seems to be intact and undisturbed.

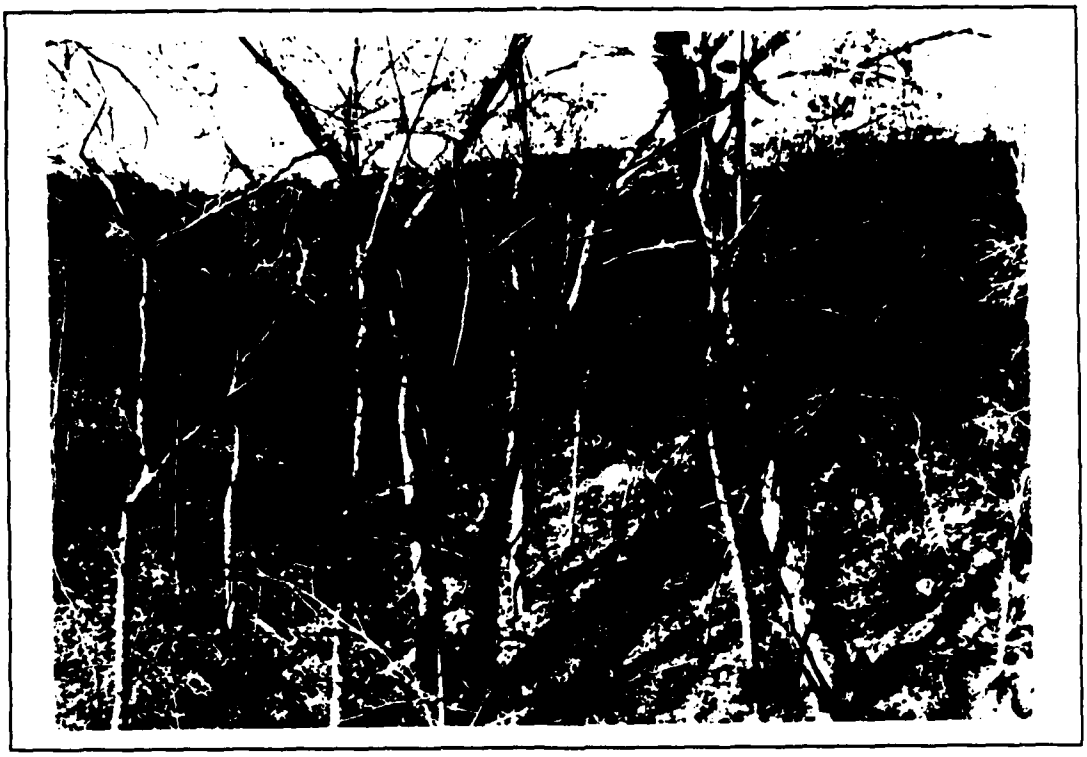


Stone Square Stemmed (1-1)

Previously, Wimmer collected 6 (88.3 g) items including 1 (32.6 g) Stone Square Stemmed knife, 1 (14.6 g) Lander Corner Notched knife, 1 (10.8 g) flake scraper, 1 (25.2 g) preform fragment, 1 (3.5 g) flake knife and 1 (1.6 g) deer(?) bone.

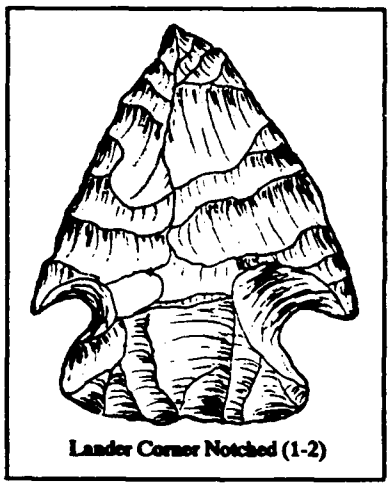
Artifact 1-1 is a bifacial knife. It is a parallel stem specimen with a pointed tip, a straight blade, sloping shoulders and a straight base. The cross section is diamond-shaped with no edge abrading and no beveling. Maximum dimensions are 9.5 cm x 3.7 cm x 1.2 cm and it weighs 32.6 g. The stem measures 1.8 cm x 2.3 cm and comprises about 19% of the total length of the specimen. The raw material is Keokuk chert, which is abundant further south but may be available locally in highly restricted areas. Microscopic examination revealed wear resulting from cutting meat without bone contact. This specimen most closely resembles the Stone Square Stemmed type, which is associated with the Late Archaic Period.

Artifact 1-2 is also a bifacial knife. It is an expanding stem specimen with a broad tip, an excurvate blade, corner notches,



Photograph 10. View of 23DA408 facing north.

Photograph 11. View of 23DA408 facing northeast.


Lander Corner Notched (1-2)

barbed shoulders and a convex base. The cross section is biconvex with no edge abrading and no beveling. Maximum dimensions are 5.0 cm x 4.0 cm x 0.9 cm and it weighs 14.6 g. The stem measures 1.3 cm x 3.1 cm and comprises about 26% of the total length of the specimen. The raw material is heat-treated Burlington chert, which is found locally. Microscopic examination revealed wear resulting from cutting meat without bone contact. This specimen most closely resembles the Lander Corner Notched type, which is associated with the Woodland Period.

Artifact 1-3 is a flake scraper. Maximum dimensions are 5.9 cm x 2.4 cm x 0.7 cm and it weighs 10.8 g. The raw material is heat-treated Burlington chert, which is found locally. Microscopic examination revealed wear resulting from the scraping of leather dry pottery. This specimen is not associated with a specific cultural period. Artifact 1-5 is a flake knife. Maximum dimensions are 3.7 cm x 2.2 cm x 0.4 cm and it weighs 3.5 g. The raw material is heat-treated Burlington chert, which is found locally. Microscopic examination revealed wear resulting from cutting wood. This specimen is not associated with a specific cultural period.

Test excavations were conducted by Historic Preservation Associates between January 4 and 7, 1993. These excavations included two 1 m x 1 m test units and 12 shovel tests (Figure 37). One tool was recovered from disturbed surface context. Artifact 14-1 is a flake graver. A sharp graver spur had been unifacially worked into the side of a large flake. Maximum dimensions are 6.7 cm x 2.6 cm x 1.3 cm and it weighs 27.4 g. The raw material is Burlington chert, which is found locally. Microscopic examination revealed limited wear resulting from perforating. This specimen is not associated with a specific cultural period.

Test Unit 1 (8.83N/16.92E)

Test Unit 1 was placed beneath the shelter overhang and excavated in arbitrary 10 cm levels that paralleled the ground surface. Level 1 (0 cm - 10 cm) was one meter square and was excavated by troweling. The primary soil matrix was a wet very dark gray (10YR3/1) silty sand with inclusions of rocks and roots and a few spots of disintegrated reddish yellow (5YR7/8) sandstone. No evidence of disturbance was noted, but features were not present. A 10 cm x 10 cm x 10 cm finescreen sample and one soil sample were collected. Two hundred forty-five (943.8 g) items were found including 1 (63.1 g) core, 2 (3.0 g) preforms, 2 (7.7 g) preform fragments, 1 (10.0 g) flake graver, 1 (1.1 g) arrow point, 1 (1.0 g) biface fragment, 38 (263.0 g) pieces of shatter, 24 (48.0 g) primary decortication flakes, 11 (14.8 g) secondary decortication flakes, 115 (243.3 g) initial stage interior flakes, 35 (22.8 g) interior flakes, 10 (1.4 g) retouch flakes, 1 (0.6 g) reverse hinge flake, 1 (252.6 g) chunk of unmodified chippable stone and 2 (2.4 g) unidentified mammal bones. The finescreen sample yielded 3 items weighing 1.2 g. These included 1 (0.6 g) flake knife, 1 (0.1 g) retouch flake and 1 (0.5 g) piece of shatter. More flakes were noted at 10 cm than above.

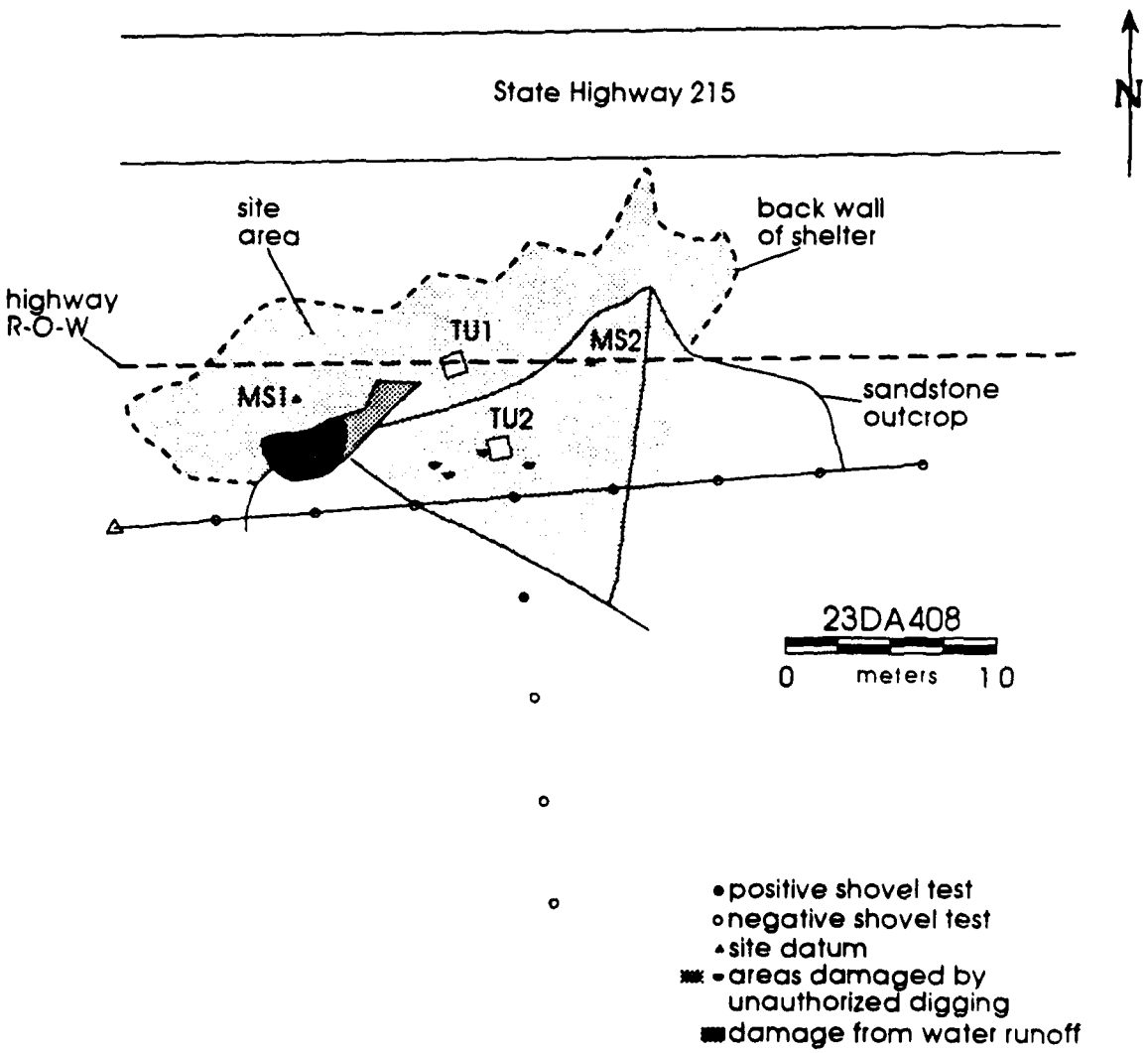


Figure 37. 23DA408 showing the location of the HPA work.

Arrow Point Preform (1-2)

Artifact 1-2 is an arrow point preform recovered at a depth of 10 cm at 8.69N/16.87E. It is an unstemmed specimen with a rounded tip, an excurvate blade, no notches, no shoulders and a convex base. The cross section is plano-convex with edge abrading on the blade and unifacial beveling. Maximum dimensions are 2.7 cm x 1.4 cm x 0.5 cm and it weighs 2.1 g. The raw material is heat-treated Burlington chert, which is found locally. Microscopic examination revealed no evidence of use-wear. This specimen is an unclassified type probably associated with the Mississippi Period.

Flake Graver (1-3)

Artifact 1-3 is a flake graver recovered at a depth of 6 cm at 8.04N/16.28E. Maximum dimensions are 3.6 cm x 2.8 cm x 1.0 cm and it weighs 10.0 g. The raw material is Jefferson City chert, which is found locally in the deeper valleys. Microscopic examination revealed wear resulting from engraving a moderately hard substance. This specimen is not associated with a specific cultural period.

Fresno (1-4)

Artifact 1-4 is an arrow point. It is an unstemmed specimen with a missing tip, a damaged blade, no notches, no shoulders and a straight base. The cross section is biconvex with no edge abrading and no beveling. Maximum dimensions are 2.0 cm x 1.5 cm x 0.3 cm and it weighs 1.1 g. The raw material is heat-treated Burlington chert, which is found locally. Microscopic examination revealed no evidence of use-wear. This most closely resembles the Fresno type, which is associated with the Late Prehistoric Period.

Arrow Point Preform (1-5)

Artifact 1-5 is a preform for a triangular arrow point. It is an unstemmed specimen with a rounded tip, a straight blade, no notches, no shoulders and a straight base. The cross section is plano-convex with no edge abrading and unifacial beveling. Maximum dimensions are 2.0 cm x 1.4 cm x 0.3 cm and it weighs 0.9 g. The raw material is heat-treated Burlington chert, which is found locally. Microscopic examination revealed no evidence of use-wear. This specimen is an unclassified type possibly associated with the Late Prehistoric Period.

Artifact 1-6 is a preform proximal. It is an unstemmed specimen with a missing tip, a damaged blade, no notches, no shoulders and a convex base. The cross section is plano-convex with no edge abrading and beveling of the left blade edge. Maximum dimensions are 2.2 cm x 2.0 cm x 0.5 cm and it weighs 2.9 g. The raw material is heat-treated Burlington chert, which is found locally. Microscopic examination revealed no evidence of use-wear. This specimen is an unclassified type that may be associated with the Mississippi Period.

Artifact 21-1 is a flake knife recovered from the Level 1 finescreen sample. Maximum dimensions are 2.1 cm x 0.9 cm x 0.2 cm and it weighs 0.6 g. The raw material is heat-treated Jefferson City chert, which is found locally in the deeper valleys. This small flake has a lot of edge damage. Some may be accidental, but there is polish on several high points, and the

breakage compares with that noted on experimental specimens used to cut bone or antler. This specimen is not associated with a specific cultural period.

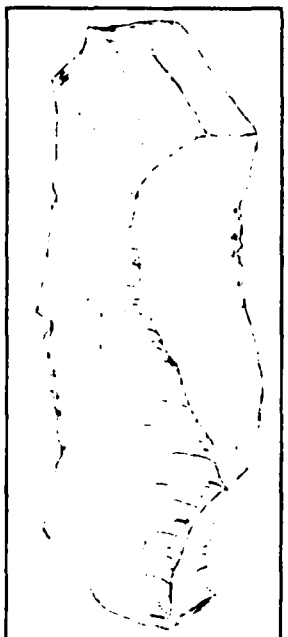
Level 2 (10 cm - 20 cm) was one meter square and was excavated by troweling. The primary soil matrix was a muddy very dark gray (10YR3/1) silty sand with inclusions of rocks and roots. A thin layer appeared undisturbed and was recorded as Feature 1. A 10 cm x 10 cm x 10 cm finescreen sample and one soil sample were collected and the fill from the feature was bagged separately for finescreening. Five hundred fifty-nine (1,072.8 g) items were found including 5 (4.9 g) arrow points, 1 (0.9 g) arrow point stem, 1 (13.2 g) prismatic flake blade, 2 (11.9 g) bifaces, 2 (5.3 g) biface fragments, 1 (2.9 g) preform, 1 (3.6 g) dart point midsection, 1 (1.2 g) bifacial drill fragment, 1 (26.5 g) flake spokeshave, 1 (44.6 g) core, 13 (36.5 g) primary decortication flakes, 7 (38.3 g) secondary decortication flakes, 191 (512.3 g) pieces of shatter, 256 (339.5 g) initial stage interior flakes, 41 (18.0 g) interior flakes, 18 (1.5 g) retouch flakes, 6 (2.9 g) pieces of mussel shell and 11 (8.8 g) unidentified bones. The finescreen sample yielded 32 items weighing 2.6 g. These included 1 (0.2 g) hickory nut hull, 6 (0.5 g) unidentified bones, 1 (0.1 g) piece of mussel shell, 5 (1.5 g) interior flakes and 14 (0.3 g) retouch flakes.

Morris (2-2)

Artifact 2-2 is an arrow point. It is a parallel stem specimen with a rounded tip, an excurvate blade, side notches, square shoulders and a concave base. The cross section is biconvex with no edge abrading and no beveling. Maximum dimensions are 2.2 cm x 1.3 cm x 0.5 cm and it weighs 1.3 g. The stem measures 0.8 cm x 1.3 cm and comprises about 36% of the total length of the specimen. The raw material is heat-treated Burlington chert, which is found locally. Microscopic examination revealed no evidence of use-wear. This specimen most closely resembles the Morris type, which is associated with the Mississippi Period.

Artifact 2-3 is an arrow point. It is an expanding stem corner removed specimen with a missing tip, a straight blade, sloping shoulders and a straight base. The cross section is biconvex with no edge abrading and no beveling. Maximum dimensions are 1.5 cm x 0.9 cm x 0.3 cm and it weighs 0.6 g. The stem measures 0.5 cm x 1.0 cm and comprises about 33% of the total length of the specimen. The raw material is heat-treated Burlington chert, which is found locally. Microscopic examination revealed no evidence of use-wear. This most closely resembles the Scallorn type, which is associated with the Late Woodland and Mississippi periods.

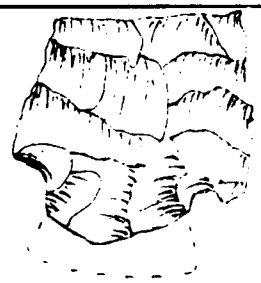
Scallorn (2-3)


Flake Blade (2-4)

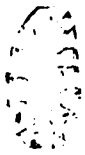
Artifact 2-4 is a prismatic flake blade recovered at a depth of 18 cm at 8.72N/16.86E. Maximum dimensions are 7.6 cm x 2.7 cm x 0.5 cm and it weighs 13.2 g. The raw material is heat-treated Burlington chert, which is found locally. Microscopic examination revealed wear resulting from cutting wood. This specimen is not associated with a specific cultural period.

Bifacial Knife (2-5)

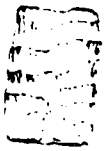
Artifact 2-5 is a bifacial knife. It is an expanding stem specimen with a missing tip, a damaged blade, corner notches, barbed shoulders and a convex base. The cross section is biconvex with no edge abrading and no beveling. Maximum dimensions are 3.1 cm x 2.5 cm x 0.5 cm and it weighs 5.3 g. The stem measures 0.8 cm x 1.7 cm and comprises about 26% of the total length of the specimen. The raw material is heat-treated Burlington chert, which is found locally. Microscopic examination revealed wear resulting from cutting meat with bone contact. This specimen is resharpened and is an unclassified type that may be associated with the Mississippi Period.


Bifacial Knife (2-6)

Artifact 2-6 is a bifacial knife. It is a parallel stem specimen with a missing tip, an asymmetrical blade, corner notches, barbed shoulders and a damaged base. The cross section is biconvex with no edge abrading and no beveling. Maximum dimensions are 3.1 cm x 3.1 cm x 0.7 cm and it weighs 6.6 g. The stem measures 0.8 cm x 1.9 cm and comprises about 26% of the total length of the specimen. The raw material is heat-treated Burlington chert, which is found locally. Microscopic examination revealed wear resulting from cutting meat with bone contact. This is an unclassified type that may be associated with the Mississippi Period.


Scallorn (2-8)

Artifact 2-8 is an arrow point. It is an expanding stem specimen with a missing tip, an excurvate blade, corner notches, square shoulders and a convex base. The cross section is biconvex with no edge abrading and no beveling. Maximum dimensions are 1.9 cm x 1.0 cm x 0.4 cm and it weighs 1.0 g. The stem measures 0.4 cm x 0.6 cm and comprises about 21% of the total length of the specimen. The raw material is heat-treated Burlington chert, which is found locally. Microscopic examination revealed no evidence of use-wear. This most closely resembles the Scallorn type, which is associated with the Late Woodland and Mississippi periods.


Fresno variant (2-9)

Artifact 2-9 is an arrow point. It is an unstemmed specimen with a missing tip, an excurvate blade, no notches, no shoulders and a straight base. The cross section is biconvex with no edge abrading and no beveling. Maximum dimensions are 1.8 cm x 1.2 cm x 0.3 cm and it weighs 1.1 g. The raw material is heat-treated Burlington chert, which is found locally. Microscopic examination revealed no evidence of use-wear. This specimen is a variant of the Fresno type, which is associated with the Late Prehistoric Period.

Fresno (2-10)

Artifact 2-10 is an arrow point. It is an unstemmed specimen with a missing tip, a damaged blade, no notches, no shoulders and a damaged base. The cross section is biconvex with no edge abrading and no beveling. Maximum dimensions are 2.0 cm x 1.0 cm x 0.3 cm and it weighs 0.9 g. The raw material is an unidentified chert. Microscopic examination revealed no evidence of use-wear. This specimen most closely resembles the Fresno type, which is associated with the

Late Prehistoric Period.

Sallisaw variant (2-11)

Artifact 2-11 is an arrow point stem. It is an expanding stem specimen with a missing tip, a missing blade, side notches, sloping shoulders and a concave base. Maximum dimensions are 1.2 cm x 1.1 cm x 0.4 cm and it weighs 0.9 g. The stem measures 0.7 cm in length and comprises about 58% of the total length of the specimen. The raw material is an unidentified chert. Microscopic examination revealed no evidence of use-wear. This specimen is a variant of the Sallisaw type, which is associated with the Mississippi Period.

Artifact 2-15 is a bifacial drill distal. It has a pointed tip, a straight blade, no shoulders and a missing stem and base. The cross section is diamond-shaped with no edge abrading and no beveling. Maximum dimensions are 2.0 cm x 1.0 cm x 0.5 cm and it weighs 1.2 g. The raw material is heat-treated Burlington chert, which is found locally. Microscopic examination revealed wear resulting from perforating. This is an unclassified type not associated with a specific cultural period.

Artifact 2-16 is a spokeshave. Maximum dimensions are 5.2 cm x 3.3 cm x 1.1 cm and it weighs 26.5 g. The raw material is Pierson chert, which is abundant in the Branson area and may be found locally in highly restricted areas. Microscopic examination revealed that this thin tabular piece of chert has been unifacially worked on one edge to form a concavity that was used to scrape wood. It is not associated with a specific cultural period.

The anomaly recorded as Feature 1 (Figure 38) was encountered in the northeast corner of the unit and was a barely discernible black stain that was only 1 cm - 2 cm thick. It yielded 43 (39.2 g) items including 14 (3.1 g) interior flakes, 9 (0.4 g) retouch flakes, 1.2 g of unidentified charcoal, 20 (1.7 g) unidentified bones and 32.8 g of small unsorted finescreen material. This area could be the remains of a campfire, although no direct evidence such as fire discoloration or hardening was noted.

Level 3 (20 cm - 30 cm) was one meter square and was excavated by troweling. The primary soil matrix was a water saturated very dark gray silty sand with inclusions of rocks and roots. The matrix was almost liquid on the west side of the unit. On east side, a disintegrated dark greenish gray (5GY4/1) shale bedrock was encountered. No evidence of disturbance was observed but features were not present. A 10 cm x 10 cm x 10 cm finescreen sample and one soil sample were collected. Fifty-seven (233.2 g) items were found including 1 (1.0 g) biface fragment, 9 (81.1 g) pieces of shatter, 2 (7.2 g) secondary decortication flakes, 22 (48.6 g) initial stage interior flakes, 9 (5.2 g) interior flakes and 14 (90.1 g) unidentified bones. The finescreen sample yielded 30 items weighing 1.9 g. These included 9 (0.2 g) pieces of unidentified charcoal, 3 (0.1 g) unidentified bones, 7 (1.4 g) interior flakes and 11 (0.2 g) retouch flakes.

Level 4 (30 cm - 41 cm) encompassed primarily the west ½ of the unit and was excavated by troweling. The primary soil matrix was a water saturated very dark gray (10YR3/1) silty sand with some dark grayish brown (10YR4/2) inclusions at the very bottom. No evidence of disturbance was observed, however, the fill was liquid mud. Features were not present. A 10 cm

23DA408
Test Unit 1 showing anomoly

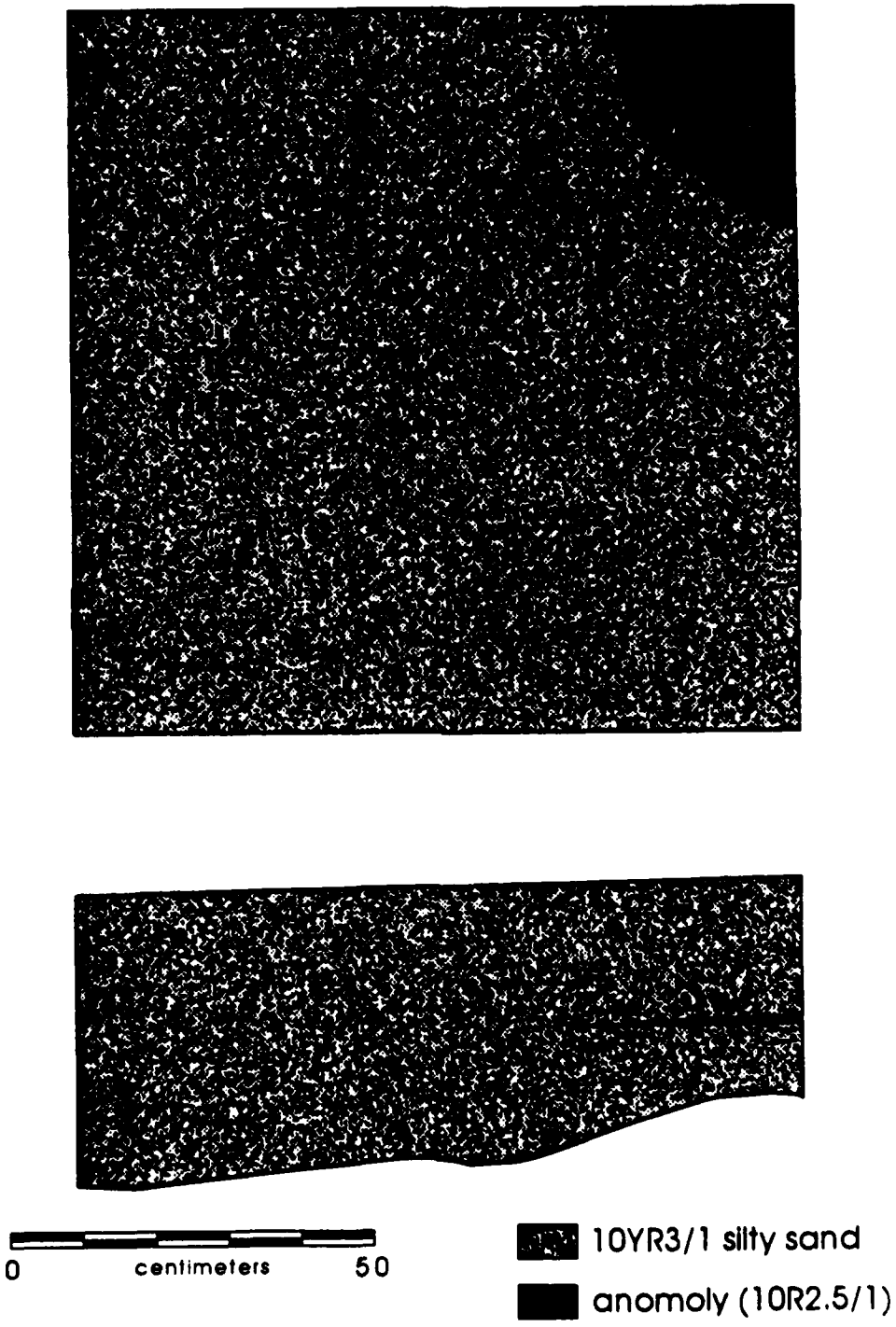


Figure 38. Plan view and profile of Test Unit 1 anomaly at 23DA408.

x 10 cm x 10 cm finescreen sample and one soil sample were collected. Twenty-one (274.4 g) items were found including 1 (145.6 g) tested cobble, 1 (11.1 g) biface fragment, 4 (28.2 g) pieces of shatter, 1 (3.1 g) primary decortication flake, 2 (46.1 g) secondary decortication flakes, 8 (33.7 g) initial stage interior flakes, 3 (5.4 g) interior flakes and 1 (1.2 g) unidentified bone. The finescreen sample yielded 17 items weighing 1.2 g. These included 6 (0.2 g) hickory nut hulls, 1 (0.1 g) unidentified bone, 2 (0.5 g) interior flakes and 8 (0.4 g) retouch flakes. Only one stratum was identified in Test Unit 1 (Figure 39) although it is possible that the wet soil may have masked faint stratification.

Test Unit 2 (4N/20E)

Test Unit 2 was placed on the talus slope in front of the shelter and excavated in 10 cm levels parallel to the ground surface. Level 1 (0 cm - 10 cm) was one meter square and was excavated by troweling and shovel skimming. The primary soil matrix was a wet very dark gray (10YR3/1) silt loam with abundant roots and chert cobbles from the conglomerate deposit exposed in the shelter. A few small fragments of sandstone were present as well. This level was disturbed, as evidenced by the recovery of a piece of plastic. Features were not present. A 10 cm x 10 cm x 10 cm finescreen sample and soil sample were taken from southwest corner. Three hundred twenty-five (685.6 g) including 3 (2.1 g) arrow points, 2 (1.5 g) arrow point tips, 1 (1.5 g) arrow point stem, 1 (23.7 g) grit-tempered cord-marked rim sherd, 2 (39.4 g) preform fragments, 5 (19.6 g) biface fragments, 1 (1.8 g) bifacial end scraper fragment, 67 (231.2 g) pieces of shatter, 135 (200.5 g) initial stage interior flakes, 76 (27.4 g) primary decortication flakes, 11 (29.9 g) secondary decortication flakes, 2 (77.0 g) pieces of fire-cracked chert and 19 (29.9 g) unidentified bones. The finescreen sample yielded 79 (24.3 g) items including 23 (0.3 g) grape seeds, 5 (0.1 g) poke seeds, 1 (0.1 g) unidentified seed, 16 (0.4 g) unidentified bones, 2 (0.1 g) snail shells, 3 (0.5 g) interior flakes, 23 (0.6 g) retouch flakes and 6 (22.3 g) pieces of fire-cracked sandstone. The first 2 cm - 3 cm of Level 1 contained noticeably fewer artifacts than the remainder.

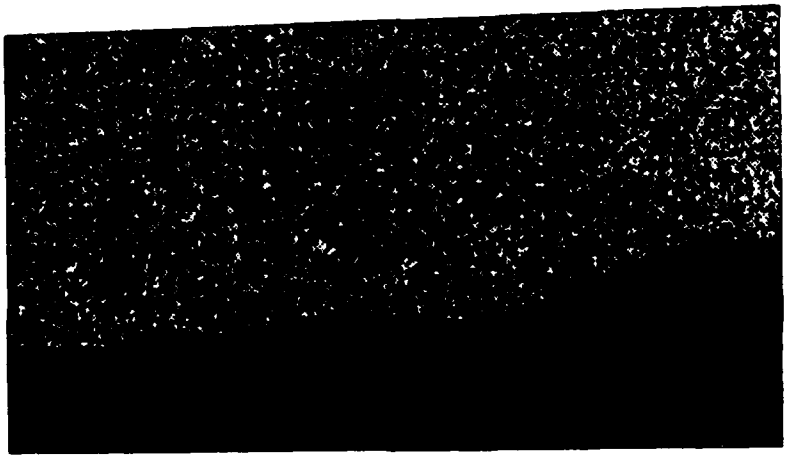
Scallorn variant (6-1)

Artifact 6-1 is an arrow point. It is an expanding stem specimen with a missing tip, a straight blade, side notches, sloping shoulders and a convex base. The cross section is biconvex with no edge abrading and no beveling. Maximum dimensions are 1.7 cm x 1.2 cm x 0.3 cm and it weighs 0.9 g. The stem measures 0.6 cm x 1.0 cm and comprises about 35% of the total length of the specimen. The raw material is heat-treated Burlington chert, which is found locally. Microscopic examination revealed no evidence of use-wear. This specimen is a variant of the Scallorn type, which is associated with the Late Woodland and Mississippi periods.

Scallorn variant (6-2)

Artifact 6-2 is an arrow point. It is an expanding stem specimen with a pointed tip, a straight blade, side notches, no shoulders and a straight base. The cross section is biconvex with no edge abrading and no beveling. Maximum dimensions are 1.4 cm x 1.0 cm x 0.2 cm and it weighs 0.6 g. The stem measures 0.5 cm x 1.0 cm and comprises about 36% of the total length of the specimen. The raw material is Jefferson City chert, which is found locally in the deeper valleys. Microscopic examination revealed no evidence of use-wear. This specimen is

23DA408 TEST UNIT 1
NORTH WALL PROFILE



0 centimeters 50

10YR3/1 silty sand

shale bedrock

Figure 39. Profile of Test Unit 1 at 23DA408.

resharpened and is a variant of the Scallorn type, which is associated with the Late Woodland and Mississippi periods.

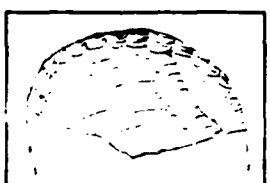
Scallorn (6-3)

Artifact 6-3 is an arrow point. It is an expanding stem specimen with a missing tip, a straight blade, corner notches, square shoulders and a convex base. The cross section is biconvex with no edge abrading and no beveling. Maximum dimensions are 1.3 cm x 0.8 cm x 0.3 cm and it weighs 0.6 g. The stem measures 0.6 cm x 0.8 cm and comprises about 46% of the total length of the specimen. The raw material is heat-treated Burlington chert, which is found locally. Microscopic examination revealed no evidence of use-wear. This specimen is resharpened and most closely resembles the Scallorn type, which is associated with the Late Woodland and Mississippi periods.

Arrow Point (6-4)

Artifact 6-4 is an arrow point distal. It has a pointed tip, a straight blade, no notches, no shoulders and a missing stem and base. The cross section is biconvex with no edge abrading and no beveling. Maximum dimensions are 2.0 cm x 1.1 cm x 0.2 cm and it weighs 0.8 g. The raw material is Burlington chert, which is found locally. Microscopic examination revealed no evidence of use-wear. This is an unclassified type that may be associated with the Mississippi Period.

Artifact 6-5 is an arrow point distal. It is from a specimen with a pointed tip and a straight blade. The cross section is biconvex with no edge abrading and no beveling. Maximum dimensions are 1.7 cm x 1.3 cm x 0.3 cm and it weighs 0.7 g. The raw material is Keokuk chert, which is abundant further south but may be available locally in highly restricted areas. Microscopic examination revealed no evidence of use-wear. This is an unclassified type that may be associated with the Mississippi Period.


Bifacial End Scraper (6-9)

Artifact 6-9 is a bifacial end scraper distal. It is an unstemmed specimen with a rounded tip, an excurvate blade, no notches, no shoulders and a missing base. The cross section is plano-convex with no edge abrading and unifacial beveling. Maximum dimensions are 1.6 cm x 2.6 cm x 0.4 cm and it weighs 1.8 g. The raw material is heat-treated Burlington chert, which is found locally. Microscopic examination revealed wear resulting from scraping wet hide. This is an unclassified type not associated with a specific cultural period.

Artifact 6-11 is a bifacial knife distal. It has a pointed tip, a straight blade, no notches, no shoulders and a missing stem and base. The cross section is biconvex with no edge abrading and no beveling. Maximum dimensions are 2.0 cm x 1.9 cm x 0.5 cm and it weighs 1.9 g. The raw material is heat-treated Burlington chert, which is found locally. Microscopic examination revealed wear resulting from cutting meat without bone contact. This is an unclassified type not associated with a specific cultural period.

Fresno (6-19)

Artifact 6-19 is an arrow point stem recovered at a depth of 13 cm from Level 1 at 4.68N/19.17E. It is an unstemmed specimen with a missing tip, a damaged blade, no notches, no shoulders and a straight base. The cross section is

biconvex with no edge abrading and no beveling. Maximum dimensions are 1.7 cm x 1.5 cm x 0.4 cm and it weighs 1.5 g. The raw material is heat-treated Burlington chert, which is found locally. Microscopic examination revealed no evidence of use-wear. This most closely resembles the Fresno type, which is associated with the Late Prehistoric Period.

Level 2 (10 cm - 20 cm) was one meter square and was excavated by troweling and shovel skimming. The primary soil matrix was a wet very dark gray (10YR3/1) silt loam with inclusions of rocks and roots. The integrity of the level was uncertain, with no direct evidence of disturbances. There seemed to be a layer of sandstone in the north half of the unit but, if it was thrown there, there is no way to know when. Features were not present. A 10 cm x 10 cm x 10 cm finescreen sample and soil sample were collected from southwest corner. Four hundred seventeen (1,308.7 g) items were found including 4 (1.9 g) arrow points, 2 (0.5 g) arrow point stems, 1 (8.1 g) grit-tempered cord-marked rim sherd, 1 (1.3 g) shell-tempered plain body sherd, 2 (309.7 g) cores, 4 (10.4 g) biface fragments, 5 (59.8 g) preform fragments, 41 (202.8 g) pieces of shatter, 4 (25.2 g) primary decortication flakes, 2 (55.1 g) pieces of fire-cracked rock, 1 (43.9 g) piece of sugar quartz, 1 (87.1 g) tabular piece of chert, 136 (26 g) initial stage interior flakes, 73 (32.0 g) interior flakes, 13 (1.7 g) retouch flakes, 10 (17.0 g) pieces of mussel shell and 117 (192.2 g) unidentified bones. The finescreen sample yielded 70 (39.9 g) items including 33 (8.7 g) unidentified bones, 5 (5.4 g) interior flakes, 30 (1.2 g) retouch flakes and 2 (24.6 g) pieces of fire-cracked sandstone.

Alba (7-1)

Artifact 7-1 is an arrow point. It is an expanding stem specimen with a missing tip, a straight blade, side notches, square shoulders and a convex base. The cross section is biconvex with no edge abrading and no beveling. Maximum dimensions are 2.3 cm x 1.2 cm x 0.3 cm and it weighs 0.7 g. The stem measures 0.8 cm x 0.8 cm and comprises about 35% of the total length of the specimen. The raw material is an unidentified red (Pierson?) chert. Microscopic examination revealed no evidence of use-wear. This is an unusual point for the Stockton area. It strongly resembles the Alba type, which is associated with the Mississippi Period in the Caddoan area.

Artifact 7-8 is a bifacial knife midsection. It has a damaged blade, no notches, no shoulders and a missing base. Maximum dimensions are 2.0 cm x 1.8 cm x 0.5 cm and it weighs 1.8 g. The raw material is heat-treated Burlington chert, which is found locally. Microscopic examination revealed wear resulting from cutting meat without bone contact. This is an unclassified type not associated with a cultural period.

Cahokia Side Notched (7-11)

Artifact 7-11 is an arrow point stem. It is a parallel stem specimen with a missing tip, a missing blade, side notches, no shoulders and a straight base. The cross section is biconvex with no edge abrading and no beveling. Maximum dimensions are 1.1 cm x 1.1 cm x 0.2 cm and it weighs 0.2 g. A small portion of the stem remains and measures 0.8 cm x 1.1 cm and comprises about 73% of the total length of the specimen. The raw material is heat-treated Burlington chert, which is found locally. Microscopic examination revealed no evidence of use-wear. This specimen most closely resembles the Cahokia Side Notched type, which is associated with the

Mississippi Period, as suggested by two shallow indentions between the notches and base. If no additional notches were present, the specimen would resemble the Washita, and if one notch was found beneath the main notches, it would resemble the Huffaker point.

Fresno (7-12)

Artifact 7-12 is an arrow point. It is an unstemmed specimen with a pointed tip, a straight blade, no notches, no shoulders and a straight base. The cross section is plano-convex with no edge abrading and no beveling. Maximum dimensions are 1.4 cm x 0.9 cm x 0.3 cm and it weighs 0.2 g. The raw material is unidentified heat-treated chert. Microscopic examination revealed no evidence of use-wear. This most closely resembles the Late Prehistoric Period Fresno type.

Fresno variant (7-13)

Artifact 7-13 is an arrow point. It is an unstemmed specimen with a pointed tip, a straight blade, no notches, no shoulders and a concave base. The cross section is plano-convex with no edge abrading and unifacial beveling. Maximum dimensions are 1.8 cm x 1.3 cm x 0.3 cm and it weighs 0.7 g. The raw material is Jefferson City chert, which is found locally in the deeper valleys. Microscopic examination revealed no evidence of use-wear. This specimen is a variant of the Fresno type, which is associated with the Late Prehistoric Period.

Fresno variant (7-14)

Artifact 7-14 is an arrow point. It is an unstemmed specimen with a pointed tip, an asymmetrical blade, no notches, no shoulders and a convex base. The cross section is biconvex with no edge abrading and no beveling. Maximum dimensions are 1.4 cm x 1.2 cm x 0.3 cm and it weighs 0.3 g. The raw material is an unidentified chert. Microscopic examination revealed no evidence of use-wear. This specimen is a variant of the Fresno type, which is associated with the Late Prehistoric Period.

Fresno variant (7-15)

Artifact 7-15 is an arrow point stem. It is an unstemmed specimen with a missing tip, a missing blade, no notches, no shoulders and a convex base. The cross section is plano-convex with no edge abrading and no beveling. Maximum dimensions are 0.8 cm x 1.5 cm x 0.2 cm and it weighs 0.3 g. The raw material is heat-treated Jefferson City chert, which is found locally in the deeper valleys. Microscopic examination revealed no evidence of use-wear. This specimen is a variant of the Fresno type, which is associated with the Late Prehistoric Period.

Compared to Level 1, Level 2 contained almost no chert cobbles. It did have large quantities of sandstones, some of which had been burned. The fill was very wet with water seeping into the unit at north edge.

Level 3 (20 cm - 30 cm) was one meter square and was excavated by troweling and shovel skimming. The primary soil matrix was a wet very dark gray (10YR3/1) silt loam with inclusions of roots and several sandstone fragments but very few chert cobbles. The integrity of the deposits in the level was unclear. Random distributions of rocks were present but none appeared to constitute purposeful placement. A 10 cm x 10 cm x 10 cm finescreen sample and soil sample were taken from the southwest corner. Two hundred thirty-three (1,226.8 g) items were found including 1 (7.4 g) flake scraper, 1 (9.0 g) preform fragment, 1 (0.5 g) dart point tip, 1 (7.6 g)

grit-tempered plain rim sherd, 1 (15.3 g) shell-tempered plain body sherd, 2 (332.0 g) cores, 6 (90.3 g) pieces of fire-cracked chert, 25 (177.4 g) pieces of shatter, 10 (285.7 g) primary decortication flakes, 70 (169.2 g) initial stage interior flakes, 2 (4.6 g) secondary decortication flakes, 40 (15.5 g) interior flakes, 10 (1.6 g) retouch flakes and 63 (109.0 g) unidentified bones. The finescreen sample yielded 56 (35.3 g) items including 7 (0.1 g) hickory nut hulls, 14 (2.8 g) unidentified bones, 8 (2.7 g) interior flakes, 25 (0.7 g) retouch flakes and 2 (29.0 g) pieces of fire-cracked chert.

Artifact 8-2 is a flake scraper. Maximum dimensions are 3.4 cm x 2.7 cm x 0.8 cm and it weighs 7.4 g. The raw material is heat-treated Burlington chert, which is found locally. Microscopic examination revealed wear resulting from scraping dry hide. This specimen is not associated with a specific cultural period.

Level 4 (30 cm - 40 cm) was one meter square and was excavated by troweling. The primary soil matrix was a wet very dark gray (10YR3/1) silt loam with inclusions of roots and sandstone and chert cobbles. The integrity of the deposits in level was unclear with no direct evidence of disturbances. Features were not present. A 10 cm x 10 cm x 10 cm finescreen sample and soil sample was collected from the southwest corner. One hundred two (779.6 g) items were found including 1 (12.7 g) grog-tempered plain body sherd, 2 (14.7 g) biface fragments, 1 (5.4 g) preform fragment, 3 (110.5 g) pieces of fire-cracked chert, 16 (160.7 g) pieces of shatter, 11 (3.3 g) interior flakes, 41 (397.4 g) initial stage interior flakes, 1 (2.2 g) primary decortication flake and 26 (72.7 g) unidentified bones. The finescreen sample yielded 38 (32.9 g) items including 1 (0.1 g) poke seed, 7 (0.3 g) hickory nut hulls, 20 (1.6 g) unidentified bones, 8 (1.9 g) interior flakes and 2 (29.0 g) pieces of fire-cracked chert.

Artifact 9-2 is a bifacial knife midsection. It has a damaged blade, no notches, no shoulders and a missing base. The cross section is biconvex with no edge abrading and no beveling. Maximum dimensions are 5.3 cm x 3.0 cm x 0.7 cm and it weighs 9.4 g. The raw material is Jefferson City chert, which is found locally in the deeper valleys. Microscopic examination revealed wear resulting from cutting meat with bone contact. This is an unclassified type not associated with a specific cultural period.

Artifact 9-3 is a bifacial knife midsection. It has a damaged blade, no notches, no shoulders and a missing base. The cross section is biconvex with no edge abrading and no beveling. Maximum dimensions are 2.4 cm x 2.9 cm x 0.7 cm and it weighs 5.3 g. The raw material is heat-treated Burlington chert, which is found locally. Microscopic examination revealed wear resulting from cutting meat with bone contact. This is an unclassified type not associated with a specific cultural period.

The unit fill was very wet with some water draining across the bottom. Fewer roots were present but there were more chert cobbles along with the sandstone. A few of the sandstone fragments were reddened.

Level 5 (40 cm - 50 cm) was one meter square and was excavated by troweling. The primary soil matrix was a saturated very dark gray (10YR3/1) silt loam with inclusions of rocks.

The integrity of the deposits in the level was unclear. Features were not present. A 10 cm x 10 cm x 10 cm finescreen sample and soil sample were taken from southwest corner although the size of the finescreen sample is actually uncertain since it was retrieved from between the rocks. Twenty-eight (152.3 g) items were found including 4 (104.4 g) pieces of shatter, 2 (15.2 g) pieces of fire-cracked chert, 9 (17.3 g) initial stage interior flakes, 6 (2.9 g) interior flakes and 7 (12.5 g) unidentified bones. The finescreen sample yielded 30 items weighing 4.5 g. These included 4 (0.2 g) pieces of unidentified charcoal, 7 (0.5 g) unidentified bones, 9 (3.1 g) interior flakes and 10 (0.7 g) retouch flakes.

Level 6 (50 cm - 60 cm) was stepped down to a 50 cm square unit in the northeast corner and was excavated by troweling. The primary soil matrix was a saturated very dark gray (10YR3/1) silt loam with inclusions of rocks. The integrity of the level was unclear with no clear evidence of disturbances. Features were not present. A 10 cm x 10 cm x 10 cm finescreen sample and soil sample were collected from the northeast corner and was retrieved from between rocks. Twelve (31.6 g) items were found including 1 (4.6 g) piece of fire-cracked chert, 10 (26.8 g) unidentified bones and 1 (0.2 g) piece of unidentified wood charcoal. The finescreen sample yielded 143 (25.5 g) items including 3 (0.2 g) pieces of unidentified charcoal, 123 (7.8 g) unidentified bones, 6 (1.5 g) interior flakes, 10 (0.3 g) retouch flakes and 1 (15.7 g) piece of shatter.

Shale bedrock was encountered at the base of Level 6. Only one stratum was identified during excavation of Test Unit 2 (Figure 40). No soil stratification was apparent, even though lighting conditions were far better than those that prevailed during the excavation of Test Unit 1.

Horizontal and Vertical Extent. Our investigations revealed that artifacts are distributed over a roughly triangular area measuring 14 m northwest-southeast x 23 m northeast-southwest (322 m^2). Outside the shelter proper, the site is roughly defined by the springs that flow over and out of the overhang. Isolated artifacts occur in the drainage flowing away from the site but the area is so circumscribed topographically that there is little doubt as to its boundaries. The maximum depth encountered was 60 cm in Test Unit 2. Isolated areas may be slightly deeper but, on the whole, the deposits probably do not greatly exceed that depth.

Cultural Affiliation. 23DA408 yielded 2,648 items weighing 6,969.5 g. These included 11 (8.0 g) whole arrow points (Alba, Fresno, Morris and Scallorn), 2 (1.2 g) arrow point stems (Fresno and Sallisaw) 4 (3.7 g) arrow point proximals (Cahokia Side Notched, Fresno and Scallorn), 1 (0.7 g) arrow point tip, 1 (0.8 g) arrow point distal, 9 (34.0 g) biface midsections, 3 (10.7 g) stemmed biface proximals (1 Table Rock Pointed Stem), 1 (1.2 g) bifacial drill fragment, 1 (87.1 g) tabular piece of chert, 1 (252.6 g) chunk of unmodified chippable stone, 1 (145.6 g) tested cobble, 6 (749.4 g) cores, 1 (3.6 g) dart point midsection, 2 (4.1 g) dart point tips, 1 (1.2 g) bifacial drill distal, 6 (30.3 g) bifacial knife distals, 20 (410.7 g) pieces of fire-cracked chert, 8 (46.9 g) pieces of fire-cracked sandstone, 285 (126.7 g) interior flakes, 796 (1,713.5 g) initial stage interior flakes, 130 (448.6 g) primary decortication flakes, 202 (11.4 g) retouch flakes, 1 (0.6 g) reverse hinge flake, 36 (150.9 g) secondary decortication flakes, 1 (7.6 g) grit-tempered plain rim sherd, 2 (31.8 g) grit-tempered cord-marked rim sherds, 1 (12.7 g) grog-tempered plain body sherd, 2 (16.6 g) shell-tempered plain body sherds, 26 (0.8 g) hickory (*Carya sp.*) nut hulls,

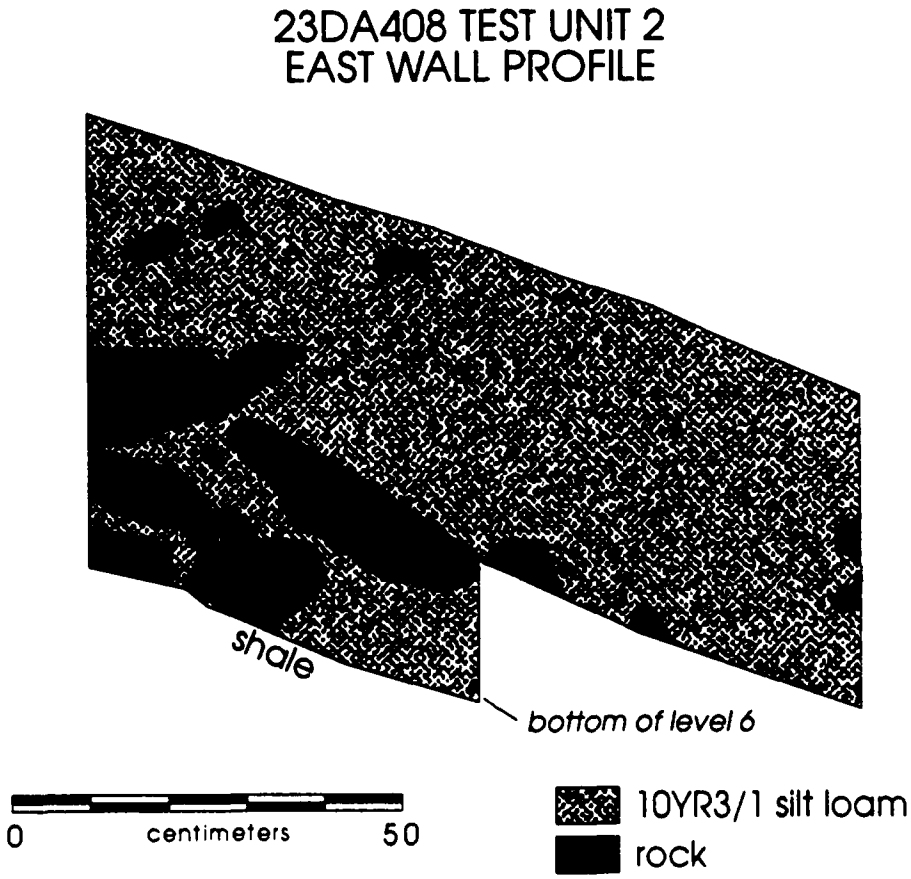


Figure 40. Profile of Test Unit 2 at 23DA408.

14 (127.2 g) preform proximals, 1 (1.8 g) bifacial end scraper distal, 1 (13.2 g) prismatic flake blade, 1 (0.6 g) flake knife, 2 (37.4 g) flake gravers, 1 (26.5 g) flake spokeshave, 1 (7.4 g) flake scraper, 398 (1,778.0 g) pieces of shatter, 1 (43.9 g) piece of sugar quartz, 511 (567.4 g) unidentified bones, 3 (4.0 g) unidentified mammal bones, 17 (20.0 g) pieces of mussel shell, 2 (0.1 g) snail shells, 106 (1.8 g) pieces of unidentified charcoal, 1 (0.2 g) piece of unidentified wood charcoal, 23 (0.3 g) grape (*Vitis sp.*) seeds, 6 (0.2 g) poke (*Phytolacca americana*) seeds, 1 (0.1 g) unidentified seed and 32.8 g of unsorted fine screen debris. The cultural materials suggest that the shelter was occupied during Woodland, Mississippi and Late Prehistoric times.

Function. Activities identified at 23DA408 include refuse disposal, hunting, butchering (including cutting meat with and without bone contact and scraping wet hide), drilling and perforating, food preparation and storage, manufacture and maintenance of stone tools, scraping dry hides, light wood and bone working (including cutting and scraping of wood, bone and antler) and limited milling of vegetal products. These activities suggest that the site was used for at least short term habitation, but evidence of year-round occupation was not recovered.

Integrity. Evidence of recent unauthorized excavations was present in the shelter. The site is relatively shallow and past episodes of pot hunting have damaged the deposits. No evidence of soil stratification was observed, however, the wet conditions may have contributed to this. The vertical distribution of culturally diagnostic artifacts suggests weakly that the site retains limited integrity (for example, all of the Mississippian and Late Prehistoric diagnostics were recovered from Levels 1 and 2 in both test units) but mixing in these levels is also evident. The site is now continuously wet due to drainage changes cause by highway construction, which has adversely affected preservation conditions.

Damage Assessment. Damage to the deposits at 23DA408 from unauthorized digging is limited in extent and shallow where it occurs. Potholes are generally small and not deeper than about 20 cm. Curiously, no backdirt piles are evident, but all of the observable excavations are near the drainage at the west end of the site and the soil may have been discarded there.

Alterations in drainage from work along State Highway 215 have had far greater impact because water now drains over the top of the shelter, keeping it perpetually saturated and eroding a large hole at the west end of the site. This hole has exposed the deposits and may have provided the original attraction to dig, but the saturated soil probably discouraged more extensive potting.

As with 23DA407 no prior published work at the site has occurred that would provide a baseline from which an accurate assessment of the damage could be made. The observable evidence suggests that damage is not extensive.

Significance. The deposits are shallow and exhibit only marginal integrity. In addition, the artifacts suggest occupation by a narrow range of prehistoric cultures that are difficult to define vertically. 23DA408 does not possess characteristics that when viewed in their most favorable light would result in it being considered eligible for the National Register of Historic Places. The site does not allow for the testing of a hypothesis or hypotheses about events, groups

or processes in the past that bear on important research questions, does not corroborate or amplify currently available information suggesting that an important research question or hypothesis is either true or false and does not allow reconstruction of the sequence or archeological culture for the purpose of identifying and explaining continuities and discontinuities in the archeological record (*National Register Bulletin* 15:21). Because shelters are abundant in the area and this one does not exhibit good research potential, it is not eligible for inclusion in the National Register of Historic Places. No further work is required and none is recommended.

SUMMARY AND RECOMMENDATIONS

Of the 90 sites newly recorded or revisited during this study (Table 98), 38 exhibit characteristics that may make them eligible for inclusion in the National Register of Historic Places . Limited testing was conducted by Prewitt and Associates at 4 of these (23CE330, 23CE336, 23DA342 and 23DA313) and all but 23CE330 were found to be significant. In addition 23DA314 was thought to be significant and 23CE338, 23CE349, 23DA211, 23DA312 and 23DA326 were considered to be not eligible, but without the benefit of test excavations. We believe that testing and assessment programs must develop sufficient information to form the basis for any necessary mitigation plans and that the previous testing did not accomplish that end. Phase II assessments should be conducted at all 38 sites to determine their significance relative to National Register criteria.

Fifty-two sites exhibit characteristics that, when viewed in their most favorable light, fail to make them eligible for inclusion in the National Register. These sites do not allow for the testing of a hypothesis or hypotheses about events, groups or processes in the past that bear on important research questions, do not corroborate or amplify currently available information suggesting that an important research question or hypothesis is either true or false and do not allow reconstruction of the sequence or archeological culture for the purpose of identifying and explaining continuities and discontinuities in the archeological record (*National Register Bulletin* 15:21). No further work is required and none is recommended.

SUGGESTED RESEARCH QUESTIONS

Many of the HPA and Wimmer sites represents the results of Archaic, Woodland and Mississippi Period activities. Important research issues that remain for the Osage Prairie Study Unit include (Wright 1987):

- Identification and documentation of datable Early Archaic contexts.
- Identification and documentation of Early Archaic settlement patterns.
- Identification and documentation of Middle Archaic site locations.
- Identification and documentation of Late Archaic settlement patterns.

Table 98. Summary of recommended actions for the HPA sites.

Site No.	Date Range	Probable Site Function	Characteristics	Recommended Disposition
23CE321	Late Archaic (3000 - 1000 BC)	Habitation	Good soil development. Presence of sub-plowdepth cultural materials with potential for intact deposits.	NRHP assessment
23CE329	Indeterminate prehistoric	Lithic procurement	Damaged by shoreline erosion. Cultural materials are sparse and soils are thin with little potential for intact deposits. Prewitt and Associates judged the site not eligible for NRHP (Girard and Freeman 1992:146)	No further work
23CE330	Indeterminate prehistoric	Upland hunting site	Some damage by development activities but most of the site appears undisturbed. Artifacts are sparse but soil development is good and intact deposits remain. Portion along shoreline tested by Prewitt and Associates (Girard and Freeman 1992:146-147) and determined not eligible for NRHP. However, only a small portion of the site is exposed along the shore.	NRHP assessment
23CE335	Indeterminate prehistoric	Upland hunting site	Impact from development. Sparse cultural remains in thin soils. Prewitt and Associates judged the site not eligible for NRHP (Girard and Freeman 1992: 182, 184)	No further work
23CE336	Indeterminate prehistoric	Habitation	Some impact from development but good soil development. Prewitt and Associates conducted limited testing and determined the site eligible for NRHP (Girard and Freeman 1992:184)	NRHP assessment
23CE338	Indeterminate prehistoric	Habitation	Damaged by development and shoreline erosion but has dense deposits that may be intact in places. Prewitt and Associates judged the site not eligible for NRHP (Girard and Freeman 1992:185)	NRHP assessment
23CE342	Indeterminate prehistoric	Upland hunting site	Subject to damage by shoreline erosion. Outside the HPA survey area. Prewitt and Associates conducted limited testing and determined the site to be eligible for NRHP (Girard and Freeman 1992:189-190).	NRHP assessment
23CE349	20th century Historic?	Farmstead	Damaged by development activities but intact historic features remain. Possibly associated with the Hartley family. Prewitt and Associates thought the site not eligible for NRHP (Girard and Freeman 1992:148, 150).	NRHP assessment

Table 98, continued. Summary of recommended actions for the HPA sites.

Site No.	Date Range	Probable Site Function	Characteristics	Recommended Disposition
23CE350	Indeterminate historic	Stone wall	Damaged by development activities and scavenged by campers for campfire rings but otherwise easily followed. Thought by Prewitt and Associates to be not eligible for NRHP (Girard and Freeman 1992:150).	No further work
23CE355	19th-20th century Historic	Cemetery	Well preserved with possible associated slave cemetery and thought to be eligible (Girard and Freeman 1992:154). Not on Government-owned land.	No further work
23CE364	Indeterminate historic	Farmstead	Destroyed by development activities. Probably associated with 23CE471. Thought by Prewitt and Associates to be not eligible for NRHP (Girard and Freeman 1992:191).	No further work
23CE398	Late Archaic (3000 - 1000 BC) Woodland (1000 BC - AD 900) Mississippi (AD 900 - 1450)	Habitation	Virtually destroyed by shoreline erosion	No further work
23CE467	Indeterminate prehistoric	Habitation	Severe damage from development and erosion	No further work
23CE468	Woodland?	Upland hunting site	Has been damaged by development and shoreline erosion. The deposits are shallow with few artifacts which are sparsely distributed over a large area. Its research potential is minimal.	No further work
23CE469	Late Archaic (3000 - 1000 BC) 20th century Historic?	Habitation Farmstead	Damaged by development but there is good soil development on the higher elevations and intact prehistoric deposits may remain. The historic component has been destroyed by shoreline erosion.	NRHP assessment
23CE470	Indeterminate prehistoric	Habitation	Heavily damaged by development and erosion.	No further work
23CE471	Indeterminate prehistoric 20th century Historic?	Habitation Farmstead	Damaged by development but cultural materials are abundant and intact historic features remain	NRHP assessment
23CE472	Indeterminate historic	Industrial	Isolated historic feature without associated structures or cultural remains	No further work
23CE473	Indeterminate prehistoric	Habitation	Damaged by road construction but is, otherwise, in good condition with abundant cultural remains	NRHP assessment
23CE474	Indeterminate prehistoric	Upland hunting site	Heavily damaged by development activities with thin soils and little chance of intact deposits	No further work
23CE475	Indeterminate prehistoric	Habitation	Virtually destroyed by development activities. The soils are shallow and probably do not contain intact deposits	No further work

Table 98, contined. Summary of recommended actions for the HPA sites.

Site No.	Date Range	Probable Site Function	Characteristics	Recommended Disposition
23CE476	Indeterminate historic	Rock wall	An isolated historic feature damaged by development	No further work
23CE477	Indeterminate prehistoric	Upland hunting site?	Destroyed by development. Cultural remains sparse and the soils thin with little potential for intact deposits	No further work
23CE478	Indeterminate prehistoric	Upland hunting site?	Destroyed by development. Cultural remains sparse and the soils thin with little potential for intact deposits	No further work
23CE479	Indeterminate prehistoric	Upland hunting site?	Destroyed by development. Cultural remains are sparse and the soils thin with little potential for intact deposits	No further work
23CE480	Indeterminate prehistoric	Upland hunting site?	Destroyed by development. Cultural remains sparse and the soils thin with little potential for intact deposits	No further work
23CE481	Indeterminate prehistoric	Upland hunting site	Destroyed by development. Cultural remains sparse and the soils thin with little potential for intact deposits	No further work
23CE482	20th century Historic	Farmstead	Severely damaged by development activities	No further work
23CE483	20th century Historic	Enclosed spring	Isolated historic feature without associated structures or cultural remains.	No further work
23CE484	20th century Historic	Farmstead	Severely damaged by development activities.	No further work
23CE485	Indeterminate prehistoric	Upland hunting site	Damaged by development but much of the site is outside developed areas. Cultural remains are reasonably abundant and soil development good with a potential for containing intact deposits.	NRHP assessment
23DA81	Indeterminate prehistoric	Shelter	No obvious evidence of disturbance by unauthorized digging. The paucity of surface materials may mean that the deposits are sealed beneath a layer of culturally sterile soil.	NRHP assessment
23DA82	Indeterminate prehistoric	Shelter	Subject to periodic inundation but there are no indications of gross disturbances and intact deposits may remain.	NRHP assessment
23DA83	Late Archaic (3000 - 1000 BC) Woodland (1000 BC - AD 900)	Shelter	Subject to periodic inundation and unauthorized digging. The existing excavations are relatively shallow and may have affected only the upper deposits.	NRHP assessment
23DA85	Late Archaic (3000 - 1000 BC) Late Woodland (AD 400 - 900) Mississippi (AD 900 - 1450)	Shelter	Subject to periodic inundation and unauthorized digging. The extent of impact from past digging is unknown.	NRHP assessment

Table 98, continued. Summary of recommended actions for the HPA sites.

Site No.	Date Range	Probable Site Function	Characteristics	Recommended Disposition
23DA86	Indeterminate prehistoric	Shelter	Subject to periodic inundation and unauthorized digging. The extent of impact from past digging is unknown.	NRHP assessment
23DA211	Indeterminate prehistoric	Habitation	Damaged by development activities but cultural materials are abundant and soil development is good and intact deposits may remain. Thought to be not eligible for NRHP by Prewitt and Associates (Girard and Freeman 1992:157)	NRHP assessment
23DA244	Indeterminate prehistoric	Lithic scatter	Subject to periodic inundation and shoreline erosion. It may have also been damaged during construction of the Highway 215 brodge across Maze Creek. Cultural materials are sparse.	No further work
23DA306	Indeterminate prehistoric	Lithic scatter	Virtually destroyed by developmant activity and erosion. Soils are thin and cultural remains were not found.	No further work
23DA312	Indeterminate prehistoric	Upland hunting site	Damaged by development activities and shoreline erosion but soil development on the higher elevations is good and may contain intact deposits. Thought to be not eligible for NRHP by Prewitt and Associates (Girard and Freeman 1992:158)	NRHP assessment
23DA313	Late Archaic (3000 - 1000 BC) Woodland (1000 BC - AD 900) 19th-20th century Historic	Habitation Farmstead	Intact historic features and abundant prehistoric and historic cultural remains are present. Soil development is good and intact deposits are possible. Previously tested and determined eligible for NRHP (Girard and Freeman 1992:165-166).	NRHP assessment
23DA314	19th-20th century Historic?	Farmstead	Subject to shoreline erosion at flood stage. Intact historic features and abundant cultural remains are present. Potentially an early 19th century homestead. Previously recommended for additional work (Girard and Freeman 1992:166).	NRHP assessment
23DA321	20th century Historic	Farmstead	Virtually destroyed by development acvtivities. Thought by Prewitt and Associates to be not eligible for NRHP (Girard and Freeman 1992:169)	No further work

Table 98, continued. Summary of recommended actions for the HPA sites.

Site No.	Date Range	Probable Site Function	Characteristics	Recommended Disposition
23DA325	19th-20th century Historic?	Farmstead	Virtually destroyed by development. Thought to be eligible for NRHP by Prewitt and Associates (Girard and Freeman 1992:193-194)	No further work
23DA326	Late Archaic (3000 - 1000 BC) Woodland (1000 BC - AD 900) Mississippi (AD 900 - 1450) 20th century Historic	Habitation Farmstead	Damaged by development activities, which have largely destroyed the historic component. There is good soil development on the higher elevations and intact prehistoric deposits may remain. Thought to be not eligible by Prewitt and Associates (Girard and Freeman 1992:171).	NRHP assessment
23DA361	Indeterminate prehistoric	Lithic procurement Upland hunting site	Heavy damage by development and erosion	No further work
23DA376	Late Archaic (3000 - 1000 BC) Woodland (1000 BC - AD 900)	Lithic scatter	Subject to shoreline erosion.	NRHP assessment
23DA384	Indeterminate prehistoric	Lithic scatter	Subject to shoreline erosion.	NRHP assessment
23DA388	Late Archaic (3000 - 1000 BC) Woodland (1000 BC - AD 900)	Habitation		NRHP assessment
23DA394	Late Prehistoric	Lithic procurement	Severe damage from shoreline erosion and development activities.	No further work
23DA407	Early-Middle Archaic? (7500 - 3000 BC) Middle-Late Woodland (500 BC - AD 900) Mississippi (AD 900 - 1450) Indeterminate historic	Shelter Trapping station	The bulk of the deposits are in the upper levels which are badly disturbed by unauthorized digging. No evidence of stratification or of in situ materials was recovered.	No further work
23DA408	Late Archaic (3000 - 1000 BC) Late Woodland (AD 400 - 900) Mississippi (AD 900 - 1450) Late Prehistoric (AD1450 - 1700)	Shelter	The site is shallow with no evidence of stratification. The lone feature found is of uncertain origin and is not definitely cultural. There is also some damage from unauthorized digging. The deposits are saturated by water draining from the Highway 215 right-of-way, which has adversely effected the preservation of organic remains.	No further work
23DA411	Woodland (1000 BC - AD 900) Mississippi (AD 900 - 1450)	Shelter	The site is used by campers and some limited digging is evident. Disturbance appears to be minimal and intact deposits may be present.	NRHP assessment

Table 99, continued. Summary of recommended actions for the HPA sites.

Site No.	Date Range	Probable Site Function	Characteristics	Recommended Disposition
23DA413	Late Archaic (3000 - 1000 BC)	Upland hunting site	Extensive damage from Jeep trails and possibly from construction of the Highway 215 bridge across Maze Creek. The deposits are sparse and shallow with little data potential.	No further work
23DA419	19th-20th century Historic?	Cemetery	Heavily overgrown	No further work
23DA420	20th century Historic	Farmstead? Dump?	The site is located on a sandstone glade with little soil present. No structural features are present and the materials could be secondarily deposited	No further work
23DA421	Woodland? (1000 BC - AD 900) 20th century Historic	Habitation Farmstead out-building	The historic component has been heavily disturbed but a portion of the prehistoric component exhibits reasonably deep deposits and good soil development.	NRHP assessment
23DA422	Indeterminate prehistoric 20th century Historic	Lithic scatter Farmstead	All structures have been destroyed and surface features heavily disturbed by bulldozing.	No further work
23DA423	Indeterminate prehistoric	Habitation	Disturbances appear to be minimal and soil development is good with the potential to contain intact remains	NRHP assessment
23DA424	Indeterminate prehistoric	Upland hunting site	Extensive damage from powerline construction and a Jeep trail.	No further work
23DA425	Indeterminate prehistoric	Shelter	Some limited digging is evident but the site appears undisturbed otherwise. It appears to be completely dry with the potential for the preservation of organic remains.	NRHP assessment
23DA426	Indeterminate prehistoric	Shelter	Some limited digging is evident but the site appears undisturbed otherwise. It appears to be completely dry with the potential for the preservation of organic remains.	NRHP assessment
23DA427	Indeterminate prehistoric	Habitation	Much of the site has been damaged by powerline construction but portions of it exhibit good soil development and may contain intact deposits.	NRHP assessment
23DA428	Indeterminate prehistoric	Habitation	Much of the site is located on a sandstone glade but the portion nearest Maze Creek exhibits good soil development and may contain intact deposits.	NRHP assessment
23DA429	Indeterminate prehistoric	Habitation	The soils are shallow and stony and shovel tests failed to detect deposits below a depth of 10 cm.	No further work

Table 99, continued. Summary of recommended actions for the HPA sites.

Site No.	Date Range	Probable Site Function	Characteristics	Recommended Disposition
23DA430	Indeterminate prehistoric	Upland hunting site	Damage from bulldozing is evident but the extent is unknown. Soil development is good and may contain intact deposits.	NRHP assessment
23DA431	Indeterminate prehistoric	Upland hunting site	There is substantial evidence of the erosion of soils from the crest of the site onto the slopes. Deflation and mixing of the deposits is likely.	No further work
23DA432	Indeterminate prehistoric	Upland hunting site	Substantially destroyed by construction of the Highway 215 bridge.	No further work
23DA433	Indeterminate prehistoric	Lithic procurement	Subject to periodic inundation. Cultural materials are sparse and of dubious research potential	No further work
23DA435	Indeterminate prehistoric	Upland hunting site	No evidence of disturbance but the cultural deposits are very sparse and have little data potential	No further work
23DA436	Late - Terminal Archaic (3000-1000 BC) Late Woodland (AD 400 - 900)	Upland hunting site	No evidence of disturbance. The cultural deposits are reasonably dense and may be partially intact.	NRHP assessment
23DA437	Indeterminate prehistoric	Upland hunting site	No evidence of disturbance. The cultural deposits are reasonably dense and may be partially intact.	NRHP assessment
23DA438	Indeterminate prehistoric	Upland hunting site	No evidence of disturbance. The soils are resonably deep and the cultural deposits are relatively dense and may be partially intact.	NRHP assessment
23DA439	Indeterminate prehistoric	Upland hunting site	No evidence of disturbance. The soils are resonably deep and the cultural deposits are relatively dense and may be partially intact.	NRHP assessment
23DA440	Indeterminate prehistoric	Upland hunting site	No evidence of disturbance. The soils are resonably deep and the cultural deposits are relatively dense and may be partially intact.	NRHP assessment
23DA441	Indeterminate prehistoric	Upland hunting site	No evidence of disturbance. The soils are resonably deep and the cultural deposits are relatively dense and may be partially intact.	NRHP assessment
23DA442	Late Woodland (AD 400 - 900) Mississippi (AD 900 - 1450)	Habitation	Cultural materials were recovered only in the field road that crosses the site and may have eroded from higher elevations. Shovel testing was uniformly negative	No further work
23DA443	Indeterminate prehistoric	Lithic procurement	Disturbed by development activities. The soils are shallow and the deposits sparse.	No further work

Table 98, concluded. Summary of recommended actions for the HPA sites.

Site No.	Date Range	Probable Site Function	Characteristics	Recommended Disposition
23DA444	Indeterminate historic	Rock pile	An isolated historic feature without associated structures or cultural remains	No further work
23DA445	Indeterminate historic	Industrial (mining pits?)	Isolated historic features without associated structures or cultural remains.	No further work
23DA446	20th century Historic	Farm outbuilding	All structural features have been destroyed by bulldozing. Potentially severe damage to subsurface deposits	No further work
23DA447	Indeterminate historic	Rock piles	Isolated historic features without associated structural or cultural remains	No further work
23DA448	Late Archaic (3000 - 1000 BC) Middle-Late Woodland (500 BC - AD900) Indeterminate historic	Habitation Isolated sherd	Virtually destroyed by recent bulldozing. Cultural remains are sparse.	No further work
23DA449	Woodland? (1000 BC - AD900) Indeterminate historic	Habitation Farmstead	Damaged by field clearing and shoreline erosion. Also subject to unauthorized collecting. Sub-plowzone deposits are present.	NRHP assessment
23DA450	Indeterminate prehistoric	Bedrock petroglyph	In excellent condition	NRHP assessment
23DA451	Indeterminate prehistoric	Upland hunting camp?	Shallow sparse deposits with little data potential	No further work
23DA452	Indeterminate prehistoric	Upland hunting camp?	Shallow sparse deposits with little data potential	No further work
23DA453	Late Archaic (3000 - 1000 BC)	Upland hunting camp?	Shallow sparse deposits with little data potential	No further work
23DA454	Indeterminate historic	Industrial (mining pits)	Isolated historic feature without associated structural or cultural remains	No further work
23DA455	Indeterminate prehistoric	Upland hunting site	Largely destroyed by development activities and erosion.	No further work

- Identification and documentation of datable Late Archaic contexts.
- Do Archaic Period activities reflected in the Osage Prairie belong to the Sedalia Phase or are other affiliations probable?
- What is the settlement-subsistence pattern reflected in Archaic contexts?
- Were the Archaic Period occupants of the Osage Prairie geographically isolated?
- Identification and documentation of Early Woodland settlement patterns.
- Do Woodland Period activities reflected in the Osage Prairie belong to the Lindley Phase or are other affiliations probable?
- What is the settlement-subsistence pattern reflected in Woodland contexts?
- What is the duration of the so-called Late Woodland adaptation in the Osage Prairie?
- Were the Woodland Period occupants of the Osage Prairie geographically isolated?
- Identification and documentation of datable Mississippi Period contexts.
- Identification and documentation of Mississippi Period settlement patterns.

These and other research questions can form the basis on which new Stockton data can be collected and interpreted. The results of these research efforts can then be used by the District and the Stockton field office to present to the public the story of how people used and adapted to their environment during the historic and prehistoric past.

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GLOSSARY

Arrow Point. This category includes small, thin, symmetrical, pointed bifaces or any fragment thereof. A hafting element is often present but may be unobtrusive in some specimens.

Biface. These are complete or fragmentary, unstemmed bifacial tools. Tip and midsection fragments of projectile points are normally included in this category but stemmed fragments are included in the projectile point category. Arrow point fragments are not included.

Broken Flake. These are incomplete flakes that cannot be assigned to any other flake category with confidence. Most are small, thin fragments that are probably fragments of retouch flakes but lack a striking platform or other distinguishing attributes.

Core. This is also a raw material category that includes cobbles or tabular pieces of good quality chert or quartzite from which more than two flakes have been removed and which show no modification for other uses. Cores recycled for use as hammerstones, choppers, etc. are classified under those categories.

Dart Point. Any relatively large, symmetrical, bifacially worked artifact that has been modified for hafting, or any fragment that shows evidence of a hafting element is classified as a dart point. Tip and midsection fragments are normally assigned to the biface category.

Drill/Reamer. These specimens exhibit rotating wear on a pointed tip. We have classified long, thin, bifacially worked specimens as drills. These are probably reworked projectile points. Reamers include tools with a similar function that are made of fragments of chert or flakes that are not bifacially worked or modified for hafting.

Edge-Ground Cobble. These tools are characterized by the presence of a well defined ground or abraded facet, shallow groove or wide indentation on the edge of a cobble. Some weathered cobbles may be mistaken for edge-ground cobbles but individual grains should be worn and there should be a difference in the amount of patination when compared with the remainder of the cobble.

Flat Abrader. These are characterized by the presence of a flat or slightly convex areas on the face of a cobble on which the patination has been worn away and/or a greater degree of smoothness is present than is typical of the natural cobble surface. In the case of sandstone or quartzite close inspection will show that individual grains on the abraded surface are worn.

Grinding Basin. These tools exhibit a shallow, smooth basin on the face of a cobble or slab of stone. These are usually made of a coarse grained stone and used for plant food processing.

Hammerstone. These are generally large chunks of chert or other hard stone that exhibit well defined zones of battering on prominent corners or edges. Some are rounded in appearance.

Interior Flake. These flakes are normally produced during the latter stages of bifacial reduction. Distinguishing characteristics include a lack of cortex, steep platform angles, deep flake scars on the dorsal surface and a thick cross section. They may intergrade with some retouch flakes and may also be confused with decortication flakes struck from raw materials lacking cortex. Specimens exhibiting use wear or intentional modification are classified as modified flakes.

Modified Flake. These are flakes that exhibit use wear or intentional modification for use as cutting or scraping tools. Working edges may be concave, straight or convex. Specimens exhibiting unifacial wear (shear chipping) are classified as flake scrapers while those exhibiting bifacial wear (wear chipping) are classified as flake knives.

Pitted Cobble. These cobbles have one or more pits that are U or V-shaped in cross section. Those with V-shaped pits may have been used in bipolar flaking as hard anvils while U-shaped pits may have resulted from nut cracking.

Preform. This category includes unstemmed bifacial artifacts and fragments thereof that do not appear to represent finished bifacial tools. Distinguishing characteristics include generally crude flaking (usually percussion) and a lack of use wear. Many occur as fragments that were broken during manufacture and discarded. These items represent the final stage of initial biface reduction, before being worked into finished tools.

Primary Decortication Flake. This category includes unmodified flakes in which ninety percent or more of the dorsal surface is covered with cortex. These are by-products of the initial stage of core preparation, core reduction and biface manufacture and are most likely to be found at quarry sites, workshop sites and base settlements. Specimens exhibiting use wear or intentional modification are classified as modified flakes.

Retouch Flake. These flakes are produced during the final stages of bifacial reduction and tool sharpening or modification. Distinguishing characteristics include acute platform angles, shallow and wide scars on the dorsal surface and a thin cross section. Some specimens may be difficult to distinguish from interior flakes. Those exhibiting use wear or intentional modification are classified as modified flakes.

Secondary Decortication Flake. This category includes unmodified flakes in which cortex covers less than ninety percent of the dorsal surface and that exhibit clear evidence of the removal of previous flakes. These are by-products of various stages of core preparation and biface manufacture and usually occur at quarry sites, workshop sites and base settlements. Flakes exhibiting cortex only on the striking platform are classified as interior flakes. Those exhibiting use wear or intentional modification are classified as modified flakes.

Shatter. This category includes angular fragments of chert or quartzite resulting from various reduction processes. Some shatter may be confused with cobble fragments and fire-cracked rock, however, most of the latter are readily recognized.

Tested Cobble. This is another raw material category that includes whole or nearly whole chert or quartzite cobbles that have no more than two flakes removed and that exhibit no further intentional modification. These are normally composed of poor grades of raw material.

Unmodified Chippable Stone. This is a raw material category and includes fragments of chert suitable for the manufacture of flaked stone tools that exhibit no evidence of modification. Specimens from which flakes have been removed are classified as cores or tested cobbles.

APPENDIX A. Project Participants

SAMUEL B. ADDINGTON, CHARLES E. EMERY and CHARLES TAULBEE of rural Cedar County, Missouri assisted in the field work.

DON R. DICKSON participated in the fieldwork, analyzed and illustrated the artifacts and authored various sections of the report. Mr. Dickson received a B.S. in secondary education from the University of Arkansas in 1967. He is a recognized regional expert in the study of lithic use and procurement.

STEVEN M. IMHOFF directed the field work and wrote various portions of the report. Mr. Imhoff has 19 years experience as a professional archeologist and has conducted investigations in Arkansas, Louisiana, Missouri and Oklahoma. He received a B.S. in sociology from the University of Tulsa in 1974 and an M.A. in anthropology from the University of Arkansas in 1982. He is a member of the Society of Professional Archeologists.

TIMOTHY C. KLINGER served as principal investigator and authored various sections of the report. Mr. Klinger received an M.A. in anthropology from the University of Arkansas in 1977 and a J.D. from the University of Arkansas School of Law in 1982. He is a member of the Society of Professional Archeologists and is an attorney at law licensed by the State of Arkansas.

JAMES E. PRICE served as a regional consultant and reviewed the Wimmer ceramic collections for the study. Dr. Price received a Ph.D. in anthropology in 1973 and is affiliated with the University of Missouri, Southeast Missouri Field Station in Naylor, Missouri.

APPENDIX B
Cultural Materials Recovered During the HPA Work

Horizontal Provenience	Vertical Provenience	Artifact Description	Ct.	Wt(g)	Comments

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SLCC-IF1	Surface - general	Aborted preform	1	304.1	Aborted due to a tough and unknappable place in stone.
SLM-IF1	Surface - general	Secondary decortication flake	1	7.5	
SLM-IF2	Surface - general	Interior flake	1	3.3	
SLOT-IF2	Surface - general	Interior flake	1	1.2	
SLOT-IF3	Surface - general	Interior flake	2	3.2	
SLS-IF1	Surface - general	Flake knife	1	37.8	A large U-shaped flake.
SLS-IF2	Surface - general	Biface distal	1	3.3	Probably part of a cutting implement but too little of blade left to determine for sure.
SLS-IF3	Surface - general	Interior flake	6	6.9	
CE134/DA361	Surface - general	Primary decortication flake	3	143.2	
		Secondary decortication flake	5	239.3	
		Preform distal	1	126.2	
		Aborted preform edge	1	55.1	
		Core	1	96.7	
		Initial stage interior flake	10	32.6	
		Interior flake	3	1.5	
23CE321	Surface - general	Dart point stem (Stone Corner Notched?)	1	11.3	Broken by impact 1.9 cm above shoulders.
		Biface stem	1	5.5	
		Preform base	1	27.7	
		Initial stage interior flake	22	121.6	
		Interior flake	11	9.2	
23CE330	Surface - general	Bifacial knife midsection	1	4.1	From an elongated narrow and thin biface.
		Knife/scraper flake tool	1	14.0	A twisted flake altered slightly in a bifacial manner. Part of it is missing. One 2.5 cm long marginal area is unifacially beveled and exhibits use rounding from cutting and scraping.
		Primary decortication flake	3	67.5	
		Secondary decortication flake	4	135.6	Three are from tabular sources one from a cobble source.
		Flake knife	1	75.2	A large and thick secondary decortication flake.
		Flake knife	1	51.4	A large and thick roughly triangular flake.
		Flake knife	1	21.1	
		Initial stage interior flake	12	126.1	
		Interior flake	2	0.8	
23CE335	Surface - general	Primary decortication flake	1	40.0	Reddish tint on inner surface suggests heat treatment. One potlid fracture on surface with cortex. Slight edge damage is probably accidental as no use polish is noted.
		Secondary decortication flake	1	0.6	This is a very small blade-like secondary decortication flake of white Ordovician chert. Breakage along one margin seems accidental since no use polish is noted
		Initial stage interior flake	7	58.0	
		Interior flake	1	1.7	This is a small semi-translucent chert flake with a potlid fracture on one face. It is Ordovician probably either Jefferson City or Cotter
		Interior flake	1	1.5	
23CE336	Surface - general	Initial stage interior flake	4	5.9	
		Interior flake	4	5.6	Some light unifacial microbreakage noted on two flakes. This is probably accidental since no use polish or rounding noted
Shovel test 02	1 (0.0 - 30.0 cm)	Interior flake	1	0.1	
Shovel test 35	1 (0.0 - 30.0 cm)	Secondary decortication flake	1	1.7	
		Interior flake	2	4.9	
Shovel test 38	1 (0.0 - 30.0 cm)	Interior flake	2	0.2	One small flake has broken in half.

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Horizontal Provenience	Vertical Provenience	Artifact Description	Ct.	Wt(g)	Comments
Shovel test 44	1 (0.0 - 30.0 cm)	Interior flake	1	0.2	
		Retouch flake	1	0.1	
Shovel test 47	1 (0.0 - 30.0 cm)	Initial stage interior flake	1	5.1	
23CE338	Surface - general	Dart point	1	8.4	A crudely made stemmed biface with a short blade.
		Bifacial knife midsection	1	3.4	
		Flake scraper	1	49.1	A thick flake with one straight edge and two concave areas on the other margin.
		Flake knife	1	6.4	An elongated blade-like flake.
		Biface midsection	1	8.9	
		Biface midsection	1	12.6	A fragment with a unifacially beveled section on one edge. This beveled part is not stem area however it has no diagnostic use wear on it either.
		Bifacial side scraper distal	1	9.2	A triangular bifacially worked item with one convex edge.
		Biface midsection	1	2.4	A small roughly triangular biface fragment with margins missing.
		Shredder denticulate	1	289.3	A blocky tabular stream cobble with flakes unifacially removed from one edge to produce several short denticulate projections. These projections and the edge in general feature much use rounding and soft polish. Comparable wear was produced on experimental specimens by shredding cedar bark. Traditionally these have been called cores.
		Core	1	121.9	A plano-convex chunk of Ordovician Jefferson City chert has had flakes removed from the dorsal surface all around the core.
		Secondary decortication flake	2	13.8	One exhibits cobble cortex one tabular.
		Initial stage interior flake	20	178.8	
		Initial stage interior flake	1	5.1	
		Interior flake	4	3.1	
		Interior flake	1	1.0	
23CE342	Surface - general	Primary decortication flake	1	43.2	One thick flake of fossiliferous Burlington chert.
		Initial stage interior flake	2	72.5	One large interior flake and one small one. The latter has some unifacial flake damage but no polish indicating use. Flaking probably accidental.
		Interior flake	4	3.6	
23CE349	Surface - general	Glass canning jar base	1	193.3	This is the base of a half gallon green tinted canning jar.
		Glass lamp globe	5	39.2	
		Stoneware white	3	29.1	The largest white stoneware sherd is from a plate the second largest is from a cup and one tiny sherd is probably from a bowl.
		Window glass	4	18.5	
		Glass canning jar lid	1	6.1	
		Glass bowl	1	4.5	An angular sherd from a small bowl or vase.
		Milk glass	1	18.0	This is a thick flat sherd of milk glass with two raised ridges on one side. The other face is flat. One edge is rounded. Possibly a glass shelf fragment (from refrigerator or cooler).
23CE350		No cultural material collected	0	0.0	
23CE355		No cultural material collected	0	0.0	
23CE467	Surface - general	Core	1	158.2	A roughly rectangular block of chert from which several flakes have been struck (from two edges)

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Cultural Materials Recovered During the HPA Work

Horizontal Provenience	Vertical Provenience	Artifact Description	Ct.	Wt(g)	Comments
		Aborted preform proximal	1	60.0	This is the proximal part of a preform broken in manufacture due to several old fractures in chert a highly weathered Burlington chert.
		Preform proximal	1	42.6	This is the proximal part of a preform broken probably by heat although it has several old unhealed fractures in it. This is lower Burlington chert.
		Bifacial knife base	1	12.8	This is part of the base of a very thin triangular cutting implement. Apparently unhafted (unnotched).
		Aborted preform	1	6.9	This is a small and thin preform made from a flake. Edges have been beveled to assist in flaking the surfaces.
		Aborted preform distal	1	22.6	The distal portion of an advanced stage preform. Breakage due to flaw in chert. No use polish or rounding on margins so item not used.
		Aborted preform edge	1	39.3	A crudely flaked edge fragment from a preform broken early in reduction. Was a large heat treated flake being modified.
		Bifacial knife edge	1	5.3	A small edge fragment with some use polish and slight rounding on part of the excurvate margin.
		Biface edge	1	5.8	This is an excurvate edge fragment from a thin biface. No evidence of use on existing margin.
		Secondary decortication flake	2	66.2	One large flake is of a coarse textured gray Ordovician chert with cobble cortex and one small but thick flake is of an Ordovician quartzite with tabular cortex.
		Secondary decortication flake	1	18.6	
		Initial stage interior flake	13	88.4	
		Interior flake	12	9.7	
		Flake knife	1	3.5	A blade-like flake with one longitudinal arris features much use rounding polish and microbreakage on two margins. Some recent damage is noted too.
		Flake knife	1	3.7	
23CE468	Surface - general	Core	1	292.9	A thick roughly ovate chunk of chert has several flakes removed from one edge. The size is typical of some choppers but there is no evidence of use such as battering or use rounding so it is classified as a core.
		Core scraper	1	51.8	This is a small core with flakes removed from one excurvate edge. Type common in Woodland sites.
		Core	1	58.4	
		Aborted preform proximal	1	36.8	A preform broken late in reduction sequence due to porous place in chert.
		Preform distal	1	10.8	Edges are well abraded to assist reduction
		Aborted preform	1	68.4	A crudely flaked preform that was aborted due to poor quality of chert at one end of specimen.
		Bifacial knife edge	1	1.7	A small triangular edge fragment made from translucent Ordovician chert.
		Primary decortication flake	1	184.5	
		Primary decortication flake	1	11.0	
		Secondary decortication flake	2	33.6	

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Cultural Materials Recovered During the HPA Work

Horizontal Provenience	Vertical Provenience	Artifact Description	Ct.	Wt(g)	Comments
		Flake knife	1	19.6	A large blade-like flake with one longitudinal arris features much microbreakage use rounding and some polish on both margins. Some recent damage noted on edge too.
		Flake knife	1	40.3	A large thick interior flake made from lower Burlington chert.
		Initial stage interior flake	18	140.9	
		Initial stage interior flake	1	7.9	A flake of a red and yellow mottled fossiliferous chert. Possibly it is lower Burlington (or a Pierson variety from further south) but I am not sure so it is classed as Unknown.
		Initial stage interior flake	1	12.7	Quartzite.
		Interior flake	6	7.0	
		Interior flake	20	3.3	One flake is a somewhat oolitic light colored specimen the other is a slightly banded light colored flake (probably heat treated).
		Plain whiteware	2	10.0	
		Transfer print china	1	2.6	A small sherd of white china with a red transfer design on one surface.
3CE469	Surface - general	Bifacial knife proximal	1	8.6	Made from Jefferson City Oolite.
		Bifacial side scraper edge	1	11.2	This is a triangular biface fragment with two angular edges and one 90 degree break.
		Core	1	239.8	A large "D-shaped" chunk of Burlington chert with flakes removed from both faces.
		Aborted blank	1	156.1	A crudely flaked chunk of Burlington chert with crinoid and bryzoan fossils. Coarse texture on one side probably promoted discarding the biface.
		Preform tip	1	44.6	A wide fairly thin and well made preform tip with one unworked spot on one blade margin.
		Bifacial knife edge	1	14.8	Probably used after breakage during reduction.
		Secondary decortication flake	1	39.6	
		Initial stage interior flake	21	342.4	
		Initial stage interior flake	5	15.5	
		Initial stage interior flake	4	27.8	Three flakes are banded and or mottled Jefferson City chert flakes. One flake is a Jefferson City quartzite.
		Interior flake	13	8.3	Note that 12 of 13 of these interior flakes were heat treated while most of the initial stage flakes were not.
		Ironstone	1	14.0	A sherd of ironstone brown on inside and gray on exterior side.
		Ironstone	2	10.5	
		Plain whiteware	2	15.4	Two sherds from a hite china cup.
		Clear glass	2	14.6	From a bowl or platter.
		Green bottle glass	1	5.0	A small base fragment.
		Glass canning jar lid	1	2.4	
		Plain whiteware	1	2.9	A dark and medium blue sherd from a poor quality china bowl.
		Plain whiteware	1	2.6	A small thin sherd from a decorated china bowl. Most of the decoration has worn off.
23CE470	Surface - general	Initial stage interior flake	6	26.2	
23CE471	Surface - general	Stoneware	2	122.4	From a stoneware jar of small size
		Stoneware	11	114.1	White stoneware or whiteware

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Horizontal Provenience	Vertical Provenience	Artifact Description	Ct.	Wt(g)	Comments
		Drain tile	1	135.8	A fragment of a round ceramic tile of a type used both for drainage and for flue tile. No evidence of heat on inside of tile.
		Stoneware crock	1	35.0	Rimsherd from a stoneware crock brown interior and gray exterior.
		Transfer print china	1	2.6	A small sherd of white china with blue transfer design.
		Transfer print china	1	3.6	A sherd of poor grade china with a blue and purple floral pattern remaining in places. Much exfoliation of surface of sherd.
		Glass jug	1	155.5	This is the bottom of a half-gallon jar or glass jug.
		Glass canning jar lid	1	[illegible].5	
		Bifacial knife edge	1	6.1	
		Biface distal	1	5.5	Made from a large flake and flat on one surface. Apparently not used.
		Aborted preform proximal	1	22.0	A thick and narrow preform.
		Initial stage interior flake	3	18.7	
		Initial stage interior flake	1	5.7	
		Interior flake	8	9.5	
23CE472		No cultural material collected	0	0.0	
23CE473	Surface - general	Secondary decortication flake	1	33.4	
		Initial stage interior flake	8	12.6	
		Initial stage interior flake	1	0.3	This interior flake is of a poor grade gray chert with white inclusions. This chert is probably from the Sedalia formation.
		Interior flake	6	3.4	
		Interior flake	1	0.2	A notching flake of Jefferson City quartzite.
Shovel test 01	1 (0.0 - 30.0 cm)	Initial stage interior flake	1	1.5	
Shovel test 03	1 (0.0 - 30.0 cm)	Initial stage interior flake	2	7.3	
Shovel test 04	1 (0.0 - 30.0 cm)	Interior flake	1	0.2	
Shovel test 05	1 (0.0 - 30.0 cm)	Initial stage interior flake	2	17.5	One large white Burlington flake and one gray Burlington flake. The large flake seems to have slight edge damage. This is probably accidental since no polish was observed on edge.
Shovel test 06	1 (0.0 - 30.0 cm)	Initial stage interior flake	1	44.2	This is a large mottled white and gray Burlington flake with few fossils apparent. Slight damage on margin seems accidental as no use polish is present.
		Interior flake	1	0.2	
Shovel test 08	1 (0.0 - 30.0 cm)	Initial stage interior flake	1	1.4	
Shovel test 11	1 (0.0 - 30.0 cm)	Interior flake	1	0.1	
		Retouch flake	1	0.5	A pressure flake.
Shovel test 12	1 (0.0 - 30.0 cm)	Preform edge	1	19.7	An advanced preform probably broken by heat exposure.
		Initial stage interior flake	1	3.0	
Shovel test 16	1 (0.0 - 30.0 cm)	Interior flake	2	0.5	
23CE474	Surface - general	Bifacial knife midsection	1	18.1	Produced by reverse hinging while trying to thin the proximal part of a biface tip. Very fossiliferous Burlington chert.
		Initial stage interior [illegible]e	11	42.7	One thick iterior flake has been altered slightly by percussion but not used as a tool.
		Interior flake	9	9.5	
23CE475	Surface - general	Calcite	3	14.6	Unmodified
		Biface stem	1	4.9	This is part of the stem one shoulder and a fragment of blade from a contracting stemmed biface. All edges missing except small amount of stem edge.
		Flake knife	1	2.2	

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Horizontal Provenience	Vertical Provenience	Artifact Description	Ct.	Wt(g)	Comments
		Flake knife	1	9.3	This is a blade-like flake with one longitudinal arris.
		Blank	1	150.3	This is a roughly circular blank.
		Flake scraper	1	55.8	A thick roughly D-shaped flake.
		Core	1	294.1	A roughly elliptical and thick chunk of chert with a few flakes removed from two edges.
		Aborted preform distal	1	67.0	Fossiliferous Burlington chert. Quite thin along one edge.
		Core	1	82.7	This is a small and thick irregular piece of chert from which a few flakes have been removed.
		Primary decortication flake	1	171.5	This is a very thick primary decortication flake from Burlington chert. Damage along one margin seems accidental and some is recent.
		Initial stage interior flake	13	272.6	Several of these flakes seem to have damage along margins but this seems accidental because no polish was observed.
		Initial stage interior flake	1	2.3	
		Interior flake	6	2.0	
23CE476		No cultural material collected	0	0.0	
23CE477	Surface - general	Flake scraper	1	1.7	A thin flake that has been flaked across one face. One edge has been beveled and the ventral edge features some use-wear.
		Unstemmed biface	1	1.0	This is a small ovate form chipped from quartzite.
		Primary decortication flake	1	10.0	This decortication flake is of a light colored Ordovician chert and consists mostly of light material between two of the darker bands and tan cortex. Probably from a stream source.
		Secondary decortication flake	1	49.4	This is a thick flake of fairly coarse textured Burlington chert with some cortex present. Apparently from a stream source.
		Flake initial stage interior	6	26.2	
		Flake knife	1	1.9	A small but fairly thick translucent initial stage interior flake. Some very faint polish may indicate brief use as a cutting tool but most of the apparent unifacial damage is probably accidental.
23CE478	Surface - general	Core	1	102.4	An elongated piece of fine textured Burlington chert with two 6.2 cm long blade-like flakes removed from one end (average width of flakes 1.2 cm) and at least five short flakes removed from the other end. Striking platforms have been well ground to assist in blade removal.
		Initial stage interior flake	5	20.8	One flake shows some edge damage but this seems to have been produced accidentally since polish is absent.
23CE479	Surface - general	Flake knife	1	14.0	An elongated blade-like flake has one longitudinal arris and one sharp margin.
		Initial stage interior flake	7	39.4	
		Interior flake	3	5.2	
		Interior flake	1	1.7	
23CE480	Surface - general	Secondary decortication flake	1	82.0	From hillside or outcrop source.

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Horizontal Provenience	Vertical Provenience	Artifact Description	Ct.	Wt(g)	Comments
		Initial stage interior flake	4	9.9	Three small and thick flakes are of typical fossiliferous white Burlington chert. One flake is atypical having fine bands near the cortex (still adhering to striking platform). The pink and gray bands have been accentuated by heat treatment. Texture is typical Burlington.
23CE481	Surface - general	Primary decortication flake	2	127.5	
		Secondary decortication flake	1	6.8	
		Initial stage interior flake	6	39.5	
		Initial stage interior flake	4	22.7	One flake is of light colored Ordovician chert one has dark bands near the cortex (on striking platform) one is translucent with dark and light mottling (resembles agate) and one is heat treated partly oolitic chert. All are probably from the Jefferson City formation.
		Interior flake	1	1.4	This is a medium gray flake with dark gray lines and is typical of some Reeds Spring chert in southwest Missouri and northeast Oklahoma.
		Interior flake	10	14.2	
		Retouch flake	1	0.1	
23CE482	Surface - general	Plain whiteware	1	151.4	A large sherd from a whiteware platter.
		Tobacco tin (Prince Albert)	1	42.8	A Prince Albert tobacco tin with back side badly rusted.
		Bottle Bayer aspirin	1	31.6	This is a small Bayer Aspirin bottle intact but cracked.
		Clear glass bottle	1	64.2	A small clear glass bottle with number (12) on bottom. Fine ridges around all of bottle except small space for label (missing).
		Bottle glass	1	87.8	A small stoppered bottle with "2 FL. OZ." on bottom. Intact.
		Clear glass bottle	1	410.1	This is a broken 10 Fl. Oz. Double Cola bottle of Double Cola Bottling Co. Nevada Mo. Top of bottle missing.
		Glass canning jar & lid	1	147.3	This is the very top of a fruit jar with a Ball zinc lid and rubber seal intact.
		Zinc canning jar ring	1	70.0	A Ball brand zinc canning jar lid with flat jammed up into lid.
		Glass canning jar	1	8.8	This is a discarded flat from a fruit jar quart or half-gallon size.
		Plain whiteware	1	21.3	Most of the base of a white and tan china cup or vase.
		Milk glass	1	20.3	A sherd of milk glass with a light blue outer color. From a small bowl.
23CE483		No cultural material collected	0	0.0	
23CE484	Surface - general	Glass chicken waterer	1	683.0	Two piece glass chicken waterer consisting of broken base (patent No. 126997) and complete Ball pint fruit jar which served as a top water holder.
		Stoneware jug	1	759.0	The top of a gallon size stoneware jug with strap handle and stoppered opening. Brown upper part and interior. Cream colored lower exterior part. All of bottom gone.
23CE485	Surface - general	Core scraper	1	130.8	A roughly oval piece of Ordovician chert has had flakes removed from two edges. Some flaws and fractures in stone. Possible slight use polish may indicate brief use as a scraper.

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Horizontal Provenience	Vertical Provenience	Artifact Description	Ct.	Wt(g)	Comments
		Core	1	173.5	A thick roughly square blocky chunk of Ordovician dolomite has flakes removed from several edges.
		Flake knife	1	6.1	A prismatic flake blade with two longitudinal arrises.
		Primary decortication flake	1	25.4	
		Secondary decortication flake	5	47.3	Possibly from one cobble.
		Initial stage interior flake	4	18.5	
		Interior flake	2	2.1	
SLDA-IF1	Surface - general	Interior flake	1	0.6	
SLDA-IF2	Surface - general	Dart point stem (Rice Side Notched variant)	1	4.9	The specimen is quite thin for a dart point. Tangs are angular and shoulders are very slight. Probably a hunting loss.
		Interior flake	1	3.8	This flake was found in the same general area with dart point 1-1. No definite use-wear was observed.
SLDA-IF3	Surface - general	Initial stage interior flake	1	1.1	
SLDA-IF4	Surface - general	Initial stage interior flake	1	32.7	
SLDA-IF5	Surface - general	Bifacial side scraper midsectionm	1	27.2	A piece of Jefferson City oolite has been bifacially worked (possibly this is part of a preform). The artifact is steeply beveled at the distal end.
SLMC-IF1	Surface - general	Adze	1	113.7	This is a crudely flaked pear-shaped tool.
SLMC-IF2	Surface - general	Initial stage interior flake	1	9.7	Microbreakage on this flake seems accidental.
SLMC-IF3	Surface - general	Secondary decortication flake	1	15.0	
SLMC-IF4	Surface - general	Initial stage interior flake	1	20.6	This is a thick flake of gray cream and white mottled OJC chert.
SLMC-IF5	Surface - general	Primary decortication flake	1	41.0	This is a thick flake of coarse textured mottled OJC chert.
SLMC-IF6	Surface - general	Initial stage interior flake	2	77.3	
		Interior flake	1	1.4	
SLRB-IF1	Surface - general	Initial stage interior flake	1	5.5	
SLRB-IF2	Surface - general	Initial stage interior flake	1	6.7	Some damage on flake seems to be accidental and not use-inflicted.
SLRB-IF3	Surface - general	Biface edge	1	3.0	This is a roughly square biface fragment from a base or square stem. Undiagnostic.
SLRB-IF4	Surface - general	Initial stage interior flake	1	0.9	
SLRB-IF5	Surface - general	Initial stage interior flake	1	1.0	
23DA83	Surface - general	Bifacial knife proximal (Stone Corner Notched var.)	1	7.0	This biface fragment was found on the badly disturbed talus in front of the north part of the site.
23DA211	Surface - East Knoll	Secondary decortication flake	2	30.8	
		Initial stage interior flake	10	16.0	
		Interior flake	7	4.1	
	Surface - West Knoll	Biface barb	1	0.1	
		Initial stage interior flake	1	0.2	
		Interior flake	7	2.4	
Shovel test 01	1 (0.0 - 30.0 cm)	Interior flake	5	1.5	
Shovel test 02	1 (0.0 - 30.0 cm)	Aborted preform distal	1	38.1	
		Retouch flake	1	0.1	This is a very small pressure flake.
Shovel test 03	1 (0.0 - 30.0 cm)	Interior flake	1	0.2	
Shovel test 06	1 (0.0 - 30.0 cm)	Retouch flake	1	0.1	
Shovel test 1W	1 (0.0 - 30.0 cm)	Interior flake	1	1.7	
Shovel test 2W	1 (0.0 - 30.0 cm)	Shatter	2	0.2	
		Interior flake	1	0.8	
		Retouch flake	3	0.1	
Shovel test 4W	1 (0.0 - 30.0 cm)	Primary decortication flake	1	72.4	
		Retouch flake	3	0.1	
Shovel test 5W	1 (0.0 - 30.0 cm)	Interior flake	1	0.9	
		Retouch flake	5	0.1	
Shovel test 6W	1 (0.0 - 30.0 cm)	Interior flake	2	0.5	
		Retouch flake	4	0.1	

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Horizontal Provenience	Vertical Provenience	Artifact Description	Ct.	Wt(g)	Comments
Shovel test 7W	1 (0.0 - 30.0 cm)	Interior flake	1	0.7	
		Retouch flake	2	0.1	
Shovel test 1S	1 (0.0 - 30.0 cm)	Interior flake	2	0.2	
		Interior flake	1	0.1	
Shovel test 3S	1 (0.0 - 30.0 cm)	Interior flake	1	0.1	
		Interior flake	1	0.1	
		Retouch flake	2	0.1	
Shovel test 4S	1 (0.0 - 30.0 cm)	Interior flake	3	1.1	
		Retouch flake	1	0.1	
Shovel test 5S	1 (0.0 - 30.0 cm)	Primary decortication flake	1	8.0	
		Interior flake	2	0.2	
Shovel test 6S	1 (0.0 - 30.0 cm)	Biface barb	1	0.1	
		Interior flake	3	0.8	
23DA312	Surface - general	Scraper/graver flake	1	7.1	A small tabular piece of chert with a graver spur produced by unifacial flaking and one edge that has been used as a scraper without modification.
		Secondary decortication flake	2	38.1	
		Initial stage interior flake	1	6.6	
		Initial stage interior flake	8	30.5	
		Interior flake	10	9.0	
		Interior flake	1	0.1	This flake is from an unrecognized medium red chert with darker black inclusions. Texture is fine. This may be a variety of Pierson chert from Stone or Taney Co. Missouri or Marion Co. Arkansas but the black inclusions are not typical of red Pierson chert from these areas. Does not closely resemble red Kansas cherts either.
Shovel test 1W	1 (0.0 - 30.0 cm)	Interior flake	3	1.7	
Shovel test 2W	1 (0.0 - 30.0 cm)	Initial stage interior flake	1	0.8	
Shovel test 4	1 (0.0 - 30.0 cm)	Interior flake	2	1.7	One flake has potlid fractures on one face. The second has been snapped into at least three pieces. This is one fragment.
Shovel test 6	1 (0.0 - 30.0 cm)	Retouch flake	1	0.1	
23DA313	Surface - general	Bifacial knife (Langtry-like)	1	8.9	
		Bifacial knife proximal (Langtry-like)	1	6.3	
		Bifacial knife	1	7.6	The tip has a tiny spur protruding from the end. Barb remnant suggests a basely notched tool.
		Bifacial knife midsection	1	4.9	
		Biface midsection	1	11.8	Severely damaged.
		Initial stage interior flake	3	10.5	
		Interior flake	1	0.3	
		Stoneware	1	426.3	This is a thick base sherd of a stoneware jar (about 2 gallon size) with brown interior and exterior slip.
		Iron harness hardware	1	116.0	An 8.2 cm diameter iron ring passes through an eye on one end of an 8.8 cm long iron piece with an eye at the other end. Apparently hardware used with horse and wagon.
		Zinc canning jar ring	1	44.2	This is a slightly damaged zinc fruit jar ring with milk glass lid intact.
		Glass canning jar lid	1	5.3	
		Window glass	3	27.1	
		Blue-green glass	1	9.4	A sherd of blue-green glass with raised floral design on outside. Somewhat irredescent surface. Probably from a bowl. Apparently fairly old (early 20th Century?).

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Horizontal Provenience	Vertical Provenience	Artifact Description	Ct.	Wt(g)	Comments
		Ironstone	1	13.6	Sherd from an ironstone crock with brown slip on both surfaces.
		Plain whiteware	1	2.5	Small whiteware sherd from a teacup or small bowl.
Shovel test 1N	1 (0.0 - 30.0 cm)	Initial stage interior flake	2	3.8	
		Retouch flake	5	0.7	
Shovel test 2N	1 (0.0 - [illegible] cm)	Interior flake	3	0.6	
		Interior flake	1	0.3	
Shovel test 3N	1 (0.0 - 30.0 cm)	Initial stage interior flake	2	3.5	
		Retouch flake	5	1.0	
Shovel test 4N	1 (0.0 - 30.0 cm)	Initial stage interior flake	1	1.0	
		Retouch flake	4	0.8	
		Clear glass bottle	2	2.5	
Shovel test 1S	1 (0.0 - 30.0 cm)	Initial stage interior flake	3	2.2	
Shovel test 3S	1 (0.0 - 30.0 cm)	Secondary decortication flake	1	1.2	
Shovel test 1E	1 (0.0 - 30.0 cm)	Initial stage interior flake	1	2.5	
Shovel test 2E	1 (0.0 - 30.0 cm)	Initial stage interior flake	1	1.0	
Shovel test 3E	1 (0.0 - 30.0 cm)	Interior flake	1	0.8	
Shovel test 4E	1 (0.0 - 30.0 cm)	Retouch flake	3	0.3	
Shovel test 1W	1 (0.0 - 30.0 cm)	Retouch flake	6	1.9	
		Retouch flake	4	0.2	
Shovel tes. 2W	1 (0.0 - 30.0 cm)	Plain whiteware	1	1.9	
Shovel test 3W	1 (0.0 - 30.0 cm)	Initial stage interior flake	2	2.4	
Shovel test 4W	1 (0.0 - 30.0 cm)	Initial stage interior flake	1	0.4	
23DA314	Surface - general	Iron horseshoe	1	478.1	A small horseshoe well worn with the head of one nail in place.
		Iron stove part	1	256.5	A roughly triangular fragment of an iron stove is decorated with a raised design of a bird and arching branches.
		Green bottle glass	1	10.7	This is a fragment from the upper part of a green glass bottle with the raised letters "NK" above and part of a smaller "S" below.
		Bottle glass	1	18.4	Part of one side from a glass bottle which was indented both on sides and front and back. Probably a medicine bottle.
		Glass canning jar fragments	2	11.0	
		Glass lavender bottle	1	6.4	
		Window glass	1	2.1	
		Plain whiteware	8	47.9	Eight whiteware sherds ranging from thin sherds of a plate to thicker sherds from bowls and cups.
		Glass pressed	1	7.8	A sherd from a pressed glass bowl. Historic: 20th century.
		Clear glass bottle	1	1.4	The tops of three raised letters are visible (possibly a "T I and O").
		Ironstone	7	338.9	Seven ironstone sherds. Two are from a crock brown on both sides. Five are from a large stoneware jar brown on interior surface and gray on exterior.
		Unidentified iron	1	144.3	An unrecognized iron object has a circular shape with two square prongs extending from one side. Possibly part of some farm equipment.
		Automotive light bulb	1	7.7	This is a bulb from an automobile tail light or side light. The letters "MA" are visible on lower side. Bulb is fused. Recent historic.
23DA325		No cultural material collected	0	0.0	
23DA326	Surface - general	Projectile point/knife	1	3.5	

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Horizontal Provenience	Vertical Provenience	Artifact Description	Ct.	Wt(g)	Comments
		Arrow point stem	1	0.2	Small and crudely made. Side and base notches are unifacially produced. Part of tip may be missing. This is the work of a beginner or a child. Probably never used.
		Flake scraper	1	9.7	This is a 1 cm thick flake with an excurvate edge that is beveled unifacially partly by pressure and partly by use. A 1.2 cm wide concave area is found in the center.
		Biface midsection	1	23.2	Midsection from a thick biface made from a coarse textured tripolized tan chert. It is possible that this is Burlington chert but if so it is atypical. Rounding on existing margins may be from edge grinding for further reduction.
		Biface distal	1	6.3	
		Bifacial knife distal	1	4.2	
		Knife/scraper midsection	1	8.6	A concave area has been unifacially worked into what is probably the distal part.
		Arrow point tip	1	0.8	
		Secondary decortication flake	1	11.5	
		Initial stage interior flake	11	90.1	
		Initial stage interior flake	3	4.8	
		Interior flake	19	15.2	
		Interior flake	4	3.2	
		Stoneware	10	8.9	This is a small sherd from a gray stoneware crock.
23DA388	Surface - general	Preform	1	138.1	
		Preform	1	89.4	
		Secondary decortication flake	1	102.7	
		Initial stage interior flake	7	24.0	
		Interior flake	3	2.7	
		Retouch flake	2	0.2	
23DA394	Surface - general	Aborted preform	1	106.5	This is an early stage preform probably aborted due to a fracture in the chert.
		Core	1	292.3	This is a white OJC chert with light gray medium gray and dark gray oolites in it. Irregular shape with flakes removed from dorsal surface on three sides and one from ventral face.
		Primary decortication flake	1	18.2	This flake is from white oolite. hillside or outcrop source.
		Secondary decortication flake	4	113.8	The two larger flakes are of very fossiliferous and porous Burlington chert.
		Secondary decortication flake	3	55.4	
		Initial stage interior flake	7	137.3	
		Interior flake	4	6.4	
23DA407					
Test unit 1	1 (0.0 - 10.0 cm)	Initial stage interior flake	1	2.0	
		Boxturtle bone (Terrapene carolina)	1	1.1	
	Fine screen sample	Poke seed (Phytolacca americana)	34	0.3	
		Grape seed (Vitis sp.)	2	0.1	
		Unidentified bone (small)	4	0.2	
		Shatter	1	0.2	
	2 (10.0 - 20.0 cm)	Shatter	9	71.8	
		Initial stage interior flake	13	26.5	
		Interior flake	3	1.2	
		Retouch flake	6	0.7	
		Mink scapula (Mustela vison)	1	0.9	
		Boxturtle bone (Terrapene carolina)	1	0.4	
		Unidentified mammal bone	2	1.4	

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Horizontal Provenience	Vertical Provenience	Artifact Description	Ct.	Wt(g)	Comments
	Fine screen sample	Poke seed (Phytolacca americana)	6	0.1	
		Grape seed (Vitis sp.)	1	0.1	
		Unidentified charcoal	17	0.4	
		Unidentified bone (small)	10	0.4	
		Mussel shell	1	0.1	
		Shatter	1	0.3	
		Initial stage interior flake	1	0.3	
		Retouch flake	2	0.1	
	3 (20.0 - 30.0 cm)	Stemmed biface	1	8.8	
		Shatter	21	93.6	
		Initial stage interior flake	33	54.3	
		Interior flake	36	12.4	
		Retouch flake	16	1.3	
		Unidentified charcoal	3	0.3	
		Unidentified mammal bone	7	2.5	
		Unidentified bone fish	1	0.3	
	Fine screen sample	Poke seed (Phytolacca americana)	8	0.1	
		Unidentified charcoal	3	0.1	
		Unidentified bone	1	0.1	
		Retouch flake	4	0.2	
	4 (30.0 - 40.0 cm)	Flake scraper	1	7.1	A roughly oval secondary decortication flake has several flakes removed from the dorsal face and two or three from the ventral one. Some use polish along one margin.
		Bifacial knife edge	2	4.3	
		Shatter	14	168.6	
		Initial stage interior flake	36	47.8	
		Interior flake	21	6.4	
		Primary decortication flake	6	24.4	
		Retouch flake	15	1.3	
		Gray squirrel bone (Scurius carolinensis)	1	0.3	
		Unidentified mammal bone	3	1.6	
		Unidentified charcoal	7	2.4	
	Fine screen sample	Unidentified charcoal	6	0.1	
		Initial stage interior flake	1	1.4	
		Retouch flake	5	0.1	
	5 (40.0 - 50.0 cm)	Shatter	19	69.9	
		Secondary decortication flake	1	34.6	
		Preform midsection	1	16.0	
		Unidentifi[illegible] one	3	1.3	
		Initial st[illegible] nterior flake	29	69.0	
		Interior flake	29	10.1	
		Wire baling	1	0.8	
		Unidentified charcoal	10	0.1	
		Retouch flake	3	0.1	
	6 (50.0 - 60.0 cm)	Shatter	31	235.7	
		Initial stage interior flake	23	68.7	
		Interior flake	25	10.0	
		Retouch flake	8	0.7	
	Fine screen sample	Unidentified charcoal	8	0.1	
		Interior flake	1	0.3	
		Retouch flake	2	0.1	
	7 (60.0 - 70.0 cm)	Shatter	7	218.4	
		Primary decortication flake	2	11.8	
		Initial stage interior flake	11	4.9	
		Interior flake	10	2.6	
		Secondary decortication flake	2	8.3	
		Unidentified charcoal	8	0.6	
	Fine screen sample	Unidentified charcoal	11	0.2	
		Retouch flake	2	0.1	
	8 (70.0 - 80.0 cm)	Shatter	10	145.5	

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Horizontal Provenience	Vertical Provenience	Artifact Description	Ct.	Wt(g)	Comments
		Secondary decortication flake	4	36.3	One is from a cobble source the others are from a tabular source.
		Initial stage interior flake	21	9.1	
		Retouch flake	7	0.6	
		Core scraper	1	449.7	Embedded in west wall 46 cm. south of north wall. Bottom at 80 cmbd.
	Fine screen sample	Unidentified charcoal	9	0.1	
	9 (80.0 - 90.0 cm)	Unmodified chippable stone	1	1317.2	This is a large angular chunk of knappable chert probably Ordovician which has been deposited in sandstone some of which is still attached. This may represent a secondary deposition.
		Shatter	7	154.4	
		Initial stage interior flake	13	4.6	
		Retouch flake	6	0.5	
		Unmodified tripolized chert	2	1331.6	Poor quality and porous chert unsuitable for knapping but apparently carried into the site for some purpose. Not used. Each chunk about 9 x 10 x 6 cm in size and irregularly shaped.
	Fine screen sample	Unidentified charcoal	6	0.1	
	10 (90.0 - 100.0 cm)	Shatter	2	0.7	
		Secondary decortication flake	2	13.6	
		Initial stage interior flake	4	49.8	
		Retouch flake	3	0.3	
	Fine screen sample	Unidentified charcoal	12	0.1	
	11 (100.0-110.0 cm)	Bifacial knife midsection	1	4.3	Beveled and serrated edges suggest the Early Archaic or early in the Middle Archaic. Without the diagnostic base one cannot be sure.
		Shatter	1	1.0	
		Core	1	104.5	
		Retouch flake	2	0.3	
	Fine screen sample	Unidentified charcoal	11	0.1	
	12 (110.0-120.0 cm)	Chopper	1	176.6	A rounded tripolized creek pebble has been broken in half exposing a fair quality Ordovician chert inside. Bifacial knapping has produced an edge on this better quality chert. Some battering can be seen on edge.
		Preform proximal	1	86.6	
		Retouch flake	2	0.3	
	Fine screen sample	Unidentified charcoal	15	0.1	
		Interior flake	1	0.2	
	13 (120.0-130.0 cm)	Shatter	5	25.5	
	Fine screen sample	Unidentified charcoal	12	0.1	
	14 (130.0-140.0 cm)	Unidentified charcoal	10	0.1	
	Fine screen sample				
	15 (140.0-150.0 cm)	No cultural material recovered	0	0.0	
	Fine screen sample				
	16 (150.0-160.0 cm)	Unidentified charcoal	12	0.1	
	Fine screen sample				
	17 (160.0-170.0 cm)	Initial stage interior flake	1	0.3	
	Fine screen sample				
Test unit 2	1 (0.0 - 10.0 cm)	Shell-tempered plain body sherd	1	3.5	Thin and mostly shell tempered but some grit is present too.
		Shatter	31	49.6	
		Initial stage interior flake	51	20.9	
		Interior flake	22	7.9	
		Primary decortication flake	3	1.0	One is from a cobble source the others are probably from a tabular source.
		Retouch flake	13	1.0	

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Horizontal Provenience	Vertical Provenience	Artifact Description	Ct.	Wt(g)	Comments
		Cottontail rabbit mandible (Sylvilagus floridanus)	1	0.8	
		Deer bone (Odocoileus virginianus)	6	3.7	Five long bone fragments and 1 tooth.
		Unidentified bone	1	0.2	
		Mussel shell	5	0.1	
		Unidentified charcoal	1	0.1	
	Fine screen sample	Dogwood seed (Cornus sp.)	3	0.2	
		Grape seed (Vitis sp.)	1	0.1	
		Poke seed (Phytolacca americana)	2	0.1	
		Retouch flake	1	0.1	
	2 (10.0 - 20.0 cm)	Sand-tempered cordmarked body sherd	1	12.2	
		Grog-tempered plain body sherd	1	6.0	
		Grog-tempered plain body sherd	1	1.3	
		Clay/grit/bone-tempered plain body sherd	2	1.5	Both sherds small & about same size. Both thin. One may have once had a red or brown slip. If so most of it has exfoliated. Clay is probably the dominant temper; however some bone and grit seem to be present. Too small to identify satisfactorily.
		Shatter	46	107.0	
		Core	1	19.9	
		Core	1	93.5	
		Initial stage interior flake	49	37.2	
		Primary decortication flake	3	48.4	
		Interior flake	20	3.8	
		Biface midsection	1	0.7	
		Retouch flake	17	1.4	
		Human incisor	1	0.8	A shovel-shaped incisor considerably worn due to gritty diet.
		Unidentified mammal bone	14	5.1	Some are probably of deer long bones.
		Pine vole mandible (Pitymys pinetorum)	1	0.1	
		Unidentified mammal bone (small)	2	0.3	
		Boxturtle bone (Terrapene carolina)	1	0.5	
		Mussel shell	5	1.8	
		Hickory nut (Carya sp.)	3	0.2	
		Unidentified charcoal	4	0.3	
	Fine screen sample	Dogwood seed (Cornus sp.)	2	0.2	
		Grape seed (Vitis sp.)	1	0.1	
		Poke seed (Phytolacca americana)	2	0.1	
		Unidentified charcoal	4	0.1	
		Unidentified seed	1	0.1	Apparently from a grass.
	3 (20.0 - 30.0 cm)	Unmodifie hippable stone	1	1333.1	
		Shatter	17	107.9	
		Initial stage interior flake	35	31.0	
		Interior flake	17	3.8	
		Retouch flake	4	0.3	
		Boxturtle bone (Terrapene carolina)	2	0.5	
		Unidentified mammal bone	5	1.5	
		Mussel shell	3	0.2	
		UNID-temper plain body sherd	1	0.8	Highly eroded with rounded edges.
		Tack	1	0.6	Rusted but not extremely old. Possibly used by a pothunter to attach hardware cloth to screen.
	Fine screen sample	Poke seed (Phytolacca americana)	26	0.1	
		Unidentified charcoal	5	0.2	
		Unidentified bone (small)	11	0.4	
		Initial stage interior flake	3	1.1	
		Retouch flake	3	0.2	
Test unit 3	1 (0.0 - 10.0 cm)	Shatter	12	215.0	
		Initial stage interior flake	20	30.3	
		Interior flake	2	0.6	
		Retouch flake	8	0.7	

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Horizontal Provenience	Vertical Provenience	Artifact Description	Ct.	Wt(g)	Comments
		Mussel shell	1	0.1	
		Black walnut (Juglans nigra)	1	1.8	Probably modern.
	Fine screen sample	Dogwood seed (Cornus sp.)	1	0.1	
		Poke seed (Phytolacca americana)	2	0.1	
		Retouch flake	1	0.1	
		Retouch flake	5	0.1	
	2 (10.0 - 20.0 cm)	Shatter	27	214.8	
		Initial stage interior flake	50	41.8	
		Interior flake	4	1.0	
		Retouch flake	21	1.5	
		Primary decortication flake	4	3.0	Two are from a cobble source two from tabular.
		Snail shell	1	0.4	Modern
		Black walnut (Juglans nigra)	1	5.9	Probably modern.
		Acorn (Quercus marilandica)	1	1.0	Probably modern.
		Unidentified bone	3	0.8	
	Fine screen sample	Shatter	2	1 1	
		Retouch flake	1	0.1	
	3 (20.0 - 30.0 cm)	Tested cobble	1	921.6	
		Tested cobble	1	404.1	
		Shatter	21	638.8	
		Initial stage interior flake	40	32.8	
		Interior flake	20	33.3	
		Retouch flake	11	0.8	
		Flat abrader	1	209.3	
	Fine screen sample	Shatter	2	0.4	
		Interior flake	3	0.8	
Test unit 4	1 (0.0 - 10.0 cm)	Bone beaver tooth (Castor canadensis)	1	1.2	
		Fox squirrel incisor (Sciurus niger)	2	0.5	
		Skunk bone (Mephitis sp.)	3	3.3	
		Woodchuck bone (Marmota monax)	1	1.8	
		Opossum bone (Didelphis marsupialis)	2	5.3	
		Bison tooth (Bison bison)	1	8.6	
		Deer bone (Odocoileus virginianus)	34	47.6	
		Unidentified mammal bone (small)	48	20.7	
		Unidentified mammal bone (large)	8	18.0	
		Boxturtle bone (Terrapene carolina)	3	1.5	
		Unidentified bone	39	16.7	
		Mussel shell	8	4.4	
		Snail shell	1	0.2	
		Desiccated small mammal feces	1	4.6	
		Unidentified charcoal	21	2.0	
		Arrow point (Washita)	1	0.6	
		Shell-tempered plain body sherd	1	13.6	Broken into two pieces.
		Shatter	33	171.7	
		Initial stage interior flake	26	145.2	
		Primary decortication flake	3	22.4	
		Interior flake	26	9.1	
	Fine screen sample	Unidentified bone	16	2.3	
		Gray squirrel bone? (Sciurus carolinensis)	1	0.1	
		Boxturtle bone (Terrapene carolina)	1	1.4	
		Mussel shell	2	0.3	
		Interior flake	3	0.3	
		Unidentified charcoal	10	0.4	
		Grape seed (Vitis sp.)	1	0.1	
		Poke seed (Phytolacca americana)	3	0.1	
		Unidentified seed	1	0.1	
	2 (10.0 - 20.0 cm)	Bone woodchuck mandible (Marmota monax)	2	8.9	
		Opossum bone (Didelphis marsupialis)	5	10.9	
		Skunk ulna (Mephitis sp.)	1	1.3	
		Weasel bone (Mustela frenata)	1	0.3	
		Squirrel bone (Sciurus sp.)	8	1.7	

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Horizontal Provenience	Vertical Provenience	Artifact Description	Ct.	Wt(g)	Comments
		Cottontail rabbit bone (Sylvilagus floridanus)	4	3.7	
		House mouse? bone (Mus musculus)	1	0.2	
		Beaver incisor (Castor canadensis)	1	1.2	
		Unidentified mammal bone (small)	105	37.2	
		Unidentified mammal bone (large)	13	33.0	
		Elk tooth (Cervus canadensis)	5	15.0	
		Deer bone (Odocoileus virginianus)	29	51.4	
		Boxturtle bone (Terrapene carolina)	18	8.7	
		Unidentified bone	115	41.2	
		Mussel shell	46	61.3	
		Unidentified charcoal	28	5.6	
		Snail shell	3	0.5	
		Shatter	59	467.8	
		Shell-tempered plain body sherd	1	8.2	
		Preform base	1	14.6	
		Primary decortication flake	11	113.3	Three are from cobble sources the remainder from tabular.
		Initial stage interior flake	72	116.7	
		Interior flake	19	5.1	
	Fine screen sample	Unidentified bone	29	2.4	
		Boxturtle bone (Terrapene carolina)	2	1.1	
		Unidentified charcoal	29	0.7	
		Shatter	3	2.9	
		Interior flake	3	0.8	
	3A (20.0 - 25.0 cm)	Bone red fox (Vulpes fulva)	1	2.1	
		Unidentified mammal bone (small)	21	5.4	
		Boxturtle bone (Terrapene carolina)	1	0.3	
		Deer bone (Odocoileus virginianus)	9	12.3	
		Unidentified bone	35	20.3	
		Mussel shell	3	1.6	
		Shatter	10	57.0	
		Unidentified charcoal	6	1.6	
		Initial stage interior flake	19	56.7	
		Primary decortication flake	3	21.9	
		Secondary decortication flake	2	10.0	
		Interior flake	12	3.8	
		Baling wire	1	1.1	
	3B (25.0 - 30.0 cm)	Cottontail rabbit tooth (Sylvilagus floridanus)	1	0.1	
		Unidentified mammal bone (small)	10	2.6	
		Deer bone (Odocoileus virginianus)	2	3.9	
		Unidentified bone	11	3.7	
		Unidentified charcoal	6	0.9	
		Primary decortication flake	1	21.7	
		Shatter	13	29.1	
		Initial stage interior flake	14	17.7	
		Interior flake	10	2.7	
	Fine screen sample	Boxturtle bone (Terrapene carolina)	1	0.5	
		Unidentified bone	28	5.8	
		Mussel shell	1	0.2	
		Unidentified charcoal	56	3.2	
		Initial stage interior flake	2	0.6	
		Cottontail rabbit bone (Sylvilagus floridanus)	1	0.1	
	4 (30.0 - 40.0 cm)	Boxturtle bone (Terrapene carolina)	1	0.8	
		Shatter	12	82.8	
		Initial stage interior flake	22	14.6	
		Interior flake	11	1.9	
		Retouch flake	2	0.1	
	Fine screen sample	Unidentified charcoal	2	0.1	
		Retouch flake	5	0.4	
	5 (40.0 - 50.0 cm)	Shatter	4	8.8	

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		Initial stage interior flake	6	6.2	
		Retouch flake	5	0.6	
	Fine screen sample	Unidentified charcoal	9	0.3	
		Initial stage interior flake	2	2.0	
		Retouch flake	1	0.1	
Test unit 4 Feature 1		Bone wood rat (Neotoma floridana)	1	0.1	
		Unidentified bone	12	18.7	
		Unidentified bone bird talon	1	0.3	
		Unidentified charcoal	14	1.3	
		Grape seed (Vitis sp.)	1	0.2	
		Retouch flake	1	0.1	
Shovel test 1	1 (0.0 - 30.0 cm)	Initial stage interior flake	2	26.1	
Shovel test 2	1 (0.0 - 30.0 cm)	Secondary decortication flake	1	0.1	
Shovel test 0N/5W	1 (0.0 - 30.0 cm)	Shatter	1	6.1	
		Initial stage interior flake	1	0.4	
Shovel test 0N/5E	1 (0.0 - 30.0 cm)	Shatter	1	17.7	
		Initial stage interior flake	1	1.0	
Shovel test 30E	1 (0.0 - 30.0 cm)	Initial stage interior flake	3	5.7	
Shovel test 35E	1 (0.0 - 30.0 cm)	Initial stage interior flake	3	19.5	
		Retouch flake	2	0.3	
Surface - general		Core	1	334.5	
		Secondary decortication flake	2	60.4	
		Dart point stem (Dickson?)	1	1.9	
23DA408					
Test unit 1	1 (0.0 - 10.0 cm)	Arrow point (Fresno)	1	1.1	
		Preform	1	0.9	Preform for triangular arrow point has been flaked on one side only & tip still rounded.
		Preform proximal	1	2.9	
		Biface midsection	1	1.0	
		Shatter	38	263.0	The "Other Lithics" represents fragments of the chert nodules found in the sandstone ceiling of the shelter.
		Primary decortication flake	24	48.0	"Other Lithics" is the coarse textured chert found in cobbles in ceiling of shelter. Nine are from cobble sources the remaining from tabular sources.
		Secondary decortication flake	11	14.8	Five are from cobble sources the remaining from tabular.
		Initial stage interior flake	115	243.3	
		Interior flake	35	22.8	
		Retouch flake	10	1.4	
		Flake reverse hinge	1	0.6	
		Unmodified chippable stone	1	252.6	
		Unidentified mammal bone	2	2.4	
	1 (7.0 - 7.0 cm)	Core	1	63.1	
	1 (10.0 - 10.0 cm)	Preform	1	2.1	
	1 (6.0 - 6.0 cm)	Flake graver	1	10.0	
	Fine screen sample	Flake knife	1	0.6	Much edge damage. Some may be accidental but there is polish on several high points and the breakage compares with that noted on experimental specimens used to cut bone or antler.
		Retouch flake	1	0.1	
		Shatter	1	0.5	
	2 (10.0 - 20.0 cm)	Preform distal	1	4.8	
		Arrow point (Morris)	1	1.3	
		Arrow point (Scallorn)	1	0.6	
		Bifacial knife	1	5.3	
		Bifacial knife proximal	1	6.6	

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		Preform	1	2.9	
		Arrow point (Scallorn)	1	1.0	
		Arrow point proximal (Fresno variant)	1	1.1	
		Arrow point (Fresno)	1	0.9	This point has some tip damage and one base corner missing.
		Arrow point stem (Sallisaw variant?)	1	0.9	Area between remaining side notch and concave base constricts.
		Stemmed biface proximal (Table Rock Pointed Stem)	1	2.6	
		Biface midsection	1	2.7	
		Dart point midsection	1	3.6	
		Bifacial drill distal	1	1.2	
		Flake spokeshave	1	26.5	Thin tabular piece of chert has been unifacially worked on one edge to form a concavity. The latter has much use polish and rounding suggestive of woodworking.
		Core	1	44.6	
		Primary decortication flake	13	36.5	Eight are from a cobble source the remainder from tabular.
		Secondary decortication flake	7	38.3	
		Shatter	191	512.3	
		Initial stage interior flake	256	339.5	
		Interior flake	41	18.0	
		Retouch flake	18	1.5	
		Mussel shell	6	2.9	
		Unidentified bone	11	8.8	
	2 (18.0 - 18.0 cm)	Flake prismatic blade	1	13.2	Some microbreakage on blade but very little use polish.
	Feature 1	Interior flake	14	3.1	
		Retouch flake	9	0.4	
		Unidentified charcoal	90	1.2	
		Unidentified bone	20	1.7	
		Fine screen materials	0	32.8	
	Fine screen sample	Hickory nut (Carya sp.)	6	0.2	Preserved by carbonization.
		Unidentified bone	6	0.5	
		Mussel shell	1	0.1	
		Interior flake	5	1.5	
		Retouch flake	14	0.3	
	3 (20.0 - 30.0 cm)	Stemmed biface proximal	1	1.0	
		Shatter	9	81.1	
		Secondary decortication flake	2	7.2	
		Initial stage interior flake	22	48.6	
		Interior flake	9	5.2	
		Unidentified bone	14	90.1	
	Fine screen sample	Unidentified charcoal	9	0.2	
		Unidentified bone	3	0.1	
		Interior flake	7	1.4	
		Retouch flake	11	0.2	
	4 (30.0 - 40.0 cm)	Tested cobble	1	145.6	
		Biface midsection	1	11.1	Specimen is badly damaged on both faces by potlid fractures.
		Shatter	4	28.2	
		Primary decortication flake	1	3.1	
		Secondary decortication flake	2	46.1	
		Initial stage interior flake	8	33.7	
		Interior flake	3	5.4	
		Unidentified bone	1	1.2	
	Fine screen sample	Hickory nut (Carya sp.)	6	0.2	
		Unidentified bone	1	0.1	
		Interior flake	2	0.5	
		Retouch flake	8	0.4	
Test unit 2	1 (0.0 - 10.0 cm)	Arrow point proximal (Scallorn variant)	1	0.9	
		Arrow point (Scallorn variant)	1	0.6	

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		Arrow point (Scallorn)	1	0.6	
		Arrow point distal	1	0.8	
		Arrow point tip	1	0.7	
		Grit-tempered cord marked rim sherd	1	23.7	Sherd decorated with partly smoothed cord marking. Fairly thin sherd. Possibly some material (shell?) leached from sherd
		Preform midsection	1	33.2	
		Biface midsection	4	17.7	
		Bifacial end scraper distal	1	1.8	
		Preform midsection	1	6.2	Bright polish covering the specimen seems to be water polish.
		Bifacial knife distal	1	1.9	
		Shatter	67	231.2	
		Initial stage interior flake	136	200.5	
		Primary decortication flake	72	25.4	
		Primary decortication flake	4	2.0	
		Secondary decortication flake	11	29.9	Three are from a tabular source the remainder from cobbles.
		Fire-cracked chert	2	77.0	
		Unidentified bone	19	29.9	
	1 (13.0 - 13.0 cm)	Arrow point proximal (Fresno)	1	1.5	
	Fine screen sample	Grape seed (and tendrill) (Vitis sp.)	23	0.3	Since these grape seeds are not carbonized they may represent a deposit of animal fecal matter.
		Poke seed (Phytolacca americana)	5	0.1	Since these poke seeds were found on or near the surface and are not carbonized they are probably recent.
		Unidentified seed	1	0.1	
		Unidentified bone	16	0.4	
		Snail shell	2	0.1	
		Interior flake	3	0.5	
		Retouch flake	23	0.6	
		Fire-cracked rock sandstone	6	22.3	
	2 (10.0 - 20.0 cm)	Arrow point (Alba-like)	1	0.7	This is an unusual point for the Stockton area. It strongly resembles the Alba of the Caddoan area. It is made from a red chert possibly a variety of red Pierson.
		Grit-tempered cord marked rim sherd	1	8.1	There is some grit in the sherd however some partly leached shell may be present too.
		Shell-tempered plain body sherd	1	1.3	Shell tempering is very finely pulverized. Some sand or grit may represent an inclusion in the clay.
		Core	1	247.1	
		Core	1	62.6	
		Preform midsection	3	16.2	The unknown Chert is dark gray possibly Sedalia.
		Stemmed biface proximal	1	7.1	
		Bifacial knife midsection	1	1.8	
		Preform proximal	1	42.2	
		Shatter	41	202.8	
		Arrow point proximal (Cahokia Side Notched)	1	0.2	Two shallow indentions between the notches and base suggest the Cahokia type. If no additional notches were present the specimen would resemble the Washita and if one notch was found beneath the main notches it would resemble the Huffaker point.
		Arrow point (Fresno)	1	0.2	
		Arrow point (Fresno variant)	1	0.7	
		Arrow point (Fresno variant)	1	0.3	
		Arrow point stem (Fresno variant)	1	0.3	
		Preform proximal	1	1.4	

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		Biface midsection	2	1.5	
		Primary decortication flake	4	25.2	
		Fire-cracked chert	2	55.1	
		Sugar quartz	1	43.9	A stream tumbled sugar quartz pebble has been removed from stream but not modified.
		Chert tabular piece	1	87.1	A tabular piece of chert from which one end has been broken. Most of the remaining chert is of poor quality.
		Initial stage interior flake	136	260.0	
		Interior flake	73	32.0	
		Retouch flake	13	1.7	
		Mussel shell	10	17.0	
		Unidentified bone	117	192.2	
	Fine screen sample	Unidentified bone	33	8.7	
		Interior flake	5	5.4	
		Retouch flake	30	1.2	
		Fire-cracked rock sandstone	2	24.6	
	3 (20.0 - 30.0 cm)	Initial stage interior flake	1	6.3	This flake is totally covered with a bright polish (which resembles silica gloss). Even striking platform and breaks on flake are polished. Probable reason for polish is unknown but could be caused by cutting grass, contact with dry hide, or contact with soil.
		Flake scraper	1	7.4	Has been unifacailly beveled along one edge. Bright polish line along scraping edge and some polish can be seen on both faces of flake (probably due to holding in hand).
		Preform midsection	1	9.0	
		Dart point tip	1	0.5	
		Grit tempered plain rim sherd	1	7.6	In adddition to grit some sand is apparent in the paste. Seems to be rimsherd from bowl.
		Shell-tempered plain body sherd	1	15.3	Sherd is almost flat and is tempered with finely pulverized shell.
		Core	1	172.2	
		Core	1	159.8	
		Fire-cracked chert	6	90.3	
		Shatter	25	177.4	
		Primary decortication flake	10	285.7	
		Initial stage interior flake	69	154.6	
		Secondary decortication flake	2	4.6	
		Interior flake	40	15.5	
		Retouch flake	10	1.6	
		Unidentified bone	63	109.0	
	Fine screen sample	Hickory nut (Carya sp.)	7	0.1	preserved by charring
		Unidentified bone	14	2.8	
		Interior flake	8	2.7	
		Retouch flake	25	0.7	
		Fire-cracked chert	2	29.0	
	4 (30.0 - 40.0 cm)	Grog-tempered plain body sherd	1	12.7	
		Bifacial knife midsection	1	9.4	
		Bifacial knife midsection	1	5.3	
		Preform midsection	1	5.4	
		Fire-cracked chert	3	110.5	
		Shatter	16	160.7	
		Interior flake	11	3.3	

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Horizontal Provenience	Vertical Provenience	Artifact Description	Ct.	Wt(g)	Comments
		Initial stage interior flake	41	397.4	
		Primary decortication flake	1	2.2	
		Unidentified bone	26	72.7	
	Fine screen sample	Poke seed (Phytolacca americana)	1	0.1	May represent a recent introduction
		Hickory nut (Carya sp.)	7	0.3	
		Unidentified bone	20	1.6	
		Interior flake	8	1.9	
		Retouch flake	10	0.3	
		Fire-cracked chert	2	29.0	
	5 (40.0 - 50.0 cm)	Shatter	4	104.4	
		Fire-cracked chert	2	15.2	
		Initial stage interior flake	9	17.3	
		Interior flake	6	2.9	
		Unidentified bone	7	12.5	
	Fine screen sample	Unidentified charcoal	4	0.2	
		Unidentified bone	7	0.5	
		Interior flake	9	3.1	
		Retouch flake	10	0.7	
	6 (50.0 - 60.0 cm)	Fire-cracked chert	1	4.6	
		Unidentified bone	10	26.8	Thick skull fragments probably from one individual.
		Unidentified charcoal wood	1	0.2	
	Fine screen sample	Unidentified charcoal	3	0.2	
		Unidentified bone	123	7.8	
		Interior flake	6	1.5	
		Shatter	1	15.7	
		Retouch flake	10	0.3	
Shovel test 5S/20E	1 (0.0 - 10.0 cm)	Primary decortication flake	1	20.5	
Shovel test 0N/20E	1 (0.0 - 15.0 cm)	Shatter	1	0.7	
		Secondary decortication flake	1	10.0	
		Initial stage interior flake	3	2.3	
	Surface - general	Flake graver	1	27.4	A very sharp graver spur has been unifacially worked into the side of a large flake. Little use polish on this tip.
23DA411	Surface - general	Core scraper	1	84.7	One excurvate margin has been used slightly as a scraper. Part of the opposite edge is somewhat battered suggesting light use as hammerstone.
		Aborted preform edge	1	161.9	Aborted due to reverse hinging. A huge crystal-lined vug is found on one face.
		Preform proximal	1	38.2	Two potlid fractures on one side.
		Flake knife	1	3.7	
		Flake scraper	1	22.0	
		Arrow point stem	1	0.2	The stem and one shoulder of a corner notched arrow point made from a very thin flake. Probably broken in manufacture while removing second notch.
		Secondary decortication flake	1	17.7	
		Initial stage interior flake	1	9.7	Fossiliferous Sedalia chert with white to light gray outer rim.
23DA413	Surface - general	Primary decortication flake	1	30.5	A coarse textured unidentified tan chert. One flake has been removed from the ventral surface.
		Secondary decortication flake	2	15.7	
		Scraper bifacial edge	1	10.0	

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Horizontal Provenience	Vertical Provenience	Artifact Description	Ct.	Wt(g)	Comments
		Biface distal	1	6.2	Made from a decortication flake. Found in two pieces.
		Initial stage interior flake	12	46.2	
		Interior flake	6	6.4	
23DA419		No cultural material collected	0	0.0	
23DA420		No cultural material collected	0	0.0	
23DA421	Surface - general	Bifacial knife	1	9.8	This is a short thick and narrow biface with one excurvate blade margin and one slightly incurved margin.
		Unstemmed biface proximal	1	5.1	Possibly a preform broken late in the reduction sequence.
		Aborted preform	1	68.3	Although edges were beveled to assist in reduction the chert was too narrow to make a biface of reasonable width. Quality of chert only fair.
		Initial stage interior flake	2	3.3	
		Interior flake	2	1.0	
		Button	1	1.0	A black button with two perforations.
		Melted green glass	1	33.2	A small irregular chunk of glass fused together by heat.
		Glass canning jar lid	4	20.2	
		Plain whiteware	3	12.4	
		Milk glass	1	0.8	
		Stoneware	1	26.4	Probably from a large jar.
		Bottle glass	1	10.0	A portion of the neck from a stoppered bottle.
		Glass canning jar	1	2.3	
		Initial stage interior flake	11	73.1	
23DA422	Surface - general	Glass canning jar	5	355.4	Three base fragments and two rims from canning jars.
		Zinc canning jar ring	1	20.7	
		Glass canning jar lid	1	17.9	This is a portion of a milk glass canning jar lid with an "8" in center and the words "lined cap" along the existing margin.
		Bottle glass	1	24.4	
		Milk glass	1	11.8	This is a rimsherd from a small bowl.
		Plain whiteware	1	66.5	This is a base sherd from a small bowl.
		Stoneware jar	1	80.4	Probably one gallon size.
		Bifacial knife distal?	1	26.6	It is impossible to tell whether it is a distal or proximal end. Apparently broken during reduction due to a fossil in the chert.
		Primary decortication flake	1	1.1	
		Brick	2	999.0	Two fragments of unusual sand tempered home-made bricks. One has residue of white paint on outer surface.
		Clear glass bottle	1	4.0	
23DA423	Surface - general	Primary decortication flake	4	207.3	Two large flakes are from creek cobbles and two smaller ones from hillside chert.
		Initial stage interior flake	60	7.2	
Shovel test 01	1 (0.0 - 30.0 cm)	Shatter	3	4.4	
		Initial stage interior flake	6	2.0	
23DA424	Surface - general	Flake scraper	1	27.9	A moderately thick flake with a steeply beveled distal end has been used to scrape wood. Characteristic recurved scraping area and polish typical of wood scrapers.

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Horizontal Provenience	Vertical Provenience	Artifact Description	Ct.	Wt(g)	Comments
		Flake scraper	1	11.1	This is a secondary decortication flake with a steeply beveled distal end. This end has been lightly retouched and a soft polish comparable to that produced on experimental skin scrapers can be seen at 25 X.
		Initial stage interior flake	12	65.1	
		Interior flake	1	0.2	
23DA425	Surface - general	Flake knife	1	10.0	This is a blade-like flake with one longitudinal arris.
		Biface tip?	1	4.7	This roughly triangular fragment could be either the distal or base portion.
		Preform edge	1	20.5	This is a triangular fragment of an early stage preform.
		Secondary decortication flake	1	7.9	
		Initial stage interior flake	2	7.1	
		Interior flake	3	2.5	
23DA426	Surface - general	Primary decortication flake	1	17.0	The stone resembles Ordovician chert in some ways. However on the outer surface some small angular and rounded pebbles are cemented with sandy silicious cement. Chert was probably redeposited in a sandstone or brecchia.
		Primary decortication flake	2	30.2	
		Core	1	38.4	A chunk of mottled chert with brown stream cortex on both ends has flakes removed from two faces.
		Initial stage interior flake	11	144.8	
		Initial stage interior flake	2	13.0	The largest flake is a medium and dark gray mottled fairly porous chert. The smaller is semi-translucent and may be heat treated.
		Interior flake	2	1.9	
23DA427	Surface - general	Blank	1	103.2	
		Biface edge	1	4.6	
		Biface edge	1	3.6	Produced by reverse hinging during knapping. The chert has short fractures in it which makes flaking uneven. Well abraded edge.
		Initial stage interior flake	10	13.2	
		Interior flake	8	6.9	
		Shatter	3	3.0	
23DA428	Surface - general	Initial stage interior flake	9	14.2	
		Interior flake	5	1.7	
23DA429	Surface - general	Flake scraper	1	36.7	This is a "D-shaped" flake with steep natural bevels on edges.
		Flake knife	1	4.7	A parallel sided blade-like flake features light polish along blade edges.
		Primary decortication flake	1	33.1	
		Secondary decortication flake	2	146.8	
		Initial stage interior flake	1	2.2	
		Interior flake	4	5.1	
23DA430	Surface - general	Initial stage interior flake	9	24.6	
		Interior flake	5	5.8	
23DA431	Surface - general	Secondary decortication flake	2	67.4	
		Retouch flake	1	0.1	
		Retouch flake	1	0.1	
23DA432	Surface - general	Primary decortication flake	1	1.4	
		Initial stage interior flake	7	22.3	

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Horizontal Provenience	Vertical Provenience	Artifact Description	Ct.	Wt(g)	Comments
		Interior flake	1	2.1	
		Interior flake	1	0.6	
23DA433	Surface - general	Initial stage interior flake	3	23.3	
		Initial stage interior flake	1	2.4	
		Interior flake	1	0.9	
23DA435	Surface - general	Primary decortication flake	1	18.6	
		Shatter	2	11.4	
		Interior flake	3	6.0	
		Interior flake	1	0.7	
		Retouch flake	1	0.1	
23DA436	Surface - general	Arrow point stem	1	2.9	Fairly thick for arrowpoint but made of coarse textured chert.
		Initial stage interior flake	6	56.8	
		Interior flake	3	0.5	
		Retouch flake	1	0.1	
23DA437	Surface - general	Flake graver	1	1.8	A short spur has been unifacially worked on a small flake by pressure. It is posible that a second spur was once present but has been broken away.
		Flake graver	1	1.7	A short spur has been unifacially flaked by pressure on one end of a rectangular flake.
		Initial stage interior flake	5	19.2	
		Interior flake	9	5.6	
		Retouch flake	3	0.1	
23DA438	Surface - general	Initial stage interior flake	1	21.5	
		Shatter	3	0.6	
		Interior flake	9	3.4	
		Retouch flake	3	0.1	One flake is a small pressure flake and a second may be as well. The third was percussion produced.
23DA439	Surface - general	Core	1	34.8	A "D-shaped" piece of probable shatter with cortex on one side and two edges. Has had at least three flakes removed by percussion.
		Initial stage interior flake	19	69.3	
		Initial stage interior flake	1	3.1	
		Initial stage interior flake	1	3.7	This is a red and pink flake that most closely approximates red Pierson chert found in Stone and Taney counties Missouri. This chert is slightly fossiliferous but the color is not typical of Burlington.
		Interior flake	14	5.5	
		Retouch flake	1	0.1	
23DA440	Surface - general	Initial stage interior flake	3	19.3	
		Interior flake	1	0.3	
23DA441	Surface - general	Interior flake	4	2.7	
23DA442	Surface - general	Arrow point (Scallorn)	1	0.4	Slightly serrated blade margins.

APPENDIX B
Cultural Materials Recovered During the HPA Work

Horizontal Provenience	Vertical Provenience	Artifact Description	Ct.	Wt(g)	Comments
		Bifacial knife proximal	1	5.6	This is the parallel-sided base part of a "drill-like" form with distinct beveling on left side of each face. Heavy use fracturing edge rounding and distinct polish plus missing tip suggest arduous use. The wear suggests this is an exhausted cutting tool resharpened extensively and that the last use was cutting a hard substance.
		Shatter	3	7.6	
		Secondary decortication flake	2	51.6	
		Initial stage interior flake	3	20.7	
		Interior flake	8	13.6	
		Interior flake	1	2.2	
23DA443	Surface - general	Primary decortication flake	6	38.0	
		Initial stage interior flake	8	235.4	
23DA444		No cultural material collected	0	0.0	
23DA445		No cultural material collected	0	0.0	
23DA446		No cultural material collected	0	0.0	
23DA447		No cultural material collected	0	0.0	
23DA448	Surface - general	Bifacial knife proximal (Steuben)	1	10.4	
		Bifacial knife proximal (Langtry)	1	10.1	Breakage probably due to a large crystal filled vug.
		Core	1	115.7	This is an irregular and somewhat fractured chunk of tan and white mottled Jefferson City chert from which a few flakes have been struck.
		Secondary decortication flake	3	6.3	
		Initial stage interior flake	1	4.2	
		Ironstone	1	12.0	A brown (both faces) ware probably from a crock .
23DA449	Surface - general	Dart point proximal	1	4.5	Blade snapped 1.8 cm above shoulders.
		Bifacial knife	1	146.4	Possibly hand held and used as a cutting tool.
		Adze	1	48.4	A small pear-shaped adze with poll thinned to facilitate hafting.
		Biface tip	1	2.8	Possibly a dart point broken by heat.
		Aborted preform midsection	1	13.5	
		Aborted preform proximal	1	43.7	Raw material was of poor quality in places.
		Aborted preform proximal	1	95.4	Broken early in reduction due to a facture in chert.
		Core	1	198.7	
		Primary decortication flake	3	47.7	
		Primary decortication flake	1	7.3	
		Secondary decortication flake	1	78.9	A light yellowish non-fossiliferous dense chert of uncertain origin. It closely resembles some Keokuk chert from McDonald County Missouri. Possibly a rare variety of Burlington.
		Initial stage interior flake	20	215.1	
		Initial stage interior flake	1	4.0	
		Interior flake	18	24.4	
		Interior flake	3	4.9	
		Ironstone	1	27.4	Brown slip on one face and tan on the other.
23DA450		No cultural material collected	0	0.0	

APPENDIX B
Cultural Materials Recovered During the HPA Work

Horizontal Provenience	Vertical Provenience	Artifact Description	Ct.	Wt(g)	Comments
23DA451	Surface - general	Unifacial side scraper	1	8.2	This is a "D-shaped" unifacially worked scraper with retouch along the excurvate margin. Originally the tool may have been ovate shaped and was broken lengthwise.
		Initial stage interior flake	2	6.4	
		Interior flake	2	0.3	
		Interior flake	1	0.3	
23DA452	Surface - general	Bifacial knife	1	6.2	An expanding stemmed biface resharpened to exhaustion. One shoulder has been eliminated by resharpening one by breakage and one tang is missing. One blade edge is convex and one concave.
		Initial stage interior flake	5	23.6	
23DA453	Surface - general	Projectile point/knife (Hanna-like)	1	5.3	A bifurcated stemmed biface in the Duncan-Hannah tradition that has been resharpened to exhaustion. Both shoulders are gone.
		Flake knife	1	32.8	A large flake from a cobble source.
		Interior flake	2	1.1	
		Interior flake	7	13.6	
23DA454		No cultural material collected	0	0.0	
23DA455	Surface - general	Flake spokeshave	1	4.1	
		Secondary decortication flake	3	9.8	
		Initial stage interior flake	8	10.9	
		Interior flake	11	6.0	

APPENDIX C
Bifacial and Flake Tools
Stockton Lake Survey and Testing

Site No.	Cat. No.	Provenience	Ct.	Type Name	Artifact Description	Portion	Cultural Affilition	Primary Function
SLCC-IF1	1-1	Surface - general	1	Unclassified	Preform, aborted	whole	Unknown	Unknown
SLS-IF1	1-1	Surface - general	1	Unclassified	Knife, flake	N/A	Unknown	Knife
SLS-IF2	1-1	Surface - general	1	Unclassified	Biface	distal	Unknown	Unknown
23CE134	1-3	Surface - general	1	Unclassified	Preform	distal	Unknown	Unknown
23CE134	1-4	Surface - general	1	Unclassified	Preform, aborted	edge	Unknown	Unknown
23CE321	1-1	Surface - general	1	Stone Corner Notched?	Dart point	stem	Archaic, Late	Dart point
23CE321	1-2	Surface - general	1	Unclassified	Biface, stemmed	stem	Unknown	Unknown
23CE321	1-3	Surface - general	1	Unclassified	Preform	basal	Unknown	Unknown
23CE330	1-1	Surface - general	1	Unclassified	Knife, bifacial	midsection	Unknown	Knife
23CE330	1-2	Surface - general	1	Unclassified	Knife/scraper, flake tool	N/A	Unknown	Knife
23CE330	1-5	Surface - general	1	Unclassified	Knife, flake	N/A	Unknown	Knife
23CE330	1-6	Surface - general	1	Unclassified	Knife, flake	N/A	Unknown	Knife
23CE330	1-7	Surface - general	1	Unclassified	Knife, flake	N/A	Unknown	Knife
23CE338	1-1	Surface - general	1	Unclassified	Dart point	whole	Unknown	Unknown
23CE338	1-2	Surface - general	1	Unclassified	Knife, bifacial	midsection	Unknown	Knife
23CE338	1-3	Surface - general	1	Unclassified	Scraper, flake	N/A	Unknown	Scraper
23CE338	1-4	Surface - general	1	Unclassified	Knife, flake	N/A	Unknown	Knife
23CE338	1-5	Surface - general	1	Unclassified	Biface	midsection	Unknown	Unknown
23CE338	1-6	Surface - general	1	Unclassified	Biface	midsection	Unknown	Unknown
23CE338	1-7	Surface - general	1	Unclassified	Scraper, bifacial side	distal	Unknown	Scraper
23CE338	1-8	Surface - general	1	Unclassified	Biface	midsection	Unknown	Unknown
23CE338	1-9	Surface - general	1	Unclassified	Shredder, denticulate	whole	Unknown	Shredder
23CE467	1-2	Surface - general	1	Unclassified	Preform, aborted	proximal	Unknown	Unknown
23CE467	1-3	Surface - general	1	Unclassified	Preform	proximal	Unknown	Unknown
23CE467	1-4	Surface - general	1	Unclassified	Knife, bifacial	basal	Unknown	Knife
23CE467	1-5	Surface - general	1	Unclassified	Preform, aborted	whole	Unknown	Unknown
23CE467	1-6	Surface - general	1	Unclassified	Preform, aborted	distal	Unknown	Unknown
23CE467	1-7	Surface - general	1	Unclassified	Preform, aborted	edge	Unknown	Unknown
23CE467	1-8	Surface - general	1	Unclassified	Knife, bifacial	edge	Unknown	Knife
23CE467	1-9	Surface - general	1	Unclassified	Biface	edge	Unknown	Unknown
23CE467	1-14	Surface - general	1	Unclassified	Knife, flake	N/A	Unknown	Knife
23CE467	1-15	Surface - general	1	Unclassified	Knife, flake	N/A	Unknown	Knife
23CE468	1-2	Surface - general	1	Unclassified	Scraper, core	whole	Woodland?	Scraper
23CE468	1-4	Surface - general	1	Unclassified	Preform, aborted	proximal	Unknown	Unknown

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Bifacial and Flake Tools
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Site No.	Cat. No.	Provenience	Ct.	Type Name	Artifact Description	Portion	Cultural Affilition	Primary Function
23CE468	1-5	Surface - general	1	Unclassified	Preform	distal	Unknown	Unknown
23CE468	1-6	Surface - general	1	Unclassified	Preform, aborted	whole	Unknown	Unknown
23CE468	1-7	Surface - general	1	Unclassified	Knife, bifacial	edge	Unknown	Knife?
23CE468	1-11	Surface - general	1	Unclassified	Knife, flake	N/A	Unknown	Knife
23CE468	1-12	Surface - general	1	Unclassified	Knife, flake	N/A	Unknown	Knife
23CE469	1-1	Surface - general	1	Unclassified	Knife, bifacial	proximal	Archaic, Late	Knife
23CE469	1-2	Surface - general	1	Unclassified	Scraper, bifacial side	edge	Unknown	Scraper
23CE469	1-4	Surface - general	1	Unclassified	Blank, aborted	whole	Unknown	Unknown
23CE469	1-5	Surface - general	1	Unclassified	Preform	tip	Unknown	Unknown
23CE469	1-6	Surface - general	1	Unclassified	Knife, bifacial	edge	Unknown	Knife
23CE471	1-9	Surface - general	1	Unclassified	Knife, bifacial	edge	Unknown	Knife
23CE471	1-10	Surface - general	1	Unclassified	Biface	distal	Unknown	Unknown
23CE471	1-11	Surface - general	1	Unclassified	Preform, aborted	proximal	Unknown	Unknown
23CE473	9-1	Shovel test 12	1	Unclassified	Preform	edge	Unknown	Unknown
23CE474	1-1	Surface - general	1	Unclassified	Knife, bifacial	midsection	Unknown	Knife
23CE475	1-2	Surface - general	1	Unclassified	Biface, stemmed	stem	Unknown	Unknown
23CE475	1-3	Surface - general	1	Unclassified	Knife, flake	N/A	Unknown	Knife
23CE475	1-4	Surface - general	1	Unclassified	Knife, flake	N/A	Unknown	Knife
23CE475	1-5	Surface - general	1	Unclassified	Blank	whole	Unknown	Unknown
23CE475	1-6	Surface - general	1	Unclassified	Scraper, flake	N/A	Unknown	Scraper
23CE475	1-8	Surface - general	1	Unclassified	Preform, aborted	distal	Unknown	Unknown
23CE477	1-1	Surface - general	1	Unclassified	Scraper, flake	N/A	Unknown	Scraper
23CE477	1-2	Surface - general	1	Unclassified	Biface, unstemmed	whole	Unknown	Unknown
23CE477	1-6	Surface - general	1	Unclassified	Knife, flake	N/A	Unknown	Knife
23CE479	1-1	Surface - general	1	Unclassified	Knife, flake	N/A	Unknown	Knife
23CE485	1-1	Surface - general	1	Unclassified	Scraper, core	N/A	Unknown	Core
23CE485	1-3	Surface - general	1	Unclassified	Knife, flake	N/A	Unknown	Knife
SLDA-IF2	1-1	Surface - general	1	Rice Side Notched variant	Dart point	stem	Woodland, Late	Dart point?
SLDA-IF5	1-1	Surface - general	1	Unclassified	Scraper, bifacial side	midsectionm	Unknown	Scraper
SLMC-IF1	1-1	Surface - general	1	Unclassified	Adze	whole	Unknown	Woodworking, heavy
SLRB-IF3	1-1	Surface - general	1	Unclassified	Biface	edge	Unknown	Unknown
23DA83	1-1	Surface - general	1	Stone Corner Notched var.	Knife, bifacial	proximal	Archaic, Late	Knife
23DA211	2-1	Surface - West Knoll	1	Unclassified	Biface	barb	Unknown	Unknown
23DA211	4-1	Shovel test 2	1	Unclassified	Preform, aborted	distal	Unknown	Unknown

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Site No.	Cat. No.	Provenience	Ct.	Type Name	Artifact Description	Portion	Cultural Affilition	Primary Function
23DA211	17-1	Shovel test 6 South	1	Unclassified	Biface	barb	Unknown	Unknown
23DA312	1-1	Surface - general	1	Unclassified	Scraper/graver, flake	N/A	Unknown	Scraper
23DA313	1-1	Surface - general	1	Langtry-like	Knife, bifacial	whole	Archaic, Late - Woodland	Knife
23DA313	1-2	Surface - general	1	Langtry-like	Knife, bifacial	proximal	Archaic, Late - Woodland	Knife
23DA313	1-3	Surface - general	1	Unclassified	Knife, bifacial	whole	Unknown	Knife
23DA313	1-4	Surface - general	1	Unclassified	Knife, bifacial	midsection	Unknown	Knife
23DA313	1-5	Surface - general	1	Unclassified	Biface	midsection	Unknown	Unknown
23DA326	1-1	Surface - general	1	Unclassified	Projectile point/knife	whole	Archaic, Late	Dart point
23DA326	1-2	Surface - general	1	Unclassified	Arrow point	stem	Woodland, Mississippi	Arrow point
23DA326	1-3	Surface - general	1	Unclassified	Scraper, flake	N/A	Unknown	Scraper
23DA326	1-4	Surface - general	1	Unclassified	Biface	midsection	Unknown	Unknown
23DA326	1-5	Surface - general	1	Unclassified	Biface	distal	Unknown	Unknown
23DA326	1-6	Surface - general	1	Unclassified	Knife, bifacial	distal	Unknown	Knife
23DA326	1-7	Surface - general	1	Unclassified	Knife/scraper	midsection	Unknown	Scraper
23DA326	1-8	Surface - general	1	Unclassified	Arrow point	tip	Woodland, Mississippi	Arrow point
23DA388	1-1	Surface - general	1	Unclassified	Preform	whole	Unknown	Unknown
23DA388	1-2	Surface - general	1	Unclassified	Preform	whole	Unknown	Unknown
23DA394	1-1	Surface - general	1	Unclassified	Preform, aborted	whole	Unknown	Unknown
23DA407	3-1	Test unit 1, Level 3	1	Unclassified	Biface, stemmed	whole	Unknown	Unknown
23DA407	4-1	Test unit 1, Level 4	1	Unclassified	Scraper, flake	N/A	Unknown	Scraper
23DA407	4-2	Test unit 1, Level 4	2	Unclassified	Knife, bifacial	edge	Unknown	Knife
23DA407	5-3	Test unit 1, Level 5	1	Unclassified	Preform	midsection	Unknown	Unknown
23DA407	8-5	Test unit 1, Level 8	1	Unclassified	Scraper, core	N/A	Unknown	Scraper
23DA407	11-1	Test unit 1, Level 11	1	Unclassified	Knife, bifacial	midsection	Archaic, Early - Middle	Knife
23DA407	12-1	Test unit 1, Level 12	1	Unclassified	Chopper	whole	Unknown	Chopper
23DA407	12-2	Test unit 1, Level 12	1	Unclassified	Preform	proximal	Unknown	Unknown
23DA407	15-1	Test unit 2, Level 2	1	Unclassified	Biface	midsection	Unknown	Unknown
23DA407	20-1	Test unit 4, Level 1	1	Washita	Arrow point	whole	Mississippi	Arrow point
23DA407	21-2	Test unit 4, Level 2	1	Unclassified	Preform	basal	Unknown	Unknown
23DA407	60-3	Surface - general	1	Dickson?	Dart point	stem	Woodland, Middle	Unknown
23DA408	1-2	Test unit 1, Level 1	1	Unclassified	Preform	whole	Mississippi	Arrow point
23DA408	1-3	Test unit 1, Level 1	1	Unclassified	Graver, flake	N/A	Unknown	Engraving
23DA408	1-4	Test unit 1, Level 1	1	Fresno	Arrow point	whole	Late Prehistoric	Arrow point
23DA408	1-5	Test unit 1, Level 1	1	Unclassified	Preform	whole	Late Prehistoric	Arrow point preform

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Bifacial and Flake Tools
Stockton Lake Survey and Testing

Site No.	Cat. No.	Provenience	Ct.	Type Name	Artifact Description	Portion	Cultural Affilition	Primary Function
23DA408	1-6	Test unit 1, Level 1	1	Unclassified	Preform	proximal	Mississippi	Arrow point preform
23DA408	1-7	Test unit 1, Level 1	1	Unclassified	Biface	midsection	Unknown	Unknown
23DA408	2-1	Test unit 1, Level 1	1	Unclassified	Preform	distal	Unknown	Unknown
23DA408	21-1	Test unit 1, Level 1	1	Unclassified	Knife, flake	N/A	Unknown	Knife
23DA408	2-2	Test unit 1, Level 2	1	Morris	Arrow point	whole	Mississippi	Arrow point
23DA408	2-3	Test unit 1, Level 2	1	Scallorn	Arrow point	whole	Woodland, Late-Mississipp	Arrow point
23DA408	2-4	Test unit 1, Level 2	1	Unclassified	Flake, prismatic blade	N/A	Unknown	Knife
23DA408	2-5	Test unit 1, Level 2	1	Unclassified	Knife, bifacial	whole	Mississippi	Knife
23DA408	2-6	Test unit 1, Level 2	1	Unclassified	Knife, bifacial	proximal	Mississippi	Knife
23DA408	2-7	Test unit 1, Level 2	1	Unclassified	Preform	whole	Mississippi	Unknown
23DA408	2-8	Test unit 1, Level 2	1	Scallorn	Arrow point	whole	Woodland, Late-Mississipp	Arrow point
23DA408	2-9	Test unit 1, Level 2	1	Fresno variant	Arrow point	proximal	Late Prehistoric	Arrow point
23DA408	2-10	Test unit 1, Level 2	1	Fresno	Arrow point	whole	Late Prehistoric	Arrow point
23DA408	2-11	Test unit 1, Level 2	1	Sallisaw variant?	Arrow point	stem	Mississippi	Arrow point
23DA408	2-12	Test unit 1, Level 2	1	Table Rock Pointed Stem	Biface, stemmed	proximal	Woodland, Late-Mississipp	Unknown
23DA408	2-13	Test unit 1, Level 2	1	Unclassified	Biface	midsection	Unknown	Unknown
23DA408	2-14	Test unit 1, Level 2	1	Unclassified	Dart point	midsection	Unknown	Unknown
23DA408	2-15	Test unit 1, Level 2	1	Unclassified	Drill, bifacial	distal	Unknown	Perforator
23DA408	2-16	Test unit 1, Level 2	1	Unclassified	Spokeshave, flake	N/A	Unknown (Late Prehist.)	Spokeshave
23DA408	3-1	Test unit 1, Level 3	1	Unclassified	Biface, stemmed	proximal	Unknown	Unknown
23DA408	4-2	Test unit 1, Level 4	1	Unclassified	Biface	midsection	Unknown	Unknown
23DA408	6-1	Test unit 2, Level 1	1	Scallorn variant	Arrow point	proximal	Woodland, Late-Mississipp	Arrow point
23DA408	6-2	Test unit 2, Level 1	1	Scallorn variant	Arrow point	whole	Woodland, Late-Mississipp	Arrow point
23DA408	6-3	Test unit 2, Level 1	1	Scallorn	Arrow point	whole	Woodland, Late-Mississipp	Arrow point
23DA408	6-4	Test unit 2, Level 1	1	Unclassified	Arrow point	distal	Mississippi?	Arrow point
23DA408	6-5	Test unit 2, Level 1	1	Unclassified	Arrow point	tip	Mississippi	Arrow point
23DA408	6-7	Test unit 2, Level 1	1	Unclassified	Preform	midsection	Unknown	Unknown
23DA408	6-8	Test unit 2, Level 1	4	Unclassified	Biface	midsection	Unknown	Unknown
23DA408	6-9	Test unit 2, Level 1	1	Unclassified	Scraper, bifacial end	distal	Unknown (Mississippi?)	Scraper
23DA408	6-10	Test unit 2, Level 1	1	Unclassified	Preform	midsection	Unknown	Unknown
23DA408	6-11	Test unit 2, Level 1	1	Unclassified	Knife, bifacial	distal	Unknown	Knife
23DA408	6-19	Test unit 2, Level 1	1	Fresno	Arrow point	proximal	Late Prehistoric	Arrow point
23DA408	7-1	Test unit 2, Level 2	1	Alba-like	Arrow point	whole	Mississippi (Caddoan?)	Arrow point
23DA408	7-6	Test unit 2, Level 2	3	Unclassified	Preform	midsection	Unknown	Unknown

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Bifacial and Flake Tools
Stockton Lake Survey and Testing

Site No.	Cat. No.	Provenience	Ct.	Type Name	Artifact Description	Portion	Cultural Affilition	Primary Function
23DA408	7-7	Test unit 2, Level 2	1	Unclassified	Biface, stemmed	proximal	Unknown	Unknown
23DA408	7-8	Test unit 2, Level 2	1	Unclassified	Knife, bifacial	midsection	Unknown	Knife
23DA408	7-9	Test unit 2, Level 2	1	Unclassified	Preform	proximal	Unknown	Unknown
23DA408	7-11	Test unit 2, Level 2	1	Cahokia Side Notched	Arrow point	proximal	Mississippi	Arrow point
23DA408	7-12	Test unit 2, Level 2	1	Fresno	Arrow point	whole	Late Prehistoric	Arrow point
23DA408	7-13	Test unit 2, Level 2	1	Fresno variant	Arrow point	whole	Late Prehistoric	Arrow point
23DA408	7-14	Test unit 2, Level 2	1	Fresno variant	Arrow point	whole	Late Prehistoric	Arrow point
23DA408	7-15	Test unit 2, Level 2	1	Fresno variant	Arrow point	stem	Late Prehistoric	Arrow point
23DA408	7-16	Test unit 2, Level 2	1	Unclassified	Preform	proximal	Mississippi	Unknown
23DA408	7-17	Test unit 2, Level 2	2	Unclassified	Biface	midsection	Unknown	Unknown
23DA408	8-2	Test unit 2, Level 3	1	Unclassified	Scraper, flake	N/A	Unknown	Scraper
23DA408	8-3	Test unit 2, Level 3	1	Unclassified	Preform	midsection	Unknown	Unknown
23DA408	8-4	Test unit 2, Level 3	1	Unclassified	Dart point	tip	Unknown	Unknown (dart point?)
23DA408	9-2	Test unit 2, Level 4	1	Unclassified	Knife, bifacial	midsection	Unknown	Knife
23DA408	9-3	Test unit 2, Level 4	1	Unclassified	Knife, bifacial	midsection	Unknown	Knife
23DA408	9-4	Test unit 2, Level 4	1	Unclassified	Preform	midsection	Unknown	Unknown
23DA408	14-1	Surface - general	1	Unclassified	Graver, flake	N/A	Unknown	Engraving
23DA411	1-1	Surface - general	1	Unclassified	Scraper, core	whole	Unknown	Scraper
23DA411	1-2	Surface - general	1	Unclassified	Preform, aborted	edge	Unknown	Unknown
23DA411	1-3	Surface - general	1	Unclassified	Preform	proximal	Unknown	Unknown
23DA411	1-4	Surface - general	1	Unclassified	Knife, flake	N/A	Unknown	Knife
23DA411	1-5	Surface - general	1	Unclassified	Scraper, flake	N/A	Unknown	Scraper
23DA411	1-6	Surface - general	1	Unclassified	Arrow point	stem	Woodland, Mississippi	Arrow point
23DA413	1-3	Surface - general	1	Unclassified	Scraper, bifacial	edge	Unknown	Scraper
23DA413	1-4	Surface - general	1	Unclassified	Biface	distal	Unknown	Unknown
23DA421	1-1	Surface - general	1	Unclassified	Knife, bifacial	whole	Woodland?	Knife
23DA421	1-2	Surface - general	1	Unclassified	Biface, unstemmed	proximal	Unknown	Unknown
23DA421	1-3	Surface - general	1	Unclassified	Preform, aborted	whole	Unknown	Unknown
23DA422	1-8	Surface - general	1	Unclassified	Knife, bifacial	distal?	Unknown	Knife
23DA424	1-1	Surface - general	1	Unclassified	Scraper, flake	N/A	Unknown	Scraper
23DA424	1-2	Surface - general	1	Unclassified	Scraper, flake	N/A	Unknown	Scraper
23DA425	1-1	Surface - general	1	Unclassified	Knife, flake	N/A	Unknown	Knife
23DA425	1-2	Surface - general	1	Unclassified	Biface	tip?	Unknown	Unknown
23DA425	1-3	Surface - general	1	Unclassified	Preform	edge	Unknown	Unknown

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Site No.	Cat. No.	Provenience	Ct.	Type Name	Artifact Description	Portion	Cultural Affiliation	Primary Function
23DA427	1-1	Surface - general	1	Unclassified	Blank	whole	Unknown	Unknown
23DA427	1-2	Surface - general	1	Unclassified	Biface	edge	Unknown	Unknown
23DA427	1-3	Surface - general	1	Unclassified	Biface	edge	Unknown	Unknown
23DA429	1-1	Surface - general	1	Unclassified	Scraper, flake	N/A	Unknown	Scraper
23DA429	1-2	Surface - general	1	Unclassified	Knife, flake	N/A	Unknown	Knife
23DA436	1-1	Surface - general	1	Unclassified	Arrow point	stem	Woodland, Late?	Arrow point
23DA437	1-1	Surface - general	1	Unclassified	Graver, flake	N/A	Unknown	Engraving
23DA437	1-2	Surface - general	1	Unclassified	Graver, flake	N/A	Unknown	Engraving
23DA442	1-1	Surface - general	1	Scallorn	Arrow point	whole	Woodland, Late-Mississipp	Arrow point
23DA442	1-2	Surface - general	1	Unclassified	Knife, bifacial	proximal	Unknown	Knife
23DA448	1-1	Surface - general	1	Steuben	Knife, bifacial	proximal	Woodland, Middle - Late	Knife
23DA448	1-2	Surface - general	1	Langtry	Knife, bifacial	proximal	Archaic, Late - Woodland	Knife
23DA449	1-1	Surface - general	1	Unclassified	Dart point	proximal	Woodland?	Dart point
23DA449	1-2	Surface - general	1	Unclassified	Knife, bifacial	whole	Unknown	Knife?
23DA449	1-3	Surface - general	1	Unclassified	Adze	whole	Unknown	Woodworking, heavy
23DA449	1-4	Surface - general	1	Unclassified	Biface	tip	Unknown	Unknown
23DA449	1-5	Surface - general	1	Unclassified	Preform, aborted	midsection	Unknown	Unknown
23DA449	1-6	Surface - general	1	Unclassified	Preform, aborted	proximal	Unknown	Unknown
23DA449	1-7	Surface - general	1	Unclassified	Preform, aborted	proximal	Unknown	Unknown
23DA451	1-1	Surface - general	1	Unclassified	Scraper, unifacial side		Unknown	Scraper
23DA452	1-1	Surface - general	1	Unclassified	Knife, bifacial	whole	Unknown	Knife
23DA453	1-1	Surface - general	1	Hanna-like	Projectile point/knife	whole	Archaic, Late	Dart point
23DA453	1-2	Surface - general	1	Unclassified	Knife, flake	N/A	Unknown	Knife
23DA455	1-1	Surface - general	1	Unclassified	Spokeshave, flake	N/A	Unknown	Spokeshave

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Site No.	Cat. No.	Secondary Function	Jeff. City Plain	Jeff. City HT	Pierson Plain	Pierson HT	Reeds Spr Plain	Reeds Spr HT	Elsey Plain	Elsey HT	Keokuk Plain	Keokuk HT	Burlington Plain	Burlington HT	Unknown Plain	Unknown HT	Other	Position in Use Cycle	Wear Observed Cutting
SLCC-IF1	1-1	None											1					Undetermined	None
SLS-IF1	1-1	None											1					Undetermined	Meat w/o bone contact
SLS-IF2	1-1	None											1					Undetermined	None
23CE134	1-3	None											1					Undetermined	None
23CE134	1-4	None											1					Undetermined	None
23CE321	1-1	None											1					Undetermined	None
23CE321	1-2	None											1					Undetermined	None
23CE321	1-3	None											1					Undetermined	None
23CE330	1-1	None											1						Meat w/o bone contact
23CE330	1-2	Scraper											1					Undetermined	Meat w/bone contact
23CE330	1-5	None											1					Undetermined	Bone/antler
23CE330	1-6	None											1					Undetermined	wood
23CE330	1-7	None											1					Undetermined	Wood
23CE338	1-1	None														1		Exhausted	None
23CE338	1-2	None											1					Undetermined	Meat w/o bone contact
23CE338	1-3	None											1					Undetermined	None
23CE338	1-4	None											1					Undetermined	Wood
23CE338	1-5	None											1					Undetermined	None
23CE338	1-6	None											1					Undetermined	None
23CE338	1-7	None											1					Undetermined	None
23CE338	1-8	None											1					Undetermined	None
23CE338	1-9	None														1		Undetermined	None
23CE467	1-2	None											1					Undetermined	None
23CE467	1-3	None											1					Undetermined	None
23CE467	1-4	None											1					Undetermined	Meat w/o bone contact
23CE467	1-5	None											1					Undetermined	None
23CE467	1-6	None											1					Undetermined	None
23CE467	1-7	None											1					Undetermined	None
23CE467	1-8	None											1					Undetermined	Meat w/o bone contact
23CE467	1-9	None											1					Undetermined	None
23CE467	1-14	None											1					Undetermined	Wood
23CE467	1-15	None											1					Undetermined	Wood
23CE468	1-2	Core											1					Undetermined	None
23CE468	1-4	None											1					Undetermined	None

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Bifacial and Flake Tools
Stockton Lake Survey and Testing

Site No.	Cat. No.	Secondary Function	Jeff. City Plain	Jeff. City HT	Pierson Plain	Pierson HT	Reeds Spr Plain	Reeds Spr HT	Elsey Plain	Elsey HT	Keokuk Plain	Keokuk HT	Burlington Plain	Burlington HT	Unknown Plain	Unknown HT	Other	Position in Use Cycle	Wear Observed Cutting
23CE468	1-5	None											1					Undetermined	None
23CE468	1-6	None											1					Undetermined	None
23CE468	1-7	None		1														Undetermined	Meat w/o bone contact
23CE468	1-11	None											1					Undetermined	Bone/antler
23CE468	1-12	None											1					Undetermined	Wood
23CE469	1-1	None		1														Undetermined	Meat w/o bone contact
23CE469	1-2	None											1					Undetermined	None
23CE469	1-4	None											1					Undetermined	None
23CE469	1-5	None											1					Undetermined	None
23CE469	1-6	None												1				Undetermined	Meat w/o bone contact
23CE471	1-9	None											1					Undetermined	Meat w/o bone contact
23CE471	1-10	None											1					Undetermined	None
23CE471	1-11	None											1					Undetermined	None
23CE473	9-1	None												1				Undetermined	None
23CE474	1-1	None											1					Undetermined	Meat w/o bone contact
23CE475	1-2	None											1					Undetermined	None
23CE475	1-3	None											1					Undetermined	Meat w/bone contact
23CE475	1-4	None											1					Undetermined	Bone/antler
23CE475	1-5	None											1					Undetermined	None
23CE475	1-6	None											1					Undetermined	None
23CE475	1-8	None												1				Undetermined	None
23CE477	1-1	None											1					Undetermined	None
23CE477	1-2	None		1															None
23CE477	1-6	None			1													Undetermined	Meat w/o bone contact
23CE479	1-1	None											1					Undetermined	Bone/antler
23CE485	1-1	Scraper		1														N/A	None
23CE485	1-3	None											1					Undetermined	Meat w/o bone contact
SLDA-IF2	1-1	None											1						None
SLDA-IF5	1-1	None		1														Undetermined	None
SLMC-IF1	1-1	None											1					Undetermined	None
SLRB-IF3	1-1	None											1						None
23DA83	1-1	None		1														Undetermined	Meat w/bone contact
23DA211	2-1	None											1					Undetermined	None
23DA211	4-1	None											1					Undetermined	None

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Site No.	Cat. No.	Secondary Function	Jeff. City Plain	Jeff. City HT	Pierson Plain	Pierson HT	Reeds Spr Plain	Reeds Spr HT	Elsey Plain	Elsey HT	Keokuk Plain	Keokuk HT	Burlington Plain	Burlington HT	Unknown Plain	Unknown HT	Other	Position in Use Cycle	Wear Observed Cutting
23DA211	17-1	None											1					Undetermined	None
23DA312	1-1	Engraving											1					Undetermined	None
23DA313	1-1	None											1					Resharpened	Meat w/o bone contact
23DA313	1-2	None											1					Undetermined	Meat w/o bone contact
23DA313	1-3	None											1					Undetermined	Meat w/o bone contact
23DA313	1-4	None												1				Undetermined	Meat w/o bone contact
23DA313	1-5	None		1														Undetermined	None
23DA326	1-1	Knife											1						Meat w/bone contact
23DA326	1-2	None											1					Undetermined	None
23DA326	1-3	None														1		Undetermined	None
23DA326	1-4	None														1		Undetermined	None
23DA326	1-5	None											1					Undetermined	None
23DA326	1-6	None											1					Undetermined	Meat w/bone contact
23DA326	1-7	Knife											1					Undetermined	Meat w/o bone contact
23DA326	1-8	None		1														Undetermined	None
23DA388	1-1	None											1					Undetermined	None
23DA388	1-2	None											1					Undetermined	None
23DA394	1-1	None											1					Undetermined	None
23DA407	3-1	None		1														Undetermined	None
23DA407	4-1	None		1														N/A	None
23DA407	4-2	None												1		1		Undetermined	Meat w/bone contact
23DA407	5-3	None											1					Undetermined	None
23DA407	8-5	None		1														N/A	None
23DA407	11-1	None												1				Resharpened	Meat w/bone contact
23DA407	12-1	None		1														Undetermined	None
23DA407	12-2	None												1				Undetermined	None
23DA407	15-1	None												1				Undetermined	None
23DA407	20-1	None												1				Resharpened	None
23DA407	21-2	None												1				Undetermined	None
23DA407	60-3	None												1				Undetermined	None
23DA408	1-2	None												1				Initial	None
23DA408	1-3	None		1															None
23DA408	1-4	None												1				Undetermined	None
23DA408	1-5	None												1				Initial	None

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Bifacial and Flake Tools
Stockton Lake Survey and Testing

Site No.	Cat. No.	Secondary Function	Jeff. City Plain	Jeff. City HT	Pierson Plain	Pierson HT	Reeds Spr Plain	Reeds Spr HT	Elsey Plain	Elsey HT	Keokuk Plain	Keokuk HT	Burlington Plain	Burlington HT	Unknown Plain	Unknown HT	Other	Position in Use Cycle	Wear Observed Cutting
23DA408	1-6	None												1				Initial	None
23DA408	1-7	None											1					Undetermined	None
23DA408	2-1	None												1				Initial	None
23DA408	21-1	None			1													Undetermined	Bone/antler
23DA408	2-2	None												1				Undetermined	None
23DA408	2-3	None												1				Undetermined	None
23DA408	2-4	None												1				Initial	Wood
23DA408	2-5	None												1				Resharpened	Meat w/bone contact
23DA408	2-6	None												1				Undetermined	Meat w/bone contact
23DA408	2-7	None		1														Initial	None
23DA408	2-8	None												1				Undetermined	None
23DA408	2-9	None												1				Undetermined	None
23DA408	2-10	None														1		Undetermined	None
23DA408	2-11	None														1		Undetermined	None
23DA408	2-12	None											1					Undetermined	None
23DA408	2-13	None											1					Undetermined	None
23DA408	2-14	None												1				Undetermined	None
23DA408	2-15	None												1				Undetermined	None
23DA408	2-16	None				1												Undetermined	None
23DA408	3-1	None											1					Undetermined	None
23DA408	4-2	None														1		Undetermined	None
23DA408	6-1	None												1				Undetermined	None
23DA408	6-2	None		1														Resharpened	None
23DA408	6-3	None												1				Resharpened	None
23DA408	6-4	None											1					Undetermined	None
23DA408	6-5	None										1						Undetermined	None
23DA408	6-7	None												1				Undetermined	None
23DA408	6-8	None											1	2		1		Undetermined	None
23DA408	6-9	None												1				Undetermined	None
23DA408	6-10	None												1				Undetermined	None
23DA408	6-11	None												1				Undetermined	Meat w/o bone contact
23DA408	6-19	None												1				Undetermined	None
23DA408	7-1	None														1		Undetermined	None
23DA408	7-6	None											1	1		1		Undetermined	None

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Site No.	Cat. No.	Secondary Function	Jeff. City Plain	Jeff. City HT	Pierson Plain	Pierson HT	Reeds Spr Plain	Reeds Spr HT	Elsey Plain	Elsey HT	Keokuk Plain	Keokuk HT	Burlington Plain	Burlington HT	Unknown Plain	Unknown HT	Other	Position in Use Cycle	Wear Observed Cutting
23DA408	7-7	None												1				Undetermined	None
23DA408	7-8	None												1				Undetermined	Meat w/o bone contact
23DA408	7-9	None												1				Undetermined	None
23DA408	7-11	None												1				Undetermined	None
23DA408	7-12	None															1	Undetermined	None
23DA408	7-13	None		1														Undetermined	None
23DA408	7-14	None														1		Undetermined	None
23DA408	7-15	None				1												Undetermined	None
23DA408	7-16	None											1					Initial	None
23DA408	7-17	None											1	1				Undetermined	None
23DA408	8-2	None												1					None
23DA408	8-3	None												1				Undetermined	None
23DA408	8-4	None														1		Undetermined	None
23DA408	9-2	None		1														Undetermined	Meat w/bone contact
23DA408	9-3	None												1				Undetermined	Meat w/bone contact
23DA408	9-4	None												1				Undetermined	None
23DA408	14-1	None											1					Undetermined	None
23DA411	1-1	Core, hammerstone											1					Undetermined	None
23DA411	1-2	None											1					Undetermined	None
23DA411	1-3	None											1					Undetermined	None
23DA411	1-4	None											1					Undetermined	Meat w/o bone contact
23DA411	1-5	None												1				Undetermined	None
23DA411	1-6	None											1					Unused	None
23DA413	1-3	None												1				Undetermined	None
23DA413	1-4	None												1				Undetermined	None
23DA421	1-1	None											1					Exhausted	Meat w/o bone contact
23DA421	1-2	None											1					Undetermined	None
23DA421	1-3	None												1				Undetermined	None
23DA422	1-8	None												1				Undetermined	Meat w/o bone contact
23DA424	1-1	None											1					Undetermined	None
23DA424	1-2	None		1														Undetermined	None
23DA425	1-1	None											1					Undetermined	Meat w/o bone contact
23DA425	1-2	None											1					Undetermined	None
23DA425	1-3	None											1					Undetermined	None

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Site No.	Cat. No.	Secondary Function	Jeff. City		Pierson		Reeds Spr		Elsey		Keokuk		Burlington		Unknown		Other	Position in Use Cycle	Wear Observed Cutting
			Plain	HT	Plain	HT	Plain	HT	Plain	HT	Plain	HT	Plain	HT	Plain	HT			
23DA427	1-1	None											1					Undetermined	None
23DA427	1-2	None											1					Undetermined	None
23DA427	1-3	None											1					Undetermined	None
23DA429	1-1	None											1					Undetermined	None
23DA429	1-2	None											1					Undetermined	Meat w/o bone contact
23DA436	1-1	None											1					Undetermined	None
23DA437	1-1	None											1					Undetermined	None
23DA437	1-2	None											1					Undetermined	None
23DA442	1-1	None											1						None
23DA442	1-2	None											1					Exhausted	Bone/antler
23DA448	1-1	None											1					Undetermined	Meat w/o bone contact
23DA448	1-2	None											1					Undetermined	Meat w/o bone contact
23DA449	1-1	None											1					Undetermined	None
23DA449	1-2	None											1					Undetermined	Meat w/bone contact
23DA449	1-3	None											1					Undetermined	None
23DA449	1-4	None											1					Undetermined	None
23DA449	1-5	None											1					Undetermined	None
23DA449	1-6	None											1					Undetermined	None
23DA449	1-7	None		1														Undetermined	None
23DA451	1-1	None		1														Undetermined	None
23DA452	1-1	None												1				Exhausted	Meat w/o bone contact
23DA453	1-1	Knife											1					Exhausted	None
23DA453	1-2	None											1					Undetermined	Meat w/bone contact
23DA455	1-1	None											1					Undetermined	None

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Stockton Lake Survey and Testing

Site No.	Cat. No.	Wear Observed			Wt(g)	Overall Size			Stem Size		Morphological Attributes				
		Scraping	Sawing	Other		L	W	T	L	W	Tip	Blade	Shoulder	Notching	Stem
SLCC-IF1	1-1	None	None	None	304.1	12.6	7.3	4.0	0.0	0.0	Rounded	Excurvate	None	Unnotched	Unstemmed
SLS-IF1	1-1	None	None	None	37.8	7.2	4.7	1.1	0.0	0.0	N/A	N/A	N/A	N/A	N/A
SLS-IF2	1-1	None	None	None	3.3	1.8	2.4	0.7	0.0	0.0	Rounded	Excurvate	None	None	Missing
23CE134	1-3	None	None	None	126.2	8.9	5.7	2.8	0.0	0.0	Rounded	Excurvate	None	Unnotched	Unstemmed
23CE134	1-4	None	None	None	55.1	7.8	3.5	1.7	0.0	0.0	Missing	Excurvate	None	None	Unstemmed
23CE321	1-1	None	None	Impact fracture	11.3	3.3	3.8	0.9	0.0	0.0	Missing	Straight	Square	Corner	Expanding
23CE321	1-2	None	None	None	5.5	2.3	3.2	0.8	0.0	0.0	Missing	Missing	Sloping	Corner removed	Contracting
23CE321	1-3	None	None	None	27.7	5.7	4.2	1.8	0.0	0.0	Missing	Damaged	None	Unnotched	Unstemmed
23CE330	1-1	None	None	None	4.1	2.4	2.2	0.6	0.0	0.0	Missing	Excurvate	Missing	Missing	Missing
23CE330	1-2	Hide-wet	None	None	14.0	4.1	4.3	0.8	0.0	0.0	N/A	N/A	N/A	N/A	N/A
23CE330	1-5	None	None	None	75.2	7.4	5.6	2.0	0.0	0.0	N/A	N/A	N/A	N/A	N/A
23CE330	1-6	None	None	None	51.4	8.0	5.5	1.5	0.0	0.0	N/A	N/A	N/A	N/A	N/A
23CE330	1-7	None	None	None	21.1	5.4	3.5	1.4	0.0	0.0	N/A	N/A	N/A	N/A	N/A
23CE338	1-1	None	None	None	8.4	4.2	2.0	1.0	0.0	0.0	Pointed	Irregular	Sloping	Corner removed	Contracting
23CE338	1-2	None	None	None	3.4	1.9	1.8	0.7	0.0	0.0	Missing	Excurvate	Missing	Missing	Missing
23CE338	1-3	Wood	None	None	49.1	6.2	4.9	1.9	0.0	0.0	N/A	N/A	N/A	N/A	N/A
23CE338	1-4	None	None	None	6.4	4.9	2.0	0.6	0.0	0.0	N/A	N/A	N/A	N/A	N/A
23CE338	1-5	None	None	None	8.9	2.8	2.6	0.9	0.0	0.0	Missing	Straight	Missing	Missing	Missing
23CE338	1-6	None	None	None	12.6	3.1	3.6	0.8	0.0	0.0	Missing	Convex	Missing	Missing	Missing
23CE338	1-7	Hide-wet	None	None	9.2	4.3	2.7	0.8	0.0	0.0	Pointed	Excurvate	None	Missing	Missing
23CE338	1-8	None	None	None	2.4	2.3	1.6	0.6	0.0	0.0	Missing	Damaged	Missing	Missing	Missing
23CE338	1-9	None	None	Shredding	289.3	8.1	5.5	4.9	0.0	0.0	N/A	N/A	N/A	N/A	N/A
23CE467	1-2	None	None	None	60.0	3.8	5.9	2.2	0.0	0.0	Missing	Excurvate	None	Unnotched	Unstemmed
23CE467	1-3	None	None	None	42.6	4.0	6.0	1.4	0.0	0.0	Missing	Excurvate	None	Unnotched	Unstemmed
23CE467	1-4	None	None	None	12.8	4.1	4.0	0.8	0.0	0.0	Missing	Missing	None	Unnotched	Unstemmed
23CE467	1-5	None	None	None	6.9	2.8	2.7	0.5	0.0	0.0	Rounded	Excurvate	None	Unnotched	Unstemmed
23CE467	1-6	None	None	None	22.6	5.8	4.1	1.2	0.0	0.0	Rounded	Excurvate	None	Missing	Missing
23CE467	1-7	None	None	None	39.3	7.6	3.7	1.6	0.0	0.0	Missing	Excurvate	None	Unnotched	Unstemmed
23CE467	1-8	None	None	None	5.3	3.2	2.2	0.8	0.0	0.0	Missing	Damaged	Missing	Missing	Missing
23CE467	1-9	None	None	None	5.8	3.0	2.7	0.6	0.0	0.0	Missing	Excurvate	Missing	Missing	Missing
23CE467	1-14	None	None	None	3.5	4.0	1.5	0.7	0.0	0.0	N/A	N/A	N/A	N/A	N/A
23CE467	1-15	None	None	None	3.7	3.4	2.4	0.5	0.0	0.0	N/A	N/A	N/A	N/A	N/A
23CE468	1-2	Hide-wet	None	None	51.8	5.0	4.5	2.3	0.0	0.0	N/A	N/A	N/A	N/A	N/A
23CE468	1-4	None	None	None	36.8	4.5	4.6	1.4	0.0	0.0	Missing	Excurvate	None	Unnotched	Unstemmed

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Site No.	Cat. No.	Wear Observed			Wt(g)	Overall Size			Stem Size		Morphological Attributes				
		Scraping	Sawing	Other		L	W	T	L	W	Tip	Blade	Shoulder	Notching	Stem
23CE468	1-5	None	None	None	10.8	2.9	3.8	1.0	0.0	0.0	Rounded	Excurvate	None	Missing	Missing
23CE468	1-6	None	None	None	68.4	6.2	4.8	1.8	0.0	0.0	Rounded	Excurvate	None	Unnotched	Unstemmed
23CE468	1-7	None	None	None	1.7	2.2	1.6	0.8	0.0	0.0	Missing	Damaged	Missing	Missing	Missing
23CE468	1-11	None	None	None	19.6	6.7	3.5	0.8	0.0	0.0	N/A	N/A	N/A	N/A	N/A
23CE468	1-12	None	None	None	40.3	6.6	4.3	1.4	0.0	0.0	N/A	N/A	N/A	N/A	N/A
23CE469	1-1	None	None	None	8.6	4.5	2.5	0.6	0.0	0.0	Missing	Straight	Barbed	Corner	Expanding
23CE469	1-2	Hide-wet	None	None	11.2	3.9	3.4	0.7	0.0	0.0	Missing	Straight	None	Missing	Missing
23CE469	1-4	None	None	None	156.1	9.6	6.3	2.5	0.0	0.0	Rounded	Excurvate	None	Unnotched	Unstemmed
23CE469	1-5	None	None	None	44.6	5.8	5.8	1.1	0.0	0.0	Rounded	Excurvate	Missing	Missing	Missing
23CE469	1-6	None	None	None	14.8	4.2	2.8	1.2	0.0	0.0	Missing	Excurvate	None	Unnotched	Unstemmed
23CE471	1-9	None	None	None	6.1	4.1	2.1	1.0	0.0	0.0	Missing	Excurvate	Missing	Missing	Missing
23CE471	1-10	None	None	None	5.5	2.9	3.6	0.6	0.0	0.0	Rounded	Excurvate	Missing	Missing	Missing
23CE471	1-11	None	None	None	22.0	2.7	4.8	1.6	0.0	0.0	Missing	Excurvate	None	Unnotched	Unstemmed
23CE473	9-1	None	None	None	19.7	5.4	3.4	1.2	0.0	0.0	Missing	Excurvate	None	None	None
23CE474	1-1	None	None	None	18.1	2.9	4.5	1.1	0.0	0.0	Missing	Excurvate	Missing	Missing	Missing
23CE475	1-2	None	None	None	4.9	3.3	1.9	0.7	0.0	0.0	Missing	Damaged	Square	Corner removed	Contracting
23CE475	1-3	None	None	None	2.2	2.9	2.2	0.4	0.0	0.0	N/A	N/A	N/A	N/A	N/A
23CE475	1-4	None	None	None	9.3	3.9	2.6	0.7	0.0	0.0	N/A	N/A	N/A	N/A	N/A
23CE475	1-5	None	None	None	150.3	7.8	7.8	2.3	0.0	0.0	Rounded	Excurvate	None	Unnotched	Unstemmed
23CE475	1-6	Hide-wet	None	None	55.8	6.8	4.5	2.0	0.0	0.0	N/A	N/A	N/A	N/A	N/A
23CE475	1-8	None	None	None	67.0	8.8	4.7	2.2	0.0	0.0	Rounded	Excurvate	None	Missing	Missing
23CE477	1-1	Wood	None	None	1.7	2.9	1.6	0.4	0.0	0.0	N/A	N/A	N/A	N/A	N/A
23CE477	1-2	None	None	None	1.0	1.6	1.4	0.5	0.0	0.0	Rounded	Excurvate	None	Unnotched	Unstemmed
23CE477	1-6	None	None	None	1.9	3.6	2.4	0.7	0.0	0.0	N/A	N/A	N/A	N/A	N/A
23CE479	1-1	None	None	None	14.0	5.3	2.9	0.8	0.0	0.0	N/A	N/A	N/A	N/A	N/A
23CE485	1-1	Hide-wet	None	None	130.8	6.4	5.2	3.9	0.0	0.0	N/A	N/A	N/A	N/A	N/A
23CE485	1-3	None	None	None	6.1	3.8	2.4	0.6	0.0	0.0	N/A	N/A	N/A	N/A	N/A
SLDA-IF2	1-1	None	None	Impact fracture	4.9	2.9	2.6	0.6	0.0	0.0	Missing	Damaged	Sloping	Side	Expanding
SLDA-IF5	1-1	Hide-dry	None	None	27.2	3.7	4.6	1.3	0.0	0.0	Missing	Damaged	None	Unnotched	Unstemmed
SLMC-IF1	1-1	None	None	Battering	113.7	8.4	7.1	1.9	0.0	0.0	Rounded	Excurvate	None	Unnotched	Unstemmed
SLRB-IF3	1-1	None	None	None	3.0	1.8	1.8	0.6	0.0	0.0	Missing	Damaged	Missing	Missing	Missing
23DA83	1-1	None	None	None	7.0	4.4	2.3	0.8	0.0	0.0	Missing	Damaged	Barbed	Corner	Expanding
23DA211	2-1	None	None	None	0.1	1.0	0.7	0.3	0.0	0.0	Missing	Missing	Barbed	Unknown	Missing
23DA211	4-1	None	None	None	38.1	6.3	5.1	1.2	0.0	0.0	Rounded	Excurvate	None	Missing	Missing

APPENDIX C
Bifacial and Flake Tools
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Site No.	Cat. No.	Wear Observed			Wt(g)	Overall Size			Stem Size		Morphological Attributes				
		Scraping	Sawing	Other		L	W	T	L	W	Tip	Blade	Shoulder	Notching	Stem
23DA211	17-1	None	None	None	0.1	0.0	0.0	0.0	0.0	0.0	Missing	Missing	Barbed	Unknown	Missing
23DA312	1-1	Wood	None	None	7.1	3.6	2.5	0.6	0.0	0.0	N/A	N/A	N/A	N/A	N/A
23DA313	1-1	None	None	None	8.9	5.3	2.4	0.5	0.0	0.0	Damaged	Straight	Sloping	Corner removed	Contracting
23DA313	1-2	None	None	None	6.3	3.4	2.8	0.5	0.0	0.0	Missing	Asymmetrical	Sloping	Corner removed	Contracting
23DA313	1-3	None	None	None	7.6	4.7	2.7	0.5	0.0	0.0	Rounded	Straight	None	Basal	Missing
23DA313	1-4	None	None	None	4.9	2.7	2.6	0.6	0.0	0.0	Missing	Excurvate	Missing	Unknown	Missing
23DA313	1-5	None	None	None	11.8	3.9	2.6	1.1	0.0	0.0	Missing	Damaged	Missing	Missing	Missing
23DA326	1-1	None	None	Impact fracture	3.5	3.4	2.3	0.6	0.0	0.0	Pointed	Straight	Barbed	Corner	Expanding
23DA326	1-2	None	None	None	0.2	1.2	1.0	0.3	0.0	0.0	Damaged	Asymmetrical	None	Side	None
23DA326	1-3	Wood	None	None	9.7	4.2	2.5	1.0	0.0	0.0	N/A	N/A	N/A	N/A	N/A
23DA326	1-4	None	None	None	23.2	3.1	4.8	1.2	0.0	0.0	Missing	Excurvate	None	Missing	Missing
23DA326	1-5	None	None	None	6.3	3.7	1.9	0.8	0.0	0.0	Damaged	Straight	Damaged	Missing	Missing
23DA326	1-6	None	None	None	4.2	2.5	2.5	0.7	0.0	0.0	Rounded	Excurvate	Missing	Unknown	Missing
23DA326	1-7	Bone/antler	None	None	8.6	1.5	4.0	1.1	0.0	0.0	Missing	Damaged	Missing	Unknown	Missing
23DA326	1-8	None	None	None	0.8	1.6	1.3	0.4	0.0	0.0	Damaged	Missing	Missing	Missing	Missing
23DA388	1-1	None	None	None	138.1	8.4	7.0	2.1	0.0	0.0	Rounded	Excurvate	None	Unnotched	Unstemmed
23DA388	1-2	None	None	None	89.4	7.3	5.2	2.5	0.0	0.0	Rounded	Excurvate	None	Unnotched	Unstemmed
23DA394	1-1	None	None	None	106.5	9.4	5.5	2.2	0.0	0.0	Rounded	Excurvate	None	Unnotched	Unstemmed
23DA407	3-1	None	None	None	8.8	4.9	2.6	0.9	0.0	0.0	Missing	Damaged	Damaged	Corner removed	Parallel
23DA407	4-1	Hide-wet	None	None	7.1	2.6	3.2	0.7	0.0	0.0	N/A	N/A	N/A	N/A	N/A
23DA407	4-2	None	None	None	4.3	0.0	0.0	0.0	0.0	0.0	Missing	Damaged	Unknown	Unknown	Missing
23DA407	5-3	None	None	None	16.0	2.9	4.0	1.2	0.0	0.0	Missing	Missing	None	Unnotched	Unstemmed
23DA407	8-5	Hide-wet	None	None	449.7	0.0	0.0	0.0	0.0	0.0	N/A	N/A	N/A	N/A	N/A
23DA407	11-1	None	None	None	4.3	2.5	1.8	0.6	0.0	0.0	Missing	Straight	None	Unnotched	Missing
23DA407	12-1	None	None	Chopping	176.6	7.4	6.0	3.3	0.0	0.0	Rounded	Asymmetrical	None	Unnotched	Unstemmed
23DA407	12-2	None	None	None	86.6	8.6	5.3	2.3	0.0	0.0	Missing	Damaged	None	Unnotched	Unstemmed
23DA407	15-1	None	None	None	0.7	1.9	1.7	0.3	0.0	0.0	Missing	Damaged	None	Unnotched	Missing
23DA407	20-1	None	None	None	0.6	1.6	1.2	0.2	0.0	0.0	Pointed	Straight	None	Side	Unstemmed
23DA407	21-2	None	None	None	14.6	3.5	3.6	1.0	0.0	0.0	Missing	Missing	None	Unnotched	Unstemmed
23DA407	60-3	None	None	None	1.9	2.3	1.8	0.5	0.0	0.0	Missing	Missing	None	Unnotched	Contracting
23DA408	1-2	None	None	None	2.1	2.7	1.4	0.5	0.0	0.0	Rounded	Excurvate	None	Unnotched	Unstemmed
23DA408	1-3	None	None	Abrading	10.0	3.6	2.8	1.0	0.0	0.0	N/A	N/A	N/A	N/A	N/A
23DA408	1-4	None	None	None	1.1	2.0	1.5	0.3	0.0	0.0	Missing	Damaged	None	Unnotched	Unstemmed
23DA408	1-5	None	None	None	0.9	2.0	1.4	0.3	0.0	0.0	Rounded	Straight	None	Unnotched	Unstemmed

APPENDIX C
Bifacial and Flake Tools
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Site No.	Cat. No.	Wear Observed			Wt(g)	Overall Size			Stem Size		Morphological Attributes				
		Scraping	Sawing	Other		L	W	T	L	W	Tip	Blade	Shoulder	Notching	Stem
23DA408	1-6	None	None	None	2.9	2.2	2.0	0.5	0.0	0.0	Missing	Damaged	None	Unnotched	Unstemmed
23DA408	1-7	None	None	None	1.0	0.7	2.0	0.7	0.0	0.0	Missing	Damaged	None	Unnotched	Missing
23DA408	2-1	None	None	None	4.8	3.4	2.5	0.4	0.0	0.0	Pointed	Excurvate	None	Unnotched	Unstemmed
23DA408	21-1	None	None	None	0.6	2.1	0.9	0.2	0.0	0.0	N/A	N/A	N/A	N/A	N/A
23DA408	2-2	None	None	None	1.3	2.2	1.3	0.5	0.8	1.3	Rounded	Excurvate	Square	Side	Parallel
23DA408	2-3	None	None	None	0.6	1.5	0.9	0.3	0.5	1.0	Missing	Straight	Sloping	Corner removed	Expanding
23DA408	2-4	None	None	None	13.2	7.6	2.7	0.5	0.0	0.0	N/A	N/A	N/A	N/A	N/A
23DA408	2-5	None	None	None	5.3	3.1	2.5	0.5	0.8	1.7	Missing	Damaged	Barbed	Corner	Expanding
23DA408	2-6	None	None	None	6.6	3.1	3.1	0.7	0.8	1.9	Missing	Asymmetrical	Barbed	Corner	Parallel
23DA408	2-7	None	None	None	2.9	2.9	1.7	0.5	0.0	0.0	Pointed	Excurvate	None	Unnotched	Unstemmed
23DA408	2-8	None	None	None	1.0	1.9	1.0	0.4	0.4	0.6	Missing	Excurvate	Square	Corner	Expanding
23DA408	2-9	None	None	None	1.1	1.8	1.2	0.3	0.0	0.0	Missing	Excurvate	None	Unnotched	Unstemmed
23DA408	2-10	None	None	None	0.9	2.0	1.0	0.3	0.0	0.0	Missing	Damaged	None	Unnotched	Unstemmed
23DA408	2-11	None	None	None	0.9	1.2	1.1	0.4	0.7	0.0	Missing	Missing	Sloping	Side	Expanding
23DA408	2-12	None	None	None	2.6	2.8	1.6	0.6	1.1	1.2	Missing	Missing	Sloping	Corner removed	Contracting
23DA408	2-13	None	None	None	2.7	2.3	1.6	0.7	0.0	0.0	Missing	Damaged	None	Unnotched	Missing
23DA408	2-14	None	None	None	3.6	2.0	2.0	0.7	0.0	0.0	Missing	Missing	None	Unnotched	Missing
23DA408	2-15	None	None	Perforating	1.2	2.0	1.0	0.5	0.0	0.0	Pointed	Straight	None	N/A	Missing
23DA408	2-16	Wood	None	None	26.5	5.2	3.3	1.1	0.0	0.0	N/A	N/A	N/A	N/A	N/A
23DA408	3-1	None	None	None	1.0	0.6	2.8	0.5	0.0	2.8	Missing	Missing	None	Corner	Expanding
23DA408	4-2	None	None	None	11.1	4.1	3.3	1.0	0.0	0.0	Missing	Damaged	None	Unnotched	Missing
23DA408	6-1	None	None	None	0.9	1.7	1.2	0.3	0.6	1.0	Missing	Straight	Sloping	Side	Expanding
23DA408	6-2	None	None	None	0.6	1.4	1.0	0.2	0.5	1.0	Pointed	Straight	None	Side	Expanding
23DA408	6-3	None	None	None	0.6	1.3	0.8	0.3	0.6	0.8	Missing	Straight	Square	Corner	Expanding
23DA408	6-4	None	None	None	0.8	2.0	1.1	0.2	0.0	0.0	Pointed	Straight	None	Unnotched	Missing
23DA408	6-5	None	None	None	0.7	1.7	1.3	0.3	0.0	0.0	Pointed	Straight	None	Unnotched	Missing
23DA408	6-7	None	None	None	33.2	5.6	3.6	1.7	0.0	0.0	Missing	Damaged	None	Unnotched	Unstemmed
23DA408	6-8	None	None	None	17.7	0.0	0.0	0.0	0.0	0.0	Missing	Missing	None	Unnotched	Missing
23DA408	6-9	Hide-wet	None	None	1.8	1.6	2.6	0.4	0.0	0.0	Rounded	Excurvate	None	Unnotched	Unstemmed
23DA408	6-10	None	None	None	6.2	4.6	1.4	0.9	0.0	0.0	Missing	Missing	None	Unnotched	Unstemmed
23DA408	6-11	None	None	None	1.9	2.0	1.9	0.5	0.0	0.0	Pointed	Straight	None	Unnotched	Missing
23DA408	6-19	None	None	None	1.5	1.7	1.5	0.4	0.0	0.0	Missing	Damaged	None	Unnotched	Unstemmed
23DA408	7-1	None	None	None	0.7	2.3	1.2	0.3	0.8	0.8	Missing	Straight	Square	Side	Expanding
23DA408	7-6	None	None	None	16.2	0.0	0.0	0.0	0.0	0.0	Missing	Missing	None	Unnotched	Unstemmed

APPENDIX C
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Site No.	Cat. No.	Wear Observed			Wt(g)	Overall Size			Stem Size		Morphological Attributes				
		Scraping	Sawing	Other		L	W	T	L	W	Tip	Blade	Shoulder	Notching	Stem
23DA408	7-7	None	None	None	7.1	3.1	3.7	0.6	0.0	0.0	Missing	Missing	None	Unnotched	None
23DA408	7-8	None	None	None	1.8	2.0	1.8	0.5	0.0	0.0	Missing	Damaged	None	Unnotched	Missing
23DA408	7-9	None	None	None	42.2	3.7	5.5	1.8	0.0	0.0	Missing	Missing	None	Unnotched	Unstemmed
23DA408	7-11	None	None	None	0.2	1.1	1.1	0.2	0.8	1.1	Missing	Missing	None	Side	Parallel
23DA408	7-12	None	None	None	0.2	1.4	0.9	0.3	0.0	0.0	Pointed	Straight	None	Unnotched	Unstemmed
23DA408	7-13	None	None	None	0.7	1.8	1.3	0.3	0.0	0.0	Pointed	Straight	None	Unnotched	Unstemmed
23DA408	7-14	None	None	None	0.3	1.4	1.2	0.3	0.0	0.0	Pointed	Asymmetrical	None	Unnotched	Unstemmed
23DA408	7-15	None	None	None	0.3	0.8	1.5	0.2	0.0	0.0	Missing	Missing	None	Unnotched	Unstemmed
23DA408	7-16	None	None	None	1.4	1.8	1.9	0.3	0.0	0.0	Missing	Missing	None	Unnotched	Unstemmed
23DA408	7-17	None	None	None	1.5	0.0	0.0	0.0	0.0	0.0	Missing	Damaged	None	Unnotched	Missing
23DA408	8-2	Hide-dry	None	None	7.4	3.4	2.7	0.8	0.0	0.0	N/A	N/A	N/A	N/A	N/A
23DA408	8-3	None	None	None	9.0	2.5	3.5	0.9	0.0	0.0	Missing	Damaged	None	Unnotched	Unstemmed
23DA408	8-4	None	None	None	0.5	1.3	1.0	0.4	0.0	0.0	Rounded	Missing	None	Unnotched	Missing
23DA408	9-2	None	None	None	9.4	5.3	3.0	0.7	0.0	0.0	Missing	Damaged	None	Unnotched	Missing
23DA408	9-3	None	None	None	5.3	2.4	2.9	0.7	0.0	0.0	Missing	Damaged	None	Unnotched	Missing
23DA408	9-4	None	None	None	5.4	2.9	3.2	0.8	0.0	0.0	Missing	Excurvate	None	Unnotched	Unstemmed
23DA408	14-1	None	None	Perforating	27.4	6.7	2.6	1.3	0.0	0.0	N/A	N/A	N/A	N/A	N/A
23DA411	1-1	Hide-wet	None	Battering	84.7	5.4	5.2	2.5	0.0	0.0	N/A	N/A	N/A	N/A	N/A
23DA411	1-2	None	None	None	161.9	10.3	8.4	2.5	0.0	0.0	Missing	Excurvate	None	Unnotched	Unstemmed
23DA411	1-3	None	None	None	38.2	4.2	4.9	1.5	0.0	0.0	Missing	Asymmetrical	None	Unnotched	Unstemmed
23DA411	1-4	None	None	None	3.7	6.9	5.8	1.0	0.0	0.0	N/A	N/A	N/A	N/A	N/A
23DA411	1-5	Hide-dry	None	None	22.0	3.8	3.0	1.7	0.0	0.0	N/A	N/A	N/A	N/A	N/A
23DA411	1-6	None	None	None	0.2	1.3	1.2	0.2	0.0	0.0	Missing	Missing	Barbed	Corner	Expanding
23DA413	1-3	Wood	None	None	10.0	3.6	2.8	1.0	0.0	0.0	Missing	Damaged	Missing	Missing	Missing
23DA413	1-4	None	None	None	6.2	2.7	3.1	0.9	0.0	0.0	Rounded	Excurvate	Missing	Missing	Missing
23DA421	1-1	None	None	None	9.8	4.1	2.3	1.2	0.0	0.0	Damaged	Asymmetrical	None	Unnotched	Unstemmed
23DA421	1-2	None	None	None	5.1	2.5	2.5	0.8	0.0	0.0	Missing	Straight	None	Unnotched	Unstemmed
23DA421	1-3	None	None	None	68.3	7.8	4.9	2.1	0.0	0.0	Rounded	Damaged	None	Unnotched	Unstemmed
23DA422	1-8	None	None	None	26.6	3.5	5.3	1.1	0.0	0.0	?	Excurvate	None	Unnotched	Unstemmed
23DA424	1-1	Wood	None	None	27.9	4.3	4.3	1.2	0.0	0.0	N/A	N/A	N/A	N/A	N/A
23DA424	1-2	Hide-wet	None	None	11.1	3.5	2.5	1.0	0.0	0.0	N/A	N/A	N/A	N/A	N/A
23DA425	1-1	None	None	None	10.0	5.0	2.7	0.7	0.0	0.0	N/A	N/A	N/A	N/A	N/A
23DA425	1-2	None	None	None	4.7	2.5	2.4	0.7	0.0	0.0	Pointed	Excurvate	Missing	Missing	Missing
23DA425	1-3	None	None	None	20.5	3.9	4.2	1.5	0.0	0.0	Missing	Fragment	None	None	None

APPENDIX C
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Site No.	Cat. No.	Wear Observed			Wt(g)	Overall Size			Stem Size		Morphological Attributes				
		Scraping	Sawing	Other		L	W	T	L	W	Tip	Blade	Shoulder	Notching	Stem
23DA427	1-1	None	None	None	103.2	8.4	6.0	2.1	0.0	0.0	Rounded	Excurvate	None	Unnotched	Unstemmed
23DA427	1-2	None	None	None	4.6	1.7	3.7	0.8	0.0	0.0	Missing	Fragment	Missing	Missing	Missing
23DA427	1-3	None	None	None	3.6	2.5	2.4	0.7	0.0	0.0	Missing	Fragment	Missing	Missing	Missing
23DA429	1-1	Hide-wet	None	None	36.7	5.4	3.9	1.5	0.0	0.0	N/A	N/A	N/A	N/A	N/A
23DA429	1-2	None	None	None	4.7	4.4	2.0	0.7	0.0	0.0	N/A	N/A	N/A	N/A	N/A
23DA436	1-1	None	None	None	2.9	2.1	1.7	0.6	0.0	0.0	Missing	Straight	Sloping	Corner removed	Expanding
23DA437	1-1	None	None	Engraving	1.8	2.2	2.1	0.5	0.0	0.0	N/A	N/A	N/A	N/A	N/A
23DA437	1-2	None	None	None	1.7	2.8	1.3	0.4	0.0	0.0	N/A	N/A	N/A	N/A	N/A
23DA442	1-1	None	None	None	0.4	2.2	1.1	0.4	0.0	0.0	Pointed	Straight	Square	Corner	Expanding
23DA442	1-2	None	None	None	5.6	3.8	2.2	0.8	0.0	0.0	Missing	Incurved	None	None	Parallel
23DA448	1-1	None	None	None	10.4	4.1	3.1	0.7	0.0	0.0	Missing	Excurvate	Square	Side	Expanding
23DA448	1-2	None	None	None	10.1	4.2	3.8	0.6	1.7	2.0	Missing	Straight	Sloping	Corner removed	Contracting
23DA449	1-1	None	None	Impact fracture	4.5	2.8	2.3	0.5	0.0	0.0	Missing	Missing	Damaged	Corner	Expanding
23DA449	1-2	None	None	None	146.4	10.8	7.0	1.8	0.0	0.0	Rounded	Excurvate	None	Unnotched	Unstemmed
23DA449	1-3	None	None	Battering	48.4	6.9	4.7	1.7	0.0	0.0	Rounded	Excurvate	None	Unnotched	Contracting
23DA449	1-4	None	None	None	2.8	2.2	2.5	0.6	0.0	0.0	Rounded	Missing	Missing	Missing	Missing
23DA449	1-5	None	None	None	13.5	3.1	3.9	0.9	0.0	0.0	Missing	Excurvate	Missing	Missing	Missing
23DA449	1-6	None	None	None	43.7	4.0	5.7	1.8	0.0	0.0	Missing	Convex	None	Unnotched	Unstemmed
23DA449	1-7	None	None	None	95.4	6.8	5.5	2.1	0.0	0.0	Missing	Excurvate	None	Unnotched	Unstemmed
23DA451	1-1	Hide-wet	None	None	8.2	4.8	2.2	0.6	0.0	0.0	N/A	N/A	N/A	N/A	N/A
23DA452	1-1	None	None	None	6.2	3.3	2.4	0.8	0.0	0.0	Rounded	Asymmetrical	Damaged	Corner	Expanding
23DA453	1-1	None	None	Impact fracture	5.3	3.3	1.9	0.7	0.0	0.0	Rounded	Exhausted	Missing	Side	Expanding
23DA453	1-2	None	None	None	32.8	6.2	4.4	1.3	0.0	0.0	N/A	N/A	N/A	N/A	N/A
23DA455	1-1	Wood	None	None	4.1	2.8	2.3	0.5	0.0	0.0	N/A	N/A	N/A	N/A	N/A

APPENDIX C
Bifacial and Flake Tools
Stockton Lake Survey and Testing

Site No.	Cat. No.	Morphological Attributes (continued)			Modifications		
		Base	Tang	X-Section	Abrading	Beveling	Serrating
SLCC-IF1	1-1	Convex	None	Biconvex	None	None	No
SLS-IF1	1-1	N/A	N/A	N/A	None	None	No
SLS-IF2	1-1	Missing	Missing	Biconvex	None	None	No
23CE134	1-3	Missing	Missing	Biconvex	None	None	No
23CE134	1-4	Missing	Missing	Unknown	None	None	No
23CE321	1-1	Convex	None	Biconvex	None	None	No
23CE321	1-2	Missing	Missing	Biconvex	None	None	No
23CE321	1-3	Damaged	None	Biconvex	None	None	No
23CE330	1-1	Missing	Missing	Biconvex	None	None	No
23CE330	1-2	N/A	N/A	N/A	None	None	No
23CE330	1-5	N/A	N/A	N/A	None	None	No
23CE330	1-6	N/A	N/A	N/A	None	None	No
23CE330	1-7	N/A	N/A	N/A	None	None	No
23CE338	1-1	Convex	None	Irregular	None	None	No
23CE338	1-2	Missing	Missing	Biconvex	None	None	No
23CE338	1-3	N/A	N/A	N/A	None	Unifacial	No
23CE338	1-4	N/A	N/A	N/A	None	None	No
23CE338	1-5	Missing	Missing	Biconvex	None	None	No
23CE338	1-6	Missing	Missing	Biconvex	None	Unifacial	No
23CE338	1-7	Missing	Missing	Plano-convex	None	Bifacial	No
23CE338	1-8	Missing	Missing	Irregular	None	None	No
23CE338	1-9	N/A	N/A	N/A	None	Unifacial	No
23CE467	1-2	Convex	None	Irregular	None	None	No
23CE467	1-3	Damaged	None	Irregular	None	None	No
23CE467	1-4	Straight	None	Biconvex	None	None	No
23CE467	1-5	Convex	None	Irregular	None	Unifacial	No
23CE467	1-6	Missing	Missing	Biconvex	None	None	No
23CE467	1-7	Missing	Missing	Unknown	None	None	No
23CE467	1-8	Missing	Missing	Unknown	None	None	No
23CE467	1-9	Missing	Missing	Unknown	None	None	No
23CE467	1-14	N/A	N/A	N/A	None	None	No
23CE467	1-15	N/A	N/A	N/A	None	None	No
23CE468	1-2	N/A	N/A	N/A	None	None	No
23CE468	1-4	Convex	None	Biconvex	None	None	No

APPENDIX C
Bifacial and Flake Tools
Stockton Lake Survey and Testing

Site No.	Cat. No.	Morphological Attributes (continued)			Modifications		
		Base	Tang	X-Section	Abrading	Beveling	Serrating
23CE468	1-5	Missing	Missing	Plano-convex	Blade	None	No
23CE468	1-6	Convex	None	Plano-convex	None	Unifacial	No
23CE468	1-7	Missing	Missing	Unknown	None	n	No
23CE468	1-11	N/A	N/A	N/A	None	None	No
23CE468	1-12	N/A	N/A	N/A	None	None	No
23CE469	1-1	Concave	None	Biconvex	None	None	No
23CE469	1-2	Missing	Missing	Unknown	None	Unifacial	No
23CE469	1-4	Convex	None	Irregular	None	None	No
23CE469	1-5	Missing	Missing	Biconvex	None	None	No
23CE469	1-6	Missing	Missing	Unknown	None	None	No
23CE471	1-9	Missing	Missing	Unknown	None	None	No
23CE471	1-10	Missing	Missing	Plano-convex	None	Unifacial	No
23CE471	1-11	Convex	None	Biconvex	None	None	No
23CE473	9-1	Missing	Missing	Unknown	None	None	No
23CE474	1-1	Missing	Missing	Biconvex	None	None	No
23CE475	1-2	Damaged	None	Biconvex	None	None	No
23CE475	1-3	N/A	N/A	N/A	None	None	No
23CE475	1-4	N/A	N/A	N/A	None	None	No
23CE475	1-5	Convex	None	Biconvex	None	None	No
23CE475	1-6	N/A	N/A	N/A	None	None	No
23CE475	1-8	Missing	Missing	Biconvex	None	None	No
23CE477	1-1	N/A	N/A	N/A	None	Unifacial	No
23CE477	1-2	Convex	None	Biconvex	None	None	No
23CE477	1-6	N/A	N/A	N/A	None	None	No
23CE479	1-1	N/A	N/A	N/A	None	None	No
23CE485	1-1	N/A	N/A	N/A	None	None	No
23CE485	1-3	N/A	N/A	N/A	None	None	No
SLDA-IF2	1-1	Straight		Biconvex	None	None	No
SLDA-IF5	1-1	Missing	Missing	Biconvex	None	Beveling-left	No
SLMC-IF1	1-1	Convex	None	Irregular	None	None	No
SLRB-IF3	1-1	Missing	Missing	Unknown	None	None	No
23DA83	1-1	Damaged	Missing	Biconvex	None	None	No
23DA211	2-1	Missing	Missing	Unknown	None	None	No
23DA211	4-1	Missing	Missing	Biconvex	Blade	None	No

APPENDIX C
Bifacial and Flake Tools
Stockton Lake Survey and Testing

Site No.	Cat. No.	Morphological Attributes (continued)			Modifications		
		Base	Tang	X-Section	Abrading	Beveling	Serrating
23DA211	17-1	Missing	Missing	Unknown	None	None	No
23DA312	1-1	N/A	N/A	N/A	None	None	No
23DA313	1-1	Straight	None	Biconvex	None	None	No
23DA313	1-2	Damaged	Damaged	Biconvex	None	None	No
23DA313	1-3	Missing	Missing	Biconvex	None	None	No
23DA313	1-4	Missing	Missing	Biconvex	None	None	No
23DA313	1-5	Missing	Missing	Biconvex	None	Base	No
23DA326	1-1	Straight	None	Biconvex	None	None	No
23DA326	1-2	Convex	None	Irregular	None	None	No
23DA326	1-3	N/A	N/A	N/A	None	None	No
23DA326	1-4	Missing	Missing	Biconvex	Blade	None	No
23DA326	1-5	Missing	Missing	Biconvex	None	Beveled-left	No
23DA326	1-6	Missing	Missing	Biconvex	None	None	No
23DA326	1-7	Missing	Missing	Biconvex	None	None	No
23DA326	1-8	Missing	Missing	Biconvex	None	None	No
23DA388	1-1	Convex	None	Biconvex	None	n	No
23DA388	1-2	Convex	None	Biconvex	None	None	No
23DA394	1-1	Convex	None	Irregular	None	None	No
23DA407	3-1	Damaged	None	Diamond-shaped	None	None	No
23DA407	4-1	N/A	N/A	N/A	None	None	No
23DA407	4-2	Missing	Missing	Unknown	None	None	No
23DA407	5-3	Missing	Missing	Biconvex	None	None	No
23DA407	8-5	N/A	N/A	N/A	Edge	None	No
23DA407	11-1	Missing	Missing	Rhomboidal	None	Beveling-right	Yes
23DA407	12-1	Convex	None	Irregular	None	None	No
23DA407	12-2	Convex	None	Plano-convex	Base	None	No
23DA407	15-1	Missing	Missing	Biconvex	None	None	No
23DA407	20-1	Concave	None	Biconvex	None	None	No
23DA407	21-2	Damaged	None	Biconvex	None	None	No
23DA407	60-3	Straight	None	Biconvex	None	None	No
23DA408	1-2	Convex	None	Plano-convex	Blade	Unifacial	No
23DA408	1-3	N/A	N/A	N/A			No
23DA408	1-4	Straight	None	Biconvex	None	None	No
23DA408	1-5	Straight	None	Plano-convex	None	Unifacial	No

APPENDIX C
Bifacial and Flake Tools
Stockton Lake Survey and Testing

Site No.	Cat. No.	Morphological Attributes (continued)			Modifications		
		Base	Tang	X-Section	Abrading	Beveling	Serrating
23DA408	1-6	Convex	None	Plano-convex	None	Beveling-left	No
23DA408	1-7	Missing	Missing	Biconvex	None	None	No
23DA408	2-1	Missing	Missing	Biconvex	Blade	None	No
23DA408	21-1	N/A	N/A	N/A	N/A	N/A	No
23DA408	2-2	Concave	None	Biconvex	None	None	No
23DA408	2-3	Straight		Biconvex	None	None	No
23DA408	2-4	N/A	N/A	N/A			No
23DA408	2-5	Convex		Biconvex	None	None	No
23DA408	2-6	Damaged	None	Biconvex	None	None	No
23DA408	2-7	Convex	None	Rhomboidal	None	Unifacial	No
23DA408	2-8	Convex		Biconvex	None	None	No
23DA408	2-9	Straight	None	Biconvex	None	None	No
23DA408	2-10	Damaged	None	Biconvex	None	None	No
23DA408	2-11	Concave		Irregular	None	None	No
23DA408	2-12	Convex	None	Biconvex	None	None	No
23DA408	2-13	Missing	Missing	Biconvex	None	None	No
23DA408	2-14	Missing	Missing	Biconvex	None	None	No
23DA408	2-15	Missing	Missing	Diamond-shaped	None	None	No
23DA408	2-16	N/A	N/A	N/A			No
23DA408	3-1	Straight		Irregular	None	None	No
23DA408	4-2	Missing	Missing	Biconvex	None	None	No
23DA408	6-1	Convex		Biconvex	None	None	No
23DA408	6-2	Straight		Biconvex	None	None	No
23DA408	6-3	Convex		Biconvex	None	None	No
23DA408	6-4	Missing	Missing	Biconvex	None	None	No
23DA408	6-5	Missing	Missing	Biconvex	None	None	No
23DA408	6-7	Missing	Missing	Plano-convex	None	None	No
23DA408	6-8	Missing	Missing	Unknown	None	None	No
23DA408	6-9	Missing	Missing	Plano-convex	None	Unifacial	No
23DA408	6-10	Missing	Missing	Biconvex	None	None	No
23DA408	6-11	Missing	Missing	Biconvex	None	None	No
23DA408	6-19	Straight	None	Biconvex	None	None	No
23DA408	7-1	Convex		Biconvex	None	None	No
23DA408	7-6	Missing	Missing	Irregular	None	None	No

APPENDIX C
Bifacial and Flake Tools
Stockton Lake Survey and Testing

Site No.	Cat. No.	Morphological Attributes (continued)			Modifications		
		Base	Tang	X-Section	Abrading	Beveling	Serrating
23DA408	7-7	Straight	None	Biconvex	None	None	No
23DA408	7-8	Missing	Missing	Irregular	None	None	No
23DA408	7-9	Convex	None	Rhomboidal	None	Beveling-right	No
23DA408	7-11	Straight	None	Biconvex	None	None	No
23DA408	7-12	Straight	None	Plano-convex	None	None	No
23DA408	7-13	Concave	None	Plano-convex	None	Unifacial	No
23DA408	7-14	Convex	None	Biconvex	None	None	No
23DA408	7-15	Convex	None	Plano-convex	None	None	No
23DA408	7-16	Convex	None	Biconvex	None	None	No
23DA408	7-17	Missing	Missing	Irregular	None	None	No
23DA408	8-2	N/A	N/A	N/A	N/A	N/A	No
23DA408	8-3	Missing	Missing	Biconvex	None	None	No
23DA408	8-4	Missing	Missing	Biconvex	None	None	No
23DA408	9-2	Missing	Missing	Biconvex	None	None	No
23DA408	9-3	Missing	Missing	Biconvex	None	None	No
23DA408	9-4	Missing	Missing	Biconvex	Blade	None	No
23DA408	14-1	N/A	N/A	N/A	N/A	N/A	No
23DA411	1-1	N/A	N/A	N/A	None	None	No
23DA411	1-2	Missing	Missing	Unknown	None	None	No
23DA411	1-3	Damaged	None	Irregular	None	Basal	No
23DA411	1-4	N/A	N/A	N/A			No
23DA411	1-5	N/A	N/A	N/A			No
23DA411	1-6	Convex		Irregular	None	None	No
23DA413	1-3	Missing	Missing	Unknown	None	None	No
23DA413	1-4	Missing	Missing	Irregular	None	None	No
23DA421	1-1	Straight	None	Irregular	None	Unifacial	No
23DA421	1-2	Damaged	None	Unknown	None	None	No
23DA421	1-3	Convex	None	Irregular	None	Right	No
23DA422	1-8	?	None	Biconvex	Edge	None	No
23DA424	1-1	N/A	N/A	N/A	None	None	No
23DA424	1-2	N/A	N/A	N/A	None	Distal end	No
23DA425	1-1	N/A	N/A	N/A	None	None	No
23DA425	1-2	Missing	Missing	Plano-convex	None	None	No
23DA425	1-3	Missing	Missing	Unknown	Blade	None	No

APPENDIX C
Bifacial and Flake Tools
Stockton Lake Survey and Testing

Site No.	Cat. No.	Morphological Attributes (continued)			Modifications		
		Base	Tang	X-Section	Abrading	Beveling	Serrating
23DA427	1-1	Convex	None	Irregular	None	None	No
23DA427	1-2	Missing	Missing	Unknown	None	None	No
23DA427	1-3	Missing	Missing	Unknown	Blade	None	No
23DA429	1-1	N/A	N/A	N/A	None	Edge	No
23DA429	1-2	N/A	N/A	N/A	None	None	No
23DA436	1-1	Convex		Biconvex	None	None	No
23DA437	1-1	N/A	N/A	N/A	None	None	No
23DA437	1-2	N/A	N/A	N/A	None	None	No
23DA442	1-1	Straight		Biconvex	None	None	Yes
23DA442	1-2	Convex	None	Diamond-shaped	Stem	Beveling-left	No
23DA448	1-1	Straight		Biconvex	None	None	No
23DA448	1-2	Straight	None	Biconvex	Stem	None	No
23DA449	1-1	Straight		Biconvex	None	None	No
23DA449	1-2	Convex	None	Plano-convex	None	None	No
23DA449	1-3	Convex	None	Biconvex	None	Bit edge	No
23DA449	1-4	Missing	Missing	Biconvex	None	None	No
23DA449	1-5	Missing	Missing	Biconvex	Blade	Unifacial	No
23DA449	1-6	Damaged	None	Irregular	None	Edge	No
23DA449	1-7	Straight	None	Irregular	None	Unifacial	No
23DA451	1-1	N/A	N/A	N/A	None	Working edge	No
23DA452	1-1	Convex	None	Biconvex	None	None	No
23DA453	1-1	Concave	None	Biconvex	Light	None	No
23DA453	1-2	N/A	N/A	N/A	None	None	No
23DA455	1-1	N/A	N/A	N/A	None	None	No

APPENDIX D
Stockton Sites Listed by Real Estate Tract

Site No.	Tract No.	Sec.	Twn	Rng	USGS Map		Potential Impacts		Recommendation
23CE483	0117	16	34N	26W	Stockton	Vandalism	Development		No further work
23CE484	0117	16	34N	26W	Stockton	Vandalism	Development		No further work
23CE338	0145	23, 26	34N	26W	Stockton	Vandalism	Shoreline erosion	Development	NRHP assessment
23CE335	0145, 0146	22, 23	34N	26W	Stockton	Vandalism	Erosion	Development	No further work
23CE336	0145, 0146	23	34N	26W	Stockton	Vandalism	Erosion	Development	NRHP assessment
23CE480	0149, 0151	21	34N	26W	Stockton	Vandalism	Erosion	Development	No further work
23CE482	0153	16	34N	26W	Stockton	Vandalism	Development		No further work
23CE485	0157	16	34N	26W	Stockton	Vandalism	Development		NRHP assessment
23CE349	0161	21	34N	26W	Stockton	Vandalism	Development		NRHP assessment
23CE350	0161	21	34N	26W	Stockton	Vandalism	Development		No further work
23CE477	0161, 0165	21	34N	26W	Stockton	Vandalism	Erosion	Development	No further work
23CE475	0164, 0165	20, 21	34N	26W	Stockton	Vandalism	Erosion	Development	No further work
23CE476	0164, 0165	20, 21	34N	26W	Stockton	Vandalism	Development		No further work
23CE478	0165	21	34N	26W	Stockton	Vandalism	Shoreline erosion	Development	No further work
23CE479	0169	21	34N	26W	Stockton	Vandalism	Development		No further work
23CE481	0170	28	34N	26W	Stockton	Vandalism	Shoreline erosion	Development	No further work
23CE329	0171	28	34N	26W	Stockton	Vandalism	Shoreline erosion	Development	No further work
23CE330	0171	28	34N	26W	Stockton	Vandalism	Shoreline erosion	Development	NRHP assessment
23CE469	0403, 0407	9	33N	26W	Crisp	Vandalism	Shoreline erosion	Development	NRHP assessment
23CE468	0407	9	33N	26W	Crisp	Vandalism	Shoreline erosion	Development	No further work
23CE470	0434	15, 16	33N	26W	Crisp	Vandalism	Erosion	Development	No further work
23DA306	0539	3	32N	25W	Crisp	Vandalism	Erosion	Development	No further work
23DA443	0539	3	32N	26W	Crisp	Vandalism	Erosion	Development	No further work
23DA444	0539	3	32N	26W	Crisp	Vandalism	Development		No further work
23DA445	0539	3	32N	26W	Crisp	Vandalism	Development		No further work
23DA447	0539	3	32N	26W	Crisp	Vandalism	Development		No further work
23DA448	0539	3	32N	26W	Crisp	Vandalism	Development		No further work
23DA450	0539	3	32N	26W	Crisp	Vandalism	Development		NRHP assessment
23DA394	0539, 0543	3	32N	26W	Crisp	Vandalism	Erosion	Development	No further work
23DA313	0547	4	32N	26W	Crisp	Vandalism	Development		NRHP assessment
23DA314	0547	4	32N	26W	Crisp	Vandalism	Development	Flooding	NRHP assessment
23DA446	0547	4	32N	26W	Crisp	Vandalism	Development		No further work
23DA449	0547	4	32N	26W	Crisp	Shoreline erosion	Development	Vandalism	NRHP assessment
23DA321	0605	10	32N	25W	Crisp	Vandalism			No further work
23DA326	0605	10	32N	26W	Crisp	Vandalism	Erosion	Development	NRHP assessment
23DA312	0624	9	32N	26W	Crisp	Vandalism	Shoreline erosion	Development	NRHP assessment
23DA452	0624	9	32N	26W	Crisp	Vandalism	Development		No further work
23DA453	0624	9	32N	26W	Crisp	Vandalism	Development	Erosion	No further work
23DA454	0624	9	32N	26W	Crisp	Development			No further work
23DA455	0624	9	32N	26W	Crisp	Vandalism	Erosion	Development	No further work
23DA211	0739	9	32N	26W	Crisp	Vandalism	Development		NRHP assessment
23DA451	0739	9	32N	26W	Crisp	Vandalism	Development		No further work
23CE472	1404	17	33N	25W	Bona	Vandalism	Development		No further work
23CE364	1407	17	33N	25W	Bona	Development			No further work
23CE342	1407, 1421	17	33N	25W	Bona	Vandalism	Shoreline erosion	Development	NRHP assessment
23CE473	1419	16	33N	25W	Bona	Vandalism	Development		NRHP assessment
23CE474	1420	16	33N	25W	Bona	Vandalism	Erosion	Development	No further work
23CE467	1422	21	33N	25W	Bona	Vandalism	Erosion	Development	No further work
23CE471	1422	17	33N	25W	Bona	Vandalism	Erosion	Development	NRHP assessment
23CE398	1422, 1440-1	21	33N	25W	Bona	Vandalism	Shoreline erosion		No further work
23CE321	1439, 1440	21	33N	25W	Bona	Vandalism	Erosion	Development	NRHP assessment
23DA441	1503, 1509	32	33N	25W	Bona	Vandalism			NRHP assessment
23DA430	1507, 1510	32, 33	33N	25W	Bona	Vandalism			NRHP assessment
23DA431	1509	32	33N	25W	Bona	Vandalism			No further work
23DA432	1509	32	33N	25W	Bona	Vandalism			No further work
23DA437	1509	32	33N	25W	Bona	Vandalism			NRHP assessment

APPENDIX D
Stockton Sites Listed by Real Estate Tract

Site No.	Tract No.	Sec.	Twn	Rng	USGS Map		Potential Impacts		Recommendation
23DA438	1509	32	33N	25W	Bona	Vandalism			NRHP assessment
23DA439	1509	32	33N	25W	Bona	Vandalism			NRHP assessment
23DA440	1509	32	33N	25W	Bona	Vandalism			NRHP assessment
23DA085	1510	32	33N	25W	Bona	Vandalism	Flooding	Shoreline erosion	NRHP assessment
23DA086	1510	32	33N	25W	Bona	Vandalism	Flooding		NRHP assessment
23DA428	1510	32	33N	25W	Bona	Vandalism			NRHP assessment
23DA429	1510	32	33N	25W	Bona	Vandalism			No further work
23DA433	1510	32	33N	25W	Bona	Vandalism	Flooding		No further work
23DA436	1510	32	33N	25W	Bona	Vandalism			NRHP assessment
23DA244	1511	32	33N	25W	Bona	Flooding	Development		No further work
23DA384	1511	32	33N	25W	Bona	Vandalism	Shoreline erosion		NRHP assessment
23DA435	1511	32	33N	25W	Bona	Vandalism			No further work
23DA442	1511	32	33N	25W	Bona	Vandalism	Erosion		No further work
23DA376	1511, 1512	32	33N	25W	Bona	Vandalism	Shoreline erosion		NRHP assessment
23DA082	1516	5	32N	25W	Bona	Vandalism	Flooding		NRHP assessment
23DA083	1516	5	32N	25W	Bona	Vandalism	Flooding		NRHP assessment
23DA425	1516	5	32N	25W	Bona	Vandalism			NRHP assessment
23DA426	1516	5	32N	25W	Bona	Vandalism			NRHP assessment
23DA427	1517, 1518	5	32N	25W	Bona	Vandalism			NRHP assessment
23DA081	1518	5	32N	25W	Bona	Vandalism			NRHP assessment
23DA407	1518	5	32N	25W	Bona	Vandalism			No further work
23DA408	1518	5	32N	25W	Bona	Vandalism			No further work
23DA411	1518	5	32N	25W	Bona	Vandalism			NRHP assessment
23DA413	1518	5	32N	25W	Bona	Vandalism	Development		No further work
23DA420	1518	5	32N	25W	Bona	Vandalism	Vehicle traffic		No further work
23DA421	1518	5	32N	25W	Bona	Vandalism	Development		NRHP assessment
23DA422	1518	5	32N	25W	Bona	Vandalism	Development		No further work
23DA423	1518, 1520	5	32N	25W	Bona	Vandalism	Development		NRHP assessment
23DA424	1520, 1522	5	32N	25W	Bona	Vandalism	Development		No further work
23DA325	1617	27	32N	25W	Bona	Development			No further work
23DA388	1617	27	33N	25W	Bona	Vandalism	Development		NRHP assessment
23DA361	1644	27	33N	25W	Bona	Vandalism	Erosion	Development	No further work
23CE355	N/A	9	33N	26W	Crisp	Development	Vandalism		No further work
23DA419	N/A	27	33N	25W	Bona	Vandalism	Development		No further work

APPENDIX E
Stockton Sites Listed by Township and Range

Site No.	Tract No.	Sec.	Twn	Rng	USGS Map		Potential Impacts		Recommendation
23DA321	0605	10	32N	25W	Crisp	Vandalism			No further work
23DA325	1617	27	32N	25W	Bona	Development			No further work
23DA306	0539	3	32N	25W	Crisp	Vandalism	Erosion	Development	No further work
23DA082	1516	5	32N	25W	Bona	Vandalism	Flooding		NRHP assessment
23DA083	1516	5	32N	25W	Bona	Vandalism	Flooding		NRHP assessment
23DA425	1516	5	32N	25W	Bona	Vandalism			NRHP assessment
23DA426	1516	5	32N	25W	Bona	Vandalism			NRHP assessment
23DA427	1517, 1518	5	32N	25W	Bona	Vandalism			NRHP assessment
23DA081	1518	5	32N	25W	Bona	Vandalism			NRHP assessment
23DA407	1518	5	32N	25W	Bona	Vandalism			No further work
23DA408	1518	5	32N	25W	Bona	Vandalism			No further work
23DA411	1518	5	32N	25W	Bona	Vandalism			NRHP assessment
23DA413	1518	5	32N	25W	Bona	Vandalism	Development		No further work
23DA420	1518	5	32N	25W	Bona	Vandalism	Vehicle traffic		No further work
23DA421	1518	5	32N	25W	Bona	Vandalism	Development		NRHP assessment
23DA422	1518	5	32N	25W	Bona	Vandalism	Development		No further work
23DA423	1518, 1520	5	32N	25W	Bona	Vandalism	Development		NRHP assessment
23DA424	1520, 1522	5	32N	25W	Bona	Vandalism	Development		No further work
23DA326	0605	10	32N	26W	Crisp	Vandalism	Erosion	Development	NRHP assessment
23DA443	0539	3	32N	26W	Crisp	Vandalism	Erosion	Development	No further work
23DA444	0539	3	32N	26W	Crisp	Vandalism	Development		No further work
23DA445	0539	3	32N	26W	Crisp	Vandalism	Development		No further work
23DA447	0539	3	32N	26W	Crisp	Vandalism	Development		No further work
23DA448	0539	3	32N	26W	Crisp	Vandalism	Development		No further work
23DA450	0539	3	32N	26W	Crisp	Vandalism	Development		NRHP assessment
23DA394	0539, 0543	3	32N	26W	Crisp	Vandalism	Erosion	Development	No further work
23DA313	0547	4	32N	26W	Crisp	Vandalism	Development		NRHP assessment
23DA314	0547	4	32N	26W	Crisp	Vandalism	Development	Flooding	NRHP assessment
23DA446	0547	4	32N	26W	Crisp	Vandalism	Development		No further work
23DA449	0547	4	32N	26W	Crisp	Shoreline erosion	Development	Vandalism	NRHP assessment
23DA312	0624	9	32N	26W	Crisp	Vandalism	Shoreline erosion	Development	NRHP assessment
23DA452	0624	9	32N	26W	Crisp	Vandalism	Development		No further work
23DA453	0624	9	32N	26W	Crisp	Vandalism	Development	Erosion	No further work
23DA454	0624	9	32N	26W	Crisp	Development			No further work
23DA455	0624	9	32N	26W	Crisp	Vandalism	Erosion	Development	No further work
23DA211	0739	9	32N	26W	Crisp	Vandalism	Development		NRHP assessment
23DA451	0739	9	32N	26W	Crisp	Vandalism	Development		No further work
23CE473	1419	16	33N	25W	Bona	Vandalism	Development		NRHP assessment
23CE474	1420	16	33N	25W	Bona	Vandalism	Erosion	Development	No further work
23CE472	1404	17	33N	25W	Bona	Vandalism	Development		No further work
23CE364	1407	17	33N	25W	Bona	Development			No further work
23CE342	1407, 1421	17	33N	25W	Bona	Vandalism	Shoreline erosion	Development	NRHP assessment
23CE471	1422	17	33N	25W	Bona	Vandalism	Erosion	Development	NRHP assessment
23CE467	1422	21	33N	25W	Bona	Vandalism	Erosion	Development	No further work
23CE398	1422, 1440-1	21	33N	25W	Bona	Vandalism	Shoreline erosion		No further work
23CE321	1439, 1440	21	33N	25W	Bona	Vandalism	Erosion	Development	NRHP assessment
23DA388	1617	27	33N	25W	Bona	Vandalism	Development		NRHP assessment
23DA361	1644	27	33N	25W	Bona	Vandalism	Erosion	Development	No further work
23DA419	N/A	27	33N	25W	Bona	Vandalism	Development		No further work
23DA441	1503, 1509	32	33N	25W	Bona	Vandalism			NRHP assessment
23DA431	1509	32	33N	25W	Bona	Vandalism			No further work
23DA432	1509	32	33N	25W	Bona	Vandalism			No further work
23DA437	1509	32	33N	25W	Bona	Vandalism			NRHP assessment
23DA438	1509	32	33N	25W	Bona	Vandalism			NRHP assessment
23DA439	1509	32	33N	25W	Bona	Vandalism			NRHP assessment
23DA440	1509	32	33N	25W	Bona	Vandalism			NRHP assessment

APPENDIX E
Stockton Sites Listed by Township and Range

Site No.	Tract No.	Sec.	Twn	Rng	USGS Map		Potential Impacts		Recommendation
23DA085	1510	32	33N	25W	Bona	Vandalism	Flooding	Shoreline erosion	NRHP assessment
23DA086	1510	32	33N	25W	Bona	Vandalism	Flooding		NRHP assessment
23DA428	1510	32	33N	25W	Bona	Vandalism			NRHP assessment
23DA429	1510	32	33N	25W	Bona	Vandalism			No further work
23DA433	1510	32	33N	25W	Bona	Vandalism	Flooding		No further work
23DA436	1510	32	33N	25W	Bona	Vandalism			NRHP assessment
23DA244	1511	32	33N	25W	Bona	Flooding	Development		No further work
23DA384	1511	32	33N	25W	Bona	Vandalism	Shoreline erosion		NRHP assessment
23DA435	1511	32	33N	25W	Bona	Vandalism			No further work
23DA442	1511	32	33N	25W	Bona	Vandalism	Erosion		No further work
23DA376	1511, 1512	32	33N	25W	Bona	Vandalism	Shoreline erosion		NRHP assessment
23DA430	1507, 1510	32, 33	33N	25W	Bona	Vandalism			NRHP assessment
23CE470	0434	15, 16	33N	26W	Crisp	Vandalism	Erosion	Development	No further work
23CE469	0403, 0407	9	33N	26W	Crisp	Vandalism	Shoreline erosion	Development	NRHP assessment
23CE468	0407	9	33N	26W	Crisp	Vandalism	Shoreline erosion	Development	No further work
23CE355	N/A	9	33N	26W	Crisp	Development	Vandalism		No further work
23CE483	0117	16	34N	26W	Stockton	Vandalism	Development		No further work
23CE484	0117	16	34N	26W	Stockton	Vandalism	Development		No further work
23CE482	0153	16	34N	26W	Stockton	Vandalism	Development		No further work
23CE485	0157	16	34N	26W	Stockton	Vandalism	Development		NRHP assessment
23CE475	0164, 0165	20, 21	34N	26W	Stockton	Vandalism	Erosion	Development	No further work
23CE476	0164, 0165	20, 21	34N	26W	Stockton	Vandalism	Development		No further work
23CE480	0149, 0151	21	34N	26W	Stockton	Vandalism	Erosion	Development	No further work
23CE349	0161	21	34N	26W	Stockton	Vandalism	Development		NRHP assessment
23CE350	0161	21	34N	26W	Stockton	Vandalism	Development		No further work
23CE477	0161, 0165	21	34N	26W	Stockton	Vandalism	Erosion	Development	No further work
23CE478	0165	21	34N	26W	Stockton	Vandalism	Shoreline erosion	Development	No further work
23CE479	0169	21	34N	26W	Stockton	Vandalism	Development		No further work
23CE335	0145, 0146	22, 23	34N	26W	Stockton	Vandalism	Erosion	Development	No further work
23CE336	0145, 0146	23	34N	26W	Stockton	Vandalism	Erosion	Development	NRHP assessment
23CE338	0145	23, 26	34N	26W	Stockton	Vandalism	Shoreline erosion	Development	NRHP assessment
23CE481	0170	28	34N	26W	Stockton	Vandalism	Shoreline erosion	Development	No further work
23CE329	0171	28	34N	26W	Stockton	Vandalism	Shoreline erosion	Development	No further work
23CE330	0171	28	34N	26W	Stockton	Vandalism	Shoreline erosion	Development	NRHP assessment